

Spic and Span Cleaners
WESTCHESTER COUNTY, NEW YORK

Final Engineering Report

NYSDEC Site Number: C360130

Prepared for:
81 Pondfield Road Company
(partnership in dissolution, winding up)
1311 Mamaroneck Ave., Suite #340
White Plains, NY 10605

Prepared by:

Andrew R. Levenbaum, PE
424 New York Avenue
Huntington, New York 11743

and

Advanced Cleanup Technologies, Inc.
110 Main Street, Suite #103
Port Washington, NY 11050

SEPTEMBER 2019

CERTIFICATIONS

I, Andrew R. Levenbaum, PE am currently a registered professional engineer licensed by the State of New York, I had primary direct responsibility for implementation of the remedial program activities, and I certify that the July 31, 2014 IRM Work Plan was implemented and that all construction activities were completed in substantial conformance with the Department-approved IRM Work Plan.

I certify that the data submitted to the Department with this Final Engineering Report demonstrates that the remediation requirements set forth in the IRM Work Plan and in all applicable statutes and regulations have been or will be achieved in accordance with the time frames, if any, established for the remedy.

I certify that all use restrictions, Institutional Controls, Engineering Controls, and/or any operation and maintenance requirements applicable to the Site are contained in an environmental easement created and recorded pursuant ECL 71-3605 and that all affected local governments, as defined in ECL 71-3603, have been notified that such easement has been recorded.

I certify that a Site Management Plan has been submitted for the continual and proper operation, maintenance, and monitoring of all Engineering Controls employed at the Site, including the proper maintenance of all remaining monitoring wells, and that such plan has been approved by Department.

I certify that all documents generated in support of this report have been submitted in accordance with the DER's electronic submission protocols and have been accepted by the Department.

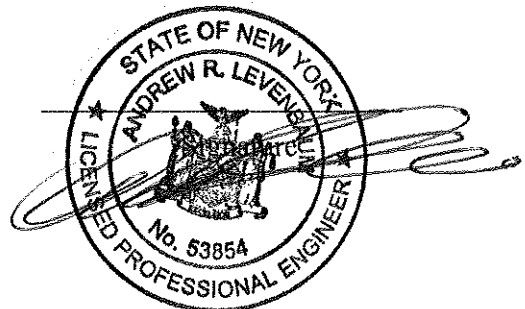
I certify that all data generated in support of this report have been submitted in accordance with the Department's electronic data deliverable and have been accepted by the Department.

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, Andrew R. Levenbaum, PE, am certifying as Owner's Designated Site Representative for the site.

Andrew R. Levenbaum, PE

12/10/2019
Date

NYS Professional Engineer # 53854



Note: include PE stamp

TABLE OF CONTENTS

CERTIFICATIONS.....	II
TABLE OF CONTENTS	III
LIST OF ACRONYMS	VI
FINAL ENGINEERING REPORT	1
1.0 BACKGROUND AND SITE DESCRIPTION.....	1
2.0 SUMMARY OF SITE REMEDY	2
2.1 REMEDIAL ACTION OBJECTIVES	2
2.1.1 Groundwater RAOs	2
2.1.2 Soil RAOs.....	2
2.2 DESCRIPTION OF SELECTED REMEDY	3
3.0 INTERIM REMEDIAL MEASURES	4
4.0 DESCRIPTION OF REMEDIAL ACTIONS PERFORMED	5
4.1 GOVERNING DOCUMENTS	5
4.1.1 Site Specific Health & Safety Plan (HASP).....	5
4.1.2 Community Air Monitoring Plan (CAMP)	5
4.1.3 Community Participation Plan (CPP)	5
4.2 REMEDIAL PROGRAM ELEMENTS	6
4.2.1 Contractors and Consultants	6
4.2.2 Site Preparation.....	6
4.2.3 General Site Controls.....	6
4.2.4 Nuisance controls	7

4.3 REMEDIAL PERFORMANCE/DOCUMENTATION SAMPLING	7
4.3.1 Soil Sampling and Analysis.....	7
4.3.2 Ground Water Sampling and Analysis	8
4.3.3 Vapor Intrusion Sampling and Analysis.....	9
4.3.4 Treatment System Sampling and Analysis.....	11
4.3.5 Ambient Air Quality Impact (DAR-1) Analysis.....	11
4.3.6 Data Usability Summary Reports (DUSRs)s	11
 4.4 ENGINEERING CONTROLS	 12
4.4.1 Sub-Slab Depressurization System	12
4.4.2 Soil Vapor Extraction System	13
4.4.3 Air Sparge System	13
4.4.4 Operation, Maintenance and Monitoring.....	14
 4.5 INSTITUTIONAL CONTROLS.....	 125
 4.6 DEVIATIONS FROM THE IRM WORK PLAN	 15

FIGURES

<u>NUMBER</u>	<u>TITLE</u>
1	Soil Sampling Locations
2	Ground Water Sampling Locations
3	As-Built SSD/SVE/AS System Layout
4	As-Built Treatment System Layout

TABLES

<u>NUMBER</u>	<u>TITLE</u>
1	Historical Soil Quality Data
2	Historical Ground Water Quality Data
3	Indoor Air and Sub-Slab Vapor Quality Data
4	Induced Vacuum at Vacuum Monitoring Points
5	Treatment System Influent and Effluent Sampling Data

APPENDICES

<u>NUMBER</u>	<u>TITLE</u>
A	Survey Map
B	Waste Manifests
C	Air Modeling Calculations
D	Data Usability Summary Reports
E	Laboratory Analytical Reports
F	Pilot Test Results
G	Equipment Specifications
H	Easement and Proof of Filing

LIST OF ACRONYMS

Acronym	Definition
AS	Air Sparge
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
CAMP	Community Air Monitoring Plan
CCR	Construction Completion Report
Cis-1,2-DCE	Cis-1,2-Dichloroethene
EC	Engineering Control
GAC	Granular Activated Carbon
HASP	Health and Safety Plan
IC	Institutional Control
IRM	Interim Remedial Measure
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PCE	Tetrachloroethene
RAO	Remedial Action Objective
SC	Site Characterization
SCOs	Soil Cleanup Objectives
SMP	Site Management Plan
SSD	Sub-Slab Depressurization
SVE	Soil Vapor Extraction
TCE	Trichloroethene
ug/l	Microgram per liter
ug/m ³	Microgram per cubic meter
VOCs	Volatile Organic Compounds
w.c.	Water column

FINAL ENGINEERING REPORT

1.0 BACKGROUND AND SITE DESCRIPTION

81 Pondfield Road Company (a partnership in dissolution, winding up) entered into a Brownfield Cleanup Agreement (BCA) with the New York State Department of Environmental Conservation (NYSDEC) in July 2013, to investigate and remediate a property known as 79-81 Pondfield Road located in the Village of Bronxville, New York (“the site”). Advanced Cleanup Technologies, Inc. (ACT) was retained to characterize soil, soil vapor and groundwater quality beneath the site, mitigate the presence of contamination beneath the site and satisfy all requirements of the BCA.

The site is located in the County of Westchester, New York and is identified as Block 1, Lot 5 and Lot 8 on Section 4 of the Westchester County Tax Map. The site consists of an approximately 0.29-acre parcel bounded by a commercial property (the Gramartin Building) to the north, a commercial property (Apple Savings Bank) to the south, Pondfield Road and various commercial properties (Village of Bronxville central shopping district) to the west, and a municipal parking area to the east. The boundaries of the site are fully described in Appendix A: Survey Map.

2.0 SUMMARY OF SITE REMEDY

2.1 REMEDIAL ACTION OBJECTIVES

Based on the results of the Remedial Investigation, the following Remedial Action Objectives (RAOs) were identified for this site.

2.1.1 Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater containing contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of, volatiles emanating from contaminated groundwater.

RAOs for Environmental Protection

- Restore ground water aquifer, to the extent practicable, to pre-disposal/pre-release conditions.
- Prevent the discharge of contaminant to surface water.
- Remove the source of ground or surface water contamination.

2.1.2 Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of, or exposure to, contaminants volatilizing from contaminated soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.
- Prevent impacts to biota due to ingestion/direct contact with contaminated soil that would cause toxicity or bioaccumulation through the terrestrial food chain.

2.1.3 Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

2.2 DESCRIPTION OF SELECTED REMEDY

The site was remediated in accordance with the remedy selected by the NYSDEC in an email dated September 30, 2013, which approved the Interim Remedial Measure (IRM) Work Plan dated July 31, 2014.

The factors considered during the selection of the remedy are those listed in 6 NYCRR 375-1.8. The following are the components of the selected remedy:

1. A site cover currently exists in areas not occupied by buildings and will be maintained to allow for commercial use of the site. Any site redevelopment will maintain the existing site cover.
2. Construction and operation of a Sub-Slab Depressurization (SSD) system, Soil Vapor Extraction (SVE) system and Air Sparge (AS) system at the site;
3. Execution and recording of an Environmental Easement to restrict land use and prevent future exposure to any contamination remaining at the site. Permitted future uses (commercial & industrial) must comply with 6 NYCRR 375-1.8(g)(iii) for commercial uses and 6 NYCRR 375-1.8(g)(iv) for industrial uses.
4. Development and implementation of a Site Management Plan for long term management of remaining contamination as required by the Environmental Easement, which includes plans for: (1) Institutional and Engineering Controls, (2) monitoring, (3) operation and maintenance and (4) reporting;
5. Periodic certification of the institutional and engineering controls listed above.

3.0 INTERIM REMEDIAL MEASURES

The remedy for this site was performed as an IRM in accordance with the approved IRM Work Plan. The remedy included the installation of a sub-slab depressurization (SSD) system, a soil vapor extraction (SVE) system and an air sparge (AS) system. The SSD system maintains negative pressure over the entire area of concern. The SVE system collects vapors released by the AS system for subsequent vapor-phase granular activated carbon treatment.

The SSD system was installed in September 2011. The SVE system was installed in March 2015 and an AS system was installed in April 2015. In May 2015, the combined SSD/SVE/AS system was put into operation. All remedial systems have been operating continuously since startup, except for routine maintenance, repairs and occasional electrical outages.

The information and certifications contained in this FER certify that the remediation requirements for the site have been met.

4.0 DESCRIPTION OF REMEDIAL ACTIONS PERFORMED

4.1 GOVERNING DOCUMENTS

Remedial activities completed at the Site were conducted in accordance with the NYSDEC-approved IRM Work Plan dated July 31, 2014, the Remedial Investigation Report dated September 2017 and the NYSDEC Decision Document dated December 2018. All deviations from the IRM Work Plan are noted below.

4.1.1 Site Specific Health & Safety Plan (HASP)

All remedial work performed under this Remedial Action was in full compliance with governmental requirements, including Site and worker safety requirements mandated by Federal OSHA.

A site-specific Health and Safety Plan (HASP) was complied with for all remedial and invasive work performed at the Site.

4.1.2 Community Air Monitoring Plan (CAMP)

Community air monitoring was performed during all invasive remedial activities, including soil boring installation, trenching, backfilling and ground water sampling. Monitoring consisted of trained personnel utilizing a hand-held Photoionization Detector (PID) to monitor for the presence of organic vapors. Monitoring took place on a continuous basis and the results recorded in the daily field log.

4.1.3 Citizen Participation Plan (CPP)

A Citizen Participation Plan was prepared which included a background of the site and remedial activities to date. It also included tasks required to provide the public with information about the site, including the site's document repository and site contact list along with a fact sheet prepared by the NYSDEC.

4.2 REMEDIAL PROGRAM ELEMENTS

4.2.1 Contractors and Consultants

- Advanced Cleanup Technologies, Inc. constructed and installed the sub-slab depressurization, soil vapor extraction, and air sparge systems and was responsible for remedial performance/documentation sampling to verify that air quality inside the building met NYSDOH air guidelines, significant vacuum was being maintained beneath the building, and contamination was being removed from soil and groundwater beneath the site;
- Ardee Electrical Construction installed and maintained electric service to each of the motors;
- Tri-State Contracting of Elmsford, NY performed trenching for the exterior SSD, SVE and AS wells and electrical conduits;
- Andrew R. Levenbaum, PE of Levenbaum Associates, Inc. was responsible for directing and supervising all remedial work and is the certifying Engineer of Record.

4.2.2 Site Preparation

A site walkthrough was performed with the NYSDEC, NYSDOH and representatives of the enrollee on June 27, 2013.

4.2.3 General Site Controls

- The lower floor of the former dry cleaner is secured by a locking door accessible only by the tenant and the owner. Building tenants have agreed to provide access to all remedial and monitoring equipment installed at the site.
- Wireless telemetry provides 24/7/365 operating status and notification of alarm conditions including SSD/SVE blower and AS compressor operating conditions.
- Soil sampling was performed utilizing 4 and 5-foot long disposable acetate liners.
- Ground water sampling was performed utilizing a peristaltic pump and 3/8-inch disposable silicone and polyethylene tubing.

- Soil vapor and indoor air sampling was performed utilizing 1/4-inch diameter disposal Teflon tubing and laboratory-supplied Summa canisters
- All non-disposable equipment such as drilling tools and ground water sampling equipment was decontaminated using a combination of detergent and tap water rinses prior to first use on site, between each investigation location and depth and prior to demobilization.
- All waste derived from remedial activities, including but not limited to all drill cuttings and monitoring well purge or development water, were containerized in 55-gallon DOT-approved drums, stored onsite and transported offsite for disposal as manifested waste. Copies of the fully executed waste manifests are contained in Appendix B.

4.2.4 Nuisance controls

- Truck wash and egress housekeeping,
- Dust generated during interior installation work was mitigated by a combination of polyethylene drop cloths and ventilation fans. Dust generated during exterior trenching was mitigated by a hose spray and pauses between excavation. No dust was generated during exterior soil, soil vapor or ground water sampling or well installation.
- All work vehicles were parked in the eastern parking lot or along Pondfield Road. No vehicle routing issues or other complaints were received.

4.3 REMEDIAL PERFORMANCE/DOCUMENTATION SAMPLING

The SSD system was installed in September 2011. The SVE system was installed in March 2015 and the AS system was installed in April 2015. In May 2015, the combined SSD/SVE/AS system was put into operation in accordance with the approved IRM Work Plan and has been operating continuously since startup, except for routine maintenance, repairs and occasional electrical outages.

A detailed description of all investigations performed at the site is provided in the RIR. A summary of the investigations performed before, during and after implementation of the IRM work plan to verify its effectiveness is provided below.

4.3.1 Soil Sampling and Analysis

Correspondence from Woodard & Curran dated August 30, 2007 indicates that five soil borings were installed inside the dry cleaner and one soil boring was installed in the parking lot outside the southeast corner of the building. Soil samples were collected from 0-2 ft and 2-4 feet bgs inside the building and 4-5 feet bgs in the parking lot. PCE was detected in three of six soil borings.

Between May 2011 and July 2012, ACT installed eleven soil borings at the site, including two inside the dry cleaner and nine in the eastern parking lot. Only two soil borings (ACT-1 and ACT-9) contained PCE above regulatory criteria. PCE was not detected above 8 feet bgs in any soil boring.

A diagram of soil sampling locations is provided in Figure 1. A summary of historical soil sampling results is provided in Table 1. Residual soil contamination may be present beneath the site. Endpoint soil sampling will be performed at the completion of remedial activities to verify the absence of soil contamination above UUSCOs.

4.3.2 Ground Water Sampling and Analysis

Ground water sampling has been performed throughout the site and its vicinity between 2011 and 2018. A diagram of ground water sampling locations is provided in Figure 2. A summary of historical ground water sampling results is provided in Table 2. All exceedances of ground water standards are highlighted.

Between May, 2011 and July, 2012, thirteen temporary monitoring wells were installed and sampled from water table surface (14 to 16 ft bgs) and approximately 10 feet below the water table surface. A total of 21 volatile organic compounds were detected in one or more of the ground water samples. PCE and TCE were detected above water quality standards from the water table surface to less than 25 feet bgs beneath the eastern parking lot, except in the southwestern portion of the parking lot where PCE was detected above water quality standards only at 25 feet bgs.

In May 2014, three on-site multilevel wells and four off-site conventional wells were purged and sampled. The results indicated that PCE was found above its water quality standard (5 µg/L) in two on-site wells MW-1S (5,800 µg/L) and MW-2S (350

µg/L), and one off-site well MW-5I (2400 µg/L). TCE was also found above its water quality standard (5 µg/L) only in MW-1S (51 µg/L).

Two groundwater monitoring events conducted on March 9th and 10th, 2016 and June 14th and 15th, 2016 showed an improvement in groundwater quality beneath and downgradient of the site. Monitoring well MW-1S in the parking lot south of the site contained 34 µg/L of PCE in June 2016 compared with 2,600 µg/L in March 2016 and 5,800 µg/L in June 2014. Monitoring wells MW-2S in the parking lot and MW-5I on the east side of Pondfield Road were the only monitoring wells showing an increase of PCE between March and June 2016. MW-2S contained 110 µg/L of PCE in June 2016, which is slightly higher than 100 µg/L in March 2016 but still much lower than 350 µg/L in June 2014. MW-5I contained 1,900 µg/L of PCE in June 2016 compared with 1,600 µg/L in March 2016 and 2,400 µg/L in June 2014. Monitoring well MW-6 on Park Place southwest of the site contained 190 µg/L of PCE in June 2016 compared with 530 µg/L in March 2016. The remaining monitoring wells contained CVOCs at or below water quality standards or detection limits.

A groundwater monitoring event conducted between January 24 and 26, 2018 showed an increase in PCE concentrations in groundwater directly south of the treatment area. Concentrations of PCE in MW-2S (890 µg/L) and MW-4 (9.2 µg/L) were higher than previous sampling events, while PCE concentrations in MW-5I (19 µg/L) and MW-6 (24 µg/L) showed improvement approaching water quality standards.

The most recent groundwater monitoring event in March 2019 showed PCE present in two onsite wells (MW-1S @ 37 ug/L and MW-2S @ 9.7ug/L) and two offsite monitoring wells (MW-5I at 1,800 ug/L and MW-6 at 150 ug/L). These levels indicate continued improvement in groundwater quality beneath the site. However, a spike in MW-5I over recent sampling events is well below its maximum level of 2,400 ug/L in 2014. The level of PCE in MW-5I will be evaluated over future monitoring events.

4.3.3 Vapor Intrusion Sampling and Analysis

A summary of pre- and post-installation indoor air and sub-slab vapor sampling results is provided in Table 3. All exceedances of NYSDOH indoor air guidelines or soil vapor screening levels are highlighted.

On May 6, 2011 ACT collected and analyzed two sub-slab soil vapor samples beneath the central portion of the building near the former dry cleaning machines and the southwestern portion of the building near air compressors and the heating system. Two additional sub-slab soil vapor samples were collected and analyzed beneath the southeastern portion of the building and in a storage room (now the treatment room) in the northwestern portion of the property. Concentrations of PCE and TCE were found in sub-slab soil vapor as high as 67,850 $\mu\text{g}/\text{m}^3$ and 13,443 $\mu\text{g}/\text{m}^3$, respectively, indicating that a potential source of indoor air contamination was present. As a precaution, depressurization well DP-1 was installed beneath the central portion of the basement to reduce pressure beneath the building through a small regenerative blower.

On January 5, 2012 ACT collected and analyzed air samples from five commercial units on the second floor of the building. Concentrations of PCE were found to be present below its NYSDOH Air Guideline at the time inside three of the five second floor commercial units ranging from 4.21 $\mu\text{g}/\text{m}^3$ to 46.82 $\mu\text{g}/\text{m}^3$ and not detected in the remaining two second floor commercial units. These results indicated that the sub-slab depressurization system was preventing vapors from entering air inside the building.

Between October 21 and November 2, 2013 ACT collected sub-slab vapor and indoor air samples at on-site and off-site locations to determine whether vapor intrusion was occurring at the site and other properties. PCE and TCE were again found below their NYSDOH's air guidelines at that time in air within all on-site and offsite commercial units.

On March 12, 2014, December 17, 2015, March 23, 2017 and June 22, 2017, off-site vapor intrusion sampling was performed at commercial units south and west of the site. The vapor intrusion results indicated that air quality inside all of the tested commercial units met NYSDOH air guidelines, while sub-slab soil vapor contained PCE and TCE above their respective soil vapor screening levels.

The vapor intrusion results indicate that the sub-slab depressurization system operated at the Site has effectively prevented sub-slab vapors from entering air inside the premises.

Vacuum measurements recorded in the five permanent vacuum monitoring points following startup of the remedial system is provided in Table 4. The results indicate that vacuum is being maintained beneath the entire site.

4.3.4 Treatment System Sampling and Analysis

A summary of historical treatment system influent and effluent sampling results is provided in Table 5. It can be seen that the vapor phase granular active carbon treatment system has been effective at removing COVs from the treatment system exhaust.

4.3.5 Ambient Air Quality Impact (DAR-1) Analysis

An ambient air quality impact analysis was performed in accordance of NYSDEC DAR-1 guidelines for the control of toxic ambient air contaminants. Based upon calculations of annual air impact with and without carbon treatment, the facility is currently not required to use activated carbon treatment as an air control. A copy of the DAR-1 analysis is provided in Appendix C. A request will be made to NYSDEC's Division of Air Resources for approval to discontinue use of activated carbon treatment for the SVES exhaust.

4.3.6 Data Usability Summary Reports (DUSRS)

Data Usability Summary Reports (DUSRs) were prepared for all data generated in during the remedial action. These DUSRs are included in Appendix D, and associated raw data is provided electronically in Appendix E.

Since contaminated soil, ground water and soil vapor remain beneath the site after completion of the Remedial Action, Institutional and Engineering Controls are required

to protect human health and the environment. These Engineering and Institutional Controls (ECs/ICs) are described in the following sections. Long-term management of these EC/ICs and residual contamination will be performed under the Site Management Plan (SMP) approved by the NYSDEC.

4.4 ENGINEERING CONTROLS

The site has three primary Engineering Controls, including (1) an SSD system to prevent vapors from entering air inside buildings at the site and adjacent properties; (2) an SVE system to contain and recover vapors present in unsaturated soil and shallow groundwater beneath the site; and (3) an AS system which injects air into groundwater beneath the saturated zone to transfer contamination from the liquid phase to the gas phase, which is then removed by the SVE system.

The as-built layout of the combined SSD/SVE/AS system is provided in Figure 3. The as-built layout of the treatment system is provided in Figure 4. Pilot test results verifying the projected influence and sizing of the combined SSD/SVE/AS system are provided in Appendix F. Equipment specifications are provided in Appendix G.

The following sections provide a detailed description of the above Engineering Controls installed and currently operating at the site.

4.4.1 Sub-Slab Depressurization System

The SSD system consists of four interior depressurization wells and two exterior depressurization wells, SVE-1 (formerly DP-5) and DP-6. Each of the depressurization wells is constructed with 20 mil, 2-inch diameter schedule 40 PVC well screen and riser piping. Each depressurization well is connected through underground lateral piping to a 3-inch diameter PVC riser and header piping pipe leading to a 7.5 Hp FPZ regenerative blower located in a room in the back of the basement. The interior depressurization wells are screened from the bottom of the concrete slab to 7 feet below the slab. The exterior depressurization wells are screened in the eastern parking lot from the bottom of the asphalt pavement to 10 feet in depth.

4.4.2 Soil Vapor Extraction System

The SVE system consists of a soil vapor extraction well (SVE-1, former DP-5) constructed in the same manner as the depressurization wells and screened from the bottom of the asphalt pavement to approximately 1-foot above the water table. Riser piping from SVE-1 is connected through underground lateral piping to the same 3-inch overhead PVC header and regenerative blower in the treatment room. The air stream exiting the blower is split and treated with two parallel sets of primary and secondary 180-pound vapor phase granular activated carbon adsorbers. An exhaust pipe exiting the secondary canisters is combined into a common 4-inch exhaust pipe which discharges at the roofline.

The regenerative blower is equipped with a vacuum relief valve, in-line filter and moisture separator with a high-level liquid level shutoff switch. Riser piping for each SVE well is fitted with ball valves and vacuum ports to adjust vacuum beneath the site.

4.4.3 Air Sparge System

The AS system consists of two 1-inch diameter air sparge wells (AS-1 and AS-2), underground lateral piping and an air compressor. Each AS well is installed to a depth of 30-feet below grade and consists of a 2 foot by 1 inch 0.010 slotted PVC well screen followed by 10-foot sections of 1-inch diameter PVC riser pipe. The well screens were backfilled with ¼ inch pea gravel followed by one foot of hydrated bentonite pellets. The annulus was then backfilled with native soil to 6 inches below the asphalt surface. A flush-mounted manhole cover was installed within the existing asphalt surface.

Underground lateral piping is located within individual trenches and later combined into a 1 inch aboveground header pipe that leads into the treatment room. The AS wells are pressurized by a 5 HP Becker rotary vane compressor also located inside the treatment room. Riser piping for each AS well is fitted with a ball valve and pressure gauge to monitor and adjust sparge pressure beneath the site.

4.4.4 Operation, Maintenance and Monitoring

A digital pressure switch is installed on the influent pipe to the regenerative blower for continuous logging of vacuum maintained by the combined SSD/SVE/AS system. An interlock installed between the SVE blower and the AS compressor causes the AS compressor to turn off if the SVE blower fails. In the event vacuum falls below 1.0 in. wc, an email and text message will be sent to the project manager indicating that the remedial system is off.

There are six control vacuum points at the site. Three interior permanent vacuum monitoring points constructed with 1/4-inch diameter by 6-inch long brace pipe are installed through the concrete floor slab inside the northern basement to verify that the performance objectives of SSD/SVE system have been reached and to demonstrate that the system is providing adequate depressurization coverage. VP-1 is installed near the southeast corner and VP-2 and VP-3 are installed along the north and south walls of northern basement, respectively.

Three exterior monitoring points (VP-4 through VP-6) are installed utilizing a dedicated piece of 1/4-inch polyethylene tubing inserted to a depth of approximately 6 inches below a 3/4-inch hole drilled through the parking lot asphalt. Coarse sand was used to fill the annulus around the tubing. The penetration was sealed with bentonite. A 5-inch flush-mounted manhole cover is installed within the existing asphalt surface to protect the vacuum point. VP-6 monitoring point located 25 feet away from the SVE well is equipped with analog pressure gauge that transmits pressure readings to the wireless telemetry system.

A wireless telemetry system is installed on the interior wall of the treatment room to monitor pressures throughout the SSD/SVE/AS system. Data is continuously logged from pressure sensors, which provide 24/7/365 real-time information on the SSD/SVE/AS system's operating conditions. In the event of an alarm condition, the ACT project manager will be instantaneously contacted by email and text alert so an emergency service call can be performed.

Procedures for monitoring, operating and maintaining the SSD/SVE/AS system are provided in the Operation and Maintenance Plan in Section 4 of the Site Management Plan (SMP). The Monitoring Plan also addresses inspection procedures that must occur after any severe weather condition has taken place that may affect on-site ECs.

4.5 INSTITUTIONAL CONTROLS

The site remedy requires that an environmental easement be placed on the property to implement, maintain and monitor the Engineering Controls.

The environmental easement for the site was executed by the Department on June 10, 2019, and filed with the Westchester County Clerk on July 26, 2019. The County Recording Identifier number for this filing is 581593529. A copy of the easement and proof of filing is provided in Appendix H.

4.6 DEVIATIONS FROM THE IRM WORK PLAN

Section 2.2.2 of the IRM Work Plan indicates that a test pit was to be installed along the eastern exterior wall of the former dry cleaner. The purpose for the test pit was to verify the absence of a subsurface drainage structure that could be contributing to soil and groundwater contamination beneath the site.

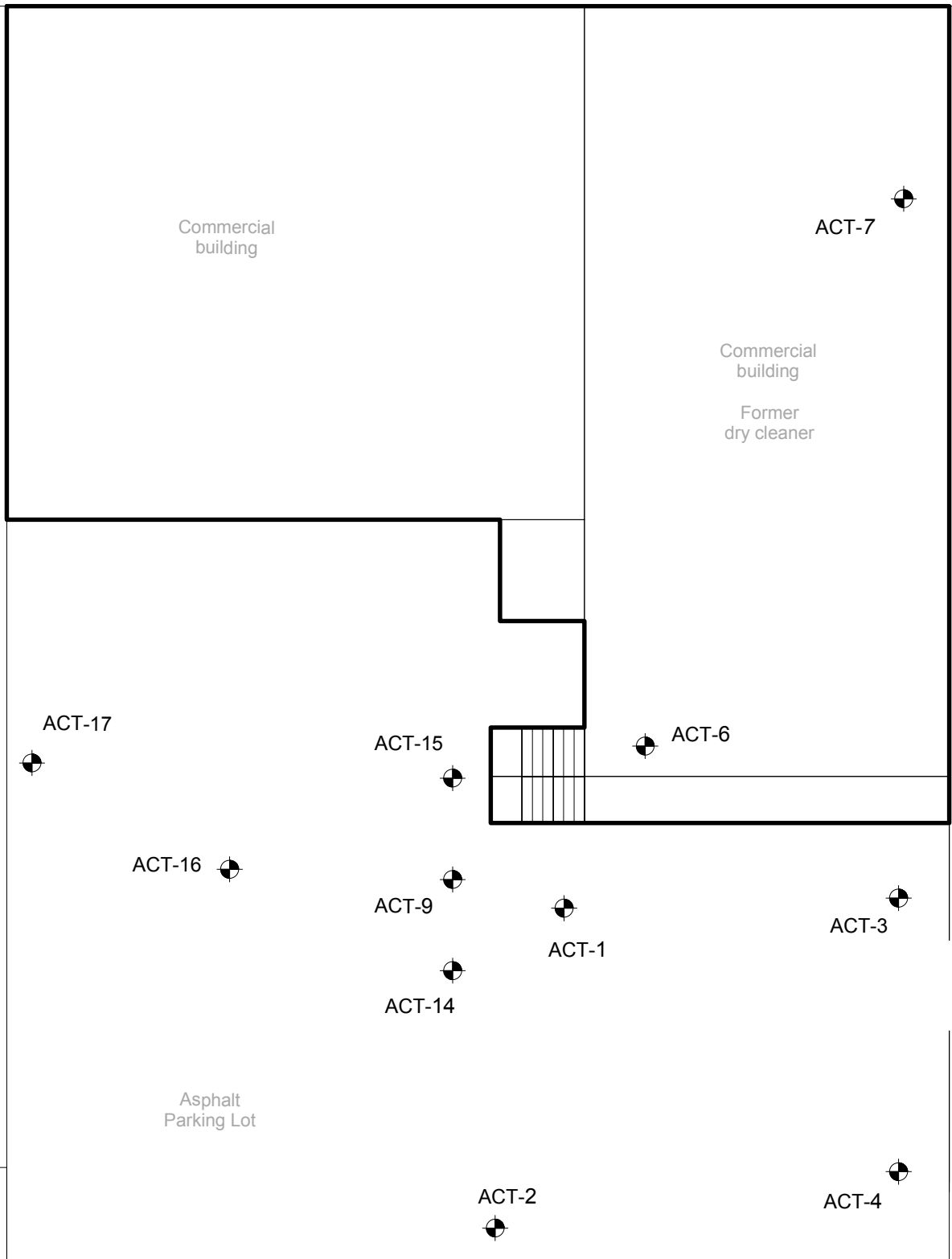
An inspection of the interior sump did not identify any drainpipes that could lead to a subsurface drainage structure and no indications of a drainage structure were identified during the geophysical survey. Furthermore, a reduction in influent treatment system concentrations and improved groundwater quality suggests that any source of subsurface contamination was being addressed by ongoing remedial activities. Therefore, a test pit was deemed not practical in light of the potentially significant disturbance of commercial tenant operations in the area of the proposed test pit.

Section 2.2.3 of the IRM Work Plan indicates that multi-level monitoring wells will be installed at three onsite locations and two offsite locations. Due to the shallow depth of bedrock southwest of the site, monitoring well MW-6 could only be installed to a depth of 30 feet before bedrock was encountered.

FIGURES

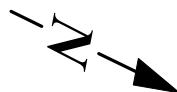
Figure 1
Soil Sampling Locations

PONDFIELD ROAD



LEGEND


 ACT-2 Soil Boring



SOIL SAMPLING LOCATIONS



960 S. Broadway, Suite 100, Hicksville, New York 11801
 Tel: 516-933-0655 Fax: 516-933-0659

Project No.: 6832-BVNY

Figure No.: 1

Date: 02/19/2013

Scale: 1" = 15.25'

Figure 2

Ground Water Sampling Locations

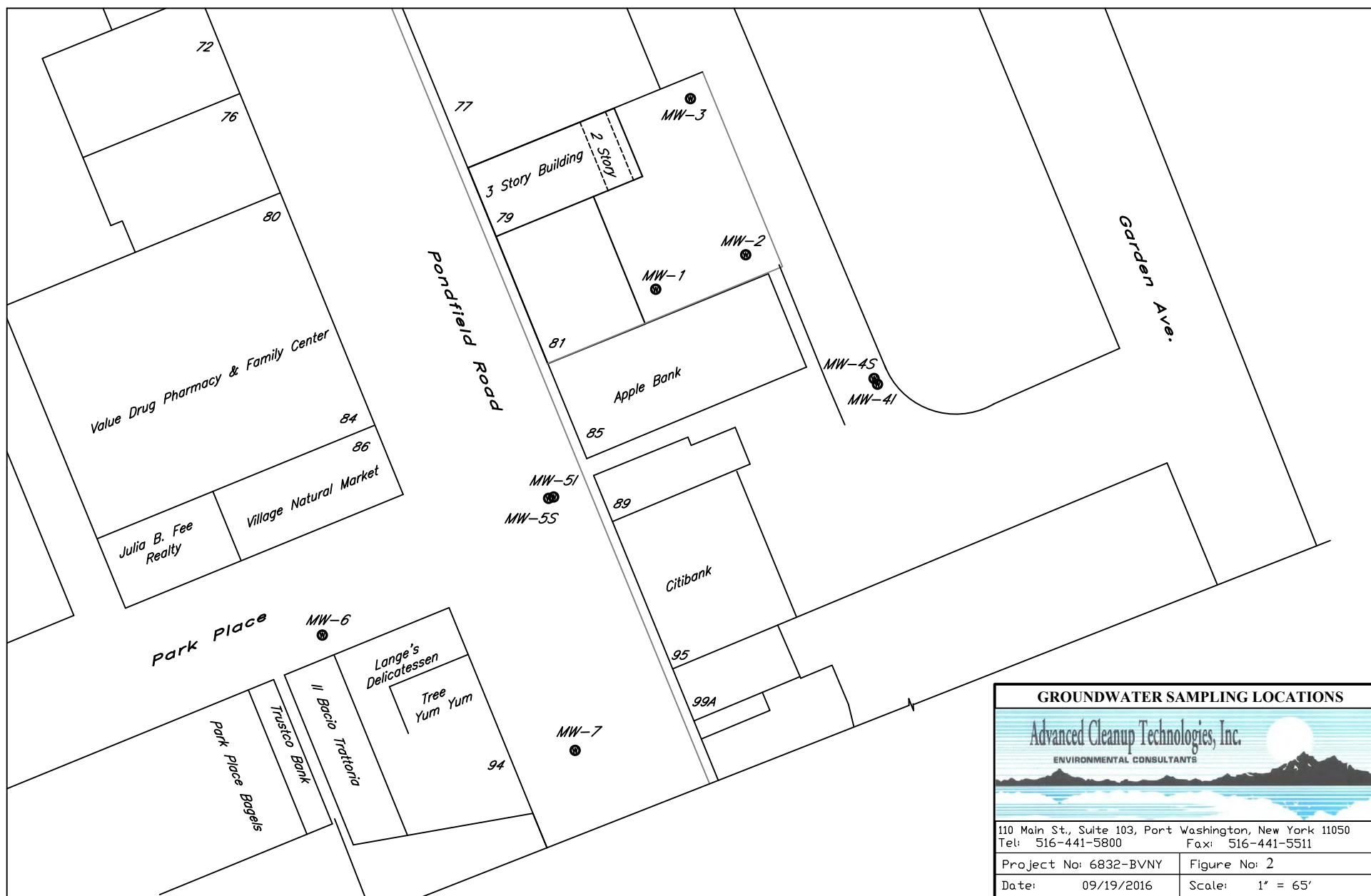


Figure 3

As-Built SSD/SVE/AS System Layout

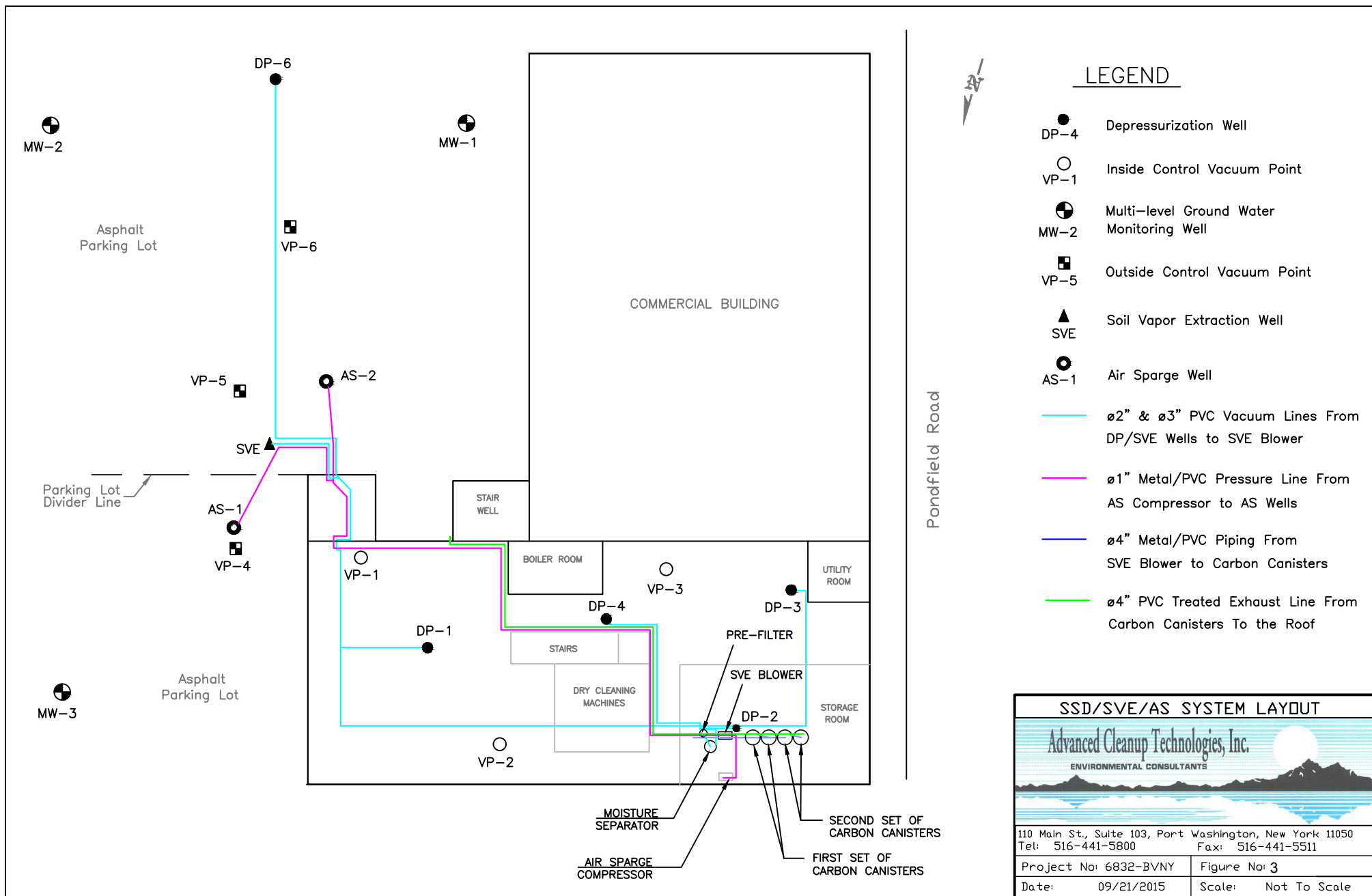
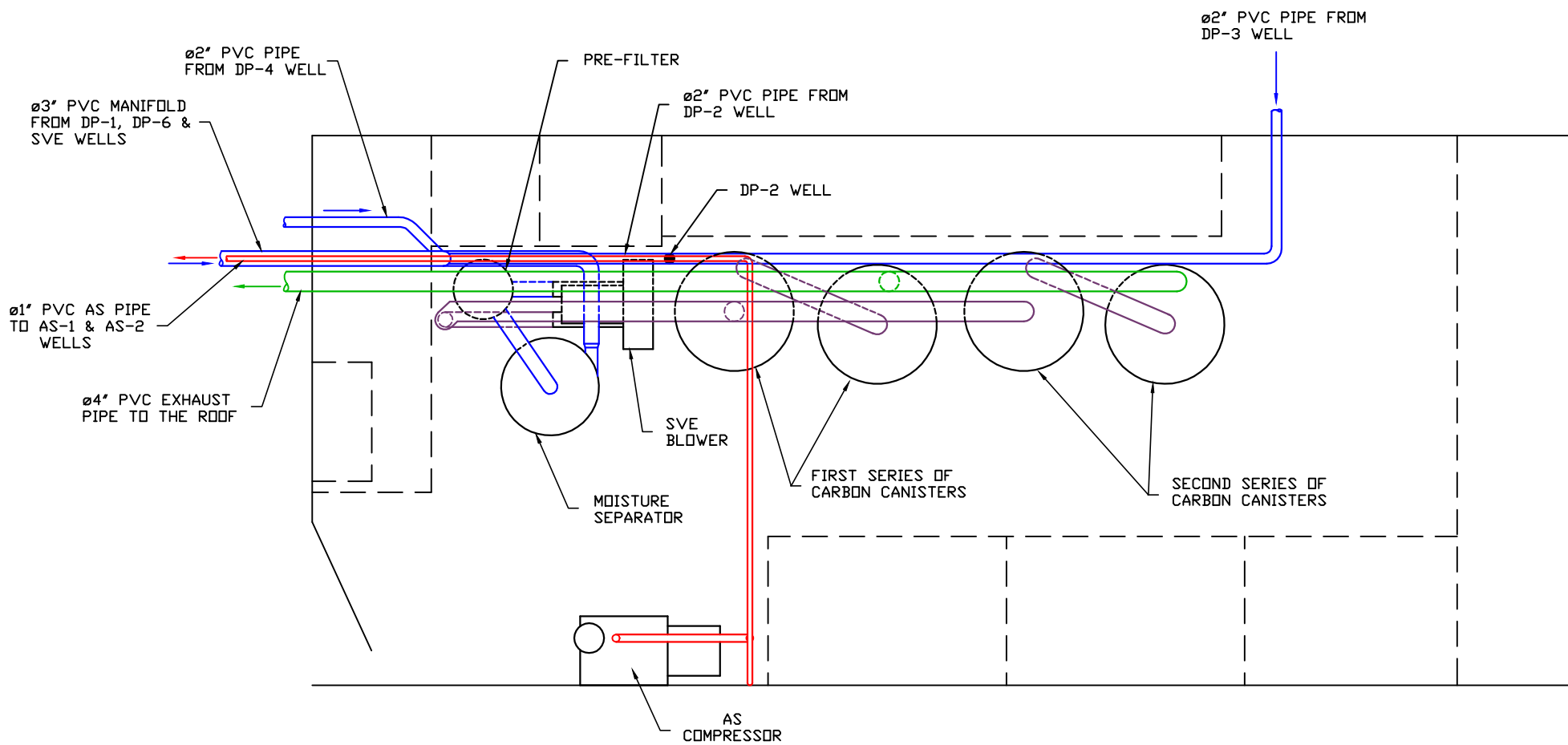


Figure 4

As-Built Treatment System Layout



LEGEND

- | | |
|--|--|
| ▬ $\varnothing$ 2" & $\varnothing$ 3" PVC Vacuum Lines From DP/SVE Wells to SVE Blower | ▬ $\varnothing$ 4" Metal/PVC Piping From SVE Blower to Carbon Canisters |
| ▬ $\varnothing$ 1" Metal/PVC Pressure Line From AS Compressor to AS Wells | ▬ $\varnothing$ 4" PVC Treated Exhaust Line From Carbon Canisters To the Roof |

AS BUILT TREATMENT SYSTEM ROOM LAYOUT	
Advanced Cleanup Technologies, Inc. ENVIRONMENTAL CONSULTANTS	
110 Main St., Suite 103, Port Washington, New York 11050 Tel: 516-441-5800 Fax: 516-441-5511	
Project No: 6832-BVNY	Figure No: 2
Date: 11/12/2015	Scale: 1 = 3'

TABLES

Table 1
Historical Soil Quality Data

Table 3

Volatile Organic Compounds in Soil (ug/kg)
EPA Method 8260

Spic & Span Cleaners
NYSDEC BCP Site No. C360130

Sample ID	Standard			ACT-1		ACT-2		ACT-3		ACT-4		ACT-6		ACT-7		ACT-9		ACT-14	ACT-15	ACT-16	ACT-17
Sample Date	UUSCO ¹	RRSCO ²	CSCO ³	3/9/12		3/9/12		4/16/12		4/16/12		5/3/12		5/3/12		5/24/12		7/12/12	7/12/12	7/12/12	7/12/12
Dample Depth				10-11'	14-15'	9-10'	0-2'	10-11'	14-15'	5-6'	9-10'	0-2'	13-15'	5-7'	15-17'	8-10'	13-15'	13-15'	14-15'	13-15'	13-15'
1,1,1,2-Tetrachloroethane	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
1,1,1-Trichloroethane	680	100,000	500,000	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
1,1,2,2-Tetrachloroethane	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
1,1,2-Trichloro-1,2,2-trifluoroethane	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
1,1,2-Trichloroethane	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
1,1-Dichloroethane	270	26,000	240,000	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
1,1-Dichloroethene	330	100,000	500,000	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
1,1-Dichloropropene	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
1,2,3-Trichlorobenzene	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
1,2,3-Trichloropropane	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
1,2,4,5-Tetramethylbenzene	NS	NS	NS	<6.2	10,000	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	620	<2.5	<2.5	<2.3	<2.4
1,2,4-Trichlorobenzene	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
1,2,4-Trimethylbenzene	3,600	52,000	190,000	<6.2	57	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	16	<2.5	<2.5	<2.3	<2.4
1,2-Dibromo-3-chloropropane	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
1,2-Dibromoethane	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
1,2-Dichlorobenzene	1,100	100,000	500,000	2	47	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	11	<2.5	<2.5	<2.3	<2.4
1,2-Dichloroethane	20	3,100	30,000	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
1,2-Dichloropropane	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
1,3,5-Trimethylbenzene	8,400	52,000	190,000	<6.2	77	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	8.6	<2.5	<2.5	<2.3	<2.4
1,3-Dichlorobenzene	2,400	49,000	280,000	1.4	1.7	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	1.8	<2.5	<2.5	<2.3	<2.4
1,3-dichloropropane	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
1,4-Dichlorobenzene	1,800	13,000	130,000	2.6	50	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	7.8	<2.5	<2.5	<2.3	<2.4
1,4-Dioxane	100	13,000	130,000	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
2,2-Dichloropropane	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
2-Butanone	120	100,000	500,000	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<5.3	<5.9	<6.2	<6.3	<5.9	<6.1
2-Chloroethyl vinyl ether	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
2-Chlorotoluene	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
2-Hexanone	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<5.3	<5.9	<6.2	<6.3	<5.9	<6.1
2-Propanol	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
4-Chlorotoluene	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
4-Isopropyltoluene	NS	NS	NS	<6.2	31	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	8	<2.5	<2.5	<2.3	<2.4
4-Methyl-2-pentanone	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<5.3	<5.9	<6.2	<6.3	<5.9	<6.1
Acetone	50	100,000	500,000	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<5.3	<5.9	<6.2	<6.3	<5.9	<6.1
Acrolein	NS	NS	NS	<12	<12	<11	<10	<10	<13	<10	<11	<9.4	<13	<11	<11	<12	<12	<12	<13	<12	<12
Acrylonitrile	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
Benzene	60	4,800	44,000	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
Bromobenzene	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
Bromochloromethane	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
Bromodichloromethane	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
Bromoform	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
Bromomethane	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
Carbon disulfide	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
Carbon tetrachloride	760	2,400	22,000	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4

Table 3 Continued

Sample ID	Standard			ACT-1	ACT-2	ACT-3	ACT-4		ACT-6		ACT-7		ACT-9		ACT-14	ACT-15	ACT-16	ACT-17			
Sample Date	UUSCO ¹	RRSCO ²	CSCO ³	3/9/12	3/9/12	4/16/12	4/16/12	4/16/12	5/3/12	5/3/12	5/3/12	5/3/12	5/24/12	7/12/12	7/12/12	7/12/12	7/12/12				
Dample Depth				10-11'	14-15'	9-10'	0-2'	10-11'	14-15'	5-6'	9-10'	0-2'	13-15'	5-7'	15-17'	8-10'	13-15'	13-15'	14-15'	13-15'	13-15'
Chlorobenzene	1,100	100,000	500,000	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
Chlorodifluoromethane	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
Chloroethane	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
Chloroform	370	49,000	350,000	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
Chloromethane	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
cis-1,2-Dichloroethene	250	100,000	500,000	<6.2	1.6	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	2.3	<2.5	0.81	1.2	<2.4
cis-1,3-Dichloropropene	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
Dibromochloromethane	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
Dibromomethane	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
Dichlorodifluoromethane	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
Diisopropyl ether	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
Ethanol	NS	NS	NS	<12	<12	<11	<10	<10	<13	<10	<11	<9.4	<13	<11	<11	<5.3	<5.9	<6.2	<6.3	<5.9	<6.1
Ethyl acetate	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
Ethylbenzene	1,000	41,000	390,000	<6.2	6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	2.5	<2.5	<2.5	<2.3	<2.4
Freon-114	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
Hexachlorobutadiene	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
Isopropyl acetate	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
Isopropylbenzene	NS	NS	NS	<6.2	1.3	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	0.51	<2.5	<2.5	<2.3	<2.4
m,p-Xylene	260	100,000	500,000	<12	7.3	<11	<10	<10	<13	<10	<11	<9.4	<13	<11	<11	<4.3	6.1	<4.9	<5.1	<4.7	<4.8
Methyl Acetate	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
Methyl tert-butyl ether	930	100,000	500,000	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
Methylene chloride	50	100,000	500,000	8.5	8.5	4.4	4.6	4.4	5.8	4.9	5.1	5.2	8.3	5.8	7	10	12	8	8.9	7.5	8.3
n-Amyl acetate	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
Naphthalene	NS	NS	NS	<6.2	42	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	92	<2.5	<2.5	0.77	<2.4
n-Butyl acetate	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
n-Butylbenzene	12,000	100,000	500,000	<6.2	3.4	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	21	<2.5	<2.5	<2.3	<2.4
n-Propyl acetate	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
n-Propylbenzene	3,900	100,000	500,000	<6.2	4.8	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	1.8	<2.5	<2.5	<2.3	<2.4
o-Xylene	260	100,000	500,000	<6.2	21	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	7.7	<2.5	<2.5	<2.3	<2.4
p-Diethylbenzene	NS	NS	NS	<6.2	160	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	180	<2.5	<2.5	<2.3	<2.4
p-Ethyltoluene	NS	NS	NS	<6.2	60	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	13	<2.5	<2.5	<2.3	<2.4
sec-Butylbenzene	11,000	100,000	500,000	<6.2	3.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	0.91	<2.5	<2.5	<2.3	<2.4
Styrene	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
t-Butyl alcohol	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
tert-Butylbenzene	5,900	100,000	500,000	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
Tetrachloroethene	1,300	19,000	150,000	2,800	300,000	1.3	0.75	<5.1	<6.3	<5.2	52	<4.7	3.1	<5.7	<5.7	0.42	6,000	8.2	33	270	0.7
Toluene	700	100,000	500,000	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	0.31	<2.5	<2.5	<2.3	<2.4
trans-1,2-Dichloroethene	NS	NS	NS	<6.2	1.4	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
trans-1,3-Dichloropropene	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
Trichloroethene	470	21,000	200,000	2.5	21	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	6.9	<2.5	2.2	2.1	<2.4
Trichlorofluoromethane	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
Vinyl acetate	NS	NS	NS	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4
Vinyl chloride	20	900	13,000	<6.2	<6.2	<5.5	<5.1	<5.1	<6.3	<5.2	<5.7	<4.7	<6.7	<5.7	<5.7	<2.1	<2.4	<2.5	<2.5	<2.3	<2.4

¹ Unrestricted Use Soil Cleanup Objectives, Table 375-6.8(a), 6 NYCRR 375, NYSDEC 2006² Restricted Residential Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006³ Commercial Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006

Bolded values signify detection above method detection limit

Highlighted values signify exceedance of regulatory guidance

NS = No Standard

Table 2

Historical Ground Water Quality Data

Table 1																		
Historical Ground Water Quality Data (ug/l)																		
EPA Method 8260																		
79 Pondfield Rd																		
Bronxville, NY																		
ACT Project No.: 6832:BVNY																		
Sample ID	Standard ¹	MW:1'(Shallow)				MW:1'(Intermediate)				MW:1'(Deep)				MW:2'(Shallow)				
Sample Date		4/16/14	5/14/14	3/10/16	6/15/16	1/10/14	5/14/14	3/10/16	6/15/16	1/10/14	5/14/14	3/10/16	6/15/16	1/10/14	4/16/14	5/14/14	3/10/16	6/15/16
1,1,1,2-Tetrachloroethane	5	NA	NA	<10	0.20	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20	NA	NA	NA	<0.50	0.20
1,1,1-Trichloroethane	5	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
1,1,2,2-Tetrachloroethane	0.2	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
1,1,2,2-Trichloro-1,2,2-trifluoroethane	NS	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
1,1,2-Trichloroethane	1	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
1,1-Dichloroethane	5	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
1,1-Dichloroethene	0.7	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
Bromochloromethane	5	NA	NA	<10	0.20	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20	NA	NA	NA	<0.50	0.20
1,2,3-Trichloropropane	0.04	NA	NA	<10	0.20	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20	NA	NA	NA	<0.50	0.20
1,2,4-Trichlorobenzene	5	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
1,2,4-Trimethylbenzene	5	NA	NA	<10	0.20	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20	NA	NA	NA	<0.50	0.20
1,2-Dibromo-3-chloropropane	0.04	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	NA	<0.50	0.20
1,2-Dibromoethane	NS	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
1,2-Dichlorobenzene	2	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
1,2-Dichloroethane	0.6	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
1,2-Dichloropropane	1	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
1,3,5-Trimethylbenzene	5	NA	NA	<10	0.20	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20	NA	NA	NA	<0.50	0.20
1,3-Dichlorobenzene	3	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	NA	<0.50	0.20
1,4-Dichlorobenzene	3	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
1,4-Dioxane	NS	NA	NA	<1600	40	NA	NA	<80	40	NA	NA	<80	40	NA	NA	NA	<80	40
2-Butanone	50	16	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	12	NA	<0.50	0.20
2-Hexanone	50	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
4-Methyl-2-pentanone	NS	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
Acetone	50	<10	<10	<40	1.6	<10	<10	<2.0	1.5	<10	<1.0	<2.0	1.6	<10	13	<10	<2.0	1.9
Acrolein	5	NA	NA	<40	0.20	NA	NA	<2.0	0.20	NA	NA	<2.0	0.20	NA	NA	NA	<2.0	0.20
Acrylonitrile	0.07	NA	NA	<10	0.20	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20	NA	NA	NA	<0.50	0.20
Benzene	0.7	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
Bromodichloromethane	50	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
Bromoform	50	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
Bromomethane	5	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
Carbon disulfide	NS	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
Carbon tetrachloride	5	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
Chlorobenzene	5	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
Chloroethane	5	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
Chloroform	7	<10	<10	<10	0.20	<10	<10	0.51	0.65	<10	0.27	0.27	0.31	<10	<10	<10	<0.50	0.20
Chloromethane	NS	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
cis-1,2-Dichloroethene	5	<10	17	4.4	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	0.21	0.47
cis-1,3-Dichloropropene	0.4	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
Cyclohexane	NS	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
Dibromochloromethane	50	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
Dibromomethane	5	NA	NA	<10	0.20	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20	NA	NA	NA	<0.50	0.20
Dichlorodifluoromethane	5	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
Ethylbenzene	5	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
Hexachlorobutadiene	0.5	NA	NA	<10	0.20	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20	NA	NA	NA	<0.50	0.20
Isopropylbenzene	5	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
Methyl acetate	NS	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
Methyl tert-butyl ether	10	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
Methylcyclohexane	NS	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20
Methylene chloride	5	<10	<10	<40	1.0	<10	<10	<2.0	1.0	<10	<10	<2.0	1.0	<10	<10	<10	<2.0	1.0
n-Butylbenzene	5	NA	NA	<10	0.20	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20	NA	NA	NA	<0.50	0.20
n-Propylbenzene	NS	NA	NA	<10	0.20	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20	NA	NA	NA	<0.50	0.20
o-Xylene	5	NA	NA	<10	0.20	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20	NA	NA	NA	<0.50	0.20
1,2,3-Trichlorobenzene	5	NA	NA	<10	0.20	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20	NA	NA	NA	<0.50	0.20
p- and m-Xylenes	10	NA	NA	<10	0.50	NA	NA	<1.0	0.50	NA	NA	<1.0	0.50	NA	NA	NA	<0.50	0.50
p-Isopropyltoluene	NS	NA	NA	<10	0.20	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20	NA	NA	NA	<0.50	0.20
sec-Butylbenzene	5	NA	NA	<10	0.20	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20	NA	NA	NA	<0.50	0.20
Styrene	50	<10	<10	<10	0.20	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10		

Table'1'continued.'

