

US EPA ARCHIVE DOCUMENT



Environment

Prepared for:
Glenn Springs Holdings, Inc.
Montague, Michigan
60143500

Prepared by:
AECOM
5555 Glenwood Hills Parkway SE
Suite 300
February 4, 2011

Work Plan for Soil Gas Investigation South of Old Channel Trail near Montague, Michigan

Glenn Springs Holdings, Inc.
MID 006 014 906

Prepared by: AECOM

Version 1.0: February 7, 2011



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Prepared By: Barry Harding

Reviewed By: James Tolbert

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1.0 INTRODUCTION

Occidental Chemical Corporation (OCC) operated a chemical plant on Old Channel Trail in Montague Township, Michigan (the Site). At this Site, OCC produced chlorine gas from 1954 through 1982 and produced hexachlorocyclopentadiene (C-56) for part of the manufacturing period; as part of the site processes, OCC historically produced byproducts and used volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) and products such as chlorine gas. Significant remedial activities were performed from 1979 through 1982 under a consent judgment with the State of Michigan when all of the manufacturing operations for the chemical C-56 were removed from the site or placed in an on-site secure landfill and waste materials and impacted soils were excavated and placed in the on-site secure landfill. Remedial activities continued after this period under the direction of the State of Michigan and the United States Environmental Protection Agency (U.S. EPA). Glenn Springs Holdings, Inc. (GSH) currently manages remediation activities at the site for OCC and is operating the ongoing groundwater collection and treatment system, providing post-closure care for the landfill, and maintaining the Site. GSH is also complying with the requirements of the Resource Conservation and Recovery Act (RCRA) Corrective Action under an administrative order with the U.S. EPA. GSH and OCC are both wholly owned subsidiaries of Occidental Petroleum Corporation.

In 1993, the U.S. EPA Region 5 issued a Unilateral Administrative Order (UAO) to address RCRA Corrective Action requirements at the Site (U.S. EPA, 1993a). Under the UAO, GSH investigated the nature and extent of the remaining impacts at the site; evaluated the risks from the remaining impacted soil, groundwater, and lake sediment; and presented a Corrective Measures Study that described methods to address the remaining impacted soil, groundwater, and lake sediment.

Following their review of the investigations and corrective measures studies, the U.S. EPA issued a Statement of Basis in February of 2001 (U.S. EPA, 2001a) and held a public meeting to gather public input on their recommendations. Following the public comment period, the U.S. EPA issued the Final Decision for the Site in July of 2001 (U.S. EPA, 2001b). Most of the requirements of the Final Decision have been implemented, such as dredging sediment in White Lake and excavation and cover of specific on-site soils. Other requirements are long-term obligations that GSH continues to comply with, such as collection and treatment of groundwater by the purge well system and long-term groundwater monitoring in accordance with the 2004 groundwater monitoring plan. In 2009-2010, GSH focused on the remaining requirement in the Final Decision: the "evaluation and implementation of feasible on-site collection/treatment options for contaminated groundwater and residual waste to expedite groundwater cleanup" (U.S. EPA, 2001b). Due to complex remedial challenges at the Site, a Post-Implementation Technical Impracticability (TI) Evaluation for Groundwater Restoration Report was prepared and submitted to U.S. EPA Region 5 (AECOM, 2009).

The TI Evaluation, TI Zone Designation and on-going groundwater containment remedy was approved by U.S. EPA in an Amended Final Decision and Response to Comments (FDRC) for Selection of Updated Corrective Measures document (U.S. EPA, 2010). The Amended FDRC from U.S. EPA Region 5 requires that OCC shall submit a work plan to U.S. EPA that will "characterize the vertical concentration of VOCs and hexachloroethane in soil gas above the defined groundwater contaminant plume south of Old Channel Trail, including the locations of potential receptors at private residences along Old Channel Trail and McFall Drive, and resort buildings on OCC property." This document serves as the Soil Gas Investigation Work Plan to address this requirement in the Amended FDRC.

1.1 Site Background

The Site is located on approximately 880 acres of property owned by OCC at 7601 Old Channel Trail in Muskegon County, Montague Township, Michigan (T12N, R17W, Southeast ¼ of Section 30). The property is bounded on the south by White Lake and Old Channel Trail, on the east by Whitbeck Road, on the west by Lamos Road, and on the north by Hancock Road as shown on **Figure 1**. The portion of the site that is currently impacted does not extend all of the way north to Hancock Road nor west to Lamos Road, and maps of the site show the impacted area that includes the former industrialized area just north of Old Channel Trail and west of Whitbeck Road. The lake front area of the Site lies along the northern shoreline of White Lake. White Lake is part of the White River and flows into Lake Michigan approximately 1.5 miles west of the Site.

The Site was occupied by the former Hooker Chemical and Plastics Company plant from 1954 to 1983. The facility produced chlorine gas, caustic, C-56, muriatic acid, anhydrous hydrochloric acid (HCl), and hydrogen. The chlor-alkali production of chlorine gas involved using natural brine recovered from deep underlying bedrock, and passing the brine through electrolytic cells.

A well-defined groundwater contaminant plume is present at the site. Groundwater monitoring continues to show that the contaminant plume is stable (i.e., not expanding) and that the purge well system captures and contains the southern edge of the dissolved groundwater plume and prevents its discharge to White Lake. Localized areas of groundwater exceeding the cleanup criterion for C-56 are present near the individual residual DNAPL source areas located in the central and northern portions of the Site. The southern edge of the dissolved groundwater plume is captured by a purge well system installed in the 1980s. The groundwater capture system has a performance record from the late 1980's, 1990s and 2000s documenting that it fully and effectively contains the dissolved plume from the DNAPL areas. The system consists of a series of eight purge wells (Pb, Pc, Pd, Pe, Pf, Pg, Ph, and Pi) which capture approximately 1 million gallons per day (mgd) of groundwater. Chlorinated organic compounds are removed from the groundwater through treatment with granular activated carbon, and the treated groundwater is discharged through a National Pollutant Discharge Elimination System (NPDES) permitted outfall into White Lake. The source areas and dissolved groundwater plume are described in more detail in the "Post-Implementation Technical Impracticability Evaluation for Groundwater Restoration at the Occidental Chemical Corporation Site in Montague, Michigan" (AECOM, 2009).

Monitoring wells are also present south of Old Channel Trail and serve as monitoring points for evaluating groundwater quality and contaminant concentrations. Supplemental groundwater characterization was performed in May 2005 and submitted to USEPA in November 22, 2005. Groundwater analytical data for wells located south of Old Channel Trail are summarized, including well and purge well screen depths, and provided in Appendix A. Nested monitoring wells are present south of Old Channel Trail, and monitor groundwater at several depths. These included nested wells RFI-MW-05-07 (A through E) and RFI-MW-05-08 (A through E). There is also a nested well pair at RFI-MW-05-05 (screened at the water table from 40 to 45 feet below grade) and Well S (screened within the aquifer from 60 to 66 feet below grade). The highest contaminant concentrations are found in the middle and lower portions of the sandy aquifer. The shallow wells near the water table historically have much lower concentrations of contaminants of tetrachloroethene (PCE), carbon tetrachloride, and hexachloroethane as historically documented as well as shown in the latest groundwater monitoring report and the TI Evaluation report (CRA, 2010, AECOM 2009).

Groundwater on the Site and within the plume boundaries is not used for drinking water purposes, and institutional controls are in place within the plume boundary as well as the area adjacent to the stable plume to prohibit the use of groundwater as a source of drinking water in the future. Residences located down gradient from the source areas use treated municipal drinking water provided by the City of Montague. Six residential properties lie over the plume (including a new residence), and the municipal drinking water for all of these houses is provided by the City of Montague and paid for by GSH. The area of Investigation is shown in **Figure 2**.

1.1.1 Hydrogeology and Geology

A detailed presentation of the groundwater flow at the site is presented in AECOM 2009. Groundwater under the site flows generally from the north to the south where it would discharge into White Lake under natural conditions. GSH maintains a purge well network that completely halts the flow of contaminated groundwater into White Lake near the shore of White Lake. Groundwater flows onto the site from up gradient (north) of the site and the aquifer receives additional recharge through surface infiltration of precipitation (rainfall or snow melt) as the groundwater flows across the site. The groundwater flows through areas with residual DNAPL (that are discussed in AECOM 2009) and chlorinated organic compounds dissolved into the groundwater. As the groundwater continues to flow down gradient the cleaner meteoric water infiltrates and enters the top of the aquifer, creating a layer of water with lower concentrations of VOCs at the top of the aquifer near the water table. Multiple cluster wells have been drilled and sampled to document the fact that the groundwater at the water table is less impacted in areas near and south of Old Channel Trail (both the cluster wells and the two monitoring wells on the OCC property in Blueberry Ridge)(AECOM, 2009; CRA, 2010). A conceptual site model showing the aquifer, groundwater flowing from north to south (where it is captured by the purge wells) and the fresher water near the top of the aquifer is presented in **Figure 3**. This figure also conceptually shows placement of groundwater monitoring wells, purge wells, and proposed soil gas monitoring points.

Groundwater is present in the sandy surficial aquifer (Upper Sand Unit) which overlies a basal clay unit. Depth to groundwater in the vicinity of Old Channel Trail is approximately 40 to 50 feet below ground surface. Groundwater elevations are subject to fluctuation of ± 0.5 feet during the course of a year. Aquifer tests including both slug-tests and aquifer pumping tests conducted on the Upper Sand Unit show hydraulic conductivities of approximately from 50 to 70 ft/day. Groundwater flow in the Upper Sand Unit is to the south-southeast at an estimated flow velocity of approximately 1.8 ft/day (0.27 ft/day Darcy velocity) (AECOM, 2009).

The Upper Sand Unit is an unconfined aquifer which is continuous across the site. The upper sand unit is composed of mainly fine to medium grained quartz-rich sands. The sands are associated with a glacial lake near-shore activity and show depositional aeolian and lacustrine features, including bedding planes, sharp depositional contacts, and thin lamellae of variable texture and heterogeneity. Vadose zone soils are also primarily fine to medium grained quartz-rich sands, although local variations in soil texture and fabric exist (Earth Tech, 2003; AECOM, 2009). These heterogeneities can affect vertical and horizontal migration of vapor-phase contaminants, if present.

1.1.2 Contaminant Fate and Transport

Dissolved-phase contamination in the groundwater at the site contains chlorinated VOCs (CVOCs) such as carbon tetrachloride, PCE, chloroform and other compounds, and chlorinated SVOCs (CSVOCs), such as C-56. C-56 is not found significant distances down gradient of the residual DNAPL areas (AECOM, 2009). Dissolved phase transport is primarily through groundwater advection. Contaminant transport via diffusion appears to be nominal or limited based on observation of the relatively narrow plume shape. The source areas have been defined and are located up gradient of Old Channel Trail. Near and south of Old Channel Trail, the groundwater near the water table (at the top of the aquifer) have lower concentrations. Infiltration of rain water and snow melt enters the aquifer at the water table and then flows down gradient, building a broader lens of less impacted water at the top of the water table with greater distance from the source areas.

Contaminant fate and transport was presented in the TI Evaluation Report (AECOM, 2009). Due to the low decay rates for the chlorinated VOCs (CVOCs) (e.g., PCE in aerobic environment) and relatively high velocity of the groundwater at the Site, the concentrations within the CVOC plume remains relatively constant from the source areas to the purge well network. This indicates that little natural attenuation is occurring, as observed in the monitoring well data. Modeled output performed during the TI evaluation confirms the low decay rate observed for the CVOCs because the modeled concentration within the plume remains fairly constant from the source area to the receptor. This is consistent with the current conditions that are observed at the Site.

Target Analytes at the site (Section 1.3) include VOCs listed in U.S. EPA OSWER Draft Vapor Intrusion Guidance as having Henry's Law Constant (HLC) greater than 10^{-5} atm m³/mol. As such, these compounds may partition from groundwater or soils and exist in a vapor (soil gas) phase. GSH's current understanding of groundwater conditions south of Old Channel Trail suggests a conceptual site model where shallow groundwater has relatively low VOC concentrations, where there is recharge from above and a layer of clean freshwater acts as an inhibitory barrier to VOC partitioning into the vadose zone south of Old Channel Trail (U.S. EPA, 2002; Fitzpatrick & Fitzgerald, 1996).

1.2 Purpose of Investigation

The purpose of this vapor intrusion investigation is to characterize the vertical concentration of VOCs and hexachloroethane in soil gas above the defined groundwater contaminant plume south of Old Channel Trail (U.S. EPA, 2010).

1.3 Target Analyte List

The Amended FDRRC refers to characterizing the vertical concentration of "VOCs and hexachloroethane" in soil gas. The cleanup criteria that must be met for VOCs in groundwater are stipulated in the Final Decision (U.S. EPA, 2001b). These are the concentrations that must be achieved to "expedite groundwater cleanup". The final decision defines the following VOCs as present at the Montague facility:

- carbon tetrachloride (CT)
- chloroform
- cis*-1,2-dichloroethene
- trans*-1,2-dichloroethene
- tetrachloroethene (PCE)
- trichloroethene

The Proposed Analyte List is presented in **Table 3** (Section 2.4), and includes these VOC compounds and hexachloroethane.

1.4 Area of Investigation

The area of investigation resides within the eastern and western boundaries of the VOC plume, and near the locations of potential receptors at private residences south of Old Channel Trail and along McFall Drive, and near resort buildings on OCC property. The Area of Investigation is shown in **Figure 2**.

2.0 VAPOR INTRUSION INVESTIGATION

Section 2.0 presents the conceptual approach and methods for performing the Soil Gas Investigation. The basis for proposed investigative methodologies and laboratory analyses are derived from the OSWER 2002 Guidance and other industry practices and standards (U.S. EPA, 2002, U.S.EPA, 2009).

2.1 Conceptual Approach

GSH's conceptual approach to performing the soil gas investigation is to install nested soil gas monitoring points (SGMPs) at approximately 5-foot, 15-foot, and 30-foot depths within the vadose zone at co-located positions next to groundwater monitoring wells or purge wells. The 5-foot depth is selected for comparison to EPA Regional Screening Levels (RSL) and calculated Target Soil Gas Screening Levels for less than 5-foot depth. The 15-foot depth is selected to collect soil gas potentially residing under target residence basements extending approximately 9-feet below ground surface. The 30-foot depth is selected to provide additional information regarding potential vapor-phase partitioning of contaminants residing in groundwater below the study area. The goal will be to vertically monitor soil gas above the groundwater plume at established groundwater monitoring wells near residential receptors, over a one year semi-annual monitoring period. The vertical concentration and attenuation of soil gas throughout the vadose zone will be determined through laboratory analysis of target compounds and comparison of soil gas concentrations at different depths.

In addition, theoretical (potential) soil gas concentrations at the groundwater-vadose zone interface will be estimated based on HLC for individual compounds using the generalized formula:

$$C_{\text{Soil Gas}} = C_{\text{Groundwater}} \times \text{HLC} \times \text{CF}.$$

Example:

$C_{\text{Groundwater}}$ carbon tetrachloride (10 ug/L) x HLC carbon tetrachloride (0.030 unitless) x Conversion Factor (1,000 L/m³)

$$C_{\text{Soil Gas}} = 300 \text{ ug/m}^3$$

The objective will be to investigate if concentrations of target compounds exist near surface receptors, and determine if risks exist based on published screening values.

Existing groundwater monitoring data and groundwater monitoring data collected from future groundwater monitoring events will be used to document the groundwater conditions at the site.

2.2 Installation of Soil Gas Monitoring Points

Section 2.2 presents the methods and means by which the soil gas investigation will be performed. This includes justification for soil gas monitoring point locations, drilling installation methods, and SGMP construction.

2.2.1 Justification of Soil Gas Monitoring Point Locations

A total of twenty-one SGMP (at shallow, intermediate and deep profiles) at seven co-located well locations are proposed. The locations are presented on **Figure 2** and are summarized in **Table 1**.

Table 1
Summary of SGMP and Wells

SGMP	Well ID	Location Justification
SGMP-01 s,i,d	RFI-MW-05-05 and Well S	In plume location, 250' from residences and shallow monitoring well. RFI-MW-05-05 is screened at the water table, and Well S is screened 20 feet deeper.
SGMP-02 s,i,d	RFI-MW-05-06	In plume location near residence and shallow monitoring well.
SGMP-03 s,i,d	RFI-MW-05-08 cluster well	Plume center. Hexachloroethane and CT present in groundwater, adjacent to well cluster with a shallow monitoring well, near residential property.
SGMP-04 s,i,d	RFI-MW-05-07 cluster well and purge well Pg	Plume center at purge wells. Historical high groundwater concentrations, adjacent to a well cluster with a shallow monitoring well.
SGMP-05 s,i,d	Purge well Ph	East flank of plume. Near Resort building.
SGMP-06 s,i,d	Purge well Pi	Near Resort building.
SGMP-07 s,i,d	Purge well Pe	West flank of plume. 500' from residences. Well WW-26, near Pe will not be used, as it is not screened at the water table.

Wells MW-05-05, MW-05-06, MW-05-07A and MW-05-08A are screened over the water table and monitor groundwater quality in the top level of the aquifer. Well cluster MW-05-07 consists of five monitoring wells screened from the top of the water table to the base of the lower clay till. Well cluster MW-05-08 consists also of five monitoring wells screened from the top of the water table to the base of the lower clay till. The purge wells are all screened below the water table; however, the purge wells have 20 to 25-foot long screens and receive contaminated groundwater through the vertical aquifer profile. A summary of well screen depths is presented as **Table 2**.

Table 2
Summary of Well Screen Depths

Well ID	Depth to Water (ft) May 2010	Top of Screen (ft)	Bottom of Screen (ft)	Screen Length (ft)	Comments
MW-05-05	43.26	40	45	5	Water Table Well
S	43.55	60	66	6	Below Water Table
MW-05-06	41.92	40	45	5	Water Table Well
MW-05-07A	51.17	48	53	5	Water Table Well
MW-05-07B	51.16	67	72	5	Below Water Table
MW-05-07C	51.38	83	88	5	Below Water Table
MW-05-07D	50.27	93	98	5	Below Water Table
MW-05-07E	45.9	120	125	5	Deep Well (base of Till)
MW-05-08A	46.26	44	49	5	Water Table Well
MW-05-08B	46.29	59	64	5	Below Water Table
MW-05-08C	46.3	81	86	5	Below Water Table

Well ID	Depth to Water (ft) May 2010	Top of Screen (ft)	Bottom of Screen (ft)	Screen Length (ft)	Comments
MW-05-08D	45.9	90	95	5	Below Water Table
MW-05-08E	42.5	107	112	5	Deep Well (base of Till)
Pe	NA	60.5	80.5	20	Below Water Table
WW-26	49.15	90	110	20	Deep Well (Base of Till)
Pg	NA	60.5	80.5	20	Below Water Table
Ph	NA	73	93	20	Below Water Table
Pi	NA	70	95.8	25.8	Below Water Table

2.2.2 Direct Push Installation of SGMP

Soils in the proposed investigation area are primarily fine to medium grain, well-graded sands. However, thin (< 6-inches) discontinuous horizons of clay have been logged at a depth of approximately 12.5 feet bgs in the vicinity of RFI-MW-05-06. Seven bore holes will be performed at each nested SGMP location to verify stratigraphy at proposed SGMP. The SGMP will be installed using a track-mounted Geoprobe 66-DT or comparable direct-push hybrid rig. Anticipated installation depths will be approximately 5, 15 and 30-feet below ground surface at each SGMP location; however, exact vertical placement of SGMP may be adjusted based on presence of thin clay horizons, if observed. The SGMP will be installed in separate dedicated borings located within three feet of each other. Construction of the SGMP is discussed in Section 2.2.3.

Soil samples will be retrieved at the 5-foot, 15-foot and 30-foot depths using a macro-core sampling tool and logged by a geologist using the Unified Soil Classification System. Soil samples will be collected and screened using an organic vapor analyzer photo-ionization detector (PID) instrument, calibrated to an iso-butylene standard. Lithologic descriptions and PID screening results will be documented in a dedicated hard-bound surveyor grade field notebook.

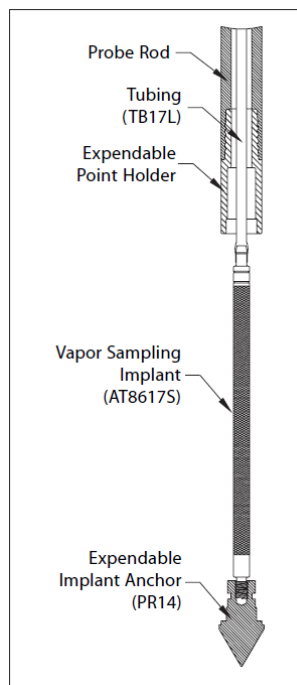
Select soil samples from the 5-foot, 15-foot and 30-foot depths will also be analyzed for the following parameters to estimate potential for contaminant sorption and pneumatic permeability (ADEQ, 2008):

- Soil Volumetric Water Content (or Moisture) – ASTM D2216 or similar
- Soil Organic Carbon Fraction (f_{oc}) – ASTM Method D2974
- Bulk density – ASTM D4404
- Porosity – ASTM D4404
- Grain-Size Distribution, with hydrometer (USCS)

Soil samples will be shipped under chain-of-custody to a geotechnical testing laboratory identified by GSH.

Vadose zone soils derived through investigation and drilling activities will be placed in 55-gallon drums, characterized and, if necessary, disposed of at an appropriate disposal facility. All sampling equipment and tooling will be decontaminated between borings at a dedicated decontamination area. Decontamination of equipment will consist of using a pressurized steam cleaner and containment basin. All decontamination water and rinseate will be transferred to OCC's onsite treatment facility and treated using granular activated carbon (GAC).

2.2.3 Soil Gas Monitoring Point Construction



Geoprobe Systems®, 2006

SGMP will be fixed and dedicated sampling devices constructed using Geoprobe Systems® AT86 Series vapor implants. The screens are constructed of stainless-steel mesh, 6-inches long x 0.25 inch OD, with 0.15 mm screen-mesh openings. The vapor implants will be factory-fitted with stainless-steel hose barbs to accommodate 3/16-inch ID tubing (vapor implant model AT8617S) (Geoprobe Systems®, 2006). All connective tubing will be manufactured of NylaFlow® (nylon) tubing, as recommended by USEPA (USEPA, 2009). The NylaFlow® tubing will be attached securely to a barb connection and deployed through hollow Geoprobe® rods to the target vertical monitoring depths of 5, 15 and 30-feet bgs. A generalized schematic of the terminal connection is presented to the left.

The SGMP are deployed by inserting the vapor implant screens attached to the tubing through a 0.625-inch I.D. annular rod space to the desired depth.

A Swagelok® Quick-Connect fitting will be added to the end of the tubing at ground surface to interface with standard air sampling apparatus and lab-certified clean 6-liter Summa canister. All stainless-steel SGMP will be decontaminated before use using steam cleaner and allowed to dry before use. This will be done to remove cutting oils or other lubricants or solvents potentially used on the metal surfaces.

At each location, three boreholes will be advanced using direct-push tooling. SGMP will be installed at approximately 5-foot depth (shallow), 15-foot depth (intermediate) and 30-foot depths (deep). Due to the limitations of introducing sand filter pack or glass beads through a narrow 0.625-inch annular space accommodating 0.25-inch SGMP tubing, no filter pack will be used for construction of the SGMP. The SGMP will be constructed in native sand formation that will be allowed to collapse around the SGMP. The on-site geologist will verify that grain-sizes are larger than the filter-screen size based on physical observation of the native sand. Upon removal of the Geoprobe® tooling, formation collapse will be verified by inserting a rigid line or weighted tape in the annular space above the SGMP.

To create a surface seal, granular dry bentonite hole-plug will be poured from ground surface to approximately 4 feet bgs at all the SGMP locations. The top of the SGMP will be finished with a locking, enclosed stick-up style housing, surface completed with concrete. Each SGMP location will be labeled as SGMP-No-S, I or D (e.g. SGMP-01-S).

The SGMP will be allowed to equilibrate with native conditions for a period of approximately 7 days prior to sampling.

A generalized SGMP construction schematic is shown in **Appendix B**.

2.3 Sampling and Monitoring

2.3.1 Soil-Gas Purging

Prior to soil gas sampling, the SGMP and associated tubing and formation within the 1.5-inch diameter borehole around the screen interval will be purged using a vacuum pump regulated at low-flow rates between 100 to 200 ml/min. This will be performed to ensure that stagnant or ambient air will be removed from the sampling system (including the NylaFlow® tubing) and to assure soil gas samples are representative of sub-surface conditions. The estimated pore-space volume for a 1.5-inch diameter Geoprobe® tooling borehole containing 2-feet of sand proximal to the SGMP screen was calculated to be approximately 0.015 cubic feet of gas, based on:

$$V = \pi r^2 h$$

V	=	Volume (cubic feet)
π	=	3.141592654
r^2	=	Radius Squared (1.5-inch diameter borehole = 0.004 feet)
h	=	Height (2 feet)
	=	0.025 cubic feet volume
Porosity Sand	=	30%
Soil Gas Volume	=	0.0075 cu feet

Three sand pore-space volumes (0.023 cubic feet)(651.29 ml) will be purged at each SGMP location. The volume of gas within the 35 feet of tubing was calculated to be 0.0067 cubic feet (190 ml). This calculates to be a total purge time of approximately 6 minutes at 150 ml/minute purge rate at each SGMP.

However, GSH will include additional purge time at each SGMP station, to be a total of 15 minutes at 150 ml/min. Sampling, discussed in Section 2.3.2, will be performed at the same flow rates as the purging (150 ml/min).

Purging will be accomplished by connecting the NylaFlow[®] tubing at each SGMP to a section of poly-tubing mounted to a vacuum pump. The purge line will be fitted with a valve and T-connector to facilitate periodic monitoring of oxygen and carbon dioxide, using portable gas meter, as recommended in the OSWER 2002 VI guidance. At one deep SGMP, per sampling event, one duplicate sample will be collected with a separate dedicated 6-liter Summa canister. The duplicate sample will be collected immediately after a 15-min purge event at 150 ml/min.

No tracer gas (helium or argon) leak-testing using a shroud (inverted dome) is proposed using methods prescribed for sub-slab soil gas sampling due to the targeted sampling depths (surface short-circuiting or infiltration of ambient air through grout seals for borings 5-feet deep or greater is unlikely). However, field quality assurance to ensure that above-grade connections are not leaky will consist of the following (ADEQ, 2008):

- Vacuum testing, where the above-grade sampling train is closed, and a vacuum is applied and measured over a period of time (no changes in line vacuum indicate sound seals).
- Oxygen monitoring, considered a qualitative test and indicator of short-circuiting. Elevated oxygen measurements in soil gas may indicate surface short-circuiting.

2.3.2 Summa Canister Sampling

A summary of sampling methods is presented:

- The soil gas sampling will be performed at 21 SGMP locations using 6-liter capacity metal Summa canisters to collect soil-gas grab samples. Dedicated NylaFlow[®] tubing will be used for all extraneous sampling connections.
- Prior to collecting a grab-sample using a Summa canister, a purge volume of approximately 850 ml will be performed at each location.
- Soil gas samples will be collected at a minimum vacuum to minimize desorption of contaminants from a sorbed phase. OSWER VI recommended sampling rate between 100-200 ml/min will be performed.

- One duplicate sample will be collected at one deep SGMP. The duplicate soil gas sample will be accomplished by concurrently collecting two soil gas samples at two Summa canisters connected by way of a T-connection.
- Temperature, barometric pressure and outside rainfall will be recorded at each sampling station and documented on a field sampling form. Rainfall will be recorded from a local weather data station in Montague, Michigan.

A Soil Gas Sampling Form is attached as **Appendix C**.

2.3.3 Monitoring Events

Two soil gas sampling events are proposed during a summer monitoring event and winter monitoring event (May and November 2011). The soil gas sampling will be performed at the same time semi-annual groundwater samples are collected perimeter monitoring wells at the Montague Site.

2.4 Analysis

The 21 soil gas samples, plus one duplicate sample, will be submitted to Accutest, Dayton, New Jersey, a NELAC accredited analytical laboratory for analysis of Constituents of Concern by TO-15. **Table 3** is the list of the volatile constituents of concern that are TO-15 analytes and specified Reporting Limits. The samples will be delivered under chain-of-custody documentation after each sampling day. The holding-time for samples will be 72-hours. A chain-of-custody form, laboratory SOP for TO-15, laboratory qualifications package, and SOPs for handling Summa canisters are presented in **Appendix D**.

2.4.1 Hexachloroethane Analysis

Hexachloroethane is a semi-volatile compound with some volatile characteristics (e.g. HLC greater than 10^{-5} atm m^3/mol). Accutest laboratory has successfully performed analysis of hexachloroethane using TO-15 methodology. However, a 5-point calibration methodology will be performed to verify reliability of TO-15 methodology for hexachloroethane analysis from soil gas samples collected at the site.

2.5 Building and Basement Survey

A total of five occupied residences are present over the plume area, south of Old Channel Trail (see **Figure 2**). One new additional residence has been built along McFall Drive. As required in the Amended FDRC document, GSH has identified that all six residences have poured concrete foundation basements extending approximately 9 feet below ground surface.

On January 31, 2011, staff from GSH performed a survey at the Occidental resort buildings located south of Old Channel Trail. These included the following buildings:

Recreation Hall

- Consisting of 7,640.25 square feet of building footprint and 1,769 square feet of basement footprint. However, "basement" is primarily walkout feature on grade, with block construction, with a narrow partitioned crawl space area with limited access.

Conference Building

- Consisting of 3,381 square feet of building footprint. No basement. Poured concrete slab.

3 Bedroom Laundry Building

- Consisting of 1,175 square feet of building footprint. No basement. Poured concrete slab.

White House

- Consisting of 1,859.25 square feet of building footprint. Partial basement area, consisting of 619.75 square feet, with a block walls and poured concrete slab, and 8 feet below grade.

Caretaker's House with Detached Garage

- Consisting of 914.25 square feet of building footprint. Full basement, with block wall construction and poured concrete slab, 8 feet below grade. Garage is 420.25 square feet with poured concrete slab on grade.

A basement informational summary will be included in the Final Report of Findings for residential buildings over the plume and the buildings on the Occidental Chemical property south of Old Channel Trail.

2.6 Groundwater Monitoring

Groundwater samples will be collected from the monitoring wells adjacent to the soil gas monitoring points as defined earlier in Section 2.2.1. At four of these locations, a shallow well is present immediately adjacent to the soil gas monitoring point and will provide data directly relevant to a comparison of groundwater concentrations to soil gas concentrations. In addition, at three of these locations there are deeper well screens present that will be sampled to provide documentation of deeper groundwater concentrations (cluster wells at RFI-MW-07 and RFI-MW-08 and Well S at RFI-MW-05). At three other sample points, groundwater samples will be collected from the adjacent purge wells. The purge wells are currently sampled quarterly, and the quarterly data will be used as appropriate for these locations.

Sample collection and laboratory methods described in the current ground water monitoring plan (January 2004, Revision 01) will be used for this sample collection when possible. For wells without dedicated pumps groundwater samples will be collected using bladder-pumps and minimal drawdown low-flow groundwater sampling techniques.

3.0 REPORT OF FINDINGS

Upon receipt of final analytical results from the second monitoring event, AECOM will prepare a Soil Gas Investigation Report summarizing field activities, results, and with recommendations. The report will include the following:

- Goals and Objectives
- Identification of relevant regulatory guidance (USEPA RSL for Indoor Air)
- Discussion of Field and Soil Gas Sampling Methods.
- Results
 - 5-foot, 15-foot and 30-foot sampling depths (SGMP)
 - Lithological Logs
 - Field Soil Screening (PID) Results
 - Tabulated Soil Gas Concentrations
 - Soil Gas Sampling Forms
 - Sample Location Map.
 - Comparison of concentrations to USEPA RSL for Indoor Air
- Discussion
- Recommendations

The report will be submitted to U.S. EPA for review and approval; and an amended report will be submitted if edits are required after review by U.S. EPA.

4.0 SCHEDULE

If approval of this work plan is received by March 18, 2011, then the proposed soil gas sampling point installation will be performed in April 2011. The first soil gas sampling event will be performed in May 2011 and the second event in November or December 2011. A draft report of findings will be prepared for U.S. EPA within 45 days of receipt of the final analytical results.

5.0 REFERENCES

AECOM, 2009. Post-Implementation Technical Impracticability Evaluation for Groundwater Restoration at the Occidental Chemical Corporation Site in Montague, Michigan, September 2009 Revision 01.

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U.S. EPA, 1999. Compendium Method TO-13A. Determination of Polycyclic Aromatic Hydrocarbons (PAHs) in Ambient Air using Gas Chromatography/Mass Spectrometry (GC/MS). EPA/625/R-96/010b. January 1999.

U.S. EPA, 2001a. Statement of Basis for Occidental Chemical Corporation, Montague Township, Michigan. February 2001.

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U.S. EPA, 2002. OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance), EPA530-D-02-004. November 2002.

U.S. EPA, 2009. Vertical Distribution of VOCs In Soils from Groundwater To the Surface/Subslab, EPA/600/R-09/073, August 2009.

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U.S. EPA, 2010b. Vapor Intrusion Guidebook, October 2010.

US EPA ARCHIVE DOCUMENT

Table 3

TABLE 3

Target Soil Gas Analyte List, USEPA Regional Screening Level, and Accutest Reporting Limits

Compound	USEPA RSL (Nov 2010) for Residential Air (Based on 1x10 ⁻⁶ target risk, Target Hazard of 1) ¹	Calculated Target Soil Gas Screening levels (Based on 1x10 ⁻⁶ target risk, Target Hazard of 1) ²		Accutest Lab RL ³	
	(ug/m3)	AF 0.1 (ug/m3)	AF 0.01 (ug/m3)	(ug/m3)	(ppbv)
Carbon Tetrachloride	4.10E-01	4.10E+00	4.10E+01	1.26	0.2
Chloroform	1.10E-01	1.10E+00	1.10E+01	0.98	0.2
cis-1,2-dichloroethene	No Value Calculated	No Value Calculated	No Value Calculated	0.79	0.2
trans-1,2-dichloroethene	6.30E+01	6.30E+02	6.30E+03	0.79	0.2
Tetrachloroethene (PCE)	4.10E-01	4.10E+00	4.10E+01	0.27	0.04
Trichloroethene	1.20E+00	1.20E+01	1.20E+02	0.21	0.04
Hexachloroethane	6.10E-01	6.10E+00	6.10E+01	TBD ⁴	TBD ⁴

1 http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm

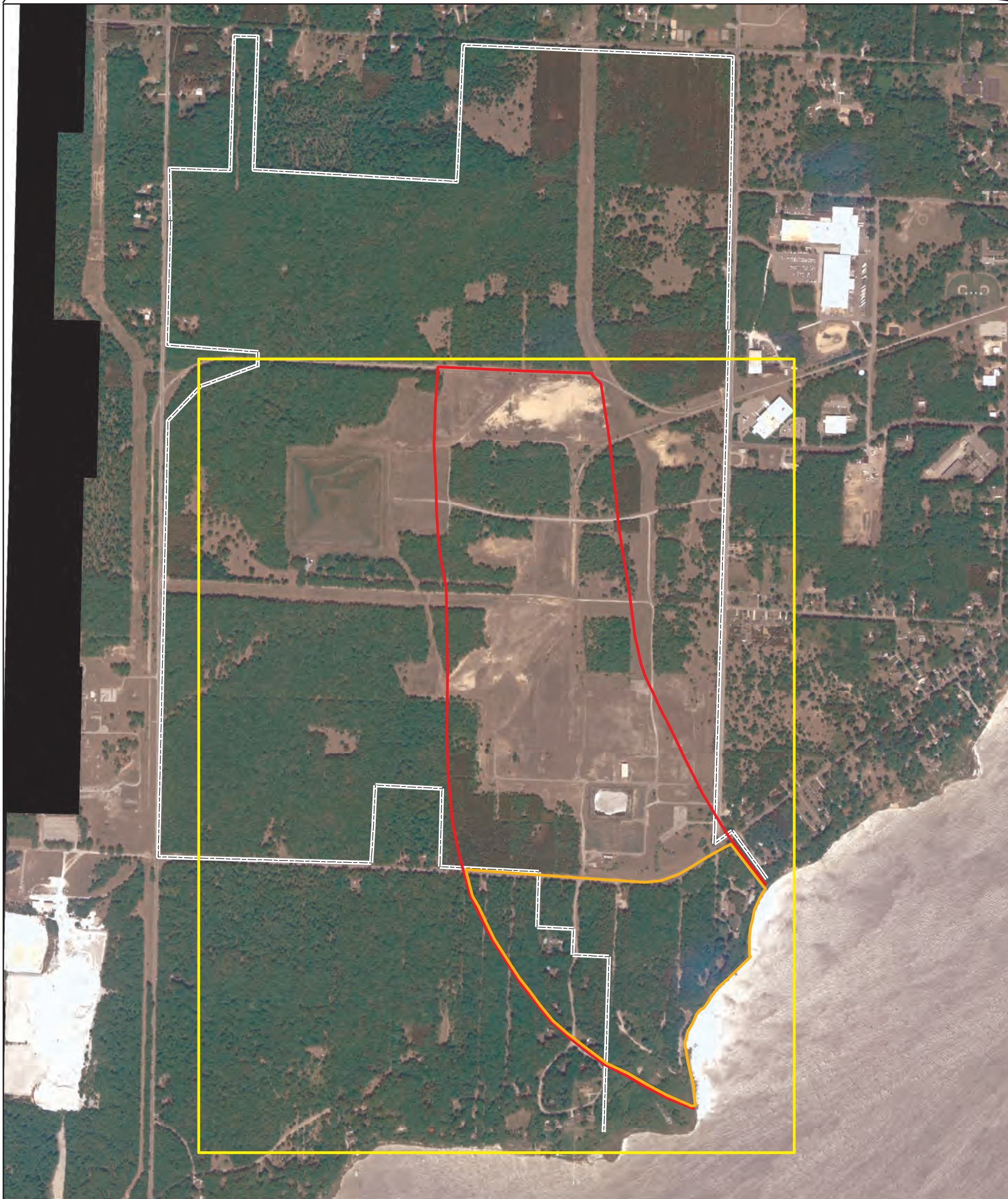
2 Calculation based on Attenuation Factors (AF) of 0.10 and 0.010 for Shallow and Deep Soil Gas.

3 RL - Reporting Data Limit

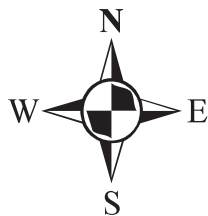
4 TBD - RDL to be determined by Accutest Lab.

US EPA ARCHIVE DOCUMENT

Figures



- Property Line
- Typical Aerial View
- Area of Investigation Shown In Figure 2
- VOC Plume



0 500 1,000 2,000 3,000
 Feet

1 inch = 1,000 feet



Figure 1

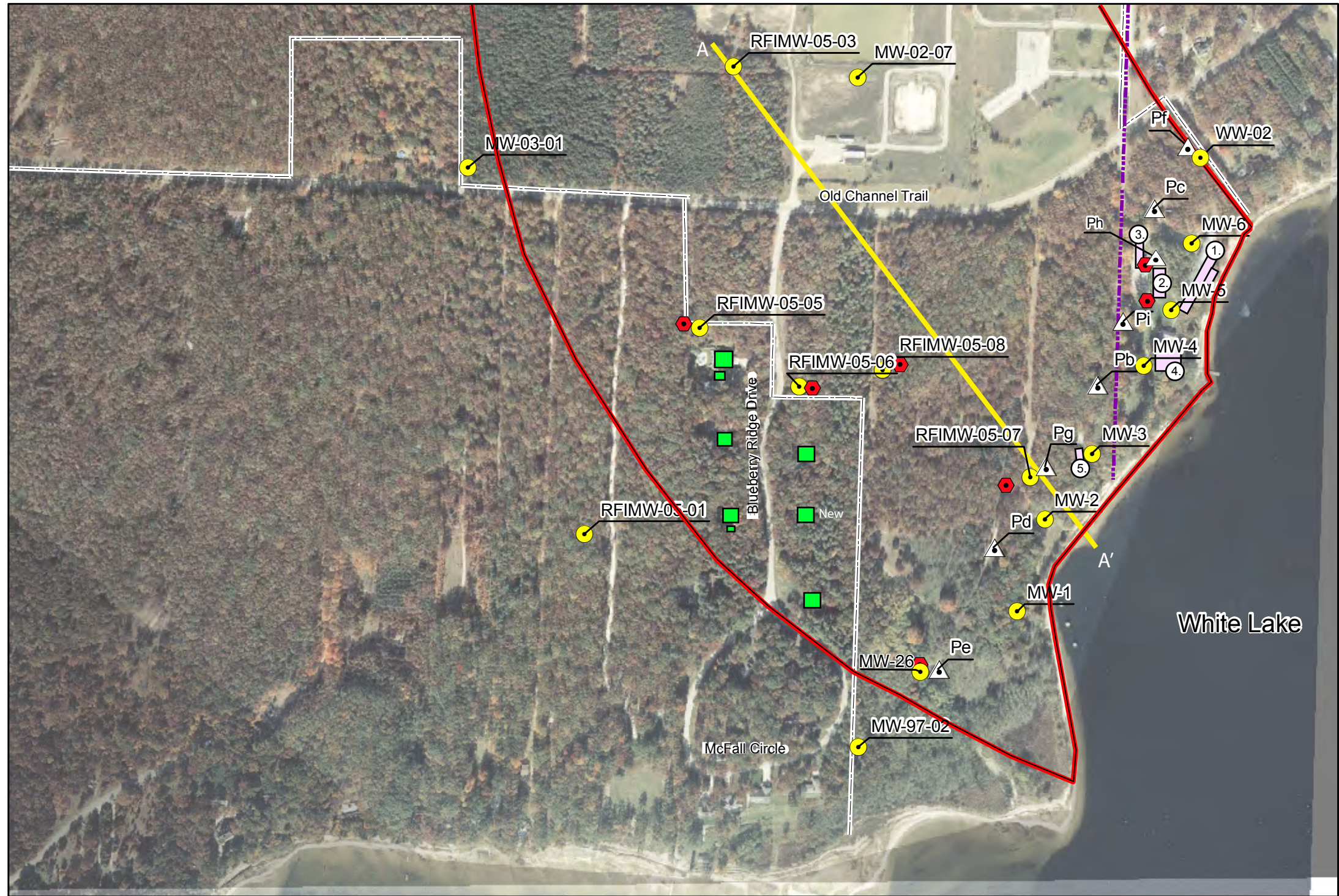
General Site Location Map
 Former Occidental Chemical Site
 Montague, MI

60143500

February 2011

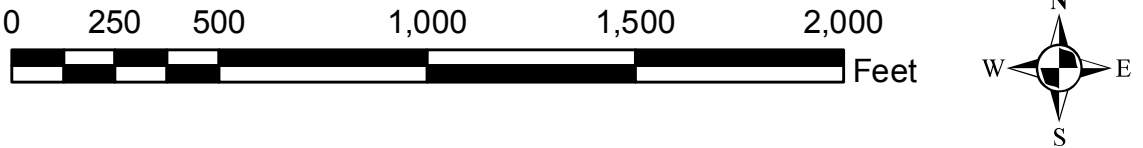
Creator: ENC040209
 CPP010311

QC: JT

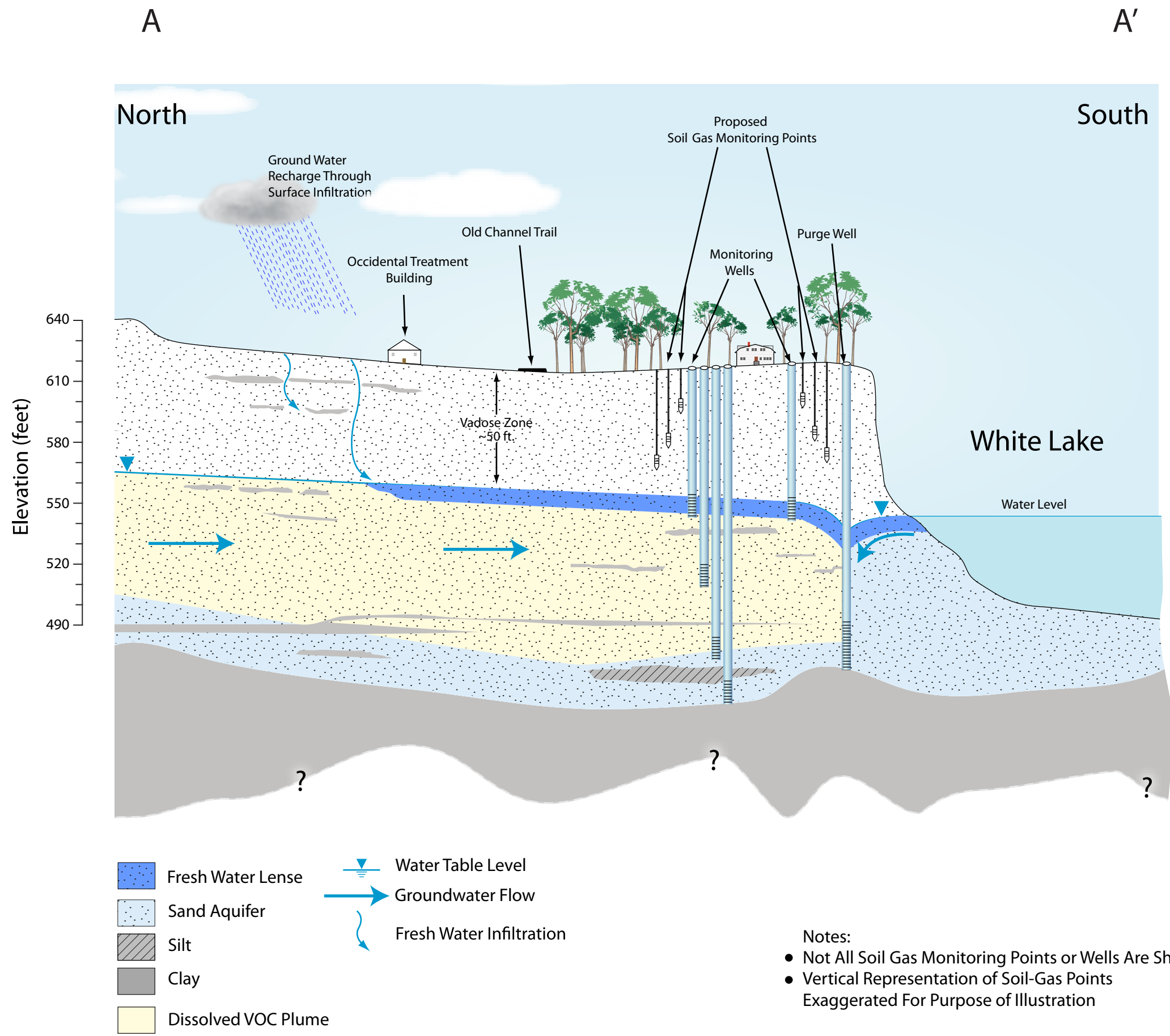


- MW-05-02 ● Monitoring Well
- Ph ▲ Purge Well
- Glenn Springs Holdings Property
- ◆ Proposed Shallow and Deep Soil Gas Monitoring Points
- - - - - Montague Township Boundary
- Impacted Groundwater
- Cross section Location
- Residential Building
- ▭ Occidental Buildings
- ① Recreation Hall
- ② Conference Building
- ③ 3 Bedroom Laundry Building
- ④ White House
- ⑤ Caretaker's House

Aerial Photo Source: Abrams Aerial Survey Corporation



AECOM	
5555 Glenwood Hills Parkway, SE Suite 200 Grand Rapids, MI 49512 (616) 942-9600	
DRAWN BY: C.Plank	DATE: February, 2011
CHECKED BY: BH	EDITED BY:
FILE NAME:	
FIGURE 2	
Area of Investigation Proposed Soil Gas Monitoring Point Locations	
Former Occidental Chemical Site Montague, MI	
PROJECT NUMBER	SCALE: As shown
60143500	As shown



- Fresh Water Lense
- Sand Aquifer
- Silt
- Clay
- Dissolved VOC Plume
- Water Table Level
- Groundwater Flow
- Fresh Water Infiltration

Notes:

- Not All Soil Gas Monitoring Points or Wells Are Shown
- Vertical Representation of Soil-Gas Points Exaggerated For Purpose of Illustration

AECOM	
5555 Glenwood Hills Parkway, SE Suite 200 Grand Rapids, MI 49512 (616) 942-9600	
DRAWN BY: M. Haworth/ C.Plank	DATE: February, 2011
CHECKED BY: BH	EDITED BY:
FILE NAME: Figure3.pdf	
FIGURE 3	
Conceptual Cross-Section Showing Placement of Soil Gas Monitoring Points	
Former Occidental Chemical Site Montague, MI	
PROJECT NUMBER	60143500
SCALE:	As shown

US EPA ARCHIVE DOCUMENT

Appendix A

Supplemental Groundwater Characterization Data Table (May 2005)

ANALYTICAL RESULTS SUMMARY
 PURGE & PLUME WELLS
 GLENN SPRINGS HOLDINGS, INC.
 MONTAGUE
 2004-2010

<i>Sample Location:</i>	MW-05-05	MW-05-05	MW-05-05	MW-05-06	
<i>Sample ID:</i>	WG-9970-051705-DB-RFIMW0505	WG-9970-BFB-0730009-RFIMW0505	GW-9970-042010-BW-RFIMW0505	WG-9970-051705-DB-RFIMW0506	
<i>Sample Date:</i>	5/17/2005	7/30/2009	4/20/2010	5/17/2005 (Duplicate)	
<i>Parameters</i>	<i>Units</i>				
<i>Volatile Organic Compounds</i>					
Carbon tetrachloride	ug/L	10 U	1.0 U	1.0 U	10 U
Chloroform (Trichloromethane)	ug/L	10 U	1.0 U	1.0 U	10 U
cis-1,2-Dichloroethene	ug/L	10 U	1.0 U	0.50 U	10 U
Tetrachloroethene	ug/L	5 J	1.0 U	1.0 U	10 U
trans-1,2-Dichloroethene	ug/L	10 U	1.0 U	0.50 U	10 U
Trichloroethene	ug/L	10 U	1.0 U	1.0 U	10 U
<i>Semi-volatile Organic Compounds</i>					
Hexachlorobutadiene	ug/L	10 U	0.010 U	0.010 U	10 U
Hexachlorocyclopentadiene	ug/L	10 U	0.010 U	0.010 U	3 J
Hexachloroethane	ug/L	10 U	0.011	1.0 U	10 U
Octachlorocyclopentene	ug/L	10 U	0.010 U	0.010 U	10 U

ANALYTICAL RESULTS SUMMARY
PURGE & PLUME WELLS
GLENN SPRINGS HOLDINGS, INC.
MONTAGUE
2004-2010

Sample Location:	MW-05-06	MW-05-06	MW-05-06	MW-05-07A	
Sample ID:	WG-9970-051705-DB-RFIMW0506	WG-9970-BFB-073009-RFIMW0506	GW-9970-042010-BW-RFIMW0506	WG-9970-051805-DB-RFIMW0507A	
Sample Date:	5/17/2005	7/30/2009	4/20/2010	5/18/2005	
Parameters	Units				
Volatile Organic Compounds					
Carbon tetrachloride	ug/L	10 U	1.0 U	1.0 U	12
Chloroform (Trichloromethane)	ug/L	10 U	1.0 U	1.0 U	10 U
cis-1,2-Dichloroethene	ug/L	10 U	1.0 U	0.50 U	10 U
Tetrachloroethene	ug/L	10 U	1.2	3.5	820 D
trans-1,2-Dichloroethene	ug/L	10 U	1.0 U	0.50 U	10 U
Trichloroethene	ug/L	10 U	1.0 U	1.0 U	3 J
Semi-volatile Organic Compounds					
Hexachlorobutadiene	ug/L	10 U	0.016	0.050 U	10 U
Hexachlorocyclopentadiene	ug/L	10 U	0.010 U	0.050 U	10 U
Hexachloroethane	ug/L	2 J	0.13	1.3	27
Octachlorocyclopentene	ug/L	10 U	0.010 U	0.050 U	10 U

ANALYTICAL RESULTS SUMMARY
 PURGE & PLUME WELLS
 GLENN SPRINGS HOLDINGS, INC.
 MONTAGUE
 2004-2010

<i>Sample Location:</i>	MW-05-07A	MW-05-07A	MW-05-07B	MW-05-07B	
<i>Sample ID:</i>	WG-9970-BFB-073009-RFIMW0507A	GW-9970-042010-BW-RFIMW0507A	WG-9970-051805-DB-RFIMW0507B	GW-9970-042010-BW-RFIMW0507B	
<i>Sample Date:</i>	7/30/2009	4/20/2010	5/18/2005	4/20/2010	
<i>Parameters</i>	<i>Units</i>				
<i>Volatile Organic Compounds</i>					
Carbon tetrachloride	ug/L	3.1	1.0 U	34	20 U
Chloroform (Trichloromethane)	ug/L	1.0 U	1.0 U	4 J	20 U
cis-1,2-Dichloroethene	ug/L	1.0 U	0.50 U	4 J	10 U
Tetrachloroethene	ug/L	310	64	4300 D	2500
trans-1,2-Dichloroethene	ug/L	1.0 U	0.50 U	10 U	10 U
Trichloroethene	ug/L	1.3	1.0 U	5 J	20 U
<i>Semi-volatile Organic Compounds</i>					
Hexachlorobutadiene	ug/L	2.2 U	0.50 U	10 U	10 U
Hexachlorocyclopentadiene	ug/L	2.2 U	0.50 U	10 U	10 U
Hexachloroethane	ug/L	48	11	160 D	320
Octachlorocyclopentene	ug/L	2.2 U	0.50 U	10 U	10 U

ANALYTICAL RESULTS SUMMARY
PURGE & PLUME WELLS
GLENN SPRINGS HOLDINGS, INC.
MONTAGUE
2004-2010

<i>Sample Location:</i>	MW-05-07C	MW-05-07C	MW-05-07D	MW-05-07D
<i>Sample ID:</i>	WG-9970-051805-DB-RFIMW0507C	GW-9970-042010-BW-RFIMW0507C	WG-9970-051805-DB-RFIMW0507D	GW-9970-042010-BW-Dup3
<i>Sample Date:</i>	5/18/2005	4/20/2010	5/18/2005	4/20/2010 (Duplicate)
<i>Parameters</i>	<i>Units</i>			
<i>Volatile Organic Compounds</i>				
Carbon tetrachloride	ug/L	200 DJ	75	10 U
Chloroform (Trichloromethane)	ug/L	90	20 U	2 J
cis-1,2-Dichloroethene	ug/L	10 U	10 U	10 U
Tetrachloroethene	ug/L	4600 D	1800	70
trans-1,2-Dichloroethene	ug/L	10 U	10 U	10 U
Trichloroethene	ug/L	9 J	20 U	10 U
<i>Semi-volatile Organic Compounds</i>				
Hexachlorobutadiene	ug/L	10 U	10 U	10 U
Hexachlorocyclopentadiene	ug/L	10 U	10 U	10 U
Hexachloroethane	ug/L	220 D	200	10 U
Octachlorocyclopentene	ug/L	10 U	10 U	10 U

ANALYTICAL RESULTS SUMMARY
PURGE & PLUME WELLS
GLENN SPRINGS HOLDINGS, INC.
MONTAGUE
2004-2010

<i>Sample Location:</i>	<i>MW-05-07D</i>	<i>MW-05-07E</i>	<i>MW-05-07E</i>	<i>MW-05-08A</i>
<i>Sample ID:</i>	GW-9970-042010-BW-RFIMW0507D	WG-9970-051805-DB-RFIMW0507E	GW-9970-042010-BW-RFIMW0507E	WG-9970-051805-DB-RFIMW0508A
<i>Sample Date:</i>	4/20/2010	5/18/2005	4/20/2010	5/18/2005 <i>(Duplicate)</i>
<i>Parameters</i>	<i>Units</i>			
<i>Volatile Organic Compounds</i>				
Carbon tetrachloride	ug/L	81	10 U	1.0 U
Chloroform (Trichloromethane)	ug/L	100	10 U	1.0 U
cis-1,2-Dichloroethene	ug/L	18	10 U	0.50 U
Tetrachloroethene	ug/L	3800	10 U	130
trans-1,2-Dichloroethene	ug/L	12 U	10 U	0.50 U
Trichloroethene	ug/L	120	10 U	1.1
<i>Semi-volatile Organic Compounds</i>				
Hexachlorobutadiene	ug/L	0.010 U	10 U	0.010 U
Hexachlorocyclopentadiene	ug/L	0.010 U	10 U	0.010 U
Hexachloroethane	ug/L	1.0 U	10 U	1.0 U
Octachlorocyclopentene	ug/L	0.010 U	10 U	0.010 U

ANALYTICAL RESULTS SUMMARY
PURGE & PLUME WELLS
GLENN SPRINGS HOLDINGS, INC.
MONTAGUE
2004-2010

<i>Sample Location:</i>	MW-05-08A	MW-05-08A	MW-05-08A	MW-05-08B	
<i>Sample ID:</i>	WG-9970-051805-DB-RFIMW0508A	WG-9970-BFB-073009-RFIMW0508A	GW-9970-042810-BW-RFIMW0508A	WG-9970-051805-DB-RFIMW0508B	
<i>Sample Date:</i>	5/18/2005	7/30/2009	4/28/2010	5/18/2005	
<i>Parameters</i>	<i>Units</i>				
<i>Volatile Organic Compounds</i>					
Carbon tetrachloride	ug/L	7 J	1.0	1.0 U	100 J
Chloroform (Trichloromethane)	ug/L	50 U	1.0 U	1.0 U	500 U
cis-1,2-Dichloroethene	ug/L	50 U	1.0 U	0.50 U	500 U
Tetrachloroethene	ug/L	480	54	39	8500
trans-1,2-Dichloroethene	ug/L	50 U	1.0 U	0.50 U	500 U
Trichloroethene	ug/L	50 U	1.0 U	1.0 U	500 U
<i>Semi-volatile Organic Compounds</i>					
Hexachlorobutadiene	ug/L	10 U	1.0 U	0.20 U	10 U
Hexachlorocyclopentadiene	ug/L	10 U	1.0 U	0.20 U	10 U
Hexachloroethane	ug/L	10	12	5.7	360 D
Octachlorocyclopentene	ug/L	10 U	1.0 U	0.20 U	10 U

ANALYTICAL RESULTS SUMMARY
PURGE & PLUME WELLS
GLENN SPRINGS HOLDINGS, INC.
MONTAGUE
2004-2010

<i>Sample Location:</i>	MW-05-08B	MW-05-08C	MW-05-08C	MW-05-08D	
<i>Sample ID:</i>	GW-9970-042910-BW-RFIMW0508B	WG-9970-051805-DB-RFIMW0508C	GW-9970-042910-BW-RFIMW0508C	WG-9970-051805-DB-RFIMW0508D	
<i>Sample Date:</i>	4/29/2010	5/18/2005	4/29/2010	5/18/2005	
<i>Parameters</i>	<i>Units</i>				
<i>Volatile Organic Compounds</i>					
Carbon tetrachloride	ug/L	100	16000	26000	28000
Chloroform (Trichloromethane)	ug/L	50 U	500 J	640	1000 J
cis-1,2-Dichloroethene	ug/L	25 U	4000 U	120 U	4000 U
Tetrachloroethene	ug/L	3700	34000	35000	44000
trans-1,2-Dichloroethene	ug/L	25 U	4000 U	120 U	4000 U
Trichloroethene	ug/L	50 U	4000 U	250 U	4000 U
<i>Semi-volatile Organic Compounds</i>					
Hexachlorobutadiene	ug/L	20 U	10 U	50 U	10 U
Hexachlorocyclopentadiene	ug/L	20 U	10 U	50 U	10 U
Hexachloroethane	ug/L	500	410 D	850	200 D
Octachlorocyclopentene	ug/L	20 U	10 U	50 U	10 U

ANALYTICAL RESULTS SUMMARY
PURGE & PLUME WELLS
GLENN SPRINGS HOLDINGS, INC.
MONTAGUE
2004-2010

<i>Sample Location:</i>	<i>MW-05-08D</i>	<i>MW-05-08E</i>	<i>MW-05-08E</i>	<i>Pe</i>	
<i>Sample ID:</i>	GW-9970-042910-BW-RFIMW0508D	WG-9970-051805-DB-RFIMW0508E	GW-9970-042910-BW-RFIMW0508E	WG-9970-CB-011404-PE	
<i>Sample Date:</i>	4/29/2010	5/18/2005	4/29/2010	1/14/2004	
<i>Parameters</i>	<i>Units</i>				
<i>Volatile Organic Compounds</i>					
Carbon tetrachloride	ug/L	30000	10 U	1.0 U	34
Chloroform (Trichloromethane)	ug/L	800	10 U	1.0 U	6.2
cis-1,2-Dichloroethene	ug/L	120 U	10 U	0.91	3.7
Tetrachloroethene	ug/L	42000	10 U	1.0 U	170
trans-1,2-Dichloroethene	ug/L	120 U	10 U	0.50 U	2.0 U
Trichloroethene	ug/L	360	10 U	1.0 U	5.5
<i>Semi-volatile Organic Compounds</i>					
Hexachlorobutadiene	ug/L	20 U	10 U	0.010 U	0.01 U
Hexachlorocyclopentadiene	ug/L	20 U	10 U	0.010 U	0.01 U
Hexachloroethane	ug/L	330	10 U	1.0 U	2.0 U
Octachlorocyclopentene	ug/L	20 U	10 U	0.010 U	0.01 U

ANALYTICAL RESULTS SUMMARY
 PURGE & PLUME WELLS
 GLENN SPRINGS HOLDINGS, INC.
 MONTAGUE
 2004-2010

<i>Sample Location:</i>	<i>Pe</i>	<i>Pe</i>	<i>Pe</i>	<i>Pe</i>	<i>Pe</i>	
<i>Sample ID:</i>	GW-9970-CB-041504-PE	GW-9970-CB-072304-PE	GW-9970-CB-102704-PE	WG-9970-CB-012805-PE	WG-9970-BFB-042705-PE	
<i>Sample Date:</i>	4/15/2004	7/23/2004	10/27/2004	1/27/2005	4/27/2005	
<i>Parameters</i>	<i>Units</i>					
<i>Volatile Organic Compounds</i>						
Carbon tetrachloride	ug/L	32	31	25	38	31
Chloroform (Trichloromethane)	ug/L	5.9	5.4	5.4	8.1	5
cis-1,2-Dichloroethene	ug/L	3.7	2.9	3.5	6.5	4
Tetrachloroethene	ug/L	180 D	170 D	190	260 D	190 D
trans-1,2-Dichloroethene	ug/L	1 U	1 U	1 U	1 U	1 U
Trichloroethene	ug/L	5.5	4.8	5.0	9.2	5
<i>Semi-volatile Organic Compounds</i>						
Hexachlorobutadiene	ug/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	ug/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	ug/L	0.31 D	0.32 D	0.45 D	0.34 D	0.49 D
Octachlorocyclopentene	ug/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U

ANALYTICAL RESULTS SUMMARY
 PURGE & PLUME WELLS
 GLENN SPRINGS HOLDINGS, INC.
 MONTAGUE
 2004-2010

<i>Sample Location:</i>	<i>Pe</i>	<i>Pe</i>	<i>Pe</i>	<i>Pe</i>	<i>Pe</i>	
<i>Sample ID:</i>	WG-9970-CB-072905-PE	WG-9970-CB-102505-PE	WG-9970-BFB-013106-PE	WG-9970-CB-042806-PE	WG-9970-BFB-072806-PE	
<i>Sample Date:</i>	7/29/2005	10/25/2005	1/31/2006	4/28/2006	7/28/2006	
<i>Parameters</i>	<i>Units</i>					
<i>Volatile Organic Compounds</i>						
Carbon tetrachloride	ug/L	35	29	29	28	30
Chloroform (Trichloromethane)	ug/L	4	5	4.3	4	5.3
cis-1,2-Dichloroethene	ug/L	4	6	6.1	6	8.3
Tetrachloroethene	ug/L	170	200	160	160	200
trans-1,2-Dichloroethene	ug/L	2 U	1 U	1 U	1 U	1 U
Trichloroethene	ug/L	4	7	6.3	7	6.6
<i>Semi-volatile Organic Compounds</i>						
Hexachlorobutadiene	ug/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	ug/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	ug/L	0.31 D	0.30 D	0.30 DP	0.43 D	0.27
Octachlorocyclopentene	ug/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U

ANALYTICAL RESULTS SUMMARY
PURGE & PLUME WELLS
GLENN SPRINGS HOLDINGS, INC.
MONTAGUE
2004-2010

<i>Sample Location:</i>	<i>Pe</i>	<i>Pe</i>	<i>Pe</i>	<i>Pe</i>	<i>Pe</i>	
<i>Sample ID:</i>	WG-9970-BFB-102706-PE	WG-9970-BFB-012907-PE	WG-9970-JAB-042507-PE	WG-9970-BFB-072507-PE	WG-9970-BFB-102307-PE	
<i>Sample Date:</i>	10/27/2006	1/29/2007	4/25/2007	7/25/2007	10/23/2007	
<i>Parameters</i>	<i>Units</i>					
<i>Volatile Organic Compounds</i>						
Carbon tetrachloride	ug/L	21	19	21	28	16
Chloroform (Trichloromethane)	ug/L	3.4	2	2.6	3.6	2.1
cis-1,2-Dichloroethene	ug/L	6.2	4	5.9	6.9	4.2
Tetrachloroethene	ug/L	170	140	190	250	130
trans-1,2-Dichloroethene	ug/L	1 U	1 U	1 U	1 U	1 U
Trichloroethene	ug/L	5.5	5	7.7	8.8	4.2
<i>Semi-volatile Organic Compounds</i>						
Hexachlorobutadiene	ug/L	0.010 U	0.010 U	0.010 U	0.012	0.010 U
Hexachlorocyclopentadiene	ug/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	ug/L	0.41	0.34	0.33	0.34	0.28
Octachlorocyclopentene	ug/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U

ANALYTICAL RESULTS SUMMARY
PURGE & PLUME WELLS
GLENN SPRINGS HOLDINGS, INC.
MONTAGUE
2004-2010

<i>Sample Location:</i>	<i>Pe</i>	<i>Pe</i>	<i>Pe</i>	<i>Pe</i>	<i>Pe</i>	
<i>Sample ID:</i>	WG-9970-BFB-012908-PE	WG-9970-JAB-042408-PE	WG-9970-JAB-072308-PE	WG-9970-BFB-103008-PE	WG-9970-BFB-012909-PE	
<i>Sample Date:</i>	1/29/2008	4/24/2008	7/23/2008	10/30/2008	1/29/2009	
<i>Parameters</i>	<i>Units</i>					
<i>Volatile Organic Compounds</i>						
Carbon tetrachloride	ug/L	28	19	28	18	15
Chloroform (Trichloromethane)	ug/L	5.0	3	2.6	2	2.4
cis-1,2-Dichloroethene	ug/L	6.7	7	4.4	5	5.8
Tetrachloroethene	ug/L	300	200	130	180	140
trans-1,2-Dichloroethene	ug/L	1 U	1 U	1 U	1 U	1.0 U
Trichloroethene	ug/L	7.2	7	4.9	6	5.0
<i>Semi-volatile Organic Compounds</i>						
Hexachlorobutadiene	ug/L	0.028	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	ug/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	ug/L	4.7	0.15	0.31	0.29	0.28
Octachlorocyclopentene	ug/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U

ANALYTICAL RESULTS SUMMARY
PURGE & PLUME WELLS
GLENN SPRINGS HOLDINGS, INC.
MONTAGUE
2004-2010

<i>Sample Location:</i>	<i>Pe</i>	<i>Pe</i>	<i>Pe</i>	<i>Pe</i>	<i>Pe</i>	
<i>Sample ID:</i>	WG-9970-BFB-043009-PE	WG-9970-BFB-072809-PE	WG-9970-BFB-103009-PE	GW-9970-BFB-012910-PE	WG-9970-BFB-042910-PE	
<i>Sample Date:</i>	4/30/2009	7/28/2009	10/30/2009	1/29/2010	4/29/2010	
<i>Parameters</i>	<i>Units</i>					
<i>Volatile Organic Compounds</i>						
Carbon tetrachloride	ug/L	15	5.7	14	11	11
Chloroform (Trichloromethane)	ug/L	1.8	1.1	1.6	1.4	1.4
cis-1,2-Dichloroethene	ug/L	5.8	2.5	5.2	4.2	4.9
Tetrachloroethene	ug/L	150	77	140	120	130
trans-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	ug/L	5.3	1.9	4.3	3.4	4.2
<i>Semi-volatile Organic Compounds</i>						
Hexachlorobutadiene	ug/L	0.010 U	0.012 U	0.020 U	0.010 U	0.020 U
Hexachlorocyclopentadiene	ug/L	0.010 U	0.012 U	0.020 U	0.010 U	0.020 U
Hexachloroethane	ug/L	0.32	0.012 U	0.39	0.30	0.32
Octachlorocyclopentene	ug/L	0.010 U	0.012 U	0.020 U	0.010 U	0.020 U

ANALYTICAL RESULTS SUMMARY
PURGE & PLUME WELLS
GLENN SPRINGS HOLDINGS, INC.
MONTAGUE
2004-2010

<i>Sample Location:</i>	<i>Pe</i>	<i>Pe</i>	<i>Ph</i>	<i>Ph</i>	<i>Ph</i>	
<i>Sample ID:</i>	WG-9970-BFB-073010-PE	WG-9970-BFB-102010-PE	WG-9970-CB-011404-PH	GW-9970-CB-041504-PH	GW-9970-CB-072304-PH	
<i>Sample Date:</i>	7/30/2010	10/20/2010	1/14/2004	4/15/2004	7/23/2004	
<i>Parameters</i>	<i>Units</i>					
<i>Volatile Organic Compounds</i>						
Carbon tetrachloride	ug/L	11	8.0	30	39	36
Chloroform (Trichloromethane)	ug/L	1.4	1.0 U	11	9.2	7.9
cis-1,2-Dichloroethene	ug/L	4.3	2.6	6.0 J	2.3	1.6
Tetrachloroethene	ug/L	120	98	490	450 D	440 D
trans-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	6.4 J	4.0	4.5
Trichloroethene	ug/L	5.5	2.4	25	23	17
<i>Semi-volatile Organic Compounds</i>						
Hexachlorobutadiene	ug/L	0.010 U	0.010 U	0.41 Y	0.70 D	0.15
Hexachlorocyclopentadiene	ug/L	0.010 U	0.010 U	0.09 Y	0.010 P	0.010 U
Hexachloroethane	ug/L	0.29	0.32	12	18 D	3.3 D
Octachlorocyclopentene	ug/L	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U

ANALYTICAL RESULTS SUMMARY
 PURGE & PLUME WELLS
 GLENN SPRINGS HOLDINGS, INC.
 MONTAGUE
 2004-2010

<i>Sample Location:</i>	<i>Ph</i>	<i>Ph</i>	<i>Ph</i>	<i>Ph</i>	<i>Ph</i>	
<i>Sample ID:</i>	GW-9970-CB-102704-PH	WG-9970-CB-012805-PH	WG-9970-BFB-042705-PH	WG-9970-CB-072905-PH	WG-9970-CB-102505-PH	
<i>Sample Date:</i>	10/27/2004	1/27/2005	4/27/2005	7/29/2005	10/25/2005	
<i>Parameters</i>	<i>Units</i>					
<i>Volatile Organic Compounds</i>						
Carbon tetrachloride	ug/L	25	41	29	35	30
Chloroform (Trichloromethane)	ug/L	7.3	13	7	7	8
cis-1,2-Dichloroethene	ug/L	1.8	3.7	2	5 U	2
Tetrachloroethene	ug/L	340 D	560 D	390 D	390	420 D
trans-1,2-Dichloroethene	ug/L	3.7	7.8	4	5 U	4
Trichloroethene	ug/L	16	29	16	12	18
<i>Semi-volatile Organic Compounds</i>						
Hexachlorobutadiene	ug/L	0.81 DP	1.2 D	0.89 D	0.78 DPJ	0.93 DP
Hexachlorocyclopentadiene	ug/L	0.010 U	0.021	0.010 U	0.010 U	0.010 U
Hexachloroethane	ug/L	23 D	22 D	23 D	16 D	16 D
Octachlorocyclopentene	ug/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U

ANALYTICAL RESULTS SUMMARY
PURGE & PLUME WELLS
GLENN SPRINGS HOLDINGS, INC.
MONTAGUE
2004-2010

<i>Sample Location:</i>	<i>Ph</i>	<i>Ph</i>	<i>Ph</i>	<i>Ph</i>	<i>Ph</i>	
<i>Sample ID:</i>	WG-9970-BFB-013106-PH	WG-9970-CB-042806-PH	WG-9970-BFB-072806-PH	WG-9970-BFB-102706-PH	WG-9970-BFB-012907-PH	
<i>Sample Date:</i>	1/31/2006	4/28/2006	7/28/2006	10/27/2006	1/29/2007	
<i>Parameters</i>	<i>Units</i>					
<i>Volatile Organic Compounds</i>						
Carbon tetrachloride	ug/L	30	32	38	31	27
Chloroform (Trichloromethane)	ug/L	7.6	9	11	8.8	5
cis-1,2-Dichloroethene	ug/L	2.5	3	3.6	3.4	2
Tetrachloroethene	ug/L	320 D	290 D	490	470	300
trans-1,2-Dichloroethene	ug/L	4.3	5	6.6	5.2	3
Trichloroethene	ug/L	1 U	17	15	15	13
<i>Semi-volatile Organic Compounds</i>						
Hexachlorobutadiene	ug/L	0.87 DP	1.2 U	1.2 U	2.5 U	1.0
Hexachlorocyclopentadiene	ug/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	ug/L	15 DP	15 D	17	27	13
Octachlorocyclopentene	ug/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U

ANALYTICAL RESULTS SUMMARY
 PURGE & PLUME WELLS
 GLENN SPRINGS HOLDINGS, INC.
 MONTAGUE
 2004-2010

<i>Sample Location:</i>	<i>Ph</i>	<i>Ph</i>	<i>Ph</i>	<i>Ph</i>	<i>Ph</i>	
<i>Sample ID:</i>	WG-9970-JAB-042507-PH	WG-9970-BFB-072507-PH	WG-9970-BFB-102307-PH	WG-9970-BFB-012908-PH	WG-9970-JAB-042408-PH	
<i>Sample Date:</i>	4/25/2007	7/25/2007	10/23/2007	1/29/2008	4/24/2008	
<i>Parameters</i>	<i>Units</i>					
<i>Volatile Organic Compounds</i>						
Carbon tetrachloride	ug/L	29	45	29	32	40
Chloroform (Trichloromethane)	ug/L	6.7	11	8.1	9.9	10
cis-1,2-Dichloroethene	ug/L	4.0	5.6	4.2	5.4	6
Tetrachloroethene	ug/L	440	530	330	490	530
trans-1,2-Dichloroethene	ug/L	5.4	6.6	4.8	5.7	5
Trichloroethene	ug/L	19	23	13	17	16
<i>Semi-volatile Organic Compounds</i>						
Hexachlorobutadiene	ug/L	1.2	2.5 U	1.4	0.90	2.5 U
Hexachlorocyclopentadiene	ug/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	ug/L	15	15	16	18	17
Octachlorocyclopentene	ug/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U