Historical'Ground'Water'Quality'Data'(ug/l)
EPA'Method'8260
79'Pondfield'Rd
Bronxville,'NY

ACT'Project'No.: '68327BVNY

Sample ID	Standard ¹	MW72'(Intermediate)				MW72'(Deep)				MW73'(Shallow)					MW73'(Intermediate)			
Sample Date		1/10/14	5/14/14	3/10/16	6/15/16	1/10/14	5/14/14	3/10/16	6/14/16	1/10/14	4/16/14	5/14/14	3/10/16	6/15/16	1/10/14	5/14/14	3/10/16	6/15/16
1,1,1,2\$Tetrachloroethane	5	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20	NA	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20
1,1,1\$Trichloroethane	5	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
1,1,2,2\$Tetrachloroethane	0.2	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
1,1,2\$Trichloro\$1,2,2\$trifluoroethane	NS	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
1,1,2\$Trichloroethane	1	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
1,1\$Dichloroethane	5	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
1,1\$Dichloroethene	0.7	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
Bromochloromethane	5	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20	NA	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20
1,2,3\$Trichloropropane	0.04	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20	NA	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20
1,2,4\$Trichlorobenzene	5	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
1,2,4\$Trimethylbenzene	5	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20	NA	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20
1,2\$Dibromo\$3\$chloropropane	0.04	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
1,2\$Dibromoethane	NS	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
1,2\$Dichlorobenzene	2	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
1,2\$Dichloroethane	0.6	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
1,2\$Dichloropropane	1	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
1,3,5\$Trimethylbenzene	5	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20	NA	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20
1,3\$Dichlorobenzene	3	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
1,4\$Dichlorobenzene	3	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
1,4\$Dioxane	NS	NA	NA	<80	40	NA	NA	<80	40	NA	NA	NA	<80	40	NA	NA	<80	40
2\$Butanone	50	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
2\$Hexanone	50	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
4\$Methyl\$2\$pentanone	NS	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
Acetone	50	<10	<10	<2.0	7.5	<10	<10	<2.0	2.6	<10	<10	<10	<2.0	1.0	<10	<10	<2.0	1.0
Acrolein	5	NA	NA	<2.0	0.20	NA	NA	<2.0	0.20	NA	NA	NA	<2.0	0.20	NA	NA	<2.0	0.20
Acrylonitrile	0.07	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20	NA	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20
Benzene	0.7	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
Bromodichloromethane	50	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
Bromoform	50	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
Bromomethane	5	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
CarbonJdisulfide	NS	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
CarbonJtetrachloride	5	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
Chlorobenzene	5	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
Chloroethane	5	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
Chloroform	7	<10	<10	<0.50	0.24	<10	<10	0.22	0.20	11	<10	<10	<0.50	0.25	<10	<10	0.51	0.42
Chloromethane	NS	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
cis\$1,2\$Dichloroethene	5	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
cis\$1,3\$Dichloropropene	0.4	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
Cyclohexane	NS	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
Dibromochloromethane	50	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
Dibromomethane	5	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20	NA	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20
Dichlorodifluoromethane	5	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
Ethylbenzene	5	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
Hexachlorobutadiene	0.5	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20	NA	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20
Isopropylbenzene	5	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
MethylJAcetate	NS	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
MethylJtert\$butylJether	10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
Methylcyclohexane	NS	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20	<10	<10	<10	<0.50	0.20	<10	<10	<0.50	0.20
MethyleneJchloride	5	<10	<10	<2.0	1.0	<10	<10	<2.0	1.0	<10	<10	<10	<1.0	1.0	<10	<10	<1.0	1.0
n\$Butylbenzene	5	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20	NA	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20
n\$Propylbenzene	NS	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20	NA	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20
o\$Xylene	5	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20	NA	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20
1,2,3\$Trichlorobenzene	5	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20	NA	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20
p\$J&Jm\$JXylenes	10	NA	NA	<1.0	0.50	NA	NA	<1.0	0.50	NA	NA	NA	<1.0	0.50	NA	NA	<1.0	0.50
p\$Isopropyltoluene	NS	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20	NA	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20
sec\$Butylbenzene	5	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20	NA	NA	NA	<0.50	0.20	NA	NA	<0.50	0.20
Styrene	50	<10	<10															

Table 1'continued.'																				
Historical'Ground'Water'Quality'Data'(ug/l)																				
EPA'Method'8260																				
79'Pondfield'Rd																				
Bronxville,NY																				
ACT'Project'No.:6832,BVNY																				
Sample'ID	Standard ¹	MW,3'(Deep)				MW,4'(Shallow)			MW,4'(Intermediate)			MW,5'(Shallow)			MW,5'(Intermediate)			MW,6		MW,7
Sample'Date		1/10/14	5/15/14	3/10/16	6/14/16	5/13/14	3/9/16	6/14/16	5/13/14	3/9/16	6/14/16	5/13/14	3/9/16	5/14/16	5/13/14	3/9/16	6/15/16	3/9/16	6/14/16	3/9/16
1,1,1,2Tetrachloroethane	5	<10	NA	<0.50	0.20	NA	<0.50	0.20	NA	<0.50	0.20	NA	<0.50	0.20	NA	<5.0	5.0	<2.5	0.40	<0.50
1,1,1,1Tetrachloroethane	5	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
1,1,2,2Tetrachloroethane	0.2	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
1,1,2,2Trichloro1,2,2,2trifluoroethane	NS	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
1,1,2Trichloroethane	1	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
1,1Dichloroethane	5	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
1,1Dichloroethene	0.7	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
Bromochloromethane	5	NA	NA	<0.50	0.20	NA	<0.50	0.20	NA	<0.50	0.20	NA	<0.50	0.20	NA	<5.0	5.0	<2.5	0.40	<0.50
1,2,3Trichloropropane	0.04	NA	NA	<0.50	0.20	NA	<0.50	0.20	NA	<0.50	0.20	NA	<0.50	0.20	NA	<5.0	5.0	<2.5	0.40	<0.50
1,2,4Trichlorobenzene	5	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
1,2,4Trimethylbenzene	5	NA	NA	<0.50	0.20	NA	<0.50	0.20	NA	<0.50	0.20	NA	<0.50	0.20	NA	<5.0	5.0	<2.5	0.40	<0.50
1,2,5Dibromo3Schloropropane	0.04	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
1,2Dibromoethane	NS	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
1,2Dichlorobenzene	2	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
1,2Dichloroethane	0.6	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
1,2Dichloropropane	1	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
1,3,5Trimethylbenzene	5	NA	NA	<0.50	0.20	NA	<0.50	0.20	NA	<0.50	0.20	NA	<0.50	0.20	NA	<5.0	5.0	<2.5	0.40	<0.50
1,3Dichlorobenzene	3	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
1,4Dichlorobenzene	3	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
1,4Dioxane	NS	NA	NA	<80	40	NA	<80	40	NA	<80	40	NA	<80	40	NA	<800	1,000	<400	80	<80
2SButanone	50	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	0.45	0.31	<10	<0.20	0.64	<10	<5.0	8.8	<2.5	0.40	0.57
2SHexanone	50	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
4SMethyl52Spentanone	NS	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
Acetone	50	<10	<10	<2.0	1.3	<10	<2.0	2.7	<10	1.5	3.7	<10	<2.0	5.8	<10	<5.0	57	<10	4.1	3.1
Acrolein	5	NA	NA	<2.0	0.20	NA	<2.0	0.20	NA	<2.0	0.20	NA	<2.0	0.20	NA	<5.0	5.0	<10	0.40	<2.0
Acrylonitrile	0.07	NA	NA	<0.50	0.20	NA	<0.50	0.20	NA	<0.50	0.20	NA	<0.50	0.20	NA	<5.0	5.0	<2.5	0.40	<0.50
Benzene	0.7	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	0.23
Bromodichloromethane	50	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
Bromoform	50	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
Bromomethane	5	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
CarbonJdisulfide	NS	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
CarbonJtetrachloride	5	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
Chlorobenzene	5	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
Chloroethane	5	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
Chloroform	7	<10	<10	0.22	0.47	<10	<0.50	0.20	<10	<0.50	0.20	<10	0.53	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
Chloromethane	NS	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
cis1,2Dichloroethene	5	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.42	<0.50
cis1,3Dichloropropene	0.4	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
Cyclohexane	NS	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
Dibromochloromethane	50	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
Dibromomethane	5	NA	NA	<0.50	0.20	NA	<0.50	0.20	NA	<0.50	0.20	NA	<0.50	0.20	NA	<5.0	5.0	<2.5	0.40	<0.50
Dichlorodifluoromethane	5	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
Ethylbenzene	5	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	0.36
Hexachlorobutadiene	0.5	NA	NA	<0.50	0.20	NA	<0.50	0.20	NA	<0.50	0.20	NA	<0.50	0.20	NA	<5.0	5.0	<2.5	0.40	<0.50
Isopropylbenzene	5	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<5.0	5.0	<2.5	0.40	<0.50
MethylJAcetate	NS	<10	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10	<0.50	0.20	<10					

Table 3

Indoor Air and Sub-Slab Vapor Quality Data

Table 3a

**On-site Indoor Air Sampling Results
EPA Method TO-15 (µg/m³)**

79-81 Pondfield Road, Bronxville, NY

Sample ID	Unit #1		Unit #3	Unit #4	Unit #6	Unit #7	Unit #9	Unit #12		Unit #14	Store #1	Store #2	Store #3	Dry Cleaner	OA-2	VP-7	VP-8	Standard ¹
Analyte	1/5/12	10/29/13	10/29/13	11/2/13	10/29/13	1/5/12	10/29/13	1/5/12	10/29/13	11/2/13	10/22/13	10/22/13	10/22/13	1/5/12	10/26/13	10/29/13	10/26/13	
PCE	4.21	5.49	ND	1.97	ND	4.34	10.40	46.82	2.03	14.20	1.22	0.95	20.50	217.12 ²	5.43	881	399	30
TCE	ND	0.59	ND	0.75	ND	ND	1.45	ND	ND	1.34	ND	ND	2.63	ND	ND	22.1	5.05	2

¹ Air Guideline, Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October, 2006

² OSHA limit of 170,000 ug/m³ applies to dry cleaning establishments

ND - Not detected above minimum detection limit

NS - No Standard

Table 3b

Off-Site Indoor Air and Sub-Slab Vapor Sampling Results
EPA Method TO-15 (µg/m³)

85 Pondfield Road (Apple/Emigrant SavingBank)			77 Pondfield Road (Gramatan Building)		80-84 Pondfield Road (Value Drugs)										86 Pondfield Road (Village Natural Market)					2 Park Place (Urstadt Property)		7 Park Place (Trustco Bank)		Standard ¹	
Sample ID	IA-1	SV-1	IA-1	SV-1	IA-1	IA-2	IA-3P	IA-4P	OA-1	OA-2	SV-1	SV-2	SV-3P	SV-4P	IA-2	OA-2	SV-2	IA-4M	SV-4M	IA-3M	SV-3M	7PPIA-1	7PPSS-1		
Date	10/21/13	10/21/13	10/21/13	10/21/13	10/21/13	3/13/14	12/17/15	3/23/17	10/21/13	3/12/14	10/21/13	3/13/14	12/17/15	3/23/17	3/12/14	3/12/14	3/12/14	3/23/17	3/23/17	12/17/15	12/17/15	6/22/17	6/22/17		
Analyte	PCE	8.6	119.00	ND	1.6	2.8	2.2	2.6	16	ND	ND	311	330	2600	850	3.3	2.4	131	1.6	250	28	550	10	5,100	30
TCE	ND	5.00	ND	ND	ND	ND	ND	0.58	0.28	ND	ND	15.1	20.5	110	53	ND	ND	188	ND	7.5	1.3	8.2	0.4	100	2

¹ Air Guideline, Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October, 2006

² OSHA limit of 170,000 ug/m³ applies to dry cleaning establishments

ND - Not detected above minimum detection limit

NS - No Standard

Figure 4

Induced Vacuum at Vacuum Monitoring Points

Induced Vacuum at Vacuum Monitoring Points
79 Pondfield Road
Bronxville, NY

Date		9/4/14	1/19/15	3/9/15	4/1/15	5/12/2015 (baseline)	5/12/15	5/13/15	5/28/15	6/18/15	7/30/15	8/12/15	8/19/15
VP-1	Inch of H ₂ O	0.002	-0.05	-0.03	-0.085	-0.023	-0.06	-0.009	-0.31	-0.11	-0.21	-0.38	-0.22
VP-2	Inch of H ₂ O	0.003	-0.45	-0.08	-0.063	-0.022	-0.02	-0.012	-0.113	-0.11	-0.69	-0.17	-0.093
VP-3	Inch of H ₂ O	-0.41	-0.1	-0.06	-0.08	-0.123	-0.02	-0.161	-0.1	-0.087	-0.023	-0.167	-0.308
VP-4	Inch of H ₂ O	-1.15	-0.06							-0.53		-0.36	-0.78
VP-5	Inch of H ₂ O	-0.61	-0.06							-0.56		-0.45	-1.7
VP-6	Inch of H ₂ O		-0.37	Ice				Sensor	Sensor	Sensor	Sensor	Sensor	Sensor

Induced Vacuum at Vacuum Monitoring Points
79 Pondfield Road
Bronxville, NY

[illegible]

Figure 5

Treatment System Startup Sampling Data

Table 4

Treatment System Sampling Results
79 Pondfield Road
Bronxville, NY

ACT Project No.: 6832-BVNY

Analyte	Guidelines ($\mu\text{g}/\text{m}^3$)	Influent ($\mu\text{g}/\text{m}^3$)											
		8/19/15	9/11/15	10/13/15	11/19/15	12/21/15	1/26/16	2/26/16	3/22/16	4/29/16	6/1/16	6/30/16	8/29/16
PCE	100	2100	2700	4900	5300	3700	2900	2100	920	580	410	630	3600
TCE	5	75	97	72	40	36	20	ND	17	20	20	35	240
Cis-1,2 DCE	NA	ND	13	20	12	19	9.3	ND	ND	2.3	ND	ND	20

Table 4 (continued)

Treatment System Sampling Results
79 Pondfield Road
Bronxville, NY

ACT Project No.: 6832-BVNY

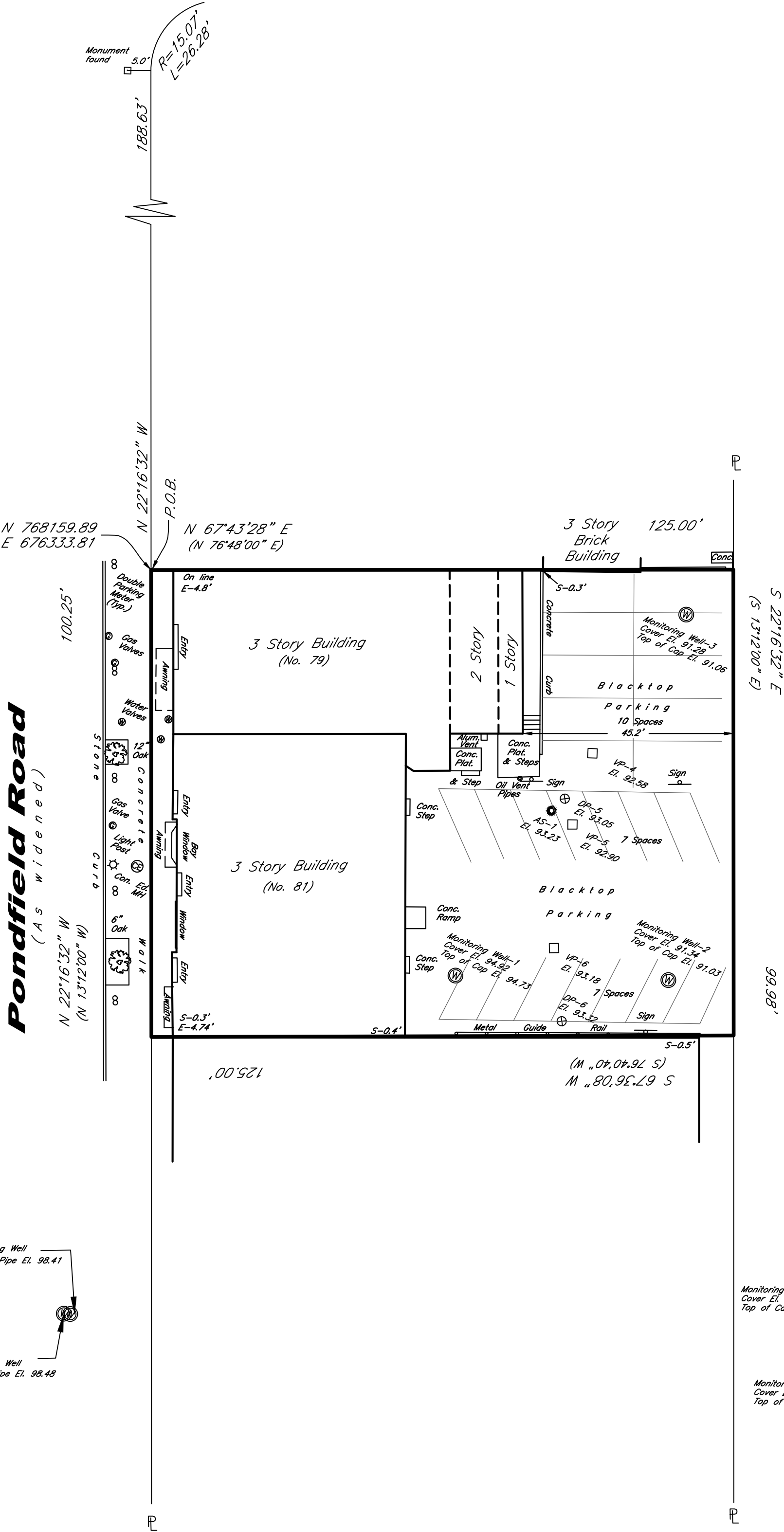
Analyte	Guidelines ($\mu\text{g}/\text{m}^3$)	Effluent ($\mu\text{g}/\text{m}^3$)											
		8/19/15	9/11/15	10/13/15	11/19/15	12/21/15	1/26/16	2/26/16	3/22/16	4/29/16	6/1/16	6/30/16	8/29/16
PCE	100	2.6	2.2	ND	ND	0.64	ND	ND	1.4	1.7	0.98	ND	16
TCE	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cis-1,2 DCE	NA	6.2	5.9	ND	7.3	9.4	8.3	9.8	16	10	13	14	ND

APPENDICES

Appendix A

Survey Map

Garden Avenue



SCHEDULE A DESCRIPTION

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate lying and being in the Village of Bronxville, Town of Eastchester, County of Westchester, State of New York, consisting of parts of Lots 3 and 4, and parts of Lots 18 and 19, in Block H, on a certain map entitled, "Map Number 2 of Lawrence Park and Associated Properties, situated at Bronxville, Westchester Co., N.Y." made by William A. Smith, dated February 17, 1920, and filed in the Office of the County Clerk, Division of Land Records, formerly Register's Office of Westchester County, New York, on March 24, 1920, as Map Number 2237, said plot being more particularly bounded and described as follows:

Beginning at a point on the easterly side of Pondfield Road as widened, said point being distant southerly 1186.63 feet from the southerly end of a curve having a radius of 15.07 feet and a length of 26.28 feet, which curve connects the southerly side of Garden Road, formerly known as Underhill Avenue, with the easterly side of Pondfield Road, as widened;

Running thence through Lot 19 and Lot 3, Block H, as shown on said map, North 76°48' East 125.00 feet to the northeasterly corner of premises being described herein;

Running thence through Lots 3 and 4 on a course, South 13°12' East 99.98 feet to the southeasterly corner of premises being described;

Running thence, South 76°40'40" West through Lots 4 and 18, in Block H, 125.00 feet to the easterly side of Pondfield Road as widened;

Running thence along the easterly side of Pondfield Road as widened, North 13°12' West 100.25 feet to the point and place of beginning.

Containing 12,514 sq. ft. or 0.2873 acres more or less.

Said premises also known as Section 4, Block 1, Lots 5 and 8 on the Official Tax Map.

NOTES

1) The premises source of title as recorded in the Westchester County Clerk's Office (Division of Land Records) are as follows:

a) Liber 7029 Page 379 dated December 7, 1971 and recorded December 13, 1971.

(The property described in the deed is the same property as shown on the survey).

2) There is one existing building shown on the surveyed property.

3) The area within the Environmental Easement is shown bounded by red boundary line.

LEGEND

Utility Pole	-----	Gas Line
Catchbasin	-----	Water Line
Hydrant	-----	Sewer Line
Sewer Manhole	-----	Drain Line
Drain Manhole	-----	Environmental Easement Only
Can Ed Manhole	-----	Building Line
Gas Valve	-----	Property Line
Water Valve	-----	Tax Lot Line
Drain Inlet	-----	
Light Pole	-----	

THE ENGINEERING AND INSTITUTIONAL CONTROLS for the Easement are set forth in more detail in the Site Management Plan ("SMP"). A copy of the SMP must be obtained by any party with an interest in the property. The SMP may be obtained from New York State Department of Environmental Conservation, Division of Environmental Remediation, Site Control Section, 625 Broadway, Albany, NY 12233 or at derweb@gw.dec.state.ny.us

Survey Map
prepared for
Advanced Cleanup Technologies, Inc.
in the Village of
Bronxville
Town of Eastchester
Westchester County, N.Y.
Scale 1"=20' April 29, 2014

Location of new monitoring wells added July 6, 2016.
Survey brought to date May 17, 2018.

The premises being Portions of Lots 3, 4, 18 & 19, Block H as shown on a map entitled "Map No. 2 of Lawrence Park and Associated Properties" dated Feb. 17, 1920 and filed March 24, 1920 as County Clerk Map No. 2237.

Site Address: 81 Pondfield Road, Bronxville, NY

PHYSICAL ADDRESSES ON PROPERTIES
WITHIN THE ENVIRONMENT EASEMENT

Address City SBL
81 Pondfield Road 4-1-8

Spatial Reference System: USA/NAD83-CORS96/New York(east)
Vertical Datum: NAVD83-Geoid09

Note: Bearings shown parenthetically as per Deed)

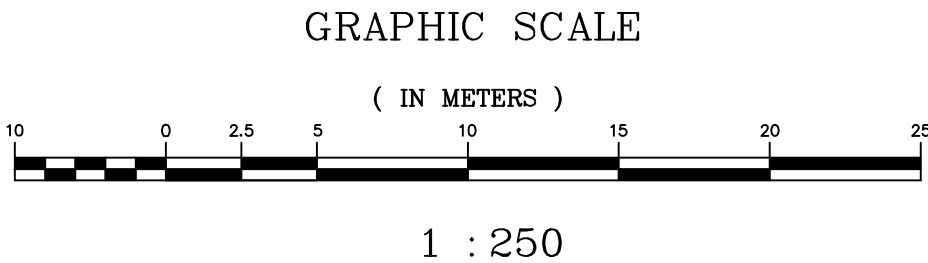
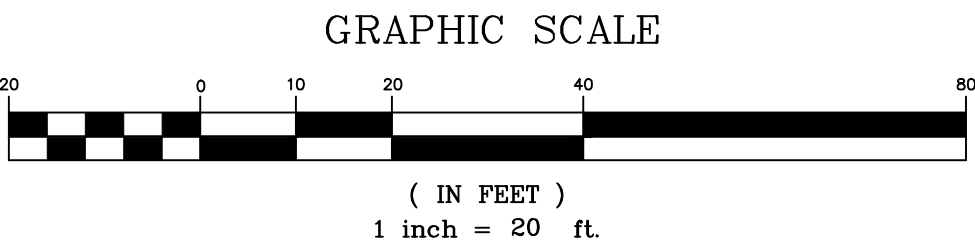
Subsurface structures and their encroachments, if any exist, are not shown hereon.

"Unauthorized alterations or additions to a survey map is a violation of section 7209, sub-division 2, of the New York State Education Law.

"Only copies of the original survey marked with the land surveyor's inked or embossed seal shall be considered a true and valid copy . . ."

"Certifications indicated hereon signify that this survey was prepared in accordance with the existing code of practice for Land Surveys adopted by the New York State Association of Professional Land Surveyors. Said certifications shall run to the person for whom the survey is prepared only, and on his behalf to the Title Company, governmental agency and lending institution listed hereon, and to the assignees of the lending institution. CERTIFICATIONS ARE NOT TRANSFERABLE TO ADDITIONAL INSTITUTIONS OR SUBSEQUENT OWNERS . . ."

Copyright (c) 2018 Ward Carpenter Engineers, Inc. All Rights Reserved.



William H. Free Jr., Senior Vice President
New York State License No. 049970

Ward Carpenter Engineers, Inc.
76 Mamaroneck Avenue
White Plains, N.Y. 10601
Phone No.: 914-949-6000

Appendix B

Waste Manifests

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number CESQG	2. Page 1 of 1	3. Emergency Response Phone (908) 354-0210	4. Manifest Tracking Number 014162285 JJK
5. Generator's Name and Mailing Address 81 Ponfield Road Company 79 PONFIELD ROAD BRONXVILLE, NY 10708 Generator's Phone: (516) 441-5800			Generator's Site Address (if different than mailing address)		
6. Transporter 1 Company Name CLEAN VENTURE INC.			U.S. EPA ID Number NJ0000027193		
7. Transporter 2 Company Name			U.S. EPA ID Number		
8. Designated Facility Name and Site Address Cycle Chem Inc. 217 South First Street Elizabeth, NJ 07206 Facility's Phone: (908) 355-5800			U.S. EPA ID Number NJD002200046		
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity
			No.	Type	12. Unit Wt./Vol.
		RQ1 NA3077 HAZARDOUS WASTE, SOLID, N.O.S. (F002 D039) 9 PG III (RQ F002 10# D039 100#) ERGH 171	4	DM	400 P
					13. Waste Codes F002 D039 B
14. Special Handling Instructions and Additional Information 975121/968626/179530/324515 (1)R02-1 TETRACHLOROETHYLENE CONT. CARBON MEDIA 91155's					
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.					
Generator's/Offor's Printed/Typed Name Tim Yang Signature Tim Yang Month 08 Day 20 Year 2015					
TRANSPORTER INTL	16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:				
	Transporter signature (for exports only):				
	17. Transporter Acknowledgment of Receipt of Materials				
TRANSPORTER	Transporter 1 Printed/Typed Name George Desruisseau Signature George Desruisseau Month 08 Day 20 Year 2015				
	Transporter 2 Printed/Typed Name Signature Month Day Year				
DESIGNATED FACILITY	18. Discrepancy				
	18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection				
	Manifest Reference Number:				
	18b. Alternate Facility (or Generator) U.S. EPA ID Number				
	Facility's Phone:				
18c. Signature of Alternate Facility (or Generator) Month Day Year					
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)					
1. H141		2.		3.	
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 19a					
Printed/Typed Name Shirley Green Signature Shirley Green Month 08 Day 20 Year 2015					

Cycle Chem, Inc

201 South First Street Elizabeth, NJ 07206 PHONE: 908-355-5800, FAX:
908-355-0562

Land Disposal Restriction Notification and Certification Form

Generator: 81 Ponfield Road Company
EPAID: CESQG

Manifest Tracking Number: 324515
Manifest Document Number: 014162285JJK
Work Order: 179530

The EPA hazardous wastes identified below must be treated to the applicable treatment standards set forth in 40 CFR 268.40.

EPA Waste Code Information

Manifest Line	Waste-water?	EPACodes
Page 1 Line 1	No	D039, F002

Spent Solvent Constituents

Manifest Line	Solvents
Page 1 Line 1	F002: tetrachloroethylene

Underlying Hazardous Constituents

(None present unless identified below.)

Manifest Line	Constituents
---------------	--------------

I certify that all information submitted on this Land Disposal Restriction and Certification Form is accurate and complete, to the best of my knowledge and information.

Signature: _____

Name: _____

Title: _____

Date: _____


Clean Venture, Inc.
TRANSPORTATION TRIP TICKET

 TTEL: TTEL-33777
 DATE: 8/20/2015
 Job Number: TR6134

8-20-15

Tractor #: ST27 Trailer#:	Driver: George Desruisseaux	Start Date:	End
Start City & State:	Date:	End City & State:	
Mileage:	End Mileage:	Total Trip Miles:	
Start Time:	End Time:	Total Hours:	
Customer Name: Clean Venture - Branch 1 (I)	Reference Number: 6134		
Contract:	Broker:		
Pick Up Location: 81 PONFIELD ROAD COMPANY	Contact: MARINA SHAPIRO		
Site Address: 79 PONFIELD RD	Phone: 516 441 5800 X 101		
Site Address 2:	Signature:		
City, State, Zip: BRONXVILLE, NY, 10708	Time In: 10:00	Time Out: 10:20	
Project Description/Notes: 9AM			
# Drums/Containers P/U Size & Quantity: 4	Supplies Delivered: / /		
Gallons Picked Up (Tankers Only):			
Manifest/BOL Number: 014162285	Helper: Yes ___ No ___		
Destination Name: Cycle Chem- NJ	Date:		
Street Address: 217 S 1st St	Contact:		
Street Address:	Phone: (908) 355- 5800		
City, State & Zip: Elizabeth, NJ 07206	Signature:		
	Time In: Time Out:		

ROLL OFF SECTION ONE

BOX NUMBER:	DROP OFF	PICK-UP	LIVE LOAD	DUMP
Site Name:	Condition of Roll Off Equipment		Damaged Fair	Good
Address:	Bottom Rail/Top Rail/Ribs			
City, State & Zip:	Tailgate/Hinges/Ratchets/Rollers			
Contact:	Tarp			
Phone:	Number of Bows: 0			
Manifest/BOL Number:	Number of Liners: 0			
Time In Time Out	Signature			
Comments:				
Destination Name:	Date			
Street Address:	Contact:			
City, State & Zip:	Phone:			
Time In Time Out	Signature			

ROLL OFF SECTION TWO

BOX NUMBER:	DROP OFF	PICK-UP	LIVE LOAD	DUMP
Site Name:	Condition of Roll Off Equipment		Damaged Fair	Good
Address:	Bottom Rail/Top Rail/Ribs			
City, State & Zip:	Tailgate/Hinges/Ratchets/Rollers			
Contact:	Tarp			
Phone:	Number of Bows: 0			
Manifest/BOL Number:	Number of Liners: 0			
Time In Time Out	Signature			
Comments:				
Destination Name:	Date:			
Street Address:	Contact:			
City, State & Zip:	Phone:			
Time In Time Out	Signature			

201 South First Street, Elizabeth, NJ 07206

White/office

Canary/Billing

Pink/Driver

Goldenrod/Customer

8/19/2015

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number H11-000000000		2. Page 1 of 1		3. Emergency Response Phone 1-800-424-9311		4. Manifest Tracking Number 016114215 JJK			
		5. Generator's Name and Mailing Address 002 South Broadway Hartsville, IN 47121 Generator's Phone: 317-233-4000						Generator's Site Address (if different than mailing address) 201 Industrial Road Greenfield, IN 46030 Greenfield, IN 46030			
		6. Transporter 1 Company Name LAWRENCE JOHNSON						U.S. EPA ID Number H11-000000000			
		7. Transporter 2 Company Name						U.S. EPA ID Number			
		8. Designated Facility Name and Site Address 017 South First Street Ellettsville, IN 47120 Facility's Phone: 317-233-4000						U.S. EPA ID Number H11-000000000			
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))				10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
						No.	Type				
	1	HAZARDOUS WASTE, DANGEROUS, CORROSIVE, LIQUID, UNIDENTIFIED				1	XY3 DM X150 G			HAZ 1	Y
	2										
	3										
	4										
14. Special Handling Instructions and Additional Information CONTAINERIZED AND DANGEROUS											
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.											
Generator's/Officer's Printed/Typed Name Y. L. JOHNSON						Signature 		Month Day Year 11 / 15 / 97			
TRANSPORTER INT'L	16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:										
	17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name: LAWRENCE JOHNSON Signature: Month Day Year: 11 / 23 / 97 Transporter 2 Printed/Typed Name: Signature: Month Day Year:										
DESIGNATED FACILITY	18. Discrepancy										
	18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection Manifest Reference Number:										
	18b. Alternate Facility (or Generator) U.S. EPA ID Number										
	Facility's Phone:										
	18c. Signature of Alternate Facility (or Generator) Month Day Year										
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)											
1. H11		2.		3.		4.					
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a											
Printed/Typed Name						Signature		Month Day Year			

Cycle Chem, Inc

201 South First Street Elizabeth, NJ 07206 PHONE: 908-355-5800, FAX:
908-355-0562

Land Disposal Restriction Notification and Certification Form

Generator: Spic & Spam C/O Advanced Cleanup Technologies
EPAID: NJD002200046
Manifest Tracking Number: 342451
Manifest Document Number: 016114215JJK
Work Order: 198474

The EPA hazardous wastes identified below must be treated to the applicable treatment standards set forth in 40 CFR 268.40.

EPA Waste Code Information

Manifest Line	Waste-water?	EPACodes
Page 1 Line 1	No	F002

Underlying Hazardous Constituents

(None present unless identified below.)

Manifest Line	Constituents

I certify that all information submitted on this Land Disposal Restriction and Certification Form is accurate and complete, to the best of my knowledge and information.

Signature: _____ Name: _____

Title: _____ Date: _____

CVCC
Clean Venture, Inc. Trip Ticket #: 12089

Driver: Johnson, Lawrence

Truck: ST27

Start Date: 1/23/2017

Start Time:

5:00A

End Date:

1-23-17

End Time:

Start Miles:

306806

Start City:

ELIZABETH, NJ

End Miles:

End City:

ELIZABETH, NJ

Site Name & Address:

Order #: 0

Broker:

CYCLE CHEM - ELIZABETH (R)

217 South First Street

ELIZABETH, NJ/ 07206 (Union)

Contact: Connolly/Hughes

Trailer/RO:

Phone: 908-355-5800 Cell: 908-246-2513

Begin Empty Trl1:

Trl2:

Time in:

5:00A

Time out:

6:00A

Date:

1-23-17

Manifest/BOL #:

N/A

Signature:

Site Name & Address:

Order #: 12242

REF: 57709-1(6134) POR

Broker: ADVANCED CLEANUP
TECHNOLOGIES

SPIC & SPAN CLEANERS

79 Pondfield Rd

rear south of parking lot

BRONXVILLE, NY/ 10708 ()

Contact: Mark Gelban

Trailer/RO:

Phone: 718-577-7639 Cell:

Live Load

Trl1:

Trl2:

Time in:

7:00A

Time out:

10:00A

Date:

1-23-17

Manifest/BOL #:

016114215 JJK

Signature:

Site Name & Address:

Order #: 12242

REF: 57709-1(6134) POR

Broker: ADVANCED CLEANUP
TECHNOLOGIES

CYCLE CHEM - ELIZABETH (R)

217 South First Street

ELIZABETH, NJ/ 07206 (Union)

Contact: Connolly/Hughes

Trailer/RO:

Phone: 908-355-5800 Cell: 908-246-2513

Live Unload

Trl1:

Trl2:

Time in:

Time out:

Date:

Manifest/BOL #:

Signature:

Appendix C

Air Modeling Calculations

Ambient Air Quality Impact Analysis

Spic and Span Cleaners

79 Pondfield Road

Bronxville, New York

NYSDEC Site No. C360130

The following ambient air quality impact analysis was prepared with accordance of NYS DAR-1 guidelines for the control of toxic ambient air contaminants.

SSDS Performance Over the Time

	Influent ($\mu\text{g}/\text{m}^3$)									Effluent ($\mu\text{g}/\text{m}^3$)								
Date	8/29/13	1/19/15	4/21/15	5/12/15	5/28/15	8/12/15	8/19/15	9/11/15	10/13/15	8/29/13	1/19/15	4/21/15	5/12/15	5/28/15	8/12/15	8/19/15	9/11/15	10/13/15
Analyte																		
PCE	1140	600	440	530	780	1300	2100	2700	4900	10.4	980	2.9	7.5	73	ND	2.6	2.2	ND

System Performance Calculations

Analyte	Date	8/29/13	1/19/15	4/21/15	5/12/15	5/28/15	8/12/15	8/19/15	9/11/15	10/13/15
PCE	Influent Conc. ($\mu\text{g}/\text{m}^3$)	1,140	600	440	530	780	1,300	2,100	2,700	4,900
	Flow Rate (ft^3/min)	209*	380	348**	290	271	271	245	249	295
	Est. Mass Per Day (g/day)	9.72*	9.30	6.24**	6.26	8.62	14.37	20.98	27.41	58.94
	Est. Mass Per Day (kg/day)	0.010*	0.009	0.006**	0.006	0.009	0.014	0.021	0.027	0.059
	Est. Mass Per Day (lb/day)	0.021*	0.020	0.014**	0.014	0.019	0.032	0.046	0.060	0.130

Conversions:

$$1\text{m}^3 = 35.32 \text{ ft}^3$$

$$1 \text{ g} = 1,000,000 \mu\text{g}$$

$$1 \text{ kg} = 1,000 \text{ g}$$

$$1\text{kg} = 2.2 \text{ lb}$$

Notes:

* - Calculations made based on flow rate measurements taken on 9/4/14.

** - Calculations made based on flow rate measurements taken on 4/1/15.

Estimated Mass Removal

Time Period	8/29/13- 1/19/15	1/19/15- 4/21/15	4/21/15- 5/12/15	5/12/15- 5/28/15	5/28/15- 8/12/15	8/12/15- 8/19/15	8/19/15- 9/11/15	9/11/15- 10/13/15	10/13/15- 11/19/15
Days operating	508	90	21	16	76	7	23	32	36
Est. Mass Removed, August 2, 2013- June 11, 2015 (lb)	10.67	1.80	0.29	0.22	1.44	0.22	1.06	1.92	4.68
Est. Total Mass Removed, August 2, 2013-June 11, 2015 (lb)	28.30								

Estimated Carbon Treatment Efficiency

Date	8/29/13	1/19/15	4/21/15	5/12/15	5/28/15	8/12/15	8/19/15	9/11/15	10/13/15
PCE Concentration ($\mu\text{g}/\text{m}^3$)	Influent	1,140	600	440	530	780	1,300	2,100	2,700
	Effluent	10.4	980	2.9	7.5	73	0	2.6	2.2
Percentage Adsorbed by Both Carbons (%)	99	-63	99	99	91	100	100	100	100

Estimated Annual Impact Percentage of Annual DAR-1 Guidance Concentrations (with carbon treatment)

Analyte	8/29/13	1/19/15	4/21/15	5/12/15	5/28/15	8/12/15	8/19/15	9/11/15	10/13/15
PCE	AGC ($\mu\text{g}/\text{m}^3$)	4	4	4	4	4	4	4	4
	Maximum Effluent PCE Concentration ($\mu\text{g}/\text{m}^3$)	10.4	980	2.9	7.5	73	0	2.6	2.2
	Maximum Emission Rate (lb/day)	1.95E-04	3.34E-02	9.07E-05	1.96E-04	1.78E-03	0	5.72E-05	4.92E-05
	Maximum Emission Rate Q_a (lb/year)	7.13E-02	12.22	3.31E-02	7.14E-02	0.65	0	2.09E-02	1.80E-02
	Maximum Emission Rate Q (lb/hr)	8.13E-06	1.39E-03	3.78E-06	8.17E-06	7.42E-05	0	2.38E-06	2.05E-06
	Estimated Annual Impact C_c ($\mu\text{g}/\text{m}^3$)	9.21E-05	1.58E-02	4.27E-05	9.22E-05	8.39E-04	0	2.70E-05	2.32E-05
	Estimated Annual Impact Percentage of AGC (%)	4.38E-03	0.75	2.03E-03	4.38E-03	3.98E-02	0	1.28E-03	1.10E-03
	Actual Annual Impact C_a ($\mu\text{g}/\text{m}^3$)	1.31E-04	2.24E-02	6.06E-05	1.31E-04	1.19E-03	0	3.83E-05	3.30E-05
	Maximum Potential Annual Impact C_p ($\mu\text{g}/\text{m}^3$)	1.33E-04	2.23E-02	6.06E-05	1.31E-04	1.19E-03	0	3.82E-05	3.29E-05

Notes:

1. AGC (annual guidance concentration) values obtained from DAR-1 AGC/SGC tables dated 02-28-2014.
2. Actual annual impact calculating by following procedures for Basic Cavity Impact Method described in NYSDEC DAR-1 Guidelines for the Control of Toxic Ambient Air Contaminants (NYSDEC 1991) Appendix B.

The worst case Annual Cavity Impact C_C is define from equation:

$$C_C (\mu\text{g}/\text{m}^3) = (1.72 * Q_a) / (h_b)^2$$

Where Q_a is the annual emission rate in lbs/year

h_b is the building height, in feet ($h_b = 36.5'$)

The standard point source method was used for assessment of the ambient air quality beyond the cavity region. Since the stack height (h_s) to building height (h_b) ratio (h_s / h_b) is $36.5' / 36.5' = 1$ is less than 1.5, we can assume that no plume rise exists and $h_e = h_s$, where h_e is the effective stack height.

The Actual Annual Impact C_a from the point source using the effective stack height h_e and the annual emission rate, Q_a can be calculating from equation:

$$C_a (\mu\text{g}/\text{m}^3) = (6.0 * Q_a) / h_e^{2.25}$$

The Maximum Potential Annual Impact C_p can be calculating from equation:

$$C_p (\mu\text{g}/\text{m}^3) = 52500 * Q / h_e^{2.25}$$

Where Q is the hour emission rate in lbs/hr

h_e is the effective stack height, in feet ($h_e = 36.5'$)

The Maximum Potential Annual Impact C_p assumes continuous operation of the source.

All annual impact analyses C_C (estimated), C_a (actual) and C_p (maximum potential) showed results lower than AGC for each time period of SSD system performance with carbon treatment based on carbon system effluent concentration of PCE:

$$C_C < \text{AGC}, C_a < \text{AGC} \text{ and } C_p < \text{AGC}.$$

**Estimated Annual Impact Percentage of Annual DAR-1 Guidance Concentrations
(without carbon treatment)**

Analyte		8/29/13	1/19/15	4/21/15	5/12/15	5/28/15	8/12/15	8/19/15	9/11/15	10/13/15
PCE	AGC ($\mu\text{g}/\text{m}^3$)	4	4	4	4	4	4	4	4	4
	Maximum Effluent PCE Concentration ($\mu\text{g}/\text{m}^3$)	1,140	600	440	530	780	1,300	2,100	2,700	4,900
	Maximum Emission Rate (lb/day)	2.14E-02	2.05E-02	1.38E-02	1.38E-02	1.90E-02	3.17E-02	4.63E-02	6.04E-02	0.13
	Maximum Emission Rate Q_a (lb/year)	7.82	7.48	5.02	5.04	6.94	11.56	16.88	22.06	47.43
	Maximum Emission Rate Q (lb/hr)	8.92E-04	8.54E-04	5.75E-04	5.75E-04	7.92E-04	1.32E-03	1.93E-03	2.52E-03	5.42E-03
	Estimated Annual Cavity Impact C_C ($\mu\text{g}/\text{m}^3$)	1.92E-02	1.83E-02	1.23E-02	1.23E-02	1.70E-02	2.83E-02	4.13E-02	5.40E-02	0.12
	Estimated Short-Term Impact C_{CST} ($\mu\text{g}/\text{m}^3$)	1.01E-02	9.66E-03	6.48E-03	6.51E-03	8.96E-03	1.49E-02	2.18E-02	2.85E-02	6.12E-02
	Estimated Annual Impact Percentage of AGC (%)	0.48	0.46	0.31	0.31	0.43	0.71	1.03	1.35	3
	Actual Annual Impact C_a ($\mu\text{g}/\text{m}^3$)	1.43E-02	1.37E-02	9.20E-03	9.23E-03	1.27E-02	2.12E-02	3.09E-02	4.04E-02	8.69E-02
	Maximum Potential Annual Impact C_p ($\mu\text{g}/\text{m}^3$)	1.43E-02	1.37E-02	9.22E-03	9.22E-03	1.27E-02	2.12E-02	3.09E-02	4.04E-02	8.69E-02

All annual impact analyses C_C (estimated), C_a (actual) and C_p (maximum potential) showed results lower than AGC for each time period of SSD system performance without carbon treatment based on carbon system influent concentration of PCE:

$$C_C < \text{AGC}, C_a < \text{AGC} \text{ and } C_p < \text{AGC}$$

Based on our calculations of annual air impact analysis with and without carbon treatment, the facility will be requesting to stop of use of additional air controls (carbon canisters).

Appendix D

Data Usability Summary Reports

Appendix E

Laboratory Analytical Reports

ECOTEST LABORATORIES, INC.

ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777 • FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.112964.01

07/07/11

Advanced Cleanup Technologies
960 South Broadway, Suite 108
Hicksville, NY 11801

ATTN: Paul Stewart

PO#:

SOURCE OF SAMPLE: #6832-BVNY

SOURCE OF SAMPLE:

COLLECTED BY: Client

DATE COL'D:06/29/11 RECEIVED:06/30/11

TIME COL'D:**

MATRIX:Air

SAMPLE: SV-3

ANALYTICAL PARAMETERS	UNITS	RESULT	DATE TIME	FLAG OF ANALYSIS	LRL	ANALYTICAL METHOD
Propylene	ppbv	< 0.5	063011		0.5	EPATO-15
Dichlorodifluoromethane	ppbv	< 0.2	063011		0.2	EPATO-15
1,2-Dichlorotetrafluoroethane	ppbv	< 0.2	063011		0.2	EPATO-15
Chloromethane	ppbv	< 1	063011		1	EPATO-15
1,3 Butadiene	ppbv	< 1	063011		1	EPATO-15
Vinyl Chloride	ppbv	< 0.2	063011		0.2	EPATO-15
Bromomethane	ppbv	< 0.2	063011		0.2	EPATO-15
Chloroethane	ppbv	< 1	063011		1	EPATO-15
Vinyl Bromide	ppbv	< 0.2	063011		0.2	EPATO-15
Trichlorofluoromethane	ppbv	< 0.2	063011		0.2	EPATO-15
Ethyl alcohol	ppbv	8.4	063011		2	EPATO-15
Freon 113	ppbv	< 0.1	063011		0.1	EPATO-15
1,1 Dichloroethene	ppbv	< 0.1	063011		0.1	EPATO-15
Acetone	ppbv	< 1	063011		1	EPATO-15
Carbon disulfide	ppbv	< 0.5	063011		0.5	EPATO-15
Isopropyl Alcohol	ppbv	< 5	063011		5	EPATO-15
3-Chloropropene	ppbv	< 0.5	063011		0.5	EPATO-15
Methylene Chloride	ppbv	< 0.2	063011		0.2	EPATO-15
tert. Butyl Alcohol	ppbv	< 2	063011		2	EPATO-15
ter. Butyl Methyl Ether	ppbv	< 0.2	063011		0.2	EPATO-15
t-1,2-Dichloroethene	ppbv	0.88	063011		0.2	EPATO-15
Acrylonitrile	ppbv	< 1	063011		1	EPATO-15
Hexane	ppbv	1.4	063011		0.5	EPATO-15
Vinyl Acetate	ppbv	< 0.5	063011		0.5	EPATO-15
1,1 Dichloroethane	ppbv	< 0.2	063011		0.2	EPATO-15

cc:

LRL=Laboratory Reporting Limit

REMARKS: ** Collected from 11:00 to 15:10.

The LOQ for all analytes was confirmed with a daily LOQ std.

DIRECTOR



ECOTEST LABORATORIES, INC.

ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777 • FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.112964.01

07/07/11

Advanced Cleanup Technologies
960 South Broadway, Suite 108
Hicksville, NY 11801

ATTN: Paul Stewart

PO#:

SOURCE OF SAMPLE: #6832-BVNY

SOURCE OF SAMPLE:

COLLECTED BY: Client

DATE COL'D:06/29/11 RECEIVED:06/30/11

TIME COL'D:**

MATRIX:Air

SAMPLE: SV-3

ANALYTICAL PARAMETERS	UNITS	RESULT	DATE TIME		ANALYTICAL
			FLAG OF ANALYSIS	LRL	METHOD
c-1,2-Dichloroethene	ppbv	23	063011	0.2	EPATO-15
Methyl Ethyl Ketone	ppbv	< 1	063011	1	EPATO-15
Ethyl Acetate	ppbv	< 5	063011	5	EPATO-15
Tetrahydrofuran	ppbv	< 0.5	063011	0.5	EPATO-15
Chloroform	ppbv	12	063011	0.2	EPATO-15
Cyclohexane	ppbv	< 0.2	063011	0.2	EPATO-15
111 Trichloroethane	ppbv	< 0.2	063011	0.2	EPATO-15
Carbon Tetrachloride	ppbv	< 0.4	063011	0.4	EPATO-15
Benzene	ppbv	1.1	063011	0.2	EPATO-15
2,2,4-Trimethylpentane	ppbv	< 0.5	063011	0.5	EPATO-15
1,2 Dichloroethane	ppbv	< 0.5	063011	0.5	EPATO-15
Heptane	ppbv	0.87	063011	0.5	EPATO-15
Trichloroethene	ppbv	87	063011	0.2	EPATO-15
1,2 Dichloropropane	ppbv	< 0.5	063011	0.5	EPATO-15
1,4-Dioxane	ppbv	< 1	063011	1	EPATO-15
Bromodichloromethane	ppbv	< 0.2	063011	0.2	EPATO-15
c-1,3Dichloropropene	ppbv	< 0.5	063011	0.5	EPATO-15
Methylisobutylketone	ppbv	< 1	063011	1	EPATO-15
Toluene	ppbv	20	063011	0.2	EPATO-15
t-1,3Dichloropropene	ppbv	< 0.2	063011	0.2	EPATO-15
112 Trichloroethane	ppbv	< 0.2	063011	0.2	EPATO-15
Tetrachloroethene	ppbv	540	063011	4	EPATO-15
2-Hexanone	ppbv	< 0.5	063011	0.5	EPATO-15
Chlorodibromomethane	ppbv	< 0.2	063011	0.2	EPATO-15
1,2 Dibromoethane	ppbv	< 0.2	063011	0.2	EPATO-15

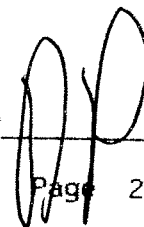
cc:

LRL=Laboratory Reporting Limit

REMARKS: ** Collected from 11:00 to 15:10.

The LOQ for all analytes was confirmed with a daily LOQ std.

DIRECTOR



ECOTEST LABORATORIES, INC.

ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777 • FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.112964.01

07/07/11

Advanced Cleanup Technologies
960 South Broadway, Suite 108
Hicksville, NY 11801

ATTN: Paul Stewart

PO#:

SOURCE OF SAMPLE: #6832-BVNY

SOURCE OF SAMPLE:

COLLECTED BY: Client

DATE COL'D:06/29/11 RECEIVED:06/30/11
TIME COL'D:**

MATRIX:Air SAMPLE: SV-3

ANALYTICAL PARAMETERS	UNITS	RESULT	DATE TIME	LRL	ANALYTICAL METHOD
			FLAG OF ANALYSIS		
Chlorobenzene	ppbv	< 0.2	063011	0.2	EPATO-15
Ethyl Benzene	ppbv	4.2	063011	0.2	EPATO-15
m + p Xylene	ppbv	20	063011	0.5	EPATO-15
o Xylene	ppbv	6.4	063011	0.2	EPATO-15
Styrene	ppbv	< 0.2	063011	0.2	EPATO-15
Bromoform	ppbv	< 0.2	063011	0.2	EPATO-15
1122Tetrachloroethane	ppbv	< 0.2	063011	0.2	EPATO-15
p-Ethyltoluene	ppbv	9.0	063011	0.5	EPATO-15
135-Trimethylbenzene	ppbv	< 0.5	063011	0.5	EPATO-15
124-Trimethylbenzene	ppbv	6.2	063011	0.5	EPATO-15
1,3 Dichlorobenzene (v)	ppbv	< 0.2	063011	0.2	EPATO-15
1,4 Dichlorobenzene (v)	ppbv	< 0.5	063011	0.5	EPATO-15
Benzyl Chloride	ppbv	< 0.2	063011	0.2	EPATO-15
1,2 Dichlorobenzene (v)	ppbv	< 0.5	063011	0.5	EPATO-15
Hexachlorobutadiene	ppbv	< 0.5	063011	0.5	EPATO-15

cc:

LRL=Laboratory Reporting Limit

REMARKS: ** Collected from 11:00 to 15:10.

The LOQ for all analytes was confirmed with a daily LOQ std.

DIRECTOR

rn = 18117

NYSDOH ID # 10320

Page 3 of 3

ECOTEST ID	112964.01			
SOURCE OF SAMPLE	#6832-BVNY			
SAMPLE ID	SV-3			
DATE SAMPLED	6/29/2011			
MATRIX	Air			
ANALYTICAL METHOD	EPA TO-15			
ANALYTE	CAS NO	DATE OF ANALYSIS	CONC UG/M3	LRL UG/M3
1,1 Dichloroethane	75-34-3	6/30/2011	< 0.81	0.81
1,1 Dichloroethene	75-35-4	6/30/2011	< 0.40	0.40
1,2 Dibromoethane	106-93-4	6/30/2011	< 1.54	1.54
1,2 Dichlorobenzene (v)	95-50-1	6/30/2011	< 3.01	3.01
1,2 Dichloroethane	107-06-2	6/30/2011	< 2.03	2.03
1,2 Dichloropropane	78-87-5	6/30/2011	< 2.31	2.31
1,2-Dichlorotetrafluoroethane	76-14-2	6/30/2011	< 1.40	1.40
1,3 Butadiene	106-99-0	6/30/2011	< 2.21	2.21
1,3 Dichlorobenzene (v)	541-73-1	6/30/2011	< 1.20	1.20
1,4 Dichlorobenzene (v)	106-46-7	6/30/2011	< 3.01	3.01
1,4-Dioxane	123-91-1	6/30/2011	< 3.60	3.60
111 Trichloroethane	71-55-6	6/30/2011	< 1.09	1.09
112 Trichloroethane	79-00-5	6/30/2011	< 1.09	1.09
1122Tetrachloroethane	79-34-5	6/30/2011	< 1.37	1.37
124-Trimethylbenzene	95-63-6	6/30/2011	30.50	2.46
135-Trimethylbenzene	108-67-8	6/30/2011	< 2.46	2.46
2,2,4-Trimethylpentane	540-84-1	6/30/2011	< 2.33	2.33
2-Hexanone	591-78-6	6/30/2011	< 2.05	2.05
3-Chloropropene	107-05-1	6/30/2011	< 1.57	1.57
Acetone	67-64-1	6/30/2011	< 2.38	2.38
Acrylonitrile	107-13-1	6/30/2011	< 2.17	2.17
Benzene	71-43-2	6/30/2011	3.51	0.64
Benzyl Chloride	100-44-7	6/30/2011	< 1.04	1.04
Bromodichloromethane	75-27-4	6/30/2011	< 1.33	1.33
Bromoform	75-25-2	6/30/2011	< 2.07	2.07
Bromomethane	74-83-9	6/30/2011	< 0.78	0.78
c-1,2-Dichloroethene	156-59-2	6/30/2011	91.24	0.79
c-1,3Dichloropropene	10061-01-5	6/30/2011	< 2.27	2.27
Carbon disulfide	75-15-0	6/30/2011	< 1.56	1.56
Carbon Tetrachloride	56-23-5	6/30/2011	< 2.52	2.52
Chlorobenzene	108-90-7	6/30/2011	< 0.92	0.92
Chlorodibromomethane	124-48-1	6/30/2011	< 1.69	1.69
Chloroethane	75-00-3	6/30/2011	< 2.64	2.64
Chloroform	67-66-3	6/30/2011	58.44	0.97
Chloromethane	74-87-3	6/30/2011	< 2.07	2.07
Cyclohexane	110-82-7	6/30/2011	< 0.69	0.69
Dichlorodifluoromethane	75-71-8	6/30/2011	< 0.99	0.99
Ethyl Acetate	141-78-6	6/30/2011	< 18.01	18.01
Ethyl alcohol	64-17-5	6/30/2011	15.82	3.77
Ethyl Benzene	100-41-4	6/30/2011	18.22	0.87
Freon 113	76-13-1	6/30/2011	< 0.77	0.77

ECOTEST ID	112964.01			
SOURCE OF SAMPLE	#6832-BVNY			
SAMPLE ID	SV-3			
DATE SAMPLED	6/29/2011			
MATRIX	Air			
ANALYTICAL METHOD	EPA TO-15			
ANALYTE	CAS NO	DATE OF ANALYSIS	CONC UG/M3	LRL UG/M3
Heptane	142-82-5	6/30/2011	3.56	2.05
Hexachlorobutadiene	87-68-3	6/30/2011	< 5.34	5.34
Hexane	110-54-3	6/30/2011	4.94	1.76
Isopropyl Alcohol	67-63-0	6/30/2011	< 12.28	12.28
m + p Xylene	XYL-MP	6/30/2011	86.92	2.17
Methyl Ethyl Ketone	78-93-3	6/30/2011	< 2.95	2.95
Methylene Chloride	75-09-2	6/30/2011	< 0.69	0.69
Methylisobutylketone	108-10-1	6/30/2011	< 4.10	4.10
o Xylene	95-47-6	6/30/2011	27.81	0.87
p-Ethyltoluene	622-96-8	6/30/2011	44.20	2.46
Propylene	115-07-1	6/30/2011	< 0.86	0.86
Styrene	100-42-5	6/30/2011	< 0.85	0.85
t-1,2-Dichloroethene	156-60-5	6/30/2011	3.49	0.79
t-1,3Dichloropropene	10061-02-6	6/30/2011	< 0.91	0.91
ter. Butyl Methyl Ether	1634-04-4	6/30/2011	< 0.70	0.70
tert. Butyl Alcohol	75-65-0	6/30/2011	< 6.06	6.06
Tetrachloroethene	127-18-4	6/30/2011	3663.90	1.36
Tetrahydrofuran	109-99-9	6/30/2011	< 1.47	1.47
Toluene	108-88-3	6/30/2011	75.30	0.75
Trichloroethene	79-01-6	6/30/2011	467.45	1.07
Trichlorofluoromethane	75-69-4	6/30/2011	< 1.12	1.12
Vinyl Acetate	108-05-4	6/30/2011	< 1.76	1.76
Vinyl Bromide	593-60-2	6/30/2011	< 0.88	0.88
Vinyl Chloride	75-01-4	6/30/2011	< 0.51	0.51

112964.01

6

ECOTEST LABORATORIES INC.

377 Sheffield Ave.

North Babylon, NY 11703

tel. 631-422-5777, fax 631-422-5770, Email ECOTESTLAB@aol.com

CANISTER SAMPLING DATA SHEET

CANISTER SERIAL NO.

SAMPLE TRAIN SERIAL NO.

FLOW

EcoTest 08

48

17.8cc/min

This above referenced Summa can and sample train was received in good condition

DATE: 6/28/2011

CLIENT: ACT

CLIENTS AGENT (print):

SIGNED:

Client agrees to pay all replacement costs associated with loss or damage of canister train. Client acknowledges that this canister is valid for a maximum of 30 days from the date of evacuation. Client is responsible for any vacuum loss or contamination while in clients custody.

VAC leaving EcoTest:

Date Evacuated:

VAC/PRES returned EcoTest:

29" Hg

6/28/2011

7" Hg

PERSON RECEIVING REPORT: Paul Stewart

ANALYSIS:

TAT:

CANISTER SERIAL NO.

SAMPLE TRAIN SERIAL NO.

RETURNED IN GOOD CONDITION TO ECOTEST LABORATORIES INC.

DATE:

SIGNED:

for ECOTEST LABS.

ALL INFORMATION BELOW MUST BE PROVIDED BY CLIENT:

CLIENT ACT

SOURCE 6832-BVNY

SAMPLE SV-3

DATE SAMPLED 6/29/11

TIME SAMPLING STARTED: 11:00

TIME SAMPLING FINISHED: 3:10

TEMPERATURE SAMPLING STARTED: 28°

TEMPERATURE SAMPLING FINISHED: 90

DATE:

CLIENT:

CLIENTS AGENT:

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY:

SAMPLE TYPE

CHECK ONE

AMBIENT AIR
SUB SLAB VAPOR
VAPOR WELL
SVE SYSTEM

X

EXPECTED CONC

CHECK ONE

LOW
MEDIUM
HIGH

DATE/TIME: 06/30/2011 10:16

DATE/TIME: 6/30 10:16

DATE/TIME:

DATE/TIME:

ECOTEST LABORATORIES, INC.

ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777 • FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.112964.02

07/07/11

Advanced Cleanup Technologies
960 South Broadway, Suite 108
Hicksville, NY 11801

ATTN: Paul Stewart

PO#:

SOURCE OF SAMPLE: #6832-BVNY

SOURCE OF SAMPLE:

COLLECTED BY: Client

DATE COL'D:06/29/11 RECEIVED:06/30/11
TIME COL'D:**

MATRIX:Air SAMPLE: SV-4

ANALYTICAL PARAMETERS	UNITS	RESULT	DATE TIME	FLAG OF ANALYSIS	LRL	ANALYTICAL METHOD
Propylene	ppbv	< 1	063011		1	EPATO-15
Dichlorodifluoromethane	ppbv	< 0.4	063011		0.4	EPATO-15
1,2-Dichlorotetrafluoroethane	ppbv	< 0.4	063011		0.4	EPATO-15
Chloromethane	ppbv	< 2	063011		2	EPATO-15
1,3 Butadiene	ppbv	< 2	063011		2	EPATO-15
Vinyl Chloride	ppbv	< 0.4	063011		0.4	EPATO-15
Bromomethane	ppbv	< 0.4	063011		0.4	EPATO-15
Chloroethane	ppbv	< 2	063011		2	EPATO-15
Vinyl Bromide	ppbv	< 0.4	063011		0.4	EPATO-15
Trichlorofluoromethane	ppbv	< 0.4	063011		0.4	EPATO-15
Ethyl alcohol	ppbv	15	063011		4	EPATO-15
Freon 113	ppbv	< 0.2	063011		0.2	EPATO-15
1,1 Dichloroethene	ppbv	< 0.2	063011		0.2	EPATO-15
Acetone	ppbv	2.4	063011		2	EPATO-15
Carbon disulfide	ppbv	< 1	063011		1	EPATO-15
Isopropyl Alcohol	ppbv	< 10	063011		10	EPATO-15
3-Chloropropene	ppbv	< 1	063011		1	EPATO-15
Methylene Chloride	ppbv	11	063011		0.4	EPATO-15
tert. Butyl Alcohol	ppbv	< 4	063011		4	EPATO-15
ter. Butyl Methyl Ether	ppbv	< 0.4	063011		0.4	EPATO-15
t-1,2-Dichloroethene	ppbv	73	063011		0.4	EPATO-15
Acrylonitrile	ppbv	< 2	063011		2	EPATO-15
Hexane	ppbv	2.2	063011		1	EPATO-15
Vinyl Acetate	ppbv	< 1	063011		1	EPATO-15
1,1 Dichloroethane	ppbv	< 0.4	063011		0.4	EPATO-15

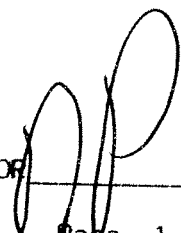
cc:

LRL=Laboratory Reporting Limit

REMARKS: ** Collected from 10:48 to 15:00.

The LOQ for all analytes was confirmed with a daily LOQ std.

DIRECTOR



ECOTEST LABORATORIES, INC.

ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777 • FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.112964.02

07/07/11

Advanced Cleanup Technologies
960 South Broadway, Suite 108
Hicksville, NY 11801

ATTN: Paul Stewart

PO#:

SOURCE OF SAMPLE: #6832-BVNY

SOURCE OF SAMPLE:

COLLECTED BY: Client

DATE COL'D:06/29/11 RECEIVED:06/30/11

TIME COL'D:**

MATRIX:Air

SAMPLE: SV-4

ANALYTICAL PARAMETERS	UNITS	RESULT	DATE TIME		ANALYTICAL
			FLAG OF ANALYSIS	LRL	
c-1,2-Dichloroethene	ppbv	1100	063011	10	EPATO-15
Methyl Ethyl Ketone	ppbv	< 2	063011	2	EPATO-15
Ethyl Acetate	ppbv	< 10	063011	10	EPATO-15
Tetrahydrofuran	ppbv	< 1	063011	1	EPATO-15
Chloroform	ppbv	12	063011	0.4	EPATO-15
Cyclohexane	ppbv	< 0.4	063011	0.4	EPATO-15
111 Trichloroethane	ppbv	< 0.4	063011	0.4	EPATO-15
Carbon Tetrachloride	ppbv	< 0.8	063011	0.8	EPATO-15
Benzene	ppbv	3.7	063011	0.4	EPATO-15
2,2,4-Trimethylpentane	ppbv	< 1	063011	1	EPATO-15
1,2 Dichloroethane	ppbv	< 1	063011	1	EPATO-15
Heptane	ppbv	1.7	063011	1	EPATO-15
Trichloroethene	ppbv	2500	063011	10	EPATO-15
1,2 Dichloropropane	ppbv	< 1	063011	1	EPATO-15
1,4-Dioxane	ppbv	< 2	063011	2	EPATO-15
Bromodichloromethane	ppbv	< 0.4	063011	0.4	EPATO-15
c-1,3Dichloropropene	ppbv	< 1	063011	1	EPATO-15
Methylisobutylketone	ppbv	< 2	063011	2	EPATO-15
Toluene	ppbv	50	063011	0.4	EPATO-15
t-1,3Dichloropropene	ppbv	< 0.4	063011	0.4	EPATO-15
112 Trichloroethane	ppbv	< 0.4	063011	0.4	EPATO-15
Tetrachloroethene	ppbv	10000	070511	20	EPATO-15
2-Hexanone	ppbv	< 1	063011	1	EPATO-15
Chlorodibromomethane	ppbv	< 0.4	063011	0.4	EPATO-15
1,2 Dibromoethane	ppbv	< 0.4	063011	0.4	EPATO-15

cc:

LRL=Laboratory Reporting Limit

REMARKS: ** Collected from 10:48 to 15:00.

The LOQ for all analytes was confirmed with a daily LOQ std.

DIRECTOR

Page 2 of 3

ECOTEST LABORATORIES, INC.

ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777 • FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO. 112964.02

07/07/11

Advanced Cleanup Technologies
960 South Broadway, Suite 108
Hicksville, NY 11801

ATTN: Paul Stewart

PO#:

SOURCE OF SAMPLE: #6832-BVNY

SOURCE OF SAMPLE:

COLLECTED BY: Client

DATE COL'D: 06/29/11 RECEIVED: 06/30/11

TIME COL'D: **

MATRIX: Air SAMPLE: SV-4

ANALYTICAL PARAMETERS	UNITS	RESULT	DATE TIME		ANALYTICAL
			FLAG OF ANALYSIS	LRL	
Chlorobenzene	ppbv	< 0.4	063011	0.4	EPATO-15
Ethyl Benzene	ppbv	6.6	063011	0.4	EPATO-15
m + p Xylene	ppbv	34	063011	1	EPATO-15
o Xylene	ppbv	10	063011	0.4	EPATO-15
Styrene	ppbv	< 0.4	063011	0.4	EPATO-15
Bromoform	ppbv	< 0.4	063011	0.4	EPATO-15
1,1,2,2-Tetrachloroethane	ppbv	< 0.4	063011	0.4	EPATO-15
p-Ethyltoluene	ppbv	16	063011	1	EPATO-15
1,3,5-Trimethylbenzene	ppbv	< 1	063011	1	EPATO-15
1,2,4-Trimethylbenzene	ppbv	9.8	063011	1	EPATO-15
1,3-Dichlorobenzene (v)	ppbv	< 0.4	063011	0.4	EPATO-15
1,4-Dichlorobenzene (v)	ppbv	< 1	063011	1	EPATO-15
Benzyl Chloride	ppbv	< 0.4	063011	0.4	EPATO-15
1,2-Dichlorobenzene (v)	ppbv	< 1	063011	1	EPATO-15
Hexachlorobutadiene	ppbv	< 1	063011	1	EPATO-15

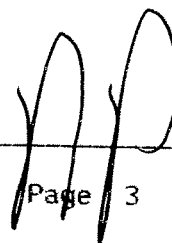
cc:

LRL=Laboratory Reporting Limit

REMARKS: ** Collected from 10:48 to 15:00.

The LOQ for all analytes was confirmed with a daily LOQ std.

DIRECTOR



rn = 18120

NYSDOH ID # 10320

Page 3 of 3

ECOTEST ID	112964.02			
SOURCE OF SAMPLE	#6832-BVNY			
SAMPLE ID	SV-4			
DATE SAMPLED	6/29/2011			
MATRIX	Air			
ANALYTICAL METHOD	EPA TO-15			
ANALYTE	CAS NO	DATE OF ANALYSIS	CONC UG/M3	IRL UG/M3
1,1 Dichloroethane	75-34-3	6/30/2011	< 1.62	0.81
1,1 Dichloroethene	75-35-4	6/30/2011	< 0.79	0.40
1,2 Dibromoethane	106-93-4	6/30/2011	< 3.08	1.54
1,2 Dichlorobenzene (v)	95-50-1	6/30/2011	< 6.02	3.01
1,2 Dichloroethane	107-06-2	6/30/2011	< 4.05	2.03
1,2 Dichloropropane	78-87-5	6/30/2011	< 4.62	2.31
1,2-Dichlorotetrafluoroethane	76-14-2	6/30/2011	< 2.80	1.40
1,3 Butadiene	106-99-0	6/30/2011	< 4.42	2.21
1,3 Dichlorobenzene (v)	541-73-1	6/30/2011	< 2.41	1.20
1,4 Dichlorobenzene (v)	106-46-7	6/30/2011	< 6.02	3.01
1,4-Dioxane	123-91-1	6/30/2011	< 7.20	3.60
111 Trichloroethane	71-55-6	6/30/2011	< 2.18	1.09
112 Trichloroethane	79-00-5	6/30/2011	< 2.18	1.09
1122Tetrachloroethane	79-34-5	6/30/2011	< 2.75	1.37
124-Trimethylbenzene	95-63-6	6/30/2011	48.21	2.46
135-Trimethylbenzene	108-67-8	6/30/2011	< 4.92	2.46
2,2,4-Trimethylpentane	540-84-1	6/30/2011	< 4.67	2.33
2-Hexanone	591-78-6	6/30/2011	< 4.09	2.05
3-Chloropropene	107-05-1	6/30/2011	< 3.13	1.57
Acetone	67-64-1	6/30/2011	5.71	2.38
Acrylonitrile	107-13-1	6/30/2011	< 4.34	2.17
Benzene	71-43-2	6/30/2011	11.81	0.64
Benzyl Chloride	100-44-7	6/30/2011	< 2.07	1.04
Bromodichloromethane	75-27-4	6/30/2011	< 2.65	1.33
Bromoform	75-25-2	6/30/2011	< 4.14	2.07
Bromomethane	74-83-9	6/30/2011	< 1.55	0.78
c-1,2-Dichloroethene	156-59-2	6/30/2011	4363.70	0.79
c-1,3Dichloropropene	10061-01-5	6/30/2011	< 4.54	2.27
Carbon disulfide	75-15-0	6/30/2011	< 3.11	1.56
Carbon Tetrachloride	56-23-5	6/30/2011	< 5.04	2.52
Chlorobenzene	108-90-7	6/30/2011	< 1.84	0.92
Chlorodibromomethane	124-48-1	6/30/2011	< 3.37	1.69
Chloroethane	75-00-3	6/30/2011	< 5.28	2.64
Chloroform	67-66-3	6/30/2011	58.44	0.97
Chloromethane	74-87-3	6/30/2011	< 4.13	2.07
Cyclohexane	110-82-7	6/30/2011	< 1.38	0.69
Dichlorodifluoromethane	75-71-8	6/30/2011	< 1.98	0.99
Ethyl Acetate	141-78-6	6/30/2011	< 36.01	18.01
Ethyl alcohol	64-17-5	6/30/2011	28.25	3.77
Ethyl Benzene	100-41-4	6/30/2011	28.63	0.87
Freon 113	76-13-1	6/30/2011	< 1.53	0.77

ECOTEST ID	112964.02			
SOURCE OF SAMPLE	#6832-BVNY			
SAMPLE ID	SV-4			
DATE SAMPLED	6/29/2011			
MATRIX	Air			
ANALYTICAL METHOD	EPA TO-15			
ANALYTE	CAS NO	DATE OF ANALYSIS	CONC UG/M3	LRL UG/M3
Heptane	142-82-5	6/30/2011	6.96	2.05
Hexachlorobutadiene	87-68-3	6/30/2011	< 10.67	5.34
Hexane	110-54-3	6/30/2011	7.76	1.76
Isopropyl Alcohol	67-63-0	6/30/2011	< 24.55	12.28
m + p Xylene	XYL-MP	6/30/2011	147.76	2.17
Methyl Ethyl Ketone	78-93-3	6/30/2011	< 5.89	2.95
Methylene Chloride	75-09-2	6/30/2011	38.21	0.69
Methylisobutylketone	108-10-1	6/30/2011	< 8.20	4.10
o Xylene	95-47-6	6/30/2011	43.46	0.87
p-Ethyltoluene	622-96-8	6/30/2011	78.58	2.46
Propylene	115-07-1	6/30/2011	< 1.72	0.86
Styrene	100-42-5	6/30/2011	< 1.70	0.85
t-1,2-Dichloroethene	156-60-5	6/30/2011	289.59	0.79
t-1,3Dichloropropene	10061-02-6	6/30/2011	< 1.82	0.91
ter. Butyl Methyl Ether	1634-04-4	6/30/2011	< 1.41	0.70
tert. Butyl Alcohol	75-65-0	6/30/2011	< 12.11	6.06
Tetrachloroethene	127-18-4	7/5/2011	67850.00	1.36
Tetrahydrofuran	109-99-9	6/30/2011	< 2.95	1.47
Toluene	108-88-3	6/30/2011	188.25	0.75
Trichloroethene	79-01-6	6/30/2011	13433.00	1.07
Trichlorofluoromethane	75-69-4	6/30/2011	< 2.25	1.12
Vinyl Acetate	108-05-4	6/30/2011	< 3.52	1.76
Vinyl Bromide	593-60-2	6/30/2011	< 1.75	0.88
Vinyl Chloride	75-01-4	6/30/2011	< 1.02	0.51

ECOTEST LABORATORIES INC.

377 Sheffield Ave.
North Babylon, NY 11703
tel. 631-422-5777, fax 631-422-5770, Email ECOTESTLAB@aol.com

CANISTER SAMPLING DATA SHEET

CANISTER SERIAL NO.

EcoTest 06

SAMPLE TRAIN SERIAL NO.

47

FLOW

17.7cc/min

This above referenced Summa can and sample train was received in good condition

DATE: 6/28/2011

CLIENT: ACT

CLIENTS AGENT (print):

SIGNED:

Client agrees to pay all replacement costs associated with loss or damage of canister train. Client acknowledges that this canister is valid for a maximum of 30 days from the date of evacuation. Client is responsible for any vacuum loss or contamination while in clients custody.

VAC leaving EcoTest:

Date Evacuated:

VAC/PRES returned EcoTest:

29" Hg

6/28/2011

8" Hg

PERSON RECEIVING REPORT: Paul Stewart

ANALYSIS:

TAT:

CANISTER SERIAL NO.

SAMPLE TRAIN SERIAL NO.

RETURNED IN GOOD CONDITION TO ECOTEST LABORATORIES INC.

DATE:

SIGNED:

for ECOTEST LABS.

ALL INFORMATION BELOW MUST BE PROVIDED BY CLIENT:

CLIENT ACT

SOURCE 6832-BVNY

SAMPLE SV-4

DATE SAMPLED 6/29/11

TIME SAMPLING STARTED: 10:48

TIME SAMPLING FINISHED: 3:00

TEMPERATURE SAMPLING STARTED: 84°

TEMPERATURE SAMPLING FINISHED: 86°

DATE:

CLIENT: ACT

CLIENTS AGENT: Yisong Yang

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY:

SAMPLE TYPE

CHECK ONE

AMBIENT AIR

SUB SLAB VAPOR

VAPOR WELL

SVE SYSTEM

EXPECTED CONC

CHECK ONE

LOW

MEDIUM

HIGH

DATE/TIME: 06/30/2011 10:15

DATE/TIME: 6/30 10:15

DATE/TIME:

DATE/TIME:

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777 • FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.120060.01

01/11/12

Advanced Cleanup Technologies
960 South Broadway, Suite 108
Hicksville, NY 11801

ATTN: Paul Stewart

PO#:

SOURCE OF SAMPLE: 79 Pondfield Road, Bronxville

SOURCE OF SAMPLE:

COLLECTED BY: Client

DATE COL'D:01/05/12 RECEIVED:01/06/12

TIME COL'D:*

MATRIX:Air

SAMPLE: Basement

ANALYTICAL PARAMETERS	UNITS	RESULT	DATE TIME FLAG OF ANALYSIS	LRL	ANALYTICAL METHOD
Propylene	ppbv	< 0.5	010612	0.5	EPATO-15
Dichlorodifluoromethane	ppbv	< 0.2	010612	0.2	EPATO-15
1,2-Dichlorotetrafluoroethane	ppbv	< 0.2	010612	0.2	EPATO-15
Chloromethane	ppbv	< 1	010612	1	EPATO-15
1,3 Butadiene	ppbv	< 1	010612	1	EPATO-15
Vinyl Chloride	ppbv	< 0.2	010612	0.2	EPATO-15
Bromomethane	ppbv	< 0.2	010612	0.2	EPATO-15
Chloroethane	ppbv	< 1	010612	1	EPATO-15
Vinyl Bromide	ppbv	< 0.2	010612	0.2	EPATO-15
Trichlorofluoromethane	ppbv	< 0.2	010612	0.2	EPATO-15
Ethyl alcohol	ppbv	16	010612	2	EPATO-15
Freon 113	ppbv	< 0.1	010612	0.1	EPATO-15
1,1 Dichloroethene	ppbv	< 0.1	010612	0.1	EPATO-15
Acetone	ppbv	< 1	010612	1	EPATO-15
Carbon disulfide	ppbv	< 0.5	010612	0.5	EPATO-15
Isopropyl Alcohol	ppbv	< 5	010612	5	EPATO-15
3-Chloropropene	ppbv	< 0.5	010612	0.5	EPATO-15
Methylene Chloride	ppbv	< 0.2	010612	0.2	EPATO-15
tert. Butyl Alcohol	ppbv	< 2	010612	2	EPATO-15
ter. Butyl Methyl Ether	ppbv	< 0.2	010612	0.2	EPATO-15
t-1,2-Dichloroethene	ppbv	< 0.2	010612	0.2	EPATO-15
Acrylonitrile	ppbv	< 1	010612	1	EPATO-15
Hexane	ppbv	< 0.5	010612	0.5	EPATO-15
Vinyl Acetate	ppbv	< 0.5	010612	0.5	EPATO-15
1,1 Dichloroethane	ppbv	< 0.2	010612	0.2	EPATO-15

cc:

LRL=Laboratory Reporting Limit

REMARKS: *Collected from 10:44 to 15:58.

The LOQ for all analytes was confirmed with a daily LOQ std.

Thomas Powell

DIRECTOR



377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777 • FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.120060.01

01/11/12

Advanced Cleanup Technologies
960 South Broadway, Suite 108
Hicksville, NY 11801

ATTN: Paul Stewart

PO#:

SOURCE OF SAMPLE: 79 Pondfield Road, Bronxville

SOURCE OF SAMPLE:

COLLECTED BY: Client

DATE COL'D:01/05/12 RECEIVED:01/06/12

TIME COL'D:*

MATRIX:Air

SAMPLE: Basement

ANALYTICAL PARAMETERS	UNITS	RESULT	DATE TIME FLAG OF ANALYSIS	LRL	ANALYTICAL METHOD
c-1,2-Dichloroethene	ppbv	< 0.2	010612	0.2	EPATO-15
Methyl Ethyl Ketone	ppbv	< 1	010612	1	EPATO-15
Ethyl Acetate	ppbv	< 5	010612	5	EPATO-15
Tetrahydrofuran	ppbv	< 0.5	010612	0.5	EPATO-15
Chloroform	ppbv	< 0.2	010612	0.2	EPATO-15
Cyclohexane	ppbv	< 0.2	010612	0.2	EPATO-15
111 Trichloroethane	ppbv	< 0.2	010612	0.2	EPATO-15
Carbon Tetrachloride	ppbv	< 0.4	010612	0.4	EPATO-15
Benzene	ppbv	< 0.2	010612	0.2	EPATO-15
2,2,4-Trimethylpentane	ppbv	< 0.5	010612	0.5	EPATO-15
1,2 Dichloroethane	ppbv	< 0.5	010612	0.5	EPATO-15
Heptane	ppbv	< 0.5	010612	0.5	EPATO-15
Trichloroethene	ppbv	< 0.2	010612	0.2	EPATO-15
1,2 Dichloropropane	ppbv	< 0.5	010612	0.5	EPATO-15
1,4-Dioxane	ppbv	< 1	010612	1	EPATO-15
Bromodichloromethane	ppbv	< 0.2	010612	0.2	EPATO-15
c-1,3Dichloropropene	ppbv	< 0.5	010612	0.5	EPATO-15
Methylisobutylketone	ppbv	< 1	010612	1	EPATO-15
Toluene	ppbv	< 0.2	010612	0.2	EPATO-15
t-1,3Dichloropropene	ppbv	< 0.2	010612	0.2	EPATO-15
112 Trichloroethane	ppbv	< 0.2	010612	0.2	EPATO-15
Tetrachloroethene	ppbv	32	010612	0.2	EPATO-15
2-Hexanone	ppbv	< 0.5	010612	0.5	EPATO-15
Chlorodibromomethane	ppbv	< 0.2	010612	0.2	EPATO-15
1,2 Dibromoethane	ppbv	< 0.2	010612	0.2	EPATO-15

cc:

LRL=Laboratory Reporting Limit

REMARKS: *Collected from 10:44 to 15:58.

The LOQ for all analytes was confirmed with a daily LOQ std.

DIRECTOR Thomas Powell


377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777 • FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.120060.01

01/11/12

Advanced Cleanup Technologies
960 South Broadway, Suite 108
Hicksville, NY 11801

ATTN: Paul Stewart

PO#:

SOURCE OF SAMPLE: 79 Pondfield Road, Bronxville

SOURCE OF SAMPLE:

COLLECTED BY: Client

DATE COL'D:01/05/12 RECEIVED:01/06/12

TIME COL'D:*

MATRIX:Air

SAMPLE: Basement

ANALYTICAL PARAMETERS	UNITS	RESULT	DATE TIME FLAG OF ANALYSIS	ANALYTICAL LRL METHOD
Chlorobenzene	ppbv	< 0.2	010612	0.2 EPATO-15
Ethyl Benzene	ppbv	< 0.2	010612	0.2 EPATO-15
m + p Xylene	ppbv	< 0.5	010612	0.5 EPATO-15
o Xylene	ppbv	< 0.2	010612	0.2 EPATO-15
Styrene	ppbv	< 0.2	010612	0.2 EPATO-15
Bromoform	ppbv	< 0.2	010612	0.2 EPATO-15
1122Tetrachloroethane	ppbv	< 0.2	010612	0.2 EPATO-15
p-Ethyltoluene	ppbv	< 0.5	010612	0.5 EPATO-15
135-Trimethylbenzene	ppbv	< 0.5	010612	0.5 EPATO-15
124-Trimethylbenzene	ppbv	< 0.5	010612	0.5 EPATO-15
1,3 Dichlorobenzene (v)	ppbv	< 0.2	010612	0.2 EPATO-15
1,4 Dichlorobenzene (v)	ppbv	< 0.5	010612	0.5 EPATO-15
Benzyl Chloride	ppbv	< 0.2	010612	0.2 EPATO-15
1,2 Dichlorobenzene (v)	ppbv	< 0.5	010612	0.5 EPATO-15
Hexachlorobutadiene	ppbv	< 0.5	010612	0.5 EPATO-15

CC:

LRL=Laboratory Reporting Limit

REMARKS: *Collected from 10:44 to 15:58.

The LOQ for all analytes was confirmed with a daily LOQ std.

Thomas Powell

DIRECTOR



ECOTEST ID	120060.01			
SOURCE OF SAMPLE	79 Pondfield Road, Bronxville			
SAMPLE ID	Basement			
DATE SAMPLED	1/5/2012			
MATRIX	Air			
ANALYTICAL METHOD	EPA TO-15			
ANALYTE	CAS NO	DATE OF ANALYSIS	CONC UG/M3	LRL UG/M3
1,1 Dichloroethane	75-34-3	1/6/2012	< 0.81	0.81
1,1 Dichloroethene	75-35-4	1/6/2012	< 0.40	0.40
1,2 Dibromoethane	106-93-4	1/6/2012	< 1.54	1.54
1,2 Dichlorobenzene (v)	95-50-1	1/6/2012	< 3.01	3.01
1,2 Dichloroethane	107-06-2	1/6/2012	< 2.03	2.03
1,2 Dichloropropane	78-87-5	1/6/2012	< 2.31	2.31
1,2-Dichlorotetrafluoroethane	76-14-2	1/6/2012	< 1.40	1.40
1,3 Butadiene	106-99-0	1/6/2012	< 2.21	2.21
1,3 Dichlorobenzene (v)	541-73-1	1/6/2012	< 1.20	1.20
1,4 Dichlorobenzene (v)	106-46-7	1/6/2012	< 3.01	3.01
1,4-Dioxane	123-91-1	1/6/2012	< 3.60	3.60
111 Trichloroethane	71-55-6	1/6/2012	< 1.09	1.09
112 Trichloroethane	79-00-5	1/6/2012	< 1.09	1.09
1122Tetrachloroethane	79-34-5	1/6/2012	< 1.37	1.37
124-Trimethylbenzene	95-63-6	1/6/2012	< 2.46	2.46
135-Trimethylbenzene	108-67-8	1/6/2012	< 2.46	2.46
2,2,4-Trimethylpentane	540-84-1	1/6/2012	< 2.33	2.33
2-Hexanone	591-78-6	1/6/2012	< 2.05	2.05
3-Chloropropene	107-05-1	1/6/2012	< 1.57	1.57
Acetone	67-64-1	1/6/2012	< 2.38	2.38
Acrylonitrile	107-13-1	1/6/2012	< 2.17	2.17
Benzene	71-43-2	1/6/2012	< 0.64	0.64
Benzyl Chloride	100-44-7	1/6/2012	< 1.04	1.04
Bromodichloromethane	75-27-4	1/6/2012	< 1.33	1.33
Bromoform	75-25-2	1/6/2012	< 2.07	2.07
Bromomethane	74-83-9	1/6/2012	< 0.78	0.78
c-1,2-Dichloroethene	156-59-2	1/6/2012	< 0.79	0.79
c-1,3Dichloropropene	10061-01-5	1/6/2012	< 2.27	2.27
Carbon disulfide	75-15-0	1/6/2012	< 1.56	1.56
Carbon Tetrachloride	56-23-5	1/6/2012	< 2.52	2.52
Chlorobenzene	108-90-7	1/6/2012	< 0.92	0.92
Chlorodibromomethane	124-48-1	1/6/2012	< 1.69	1.69
Chloroethane	75-00-3	1/6/2012	< 2.64	2.64
Chloroform	67-66-3	1/6/2012	< 0.97	0.97
Chloromethane	74-87-3	1/6/2012	< 2.07	2.07
Cyclohexane	110-82-7	1/6/2012	< 0.69	0.69
Dichlorodifluoromethane	75-71-8	1/6/2012	< 0.99	0.99
Ethyl Acetate	141-78-6	1/6/2012	< 18.01	18.01
Ethyl alcohol	64-17-5	1/6/2012	30.13	3.77
Ethyl Benzene	100-41-4	1/6/2012	< 0.87	0.87
Freon 113	76-13-1	1/6/2012	< 0.77	0.77

ECOTEST ID	120060.01			
SOURCE OF SAMPLE	79 Pondfield Road, Bronxville			
SAMPLE ID	Basement			
DATE SAMPLED	1/5/2012			
MATRIX	Air			
ANALYTICAL METHOD	EPA TO-15			
		DATE OF	CONC	LRL
ANALYTE	CAS NO	ANALYSIS	UG/M3	UG/M3
Heptane	142-82-5	1/6/2012	< 2.05	2.05
Hexachlorobutadiene	87-68-3	1/6/2012	< 5.34	5.34
Hexane	110-54-3	1/6/2012	< 1.76	1.76
Isopropyl Alcohol	67-63-0	1/6/2012	< 12.28	12.28
m + p Xylene	XYL-MP	1/6/2012	< 2.17	2.17
Methyl Ethyl Ketone	78-93-3	1/6/2012	< 2.95	2.95
Methylene Chloride	75-09-2	1/6/2012	< 0.69	0.69
Methylisobutylketone	108-10-1	1/6/2012	< 4.10	4.10
o Xylene	95-47-6	1/6/2012	< 0.87	0.87
p-Ethyltoluene	622-96-8	1/6/2012	< 2.46	2.46
Propylene	115-07-1	1/6/2012	< 0.86	0.86
Styrene	100-42-5	1/6/2012	< 0.85	0.85
t-1,2-Dichloroethene	156-60-5	1/6/2012	< 0.79	0.79
t-1,3Dichloropropene	10061-02-6	1/6/2012	< 0.91	0.91
ter. ButylMethylEther	1634-04-4	1/6/2012	< 0.70	0.70
tert. Butyl Alcohol	75-65-0	1/6/2012	< 6.06	6.06
Tetrachloroethene	127-18-4	1/6/2012	217.12	1.36
Tetrahydrofuran	109-99-9	1/6/2012	< 1.47	1.47
Toluene	108-88-3	1/6/2012	< 0.75	0.75
Trichloroethene	79-01-6	1/6/2012	< 1.07	1.07
Trichlorofluoromethane	75-69-4	1/6/2012	< 1.12	1.12
Vinyl Acetate	108-05-4	1/6/2012	< 1.76	1.76
Vinyl Bromide	593-60-2	1/6/2012	< 0.88	0.88
Vinyl Chloride	75-01-4	1/6/2012	< 0.51	0.51

120060.01

ECOTEST LABORATORIES INC.

377 Sheffield Ave.
North Babylon, NY 11703
tel. 631-422-5777, fax 631-422-5770, Email ECOTESTLAB@aol.com

CANISTER SAMPLING DATA SHEET

CANISTER SERIAL NO.	SAMPLE TRAIN SERIAL NO.	FLOW
EcoTest 22	81	11.6cc/min

This above referenced Summa can and sample train was received in good condition

DATE: 1/4/2012
CLIENT: ACT
CLIENTS AGENT (print): Yisong Yang
SIGNED: [Signature]

Client agrees to pay all replacement costs associated with loss or damage of canister train. Client acknowledges that this canister is valid for a maximum of 30 days from the date of evacuation. Client is responsible for any vacuum loss or contamination while in clients custody.

VAC leaving EcoTest:	29" Hg	PERSON RECEIVING REPORT:
Date Evacuated:	1/4/2012	ANALYSIS:
VAC/PRES returned EcoTest:	0.0" Hg	TAT: <u>5 Day TAT</u>

CANISTER SERIAL NO. 22
SAMPLE TRAIN SERIAL NO. 81

RETURNED IN GOOD CONDITION TO ECOTEST LABORATORIES INC.

DATE: 1/6/12

SIGNED: [Signature] for ECOTEST LABS.

ALL INFORMATION BELOW MUST BE PROVIDED BY CLIENT:

CLIENT <u>Advanced Cleanup Technologies</u>	SAMPLE TYPE CHECK ONE AMBIENT AIR ☒ SUB SLAB VAPOR ☐ VAPOR WELL ☐ SVE SYSTEM ☐
SOURCE <u>79 Pondfield Road, Bronxville, NY</u>	
SAMPLE <u>Basement</u>	
DATE SAMPLED <u>1/5/12</u>	
TIME SAMPLING STARTED: <u>10:44am</u>	EXPECTED CONC CHECK ONE LOW ☒ MEDIUM ☐ HIGH ☐
TIME SAMPLING FINISHED: <u>3:58pm</u>	
TEMPERATURE SAMPLING STARTED: <u>78°</u>	
TEMPERATURE SAMPLING FINISHED: <u>78°</u>	
DATE: <u>1/6/12</u>	
CLIENT: <u>Advanced Cleanup Technologies</u>	
CLIENTS AGENT: <u>Yisong Yang</u>	

RELINQUISHED BY: <u>[Signature]</u>	DATE/TIME:
RECEIVED BY: <u>[Signature]</u>	DATE/TIME: <u>1/6/12 10:20</u>
RELINQUISHED BY:	DATE/TIME:
RECEIVED BY:	DATE/TIME:

120060

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777 • FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.120060.02

01/11/12

Advanced Cleanup Technologies
960 South Broadway, Suite 108
Hicksville, NY 11801

ATTN: Paul Stewart

PO#:

SOURCE OF SAMPLE: 81 Pondfield Road, Bronxville

SOURCE OF SAMPLE:

COLLECTED BY: Client

DATE COL'D:01/05/12 RECEIVED:01/06/12

TIME COL'D:*

MATRIX:Air

SAMPLE: Unit #12

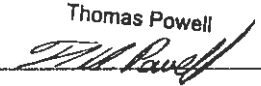
ANALYTICAL PARAMETERS	UNITS	RESULT	DATE TIME	FLAG OF ANALYSIS	LRL	ANALYTICAL METHOD
Propylene	ppbv	< 0.5	010612		0.5	EPATO-15
Dichlorodifluoromethane	ppbv	< 0.2	010612		0.2	EPATO-15
1,2-Dichlorotetrafluoroethane	ppbv	< 0.2	010612		0.2	EPATO-15
Chloromethane	ppbv	< 1	010612		1	EPATO-15
1,3 Butadiene	ppbv	< 1	010612		1	EPATO-15
Vinyl Chloride	ppbv	< 0.2	010612		0.2	EPATO-15
Bromomethane	ppbv	< 0.2	010612		0.2	EPATO-15
Chloroethane	ppbv	< 1	010612		1	EPATO-15
Vinyl Bromide	ppbv	< 0.2	010612		0.2	EPATO-15
Trichlorofluoromethane	ppbv	< 0.2	010612		0.2	EPATO-15
Ethyl alcohol	ppbv	9	010612		2	EPATO-15
Freon 113	ppbv	< 0.1	010612		0.1	EPATO-15
1,1 Dichloroethene	ppbv	< 0.1	010612		0.1	EPATO-15
Acetone	ppbv	< 1	010612		1	EPATO-15
Carbon disulfide	ppbv	< 0.5	010612		0.5	EPATO-15
Isopropyl Alcohol	ppbv	< 5	010612		5	EPATO-15
3-Chloropropene	ppbv	< 0.5	010612		0.5	EPATO-15
Methylene Chloride	ppbv	< 0.2	010612		0.2	EPATO-15
tert. Butyl Alcohol	ppbv	< 2	010612		2	EPATO-15
ter. Butyl Methyl Ether	ppbv	< 0.2	010612		0.2	EPATO-15
t-1,2-Dichloroethene	ppbv	< 0.2	010612		0.2	EPATO-15
Acrylonitrile	ppbv	< 1	010612		1	EPATO-15
Hexane	ppbv	< 0.5	010612		0.5	EPATO-15
Vinyl Acetate	ppbv	< 0.5	010612		0.5	EPATO-15
1,1 Dichloroethane	ppbv	< 0.2	010612		0.2	EPATO-15

cc:

LRL=Laboratory Reporting Limit

REMARKS: *Collected from 08:14 to 13:50.

The LOQ for all analytes was confirmed with a daily LOQ std.

DIRECTOR Thomas Powell


377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777 • FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.120060.02

01/11/12

Advanced Cleanup Technologies
960 South Broadway, Suite 108
Hicksville, NY 11801

ATTN: Paul Stewart

PO#:

SOURCE OF SAMPLE: 81 Pondfield Road, Bronxville

SOURCE OF SAMPLE:

COLLECTED BY: Client

DATE COL'D:01/05/12 RECEIVED:01/06/12

TIME COL'D:*

MATRIX:Air

SAMPLE: Unit #12

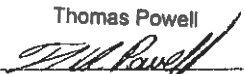
ANALYTICAL PARAMETERS	UNITS	RESULT	DATE TIME FLAG OF ANALYSIS	LRL	ANALYTICAL METHOD
c-1,2-Dichloroethene	ppbv	< 0.2	010612	0.2	EPATO-15
Methyl Ethyl Ketone	ppbv	< 1	010612	1	EPATO-15
Ethyl Acetate	ppbv	< 5	010612	5	EPATO-15
Tetrahydrofuran	ppbv	< 0.5	010612	0.5	EPATO-15
Chloroform	ppbv	< 0.2	010612	0.2	EPATO-15
Cyclohexane	ppbv	< 0.2	010612	0.2	EPATO-15
111 Trichloroethane	ppbv	< 0.2	010612	0.2	EPATO-15
Carbon Tetrachloride	ppbv	< 0.4	010612	0.4	EPATO-15
Benzene	ppbv	< 0.2	010612	0.2	EPATO-15
2,2,4-Trimethylpentane	ppbv	< 0.5	010612	0.5	EPATO-15
1,2 Dichloroethane	ppbv	< 0.5	010612	0.5	EPATO-15
Heptane	ppbv	< 0.5	010612	0.5	EPATO-15
Trichloroethene	ppbv	< 0.2	010612	0.2	EPATO-15
1,2 Dichloropropane	ppbv	< 0.5	010612	0.5	EPATO-15
1,4-Dioxane	ppbv	< 1	010612	1	EPATO-15
Bromodichloromethane	ppbv	< 0.2	010612	0.2	EPATO-15
c-1,3Dichloropropene	ppbv	< 0.5	010612	0.5	EPATO-15
Methylisobutylketone	ppbv	< 1	010612	1	EPATO-15
Toluene	ppbv	< 0.2	010612	0.2	EPATO-15
t-1,3Dichloropropene	ppbv	< 0.2	010612	0.2	EPATO-15
112 Trichloroethane	ppbv	< 0.2	010612	0.2	EPATO-15
Tetrachloroethene	ppbv	6.9	010612	0.2	EPATO-15
2-Hexanone	ppbv	< 0.5	010612	0.5	EPATO-15
Chlorodibromomethane	ppbv	< 0.2	010612	0.2	EPATO-15
1,2 Dibromoethane	ppbv	< 0.2	010612	0.2	EPATO-15

cc:

LRL=Laboratory Reporting Limit

REMARKS: *Collected from 08:14 to 13:50.

The LOQ for all analytes was confirmed with a daily LOQ std.

Thomas Powell
DIRECTOR 

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777 • FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.120060.02

01/11/12

Advanced Cleanup Technologies
960 South Broadway, Suite 108
Hicksville, NY 11801

ATTN: Paul Stewart

PO#:

SOURCE OF SAMPLE: 81 Pondfield Road, Bronxville

SOURCE OF SAMPLE:

COLLECTED BY: Client

DATE COL'D:01/05/12 RECEIVED:01/06/12

TIME COL'D:*

MATRIX:Air

SAMPLE: Unit #12

ANALYTICAL PARAMETERS	UNITS	RESULT	DATE TIME FLAG OF ANALYSIS	LRL	ANALYTICAL METHOD
Chlorobenzene	ppbv	< 0.2	010612	0.2	EPATO-15
Ethyl Benzene	ppbv	< 0.2	010612	0.2	EPATO-15
m + p Xylene	ppbv	< 0.5	010612	0.5	EPATO-15
o Xylene	ppbv	< 0.2	010612	0.2	EPATO-15
Styrene	ppbv	< 0.2	010612	0.2	EPATO-15
Bromoform	ppbv	< 0.2	010612	0.2	EPATO-15
1122Tetrachloroethane	ppbv	< 0.2	010612	0.2	EPATO-15
p-Ethyltoluene	ppbv	< 0.5	010612	0.5	EPATO-15
135-Trimethylbenzene	ppbv	< 0.5	010612	0.5	EPATO-15
124-Trimethylbenzene	ppbv	< 0.5	010612	0.5	EPATO-15
1,3 Dichlorobenzene (v)	ppbv	< 0.2	010612	0.2	EPATO-15
1,4 Dichlorobenzene (v)	ppbv	< 0.5	010612	0.5	EPATO-15
Benzyl Chloride	ppbv	< 0.2	010612	0.2	EPATO-15
1,2 Dichlorobenzene (v)	ppbv	< 0.5	010612	0.5	EPATO-15
Hexachlorobutadiene	ppbv	< 0.5	010612	0.5	EPATO-15

CC:

LRL=Laboratory Reporting Limit

REMARKS: *Collected from 08:14 to 13:50.

The LOQ for all analytes was confirmed with a daily LOQ std.

DIRECTOR

Thomas Powell



ECOTEST ID	120060.02			
SOURCE OF SAMPLE	81 Pondfield Road, Bronxville			
SAMPLE ID	Unit #12			
DATE SAMPLED	1/5/2012			
MATRIX	Air			
ANALYTICAL METHOD	EPA TO-15			
		DATE OF	CONC	LRL
ANALYTE	CAS NO	ANALYSIS	UG/M3	UG/M3
1,1 Dichloroethane	75-34-3	1/6/2012	< 0.81	0.81
1,1 Dichloroethene	75-35-4	1/6/2012	< 0.40	0.40
1,2 Dibromoethane	106-93-4	1/6/2012	< 1.54	1.54
1,2 Dichlorobenzene (v)	95-50-1	1/6/2012	< 3.01	3.01
1,2 Dichloroethane	107-06-2	1/6/2012	< 2.03	2.03
1,2 Dichloropropane	78-87-5	1/6/2012	< 2.31	2.31
1,2-Dichlorotetrafluoroethane	76-14-2	1/6/2012	< 1.40	1.40
1,3 Butadiene	106-99-0	1/6/2012	< 2.21	2.21
1,3 Dichlorobenzene (v)	541-73-1	1/6/2012	< 1.20	1.20
1,4 Dichlorobenzene (v)	106-46-7	1/6/2012	< 3.01	3.01
1,4-Dioxane	123-91-1	1/6/2012	< 3.60	3.60
111 Trichloroethane	71-55-6	1/6/2012	< 1.09	1.09
112 Trichloroethane	79-00-5	1/6/2012	< 1.09	1.09
1122Tetrachloroethane	79-34-5	1/6/2012	< 1.37	1.37
124-Trimethylbenzene	95-63-6	1/6/2012	< 2.46	2.46
135-Trimethylbenzene	108-67-8	1/6/2012	< 2.46	2.46
2,2,4-Trimethylpentane	540-84-1	1/6/2012	< 2.33	2.33
2-Hexanone	591-78-6	1/6/2012	< 2.05	2.05
3-Chloropropene	107-05-1	1/6/2012	< 1.57	1.57
Acetone	67-64-1	1/6/2012	< 2.38	2.38
Acrylonitrile	107-13-1	1/6/2012	< 2.17	2.17
Benzene	71-43-2	1/6/2012	< 0.64	0.64
Benzyl Chloride	100-44-7	1/6/2012	< 1.04	1.04
Bromodichloromethane	75-27-4	1/6/2012	< 1.33	1.33
Bromoform	75-25-2	1/6/2012	< 2.07	2.07
Bromomethane	74-83-9	1/6/2012	< 0.78	0.78
c-1,2-Dichloroethene	156-59-2	1/6/2012	< 0.79	0.79
c-1,3Dichloropropene	10061-01-5	1/6/2012	< 2.27	2.27
Carbon disulfide	75-15-0	1/6/2012	< 1.56	1.56
Carbon Tetrachloride	56-23-5	1/6/2012	< 2.52	2.52
Chlorobenzene	108-90-7	1/6/2012	< 0.92	0.92
Chlorodibromomethane	124-48-1	1/6/2012	< 1.69	1.69
Chloroethane	75-00-3	1/6/2012	< 2.64	2.64
Chloroform	67-66-3	1/6/2012	< 0.97	0.97
Chloromethane	74-87-3	1/6/2012	< 2.07	2.07
Cyclohexane	110-82-7	1/6/2012	< 0.69	0.69
Dichlorodifluoromethane	75-71-8	1/6/2012	< 0.99	0.99
Ethyl Acetate	141-78-6	1/6/2012	< 18.01	18.01
Ethyl alcohol	64-17-5	1/6/2012	16.95	3.77
Ethyl Benzene	100-41-4	1/6/2012	< 0.87	0.87
Freon 113	76-13-1	1/6/2012	< 0.77	0.77

ECOTEST ID	120060.02			
SOURCE OF SAMPLE	81 Pondfield Road, Bronxville			
SAMPLE ID	Unit #12			
DATE SAMPLED	1/5/2012			
MATRIX	Air			
ANALYTICAL METHOD	EPA TO-15			
		DATE OF	CONC	LRL
ANALYTE	CAS NO	ANALYSIS	UG/M3	UG/M3
Heptane	142-82-5	1/6/2012	< 2.05	2.05
Hexachlorobutadiene	87-68-3	1/6/2012	< 5.34	5.34
Hexane	110-54-3	1/6/2012	< 1.76	1.76
Isopropyl Alcohol	67-63-0	1/6/2012	< 12.28	12.28
m + p Xylene	XYL-MP	1/6/2012	< 2.17	2.17
Methyl Ethyl Ketone	78-93-3	1/6/2012	< 2.95	2.95
Methylene Chloride	75-09-2	1/6/2012	< 0.69	0.69
Methylisobutylketone	108-10-1	1/6/2012	< 4.10	4.10
o Xylene	95-47-6	1/6/2012	< 0.87	0.87
p-Ethyltoluene	622-96-8	1/6/2012	< 2.46	2.46
Propylene	115-07-1	1/6/2012	< 0.86	0.86
Styrene	100-42-5	1/6/2012	< 0.85	0.85
t-1,2-Dichloroethene	156-60-5	1/6/2012	< 0.79	0.79
t-1,3Dichloropropene	10061-02-6	1/6/2012	< 0.91	0.91
ter. Butyl Methyl Ether	1634-04-4	1/6/2012	< 0.70	0.70
tert. Butyl Alcohol	75-65-0	1/6/2012	< 6.06	6.06
Tetrachloroethene	127-18-4	1/6/2012	46.82	1.36
Tetrahydrofuran	109-99-9	1/6/2012	< 1.47	1.47
Toluene	108-88-3	1/6/2012	< 0.75	0.75
Trichloroethene	79-01-6	1/6/2012	< 1.07	1.07
Trichlorofluoromethane	75-69-4	1/6/2012	< 1.12	1.12
Vinyl Acetate	108-05-4	1/6/2012	< 1.76	1.76
Vinyl Bromide	593-60-2	1/6/2012	< 0.88	0.88
Vinyl Chloride	75-01-4	1/6/2012	< 0.51	0.51

ECOTEST LABORATORIES INC.

377 Sheffield Ave.
North Babylon, NY 11703

tel. 631-422-5777, fax 631-422-5770, Email ECOTESTLAB@aol.com

CANISTER SAMPLING DATA SHEET

CANISTER SERIAL NO.

EcoTest 49

SAMPLE TRAIN SERIAL NO.

93

FLOW

11cc/min

This above referenced Summa can and sample train was received in good condition

DATE: 1/4/2012

CLIENT: ACT

CLIENTS AGENT (print):

SIGNED:

Client agrees to pay all replacement costs associated with loss or damage of canister train. Client acknowledges that this canister is valid for a maximum of 30 days from the date of evacuation. Client is responsible for any vacuum loss or contamination while in clients custody.

VAC leaving EcoTest:

29" Hg

PERSON RECEIVING REPORT:

Date Evacuated:

1/4/2012

ANALYSIS:

VAC/PRES returned EcoTest:

9" Hg

TAT:

5 Day TAT

CANISTER SERIAL NO.

49

SAMPLE TRAIN SERIAL NO.

93

RETURNED IN GOOD CONDITION TO ECOTEST LABORATORIES INC.

DATE:

1/6/12

SIGNED:

for ECOTEST LABS.

ALL INFORMATION BELOW MUST BE PROVIDED BY CLIENT:

CLIENT Advanced Cleanup Technologies

SOURCE 81 Pondfield Road, Bronxville, NY

SAMPLE Unit #12

DATE SAMPLED 1/5/12

TIME SAMPLING STARTED: 8:14am

TIME SAMPLING FINISHED: 1:50pm

TEMPERATURE SAMPLING STARTED: 70°

TEMPERATURE SAMPLING FINISHED: 70°

DATE: 1/6/12

CLIENT: Advanced Cleanup Technologies

CLIENTS AGENT:

Vision Young

SAMPLE TYPE

CHECK ONE

AMBIENT AIR

SUB SLAB VAPOR

VAPOR WELL

SVE SYSTEM

EXPECTED CONC

CHECK ONE

LOW

MEDIUM

HIGH

RELINQUISHED BY:

DATE/TIME:

RECEIVED BY:

DATE/TIME: 1/6/12 10:20

RELINQUISHED BY:

DATE/TIME:

RECEIVED BY:

DATE/TIME:

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777 • FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.120060.03

01/11/12

Advanced Cleanup Technologies
960 South Broadway, Suite 108
Hicksville, NY 11801

ATTN: Paul Stewart

PO#:

SOURCE OF SAMPLE: 81 Pondfield Road, Bronxville

SOURCE OF SAMPLE:

COLLECTED BY: Client

DATE COL'D:01/05/12 RECEIVED:01/06/12

TIME COL'D:*

MATRIX:Air

SAMPLE: Unit #7

ANALYTICAL PARAMETERS	UNITS	RESULT	DATE TIME FLAG OF ANALYSIS	LRL	ANALYTICAL METHOD
Propylene	ppbv	< 0.5	010612	0.5	EPATO-15
Dichlorodifluoromethane	ppbv	< 0.2	010612	0.2	EPATO-15
1,2-Dichlorotetrafluoroethane	ppbv	< 0.2	010612	0.2	EPATO-15
Chloromethane	ppbv	< 1	010612	1	EPATO-15
1,3 Butadiene	ppbv	< 1	010612	1	EPATO-15
Vinyl Chloride	ppbv	< 0.2	010612	0.2	EPATO-15
Bromomethane	ppbv	< 0.2	010612	0.2	EPATO-15
Chloroethane	ppbv	< 1	010612	1	EPATO-15
Vinyl Bromide	ppbv	< 0.2	010612	0.2	EPATO-15
Trichlorofluoromethane	ppbv	< 0.2	010612	0.2	EPATO-15
Ethyl alcohol	ppbv	27	010612	2	EPATO-15
Freon 113	ppbv	< 0.1	010612	0.1	EPATO-15
1,1 Dichloroethene	ppbv	< 0.1	010612	0.1	EPATO-15
Acetone	ppbv	6.7	010612	1	EPATO-15
Carbon disulfide	ppbv	< 0.5	010612	0.5	EPATO-15
Isopropyl Alcohol	ppbv	< 5	010612	5	EPATO-15
3-Chloropropene	ppbv	< 0.5	010612	0.5	EPATO-15
Methylene Chloride	ppbv	< 0.2	010612	0.2	EPATO-15
tert. Butyl Alcohol	ppbv	< 2	010612	2	EPATO-15
ter. Butyl Methyl Ether	ppbv	< 0.2	010612	0.2	EPATO-15
t-1,2-Dichloroethene	ppbv	< 0.2	010612	0.2	EPATO-15
Acrylonitrile	ppbv	< 1	010612	1	EPATO-15
Hexane	ppbv	< 0.5	010612	0.5	EPATO-15
Vinyl Acetate	ppbv	< 0.5	010612	0.5	EPATO-15
1,1 Dichloroethane	ppbv	< 0.2	010612	0.2	EPATO-15

cc:

LRL=Laboratory Reporting Limit

REMARKS: *Collected from 09:44 to 14:27.

The LOQ for all analytes was confirmed with a daily LOQ std.

Thomas Powell

DIRECTOR



377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777 • FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.120060.03

01/11/12

Advanced Cleanup Technologies
960 South Broadway, Suite 108
Hicksville, NY 11801

ATTN: Paul Stewart

PO#:

SOURCE OF SAMPLE: 81 Pondfield Road, Bronxville

SOURCE OF SAMPLE:

COLLECTED BY: Client

DATE COL'D:01/05/12 RECEIVED:01/06/12

TIME COL'D:*

MATRIX:Air

SAMPLE: Unit #7

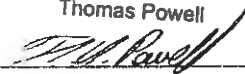
ANALYTICAL PARAMETERS	UNITS	RESULT	DATE TIME FLAG OF ANALYSIS	LRL	ANALYTICAL METHOD
c-1,2-Dichloroethene	ppbv	< 0.2	010612	0.2	EPATO-15
Methyl Ethyl Ketone	ppbv	< 1	010612	1	EPATO-15
Ethyl Acetate	ppbv	< 5	010612	5	EPATO-15
Tetrahydrofuran	ppbv	< 0.5	010612	0.5	EPATO-15
Chloroform	ppbv	< 0.2	010612	0.2	EPATO-15
Cyclohexane	ppbv	< 0.2	010612	0.2	EPATO-15
111 Trichloroethane	ppbv	< 0.2	010612	0.2	EPATO-15
Carbon Tetrachloride	ppbv	< 0.4	010612	0.4	EPATO-15
Benzene	ppbv	< 0.2	010612	0.2	EPATO-15
2,2,4-Trimethylpentane	ppbv	< 0.5	010612	0.5	EPATO-15
1,2 Dichloroethane	ppbv	< 0.5	010612	0.5	EPATO-15
Heptane	ppbv	< 0.5	010612	0.5	EPATO-15
Trichloroethene	ppbv	< 0.2	010612	0.2	EPATO-15
1,2 Dichloropropane	ppbv	< 0.5	010612	0.5	EPATO-15
1,4-Dioxane	ppbv	< 1	010612	1	EPATO-15
Bromodichloromethane	ppbv	< 0.2	010612	0.2	EPATO-15
c-1,3Dichloropropene	ppbv	< 0.5	010612	0.5	EPATO-15
Methylisobutylketone	ppbv	< 1	010612	1	EPATO-15
Toluene	ppbv	0.9	010612	0.2	EPATO-15
t-1,3Dichloropropene	ppbv	< 0.2	010612	0.2	EPATO-15
112 Trichloroethane	ppbv	< 0.2	010612	0.2	EPATO-15
Tetrachloroethene	ppbv	0.64	010612	0.2	EPATO-15
2-Hexanone	ppbv	< 0.5	010612	0.5	EPATO-15
Chlorodibromomethane	ppbv	< 0.2	010612	0.2	EPATO-15
1,2 Dibromoethane	ppbv	< 0.2	010612	0.2	EPATO-15

cc:

LRL=Laboratory Reporting Limit

REMARKS: *Collected from 09:44 to 14:27.

The LOQ for all analytes was confirmed with a daily LOQ std.

Thomas Powell
DIRECTOR 

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777 • FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.120060.03

01/11/12

Advanced Cleanup Technologies
960 South Broadway, Suite 108
Hicksville, NY 11801

ATTN: Paul Stewart

PO#:

SOURCE OF SAMPLE: 81 Pondfield Road, Bronxville

SOURCE OF SAMPLE:

COLLECTED BY: Client

DATE COL'D:01/05/12 RECEIVED:01/06/12

TIME COL'D:*

MATRIX:Air

SAMPLE: Unit #7

ANALYTICAL PARAMETERS	UNITS	RESULT	DATE TIME FLAG OF ANALYSIS	LRL	ANALYTICAL METHOD
Chlorobenzene	ppbv	< 0.2	010612	0.2	EPATO-15
Ethyl Benzene	ppbv	< 0.2	010612	0.2	EPATO-15
m + p Xylene	ppbv	< 0.5	010612	0.5	EPATO-15
o Xylene	ppbv	< 0.2	010612	0.2	EPATO-15
Styrene	ppbv	< 0.2	010612	0.2	EPATO-15
Bromoform	ppbv	< 0.2	010612	0.2	EPATO-15
1122Tetrachloroethane	ppbv	< 0.2	010612	0.2	EPATO-15
p-Ethyltoluene	ppbv	< 0.5	010612	0.5	EPATO-15
135-Trimethylbenzene	ppbv	< 0.5	010612	0.5	EPATO-15
124-Trimethylbenzene	ppbv	< 0.5	010612	0.5	EPATO-15
1,3 Dichlorobenzene (v)	ppbv	< 0.2	010612	0.2	EPATO-15
1,4 Dichlorobenzene (v)	ppbv	< 0.5	010612	0.5	EPATO-15
Benzyl Chloride	ppbv	< 0.2	010612	0.2	EPATO-15
1,2 Dichlorobenzene (v)	ppbv	< 0.5	010612	0.5	EPATO-15
Hexachlorobutadiene	ppbv	< 0.5	010612	0.5	EPATO-15

cc:

LRL=Laboratory Reporting Limit

REMARKS: *Collected from 09:44 to 14:27.

The LOQ for all analytes was confirmed with a daily LOQ std.

Thomas Powell

DIRECTOR

ECOTEST ID	120060.03			
SOURCE OF SAMPLE	81 Pondfield Road, Bronxville			
SAMPLE ID	Unit #7			
DATE SAMPLED	1/5/2012			
MATRIX	Air			
ANALYTICAL METHOD	EPA TO-15			
		DATE OF	CONC	LRL
ANALYTE	CAS NO	ANALYSIS	UG/M3	UG/M3
1,1 Dichloroethane	75-34-3	1/6/2012	< 0.81	0.81
1,1 Dichloroethene	75-35-4	1/6/2012	< 0.40	0.40
1,2 Dibromoethane	106-93-4	1/6/2012	< 1.54	1.54
1,2 Dichlorobenzene (v)	95-50-1	1/6/2012	< 3.01	3.01
1,2 Dichloroethane	107-06-2	1/6/2012	< 2.03	2.03
1,2 Dichloropropane	78-87-5	1/6/2012	< 2.31	2.31
1,2-Dichlorotetrafluoroethane	76-14-2	1/6/2012	< 1.40	1.40
1,3 Butadiene	106-99-0	1/6/2012	< 2.21	2.21
1,3 Dichlorobenzene (v)	541-73-1	1/6/2012	< 1.20	1.20
1,4 Dichlorobenzene (v)	106-46-7	1/6/2012	< 3.01	3.01
1,4-Dioxane	123-91-1	1/6/2012	< 3.60	3.60
111 Trichloroethane	71-55-6	1/6/2012	< 1.09	1.09
112 Trichloroethane	79-00-5	1/6/2012	< 1.09	1.09
1122Tetrachloroethane	79-34-5	1/6/2012	< 1.37	1.37
124-Trimethylbenzene	95-63-6	1/6/2012	< 2.46	2.46
135-Trimethylbenzene	108-67-8	1/6/2012	< 2.46	2.46
2,2,4-Trimethylpentane	540-84-1	1/6/2012	< 2.33	2.33
2-Hexanone	591-78-6	1/6/2012	< 2.05	2.05
3-Chloropropene	107-05-1	1/6/2012	< 1.57	1.57
Acetone	67-64-1	1/6/2012	15.93	2.38
Acrylonitrile	107-13-1	1/6/2012	< 2.17	2.17
Benzene	71-43-2	1/6/2012	< 0.64	0.64
Benzyl Chloride	100-44-7	1/6/2012	< 1.04	1.04
Bromodichloromethane	75-27-4	1/6/2012	< 1.33	1.33
Bromoform	75-25-2	1/6/2012	< 2.07	2.07
Bromomethane	74-83-9	1/6/2012	< 0.78	0.78
c-1,2-Dichloroethene	156-59-2	1/6/2012	< 0.79	0.79
c-1,3Dichloropropene	10061-01-5	1/6/2012	< 2.27	2.27
Carbon disulfide	75-15-0	1/6/2012	< 1.56	1.56
Carbon Tetrachloride	56-23-5	1/6/2012	< 2.52	2.52
Chlorobenzene	108-90-7	1/6/2012	< 0.92	0.92
Chlorodibromomethane	124-48-1	1/6/2012	< 1.69	1.69
Chloroethane	75-00-3	1/6/2012	< 2.64	2.64
Chloroform	67-66-3	1/6/2012	< 0.97	0.97
Chloromethane	74-87-3	1/6/2012	< 2.07	2.07
Cyclohexane	110-82-7	1/6/2012	< 0.69	0.69
Dichlorodifluoromethane	75-71-8	1/6/2012	< 0.99	0.99
Ethyl Acetate	141-78-6	1/6/2012	< 18.01	18.01
Ethyl alcohol	64-17-5	1/6/2012	50.84	3.77
Ethyl Benzene	100-41-4	1/6/2012	< 0.87	0.87
Freon 113	76-13-1	1/6/2012	< 0.77	0.77

ECOTEST ID	120060.03			
SOURCE OF SAMPLE	81 Pondfield Road, Bronxville			
SAMPLE ID	Unit #7			
DATE SAMPLED	1/5/2012			
MATRIX	Air			
ANALYTICAL METHOD	EPA TO-15			
		DATE OF	CONC	LRL
ANALYTE	CAS NO	ANALYSIS	UG/M3	UG/M3
Heptane	142-82-5	1/6/2012	< 2.05	2.05
Hexachlorobutadiene	87-68-3	1/6/2012	< 5.34	5.34
Hexane	110-54-3	1/6/2012	< 1.76	1.76
Isopropyl Alcohol	67-63-0	1/6/2012	< 12.28	12.28
m + p Xylene	XYL-MP	1/6/2012	< 2.17	2.17
Methyl Ethyl Ketone	78-93-3	1/6/2012	< 2.95	2.95
Methylene Chloride	75-09-2	1/6/2012	< 0.69	0.69
Methylisobutylketone	108-10-1	1/6/2012	< 4.10	4.10
o Xylene	95-47-6	1/6/2012	< 0.87	0.87
p-Ethyltoluene	622-96-8	1/6/2012	< 2.46	2.46
Propylene	115-07-1	1/6/2012	< 0.86	0.86
Styrene	100-42-5	1/6/2012	< 0.85	0.85
t-1,2-Dichloroethene	156-60-5	1/6/2012	< 0.79	0.79
t-1,3Dichloropropene	10061-02-6	1/6/2012	< 0.91	0.91
ter. Butyl Methyl Ether	1634-04-4	1/6/2012	< 0.70	0.70
tert. Butyl Alcohol	75-65-0	1/6/2012	< 6.06	6.06
Tetrachloroethene	127-18-4	1/6/2012	4.34	1.36
Tetrahydrofuran	109-99-9	1/6/2012	< 1.47	1.47
Toluene	108-88-3	1/6/2012	3.39	0.75
Trichloroethene	79-01-6	1/6/2012	< 1.07	1.07
Trichlorofluoromethane	75-69-4	1/6/2012	< 1.12	1.12
Vinyl Acetate	108-05-4	1/6/2012	< 1.76	1.76
Vinyl Bromide	593-60-2	1/6/2012	< 0.88	0.88
Vinyl Chloride	75-01-4	1/6/2012	< 0.51	0.51

120060.03

ECOTEST LABORATORIES INC.

377 Sheffield Ave.

North Babylon, NY 11703

tel. 631-422-5777, fax 631-422-5770, Email ECOTESTLAB@aol.com

CANISTER SAMPLING DATA SHEET

CANISTER SERIAL NO.

SAMPLE TRAIN SERIAL NO.

FLOW

EcoTest 56**89****12.5cc/min**

This above referenced Summa can and sample train was received in good condition

DATE: 1/4/2012

CLIENT: ACT

CLIENTS AGENT (print): Yisong Yang

SIGNED: 

Client agrees to pay all replacement costs associated with loss or damage of canister.
 Client acknowledges that this canister is valid for a maximum of 30 days from the date of
 evacuation. Client is responsible for any vacuum loss or contamination while in clients custody

VAC leaving EcoTest:

29" Hg

PERSON RECEIVING REPORT:

Date Evacuated:

1/4/2012

ANALYSIS:

VAC/PRES returned EcoTest:

7.0" Hg

TAT:

(5 Day TAT)

CANISTER SERIAL NO.

56

SAMPLE TRAIN SERIAL NO.

89

RETURNED IN GOOD CONDITION TO ECOTEST LABORATORIES INC.

DATE:

1/6/12

SIGNED:

for ECOTEST LABS.