ANALYTICAL RESULTS SUMMARY
 PURGE & PLUME WELLS
 GLENN SPRINGS HOLDINGS, INC.
 MONTAGUE
 2004-2010

<i>Sample Location:</i>	<i>Ph</i>	<i>Ph</i>	<i>Ph</i>	<i>Ph</i>	<i>Ph</i>	
<i>Sample ID:</i>	WG-9970-JAB-072308-PH	WG-9970-BFB-103008-PH	WG-9970-BFB-012909-PH	WG-9970-BFB-043009-PH	WG-9970-BFB-072809-PH	
<i>Sample Date:</i>	7/23/2008	10/30/2008	1/29/2009	4/30/2009	7/28/2009	
<i>Parameters</i>	<i>Units</i>					
<i>Volatile Organic Compounds</i>						
Carbon tetrachloride	ug/L	56	26	34	25	24
Chloroform (Trichloromethane)	ug/L	8.8	8	8.3	6.0	7.0
cis-1,2-Dichloroethene	ug/L	3.4	4	5.0 U	5.0 U	5.0 U
Tetrachloroethene	ug/L	310	450	410	360	360
trans-1,2-Dichloroethene	ug/L	3.3	4	5.0 U	5.0 U	5.0 U
Trichloroethene	ug/L	11	14	12	9.4	7.8
<i>Semi-volatile Organic Compounds</i>						
Hexachlorobutadiene	ug/L	1.5	1.3 J	2.1	1.8	2.0
Hexachlorocyclopentadiene	ug/L	0.010 U	0.010 U	0.010 U	0.010 U	1.0 U
Hexachloroethane	ug/L	19	16	20	23	25
Octachlorocyclopentene	ug/L	0.010 U	0.010 U	0.010 U	0.010 U	1.0 U

ANALYTICAL RESULTS SUMMARY
PURGE & PLUME WELLS
GLENN SPRINGS HOLDINGS, INC.
MONTAGUE
2004-2010

<i>Sample Location:</i>	<i>Ph</i>	<i>Ph</i>	<i>Ph</i>	<i>Ph</i>	<i>Ph</i>	
<i>Sample ID:</i>	WG-9970-BFB-103009-PH	GW-9970-BFB-012910-PH	WG-9970-BFB-042910-PH	WG-9970-BFB-073010-PH	WG-9970-BFB-102010-PH	
<i>Sample Date:</i>	10/30/2009	1/29/2010	4/29/2010	7/30/2010	10/20/2010	
<i>Parameters</i>	<i>Units</i>					
<i>Volatile Organic Compounds</i>						
Carbon tetrachloride	ug/L	43	27	31	31	30
Chloroform (Trichloromethane)	ug/L	6.9	6.8	6.9	7.5	6.6
cis-1,2-Dichloroethene	ug/L	5.0 U	5.0 U	3.2	5.0 U	3.1
Tetrachloroethene	ug/L	420	330	400	450	350
trans-1,2-Dichloroethene	ug/L	5.0 U	5.0 U	2.8	5.0 U	2.5
Trichloroethene	ug/L	9.2	7.6	8.6	15	7.8
<i>Semi-volatile Organic Compounds</i>						
Hexachlorobutadiene	ug/L	1.8	1.9	1.6	1.4	1.7
Hexachlorocyclopentadiene	ug/L	1.0 U	1.0 U	0.50 U	0.50 U	0.010 U
Hexachloroethane	ug/L	25	20	15	15	19
Octachlorocyclopentene	ug/L	1.0 U	1.0 U	0.50 U	0.50 U	0.010 U

ANALYTICAL RESULTS SUMMARY
 PURGE & PLUME WELLS
 GLENN SPRINGS HOLDINGS, INC.
 MONTAGUE
 2004-2010

<i>Sample Location:</i>	<i>Pi</i>	<i>Pi</i>	<i>Pi</i>	<i>Pi</i>	<i>Pi</i>	
<i>Sample ID:</i>	WG-9970-CB-011404-PI	GW-9970-CB-041504-PI	GW-9970-CB-072304-PI	GW-9970-CB-102704-PI	GW-9970-CB-102704-PI	
<i>Sample Date:</i>	1/14/2004	4/15/2004	7/23/2004	10/27/2004	10/28/2004	
<i>Parameters</i>	<i>Units</i>					
<i>Volatile Organic Compounds</i>						
Carbon tetrachloride	ug/L	150	170	170	150	-
Chloroform (Trichloromethane)	ug/L	210	180 D	190	200	-
cis-1,2-Dichloroethene	ug/L	39	47	43	43	-
Tetrachloroethene	ug/L	1900	2000 D	1900 D	-	2400 D
trans-1,2-Dichloroethene	ug/L	25.0 U	2.2	3.3	3.2	-
Trichloroethene	ug/L	46	61	50	54	-
<i>Semi-volatile Organic Compounds</i>						
Hexachlorobutadiene	ug/L	0.30 Y	0.38 D	0.44 DP	-	1.1 DP
Hexachlorocyclopentadiene	ug/L	0.10 Y	0.010 U	0.032 P	0.010 P	-
Hexachloroethane	ug/L	22	32 DP	34 D	-	29 D
Octachlorocyclopentene	ug/L	0.01 U	0.010 U	0.010 U	0.010 U	-

ANALYTICAL RESULTS SUMMARY
PURGE & PLUME WELLS
GLENN SPRINGS HOLDINGS, INC.
MONTAGUE
2004-2010

<i>Sample Location:</i>		<i>Pi</i>	<i>Pi</i>	<i>Pi</i>	<i>Pi</i>	<i>Pi</i>
<i>Sample ID:</i>		WG-9970-CB-012805-PI	WG-9970-BFB-042705-PI	WG-9970-CB-072905-PI	WG-9970-CB-102505-PI	WG-9970-BFB-013106-PI
<i>Sample Date:</i>		1/27/2005	4/27/2005	7/29/2005	10/25/2005	1/31/2006
<i>Parameters</i>	<i>Units</i>					
<i>Volatile Organic Compounds</i>						
Carbon tetrachloride	ug/L	240 D	150	200	190 D	290 D
Chloroform (Trichloromethane)	ug/L	360 D	190	190	200 D	270 D
cis-1,2-Dichloroethene	ug/L	77	42	34	54	85
Tetrachloroethene	ug/L	3200 D	2300 D	2100	2300 D	2600 D
trans-1,2-Dichloroethene	ug/L	5.9	3	20 U	5	5.8
Trichloroethene	ug/L	80	52	35	67	77
<i>Semi-volatile Organic Compounds</i>						
Hexachlorobutadiene	ug/L	1.4 D	0.79 DP	1.5 DP	0.75 DP	1.2 DP
Hexachlorocyclopentadiene	ug/L	0.066	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	ug/L	37 D	39 D	38 D	25 D	38 DP
Octachlorocyclopentene	ug/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U

ANALYTICAL RESULTS SUMMARY
 PURGE & PLUME WELLS
 GLENN SPRINGS HOLDINGS, INC.
 MONTAGUE
 2004-2010

<i>Sample Location:</i>	<i>Pi</i>	<i>Pi</i>	<i>Pi</i>
<i>Sample ID:</i>	WG-9970-CB-042806-PI	WG-9970-BFB-072806-PI	WG-9970-BFB-102706-PI
<i>Sample Date:</i>	4/28/2006	7/28/2006	10/27/2006

<i>Parameters</i>	<i>Units</i>			
<i>Volatile Organic Compounds</i>				
Carbon tetrachloride	ug/L	310 D	320	180
Chloroform (Trichloromethane)	ug/L	320 D	290	200
cis-1,2-Dichloroethene	ug/L	62	87	74
Tetrachloroethene	ug/L	2500 D	2800	2000
trans-1,2-Dichloroethene	ug/L	4	5.6	5.2
Trichloroethene	ug/L	59	60	57
<i>Semi-volatile Organic Compounds</i>				
Hexachlorobutadiene	ug/L	2.0 U	2.5 U	2.5 U
Hexachlorocyclopentadiene	ug/L	0.010 U	0.010 U	0.010 U
Hexachloroethane	ug/L	30 D	33	40
Octachlorocyclopentene	ug/L	0.010 U	0.010 U	0.010 U

ANALYTICAL RESULTS SUMMARY
 PURGE & PLUME WELLS
 GLENN SPRINGS HOLDINGS, INC.
 MONTAGUE
 2004-2010

<i>Sample Location:</i>	<i>Pi</i>	<i>Pi</i>	<i>Pi</i>	<i>Pi</i>	<i>Pi</i>	
<i>Sample ID:</i>	WG-9970-BFB-012907-PI	WG-9970-JAB-042507-PI	WG-9970-BFB-072507-PI	WG-9970-BFB-102307-PI	WG-9970-BFB-012908-PI	
<i>Sample Date:</i>	1/29/2007	4/25/2007	7/25/2007	10/23/2007	1/29/2008	
<i>Parameters</i>	<i>Units</i>					
<i>Volatile Organic Compounds</i>						
Carbon tetrachloride	ug/L	190	240	230	170	190
Chloroform (Trichloromethane)	ug/L	130	160	200	170	220
cis-1,2-Dichloroethene	ug/L	46	65	70	66	78
Tetrachloroethene	ug/L	2100	2800	2700	1900	3300
trans-1,2-Dichloroethene	ug/L	3	4.5	20 U	4.3	4.2
Trichloroethene	ug/L	45	67	74	53	60
<i>Semi-volatile Organic Compounds</i>						
Hexachlorobutadiene	ug/L	1.9	3.1	5.0 U	1.7	2.2
Hexachlorocyclopentadiene	ug/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	ug/L	33	41	36	240	58
Octachlorocyclopentene	ug/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U

ANALYTICAL RESULTS SUMMARY
 PURGE & PLUME WELLS
 GLENN SPRINGS HOLDINGS, INC.
 MONTAGUE
 2004-2010

<i>Sample Location:</i>	<i>Pi</i>	<i>Pi</i>	<i>Pi</i>	<i>Pi</i>	<i>Pi</i>	
<i>Sample ID:</i>	WG-9970-JAB-042408-PI	WG-9970-JAB-072308-PI	WG-9970-BFB-103008-PI	WG-9970-BFB-012909-PI	WG-9970-BFB-043009-PI	
<i>Sample Date:</i>	4/24/2008	7/23/2008	10/30/2008	1/29/2009	4/30/2009	
<i>Parameters</i>	<i>Units</i>					
<i>Volatile Organic Compounds</i>						
Carbon tetrachloride	ug/L	210	280	190	160	190
Chloroform (Trichloromethane)	ug/L	180	200	160	140	150
cis-1,2-Dichloroethene	ug/L	65	58	67	56	60
Tetrachloroethene	ug/L	3100	1900	3000	2100	2200
trans-1,2-Dichloroethene	ug/L	3	3.2	4	25 U	25 U
Trichloroethene	ug/L	57	52	59	49	56
<i>Semi-volatile Organic Compounds</i>						
Hexachlorobutadiene	ug/L	0.92	2.7	2.7	3.5	1.1
Hexachlorocyclopentadiene	ug/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	ug/L	22	29	28	28	20
Octachlorocyclopentene	ug/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U

ANALYTICAL RESULTS SUMMARY
 PURGE & PLUME WELLS
 GLENN SPRINGS HOLDINGS, INC.
 MONTAGUE
 2004-2010

<i>Sample Location:</i>	<i>Pi</i>	<i>Pi</i>	<i>Pi</i>	<i>Pi</i>	<i>Pi</i>	
<i>Sample ID:</i>	WG-9970-BFB-072809-PI	WG-9970-BFB-103009-PI	GW-9970-BFB-012910-PI	WG-9970-BFB-042910-PI	WG-9970-BFB-073010-PI	
<i>Sample Date:</i>	7/28/2009	10/30/2009	1/29/2010	4/29/2010	7/30/2010	
<i>Parameters</i>	<i>Units</i>					
<i>Volatile Organic Compounds</i>						
Carbon tetrachloride	ug/L	190	290	190	250	190
Chloroform (Trichloromethane)	ug/L	160	160	140	140	130
cis-1,2-Dichloroethene	ug/L	49	60	46	53	51
Tetrachloroethene	ug/L	2400	2600	2200	2300	3100
trans-1,2-Dichloroethene	ug/L	25 U	25 U	25 U	3.6	25 U
Trichloroethene	ug/L	48	53	45	46	75
<i>Semi-volatile Organic Compounds</i>						
Hexachlorobutadiene	ug/L	3.1	2.5	4.1	3.8	4.4
Hexachlorocyclopentadiene	ug/L	1.0 U	2.2 U	1.0 U	1.0 U	1.0 U
Hexachloroethane	ug/L	30	25	31	25	27
Octachlorocyclopentene	ug/L	1.0 U	2.2 U	1.0 U	1.0 U	1.0 U

ANALYTICAL RESULTS SUMMARY
 PURGE & PLUME WELLS
 GLENN SPRINGS HOLDINGS, INC.
 MONTAGUE
 2004-2010

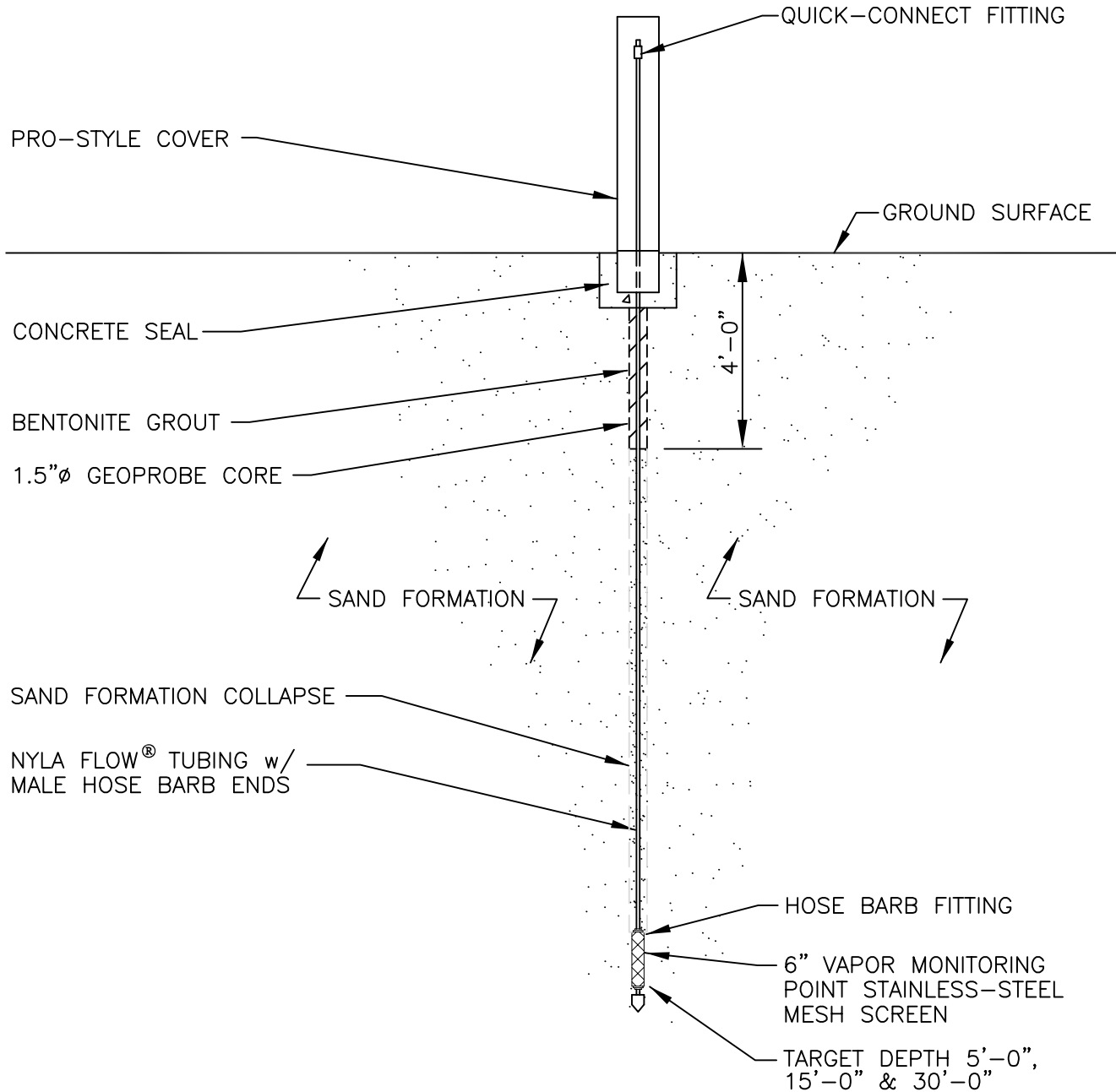
<i>Sample Location:</i>	<i>Pi</i>	<i>S</i>
<i>Sample ID:</i>	WG-9970-BFB-102010-PI	GW-9970-041910-BW-S
<i>Sample Date:</i>	10/20/2010	4/19/2010

<i>Parameters</i>	<i>Units</i>		
<i>Volatile Organic Compounds</i>			
Carbon tetrachloride	ug/L	130	1.0 U
Chloroform (Trichloromethane)	ug/L	110	1.0 U
cis-1,2-Dichloroethene	ug/L	42	0.50 U
Tetrachloroethene	ug/L	2100	87
trans-1,2-Dichloroethene	ug/L	2.7	0.50 U
Trichloroethene	ug/L	38	1.0 U
<i>Semi-volatile Organic Compounds</i>			
Hexachlorobutadiene	ug/L	30	0.50 U
Hexachlorocyclopentadiene	ug/L	4.5	0.50 U
Hexachloroethane	ug/L	0.40	13
Octachlorocyclopentene	ug/L	0.010 U	0.50 U

US EPA ARCHIVE DOCUMENT

Appendix B

Schematic of Soil Gas Monitoring Point



SOIL GAS MONITORING
POINT (SGMP)
SCHEMATIC

FORMER OCCIDENTAL SITE
MONTAGUE, MI

FILE NAME: 60143500F1c.dwg	DRN DPE	PROJECT NO. 60143500	DATE 02/2011	FIGURE NO. 1
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US EPA ARCHIVE DOCUMENT

Appendix C

Soil Gas Sampling Form

Soil-Gas Sampling Field Form

Location	Sample Name	Sample Type	Canister No.	Controller No.	Purge Time	Sample Time Start	Sample Time End	Initial Vacuum (Hg)	Final Vacuum (Hg)	Notes
GMP-01-S	2011-SGMP-01-S	SG	BC1530	4063	1137-1147 37 min					Weather: Rain.

Sampler Name: Joe Sampler
 Date: 5/25/2011
 Sample Methodology: 1-Liter Summa - TO-15
 Project Number: 12345.01
 Project Name: Montague Soil Gas Sampling
 Barometric Pressure: 29.88"Hg @1055; 1155 - 1350 29.96"Hg
 Ambient Temperature: 1055 - 62 F; 1155 67 F, 1355 - 71 F

Comments: 1. Canisters in Shipping Box B001.

Appendix D

Accutest Laboratories' Qualifications Package

CHAIN OF CUSTODY

Air Sampling Field Data Sheet



2235 US Highway 130, Dayton, NJ 08810
 V: 732.329.0200 F: 732.329.3499 www.accutest.com

FED-EX Tracking #	Bottle Order Control #
Lab Quote #	Lab Job #

Client / Reporting Information			Project Information			Weather Parameters			Requested Analysis		
Company Name			Project Name:			Temperature (Fahrenheit)					
Address			Street			Start: Maximum:					
City		State	City		State	Stop: Minimum:					
Project Contact			Project #			Atmospheric Pressure (inches of Hg)					
Phone #			Client Purchase Order #			Start: Maximum:					
						Stop: Minimum:					
Sampler(s) Name(s)						Other weather comment:					

Lab Sample #	Field ID / Point of Collection	Air Type	Sampling Equipment Info			Start Sampling Information					Stop Sampling Information				
		Indoor(I) Soil Vap(SV) Ambient(A)	Canister Serial #	Canister Size 6L or 1L	Flow Controller Serial #	Date	Time (24hr clock)	Canister Pressure ("Hg)	Interior Temp (F)	Sampler Init.	Date	Time (24hr clock)	Canister Pressure ("Hg)	Interior Temp (F)	Sampler Init.

Turnaround Time (Business days)		Data Deliverable Information		Comments / Remarks	
Standard - 15 Days 10 Day 5 Day 3 Day 2 Day 1 Day Other		Approved By: _____ Date: _____	All NJDEP TO-15 is mandatory Full T1 Comm A: _____ Comm B: _____ Reduced T2: _____ Full T1: _____ Other: _____		

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Laboratory: 1	Date Time:	Received By: 1	Relinquished By: 2	Date Time:	Received By: 2
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #		

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Lab Manager: _____

QA Manager: _____

Effective Date: 10/1/2010

Title: **Air Analysis by TO-15**

Reference: **TO-15**

Revised Sections: **Added text to 8.9; inserted new text to 9.14.1 & 12.2.1; re-ordered 9.14 & 12.2; and revised 11.7.1**

1.0 SCOPE AND APPLICATION

- 1.1 This method is for the analysis of volatile organics on whole ambient air samples collected in summa canisters. This procedure is applicable to all compounds listed under EPA method TO-15 as the cryofocusing technique can trap a wide range of polar and non-polar compounds.

2.0 METHOD SUMMARY

- 2.1 A whole air sample collected in a summa passivated canister or Restek "Silcoan", is concentrated by adsorption and cryofocusing and introduced into a GC/MS for target compound analysis.
- 2.2 The GC/MS is calibrated with a minimum 5 level curve with quantitation performed by internal standard technique. Standards are purchased as commercial certified gas standards and dynamically diluted into working calibration standards.
- 2.3 A nominal sample volume of 400cc is used and adjusted if necessary based on dilutions and/or canister pressurization. Air is drawn out of a canister and trapped on a glass bead trap, tenax trap and cryofocused prior to introduction into the GC/MS. The GC oven is temperature programmed to separate the compounds of interest with detection by a mass selective detector.
- 2.4 This method is applicable to the compounds listed on Table 5 which, are routinely calibrated.

3.0 REPORTING LIMIT AND METHOD DETECTION LIMIT

- 3.1 Reporting Limit. The reporting limit for this method is established at the low calibration standard used in the analysis. Detected concentrations below these reporting limits cannot be reported without qualification. Total volatiles based on total peak areas as calibrated to the total area of pentane or heptane have a reporting limit of 10ppbv. See Table 5.
- 3.2 Method Detection Limit Study. Experimentally determine MDLs using the procedure specified in 40 CFR, Part 136, Appendix B.

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- 3.2.1 Experimental MDLs must be determined annually for this method. The spike concentration must be at or below the reporting limit.
- 3.2.2 MDL studies are to be performed with volumes of spiked zero air that is routinely analyzed for live samples (i.e. 400cc).
- 3.2.3 Process all raw data for the replicate analysis in each MDL study. Forward the processed data to the QA group for archiving.

4.0 DEFINITIONS

CALIBRATION FACTOR (CF) - a measure of the gas chromatographic response of a target analyte to the mass injected. The calibration factor is analogous to the Relative Response Factor (RRF) used in the Volatile and Semivolatile fractions.

CONTINUING CALIBRATION - analytical standard run every 24 hours to verify the initial calibration of the system.

INITIAL CALIBRATION - analysis of analytical standards for a series of different specified concentrations; used to define the linearity and dynamic range of the response of the mass spectrometer to the target compounds.

MATRIX DUPLICATE - a second aliquot of the same matrix as the sample analyzed in order to determine the precision of the method.

METHOD BLANK - an analytical control consisting of all reagents, internal standards and surrogate standards (or SMC's for VOA), that is carried throughout the entire analytical procedure. The method blank is used to define the level of laboratory, background and reagent contamination.

METHOD DETECTION LIMIT (MDL) The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte. MDLs are determined approximately once per year for frequently analyzed parameters.

PERCENT DIFFERENCE (%D) - As used in this SOW and elsewhere to compare two values, the percent difference indicates both the direction and the magnitude of the comparison, i.e., the percent difference may be either negative, positive, or zero. (In contrast, see relative percent difference.)

RELATIVE PERCENT DIFFERENCE (RPD) - As used in this SOW and elsewhere to compare two values, the relative percent difference is based on the mean of the two values, and is reported as an absolute value, i.e., always expressed as a positive number or zero. (In contrast, see percent difference.)

REPORTING LIMIT (RL) - The reporting limit is established at either the method detection limit or the lowest concentration standard in the calibration curve, depending on the requirements of different specific regulatory programs. Detected concentration below this concentration cannot be reported without qualification.

ZERO AIR - Ultra purity grade commercially available compressed air. Contains less than 0.1ppm of hydrocarbons, 1ppm of carbon dioxide and carbon monoxide, and less than 5ppm moisture.

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5.0 HEALTH & SAFETY

- 5.1 The analyst must follow normal safety procedures as outlined in the Accutest Laboratory Safety Manual which includes the use of safety glasses and lab coats. In addition, all acids are corrosive and must be handled with care. Flush spills with plenty of water. If acids contact any part of the body, flush with water and contact the supervisor
- 5.2 The toxicity or carcinogenicity of each reagent used in this method has not been precisely determined; however, each chemical must be treated as a potential health hazard. Exposure to these reagents must be reduced to the lowest possible level. The laboratory is responsible for maintaining a current awareness file of OSHA regulations regarding the safe handling of the chemicals specified in this method. A reference file of data handling sheets must be made available to all personnel involved in these analyses.
- 5.3 The following analytes covered by this method have been tentatively classified as known or suspected human or mammalian carcinogens: benzene, carbon tetrachloride, chloroform, and vinyl chloride. Primary standards of these toxic compounds must be prepared in a hood. A NIOSH/Mass approved toxic gas respirator must be worn when the analyst handles high concentrations of these toxic compounds.
- 5.4 Releasing pressurized summa canisters must be performed under a ventilation hood.

6.0 HOLDING TIME & PRESERVATION

- 6.1 30 days for canisters from collection to analysis.
- 6.2 Summa Canisters are stored at ambient temperature.

7.0 INTERFERENCES

- 7.1 High CO₂ samples such as landfill gas may freeze and restrict flow on the traps causing reduced sample volume.
- 7.2 Common laboratory solvents such as methylene chloride, ethanol, hexane, iso-propanol, freon-113 and acetone may be detected at low level concentrations. The values qualified with a "B" if they are also detected in the method blank.

8.0 APPARATUS

- 8.1 Hewlett Packard 5890 series II GC with 5971 MSD,
- 8.2 Agilent 6890 GC with 5973 MSD.
- 8.3 Agilent 6890 GC with 5975 MSD
- 8.4 PC based Hewlett Packard Chemstation with Enviroquant software.

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- 8.5 Entech model 7016CA 16-position canister autosampler.
- 8.6 Entech model 7100 pre-concentrator.
- 8.7 30"Hg-30psig "NIST" traceable pressure/vac gauge, accurate to 0.25%, for sample receipt check and pressurization, if necessary.
- 8.8 1- Liter certified (as per SOP EAT002) "mini" canisters or silcocans evacuated to under 0.05mm Hg.
- 8.9 6- Liter certified (as per SOP EAT002) passivated summa canisters or silcocans evacuated to under 0.05mm Hg. A separate group must be maintained for method blank analysis
- 8.10 Passive flow controllers equipped with particulate filter – Entech CS1200 or equivalent
- 8.11 Flow controller critical orifices for varying sampling time ranges (see table 10).
- 8.12 Digital Flow Meter for flow controller calibration
- 8.13 Various gas tight syringes for standard and sample dilutions.
- 8.14 Various swagelok fittings.
- 8.15 Syringe adapters for summa canisters if manual injection or dilution needed.
- 8.16 Tedlar Bags – for secondary sample dilutions.

9.0 STANDARDS AND REAGENTS

The manufacturer brands listed may be substituted with equivalent standards. Refer to table 5 for a list of compounds in the TO-14 reporting list, TO-15 reporting list, and add-on compounds.

- 9.1 Spectra Gases certified internal/surrogate gas standard at the following concentrations.
 - Bromochloromethane 40ppbv
 - 1,4-Difluorobenzene 40ppbv
 - Chlorobenzene-d5 40ppbv
 - 4-bromofluorobenzene 20ppbv
- 9.2 Spectra Gases certified 1ppmv TO-15 stock gas standard.
- 9.3 Spectra Gases certified 1ppmv second source TO-15 stock gas standard (for LCS)
- 9.4 Spectra Gases 1ppmv Naphthalene gas standard with 3ppmv Bromoform as a stabilizer.
- 9.5 Absolute Standards 1000 ug/ml naphthalene standard in methanol.
- 9.6 Reagent grade organic free water.

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- 9.7 Air Gas brand Ultra Zero Grade air
- 9.8 Air Gas brand Ultra High Purity (UHP) helium
- 9.9 Air Gas liquid nitrogen Dewar
- 9.10 Standards dilution canister preparation
 - 9.10.1 All canisters must be certified and under full vacuum.
 - 9.10.2 Make sure sampling valve is closed. Using a wrench, remove the protective swagelok cap exposing the 1/4" threaded sampling port.
 - 9.10.3 Add 80ul of organic free reagent grade water into the threaded port of the evacuated 6-Liter canister and attach a syringe adaptor for standard introduction.
- 9.11 Stock gas standard preparation
 - 9.11.1 Place the stock gas standard cylinder of interest in or near the evacuation hood and attach syringe adaptor to gas regulator.
 - 9.11.2 Turn on stock standard valve and regulate delivery pressure to approximately 5psig and let purge for a few seconds.
 - 9.11.3 Attach gas tight standard syringe and draw a full volume to rinse. Expel contents under the hood and proceed to standard concentration of interest.
- 9.12 Calibration Standards
 - 9.12.1 **40ppbv routine compounds-**
 - 9.12.1.1 With a 500cc gas tight syringe, measure 400cc of the 1ppm stock standard.
 - 9.12.1.2 Attach the syringe to a prepared 6-Liter canister.
 - 9.12.1.3 Open the sampling valve and draw in the entire 400 cc.
 - 9.12.1.4 Close the valve and remove the syringe adaptor.
 - 9.12.1.5 Attach a zero air supply to the canister equipped with a fine metering regulator and a NIST vacuum/pressure gauge.
 - 9.12.1.6 Adjust the air pressure regulator to 9.8psig and slowly open the canister sampling valve only enough to hear the air draw but keeping a positive reading on the NIST gauge reading from dipping below 0 psig.
 - 9.12.1.7 The final pressure of 9.8psig equates to an actual volume of 10-liters in a 6-liter canister.
 - 9.12.1.8 Once the pressure equilibrates, first close the canister valve and then the air supply.

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- 9.12.1.9 Let standard equilibrate for 30 minutes prior to use.
- 9.12.2 **2ppbv routine compounds** -
 - 9.12.2.1 With a 500cc gas tight syringe, measure 500cc of the 40ppbv standard that is equipped with a syringe adaptor.
 - 9.12.2.2 Follow the remaining steps outlined in 9.12.1.2 through 9.12.1.9
- 9.12.3 **0.4ppbv routine compounds** -
 - 9.12.3.1 With a 500cc gas tight syringe, measure 100cc of the 40ppbv standard that is equipped with a syringe adaptor.
 - 9.12.3.2 Follow the remaining steps outlined in 9.12.1.2 through 9.12.1.9
- 9.12.4 **40ppbv Naphthalene standard** – Follow same procedure as 9.12.1 using the 1ppmv naphthalene stock standard.
- 9.12.5 **2.0 ppbv Naphthalene standard**
 - 9.12.5.1 With a 500cc gas tight syringe, measure 500cc of the 40ppbv naphthalene standard that is equipped with a syringe adaptor.
 - 9.12.5.2 Follow the remaining steps outlined in 9.12.1.2 through 9.12.1.9
- 9.13 Laboratory Control Standard (LCS)
 - 9.13.1 **40ppbv LCS standard**
 - 9.13.4.1 Follow the same procedure as 9.12.1 using the 1ppmv LCS stock standards.
 - 9.13.4.2 100cc of this standard is used for an equivalent 10ppbv LCS.
- 9.14 Method Blank
 - 9.14.1 A separate stock of canisters is maintained for use exclusively as method blanks. These canisters are not to be used for field sampling.
 - 9.14.2 Inject approximately 80ul of organic free reagent water into the threaded port of an evacuated 6-Liter canister. Do not open valve as the water will be drawn in when the zero air is attached.
 - 9.14.3 A 6 liter evacuated canister is filled and pressurized to approximately 15 psig with zero grade air.
- 9.15 Working Standards Storage Period
 - 9.15.2 Any working standards or LCS must not be used after 30 days from preparation or of the stock standard expiration date if this date is sooner. An expiration date of 30

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days after the preparation date must be documented on the standards tag and standards logbook.

10.0 SUMMA CANISTER HANDLING

10.1 Canister Cleaning and Certification – Refer to Accutest Laboratories SOP EAT002

10.2 Canister Shipping

10.2.1 Record prepared certified summa canister (Refer to SOP) and vacuum in canister logbook. Vacuum must be recorded to the nearest 0.2" hg Vacuum.

10.2.2 Grab samples are summa canisters without flow controllers taking about 20 seconds to fill.

10.3 Flow Controller Calibration

10.3.1 For integrated sampling, a canister must be equipped with a clean calibrated detachable flow controller.

10.3.2 Select and install the appropriate critical orifice (table 10) that corresponds to the desired sampling period.

10.3.3 The flow controller is calibrated by attaching it to a "practice" canister under vacuum and adjusting the flow control calibrator while measuring the flow in cc/min with a flow meter.

10.3.4 Slight vacuum (1 to 8"Hg) remains in the canister after sampling to indicate a consistent sampling event. Therefore the flow controller is calibrated at a rate not to completely fill the canister.

10.3.5 For a 24 hour sample, a flow of 3.8cc/min theoretically fills a 6-Liter canister with 5.47 liters of sample $(3.8\text{cc/min})(60\text{min})(24\text{ hr})$.

10.4 Canister Receipt

10.4.1 Upon receipt of the canister, the pressure or vacuum must be checked to ensure proper sampling was performed. If excessive vacuum ($>15"$ Hg) is measured the client is notified to inquire about the shortened sampling period and re-sampling.

10.4.2 The pressure or vacuum along with received date and lab sample number must be recorded in the canister logbook to the nearest 0.2 "hg vacuum or 0.2 psig if under positive pressure.

10.4.3 Canisters received at greater than or equal to 8" Hg vacuum, must be pressurized to ensure sample draw with the diaphragm pump.

10.4.4 Canisters pressurized upon receipt must not exceed 6.5 Liters total. Refer to the "Canister Pressurization Calculation" in table 6.

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10.4.5 If a flow controller was supplied, the flow must be verified upon receipt and recorded in the logbook.

10.5 Canister Shelf-life

10.5.1 Canisters that are shipped from the lab are no longer considered as being stored under controlled conditions. A 15 day period is the maximum allowed field holding period.

10.5.2 Canister tags are labeled with the "Field Expiration Date" in month/day/year format.

10.5.3 All canisters transferred out of controlled storage must be returned to the lab for recleaning and certification. This requirement applies to canisters that were not used for sampling, but were stored in an uncontrolled environment.

11.0 Calibration

11.1 Entech Autosampler/ Concentrator conditions

11.1.1 7016CA autosampler Valve: 100°C

11.1.2 Transfer Line: 80°C

11.1.3 7100 Concentrator

	<u>Internal</u>	<u>Standard</u>	<u>Sample</u>	<u>Sweep Gas</u>	<u>Transfer</u>
Preflush (sec)	5	2	15	5	-
Flow Rate (sccm)	100	150	150	100	15
Vol (cc/min)	100	varies	varies	75	40

Note: the mass flow controller may have a false reading in standby, as in 5 or 6. The trapping cc/min must be increased by this amount as per the manufacturer (100 must be set at 105 or 106 in this case).

	<u>Trap</u>	<u>Preheat</u>	<u>Desorb</u>	<u>Bake</u>
Module 1	-150 °C	20 °C	20 °C	150 °C/ 10 min
Module 2	-10 °C	no	180 °C	190 °C/ 3.5 min
Module 3	-150 °C	100 °C	4.5min	100 °C/ 3min

GC/MS Transfer line 100 °C

Total event cycle time 35 min

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11.2 GC Conditions

- 11.2.1 Hewlett Packard 5980 or Agilent 6890 gas chromatograph.
- 11.2.2 Column – Restek 60 meter RTX-1, 0.25mm id, 1.0 um film thickness.
- 11.2.3 Helium carrier gas at approx. 12psig column head pressure.
- 11.2.4 GC Temperatures:

Injection port	120 °C
Detector	280 °C
Oven	40 °C held for 5min 8 °C /min to 210 °C and held for 0.0min 25 °C/min to 260 °C and held for 3.0min
Total runtime	29.25 min
Electronic Pressure Control:	Constant Flow at 1.4cc/min
Purge Valve	Off at 1.00 min
- 11.2.5 Optimize GC conditions for compound separation and sensitivity. Baseline separation of benzene and carbon tetrachloride is an indication of acceptable chromatographic performance.

11.3 Mass Spectrometer Conditions

- 11.3.1 Hewlett Packard 5971, Agilent 5973, or Agilent 5975 MSD with linear quadrupole.
- 11.3.2 Scan from 35-300 amu every 1.0 seconds or less utilizing a 70 volt (nominal) electron energy in the electron impact ionization mode.
- 11.3.3 Set baseline noise threshold to 250 with a solvent delay of approximately 3.3 minutes or just before the elution of propylene.
- 11.3.4 Mass spectrum must meet all the criteria in Table 1 when injecting 100cc of 20ppbv 4-Bromofluorobenzene (BFB). This is equivalent to 5ppbv when considering a 400cc nominal volume.

11.4 Data System

- 11.4.1 A computer system containing the latest compatible version Hewlett Packard chemstation software interfaced to the mass spectrometer.
- 11.4.2 Set the data acquisition mode method to the conditions described in 12.3.

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The software performs continuous acquisition and storage on machine- readable media (disc) of all mass spectra obtained throughout the duration of the chromatographic program.

- 11.4.3 The data analysis mode method defines each compound retention time, characteristic ions (table 4), and calibration to identify and quantify each compound in the data file.
 - 11.4.4 The quantitation is performed by internal standard option using multi-point calibration and multipoint internal standards.
 - 11.4.5 The NIST mass spectral library (75,000 compounds) is used for non- target peak tentative identification.
- 11.5 Daily BFB system performance tuning.
- 11.5.1 The 40ppbv internal standard and 20ppbv surrogate is attached to the internal standard port of the Entech 7100 utilizing flushed 1/8" copper tubing.
 - 11.5.2 100cc of this standard is sampled which is equivalent to 5ppbv of BFB.
 - 11.5.3 The GC/MS and Entech concentrator conditions are the same as in section 11 with the sample amount and standard amount set to "0".
 - 11.5.4 Once the tune is complete, spectra of the background subtracted BFB peak must be checked to verify acceptable performance criteria are achieved (see Table 1).
 - 11.5.5 This performance test must be passed before any samples, blanks, or standards are analyzed.
 - 11.5.6 If all the criteria are not achieved, the analyst must retune the mass spectrometer and repeat the test until all criteria are met.
 - 11.5.7 The injection time of the acceptable tune analysis is considered the start of the 24-hour clock.
- 11.6 Initial Calibration
- 11.6.1 All volumes are calculated based on a nominal volume of 400cc.
 - 11.6.2 A multi-level calibration is performed utilizing 0.04, 0.1, 0.2, 0.5, 5, 10, 20, and 40 ppbv.
 - 11.6.2.1 The 0.2ppbv standard, with the exception of propylene and ethanol, must be part of the calibration curve to satisfy the reporting limits. The propylene and ethanol curves must contain the 0.5ppbv.
 - 11.6.2.2 Saturation may occur on some of the highly polar compounds (alcohols, 1,4-dioxane) that may require removing of the 40ppbv standard from the calibration curve in order to meet criteria.

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- 11.6.2.3 A minimum of 5 calibration points must be used for each compound.
- 11.6.2.4 A 0.04ppbv may be analyzed for limited projects and limited compounds upon client request.
- 11.6.3 The 0.4, 2.0 and 40ppbv calibration standards are attached to sample ports on the Entech 7100.
- 11.6.4 Considering a nominal volume of 400cc, volumes of 40cc and 100cc are sampled from the 0.4ppbv standard (9.12.3) for the 0.04 and 0.1 standards respectively. Volumes of 40cc and 100cc are sampled from the 2ppbv standard (9.12.2) for the 0.2 and 0.5, standards. Volumes of 50, 100, 200 and 400 are sampled from the 40ppbv standard (9.12.1) for the 5, 10, 20, and 40ppbv.
- 11.6.5 Internal standard/ surrogate- volume is 100cc of the stock standard (8.1) for all standards, samples and quality control resulting in a 10ppbv internal standard and 5ppbv surrogate standard concentration.
- 11.6.6 Detector Saturation - Occasionally, several compounds in higher concentration standards exhibit chromatographic peak saturation. Unsymmetrical peaks that initially appear to be symmetrical that exhibit a perpendicular drop to the baseline are characteristic of peak saturation. The apex of a saturated peak looks abnormal and may exhibit a plateau. Saturated chromatographic peaks must not be used in the calibration curve and must be eliminated from the calibration. This results in decreased concentration for the upper calibration range limit.
- 11.6.7 The Relative Response Factor (RRF) is calculated for each compound at every standard level.
- 11.6.8 Mean Relative Response Factor - Calculate the average of the values obtained at the five concentrations.
- 11.6.9 Percent Relative Standard Deviation (% RSD) is calculated for all calibration levels
- 11.6.10 Calculate the Relative Retention Time (RRT) for each target compound over the initial calibration range.
- 11.6.11 Mean Relative Retention Time- Calculate the mean of the relative retention times for each analyte target compound over the initial calibration range.
- 11.6.12 The following criteria must be met for the initial calibration to be valid.
 - 11.6.12.1 The percent relative standard deviation must be less than 30 %, with the exception of naphthalene.
 - 11.6.12.2 Up to two compounds may exceed 30% but must be less than 40% for a valid initial calibration, with the exception of naphthalene.

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- 11.6.12.3 The relative retention time for each target compound at each calibration level must be within 0.06 RRT units of the mean relative retention time for the compound.
- 11.6.12.4 The area response of each calibration level must be within 40% of the mean area response over the initial calibration range for each internal standard.
- 11.6.12.5 The retention time shift for each of the internal standards at each calibration level must be within 20 seconds (0.33 minutes) of the mean retention time over the initial calibration range for each internal standard.
- 11.6.12.6 If the acceptance criteria are not met due to peak saturation the high standard can be dropped for that compound, but a minimum of 5 standards must be used. This will lower the upper calibration range and may require additional dilutions. If a particular standard(s) are the cause of the failure, rerun that standard(s) one time only. If this fails then the calibration curve must be rerun.

11.7 Continuing calibration

- 11.7.1 A continuing calibration check standard is analyzed at 10ppbv, which is equivalent to 100cc of the 40ppbv standard. Calibration checks must be acquired every 24 hrs.
- 11.7.2 A 10ppbv naphthalene standard is analyzed every 24 hours when samples are requested for naphthalene. A 10ppbv standard is equivalent to 100cc of the 40ppbv naphthalene standard.
- 11.7.3 The percent difference (%D) for all continuing calibration compounds must be less than 30%.
- 11.7.4 If the continuing calibration check fails to meet the criteria, it is repeated one time. If it fails a second time a new initial calibration must be performed.

12.0 SAMPLE ANALYSIS

12.1 Internal Standard

- 12.1.1 100 cc of the internal/ surrogate standard is equivalent to 10ppbv that is added to all standards, samples and QC.
- 12.1.2 If any of the internal standard areas change by greater than +/-40% or retention time changes by more than 0.33 minutes from the last daily calibration check standard the mass spectrometer must be inspected for malfunctions and corrections be made, as appropriate.

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12.2 Method Blank

- 12.2.1 A separate stock of canisters is maintained for use exclusively as method blanks. These canisters are not to be used for field sampling.
- 12.2.2 To monitor for possible laboratory contamination, laboratory method blanks are analyzed at least once in a 24-hour analytical sequence. All steps in the analytical procedure are performed on the blank
- 12.2.3 A volume of 400cc is sampled from the method blank as prepared in 10.5. This volume is the most dilution air that could be added to any sample to verify the dilution air source along with the procedure is non-detect for all compounds.
- 12.2.4 Method blanks are analyzed and evaluated before any samples can be run and must be less than the MDL for all target compounds. The surrogate must meet the acceptance criteria in table 3. Occasionally, lab background such as isopropanol cannot be fully eliminated and is flagged appropriately in any samples
- 12.2.5 If the method blank fails to meet these criteria the source of contamination must be determined and the method blank be rerun before any samples are run.

12.3 Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCSD). An external source standard.

- 12.3.1 Laboratory Control Standard (LCS) is prepared to contain 40ppbv each analyte from a source other than the calibration standard. 100 cc of the LCS is sampled in duplicate (LCSD) for a 10ppbv.
- 12.3.2 Percent recoveries (% R) (see section 14.2) must fall within 70-130%. All of the compounds must be within acceptable ranges with one exception. The LCS is acceptable if a few compounds have a bias high recovery as long as no hits are reported in associated samples.
- 12.3.3 Relative Percent Difference (RPD) (see section 14.3) must be less than or equal to 30%. All of the compounds reported as target compounds must be within acceptable ranges.
- 12.3.4 If laboratory control samples do not meet criteria, calculations are checked. A new LCS must be prepared and analyzed and possibly a new calibration if the problem isn't rectified.

12.4 Sample analysis – General

- 12.4.1 Unknown samples are screened by the TO-3/PID/FID system or a GC/MS system dedicated to screening.
- 12.4.2 A sample volume of 400cc at ambient temperature and pressure is standard for analysis to achieve the reporting limits required. Smaller sample amounts down to 20 cc can be sampled accurately with the concentrators mass flow controller.

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- 12.4.3 Sample volumes are adjusted accordingly (table 6) when canisters are received with excess vacuum and require dilution air (8.7) in order for the concentrator to draw an accurate volume.
 - 12.4.4 Samples requiring further dilution beyond the minimum 20cc (greater than 20X) that can be sampled from the primary sample canister are prepared as secondary dilutions in additional canisters or tedlar bags. This practice is commonly used for soil vapor samples.
 - 12.4.5 Secondary dilution information is recorded in the secondary dilution log (table 7).
- 12.5 Summa canister sample analysis
- 12.5.1 Check canister pressure and document upon laboratory receipt.
 - 12.5.2 The canister is pressurized upon receipt if excessive vacuum remains at receipt (≥ 8 "Hg). If the canister is pressurized, the sampling volume must be adjusted to compensate for the dilution. Refer to the "Canister Pressurization Calculation" in table 6.
- 12.6 Sample Dilution
- 12.6.1 Less sample volume can be designated by the concentrator software down to 20cc. With normal volume being 400cc, this would result in a 1:20 dilution. Further dilutions require a dilution into a secondary vessel.
 - 12.6.2 To manually draw a volume out of a canister, positive canister pressure is required.
 - 12.6.3 To perform a secondary dilution, the canister vacuum at the time must be recorded. This vacuum varies from the received vacuum if sample has already been drawn.
 - 12.6.4 Record the vacuum in the "Canister Secondary Dilution" log. Refer to table 7.
 - 12.6.5 When pressurizing the canister for a manual sample draw, the volume of a 6-Liter canister must not exceed 6.5-Liters. Refer to Table 8 for the proper pressurization.
 - 12.6.6 A measured volume of the newly pressurized original canister is drawn out with a gas-tight syringe and introduced into a secondary vessel (6-Liter, 1-Liter canister or 1-Liter tedlar bag). The secondary vessel is diluted with zero grade air.
 - 12.6.7 The final sample dilution factor (DF) is calculated by (original canister dilution factor) x (secondary vessel dilution factor) x (instrument dilution factor). The instrument dilution factor is the nominal volume of 400cc/ amount of sample introduced by the auto sampler. An example calculation of a final sample multiplier is as follows;
 - 12.6.7.1.1 Original canister is pressurized to a factor of 1.2
 - 12.6.7.1.2 The amount introduced to the dilution vessel results in an additional factor of 10

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12.6.7.1.3 The autosampler introduces 40cc from the secondary vessel for an additional factor of $400/40 = 10$

12.6.7.1.4 Final sample multiplier = $1.2 \times 10 \times 10 = 120$

13.0 QUALITY CONTROL

QC Requirements Summary:

BFB.	Every 24 hrs.
Calibration Check std.	Every 24 hrs.
Batch blank	Every 24 hrs.
Matrix Duplicate	one per 20 samples
Lab Control Sample (LCS)	one per 20 samples
Lab Control Dup. (LCSD)	one per 20 samples
Surrogate	every sample and standard.
Internal Standard	every sample and standard.

13.1 Daily GC/MS Performance Check - refer to section 11.5.

13.2 Initial Calibration - Refer to section 11.6.

13.3 Continuing Calibration Check - refer to section 11.7.

13.4 Method Blank (zero grade air) at 400 cc - refer to section 12.2.

13.5 Laboratory Control Sample (LCS) - refer to section 12.3.

13.6 Matrix Duplicate.

13.6.1 One sample is selected at random. Calculate the Relative Percent Difference for all hits.

13.6.2 Evaluate the RPD's versus the limits in LIMS. If the RPD does not meet the limits, matrix interference is suspected. No further action is required.

13.7 Surrogate

13.7.1 All blanks, samples, and matrix spikes contain surrogate compounds that are used to monitor method performance. All samples are spiked with 100cc of the internal/surrogate standard that is equivalent to 5ppbv of 4-Bromofluorobenzene.

13.7.2 If the % recovery of 4-Bromofluorobenzene does not meet the control limits specified in Table 3, the recovery must be flagged and:

13.7.2.1 The calculation must be checked.

13.7.2.2 The sample must be reanalyzed to verify recovery of the surrogate is out of control limits due to apparent matrix interference.

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- 13.7.3 If surrogate recoveries are acceptable upon reanalysis, the data from the reanalysis is reported. If the reanalysis date did not meet the hold time, then both sets of data are submitted with the reanalysis reported.
- 13.7.4 If surrogates are still outside control limits upon reanalysis, then both sets of data must be submitted for confirmation with the first analysis reported.
- 13.7.5 Note: As database records become available, method accuracy is assessed by calculating average percent recovery (AVE %R) and the standard deviation (SD) of recovery to express control limits as AVE %R +/- 3SD.
- 13.8 Internal Standard.
- 13.8.1 Retention time for all internal standards must be within ± 0.33 minutes (20 seconds) of the corresponding internal standard in the latest continuing calibration or 10ppbv standard of initial calibration.
- 13.8.2 The area (Extracted Ion Current Profile) of the internal standard in all analyses must be within +/-40 % of the corresponding area in the latest calibration standard (24 hr. time period).
- 13.8.3 If area of internal standard does not meet control limits, the calculations must be checked. If a problem is not discovered, the sample must be reanalyzed at the same concentration unless matrix interferences are visibly present in the chromatogram, then a smaller volume is analyzed.
- 13.8.4 If areas are acceptable upon reanalysis, the reanalysis data is reported.
- 13.8.5 If areas are unacceptable upon reanalysis, then both sets of data are submitted with the original analysis reported.

14.0 CALCULATIONS

14.1 Concentration (Conc.)

$$C_x = \frac{A_x C_s DF}{A_s \overline{RRF}}$$

where: C_x = Compound concentration, ppbv.

A_x = Area of the characteristic ion for the compound to be measured, counts.

A_s = Area of the characteristic ion for the specific internal standard, counts.

C_s = Concentration of the internal standard spiking mixture, ppbv

\overline{RRF} = Mean relative response factor from the initial calibration.

DF is the dilution factor as described in 12.6.7

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14.2 Percent Recovery (% R)

$$\% R = \frac{\text{Concentration found}}{\text{Concentration spiked}} \times 100$$

14.3 Relative Percent Difference (RPD)

$$RPD = \frac{|SC - SDC|}{(1/2)(SC + SDC)} \times 100$$

Where: SC = Sample Concentration
SDC = Sample Duplicate Concentration

14.4 Relative response factor (RRF)

$$RRF = \frac{A_s \times C_{is}}{A_{is} \times C_s}$$

Where: A_s = Area of the characteristic ion for the compound being measured.
 A_{is} = Area of the characteristic ion for the specific internal standard.
 C_s = Concentration of the compound being measured (ppbv).
 C_{is} = Concentration of the specific internal standard (ppbv).

14.5 Mean Relative Response Factor

$$\overline{RRF} = \sum_{i=1}^n \frac{x_i}{n}$$

where:

\overline{RRF} = Mean relative response factor.

x_i = RRF of the compound at concentration i .

n = Number of concentration values, (5 to 7 points in curve).

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14.6 Percent relative Standard Deviation (%RSD)

$$\%RSD = \frac{SD_{RRF}}{\overline{RRF}} \times 100$$

and

$$SD_{RRF} = \sqrt{\frac{\sum_{i=1}^N (RRF_i - \overline{RRF})^2}{N - 1}}$$

where: SD_{RRF} = Standard deviation of initial response factors (per compound).
 RRF_i = Relative response factor at a concentration level i .
 \overline{RRF} = Mean of initial relative response factors (per compound).

14.7 Relative Retention Time (RRT)

$$RRT = \frac{RT_c}{RT_{is}}$$

where: RT_c = Retention time of the target compound, seconds
 RT_{is} = Retention time of the internal standard, seconds.

14.8 Mean Relative Retention Time

$$\overline{RRT} = \frac{\sum_{i=1}^n RRT}{n}$$

where: \overline{RRT} = Mean relative retention time for the target compound for each initial calibration standard.
 RRT = Relative retention time for the target compound at each calibration level.

14.9 Percent Difference (%D)

$$\%D = \frac{RRF_c - \overline{RRF}_i}{\overline{RRF}_i} \times 100$$

where: RRF_c = RRF of the compound in the continuing calibration standard.
 \overline{RRF}_i = Mean RRF of the compound in the most recent initial calibration.

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15.0 DOCUMENTATION

- 15.1 The Analytical Logbooks records the analysis sequence; the logbook must be completed daily. Each instrument has a separate logbook.
 - 15.1.1 If samples require reanalysis, a brief explanation of the reason must be documented in the comment section.
- 15.2 The Standards Preparation Logbook must be completed for all standard preparations. All information must be completed. The page must be signed and dated by the appropriate person.
 - 15.2.1 The Accutest lot number must be cross-referenced on the standard canister.
- 15.3 Instrument Maintenance Logbook must be completed when any type of maintenance is performed on the instrument. Each instrument has a separate log.
- 15.4 Canister Shipping and Receiving Logbook must be completed.

16.0 DATA REVIEW & INTERPRETATION

- 16.1 Qualitative identification
 - 16.1.1 Analyst shall identify the targeted compounds by comparison of the sample mass spectrum to the mass spectrum of a standard of the suspected compound. The criteria required for a positive identification are:
 - 16.1.2 The sample component must elute at the same relative retention time (RRT) as the daily standard. Criteria are the RRT of sample component must be within ± 0.06 RRT units of the standard.
 - 16.1.3 All ions present in the standard mass spectra at a relative intensity greater than 10 % (major abundant ion in the spectrum equals 100 %) must be present in the sample spectrum.
 - 16.1.4 The relative intensities of these ions must agree within ± 30 % between the daily standard and sample spectra. (Example: For an ion with an abundance of 50 % in the standard spectra, the corresponding sample abundance must be between 20 and 80 %. Matrix interferences may skew ion ratios where criteria are exceeded. In this case, analyst's judgment with supervisor's approval is required.
 - 16.1.5 Structural isomers (dichlorobenzenes, trimethylbenzenes, and o-xylene) that produce very similar mass spectra are identified as individual isomers if they have sufficiently different GC retention times. Sufficient GC resolution is achieved if the height of the valley between two isomer peaks is less than 25 % of sum of the two peak heights. Otherwise, structural isomers are identified as isomeric pairs (m,p-xylene).

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16.2 Quantitative analysis

- 16.2.1 When a target compound has been identified, concentration (see section 16.1) is based on the integrated area of the primary quantitation ion (see Table 4).
- 16.2.2 If the sample produces interference for the primary ion, use a secondary ion to quantitate (see Table 4). This is characterized by an excessive background signal of the same ion, which distorts the peak shape beyond a definitive integration. Also interference could severely inhibit the response of the internal standard ion. If a secondary ion is used for quantitation, new calibration response factors must be generated for this secondary ion.

16.3 Library search for tentatively identified compounds.

If a library search is requested, the analyst performs a forward library search of NIST mass spectral library to tentatively identify 15 non-reported compounds. Guidelines for making tentative identification are listed below.

- 16.3.1 These compounds must have a response greater than 10 % of the nearest internal standard. The response is obtained from the integration for peak area of the Total Ion Chromatogram (TIC).
- 16.3.2 The search is to include a spectral printout of the 3 best library matches for a particular substance. The results are to be interpreted by analyst.
- 16.3.3 Molecular ions present in the reference spectrum must be present in the sample spectrum.
- 16.3.4 Relative intensities of major ions in the reference spectrum (ions > 10 % of the most abundant ion) must be present in the sample spectrum.
- 16.3.5 The relative intensities the major ions must agree within ± 20 %.
- 16.3.6 Ions present in the sample spectrum but not in the reference spectrum are reviewed for possible background contamination or presence of co-eluting compounds.
- 16.3.7 Ions present in the reference spectrum but not in the sample spectrum are verified by performing further manual background subtraction to eliminate the interference created by co-eluting peaks and/or matrix interference.
- 16.3.8 Quantitation of the tentatively identified compounds is obtained from the total ion chromatogram based on a response factor of 1 and is to be tabulated on the library search summary data sheet.
- 16.3.9 Quantitation is performed on the nearest internal standard.

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17.0 POLLUTION PREVENTION & WASTE MANAGEMENT

- 17.1 Users of this method must perform all procedural steps in a manner that controls the creation and/or escape of wastes or hazardous materials to the environment. The amounts of standards, reagents, and solvents must be limited to the amounts specified in this SOP. All safety practices designed to limit the escape of vapors, liquids or solids to the environment must be followed. All method users must be familiar with the waste management practices described in section 17.2.

- 17.2 Waste Management. All laboratory waste must be managed, accumulated, and disposed in accordance with all federal or state laws and regulations. Individuals performing this method must follow established waste management procedures as described in the waste management SOP, EHS004. This document describes the proper disposal of all waste materials generated during the testing of samples as follows:
 - 17.2.1 Non hazardous aqueous wastes.
 - 17.2.2 Hazardous aqueous wastes
 - 17.2.3 Chlorinated organic solvents
 - 17.2.4 Non-chlorinated organic solvents
 - 17.2.5 Hazardous solid wastes
 - 17.2.6 Non-hazardous solid wastes

18.0 METHOD and other SOP REFERENCES

- 18.1 USEPA METHOD TO-15, 2nd edition, 03/18/1999 "Methods for the Determination of Toxic Organic Compounds in Air"
- 18.2 Accutest SOP EAT002 – "Canister Cleaning and Certification SOP"

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Table 1

BFB KEY IONS AND ION ABUNDANCE CRITERIA

Mass	Ion Abundance Criteria
50	8-40% of mass 95
75	30-66% of mass 95
95	Base peak, 100% relative abundance
96	5-9% of mass 95
173	< 2% of mass 174
174	> 50% and <120% of mass 95
175	4-9% of mass 174
176	>93% and <101% of mass 174
177	5-9% of mass 176

Table 2

INTERNAL STANDARD IONS

Internal Standard	Prim/Sec. Ions
Bromochloromethane	128 / 49, 130, 51
1,4-Difluorobenzene	114 / 63,88
Chlorobenzene-d5	117 / 82, 119

Table 3

SURROGATE CONTROL LIMITS

Compound	(Prim/Sec. ions)	% Recovery
4-Bromofluorobenzene	(95 / 174, 176)	78-124

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Table 4

TARGET COMPOUND IONS

Analyte	Primary Characteristic Ion	Secondary Characteristic Ion (s)
Acetone	58	43
Benzene	78	77, 52
Benzyl chloride	91	126, 65
1,3-Butadiene	39	54, 53
Bromodichloromethane	83	85, 122
Bromoform	173	175, 254
Bromoethene (1)	106	108, 81
Bromomethane	94	96, 95
Carbon disulfide	76	78, 44
Carbon tetrachloride	117	119, 121
Chlorobenzene	112	77, 114
Cyclohexane	84	56, 69
Chloroethane	64	66, 49
Chloroform	83	85, 47
Chloromethane	50	52, 32
3-Chloropropene (1)	76	41, 39, 78
2-Chlorotoluene	91	126, 63
Dibromochloromethane	129	127, 31
1,2-Dibromoethane	107	109, 88
1,2-Dichlorobenzene	146	111, 148
1,3-Dichlorobenzene	146	111, 148
1,4-Dichlorobenzene	146	111, 148
Dichlorodifluoromethane	85	87, 50
1,1-Dichlorethane	63	65, 83
1,2-Dichloroethane	62	64, 98
1,1-Dichloroethene	96	61, 63
cis-1,2-Dichloroethene	96	61, 98
Trans-1,2-Dichloroethene	96	61, 98
1,2-Dichloropropane	63	65
1,4-Dioxane	88	57, 58, 43
cis-1,3-Dichloropropene	75	77, 39
Trans-1,3-Dichloropropene	75	77, 39
Ethanol	45	46, 42
Ethyl Acetate	43	61, 88
4-Ethyltoluene	105	120, 91
Ethylbenzene	91	106, 77
Freon 113 (1)	151	101, 103
Freon 114 (1)	85	135, 87
Hexachlorobutadiene	225	223, 227
Heptane	43	71, 57
Hexane	57	47, 41

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Table 4 -continued

TARGET COMPOUND IONS

Analyte	Primary Characteristic Ion	Secondary Characteristic Ion (s)
2-Hexanone	43	58, 100
Isopropyl Alcohol	45	43, 59
Methyl-t-butyl ether	73	57, 43
Methylene chloride	84	86, 49
Methyl ethyl ketone	72	43, 57
Propylene	41	39, 42
Styrene	104	78, 103
Tetrahydrofuran	42	71, 72
1,2,4-Trichlorobenzene	180	182, 145
1,1,2,2-Tetrachloroethane	83	85, 131
Tetrachloroethene	164	129, 131, 166
Toluene	92	91, 65
1,1,1-Trichloroethane	97	99, 61
1,1,2-Trichloroethane	83	97, 85
Trichloroethene	95	97, 130, 132
Trichlorofluoromethane	101	103, 105
1,2,4-Trimethylbenzene	105	120, 119
1,3,5-Trimethylbenzene	105	120, 119
2,2,4-Trimethylpentane	57	56, 99
Vinyl acetate	43	86, 44
Vinyl chloride	62	64, 61
o-Xylene	106	91, 77
m-Xylene	106	91, 77
p-Xylene	106	91, 77
Pentane (1)	42	41, 57
Nonane (1)	43	71, 128
Isopropylbenzene(Cumene)	105	120, 77
Tertiary Butyl Alcohol	59	41, 43
Naphthalene	128	127, 129
Total Volatiles as Pentane	Total Peak Area	
Total Volatiles as Heptane	Total Peak Area	

(1) NELAC accreditation is not offered for this compound.

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**Table 5
Reporting Limits**

Compound	TO15 Canister RDL(ppbv)
Propylene	0.5
Freon-12 (Dichlorodifluoromethane)	0.2
Chloromethane	0.2
Freon-114 (1)	0.2
Vinyl Chloride	0.2
1,3-Butadiene	0.2
Bromomethane	0.2
Chloroethane	0.2
Carbon Disulfide	0.2
Ethanol	0.5
Acetone	0.2
Freon-11 (Trichlorofluoromethane)	0.2
Isopropyl Alcohol	0.2
1,1-Dichloroethene	0.2
Methylene Chloride	0.2
Freon-113 (1)	0.2
Trans-1,2-Dichloroethene	0.2
1,1-Dichloroethane	0.2
Methyl Tertiary Butyl Ether	0.2
Tetrahydrofuran	0.2
Methyl Ethyl Ketone (2-Butanone)	0.2
Cis-1,2-Dichloroethene	0.2
Hexane	0.2
Chloroform	0.2
Ethyl Acetate	0.2
Vinyl Acetate	0.2
1,2-Dichloroethane	0.2
1,1,1-Trichloroethane	0.2
Benzene	0.2
Carbon Tetrachloride	0.2
Cyclohexane	0.2
1,2-Dichloropropane	0.2
Trichloroethylene	0.04
Bromodichloromethane	0.2
1,4-Dioxane	0.2

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Table 5 (cont'd)

Compound	TO15 Canister RDL(ppbv)
Heptane	0.2
Cis-1,3-Dichloropropene	0.2
Trans-1,3-Dichloropropene	0.2
1,1,2-Trichloroethane	0.2
Toluene	0.2
Methyl IsoButyl Ketone (2-Hexanone)	0.2
Dibromochloromethane	0.2
1,2-Dibromomethane (EDB)	0.2
Tetrachloroethylene	0.04
Chlorobenzene	0.2
Ethylbenzene	0.2
M,p-Xylene	0.2
o-xylene	0.2
1,1,2,2-Tetrachloroethane	0.2
Bromoform	0.2
Styrene	0.2
4-Ethyltoluene	0.2
1,3,5-Trimethylbenzene	0.2
1,2,4-Trimethylbenzene	0.2
1,3-Dichlorobenzene(m)	0.2
1,4-Dichlorobenzene(p)	0.2
1,2-Dichlorobenzene(o)	0.2
Benzyl Chloride (a-Chlorotoluene)	0.2
1,2,4-Trichlorobenzene	0.2
Hexachloro-1,3-butadiene	0.2
Bromoethene (1)	0.2
3-Chloropropene (1)	0.2
2-Chlorotoluene	0.2
2,2,4-Trimethylpentane	0.2
Pentane (1)	0.2

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Table 5 (cont'd)

Compound	TO15 Canister RDL(ppbv)
Nonane (1)	0.2
Isopropylbenzene(Cumene)	0.2
Tertiary Butyl Alcohol	0.2
Naphthalene	0.2
Total Volatiles as Pentane	10
Total Volatiles as Heptane	10

(1) – NELAC does not offer accreditation for this compound.

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Table 6

Canister Pressurization Calculations											
Canister Pressure Received					Canister Final Pressure				Dilution	Sampling	
"Hg (vac)	"Hg	Atm	psia	Vol. (L)	"Hg	psia	Vol. (L)	psig	Factor	Volume (cc)	
0.0	29.92	1.00	14.7	6.0	29.92	14.7	6.0	0.0	1	400	
0.5	29.42	0.98	14.5	5.9	29.42	14.5	5.9	-0.2	1	400	
1.0	28.92	0.97	14.2	5.8	28.92	14.2	5.8	-0.5	1	400	
1.5	28.42	0.95	14.0	5.7	28.42	14.0	5.7	-0.7	1	400	
2.0	27.92	0.93	13.7	5.6	27.92	13.7	5.6	-1.0	1	400	
2.5	27.42	0.92	13.5	5.5	27.42	13.5	5.5	-1.2	1	400	
3.0	26.92	0.90	13.2	5.4	26.92	13.2	5.4	-1.5	1	400	
3.5	26.42	0.88	13.0	5.3	26.42	13.0	5.3	-1.7	1	400	
4.0	25.92	0.87	12.7	5.2	25.92	12.7	5.2	-2.0	1	400	
4.5	25.42	0.85	12.5	5.1	25.42	12.5	5.1	-2.2	1	400	
5.0	24.92	0.83	12.2	5.0	24.92	12.2	5.0	-2.5	1	400	
5.5	24.42	0.82	12.0	4.9	24.42	12.0	4.9	-2.7	1	400	
6.0	23.92	0.80	11.7	4.8	23.92	11.7	4.8	-3.0	1	400	
6.5	23.42	0.78	11.5	4.7	23.42	11.5	4.7	-3.2	1	400	
7.0	22.92	0.77	11.3	4.6	22.92	11.3	4.6	-3.4	1	400	
7.5	22.42	0.75	11.0	4.5	22.42	11.0	4.5	-3.7	1	400	
8.0	21.92	0.73	10.8	4.4	32.33	15.9	6.5	1.2	1.48	590	"Hg(vac) 8.0
8.5	21.42	0.72	10.5	4.3	32.67	16.0	6.5	1.3	1.53	610	8.5
9.0	20.92	0.70	10.3	4.2	32.43	15.9	6.5	1.2	1.55	620	9.0
9.5	20.42	0.68	10.0	4.1	32.16	15.8	6.4	1.1	1.58	630	9.5
10.0	19.92	0.67	9.8	4.0	31.87	15.7	6.4	1.0	1.60	640	10.0
10.5	19.42	0.65	9.5	3.9	32.04	15.7	6.4	1.0	1.65	660	10.5
11.0	18.92	0.63	9.3	3.8	32.16	15.8	6.4	1.1	1.70	680	11.0
11.5	18.42	0.62	9.0	3.7	32.24	15.8	6.5	1.1	1.75	700	11.5
12.0	17.92	0.60	8.8	3.6	32.26	15.8	6.5	1.1	1.80	720	12.0
12.5	17.42	0.58	8.6	3.5	32.23	15.8	6.5	1.1	1.85	740	12.5
13.0	16.92	0.57	8.3	3.4	32.15	15.8	6.4	1.1	1.90	760	13.0
13.5	16.42	0.55	8.1	3.3	32.02	15.7	6.4	1.0	1.95	780	13.5
14.0	15.92	0.53	7.8	3.2	32.64	16.0	6.5	1.3	2.05	820	14.0
14.5	15.42	0.52	7.6	3.1	32.38	15.9	6.5	1.2	2.10	840	14.5
15.0	14.92	0.50	7.3	3.0	32.08	15.8	6.4	1.1	2.15	860	15.0

Note: Dilution factors are typically compensated for by concentrating more sample volume.

Calculations: psia(rec) x DF = psia(final)

 psia(final) - 14.7 = psig(final)

This results in a quantitation factor of 1.