ALL INFORMATION BELOW MUST BE PROVIDED BY CLIENT:

CLIENT	Advanced Cleanup Technologies	SAMPLE TYPE	
SOURCE	81 Pondfield Road, Bronxville, NY	CHECK ONE	
SAMPLE	Unit #7	AMBIENT AIR	☒
DATE SAMPLED	1/5/12	SUB SLAB VAPOR	☐
TIME SAMPLING STARTED:	9:44am	VAPOR WELL	☐
TIME SAMPLING FINISHED:	2:27pm	SVE SYSTEM	☐
TEMPERATURE SAMPLING STARTED:	70°	EXPECTED CONC	
TEMPERATURE SAMPLING FINISHED:	70°	CHECK ONE	
DATE:	1/6/12	LOW	☒
CLIENT:	Advanced Cleanup Technologies	MEDIUM	☐
CLIENTS AGENT:	Yisong Yang	HIGH	☐

RELINQUISHED BY:

DATE/TIME:

RECEIVED BY:

DATE/TIME: 1/6/12 10:20

RELINQUISHED BY:

DATE/TIME:

RECEIVED BY:

DATE/TIME:

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777 • FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.120060.04

01/11/12

Advanced Cleanup Technologies
960 South Broadway, Suite 108
Hicksville, NY 11801

ATTN: Paul Stewart

PO#:

SOURCE OF SAMPLE: 81 Pondfield Road, Bronxville

SOURCE OF SAMPLE:

COLLECTED BY: Client

DATE COL'D:01/05/12 RECEIVED:01/06/12

TIME COL'D:*

MATRIX:Air

SAMPLE: Unit #6

ANALYTICAL PARAMETERS	UNITS	RESULT	DATE TIME FLAG OF ANALYSIS	LRL	ANALYTICAL METHOD
Propylene	ppbv	< 0.5	010712	0.5	EPATO-15
Dichlorodifluoromethane	ppbv	< 0.2	010712	0.2	EPATO-15
1,2-Dichlorotetrafluoroethane	ppbv	< 0.2	010712	0.2	EPATO-15
Chloromethane	ppbv	< 1	010712	1	EPATO-15
1,3 Butadiene	ppbv	< 1	010712	1	EPATO-15
Vinyl Chloride	ppbv	< 0.2	010712	0.2	EPATO-15
Bromomethane	ppbv	< 0.2	010712	0.2	EPATO-15
Chloroethane	ppbv	< 1	010712	1	EPATO-15
Vinyl Bromide	ppbv	< 0.2	010712	0.2	EPATO-15
Trichlorofluoromethane	ppbv	< 0.2	010712	0.2	EPATO-15
Ethyl alcohol	ppbv	13	010712	2	EPATO-15
Freon 113	ppbv	< 0.1	010712	0.1	EPATO-15
1,1 Dichloroethene	ppbv	< 0.1	010712	0.1	EPATO-15
Acetone	ppbv	< 1	010712	1	EPATO-15
Carbon disulfide	ppbv	< 0.5	010712	0.5	EPATO-15
Isopropyl Alcohol	ppbv	< 5	010712	5	EPATO-15
3-Chloropropene	ppbv	< 0.5	010712	0.5	EPATO-15
Methylene Chloride	ppbv	< 0.2	010712	0.2	EPATO-15
tert. Butyl Alcohol	ppbv	< 2	010712	2	EPATO-15
ter. Butyl Methyl Ether	ppbv	< 0.2	010712	0.2	EPATO-15
t-1,2-Dichloroethene	ppbv	< 0.2	010712	0.2	EPATO-15
Acrylonitrile	ppbv	< 1	010712	1	EPATO-15
Hexane	ppbv	< 0.5	010712	0.5	EPATO-15
Vinyl Acetate	ppbv	< 0.5	010712	0.5	EPATO-15
1,1 Dichloroethane	ppbv	< 0.2	010712	0.2	EPATO-15

cc:

LRL=Laboratory Reporting Limit

REMARKS: *Collected from 08:14 to 13:50.

The LOQ for all analytes was confirmed with a daily LOQ std.

DIRECTOR

Thomas Powell



377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777 • FAX (631) 422-5770**Email: ecotestlab@aol.com Website: www.ecotestlabs.com**

LAB NO.120060.04

01/11/12

Advanced Cleanup Technologies
960 South Broadway, Suite 108
Hicksville, NY 11801

ATTN: Paul Stewart

PO#:

SOURCE OF SAMPLE: 81 Pondfield Road, Bronxville

SOURCE OF SAMPLE:

COLLECTED BY: Client

DATE COL'D:01/05/12 RECEIVED:01/06/12

TIME COL'D:*

MATRIX:Air

SAMPLE: Unit #6

ANALYTICAL PARAMETERS	UNITS	RESULT	DATE TIME FLAG OF ANALYSIS	LRL	ANALYTICAL METHOD
c-1,2-Dichloroethene	ppbv	< 0.2	010712	0.2	EPATO-15
Methyl Ethyl Ketone	ppbv	< 1	010712	1	EPATO-15
Ethyl Acetate	ppbv	< 5	010712	5	EPATO-15
Tetrahydrofuran	ppbv	< 0.5	010712	0.5	EPATO-15
Chloroform	ppbv	< 0.2	010712	0.2	EPATO-15
Cyclohexane	ppbv	< 0.2	010712	0.2	EPATO-15
111 Trichloroethane	ppbv	< 0.2	010712	0.2	EPATO-15
Carbon Tetrachloride	ppbv	< 0.4	010712	0.4	EPATO-15
Benzene	ppbv	< 0.2	010712	0.2	EPATO-15
2,2,4-Trimethylpentane	ppbv	< 0.5	010712	0.5	EPATO-15
1,2 Dichloroethane	ppbv	< 0.5	010712	0.5	EPATO-15
Heptane	ppbv	< 0.5	010712	0.5	EPATO-15
Trichloroethene	ppbv	< 0.2	010712	0.2	EPATO-15
1,2 Dichloropropane	ppbv	< 0.5	010712	0.5	EPATO-15
1,4-Dioxane	ppbv	< 1	010712	1	EPATO-15
Bromodichloromethane	ppbv	< 0.2	010712	0.2	EPATO-15
c-1,3Dichloropropene	ppbv	< 0.5	010712	0.5	EPATO-15
Methylisobutylketone	ppbv	< 1	010712	1	EPATO-15
Toluene	ppbv	< 0.2	010712	0.2	EPATO-15
t-1,3Dichloropropene	ppbv	< 0.2	010712	0.2	EPATO-15
112 Trichloroethane	ppbv	< 0.2	010712	0.2	EPATO-15
Tetrachloroethene	ppbv	< 0.2	010712	0.2	EPATO-15
2-Hexanone	ppbv	< 0.5	010712	0.5	EPATO-15
Chlorodibromomethane	ppbv	< 0.2	010712	0.2	EPATO-15
1,2 Dibromoethane	ppbv	< 0.2	010712	0.2	EPATO-15

cc:

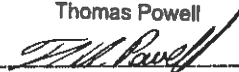
LRL=Laboratory Reporting Limit

REMARKS: *Collected from 08:14 to 13:50.

The LOQ for all analytes was confirmed with a daily LOQ std.

Thomas Powell

DIRECTOR



377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777 • FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.120060.04

01/11/12

Advanced Cleanup Technologies
960 South Broadway, Suite 108
Hicksville, NY 11801

ATTN: Paul Stewart

PO#:

SOURCE OF SAMPLE: 81 Pondfield Road, Bronxville

SOURCE OF SAMPLE:

COLLECTED BY: Client

DATE COL'D:01/05/12 RECEIVED:01/06/12

TIME COL'D:*

MATRIX:Air

SAMPLE: Unit #6

ANALYTICAL PARAMETERS	UNITS	RESULT	DATE TIME	ANALYTICAL	
			FLAG OF ANALYSIS	LRL	METHOD
Chlorobenzene	ppbv	< 0.2	010712	0.2	EPATO-15
Ethyl Benzene	ppbv	< 0.2	010712	0.2	EPATO-15
m + p Xylene	ppbv	< 0.5	010712	0.5	EPATO-15
o Xylene	ppbv	< 0.2	010712	0.2	EPATO-15
Styrene	ppbv	< 0.2	010712	0.2	EPATO-15
Bromoform	ppbv	< 0.2	010712	0.2	EPATO-15
1122Tetrachloroethane	ppbv	< 0.2	010712	0.2	EPATO-15
p-Ethyltoluene	ppbv	< 0.5	010712	0.5	EPATO-15
135-Trimethylbenzene	ppbv	< 0.5	010712	0.5	EPATO-15
124-Trimethylbenzene	ppbv	< 0.5	010712	0.5	EPATO-15
1,3 Dichlorobenzene (v)	ppbv	< 0.2	010712	0.2	EPATO-15
1,4 Dichlorobenzene (v)	ppbv	< 0.5	010712	0.5	EPATO-15
Benzyl Chloride	ppbv	< 0.2	010712	0.2	EPATO-15
1,2 Dichlorobenzene (v)	ppbv	< 0.5	010712	0.5	EPATO-15
Hexachlorobutadiene	ppbv	< 0.5	010712	0.5	EPATO-15

CC:

LRL=Laboratory Reporting Limit

REMARKS: *Collected from 08:14 to 13:50.

The LOQ for all analytes was confirmed with a daily LOQ std.

DIRECTOR Thomas Powell


ECOTEST ID	120060.04			
SOURCE OF SAMPLE	81 Pondfield Road, Bronxville			
SAMPLE ID	Unit #6			
DATE SAMPLED	1/5/2012			
MATRIX	Air			
ANALYTICAL METHOD	EPA TO-15			
ANALYTE	CAS NO	DATE OF ANALYSIS	CONC UG/M3	LRL UG/M3
1,1 Dichloroethane	75-34-3	1/7/2012	< 0.81	0.81
1,1 Dichloroethene	75-35-4	1/7/2012	< 0.40	0.40
1,2 Dibromoethane	106-93-4	1/7/2012	< 1.54	1.54
1,2 Dichlorobenzene (v)	95-50-1	1/7/2012	< 3.01	3.01
1,2 Dichloroethane	107-06-2	1/7/2012	< 2.03	2.03
1,2 Dichloropropane	78-87-5	1/7/2012	< 2.31	2.31
1,2-Dichlorotetrafluoroethane	76-14-2	1/7/2012	< 1.40	1.40
1,3 Butadiene	106-99-0	1/7/2012	< 2.21	2.21
1,3 Dichlorobenzene (v)	541-73-1	1/7/2012	< 1.20	1.20
1,4 Dichlorobenzene (v)	106-46-7	1/7/2012	< 3.01	3.01
1,4-Dioxane	123-91-1	1/7/2012	< 3.60	3.60
111 Trichloroethane	71-55-6	1/7/2012	< 1.09	1.09
112 Trichloroethane	79-00-5	1/7/2012	< 1.09	1.09
1122Tetrachloroethane	79-34-5	1/7/2012	< 1.37	1.37
124-Trimethylbenzene	95-63-6	1/7/2012	< 2.46	2.46
135-Trimethylbenzene	108-67-8	1/7/2012	< 2.46	2.46
2,2,4-Trimethylpentane	540-84-1	1/7/2012	< 2.33	2.33
2-Hexanone	591-78-6	1/7/2012	< 2.05	2.05
3-Chloropropene	107-05-1	1/7/2012	< 1.57	1.57
Acetone	67-64-1	1/7/2012	< 2.38	2.38
Acrylonitrile	107-13-1	1/7/2012	< 2.17	2.17
Benzene	71-43-2	1/7/2012	< 0.64	0.64
Benzyl Chloride	100-44-7	1/7/2012	< 1.04	1.04
Bromodichloromethane	75-27-4	1/7/2012	< 1.33	1.33
Bromoform	75-25-2	1/7/2012	< 2.07	2.07
Bromomethane	74-83-9	1/7/2012	< 0.78	0.78
c-1,2-Dichloroethene	156-59-2	1/7/2012	< 0.79	0.79
c-1,3Dichloropropene	10061-01-5	1/7/2012	< 2.27	2.27
Carbon disulfide	75-15-0	1/7/2012	< 1.56	1.56
Carbon Tetrachloride	56-23-5	1/7/2012	< 2.52	2.52
Chlorobenzene	108-90-7	1/7/2012	< 0.92	0.92
Chlorodibromomethane	124-48-1	1/7/2012	< 1.69	1.69
Chloroethane	75-00-3	1/7/2012	< 2.64	2.64
Chloroform	67-66-3	1/7/2012	< 0.97	0.97
Chloromethane	74-87-3	1/7/2012	< 2.07	2.07
Cyclohexane	110-82-7	1/7/2012	< 0.69	0.69
Dichlorodifluoromethane	75-71-8	1/7/2012	< 0.99	0.99
Ethyl Acetate	141-78-6	1/7/2012	< 18.01	18.01
Ethyl alcohol	64-17-5	1/7/2012	24.48	3.77
Ethyl Benzene	100-41-4	1/7/2012	< 0.87	0.87
Freon 113	76-13-1	1/7/2012	< 0.77	0.77

ECOTEST ID	120060.04			
SOURCE OF SAMPLE	81 Pondfield Road, Bronxville			
SAMPLE ID	Unit #6			
DATE SAMPLED	1/5/2012			
MATRIX	Air			
ANALYTICAL METHOD	EPA TO-15			
		DATE OF	CONC	LRL
ANALYTE	CAS NO	ANALYSIS	UG/M3	UG/M3
Heptane	142-82-5	1/7/2012	< 2.05	2.05
Hexachlorobutadiene	87-68-3	1/7/2012	< 5.34	5.34
Hexane	110-54-3	1/7/2012	< 1.76	1.76
Isopropyl Alcohol	67-63-0	1/7/2012	< 12.28	12.28
m + p Xylene	XYL-MP	1/7/2012	< 2.17	2.17
Methyl Ethyl Ketone	78-93-3	1/7/2012	< 2.95	2.95
Methylene Chloride	75-09-2	1/7/2012	< 0.69	0.69
Methylisobutylketone	108-10-1	1/7/2012	< 4.10	4.10
o Xylene	95-47-6	1/7/2012	< 0.87	0.87
p-Ethyltoluene	622-96-8	1/7/2012	< 2.46	2.46
Propylene	115-07-1	1/7/2012	< 0.86	0.86
Styrene	100-42-5	1/7/2012	< 0.85	0.85
t-1,2-Dichloroethene	156-60-5	1/7/2012	< 0.79	0.79
t-1,3Dichloropropene	10061-02-6	1/7/2012	< 0.91	0.91
ter. Butyl Methyl Ether	1634-04-4	1/7/2012	< 0.70	0.70
tert. Butyl Alcohol	75-65-0	1/7/2012	< 6.06	6.06
Tetrachloroethene	127-18-4	1/7/2012	< 1.36	1.36
Tetrahydrofuran	109-99-9	1/7/2012	< 1.47	1.47
Toluene	108-88-3	1/7/2012	< 0.75	0.75
Trichloroethene	79-01-6	1/7/2012	< 1.07	1.07
Trichlorofluoromethane	75-69-4	1/7/2012	< 1.12	1.12
Vinyl Acetate	108-05-4	1/7/2012	< 1.76	1.76
Vinyl Bromide	593-60-2	1/7/2012	< 0.88	0.88
Vinyl Chloride	75-01-4	1/7/2012	< 0.51	0.51

ECOTEST LABORATORIES INC.

377 Sheffield Ave.
North Babylon, NY 11703

tel. 631-422-5777, fax 631-422-5770, Email ECOTESTLAB@aol.com

CANISTER SAMPLING DATA SHEET

CANISTER SERIAL NO.

EcoTest 59

SAMPLE TRAIN SERIAL NO.

86

FLOW

11.2cc/min

This above referenced Summa can and sample train was received in good condition

DATE: 1/4/2012

CLIENT: ACT

CLIENTS AGENT (print): Yisong Young

SIGNED: 

Client agrees to pay all replacement costs associated with loss or damage of canister. Client acknowledges that this canister is valid for a maximum of 30 days from the date of evacuation. Client is responsible for any vacuum loss or contamination while in clients custody.

VAC leaving EcoTest:

29" Hg

PERSON RECEIVING REPORT:

Date Evacuated:

1/4/2012

ANALYSIS:

VAC/PRES returned EcoTest:

9.0" Hg

TAT: 5 Day TAT

CANISTER SERIAL NO.

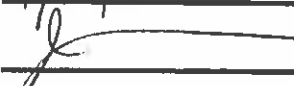
59

SAMPLE TRAIN SERIAL NO.

86

RETURNED IN GOOD CONDITION TO ECOTEST LABORATORIES INC.

DATE: 1/6/12

SIGNED: 

for ECOTEST LABS.

ALL INFORMATION BELOW MUST BE PROVIDED BY CLIENT:

CLIENT	Advanced Cleanup Technologies	SAMPLE TYPE	
SOURCE	81 Pondfield Road, Bronxville, NY	CHECK ONE	
SAMPLE	Unit #6	AMBIENT AIR	☒
DATE SAMPLED	1/5/12	SUB SLAB VAPOR	
TIME SAMPLING STARTED:	8:14am	VAPOR WELL	
TIME SAMPLING FINISHED:	1:50pm	SVE SYSTEM	
TEMPERATURE SAMPLING STARTED:	70°	EXPECTED CONC	
TEMPERATURE SAMPLING FINISHED:	70°	CHECK ONE	
DATE:	1/6/12	LOW	☒
CLIENT:	Advanced Cleanup Technologies	MEDIUM	
CLIENTS AGENT:	Yisong Young	HIGH	

RELINQUISHED BY: 

DATE/TIME:

RECEIVED BY: 

DATE/TIME: 1/6/12 10:20

RELINQUISHED BY:

DATE/TIME:

RECEIVED BY:

DATE/TIME:

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777 • FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO. 120060.05

01/11/12

Advanced Cleanup Technologies
960 South Broadway, Suite 108
Hicksville, NY 11801

ATTN: Paul Stewart

PO#:

SOURCE OF SAMPLE: 81 Pondfield Road, Bronxville

SOURCE OF SAMPLE:

COLLECTED BY: Client

DATE COL'D: 01/05/12 RECEIVED: 01/06/12

TIME COL'D: *

MATRIX: Air

SAMPLE: Unit #3

ANALYTICAL PARAMETERS	UNITS	RESULT	DATE TIME	FLAG OF ANALYSIS	LRL	ANALYTICAL METHOD
Propylene	ppbv	< 0.5	010712		0.5	EPATO-15
Dichlorodifluoromethane	ppbv	< 0.2	010712		0.2	EPATO-15
1,2-Dichlorotetrafluoroethane	ppbv	< 0.2	010712		0.2	EPATO-15
Chloromethane	ppbv	< 1	010712		1	EPATO-15
1,3 Butadiene	ppbv	< 1	010712		1	EPATO-15
Vinyl Chloride	ppbv	< 0.2	010712		0.2	EPATO-15
Bromomethane	ppbv	< 0.2	010712		0.2	EPATO-15
Chloroethane	ppbv	< 1	010712		1	EPATO-15
Vinyl Bromide	ppbv	< 0.2	010712		0.2	EPATO-15
Trichlorofluoromethane	ppbv	< 0.2	010712		0.2	EPATO-15
Ethyl alcohol	ppbv	19	010712		2	EPATO-15
Freon 113	ppbv	< 0.1	010712		0.1	EPATO-15
1,1 Dichloroethene	ppbv	< 0.1	010712		0.1	EPATO-15
Acetone	ppbv	< 1	010712		1	EPATO-15
Carbon disulfide	ppbv	< 0.5	010712		0.5	EPATO-15
Isopropyl Alcohol	ppbv	< 5	010712		5	EPATO-15
3-Chloropropene	ppbv	< 0.5	010712		0.5	EPATO-15
Methylene Chloride	ppbv	< 0.2	010712		0.2	EPATO-15
tert. Butyl Alcohol	ppbv	< 2	010712		2	EPATO-15
ter. Butyl Methyl Ether	ppbv	< 0.2	010712		0.2	EPATO-15
t-1,2-Dichloroethene	ppbv	< 0.2	010712		0.2	EPATO-15
Acrylonitrile	ppbv	< 1	010712		1	EPATO-15
Hexane	ppbv	< 0.5	010712		0.5	EPATO-15
Vinyl Acetate	ppbv	< 0.5	010712		0.5	EPATO-15
1,1 Dichloroethane	ppbv	< 0.2	010712		0.2	EPATO-15

cc:

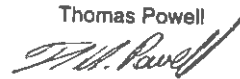
LRL=Laboratory Reporting Limit

REMARKS: *Collected from 10:33 to 14:20.

The LOQ for all analytes was confirmed with a daily LOQ std.

Thomas Powell

DIRECTOR



377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777 • FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.120060.05

01/11/12

Advanced Cleanup Technologies
960 South Broadway, Suite 108
Hicksville, NY 11801

ATTN: Paul Stewart

PO#:

SOURCE OF SAMPLE: 81 Pondfield Road, Bronxville

SOURCE OF SAMPLE:

COLLECTED BY: Client

DATE COL'D:01/05/12 RECEIVED:01/06/12

TIME COL'D:*

MATRIX:Air

SAMPLE: Unit #3

ANALYTICAL PARAMETERS	UNITS	RESULT	DATE TIME	FLAG OF ANALYSIS	LRL	ANALYTICAL METHOD
c-1,2-Dichloroethene	ppbv	< 0.2	010712		0.2	EPATO-15
Methyl Ethyl Ketone	ppbv	< 1	010712		1	EPATO-15
Ethyl Acetate	ppbv	< 5	010712		5	EPATO-15
Tetrahydrofuran	ppbv	< 0.5	010712		0.5	EPATO-15
Chloroform	ppbv	< 0.2	010712		0.2	EPATO-15
Cyclohexane	ppbv	< 0.2	010712		0.2	EPATO-15
111 Trichloroethane	ppbv	< 0.2	010712		0.2	EPATO-15
Carbon Tetrachloride	ppbv	< 0.4	010712		0.4	EPATO-15
Benzene	ppbv	< 0.2	010712		0.2	EPATO-15
2,2,4-Trimethylpentane	ppbv	< 0.5	010712		0.5	EPATO-15
1,2 Dichloroethane	ppbv	< 0.5	010712		0.5	EPATO-15
Heptane	ppbv	< 0.5	010712		0.5	EPATO-15
Trichloroethene	ppbv	< 0.2	010712		0.2	EPATO-15
1,2 Dichloropropane	ppbv	< 0.5	010712		0.5	EPATO-15
1,4-Dioxane	ppbv	< 1	010712		1	EPATO-15
Bromodichloromethane	ppbv	< 0.2	010712		0.2	EPATO-15
c-1,3Dichloropropene	ppbv	< 0.5	010712		0.5	EPATO-15
Methylisobutylketone	ppbv	< 1	010712		1	EPATO-15
Toluene	ppbv	< 0.2	010712		0.2	EPATO-15
t-1,3Dichloropropene	ppbv	< 0.2	010712		0.2	EPATO-15
112 Trichloroethane	ppbv	< 0.2	010712		0.2	EPATO-15
Tetrachloroethene	ppbv	< 0.2	010712		0.2	EPATO-15
2-Hexanone	ppbv	< 0.5	010712		0.5	EPATO-15
Chlorodibromomethane	ppbv	< 0.2	010712		0.2	EPATO-15
1,2 Dibromoethane	ppbv	< 0.2	010712		0.2	EPATO-15

cc:

LRL=Laboratory Reporting Limit

REMARKS: *Collected from 10:33 to 14:20.

The LOQ for all analytes was confirmed with a daily LOQ std.

DIRECTOR Thomas Powell


377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777 • FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.120060.05

01/11/12

Advanced Cleanup Technologies
960 South Broadway, Suite 108
Hicksville, NY 11801

ATTN: Paul Stewart

PO#:

SOURCE OF SAMPLE: 81 Pondfield Road, Bronxville

SOURCE OF SAMPLE:

COLLECTED BY: Client

DATE COL'D:01/05/12 RECEIVED:01/06/12

TIME COL'D:*

MATRIX:Air

SAMPLE: Unit #3

ANALYTICAL PARAMETERS	UNITS	RESULT	DATE TIME	ANALYTICAL	
			FLAG OF ANALYSIS	LRL	METHOD
Chlorobenzene	ppbv	< 0.2	010712	0.2	EPATO-15
Ethyl Benzene	ppbv	< 0.2	010712	0.2	EPATO-15
m + p Xylene	ppbv	< 0.5	010712	0.5	EPATO-15
o Xylene	ppbv	< 0.2	010712	0.2	EPATO-15
Styrene	ppbv	< 0.2	010712	0.2	EPATO-15
Bromoform	ppbv	< 0.2	010712	0.2	EPATO-15
1122Tetrachloroethane	ppbv	< 0.2	010712	0.2	EPATO-15
p-Ethyltoluene	ppbv	< 0.5	010712	0.5	EPATO-15
135-Trimethylbenzene	ppbv	< 0.5	010712	0.5	EPATO-15
124-Trimethylbenzene	ppbv	< 0.5	010712	0.5	EPATO-15
1,3 Dichlorobenzene (v)	ppbv	< 0.2	010712	0.2	EPATO-15
1,4 Dichlorobenzene (v)	ppbv	< 0.5	010712	0.5	EPATO-15
Benzyl Chloride	ppbv	< 0.2	010712	0.2	EPATO-15
1,2 Dichlorobenzene (v)	ppbv	< 0.5	010712	0.5	EPATO-15
Hexachlorobutadiene	ppbv	< 0.5	010712	0.5	EPATO-15

CC:

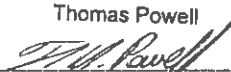
LRL=Laboratory Reporting Limit

REMARKS: *Collected from 10:33 to 14:20.

The LOQ for all analytes was confirmed with a daily LOQ std.

Thomas Powell

DIRECTOR



ECOTEST ID	120060.05			
SOURCE OF SAMPLE	81 Pondfield Road, Bronxville			
SAMPLE ID	Unit #3			
DATE SAMPLED	1/5/2012			
MATRIX	Air			
ANALYTICAL METHOD	EPA TO-15			
ANALYTE	CAS NO	DATE OF ANALYSIS	CONC UG/M3	LRL UG/M3
1,1 Dichloroethane	75-34-3	1/7/2012	< 0.81	0.81
1,1 Dichloroethene	75-35-4	1/7/2012	< 0.40	0.40
1,2 Dibromoethane	106-93-4	1/7/2012	< 1.54	1.54
1,2 Dichlorobenzene (v)	95-50-1	1/7/2012	< 3.01	3.01
1,2 Dichloroethane	107-06-2	1/7/2012	< 2.03	2.03
1,2 Dichloropropane	78-87-5	1/7/2012	< 2.31	2.31
1,2-Dichlorotetrafluoroethane	76-14-2	1/7/2012	< 1.40	1.40
1,3 Butadiene	106-99-0	1/7/2012	< 2.21	2.21
1,3 Dichlorobenzene (v)	541-73-1	1/7/2012	< 1.20	1.20
1,4 Dichlorobenzene (v)	106-46-7	1/7/2012	< 3.01	3.01
1,4-Dioxane	123-91-1	1/7/2012	< 3.60	3.60
111 Trichloroethane	71-55-6	1/7/2012	< 1.09	1.09
112 Trichloroethane	79-00-5	1/7/2012	< 1.09	1.09
1122Tetrachloroethane	79-34-5	1/7/2012	< 1.37	1.37
124-Trimethylbenzene	95-63-6	1/7/2012	< 2.46	2.46
135-Trimethylbenzene	108-67-8	1/7/2012	< 2.46	2.46
2,2,4-Trimethylpentane	540-84-1	1/7/2012	< 2.33	2.33
2-Hexanone	591-78-6	1/7/2012	< 2.05	2.05
3-Chloropropene	107-05-1	1/7/2012	< 1.57	1.57
Acetone	67-64-1	1/7/2012	< 2.38	2.38
Acrylonitrile	107-13-1	1/7/2012	< 2.17	2.17
Benzene	71-43-2	1/7/2012	< 0.64	0.64
Benzyl Chloride	100-44-7	1/7/2012	< 1.04	1.04
Bromodichloromethane	75-27-4	1/7/2012	< 1.33	1.33
Bromoform	75-25-2	1/7/2012	< 2.07	2.07
Bromomethane	74-83-9	1/7/2012	< 0.78	0.78
c-1,2-Dichloroethene	156-59-2	1/7/2012	< 0.79	0.79
c-1,3Dichloropropene	10061-01-5	1/7/2012	< 2.27	2.27
Carbon disulfide	75-15-0	1/7/2012	< 1.56	1.56
Carbon Tetrachloride	56-23-5	1/7/2012	< 2.52	2.52
Chlorobenzene	108-90-7	1/7/2012	< 0.92	0.92
Chlorodibromomethane	124-48-1	1/7/2012	< 1.69	1.69
Chloroethane	75-00-3	1/7/2012	< 2.64	2.64
Chloroform	67-66-3	1/7/2012	< 0.97	0.97
Chloromethane	74-87-3	1/7/2012	< 2.07	2.07
Cyclohexane	110-82-7	1/7/2012	< 0.69	0.69
Dichlorodifluoromethane	75-71-8	1/7/2012	< 0.99	0.99
Ethyl Acetate	141-78-6	1/7/2012	< 18.01	18.01
Ethyl alcohol	64-17-5	1/7/2012	35.78	3.77
Ethyl Benzene	100-41-4	1/7/2012	< 0.87	0.87
Freon 113	76-13-1	1/7/2012	< 0.77	0.77

ECOTEST ID	120060.05			
SOURCE OF SAMPLE	81 Pondfield Road, Bronxville			
SAMPLE ID	Unit #3			
DATE SAMPLED	1/5/2012			
MATRIX	Air			
ANALYTICAL METHOD	EPA TO-15			
		DATE OF	CONC	LRL
ANALYTE	CAS NO	ANALYSIS	UG/M3	UG/M3
Heptane	142-82-5	1/7/2012	< 2.05	2.05
Hexachlorobutadiene	87-68-3	1/7/2012	< 5.34	5.34
Hexane	110-54-3	1/7/2012	< 1.76	1.76
Isopropyl Alcohol	67-63-0	1/7/2012	< 12.28	12.28
m + p Xylene	XYL-MP	1/7/2012	< 2.17	2.17
Methyl Ethyl Ketone	78-93-3	1/7/2012	< 2.95	2.95
Methylene Chloride	75-09-2	1/7/2012	< 0.69	0.69
Methylisobutylketone	108-10-1	1/7/2012	< 4.10	4.10
o Xylene	95-47-6	1/7/2012	< 0.87	0.87
p-Ethyltoluene	622-96-8	1/7/2012	< 2.46	2.46
Propylene	115-07-1	1/7/2012	< 0.86	0.86
Styrene	100-42-5	1/7/2012	< 0.85	0.85
t-1,2-Dichloroethene	156-60-5	1/7/2012	< 0.79	0.79
t-1,3Dichloropropene	10061-02-6	1/7/2012	< 0.91	0.91
ter. Butyl Methyl Ether	1634-04-4	1/7/2012	< 0.70	0.70
tert. Butyl Alcohol	75-65-0	1/7/2012	< 6.06	6.06
Tetrachloroethene	127-18-4	1/7/2012	< 1.36	1.36
Tetrahydrofuran	109-99-9	1/7/2012	< 1.47	1.47
Toluene	108-88-3	1/7/2012	< 0.75	0.75
Trichloroethene	79-01-6	1/7/2012	< 1.07	1.07
Trichlorofluoromethane	75-69-4	1/7/2012	< 1.12	1.12
Vinyl Acetate	108-05-4	1/7/2012	< 1.76	1.76
Vinyl Bromide	593-60-2	1/7/2012	< 0.88	0.88
Vinyl Chloride	75-01-4	1/7/2012	< 0.51	0.51

120060.05

ECOTEST LABORATORIES INC.

377 Sheffield Ave.
North Babylon, NY 11703
tel. 631-422-5777, fax 631-422-5770, Email ECOTESTLAB@aol.com

CANISTER SAMPLING DATA SHEET

CANISTER SERIAL NO. **EcoTest 29** SAMPLE TRAIN SERIAL NO. **73** FLOW **12.5cc/min**

This above referenced Summa can and sample train was received in good condition

DATE: 1/4/2012
CLIENT: ACT
CLIENTS AGENT (print): Yisong Yang
SIGNED: [Signature]

Client agrees to pay all replacement costs associated with loss or damage of canister train. Client acknowledges that this canister is valid for a maximum of 30 days from the date of evacuation. Client is responsible for any vacuum loss or contamination while in clients custody.

VAC leaving EcoTest: 29" Hg PERSON RECEIVING REPORT: ANALYSIS:
Date Evacuated: 1/4/2012
VAC/PRES returned EcoTest: 12" Hg TAT: 5 Day TAT

CANISTER SERIAL NO. 29
SAMPLE TRAIN SERIAL NO. 73

RETURNED IN GOOD CONDITION TO ECOTEST LABORATORIES INC.

DATE: 1/6/12

SIGNED: [Signature] for ECOTEST LABS.

ALL INFORMATION BELOW MUST BE PROVIDED BY CLIENT:

CLIENT <u>Advanced Cleanup Technologies</u>	SAMPLE TYPE CHECK ONE AMBIENT AIR ☒ SUB SLAB VAPOR ☐ VAPOR WELL ☐ SVE SYSTEM ☐
SOURCE <u>81 Pondfield Road, Brinville, NY</u>	
SAMPLE <u>Unit #3</u>	
DATE SAMPLED <u>1/5/12</u>	
TIME SAMPLING STARTED: <u>10:33am</u>	EXPECTED CONC CHECK ONE LOW ☒ MEDIUM ☐ HIGH ☐
TIME SAMPLING FINISHED: <u>2:20pm</u>	
TEMPERATURE SAMPLING STARTED: <u>70°</u>	
TEMPERATURE SAMPLING FINISHED: <u>70°</u>	
DATE: <u>1/6/12</u>	
CLIENT: <u>Advanced Cleanup Technologies</u>	
CLIENTS AGENT: <u>Yisong Yang</u>	

RELINQUISHED BY: [Signature] DATE/TIME: 1/6/12 1020
RECEIVED BY: [Signature] DATE/TIME: 1/6/12 1020
RELINQUISHED BY: [Signature] DATE/TIME: 1/6/12 1020
RECEIVED BY: [Signature] DATE/TIME: 1/6/12 1020

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777 • FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.120060.06

01/11/12

Advanced Cleanup Technologies
960 South Broadway, Suite 108
Hicksville, NY 11801

ATTN: Paul Stewart

PO#:

SOURCE OF SAMPLE: 81 Pondfield Road, Bronxville

SOURCE OF SAMPLE:

COLLECTED BY: Client

DATE COL'D:01/05/12 RECEIVED:01/06/12

TIME COL'D:*

MATRIX:Air

SAMPLE: Unit #1

ANALYTICAL PARAMETERS	UNITS	RESULT	DATE TIME FLAG OF ANALYSIS	LRL	ANALYTICAL METHOD
Propylene	ppbv	< 0.5	010712	0.5	EPATO-15
Dichlorodifluoromethane	ppbv	< 0.2	010712	0.2	EPATO-15
1,2-Dichlorotetrafluoroethane	ppbv	< 0.2	010712	0.2	EPATO-15
Chloromethane	ppbv	< 1	010712	1	EPATO-15
1,3 Butadiene	ppbv	< 1	010712	1	EPATO-15
Vinyl Chloride	ppbv	< 0.2	010712	0.2	EPATO-15
Bromomethane	ppbv	< 0.2	010712	0.2	EPATO-15
Chloroethane	ppbv	< 1	010712	1	EPATO-15
Vinyl Bromide	ppbv	< 0.2	010712	0.2	EPATO-15
Trichlorofluoromethane	ppbv	< 0.2	010712	0.2	EPATO-15
Ethyl alcohol	ppbv	58	010712	2	EPATO-15
Freon 113	ppbv	< 0.1	010712	0.1	EPATO-15
1,1 Dichloroethene	ppbv	< 0.1	010712	0.1	EPATO-15
Acetone	ppbv	3.8	010712	1	EPATO-15
Carbon disulfide	ppbv	< 0.5	010712	0.5	EPATO-15
Isopropyl Alcohol	ppbv	< 5	010712	5	EPATO-15
3-Chloropropene	ppbv	< 0.5	010712	0.5	EPATO-15
Methylene Chloride	ppbv	< 0.2	010712	0.2	EPATO-15
tert. Butyl Alcohol	ppbv	< 2	010712	2	EPATO-15
ter. Butyl Methyl Ether	ppbv	< 0.2	010712	0.2	EPATO-15
t-1,2-Dichloroethene	ppbv	< 0.2	010712	0.2	EPATO-15
Acrylonitrile	ppbv	< 1	010712	1	EPATO-15
Hexane	ppbv	< 0.5	010712	0.5	EPATO-15
Vinyl Acetate	ppbv	< 0.5	010712	0.5	EPATO-15
1,1 Dichloroethane	ppbv	< 0.2	010712	0.2	EPATO-15

cc:

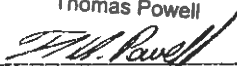
LRL=Laboratory Reporting Limit

REMARKS: *Collected from 08:22 to 14:01.

The LOQ for all analytes was confirmed with a daily LOQ std.

DIRECTOR

Thomas Powell



377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777 • FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.120060.06

01/11/12

Advanced Cleanup Technologies
960 South Broadway, Suite 108
Hicksville, NY 11801

ATTN: Paul Stewart

PO#:

SOURCE OF SAMPLE: 81 Pondfield Road, Bronxville

SOURCE OF SAMPLE:

COLLECTED BY: Client

DATE COL'D:01/05/12 RECEIVED:01/06/12

TIME COL'D:*

MATRIX:Air

SAMPLE: Unit #1

ANALYTICAL PARAMETERS	UNITS	RESULT	DATE TIME FLAG OF ANALYSIS	LRL	ANALYTICAL METHOD
c-1,2-Dichloroethene	ppbv	< 0.2	010712	0.2	EPATO-15
Methyl Ethyl Ketone	ppbv	< 1	010712	1	EPATO-15
Ethyl Acetate	ppbv	< 5	010712	5	EPATO-15
Tetrahydrofuran	ppbv	< 0.5	010712	0.5	EPATO-15
Chloroform	ppbv	< 0.2	010712	0.2	EPATO-15
Cyclohexane	ppbv	< 0.2	010712	0.2	EPATO-15
111 Trichloroethane	ppbv	< 0.2	010712	0.2	EPATO-15
Carbon Tetrachloride	ppbv	< 0.4	010712	0.4	EPATO-15
Benzene	ppbv	< 0.2	010712	0.2	EPATO-15
2,2,4-Trimethylpentane	ppbv	< 0.5	010712	0.5	EPATO-15
1,2 Dichloroethane	ppbv	< 0.5	010712	0.5	EPATO-15
Heptane	ppbv	< 0.5	010712	0.5	EPATO-15
Trichloroethene	ppbv	< 0.2	010712	0.2	EPATO-15
1,2 Dichloropropane	ppbv	< 0.5	010712	0.5	EPATO-15
1,4-Dioxane	ppbv	< 1	010712	1	EPATO-15
Bromodichloromethane	ppbv	< 0.2	010712	0.2	EPATO-15
c-1,3Dichloropropene	ppbv	< 0.5	010712	0.5	EPATO-15
Methylisobutylketone	ppbv	< 1	010712	1	EPATO-15
Toluene	ppbv	0.57	010712	0.2	EPATO-15
t-1,3Dichloropropene	ppbv	< 0.2	010712	0.2	EPATO-15
112 Trichloroethane	ppbv	< 0.2	010712	0.2	EPATO-15
Tetrachloroethene	ppbv	0.62	010712	0.2	EPATO-15
2-Hexanone	ppbv	< 0.5	010712	0.5	EPATO-15
Chlorodibromomethane	ppbv	< 0.2	010712	0.2	EPATO-15
1,2 Dibromoethane	ppbv	< 0.2	010712	0.2	EPATO-15

cc:

LRL=Laboratory Reporting Limit

REMARKS: *Collected from 08:22 to 14:01.

The LOQ for all analytes was confirmed with a daily LOQ std.

Thomas Powell

DIRECTOR



377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777 • FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.120060.06

01/11/12

Advanced Cleanup Technologies
960 South Broadway, Suite 108
Hicksville, NY 11801

ATTN: Paul Stewart

PO#:

SOURCE OF SAMPLE: 81 Pondfield Road, Bronxville

SOURCE OF SAMPLE:

COLLECTED BY: Client

DATE COL'D:01/05/12 RECEIVED:01/06/12

TIME COL'D:*

MATRIX:Air

SAMPLE: Unit #1

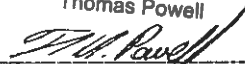
ANALYTICAL PARAMETERS	UNITS	RESULT	DATE TIME	ANALYTICAL	
			FLAG OF ANALYSIS	LRL	METHOD
Chlorobenzene	ppbv	< 0.2	010712	0.2	EPATO-15
Ethyl Benzene	ppbv	< 0.2	010712	0.2	EPATO-15
m + p Xylene	ppbv	< 0.5	010712	0.5	EPATO-15
o Xylene	ppbv	< 0.2	010712	0.2	EPATO-15
Styrene	ppbv	< 0.2	010712	0.2	EPATO-15
Bromoform	ppbv	< 0.2	010712	0.2	EPATO-15
1122Tetrachloroethane	ppbv	< 0.2	010712	0.2	EPATO-15
p-Ethyltoluene	ppbv	< 0.5	010712	0.5	EPATO-15
135-Trimethylbenzene	ppbv	< 0.5	010712	0.5	EPATO-15
124-Trimethylbenzene	ppbv	< 0.5	010712	0.5	EPATO-15
1,3 Dichlorobenzene (v)	ppbv	< 0.2	010712	0.2	EPATO-15
1,4 Dichlorobenzene (v)	ppbv	< 0.5	010712	0.5	EPATO-15
Benzyl Chloride	ppbv	< 0.2	010712	0.2	EPATO-15
1,2 Dichlorobenzene (v)	ppbv	< 0.5	010712	0.5	EPATO-15
Hexachlorobutadiene	ppbv	< 0.5	010712	0.5	EPATO-15

CC:

LRL=Laboratory Reporting Limit

REMARKS: *Collected from 08:22 to 14:01.

The LOQ for all analytes was confirmed with a daily LOQ std.

Thomas Powell
DIRECTOR 

ECOTEST ID	120060.06			
SOURCE OF SAMPLE	81 Pondfield Road, Bronxville			
SAMPLE ID	Unit #1			
DATE SAMPLED	1/5/2012			
MATRIX	Air			
ANALYTICAL METHOD	EPA TO-15			
		DATE OF	CONC	LRL
ANALYTE	CAS NO	ANALYSIS	UG/M3	UG/M3
1,1 Dichloroethane	75-34-3	1/7/2012	< 0.81	0.81
1,1 Dichloroethene	75-35-4	1/7/2012	< 0.40	0.40
1,2 Dibromoethane	106-93-4	1/7/2012	< 1.54	1.54
1,2 Dichlorobenzene (v)	95-50-1	1/7/2012	< 3.01	3.01
1,2 Dichloroethane	107-06-2	1/7/2012	< 2.03	2.03
1,2 Dichloropropane	78-87-5	1/7/2012	< 2.31	2.31
1,2-Dichlorotetrafluoroethane	76-14-2	1/7/2012	< 1.40	1.40
1,3 Butadiene	106-99-0	1/7/2012	< 2.21	2.21
1,3 Dichlorobenzene (v)	541-73-1	1/7/2012	< 1.20	1.20
1,4 Dichlorobenzene (v)	106-46-7	1/7/2012	< 3.01	3.01
1,4-Dioxane	123-91-1	1/7/2012	< 3.60	3.60
111 Trichloroethane	71-55-6	1/7/2012	< 1.09	1.09
112 Trichloroethane	79-00-5	1/7/2012	< 1.09	1.09
1122Tetrachloroethane	79-34-5	1/7/2012	< 1.37	1.37
124-Trimethylbenzene	95-63-6	1/7/2012	< 2.46	2.46
135-Trimethylbenzene	108-67-8	1/7/2012	< 2.46	2.46
2,2,4-Trimethylpentane	540-84-1	1/7/2012	< 2.33	2.33
2-Hexanone	591-78-6	1/7/2012	< 2.05	2.05
3-Chloropropene	107-05-1	1/7/2012	< 1.57	1.57
Acetone	67-64-1	1/7/2012	9.04	2.38
Acrylonitrile	107-13-1	1/7/2012	< 2.17	2.17
Benzene	71-43-2	1/7/2012	< 0.64	0.64
Benzyl Chloride	100-44-7	1/7/2012	< 1.04	1.04
Bromodichloromethane	75-27-4	1/7/2012	< 1.33	1.33
Bromoform	75-25-2	1/7/2012	< 2.07	2.07
Bromomethane	74-83-9	1/7/2012	< 0.78	0.78
c-1,2-Dichloroethene	156-59-2	1/7/2012	< 0.79	0.79
c-1,3Dichloropropene	10061-01-5	1/7/2012	< 2.27	2.27
Carbon disulfide	75-15-0	1/7/2012	< 1.56	1.56
Carbon Tetrachloride	56-23-5	1/7/2012	< 2.52	2.52
Chlorobenzene	108-90-7	1/7/2012	< 0.92	0.92
Chlorodibromomethane	124-48-1	1/7/2012	< 1.69	1.69
Chloroethane	75-00-3	1/7/2012	< 2.64	2.64
Chloroform	67-66-3	1/7/2012	< 0.97	0.97
Chloromethane	74-87-3	1/7/2012	< 2.07	2.07
Cyclohexane	110-82-7	1/7/2012	< 0.69	0.69
Dichlorodifluoromethane	75-71-8	1/7/2012	< 0.99	0.99
Ethyl Acetate	141-78-6	1/7/2012	< 18.01	18.01
Ethyl alcohol	64-17-5	1/7/2012	109.21	3.77
Ethyl Benzene	100-41-4	1/7/2012	< 0.87	0.87
Freon 113	76-13-1	1/7/2012	< 0.77	0.77

ECOTEST ID	120060.06			
SOURCE OF SAMPLE	81 Pondfield Road, Bronxville			
SAMPLE ID	Unit #1			
DATE SAMPLED	1/5/2012			
MATRIX	Air			
ANALYTICAL METHOD	EPA TO-15			
		DATE OF	CONC	LRL
ANALYTE	CAS NO	ANALYSIS	UG/M3	UG/M3
Heptane	142-82-5	1/7/2012	< 2.05	2.05
Hexachlorobutadiene	87-68-3	1/7/2012	< 5.34	5.34
Hexane	110-54-3	1/7/2012	< 1.76	1.76
Isopropyl Alcohol	67-63-0	1/7/2012	< 12.28	12.28
m + p Xylene	XYL-MP	1/7/2012	< 2.17	2.17
Methyl Ethyl Ketone	78-93-3	1/7/2012	< 2.95	2.95
Methylene Chloride	75-09-2	1/7/2012	< 0.69	0.69
Methylisobutylketone	108-10-1	1/7/2012	< 4.10	4.10
o Xylene	95-47-6	1/7/2012	< 0.87	0.87
p-Ethyltoluene	622-96-8	1/7/2012	< 2.46	2.46
Propylene	115-07-1	1/7/2012	< 0.86	0.86
Styrene	100-42-5	1/7/2012	< 0.85	0.85
t-1,2-Dichloroethene	156-60-5	1/7/2012	< 0.79	0.79
t-1,3Dichloropropene	10061-02-6	1/7/2012	< 0.91	0.91
ter. ButylMethylEther	1634-04-4	1/7/2012	< 0.70	0.70
tert. Butyl Alcohol	75-65-0	1/7/2012	< 6.06	6.06
Tetrachloroethene	127-18-4	1/7/2012	4.21	1.36
Tetrahydrofuran	109-99-9	1/7/2012	< 1.47	1.47
Toluene	108-88-3	1/7/2012	2.15	0.75
Trichloroethene	79-01-6	1/7/2012	< 1.07	1.07
Trichlorofluoromethane	75-69-4	1/7/2012	< 1.12	1.12
Vinyl Acetate	108-05-4	1/7/2012	< 1.76	1.76
Vinyl Bromide	593-60-2	1/7/2012	< 0.88	0.88
Vinyl Chloride	75-01-4	1/7/2012	< 0.51	0.51

ECOTEST LABORATORIES INC.

377 Sheffield Ave.
North Babylon, NY 11703

tel. 631-422-5777, fax 631-422-5770, Email ECOTESTLAB@aol.com

CANISTER SAMPLING DATA SHEET

CANISTER SERIAL NO.

SAMPLE TRAIN SERIAL NO.

FLOW

EcoTest 50

20

11.6cc/min

This above referenced Summa can and sample train was received in good condition

DATE: 1/4/2012

CLIENT: ACT

CLIENTS AGENT (print): Yisang Yang

SIGNED:

Client agrees to pay all replacement costs associated with loss or damage of canister. Client acknowledges that this canister is valid for a maximum of 30 days from the date of evacuation. Client is responsible for any vacuum loss or contamination while in clients custody.

VAC leaving EcoTest:

29" Hg

PERSON RECEIVING REPORT:

Date Evacuated:

1/4/2012

ANALYSIS:

VAC/PRES returned EcoTest:

7.5" Hg

TAT: 5 DAY TAT

CANISTER SERIAL NO.

50

SAMPLE TRAIN SERIAL NO.

20

RETURNED IN GOOD CONDITION TO ECOTEST LABORATORIES INC.

DATE:

1/6/12

SIGNED:

for ECOTEST LABS.

ALL INFORMATION BELOW MUST BE PROVIDED BY CLIENT:

CLIENT	Advanced Cleanup Technologies	SAMPLE TYPE	
SOURCE	81 Pondfield Road, Brookville, NY	CHECK ONE	
SAMPLE	Unit #1	AMBIENT AIR	☒
DATE SAMPLED	1/5/12	SUB SLAB VAPOR	
TIME SAMPLING STARTED:	8:22am	VAPOR WELL	
TIME SAMPLING FINISHED:	2:01pm	SVE SYSTEM	
TEMPERATURE SAMPLING STARTED:	70°	EXPECTED CONC	
TEMPERATURE SAMPLING FINISHED:	70°	CHECK ONE	
DATE:	1/6/12	LOW	☒
CLIENT:	Advanced Cleanup Technologies	MEDIUM	
CLIENTS AGENT:	Yisang Yang	HIGH	
RELINQUISHED BY:		DATE/TIME:	
RECEIVED BY:		DATE/TIME:	1/5/12 10:20
RELINQUISHED BY:		DATE/TIME:	
RECEIVED BY:		DATE/TIME:	

Wednesday, March 14, 2012

Paul P. Stewart
Advanced Cleanup Technologies, Inc.
960 So. Broadway, Suite 100
Hicksville, NY 11801

TEL: (516) 933-0655

FAX (516) 933-0659

RE: Bronxville, NY; Proj. No. 6832-BVNY

Order No.: 1203090

Dear Paul P. Stewart:

American Analytical Laboratories, LLC. received 5 sample(s) on 3/12/2012 for the analyses presented in the following report.

Samples were analyzed in accordance with the test procedures documented on the chain of custody and detailed throughout the text of this report.

The results reported herein relate only to the items tested or to the samples as received by the laboratory. This report may not be reproduced, except in full, without the approval of American Analytical Laboratories, LLC and is not considered complete without a cover page and chain of custody documentation. The limits (LOQ) provided in the data package are analytical reporting limits and not Federal or Local mandated values to which the sample results should be compared.

There were no problems with the analyses and all data for associated QC met laboratory specifications. If there are any exceptions a Case Narrative is provided in the report or the data is qualified. This package has been reviewed by American Analytical Laboratories' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal. This report consists of 40 pages.

If you have any questions regarding these tests results, please do not hesitate to call (631) 454-6100 or email me directly at lbeyer@american-analytical.com.

Sincerely,

Lori Beyer
Lab Director



American Analytical Laboratories, LLC.**Date:** 14-Mar-12

CLIENT: Advanced Cleanup Technologies, Inc.
Project: Bronxville, NY; Proj. No. 6832-BVNY
Lab Order: 1203090

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date Collected	Date Received
1203090-01A	ACT-1 10-11'	3/9/2012 12:00:00 PM	3/12/2012
1203090-02A	ACT-1 14-15'	3/9/2012 12:30:00 PM	3/12/2012
1203090-03A	ACT-2 9-10'	3/9/2012 1:00:00 PM	3/12/2012
1203090-04A	ACT-1	3/9/2012 1:30:00 PM	3/12/2012
1203090-05A	ACT-2	3/9/2012 2:00:00 PM	3/12/2012

American Analytical Laboratories, LLC.

Sample Receipt Checklist

Client Name ADVANCED CLEANUP TECH

Date and Time Receive 3/12/2012 10:41:30 AM

Work Order Numbe 1203090

RcptNo: 1

Received by PM

COC_ID:

CoolerID:

Checklist completed b

Signature John Bay Date 3/12/12

Reviewed by

Initials P. mass Date 3/12/12

Matrix

Carrier name Client

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Presen ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Presen ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Presen ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☒	No ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐

Adjusted _____ Checked b _____

Any No and/or NA (not applicable) response must be detailed in the comments section b

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments:

Corrective Action _____

American Analytical Laboratories, LLC.