DF x Volume(rec) = Volume(final) in cc

DF x 400 = Volume(cc) introduced into concentrator for a quant factor of 1

Conversion Equivalents

0"Hg(vac) = 29.9"Hg = 1atm = 14.7psia = 0psig

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Table 7

Canister Secondary Dilution Log													
Original Canister Dilution							Secondary Canister Dilution						
Date	Initials	Accutest Sample ID	Canister ID	Vacuum in "Hg at time of Dilution	Final Pressure Psig	Dilution Factor	Canister ID	Canister Volume CC	Sample Volume Added CC	Final Pressure psig	Equiv Total Volume CC	Dilution Factor	Final Canister Dilution Factor
Comments:													
Note: For secondary dilutions into 375cc minicans, a 1psig final pressure is equivalent to a 400cc final volume													
Definition: Final DF = (Original Canister DF) x (Secondary Canister DF)													
Dilution Factor at Instrument = (Final Canister Dilution Factor) x (Normal Sampling Volume in cc) / (Sample Volume in cc Injected)													
Example: Original Canister is diluted 1.2x for manual sample draw due to the 3" Hg(vac). 40cc from this canister is added to a 375cc minican and brought to 1.0 psig or 400cc equiv volume. This results in an additional dilution of 400/40 or 10. The final canister dilution factor is 1.2 x 10 = 12. From the dilution canister 40cc is injected at the instrument where normal volume is 400cc. This is an additional instrument dilution factor of 10. The final dilution multiplier is 12(from canister dilution) x 10(from instrument dilution) = 120													

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Q1Table 8

Secondary Dilution Conversion Chart For 6-Liter Canisters

Initial				Final				Initial				Final			
"Hg (vac)	"Hg	Psia	Vol. (L)	psia	psig	Vol. (L)	DF	"Hg (vac)	"Hg	psia	Vol. (L)	psia	psig	Vol. (L)	DF
0.0	29.9	14.7	6.0	15.4	0.7	6.30	1.05	7.6	22.3	11.0	4.5	15.9	1.2	6.49	1.45
0.2	29.7	14.6	6.0	15.3	0.6	6.26	1.05	7.8	22.1	10.9	4.4	15.8	1.1	6.43	1.45
0.4	29.5	14.5	5.9	15.2	0.5	6.21	1.05	8.0	21.9	10.8	4.4	15.6	0.9	6.37	1.45
0.6	29.3	14.4	5.9	15.8	1.1	6.47	1.10	8.2	21.7	10.7	4.4	15.5	0.8	6.31	1.45
0.8	29.1	14.3	5.8	15.7	1.0	6.42	1.10	8.4	21.5	10.6	4.3	15.4	1.2	6.47	1.50
1.0	28.9	14.2	5.8	15.6	0.9	6.38	1.10	8.6	21.3	10.5	4.3	15.7	1.0	6.41	1.50
1.2	28.7	14.1	5.8	15.5	0.8	6.33	1.10	8.8	21.1	10.4	4.2	15.6	0.9	6.35	1.50
1.4	28.5	14.0	5.7	15.4	0.7	6.29	1.10	9.0	20.9	10.3	4.2	15.9	1.2	6.50	1.55
1.6	28.3	13.9	5.7	15.3	0.6	6.25	1.10	9.2	20.7	10.2	4.2	15.8	1.1	6.44	1.55
1.8	28.1	13.8	5.6	15.9	1.2	6.48	1.15	9.4	20.5	10.1	4.1	15.6	0.9	6.38	1.55
2.0	27.9	13.7	5.6	15.8	1.1	6.44	1.15	9.6	20.3	10.0	4.1	15.5	0.8	6.31	1.55
2.2	27.7	13.6	5.6	15.7	1.0	6.39	1.15	9.8	20.1	9.9	4.0	15.8	1.1	6.45	1.60
2.4	27.5	13.5	5.5	15.5	0.8	6.35	1.15	10.0	19.9	9.8	4.0	15.7	1.0	6.39	1.60
2.6	27.3	13.4	5.5	15.4	0.7	6.30	1.15	10.2	19.7	9.7	4.0	15.5	0.8	6.33	1.60
2.8	27.1	13.3	5.4	15.3	0.6	6.25	1.15	10.4	19.5	9.6	3.9	15.8	1.1	6.46	1.65
3.0	26.9	13.2	5.4	15.9	1.2	6.48	1.20	10.6	19.3	9.5	3.9	15.7	1.0	6.39	1.65
3.2	26.7	13.1	5.4	15.7	1.0	6.43	1.20	10.8	19.1	9.4	3.8	15.5	0.8	6.33	1.65
3.4	26.5	13.0	5.3	15.6	0.9	6.38	1.20	11.0	18.9	9.3	3.8	15.8	1.1	6.45	1.70
3.6	26.3	12.9	5.3	15.5	0.8	6.33	1.20	11.2	18.7	9.2	3.8	15.6	0.9	6.38	1.70
3.8	26.1	12.8	5.2	15.4	0.7	6.28	1.20	11.4	18.5	9.1	3.7	15.9	1.2	6.50	1.75
4.0	25.9	12.7	5.2	15.9	1.2	6.50	1.25	11.6	18.3	9.0	3.7	15.7	1.0	6.43	1.75
4.2	25.7	12.6	5.2	15.8	1.1	6.45	1.25	11.8	18.1	8.9	3.6	15.6	0.9	6.36	1.75
4.4	25.5	12.5	5.1	15.7	1.0	6.40	1.25	12.0	17.9	8.8	3.6	15.8	1.1	6.47	1.80
4.6	25.3	12.4	5.1	15.5	0.8	6.35	1.25	12.2	17.7	8.7	3.6	15.7	1.0	6.39	1.80
4.8	25.1	12.3	5.0	15.4	0.7	6.30	1.25	12.4	17.5	8.6	3.5	15.9	1.2	6.50	1.85
5.0	24.9	12.2	5.0	15.9	1.2	6.50	1.30	12.6	17.3	8.5	3.5	15.7	1.0	6.42	1.85
5.2	24.7	12.1	5.0	15.8	1.1	6.44	1.30	12.8	17.1	8.4	3.4	15.6	0.9	6.35	1.85
5.4	24.5	12.0	4.9	15.7	1.0	6.39	1.30	13.0	16.9	8.3	3.4	15.8	1.1	6.45	1.90
5.6	24.3	11.9	4.9	15.5	0.8	6.34	1.30	13.2	16.7	8.2	3.4	15.6	0.9	6.37	1.90
5.8	24.1	11.8	4.8	15.4	0.7	6.29	1.30	13.4	16.5	8.1	3.3	15.8	1.1	6.46	1.95
6.0	23.9	11.7	4.8	15.9	1.2	6.47	1.35	13.6	16.3	8.0	3.3	15.6	0.9	6.38	1.95
6.2	23.7	11.7	4.8	15.7	1.0	6.42	1.35	13.8	16.1	7.9	3.2	15.8	1.1	6.46	2.00
6.4	23.5	11.6	4.7	15.6	0.9	6.37	1.35	14.0	15.9	7.8	3.2	15.6	0.9	6.38	2.00
6.6	23.3	11.5	4.7	15.5	0.8	6.31	1.35	14.2	15.7	7.7	3.2	15.4	0.7	6.30	2.00
6.8	23.1	11.4	4.6	15.9	1.2	6.49	1.40	14.4	15.5	7.6	3.1	15.2	0.5	6.22	2.00
7.0	22.9	11.3	4.6	15.8	1.1	6.43	1.40	14.6	15.3	7.5	3.1	15.1	0.4	6.14	2.00
7.2	22.7	11.2	4.6	15.6	0.9	6.38	1.40	14.8	15.1	7.4	3.0	14.9	0.2	6.06	2.00
7.4	22.5	11.1	4.5	15.5	0.8	6.32	1.40	15.0	14.9	7.3	3.0	14.7	0.0	5.98	2.00

Calculations: Psia(rec) x DF = psia(final)
Psia(final) - 14.7 = psig(final)

Conversion Equivalents

0"Hg(vac) = 29.9"Hg = 1atm = 14.7psia = 0psig

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Table 9

Entech 4560SL Dynamic Standards Diluter																
Mass Flow Controller Calibration																
MFC #1 - Dilution Gas			MFC #2 - Standard Gas Mix						MFC #3 - Standard Gas Mix							
Target	Flow	Software	Target	Flow	Software	Target	Flow	Software	Target	Flow	Software	Target	Flow	Software		
Flow	Measured	Readout	Flow	Measured	Readout	Flow	Measured	Readout	Flow	Measured	Readout	Flow	Measured	Readout		
cc/min	cc/min	cc/min	cc/min	cc/min	cc/min	cc/min	cc/min	cc/min	cc/min	cc/min	cc/min	cc/min	cc/min	cc/min	Date	Init.
1000			40			5.0			40			5.0				
1000			40			5.0			40			5.0				
1000			40			5.0			40			5.0				
1000			40			5.0			40			5.0				
1000			40			5.0			40			5.0				
1000			40			5.0			40			5.0				
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1000			40			5.0			40			5.0				
1000			40			5.0			40			5.0				

Comments:

**ACCUTEST LABORATORIES
STANDARD OPERATING PROCEDURE**

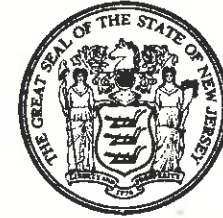
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Table 10

**Flow Controller
Calibration Table**

Restrictor Type	Restrictor Orifice ID (inches)	Sampling Time	6-Liter Canister Flow Rate (CC/MIN)	1-Liter Canister Flow Rate (CC/MIN)
#1	0.0080	5 Minutes	NA	180.0
#1	0.0080	30 Minutes	180.0	30.0
#1	0.0080	1 Hour	90.0	15.0
#2	0.0050	2 Hour	45.0	7.5
#2	0.0050	3 Hour	30.0	5.0
#2	0.0050	4 Hour	22.5	3.8
#3	0.0035	6 Hour	15.0	NA
#3	0.0035	8 Hour	11.3	NA
#3	0.0035	12 Hour	7.5	NA
#4	0.0020	24 Hour	3.8	NA

State of New Jersey
Department of Environmental Protection



Certifies That
Accutest Laboratories

Laboratory Certification ID # 12129

is hereby approved as a

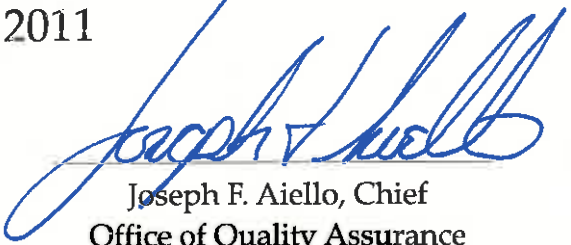
Nationally Accredited Environmental Laboratory
to perform the analyses as indicated on the Annual Certified Parameter List
which must accompany this certificate to be valid

having duly met the requirements of the
Regulations Governing The Certification Of
Laboratories And Environmental Measurements N.J.A.C. 7:18 et. seq.
and
having been found compliant with the standards approved by the
The NELAC Institute

Expiration Date June 30, 2011



NJDEP is a NELAP Recognized Accreditation Body


Joseph F. Aiello, Chief
Office of Quality Assurance

This certificate is to be conspicuously displayed at the laboratory with the annual certified parameter list in a location on the premises visible to the public. Consumers are urged to verify the laboratory's current accreditation status with the State of NJ, NELAP.

New Jersey Department of Environmental Protection
National Environmental Laboratory Accreditation Program
ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS
Effective as of 10/15/2010 until 06/30/2011



Laboratory Name: ACCUTEST LABORATORIES Laboratory Number: 12129 Activity ID: NLC100007
2235 RT 130
BLDG B
Dayton, NJ 08810

Category: CAP03 – Atmospheric Organic Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	CAP03.00180	AE	GC/MS, Canisters	[EPA TO-15]	Acetaldehyde
Certified	Yes	NJ	CAP03.00184	AE	GC/MS, Canisters	[EPA TO-15]	Acetone
Certified	Yes	NJ	CAP03.00190	AE	GC/MS, Canisters	[EPA TO-15]	Acetophenone
Certified	Yes	NJ	CAP03.00195	AE	GC/MS, Canisters	[EPA TO-15]	Acrolein
Certified	Yes	NJ	CAP03.00200	AE	GC/MS, Canisters	[EPA TO-15]	Acrylamide
Certified	Yes	NJ	CAP03.00205	AE	GC/MS, Canisters	[EPA TO-15]	Acrylic acid
Certified	Yes	NJ	CAP03.00215	AE	GC/MS, Canisters	[EPA TO-15]	Allyl chloride
Certified	Yes	NJ	CAP03.00225	AE	GC/MS, Canisters	[EPA TO-15]	Benzene
Certified	Yes	NJ	CAP03.00230	AE	GC/MS, Canisters	[EPA TO-15]	Benzyl chloride
Certified	Yes	NJ	CAP03.00235	AE	GC/MS, Canisters	[EPA TO-15]	Propiolactone (beta-)
Certified	Yes	NJ	CAP03.00240	AE	GC/MS, Canisters	[EPA TO-15]	Bis (2-chloroethyl) ether
Certified	Yes	NJ	CAP03.00245	AE	GC/MS, Canisters	[EPA TO-15]	Bis (chloromethyl) ether
Certified	Yes	NJ	CAP03.00250	AE	GC/MS, Canisters	[EPA TO-15]	Bromodichloromethane
Certified	Yes	NJ	CAP03.00255	AE	GC/MS, Canisters	[EPA TO-15]	Bromoform
Certified	Yes	NJ	CAP03.00260	AE	GC/MS, Canisters	[EPA TO-15]	Bromomethane
Certified	Yes	NJ	CAP03.00265	AE	GC/MS, Canisters	[EPA TO-15]	Butadiene (1,3-)
Certified	Yes	NJ	CAP03.00270	AE	GC/MS, Canisters	[EPA TO-15]	Carbon disulfide
Certified	Yes	NJ	CAP03.00275	AE	GC/MS, Canisters	[EPA TO-15]	Carbon tetrachloride
Certified	Yes	NJ	CAP03.00280	AE	GC/MS, Canisters	[EPA TO-15]	Carbon oxysulfide (Carbonyl sulfide)
Certified	Yes	NJ	CAP03.00285	AE	GC/MS, Canisters	[EPA TO-15]	Catechol
Certified	Yes	NJ	CAP03.00290	AE	GC/MS, Canisters	[EPA TO-15]	Butadiene (2-chloro-1,3-)
Certified	Yes	NJ	CAP03.00295	AE	GC/MS, Canisters	[EPA TO-15]	Chloroacetic acid
Certified	Yes	NJ	CAP03.00300	AE	GC/MS, Canisters	[EPA TO-15]	Chlorobenzene
Certified	Yes	NJ	CAP03.00305	AE	GC/MS, Canisters	[EPA TO-15]	Chloroethane
Certified	Yes	NJ	CAP03.00310	AE	GC/MS, Canisters	[EPA TO-15]	Chloroform
Certified	Yes	NJ	CAP03.00315	AE	GC/MS, Canisters	[EPA TO-15]	Chloromethane
Certified	Yes	NJ	CAP03.00320	AE	GC/MS, Canisters	[EPA TO-15]	Chloromethyl methyl ether
Certified	Yes	NJ	CAP03.00325	AE	GC/MS, Canisters	[EPA TO-15]	Chlorotoluene (2-)
Certified	Yes	NJ	CAP03.00330	AE	GC/MS, Canisters	[EPA TO-15]	Cresols Cresylic acid
Certified	Yes	NJ	CAP03.00335	AE	GC/MS, Canisters	[EPA TO-15]	Cyclohexane
Certified	Yes	NJ	CAP03.00340	AE	GC/MS, Canisters	[EPA TO-15]	Diazomethane

KEY: AE = Air and Emissions, BT = Biological Tissues, DW = Drinking Water, NPW = Non-Potable Water, SCM = Solid and Chemical Materials

New Jersey Department of Environmental Protection
National Environmental Laboratory Accreditation Program
ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS
Effective as of 10/15/2010 until 06/30/2011



Laboratory Name: ACCUTEST LABORATORIES Laboratory Number: 12129 Activity ID: NLC100007
2235 RT 130
BLDG B
Dayton, NJ 08810

Category: CAP03 -- Atmospheric Organic Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	CAP03.00342	AE	GC/MS, Canisters	[EPA TO-15]	Dibromochloromethane
Certified	Yes	NJ	CAP03.00345	AE	GC/MS, Canisters	[EPA TO-15]	Dibromo-3-chloropropane (1,2-)
Certified	Yes	NJ	CAP03.00350	AE	GC/MS, Canisters	[EPA TO-15]	Dibromoethane (1,2-) (EDB)
Certified	Yes	NJ	CAP03.00355	AE	GC/MS, Canisters	[EPA TO-15]	Dichlorobenzene (1,2-)
Certified	Yes	NJ	CAP03.00360	AE	GC/MS, Canisters	[EPA TO-15]	Dichlorobenzene (1,3-)
Certified	Yes	NJ	CAP03.00365	AE	GC/MS, Canisters	[EPA TO-15]	Dichlorobenzene (1,4-)
Certified	Yes	NJ	CAP03.00368	AE	GC/MS, Canisters	[EPA TO-15]	Dichlorodifluoromethane
Certified	Yes	NJ	CAP03.00370	AE	GC/MS, Canisters	[EPA TO-15]	Dichloroethane (1,1-)
Certified	Yes	NJ	CAP03.00375	AE	GC/MS, Canisters	[EPA TO-15]	Dichloroethane (1,2-)
Certified	Yes	NJ	CAP03.00380	AE	GC/MS, Canisters	[EPA TO-15]	Dichloroethene (1,1-)
Certified	Yes	NJ	CAP03.00384	AE	GC/MS, Canisters	[EPA TO-15]	Dichloroethene (cis-1,2-)
Certified	Yes	NJ	CAP03.00385	AE	GC/MS, Canisters	[EPA TO-15]	Dichloroethene (trans-1,2-)
Certified	Yes	NJ	CAP03.00390	AE	GC/MS, Canisters	[EPA TO-15]	Dichlorofluoromethane
Certified	Yes	NJ	CAP03.00395	AE	GC/MS, Canisters	[EPA TO-15]	Dichloropropane (1,2-)
Certified	Yes	NJ	CAP03.00400	AE	GC/MS, Canisters	[EPA TO-15]	Dichloropropene (cis-1,3-)
Certified	Yes	NJ	CAP03.00401	AE	GC/MS, Canisters	[EPA TO-15]	Dichloropropene (trans-1,3-)
Certified	Yes	NJ	CAP03.00405	AE	GC/MS, Canisters	[EPA TO-15]	Dichlorotetrafluoroethane (1,2-)
Certified	Yes	NJ	CAP03.00410	AE	GC/MS, Canisters	[EPA TO-15]	Diethyl sulfate
Certified	Yes	NJ	CAP03.00415	AE	GC/MS, Canisters	[EPA TO-15]	Dimethyl sulfate
Certified	Yes	NJ	CAP03.00425	AE	GC/MS, Canisters	[EPA TO-15]	Dimethylcarbamoyl chloride
Certified	Yes	NJ	CAP03.00430	AE	GC/MS, Canisters	[EPA TO-15]	Dimethyl formamide (N, N-)
Certified	Yes	NJ	CAP03.00440	AE	GC/MS, Canisters	[EPA TO-15]	Dioxane (1,4-)
Certified	Yes	NJ	CAP03.00445	AE	GC/MS, Canisters	[EPA TO-15]	Epichlorohydrin
Certified	Yes	NJ	CAP03.00450	AE	GC/MS, Canisters	[EPA TO-15]	Epoxybutane (1,2-)
Certified	Yes	NJ	CAP03.00451	AE	GC/MS, Canisters	[EPA TO-15]	Ethanol
Certified	Yes	NJ	CAP03.00452	AE	GC/MS, Canisters	[EPA TO-15]	Ethyl acetate
Certified	Yes	NJ	CAP03.00455	AE	GC/MS, Canisters	[EPA TO-15]	Ethyl acrylate
Certified	Yes	NJ	CAP03.00460	AE	GC/MS, Canisters	[EPA TO-15]	Ethyl carbamate (Urethane)
Certified	Yes	NJ	CAP03.00465	AE	GC/MS, Canisters	[EPA TO-15]	Ethylbenzene
Certified	Yes	NJ	CAP03.00470	AE	GC/MS, Canisters	[EPA TO-15]	Ethylene Oxide
Certified	Yes	NJ	CAP03.00480	AE	GC/MS, Canisters	[EPA TO-15]	Ethyltoluene (4-)
Certified	Yes	NJ	CAP03.00485	AE	GC/MS, Canisters	[EPA TO-15]	Formaldehyde

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2235 RT 130
BLDG B
Dayton, NJ 08810

Category: CAP03 -- Atmospheric Organic Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	CAP03.00490	AE	GC/MS, Canisters	[EPA TO-15]	Hexachlorobutadiene (1,3-)
Certified	Yes	NJ	CAP03.00495	AE	GC/MS, Canisters	[EPA TO-15]	Hexachloroethane
Certified	Yes	NJ	CAP03.00498	AE	GC/MS, Canisters	[EPA TO-15]	Hexanone (2-)
Certified	Yes	NJ	CAP03.00500	AE	GC/MS, Canisters	[EPA TO-15]	Heptane (n-)
Certified	Yes	NJ	CAP03.00505	AE	GC/MS, Canisters	[EPA TO-15]	Hexane (n-)
Certified	Yes	NJ	CAP03.00510	AE	GC/MS, Canisters	[EPA TO-15]	Isophorone
Certified	Yes	NJ	CAP03.00511	AE	GC/MS, Canisters	[EPA TO-15]	Isopropanol
Certified	Yes	NJ	CAP03.00515	AE	GC/MS, Canisters	[EPA TO-15]	Isopropylbenzene
Certified	Yes	NJ	CAP03.00520	AE	GC/MS, Canisters	[EPA TO-15]	Methyl alcohol (Methanol)
Certified	Yes	NJ	CAP03.00525	AE	GC/MS, Canisters	[EPA TO-15]	Methyl ethyl ketone
Certified	Yes	NJ	CAP03.00530	AE	GC/MS, Canisters	[EPA TO-15]	Methyl iodide
Certified	Yes	NJ	CAP03.00535	AE	GC/MS, Canisters	[EPA TO-15]	Methyl isobutyl ketone
Certified	Yes	NJ	CAP03.00540	AE	GC/MS, Canisters	[EPA TO-15]	Methyl isocyanate
Certified	Yes	NJ	CAP03.00545	AE	GC/MS, Canisters	[EPA TO-15]	Methyl methacrylate
Certified	Yes	NJ	CAP03.00550	AE	GC/MS, Canisters	[EPA TO-15]	Methyl tert-butyl ether
Certified	Yes	NJ	CAP03.00555	AE	GC/MS, Canisters	[EPA TO-15]	Methylene chloride (Dichloromethane)
Certified	Yes	NJ	CAP03.00565	AE	GC/MS, Canisters	[EPA TO-15]	Methylphenol (2-)
Certified	Yes	NJ	CAP03.00567	AE	GC/MS, Canisters	[EPA TO-15]	Naphthalene
Certified	Yes	NJ	CAP03.00570	AE	GC/MS, Canisters	[EPA TO-15]	Nitrobenzene
Certified	Yes	NJ	CAP03.00575	AE	GC/MS, Canisters	[EPA TO-15]	Nitropropane (2-)
Certified	Yes	NJ	CAP03.00580	AE	GC/MS, Canisters	[EPA TO-15]	N-Nitrosodimethylamine
Certified	Yes	NJ	CAP03.00585	AE	GC/MS, Canisters	[EPA TO-15]	N-Nitrosomorpholine
Certified	Yes	NJ	CAP03.00590	AE	GC/MS, Canisters	[EPA TO-15]	N-Nitroso-N-methylurca
Certified	Yes	NJ	CAP03.00595	AE	GC/MS, Canisters	[EPA TO-15]	Phenol
Certified	Yes	NJ	CAP03.00600	AE	GC/MS, Canisters	[EPA TO-15]	Phosgene
Certified	Yes	NJ	CAP03.00605	AE	GC/MS, Canisters	[EPA TO-15]	Propionaldehyde
Certified	Yes	NJ	CAP03.00612	AE	GC/MS, Canisters	[EPA TO-15]	Propylene
Certified	Yes	NJ	CAP03.00615	AE	GC/MS, Canisters	[EPA TO-15]	Propylene oxide
Certified	Yes	NJ	CAP03.00620	AE	GC/MS, Canisters	[EPA TO-15]	Propane sultone (1,3-)
Certified	Yes	NJ	CAP03.00625	AE	GC/MS, Canisters	[EPA TO-15]	Styrene
Certified	Yes	NJ	CAP03.00630	AE	GC/MS, Canisters	[EPA TO-15]	Styrene oxide
Certified	Yes	NJ	CAP03.00635	AE	GC/MS, Canisters	[EPA TO-15]	Trichlorobenzene (1,2,4-)

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2235 RT 130
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Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	CAP03.00640	AE	GC/MS, Canisters	[EPA TO-15]	Trimethylbenzene (1,3,5-)
Certified	Yes	NJ	CAP03.00645	AE	GC/MS, Canisters	[EPA TO-15]	Trimethylbenzene (1,2,4-)
Certified	Yes	NJ	CAP03.00650	AE	GC/MS, Canisters	[EPA TO-15]	Trimethylpentane (2,2,4-)
Certified	Yes	NJ	CAP03.00652	AE	GC/MS, Canisters	[EPA TO-15]	Tert-butyl alcohol
Certified	Yes	NJ	CAP03.00655	AE	GC/MS, Canisters	[EPA TO-15]	Tetrachloroethane (1,1,2,2-)
Certified	Yes	NJ	CAP03.00660	AE	GC/MS, Canisters	[EPA TO-15]	Tetrachloroethene
Certified	Yes	NJ	CAP03.00662	AE	GC/MS, Canisters	[EPA TO-15]	Tetrahydrofuran
Certified	Yes	NJ	CAP03.00665	AE	GC/MS, Canisters	[EPA TO-15]	Toluene
Certified	Yes	NJ	CAP03.00670	AE	GC/MS, Canisters	[EPA TO-15]	Trichloroethane (1,1,1-)
Certified	Yes	NJ	CAP03.00675	AE	GC/MS, Canisters	[EPA TO-15]	Trichloroethane (1,1,2-)
Certified	Yes	NJ	CAP03.00680	AE	GC/MS, Canisters	[EPA TO-15]	Trichloroethene
Certified	Yes	NJ	CAP03.00684	AE	GC/MS, Canisters	[EPA TO-15]	Trichlorofluoromethane
Certified	Yes	NJ	CAP03.00685	AE	GC/MS, Canisters	[EPA TO-15]	Trichloro (1,1,2-) trifluoroethane (1,2,2-)
Certified	Yes	NJ	CAP03.00695	AE	GC/MS, Canisters	[EPA TO-15]	Trifluoromethane
Certified	Yes	NJ	CAP03.00700	AE	GC/MS, Canisters	[EPA TO-15]	Vinyl acetate
Certified	Yes	NJ	CAP03.00705	AE	GC/MS, Canisters	[EPA TO-15]	Vinyl bromide
Certified	Yes	NJ	CAP03.00710	AE	GC/MS, Canisters	[EPA TO-15]	Vinyl chloride
Certified	Yes	NJ	CAP03.00715	AE	GC/MS, Canisters	[EPA TO-15]	Xylene (m-)
Certified	Yes	NJ	CAP03.00720	AE	GC/MS, Canisters	[EPA TO-15]	Xylene (o-)
Certified	Yes	NJ	CAP03.00725	AE	GC/MS, Canisters	[EPA TO-15]	Xylene (p-)
Certified	Yes	NJ	CAP03.00730	AE	GC/MS, Canisters	[EPA TO-15]	Xylenes (total)
Certified	Yes	NJ	CAP03.02450	AE	GC, FID and/or ECD, Cryogenic Preconcentration	[EPA TO-3]	Benzene
Certified	Yes	NJ	CAP03.02482	AE	GC, FID and/or ECD, Cryogenic Preconcentration	[EPA TO-3]	Ethylbenzene
Certified	Yes	NJ	CAP03.02483	AE	GC, FID and/or ECD, Cryogenic Preconcentration	[EPA TO-3]	Isopropylbenzene
Certified	Yes	NJ	CAP03.02485	AE	GC, FID and/or ECD, Cryogenic Preconcentration	[EPA TO-3]	Methane
Certified	Yes	NJ	CAP03.02486	AE	GC, FID and/or ECD, Cryogenic Preconcentration	[EPA TO-3]	Methyl tert-butyl ether
Certified	Yes	NJ	CAP03.02488	AE	GC, FID and/or ECD, Cryogenic Preconcentration	[EPA TO-3]	Tert-butyl alcohol

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Certified	Yes	NJ	CAP03.02489	AE	GC, FID and/or ECD, Cryogenic Preconcentration	[EPA TO-3]	Toluene
Certified	Yes	NJ	CAP03.02515	AE	GC, FID and/or ECD, Cryogenic Preconcentration	[EPA TO-3]	Xylenes (total)
Applied	No	NJ	CAP03.06850	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Acetone
Applied	No	NJ	CAP03.06852	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Allyl chloride
Applied	No	NJ	CAP03.06854	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Benzene
Applied	No	NJ	CAP03.06856	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Bromodichloromethane
Applied	No	NJ	CAP03.06858	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Bromoform
Applied	No	NJ	CAP03.06860	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Bromomethane
Applied	No	NJ	CAP03.06862	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Butadiene (1,3-)
Applied	No	NJ	CAP03.06864	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Carbon disulfide
Applied	No	NJ	CAP03.06866	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Carbon tetrachloride
Applied	No	NJ	CAP03.06868	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Chlorobenzene
Applied	No	NJ	CAP03.06870	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Chloroethane
Applied	No	NJ	CAP03.06872	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Chloroform
Applied	No	NJ	CAP03.06874	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Chloromethane
Applied	No	NJ	CAP03.06876	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Chlorotoluene (2-)
Applied	No	NJ	CAP03.06878	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Cyclohexane
Applied	No	NJ	CAP03.06880	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Dibromochloromethane
Applied	No	NJ	CAP03.06882	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Dibromoethane (1,2-) (EDB)
Applied	No	NJ	CAP03.06884	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Dichlorobenzene (1,2-)
Applied	No	NJ	CAP03.06886	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Dichlorobenzene (1,3-)
Applied	No	NJ	CAP03.06888	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Dichlorobenzene (1,4-)
Applied	No	NJ	CAP03.06890	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Dichlorodifluoromethane
Applied	No	NJ	CAP03.06892	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Dichloroethane (1,1-)
Applied	No	NJ	CAP03.06894	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Dichloroethane (1,2-)
Applied	No	NJ	CAP03.06896	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Dichloroethene (1,1-)
Applied	No	NJ	CAP03.06898	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Dichloroethene (cis-1,2-)
Applied	No	NJ	CAP03.06900	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Dichloroethene (trans-1,2-)
Applied	No	NJ	CAP03.06902	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Dichloropropane (1,2-)
Applied	No	NJ	CAP03.06904	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Dichloropropene (cis-1,3-)

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Applied	No	NJ	CAP03.06906	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Dichloropropene (trans-1,3-)
Applied	No	NJ	CAP03.06908	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Dichlorotetrafluoroethane (1,2-)
Applied	No	NJ	CAP03.06910	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Dioxane (1,4-)
Applied	No	NJ	CAP03.06912	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Ethanol
Applied	No	NJ	CAP03.06914	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Ethylbenzene
Applied	No	NJ	CAP03.06916	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Ethyltoluene (4-)
Applied	No	NJ	CAP03.06918	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Heptane (n-)
Applied	No	NJ	CAP03.06920	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Hexachlorobutadiene (1,3-)
Applied	No	NJ	CAP03.06922	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Hexane (n-)
Applied	No	NJ	CAP03.06924	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Isopropanol
Applied	No	NJ	CAP03.06926	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Methylene chloride (Dichloromethane)
Applied	No	NJ	CAP03.06928	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Methyl ethyl ketone
Applied	No	NJ	CAP03.06930	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Methyl isobutyl ketone
Applied	No	NJ	CAP03.06932	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Methyl methacrylate
Applied	No	NJ	CAP03.06934	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Methyl tert-butyl ether
Applied	No	NJ	CAP03.06936	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Styrene
Applied	No	NJ	CAP03.06938	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Tert-butyl alcohol
Applied	No	NJ	CAP03.06940	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Tetrachloroethane (1,1,2,2-)
Applied	No	NJ	CAP03.06942	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Tetrachloroethene
Applied	No	NJ	CAP03.06944	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Tetrahydrofuran
Applied	No	NJ	CAP03.06946	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Toluene
Applied	No	NJ	CAP03.06948	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Trichlorobenzene (1,2,4-)
Applied	No	NJ	CAP03.06950	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Trichloroethane (1,1,1-)
Applied	No	NJ	CAP03.06952	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Trichloroethane (1,1,2-)
Applied	No	NJ	CAP03.06954	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Trichloroethene
Applied	No	NJ	CAP03.06956	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Trichlorofluoromethane
Applied	No	NJ	CAP03.06958	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Trichloro (1,1,2-) trifluoroethane (1,2,2-)
Applied	No	NJ	CAP03.06960	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Trimethylbenzene (1,2,4-)
Applied	No	NJ	CAP03.06962	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Trimethylbenzene (1,3,5-)
Applied	No	NJ	CAP03.06964	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Trimethylpentane (2,2,4-)
Applied	No	NJ	CAP03.06966	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Vinyl bromide
Applied	No	NJ	CAP03.06968	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Vinyl chloride

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Applied	No	NJ	CAP03.06970	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Xylene (m- + p-)
Applied	No	NJ	CAP03.06972	AE	GC/MS, Canisters	[OTHER NJDEP-LLTO-15-3/2007]	Xylene (o-)

Category: SDW01 -- Microbiological Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SDW01.05000	DW	ONPG-MUG (Autoanalysis Colilert System) (P-A)	[SM 9223 B]	Total coliform / E. coli
Certified	Yes	NJ	SDW01.14000	DW	Pour Plate	[SM 9215 B]	Heterotrophic bacteria

Category: SDW02 -- Inorganic Parameters Including Na + Ca

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SDW02.01000	DW	Nephelometric	[EPA 180.1]	Turbidity
Certified	Yes	NJ	SDW02.02000	DW	Automated Cadmium Reduction	[EPA 353.2]	Nitrate
Certified	Yes	NJ	SDW02.09000	DW	Spectrophotometric	[SM 4500-NO2 B]	Nitrite
Certified	Yes	NJ	SDW02.14000	DW	Ion Chromatography	[EPA 300.0]	Fluoride
Certified	Yes	NJ	SDW02.15200	DW	Spectrophotometric, Distill, Semi Automated	[EPA 335.4]	Cyanide
Certified	Yes	NJ	SDW02.19000	DW	Ion Chromatography	[EPA 300.0]	Sulfate
Certified	Yes	NJ	SDW02.20000	DW	ICP	[EPA 200.7]	Sodium
Certified	Yes	NJ	SDW02.24000	DW	Gravimetric At 180	[SM 2540 C]	Total dissolved solids (TDS)
Certified	Yes	NJ	SDW02.27000	DW	ICP	[EPA 200.7]	Calcium
Certified	Yes	NJ	SDW02.27200	DW	Ca as Carbonate	[EPA 200.7]	Calcium-hardness
Certified	Yes	NJ	SDW02.27300	DW	Hardness By Calculation	[EPA 200.7]	Total hardness
Certified	Yes	NJ	SDW02.27400	DW	Titrimetric, EDTA	[SM 2340 C]	Total hardness
Certified	Yes	NJ	SDW02.29000	DW	Electrometric Titration	[SM 2320 B]	Alkalinity
Certified	Yes	NJ	SDW02.29310	DW	Automated Phenate	[SM 4500-NH3 G]	Ammonia
Certified	Yes	NJ	SDW02.31000	DW	Ion Chromatography	[EPA 300.0]	Chloride
Certified	Yes	NJ	SDW02.31120	DW	Ion Chromatography	[EPA 314.0]	Perchlorate
Certified	Yes	NJ	SDW02.32000	DW	Platinum-Cobalt	[SM 2120 B]	Color

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New Jersey Department of Environmental Protection
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Laboratory Name: ACCUTEST LABORATORIES Laboratory Number: 12129 Activity ID: NLC100007
2235 RT 130
BLDG B
Dayton, NJ 08810

Category: SDW02 -- Inorganic Parameters Including Na + Ca

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SDW02.33000	DW	Methylene Blue	[SM 5540 C]	Foaming agents
Certified	Yes	NJ	SDW02.34000	DW	Consistent Series	[SM 2150 B]	Odor
Certified	Yes	NJ	SDW02.35000	DW	Conductance	{SM 2510 B}	Conductivity
Certified	Yes	NJ	SDW02.36100	DW	Molybdosilicate	[SM 4500-Si D (18/19th ed)]	Silica
Certified	Yes	NJ	SDW02.36400	DW	ICP	[EPA 200.7]	Silica
Certified	Yes	NJ	SDW02.37000	DW	Colorimetric	[SM 4500-P E]	Orthophosphate
Certified	Yes	NJ	SDW02.39600	DW	High Temp. Combustion	[SM 5310 B]	Total organic carbon (TOC)
Certified	Yes	NJ	SDW02.40000	DW	Pyrolysis, Titrimetric	[SM 5320 B]	Total organic halides (TOX)

Category: SDW03 -- Analyze-Immediately Inorganic Parameter

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SDW03.00002	DW	All Categories Sample Handling Procedures	{OTHER NJAC 7:18-6 & 9}	PWTA Sampling Parameters
Certified	Yes	NJ	SDW03.02000	DW	DPD, Ferrous Titrimetric	{SM 4500-Cl F}	Chlorine - residual
Certified	Yes	NJ	SDW03.08000	DW	Electrometric	{SM 4500-H B}	pH
Certified	Yes	NJ	SDW03.09000	DW	Thermometric	{SM 2550 B}	Temperature

Category: SDW04 -- Inorganic Parameters, Metals

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SDW04.03000	DW	ICP	[EPA 200.7]	Aluminum
Certified	Yes	NJ	SDW04.03100	DW	ICP/MS	[EPA 200.8]	Aluminum
Certified	Yes	NJ	SDW04.07000	DW	ICP/MS	[EPA 200.8]	Antimony
Certified	Yes	NJ	SDW04.12000	DW	ICP/MS	[EPA 200.8]	Arsenic
Certified	Yes	NJ	SDW04.16000	DW	ICP	[EPA 200.7]	Barium
Certified	Yes	NJ	SDW04.17000	DW	ICP/MS	[EPA 200.8]	Barium
Certified	Yes	NJ	SDW04.20000	DW	ICP	[EPA 200.7]	Beryllium
Certified	Yes	NJ	SDW04.21000	DW	ICP/MS	[EPA 200.8]	Beryllium
Certified	Yes	NJ	SDW04.24000	DW	ICP	[EPA 200.7]	Cadmium

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2235 RT 130
BLDG B
Dayton, NJ 08810

Category: SDW04 -- Inorganic Parameters, Metals

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SDW04.25000	DW	ICP/MS	[EPA 200.8]	Cadmium
Certified	Yes	NJ	SDW04.28000	DW	ICP	[EPA 200.7]	Chromium
Certified	Yes	NJ	SDW04.29000	DW	ICP/MS	[EPA 200.8]	Chromium
Certified	Yes	NJ	SDW04.33000	DW	ICP	[EPA 200.7]	Copper
Certified	Yes	NJ	SDW04.34000	DW	ICP/MS	[EPA 200.8]	Copper
Certified	Yes	NJ	SDW04.37000	DW	ICP	[EPA 200.7]	Iron
Certified	Yes	NJ	SDW04.40000	DW	ICP/MS	[EPA 200.8]	Lead
Certified	Yes	NJ	SDW04.41100	DW	ICP	[EPA 200.7]	Magnesium
Certified	Yes	NJ	SDW04.44000	DW	ICP	[EPA 200.7]	Manganese
Certified	Yes	NJ	SDW04.45000	DW	ICP/MS	[EPA 200.8]	Manganese
Certified	Yes	NJ	SDW04.46000	DW	Manual Cold Vapor	[EPA 245.1]	Mercury
Certified	Yes	NJ	SDW04.52000	DW	ICP	[EPA 200.7]	Nickel
Certified	Yes	NJ	SDW04.53000	DW	ICP/MS	[EPA 200.8]	Nickel
Certified	Yes	NJ	SDW04.57000	DW	ICP/MS	[EPA 200.8]	Selenium
Certified	Yes	NJ	SDW04.62000	DW	ICP	[EPA 200.7]	Silver
Certified	Yes	NJ	SDW04.63000	DW	ICP/MS	[EPA 200.8]	Silver
Certified	Yes	NJ	SDW04.65000	DW	ICP/MS	[EPA 200.8]	Thallium
Certified	Yes	NJ	SDW04.67000	DW	ICP	[EPA 200.7]	Zinc
Certified	Yes	NJ	SDW04.68000	DW	ICP/MS	[EPA 200.8]	Zinc

Category: SDW05 -- Organic Parameters, Chromatography

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SDW05.12010	DW	Solvent Extract, GC	[EPA 504.1]	Dibromoethane (1,2-) (EDB)
Certified	Yes	NJ	SDW05.12020	DW	Solvent Extract, GC	[EPA 504.1]	Dibromo-3-chloropropane (1,2-)
Certified	Yes	NJ	SDW05.12030	DW	Solvent Extract, GC	[EPA 504.1]	Trichloropropane (1,2,3-)
Dropped	No	NJ	SDW05.14010	DW	Liquid/Liquid Extraction/GC	[EPA 515.1]	D (2,4-)
Dropped	No	NJ	SDW05.14020	DW	Liquid/Liquid Extraction/GC	[EPA 515.1]	Dalapon
Dropped	No	NJ	SDW05.14030	DW	Liquid/Liquid Extraction/GC	[EPA 515.1]	Dinoseb
Dropped	No	NJ	SDW05.14040	DW	Liquid/Liquid Extraction/GC	[EPA 515.1]	Pentachlorophenol

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Dayton, NJ 08810

Category: SDW05 – Organic Parameters, Chromatography

Status	Eligible to Report	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
	NJ Data						
Dropped	No	NJ	SDW05.14050	DW	Liquid/Liquid Extraction/GC	[EPA 515.1]	Picloram
Dropped	No	NJ	SDW05.14060	DW	Liquid/Liquid Extraction/GC	[EPA 515.1]	TP (2,4,5-) (Silvex)
Dropped	No	NJ	SDW05.15020	DW	Liquid/Liquid Extraction/GC	[EPA 515.1]	DB (2,4-)
Dropped	No	NJ	SDW05.15030	DW	Liquid/Liquid Extraction/GC	[EPA 515.1]	Dicamba
Dropped	No	NJ	SDW05.15050	DW	Liquid/Liquid Extraction/GC	[EPA 515.1]	Dichlorprop
Dropped	No	NJ	SDW05.15070	DW	Liquid/Liquid Extraction/GC	[EPA 515.1]	T (2,4,5-)

Category: SDW06 – Organic Parameters, Chromatography/MS

Status	Eligible to Report	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
	NJ Data						
Certified	Yes	NJ	SDW06.01010	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Bromoform
Certified	Yes	NJ	SDW06.01020	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Chloroform
Certified	Yes	NJ	SDW06.01030	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dibromochloromethane
Certified	Yes	NJ	SDW06.01040	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Bromodichloromethane
Certified	Yes	NJ	SDW06.02010	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Benzene
Certified	Yes	NJ	SDW06.02020	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Carbon tetrachloride
Certified	Yes	NJ	SDW06.02030	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Chlorobenzene
Certified	Yes	NJ	SDW06.02040	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichlorobenzene (1,2-)
Certified	Yes	NJ	SDW06.02050	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichlorobenzene (1,3-)
Certified	Yes	NJ	SDW06.02060	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichlorobenzene (1,4-)
Certified	Yes	NJ	SDW06.02070	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloroethane (1,1-)
Certified	Yes	NJ	SDW06.02080	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloroethane (1,2-)
Certified	Yes	NJ	SDW06.02090	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloroethene (cis-1,2-)
Certified	Yes	NJ	SDW06.02100	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloroethene (trans-1,2-)
Certified	Yes	NJ	SDW06.02110	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Methylene chloride (Dichloromethane)
Certified	Yes	NJ	SDW06.02120	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloropropane (1,2-)
Certified	Yes	NJ	SDW06.02130	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Ethylbenzene
Certified	Yes	NJ	SDW06.02140	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Methyl tert-butyl ether
Certified	Yes	NJ	SDW06.02150	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Naphthalene
Certified	Yes	NJ	SDW06.02160	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Styrene

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2235 RT 130
BLDG B
Dayton, NJ 08810

Category: SDW06 -- Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SDW06.02170	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Tetrachloroethane (1,1,2,2-)
Certified	Yes	NJ	SDW06.02180	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Tetrachloroethene
Certified	Yes	NJ	SDW06.02190	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Trichloroethane (1,1,1-)
Certified	Yes	NJ	SDW06.02200	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Trichloroethene
Certified	Yes	NJ	SDW06.02210	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Toluene
Certified	Yes	NJ	SDW06.02220	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Trichlorobenzene (1,2,4-)
Certified	Yes	NJ	SDW06.02230	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloroethene (1,1-)
Certified	Yes	NJ	SDW06.02240	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Trichloroethane (1,1,2-)
Certified	Yes	NJ	SDW06.02250	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Vinyl chloride
Certified	Yes	NJ	SDW06.02260	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Xylenes (total)
Certified	Yes	NJ	SDW06.03010	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Bromobenzene
Certified	Yes	NJ	SDW06.03020	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Bromochloromethane
Certified	Yes	NJ	SDW06.03030	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Bromomethane
Certified	Yes	NJ	SDW06.03040	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Butyl benzene (n-)
Certified	Yes	NJ	SDW06.03050	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Sec-butylbenzene
Certified	Yes	NJ	SDW06.03060	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Tert-butylbenzene
Certified	Yes	NJ	SDW06.03070	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Chloroethane
Certified	Yes	NJ	SDW06.03080	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Chloromethane
Certified	Yes	NJ	SDW06.03090	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Chlorotoluene (2-)
Certified	Yes	NJ	SDW06.03100	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Chlorotoluene (4-)
Certified	Yes	NJ	SDW06.03110	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dibromo-3-chloropropane (1,2-)
Certified	Yes	NJ	SDW06.03120	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dibromoethane (1,2-) (EDB)
Certified	Yes	NJ	SDW06.03130	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dibromomethane
Certified	Yes	NJ	SDW06.03140	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichlorodifluoromethane
Certified	Yes	NJ	SDW06.03150	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloropropane (1,3-)
Certified	Yes	NJ	SDW06.03160	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloropropane (2,2-)
Certified	Yes	NJ	SDW06.03170	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloropropene (1,1-)
Certified	Yes	NJ	SDW06.03180	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloropropene (cis-1,3-)
Certified	Yes	NJ	SDW06.03190	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloropropene (trans-1,3-)
Certified	Yes	NJ	SDW06.03200	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Hexachlorobutadiene (1,3-)
Certified	Yes	NJ	SDW06.03210	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Isopropylbenzene
Certified	Yes	NJ	SDW06.03220	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Isopropyltoluene (4-)

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Category: SDW06 – Organic Parameters, Chromatography/MS

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Certified	Yes	NJ	SDW06.03230	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Propylbenzene (n-)
Certified	Yes	NJ	SDW06.03240	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Tetrachloroethane (1,1,1,2-)
Certified	Yes	NJ	SDW06.03250	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Trichlorobenzene (1,2,3-)
Certified	Yes	NJ	SDW06.03260	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Trichlorofluoromethane
Certified	Yes	NJ	SDW06.03270	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Trichloropropane (1,2,3-)
Certified	Yes	NJ	SDW06.03280	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Trimethylbenzene (1,2,4-)
Certified	Yes	NJ	SDW06.03300	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Trimethylbenzene (1,3,5-)
Certified	Yes	NJ	SDW06.03310	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Nitrobenzene
Certified	Yes	NJ	SDW06.03410	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Acetone
Certified	Yes	NJ	SDW06.03420	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Acrylonitrile
Certified	Yes	NJ	SDW06.03430	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Allyl chloride
Certified	Yes	NJ	SDW06.03440	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Butanone (2-)
Certified	Yes	NJ	SDW06.03450	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Carbon disulfide
Certified	Yes	NJ	SDW06.03460	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Chloroacetonitrile
Certified	Yes	NJ	SDW06.03470	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Chlorobutane (1-)
Certified	Yes	NJ	SDW06.03480	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloro-2-butene (trans-1,4-)
Certified	Yes	NJ	SDW06.03490	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloropropanone (1,1-)
Certified	Yes	NJ	SDW06.03500	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Diethyl ether (Ethyl ether)
Certified	Yes	NJ	SDW06.03510	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Ethyl methacrylate
Applied	No	NJ	SDW06.03515	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Hexane (n-)
Certified	Yes	NJ	SDW06.03520	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Hexachloroethane
Certified	Yes	NJ	SDW06.03530	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Hexanone (2-)
Certified	Yes	NJ	SDW06.03540	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Methacrylonitrile
Certified	Yes	NJ	SDW06.03550	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Methyl acrylate
Certified	Yes	NJ	SDW06.03560	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Methyl iodide
Certified	Yes	NJ	SDW06.03570	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Methyl methacrylate
Certified	Yes	NJ	SDW06.03580	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Pentanone (4-methyl-2-)
Certified	Yes	NJ	SDW06.03590	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Nitropropane (2-)
Certified	Yes	NJ	SDW06.03600	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Pentachloroethane
Certified	Yes	NJ	SDW06.03610	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Propionitrile
Certified	Yes	NJ	SDW06.03615	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Tert-butyl alcohol

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Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SDW06.03620	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Tetrahydrofuran

Category: SHW03 -- Analyze-Immediately Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW03.02000	NPW	Thermometric	[SM 2550 B]	Temperature

Category: SHW04 -- Inorganic Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW04.01000	NPW	Acid Digestion/Surface and Groundwater, ICP, FLAA	[SW-846 3005A]	Metals, Total Rec and Dissolved
Certified	Yes	NJ	SHW04.01500	NPW	Acid Digestion/Aqueous Samples, ICP, FLAA	[SW-846 3010A]	Metals, Total
Certified	Yes	NJ	SHW04.33000	NPW	AA, Manual Cold Vapor	[SW-846 7470A]	Mercury - liquid waste

Category: SHW05 -- Organic Parameters, Prep. / Screening

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW05.01000	NPW	Separatory Funnel Extraction	[SW-846 3510C]	Semivolatile organics
Certified	Yes	NJ	SHW05.02000	NPW	Continuous Liquid-Liquid Extraction	[SW-846 3520C]	Semivolatile organics
Certified	Yes	NJ	SHW05.07000	NPW	Purge & Trap Aqueous	[SW-846 5030B]	Volatile organics

Category: SHW07 -- Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW07.04016	NPW	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Benzyl chloride
Certified	Yes	NJ	SHW07.04680	NPW	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Aramite

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2235 RT 130
BLDG B
Dayton, NJ 08810

Category: SHW07 -- Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW07.04775	NPW	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dimethyl benzidine (3,3-)
Certified	Yes	NJ	SHW07.04795	NPW	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Famphur
Certified	Yes	NJ	SHW07.04800	NPW	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Hexachlorophene
Certified	Yes	NJ	SHW07.04840	NPW	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Methapyrilene
Certified	Yes	NJ	SHW07.04915	NPW	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Phenylenediamine (1,4-)

Category: SHW09 -- Miscellaneous Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW09.06000	NPW	Combustion, Titration	[SW-846 9020B, Rev. 2, 9/94]	Total organic halides (TOX)
Certified	Yes	NJ	SHW09.17000	NPW	Wheatstone Bridge	[SW-846 9050A, Rev. 1, 12/96]	Specific conductance
Certified	Yes	NJ	SHW09.22000	NPW	Colorimetric, Auto, 4AAP Distillation	[SW-846 9066, Rev. 0, 9/86]	Phenols

Category: WPP01 -- Microbiological Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	WPP01.02000	NPW	Membrane Filter (MF), Single Step	[SM 9222 D]	Fecal coliform
Certified	Yes	NJ	WPP01.04000	NPW	MF Single Step or Two Step	[SM 9222 B]	Total coliform
Certified	Yes	NJ	WPP01.10000	NPW	Pour Plate	[SM 9215 B]	Heterotrophic plate count

Category: WPP02 -- Inorg. Parameters, Nutrients and Demands

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	WPP02.01000	NPW	Electrometric or Phenolphthalein	[SM 2310 B(4A)]	Acidity as CaCO ₃
Certified	Yes	NJ	WPP02.01500	NPW	Electrometric or Color Titration	[SM 2320 B]	Alkalinity as CaCO ₃
Certified	Yes	NJ	WPP02.04000	NPW	Automated Phenate	[SM 4500-NH ₃ B+G (20th ed.)]	Ammonia
Certified	Yes	NJ	WPP02.05000	NPW	Dissolved Oxygen Depletion	[SM 5210 B]	Biochemical oxygen demand
Certified	Yes	NJ	WPP02.06000	NPW	ICP	[EPA 200.7]	Boron

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Category: WPP02 – Inorg. Parameters, Nutrients and Demands

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	WPP02.07100	NPW	Ion Chromatography	[EPA 300.0]	Bromide
Certified	Yes	NJ	WPP02.08000	NPW	Digestion, ICP	[EPA 200.7]	Calcium
Certified	Yes	NJ	WPP02.08050	NPW	ICP/MS	[EPA 200.8]	Calcium
Certified	Yes	NJ	WPP02.09500	NPW	Dissolved Oxygen Depletion, Nitrification Inhibition	[SM 5210 B]	Carbonaceous BOD (CBOD)
Certified	Yes	NJ	WPP02.10000	NPW	Titrimetric	[SM 5220 C]	Chemical oxygen demand
Certified	Yes	NJ	WPP02.11500	NPW	Titrimetric, Mercuric Nitrate	[SM 4500-Cl C]	Chloride
Certified	Yes	NJ	WPP02.12600	NPW	Ion Chromatography	[EPA 300.0]	Chloride
Certified	Yes	NJ	WPP02.13500	NPW	Colorimetric (Platinum-Cobalt)	[SM 2120 B]	Color
Dropped	No	NJ	WPP02.15000	NPW	Distillation, Spectrophotometric (Manual)	[SM 4500-CN C, E]	Cyanide
Certified	Yes	NJ	WPP02.15500	NPW	Distillation, Spectrophotometric (Auto)	[EPA 335.4]	Cyanide
Certified	Yes	NJ	WPP02.16000	NPW	Manual Distillation, Titrimetr. Spectro	[SM 4500-CN C,G]	Cyanide - amenable to Cl ₂
Certified	Yes	NJ	WPP02.18100	NPW	Ion Chromatography	[EPA 300.0]	Fluoride
Certified	Yes	NJ	WPP02.19000	NPW	Titrimetric, EDTA	[SM 2340 B or C]	Hardness - total as CaCO ₃
Certified	Yes	NJ	WPP02.20100	NPW	Ca + Mg Carbonates, ICP	[EPA 200.7]	Hardness - total as CaCO ₃
Certified	Yes	NJ	WPP02.22500	NPW	Digestion, Distillation, Semiautomated Digestor	[EPA 351.2]	Kjeldahl nitrogen - total
Certified	Yes	NJ	WPP02.24000	NPW	Digestion, ICP	[EPA 200.7]	Magnesium
Certified	Yes	NJ	WPP02.24050	NPW	ICP/MS	[EPA 200.8]	Magnesium
Certified	Yes	NJ	WPP02.27000	NPW	Cadmium Reduction, Automated	[EPA 353.2]	Nitrate - nitrite
Certified	Yes	NJ	WPP02.28000	NPW	Spectrophotometric, Manual	[SM 4500-NO2 B]	Nitrite
Certified	Yes	NJ	WPP02.29100	NPW	Gravimetric, Hexane Extractable Material-LL	[EPA 1664A]	Oil & grease - hem-LL
Certified	Yes	NJ	WPP02.29200	NPW	Gravimetric, Silica Gel Treated-Hem	[EPA 1664A]	Oil & grease - sgt-non polar
Certified	Yes	NJ	WPP02.30000	NPW	Combustion or Oxidation	[SM 5310 B, C or D]	Total organic carbon (TOC)
Certified	Yes	NJ	WPP02.30500	NPW	Total Kjeldahl-N Minus Ammonia-N	[USER DEFINED EPA 351.2 - SM4500 NH ₃ B+G (20TH ED)]	Organic nitrogen
Certified	Yes	NJ	WPP02.31500	NPW	Ascorbic Acid, Manual Single Reagent	[SM 4500-P, E]	Orthophosphate
Certified	Yes	NJ	WPP02.33000	NPW	Manual Distillation, Colorimetric Auto	[EPA 420.1 + .4]	Phenols
Certified	Yes	NJ	WPP02.34000	NPW	Persulfate Digestion + Manual	[EPA 365.3]	Phosphorus (total)
Certified	Yes	NJ	WPP02.36500	NPW	Digestion, ICP	[EPA 200.7]	Potassium
Certified	Yes	NJ	WPP02.36550	NPW	ICP/MS	[EPA 200.8]	Potassium
Certified	Yes	NJ	WPP02.38000	NPW	Gravimetric, 103-105 Degrees C	[SM 2540 B]	Residue - total
Certified	Yes	NJ	WPP02.38500	NPW	Gravimetric, 180 Degrees C	[SM 2540 C]	Residue - filterable (TDS)

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2235 RT 130
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Dayton, NJ 08810

Category: WPP02 -- Inorg. Parameters, Nutrients and Demands

Status	Eligible to Report		Code	Matrix	Technique Description	Approved Method	Parameter Description
	NJ Data	State					
Certified	Yes	NJ	WPP02.39000	NPW	Gravimetric, 103-105 Degrees C, Post Washing	[SM 2540 D]	Residue - nonfilterable (TSS)
Certified	Yes	NJ	WPP02.39500	NPW	Volumetric (Imhoff Cone) or Gravimetric	[SM 2540 F]	Residue - settleable
Certified	Yes	NJ	WPP02.40000	NPW	Gravimetric, 550 Degrees C	[EPA 160.4]	Residue - volatile
Certified	Yes	NJ	WPP02.40100	NPW	Gravimetric, 500 Degrees C	[SM 2540 G SM 18th Ed.]	Total, fixed, and volatile solids (SQAR)
Certified	Yes	NJ	WPP02.40500	NPW	Electrical Conductivity	[SM 2520 B]	Salinity
Certified	Yes	NJ	WPP02.41500	NPW	0.45u Filtration + Colorimetric (Manual)	[SM 4500-Si D (18/19th ed)]	Silica - dissolved
Certified	Yes	NJ	WPP02.42500	NPW	0.45u Filtration + ICP	[EPA 200.7]	Silica - dissolved
Certified	Yes	NJ	WPP02.44000	NPW	Digestion, ICP	[EPA 200.7]	Sodium
Certified	Yes	NJ	WPP02.44050	NPW	ICP/MS	[EPA 200.8]	Sodium
Certified	Yes	NJ	WPP02.45500	NPW	Wheatstone Bridge	[SM 2510 B]	Specific conductance
Certified	Yes	NJ	WPP02.47100	NPW	Ion Chromatography	[EPA 300.0]	Sulfate
Certified	Yes	NJ	WPP02.47500	NPW	Titrimetric, Iodine	[SM 4500-S F (19/20th ed)]	Sulfides
Certified	Yes	NJ	WPP02.48500	NPW	Colorimetric (Methylene Blue)	[SM 5540 C]	Surfactants
Certified	Yes	NJ	WPP02.48510	NPW	Colorimetric (CTAS)	[SM 5540 D]	Surfactants
Certified	Yes	NJ	WPP02.50000	NPW	Nephelometric	[EPA 180.1]	Turbidity

Category: WPP03 -- Analyze-Immediately Inorganic Parameters

Status	Eligible to Report		Code	Matrix	Technique Description	Approved Method	Parameter Description
	NJ Data	State					
Certified	Yes	NJ	WPP03.04000	NPW	DPD-FAS	[SM 4500-Cl F]	Chlorine
Certified	Yes	NJ	WPP03.07000	NPW	Winkler, Azide Modification	[SM 4500-O C]	Oxygen (dissolved)
Certified	Yes	NJ	WPP03.08000	NPW	Electrode	[SM 4500-O G]	Oxygen (dissolved)
Certified	Yes	NJ	WPP03.09000	NPW	Electrometric	[SM 4500-H B]	pH
Certified	Yes	NJ	WPP03.12000	NPW	Titrimetric, Iodine-Iodate	[SM 4500-SO3 B]	Sulfite - SO3
Certified	Yes	NJ	WPP03.14000	NPW	Thermometric	[SM 2550 B]	Temperature

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Category: WPP04 -- Inorganic Parameters, Metals

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	WPP04.02000	NPW	Digestion, ICP	[EPA 200.7]	Aluminum
Certified	Yes	NJ	WPP04.02100	NPW	ICP/MS	[EPA 200.8]	Aluminum
Certified	Yes	NJ	WPP04.04500	NPW	Digestion, ICP	[EPA 200.7]	Antimony
Certified	Yes	NJ	WPP04.04600	NPW	ICP/MS	[EPA 200.8]	Antimony
Certified	Yes	NJ	WPP04.05600	NPW	Digestion, ICP	[EPA 200.7]	Arsenic
Certified	Yes	NJ	WPP04.05700	NPW	ICP/MS	[EPA 200.8]	Arsenic
Certified	Yes	NJ	WPP04.08000	NPW	Digestion, ICP	[EPA 200.7]	Barium
Certified	Yes	NJ	WPP04.08200	NPW	ICP/MS	[EPA 200.8]	Barium
Certified	Yes	NJ	WPP04.11000	NPW	Digestion, ICP	[EPA 200.7]	Beryllium
Certified	Yes	NJ	WPP04.11100	NPW	ICP/MS	[EPA 200.8]	Beryllium
Certified	Yes	NJ	WPP04.13500	NPW	Digestion, ICP	[EPA 200.7]	Cadmium
Certified	Yes	NJ	WPP04.13600	NPW	ICP/MS	[EPA 200.8]	Cadmium
Certified	Yes	NJ	WPP04.15000	NPW	0.45u Filter, Colorimetric DPC	[SM 3500-Cr D (18/19th ed)]	Chromium (VI)
Certified	Yes	NJ	WPP04.15100	NPW	0.45u Filter, Ion Chromatography	[EPA 218.6]	Chromium (VI)
Certified	Yes	NJ	WPP04.18000	NPW	Digestion, ICP	[EPA 200.7]	Chromium
Certified	Yes	NJ	WPP04.18100	NPW	ICP/MS	[EPA 200.8]	Chromium
Certified	Yes	NJ	WPP04.19500	NPW	Digestion, ICP	[EPA 200.7]	Cobalt
Certified	Yes	NJ	WPP04.19600	NPW	ICP/MS	[EPA 200.8]	Cobalt
Certified	Yes	NJ	WPP04.21500	NPW	Digestion, ICP	[EPA 200.7]	Copper
Certified	Yes	NJ	WPP04.21600	NPW	ICP/MS	[EPA 200.8]	Copper
Certified	Yes	NJ	WPP04.26500	NPW	Digestion, ICP	[EPA 200.7]	Iron
Certified	Yes	NJ	WPP04.26550	NPW	ICP/MS	[EPA 200.8]	Iron
Certified	Yes	NJ	WPP04.27001	NPW	Digestion, Colorimetric (Phenanthroline)	[SM 3500-Fe B (20th ed)]	Iron, Ferrous
Certified	Yes	NJ	WPP04.28000	NPW	Digestion, ICP	[EPA 200.7]	Lead
Certified	Yes	NJ	WPP04.28100	NPW	ICP/MS	[EPA 200.8]	Lead
Certified	Yes	NJ	WPP04.31000	NPW	Digestion, ICP	[EPA 200.7]	Manganese
Certified	Yes	NJ	WPP04.31100	NPW	ICP/MS	[EPA 200.8]	Manganese
Certified	Yes	NJ	WPP04.33000	NPW	Manual Cold Vapor	[EPA 245.1]	Mercury
Certified	Yes	NJ	WPP04.33100	NPW	Cold Vapor Atomic Fluorescence Spectrometry	[EPA 245.7]	Mercury
Certified	Yes	NJ	WPP04.33200	NPW	Purge & Trap Atomic Fluorescence	[EPA 1631E]	Mercury
Certified	Yes	NJ	WPP04.35000	NPW	Digestion, ICP	[EPA 200.7]	Molybdenum
Certified	Yes	NJ	WPP04.35200	NPW	ICP/MS	[EPA 200.8]	Molybdenum

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Category: WPP04 -- Inorganic Parameters, Metals

Status	Eligible to Report	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
	NJ Data						
Certified	Yes	NJ	WPP04.37500	NPW	Digestion, ICP	[EPA 200.7]	Nickel
Certified	Yes	NJ	WPP04.37600	NPW	ICP/MS	[EPA 200.8]	Nickel
Certified	Yes	NJ	WPP04.45500	NPW	Digestion, ICP	[EPA 200.7]	Selenium
Certified	Yes	NJ	WPP04.45600	NPW	ICP/MS	[EPA 200.8]	Selenium
Certified	Yes	NJ	WPP04.48000	NPW	Digestion, ICP	[EPA 200.7]	Silver
Certified	Yes	NJ	WPP04.48200	NPW	ICP/MS	[EPA 200.8]	Silver
Certified	Yes	NJ	WPP04.50000	NPW	Digestion, ICP	[EPA 200.7]	Thallium
Certified	Yes	NJ	WPP04.50100	NPW	ICP/MS	[EPA 200.8]	Thallium
Certified	Yes	NJ	WPP04.51100	NPW	Digestion, ICP	[EPA 200.7]	Tin
Certified	Yes	NJ	WPP04.51200	NPW	ICP/MS	[EPA 200.8]	Tin
Certified	Yes	NJ	WPP04.52050	NPW	Digestion, ICP	[EPA 200.7]	Titanium
Certified	Yes	NJ	WPP04.52070	NPW	ICP/MS	[EPA 200.8]	Titanium
Certified	Yes	NJ	WPP04.54000	NPW	Digestion, ICP	[EPA 200.7]	Vanadium
Certified	Yes	NJ	WPP04.54100	NPW	ICP/MS	[EPA 200.8]	Vanadium
Certified	Yes	NJ	WPP04.56500	NPW	Digestion, ICP	[EPA 200.7]	Zinc
Certified	Yes	NJ	WPP04.56600	NPW	ICP/MS	[EPA 200.8]	Zinc

Category: WPP05 -- Organic Parameters, Chromatography

Status	Eligible to Report	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
	NJ Data						
Certified	Yes	NJ	WPP05.02010	NPW	Purge & Trap, GC (PID)	[EPA 602]	Benzene
Certified	Yes	NJ	WPP05.02020	NPW	Purge & Trap, GC (PID)	[EPA 602]	Chlorobenzene
Certified	Yes	NJ	WPP05.02030	NPW	Purge & Trap, GC (PID)	[EPA 602]	Dichlorobenzene (1,2-)
Certified	Yes	NJ	WPP05.02040	NPW	Purge & Trap, GC (PID)	[EPA 602]	Dichlorobenzene (1,3-)
Certified	Yes	NJ	WPP05.02050	NPW	Purge & Trap, GC (PID)	[EPA 602]	Dichlorobenzene (1,4-)
Certified	Yes	NJ	WPP05.02060	NPW	Purge & Trap, GC (PID)	[EPA 602]	Ethylbenzene
Certified	Yes	NJ	WPP05.02062	NPW	Purge & Trap, GC (PID)	[EPA 602]	Methyl tert-butyl ether
Certified	Yes	NJ	WPP05.02064	NPW	Purge & Trap, GC (PID)	[EPA 602]	Tert-butyl alcohol
Certified	Yes	NJ	WPP05.02070	NPW	Purge & Trap, GC (PID)	[EPA 602]	Toluene
Certified	Yes	NJ	WPP05.02080	NPW	Purge & Trap, GC (PID)	[EPA 602]	Xylenes (total)

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Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	WPP05.03000	NPW	Purge & Trap, GC (FID)	[EPA 603]	Acrolein
Certified	Yes	NJ	WPP05.03005	NPW	Purge & Trap, GC (FID)	[EPA 603]	Acrylonitrile
Certified	Yes	NJ	WPP05.09010	NPW	Extract/GC (ECD)	[EPA 608]	Aldrin
Certified	Yes	NJ	WPP05.09020	NPW	Extract/GC (ECD)	[EPA 608]	Alpha BHC
Certified	Yes	NJ	WPP05.09030	NPW	Extract/GC (ECD)	[EPA 608]	Beta BHC
Certified	Yes	NJ	WPP05.09040	NPW	Extract/GC (ECD)	[EPA 608]	Delta BHC
Certified	Yes	NJ	WPP05.09050	NPW	Extract/GC (ECD)	[EPA 608]	Lindane (gamma BHC)
Certified	Yes	NJ	WPP05.09060	NPW	Extract/GC (ECD)	[EPA 608]	Chlordane
Certified	Yes	NJ	WPP05.09062	NPW	Extract/GC (ECD)	[EPA 608]	Chlordane (alpha)
Certified	Yes	NJ	WPP05.09063	NPW	Extract/GC (ECD)	[EPA 608]	Chlordane (gamma)
Applied	No	NJ	WPP05.09065	NPW	Extract/GC (ECD)	[EPA 608]	Chlorobenzilate
Certified	Yes	NJ	WPP05.09070	NPW	Extract/GC (ECD)	[EPA 608]	DDD (4,4'-)
Certified	Yes	NJ	WPP05.09080	NPW	Extract/GC (ECD)	[EPA 608]	DDE (4,4'-)
Certified	Yes	NJ	WPP05.09090	NPW	Extract/GC (ECD)	[EPA 608]	DDT (4,4'-)
Certified	Yes	NJ	WPP05.09100	NPW	Extract/GC (ECD)	[EPA 608]	Dieldrin
Certified	Yes	NJ	WPP05.09110	NPW	Extract/GC (ECD)	[EPA 608]	Endosulfan I
Certified	Yes	NJ	WPP05.09120	NPW	Extract/GC (ECD)	[EPA 608]	Endosulfan II
Certified	Yes	NJ	WPP05.09130	NPW	Extract/GC (ECD)	[EPA 608]	Endosulfan sulfate
Certified	Yes	NJ	WPP05.09140	NPW	Extract/GC (ECD)	[EPA 608]	Endrin
Certified	Yes	NJ	WPP05.09150	NPW	Extract/GC (ECD)	[EPA 608]	Endrin aldehyde
Certified	Yes	NJ	WPP05.09160	NPW	Extract/GC (ECD)	[EPA 608]	Endrin ketone
Certified	Yes	NJ	WPP05.09170	NPW	Extract/GC (ECD)	[EPA 608]	Heptachlor
Certified	Yes	NJ	WPP05.09180	NPW	Extract/GC (ECD)	[EPA 608]	Heptachlor epoxide
Certified	Yes	NJ	WPP05.09190	NPW	Extract/GC (ECD)	[EPA 608]	Methoxychlor
Applied	No	NJ	WPP05.09198	NPW	Extract/GC (ECD)	[EPA 608]	Simazine
Certified	Yes	NJ	WPP05.09200	NPW	Extract/GC (ECD)	[EPA 608]	Toxaphene
Certified	Yes	NJ	WPP05.11010	NPW	Extract/GC (ECD)	[EPA 608]	PCB 1016
Certified	Yes	NJ	WPP05.11020	NPW	Extract/GC (ECD)	[EPA 608]	PCB 1221
Certified	Yes	NJ	WPP05.11030	NPW	Extract/GC (ECD)	[EPA 608]	PCB 1232
Certified	Yes	NJ	WPP05.11040	NPW	Extract/GC (ECD)	[EPA 608]	PCB 1242
Certified	Yes	NJ	WPP05.11050	NPW	Extract/GC (ECD)	[EPA 608]	PCB 1248
Certified	Yes	NJ	WPP05.11060	NPW	Extract/GC (ECD)	[EPA 608]	PCB 1254

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Category: WPP05 – Organic Parameters, Chromatography

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	WPP05.11070	NPW	Extract/GC (ECD)	[EPA 608]	PCB 1260

Category: WPP06 – Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	WPP06.02001	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Amyl acetate (n-)
Applied	No	NJ	WPP06.02002	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Amyl alcohol (n-)
Certified	Yes	NJ	WPP06.02003	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Acetone
Certified	Yes	NJ	WPP06.02007	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Acrolein
Certified	Yes	NJ	WPP06.02009	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Acrylonitrile
Certified	Yes	NJ	WPP06.02010	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Benzene
Certified	Yes	NJ	WPP06.02020	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Bromodichloromethane
Certified	Yes	NJ	WPP06.02030	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Bromoform
Certified	Yes	NJ	WPP06.02040	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Bromomethane
Certified	Yes	NJ	WPP06.02041	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Butanone (2-)
Certified	Yes	NJ	WPP06.02042	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Butyl acetate (n-)
Certified	Yes	NJ	WPP06.02045	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Carbon disulfide
Certified	Yes	NJ	WPP06.02050	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Carbon tetrachloride
Certified	Yes	NJ	WPP06.02060	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Chlorobenzene
Certified	Yes	NJ	WPP06.02070	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Chloroethane
Certified	Yes	NJ	WPP06.02080	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Chloroethyl vinyl ether (2-)
Certified	Yes	NJ	WPP06.02090	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Chloroform
Certified	Yes	NJ	WPP06.02100	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Chloromethane
Certified	Yes	NJ	WPP06.02110	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dibromochloromethane
Certified	Yes	NJ	WPP06.02115	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dibromoethane (1,2-) (EDB)
Certified	Yes	NJ	WPP06.02120	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dichlorobenzene (1,2-)
Certified	Yes	NJ	WPP06.02130	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dichlorobenzene (1,3-)
Certified	Yes	NJ	WPP06.02140	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dichlorobenzene (1,4-)
Certified	Yes	NJ	WPP06.02145	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dichlorodifluoromethane
Certified	Yes	NJ	WPP06.02150	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dichloroethane (1,1-)

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New Jersey Department of Environmental Protection
National Environmental Laboratory Accreditation Program
ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS
Effective as of 10/15/2010 until 06/30/2011



Laboratory Name: ACCUTEST LABORATORIES **Laboratory Number:** 12129 **Activity ID:** NLC100007
2235 RT 130
BLDG B
Dayton, NJ 08810

Category: WPP06 -- Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	WPP06.02160	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dichloroethane (1,2-)
Certified	Yes	NJ	WPP06.02170	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dichloroethene (1,1-)
Certified	Yes	NJ	WPP06.02175	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dichloroethene (cis-1,2-)
Certified	Yes	NJ	WPP06.02180	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dichloroethene (trans-1,2-)
Certified	Yes	NJ	WPP06.02190	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dichloropropane (1,2-)
Certified	Yes	NJ	WPP06.02198	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Diethyl ether (Ethyl ether)
Certified	Yes	NJ	WPP06.02200	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dichloropropene (cis-1,3-)
Certified	Yes	NJ	WPP06.02210	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dichloropropene (trans-1,3-)
Certified	Yes	NJ	WPP06.02212	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Ethyl acetate
Certified	Yes	NJ	WPP06.02220	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Ethylbenzene
Certified	Yes	NJ	WPP06.02222	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Heptane (n-)
Certified	Yes	NJ	WPP06.02223	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Hexane (n-)
Applied	No	NJ	WPP06.02224	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Isobutyraldehyde
Applied	No	NJ	WPP06.02225	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Isopropanol
Applied	No	NJ	WPP06.02226	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Isopropyl acetate
Certified	Yes	NJ	WPP06.02227	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Isopropyl ether
Certified	Yes	NJ	WPP06.02230	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Methylene chloride (Dichloromethane)
Applied	No	NJ	WPP06.02231	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Methyl formate
Certified	Yes	NJ	WPP06.02232	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Methyl tert-butyl ether
Certified	Yes	NJ	WPP06.02233	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Methyl isobutyl ketone
Certified	Yes	NJ	WPP06.02234	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Tert-butyl alcohol
Certified	Yes	NJ	WPP06.02235	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Tetrahydrofuran
Certified	Yes	NJ	WPP06.02238	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Styrene
Certified	Yes	NJ	WPP06.02240	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Tetrachloroethane (1,1,2,2-)
Certified	Yes	NJ	WPP06.02250	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Tetrachloroethene
Certified	Yes	NJ	WPP06.02260	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Toluene
Certified	Yes	NJ	WPP06.02270	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Trichloroethane (1,1,1-)
Certified	Yes	NJ	WPP06.02280	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Trichloroethane (1,1,2-)
Certified	Yes	NJ	WPP06.02290	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Trichloroethene
Certified	Yes	NJ	WPP06.02300	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Trichlorofluoromethane
Certified	Yes	NJ	WPP06.02305	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Trichloro (1,1,2-) trifluoroethane (1,2,2-)
Certified	Yes	NJ	WPP06.02307	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Vinyl acetate

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Laboratory Name: ACCUTEST LABORATORIES **Laboratory Number:** 12129 **Activity ID:** NLC100007
2235 RT 130
BLDG B
Dayton, NJ 08810

Category: WPP06 -- Organic Parameters, Chromatography/MS

Status	Eligible to Report		Code	Matrix	Technique Description	Approved Method	Parameter Description
	NJ Data	State					
Certified	Yes	NJ	WPP06.02310	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Vinyl chloride
Certified	Yes	NJ	WPP06.02312	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Xylenes (total)
Certified	Yes	NJ	WPP06.02315	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Xylene (o-)
Certified	Yes	NJ	WPP06.02317	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Xylene (m- + p-)
Certified	Yes	NJ	WPP06.02325	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Hexanone (2-)
Certified	Yes	NJ	WPP06.02335	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Ethyl-tert-butyl Ether [ETBE]
Certified	Yes	NJ	WPP06.02400	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Diisopropyl Ether [DIPE]
Certified	Yes	NJ	WPP06.02410	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dioxane (1,4-)
Certified	Yes	NJ	WPP06.02460	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Isopropylbenzene
Certified	Yes	NJ	WPP06.02510	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Naphthalene
Certified	Yes	NJ	WPP06.02570	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	tert-Amylmethyl ether [TAME]
Certified	Yes	NJ	WPP06.02650	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Trimethylbenzene (1,2,4-)
Certified	Yes	NJ	WPP06.02660	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Trimethylbenzene (1,3,5-)
Certified	Yes	NJ	WPP06.03010	NPW	Extract, GC/MS	[EPA 625]	Acenaphthene
Certified	Yes	NJ	WPP06.03020	NPW	Extract, GC/MS	[EPA 625]	Acenaphthylene
Certified	Yes	NJ	WPP06.03030	NPW	Extract, GC/MS	[EPA 625]	Anthracene
Certified	Yes	NJ	WPP06.03040	NPW	Extract, GC/MS	[EPA 625]	Benzo(a)anthracene
Certified	Yes	NJ	WPP06.03050	NPW	Extract, GC/MS	[EPA 625]	Benzo(b)fluoranthene
Certified	Yes	NJ	WPP06.03060	NPW	Extract, GC/MS	[EPA 625]	Benzo(k)fluoranthene
Certified	Yes	NJ	WPP06.03070	NPW	Extract, GC/MS	[EPA 625]	Benzo(a)pyrene
Certified	Yes	NJ	WPP06.03080	NPW	Extract, GC/MS	[EPA 625]	Benzo(ghi)perylene
Certified	Yes	NJ	WPP06.03090	NPW	Extract, GC/MS	[EPA 625]	Butyl benzyl phthalate
Certified	Yes	NJ	WPP06.03100	NPW	Extract, GC/MS	[EPA 625]	Bis (2-chloroethyl) ether
Certified	Yes	NJ	WPP06.03110	NPW	Extract, GC/MS	[EPA 625]	Bis (2-chloroethoxy) methane
Certified	Yes	NJ	WPP06.03120	NPW	Extract, GC/MS	[EPA 625]	Bis (2-ethylhexyl) phthalate
Certified	Yes	NJ	WPP06.03130	NPW	Extract, GC/MS	[EPA 625]	Bis (2-chloroisopropyl) ether
Certified	Yes	NJ	WPP06.03140	NPW	Extract, GC/MS	[EPA 625]	Bromophenyl-phenyl ether (4-)
Certified	Yes	NJ	WPP06.03150	NPW	Extract, GC/MS	[EPA 625]	Chloronaphthalene (2-)
Certified	Yes	NJ	WPP06.03160	NPW	Extract, GC/MS	[EPA 625]	Chlorophenyl-phenyl ether (4-)
Certified	Yes	NJ	WPP06.03170	NPW	Extract, GC/MS	[EPA 625]	Chrysene
Certified	Yes	NJ	WPP06.03178	NPW	Extract, GC/MS	[EPA 625]	Dibenz(a,h)acridine
Certified	Yes	NJ	WPP06.03180	NPW	Extract, GC/MS	[EPA 625]	Dibenzo(a,h)anthracene