Date: 14-Mar-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY
Lab ID: 1203090-01A

Client Sample ID: ACT-1 10-11'
Collection Date: 3/9/2012 12:00:00 PM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
PERCENT MOISTURE							
Percent Moisture	19.5	0	0		wt%	1	3/12/2012
VOLATILE SW-846 METHOD 8260							
				D2216			Analyst: KK
							3/12/2012
							Analyst: LA
1,1,1,2-Tetrachloroethane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
1,1,1-Trichloroethane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
1,1,2,2-Tetrachloroethane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
1,1,2-Trichloroethane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
1,1-Dichloroethane	U	0.62	6.2	C	µg/Kg-dry	1	3/12/2012 5:11:00 PM
1,1-Dichloroethene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
1,1-Dichloropropene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
1,2,3-Trichlorobenzene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
1,2,3-Trichloropropane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
1,2,4,5-Tetramethylbenzene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
1,2,4-Trichlorobenzene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
1,2,4-Trimethylbenzene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
1,2-Dibromo-3-chloropropane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
1,2-Dibromoethane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
1,2-Dichlorobenzene	2.0	0.62	6.2	J	µg/Kg-dry	1	3/12/2012 5:11:00 PM
1,2-Dichloroethane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
1,2-Dichloropropane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
1,3,5-Trimethylbenzene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
1,3-Dichlorobenzene	1.4	0.62	6.2	J	µg/Kg-dry	1	3/12/2012 5:11:00 PM
1,3-dichloropropane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
1,4-Dichlorobenzene	2.6	0.62	6.2	J	µg/Kg-dry	1	3/12/2012 5:11:00 PM
1,4-Dioxane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
2,2-Dichloropropane	U	0.62	6.2	C	µg/Kg-dry	1	3/12/2012 5:11:00 PM
2-Butanone	U	1.86	6.2	C	µg/Kg-dry	1	3/12/2012 5:11:00 PM
2-Chloroethyl vinyl ether	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
2-Chlorotoluene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
2-Hexanone	U	1.86	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
2-Propanol	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
4-Chlorotoluene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 14-Mar-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY
Lab ID: 1203090-01A

Client Sample ID: ACT-1 10-11'
Collection Date: 3/9/2012 12:00:00 PM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
4-Isopropyltoluene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
4-Methyl-2-pentanone	U	1.86	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Acetone	U	1.86	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Acrolein	U	3.1	12	C	µg/Kg-dry	1	3/12/2012 5:11:00 PM
Acrylonitrile	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Benzene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Bromobenzene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Bromochloromethane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Bromodichloromethane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Bromoform	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Bromomethane	U	0.62	6.2	C	µg/Kg-dry	1	3/12/2012 5:11:00 PM
Carbon disulfide	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Carbon tetrachloride	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Chlorobenzene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Chlorodifluoromethane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Chloroethane	U	0.62	6.2	C	µg/Kg-dry	1	3/12/2012 5:11:00 PM
Chloroform	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Chloromethane	U	0.62	6.2	C	µg/Kg-dry	1	3/12/2012 5:11:00 PM
cis-1,2-Dichloroethene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
cis-1,3-Dichloropropene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Dibromochloromethane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Dibromomethane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Dichlorodifluoromethane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Diisopropyl ether	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Ethanol	U	3.1	12		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Ethyl acetate	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Ethylbenzene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Freon-114	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Hexachlorobutadiene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Isopropyl acetate	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Isopropylbenzene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
m,p-Xylene	U	1.24	12		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Methyl Acetate	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 14-Mar-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY
Lab ID: 1203090-01A

Client Sample ID: ACT-1 10-11'
Collection Date: 3/9/2012 12:00:00 PM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Methyl tert-butyl ether	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Methylene chloride	8.5	0.62	6.2	B	µg/Kg-dry	1	3/12/2012 5:11:00 PM
n-Amyl acetate	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Naphthalene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
n-Butyl acetate	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
n-Butylbenzene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
n-Propyl acetate	U	0.62	6.2	C	µg/Kg-dry	1	3/12/2012 5:11:00 PM
n-Propylbenzene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
o-Xylene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
p-Diethylbenzene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
p-Ethyltoluene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
sec-Butylbenzene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Styrene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
t-Butyl alcohol	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
tert-Butylbenzene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Tetrachloroethene	2800	77.5	770		µg/Kg-dry	125	3/13/2012 4:03:00 PM
Toluene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
trans-1,2-Dichloroethene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
trans-1,3-Dichloropropene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Trichloroethene	2.5	0.62	6.2	J	µg/Kg-dry	1	3/12/2012 5:11:00 PM
Trichlorofluoromethane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Vinyl acetate	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Vinyl chloride	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:11:00 PM
Surr: 4-Bromofluorobenzene	92.7	0	42-133		%REC	125	3/13/2012 4:03:00 PM
Surr: 4-Bromofluorobenzene	82.9	0	42-133		%REC	1	3/12/2012 5:11:00 PM
Surr: Dibromofluoromethane	83.2	0	50-133		%REC	1	3/12/2012 5:11:00 PM
Surr: Dibromofluoromethane	97.3	0	50-133		%REC	125	3/13/2012 4:03:00 PM
Surr: Toluene-d8	99.5	0	53-130		%REC	125	3/13/2012 4:03:00 PM
Surr: Toluene-d8	96.8	0	53-130		%REC	1	3/12/2012 5:11:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 14-Mar-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY
Lab ID: 1203090-02A

Client Sample ID: ACT-1 14-15'
Collection Date: 3/9/2012 12:30:00 PM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
PERCENT MOISTURE							
Percent Moisture	19.6	0	0		wt%	1	3/12/2012
VOLATILE SW-846 METHOD 8260							
			D2216				Analyst: KK
			SW8260C				Analyst: LA
1,1,1,2-Tetrachloroethane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
1,1,1-Trichloroethane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
1,1,2,2-Tetrachloroethane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
1,1,2-Trichloroethane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
1,1-Dichloroethane	U	0.62	6.2	C	µg/Kg-dry	1	3/12/2012 5:35:00 PM
1,1-Dichloroethene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
1,1-Dichloropropene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
1,2,3-Trichlorobenzene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
1,2,3-Trichloropropane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
1,2,4,5-Tetramethylbenzene	10000	387	3900		µg/Kg-dry	625	3/13/2012 4:26:00 PM
1,2,4-Trichlorobenzene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
1,2,4-Trimethylbenzene	57	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
1,2-Dibromo-3-chloropropane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
1,2-Dibromoethane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
1,2-Dichlorobenzene	47	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
1,2-Dichloroethane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
1,2-Dichloropropane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
1,3,5-Trimethylbenzene	77	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
1,3-Dichlorobenzene	1.7	0.62	6.2	J	µg/Kg-dry	1	3/12/2012 5:35:00 PM
1,3-dichloropropane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
1,4-Dichlorobenzene	50	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
1,4-Dioxane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
2,2-Dichloropropane	U	0.62	6.2	C	µg/Kg-dry	1	3/12/2012 5:35:00 PM
2-Butanone	U	1.86	6.2	C	µg/Kg-dry	1	3/12/2012 5:35:00 PM
2-Chloroethyl vinyl ether	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
2-Chlorotoluene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
2-Hexanone	U	1.86	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
2-Propanol	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
4-Chlorotoluene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 14-Mar-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY
Lab ID: 1203090-02A

Client Sample ID: ACT-1 14-15'
Collection Date: 3/9/2012 12:30:00 PM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
4-Isopropyltoluene	31	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
4-Methyl-2-pentanone	U	1.86	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Acetone	U	1.86	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Acrolein	U	3.1	12	C	µg/Kg-dry	1	3/12/2012 5:35:00 PM
Acrylonitrile	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Benzene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Bromobenzene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Bromochloromethane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Bromodichloromethane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Bromoform	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Bromomethane	U	0.62	6.2	C	µg/Kg-dry	1	3/12/2012 5:35:00 PM
Carbon disulfide	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Carbon tetrachloride	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Chlorobenzene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Chlorodifluoromethane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Chloroethane	U	0.62	6.2	C	µg/Kg-dry	1	3/12/2012 5:35:00 PM
Chloroform	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Chloromethane	U	0.62	6.2	C	µg/Kg-dry	1	3/12/2012 5:35:00 PM
cis-1,2-Dichloroethene	1.6	0.62	6.2	J	µg/Kg-dry	1	3/12/2012 5:35:00 PM
cis-1,3-Dichloropropene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Dibromochloromethane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Dibromomethane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Dichlorodifluoromethane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Diisopropyl ether	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Ethanol	U	3.1	12		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Ethyl acetate	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Ethylbenzene	6.2	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Freon-114	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Hexachlorobutadiene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Isopropyl acetate	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Isopropylbenzene	1.3	0.62	6.2	J	µg/Kg-dry	1	3/12/2012 5:35:00 PM
m,p-Xylene	7.3	1.24	12	J	µg/Kg-dry	1	3/12/2012 5:35:00 PM
Methyl Acetate	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 14-Mar-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY
Lab ID: 1203090-02A

Client Sample ID: ACT-1 14-15'
Collection Date: 3/9/2012 12:30:00 PM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Methyl tert-butyl ether	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Methylene chloride	8.5	0.62	6.2	B	µg/Kg-dry	1	3/12/2012 5:35:00 PM
n-Amyl acetate	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Naphthalene	42	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
n-Butyl acetate	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
n-Butylbenzene	3.4	0.62	6.2	J	µg/Kg-dry	1	3/12/2012 5:35:00 PM
n-Propyl acetate	U	0.62	6.2	C	µg/Kg-dry	1	3/12/2012 5:35:00 PM
n-Propylbenzene	4.8	0.62	6.2	J	µg/Kg-dry	1	3/12/2012 5:35:00 PM
o-Xylene	21	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
p-Diethylbenzene	160	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
p-Ethyltoluene	60	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
sec-Butylbenzene	3.2	0.62	6.2	J	µg/Kg-dry	1	3/12/2012 5:35:00 PM
Styrene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
t-Butyl alcohol	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
tert-Butylbenzene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Tetrachloroethene	300000	387	3900		µg/Kg-dry	625	3/13/2012 4:26:00 PM
Toluene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
trans-1,2-Dichloroethene	1.4	0.62	6.2	J	µg/Kg-dry	1	3/12/2012 5:35:00 PM
trans-1,3-Dichloropropene	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Trichloroethene	21	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Trichlorofluoromethane	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Vinyl acetate	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Vinyl chloride	U	0.62	6.2		µg/Kg-dry	1	3/12/2012 5:35:00 PM
Surr: 4-Bromofluorobenzene	87.3	0	42-133		%REC	1	3/12/2012 5:35:00 PM
Surr: 4-Bromofluorobenzene	90.4	0	42-133		%REC	625	3/13/2012 4:26:00 PM
Surr: Dibromofluoromethane	99.7	0	50-133		%REC	625	3/13/2012 4:26:00 PM
Surr: Dibromofluoromethane	86.7	0	50-133		%REC	1	3/12/2012 5:35:00 PM
Surr: Toluene-d8	98.5	0	53-130		%REC	625	3/13/2012 4:26:00 PM
Surr: Toluene-d8	97.6	0	53-130		%REC	1	3/12/2012 5:35:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 14-Mar-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY
Lab ID: 1203090-03A

Client Sample ID: ACT-2 9-10'
Collection Date: 3/9/2012 1:00:00 PM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
PERCENT MOISTURE							
Percent Moisture	10.4	0	0		wt%	1	3/12/2012
VOLATILE SW-846 METHOD 8260							
			D2216				Analyst: KK
			SW8260C				Analyst: LA
1,1,1,2-Tetrachloroethane	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
1,1,1-Trichloroethane	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
1,1,2,2-Tetrachloroethane	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
1,1,2-Trichloroethane	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
1,1-Dichloroethane	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
1,1-Dichloroethene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
1,1-Dichloropropene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
1,2,3-Trichlorobenzene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
1,2,3-Trichloropropane	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
1,2,4,5-Tetramethylbenzene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
1,2,4-Trichlorobenzene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
1,2,4-Trimethylbenzene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
1,2-Dibromo-3-chloropropane	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
1,2-Dibromoethane	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
1,2-Dichlorobenzene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
1,2-Dichloroethane	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
1,2-Dichloropropane	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
1,3,5-Trimethylbenzene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
1,3-Dichlorobenzene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
1,3-dichloropropane	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
1,4-Dichlorobenzene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
1,4-Dioxane	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
2,2-Dichloropropane	U	0.55	5.5	C	µg/Kg-dry	1	3/13/2012 2:04:00 PM
2-Butanone	U	1.65	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
2-Chloroethyl vinyl ether	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
2-Chlorotoluene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
2-Hexanone	U	1.65	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
2-Propanol	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
4-Chlorotoluene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 14-Mar-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY
Lab ID: 1203090-03A

Client Sample ID: ACT-2 9-10'
Collection Date: 3/9/2012 1:00:00 PM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
4-Isopropyltoluene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
4-Methyl-2-pentanone	U	1.65	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Acetone	U	1.65	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Acrolein	U	2.75	11	C	µg/Kg-dry	1	3/13/2012 2:04:00 PM
Acrylonitrile	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Benzene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Bromobenzene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Bromochloromethane	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Bromodichloromethane	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Bromoform	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Bromomethane	U	0.55	5.5	C	µg/Kg-dry	1	3/13/2012 2:04:00 PM
Carbon disulfide	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Carbon tetrachloride	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Chlorobenzene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Chlorodifluoromethane	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Chloroethane	U	0.55	5.5	C	µg/Kg-dry	1	3/13/2012 2:04:00 PM
Chloroform	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Chloromethane	U	0.55	5.5	C	µg/Kg-dry	1	3/13/2012 2:04:00 PM
cis-1,2-Dichloroethene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
cis-1,3-Dichloropropene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Dibromochloromethane	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Dibromomethane	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Dichlorodifluoromethane	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Diisopropyl ether	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Ethanol	U	2.75	11		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Ethyl acetate	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Ethylbenzene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Freon-114	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Hexachlorobutadiene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Isopropyl acetate	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Isopropylbenzene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
m,p-Xylene	U	1.1	11		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Methyl Acetate	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 14-Mar-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY
Lab ID: 1203090-03A

Client Sample ID: ACT-2 9-10'
Collection Date: 3/9/2012 1:00:00 PM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Methyl tert-butyl ether	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Methylene chloride	4.4	0.55	5.5	JB	µg/Kg-dry	1	3/13/2012 2:04:00 PM
n-Amyl acetate	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Naphthalene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
n-Butyl acetate	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
n-Butylbenzene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
n-Propyl acetate	U	0.55	5.5	C	µg/Kg-dry	1	3/13/2012 2:04:00 PM
n-Propylbenzene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
o-Xylene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
p-Diethylbenzene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
p-Ethyltoluene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
sec-Butylbenzene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Styrene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
t-Butyl alcohol	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
tert-Butylbenzene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Tetrachloroethene	1.3	0.55	5.5	J	µg/Kg-dry	1	3/13/2012 2:04:00 PM
Toluene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
trans-1,2-Dichloroethene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
trans-1,3-Dichloropropene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Trichloroethene	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Trichlorofluoromethane	U	0.55	5.5	C	µg/Kg-dry	1	3/13/2012 2:04:00 PM
Vinyl acetate	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Vinyl chloride	U	0.55	5.5		µg/Kg-dry	1	3/13/2012 2:04:00 PM
Surr: 4-Bromofluorobenzene	83.3	0	42-133		%REC	1	3/13/2012 2:04:00 PM
Surr: Dibromofluoromethane	80.8	0	50-133		%REC	1	3/13/2012 2:04:00 PM
Surr: Toluene-d8	97.2	0	53-130		%REC	1	3/13/2012 2:04:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 14-Mar-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY
Lab ID: 1203090-04A

Client Sample ID: ACT-1
Collection Date: 3/9/2012 1:30:00 PM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
1,1,1,2-Tetrachloroethane	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
1,1,1-Trichloroethane	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
1,1,2,2-Tetrachloroethane	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
1,1,2-Trichloroethane	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
1,1-Dichloroethane	U	0.5	1.0	C	µg/L	1	3/12/2012 12:07:00 PM
1,1-Dichloroethene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
1,1-Dichloropropene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
1,2,3-Trichlorobenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
1,2,3-Trichloropropane	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
1,2,4,5-Tetramethylbenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
1,2,4-Trichlorobenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
1,2,4-Trimethylbenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
1,2-Dibromo-3-chloropropane	U	1	2.0		µg/L	1	3/12/2012 12:07:00 PM
1,2-Dibromoethane	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
1,2-Dichlorobenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
1,2-Dichloroethane	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
1,2-Dichloropropane	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
1,3,5-Trimethylbenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
1,3-Dichlorobenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
1,3-dichloropropane	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
1,4-Dichlorobenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
1,4-Dioxane	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
2,2-Dichloropropane	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
2-Butanone	U	1.2	2.5		µg/L	1	3/12/2012 12:07:00 PM
2-Chloroethyl vinyl ether	U	1	2.0		µg/L	1	3/12/2012 12:07:00 PM
2-Chlorotoluene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
2-Hexanone	U	1.2	2.5		µg/L	1	3/12/2012 12:07:00 PM
2-Propanol	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
4-Chlorotoluene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
4-Isopropyltoluene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
4-Methyl-2-pentanone	U	1.2	2.5		µg/L	1	3/12/2012 12:07:00 PM
Acetone	U	1.2	2.5		µg/L	1	3/12/2012 12:07:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 14-Mar-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY
Lab ID: 1203090-04A

Client Sample ID: ACT-1
Collection Date: 3/9/2012 1:30:00 PM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Acrolein	U	2.5	5.0	C	µg/L	1	3/12/2012 12:07:00 PM
Acrylonitrile	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Benzene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Bromobenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Bromochloromethane	U	0.5	1.0	C	µg/L	1	3/12/2012 12:07:00 PM
Bromodichloromethane	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Bromoform	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Bromomethane	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Carbon disulfide	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Carbon tetrachloride	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Chlorobenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Chlorodifluoromethane	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Chloroethane	U	0.5	1.0	C	µg/L	1	3/12/2012 12:07:00 PM
Chloroform	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Chloromethane	U	0.5	1.0	C	µg/L	1	3/12/2012 12:07:00 PM
cis-1,2-Dichloroethene	U	0.5	1.0	C	µg/L	1	3/12/2012 12:07:00 PM
cis-1,3-Dichloropropene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Dibromochloromethane	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Dibromomethane	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Dichlorodifluoromethane	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Diisopropyl ether	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Ethanol	U	2.5	5.0		µg/L	1	3/12/2012 12:07:00 PM
Ethyl acetate	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Ethylbenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Freon-114	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Hexachlorobutadiene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Isopropyl acetate	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Isopropylbenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
m,p-Xylene	U	1	2.0		µg/L	1	3/12/2012 12:07:00 PM
Methyl Acetate	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Methyl tert-butyl ether	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Methylene chloride	5.1	0.5	1.0	BC	µg/L	1	3/12/2012 12:07:00 PM
n-Amyl acetate	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 14-Mar-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY
Lab ID: 1203090-04A

Client Sample ID: ACT-1
Collection Date: 3/9/2012 1:30:00 PM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Naphthalene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
n-Butyl acetate	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
n-Butylbenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
n-Propyl acetate	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
n-Propylbenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
o-Xylene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
p-Diethylbenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
p-Ethyltoluene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
sec-Butylbenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Styrene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
t-Butyl alcohol	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
tert-Butylbenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Tetrachloroethene	73	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Toluene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
trans-1,2-Dichloroethene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
trans-1,3-Dichloropropene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Trichloroethene	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Trichlorofluoromethane	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Vinyl acetate	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Vinyl chloride	U	0.5	1.0		µg/L	1	3/12/2012 12:07:00 PM
Surr: 4-Bromofluorobenzene	88.9	0	63-123		%REC	1	3/12/2012 12:07:00 PM
Surr: Dibromofluoromethane	105	0	68-124		%REC	1	3/12/2012 12:07:00 PM
Surr: Toluene-d8	97.6	0	67-125		%REC	1	3/12/2012 12:07:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 14-Mar-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY
Lab ID: 1203090-05A

Client Sample ID: ACT-2
Collection Date: 3/9/2012 2:00:00 PM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
1,1,1,2-Tetrachloroethane	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
1,1,1-Trichloroethane	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
1,1,2,2-Tetrachloroethane	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
1,1,2-Trichloroethane	U	0.5	1.0	C	µg/L	1	3/12/2012 12:29:00 PM
1,1-Dichloroethane	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
1,1-Dichloroethene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
1,1-Dichloropropene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
1,2,3-Trichlorobenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
1,2,3-Trichloropropane	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
1,2,4,5-Tetramethylbenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
1,2,4-Trichlorobenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
1,2,4-Trimethylbenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
1,2-Dibromo-3-chloropropane	U	1	2.0		µg/L	1	3/12/2012 12:29:00 PM
1,2-Dibromoethane	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
1,2-Dichlorobenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
1,2-Dichloroethane	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
1,2-Dichloropropane	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
1,3,5-Trimethylbenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
1,3-Dichlorobenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
1,3-dichloropropane	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
1,4-Dichlorobenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
1,4-Dioxane	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
2,2-Dichloropropane	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
2-Butanone	U	1.2	2.5		µg/L	1	3/12/2012 12:29:00 PM
2-Chloroethyl vinyl ether	U	1	2.0		µg/L	1	3/12/2012 12:29:00 PM
2-Chlorotoluene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
2-Hexanone	U	1.2	2.5		µg/L	1	3/12/2012 12:29:00 PM
2-Propanol	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
4-Chlorotoluene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
4-Isopropyltoluene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
4-Methyl-2-pentanone	U	1.2	2.5		µg/L	1	3/12/2012 12:29:00 PM
Acetone	U	1.2	2.5		µg/L	1	3/12/2012 12:29:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 14-Mar-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY
Lab ID: 1203090-05A

Client Sample ID: ACT-2
Collection Date: 3/9/2012 2:00:00 PM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Acrolein	U	2.5	5.0	C	µg/L	1	3/12/2012 12:29:00 PM
Acrylonitrile	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Benzene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Bromobenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Bromochloromethane	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Bromodichloromethane	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Bromoform	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Bromomethane	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Carbon disulfide	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Carbon tetrachloride	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Chlorobenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Chlorodifluoromethane	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Chloroethane	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Chloroform	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Chloromethane	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
cis-1,2-Dichloroethene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
cis-1,3-Dichloropropene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Dibromochloromethane	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Dibromomethane	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Dichlorodifluoromethane	U	0.5	1.0	C	µg/L	1	3/12/2012 12:29:00 PM
Diisopropyl ether	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Ethanol	U	2.5	5.0		µg/L	1	3/12/2012 12:29:00 PM
Ethyl acetate	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Ethylbenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Freon-114	U	0.5	1.0	C	µg/L	1	3/12/2012 12:29:00 PM
Hexachlorobutadiene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Isopropyl acetate	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Isopropylbenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
m,p-Xylene	U	1	2.0		µg/L	1	3/12/2012 12:29:00 PM
Methyl Acetate	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Methyl tert-butyl ether	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Methylene chloride	4.6	0.5	1.0	B	µg/L	1	3/12/2012 12:29:00 PM
n-Amyl acetate	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 14-Mar-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY
Lab ID: 1203090-05A

Client Sample ID: ACT-2
Collection Date: 3/9/2012 2:00:00 PM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Naphthalene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
n-Butyl acetate	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
n-Butylbenzene	U	0.5	1.0	C	µg/L	1	3/12/2012 12:29:00 PM
n-Propyl acetate	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
n-Propylbenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
o-Xylene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
p-Diethylbenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
p-Ethyltoluene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
sec-Butylbenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Styrene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
t-Butyl alcohol	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
tert-Butylbenzene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Tetrachloroethene	40	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Toluene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
trans-1,2-Dichloroethene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
trans-1,3-Dichloropropene	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Trichloroethene	0.59	0.5	1.0	J	µg/L	1	3/12/2012 12:29:00 PM
Trichlorofluoromethane	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Vinyl acetate	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Vinyl chloride	U	0.5	1.0		µg/L	1	3/12/2012 12:29:00 PM
Surr: 4-Bromofluorobenzene	93.7	0	63-123		%REC	1	3/12/2012 12:29:00 PM
Surr: Dibromofluoromethane	106	0	68-124		%REC	1	3/12/2012 12:29:00 PM
Surr: Toluene-d8	99.8	0	67-125		%REC	1	3/12/2012 12:29:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

Date: 14-Mar-12

ANALYTICAL QC SUMMARY REPORT

Project: Bronxville, NY; Proj. No. 6832-BVNY

Sample ID: V624LCS-031212LS		SampType: LCS		TestCode: DryFull8260_			Units: µg/Kg		Prep Date: 3/12/2012		RunNo: 62541	
Client ID: LCSS		Batch ID: R62541		TestNo: SW8260C				Analysis Date: 3/12/2012		SeqNo: 878032		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual	
1,1,1-Trichloroethane	36	5.0	50.00	0	71.4	40	125				C	
1,1,1,2-Tetrachloroethane	48	5.0	50.00	0	95.5	41	130					
1,1,2-Trichloroethane	38	5.0	50.00	0	77.0	43	121					
1,1-Dichloroethane	37	5.0	50.00	0	74.4	42	126					
1,1-Dichloroethene	37	5.0	50.00	0	73.2	40	126					
1,2-Dichlorobenzene	43	5.0	50.00	0	86.8	41	122					
1,2-Dichloroethane	37	5.0	50.00	0	73.8	42	133					
1,2-Dichloropropane	38	5.0	50.00	0	76.9	41	128					
1,3-Dichlorobenzene	46	5.0	50.00	0	91.0	45	119					
1,4-Dichlorobenzene	43	5.0	50.00	0	86.2	46	121					
2-Chloroethyl vinyl ether	34	5.0	50.00	0	68.5	30	135				C	
Benzene	35	5.0	50.00	0	70.3	35	123					
Bromodichloromethane	38	5.0	50.00	0	75.3	37	130					
Bromoform	46	5.0	50.00	0	91.4	43	121					
Bromomethane	21	5.0	50.00	0	42.3	32	130					
Carbon tetrachloride	37	5.0	50.00	0	74.9	37	134					
Chlorobenzene	40	5.0	50.00	0	80.8	40	124					
Chloroethane	23	5.0	50.00	0	46.8	35	141					
Chloroform	39	5.0	50.00	0	77.0	36	126					
Chloromethane	23	5.0	50.00	0	46.7	42	141					
cis-1,3-Dichloropropene	38	5.0	50.00	0	76.2	30	130				B	
Dibromochloromethane	39	5.0	50.00	0	77.5	43	125					
Ethylbenzene	40	5.0	50.00	0	79.5	44	122					
Methylene chloride	36	5.0	50.00	0	71.4	32	132					
Tetrachloroethene	34	5.0	50.00	0	68.8	31	120					
Toluene	36	5.0	50.00	0	72.1	42	124					
trans-1,3-Dichloropropene	37	5.0	50.00	0	74.4	45	123					
Trichloroethene	39	5.0	50.00	0	78.9	46	124					
Trichlorofluoromethane	32	5.0	50.00	0	63.1	45	137					
Vinyl chloride	28	5.0	50.00	0	56.9	46	139					

Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes	H	Holding times for preparation or analysis
J	Analyte detected below quantitation limits	P	>40% diff for detected conc between the two GC columns	PQL	Practical Quantitation Limit	
R	RPD outside accepted recovery limits	S	Spike Recovery outside accepted recovery limits	U	Indicates the compound was analyzed	

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: V624LCS-031212LS	SampType: LCS	TestCode: DryFull8260_	Units: µg/Kg	Prep Date: 3/12/2012	RunNo: 62541						
Client ID: LCSS	Batch ID: R62541	TestNo: SW8260C		Analysis Date: 3/12/2012	SeqNo: 878032						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: VBLK-031212LS	SampType: MBLK	TestCode: DryFull8260_	Units: µg/Kg	Prep Date: 3/12/2012	RunNo: 62541						
Client ID: PBS	Batch ID: R62541	TestNo: SW8260C		Analysis Date: 3/12/2012	SeqNo: 878033						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1,2-Tetrachloroethane	U	5.0									
1,1,1-Trichloroethane	U	5.0									
1,1,2,2-Tetrachloroethane	U	5.0									
1,1,2-Trichloro-1,2,2-trifluoroethane	U	5.0									
1,1,2-Trichloroethane	U	5.0									
1,1-Dichloroethane	U	5.0									
1,1-Dichloroethene	U	5.0									
1,1-Dichloropropene	U	5.0									
1,2,3-Trichlorobenzene	U	5.0									
1,2,3-Trichloropropane	U	5.0									
1,2,4,5-Tetramethylbenzene	U	5.0									
1,2,4-Trichlorobenzene	U	5.0									
1,2,4-Trimethylbenzene	U	5.0									
1,2-Dibromo-3-chloropropane	U	5.0									
1,2-Dibromoethane	U	5.0									
1,2-Dichlorobenzene	U	5.0									
1,2-Dichloroethane	U	5.0									
1,2-Dichloropropane	U	5.0									
1,3,5-Trimethylbenzene	U	5.0									
1,3-Dichlorobenzene	U	5.0									
1,3-dichloropropane	U	5.0									
1,4-Dichlorobenzene	U	5.0									
1,4-Dioxane	U	5.0									

C

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%d exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analysis
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: VBLK-031212LS		SampType: MBLK		TestCode: DryFull8260_ Units: µg/Kg		Prep Date: 3/12/2012		RunNo: 62541			
Client ID: PBS		Batch ID: R62541		TestNo: SW8260C		Analysis Date: 3/12/2012		SeqNo: 878033			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2-Dichloropropane	U	5.0									C
2-Butanone	U	5.0									C
2-Chloroethyl vinyl ether	U	5.0									
2-Chlorotoluene	U	5.0									
2-Hexanone	U	5.0									
2-Propanol	U	5.0									
4-Chlorotoluene	U	5.0									
4-Isopropyltoluene	U	5.0									
4-Methyl-2-pentanone	U	5.0									
Acetone	U	5.0									
Acrolein	U	10									C
Acrylonitrile	U	5.0									
Benzene	U	5.0									
Bromobenzene	U	5.0									
Bromochloromethane	U	5.0									
Bromodichloromethane	U	5.0									
Bromoform	U	5.0									C
Bromomethane	U	5.0									
Carbon disulfide	U	5.0									
Carbon tetrachloride	U	5.0									
Chlorobenzene	U	5.0									C
Chlorodifluoromethane	U	5.0									
Chloroethane	U	5.0									C
Chloroform	U	5.0									C
Chloromethane	U	5.0									
cis-1,2-Dichloroethene	U	5.0									
cis-1,3-Dichloropropene	U	5.0									
Dibromochloromethane	U	5.0									
Dibromomethane	U	5.0									
Dichlorodifluoromethane	U	5.0									
Diisopropyl ether	U	5.0									

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: VBLK-031212LS		SampType: MBLK	TestCode: DryFull8260_	Units: µg/Kg	Prep Date: 3/12/2012	RunNo: 62541					
Client ID: PBS	Batch ID: R62541		TestNo: SW8260C		Analysis Date: 3/12/2012	SeqNo: 878033					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethanol	U	10									
Ethyl acetate	U	5.0									
Ethylbenzene	U	5.0									
Freon-114	U	5.0									
Hexachlorobutadiene	U	5.0									
Isopropyl acetate	U	5.0									
Isopropylbenzene	U	5.0									
m,p-Xylene	U	10									
Methyl Acetate	U	5.0									
Methyl tert-butyl ether	U	5.0									
Methylene chloride	4.0	5.0									J
n-Amyl acetate	U	5.0									
Naphthalene	U	5.0									
n-Butyl acetate	U	5.0									
n-Butylbenzene	U	5.0									
n-Propyl acetate	U	5.0									
n-Propylbenzene	U	5.0									
o-Xylene	U	5.0									
p-Diethylbenzene	U	5.0									
p-Ethyltoluene	U	5.0									
sec-Butylbenzene	U	5.0									
Styrene	U	5.0									
t-Butyl alcohol	U	5.0									
tert-Butylbenzene	U	5.0									
Tetrachloroethene	U	5.0									
Toluene	U	5.0									
trans-1,2-Dichloroethene	U	5.0									
trans-1,3-Dichloropropene	U	5.0									
Trichloroethene	U	5.0									
Trichlorofluoromethane	U	5.0									
Vinyl acetate	U	5.0									
											C

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analysis
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: VBLK-031212LS	SampType: MBLK	TestCode: DryFull8260_	Units: µg/Kg	Prep Date: 3/12/2012	RunNo: 62541						
Client ID: PBS	Batch ID: R62541	TestNo: SW8260C		Analysis Date: 3/12/2012	SeqNo: 878033						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Vinyl chloride	U	5.0									
Surr: 4-Bromofluorobenzene	47		50.00		93.5	42	133				
Surr: Dibromofluoromethane	51		50.00		101	50	133				
Surr: Toluene-d8	48		50.00		97.0	53	130				

Sample ID: V624LCS-031312LS	SampType: LCS	TestCode: DryFull8260_	Units: µg/Kg	Prep Date: 3/13/2012	RunNo: 62541						
Client ID: LCSS	Batch ID: R62541C	TestNo: SW8260C		Analysis Date: 3/13/2012	SeqNo: 878109						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	37	5.0	50.00	0	73.6	40	125				
1,1,2,2-Tetrachloroethane	43	5.0	50.00	0	86.7	41	130				
1,1,2-Trichloroethane	37	5.0	50.00	0	74.3	43	121				
1,1-Dichloroethane	38	5.0	50.00	0	76.5	42	126				
1,1-Dichloroethene	36	5.0	50.00	0	71.9	40	126				
1,2-Dichlorobenzene	42	5.0	50.00	0	84.0	41	122				
1,2-Dichloroethane	37	5.0	50.00	0	74.6	42	133				
1,2-Dichloropropane	39	5.0	50.00	0	78.5	41	128				
1,3-Dichlorobenzene	44	5.0	50.00	0	88.4	45	119				
1,4-Dichlorobenzene	42	5.0	50.00	0	83.4	46	121				
2-Chloroethyl vinyl ether	33	5.0	50.00	0	66.7	30	135				
Benzene	36	5.0	50.00	0	71.2	35	123				
Bromodichloromethane	38	5.0	50.00	0	75.3	37	130				
Bromoform	42	5.0	50.00	0	84.2	43	121				
Bromomethane	21	5.0	50.00	0	42.9	32	130				C
Carbon tetrachloride	38	5.0	50.00	0	76.0	37	134				
Chlorobenzene	40	5.0	50.00	0	80.9	40	124				
Chloroethane	24	5.0	50.00	0	47.5	35	141				C
Chloroform	39	5.0	50.00	0	78.2	36	126				
Chloromethane	24	5.0	50.00	0	47.1	42	141				C
cis-1,3-Dichloropropene	38	5.0	50.00	0	75.3	30	130				
Dibromochloromethane	38	5.0	50.00	0	75.1	43	125				

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analyte
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: V624LCS-031312LS		SampType: LCS		TestCode: DryFull8260_		Units: µg/Kg		Prep Date: 3/13/2012		RunNo: 62541	
Client ID: LCSS		Batch ID: R62541C		TestNo: SW8260C				Analysis Date: 3/13/2012		SeqNo: 878109	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene	40	5.0	50.00	0	80.2	44	122				B
Methylene chloride	35	5.0	50.00	0	70.9	32	132				
Tetrachloroethene	35	5.0	50.00	0	70.8	31	120				
Toluene	37	5.0	50.00	0	73.9	42	124				
trans-1,3-Dichloropropene	35	5.0	50.00	0	70.0	45	123				C
Trichloroethene	41	5.0	50.00	0	81.2	46	124				
Trichlorofluoromethane	33	5.0	50.00	0	65.6	45	137				
Vinyl chloride	29	5.0	50.00	0	57.6	46	139				
Surr: 4-Bromofluorobenzene	47		50.00		93.3	42	133				
Surr: Dibromofluoromethane	45		50.00		90.4	50	133				
Surr: Toluene-d8	50		50.00		100	53	130				

Sample ID: VBLK-031312LS		SampType: MBLK		TestCode: DryFull8260_		Units: µg/Kg		Prep Date: 3/13/2012		RunNo: 62541	
Client ID: PBS		Batch ID: R62541C		TestNo: SW8260C				Analysis Date: 3/13/2012		SeqNo: 878110	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	U	5.0									
1,1,1-Trichloroethane	U	5.0									
1,1,2,2-Tetrachloroethane	U	5.0									
1,1,2-Trichloro-1,2,2-trifluoroethane	U	5.0									
1,1,2-Trichloroethane	U	5.0									
1,1-Dichloroethane	U	5.0									
1,1-Dichloroethene	U	5.0									
1,1-Dichloropropene	U	5.0									
1,2,3-Trichlorobenzene	U	5.0									
1,2,3-Trichloropropane	U	5.0									
1,2,4,5-Tetramethylbenzene	U	5.0									
1,2,4-Trichlorobenzene	U	5.0									
1,2,4-Trimethylbenzene	U	5.0									
1,2-Dibromo-3-chloropropane	U	5.0									
1,2-Dibromoethane	U	5.0									

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC columns
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analysis
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: VBLK-031312LS		SampType: MBLK		TestCode: DryFull8260_		Units: µg/Kg		Prep Date: 3/13/2012		RunNo: 62541	
Client ID: PBS		Batch ID: R62541C		TestNo: SW8260C				Analysis Date: 3/13/2012		SeqNo: 878110	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichlorobenzene	U	5.0									
1,2-Dichloroethane	U	5.0									
1,2-Dichloropropane	U	5.0									
1,3,5-Trimethylbenzene	U	5.0									
1,3-Dichlorobenzene	U	5.0									
1,3-dichloropropane	U	5.0									
1,4-Dichlorobenzene	U	5.0									
1,4-Dioxane	U	5.0									
2,2-Dichloropropane	U	5.0									C
2-Butanone	U	5.0									
2-Chloroethyl vinyl ether	U	5.0									
2-Chlorotoluene	U	5.0									
2-Hexanone	U	5.0									
2-Propanol	U	5.0									
4-Chlorotoluene	U	5.0									
4-Isopropyltoluene	U	5.0									
4-Methyl-2-pentanone	U	5.0									
Acetone	U	5.0									C
Acrolein	U	10									
Acrylonitrile	U	5.0									
Benzene	U	5.0									
Bromobenzene	U	5.0									
Bromochloromethane	U	5.0									
Bromodichloromethane	U	5.0									
Bromoform	U	5.0									
Bromomethane	U	5.0									C
Carbon disulfide	U	5.0									
Carbon tetrachloride	U	5.0									
Chlorobenzene	U	5.0									
Chlorodifluoromethane	U	5.0									
Chloroethane	U	5.0									C

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: VBLK-031312LS		SampType: MBLK		TestCode: DryFull8260_		Units: µg/Kg		Prep Date: 3/13/2012		RunNo: 62541	
Client ID: PBS		Batch ID: R62541C		TestNo: SW8260C				Analysis Date: 3/13/2012		SeqNo: 878110	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroform	U	5.0									C
Chloromethane	U	5.0									
cis-1,2-Dichloroethene	U	5.0									
cis-1,3-Dichloropropene	U	5.0									J
Dibromochloromethane	U	5.0									
Dibromomethane	U	5.0									
Dichlorodifluoromethane	U	5.0									C
Diisopropyl ether	U	5.0									
Ethanol	U	10									
Ethyl acetate	U	5.0									J
Ethylbenzene	U	5.0									
Freon-114	U	5.0									
Hexachlorobutadiene	U	5.0									C
Isopropyl acetate	U	5.0									
Isopropylbenzene	U	5.0									
m,p-Xylene	U	10									J
Methyl Acetate	U	5.0									
Methyl tert-butyl ether	U	5.0									
Methylene chloride	3.1	5.0									C
n-Amyl acetate	U	5.0									
Naphthalene	U	5.0									
n-Butyl acetate	U	5.0									J
n-Butylbenzene	U	5.0									
n-Propyl acetate	U	5.0									
n-Propylbenzene	U	5.0									C
o-Xylene	U	5.0									
p-Diethylbenzene	U	5.0									
p-Ethyltoluene	U	5.0									J
sec-Butylbenzene	U	5.0									
Styrene	U	5.0									
t-Butyl alcohol	U	5.0									C

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: VBLK-031312LS		SampType: MBLK	TestCode: DryFull8260_		Units: µg/Kg	Prep Date: 3/13/2012		RunNo: 62541				
Client ID: PBS		Batch ID: R62541C	TestNo: SW8260C			Analysis Date: 3/13/2012		SeqNo: 878110				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
tert-Butylbenzene		U	5.0									
Tetrachloroethene		U	5.0									
Toluene		U	5.0									
trans-1,2-Dichloroethene		U	5.0									
trans-1,3-Dichloropropene		U	5.0									
Trichloroethene		U	5.0									
Trichlorofluoromethane		U	5.0									
Vinyl acetate		U	5.0									
Vinyl chloride		U	5.0									
Surr: 4-Bromofluorobenzene		45		50.00		89.5	42	133				
Surr: Dibromofluoromethane		49		50.00		98.4	50	133				
Surr: Toluene-d8		49		50.00		97.8	53	130				

C

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits

C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected cone between the two GC column
S Spike Recovery outside accepted recovery limits

H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: V624LCS-031212YW		SampType: LCS	TestCode: Full8260_W		Units: µg/L	Prep Date: 3/12/2012		RunNo: 62541			
Client ID: LCSW		Batch ID: R62541A	TestNo: SW8260C			Analysis Date: 3/12/2012		SeqNo: 878095			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	54	1.0	50.00	0	108	38	136				
1,1,2,2-Tetrachloroethane	52	1.0	50.00	0	104	50	124				
1,1,2-Trichloroethane	50	1.0	50.00	0	100	52	128				
1,1-Dichloroethane	58	1.0	50.00	0	116	55	123				C
1,1-Dichloroethene	54	1.0	50.00	0	109	48	128				
1,2-Dichlorobenzene	55	1.0	50.00	0	110	59	123				
1,2-Dichloroethane	56	1.0	50.00	0	112	52	129				
1,2-Dichloropropane	57	1.0	50.00	0	115	58	124				
1,3-Dichlorobenzene	55	1.0	50.00	0	109	51	124				
1,4-Dichlorobenzene	55	1.0	50.00	0	110	54	128				
2-Chloroethyl vinyl ether	54	2.0	50.00	0	109	25	141				
Benzene	58	1.0	50.00	0	115	53	131				
Bromodichloromethane	50	1.0	50.00	0	99.3	54	126				
Bromoform	44	1.0	50.00	0	88.7	53	127				
Bromomethane	34	1.0	50.00	0	67.2	42	150				
Carbon tetrachloride	55	1.0	50.00	0	110	46	135				
Chlorobenzene	54	1.0	50.00	0	107	53	121				C
Chloroethane	27	1.0	50.00	0	53.2	40	145				
Chloroform	56	1.0	50.00	0	112	41	135				C
Chloromethane	32	1.0	50.00	0	64.9	32	149				
cis-1,3-Dichloropropene	54	1.0	50.00	0	108	46	128				
Dibromochloromethane	51	1.0	50.00	0	103	42	124				
Ethylbenzene	54	1.0	50.00	0	108	52	135				
Methylene chloride	59	1.0	50.00	0	118	35	137				BC
Tetrachloroethene	47	1.0	50.00	0	94.6	26	126				
Toluene	53	1.0	50.00	0	105	51	130				
trans-1,2-Dichloroethene	54	1.0	50.00	0	107	49	125				
trans-1,3-Dichloropropene	51	1.0	50.00	0	102	43	125				
Trichloroethene	53	1.0	50.00	0	106	47	127				
Trichlorofluoromethane	44	1.0	50.00	0	87.9	50	152				
Vinyl chloride	38	1.0	50.00	0	76.4	50	149				

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or anal
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: V624LCS-031212YW	SampType: LCS	TestCode: Full8260_W	Units: µg/L	Prep Date: 3/12/2012	RunNo: 62541						
Client ID: LCSW	Batch ID: R62541A	TestNo: SW8260C		Analysis Date: 3/12/2012	SeqNo: 878095						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: 4-Bromofluorobenzene	47		50.00		93.4	63	123				
Surr: Dibromofluoromethane	52		50.00		105	68	124				
Surr: Toluene-d8	51		50.00		102	67	125				

Sample ID: VBLK-031212YW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 3/12/2012	RunNo: 62541						
Client ID: PBW	Batch ID: R62541A	TestNo: SW8260C		Analysis Date: 3/12/2012	SeqNo: 878096						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1,2-Tetrachloroethane	U	1.0									
1,1,1-Trichloroethane	U	1.0									
1,1,2,2-Tetrachloroethane	U	1.0									
1,1,2-Trichloro-1,2,2-trifluoroethane	U	1.0									
1,1,2-Trichloroethane	U	1.0									
1,1-Dichloroethane	U	1.0									
1,1-Dichloroethene	U	1.0									
1,1-Dichloropropene	U	1.0									
1,2,3-Trichlorobenzene	U	1.0									
1,2,3-Trichloropropane	U	1.0									
1,2,4,5-Tetramethylbenzene	U	1.0									
1,2,4-Trichlorobenzene	U	1.0									
1,2,4-Trimethylbenzene	U	1.0									
1,2-Dibromo-3-chloropropane	U	2.0									
1,2-Dibromoethane	U	1.0									
1,2-Dichlorobenzene	U	1.0									
1,2-Dichloroethane	U	1.0									
1,2-Dichloropropane	U	1.0									
1,3,5-Trimethylbenzene	U	1.0									
1,3-Dichlorobenzene	U	1.0									
1,3-dichloropropane	U	1.0									
1,4-Dichlorobenzene	U	1.0									
1,4-Dioxane	U	1.0									

C

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analysis
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC columns PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-031212YW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 3/12/2012	RunNo: 62541						
Client ID: PBW	Batch ID: R62541A	TestNo: SW8260C		Analysis Date: 3/12/2012	SeqNo: 878096						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2-Dichloropropane	U	1.0									
2-Butanone	U	2.5									
2-Chloroethyl vinyl ether	U	2.0									
2-Chlorotoluene	U	1.0									
2-Hexanone	U	2.5									
2-Propanol	U	1.0									
4-Chlorotoluene	U	1.0									
4-Isopropyltoluene	U	1.0									
4-Methyl-2-pentanone	U	2.5									
Acetone	U	2.5									
Acrolein	U	5.0									C
Acrylonitrile	U	1.0									
Benzene	U	1.0									
Bromobenzene	U	1.0									
Bromochloromethane	U	1.0									C
Bromodichloromethane	U	1.0									
Bromoform	U	1.0									
Bromomethane	U	1.0									
Carbon disulfide	U	1.0									
Carbon tetrachloride	U	1.0									
Chlorobenzene	U	1.0									
Chlorodifluoromethane	U	1.0									C
Chloroethane	U	1.0									
Chloroform	U	1.0									C
Chloromethane	U	1.0									C
cis-1,2-Dichloroethene	U	1.0									
cis-1,3-Dichloropropene	U	1.0									
Dibromochloromethane	U	1.0									
Dibromomethane	U	1.0									
Dichlorodifluoromethane	U	1.0									
Diisopropyl ether	U	1.0									

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-031212YW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 3/12/2012	RunNo: 62541						
Client ID: PBW	Batch ID: R62541A	TestNo: SW8260C		Analysis Date: 3/12/2012	SeqNo: 878096						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ethanol	U	5.0									
Ethyl acetate	U	1.0									
Ethylbenzene	U	1.0									
Freon-114	U	1.0									
Hexachlorobutadiene	U	1.0									
Isopropyl acetate	U	1.0									
Isopropylbenzene	U	1.0									
m,p-Xylene	U	2.0									
Methyl Acetate	U	1.0									
Methyl tert-butyl ether	U	1.0									
Methylene chloride	6.6	1.0									
n-Amyl acetate	U	1.0									
Naphthalene	U	1.0									
n-Butyl acetate	U	1.0									
n-Butylbenzene	U	1.0									
n-Propyl acetate	U	1.0									
n-Propylbenzene	U	1.0									
o-Xylene	U	1.0									
p-Diethylbenzene	U	1.0									
p-Ethyltoluene	U	1.0									
sec-Butylbenzene	U	1.0									
Styrene	U	1.0									
t-Butyl alcohol	U	1.0									
tert-Butylbenzene	U	1.0									
Tetrachloroethene	U	1.0									
Toluene	U	1.0									
trans-1,2-Dichloroethene	U	1.0									
trans-1,3-Dichloropropene	U	1.0									
Trichloroethene	U	1.0									
Trichlorofluoromethane	U	1.0									
Vinyl acetate	U	1.0									

C

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analysis
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-031212YW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 3/12/2012	RunNo: 62541						
Client ID: PBW	Batch ID: R62541A	TestNo: SW8260C		Analysis Date: 3/12/2012	SeqNo: 878096						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Vinyl chloride	U	1.0									
Surr: 4-Bromofluorobenzene	46		50.00		92.8	63	123				
Surr: Dibromofluoromethane	53		50.00		107	68	124				
Surr: Toluene-d8	51		50.00		101	67	125				

Sample ID: V624LCS-031212YW	SampType: LCS	TestCode: Full8260_W	Units: µg/L	Prep Date: 3/12/2012	RunNo: 62541						
Client ID: LCSW	Batch ID: R62541B	TestNo: SW8260C		Analysis Date: 3/12/2012	SeqNo: 878099						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	52	1.0	50.00	0	105	38	136				
1,1,2,2-Tetrachloroethane	50	1.0	50.00	0	101	50	124				
1,1,2-Trichloroethane	50	1.0	50.00	0	99.1	52	128				C
1,1-Dichloroethane	56	1.0	50.00	0	113	55	123				
1,1-Dichloroethene	54	1.0	50.00	0	108	48	128				
1,2-Dichlorobenzene	54	1.0	50.00	0	109	59	123				
1,2-Dichloroethane	55	1.0	50.00	0	110	52	129				
1,2-Dichloropropane	55	1.0	50.00	0	110	58	124				
1,3-Dichlorobenzene	53	1.0	50.00	0	106	51	124				
1,4-Dichlorobenzene	54	1.0	50.00	0	108	54	128				
2-Chloroethyl vinyl ether	53	2.0	50.00	0	106	25	141				
Benzene	56	1.0	50.00	0	112	53	131				
Bromodichloromethane	48	1.0	50.00	0	95.6	54	126				
Bromoform	44	1.0	50.00	0	88.5	53	127				
Bromomethane	29	1.0	50.00	0	57.4	42	150				
Carbon tetrachloride	54	1.0	50.00	0	109	46	135				
Chlorobenzene	53	1.0	50.00	0	106	53	121				
Chloroethane	26	1.0	50.00	0	52.0	40	145				
Chloroform	54	1.0	50.00	0	109	41	135				
Chloromethane	30	1.0	50.00	0	61.0	32	149				
cis-1,3-Dichloropropene	51	1.0	50.00	0	102	46	128				
Dibromochloromethane	49	1.0	50.00	0	97.3	42	124				

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%AD exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analysis
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: V624LCS-031212YW	SampType: LCS	TestCode: Full8260_W	Units: µg/L	Prep Date: 3/12/2012	RunNo: 62541						
Client ID: LCSW	Batch ID: R62541B	TestNo: SW8260C		Analysis Date: 3/12/2012	SeqNo: 878099						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ethylbenzene	53	1.0	50.00	0	106	52	135				B
Methylene chloride	54	1.0	50.00	0	107	35	137				
Tetrachloroethene	44	1.0	50.00	0	88.4	26	126				
Toluene	50	1.0	50.00	0	100	51	130				
trans-1,2-Dichloroethene	50	1.0	50.00	0	101	49	125				
trans-1,3-Dichloropropene	49	1.0	50.00	0	98.0	43	125				
Trichloroethene	50	1.0	50.00	0	100	47	127				
Trichlorofluoromethane	40	1.0	50.00	0	79.2	50	152				
Vinyl chloride	38	1.0	50.00	0	75.2	50	149				
Surr: 4-Bromofluorobenzene	46		50.00		92.8	63	123				
Surr: Dibromofluoromethane	52		50.00		105	68	124				
Surr: Toluene-d8	49		50.00		98.6	67	125				

Sample ID: VBLK-031212YW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 3/12/2012	RunNo: 62541						
Client ID: PBW	Batch ID: R62541B	TestNo: SW8260C		Analysis Date: 3/12/2012	SeqNo: 878100						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1,2-Tetrachloroethane	U	1.0									C
1,1,1-Trichloroethane	U	1.0									
1,1,2,2-Tetrachloroethane	U	1.0									
1,1,2-Trichloro-1,2,2-trifluoroethane	U	1.0									
1,1,2-Trichloroethane	U	1.0									
1,1-Dichloroethane	U	1.0									
1,1-Dichloroethene	U	1.0									
1,1-Dichloropropene	U	1.0									
1,2,3-Trichlorobenzene	U	1.0									
1,2,3-Trichloropropene	U	1.0									
1,2,4,5-Tetramethylbenzene	U	1.0									
1,2,4-Trichlorobenzene	U	1.0									
1,2,4-Trimethylbenzene	U	1.0									
1,2-Dibromo-3-chloropropane	U	2.0									

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%d exceeded for non-CCC analytes H Holding times for preparation or analyte
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-031212YW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 3/12/2012	RunNo: 62541						
Client ID: PBW	Batch ID: R62541B	TestNo: SW8260C		Analysis Date: 3/12/2012	SeqNo: 878100						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,2-Dibromoethane	U	1.0									
1,2-Dichlorobenzene	U	1.0									
1,2-Dichloroethane	U	1.0									
1,2-Dichloropropane	U	1.0									
1,3,5-Trimethylbenzene	U	1.0									
1,3-Dichlorobenzene	U	1.0									
1,3-dichloropropane	U	1.0									
1,4-Dichlorobenzene	U	1.0									
1,4-Dioxane	U	1.0									
2,2-Dichloropropane	U	1.0									
2-Butanone	U	2.5									
2-Chloroethyl vinyl ether	U	2.0									
2-Chlorotoluene	U	1.0									
2-Hexanone	U	2.5									
2-Propanol	U	1.0									
4-Chlorotoluene	U	1.0									
4-Isopropyltoluene	U	1.0									
4-Methyl-2-pentanone	U	2.5									
Acetone	U	2.5									
Acrolein	U	5.0									
Acrylonitrile	U	1.0									
Benzene	U	1.0									
Bromobenzene	U	1.0									
Bromochloromethane	U	1.0									
Bromodichloromethane	U	1.0									
Bromoform	U	1.0									
Bromomethane	U	1.0									
Carbon disulfide	U	1.0									
Carbon tetrachloride	U	1.0									
Chlorobenzene	U	1.0									
Chlorodifluoromethane	U	1.0									

C

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-031212YW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 3/12/2012	RunNo: 62541						
Client ID: PBW	Batch ID: R62541B	TestNo: SW8260C		Analysis Date: 3/12/2012	SeqNo: 878100						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroethane	U	1.0									
Chloroform	U	1.0									
Chloromethane	U	1.0									
cis-1,2-Dichloroethene	U	1.0									
cis-1,3-Dichloropropene	U	1.0									
Dibromochloromethane	U	1.0									
Dibromomethane	U	1.0									
Dichlorodifluoromethane	U	1.0									C
Diisopropyl ether	U	1.0									
Ethanol	U	5.0									
Ethyl acetate	U	1.0									
Ethylbenzene	U	1.0									
Freon-114	U	1.0									C
Hexachlorobutadiene	U	1.0									
Isopropyl acetate	U	1.0									
Isopropylbenzene	U	1.0									
m,p-Xylene	U	2.0									
Methyl Acetate	U	1.0									
Methyl tert-butyl ether	U	1.0									
Methylene chloride	6.4	1.0									
n-Amyl acetate	U	1.0									
Naphthalene	U	1.0									
n-Butyl acetate	U	1.0									
n-Butylbenzene	U	1.0									C
n-Propyl acetate	U	1.0									
n-Propylbenzene	U	1.0									
o-Xylene	U	1.0									
p-Diethylbenzene	U	1.0									
p-Ethyltoluene	U	1.0									
sec-Butylbenzene	U	1.0									
Styrene	U	1.0									

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analy
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-031212YW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 3/12/2012	RunNo: 62541						
Client ID: PBW	Batch ID: R62541B	TestNo: SW8260C		Analysis Date: 3/12/2012	SeqNo: 878100						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
t-Butyl alcohol	U	1.0									
tert-Butylbenzene	U	1.0									
Tetrachloroethene	U	1.0									
Toluene	U	1.0									
trans-1,2-Dichloroethene	U	1.0									
trans-1,3-Dichloropropene	U	1.0									
Trichloroethene	U	1.0									
Trichlorofluoromethane	U	1.0									
Vinyl acetate	U	1.0									
Vinyl chloride	U	1.0									
Surr: 4-Bromofluorobenzene	47		50.00		93.8	63	123				
Surr: Dibromofluoromethane	53		50.00		105	68	124				
Surr: Toluene-d8	50		50.00		101	67	125				

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analy
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

American Analytical Laboratories, LLC.

Date: 14-Mar-12

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: 1203090-05AMS		SampType: MS		TestCode: Full8260_W		Units: µg/L		Prep Date:		RunNo: 62541	
Client ID: ACT-2		Batch ID: R62541A		TestNo: SW8260C				Analysis Date: 3/12/2012		SeqNo: 878098	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	49	1.0	50.00	0	98.5	32	122				
1,1,2,2-Tetrachloroethane	47	1.0	50.00	0	93.4	30	130				
1,1,2-Trichloroethane	43	1.0	50.00	0	86.3	32	120				
1,1-Dichloroethane	52	1.0	50.00	0	103	26	121				C
1,1-Dichloroethene	51	1.0	50.00	0	102	29	118				
1,2-Dichlorobenzene	49	1.0	50.00	0	98.5	33	109				
1,2-Dichloroethane	49	1.0	50.00	0	98.5	26	120				
1,2-Dichloropropane	51	1.0	50.00	0	101	29	119				
1,3-Dichlorobenzene	51	1.0	50.00	0	103	35	111				
1,4-Dichlorobenzene	52	1.0	50.00	0	103	35	110				
2-Chloroethyl vinyl ether	46	2.0	50.00	0	92.9	30	120				
Benzene	52	1.0	50.00	0	104	27	116				
Bromodichloromethane	44	1.0	50.00	0	87.6	32	110				
Bromoform	39	1.0	50.00	0	78.3	27	119				
Bromomethane	32	1.0	50.00	0	63.4	30	120				
Carbon tetrachloride	50	1.0	50.00	0	99.7	27	123				
Chlorobenzene	50	1.0	50.00	0	99.1	33	120				C
Chloroethane	26	1.0	50.00	0	51.6	24	138				
Chloroform	50	1.0	50.00	0	99.3	29	128				
Chloromethane	28	1.0	50.00	0	56.8	20	118				C
cis-1,3-Dichloropropene	47	1.0	50.00	0	93.4	27	110				
Dibromochloromethane	44	1.0	50.00	0	87.9	32	118				
Ethylbenzene	51	1.0	50.00	0	102	37	111				
Methylene chloride	50	1.0	50.00	4.620	91.7	24	112				BC
Tetrachloroethene	80	1.0	50.00	40.27	78.6	20	125				
Toluene	48	1.0	50.00	0	96.5	30	120				
trans-1,2-Dichloroethene	49	1.0	50.00	0	97.9	27	115				
trans-1,3-Dichloropropene	45	1.0	50.00	0	89.6	20	123				
Trichloroethene	49	1.0	50.00	0.5900	96.8	24	122				
Trichlorofluoromethane	41	1.0	50.00	0	82.6	30	129				

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: 1203090-05AMS	SampType: MS	TestCode: Full8260_W	Units: µg/L	Prep Date:	RunNo: 62541						
Client ID: ACT-2	Batch ID: R62541A	TestNo: SW8260C		Analysis Date: 3/12/2012	SeqNo: 878098						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Vinyl chloride	35	1.0	50.00	0	69.2	20	141				
Surr: 4-Bromofluorobenzene	46		50.00		92.0	63	123				
Surr: Dibromofluoromethane	52		50.00		104	68	124				
Surr: Toluene-d8	51		50.00		102	67	125				

Sample ID: 1203090-05A	MSD	SampType: MSD	TestCode: Full8260_W	Units: µg/L	Prep Date:	RunNo: 62541						
Client ID: ACT-2		Batch ID: R62541B	TestNo: SW8260C		Analysis Date: 3/12/2012	SeqNo: 878102						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	46	1.0	50.00	0	92.7	32	122	49.25	6.09	20	
1,1,2,2-Tetrachloroethane	41	1.0	50.00	0	81.8	30	130	46.71	13.2	20	
1,1,2-Trichloroethane	42	1.0	50.00	0	83.7	32	120	43.14	3.04	20	C
1,1-Dichloroethane	48	1.0	50.00	0	96.7	26	121	51.51	6.35	20	
1,1-Dichloroethene	48	1.0	50.00	0	95.9	29	118	50.94	6.03	20	
1,2-Dichlorobenzene	44	1.0	50.00	0	88.9	33	109	49.23	10.2	20	
1,2-Dichloroethane	46	1.0	50.00	0	91.9	26	120	49.23	6.85	20	
1,2-Dichloropropane	48	1.0	50.00	0	95.5	29	119	50.55	5.72	20	
1,3-Dichlorobenzene	46	1.0	50.00	0	91.8	35	111	51.34	11.1	20	
1,4-Dichlorobenzene	47	1.0	50.00	0	93.5	35	110	51.61	9.86	20	
2-Chloroethyl vinyl ether	42	2.0	50.00	0	84.6	30	120	46.45	9.33	20	
Benzene	48	1.0	50.00	0	96.9	27	116	52.06	7.14	20	
Bromodichloromethane	42	1.0	50.00	0	83.3	32	110	43.80	4.98	20	
Bromoform	37	1.0	50.00	0	73.9	27	119	39.15	5.75	20	
Bromomethane	26	1.0	50.00	0	52.4	30	120	31.71	19.0	20	
Carbon tetrachloride	48	1.0	50.00	0	96.5	27	123	49.84	3.22	20	
Chlorobenzene	47	1.0	50.00	0	93.6	33	120	49.54	5.71	20	
Chloroethane	24	1.0	50.00	0	48.2	24	138	25.79	6.69	20	
Chloroform	47	1.0	50.00	0	93.4	29	128	49.67	6.21	20	
Chloromethane	25	1.0	50.00	0	49.7	20	118	28.39	13.3	20	
cis-1,3-Dichloropropene	44	1.0	50.00	0	88.9	27	110	46.72	5.00	20	
Dibromochloromethane	41	1.0	50.00	0	81.2	32	118	43.96	8.00	20	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC columns
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analysis
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1203090
Project: Bronxville, NY; Proj. No. 6832-BVNY

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: 1203090-05AMSD		SampType: MSD		TestCode: Full8260_W		Units: µg/L		Prep Date:		RunNo: 62541			
Client ID: ACT-2		Batch ID: R62541B		TestNo: SW8260C		Analysis Date: 3/12/2012						SeqNo: 878102	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Ethylbenzene	48	1.0	50.00	0	95.1	37	111	51.01	7.06	20			
Methylene chloride	44	1.0	50.00	4.620	78.7	24	112	50.49	13.8	20	B		
Tetrachloroethene	75	1.0	50.00	40.27	69.5	20	125	79.57	5.86	20			
Toluene	45	1.0	50.00	0	90.6	30	120	48.23	6.22	20			
trans-1,2-Dichloroethene	44	1.0	50.00	0	87.4	27	115	48.96	11.4	20			
trans-1,3-Dichloropropene	42	1.0	50.00	0	83.0	20	123	44.80	7.65	20			
Trichloroethene	45	1.0	50.00	0.5900	89.3	24	122	49.01	7.96	20			
Trichlorofluoromethane	35	1.0	50.00	0	69.9	30	129	41.28	16.6	20			
Vinyl chloride	32	1.0	50.00	0	64.5	20	141	34.60	7.06	20			
Surr: 4-Bromofluorobenzene	45		50.00		90.7	63	123		0	0			
Surr: Dibromofluoromethane	51		50.00		102	68	124		0	0			
Surr: Toluene-d8	51		50.00		102	67	125		0	0			

Qualifiers:

B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%AD exceeded for non-CCC analytes	H	Holding times for preparation or analysis
J	Analyte detected below quantitation limits	P	>40% diff for detected conc between the two GC columns	PQL	Practical Quantitation Limit
R	RPD outside accepted recovery limits	S	Spike Recovery outside accepted recovery limits	U	Indicates the compound was analyzed

Thursday, April 19, 2012

Paul P. Stewart
Advanced Cleanup Technologies, Inc.
960 So. Broadway, Suite 100
Hicksville, NY 11801

TEL: (516) 933-0655
FAX (516) 933-0659

RE: Bronxville, NY (6832-BVNY)

Order No.: 1204140

Dear Paul P. Stewart:

American Analytical Laboratories, LLC. received 10 sample(s) on 4/17/2012 for the analyses presented in the following report.

Samples were analyzed in accordance with the test procedures documented on the chain of custody and detailed throughout the text of this report.

The results reported herein relate only to the items tested or to the samples as received by the laboratory. This report may not be reproduced, except in full, without the approval of American Analytical Laboratories, LLC and is not considered complete without a cover page and chain of custody documentation. The limits (LOQ) provided in the data package are analytical reporting limits and not Federal or Local mandated values to which the sample results should be compared.

There were no problems with the analyses and all data for associated QC met laboratory specifications. If there are any exceptions a Case Narrative is provided in the report or the data is qualified. This package has been reviewed by American Analytical Laboratories' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal. This report consists of 51 pages.

If you have any questions regarding these tests results, please do not hesitate to call (631) 454-6100 or email me directly at lbeyer@american-analytical.com.

Sincerely,


Lori Beyer
Lab Director

American Analytical Laboratories, LLC.

Date: 19-Apr-12

CLIENT: Advanced Cleanup Technologies, Inc.
Project: Bronxville, NY (6832-BVNY)
Lab Order: 1204140

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date Collected	Date Received
1204140-01A	ACT-3 0-2'	4/16/2012 10:00:00 AM	4/17/2012
1204140-02A	ACT-3 10-11'	4/16/2012 10:30:00 AM	4/17/2012
1204140-03A	ACT-3 14-15'	4/16/2012 11:00:00 AM	4/17/2012
1204140-04A	ACT-4 5-6'	4/16/2012 12:00:00 PM	4/17/2012
1204140-05A	ACT-4 9-10'	4/16/2012 12:30:00 PM	4/17/2012
1204140-06A	ACT-1 16'	4/16/2012 1:00:00 PM	4/17/2012
1204140-07A	ACT-3 15.5'	4/16/2012 1:30:00 PM	4/17/2012
1204140-08A	ACT-3 20.5'	4/16/2012 2:00:00 PM	4/17/2012
1204140-09A	ACT-4	4/16/2012 2:30:00 PM	4/17/2012
1204140-10A	ACT-5	4/16/2012 3:00:00 PM	4/17/2012



56 TOLEDO STREET • FARMINGDALE, NEW YORK 11735
(631) 454-6100 • FAX (631) 454-8027
www.american-analytical.com

CTDOH
NJDEP
PADEP

PH-0205
NY050
68-573

CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT

CLIENT NAME/ADDRESS ACT South Broadway, Suite 100 Hicksville, NY 11801				CONTACT: Paul Stewart		SAMPLER (SIGNATURE) Steven Walls GPR		SAMPLE(S) SEALED		YES / NO YES	
PROJECT LOCATION: Barnesville, NY				PROJECT #: 6832-BVNY		SAMPLER NAME (PRINT) Steven Walls		CORRECT CONTAINER(S)		YES / NO YES	
ANALYSIS REQUIRED GPR 8260 (veg)								TEMPERATURE (°C)		4.4	
LABORATORY ID# LAB USE ONLY	MATRIX/ TYPE	NO. OF CONTAINERS	SAMPLING DATE	SAMPLING TIME	SAMPLE # - LOCATION						
1204/40-01A	S	2	4/16	10:00	ACT-3 0-2'						
G2A	S	2	4/16	10:30	ACT-3 10-11'						
G3A	S	2	4/16	11:00	ACT-3 14-15'						
G4A	S	2	4/16	12:00	ACT-4 5-6'						
G5A	S	2	4/16	12:30	ACT-4 9-10'						
G6A	W	3	4/16	1:00	ACT-1 16'						
G7A	W	3	4/16	1:30	ACT-3 13.5'						
G8A	W	3	4/16	2:00	ACT-3 20.5'						
G9A	W	3	4/16	2:30	ACT-4						
10A	W	3	4/16	3:00	ACT-5						
COMMENTS / INSTRUCTIONS						Samples must be on ICE ($<6^{\circ}\text{C}$)					
MATRIX S=SOIL; W=WATER; SL=SLUDGE; A=AIR; M=MISCELLANEOUS TYPE G=GRAB; C=COMPOSITE						TURNAROUND REQUIRED STANDARD ☒ STAT ☐ (7-10 business days) BY 4/20/12					
RELINQUISHED BY (SIGNATURE) 		DATE TIME		PRINTED NAME J. Raul Ramirez		RECEIVED BY LAB (SIGNATURE) Senora		DATE TIME 4/17/12		PRINTED NAME Cate Ferrara	
RELINQUISHED BY (SIGNATURE)		DATE TIME		PRINTED NAME		RECEIVED BY LAB (SIGNATURE)		DATE TIME		PRINTED NAME	

American Analytical Laboratories, LLC.