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Laboratory Name: ACCUTEST LABORATORIES **Laboratory Number:** 12129 **Activity ID:** NLC100007
2235 RT 130
BLDG B
Dayton, NJ 08810

Category: WPP06 -- Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	WPP06.03186	NPW	Extract, GC/MS	[EPA 625]	Dibenzofuran
Certified	Yes	NJ	WPP06.03190	NPW	Extract, GC/MS	[EPA 625]	Di-n-butyl phthalate
Certified	Yes	NJ	WPP06.03230	NPW	Extract, GC/MS	[EPA 625]	Dichlorobenzidine (3,3')
Certified	Yes	NJ	WPP06.03240	NPW	Extract, GC/MS	[EPA 625]	Diethyl phthalate
Certified	Yes	NJ	WPP06.03244	NPW	Extract, GC/MS	[EPA 625]	Dimethylbenz(a)anthracene (7,12-)
Certified	Yes	NJ	WPP06.03250	NPW	Extract, GC/MS	[EPA 625]	Dimethyl phthalate
Certified	Yes	NJ	WPP06.03260	NPW	Extract, GC/MS	[EPA 625]	Dinitrotoluene (2,4-)
Certified	Yes	NJ	WPP06.03270	NPW	Extract, GC/MS	[EPA 625]	Dinitrotoluene (2,6-)
Certified	Yes	NJ	WPP06.03280	NPW	Extract, GC/MS	[EPA 625]	Di-n-octyl phthalate
Certified	Yes	NJ	WPP06.03290	NPW	Extract, GC/MS	[EPA 625]	Fluoranthene
Certified	Yes	NJ	WPP06.03300	NPW	Extract, GC/MS	[EPA 625]	Fluorene
Certified	Yes	NJ	WPP06.03310	NPW	Extract, GC/MS	[EPA 625]	Hexachlorobenzene
Certified	Yes	NJ	WPP06.03320	NPW	Extract, GC/MS	[EPA 625]	Hexachlorobutadiene (1,3-)
Certified	Yes	NJ	WPP06.03330	NPW	Extract, GC/MS	[EPA 625]	Hexachloroethane
Certified	Yes	NJ	WPP06.03340	NPW	Extract, GC/MS	[EPA 625]	Indeno(1,2,3-cd)pyrene
Certified	Yes	NJ	WPP06.03350	NPW	Extract, GC/MS	[EPA 625]	Isophorone
Certified	Yes	NJ	WPP06.03358	NPW	Extract, GC/MS	[EPA 625]	Methylnaphthalene (2-)
Certified	Yes	NJ	WPP06.03360	NPW	Extract, GC/MS	[EPA 625]	Naphthalene
Certified	Yes	NJ	WPP06.03366	NPW	Extract, GC/MS	[EPA 625]	Chloroaniline (4-)
Certified	Yes	NJ	WPP06.03367	NPW	Extract, GC/MS	[EPA 625]	Nitroaniline (2-)
Certified	Yes	NJ	WPP06.03368	NPW	Extract, GC/MS	[EPA 625]	Nitroaniline (3-)
Certified	Yes	NJ	WPP06.03369	NPW	Extract, GC/MS	[EPA 625]	Nitroaniline (4-)
Certified	Yes	NJ	WPP06.03370	NPW	Extract, GC/MS	[EPA 625]	Nitrobenzene
Certified	Yes	NJ	WPP06.03380	NPW	Extract, GC/MS	[EPA 625]	N-Nitroso-di-n-propylamine
Certified	Yes	NJ	WPP06.03390	NPW	Extract, GC/MS	[EPA 625]	Phenanthrene
Certified	Yes	NJ	WPP06.03400	NPW	Extract, GC/MS	[EPA 625]	Pyrene
Certified	Yes	NJ	WPP06.03402	NPW	Extract, GC/MS	[EPA 625]	Pentachlorobenzene
Certified	Yes	NJ	WPP06.03405	NPW	Extract, GC/MS	[EPA 625]	Tetrachlorobenzene (1,2,4,5-)
Certified	Yes	NJ	WPP06.03410	NPW	Extract, GC/MS	[EPA 625]	Trichlorobenzene (1,2,4-)
Certified	Yes	NJ	WPP06.03420	NPW	Extract, GC/MS	[EPA 625]	Methyl phenol (4-chloro-3-)
Certified	Yes	NJ	WPP06.03430	NPW	Extract, GC/MS	[EPA 625]	Chlorophenol (2-)
Certified	Yes	NJ	WPP06.03440	NPW	Extract, GC/MS	[EPA 625]	Dichlorophenol (2,4-)

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Laboratory Name: ACCUTEST LABORATORIES Laboratory Number: 12129 Activity ID: NLC100007
2235 RT 130
BLDG B
Dayton, NJ 08810

Category: WPP06 – Organic Parameters, Chromatography/MS

Status	Eligible to Report	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
	NJ Data						
Certified	Yes	NJ	WPP06.03450	NPW	Extract, GC/MS	[EPA 625]	Dimethylphenol (2,4-)
Certified	Yes	NJ	WPP06.03460	NPW	Extract, GC/MS	[EPA 625]	Dinitrophenol (2,4-)
Certified	Yes	NJ	WPP06.03470	NPW	Extract, GC/MS	[EPA 625]	Dinitrophenol (2-methyl-4,6-)
Certified	Yes	NJ	WPP06.03480	NPW	Extract, GC/MS	[EPA 625]	Nitrophenol (2-)
Certified	Yes	NJ	WPP06.03490	NPW	Extract, GC/MS	[EPA 625]	Nitrophenol (4-)
Certified	Yes	NJ	WPP06.03500	NPW	Extract, GC/MS	[EPA 625]	Pentachlorophenol
Certified	Yes	NJ	WPP06.03510	NPW	Extract, GC/MS	[EPA 625]	Phenol
Certified	Yes	NJ	WPP06.03512	NPW	Extract, GC/MS	[EPA 625]	Tetrachlorophenol (2,3,4,6-)
Certified	Yes	NJ	WPP06.03518	NPW	Extract, GC/MS	[EPA 625]	Trichlorophenol (2,4,5-)
Certified	Yes	NJ	WPP06.03520	NPW	Extract, GC/MS	[EPA 625]	Trichlorophenol (2,4,6-)
Certified	Yes	NJ	WPP06.03530	NPW	Extract, GC/MS	[EPA 625]	Benzoic acid
Certified	Yes	NJ	WPP06.03540	NPW	Extract, GC/MS	[EPA 625]	Methylphenol (4-)
Certified	Yes	NJ	WPP06.03550	NPW	Extract, GC/MS	[EPA 625]	Acetophenone
Certified	Yes	NJ	WPP06.03560	NPW	Extract, GC/MS	[EPA 625]	Alpha - terpineol
Certified	Yes	NJ	WPP06.03570	NPW	Extract, GC/MS	[EPA 625]	Aniline
Certified	Yes	NJ	WPP06.03580	NPW	Extract, GC/MS	[EPA 625]	Benzidine
Certified	Yes	NJ	WPP06.03590	NPW	Extract, GC/MS	[EPA 625]	Carbazole
Certified	Yes	NJ	WPP06.03600	NPW	Extract, GC/MS	[EPA 625]	Dichloroaniline (2,3-)
Certified	Yes	NJ	WPP06.03605	NPW	Extract, GC/MS	[EPA 625]	Diphenylhydrazine (1,2-)
Certified	Yes	NJ	WPP06.03610	NPW	Extract, GC/MS	[EPA 625]	Methylphenol (2-)
Certified	Yes	NJ	WPP06.03620	NPW	Extract, GC/MS	[EPA 625]	Decane (n-)
Certified	Yes	NJ	WPP06.03660	NPW	Extract, GC/MS	[EPA 625]	Hexachlorocyclopentadiene
Certified	Yes	NJ	WPP06.03675	NPW	Extract, GC/MS	[EPA 625]	N-Nitroso-di-n-butylamine
Certified	Yes	NJ	WPP06.03677	NPW	Extract, GC/MS	[EPA 625]	N-Nitrosodiethylamine
Certified	Yes	NJ	WPP06.03680	NPW	Extract, GC/MS	[EPA 625]	N-Nitrosodimethylamine
Certified	Yes	NJ	WPP06.03690	NPW	Extract, GC/MS	[EPA 625]	N-Nitrosodiphenylamine
Certified	Yes	NJ	WPP06.03695	NPW	Extract, GC/MS	[EPA 625]	N-Nitrosopyrrolidine
Certified	Yes	NJ	WPP06.03700	NPW	Extract, GC/MS	[EPA 625]	Octadecane (n-)
Certified	Yes	NJ	WPP06.03720	NPW	Extract, GC/MS	[EPA 625]	Pyridine
Certified	Yes	NJ	WPP06.03730	NPW	Extract, GC/MS	[EPA 625]	Methylphenanthrene (1-)

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Laboratory Name: ACCUTEST LABORATORIES Laboratory Number: 12129 Activity ID: NLC100007
2235 RT 130
BLDG B
Dayton, NJ 08810

Category: WPP07 -- Organic Parameters, Individual Pesticide

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	WPP07.11000	NPW	GC	[USER DEFINED EPA 608]	Beta BHC
Certified	Yes	NJ	WPP07.13000	NPW	GC	[USER DEFINED EPA 608]	Delta BHC
Certified	Yes	NJ	WPP07.20000	NPW	GC	[USER DEFINED EPA 608]	Chlordane
Certified	Yes	NJ	WPP07.45000	NPW	GC	[USER DEFINED EPA 608]	Endosulfan sulfate
Certified	Yes	NJ	WPP07.47000	NPW	GC	[USER DEFINED EPA 608]	Endrin
Certified	Yes	NJ	WPP07.62000	NPW	GC	[USER DEFINED EPA 608]	Methoxychlor
Certified	Yes	NJ	WPP07.85000	NPW	GC	[USER DEFINED EPA 608]	Toxaphene

Category: SHW02 -- Characteristics of Hazardous Waste

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW02.01000	NPW, SCM	Pensky Martens	[SW-846 1010A]	Ignitability
Certified	Yes	NJ	SHW02.03000	NPW, SCM	Aqueous Waste, Potentiometric	[SW-846 9040C]	Corrosivity - pH waste, >20% water
Certified	Yes	NJ	SHW02.06900	NPW, SCM	TCLP, Toxicity Procedure, ZHE	[SW-846 1311]	Volatile organics
Certified	Yes	NJ	SHW02.06950	NPW, SCM	TCLP, Toxicity Procedure, Shaker	[SW-846 1311]	Semivolatile organics
Certified	Yes	NJ	SHW02.07000	NPW, SCM	TCLP, Toxicity Procedure, Shaker	[SW-846 1311]	Metals
Certified	Yes	NJ	SHW02.08000	NPW, SCM	Synthetic PPT Leachate Procedure	[SW-846 1312]	Metals - organics
Certified	Yes	NJ	SHW02.09000	NPW, SCM	Multiple Extractions	[SW-846 1320]	Metals - organics

Category: SHW03 -- Analyze-Immediately Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW03.01000	NPW, SCM	Aqueous, Electrometric	[SW-846 9040C]	pH

Category: SHW04 -- Inorganic Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW04.05000	NPW, SCM	ICP	[SW-846 6010B]	Aluminum

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BLDG B
Dayton, NJ 08810

Category: SHW04 – Inorganic Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW04.05500	NPW, SCM	ICP/MS	[SW-846 6020A] [SW-846 6020]	Aluminum
Certified	Yes	NJ	SHW04.06500	NPW, SCM	ICP	[SW-846 6010B]	Antimony
Certified	Yes	NJ	SHW04.07000	NPW, SCM	ICP/MS	[SW-846 6020A] [SW-846 6020]	Antimony
Certified	Yes	NJ	SHW04.09000	NPW, SCM	ICP	[SW-846 6010B]	Arsenic
Certified	Yes	NJ	SHW04.09500	NPW, SCM	ICP/MS	[SW-846 6020A] [SW-846 6020]	Arsenic
Certified	Yes	NJ	SHW04.11500	NPW, SCM	ICP	[SW-846 6010B]	Barium
Certified	Yes	NJ	SHW04.12000	NPW, SCM	ICP/MS	[SW-846 6020A] [SW-846 6020]	Barium
Certified	Yes	NJ	SHW04.13500	NPW, SCM	ICP	[SW-846 6010B]	Beryllium
Certified	Yes	NJ	SHW04.14000	NPW, SCM	ICP/MS	[SW-846 6020A] [SW-846 6020]	Beryllium
Certified	Yes	NJ	SHW04.15100	NPW, SCM	ICP	[SW-846 6010B]	Boron
Certified	Yes	NJ	SHW04.15500	NPW, SCM	ICP	[SW-846 6010B]	Cadmium
Certified	Yes	NJ	SHW04.16000	NPW, SCM	ICP/MS	[SW-846 6020A] [SW-846 6020]	Cadmium
Certified	Yes	NJ	SHW04.17500	NPW, SCM	ICP	[SW-846 6010B]	Calcium
Certified	Yes	NJ	SHW04.17505	NPW, SCM	ICP/MS	[SW-846 6020A] [SW-846 6020]	Calcium
Certified	Yes	NJ	SHW04.18500	NPW, SCM	ICP	[SW-846 6010B]	Chromium
Certified	Yes	NJ	SHW04.19000	NPW, SCM	ICP/MS	[SW-846 6020A] [SW-846 6020]	Chromium
Certified	Yes	NJ	SHW04.21000	NPW, SCM	Colorimetric	[SW-846 7196A]	Chromium (VI)
Certified	Yes	NJ	SHW04.22100	NPW, SCM	Ion Chromatography	[SW-846 7199]	Chromium (VI)
Certified	Yes	NJ	SHW04.22500	NPW, SCM	ICP	[SW-846 6010B]	Cobalt
Certified	Yes	NJ	SHW04.23000	NPW, SCM	ICP/MS	[SW-846 6020A] [SW-846 6020]	Cobalt
Certified	Yes	NJ	SHW04.24500	NPW, SCM	ICP	[SW-846 6010B]	Copper
Certified	Yes	NJ	SHW04.25000	NPW, SCM	ICP/MS	[SW-846 6020A] [SW-846 6020]	Copper
Certified	Yes	NJ	SHW04.26000	NPW, SCM	ICP	[SW-846 6010B]	Iron
Certified	Yes	NJ	SHW04.26005	NPW, SCM	ICP/MS	[SW-846 6020A] [SW-846 6020]	Iron
Certified	Yes	NJ	SHW04.27500	NPW, SCM	ICP	[SW-846 6010B]	Lead
Certified	Yes	NJ	SHW04.28000	NPW, SCM	ICP/MS	[SW-846 6020A] [SW-846 6020]	Lead
Certified	Yes	NJ	SHW04.30500	NPW, SCM	ICP	[SW-846 6010B]	Magnesium
Certified	Yes	NJ	SHW04.30505	NPW, SCM	ICP/MS	[SW-846 6020A] [SW-846 6020]	Magnesium
Certified	Yes	NJ	SHW04.31500	NPW, SCM	ICP	[SW-846 6010B]	Manganese
Certified	Yes	NJ	SHW04.31600	NPW, SCM	ICP/MS	[SW-846 6020A] [SW-846 6020]	Manganese
Certified	Yes	NJ	SHW04.34000	NPW, SCM	ICP	[SW-846 6010B]	Molybdenum
Certified	Yes	NJ	SHW04.34005	NPW, SCM	ICP/MS	[SW-846 6020A] [SW-846 6020]	Molybdenum

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National Environmental Laboratory Accreditation Program
ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS
Effective as of 10/15/2010 until 06/30/2011



Laboratory Name: ACCUTEST LABORATORIES **Laboratory Number:** 12129 **Activity ID:** NLC100007
2235 RT 130
BLDG B
Dayton, NJ 08810

Category: SHW04 -- Inorganic Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW04.35500	NPW, SCM	ICP	[SW-846 6010B]	Nickel
Certified	Yes	NJ	SHW04.36000	NPW, SCM	ICP/MS	[SW-846 6020A] [SW-846 6020]	Nickel
Certified	Yes	NJ	SHW04.38000	NPW, SCM	ICP	[SW-846 6010B]	Potassium
Certified	Yes	NJ	SHW04.38505	NPW, SCM	ICP/MS	[SW-846 6020A] [SW-846 6020]	Potassium
Certified	Yes	NJ	SHW04.39000	NPW, SCM	ICP	[SW-846 6010B]	Selenium
Certified	Yes	NJ	SHW04.40600	NPW, SCM	ICP/MS	[SW-846 6020A] [SW-846 6020]	Selenium
Certified	Yes	NJ	SHW04.41000	NPW, SCM	ICP	[SW-846 6010B]	Silver
Certified	Yes	NJ	SHW04.41500	NPW, SCM	ICP/MS	[SW-846 6020A] [SW-846 6020]	Silver
Certified	Yes	NJ	SHW04.43000	NPW, SCM	ICP	[SW-846 6010B]	Sodium
Certified	Yes	NJ	SHW04.43005	NPW, SCM	ICP/MS	[SW-846 6020A] [SW-846 6020]	Sodium
Certified	Yes	NJ	SHW04.44000	NPW, SCM	ICP	[SW-846 6010B]	Strontium
Applied	No	NJ	SHW04.44001	NPW, SCM	ICP/MS	[SW-846 6020A] [SW-846 6020]	Strontium
Certified	Yes	NJ	SHW04.45000	NPW, SCM	ICP	[SW-846 6010B]	Thallium
Certified	Yes	NJ	SHW04.45500	NPW, SCM	ICP/MS	[SW-846 6020A] [SW-846 6020]	Thallium
Certified	Yes	NJ	SHW04.47100	NPW, SCM	ICP	[SW-846 6010B]	Tin
Certified	Yes	NJ	SHW04.47105	NPW, SCM	ICP/MS	[SW-846 6020A] [SW-846 6020]	Tin
Certified	Yes	NJ	SHW04.47145	NPW, SCM	ICP	[SW-846 6010B]	Titanium
Applied	No	NJ	SHW04.47150	NPW, SCM	ICP/MS	[SW-846 6020A]	Titanium
Certified	Yes	NJ	SHW04.47500	NPW, SCM	ICP	[SW-846 6010B]	Vanadium
Certified	Yes	NJ	SHW04.47505	NPW, SCM	ICP/MS	[SW-846 6020A] [SW-846 6020]	Vanadium
Certified	Yes	NJ	SHW04.49000	NPW, SCM	ICP	[SW-846 6010B]	Zinc
Certified	Yes	NJ	SHW04.49500	NPW, SCM	ICP/MS	[SW-846 6020A] [SW-846 6020]	Zinc
Applied	No	NJ	SHW04.51045	NPW, SCM	ICP	[SW-846 6010B]	Zirconium

Category: SHW06 -- Organic Parameters, Chromatography

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW06.02010	NPW, SCM	Microextraction, GC, ECD	[SW-846 8011, Rev. 0, 7/92]	Dibromoethane (1,2-) (EDB)
Certified	Yes	NJ	SHW06.02020	NPW, SCM	Microextraction, GC, ECD	[SW-846 8011, Rev. 0, 7/92]	Dibromo-3-chloropropane (1,2-)
Certified	Yes	NJ	SHW06.02030	NPW, SCM	Microextraction, GC, ECD	[SW-846 8011, Rev. 0, 7/92]	Trichloropropane (1,2,3-)

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2235 RT 130
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Dayton, NJ 08810

Category: SHW06 -- Organic Parameters, Chromatography

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	SHW06.03048	NPW, SCM	GC, Direct Injection or P & T, FID	[SW-846 8015B]	Butanol (1-)
Certified	Yes	NJ	SHW06.03050	NPW, SCM	GC, Direct Injection or P & T, FID	[SW-846 8015B, Rev. 2, 12/96]	Tert-butyl alcohol
Certified	Yes	NJ	SHW06.03090	NPW, SCM	GC, Direct Injection or P & T, FID	[SW-846 8015B, Rev. 2, 12/96]	Iso-butyl alcohol
Applied	No	NJ	SHW06.03142	NPW, SCM	GC, Direct Injection or P & T, FID	[SW-846 8015B]	Propyl Alcohol (n-)
Certified	Yes	NJ	SHW06.03145	NPW, SCM	GC, Direct Injection or P & T, FID	[SW-846 8015B, Rev. 2, 12/96]	Isopropyl alcohol
Certified	Yes	NJ	SHW06.03180	NPW, SCM	GC, Direct Injection or P & T, FID	[SW-846 8015B, Rev. 2, 12/96]	Methyl alcohol (Methanol)
Certified	Yes	NJ	SHW06.03778	NPW, SCM	GC, Direct Injection or P & T, FID	[SW-846 8015B, Rev. 2, 12/96]	Ethyl alcohol
Certified	Yes	NJ	SHW06.04010	NPW, SCM	GC P&T, FID	[SW-846 8015B, Rev. 2, 12/96]	Gasoline range organic
Certified	Yes	NJ	SHW06.04500	NPW, SCM	Extraction, GC, FID	[SW-846 8015B, Rev. 2, 12/96]	Diesel range organic
Certified	Yes	NJ	SHW06.04505	NPW, SCM	Extraction, GC, FID	[USER DEFINED TCEQ 1005]	Diesel range organic
Certified	Yes	NJ	SHW06.04520	NPW, SCM	Extraction, GC, FID	[OTHER NJ-OQA-QAM-025, Rev. 7]	Petroleum Organics
Certified	Yes	NJ	SHW06.04540	NPW, SCM	Extraction, GC, FID	[OTHER NJDEP EPH 10/08, Rev. 3]	Extractable Petroleum Hydrocarbons
Certified	Yes	NJ	SHW06.05010	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Benzene
Certified	Yes	NJ	SHW06.05020	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Chlorobenzene
Certified	Yes	NJ	SHW06.05030	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichlorobenzene (1,2-)
Certified	Yes	NJ	SHW06.05040	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichlorobenzene (1,3-)
Certified	Yes	NJ	SHW06.05050	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichlorobenzene (1,4-)
Certified	Yes	NJ	SHW06.05060	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Ethylbenzene
Certified	Yes	NJ	SHW06.05068	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Styrene
Certified	Yes	NJ	SHW06.05070	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Toluene
Certified	Yes	NJ	SHW06.05080	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Xylene (o-)
Certified	Yes	NJ	SHW06.05090	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Xylene (m-)
Certified	Yes	NJ	SHW06.05100	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Xylene (p-)
Applied	No	NJ	SHW06.05105	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B]	Xylenes (total)
Certified	Yes	NJ	SHW06.05180	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichloropropene (trans-1,3-)
Certified	Yes	NJ	SHW06.05240	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichloroethene (cis-1,2-)
Certified	Yes	NJ	SHW06.05250	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichloroethene (trans-1,2-)
Certified	Yes	NJ	SHW06.05270	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichloropropene (cis-1,3-)
Certified	Yes	NJ	SHW06.05300	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Tetrachloroethene
Certified	Yes	NJ	SHW06.05330	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Trichloroethene
Certified	Yes	NJ	SHW06.05360	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Methyl tert-butyl ether
Certified	Yes	NJ	SHW06.12010	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Aldrin

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2235 RT 130
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Category: SHW06 -- Organic Parameters, Chromatography

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW06.12020	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Alpha BHC
Certified	Yes	NJ	SHW06.12030	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Beta BHC
Certified	Yes	NJ	SHW06.12040	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Delta BHC
Certified	Yes	NJ	SHW06.12050	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Lindane (gamma BHC)
Certified	Yes	NJ	SHW06.12060	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Chlordane (technical)
Certified	Yes	NJ	SHW06.12070	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Chlordane (alpha)
Certified	Yes	NJ	SHW06.12080	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Chlordane (gamma)
Certified	Yes	NJ	SHW06.12090	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	DDD (4,4'-)
Certified	Yes	NJ	SHW06.12100	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	DDE (4,4'-)
Certified	Yes	NJ	SHW06.12110	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	DDT (4,4'-)
Certified	Yes	NJ	SHW06.12120	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Dieldrin
Certified	Yes	NJ	SHW06.12130	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Endosulfan I
Certified	Yes	NJ	SHW06.12140	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Endosulfan II
Certified	Yes	NJ	SHW06.12150	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Endosulfan sulfate
Certified	Yes	NJ	SHW06.12160	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Endrin
Certified	Yes	NJ	SHW06.12170	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Endrin aldehyde
Certified	Yes	NJ	SHW06.12180	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Endrin ketone
Certified	Yes	NJ	SHW06.12190	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Heptachlor
Certified	Yes	NJ	SHW06.12200	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Heptachlor epoxide
Certified	Yes	NJ	SHW06.12210	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Methoxychlor
Certified	Yes	NJ	SHW06.12220	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Mirex
Certified	Yes	NJ	SHW06.13110	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8082, Rev. 0, 12/96]	Toxaphene
Certified	Yes	NJ	SHW06.13120	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8082, Rev. 0, 12/96]	PCB 1016
Certified	Yes	NJ	SHW06.13130	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8082, Rev. 0, 12/96]	PCB 1221
Certified	Yes	NJ	SHW06.13140	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8082, Rev. 0, 12/96]	PCB 1232
Certified	Yes	NJ	SHW06.13150	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8082, Rev. 0, 12/96]	PCB 1242
Certified	Yes	NJ	SHW06.13160	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8082, Rev. 0, 12/96]	PCB 1248
Certified	Yes	NJ	SHW06.13170	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8082, Rev. 0, 12/96]	PCB 1254
Certified	Yes	NJ	SHW06.13175	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8082A]	PCB 1260
Applied	No	NJ	SHW06.13175	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8082A]	PCB-1262
Applied	No	NJ	SHW06.13180	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8082A]	PCB-1268
Certified	Yes	NJ	SHW06.16010	NPW, SCM	GC, Extraction or Direct Inject, FID	[SW-846 8100, Rev. 0, 9/86]	Acenaphthene

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Category: SHW06 -- Organic Parameters, Chromatography

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW06.16020	NPW, SCM	GC, Extraction or Direct Inject, FID	[SW-846 8100, Rev. 0, 9/86]	Acenaphthylene
Certified	Yes	NJ	SHW06.16030	NPW, SCM	GC, Extraction or Direct Inject, FID	[SW-846 8100, Rev. 0, 9/86]	Anthracene
Certified	Yes	NJ	SHW06.16040	NPW, SCM	GC, Extraction or Direct Inject, FID	[SW-846 8100, Rev. 0, 9/86]	Benzo(a)anthracene
Certified	Yes	NJ	SHW06.16050	NPW, SCM	GC, Extraction or Direct Inject, FID	[SW-846 8100, Rev. 0, 9/86]	Benzo(a)pyrene
Certified	Yes	NJ	SHW06.16060	NPW, SCM	GC, Extraction or Direct Inject, FID	[SW-846 8100, Rev. 0, 9/86]	Benzo(b)fluoranthene
Certified	Yes	NJ	SHW06.16070	NPW, SCM	GC, Extraction or Direct Inject, FID	[SW-846 8100, Rev. 0, 9/86]	Benzo(k)fluoranthene
Certified	Yes	NJ	SHW06.16080	NPW, SCM	GC, Extraction or Direct Inject, FID	[SW-846 8100, Rev. 0, 9/86]	Benzo(ghi)perylene
Certified	Yes	NJ	SHW06.16090	NPW, SCM	GC, Extraction or Direct Inject, FID	[SW-846 8100, Rev. 0, 9/86]	Chrysene
Certified	Yes	NJ	SHW06.16100	NPW, SCM	GC, Extraction or Direct Inject, FID	[SW-846 8100, Rev. 0, 9/86]	Dibenzo(a,h)anthracene
Certified	Yes	NJ	SHW06.16110	NPW, SCM	GC, Extraction or Direct Inject, FID	[SW-846 8100, Rev. 0, 9/86]	Fluoranthene
Certified	Yes	NJ	SHW06.16120	NPW, SCM	GC, Extraction or Direct Inject, FID	[SW-846 8100, Rev. 0, 9/86]	Fluorene
Certified	Yes	NJ	SHW06.16130	NPW, SCM	GC, Extraction or Direct Inject, FID	[SW-846 8100, Rev. 0, 9/86]	Indeno(1,2,3-cd)pyrene
Certified	Yes	NJ	SHW06.16140	NPW, SCM	GC, Extraction or Direct Inject, FID	[SW-846 8100, Rev. 0, 9/86]	Naphthalene
Certified	Yes	NJ	SHW06.16150	NPW, SCM	GC, Extraction or Direct Inject, FID	[SW-846 8100, Rev. 0, 9/86]	Phenanthrene
Certified	Yes	NJ	SHW06.16160	NPW, SCM	GC, Extraction or Direct Inject, FID	[SW-846 8100, Rev. 0, 9/86]	Pyrene
Certified	Yes	NJ	SHW06.23010	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev 1, 9/96]	Dalapon
Certified	Yes	NJ	SHW06.23020	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev 1, 9/96]	Dicamba
Certified	Yes	NJ	SHW06.23021	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev. 1, 9/96]	Dichlorprop
Certified	Yes	NJ	SHW06.23030	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev 1, 9/96]	Dinoseb
Certified	Yes	NJ	SHW06.23040	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev 1, 9/96]	D (2,4-)
Certified	Yes	NJ	SHW06.23041	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev. 1, 9/96]	DB (2,4-)
Certified	Yes	NJ	SHW06.23050	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev 1, 9/96]	T (2,4,5-)
Certified	Yes	NJ	SHW06.23060	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev 1, 9/96]	TP (2,4,5-) (Silvex)
Certified	Yes	NJ	SHW06.23063	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev. 1, 9/96]	MCPA
Certified	Yes	NJ	SHW06.23064	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev. 1, 9/96]	MCPP
Certified	Yes	NJ	SHW06.23066	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev. 1, 9/96]	Pentachlorophenol
Certified	Yes	NJ	SHW06.23070	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev 1, 9/96]	Picloram
Certified	Yes	NJ	SHW06.23100	NPW, SCM	GC, Headspace, FID	[OTHER J. Chrom. Sci. RSK-175]	Ethane
Certified	Yes	NJ	SHW06.23105	NPW, SCM	GC, Headspace, FID	[OTHER J. Chrom. Sci. RSK-175]	Ethene
Certified	Yes	NJ	SHW06.23110	NPW, SCM	GC, Headspace, FID	[OTHER J. Chrom. Sci. RSK-175]	Methane
Certified	Yes	NJ	SHW06.24110	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Acenaphthene
Certified	Yes	NJ	SHW06.24120	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Acenaphthylene

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New Jersey Department of Environmental Protection
National Environmental Laboratory Accreditation Program
ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS
Effective as of 10/15/2010 until 06/30/2011



Laboratory Name: ACCUTEST LABORATORIES **Laboratory Number:** 12129 **Activity ID:** NLC100007
2235 RT 130
BLDG B
Dayton, NJ 08810

Category: SHW06 – Organic Parameters, Chromatography

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW06.24130	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Anthracene
Certified	Yes	NJ	SHW06.24140	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Benzo(a)anthracene
Certified	Yes	NJ	SHW06.24150	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Benzo(a)pyrene
Certified	Yes	NJ	SHW06.24160	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Benzo(b)fluoranthene
Certified	Yes	NJ	SHW06.24170	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Benzo(ghi)perylene
Certified	Yes	NJ	SHW06.24180	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Benzo(k)fluoranthene
Certified	Yes	NJ	SHW06.24190	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Chrysene
Certified	Yes	NJ	SHW06.24200	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Dibenzo(a,h)anthracene
Certified	Yes	NJ	SHW06.24210	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Fluoranthene
Certified	Yes	NJ	SHW06.24220	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Fluorene
Certified	Yes	NJ	SHW06.24230	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Indeno(1,2,3-cd)pyrene
Certified	Yes	NJ	SHW06.24240	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Naphthalene
Certified	Yes	NJ	SHW06.24250	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Phenanthrene
Certified	Yes	NJ	SHW06.24260	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Pyrene

Category: SHW07 -- Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW07.04004	NPW, SCM	GC/MS/SIM, Direct Aqueous Injection	[USER DEFINED SW-846 8260B]	Ethylene glycol
Certified	Yes	NJ	SHW07.04006	NPW, SCM	GC/MS/SIM, Direct Aqueous Injection	[USER DEFINED SW-846 8260B]	Propylene glycol
Certified	Yes	NJ	SHW07.04010	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Benzene
Certified	Yes	NJ	SHW07.04011	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Bromobenzene
Certified	Yes	NJ	SHW07.04012	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Butyl benzene (n-)
Certified	Yes	NJ	SHW07.04013	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Sec-butylbenzene
Certified	Yes	NJ	SHW07.04014	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Tert-butylbenzene
Certified	Yes	NJ	SHW07.04020	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Chlorobenzene
Certified	Yes	NJ	SHW07.04022	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Chlorotoluene (2-)
Certified	Yes	NJ	SHW07.04023	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Chlorotoluene (4-)
Certified	Yes	NJ	SHW07.04030	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichlorobenzene (1,2-)
Certified	Yes	NJ	SHW07.04040	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichlorobenzene (1,3-)

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Laboratory Name: ACCUTEST LABORATORIES **Laboratory Number:** 12129 **Activity ID:** NLC100007
2235 RT 130
BLDG B
Dayton, NJ 08810

Category: SHW07 -- Organic Parameters, Chromatography/MS

Status	Eligible to Report	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
	NJ Data						
Certified	Yes	NJ	SHW07.04050	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichlorobenzene (1,4-)
Certified	Yes	NJ	SHW07.04060	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Ethylbenzene
Certified	Yes	NJ	SHW07.04065	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Isopropylbenzene
Certified	Yes	NJ	SHW07.04067	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Propylbenzene (n-)
Certified	Yes	NJ	SHW07.04070	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Toluene
Certified	Yes	NJ	SHW07.04071	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Isopropyltoluene (4-)
Certified	Yes	NJ	SHW07.04072	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Trichlorobenzene (1,2,3-)
Certified	Yes	NJ	SHW07.04073	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Trimethylbenzene (1,2,4-)
Certified	Yes	NJ	SHW07.04074	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Trimethylbenzene (1,3,5-)
Certified	Yes	NJ	SHW07.04080	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Xylenes (total)
Certified	Yes	NJ	SHW07.04081	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Xylene (m-)
Certified	Yes	NJ	SHW07.04082	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Xylene (o-)
Certified	Yes	NJ	SHW07.04083	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Xylene (p-)
Certified	Yes	NJ	SHW07.04087	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	tert-Amylmethyl ether [TAME]
Certified	Yes	NJ	SHW07.04088	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Allyl chloride
Certified	Yes	NJ	SHW07.04089	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Bromochloromethane
Certified	Yes	NJ	SHW07.04090	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Bromodichloromethane
Certified	Yes	NJ	SHW07.04100	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Bromoform
Certified	Yes	NJ	SHW07.04110	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Bromomethane
Certified	Yes	NJ	SHW07.04111	NPW, SCM	GC/MS, P&T, or Direct Injection, Capillary	[SW-846 8260B]	Cyclohexane
Certified	Yes	NJ	SHW07.04112	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Cyclohexanone
Certified	Yes	NJ	SHW07.04115	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Butadiene (2-chloro-1,3-)
Certified	Yes	NJ	SHW07.04120	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Carbon tetrachloride
Certified	Yes	NJ	SHW07.04130	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Chloroethane
Certified	Yes	NJ	SHW07.04140	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Chloroethyl vinyl ether (2-)
Certified	Yes	NJ	SHW07.04150	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Chloroform
Certified	Yes	NJ	SHW07.04160	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Chloromethane
Certified	Yes	NJ	SHW07.04165	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Diethyl ether (Ethyl ether)
Certified	Yes	NJ	SHW07.04170	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloropropene (trans-1,3-)
Certified	Yes	NJ	SHW07.04180	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dibromochloromethane
Certified	Yes	NJ	SHW07.04185	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dibromoethane (1,2-) (EDB)
Certified	Yes	NJ	SHW07.04186	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dibromomethane

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Laboratory Name: ACCUTEST LABORATORIES **Laboratory Number:** 12129 **Activity ID:** NLC100007
2235 RT 130
BLDG B
Dayton, NJ 08810