Sample Receipt Checklist

Client Name **ADVANCED CLEANUP TECH**

Date and Time Receive **4/17/2012 10:12:47 AM**

Work Order Numbe **1204140**

RcptNo: **1**

Received by **CF**

COC_ID:

CoolerID:

Checklist completed by

CF 4/17/12
Signature Date

Reviewed by

KBK 4/17/12
Initials Date

Matrix:

Carrier name Courier

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Presen ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Presen ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Presen ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☒	No ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐

Adjusted? _____ Checked b _____

Any No and/or NA (not applicable) response must be detailed in the comments section be

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments:

Corrective Action _____

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1204140
Project: Bronxville, NY (6832-BVNY)
Lab ID: 1204140-01A

Client Sample ID: ACT-3 0-2'
Collection Date: 4/16/2012 10:00:00 AM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
PERCENT MOISTURE							
Percent Moisture	5.23	0	0		wt%	1	4/18/2012
VOLATILE SW-846 METHOD 8260							
					D2216		Analyst: CF
1,1,1,2-Tetrachloroethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
1,1,1-Trichloroethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
1,1,2,2-Tetrachloroethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
1,1,2-Trichloroethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
1,1-Dichloroethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
1,1-Dichloroethene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
1,1-Dichloropropene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
1,2,3-Trichlorobenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
1,2,3-Trichloropropane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
1,2,4,5-Tetramethylbenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
1,2,4-Trichlorobenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
1,2,4-Trimethylbenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
1,2-Dibromo-3-chloropropane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
1,2-Dibromoethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
1,2-Dichlorobenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
1,2-Dichloroethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
1,2-Dichloropropane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
1,3,5-Trimethylbenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
1,3-Dichlorobenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
1,3-dichloropropane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
1,4-Dichlorobenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
1,4-Dioxane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
2,2-Dichloropropane	U	0.51	5.1	C	µg/Kg-dry	1	4/17/2012 4:09:00 PM
2-Butanone	U	1.53	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
2-Chloroethyl vinyl ether	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
2-Chlorotoluene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
2-Hexanone	U	1.53	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
2-Propanol	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
4-Chlorotoluene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1204140
Project: Bronxville, NY (6832-BVNY)
Lab ID: 1204140-01A

Client Sample ID: ACT-3 0-2'
Collection Date: 4/16/2012 10:00:00 AM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
4-Isopropyltoluene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
4-Methyl-2-pentanone	U	1.53	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Acetone	U	1.53	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Acrolein	U	2.56	10		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Acrylonitrile	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Benzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Bromobenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Bromochloromethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Bromodichloromethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Bromoform	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Bromomethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Carbon disulfide	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Carbon tetrachloride	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Chlorobenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Chlorodifluoromethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Chloroethane	U	0.51	5.1	C	µg/Kg-dry	1	4/17/2012 4:09:00 PM
Chloroform	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Chloromethane	U	0.51	5.1	C	µg/Kg-dry	1	4/17/2012 4:09:00 PM
cis-1,2-Dichloroethene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
cis-1,3-Dichloropropene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Dibromochloromethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Dibromomethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Dichlorodifluoromethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Diisopropyl ether	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Ethanol	U	2.56	10		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Ethyl acetate	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Ethylbenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Freon-114	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Hexachlorobutadiene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Isopropyl acetate	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Isopropylbenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
m,p-Xylene	U	1.02	10		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Methyl Acetate	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1204140
Project: Bronxville, NY (6832-BVNY)
Lab ID: 1204140-01A

Client Sample ID: ACT-3 0-2'
Collection Date: 4/16/2012 10:00:00 AM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Methyl tert-butyl ether	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Methylene chloride	4.6	0.51	5.1	JB	µg/Kg-dry	1	4/17/2012 4:09:00 PM
n-Amyl acetate	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Naphthalene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
n-Butyl acetate	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
n-Butylbenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
n-Propyl acetate	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
n-Propylbenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
o-Xylene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
p-Diethylbenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
p-Ethyltoluene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
sec-Butylbenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Styrene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
t-Butyl alcohol	U	0.51	5.1	C	µg/Kg-dry	1	4/17/2012 4:09:00 PM
tert-Butylbenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Tetrachloroethene	0.75	0.51	5.1	J	µg/Kg-dry	1	4/17/2012 4:09:00 PM
Toluene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
trans-1,2-Dichloroethene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
trans-1,3-Dichloropropene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Trichloroethene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Trichlorofluoromethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Vinyl acetate	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:09:00 PM
Vinyl chloride	U	0.51	5.1	C	µg/Kg-dry	1	4/17/2012 4:09:00 PM
Surr: 4-Bromofluorobenzene	94.0	0	42-133		%REC	1	4/17/2012 4:09:00 PM
Surr: Dibromofluoromethane	86.3	0	50-133		%REC	1	4/17/2012 4:09:00 PM
Surr: Toluene-d8	97.3	0	53-130		%REC	1	4/17/2012 4:09:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.

Client Sample ID: ACT-3 10-11'

Lab Order: 1204140

Collection Date: 4/16/2012 10:30:00 AM

Project: Bronxville, NY (6832-BVNY)

Matrix: SOIL

Lab ID: 1204140-02A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
PERCENT MOISTURE							
Percent Moisture	3.60	0	0		wt%	1	Analyst: CF 4/18/2012
VOLATILE SW-846 METHOD 8260							
							Analyst: LA
1,1,1,2-Tetrachloroethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
1,1,1-Trichloroethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
1,1,2,2-Tetrachloroethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
1,1,2-Trichloroethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
1,1-Dichloroethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
1,1-Dichloroethene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
1,1-Dichloropropene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
1,2,3-Trichlorobenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
1,2,3-Trichloropropane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
1,2,4,5-Tetramethylbenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
1,2,4-Trichlorobenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
1,2,4-Trimethylbenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
1,2-Dibromo-3-chloropropane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
1,2-Dibromoethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
1,2-Dichlorobenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
1,2-Dichloroethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
1,2-Dichloropropane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
1,3,5-Trimethylbenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
1,3-Dichlorobenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
1,3-dichloropropane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
1,4-Dichlorobenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
1,4-Dioxane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
2,2-Dichloropropane	U	0.51	5.1	C	µg/Kg-dry	1	4/17/2012 4:32:00 PM
2-Butanone	U	1.53	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
2-Chloroethyl vinyl ether	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
2-Chlorotoluene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
2-Hexanone	U	1.53	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
2-Propanol	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
4-Chlorotoluene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1204140
Project: Bronxville, NY (6832-BVNY)
Lab ID: 1204140-02A

Client Sample ID: ACT-3 10-11'
Collection Date: 4/16/2012 10:30:00 AM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
4-Isopropyltoluene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
4-Methyl-2-pentanone	U	1.53	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Acetone	U	1.53	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Acrolein	U	2.55	10		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Acrylonitrile	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Benzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Bromobenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Bromochloromethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Bromodichloromethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Bromoform	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Bromomethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Carbon disulfide	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Carbon tetrachloride	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Chlorobenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Chlorodifluoromethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Chloroethane	U	0.51	5.1	C	µg/Kg-dry	1	4/17/2012 4:32:00 PM
Chloroform	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Chloromethane	U	0.51	5.1	C	µg/Kg-dry	1	4/17/2012 4:32:00 PM
cis-1,2-Dichloroethene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
cis-1,3-Dichloropropene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Dibromochloromethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Dibromomethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Dichlorodifluoromethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Diisopropyl ether	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Ethanol	U	2.55	10		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Ethyl acetate	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Ethylbenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Freon-114	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Hexachlorobutadiene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Isopropyl acetate	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Isopropylbenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
m,p-Xylene	U	1.02	10		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Methyl Acetate	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1204140
Project: Bronxville, NY (6832-BVNY)
Lab ID: 1204140-02A

Client Sample ID: ACT-3 10-11'
Collection Date: 4/16/2012 10:30:00 AM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Methyl tert-butyl ether	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Methylene chloride	4.4	0.51	5.1	JB	µg/Kg-dry	1	4/17/2012 4:32:00 PM
n-Amyl acetate	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Naphthalene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
n-Butyl acetate	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
n-Butylbenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
n-Propyl acetate	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
n-Propylbenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
o-Xylene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
p-Diethylbenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
p-Ethyltoluene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
sec-Butylbenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Styrene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
t-Butyl alcohol	U	0.51	5.1	C	µg/Kg-dry	1	4/17/2012 4:32:00 PM
tert-Butylbenzene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Tetrachloroethene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Toluene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
trans-1,2-Dichloroethene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
trans-1,3-Dichloropropene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Trichloroethene	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Trichlorofluoromethane	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Vinyl acetate	U	0.51	5.1		µg/Kg-dry	1	4/17/2012 4:32:00 PM
Vinyl chloride	U	0.51	5.1	C	µg/Kg-dry	1	4/17/2012 4:32:00 PM
Surr: 4-Bromofluorobenzene	93.1	0	42-133		%REC	1	4/17/2012 4:32:00 PM
Surr: Dibromofluoromethane	85.2	0	50-133		%REC	1	4/17/2012 4:32:00 PM
Surr: Toluene-d8	96.4	0	53-130		%REC	1	4/17/2012 4:32:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.

Client Sample ID: ACT-3 14-15'

Lab Order: 1204140

Collection Date: 4/16/2012 11:00:00 AM

Project: Bronxville, NY (6832-BVNY)

Matrix: SOIL

Lab ID: 1204140-03A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
PERCENT MOISTURE					D2216		Analyst: CF
Percent Moisture	21.0	0	0		wt%	1	4/18/2012
VOLATILE SW-846 METHOD 8260					SW8260C		Analyst: LA
1,1,1,2-Tetrachloroethane	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
1,1,1-Trichloroethane	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
1,1,2,2-Tetrachloroethane	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
1,1,2-Trichloroethane	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
1,1-Dichloroethane	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
1,1-Dichloroethene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
1,1-Dichloropropene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
1,2,3-Trichlorobenzene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
1,2,3-Trichloropropane	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
1,2,4,5-Tetramethylbenzene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
1,2,4-Trichlorobenzene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
1,2,4-Trimethylbenzene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
1,2-Dibromo-3-chloropropane	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
1,2-Dibromoethane	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
1,2-Dichlorobenzene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
1,2-Dichloroethane	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
1,2-Dichloropropane	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
1,3,5-Trimethylbenzene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
1,3-Dichlorobenzene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
1,3-dichloropropane	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
1,4-Dichlorobenzene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
1,4-Dioxane	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
2,2-Dichloropropane	U	0.63	6.3	C	µg/Kg-dry	1	4/17/2012 4:56:00 PM
2-Butanone	U	1.88	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
2-Chloroethyl vinyl ether	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
2-Chlorotoluene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
2-Hexanone	U	1.88	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
2-Propanol	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
4-Chlorotoluene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1204140
Project: Bronxville, NY (6832-BVNY)
Lab ID: 1204140-03A

Client Sample ID: ACT-3 14-15'
Collection Date: 4/16/2012 11:00:00 AM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
4-Isopropyltoluene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
4-Methyl-2-pentanone	U	1.88	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Acetone	U	1.88	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Acrolein	U	3.14	13		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Acrylonitrile	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Benzene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Bromobenzene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Bromochloromethane	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Bromodichloromethane	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Bromoform	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Bromomethane	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Carbon disulfide	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Carbon tetrachloride	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Chlorobenzene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Chlorodifluoromethane	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Chloroethane	U	0.63	6.3	C	µg/Kg-dry	1	4/17/2012 4:56:00 PM
Chloroform	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Chloromethane	U	0.63	6.3	C	µg/Kg-dry	1	4/17/2012 4:56:00 PM
cis-1,2-Dichloroethene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
cis-1,3-Dichloropropene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Dibromochloromethane	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Dibromomethane	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Dichlorodifluoromethane	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Diisopropyl ether	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Ethanol	U	3.14	13		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Ethyl acetate	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Ethylbenzene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Freon-114	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Hexachlorobutadiene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Isopropyl acetate	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Isopropylbenzene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
m,p-Xylene	U	1.26	13		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Methyl Acetate	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.

Client Sample ID: ACT-3 14-15'

Lab Order: 1204140

Collection Date: 4/16/2012 11:00:00 AM

Project: Bronxville, NY (6832-BVNY)

Matrix: SOIL

Lab ID: 1204140-03A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Methyl tert-butyl ether	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Methylene chloride	5.8	0.63	6.3	JB	µg/Kg-dry	1	4/17/2012 4:56:00 PM
n-Amyl acetate	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Naphthalene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
n-Butyl acetate	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
n-Butylbenzene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
n-Propyl acetate	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
n-Propylbenzene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
o-Xylene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
p-Diethylbenzene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
p-Ethyltoluene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
sec-Butylbenzene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Styrene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
t-Butyl alcohol	U	0.63	6.3	C	µg/Kg-dry	1	4/17/2012 4:56:00 PM
tert-Butylbenzene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Tetrachloroethene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Toluene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
trans-1,2-Dichloroethene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
trans-1,3-Dichloropropene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Trichloroethene	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Trichlorofluoromethane	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Vinyl acetate	U	0.63	6.3		µg/Kg-dry	1	4/17/2012 4:56:00 PM
Vinyl chloride	U	0.63	6.3	C	µg/Kg-dry	1	4/17/2012 4:56:00 PM
Surr: 4-Bromofluorobenzene	90.6	0	42-133		%REC	1	4/17/2012 4:56:00 PM
Surr: Dibromofluoromethane	82.2	0	50-133		%REC	1	4/17/2012 4:56:00 PM
Surr: Toluene-d8	95.5	0	53-130		%REC	1	4/17/2012 4:56:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1204140
Project: Bronxville, NY (6832-BVNY)
Lab ID: 1204140-04A

Client Sample ID: ACT-4 5-6'
Collection Date: 4/16/2012 12:00:00 PM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
PERCENT MOISTURE							
Percent Moisture	5.86	0	0		wt%	1	4/18/2012
VOLATILE SW-846 METHOD 8260							
			D2216				Analyst: CF
1,1,1,2-Tetrachloroethane	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
1,1,1-Trichloroethane	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
1,1,2,2-Tetrachloroethane	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
1,1,2-Trichloroethane	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
1,1-Dichloroethane	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
1,1-Dichloroethene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
1,1-Dichloropropene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
1,2,3-Trichlorobenzene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
1,2,3-Trichloropropane	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
1,2,4,5-Tetramethylbenzene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
1,2,4-Trichlorobenzene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
1,2,4-Trimethylbenzene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
1,2-Dibromo-3-chloropropane	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
1,2-Dibromoethane	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
1,2-Dichlorobenzene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
1,2-Dichloroethane	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
1,2-Dichloropropane	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
1,3,5-Trimethylbenzene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
1,3-Dichlorobenzene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
1,3-dichloropropane	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
1,4-Dichlorobenzene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
1,4-Dioxane	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
2,2-Dichloropropane	U	0.52	5.2	C	µg/Kg-dry	1	4/17/2012 5:19:00 PM
2-Butanone	U	1.56	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
2-Chloroethyl vinyl ether	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
2-Chlorotoluene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
2-Hexanone	U	1.56	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
2-Propanol	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
4-Chlorotoluene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.

Client Sample ID: ACT-4 5-6'

Lab Order: 1204140

Collection Date: 4/16/2012 12:00:00 PM

Project: Bronxville, NY (6832-BVNY)

Matrix: SOIL

Lab ID: 1204140-04A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
4-Isopropyltoluene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
4-Methyl-2-pentanone	U	1.56	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Acetone	U	1.56	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Acrolein	U	2.59	10		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Acrylonitrile	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Benzene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Bromobenzene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Bromochloromethane	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Bromodichloromethane	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Bromoform	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Bromomethane	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Carbon disulfide	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Carbon tetrachloride	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Chlorobenzene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Chlorodifluoromethane	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Chloroethane	U	0.52	5.2	C	µg/Kg-dry	1	4/17/2012 5:19:00 PM
Chloroform	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Chloromethane	U	0.52	5.2	C	µg/Kg-dry	1	4/17/2012 5:19:00 PM
cis-1,2-Dichloroethene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
cis-1,3-Dichloropropene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Dibromochloromethane	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Dibromomethane	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Dichlorodifluoromethane	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Diisopropyl ether	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Ethanol	U	2.59	10		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Ethyl acetate	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Ethylbenzene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Freon-114	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Hexachlorobutadiene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Isopropyl acetate	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Isopropylbenzene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
m,p-Xylene	U	1.04	10		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Methyl Acetate	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1204140
Project: Bronxville, NY (6832-BVNY)
Lab ID: 1204140-04A

Client Sample ID: ACT-4 5-6'
Collection Date: 4/16/2012 12:00:00 PM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Methyl tert-butyl ether	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Methylene chloride	4.9	0.52	5.2	JB	µg/Kg-dry	1	4/17/2012 5:19:00 PM
n-Amyl acetate	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Naphthalene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
n-Butyl acetate	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
n-Butylbenzene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
n-Propyl acetate	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
n-Propylbenzene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
o-Xylene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
p-Diethylbenzene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
p-Ethyltoluene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
sec-Butylbenzene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Styrene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
t-Butyl alcohol	U	0.52	5.2	C	µg/Kg-dry	1	4/17/2012 5:19:00 PM
tert-Butylbenzene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Tetrachloroethene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Toluene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
trans-1,2-Dichloroethene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
trans-1,3-Dichloropropene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Trichloroethene	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Trichlorofluoromethane	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Vinyl acetate	U	0.52	5.2		µg/Kg-dry	1	4/17/2012 5:19:00 PM
Vinyl chloride	U	0.52	5.2	C	µg/Kg-dry	1	4/17/2012 5:19:00 PM
Surr: 4-Bromofluorobenzene	91.0	0	42-133		%REC	1	4/17/2012 5:19:00 PM
Surr: Dibromofluoromethane	85.0	0	50-133		%REC	1	4/17/2012 5:19:00 PM
Surr: Toluene-d8	95.5	0	53-130		%REC	1	4/17/2012 5:19:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1204140
Project: Bronxville, NY (6832-BVNY)
Lab ID: 1204140-05A

Client Sample ID: ACT-4 9-10'
Collection Date: 4/16/2012 12:30:00 PM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
PERCENT MOISTURE							
Percent Moisture	13.4	0	0		wt%	1	Analyst: CF 4/18/2012
VOLATILE SW-846 METHOD 8260							
			D2216				Analyst: LA
			SW8260C				
1,1,1,2-Tetrachloroethane	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
1,1,1-Trichloroethane	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
1,1,2,2-Tetrachloroethane	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
1,1,2-Trichloroethane	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
1,1-Dichloroethane	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
1,1-Dichloroethene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
1,1-Dichloropropene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
1,2,3-Trichlorobenzene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
1,2,3-Trichloropropane	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
1,2,4,5-Tetramethylbenzene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
1,2,4-Trichlorobenzene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
1,2,4-Trimethylbenzene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
1,2-Dibromo-3-chloropropane	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
1,2-Dibromoethane	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
1,2-Dichlorobenzene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
1,2-Dichloroethane	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
1,2-Dichloropropane	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
1,3,5-Trimethylbenzene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
1,3-Dichlorobenzene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
1,3-dichloropropane	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
1,4-Dichlorobenzene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
1,4-Dioxane	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
2,2-Dichloropropane	U	0.57	5.7	C	µg/Kg-dry	1	4/17/2012 5:42:00 PM
2-Butanone	U	1.71	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
2-Chloroethyl vinyl ether	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
2-Chlorotoluene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
2-Hexanone	U	1.71	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
2-Propanol	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
4-Chlorotoluene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1204140
Project: Bronxville, NY (6832-BVNY)
Lab ID: 1204140-05A

Client Sample ID: ACT-4 9-10'
Collection Date: 4/16/2012 12:30:00 PM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
4-Isopropyltoluene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
4-Methyl-2-pentanone	U	1.71	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Acetone	U	1.71	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Acrolein	U	2.86	11		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Acrylonitrile	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Benzene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Bromobenzene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Bromochloromethane	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Bromodichloromethane	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Bromoform	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Bromomethane	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Carbon disulfide	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Carbon tetrachloride	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Chlorobenzene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Chlorodifluoromethane	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Chloroethane	U	0.57	5.7	C	µg/Kg-dry	1	4/17/2012 5:42:00 PM
Chloroform	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Chloromethane	U	0.57	5.7	C	µg/Kg-dry	1	4/17/2012 5:42:00 PM
cis-1,2-Dichloroethene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
cis-1,3-Dichloropropene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Dibromochloromethane	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Dibromomethane	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Dichlorodifluoromethane	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Diisopropyl ether	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Ethanol	U	2.86	11		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Ethyl acetate	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Ethylbenzene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Freon-114	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Hexachlorobutadiene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Isopropyl acetate	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Isopropylbenzene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
m,p-Xylene	U	1.14	11		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Methyl Acetate	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1204140
Project: Bronxville, NY (6832-BVNY)
Lab ID: 1204140-05A

Client Sample ID: ACT-4 9-10'
Collection Date: 4/16/2012 12:30:00 PM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Methyl tert-butyl ether	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Methylene chloride	5.1	0.57	5.7	JB	µg/Kg-dry	1	4/17/2012 5:42:00 PM
n-Amyl acetate	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Naphthalene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
n-Butyl acetate	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
n-Butylbenzene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
n-Propyl acetate	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
n-Propylbenzene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
o-Xylene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
p-Diethylbenzene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
p-Ethyltoluene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
sec-Butylbenzene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Styrene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
t-Butyl alcohol	U	0.57	5.7	C	µg/Kg-dry	1	4/17/2012 5:42:00 PM
tert-Butylbenzene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Tetrachloroethene	52	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Toluene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
trans-1,2-Dichloroethene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
trans-1,3-Dichloropropene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Trichloroethene	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Trichlorofluoromethane	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Vinyl acetate	U	0.57	5.7		µg/Kg-dry	1	4/17/2012 5:42:00 PM
Vinyl chloride	U	0.57	5.7	C	µg/Kg-dry	1	4/17/2012 5:42:00 PM
Surr: 4-Bromofluorobenzene	91.9	0	42-133		%REC	1	4/17/2012 5:42:00 PM
Surr: Dibromofluoromethane	82.5	0	50-133		%REC	1	4/17/2012 5:42:00 PM
Surr: Toluene-d8	95.6	0	53-130		%REC	1	4/17/2012 5:42:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.

Client Sample ID: ACT-1 16'

Lab Order: 1204140

Collection Date: 4/16/2012 1:00:00 PM

Project: Bronxville, NY (6832-BVNY)

Matrix: LIQUID

Lab ID: 1204140-06A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
1,1,1,2-Tetrachloroethane	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
1,1,1-Trichloroethane	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
1,1,2,2-Tetrachloroethane	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
1,1,2-Trichloroethane	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
1,1-Dichloroethane	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
1,1-Dichloroethene	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
1,1-Dichloropropene	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
1,2,3-Trichlorobenzene	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
1,2,3-Trichloropropane	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
1,2,4,5-Tetramethylbenzene	2.2	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
1,2,4-Trichlorobenzene	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
1,2,4-Trimethylbenzene	0.52	0.5	1.0	J	µg/L	1	4/17/2012 4:06:00 PM
1,2-Dibromo-3-chloropropane	U	1	2.0		µg/L	1	4/17/2012 4:06:00 PM
1,2-Dibromoethane	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
1,2-Dichlorobenzene	0.94	0.5	1.0	J	µg/L	1	4/17/2012 4:06:00 PM
1,2-Dichloroethane	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
1,2-Dichloropropane	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
1,3,5-Trimethylbenzene	0.58	0.5	1.0	J	µg/L	1	4/17/2012 4:06:00 PM
1,3-Dichlorobenzene	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
1,3-dichloropropane	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
1,4-Dichlorobenzene	0.89	0.5	1.0	J	µg/L	1	4/17/2012 4:06:00 PM
1,4-Dioxane	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
2,2-Dichloropropane	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
2-Butanone	U	1.2	2.5	C	µg/L	1	4/17/2012 4:06:00 PM
2-Chloroethyl vinyl ether	U	1	2.0		µg/L	1	4/17/2012 4:06:00 PM
2-Chlorotoluene	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
2-Hexanone	U	1.2	2.5		µg/L	1	4/17/2012 4:06:00 PM
2-Propanol	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
4-Chlorotoluene	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
4-Isopropyltoluene	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
4-Methyl-2-pentanone	U	1.2	2.5		µg/L	1	4/17/2012 4:06:00 PM
Acetone	U	1.2	2.5		µg/L	1	4/17/2012 4:06:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1204140
Project: Bronxville, NY (6832-BVNY)
Lab ID: 1204140-06A

Client Sample ID: ACT-1 16'
Collection Date: 4/16/2012 1:00:00 PM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Acrolein	U	2.5	5.0		µg/L	1	4/17/2012 4:06:00 PM
Acrylonitrile	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Benzene	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Bromobenzene	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Bromochloromethane	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Bromodichloromethane	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Bromoform	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Bromomethane	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Carbon disulfide	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Carbon tetrachloride	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Chlorobenzene	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Chlorodifluoromethane	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Chloroethane	U	0.5	1.0	C	µg/L	1	4/17/2012 4:06:00 PM
Chloroform	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Chloromethane	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
cis-1,2-Dichloroethene	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
cis-1,3-Dichloropropene	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Dibromochloromethane	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Dibromomethane	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Dichlorodifluoromethane	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Diisopropyl ether	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Ethanol	U	2.5	5.0		µg/L	1	4/17/2012 4:06:00 PM
Ethyl acetate	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Ethylbenzene	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Freon-114	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Hexachlorobutadiene	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Isopropyl acetate	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Isopropylbenzene	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
m,p-Xylene	U	1	2.0		µg/L	1	4/17/2012 4:06:00 PM
Methyl Acetate	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Methyl tert-butyl ether	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Methylene chloride	2.9	0.5	1.0	B	µg/L	1	4/17/2012 4:06:00 PM
n-Amyl acetate	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1204140
Project: Bronxville, NY (6832-BVNY)
Lab ID: 1204140-06A

Client Sample ID: ACT-1 16'
Collection Date: 4/16/2012 1:00:00 PM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Naphthalene	0.72	0.5	1.0	J	µg/L	1	4/17/2012 4:06:00 PM
n-Butyl acetate	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
n-Butylbenzene	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
n-Propyl acetate	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
n-Propylbenzene	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
o-Xylene	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
p-Diethylbenzene	1.5	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
p-Ethyltoluene	0.51	0.5	1.0	J	µg/L	1	4/17/2012 4:06:00 PM
sec-Butylbenzene	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Styrene	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
t-Butyl alcohol	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
tert-Butylbenzene	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Tetrachloroethene	1500	5	10		µg/L	10	4/18/2012 3:04:00 PM
Toluene	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
trans-1,2-Dichloroethene	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
trans-1,3-Dichloropropene	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Trichloroethene	3.0	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Trichlorofluoromethane	U	0.5	1.0	C	µg/L	1	4/17/2012 4:06:00 PM
Vinyl acetate	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Vinyl chloride	U	0.5	1.0		µg/L	1	4/17/2012 4:06:00 PM
Surr: 4-Bromofluorobenzene	92.2	0	63-123		%REC	10	4/18/2012 3:04:00 PM
Surr: 4-Bromofluorobenzene	89.1	0	63-123		%REC	1	4/17/2012 4:06:00 PM
Surr: Dibromofluoromethane	94.0	0	68-124		%REC	1	4/17/2012 4:06:00 PM
Surr: Dibromofluoromethane	98.2	0	68-124		%REC	10	4/18/2012 3:04:00 PM
Surr: Toluene-d8	93.7	0	67-125		%REC	10	4/18/2012 3:04:00 PM
Surr: Toluene-d8	93.0	0	67-125		%REC	1	4/17/2012 4:06:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.

Client Sample ID: ACT-3 15.5'

Lab Order: 1204140

Collection Date: 4/16/2012 1:30:00 PM

Project: Bronxville, NY (6832-BVNY)

Matrix: LIQUID

Lab ID: 1204140-07A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
1,1,1,2-Tetrachloroethane	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
1,1,1-Trichloroethane	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
1,1,2,2-Tetrachloroethane	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
1,1,2-Trichloroethane	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
1,1-Dichloroethane	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
1,1-Dichloroethene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
1,1-Dichloropropene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
1,2,3-Trichlorobenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
1,2,3-Trichloropropane	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
1,2,4,5-Tetramethylbenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
1,2,4-Trichlorobenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
1,2,4-Trimethylbenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
1,2-Dibromo-3-chloropropane	U	1	2.0		µg/L	1	4/18/2012 2:01:00 PM
1,2-Dibromoethane	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
1,2-Dichlorobenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
1,2-Dichloroethane	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
1,2-Dichloropropane	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
1,3,5-Trimethylbenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
1,3-Dichlorobenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
1,3-dichloropropane	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
1,4-Dichlorobenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
1,4-Dioxane	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
2,2-Dichloropropane	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
2-Butanone	U	1.2	2.5	C	µg/L	1	4/18/2012 2:01:00 PM
2-Chloroethyl vinyl ether	U	1	2.0		µg/L	1	4/18/2012 2:01:00 PM
2-Chlorotoluene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
2-Hexanone	U	1.2	2.5		µg/L	1	4/18/2012 2:01:00 PM
2-Propanol	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
4-Chlorotoluene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
4-Isopropyltoluene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
4-Methyl-2-pentanone	U	1.2	2.5		µg/L	1	4/18/2012 2:01:00 PM
Acetone	U	1.2	2.5		µg/L	1	4/18/2012 2:01:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1204140
Project: Bronxville, NY (6832-BVNY)
Lab ID: 1204140-07A

Client Sample ID: ACT-3 15.5'
Collection Date: 4/16/2012 1:30:00 PM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Acrolein	U	2.5	5.0	C	µg/L	1	4/18/2012 2:01:00 PM
Acrylonitrile	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Benzene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Bromobenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Bromochloromethane	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Bromodichloromethane	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Bromoform	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Bromomethane	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Carbon disulfide	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Carbon tetrachloride	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Chlorobenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Chlorodifluoromethane	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Chloroethane	U	0.5	1.0	C	µg/L	1	4/18/2012 2:01:00 PM
Chloroform	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Chloromethane	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
cis-1,2-Dichloroethene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
cis-1,3-Dichloropropene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Dibromochloromethane	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Dibromomethane	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Dichlorodifluoromethane	U	0.5	1.0	C	µg/L	1	4/18/2012 2:01:00 PM
Diisopropyl ether	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Ethanol	U	2.5	5.0		µg/L	1	4/18/2012 2:01:00 PM
Ethyl acetate	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Ethylbenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Freon-114	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Hexachlorobutadiene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Isopropyl acetate	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Isopropylbenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
m,p-Xylene	U	1	2.0		µg/L	1	4/18/2012 2:01:00 PM
Methyl Acetate	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Methyl tert-butyl ether	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Methylene chloride	3.1	0.5	1.0	B	µg/L	1	4/18/2012 2:01:00 PM
n-Amyl acetate	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1204140
Project: Bronxville, NY (6832-BVNY)
Lab ID: 1204140-07A

Client Sample ID: ACT-3 15.5'
Collection Date: 4/16/2012 1:30:00 PM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Naphthalene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
n-Butyl acetate	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
n-Butylbenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
n-Propyl acetate	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
n-Propylbenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
o-Xylene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
p-Diethylbenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
p-Ethyltoluene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
sec-Butylbenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Styrene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
t-Butyl alcohol	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
tert-Butylbenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Tetrachloroethene	0.69	0.5	1.0	J	µg/L	1	4/18/2012 2:01:00 PM
Toluene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
trans-1,2-Dichloroethene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
trans-1,3-Dichloropropene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Trichloroethene	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Trichlorofluoromethane	U	0.5	1.0	C	µg/L	1	4/18/2012 2:01:00 PM
Vinyl acetate	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Vinyl chloride	U	0.5	1.0		µg/L	1	4/18/2012 2:01:00 PM
Surr: 4-Bromofluorobenzene	94.7	0	63-123		%REC	1	4/18/2012 2:01:00 PM
Surr: Dibromofluoromethane	95.8	0	68-124		%REC	1	4/18/2012 2:01:00 PM
Surr: Toluene-d8	91.9	0	67-125		%REC	1	4/18/2012 2:01:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.

Client Sample ID: ACT-3 20.5'

Lab Order: 1204140

Collection Date: 4/16/2012 2:00:00 PM

Project: Bronxville, NY (6832-BVNY)

Matrix: LIQUID

Lab ID: 1204140-08A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
1,1,1,2-Tetrachloroethane	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
1,1,1-Trichloroethane	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
1,1,2,2-Tetrachloroethane	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
1,1,2-Trichloroethane	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
1,1-Dichloroethane	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
1,1-Dichloroethene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
1,1-Dichloropropene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
1,2,3-Trichlorobenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
1,2,3-Trichloropropane	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
1,2,4,5-Tetramethylbenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
1,2,4-Trichlorobenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
1,2,4-Trimethylbenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
1,2-Dibromo-3-chloropropane	U	1	2.0		µg/L	1	4/18/2012 2:33:00 PM
1,2-Dibromoethane	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
1,2-Dichlorobenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
1,2-Dichloroethane	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
1,2-Dichloropropane	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
1,3,5-Trimethylbenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
1,3-Dichlorobenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
1,3-dichloropropane	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
1,4-Dichlorobenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
1,4-Dioxane	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
2,2-Dichloropropane	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
2-Butanone	U	1.2	2.5	C	µg/L	1	4/18/2012 2:33:00 PM
2-Chloroethyl vinyl ether	U	1	2.0		µg/L	1	4/18/2012 2:33:00 PM
2-Chlorotoluene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
2-Hexanone	U	1.2	2.5		µg/L	1	4/18/2012 2:33:00 PM
2-Propanol	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
4-Chlorotoluene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
4-Isopropyltoluene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
4-Methyl-2-pentanone	U	1.2	2.5		µg/L	1	4/18/2012 2:33:00 PM
Acetone	U	1.2	2.5		µg/L	1	4/18/2012 2:33:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1204140
Project: Bronxville, NY (6832-BVNY)
Lab ID: 1204140-08A

Client Sample ID: ACT-3 20.5'
Collection Date: 4/16/2012 2:00:00 PM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Acrolein	U	2.5	5.0	C	µg/L	1	4/18/2012 2:33:00 PM
Acrylonitrile	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Benzene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Bromobenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Bromochloromethane	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Bromodichloromethane	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Bromoform	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Bromomethane	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Carbon disulfide	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Carbon tetrachloride	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Chlorobenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Chlorodifluoromethane	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Chloroethane	U	0.5	1.0	C	µg/L	1	4/18/2012 2:33:00 PM
Chloroform	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Chloromethane	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
cis-1,2-Dichloroethene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
cis-1,3-Dichloropropene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Dibromochloromethane	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Dibromomethane	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Dichlorodifluoromethane	U	0.5	1.0	C	µg/L	1	4/18/2012 2:33:00 PM
Diisopropyl ether	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Ethanol	U	2.5	5.0		µg/L	1	4/18/2012 2:33:00 PM
Ethyl acetate	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Ethylbenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Freon-114	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Hexachlorobutadiene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Isopropyl acetate	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Isopropylbenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
m,p-Xylene	U	1	2.0		µg/L	1	4/18/2012 2:33:00 PM
Methyl Acetate	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Methyl tert-butyl ether	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Methylene chloride	2.8	0.5	1.0	B	µg/L	1	4/18/2012 2:33:00 PM
n-Amyl acetate	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.

Client Sample ID: ACT-3 20.5'

Lab Order: 1204140

Collection Date: 4/16/2012 2:00:00 PM

Project: Bronxville, NY (6832-BVNY)

Matrix: LIQUID

Lab ID: 1204140-08A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Naphthalene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
n-Butyl acetate	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
n-Butylbenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
n-Propyl acetate	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
n-Propylbenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
o-Xylene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
p-Diethylbenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
p-Ethyltoluene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
sec-Butylbenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Styrene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
t-Butyl alcohol	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
tert-Butylbenzene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Tetrachloroethene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Toluene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
trans-1,2-Dichloroethene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
trans-1,3-Dichloropropene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Trichloroethene	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Trichlorofluoromethane	U	0.5	1.0	C	µg/L	1	4/18/2012 2:33:00 PM
Vinyl acetate	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Vinyl chloride	U	0.5	1.0		µg/L	1	4/18/2012 2:33:00 PM
Surr: 4-Bromofluorobenzene	87.9	0	63-123		%REC	1	4/18/2012 2:33:00 PM
Surr: Dibromofluoromethane	95.1	0	68-124		%REC	1	4/18/2012 2:33:00 PM
Surr: Toluene-d8	91.4	0	67-125		%REC	1	4/18/2012 2:33:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1204140
Project: Bronxville, NY (6832-BVNY)
Lab ID: 1204140-09A

Client Sample ID: ACT-4
Collection Date: 4/16/2012 2:30:00 PM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
1,1,1,2-Tetrachloroethane	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
1,1,1-Trichloroethane	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
1,1,2,2-Tetrachloroethane	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
1,1,2-Trichloroethane	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
1,1-Dichloroethane	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
1,1-Dichloroethene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
1,1-Dichloropropene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
1,2,3-Trichlorobenzene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
1,2,3-Trichloropropane	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
1,2,4,5-Tetramethylbenzene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
1,2,4-Trichlorobenzene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
1,2,4-Trimethylbenzene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
1,2-Dibromo-3-chloropropane	U	1	2.0		µg/L	1	4/17/2012 5:42:00 PM
1,2-Dibromoethane	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
1,2-Dichlorobenzene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
1,2-Dichloroethane	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
1,2-Dichloropropane	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
1,3,5-Trimethylbenzene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
1,3-Dichlorobenzene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
1,3-dichloropropane	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
1,4-Dichlorobenzene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
1,4-Dioxane	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
2,2-Dichloropropane	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
2-Butanone	U	1.2	2.5	C	µg/L	1	4/17/2012 5:42:00 PM
2-Chloroethyl vinyl ether	U	1	2.0		µg/L	1	4/17/2012 5:42:00 PM
2-Chlorotoluene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
2-Hexanone	U	1.2	2.5		µg/L	1	4/17/2012 5:42:00 PM
2-Propanol	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
4-Chlorotoluene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
4-Isopropyltoluene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
4-Methyl-2-pentanone	U	1.2	2.5		µg/L	1	4/17/2012 5:42:00 PM
Acetone	U	1.2	2.5		µg/L	1	4/17/2012 5:42:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1204140
Project: Bronxville, NY (6832-BVNY)
Lab ID: 1204140-09A

Client Sample ID: ACT-4
Collection Date: 4/16/2012 2:30:00 PM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Acrolein	U	2.5	5.0		µg/L	1	4/17/2012 5:42:00 PM
Acrylonitrile	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Benzene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Bromobenzene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Bromochloromethane	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Bromodichloromethane	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Bromoform	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Bromomethane	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Carbon disulfide	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Carbon tetrachloride	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Chlorobenzene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Chlorodifluoromethane	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Chloroethane	U	0.5	1.0	C	µg/L	1	4/17/2012 5:42:00 PM
Chloroform	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Chloromethane	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
cis-1,2-Dichloroethene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
cis-1,3-Dichloropropene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Dibromochloromethane	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Dibromomethane	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Dichlorodifluoromethane	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Diisopropyl ether	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Ethanol	U	2.5	5.0		µg/L	1	4/17/2012 5:42:00 PM
Ethyl acetate	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Ethylbenzene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Freon-114	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Hexachlorobutadiene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Isopropyl acetate	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Isopropylbenzene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
m,p-Xylene	U	1	2.0		µg/L	1	4/17/2012 5:42:00 PM
Methyl Acetate	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Methyl tert-butyl ether	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Methylene chloride	3.0	0.5	1.0	B	µg/L	1	4/17/2012 5:42:00 PM
n-Amyl acetate	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1204140
Project: Bronxville, NY (6832-BVNY)
Lab ID: 1204140-09A

Client Sample ID: ACT-4
Collection Date: 4/16/2012 2:30:00 PM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Naphthalene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
n-Butyl acetate	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
n-Butylbenzene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
n-Propyl acetate	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
n-Propylbenzene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
o-Xylene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
p-Diethylbenzene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
p-Ethyltoluene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
sec-Butylbenzene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Styrene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
t-Butyl alcohol	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
tert-Butylbenzene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Tetrachloroethene	160	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Toluene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
trans-1,2-Dichloroethene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
trans-1,3-Dichloropropene	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Trichloroethene	1.0	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Trichlorofluoromethane	U	0.5	1.0	C	µg/L	1	4/17/2012 5:42:00 PM
Vinyl acetate	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Vinyl chloride	U	0.5	1.0		µg/L	1	4/17/2012 5:42:00 PM
Surr: 4-Bromofluorobenzene	94.3	0	63-123		%REC	1	4/17/2012 5:42:00 PM
Surr: Dibromofluoromethane	92.4	0	68-124		%REC	1	4/17/2012 5:42:00 PM
Surr: Toluene-d8	91.6	0	67-125		%REC	1	4/17/2012 5:42:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1204140
Project: Bronxville, NY (6832-BVNY)
Lab ID: 1204140-10A

Client Sample ID: ACT-5
Collection Date: 4/16/2012 3:00:00 PM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
1,1,1,2-Tetrachloroethane	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
1,1,1-Trichloroethane	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
1,1,2,2-Tetrachloroethane	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
1,1,2-Trichloroethane	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
1,1-Dichloroethane	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
1,1-Dichloroethene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
1,1-Dichloropropene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
1,2,3-Trichlorobenzene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
1,2,3-Trichloropropane	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
1,2,4,5-Tetramethylbenzene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
1,2,4-Trichlorobenzene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
1,2,4-Trimethylbenzene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
1,2-Dibromo-3-chloropropane	U	1	2.0		µg/L	1	4/17/2012 6:14:00 PM
1,2-Dibromoethane	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
1,2-Dichlorobenzene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
1,2-Dichloroethane	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
1,2-Dichloropropane	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
1,3,5-Trimethylbenzene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
1,3-Dichlorobenzene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
1,3-dichloropropane	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
1,4-Dichlorobenzene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
1,4-Dioxane	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
2,2-Dichloropropane	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
2-Butanone	U	1.2	2.5	C	µg/L	1	4/17/2012 6:14:00 PM
2-Chloroethyl vinyl ether	U	1	2.0		µg/L	1	4/17/2012 6:14:00 PM
2-Chlorotoluene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
2-Hexanone	U	1.2	2.5		µg/L	1	4/17/2012 6:14:00 PM
2-Propanol	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
4-Chlorotoluene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
4-Isopropyltoluene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
4-Methyl-2-pentanone	U	1.2	2.5		µg/L	1	4/17/2012 6:14:00 PM
Acetone	U	1.2	2.5		µg/L	1	4/17/2012 6:14:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1204140
Project: Bronxville, NY (6832-BVNY)
Lab ID: 1204140-10A

Client Sample ID: ACT-5
Collection Date: 4/16/2012 3:00:00 PM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Acrolein	U	2.5	5.0		µg/L	1	4/17/2012 6:14:00 PM
Acrylonitrile	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Benzene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Bromobenzene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Bromochloromethane	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Bromodichloromethane	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Bromoform	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Bromomethane	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Carbon disulfide	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Carbon tetrachloride	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Chlorobenzene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Chlorodifluoromethane	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Chloroethane	U	0.5	1.0	C	µg/L	1	4/17/2012 6:14:00 PM
Chloroform	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Chloromethane	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
cis-1,2-Dichloroethene	2.2	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
cis-1,3-Dichloropropene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Dibromochloromethane	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Dibromomethane	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Dichlorodifluoromethane	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Diisopropyl ether	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Ethanol	U	2.5	5.0		µg/L	1	4/17/2012 6:14:00 PM
Ethyl acetate	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Ethylbenzene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Freon-114	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Hexachlorobutadiene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Isopropyl acetate	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Isopropylbenzene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
m,p-Xylene	U	1	2.0		µg/L	1	4/17/2012 6:14:00 PM
Methyl Acetate	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Methyl tert-butyl ether	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Methylene chloride	3.0	0.5	1.0	B	µg/L	1	4/17/2012 6:14:00 PM
n-Amyl acetate	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1204140
Project: Bronxville, NY (6832-BVNY)
Lab ID: 1204140-10A

Client Sample ID: ACT-5
Collection Date: 4/16/2012 3:00:00 PM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Naphthalene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
n-Butyl acetate	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
n-Butylbenzene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
n-Propyl acetate	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
n-Propylbenzene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
o-Xylene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
p-Diethylbenzene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
p-Ethyltoluene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
sec-Butylbenzene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Styrene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
t-Butyl alcohol	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
tert-Butylbenzene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Tetrachloroethene	69	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Toluene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
trans-1,2-Dichloroethene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
trans-1,3-Dichloropropene	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Trichloroethene	3.2	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Trichlorofluoromethane	U	0.5	1.0	C	µg/L	1	4/17/2012 6:14:00 PM
Vinyl acetate	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Vinyl chloride	U	0.5	1.0		µg/L	1	4/17/2012 6:14:00 PM
Surr: 4-Bromofluorobenzene	94.5	0	63-123		%REC	1	4/17/2012 6:14:00 PM
Surr: Dibromofluoromethane	92.6	0	68-124		%REC	1	4/17/2012 6:14:00 PM
Surr: Toluene-d8	89.5	0	67-125		%REC	1	4/17/2012 6:14:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Apr-12

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1204140
Project: Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: V624LCS-041712LS		SampType: LCS	TestCode: DryFull8260_		Units: µg/Kg	Prep Date: 4/17/2012		RunNo: 63010	
Client ID: LCSS		Batch ID: R63010A	TestNo: SW8260C			Analysis Date: 4/17/2012		SeqNo: 884874	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	Qual
1,1,1-Trichloroethane	33	5.0	50.00	0	66.7	40	125		
1,1,2,2-Tetrachloroethane	33	5.0	50.00	0	65.7	41	130		
1,1,2-Trichloroethane	34	5.0	50.00	0	68.4	43	121		
1,1-Dichloroethane	38	5.0	50.00	0	75.3	42	126		
1,1-Dichloroethene	35	5.0	50.00	0	70.8	40	126		
1,2-Dichlorobenzene	37	5.0	50.00	0	73.9	41	122		
1,2-Dichloroethane	35	5.0	50.00	0	70.3	42	133		
1,2-Dichloropropane	37	5.0	50.00	0	73.6	41	128		
1,3-Dichlorobenzene	39	5.0	50.00	0	77.9	45	119		
1,4-Dichlorobenzene	37	5.0	50.00	0	74.3	46	121		
Benzene	34	5.0	50.00	0	67.8	35	123		
Bromodichloromethane	33	5.0	50.00	0	66.4	37	130		
Bromoform	38	5.0	50.00	0	75.7	43	121		
Bromomethane	30	5.0	50.00	0	59.1	32	130		
Carbon tetrachloride	35	5.0	50.00	0	69.2	37	134		
Chlorobenzene	36	5.0	50.00	0	72.3	40	124		
Chloroethane	29	5.0	50.00	0	58.1	35	141		C
Chloroform	36	5.0	50.00	0	71.5	36	126		
Chloromethane	33	5.0	50.00	0	65.5	42	141		C
cis-1,3-Dichloropropene	33	5.0	50.00	0	66.7	30	130		
Dibromochloromethane	36	5.0	50.00	0	72.6	43	125		
Ethylbenzene	35	5.0	50.00	0	69.6	44	122		
Methylene chloride	35	5.0	50.00	0	69.2	32	132		B
Tetrachloroethene	36	5.0	50.00	0	71.3	31	120		
Toluene	36	5.0	50.00	0	71.9	42	124		
trans-1,3-Dichloropropene	28	5.0	50.00	0	56.0	45	123		
Trichloroethene	39	5.0	50.00	0	78.3	46	124		
Trichlorofluoromethane	41	5.0	50.00	0	82.2	45	137		
Vinyl chloride	37	5.0	50.00	0	73.7	46	139		C
Surr: 4-Bromofluorobenzene	52		50.00		103	42	133		

Qualifiers: B Analyte detected in the associated Method Blank
 J Analyte detected below quantitation limits
 R RPD outside accepted recovery limits
 C Calibration %RSD/%D exceeded for non-CCC analytes
 P >40% diff for detected conc between the two GC column
 S Spike Recovery outside accepted recovery limits
 H Holding times for preparation or analy
 PQL Practical Quantitation Limit
 U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1204140
Project: Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: V624LCS-041712LS	Sample Type: LCS	TestCode: DryFull8260_	Units: µg/Kg	Prep Date: 4/17/2012	RunNo: 63010						
Client ID: LCSS	Batch ID: R63010A	TestNo: SW8260C		Analysis Date: 4/17/2012	SeqNo: 884874						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: VBLK-041712LS	Sample Type: MBLK	TestCode: DryFull8260_	Units: µg/Kg	Prep Date: 4/17/2012	RunNo: 63010						
Client ID: PBS	Batch ID: R63010A	TestNo: SW8260C		Analysis Date: 4/17/2012	SeqNo: 884875						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1,2-Tetrachloroethane	U	5.0									
1,1,1-Trichloroethane	U	5.0									
1,1,2,2-Tetrachloroethane	U	5.0									
1,1,2-Trichloro-1,2,2-trifluoroethane	U	5.0									
1,1,2-Trichloroethane	U	5.0									
1,1-Dichloroethane	U	5.0									
1,1-Dichloroethene	U	5.0									
1,1-Dichloropropene	U	5.0									
1,2,3-Trichlorobenzene	U	5.0									
1,2,3-Trichloropropane	U	5.0									
1,2,4,5-Tetramethylbenzene	U	5.0									
1,2,4-Trichlorobenzene	U	5.0									
1,2,4-Trimethylbenzene	U	5.0									
1,2-Dibromo-3-chloropropane	U	5.0									
1,2-Dibromoethane	U	5.0									
1,2-Dichlorobenzene	U	5.0									
1,2-Dichloroethane	U	5.0									
1,2-Dichloropropane	U	5.0									
1,3,5-Trimethylbenzene	U	5.0									
1,3-Dichlorobenzene	U	5.0									
1,3-dichloropropane	U	5.0									
1,4-Dichlorobenzene	U	5.0									
1,4-Dioxane	U	5.0									
2,2-Dichloropropane	U	5.0									C

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analyte
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
 Work Order: 1204140
 Project: Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: VBLK-041712LS	SampType: MBLK	TestCode: DryFull8260_	Units: µg/Kg	Prep Date: 4/17/2012	RunNo: 63010						
Client ID: PBS	Batch ID: R63010A	TestNo: SW8260C		Analysis Date: 4/17/2012	SeqNo: 884875						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Butanone	U	5.0									
2-Chloroethyl vinyl ether	U	5.0									
2-Chlorotoluene	U	5.0									
2-Hexanone	U	5.0									
2-Propanol	U	5.0									
4-Chlorotoluene	U	5.0									
4-Isopropyltoluene	U	5.0									
4-Methyl-2-pentanone	U	5.0									
Acetone	U	5.0									
Acrolein	U	10									
Acrylonitrile	U	5.0									
Benzene	U	5.0									
Bromobenzene	U	5.0									
Bromochloromethane	U	5.0									
Bromodichloromethane	U	5.0									
Bromoform	U	5.0									
Bromomethane	U	5.0									
Carbon disulfide	U	5.0									
Carbon tetrachloride	U	5.0									
Chlorobenzene	U	5.0									
Chlorodifluoromethane	U	5.0									C
Chloroethane	U	5.0									
Chloroform	U	5.0									C
Chloromethane	U	5.0									
cis-1,2-Dichloroethene	U	5.0									
cis-1,3-Dichloropropene	U	5.0									
Dibromochloromethane	U	5.0									
Dibromomethane	U	5.0									
Dichlorodifluoromethane	U	5.0									
Diisopropyl ether	U	5.0									
Ethanol	U	10									

Qualifiers: B Analyte detected in the associated Method Blank
 J Analyte detected below quantitation limits
 R RPD outside accepted recovery limits
 C Calibration %RSD/%D exceeded for non-CCC analytes
 P >40% diff for detected conc between the two GC column
 S Spike Recovery outside accepted recovery limits
 H Holding times for preparation or analysis
 PQL Practical Quantitation Limit
 U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1204140
Project: Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: VBLK-041712LS	SampType: MBLK	TestCode: DryFull8260_	Units: µg/Kg	Prep Date: 4/17/2012	RunNo: 63010						
Client ID: PBS	Batch ID: R63010A	TestNo: SW8260C		Analysis Date: 4/17/2012	SeqNo: 884875						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethyl acetate	U	5.0									
Ethylbenzene	U	5.0									
Freon-114	U	5.0									
Hexachlorobutadiene	U	5.0									
Isopropyl acetate	U	5.0									
Isopropylbenzene	U	5.0									
m,p-Xylene	U	10									
Methyl Acetate	U	5.0									
Methyl tert-butyl ether	U	5.0									
Methylene chloride	3.4	5.0									J
n-Amyl acetate	U	5.0									
Naphthalene	U	5.0									
n-Butyl acetate	U	5.0									
n-Butylbenzene	U	5.0									
n-Propyl acetate	U	5.0									
n-Propylbenzene	U	5.0									
o-Xylene	U	5.0									
p-Diethylbenzene	U	5.0									
p-Ethyltoluene	U	5.0									
sec-Butylbenzene	U	5.0									
Styrene	U	5.0									
t-Butyl alcohol	U	5.0									
tert-Butylbenzene	U	5.0									
Tetrachloroethene	U	5.0									
Toluene	U	5.0									
trans-1,2-Dichloroethene	U	5.0									
trans-1,3-Dichloropropene	U	5.0									
Trichloroethene	U	5.0									
Trichlorofluoromethane	U	5.0									
Vinyl acetate	U	5.0									
Vinyl chloride	U	5.0									C

Qualifiers: B Analyte detected in the associated Method Blank
 J Analyte detected below quantitation limits
 R RPD outside accepted recovery limits
 C Calibration %RSD/%D exceeded for non-CCC analytes
 P >40% diff for detected conc between the two GC column
 S Spike Recovery outside accepted recovery limits
 H Holding times for preparation or analy
 PQL Practical Quantitation Limit
 U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1204140
Project: Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: VBLK-041712LS	SampleType: MBLK	TestCode: DryFull8260_	Units: µg/Kg	Prep Date: 4/17/2012	RunNo: 63010						
Client ID: PBS	Batch ID: R63010A	TestNo: SW8260C		Analysis Date: 4/17/2012	SeqNo: 884875						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: 4-Bromofluorobenzene

Surr: Dibromofluoromethane

Surr: Toluene-d8

49

51

48

50.00

50.00

50.00

98.5

101

96.6

42

50

53

133

133

130

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analy
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
 Work Order: 1204140
 Project: Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: V624LCS-041712HW		Sample Type: LCS	TestCode: Full8260_W		Units: µg/L	Prep Date: 4/17/2012		RunNo: 63010	
Client ID: LCSW		Batch ID: R63010	TestNo: SW8260C			Analysis Date: 4/17/2012		SeqNo: 884694	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	RPDLimit
1,1,1-Trichloroethane	40	1.0	50.00	0	79.0	38	136		
1,1,2,2-Tetrachloroethane	49	1.0	50.00	0	97.7	50	124		
1,1,2-Trichloroethane	43	1.0	50.00	0	85.8	52	128		
1,1-Dichloroethane	41	1.0	50.00	0	81.3	55	123		
1,1-Dichloroethene	39	1.0	50.00	0	78.5	48	128		
1,2-Dichlorobenzene	41	1.0	50.00	0	82.6	59	123		
1,2-Dichloroethane	40	1.0	50.00	0	79.3	52	129		
1,2-Dichloropropane	43	1.0	50.00	0	86.7	58	124		
1,3-Dichlorobenzene	42	1.0	50.00	0	84.2	51	124		
1,4-Dichlorobenzene	40	1.0	50.00	0	80.2	54	128		
2-Chloroethyl vinyl ether	33	2.0	50.00	0	66.5	25	141		
Benzene	40	1.0	50.00	0	79.2	53	131		
Bromodichloromethane	39	1.0	50.00	0	78.3	54	126		
Bromoform	45	1.0	50.00	0	90.1	53	127		
Bromomethane	34	1.0	50.00	0	67.1	42	150		
Carbon tetrachloride	43	1.0	50.00	0	86.5	46	135		
Chlorobenzene	41	1.0	50.00	0	82.3	53	121		
Chloroethane	29	1.0	50.00	0	58.0	40	145		C
Chloroform	38	1.0	50.00	0	76.8	41	135		
Chloromethane	38	1.0	50.00	0	77.0	32	149		
cis-1,3-Dichloropropene	37	1.0	50.00	0	74.3	46	128		
Dibromochloromethane	44	1.0	50.00	0	87.3	42	124		
Ethylbenzene	40	1.0	50.00	0	81.0	52	135		
Methylene chloride	37	1.0	50.00	0	74.7	35	137		B
Tetrachloroethene	46	1.0	50.00	0	92.6	26	126		
Toluene	43	1.0	50.00	0	86.5	51	130		
trans-1,2-Dichloroethene	39	1.0	50.00	0	78.6	49	125		
trans-1,3-Dichloropropene	37	1.0	50.00	0	74.3	43	125		
Trichloroethene	45	1.0	50.00	0	90.1	47	127		
Trichlorofluoromethane	50	1.0	50.00	0	99.1	50	152		C
Vinyl chloride	44	1.0	50.00	0	87.5	50	149		

Qualifiers: B Analyte detected in the associated Method Blank
 J Analyte detected below quantitation limits
 R RPD outside accepted recovery limits
 C Calibration %RSD/%D exceeded for non-CCC analytes
 P >40% diff for detected conc between the two GC column
 S Spike Recovery outside accepted recovery limits
 H Holding times for preparation or analy
 PQL Practical Quantitation Limit
 U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1204140
Project: Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260 W

Sample ID: V624LCS-041712HW	SampType: LCS	TestCode: Full8260_W	Units: µg/L	Prep Date: 4/17/2012	RunNo: 63010						
Client ID: LCSW	Batch ID: R63010	TestNo: SW8260C		Analysis Date: 4/17/2012	SeqNo: 884694						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: VBLK-041712HW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 4/17/2012	RunNo: 63010						
Client ID: PBW	Batch ID: R63010	TestNo: SW8260C		Analysis Date: 4/17/2012	SeqNo: 884695						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
 Work Order: 1204140
 Project: Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-041712HW		SampType: MBLK		TestCode: Full8260_W		Units: µg/L		Prep Date: 4/17/2012		RunNo: 63010	
Client ID: PBW		Batch ID: R63010		TestNo: SW8260C				Analysis Date: 4/17/2012		SeqNo: 884695	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2-Dichloropropane	U	1.0									C
2-Butanone	U	2.5									
2-Chloroethyl vinyl ether	U	2.0									
2-Chlorotoluene	U	1.0									
2-Hexanone	U	2.5									C
2-Propanol	U	1.0									
4-Chlorotoluene	U	1.0									
4-Isopropyltoluene	U	1.0									
4-Methyl-2-pentanone	U	2.5									
Acetone	U	2.5									
Acrolein	U	5.0									
Acrylonitrile	U	1.0									
Benzene	U	1.0									
Bromobenzene	U	1.0									
Bromochloromethane	U	1.0									
Bromodichloromethane	U	1.0									
Bromoform	U	1.0									
Bromomethane	U	1.0									
Carbon disulfide	U	1.0									
Carbon tetrachloride	U	1.0									
Chlorobenzene	U	1.0									
Chlorodifluoromethane	U	1.0									
Chloroethane	U	1.0									
Chloroform	U	1.0									
Chloromethane	U	1.0									
cis-1,2-Dichloroethene	U	1.0									
cis-1,3-Dichloropropene	U	1.0									
Dibromochloromethane	U	1.0									
Dibromomethane	U	1.0									
Dichlorodifluoromethane	U	1.0									
Diisopropyl ether	U	1.0									