Category: SHW07 -- Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW07.04187	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dibromo-3-chloropropane (1,2-)
Certified	Yes	NJ	SHW07.04190	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichlorodifluoromethane
Certified	Yes	NJ	SHW07.04200	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloroethane (1,1-)
Certified	Yes	NJ	SHW07.04210	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloroethane (1,2-)
Certified	Yes	NJ	SHW07.04220	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloroethene (1,1-)
Certified	Yes	NJ	SHW07.04230	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloroethene (trans-1,2-)
Certified	Yes	NJ	SHW07.04235	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloroethene (cis-1,2-)
Certified	Yes	NJ	SHW07.04240	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloropropane (1,2-)
Certified	Yes	NJ	SHW07.04241	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloropropane (1,3-)
Certified	Yes	NJ	SHW07.04242	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloropropane (2,2-)
Certified	Yes	NJ	SHW07.04249	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloropropene (1,1-)
Certified	Yes	NJ	SHW07.04250	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloropropene (cis-1,3-)
Certified	Yes	NJ	SHW07.04255	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloro-2-butene (trans-1,4-)
Certified	Yes	NJ	SHW07.04257	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Diisopropyl Ether [DIPE]
Certified	Yes	NJ	SHW07.04258	NPW, SCM	GC/MS, P&T, or Direct Injection, Capillary	[SW-846 8260B]	Butanol (1-)
Certified	Yes	NJ	SHW07.04259	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Ethanol
Certified	Yes	NJ	SHW07.04260	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Methylene chloride (Dichloromethane)
Certified	Yes	NJ	SHW07.04265	NPW, SCM	GC/MS, P&T, or Direct Injection, Capillary	[SW-846 8260B]	Nitropropane (2-)
Certified	Yes	NJ	SHW07.04270	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Tetrachloroethane (1,1,2,2-)
Certified	Yes	NJ	SHW07.04280	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Tetrachloroethene
Certified	Yes	NJ	SHW07.04282	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Tetrahydrofuran
Certified	Yes	NJ	SHW07.04290	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Trichloroethane (1,1,1-)
Certified	Yes	NJ	SHW07.04300	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Trichloroethane (1,1,2-)
Certified	Yes	NJ	SHW07.04310	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Trichloroethene
Certified	Yes	NJ	SHW07.04320	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Trichlorofluoromethane
Certified	Yes	NJ	SHW07.04322	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Trichloro (1,1,2-) trifluoroethane (1,2,2-)
Certified	Yes	NJ	SHW07.04325	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Trichloropropane (1,2,3-)
Certified	Yes	NJ	SHW07.04327	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Vinyl acetate
Certified	Yes	NJ	SHW07.04330	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Vinyl chloride
Certified	Yes	NJ	SHW07.04340	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Acetone
Certified	Yes	NJ	SHW07.04350	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Carbon disulfide
Certified	Yes	NJ	SHW07.04360	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Butanone (2-)

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2235 RT 130
BLDG B
Dayton, NJ 08810

Category: SHW07 -- Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW07.04364	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Ethyl-tert-butyl Ether [ETBE]
Certified	Yes	NJ	SHW07.04365	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Ethyl acetate
Certified	Yes	NJ	SHW07.04367	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Ethyl methacrylate
Certified	Yes	NJ	SHW07.04370	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Hexanone (2-)
Certified	Yes	NJ	SHW07.04371	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Methacrylonitrile
Certified	Yes	NJ	SHW07.04372	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Methyl acrylate
Certified	Yes	NJ	SHW07.04373	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Methyl methacrylate
Certified	Yes	NJ	SHW07.04374	NPW, SCM	GC/MS, P&T, or Direct Injection, Capillary	[SW-846 8260B]	Methyl acetate
Certified	Yes	NJ	SHW07.04375	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Methyl iodide
Certified	Yes	NJ	SHW07.04376	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Iso-butyl alcohol
Certified	Yes	NJ	SHW07.04379	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Pentachloroethane
Certified	Yes	NJ	SHW07.04380	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Pentanone (4-methyl-2-)
Certified	Yes	NJ	SHW07.04385	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Propionitrile
Certified	Yes	NJ	SHW07.04390	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Methyl tert-butyl ether
Certified	Yes	NJ	SHW07.04395	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Tert-butyl alcohol
Certified	Yes	NJ	SHW07.04398	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Acetonitrile
Certified	Yes	NJ	SHW07.04400	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Acrolein
Certified	Yes	NJ	SHW07.04410	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Acrylonitrile
Certified	Yes	NJ	SHW07.04500	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Hexachlorobutadiene (1,3-)
Certified	Yes	NJ	SHW07.04530	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Hexachloroethane
Certified	Yes	NJ	SHW07.04535	NPW, SCM	GC/MS, P&T, or Direct Injection, Capillary	[SW-846 8260B]	Methylcyclohexane
Certified	Yes	NJ	SHW07.04540	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260C, Rev. 2, 12/96]	Naphthalene
Certified	Yes	NJ	SHW07.04550	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Styrene
Certified	Yes	NJ	SHW07.04560	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Tetrachloroethane (1,1,1,2-)
Certified	Yes	NJ	SHW07.04570	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Trichlorobenzene (1,2,4-)
Certified	Yes	NJ	SHW07.04572	NPW, SCM	GC/MS, Extract, or Direct Injection, Capillary	[SW-846 8260B]	Trimethylpentane (2,2,4-)
Certified	Yes	NJ	SHW07.04590	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dioxane (1,4-)
Certified	Yes	NJ	SHW07.04660	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Alpha - terpineol
Certified	Yes	NJ	SHW07.04665	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Acetophenone
Certified	Yes	NJ	SHW07.04670	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Acetylaminofluorene (2-)
Certified	Yes	NJ	SHW07.04675	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Aminobiphenyl (4-)
Applied	No	NJ	SHW07.04700	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C]	Benzyl chloride

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National Environmental Laboratory Accreditation Program
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Effective as of 10/15/2010 until 06/30/2011



Laboratory Name: ACCUTEST LABORATORIES Laboratory Number: 12129 Activity ID: NLC100007
2235 RT 130
BLDG B
Dayton, NJ 08810

Category: SHW07 -- Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW07.04702	NPW, SCM	GC/MS, Extract, or Direct Injection, Capillary	[SW-846 8270C]	Biphenyl (1,1'-)
Certified	Yes	NJ	SHW07.04705	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Chlorobenzilate
Certified	Yes	NJ	SHW07.04715	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Diallate (cis)
Certified	Yes	NJ	SHW07.04720	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Diallate (trans)
Certified	Yes	NJ	SHW07.04730	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dibenz(a,h)acridine
Certified	Yes	NJ	SHW07.04755	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dichlorophenol (2,6-)
Certified	Yes	NJ	SHW07.04760	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dimethoate
Applied	No	NJ	SHW07.04765	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270D]	Dimethylaminobenzene
Certified	Yes	NJ	SHW07.04767	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dimethylaminoazobenzene
Certified	Yes	NJ	SHW07.04770	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dimethylbenz(a)anthracene (7,12-)
Certified	Yes	NJ	SHW07.04780	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dinitrobenzene (1,3-)
Certified	Yes	NJ	SHW07.04785	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dinoseb
Certified	Yes	NJ	SHW07.04790	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Disulfoton
Certified	Yes	NJ	SHW07.04810	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Isodrin
Certified	Yes	NJ	SHW07.04815	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Isosafrole (cis-)
Certified	Yes	NJ	SHW07.04820	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Isosafrole (trans-)
Certified	Yes	NJ	SHW07.04825	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Kepone
Certified	Yes	NJ	SHW07.04830	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Methanesulfonate (Ethyl-)
Certified	Yes	NJ	SHW07.04835	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Methanesulfonate (Methyl-)
Certified	Yes	NJ	SHW07.04845	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Methylcholanthrene (3-)
Certified	Yes	NJ	SHW07.04850	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Napthoquinone (1,4-)
Certified	Yes	NJ	SHW07.04855	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Napththylamine (1-)
Certified	Yes	NJ	SHW07.04860	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Napththylamine (2-)
Certified	Yes	NJ	SHW07.04870	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	N-Nitroso-di-n-butylamine
Certified	Yes	NJ	SHW07.04875	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	N-Nitrosomorpholine
Certified	Yes	NJ	SHW07.04880	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	N-Nitrosopiperidine
Certified	Yes	NJ	SHW07.04885	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Parathion
Certified	Yes	NJ	SHW07.04890	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Parathion methyl
Certified	Yes	NJ	SHW07.04895	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Pentachlorobenzene
Certified	Yes	NJ	SHW07.04900	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Pentachloroethane
Certified	Yes	NJ	SHW07.04905	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Pentachloronitrobenzene
Certified	Yes	NJ	SHW07.04910	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Phenacetin

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Laboratory Name: ACCUTEST LABORATORIES Laboratory Number: 12129 Activity ID: NLC100007
2235 RT 130
BLDG B
Dayton, NJ 08810

Category: SHW07 – Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW07.04920	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Phenylethylamine (alpha, alpha-Dimethyl)
Certified	Yes	NJ	SHW07.04925	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Phorate
Certified	Yes	NJ	SHW07.04930	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Phosphorothioate (O,O,O-triethyl)
Certified	Yes	NJ	SHW07.04935	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Phosphorothioate (O,O-diethyl-O-2-pyrazinyl) [Thionazin]
Certified	Yes	NJ	SHW07.04940	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Picoline (2-)
Certified	Yes	NJ	SHW07.04945	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Pronamide
Certified	Yes	NJ	SHW07.04950	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Quinoline -1-Oxide (4-Nitro)
Certified	Yes	NJ	SHW07.04955	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Safrole
Certified	Yes	NJ	SHW07.04975	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Tetrachlorobenzene (1,2,4,5-)
Certified	Yes	NJ	SHW07.04980	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Tetrachlorophenol (2,3,4,6-)
Certified	Yes	NJ	SHW07.04985	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Toluidine (2-) (2-Methylaniline)
Certified	Yes	NJ	SHW07.04990	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Toluidine (5-Nitro-2-)
Certified	Yes	NJ	SHW07.04995	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Trinitrobenzene (1,3,5-)
Certified	Yes	NJ	SHW07.05004	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	N-Nitrosodiethylamine
Certified	Yes	NJ	SHW07.05005	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	N-Nitrosodimethylamine
Certified	Yes	NJ	SHW07.05006	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	N-Nitroso-di-n-propylamine
Certified	Yes	NJ	SHW07.05010	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	N-Nitrosodiphenylamine
Certified	Yes	NJ	SHW07.05011	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	N-Nitrosomethylethylamine
Certified	Yes	NJ	SHW07.05012	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	N-Nitrosopyrrolidine
Certified	Yes	NJ	SHW07.05020	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Diphenylamine
Certified	Yes	NJ	SHW07.05030	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Carbazole
Certified	Yes	NJ	SHW07.05038	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzidine
Certified	Yes	NJ	SHW07.05040	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dichlorobenzidine (3,3'-)
Certified	Yes	NJ	SHW07.05045	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Diphenylhydrazine (1,2-)
Certified	Yes	NJ	SHW07.05048	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Aniline
Certified	Yes	NJ	SHW07.05050	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Chloraniline (4-)
Certified	Yes	NJ	SHW07.05060	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Nitroaniline (2-)
Certified	Yes	NJ	SHW07.05062	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Nitroaniline (3-)
Certified	Yes	NJ	SHW07.05063	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Nitroaniline (4-)
Certified	Yes	NJ	SHW07.05070	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Chloronaphthalene (2-)
Certified	Yes	NJ	SHW07.05080	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Hexachlorobenzene

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Effective as of 10/15/2010 until 06/30/2011



Laboratory Name: ACCUTEST LABORATORIES **Laboratory Number:** 12129 **Activity ID:** NLC100007
2235 RT 130
BLDG B
Dayton, NJ 08810

Category: SHW07 -- Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW07.05090	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Hexachlorobutadiene (1,3-)
Certified	Yes	NJ	SHW07.05100	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Hexachlorocyclopentadiene
Certified	Yes	NJ	SHW07.05110	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Hexachloroethane
Certified	Yes	NJ	SHW07.05115	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Hexachloropropene
Certified	Yes	NJ	SHW07.05120	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Trichlorobenzene (1,2,4-)
Certified	Yes	NJ	SHW07.05130	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Bis (2-chloroethoxy) methane
Certified	Yes	NJ	SHW07.05132	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Bis (2-chloroethyl) ether
Certified	Yes	NJ	SHW07.05140	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Bis (2-chloroisopropyl) ether
Certified	Yes	NJ	SHW07.05150	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Chlorophenyl-phenyl ether (4-)
Certified	Yes	NJ	SHW07.05160	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Bromophenyl-phenyl ether (4-)
Certified	Yes	NJ	SHW07.05170	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dinitrotoluene (2,4-)
Certified	Yes	NJ	SHW07.05180	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dinitrotoluene (2,6-)
Certified	Yes	NJ	SHW07.05190	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Isophorone
Certified	Yes	NJ	SHW07.05200	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Nitrobenzene
Certified	Yes	NJ	SHW07.05210	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Butyl benzyl phthalate
Certified	Yes	NJ	SHW07.05220	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Bis (2-ethylhexyl) phthalate
Certified	Yes	NJ	SHW07.05230	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Diethyl phthalate
Certified	Yes	NJ	SHW07.05240	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dimethyl phthalate
Certified	Yes	NJ	SHW07.05250	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Di-n-butyl phthalate
Certified	Yes	NJ	SHW07.05260	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Di-n-octyl phthalate
Certified	Yes	NJ	SHW07.05270	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Acenaphthene
Certified	Yes	NJ	SHW07.05280	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Anthracene
Certified	Yes	NJ	SHW07.05290	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Acenaphthylene
Certified	Yes	NJ	SHW07.05300	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzo(a)anthracene
Certified	Yes	NJ	SHW07.05310	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzo(a)pyrene
Certified	Yes	NJ	SHW07.05320	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzo(b)fluoranthene
Certified	Yes	NJ	SHW07.05330	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzo(ghi)perylene
Certified	Yes	NJ	SHW07.05340	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzo(k)fluoranthene
Certified	Yes	NJ	SHW07.05350	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Chrysene
Certified	Yes	NJ	SHW07.05360	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dibenzo(a,h)anthracene
Certified	Yes	NJ	SHW07.05370	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Fluoranthene
Certified	Yes	NJ	SHW07.05380	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Fluorene

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2235 RT 130
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Category: SHW07 -- Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW07.05390	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Indeno(1,2,3-cd)pyrene
Certified	Yes	NJ	SHW07.05400	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Methylnaphthalene (2-)
Certified	Yes	NJ	SHW07.05410	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Naphthalene
Certified	Yes	NJ	SHW07.05420	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Phenanthrene
Certified	Yes	NJ	SHW07.05430	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Pyrene
Certified	Yes	NJ	SHW07.05440	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Methyl phenol (4-chloro-3-)
Certified	Yes	NJ	SHW07.05450	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Chlorophenol (2-)
Certified	Yes	NJ	SHW07.05460	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dichlorophenol (2,4-)
Certified	Yes	NJ	SHW07.05470	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dimethylphenol (2,4-)
Certified	Yes	NJ	SHW07.05480	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dinitrophenol (2,4-)
Certified	Yes	NJ	SHW07.05490	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dinitrophenol (2-methyl-4,6-)
Certified	Yes	NJ	SHW07.05500	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Methylphenol (2-)
Certified	Yes	NJ	SHW07.05510	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Methylphenol (4-)
Certified	Yes	NJ	SHW07.05520	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Nitrophenol (2-)
Certified	Yes	NJ	SHW07.05530	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Nitrophenol (4-)
Certified	Yes	NJ	SHW07.05540	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Pentachlorophenol
Certified	Yes	NJ	SHW07.05550	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Phenol
Certified	Yes	NJ	SHW07.05560	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Trichlorophenol (2,4,5-)
Certified	Yes	NJ	SHW07.05570	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Trichlorophenol (2,4,6-)
Certified	Yes	NJ	SHW07.05590	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Methylphenol (3-)
Certified	Yes	NJ	SHW07.05600	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dibenzofuran
Certified	Yes	NJ	SHW07.05691	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dichlorobenzene (1,2-)
Certified	Yes	NJ	SHW07.05692	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dichlorobenzene (1,3-)
Certified	Yes	NJ	SHW07.05700	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dichlorobenzene (1,4-)
Certified	Yes	NJ	SHW07.05705	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C]	Benzaldehyde
Certified	Yes	NJ	SHW07.05710	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzoic acid
Certified	Yes	NJ	SHW07.05720	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzyl alcohol
Certified	Yes	NJ	SHW07.05725	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C]	Decane (n-)
Certified	Yes	NJ	SHW07.05730	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C]	Octadecane (n-)
Certified	Yes	NJ	SHW07.05750	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Pyridine
Certified	Yes	NJ	SHW07.05765	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C]	Caprolactam
Certified	Yes	NJ	SHW07.05990	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C]	Atrazine

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Laboratory Name: ACCUTEST LABORATORIES Laboratory Number: 12129 Activity ID: NLC100007
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BLDG B
Dayton, NJ 08810

Category: SHW07 – Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW07.05995	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C]	Hydroquinone
Certified	Yes	NJ	SHW07.07584	NPW, SCM	GC/MS/SIM, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzo(a)anthracene
Certified	Yes	NJ	SHW07.07586	NPW, SCM	GC/MS/SIM, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzo(a)pyrene
Certified	Yes	NJ	SHW07.07588	NPW, SCM	GC/MS/SIM, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzo(b)fluoranthene
Certified	Yes	NJ	SHW07.07590	NPW, SCM	GC/MS/SIM, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzo(k)fluoranthene
Certified	Yes	NJ	SHW07.07594	NPW, SCM	GC/MS/SIM, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dibenzo(a,h)anthracene
Certified	Yes	NJ	SHW07.07596	NPW, SCM	GC/MS/SIM, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Hexachlorobenzene
Certified	Yes	NJ	SHW07.07598	NPW, SCM	GC/MS/SIM, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Indeno(1,2,3-cd)pyrene
Certified	Yes	NJ	SHW07.07616	NPW, SCM	GC/MS/SIM, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Pentachlorophenol

Category: SHW09 – Miscellaneous Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW09.02000	NPW, SCM	Distillation	[SW-846 9010C]	Cyanide
Certified	Yes	NJ	SHW09.03000	NPW, SCM	Distillation	[SW-846 9010C]	Cyanide - amenable to Cl2
Certified	Yes	NJ	SHW09.05000	NPW, SCM	Colorimetric, Automated	[SW-846 9012B, Rev. 2, 11/04]	Cyanide
Certified	Yes	NJ	SHW09.10100	NPW, SCM	Titration	[SW-846 9034, Rev. 0, 12/96]	Sulfides, acid sol. & insol.
Certified	Yes	NJ	SHW09.13050	NPW, SCM	Ion Chromatography	[SW-846 9056, Rev. 0, 9/94]	Sulfate
Certified	Yes	NJ	SHW09.14000	NPW, SCM	Electrometric	[SW-846 9040C, Rev. 3, 11/04]	pH - waste, >20% water
Certified	Yes	NJ	SHW09.19000	NPW, SCM	Infrared Spectrometry or FID	[SW-846 9060A, Rev. 1, 11/04]	Total organic carbon (TOC)
Certified	Yes	NJ	SHW09.21000	NPW, SCM	Colorimetric, Man, 4AAP Distillation	[SW-846 9065, Rev. 0, 9/86]	Phenols
Certified	Yes	NJ	SHW09.24100	NPW, SCM	Extraction & Gravimetric - LL or SPE	[SW-846 1664A, Rev. 1, 2/99]	Oil & grease - hem
Certified	Yes	NJ	SHW09.30250	NPW, SCM	Ion Chromatography	[SW-846 9056, Rev. 0, 12/96]	Bromide
Certified	Yes	NJ	SHW09.33100	NPW, SCM	Ion Chromatography	[SW-846 9056, Rev. 0, 12/96]	Chloride
Certified	Yes	NJ	SHW09.34150	NPW, SCM	Ion Chromatography	[SW-846 9056, Rev. 0, 12/96]	Fluoride
Certified	No	NJ	SHW09.34160	NPW, SCM	Ion Chromatography	[USER DEFINED EPA 314 (Modified for solid matrices)]	Perchlorate

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Category: SHW04 – Inorganic Parameters

Status	Eligible to Report	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
	NJ Data						
Certified	Yes	NJ	SHW04.03000	SCM	Acid Digestion, Soil Sediment & Sludge	[SW-846 3050B]	Metals
Certified	Yes	NJ	SHW04.03700	SCM	Chromium VI Digestion	[SW-846 3060A]	Metals
Certified	Yes	NJ	SHW04.33500	SCM	AA, Manual Cold Vapor	[SW-846 7471A]	Mercury - solid waste

Category: SHW05 – Organic Parameters, Prep. / Screening

Status	Eligible to Report	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
	NJ Data						
Certified	Yes	NJ	SHW05.03000	SCM	Soxhlet Extraction	[SW-846 3540C]	Semivolatile organics
Certified	Yes	NJ	SHW05.04200	SCM	Pressurized Fluid Extraction	[SW-846 3545]	Semivolatile organics
Certified	Yes	NJ	SHW05.05000	SCM	Ultrasonic Extraction	[SW-846 3550B]	Semivolatile organics
Certified	Yes	NJ	SHW05.06000	SCM	Waste Dilution	[SW-846 3580A]	Organics
Certified	Yes	NJ	SHW05.07300	SCM	Closed System Purge & Trap	[SW-846 5035L]	Volatile organics - low conc.
Certified	Yes	NJ	SHW05.07310	SCM	Methanol Extract, Closed System P & T	[SW-846 5035H]	Volatile organics - high conc.
Certified	Yes	NJ	SHW05.10000	SCM	Cleanup-Alumina	[SW-846 3610B]	Semivolatile organics
Certified	Yes	NJ	SHW05.11000	SCM	Petroleum Waste, Cleanup Alumina	[SW-846 3611B]	Semivolatile organics
Certified	Yes	NJ	SHW05.12000	SCM	Cleanup-Florisil	[SW-846 3620B, Rev. 2, 12/96]	Semivolatile organics
Certified	Yes	NJ	SHW05.13000	SCM	Cleanup-Silica Gel	[SW-846 3630C, Rev. 3, 12/96]	Semivolatile organics
Certified	Yes	NJ	SHW05.14000	SCM	Cleanup-Gel Permeation	[SW-846 3640A, Rev. 1, 9/94]	Semivolatile organics
Certified	Yes	NJ	SHW05.15000	SCM	Cleanup-Acid/Base Partition	[SW-846 3650B, Rev. 2, 12/96]	Semivolatile organics
Certified	Yes	NJ	SHW05.16000	SCM	Cleanup-Sulfur Removal	[SW-846 3660B, Rev. 2, 12/96]	Semivolatile organics
Certified	Yes	NJ	SHW05.17000	SCM	Cleanup-Sulfuric Acid/KMnO4	[SW-846 3665A, Rev. 1, 12/96]	Semivolatile organics
Certified	Yes	NJ	SHW05.18000	SCM	Headspace, GC or GC/MS Screen	[SW-846 3610, Rev. 0, 9/86]	Volatile organics

Category: SHW09 -- Miscellaneous Parameters

Status	Eligible to Report	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
	NJ Data						
Certified	Yes	NJ	SHW09.08100	SCM	Extraction	[SW-846 9023, Rev. 0, 12/96]	Extractable organic halides (EOX)
Certified	Yes	NJ	SHW09.16000	SCM	Mix with Water or Calcium Chloride	[SW-846 9045C, Rev. 3, 1/95]	pH - soil and waste
Applied	No	NJ	SHW09.19100	SCM	Pyrolytic	[OTHER Lloyd Kahn]	Total organic carbon (TOC)

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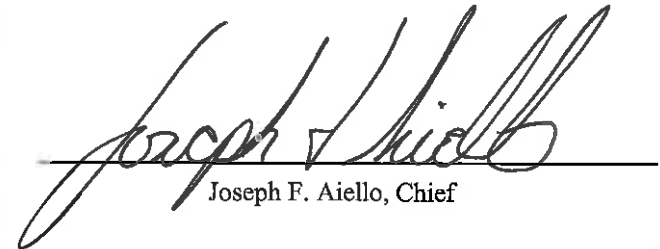
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Laboratory Name: ACCUTEST LABORATORIES **Laboratory Number:** 12129 **Activity ID:** NLC100007
 2235 RT 130
 BLDG B
 Dayton, NJ 08810

Category: SHW09 -- Miscellaneous Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW09.25000	SCM	Extraction & Gravimetric	[SW-846 9071 B, Rev. 2, 5/99]	Oil & grease - sludge-hem
Certified	Yes	NJ	SHW09.26100	SCM	Combustion, Bomb Oxidation	[SW-846 5050, Rev. 0, 9/94]	Chlorine - total, solid waste
Certified	Yes	NJ	SHW09.28350	SCM	Bomb Calorimeter	[ASTM D-240]	Heat of combustion (BTU)
Certified	Yes	NJ	SHW09.29000	SCM	Flow-Through Paint Filter, Observation	[SW-846 9095, Rev. 0, 9/86]	Free liquid
Certified	Yes	NJ	SHW09.40000	SCM	Soils, Sodium Acetate	[SW-846 9081, Rev. 0, 9/86]	Cation-exchange capacity



 Joseph F. Aiello, Chief

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Lab Manager _____

QA Manager _____

Effective Date: _____

Title: **Summa Canister Cleaning and Certification SOP**

Revised Sections: 1.0, 2.0, 6.0(Removed), 7.1, 8.0, 9.1; Added 14.3, Tables 1 & 2, Figure 1

1.0 Scope

- 1.1 This procedure applies to the cleaning, leak testing and certification of whole air and soil gas passivated sampling canisters for use in USEPA Methods TO-3, TO-15 and New Jersey Department of Environmental Protection (NJDEP) Low Level TO-15. It is applicable to 1-Liter and 6-Liter canisters that previously contained field samples, standards, lab control samples, returned unused canisters, and newly purchased canisters. This process is performed to ensure that all canisters shipped by the laboratory are free of contaminants prior to their use for field sample collection.
- 1.2 The cleanliness reporting limit for the majority of target compounds in ambient air is 0.2 ppbv with the exception of several compounds, which are higher for NJDEP LL TO-15 applications. The number of compound exceptions is greater for soil gas sampling.
- 1.3 One liter soil vapor canisters must be certified by analysis of 500ml, as required by NJDEP.
- 1.4 Canisters are categorized by their uses as either ambient air or soil gas. Each cleaning batch is specific to the canisters' use.
- 1.5 The term "canisters" referenced in this SOP applies to 1 or 6-Liter summa canisters as defined in section 5.

2.0 SUMMARY

- 2.1 Passivated canisters are scrupulously cleaned using a repetitive humidified zero air pressurization and evacuation at elevated temperatures. Cleaned canisters are evacuated to approximately 30 inches of mercury (vacuum) and leak checked over a 24 hour period. The canister in the batch that contained the highest concentration of contaminants is filled with zero air and analyzed to verify cleanliness. The canister batch is certified as clean if the results are below the reporting limit for all target compounds. The certified clean canisters are then evacuated and sealed in preparation for field sampling.

3.0 Reporting Limit and Method Detection Limit

- 3.1 Not applicable.

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4.0 HEALTH & SAFETY

- 4.1 The analyst must follow normal safety procedures as outlined in the Accutest Laboratory Safety Manual which includes the use of safety glasses and lab coats. In addition, all acids are corrosive and should be handled with care. Flush spills with plenty of water. If acids contact any part of the body, flush with water and contact the supervisor
- 4.2 The toxicity or carcinogenicity of each reagent used in this method has not been precisely determined; however, each chemical should be treated as a potential health hazard. Exposure to these reagents should be reduced to the lowest possible level. The laboratory is responsible for maintaining a current awareness file of OSHA regulations regarding the safe handling of the chemicals specified in this method. A reference file of data handling sheets should be made available to all personnel involved in these analyses.
- 4.3 The following analytes covered by this method have been tentatively classified as known or suspected, human or mammalian carcinogens: benzene, carbon tetrachloride, chloroform, and vinyl chloride. Primary standards of these toxic compounds should be prepared in a hood. A NIOSH/Mass approved toxic gas respirator should be worn when the analyst handles high concentrations of these toxic compounds.
- 4.4 Releasing pressurized summa canisters must be performed under a ventilation hood.
- 4.5 The vent lines off the canister cleaning manifold pumps must be vented to a hood or other ventilation source.

5.0 Apparatus and Materials

- 5.1 Canisters – 1 liter or 6 liter stainless steel canisters with shut off valve and ¼" threaded Swagelock sampling port. Primarily used for field samples, standards, and quality control samples. The 1-Liter variety may also be used for secondary dilutions.
- 5.2 Entech Model 3100 Cleaning System for canisters – similar pump configuration, software controlled.
- 5.3 The cleaning systems have the following manifold configuration.
- 5.4 Entech Humidification Chamber containing organic free water.
- 5.5 Entech dual- six position ovens in tandem, allowing for a batch of 12.
- 5.6 Dedicated clean pressure gauge (0-30 PSIG)
- 5.7 Zero grade air - Humidified by a humidification chamber to fill canisters during cleaning cycle along with pressurizing for leak check.

6.0 Cleaning Procedure

- 6.1 Empty pressurized canisters under a hood

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- 6.2 Select twelve 6-liter canisters or 16 1-Liter canisters to create a batch. Record canister serial number, previous sample number, date, canister type, cleaning cycle start/stop times and preparation batch number in Canister Preparation and Certification Logbook (Figure 1). Canister preparation batches are numbered sequentially as, CP0001, CP0002 ...etc.
- 6.3 Record each canister number of the preparation batch in the LIMs program "Summa Batch." This program is used to track canister certification status.
- 6.4 Set the controller setting for the cleaning procedure on the Entech 3100 as follows:
 - 6.4.1 Cycles: minimum 8 times for 6L, 16 times for 1L
 - 6.4.2 Rough Pump 1: 2 psia
 - 6.4.3 Final Rough pump: 2psia
 - 6.4.4 Turbo Pump 2: 1000 mtorr.
 - 6.4.5 Final Turbo: 50 mtorr for 1L and 500 mtorr for 6L
 - 6.4.6 Fill: To 20 psia
 - 6.4.7 Note: The number of cycles may be increased if a highly contaminated canister is in the batch. It is best to increase the number of cycles when a highly contaminated canister is cleaned, since the acceptance criteria for a canister cleaning is determined by the cleanliness of the canister that had the highest level of target compounds. If the selected canister does not meet the criteria, the entire batch must be re-cleaned and re-analyzed.
- 6.5 Prior to initiating the cleaning process, check the humidifier chamber in the cleaning unit to verify the water level is at 20-50% full, as shown by the viewing tube. Use only de-ionized water. If the water level is insufficient, add more water by removing the screw cap to the chamber while the system is at ambient pressure. Fill the chamber to the 50% mark.
- 6.6 Canisters Cleaning Cycle Initiation
 - 6.6.1 Attach the canisters to the manifold, open the canister valves and turn on the ovens. The operating range is 80-100°C.
 - 6.6.2 Set the controller to **GO** and initiate the cleaning cycle as noted in section 6.4. When the procedure is finished, the controller will automatically switch to the **RUN COMPLETE** mode.
 - 6.6.3 Once the unit is in the **RUN COMPLETE** mode switch the oven to off. Allow the canisters to cool and fill them to approximately 30psig with zero air, using the **DILUENT** button. Close each canister valve and disconnect the Swagelock fittings of the 6-liter canisters manifold.

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7.0 Leak Testing Canisters

- 7.1 Once the canisters have been cleaned as described in Section 7, allowing them to equilibrate to ambient temperature is critical as a change will effect the pressure reading when leak testing the canisters.
- 7.2 Attach a pressure gauge to each 6-Liter canister and tighten with a wrench. Open the sampling valve and record the pressure in the logbook to the nearest 0.5psig.
- 7.3 Record the date and time of the initial pressure check (Figure 1). Remove the pressure gauge and set the canister aside for a 24 hour period to determine if vacuum deterioration from leaks occurs.
- 7.4 After the 24 hour leak check period has elapsed, check and record the pressure of each canister or mini-can using the same dedicated clean pressure gauge. Record the appropriate date and time of the final pressure check in the logbook (Figure 1). The pressure change cannot be more than 2 psig for the canister top to be considered leak free.
- 7.5 If a change greater than 2 psig is recorded from the initial pressure, then the canister or mini-can is suspect and should not be used. Check that all fittings and valves are tight. Refill and pressure check for another 24 hours. If canister fails the leak check again, mark as "Out of Service" until repair can be made.
- 7.6 After acceptable leak checks, release the pressure in the can by pointing the sampling port away from you by into an exhaust hood and opening the valve.
- 7.7 The canisters are stored at ambient pressure and the canister is ready for certification following the procedures in Section 8.

8.0 Canister Cleaning Certification

- 8.1 Once canisters have been successfully cleaned and passed the leak check, one container from each batch is selected for certification by the applicable method. Method TO-3 is used for source air and method TO-15 for ambient air, soil gas and mini-cans.
- 8.2 The canister selected for verification is the can in the batch that contained the highest concentrations of target compounds during its previous use. This data is accessed from the LIMs by entering WORKSTAT and SUMMA BATCH. Enter the canister ID's from the cleaning batch, LIMs produces a report summarizing all the target hits.
- 8.3 All TO-3 cleaning batches are certified using Method TO-3 employing a GC/PID/FID system. All TO-15 batches are certified by GC/MS.
- 8.4 Release any overpressure from the selected canister to assure ambient pressure (Section 7.6). For method TO-3, analyze 0.5cc of sample via a loop injector. For method TO-15, analyzing 400cc of this canister represents a dilution factor of one since calibration is based on 400cc of the calibration standards. The canister selected is documented in the logbook with the analysis date and data file used for certification.

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8.5 Once the analysis is completed, review the data. All the results must be less than 0.2ppbv with the exception of the compounds listed in Tables 1 and 2. If the results satisfy the criteria, the canisters from the batch can be evacuated as described in Section 9 and shipped for sampling.

8.5.1 If the results do not meet the criteria repeat the Cleaning Procedure in Section 6 and the Leak Test Procedure in Section 7, for all canisters in the cleaning batch.

9.0 Final Canister Evacuation

- 9.1 Re-attach the canisters at ambient pressure from the same preparation batch to the Entech evacuation manifold.
- 9.2 Recall and initiate EVAC program on the Entech. Open the valve on each canister to initiate the evacuation process. Pump the system down to <50mtorr or 0.050 mm Hg (approximately 45 minutes).
- 9.3 When the vacuum is <50mtorr on the digital readout, record the vacuum value and close the canister valves. Click the STOP button with the mouse cursor.
- 9.4 Vacuum readings <0.050mm Hg or 50mtorr are considered full vacuum and will read approximately 29.4" Hg (vac) on a vacuum gauge. Record the date, initials, and final mtorr reading in the canister preparation logbook (Figure 7).
- 9.5 Remove the canisters and cap with the ¼" nut with a wrench. Do not over tighten; the nuts are soft brass and can be easily stripped.
- 9.5.1 The canister's On/Off valve seals the vacuum. Tightening the nut is an additional seal to protect the sampling port from outside contamination.
- 9.6 Once the canisters have undergone the final evacuation, they can be stored in the laboratory for 2 months.

11.0 Client Canister Retention

- 11.1 Canisters that have been shipped from the laboratory are no longer under controlled laboratory conditions. A 15 day period is the maximum allowed field holding period.
- 11.2 Canister tags are labeled with the "Field Expiration Date" in month/day/year format.
- 11.3 All canisters transferred from controlled storage must be returned to the lab for re-cleaning and certification. This requirement applies to any canisters that were not used for sampling, but were stored in an uncontrolled environment.

12.0 Documentation Requirements

- 12.1 Assign new canisters a serial number utilizing stick on labels with the Accutest Laboratories name and address.

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- 12.2 Complete all the sections of the Canister Preparation and Certification Log to ensure a full audit trail of each canister.
- 12.3 Canister Preparation Batch number and associated canisters must be entered in the LIMs **Summa Batch** program in order to link canister cleaning information to samples received.

13.0 POLLUTION PREVENTION & WASTE MANAGEMENT

- 13.1 Users of this method must perform all procedural steps in a manner that controls the creation and/or escape of wastes or hazardous materials to the environment. The amounts of standards, reagents, and solvents must be limited to the amounts specified in this SOP. All safety practices designed to limit the escape of vapors, liquids or solids to the environment must be followed. All method users must be familiar with the waste management practices described in section 13.2.
- 13.2 Waste Management. Individuals performing this method must follow established waste management procedures as described in the waste management SOP, EHS004. This document describes the proper disposal of all waste materials generated during the testing of samples as follows:
 - 13.2.1 Non hazardous aqueous wastes.
 - 13.2.2 Hazardous aqueous wastes
 - 13.2.3 Chlorinated organic solvents
 - 13.2.4 Non-chlorinated organic solvents
 - 13.2.5 Hazardous solid wastes
 - 13.2.6 Non-hazardous solid wastes

14.0 METHOD REFERENCE

- 14.1 Method TO-14A, "Determination of Volatile Organic Compounds (VOCs) in Ambient Air Using Summa Passivated Canister Sampling and Gas Chromatographic Analysis", Jan 1999" Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition"
- 14.2 Method TO-15, "Determination Of Volatile Organic Compounds (VOCs) In Air Collected In Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS)", Jan 1999 from "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition"
- 14.3 NJDEP- SRP Low Level USEPA TO-15 Method (NJDEP-LLTO-15-3/2007), March 2007, Revised March 2009

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Table 1

NJ LL TO-15: Ambient Air Clean Canister Exceptions	
<u>Compound</u>	<u>Maximum</u>
Acetone	5.0 ppbv
Tetrahydrofuran	50 ppbv
1,4 Dioxane	5.0 ppbv
Tert-Butyl Alcohol	50 ppbv
Xylenes (m&p)	0.5 ppbv

Table 2

NJ LL TO-15: Soil Gas Clean Canister Exceptions	
<u>Compound</u>	<u>Maximum</u>
Acetone	5.0 ppbv
Carbon Disulfide	0.5 ppbv
Methylene Chloride	0.5 ppbv
Methyl Ethyl Ketone	0.5 ppbv
1,2,4 Trichlorobenzene	0.5 ppbv
Tetrahydrofuran	50 ppbv
Dichlorodifluoromethane	0.5 ppbv
Methyl Methacrylate	0.5 ppbv
1,4 Dioxane	5.0 ppbv
Methyl Isobutyl Ketone	0.5 ppbv
Tert-Butyl Alcohol	50 ppbv
Xylenes (m&p)	0.5 ppbv