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analyte
 J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
 R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
 Work Order: 1204140
 Project: Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-041712HW		SampType: MBLK		TestCode: Full8260_W		Units: µg/L		Prep Date: 4/17/2012		RunNo: 63010		
Client ID: PBW		Batch ID: R63010		TestNo: SW8260C				Analysis Date: 4/17/2012		SeqNo: 884695		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethanol		U	5.0									
Ethyl acetate		U	1.0									
Ethylbenzene		U	1.0									
Freon-114		U	1.0									
Hexachlorobutadiene		U	1.0									
Isopropyl acetate		U	1.0									
Isopropylbenzene		U	1.0									
m,p-Xylene		U	2.0									
Methyl Acetate		U	1.0									
Methyl tert-butyl ether		U	1.0									
Methylene chloride		3.2	1.0									
n-Amyl acetate		U	1.0									
Naphthalene		U	1.0									
n-Butyl acetate		U	1.0									
n-Butylbenzene		U	1.0									
n-Propyl acetate		U	1.0									
n-Propylbenzene		U	1.0									
o-Xylene		U	1.0									
p-Diethylbenzene		U	1.0									
p-Ethyltoluene		U	1.0									
sec-Butylbenzene		U	1.0									
Styrene		U	1.0									
t-Butyl alcohol		U	1.0									
tert-Butylbenzene		U	1.0									
Tetrachloroethene		U	1.0									
Toluene		U	1.0									
trans-1,2-Dichloroethene		U	1.0									
trans-1,3-Dichloropropene		U	1.0									
Trichloroethene		U	1.0									
Trichlorofluoromethane		U	1.0									
Vinyl acetate		U	1.0									C

Qualifiers: B Analyte detected in the associated Method Blank
 J Analyte detected below quantitation limits
 R RPD outside accepted recovery limits
 C Calibration %RSD/%D exceeded for non-CCC analytes
 P >40% diff for detected conc between the two GC column
 S Spike Recovery outside accepted recovery limits
 H Holding times for preparation or anal
 PQL Practical Quantitation Limit
 U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
 Work Order: 1204140
 Project: Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-041712HW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 4/17/2012	RunNo: 63010						
Client ID: PBW	Batch ID: R63010	TestNo: SW8260C		Analysis Date: 4/17/2012	SeqNo: 884695						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Vinyl chloride U 1.0

Surr: 4-Bromofluorobenzene	48		50.00		95.5	63	123				
Surr: Dibromofluoromethane	45		50.00		89.1	68	124				
Surr: Toluene-d8	46		50.00		91.5	67	125				

Sample ID: V624LCS-041812HW	SampType: LCS	TestCode: Full8260_W	Units: µg/L	Prep Date: 4/18/2012	RunNo: 63010						
Client ID: LCSW	Batch ID: R63010B	TestNo: SW8260C		Analysis Date: 4/18/2012	SeqNo: 884881						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	40	1.0	50.00	0	81.0	38	136				
1,1,2,2-Tetrachloroethane	53	1.0	50.00	0	107	50	124				
1,1,2-Trichloroethane	47	1.0	50.00	0	93.6	52	128				
1,1-Dichloroethane	43	1.0	50.00	0	86.0	55	123				
1,1-Dichloroethene	42	1.0	50.00	0	84.0	48	128				
1,2-Dichlorobenzene	44	1.0	50.00	0	87.8	59	123				
1,2-Dichloroethane	40	1.0	50.00	0	79.8	52	129				
1,2-Dichloropropane	48	1.0	50.00	0	95.6	58	124				
1,3-Dichlorobenzene	45	1.0	50.00	0	89.9	51	124				
1,4-Dichlorobenzene	43	1.0	50.00	0	85.3	54	128				
2-Chloroethyl vinyl ether	32	2.0	50.00	0	63.5	25	141				
Benzene	42	1.0	50.00	0	83.1	53	131				
Bromodichloromethane	43	1.0	50.00	0	85.6	54	126				
Bromoform	48	1.0	50.00	0	96.5	53	127				
Bromomethane	29	1.0	50.00	0	57.6	42	150				
Carbon tetrachloride	44	1.0	50.00	0	88.7	46	135				
Chlorobenzene	44	1.0	50.00	0	88.7	53	121				
Chloroethane	24	1.0	50.00	0	47.6	40	145				
Chloroform	40	1.0	50.00	0	81.0	41	135				
Chloromethane	37	1.0	50.00	0	73.0	32	149				
cis-1,3-Dichloropropene	39	1.0	50.00	0	77.9	46	128				
Dibromochloromethane	45	1.0	50.00	0	90.9	42	124				

C

Qualifiers: B Analyte detected in the associated Method Blank
 J Analyte detected below quantitation limits
 R RPD outside accepted recovery limits
 C Calibration %RSD/%D exceeded for non-CCC analytes
 P >40% diff for detected conc between the two GC column
 S Spike Recovery outside accepted recovery limits
 H Holding times for preparation or analy
 PQL Practical Quantitation Limit
 U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
 Work Order: 1204140
 Project: Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: V624LCS-041812HW		SampType: LCS	TestCode: Full8260_W		Units: µg/L	Prep Date: 4/18/2012		RunNo: 63010			
Client ID: LCSW	Batch ID: R63010B		TestNo: SW8260C		Analysis Date: 4/18/2012		SeqNo: 884881				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene	44	1.0	50.00	0	88.4	52	135				B
Methylene chloride	38	1.0	50.00	0	76.5	35	137				
Tetrachloroethene	52	1.0	50.00	0	104	26	126				
Toluene	47	1.0	50.00	0	93.1	51	130				
trans-1,2-Dichloroethene	42	1.0	50.00	0	84.1	49	125				C
trans-1,3-Dichloropropene	39	1.0	50.00	0	77.9	43	125				
Trichloroethene	50	1.0	50.00	0	101	47	127				
Trichlorofluoromethane	44	1.0	50.00	0	88.7	50	152				
Vinyl chloride	39	1.0	50.00	0	78.4	50	149				
Surr: 4-Bromofluorobenzene	53		50.00		106	63	123				
Surr: Dibromofluoromethane	44		50.00		88.8	68	124				
Surr: Toluene-d8	51		50.00		101	67	125				

Sample ID: VBLK-041812HW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 4/18/2012	RunNo: 63010						
Client ID: PBW	Batch ID: R63010B	TestNo: SW8260C		Analysis Date: 4/18/2012	SeqNo: 884882						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	U	1.0									
1,1,1-Trichloroethane	U	1.0									
1,1,2,2-Tetrachloroethane	U	1.0									
1,1,2-Trichloro-1,2,2-trifluoroethane	U	1.0									
1,1,2-Trichloroethane	U	1.0									
1,1-Dichloroethane	U	1.0									
1,1-Dichloroethene	U	1.0									
1,1-Dichloropropene	U	1.0									
1,2,3-Trichlorobenzene	U	1.0									
1,2,3-Trichloropropane	U	1.0									
1,2,4,5-Tetramethylbenzene	U	1.0									
1,2,4-Trichlorobenzene	U	1.0									
1,2,4-Trimethylbenzene	U	1.0									
1,2-Dibromo-3-chloropropane	U	2.0									

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analy
 J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
 R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1204140
Project: Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-041812HW		SampType: MBLK		TestCode: Full8260_W		Units: µg/L		Prep Date: 4/18/2012		RunNo: 63010		
Client ID: PBW		Batch ID: R63010B		TestNo: SW8260C				Analysis Date: 4/18/2012		SeqNo: 884882		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane		U	1.0									
1,2-Dichlorobenzene		U	1.0									
1,2-Dichloroethane		U	1.0									
1,2-Dichloropropane		U	1.0									
1,3,5-Trimethylbenzene		U	1.0									
1,3-Dichlorobenzene		U	1.0									
1,3-dichloropropane		U	1.0									
1,4-Dichlorobenzene		U	1.0									
1,4-Dioxane		U	1.0									
2,2-Dichloropropane		U	1.0									
2-Butanone		U	2.5									
2-Chloroethyl vinyl ether		U	2.0									C
2-Chlorotoluene		U	1.0									
2-Hexanone		U	2.5									
2-Propanol		U	1.0									
4-Chlorotoluene		U	1.0									
4-Isopropyltoluene		U	1.0									
4-Methyl-2-pentanone		U	2.5									
Acetone		U	2.5									
Acrolein		U	5.0									C
Acrylonitrile		U	1.0									
Benzene		U	1.0									
Bromobenzene		U	1.0									
Bromochloromethane		U	1.0									
Bromodichloromethane		U	1.0									
Bromoform		U	1.0									
Bromomethane		U	1.0									
Carbon disulfide		U	1.0									
Carbon tetrachloride		U	1.0									
Chlorobenzene		U	1.0									
Chlorodifluoromethane		U	1.0									

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analysis
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
 Work Order: 1204140
 Project: Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-041812HW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 4/18/2012	RunNo: 63010						
Client ID: PBW	Batch ID: R63010B	TestNo: SW8260C		Analysis Date: 4/18/2012	SeqNo: 884882						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroethane	U	1.0									C
Chloroform	U	1.0									
Chloromethane	U	1.0									
cis-1,2-Dichloroethene	U	1.0									
cis-1,3-Dichloropropene	U	1.0									
Dibromochloromethane	U	1.0									
Dibromomethane	U	1.0									
Dichlorodifluoromethane	U	1.0									C
Diisopropyl ether	U	1.0									
Ethanol	U	5.0									
Ethyl acetate	U	1.0									
Ethylbenzene	U	1.0									
Freon-114	U	1.0									
Hexachlorobutadiene	U	1.0									
Isopropyl acetate	U	1.0									
Isopropylbenzene	U	1.0									
m,p-Xylene	U	2.0									
Methyl Acetate	U	1.0									
Methyl tert-butyl ether	U	1.0									
Methylene chloride	3.2	1.0									
n-Amyl acetate	U	1.0									
Naphthalene	U	1.0									
n-Butyl acetate	U	1.0									
n-Butylbenzene	U	1.0									
n-Propyl acetate	U	1.0									
n-Propylbenzene	U	1.0									
o-Xylene	U	1.0									
p-Diethylbenzene	U	1.0									
p-Ethyltoluene	U	1.0									
sec-Butylbenzene	U	1.0									
Styrene	U	1.0									

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analysis
 J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
 R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
 Work Order: 1204140
 Project: Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-041812HW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 4/18/2012	RunNo: 63010						
Client ID: PBW	Batch ID: R63010B	TestNo: SW8260C		Analysis Date: 4/18/2012	SeqNo: 884882						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
t-Butyl alcohol	U	1.0									
tert-Butylbenzene	U	1.0									
Tetrachloroethene	U	1.0									
Toluene	U	1.0									
trans-1,2-Dichloroethene	U	1.0									
trans-1,3-Dichloropropene	U	1.0									
Trichloroethene	U	1.0									
Trichlorofluoromethane	U	1.0									
Vinyl acetate	U	1.0									
Vinyl chloride	U	1.0									
Surr: 4-Bromofluorobenzene	48		50.00		95.1	63	123				
Surr: Dibromofluoromethane	46		50.00		92.0	68	124				
Surr: Toluene-d8	45		50.00		89.8	67	125				
C											

C

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analy
 J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
 R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

American Analytical Laboratories, LLC.

Date: 19-Apr-12

CLIENT: Advanced Cleanup Technologies, Inc.
 Work Order: 1204140
 Project: Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: 1204140-10AMS		SampType: MS		TestCode: Full8260_W		Units: µg/L		Prep Date:		RunNo: 63010	
Client ID: ACT-5		Batch ID: R63010		TestNo: SW8260C				Analysis Date: 4/17/2012		SeqNo: 884699	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	35	1.0	50.00	0	71.0	32	122				
1,1,2,2-Tetrachloroethane	44	1.0	50.00	0	89.0	30	130				
1,1,2-Trichloroethane	38	1.0	50.00	0	75.2	32	120				
1,1-Dichloroethane	36	1.0	50.00	0	71.2	26	121				
1,1-Dichloroethene	34	1.0	50.00	0	68.2	29	118				
1,2-Dichlorobenzene	39	1.0	50.00	0	77.5	33	109				
1,2-Dichloroethane	33	1.0	50.00	0	65.4	26	120				
1,2-Dichloropropane	39	1.0	50.00	0	77.6	29	119				
1,3-Dichlorobenzene	41	1.0	50.00	0	82.2	35	111				
1,4-Dichlorobenzene	39	1.0	50.00	0	77.7	35	110				
Benzene	36	1.0	50.00	0	71.1	27	116				
Bromodichloromethane	36	1.0	50.00	0	71.8	32	110				
Bromoform	41	1.0	50.00	0	81.7	27	119				
Bromomethane	34	1.0	50.00	0	67.6	30	120				
Carbon tetrachloride	38	1.0	50.00	0	75.4	27	123				
Chlorobenzene	40	1.0	50.00	0	80.1	33	120				C
Chloroethane	32	1.0	50.00	0	63.1	24	138				
Chloroform	35	1.0	50.00	0	69.0	29	128				
Chloromethane	33	1.0	50.00	0	66.4	20	118				
cis-1,3-Dichloropropene	28	1.0	50.00	0	55.5	27	110				
Dibromochloromethane	38	1.0	50.00	0	76.8	32	118				
Ethylbenzene	39	1.0	50.00	0	78.4	37	111				
Methylene chloride	32	1.0	50.00	3.050	57.9	24	112				B
Tetrachloroethene	110	1.0	50.00	69.36	71.8	20	125				
Toluene	41	1.0	50.00	0	81.1	30	120				
trans-1,2-Dichloroethene	35	1.0	50.00	0	69.7	27	115				
trans-1,3-Dichloropropene	28	1.0	50.00	0	55.5	20	123				
Trichloroethene	46	1.0	50.00	3.190	85.5	24	122				
Trichlorofluoromethane	47	1.0	50.00	0	93.3	30	129				C
Vinyl chloride	39	1.0	50.00	0	78.4	20	141				

Qualifiers: B Analyte detected in the associated Method Blank
 J Analyte detected below quantitation limits
 R RPD outside accepted recovery limits
 C Calibration %RSD/%D exceeded for non-CCC analytes
 P >40% diff for detected conc between the two GC column
 S Spike Recovery outside accepted recovery limits
 H Holding times for preparation or analy
 PQL Practical Quantitation Limit
 U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
 Work Order: 1204140
 Project: Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: 1204140-10AMS	SampleType: MS	TestCode: Full8260_W	Units: µg/L	Prep Date:	RunNo: 63010						
Client ID: ACT-5	Batch ID: R63010	TestNo: SW8260C		Analysis Date: 4/17/2012	SeqNo: 884699						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: 1204140-10AMSD	SampleType: MSD	TestCode: Full8260_W	Units: µg/L	Prep Date:	RunNo: 63010						
Client ID: ACT-5	Batch ID: R63010	TestNo: SW8260C		Analysis Date: 4/17/2012	SeqNo: 884700						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: B Analyte detected in the associated Method Blank
 J Analyte detected below quantitation limits
 R RPD outside accepted recovery limits
 C Calibration %RSD/%D exceeded for non-CCC analytes
 P >40% diff for detected conc between the two GC column
 S Spike Recovery outside accepted recovery limits
 H Holding times for preparation or analy
 PQL Practical Quantitation Limit
 U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
 Work Order: 1204140
 Project: Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: 1204140-10AMSD	SampType: MSD	TestCode: Full8260_W	Units: µg/L	Prep Date:	RunNo: 63010						
Client ID: ACT-5	Batch ID: R63010	TestNo: SW8260C		Analysis Date: 4/17/2012	SeqNo: 884700						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tetrachloroethene	100	1.0	50.00	69.36	61.3	20	125	105.3	5.11	20	
Toluene	37	1.0	50.00	0	73.8	30	120	40.56	9.45	20	
trans-1,2-Dichloroethene	32	1.0	50.00	0	64.9	27	115	34.85	7.13	20	
trans-1,3-Dichloropropene	24	1.0	50.00	0	47.8	20	123	27.77	15.0	20	
Trichloroethene	41	1.0	50.00	3.190	76.4	24	122	45.94	10.4	20	
Trichlorofluoromethane	41	1.0	50.00	0	82.3	30	129	46.66	12.5	20	C
Vinyl chloride	36	1.0	50.00	0	71.3	20	141	39.18	9.46	20	
Surr: 4-Bromofluorobenzene	51		50.00		102	63	123		0	0	
Surr: Dibromofluoromethane	45		50.00		90.2	68	124		0	0	
Surr: Toluene-d8	50		50.00		99.0	67	125		0	0	

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analy
 J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
 R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

Friday, May 11, 2012

Paul P. Stewart
Advanced Cleanup Technologies, Inc.
960 So. Broadway, Suite 100
Hicksville, NY 11801

TEL: (516) 933-0655

FAX (516) 933-0659

RE: 79 Pondfield Road, Bronxville, NY (6832-B

Order No.: 1205035

Dear Paul P. Stewart:

American Analytical Laboratories, LLC. received 7 sample(s) on 5/4/2012 for the analyses presented in the following report.

Samples were analyzed in accordance with the test procedures documented on the chain of custody and detailed throughout the text of this report.

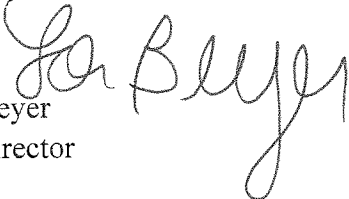
The results reported herein relate only to the items tested or to the samples as received by the laboratory. This report may not be reproduced, except in full, without the approval of American Analytical Laboratories, LLC and is not considered complete without a cover page and chain of custody documentation. The limits (LOQ) provided in the data package are analytical reporting limits and not Federal or Local mandated values to which the sample results should be compared.

There were no problems with the analyses and all data for associated QC met laboratory specifications. If there are any exceptions a Case Narrative is provided in the report or the data is qualified. This package has been reviewed by American Analytical Laboratories' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal. This report consists of 43 pages.

If you have any questions regarding these tests results, please do not hesitate to call (631) 454-6100 or email me directly at lbeyer@american-analytical.com.

Sincerely,

Lori Beyer
Lab Director



American Analytical Laboratories, LLC.

Date: 11-May-12

CLIENT: Advanced Cleanup Technologies, Inc.
Project: 79 Pondfield Road, Bronxville, NY (6832-BVN)
Lab Order: 1205035

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date Collected	Date Received
1205035-01A	ACT-6 (0-2ft)	5/3/2012 10:00:00 AM	5/4/2012
1205035-02A	ACT-6 (13-15ft)	5/3/2012 11:00:00 AM	5/4/2012
1205035-03A	ACT-7 (5-7ft)	5/3/2012 2:00:00 PM	5/4/2012
1205035-04A	ACT-7 (15-17ft)	5/3/2012 3:00:00 PM	5/4/2012
1205035-05A	ACT-6 (17ft)	5/3/2012 12:00:00 PM	5/4/2012
1205035-06A	ACT-7 (17ft)	5/3/2012 4:00:00 PM	5/4/2012
1205035-07A	ACT-8 (16ft)	5/3/2012 5:00:00 PM	5/4/2012

CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT

CLIENT NAME/ADDRESS		CONTACT:		SAMPLER (SIGNATURE)		SAMPLE(S) SEALED		YES / NO	
PROJECT LOCATION:		SAMPLING DATE		SAMPLE # - LOCATION		SAMPLER NAME (PRINT)		CORRECT CONTAINER(S)	
LABORATORY ID# LAB USE ONLY		NO. OF CONTAINERS		DATE		TIME		TEMPERATURE (°C)	
ACT 960 South Broadway, Suite 100 Hicksville, NY 11801		Paul Stewart		Paul Stewart		Stern Waks		YES / NO	
PROJECT LOCATION:		SAMPLING DATE		SAMPLE # - LOCATION		SAMPLER NAME (PRINT)		CORRECT CONTAINER(S)	
LABORATORY ID# LAB USE ONLY		NO. OF CONTAINERS		DATE		TIME		TEMPERATURE (°C)	
1205035-01A		1		5/3/12		10:00		YES / NO	
00A		1		5/3/12		11:00		YES / NO	
03A		1		5/3/12		2:00		YES / NO	
04A		1		5/3/12		3:00		YES / NO	
05A		2		5/3/12		12:00		YES / NO	
06A		2		5/3/12		4:00		YES / NO	
07A		2		5/3/12		5:00		YES / NO	
1205035-01A		1		5/3/12		10:00		YES / NO	
00A		1		5/3/12		11:00		YES / NO	
03A		1		5/3/12		2:00		YES / NO	
04A		1		5/3/12		3:00		YES / NO	
05A		2		5/3/12		12:00		YES / NO	
06A		2		5/3/12		4:00		YES / NO	
07A		2		5/3/12		5:00		YES / NO	
1205035-01A		1		5/3/12		10:00		YES / NO	
00A		1		5/3/12		11:00		YES / NO	
03A		1		5/3/12		2:00		YES / NO	
04A		1		5/3/12		3:00		YES / NO	
05A		2		5/3/12		12:00		YES / NO	
06A		2		5/3/12		4:00		YES / NO	
07A		2		5/3/12		5:00		YES / NO	
1205035-01A		1		5/3/12		10:00		YES / NO	
00A		1		5/3/12		11:00		YES / NO	
03A		1		5/3/12		2:00		YES / NO	
04A		1		5/3/12		3:00		YES / NO	
05A		2		5/3/12		12:00		YES / NO	
06A		2		5/3/12		4:00		YES / NO	
07A		2		5/3/12		5:00		YES / NO	
1205035-01A		1		5/3/12		10:00		YES / NO	
00A		1		5/3/12		11:00		YES / NO	
03A		1		5/3/12		2:00		YES / NO	
04A		1		5/3/12		3:00		YES / NO	
05A		2		5/3/12		12:00		YES / NO	
06A		2		5/3/12		4:00		YES / NO	
07A		2		5/3/12		5:00		YES / NO	
1205035-01A		1		5/3/12		10:00		YES / NO	
00A		1		5/3/12		11:00		YES / NO	
03A		1		5/3/12		2:00		YES / NO	
04A		1		5/3/12		3:00		YES / NO	
05A		2		5/3/12		12:00		YES / NO	
06A		2		5/3/12		4:00		YES / NO	
07A		2		5/3/12		5:00		YES / NO	
1205035-01A		1		5/3/12		10:00		YES / NO	
00A		1		5/3/12		11:00		YES / NO	
03A		1		5/3/12		2:00		YES / NO	
04A		1		5/3/12		3:00		YES / NO	
05A		2		5/3/12		12:00		YES / NO	
06A		2		5/3/12		4:00		YES / NO	
07A		2		5/3/12		5:00		YES / NO	
1205035-01A		1		5/3/12		10:00		YES / NO	
00A		1		5/3/12		11:00		YES / NO	
03A		1		5/3/12		2:00		YES / NO	
04A		1		5/3/12		3:00		YES / NO	
05A		2		5/3/12		12:00		YES / NO	
06A		2		5/3/12		4:00		YES / NO	
07A		2		5/3/12		5:00		YES / NO	
1205035-01A		1		5/3/12		10:00		YES / NO	
00A		1		5/3/12		11:00		YES / NO	
03A		1		5/3/12		2			

American Analytical Laboratories, LLC.

Sample Receipt Checklist

Client Name **ADVANCED CLEANUP TECH**

Date and Time Receive **5/4/2012 11:56:21 AM**

Work Order Number **1205035**

RcptNo: **1**

Received by **CF**

COC_ID:

CoolerID:

Checklist completed by

CF 5/4/12
Signature Date

Reviewed by

JB 5/4/12
Initials Date

Matrix:

Carrier name Courier

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☒	No ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐

Adjusted? _____ Checked by _____

Any No and/or NA (not applicable) response must be detailed in the comments section below

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments:

Corrective Action _____

American Analytical Laboratories, LLC.

Date: 11-May-12

ELAP ID : 11418

CLIENT:	Advanced Cleanup Technologies, Inc.	Client Sample ID:	ACT-6 (0-2ft)
Lab Order:	1205035	Collection Date:	5/3/2012 10:00:00 AM
Project:	79 Pondfield Road, Bronxville, NY (6832-BVN)	Matrix:	SOIL
Lab ID:	1205035-01A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
PERCENT MOISTURE							
Percent Moisture	1.05	0	0		wt%	1	5/7/2012
VOLATILE SW-846 METHOD 8260							
			D2216				Analyst: KK
			SW8260C				Analyst: LA
1,1,1,2-Tetrachloroethane	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
1,1,1-Trichloroethane	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
1,1,2,2-Tetrachloroethane	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
1,1,2-Trichloroethane	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
1,1-Dichloroethane	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
1,1-Dichloroethene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
1,1-Dichloropropene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
1,2,3-Trichlorobenzene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
1,2,3-Trichloropropane	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
1,2,4,5-Tetramethylbenzene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
1,2,4-Trichlorobenzene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
1,2,4-Trimethylbenzene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
1,2-Dibromo-3-chloropropane	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
1,2-Dibromoethane	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
1,2-Dichlorobenzene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
1,2-Dichloroethane	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
1,2-Dichloropropane	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
1,3,5-Trimethylbenzene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
1,3-Dichlorobenzene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
1,3-dichloropropane	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
1,4-Dichlorobenzene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
1,4-Dioxane	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
2,2-Dichloropropane	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
2-Butanone	U	1.41	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
2-Chloroethyl vinyl ether	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
2-Chlorotoluene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
2-Hexanone	U	1.41	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
2-Propanol	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
4-Chlorotoluene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 11-May-12

ELAP ID : 11418

CLIENT:	Advanced Cleanup Technologies, Inc.	Client Sample ID:	ACT-6 (0-2ft)
Lab Order:	1205035	Collection Date:	5/3/2012 10:00:00 AM
Project:	79 Pondfield Road, Bronxville, NY (6832-BVN)	Matrix:	SOIL
Lab ID:	1205035-01A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
4-Isopropyltoluene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
4-Methyl-2-pentanone	U	1.41	4.7	C	µg/Kg-dry	1	5/4/2012 6:46:00 PM
Acetone	U	1.41	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Acrolein	U	2.36	9.4	C	µg/Kg-dry	1	5/4/2012 6:46:00 PM
Acrylonitrile	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Benzene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Bromobenzene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Bromochloromethane	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Bromodichloromethane	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Bromoform	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Bromomethane	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Carbon disulfide	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Carbon tetrachloride	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Chlorobenzene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Chlorodifluoromethane	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Chloroethane	U	0.47	4.7	C	µg/Kg-dry	1	5/4/2012 6:46:00 PM
Chloroform	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Chloromethane	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
cis-1,2-Dichloroethene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
cis-1,3-Dichloropropene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Dibromochloromethane	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Dibromomethane	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Dichlorodifluoromethane	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Diisopropyl ether	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Ethanol	U	2.36	9.4		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Ethyl acetate	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Ethylbenzene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Freon-114	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Hexachlorobutadiene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Isopropyl acetate	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Isopropylbenzene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
m,p-Xylene	U	0.94	9.4		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Methyl Acetate	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 11-May-12

ELAP ID : 11418

CLIENT:	Advanced Cleanup Technologies, Inc.	Client Sample ID:	ACT-6 (0-2ft)
Lab Order:	1205035	Collection Date:	5/3/2012 10:00:00 AM
Project:	79 Pondfield Road, Bronxville, NY (6832-BVN)	Matrix:	SOIL
Lab ID:	1205035-01A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Methyl tert-butyl ether	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Methylene chloride	5.2	0.47	4.7	B	µg/Kg-dry	1	5/4/2012 6:46:00 PM
n-Amyl acetate	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Naphthalene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
n-Butyl acetate	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
n-Butylbenzene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
n-Propyl acetate	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
n-Propylbenzene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
o-Xylene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
p-Diethylbenzene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
p-Ethyltoluene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
sec-Butylbenzene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Styrene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
t-Butyl alcohol	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
tert-Butylbenzene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Tetrachloroethene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Toluene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
trans-1,2-Dichloroethene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
trans-1,3-Dichloropropene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Trichloroethene	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Trichlorofluoromethane	U	0.47	4.7	C	µg/Kg-dry	1	5/4/2012 6:46:00 PM
Vinyl acetate	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Vinyl chloride	U	0.47	4.7		µg/Kg-dry	1	5/4/2012 6:46:00 PM
Surr: 4-Bromofluorobenzene	89.1	0	42-133		%REC	1	5/4/2012 6:46:00 PM
Surr: Dibromofluoromethane	97.9	0	50-133		%REC	1	5/4/2012 6:46:00 PM
Surr: Toluene-d8	92.0	0	53-130		%REC	1	5/4/2012 6:46:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 11-May-12

ELAP ID : 11418

CLIENT:	Advanced Cleanup Technologies, Inc.	Client Sample ID:	ACT-6 (13-15ft)
Lab Order:	1205035	Collection Date:	5/3/2012 11:00:00 AM
Project:	79 Pondfield Road, Bronxville, NY (6832-BVN)	Matrix:	SOIL
Lab ID:	1205035-02A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
PERCENT MOISTURE							
Percent Moisture	9.42	0	0		wt%	1	5/7/2012
VOLATILE SW-846 METHOD 8260							
			D2216				Analyst: KK
			SW8260C				Analyst: LA
1,1,1,2-Tetrachloroethane	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
1,1,1-Trichloroethane	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
1,1,2,2-Tetrachloroethane	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
1,1,2-Trichloroethane	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
1,1-Dichloroethane	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
1,1-Dichloroethene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
1,1-Dichloropropene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
1,2,3-Trichlorobenzene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
1,2,3-Trichloropropane	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
1,2,4,5-Tetramethylbenzene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
1,2,4-Trichlorobenzene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
1,2,4-Trimethylbenzene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
1,2-Dibromo-3-chloropropane	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
1,2-Dibromoethane	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
1,2-Dichlorobenzene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
1,2-Dichloroethane	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
1,2-Dichloropropane	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
1,3,5-Trimethylbenzene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
1,3-Dichlorobenzene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
1,3-dichloropropane	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
1,4-Dichlorobenzene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
1,4-Dioxane	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
2,2-Dichloropropane	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
2-Butanone	U	2	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
2-Chloroethyl vinyl ether	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
2-Chlorotoluene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
2-Hexanone	U	2	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
2-Propanol	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
4-Chlorotoluene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
 Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 11-May-12

ELAP ID : 11418

CLIENT:	Advanced Cleanup Technologies, Inc.	Client Sample ID:	ACT-6 (13-15ft)
Lab Order:	1205035	Collection Date:	5/3/2012 11:00:00 AM
Project:	79 Pondfield Road, Bronxville, NY (6832-BVN)	Matrix:	SOIL
Lab ID:	1205035-02A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
4-Isopropyltoluene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
4-Methyl-2-pentanone	U	2	6.7	C	µg/Kg-dry	1	5/4/2012 7:18:00 PM
Acetone	U	2	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Acrolein	U	3.33	13	C	µg/Kg-dry	1	5/4/2012 7:18:00 PM
Acrylonitrile	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Benzene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Bromobenzene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Bromochloromethane	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Bromodichloromethane	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Bromoform	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Bromomethane	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Carbon disulfide	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Carbon tetrachloride	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Chlorobenzene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Chlorodifluoromethane	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Chloroethane	U	0.67	6.7	C	µg/Kg-dry	1	5/4/2012 7:18:00 PM
Chloroform	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Chloromethane	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
cis-1,2-Dichloroethene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
cis-1,3-Dichloropropene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Dibromochloromethane	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Dibromomethane	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Dichlorodifluoromethane	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Diisopropyl ether	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Ethanol	U	3.33	13		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Ethyl acetate	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Ethylbenzene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Freon-114	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Hexachlorobutadiene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Isopropyl acetate	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Isopropylbenzene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
m,p-Xylene	U	1.33	13		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Methyl Acetate	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
 Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 11-May-12

ELAP ID : 11418

CLIENT:	Advanced Cleanup Technologies, Inc.	Client Sample ID:	ACT-6 (13-15ft)
Lab Order:	1205035	Collection Date:	5/3/2012 11:00:00 AM
Project:	79 Pondfield Road, Bronxville, NY (6832-BVN)	Matrix:	SOIL
Lab ID:	1205035-02A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Methyl tert-butyl ether	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Methylene chloride	8.3	0.67	6.7	B	µg/Kg-dry	1	5/4/2012 7:18:00 PM
n-Amyl acetate	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Naphthalene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
n-Butyl acetate	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
n-Butylbenzene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
n-Propyl acetate	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
n-Propylbenzene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
o-Xylene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
p-Diethylbenzene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
p-Ethyltoluene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
sec-Butylbenzene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Styrene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
t-Butyl alcohol	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
tert-Butylbenzene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Tetrachloroethene	3.1	0.67	6.7	J	µg/Kg-dry	1	5/4/2012 7:18:00 PM
Toluene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
trans-1,2-Dichloroethene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
trans-1,3-Dichloropropene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Trichloroethene	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Trichlorofluoromethane	U	0.67	6.7	C	µg/Kg-dry	1	5/4/2012 7:18:00 PM
Vinyl acetate	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Vinyl chloride	U	0.67	6.7		µg/Kg-dry	1	5/4/2012 7:18:00 PM
Surr: 4-Bromofluorobenzene	86.5	0	42-133		%REC	1	5/4/2012 7:18:00 PM
Surr: Dibromofluoromethane	105	0	50-133		%REC	1	5/4/2012 7:18:00 PM
Surr: Toluene-d8	95.8	0	53-130		%REC	1	5/4/2012 7:18:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
 Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 11-May-12

ELAP ID : 11418

CLIENT:	Advanced Cleanup Technologies, Inc.	Client Sample ID:	ACT-7 (5-7ft)
Lab Order:	1205035	Collection Date:	5/3/2012 2:00:00 PM
Project:	79 Pondfield Road, Bronxville, NY (6832-BVN)	Matrix:	SOIL
Lab ID:	1205035-03A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
PERCENT MOISTURE							
Percent Moisture	5.32	0	0		wt%	1	Analyst: KK 5/7/2012
VOLATILE SW-846 METHOD 8260							
			D2216				Analyst: LA
			SW8260C				
1,1,1,2-Tetrachloroethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
1,1,1-Trichloroethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
1,1,2,2-Tetrachloroethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
1,1,2-Trichloroethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
1,1-Dichloroethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
1,1-Dichloroethene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
1,1-Dichloropropene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
1,2,3-Trichlorobenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
1,2,3-Trichloropropane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
1,2,4,5-Tetramethylbenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
1,2,4-Trichlorobenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
1,2,4-Trimethylbenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
1,2-Dibromo-3-chloropropane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
1,2-Dibromoethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
1,2-Dichlorobenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
1,2-Dichloroethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
1,2-Dichloropropane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
1,3,5-Trimethylbenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
1,3-Dichlorobenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
1,3-dichloropropane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
1,4-Dichlorobenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
1,4-Dioxane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
2,2-Dichloropropane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
2-Butanone	U	1.70	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
2-Chloroethyl vinyl ether	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
2-Chlorotoluene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
2-Hexanone	U	1.70	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
2-Propanol	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
4-Chlorotoluene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
 Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 11-May-12

ELAP ID : 11418

CLIENT:	Advanced Cleanup Technologies, Inc.	Client Sample ID:	ACT-7 (5-7ft)
Lab Order:	1205035	Collection Date:	5/3/2012 2:00:00 PM
Project:	79 Pondfield Road, Bronxville, NY (6832-BVN)	Matrix:	SOIL
Lab ID:	1205035-03A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
4-Isopropyltoluene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
4-Methyl-2-pentanone	U	1.70	5.7	C	µg/Kg-dry	1	5/4/2012 7:50:00 PM
Acetone	U	1.70	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Acrolein	U	2.84	11	C	µg/Kg-dry	1	5/4/2012 7:50:00 PM
Acrylonitrile	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Benzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Bromobenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Bromochloromethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Bromodichloromethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Bromoform	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Bromomethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Carbon disulfide	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Carbon tetrachloride	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Chlorobenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Chlorodifluoromethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Chloroethane	U	0.57	5.7	C	µg/Kg-dry	1	5/4/2012 7:50:00 PM
Chloroform	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Chloromethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
cis-1,2-Dichloroethene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
cis-1,3-Dichloropropene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Dibromochloromethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Dibromomethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Dichlorodifluoromethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Diisopropyl ether	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Ethanol	U	2.84	11		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Ethyl acetate	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Ethylbenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Freon-114	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Hexachlorobutadiene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Isopropyl acetate	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Isopropylbenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
m,p-Xylene	U	1.14	11		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Methyl Acetate	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 11-May-12

ELAP ID : 11418

CLIENT:	Advanced Cleanup Technologies, Inc.	Client Sample ID:	ACT-7 (5-7ft)
Lab Order:	1205035	Collection Date:	5/3/2012 2:00:00 PM
Project:	79 Pondfield Road, Bronxville, NY (6832-BVN)	Matrix:	SOIL
Lab ID:	1205035-03A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Methyl tert-butyl ether	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Methylene chloride	5.8	0.57	5.7	B	µg/Kg-dry	1	5/4/2012 7:50:00 PM
n-Amyl acetate	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Naphthalene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
n-Butyl acetate	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
n-Butylbenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
n-Propyl acetate	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
n-Propylbenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
o-Xylene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
p-Diethylbenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
p-Ethyltoluene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
sec-Butylbenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Styrene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
t-Butyl alcohol	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
tert-Butylbenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Tetrachloroethene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Toluene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
trans-1,2-Dichloroethene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
trans-1,3-Dichloropropene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Trichloroethene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Trichlorofluoromethane	U	0.57	5.7	C	µg/Kg-dry	1	5/4/2012 7:50:00 PM
Vinyl acetate	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Vinyl chloride	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 7:50:00 PM
Surr: 4-Bromofluorobenzene	88.5	0	42-133		%REC	1	5/4/2012 7:50:00 PM
Surr: Dibromofluoromethane	104	0	50-133		%REC	1	5/4/2012 7:50:00 PM
Surr: Toluene-d8	95.3	0	53-130		%REC	1	5/4/2012 7:50:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
 Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 11-May-12

ELAP ID : 11418

CLIENT:	Advanced Cleanup Technologies, Inc.	Client Sample ID:	ACT-7 (15-17ft)
Lab Order:	1205035	Collection Date:	5/3/2012 3:00:00 PM
Project:	79 Pondfield Road, Bronxville, NY (6832-BVN)	Matrix:	SOIL
Lab ID:	1205035-04A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
PERCENT MOISTURE							
Percent Moisture	8.81	0	0		wt%	1	5/7/2012
VOLATILE SW-846 METHOD 8260							
			D2216				Analyst: KK
			SW8260C				Analyst: LA
1,1,1,2-Tetrachloroethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
1,1,1-Trichloroethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
1,1,2,2-Tetrachloroethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
1,1,2-Trichloroethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
1,1-Dichloroethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
1,1-Dichloroethene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
1,1-Dichloropropene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
1,2,3-Trichlorobenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
1,2,3-Trichloropropane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
1,2,4,5-Tetramethylbenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
1,2,4-Trichlorobenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
1,2,4-Trimethylbenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
1,2-Dibromo-3-chloropropane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
1,2-Dibromoethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
1,2-Dichlorobenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
1,2-Dichloroethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
1,2-Dichloropropane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
1,3,5-Trimethylbenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
1,3-Dichlorobenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
1,3-dichloropropane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
1,4-Dichlorobenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
1,4-Dioxane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
2,2-Dichloropropane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
2-Butanone	U	1.72	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
2-Chloroethyl vinyl ether	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
2-Chlorotoluene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
2-Hexanone	U	1.72	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
2-Propanol	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
4-Chlorotoluene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
 Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 11-May-12

ELAP ID : 11418

CLIENT:	Advanced Cleanup Technologies, Inc.	Client Sample ID:	ACT-7 (15-17ft)
Lab Order:	1205035	Collection Date:	5/3/2012 3:00:00 PM
Project:	79 Pondfield Road, Bronxville, NY (6832-BVN)	Matrix:	SOIL
Lab ID:	1205035-04A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
4-Isopropyltoluene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
4-Methyl-2-pentanone	U	1.72	5.7	C	µg/Kg-dry	1	5/4/2012 8:21:00 PM
Acetone	U	1.72	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Acrolein	U	2.87	11	C	µg/Kg-dry	1	5/4/2012 8:21:00 PM
Acrylonitrile	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Benzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Bromobenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Bromochloromethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Bromodichloromethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Bromoform	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Bromomethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Carbon disulfide	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Carbon tetrachloride	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Chlorobenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Chlorodifluoromethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Chloroethane	U	0.57	5.7	C	µg/Kg-dry	1	5/4/2012 8:21:00 PM
Chloroform	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Chloromethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
cis-1,2-Dichloroethene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
cis-1,3-Dichloropropene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Dibromochloromethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Dibromomethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Dichlorodifluoromethane	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Diisopropyl ether	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Ethanol	U	2.87	11		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Ethyl acetate	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Ethylbenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Freon-114	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Hexachlorobutadiene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Isopropyl acetate	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Isopropylbenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
m,p-Xylene	U	1.15	11		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Methyl Acetate	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
 Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 11-May-12

ELAP ID : 11418

CLIENT:	Advanced Cleanup Technologies, Inc.	Client Sample ID:	ACT-7 (15-17ft)
Lab Order:	1205035	Collection Date:	5/3/2012 3:00:00 PM
Project:	79 Pondfield Road, Bronxville, NY (6832-BVN)	Matrix:	SOIL
Lab ID:	1205035-04A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Methyl tert-butyl ether	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Methylene chloride	7.0	0.57	5.7	B	µg/Kg-dry	1	5/4/2012 8:21:00 PM
n-Amyl acetate	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Naphthalene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
n-Butyl acetate	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
n-Butylbenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
n-Propyl acetate	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
n-Propylbenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
o-Xylene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
p-Diethylbenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
p-Ethyltoluene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
sec-Butylbenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Styrene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
t-Butyl alcohol	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
tert-Butylbenzene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Tetrachloroethene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Toluene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
trans-1,2-Dichloroethene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
trans-1,3-Dichloropropene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Trichloroethene	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Trichlorofluoromethane	U	0.57	5.7	C	µg/Kg-dry	1	5/4/2012 8:21:00 PM
Vinyl acetate	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Vinyl chloride	U	0.57	5.7		µg/Kg-dry	1	5/4/2012 8:21:00 PM
Surr: 4-Bromofluorobenzene	85.8	0	42-133		%REC	1	5/4/2012 8:21:00 PM
Surr: Dibromofluoromethane	102	0	50-133		%REC	1	5/4/2012 8:21:00 PM
Surr: Toluene-d8	92.5	0	53-130		%REC	1	5/4/2012 8:21:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 11-May-12

ELAP ID : 11418

CLIENT:	Advanced Cleanup Technologies, Inc.	Client Sample ID:	ACT-6 (17ft)
Lab Order:	1205035	Collection Date:	5/3/2012 12:00:00 PM
Project:	79 Pondfield Road, Bronxville, NY (6832-BVN)	Matrix:	LIQUID
Lab ID:	1205035-05A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
1,1,1,2-Tetrachloroethane	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
1,1,1-Trichloroethane	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
1,1,2,2-Tetrachloroethane	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
1,1,2-Trichloroethane	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
1,1-Dichloroethane	U	0.5	1.0		µg/L	1	5/9/2012 5:08:00 PM
1,1-Dichloroethene	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
1,1-Dichloropropene	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
1,2,3-Trichlorobenzene	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
1,2,3-Trichloropropane	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
1,2,4,5-Tetramethylbenzene	7.1	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
1,2,4-Trichlorobenzene	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
1,2,4-Trimethylbenzene	1.1	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
1,2-Dibromo-3-chloropropane	U	0.5	2.0		µg/L	1	5/9/2012 5:08:00 PM
1,2-Dibromoethane	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
1,2-Dichlorobenzene	0.26	0.25	1.0	J	µg/L	1	5/9/2012 5:08:00 PM
1,2-Dichloroethane	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
1,2-Dichloropropane	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
1,3,5-Trimethylbenzene	0.66	0.25	1.0	J	µg/L	1	5/9/2012 5:08:00 PM
1,3-Dichlorobenzene	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
1,3-dichloropropane	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
1,4-Dichlorobenzene	0.50	0.25	1.0	J	µg/L	1	5/9/2012 5:08:00 PM
1,4-Dioxane	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
2,2-Dichloropropane	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
2-Butanone	U	1.25	2.5	C	µg/L	1	5/9/2012 5:08:00 PM
2-Chloroethyl vinyl ether	U	0.5	1.0		µg/L	1	5/9/2012 5:08:00 PM
2-Chlorotoluene	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
2-Hexanone	U	1.25	2.5		µg/L	1	5/9/2012 5:08:00 PM
2-Propanol	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
4-Chlorotoluene	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
4-Isopropyltoluene	1.2	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
4-Methyl-2-pentanone	U	1.25	2.5		µg/L	1	5/9/2012 5:08:00 PM
Acetone	U	1.25	5.0		µg/L	1	5/9/2012 5:08:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 11-May-12

ELAP ID : 11418

CLIENT:	Advanced Cleanup Technologies, Inc.	Client Sample ID:	ACT-6 (17ft)
Lab Order:	1205035	Collection Date:	5/3/2012 12:00:00 PM
Project:	79 Pondfield Road, Bronxville, NY (6832-BVN)	Matrix:	LIQUID
Lab ID:	1205035-05A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260				SW8260C		Analyst: LA	
Acrolein	U	5	10		µg/L	1	5/9/2012 5:08:00 PM
Acrylonitrile	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
Benzene	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
Bromobenzene	U	0.5	1.0		µg/L	1	5/9/2012 5:08:00 PM
Bromochloromethane	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
Bromodichloromethane	0.33	0.25	1.0	J	µg/L	1	5/9/2012 5:08:00 PM
Bromoform	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
Bromomethane	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
Carbon disulfide	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
Carbon tetrachloride	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
Chlorobenzene	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
Chlorodifluoromethane	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
Chloroethane	U	0.25	1.0	C	µg/L	1	5/9/2012 5:08:00 PM
Chloroform	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
Chloromethane	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
cis-1,2-Dichloroethene	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
cis-1,3-Dichloropropene	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
Dibromochloromethane	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
Dibromomethane	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
Dichlorodifluoromethane	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
Diisopropyl ether	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
Ethanol	U	2.5	5.0		µg/L	1	5/9/2012 5:08:00 PM
Ethyl acetate	U	0.5	1.0		µg/L	1	5/9/2012 5:08:00 PM
Ethylbenzene	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
Freon-114	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
Hexachlorobutadiene	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
Isopropyl acetate	U	1	2.0		µg/L	1	5/9/2012 5:08:00 PM
Isopropylbenzene	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
m,p-Xylene	U	0.5	2.0		µg/L	1	5/9/2012 5:08:00 PM
Methyl Acetate	U	0.5	2.0		µg/L	1	5/9/2012 5:08:00 PM
Methyl tert-butyl ether	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
Methylene chloride	5.8	0.25	1.0	B	µg/L	1	5/9/2012 5:08:00 PM
n-Amyl acetate	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 11-May-12

ELAP ID : 11418

CLIENT:	Advanced Cleanup Technologies, Inc.	Client Sample ID:	ACT-6 (17ft)
Lab Order:	1205035	Collection Date:	5/3/2012 12:00:00 PM
Project:	79 Pondfield Road, Bronxville, NY (6832-BVN)	Matrix:	LIQUID
Lab ID:	1205035-05A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Naphthalene	2.0	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
n-Butyl acetate	U	0.25	2.0		µg/L	1	5/9/2012 5:08:00 PM
n-Butylbenzene	0.38	0.25	1.0	J	µg/L	1	5/9/2012 5:08:00 PM
n-Propyl acetate	U	0.5	1.0		µg/L	1	5/9/2012 5:08:00 PM
n-Propylbenzene	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
o-Xylene	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
p-Diethylbenzene	4.1	0.5	1.0		µg/L	1	5/9/2012 5:08:00 PM
p-Ethyltoluene	1.4	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
sec-Butylbenzene	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
Styrene	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
t-Butyl alcohol	U	1	2.0		µg/L	1	5/9/2012 5:08:00 PM
tert-Butylbenzene	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
Tetrachloroethene	1600	2.5	20		µg/L	10	5/11/2012 10:13:00 AM
Toluene	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
trans-1,2-Dichloroethene	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
trans-1,3-Dichloropropene	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
Trichloroethene	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
Trichlorofluoromethane	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
Vinyl acetate	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
Vinyl chloride	U	0.25	1.0		µg/L	1	5/9/2012 5:08:00 PM
Surr: 4-Bromofluorobenzene	102	0	63-123		%REC	10	5/11/2012 10:13:00 AM
Surr: 4-Bromofluorobenzene	102	0	63-123		%REC	1	5/9/2012 5:08:00 PM
Surr: Dibromofluoromethane	100	0	68-124		%REC	1	5/9/2012 5:08:00 PM
Surr: Dibromofluoromethane	102	0	68-124		%REC	10	5/11/2012 10:13:00 AM
Surr: Toluene-d8	98.4	0	67-125		%REC	10	5/11/2012 10:13:00 AM
Surr: Toluene-d8	99.2	0	67-125		%REC	1	5/9/2012 5:08:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
 Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 11-May-12

ELAP ID : 11418

CLIENT:	Advanced Cleanup Technologies, Inc.	Client Sample ID:	ACT-7 (17ft)
Lab Order:	1205035	Collection Date:	5/3/2012 4:00:00 PM
Project:	79 Pondfield Road, Bronxville, NY (6832-BVN)	Matrix:	LIQUID
Lab ID:	1205035-06A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
1,1,1,2-Tetrachloroethane	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
1,1,1-Trichloroethane	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
1,1,2,2-Tetrachloroethane	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
1,1,2-Trichloroethane	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
1,1-Dichloroethane	U	0.5	1.0		µg/L	1	5/11/2012 9:49:00 AM
1,1-Dichloroethene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
1,1-Dichloropropene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
1,2,3-Trichlorobenzene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
1,2,3-Trichloropropane	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
1,2,4,5-Tetramethylbenzene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
1,2,4-Trichlorobenzene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
1,2,4-Trimethylbenzene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
1,2-Dibromo-3-chloropropane	U	0.5	2.0	C	µg/L	1	5/11/2012 9:49:00 AM
1,2-Dibromoethane	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
1,2-Dichlorobenzene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
1,2-Dichloroethane	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
1,2-Dichloropropane	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
1,3,5-Trimethylbenzene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
1,3-Dichlorobenzene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
1,3-dichloropropane	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
1,4-Dichlorobenzene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
1,4-Dioxane	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
2,2-Dichloropropane	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
2-Butanone	U	1.25	2.5		µg/L	1	5/11/2012 9:49:00 AM
2-Chloroethyl vinyl ether	U	0.5	1.0		µg/L	1	5/11/2012 9:49:00 AM
2-Chlorotoluene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
2-Hexanone	U	1.25	2.5		µg/L	1	5/11/2012 9:49:00 AM
2-Propanol	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
4-Chlorotoluene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
4-Isopropyltoluene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
4-Methyl-2-pentanone	8.3	1.25	2.5		µg/L	1	5/11/2012 9:49:00 AM
Acetone	U	1.25	5.0		µg/L	1	5/11/2012 9:49:00 AM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 11-May-12

ELAP ID : 11418

CLIENT:	Advanced Cleanup Technologies, Inc.	Client Sample ID:	ACT-7 (17ft)
Lab Order:	1205035	Collection Date:	5/3/2012 4:00:00 PM
Project:	79 Pondfield Road, Bronxville, NY (6832-BVN)	Matrix:	LIQUID
Lab ID:	1205035-06A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Acrolein	U	5	10		µg/L	1	5/11/2012 9:49:00 AM
Acrylonitrile	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
Benzene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
Bromobenzene	U	0.5	1.0		µg/L	1	5/11/2012 9:49:00 AM
Bromochloromethane	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
Bromodichloromethane	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
Bromoform	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
Bromomethane	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
Carbon disulfide	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
Carbon tetrachloride	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
Chlorobenzene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
Chlorodifluoromethane	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
Chloroethane	U	0.25	1.0	C	µg/L	1	5/11/2012 9:49:00 AM
Chloroform	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
Chloromethane	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
cis-1,2-Dichloroethene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
cis-1,3-Dichloropropene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
Dibromochloromethane	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
Dibromomethane	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
Dichlorodifluoromethane	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
Diisopropyl ether	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
Ethanol	U	2.5	5.0		µg/L	1	5/11/2012 9:49:00 AM
Ethyl acetate	U	0.5	1.0		µg/L	1	5/11/2012 9:49:00 AM
Ethylbenzene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
Freon-114	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
Hexachlorobutadiene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
Isopropyl acetate	U	1	2.0		µg/L	1	5/11/2012 9:49:00 AM
Isopropylbenzene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
m,p-Xylene	U	0.5	2.0		µg/L	1	5/11/2012 9:49:00 AM
Methyl Acetate	U	0.5	2.0		µg/L	1	5/11/2012 9:49:00 AM
Methyl tert-butyl ether	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
Methylene chloride	3.3	0.25	1.0	B	µg/L	1	5/11/2012 9:49:00 AM
n-Amyl acetate	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 11-May-12

ELAP ID : 11418

CLIENT:	Advanced Cleanup Technologies, Inc.	Client Sample ID:	ACT-7 (17ft)
Lab Order:	1205035	Collection Date:	5/3/2012 4:00:00 PM
Project:	79 Pondfield Road, Bronxville, NY (6832-BVN)	Matrix:	LIQUID
Lab ID:	1205035-06A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Naphthalene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
n-Butyl acetate	U	0.25	2.0		µg/L	1	5/11/2012 9:49:00 AM
n-Butylbenzene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
n-Propyl acetate	U	0.5	1.0		µg/L	1	5/11/2012 9:49:00 AM
n-Propylbenzene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
o-Xylene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
p-Diethylbenzene	U	0.5	1.0		µg/L	1	5/11/2012 9:49:00 AM
p-Ethyltoluene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
sec-Butylbenzene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
Styrene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
t-Butyl alcohol	U	1	2.0	C	µg/L	1	5/11/2012 9:49:00 AM
tert-Butylbenzene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
Tetrachloroethene	1.8	0.25	2.0	J	µg/L	1	5/11/2012 9:49:00 AM
Toluene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
trans-1,2-Dichloroethene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
trans-1,3-Dichloropropene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
Trichloroethene	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
Trichlorofluoromethane	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
Vinyl acetate	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
Vinyl chloride	U	0.25	1.0		µg/L	1	5/11/2012 9:49:00 AM
Surr: 4-Bromofluorobenzene	97.9	0	63-123		%REC	1	5/11/2012 9:49:00 AM
Surr: Dibromofluoromethane	98.8	0	68-124		%REC	1	5/11/2012 9:49:00 AM
Surr: Toluene-d8	101	0	67-125		%REC	1	5/11/2012 9:49:00 AM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 11-May-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc. **Client Sample ID:** ACT-8 (16ft)
Lab Order: 1205035 **Collection Date:** 5/3/2012 5:00:00 PM
Project: 79 Pondfield Road, Bronxville, NY (6832-BVN) **Matrix:** LIQUID
Lab ID: 1205035-07A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
1,1,1,2-Tetrachloroethane	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
1,1,1-Trichloroethane	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
1,1,2,2-Tetrachloroethane	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
1,1,2-Trichloroethane	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
1,1-Dichloroethane	U	0.5	1.0		µg/L	1	5/9/2012 6:01:00 PM
1,1-Dichloroethene	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
1,1-Dichloropropene	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
1,2,3-Trichlorobenzene	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
1,2,3-Trichloropropane	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
1,2,4,5-Tetramethylbenzene	25	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
1,2,4-Trichlorobenzene	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
1,2,4-Trimethylbenzene	4.5	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
1,2-Dibromo-3-chloropropane	U	0.5	2.0		µg/L	1	5/9/2012 6:01:00 PM
1,2-Dibromoethane	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
1,2-Dichlorobenzene	1.6	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
1,2-Dichloroethane	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
1,2-Dichloropropane	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
1,3,5-Trimethylbenzene	1.8	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
1,3-Dichlorobenzene	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
1,3-dichloropropane	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
1,4-Dichlorobenzene	1.3	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
1,4-Dioxane	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
2,2-Dichloropropane	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
2-Butanone	U	1.25	2.5	C	µg/L	1	5/9/2012 6:01:00 PM
2-Chloroethyl vinyl ether	U	0.5	1.0		µg/L	1	5/9/2012 6:01:00 PM
2-Chlorotoluene	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
2-Hexanone	U	1.25	2.5		µg/L	1	5/9/2012 6:01:00 PM
2-Propanol	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
4-Chlorotoluene	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
4-Isopropyltoluene	2.2	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
4-Methyl-2-pentanone	U	1.25	2.5		µg/L	1	5/9/2012 6:01:00 PM
Acetone	U	1.25	5.0		µg/L	1	5/9/2012 6:01:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
 Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 11-May-12

ELAP ID : 11418

CLIENT:	Advanced Cleanup Technologies, Inc.	Client Sample ID:	ACT-8 (16ft)
Lab Order:	1205035	Collection Date:	5/3/2012 5:00:00 PM
Project:	79 Pondfield Road, Bronxville, NY (6832-BVN)	Matrix:	LIQUID
Lab ID:	1205035-07A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Acrolein	U	5	10		µg/L	1	5/9/2012 6:01:00 PM
Acrylonitrile	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
Benzene	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
Bromobenzene	U	0.5	1.0		µg/L	1	5/9/2012 6:01:00 PM
Bromochloromethane	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
Bromodichloromethane	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
Bromoform	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
Bromomethane	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
Carbon disulfide	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
Carbon tetrachloride	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
Chlorobenzene	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
Chlorodifluoromethane	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
Chloroethane	U	0.25	1.0	C	µg/L	1	5/9/2012 6:01:00 PM
Chloroform	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
Chloromethane	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
cis-1,2-Dichloroethene	27	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
cis-1,3-Dichloropropene	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
Dibromochloromethane	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
Dibromomethane	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
Dichlorodifluoromethane	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
Diisopropyl ether	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
Ethanol	U	2.5	5.0		µg/L	1	5/9/2012 6:01:00 PM
Ethyl acetate	U	0.5	1.0		µg/L	1	5/9/2012 6:01:00 PM
Ethylbenzene	1.7	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
Freon-114	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
Hexachlorobutadiene	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
Isopropyl acetate	U	1	2.0		µg/L	1	5/9/2012 6:01:00 PM
Isopropylbenzene	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
m,p-Xylene	3.1	0.5	2.0		µg/L	1	5/9/2012 6:01:00 PM
Methyl Acetate	U	0.5	2.0		µg/L	1	5/9/2012 6:01:00 PM
Methyl tert-butyl ether	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
Methylene chloride	5.2	0.25	1.0	B	µg/L	1	5/9/2012 6:01:00 PM
n-Amyl acetate	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
 Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 11-May-12

ELAP ID : 11418

CLIENT:	Advanced Cleanup Technologies, Inc.	Client Sample ID:	ACT-8 (16ft)
Lab Order:	1205035	Collection Date:	5/3/2012 5:00:00 PM
Project:	79 Pondfield Road, Bronxville, NY (6832-BVN)	Matrix:	LIQUID
Lab ID:	1205035-07A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Naphthalene	41	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
n-Butyl acetate	U	0.25	2.0		µg/L	1	5/9/2012 6:01:00 PM
n-Butylbenzene	0.83	0.25	1.0	J	µg/L	1	5/9/2012 6:01:00 PM
n-Propyl acetate	U	0.5	1.0		µg/L	1	5/9/2012 6:01:00 PM
n-Propylbenzene	0.43	0.25	1.0	J	µg/L	1	5/9/2012 6:01:00 PM
o-Xylene	5.4	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
p-Diethylbenzene	9.5	0.5	1.0		µg/L	1	5/9/2012 6:01:00 PM
p-Ethyltoluene	3.3	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
sec-Butylbenzene	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
Styrene	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
t-Butyl alcohol	U	1	2.0		µg/L	1	5/9/2012 6:01:00 PM
tert-Butylbenzene	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
Tetrachloroethene	3700	2.5	20		µg/L	10	5/11/2012 10:37:00 AM
Toluene	0.67	0.25	1.0	J	µg/L	1	5/9/2012 6:01:00 PM
trans-1,2-Dichloroethene	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
trans-1,3-Dichloropropene	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
Trichloroethene	25	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
Trichlorofluoromethane	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
Vinyl acetate	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
Vinyl chloride	U	0.25	1.0		µg/L	1	5/9/2012 6:01:00 PM
Surr: 4-Bromofluorobenzene	99.0	0	63-123		%REC	10	5/11/2012 10:37:00 AM
Surr: 4-Bromofluorobenzene	102	0	63-123		%REC	1	5/9/2012 6:01:00 PM
Surr: Dibromofluoromethane	101	0	68-124		%REC	1	5/9/2012 6:01:00 PM
Surr: Dibromofluoromethane	99.1	0	68-124		%REC	10	5/11/2012 10:37:00 AM
Surr: Toluene-d8	100	0	67-125		%REC	10	5/11/2012 10:37:00 AM
Surr: Toluene-d8	99.1	0	67-125		%REC	1	5/9/2012 6:01:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
 Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 11-May-12

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205035
Project: 79 Pondfield Road, Bronxville, NY (6832-BVN)

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: V624LCS-050412HS		SampType: LCS		TestCode: DryFull8260_		Units: µg/Kg		Prep Date:		RunNo: 63312	
Client ID: LCSS		Batch ID: R63312		TestNo: SW8260C				Analysis Date: 5/4/2012		SeqNo: 890766	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	42	5.0	50.00	0	84.4	40	125				
1,1,2,2-Tetrachloroethane	54	5.0	50.00	0	107	41	130				
1,1,2-Trichloroethane	43	5.0	50.00	0	85.4	43	121				
1,1-Dichloroethane	41	5.0	50.00	0	81.4	42	126				
1,1-Dichloroethene	43	5.0	50.00	0	86.7	40	126				
1,2-Dichlorobenzene	39	5.0	50.00	0	77.8	41	122				
1,2-Dichloroethane	41	5.0	50.00	0	81.5	42	133				
1,2-Dichloropropane	41	5.0	50.00	0	81.7	41	128				
1,3-Dichlorobenzene	39	5.0	50.00	0	77.2	45	119				
1,4-Dichlorobenzene	37	5.0	50.00	0	74.4	46	121				
2-Chloroethyl vinyl ether	35	5.0	50.00	0	69.4	30	135				
Benzene	38	5.0	50.00	0	76.8	35	123				
Bromodichloromethane	40	5.0	50.00	0	79.6	37	130				
Bromoform	47	5.0	50.00	0	94.0	43	121				
Bromomethane	40	5.0	50.00	0	80.7	32	130				
Carbon tetrachloride	43	5.0	50.00	0	85.0	37	134				
Chlorobenzene	39	5.0	50.00	0	77.3	40	124				
Chloroethane	24	5.0	50.00	0	48.1	35	141				C
Chloroform	41	5.0	50.00	0	81.6	36	126				
Chloromethane	36	5.0	50.00	0	71.8	42	141				
cis-1,3-Dichloropropene	39	5.0	50.00	0	78.5	30	130				
Dibromochloromethane	42	5.0	50.00	0	83.0	43	125				
Ethylbenzene	40	5.0	50.00	0	79.3	44	122				
Methylene chloride	39	5.0	50.00	0	77.8	32	132				B
Tetrachloroethene	40	5.0	50.00	0	79.0	31	120				
Toluene	39	5.0	50.00	0	78.8	42	124				
trans-1,2-Dichloroethene	37	5.0	50.00	0	74.3	38	122				
trans-1,3-Dichloropropene	36	5.0	50.00	0	72.7	45	123				
Trichloroethene	41	5.0	50.00	0	82.8	46	124				
Trichlorofluoromethane	55	5.0	50.00	0	111	45	137				C

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%d exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205035
Project: 79 Pondfield Road, Bronxville, NY (6832-BVN)

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: V624LCS-050412HS	SampType: LCS	TestCode: DryFull8260_	Units: µg/Kg	Prep Date:	RunNo: 63312						
Client ID: LCSS	Batch ID: R63312	TestNo: SW8260C		Analysis Date: 5/4/2012	SeqNo: 890766						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Vinyl chloride	43	5.0	50.00	0	85.4	46	139				
Surr: 4-Bromofluorobenzene	49		50.00		98.6	42	133				
Surr: Dibromofluoromethane	51		50.00		103	50	133				
Surr: Toluene-d8	49		50.00		98.6	53	130				

Sample ID: VBLK-050412HS	SampType: MBLK	TestCode: DryFull8260_	Units: µg/Kg	Prep Date: 5/7/2012	RunNo: 63312						
Client ID: PBS	Batch ID: R63312	TestNo: SW8260C		Analysis Date: 5/4/2012	SeqNo: 890767						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1,2-Tetrachloroethane	U	5.0									
1,1,1-Trichloroethane	U	5.0									
1,1,2,2-Tetrachloroethane	U	5.0									
1,1,2-Trichloro-1,2,2-trifluoroethane	U	5.0									
1,1,2-Trichloroethane	U	5.0									
1,1-Dichloroethane	U	5.0									
1,1-Dichloroethene	U	5.0									
1,1-Dichloropropene	U	5.0									
1,2,3-Trichlorobenzene	U	5.0									
1,2,3-Trichloropropane	U	5.0									
1,2,4,5-Tetramethylbenzene	U	5.0									
1,2,4-Trichlorobenzene	U	5.0									
1,2,4-Trimethylbenzene	U	5.0									
1,2-Dibromo-3-chloropropane	U	5.0									
1,2-Dibromoethane	U	5.0									
1,2-Dichlorobenzene	U	5.0									
1,2-Dichloroethane	U	5.0									
1,2-Dichloropropane	U	5.0									
1,3,5-Trimethylbenzene	U	5.0									
1,3-Dichlorobenzene	U	5.0									
1,3-dichloropropane	U	5.0									
1,4-Dichlorobenzene	U	5.0									

Qualifiers:	B	Analyste detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes	H	Holding times for preparation or analy
J	Analyste detected below quantitation limits	P	>40% diff for detected conc between the two GC column	PQL	Practical Quantitation Limit	
R	RPD outside accepted recovery limits	S	Spike Recovery outside accepted recovery limits	U	Indicates the compound was analyzed	

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205035
Project: 79 Pondfield Road, Bronxville, NY (6832-BVN)

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: VBLK-050412HS		SampType: MBLK		TestCode: DryFull8260_		Units: µg/Kg		Prep Date: 5/7/2012		RunNo: 63312		
Client ID: PBS		Batch ID: R63312		TestNo: SW8260C				Analysis Date: 5/4/2012		SeqNo: 890767		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane		U	5.0									
2,2-Dichloropropane		U	5.0									
2-Butanone		U	5.0									
2-Chloroethyl vinyl ether		U	5.0									
2-Chlorotoluene		U	5.0									
2-Hexanone		U	5.0									
2-Propanol		U	5.0									
4-Chlorotoluene		U	5.0									
4-Isopropyltoluene		U	5.0									
4-Methyl-2-pentanone		U	5.0									C
Acetone		U	5.0									
Acrolein		U	10									C
Acrylonitrile		U	5.0									
Benzene		U	5.0									
Bromobenzene		U	5.0									
Bromochloromethane		U	5.0									
Bromodichloromethane		U	5.0									
Bromoform		U	5.0									
Bromomethane		U	5.0									
Carbon disulfide		U	5.0									
Carbon tetrachloride		U	5.0									
Chlorobenzene		U	5.0									
Chlorodifluoromethane		U	5.0									
Chloroethane		U	5.0									C
Chloroform		U	5.0									
Chloromethane		U	5.0									
cis-1,2-Dichloroethene		U	5.0									
cis-1,3-Dichloropropene		U	5.0									
Dibromochloromethane		U	5.0									
Dibromomethane		U	5.0									
Dichlorodifluoromethane		U	5.0									

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205035
Project: 79 Pondfield Road, Bronxville, NY (6832-BVN)

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: VBLK-050412HS		SampType: MBLK		TestCode: DryFull8260_		Units: µg/Kg		Prep Date: 5/7/2012		RunNo: 63312		
Client ID: PBS		Batch ID: R63312		TestNo: SW8260C				Analysis Date: 5/4/2012		SeqNo: 890767		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diisopropyl ether		U	5.0									J
Ethanol		U	10									
Ethyl acetate		U	5.0									
Ethylbenzene		U	5.0									
Freon-114		U	5.0									
Hexachlorobutadiene		U	5.0									
Isopropyl acetate		U	5.0									
Isopropylbenzene		U	5.0									
m,p-Xylene		U	10									
Methyl Acetate		U	5.0									
Methyl tert-butyl ether		U	5.0									
Methylene chloride		4.9	5.0									
n-Amyl acetate		U	5.0									
Naphthalene		U	5.0									
n-Butyl acetate		U	5.0									
n-Butylbenzene		U	5.0									
n-Propyl acetate		U	5.0									
n-Propylbenzene		U	5.0									
o-Xylene		U	5.0									
p-Diethylbenzene		U	5.0									
p-Ethyltoluene		U	5.0									
sec-Butylbenzene		U	5.0									
Styrene		U	5.0									
t-Butyl alcohol		U	5.0									
tert-Butylbenzene		U	5.0									
Tetrachloroethene		U	5.0									
Toluene		U	5.0									
trans-1,2-Dichloroethene		U	5.0									
trans-1,3-Dichloropropene		U	5.0									
Trichloroethene		U	5.0									
Trichlorofluoromethane		U	5.0									

C

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or anal
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.

Work Order: 1205035

Project: 79 Pondfield Road, Bronxville, NY (6832-BVN)

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: VBLK-050412HS	SampType: MBLK	TestCode: DryFull8260_	Units: µg/Kg	Prep Date: 5/7/2012	RunNo: 63312						
Client ID: PBS	Batch ID: R63312	TestNo: SW8260C		Analysis Date: 5/4/2012	SeqNo: 890767						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl acetate	U	5.0									
Vinyl chloride	U	5.0									
Surr: 4-Bromofluorobenzene	43		50.00		86.4	42	133				
Surr: Dibromofluoromethane	49		50.00		97.8	50	133				
Surr: Toluene-d8	45		50.00		89.4	53	130				

Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes	H	Holding times for preparation or analy
	J	Analyte detected below quantitation limits	P	>40% diff for detected conc between the two GC column	PQL	Practical Quantitation Limit
	R	RPD outside accepted recovery limits	S	Spike Recovery outside accepted recovery limits	U	Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205035
Project: 79 Pondfield Road, Bronxville, NY (6832-BVN)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: V624LCS-050912YW SampType: LCS				TestCode: Full8260_W Units: µg/L		Prep Date: 5/9/2012		RunNo: 63312			
Client ID: LCSW		Batch ID: R63312A		TestNo: SW8260C		Analysis Date: 5/9/2012		SeqNo: 891756			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	40	1.0	50.00	0	79.9	38	136				
1,1,2,2-Tetrachloroethane	41	1.0	50.00	0	82.9	50	124				
1,1,2-Trichloroethane	41	1.0	50.00	0	82.9	52	128				
1,1-Dichloroethane	38	1.0	50.00	0	75.7	55	123				
1,1-Dichloroethene	41	1.0	50.00	0	81.8	48	128				
1,2-Dichlorobenzene	41	1.0	50.00	0	81.6	59	123				
1,2-Dichloroethane	40	1.0	50.00	0	80.6	52	129				
1,2-Dichloropropane	40	1.0	50.00	0	79.5	58	124				
1,3-Dichlorobenzene	41	1.0	50.00	0	82.2	51	124				
1,4-Dichlorobenzene	41	1.0	50.00	0	81.1	54	128				
2-Chloroethyl vinyl ether	41	1.0	50.00	0	81.8	25	141				
Benzene	39	1.0	50.00	0	77.7	53	131				
Bromodichloromethane	38	1.0	50.00	0	76.6	54	126				
Bromoform	41	1.0	50.00	0	82.8	53	127				
Bromomethane	41	1.0	50.00	0	82.1	42	150				
Carbon tetrachloride	40	1.0	50.00	0	81.0	46	135				
Chlorobenzene	40	1.0	50.00	0	79.5	53	121				
Chloroethane	33	1.0	50.00	0	66.3	40	145				C
Chloroform	39	1.0	50.00	0	78.8	41	135				
Chloromethane	45	1.0	50.00	0	89.3	32	149				
cis-1,3-Dichloropropene	39	1.0	50.00	0	78.3	46	128				
Dibromochloromethane	41	1.0	50.00	0	82.8	42	124				
Ethylbenzene	40	1.0	50.00	0	80.2	52	135				
Methylene chloride	38	1.0	50.00	0	76.3	35	137				B
Tetrachloroethene	37	2.0	50.00	0	74.6	26	126				
Toluene	39	1.0	50.00	0	77.8	51	130				
trans-1,2-Dichloroethene	39	1.0	50.00	0	78.3	49	125				
trans-1,3-Dichloropropene	35	1.0	50.00	0	70.1	43	125				
Trichloroethene	40	1.0	50.00	0	80.6	47	127				
Trichlorofluoromethane	50	1.0	50.00	0	101	50	152				
Vinyl chloride	49	1.0	50.00	0	97.3	50	149				

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205035
Project: 79 Pondfield Road, Bronxville, NY (6832-BVN)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: V624LCS-050912YW	SampleType: LCS	TestCode: Full8260_W	Units: µg/L	Prep Date: 5/9/2012	RunNo: 63312						
Client ID: LCSW	Batch ID: R63312A	TestNo: SW8260C		Analysis Date: 5/9/2012	SeqNo: 891756						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: 4-Bromofluorobenzene	49		50.00		97.7	63	123				
Surr: Dibromofluoromethane	52		50.00		103	68	124				
Surr: Toluene-d8	50		50.00		99.6	67	125				

Sample ID: VBLK-050912YW	SampleType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 5/9/2012	RunNo: 63312						
Client ID: PBW	Batch ID: R63312A	TestNo: SW8260C		Analysis Date: 5/9/2012	SeqNo: 891757						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1,2-Tetrachloroethane	U	1.0									
1,1,1-Trichloroethane	U	1.0									
1,1,2,2-Tetrachloroethane	U	1.0									
1,1,2-Trichloro-1,2,2-trifluoroethane	U	1.0									
1,1,2-Trichloroethane	U	1.0									
1,1-Dichloroethane	U	1.0									
1,1-Dichloroethene	U	1.0									
1,1-Dichloropropene	U	1.0									
1,2,3-Trichlorobenzene	U	1.0									
1,2,3-Trichloropropane	U	1.0									
1,2,4,5-Tetramethylbenzene	U	1.0									
1,2,4-Trichlorobenzene	U	1.0									
1,2,4-Trimethylbenzene	U	1.0									
1,2-Dibromo-3-chloropropane	U	2.0									
1,2-Dibromoethane	U	1.0									
1,2-Dichlorobenzene	U	1.0									
1,2-Dichloroethane	U	1.0									
1,2-Dichloropropane	U	1.0									
1,3,5-Trimethylbenzene	U	1.0									
1,3-Dichlorobenzene	U	1.0									
1,3-dichloropropane	U	1.0									
1,4-Dichlorobenzene	U	1.0									
1,4-Dioxane	U	1.0									

Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes	H	Holding times for preparation or anal
	J	Analyte detected below quantitation limits	P	>40% diff for detected conc between the two GC column	PQL	Practical Quantitation Limit
	R	RPD outside accepted recovery limits	S	Spike Recovery outside accepted recovery limits	U	Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205035
Project: 79 Pondfield Road, Bronxville, NY (6832-BVN)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-050912YW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 5/9/2012	RunNo: 63312
Client ID: PBW	Batch ID: R63312A	TestNo: SW8260C		Analysis Date: 5/9/2012	SeqNo: 891757

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2-Dichloropropane	U	1.0									C
2-Butanone	U	2.5									
2-Chloroethyl vinyl ether	U	1.0									
2-Chlorotoluene	U	1.0									
2-Hexanone	U	2.5									
2-Propanol	U	1.0									
4-Chlorotoluene	U	1.0									
4-Isopropyltoluene	U	1.0									
4-Methyl-2-pentanone	U	2.5									
Acetone	U	5.0									
Acrolein	U	10									
Acrylonitrile	U	1.0									
Benzene	U	1.0									
Bromobenzene	U	1.0									
Bromochloromethane	U	1.0									
Bromodichloromethane	U	1.0									
Bromoform	U	1.0									
Bromomethane	U	1.0									
Carbon disulfide	U	1.0									
Carbon tetrachloride	U	1.0									
Chlorobenzene	U	1.0									
Chlorodifluoromethane	U	1.0									
Chloroethane	U	1.0									
Chloroform	U	1.0									
Chloromethane	U	1.0									
cis-1,2-Dichloroethene	U	1.0									
cis-1,3-Dichloropropene	U	1.0									
Dibromochloromethane	U	1.0									
Dibromomethane	U	1.0									
Dichlorodifluoromethane	U	1.0									
Diisopropyl ether	U	1.0									

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analyte
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.

Work Order: 1205035

Project: 79 Pondfield Road, Bronxville, NY (6832-BVN)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-050912YW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 5/9/2012	RunNo: 63312						
Client ID: PBW	Batch ID: R63312A	TestNo: SW8260C		Analysis Date: 5/9/2012	SeqNo: 891757						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ethanol	U	5.0									
Ethyl acetate	U	1.0									
Ethylbenzene	U	1.0									
Freon-114	U	1.0									
Hexachlorobutadiene	U	1.0									
Isopropyl acetate	U	2.0									
Isopropylbenzene	U	1.0									
m,p-Xylene	U	2.0									
Methyl Acetate	U	2.0									
Methyl tert-butyl ether	U	1.0									
Methylene chloride	5.5	1.0									
n-Amyl acetate	U	1.0									
Naphthalene	U	1.0									
n-Butyl acetate	U	2.0									
n-Butylbenzene	U	1.0									
n-Propyl acetate	U	1.0									
n-Propylbenzene	U	1.0									
o-Xylene	U	1.0									
p-Diethylbenzene	U	1.0									
p-Ethyltoluene	U	1.0									
sec-Butylbenzene	U	1.0									
Styrene	U	1.0									
t-Butyl alcohol	U	2.0									
tert-Butylbenzene	U	1.0									
Tetrachloroethene	U	2.0									
Toluene	U	1.0									
trans-1,2-Dichloroethene	U	1.0									
trans-1,3-Dichloropropene	U	1.0									
Trichloroethene	U	1.0									
Trichlorofluoromethane	U	1.0									
Vinyl acetate	U	1.0									

Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes	H	Holding times for preparation or analy
	J	Analyte detected below quantitation limits	P	>40% diff for detected conc between the two GC column	PQL	Practical Quantitation Limit
	R	RPD outside accepted recovery limits	S	Spike Recovery outside accepted recovery limits	U	Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205035
Project: 79 Pondfield Road, Bronxville, NY (6832-BVN)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-050912YW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 5/9/2012	RunNo: 63312						
Client ID: PBW	Batch ID: R63312A	TestNo: SW8260C		Analysis Date: 5/9/2012	SeqNo: 891757						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Vinyl chloride U 1.0

Surr: 4-Bromofluorobenzene 51 102 63 123
Surr: Dibromofluoromethane 49 98.3 68 124
Surr: Toluene-d8 50 99.2 67 125

Sample ID: V624LCS-051012aY	SampType: LCS	TestCode: Full8260_W	Units: µg/L	Prep Date: 5/10/2012	RunNo: 63312						
Client ID: LCSW	Batch ID: R63312B	TestNo: SW8260C		Analysis Date: 5/11/2012	SeqNo: 892314						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane 42 1.0 50.00 0 84.1 38 136
1,1,2,2-Tetrachloroethane 43 1.0 50.00 0 86.5 50 124
1,1,2-Trichloroethane 44 1.0 50.00 0 87.6 52 128
1,1-Dichloroethane 39 1.0 50.00 0 78.5 55 123
1,1-Dichloroethene 41 1.0 50.00 0 81.9 48 128
1,2-Dichlorobenzene 40 1.0 50.00 0 80.6 59 123
1,2-Dichloroethane 42 1.0 50.00 0 84.5 52 129
1,2-Dichloropropane 41 1.0 50.00 0 82.9 58 124
1,3-Dichlorobenzene 40 1.0 50.00 0 79.4 51 124
1,4-Dichlorobenzene 40 1.0 50.00 0 79.6 54 128
2-Chloroethyl vinyl ether 47 1.0 50.00 0 94.9 25 141
Benzene 41 1.0 50.00 0 81.3 53 131
Bromodichloromethane 41 1.0 50.00 0 81.4 54 126
Bromoform 45 1.0 50.00 0 89.0 53 127
Bromomethane 37 1.0 50.00 0 74.6 42 150
Carbon tetrachloride 41 1.0 50.00 0 81.4 46 135
Chlorobenzene 41 1.0 50.00 0 81.8 53 121
Chloroethane 41 1.0 50.00 0 82.6 40 145
Chloroform 41 1.0 50.00 0 81.1 41 135
Chloromethane 45 1.0 50.00 0 89.3 32 149
cis-1,3-Dichloropropene 39 1.0 50.00 0 78.0 46 128
Dibromochloromethane 43 1.0 50.00 0 85.3 42 124

C

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analysis
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205035
Project: 79 Pondfield Road, Bronxville, NY (6832-BVN)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: V624LCS-051012aY		SampType: LCS	TestCode: Full8260_W		Units: µg/L		Prep Date: 5/10/2012		RunNo: 63312		
Client ID: LCSW		Batch ID: R63312B	TestNo: SW8260C		Analysis Date: 5/11/2012				SeqNo: 892314		
Analyte	Result	PQL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene	41	1.0	50.00	0	83.0	52	135				B
Methylene chloride	43	1.0	50.00	0	85.8	35	137				
Tetrachloroethene	36	2.0	50.00	0	72.8	26	126				
Toluene	40	1.0	50.00	0	79.8	51	130				
trans-1,2-Dichloroethene	41	1.0	50.00	0	81.1	49	125				
trans-1,3-Dichloropropene	36	1.0	50.00	0	72.4	43	125				
Trichloroethene	41	1.0	50.00	0	81.9	47	127				
Trichlorofluoromethane	52	1.0	50.00	0	104	50	152				
Vinyl chloride	47	1.0	50.00	0	94.6	50	149				
Surr: 4-Bromofluorobenzene	50		50.00		101	63	123				
Surr: Dibromofluoromethane	54		50.00		107	68	124				
Surr: Toluene-d8	50		50.00		100	67	125				

Sample ID: VBLK-051012aYW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 5/10/2012	RunNo: 63312						
Client ID: PBW	Batch ID: R63312B	TestNo: SW8260C		Analysis Date: 5/11/2012	SeqNo: 892315						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	U	1.0									C
1,1,1-Trichloroethane	U	1.0									
1,1,2,2-Tetrachloroethane	U	1.0									
1,1,2-Trichloro-1,2,2-trifluoroethane	U	1.0									
1,1,2-Trichloroethane	U	1.0									
1,1-Dichloroethane	U	1.0									
1,1-Dichloroethene	U	1.0									
1,1-Dichloropropene	U	1.0									
1,2,3-Trichlorobenzene	U	1.0									
1,2,3-Trichloropropane	U	1.0									
1,2,4,5-Tetramethylbenzene	U	1.0									
1,2,4-Trichlorobenzene	U	1.0									
1,2,4-Trimethylbenzene	U	1.0									
1,2-Dibromo-3-chloropropane	U	2.0									

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analy
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205035
Project: 79 Pondfield Road, Bronxville, NY (6832-BVN)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-051012aYW		SampType: MBLK		TestCode: Full8260_W		Units: µg/L		Prep Date: 5/10/2012		RunNo: 63312			
Client ID: PBW		Batch ID: R63312B		TestNo: SW8260C		Analysis Date: 5/11/2012						SeqNo: 892315	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,2-Dibromoethane		U	1.0										
1,2-Dichlorobenzene		U	1.0										
1,2-Dichloroethane		U	1.0										
1,2-Dichloropropane		U	1.0										
1,3,5-Trimethylbenzene		U	1.0										
1,3-Dichlorobenzene		U	1.0										
1,3-dichloropropane		U	1.0										
1,4-Dichlorobenzene		U	1.0										
1,4-Dioxane		U	1.0										
2,2-Dichloropropane		U	1.0										
2-Butanone		U	2.5										
2-Chloroethyl vinyl ether		U	1.0										
2-Chlorotoluene		U	1.0										
2-Hexanone		U	2.5										
2-Propanol		U	1.0										
4-Chlorotoluene		U	1.0										
4-Isopropyltoluene		U	1.0										
4-Methyl-2-pentanone		U	2.5										
Acetone		U	5.0										
Acrolein		U	10										
Acrylonitrile		U	1.0										
Benzene		U	1.0										
Bromobenzene		U	1.0										
Bromochloromethane		U	1.0										
Bromodichloromethane		U	1.0										
Bromoform		U	1.0										
Bromomethane		U	1.0										
Carbon disulfide		U	1.0										
Carbon tetrachloride		U	1.0										
Chlorobenzene		U	1.0										
Chlorodifluoromethane		U	1.0										

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205035
Project: 79 Pondfield Road, Bronxville, NY (6832-BVN)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-051012aYW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 5/10/2012	RunNo: 63312						
Client ID: PBW	Batch ID: R63312B	TestNo: SW8260C		Analysis Date: 5/11/2012	SeqNo: 892315						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

C

Chloroethane	U	1.0									
Chloroform	U	1.0									
Chloromethane	U	1.0									
cis-1,2-Dichloroethene	U	1.0									
cis-1,3-Dichloropropene	U	1.0									
Dibromochloromethane	U	1.0									
Dibromomethane	U	1.0									
Dichlorodifluoromethane	U	1.0									
Diisopropyl ether	U	1.0									
Ethanol	U	5.0									
Ethyl acetate	U	1.0									
Ethylbenzene	U	1.0									
Freon-114	U	1.0									
Hexachlorobutadiene	U	1.0									
Isopropyl acetate	U	2.0									
Isopropylbenzene	U	1.0									
m,p-Xylene	U	2.0									
Methyl Acetate	U	2.0									
Methyl tert-butyl ether	U	1.0									
Methylene chloride	4.3	1.0									
n-Amyl acetate	U	1.0									
Naphthalene	U	1.0									
n-Butyl acetate	U	2.0									
n-Butylbenzene	U	1.0									
n-Propyl acetate	U	1.0									
n-Propylbenzene	U	1.0									
o-Xylene	U	1.0									
p-Diethylbenzene	U	1.0									
p-Ethyltoluene	U	1.0									
sec-Butylbenzene	U	1.0									
Styrene	U	1.0									

Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes	H	Holding times for preparation or analy
J		Analyte detected below quantitation limits	P	>40% diff for detected conc between the two GC column	PQL	Practical Quantitation Limit
R		RPD outside accepted recovery limits	S	Spike Recovery outside accepted recovery limits	U	Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205035
Project: 79 Pondfield Road, Bronxville, NY (6832-BVN)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-051012aYW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 5/10/2012	RunNo: 63312						
Client ID: PBW	Batch ID: R63312B	TestNo: SW8260C		Analysis Date: 5/11/2012	SeqNo: 892315						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

t-Butyl alcohol U 2.0 C

tert-Butylbenzene U 1.0

Tetrachloroethene U 2.0

Toluene U 1.0

trans-1,2-Dichloroethene U 1.0

trans-1,3-Dichloropropene U 1.0

Trichloroethene U 1.0

Trichlorofluoromethane U 1.0

Vinyl acetate U 1.0

Vinyl chloride U 1.0

Surr: 4-Bromofluorobenzene 50

Surr: Dibromofluoromethane 51

Surr: Toluene-d8 52

Sample ID: V624LCS-051012aY	SampType: LCS	TestCode: Full8260_W	Units: µg/L	Prep Date: 5/10/2012	RunNo: 63312						
Client ID: LCSW	Batch ID: R63312C	TestNo: SW8260C		Analysis Date: 5/11/2012	SeqNo: 892318						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane 40

1,1,2,2-Tetrachloroethane 39

1,1,2-Trichloroethane 41

1,1-Dichloroethane 37

1,1-Dichloroethene 38

1,2-Dichlorobenzene 37

1,2-Dichloroethane 40

1,2-Dichloropropane 39

1,3-Dichlorobenzene 37

1,4-Dichlorobenzene 42

2-Chloroethyl vinyl ether 37

Benzene 39

Bromodichloromethane 39

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205035
Project: 79 Pondfield Road, Bronxville, NY (6832-BVN)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: V624LCS-051012aY		SampType: LCS		TestCode: Full8260_W		Units: µg/L		Prep Date: 5/10/2012		RunNo: 63312	
Client ID: LCSW		Batch ID: R63312C		TestNo: SW8260C				Analysis Date: 5/11/2012		SeqNo: 892318	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromoform	41	1.0	50.00	0	82.7	53	127				
Bromomethane	41	1.0	50.00	0	82.1	42	150				
Carbon tetrachloride	40	1.0	50.00	0	79.5	46	135				
Chlorobenzene	38	1.0	50.00	0	76.5	53	121				
Chloroethane	34	1.0	50.00	0	67.8	40	145				
Chloroform	39	1.0	50.00	0	77.2	41	135				
Chloromethane	42	1.0	50.00	0	84.7	32	149				
cis-1,3-Dichloropropene	39	1.0	50.00	0	77.7	46	128				
Dibromochloromethane	42	1.0	50.00	0	84.3	42	124				
Ethylbenzene	39	1.0	50.00	0	77.1	52	135				
Methylene chloride	40	1.0	50.00	0	79.7	35	137				
Tetrachloroethene	36	2.0	50.00	0	72.1	26	126				
Toluene	39	1.0	50.00	0	77.1	51	130				
trans-1,2-Dichloroethene	36	1.0	50.00	0	72.7	49	125				
trans-1,3-Dichloropropene	36	1.0	50.00	0	72.0	43	125				
Trichloroethene	39	1.0	50.00	0	78.2	47	127				
Trichlorofluoromethane	49	1.0	50.00	0	98.5	50	152				
Vinyl chloride	48	1.0	50.00	0	95.8	50	149				
Surr: 4-Bromofluorobenzene	51		50.00		103	63	123				
Surr: Dibromofluoromethane	50		50.00		100	68	124				
Surr: Toluene-d8	50		50.00		99.1	67	125				

Sample ID: VBLK-051012aYW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 5/10/2012	RunNo: 63312						
Client ID: PBW	Batch ID: R63312C	TestNo: SW8260C		Analysis Date: 5/11/2012	SeqNo: 892319						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	U	1.0									
1,1,1-Trichloroethane	U	1.0									
1,1,2,2-Tetrachloroethane	U	1.0									
1,1,2-Trichloro-1,2,2-trifluoroethane	U	1.0									
1,1,2-Trichloroethane	U	1.0									

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analyte
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205035
Project: 79 Pondfield Road, Bronxville, NY (6832-BVN)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-051012aYW		SampType: MBLK		TestCode: Full8260_W		Units: µg/L		Prep Date: 5/10/2012		RunNo: 63312		
Client ID: PBW		Batch ID: R63312C		TestNo: SW8260C				Analysis Date: 5/11/2012		SeqNo: 892319		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane		U	1.0									
1,1-Dichloroethene		U	1.0									
1,1-Dichloropropene		U	1.0									
1,2,3-Trichlorobenzene		U	1.0									
1,2,3-Trichloropropane		U	1.0									
1,2,4,5-Tetramethylbenzene		U	1.0									
1,2,4-Trichlorobenzene		U	1.0									
1,2,4-Trimethylbenzene		U	1.0									
1,2-Dibromo-3-chloropropane		U	2.0									
1,2-Dibromoethane		U	1.0									
1,2-Dichlorobenzene		U	1.0									
1,2-Dichloroethane		U	1.0									
1,2-Dichloropropene		U	1.0									
1,3,5-Trimethylbenzene		U	1.0									
1,3-Dichlorobenzene		U	1.0									
1,3-dichloropropane		U	1.0									
1,4-Dichlorobenzene		U	1.0									
1,4-Dioxane		U	1.0									
2,2-Dichloropropane		U	1.0									
2-Butanone		U	2.5									
2-Chloroethyl vinyl ether		U	1.0									
2-Chlorotoluene		U	1.0									C
2-Hexanone		U	2.5									
2-Propanol		U	1.0									
4-Chlorotoluene		U	1.0									
4-Isopropyltoluene		U	1.0									
4-Methyl-2-pentanone		U	2.5									C
Acetone		U	5.0									
Acrolein		U	10									
Acrylonitrile		U	1.0									
Benzene		U	1.0									

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205035
Project: 79 Pondfield Road, Bronxville, NY (6832-BVN)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-051012aYW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 5/10/2012	RunNo: 63312						
Client ID: PBW	Batch ID: R63312C	TestNo: SW8260C		Analysis Date: 5/11/2012	SeqNo: 892319						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromobenzene	U	1.0									
Bromochloromethane	U	1.0									
Bromodichloromethane	U	1.0									
Bromoform	U	1.0									
Bromomethane	U	1.0									
Carbon disulfide	U	1.0									
Carbon tetrachloride	U	1.0									
Chlorobenzene	U	1.0									
Chlorodifluoromethane	U	1.0									
Chloroethane	U	1.0									
Chloroform	U	1.0									
Chloromethane	U	1.0									
cis-1,2-Dichloroethene	U	1.0									
cis-1,3-Dichloropropene	U	1.0									
Dibromochloromethane	U	1.0									
Dibromomethane	U	1.0									
Dichlorodifluoromethane	U	1.0									
Diisopropyl ether	U	1.0									
Ethanol	U	5.0									
Ethyl acetate	U	1.0									
Ethylbenzene	U	1.0									
Freon-114	U	1.0									
Hexachlorobutadiene	U	1.0									
Isopropyl acetate	U	2.0									
Isopropylbenzene	U	1.0									
m,p-Xylene	U	2.0									
Methyl Acetate	U	2.0									
Methyl tert-butyl ether	U	1.0									
Methylene chloride	4.1	1.0									
n-Amyl acetate	U	1.0									
Naphthalene	U	1.0									

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205035
Project: 79 Pondfield Road, Bronxville, NY (6832-BVN)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-051012aYW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 5/10/2012	RunNo: 63312						
Client ID: PBW	Batch ID: R63312C	TestNo: SW8260C		Analysis Date: 5/11/2012	SeqNo: 892319						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

n-Butyl acetate	U	2.0									
n-Butylbenzene	U	1.0									
n-Propyl acetate	U	1.0									
n-Propylbenzene	U	1.0									
o-Xylene	U	1.0									
p-Diethylbenzene	U	1.0									
p-Ethyltoluene	U	1.0									
sec-Butylbenzene	U	1.0									
Styrene	U	1.0									
t-Butyl alcohol	U	2.0									C
tert-Butylbenzene	U	1.0									
Tetrachloroethene	U	2.0									
Toluene	U	1.0									
trans-1,2-Dichloroethene	U	1.0									
trans-1,3-Dichloropropene	U	1.0									
Trichloroethene	U	1.0									
Trichlorofluoromethane	U	1.0									
Vinyl acetate	U	1.0									
Vinyl chloride	U	1.0									
Surr: 4-Bromofluorobenzene	52		50.00		103	63		123			
Surr: Dibromofluoromethane	52		50.00		104	68		124			
Surr: Toluene-d8	50		50.00		100	67		125			

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analy
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

Thursday, May 31, 2012

Paul P. Stewart
Advanced Cleanup Technologies, Inc.
960 So. Broadway, Suite 100
Hicksville, NY 11801

TEL: (516) 933-0655

FAX (516) 933-0659

RE: 79 Pondfield Rd., Bronxville, NY (6832-BV

Order No.: 1205250

Dear Paul P. Stewart:

American Analytical Laboratories, LLC. received 7 sample(s) on 5/25/2012 for the analyses presented in the following report.

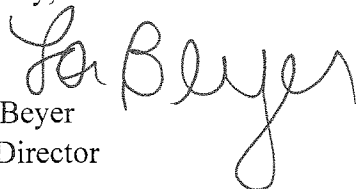
Samples were analyzed in accordance with the test procedures documented on the chain of custody and detailed throughout the text of this report.

The results reported herein relate only to the items tested or to the samples as received by the laboratory. This report may not be reproduced, except in full, without the approval of American Analytical Laboratories, LLC and is not considered complete without a cover page and chain of custody documentation. The limits (LOQ) provided in the data package are analytical reporting limits and not Federal or Local mandated values to which the sample results should be compared.

There were no problems with the analyses and all data for associated QC met laboratory specifications. If there are any exceptions a Case Narrative is provided in the report or the data is qualified. This package has been reviewed by American Analytical Laboratories' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal. This report consists of 51 pages.

If you have any questions regarding these tests results, please do not hesitate to call (631) 454-6100 or email me directly at lbeyer@american-analytical.com.

Sincerely,



Lori Beyer
Lab Director

American Analytical Laboratories, LLC.

Date: 31-May-12

CLIENT: Advanced Cleanup Technologies, Inc.
Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)
Lab Order: 1205250

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date Collected	Date Received
1205250-01A	ACT-6 (25ft)	5/24/2012 10:00:00 AM	5/25/2012
1205250-02A	ACT-8 (25ft.)	5/24/2012 10:45:00 AM	5/25/2012
1205250-03A	ACT-9 (14 ft.)	5/24/2012 11:30:00 AM	5/25/2012
1205250-04A	ACT-10 (14 ft.)	5/24/2012 2:00:00 PM	5/25/2012
1205250-05A	ACT-11 (16 ft.)	5/24/2012 3:00:00 PM	5/25/2012
1205250-06A	ACT-8 (8-10 ft.)	5/24/2012 3:30:00 PM	5/25/2012
1205250-07A	ACT- 8 (13-15 ft.)	5/24/2012 4:30:00 PM	5/25/2012

56 TOLEDO STREET • FARMINGDALE, NEW YORK 11735
(631) 454-6100 • FAX (631) 454-8027
www.american-analytical.com

CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT

CLIENT NAME/ADDRESS						CONTACT:		SAMPLER(S) SEALED	YES/ NO
								CORRECT CONTAINER(S)	YES) NO
								TEMPERATURE (° C)	✓ /
PROJECT LOCATION: 79 Pondfield Rd. Bronxville, NY (6832 - BVNY)									
LABORATORY ID# LAB USE ONLY	MATRIX/ TYPE	NO. OF CONTAINERS	SAMPLE DATE	SAMPLING TIME	SAMPLE # - LOCATION				
1205280-01A	W	2	5/24	10:00	ACT-6 (25 ft.)	X			
-02A	W	2	5/24	10:45	ACT-8 (25 ft.)	X			
-03A	W	2	5/24	11:30	ACT-9 (14 ft.)	X			
-04A	W	2	5/24	2:00	ACT-10 (14 ft.)	X			
-05A	W	2	5/24	3:00	ACT-11 (16 ft.)	X			
-06A	S	1	5/24	3:30	ACT-8 (8-10 ft.)	X			
-07A	S	1	5/24	4:30	ACT-8 (13-15 ft.)	X			
COMMENTS / INSTRUCTIONS									
Samples must be on ICE (<6° C)									
TURNAROUND REQUIRED STANDARD ☐ STAT ☒ (7-10 business days)						E-MAIL ADDRESS FOR RESULTS: BY 5/31/12			
RELINQUISHED BY (SIGNATURE)		DATE		PRINTED NAME		RECEIVED BY LAB (SIGNATURE)		DATE	
		TIME		J. Paul Ramirez		C. Fenore		5/31/12	
RELINQUISHED BY (SIGNATURE)		DATE		PRINTED NAME		RECEIVED BY LAB (SIGNATURE)		DATE	
		TIME						TIME	

American Analytical Laboratories, LLC.

Sample Receipt Checklist

Client Name **ADVANCED CLEANUP TECH**

Date and Time Receive **5/25/2012 10:39:19 AM**

Work Order Numbe **1205250**

RcptNo: **1**

Received by **CF**

COC_ID:

CoolerID:

Checklist completed by

CF *5/24/12*
Signature Date

Reviewed by

KBK *5/25/12*
Initials Date

Matrix:

Carrier name Courier

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Presen ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Presen ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Presen ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☒	No ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐

Adjusted? _____ Checked b _____

Any No and/or NA (not applicable) response must be detailed in the comments section be

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments:

Corrective Action

American Analytical Laboratories, LLC.

Date: 31-May-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.

Client Sample ID: ACT-6 (25ft)

Lab Order: 1205250

Collection Date: 5/24/2012 10:00:00 AM

Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

Matrix: LIQUID

Lab ID: 1205250-01A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
1,1,1,2-Tetrachloroethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
1,1,1-Trichloroethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
1,1,2,2-Tetrachloroethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
1,1,2-Trichloroethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
1,1-Dichloroethane	U	0.54	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
1,1-Dichloroethene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
1,1-Dichloropropene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
1,2,3-Trichlorobenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
1,2,3-Trichloropropane	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
1,2,4,5-Tetramethylbenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
1,2,4-Trichlorobenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
1,2,4-Trimethylbenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
1,2-Dibromo-3-chloropropane	U	0.54	2.2		µg/L-dry	1	5/29/2012 1:35:00 PM
1,2-Dibromoethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
1,2-Dichlorobenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
1,2-Dichloroethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
1,2-Dichloropropane	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
1,3,5-Trimethylbenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
1,3-Dichlorobenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
1,3-dichloropropane	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
1,4-Dichlorobenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
1,4-Dioxane	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
2,2-Dichloropropane	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
2-Butanone	U	1.36	2.7	C	µg/L-dry	1	5/29/2012 1:35:00 PM
2-Chloroethyl vinyl ether	U	0.54	1.1	C	µg/L-dry	1	5/29/2012 1:35:00 PM
2-Chlorotoluene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
2-Hexanone	U	1.36	2.7	C	µg/L-dry	1	5/29/2012 1:35:00 PM
2-Propanol	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
4-Chlorotoluene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
4-Isopropyltoluene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
4-Methyl-2-pentanone	U	1.36	2.7	C	µg/L-dry	1	5/29/2012 1:35:00 PM
Acetone	U	1.36	5.4		µg/L-dry	1	5/29/2012 1:35:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 31-May-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.

Client Sample ID: ACT-6 (25ft)

Lab Order: 1205250

Collection Date: 5/24/2012 10:00:00 AM

Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

Matrix: LIQUID

Lab ID: 1205250-01A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Acrolein	U	5.42	11		µg/L-dry	1	5/29/2012 1:35:00 PM
Acrylonitrile	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
Benzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
Bromobenzene	U	0.54	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
Bromochloromethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
Bromodichloromethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
Bromoform	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
Bromomethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
Carbon disulfide	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
Carbon tetrachloride	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
Chlorobenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
Chlorodifluoromethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
Chloroethane	U	0.27	1.1	C	µg/L-dry	1	5/29/2012 1:35:00 PM
Chloroform	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
Chloromethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
cis-1,2-Dichloroethene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
cis-1,3-Dichloropropene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
Dibromochloromethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
Dibromomethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
Dichlorodifluoromethane	U	0.27	1.1	C	µg/L-dry	1	5/29/2012 1:35:00 PM
Diisopropyl ether	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
Ethanol	U	2.71	5.4		µg/L-dry	1	5/29/2012 1:35:00 PM
Ethyl acetate	U	0.54	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
Ethylbenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
Freon-114	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
Hexachlorobutadiene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
Isopropyl acetate	U	1.08	2.2		µg/L-dry	1	5/29/2012 1:35:00 PM
Isopropylbenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
m,p-Xylene	U	0.54	2.2		µg/L-dry	1	5/29/2012 1:35:00 PM
Methyl Acetate	U	0.54	2.2		µg/L-dry	1	5/29/2012 1:35:00 PM
Methyl tert-butyl ether	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
Methylene chloride	2.7	0.27	1.1	B	µg/L-dry	1	5/29/2012 1:35:00 PM
n-Amyl acetate	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 31-May-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.

Client Sample ID: ACT-6 (25ft)

Lab Order: 1205250

Collection Date: 5/24/2012 10:00:00 AM

Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

Matrix: LIQUID

Lab ID: 1205250-01A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Naphthalene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
n-Butyl acetate	U	0.27	2.2		µg/L-dry	1	5/29/2012 1:35:00 PM
n-Butylbenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
n-Propyl acetate	U	0.54	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
n-Propylbenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
o-Xylene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
p-Diethylbenzene	U	0.54	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
p-Ethyltoluene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
sec-Butylbenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
Styrene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
t-Butyl alcohol	U	1.08	2.2		µg/L-dry	1	5/29/2012 1:35:00 PM
tert-Butylbenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
Tetrachloroethene	0.40	0.27	2.2	J	µg/L-dry	1	5/29/2012 1:35:00 PM
Toluene	0.36	0.27	1.1	J	µg/L-dry	1	5/29/2012 1:35:00 PM
trans-1,2-Dichloroethene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
trans-1,3-Dichloropropene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
Trichloroethene	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
Trichlorofluoromethane	U	0.27	1.1	C	µg/L-dry	1	5/29/2012 1:35:00 PM
Vinyl acetate	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
Vinyl chloride	U	0.27	1.1		µg/L-dry	1	5/29/2012 1:35:00 PM
Surr: 4-Bromofluorobenzene	93.1	0	63-123		%REC	1	5/29/2012 1:35:00 PM
Surr: Dibromofluoromethane	98.2	0	68-124		%REC	1	5/29/2012 1:35:00 PM
Surr: Toluene-d8	92.1	0	67-125		%REC	1	5/29/2012 1:35:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 31-May-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.

Client Sample ID: ACT-8 (25ft.)

Lab Order: 1205250

Collection Date: 5/24/2012 10:45:00 AM

Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

Matrix: LIQUID

Lab ID: 1205250-02A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
1,1,1,2-Tetrachloroethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
1,1,1-Trichloroethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
1,1,2,2-Tetrachloroethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
1,1,2-Trichloroethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
1,1-Dichloroethane	U	0.53	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
1,1-Dichloroethene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
1,1-Dichloropropene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
1,2,3-Trichlorobenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
1,2,3-Trichloropropane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
1,2,4,5-Tetramethylbenzene	1.3	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
1,2,4-Trichlorobenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
1,2,4-Trimethylbenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
1,2-Dibromo-3-chloropropane	U	0.53	2.1		µg/L-dry	1	5/29/2012 2:00:00 PM
1,2-Dibromoethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
1,2-Dichlorobenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
1,2-Dichloroethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
1,2-Dichloropropane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
1,3,5-Trimethylbenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
1,3-Dichlorobenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
1,3-dichloropropane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
1,4-Dichlorobenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
1,4-Dioxane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
2,2-Dichloropropane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
2-Butanone	U	1.33	2.7	C	µg/L-dry	1	5/29/2012 2:00:00 PM
2-Chloroethyl vinyl ether	U	0.53	1.1	C	µg/L-dry	1	5/29/2012 2:00:00 PM
2-Chlorotoluene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
2-Hexanone	U	1.33	2.7	C	µg/L-dry	1	5/29/2012 2:00:00 PM
2-Propanol	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
4-Chlorotoluene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
4-Isopropyltoluene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
4-Methyl-2-pentanone	U	1.33	2.7		µg/L-dry	1	5/29/2012 2:00:00 PM
Acetone	U	1.33	5.3		µg/L-dry	1	5/29/2012 2:00:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 31-May-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.

Client Sample ID: ACT-8 (25ft.)

Lab Order: 1205250

Collection Date: 5/24/2012 10:45:00 AM

Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

Matrix: LIQUID

Lab ID: 1205250-02A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Acrolein	U	5.31	11		µg/L-dry	1	5/29/2012 2:00:00 PM
Acrylonitrile	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Benzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Bromobenzene	U	0.53	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Bromochloromethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Bromodichloromethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Bromoform	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Bromomethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Carbon disulfide	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Carbon tetrachloride	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Chlorobenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Chlorodifluoromethane	U	0.27	1.1	C	µg/L-dry	1	5/29/2012 2:00:00 PM
Chloroethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Chloroform	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Chloromethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
cis-1,2-Dichloroethene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
cis-1,3-Dichloropropene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Dibromochloromethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Dibromomethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Dichlorodifluoromethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Diisopropyl ether	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Ethanol	U	2.66	5.3		µg/L-dry	1	5/29/2012 2:00:00 PM
Ethyl acetate	U	0.53	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Ethylbenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Freon-114	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Hexachlorobutadiene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Isopropyl acetate	U	1.06	2.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Isopropylbenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
m,p-Xylene	U	0.53	2.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Methyl Acetate	U	0.53	2.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Methyl tert-butyl ether	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Methylene chloride	3.0	0.27	1.1	B	µg/L-dry	1	5/29/2012 2:00:00 PM
n-Amyl acetate	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 31-May-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.

Client Sample ID: ACT-8 (25ft.)

Lab Order: 1205250

Collection Date: 5/24/2012 10:45:00 AM

Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

Matrix: LIQUID

Lab ID: 1205250-02A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Naphthalene	0.76	0.27	1.1	J	µg/L-dry	1	5/29/2012 2:00:00 PM
n-Butyl acetate	U	0.27	2.1		µg/L-dry	1	5/29/2012 2:00:00 PM
n-Butylbenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
n-Propyl acetate	U	0.53	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
n-Propylbenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
o-Xylene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
p-Diethylbenzene	0.72	0.53	1.1	J	µg/L-dry	1	5/29/2012 2:00:00 PM
p-Ethyltoluene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
sec-Butylbenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Styrene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
t-Butyl alcohol	U	1.06	2.1		µg/L-dry	1	5/29/2012 2:00:00 PM
tert-Butylbenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Tetrachloroethene	93	0.27	2.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Toluene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
trans-1,2-Dichloroethene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
trans-1,3-Dichloropropene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Trichloroethene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Trichlorofluoromethane	U	0.27	1.1	C	µg/L-dry	1	5/29/2012 2:00:00 PM
Vinyl acetate	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Vinyl chloride	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:00:00 PM
Surr: 4-Bromofluorobenzene	95.2	0	63-123		%REC	1	5/29/2012 2:00:00 PM
Surr: Dibromofluoromethane	97.9	0	68-124		%REC	1	5/29/2012 2:00:00 PM
Surr: Toluene-d8	85.4	0	67-125		%REC	1	5/29/2012 2:00:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 31-May-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.

Client Sample ID: ACT-9 (14 ft.)

Lab Order: 1205250

Collection Date: 5/24/2012 11:30:00 AM

Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

Matrix: LIQUID

Lab ID: 1205250-03A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
1,1,1,2-Tetrachloroethane	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
1,1,1-Trichloroethane	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
1,1,2,2-Tetrachloroethane	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
1,1,2-Trichloroethane	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
1,1-Dichloroethane	U	0.57	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
1,1-Dichloroethene	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
1,1-Dichloropropene	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
1,2,3-Trichlorobenzene	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
1,2,3-Trichloropropane	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
1,2,4,5-Tetramethylbenzene	15	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
1,2,4-Trichlorobenzene	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
1,2,4-Trimethylbenzene	9.0	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
1,2-Dibromo-3-chloropropane	U	0.57	2.3		µg/L-dry	1	5/29/2012 2:24:00 PM
1,2-Dibromoethane	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
1,2-Dichlorobenzene	2.4	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
1,2-Dichloroethane	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
1,2-Dichloropropane	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
1,3,5-Trimethylbenzene	3.2	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
1,3-Dichlorobenzene	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
1,3-dichloropropane	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
1,4-Dichlorobenzene	1.6	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
1,4-Dioxane	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
2,2-Dichloropropane	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
2-Butanone	U	1.42	2.8	C	µg/L-dry	1	5/29/2012 2:24:00 PM
2-Chloroethyl vinyl ether	U	0.57	1.1	C	µg/L-dry	1	5/29/2012 2:24:00 PM
2-Chlorotoluene	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
2-Hexanone	U	1.42	2.8	C	µg/L-dry	1	5/29/2012 2:24:00 PM
2-Propanol	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
4-Chlorotoluene	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
4-Isopropyltoluene	1.2	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
4-Methyl-2-pentanone	U	1.42	2.8	C	µg/L-dry	1	5/29/2012 2:24:00 PM
Acetone	U	1.42	5.7		µg/L-dry	1	5/29/2012 2:24:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 31-May-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc. **Client Sample ID:** ACT-9 (14 ft.)
Lab Order: 1205250 **Collection Date:** 5/24/2012 11:30:00 AM
Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY) **Matrix:** LIQUID
Lab ID: 1205250-03A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Acrolein	U	5.69	11		µg/L-dry	1	5/29/2012 2:24:00 PM
Acrylonitrile	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
Benzene	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
Bromobenzene	U	0.57	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
Bromochloromethane	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
Bromodichloromethane	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
Bromoform	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
Bromomethane	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
Carbon disulfide	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
Carbon tetrachloride	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
Chlorobenzene	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
Chlorodifluoromethane	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
Chloroethane	U	0.28	1.1	C	µg/L-dry	1	5/29/2012 2:24:00 PM
Chloroform	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
Chloromethane	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
cis-1,2-Dichloroethene	5.7	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
cis-1,3-Dichloropropene	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
Dibromochloromethane	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
Dibromomethane	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
Dichlorodifluoromethane	U	0.28	1.1	C	µg/L-dry	1	5/29/2012 2:24:00 PM
Diisopropyl ether	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
Ethanol	U	2.85	5.7		µg/L-dry	1	5/29/2012 2:24:00 PM
Ethyl acetate	U	0.57	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
Ethylbenzene	2.1	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
Freon-114	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
Hexachlorobutadiene	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
Isopropyl acetate	U	1.14	2.3		µg/L-dry	1	5/29/2012 2:24:00 PM
Isopropylbenzene	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
m,p-Xylene	4.6	0.57	2.3		µg/L-dry	1	5/29/2012 2:24:00 PM
Methyl Acetate	U	0.57	2.3		µg/L-dry	1	5/29/2012 2:24:00 PM
Methyl tert-butyl ether	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
Methylene chloride	3.5	0.28	1.1	B	µg/L-dry	1	5/29/2012 2:24:00 PM
n-Amyl acetate	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 31-May-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.

Client Sample ID: ACT-9 (14 ft.)

Lab Order: 1205250

Collection Date: 5/24/2012 11:30:00 AM

Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

Matrix: LIQUID

Lab ID: 1205250-03A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Naphthalene	32	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
n-Butyl acetate	U	0.28	2.3		µg/L-dry	1	5/29/2012 2:24:00 PM
n-Butylbenzene	0.57	0.28	1.1	J	µg/L-dry	1	5/29/2012 2:24:00 PM
n-Propyl acetate	U	0.57	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
n-Propylbenzene	0.46	0.28	1.1	J	µg/L-dry	1	5/29/2012 2:24:00 PM
o-Xylene	7.2	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
p-Diethylbenzene	7.4	0.57	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
p-Ethyltoluene	4.7	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
sec-Butylbenzene	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
Styrene	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
t-Butyl alcohol	U	1.14	2.3		µg/L-dry	1	5/29/2012 2:24:00 PM
tert-Butylbenzene	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
Tetrachloroethene	5100	12.5	100		µg/L	50	5/31/2012 8:39:00 AM
Toluene	0.85	0.28	1.1	J	µg/L-dry	1	5/29/2012 2:24:00 PM
trans-1,2-Dichloroethene	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
trans-1,3-Dichloropropene	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
Trichloroethene	14	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
Trichlorofluoromethane	U	0.28	1.1	C	µg/L-dry	1	5/29/2012 2:24:00 PM
Vinyl acetate	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
Vinyl chloride	U	0.28	1.1		µg/L-dry	1	5/29/2012 2:24:00 PM
Surr: 4-Bromofluorobenzene	105	0	63-123		%REC	50	5/31/2012 8:39:00 AM
Surr: 4-Bromofluorobenzene	93.5	0	63-123		%REC	1	5/29/2012 2:24:00 PM
Surr: Dibromofluoromethane	97.7	0	68-124		%REC	1	5/29/2012 2:24:00 PM
Surr: Dibromofluoromethane	103	0	68-124		%REC	50	5/31/2012 8:39:00 AM
Surr: Toluene-d8	110	0	67-125		%REC	50	5/31/2012 8:39:00 AM
Surr: Toluene-d8	91.1	0	67-125		%REC	1	5/29/2012 2:24:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers: B Analyte detected in the associated Method Blank
 E Value above quantitation range
 J Analyte detected below quantitation limits
 LOQ Limit of Quantitation
 PQL Practical Quantitation Limit
 U Indicates the compound was analyzed but not detected.

C Calibration %RSD/%D exceeded for non-CCC analytes
 H Holding times for preparation or analysis exceeded
 LOD Limit of Detection
 P >40% diff for detected conc between the two GC columns
 S Spike Recovery outside accepted recovery limits

American Analytical Laboratories, LLC.

Date: 31-May-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.

Client Sample ID: ACT-10 (14 ft.)

Lab Order: 1205250

Collection Date: 5/24/2012 2:00:00 PM

Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

Matrix: LIQUID

Lab ID: 1205250-04A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
1,1,1,2-Tetrachloroethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
1,1,1-Trichloroethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
1,1,2,2-Tetrachloroethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
1,1,2-Trichloroethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
1,1-Dichloroethane	U	0.53	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
1,1-Dichloroethene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
1,1-Dichloropropene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
1,2,3-Trichlorobenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
1,2,3-Trichloropropane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
1,2,4,5-Tetramethylbenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
1,2,4-Trichlorobenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
1,2,4-Trimethylbenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
1,2-Dibromo-3-chloropropane	U	0.53	2.1		µg/L-dry	1	5/29/2012 2:49:00 PM
1,2-Dibromoethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
1,2-Dichlorobenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
1,2-Dichloroethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
1,2-Dichloropropane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
1,3,5-Trimethylbenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
1,3-Dichlorobenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
1,3-dichloropropane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
1,4-Dichlorobenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
1,4-Dioxane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
2,2-Dichloropropane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
2-Butanone	U	1.33	2.7	C	µg/L-dry	1	5/29/2012 2:49:00 PM
2-Chloroethyl vinyl ether	U	0.53	1.1	C	µg/L-dry	1	5/29/2012 2:49:00 PM
2-Chlorotoluene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
2-Hexanone	U	1.33	2.7	C	µg/L-dry	1	5/29/2012 2:49:00 PM
2-Propanol	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
4-Chlorotoluene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
4-Isopropyltoluene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
4-Methyl-2-pentanone	U	1.33	2.7		µg/L-dry	1	5/29/2012 2:49:00 PM
Acetone	U	1.33	5.3		µg/L-dry	1	5/29/2012 2:49:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 31-May-12

ELAP ID : 11418

CLIENT:	Advanced Cleanup Technologies, Inc.	Client Sample ID:	ACT-10 (14 ft.)
Lab Order:	1205250	Collection Date:	5/24/2012 2:00:00 PM
Project:	79 Pondfield Rd., Bronxville, NY (6832-BVNY)	Matrix:	LIQUID
Lab ID:	1205250-04A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Acrolein	U	5.32	11		µg/L-dry	1	5/29/2012 2:49:00 PM
Acrylonitrile	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Benzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Bromobenzene	U	0.53	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Bromochloromethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Bromodichloromethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Bromoform	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Bromomethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Carbon disulfide	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Carbon tetrachloride	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Chlorobenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Chlorodifluoromethane	U	0.27	1.1	C	µg/L-dry	1	5/29/2012 2:49:00 PM
Chloroethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Chloroform	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Chloromethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
cis-1,2-Dichloroethene	12	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
cis-1,3-Dichloropropene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Dibromochloromethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Dibromomethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Dichlorodifluoromethane	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Diisopropyl ether	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Ethanol	U	2.66	5.3		µg/L-dry	1	5/29/2012 2:49:00 PM
Ethyl acetate	U	0.53	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Ethylbenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Freon-114	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Hexachlorobutadiene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Isopropyl acetate	U	1.06	2.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Isopropylbenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
m,p-Xylene	U	0.53	2.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Methyl Acetate	U	0.53	2.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Methyl tert-butyl ether	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Methylene chloride	2.6	0.27	1.1	B	µg/L-dry	1	5/29/2012 2:49:00 PM
n-Amyl acetate	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 31-May-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc. Client Sample ID: ACT-10 (14 ft.)
 Lab Order: 1205250 Collection Date: 5/24/2012 2:00:00 PM
 Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY) Matrix: LIQUID
 Lab ID: 1205250-04A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Naphthalene	1.8	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
n-Butyl acetate	U	0.27	2.1		µg/L-dry	1	5/29/2012 2:49:00 PM
n-Butylbenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
n-Propyl acetate	U	0.53	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
n-Propylbenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
o-Xylene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
p-Diethylbenzene	U	0.53	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
p-Ethyltoluene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
sec-Butylbenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Styrene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
t-Butyl alcohol	U	1.06	2.1		µg/L-dry	1	5/29/2012 2:49:00 PM
tert-Butylbenzene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Tetrachloroethene	2000	12.5	100		µg/L	50	5/31/2012 9:01:00 AM
Toluene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
trans-1,2-Dichloroethene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
trans-1,3-Dichloropropene	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Trichloroethene	33	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Trichlorofluoromethane	U	0.27	1.1	C	µg/L-dry	1	5/29/2012 2:49:00 PM
Vinyl acetate	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Vinyl chloride	U	0.27	1.1		µg/L-dry	1	5/29/2012 2:49:00 PM
Surr: 4-Bromofluorobenzene	91.5	0	63-123		%REC	50	5/31/2012 9:01:00 AM
Surr: 4-Bromofluorobenzene	98.2	0	63-123		%REC	1	5/29/2012 2:49:00 PM
Surr: Dibromofluoromethane	97.5	0	68-124		%REC	1	5/29/2012 2:49:00 PM
Surr: Dibromofluoromethane	106	0	68-124		%REC	50	5/31/2012 9:01:00 AM
Surr: Toluene-d8	102	0	67-125		%REC	50	5/31/2012 9:01:00 AM
Surr: Toluene-d8	94.4	0	67-125		%REC	1	5/29/2012 2:49:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 31-May-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc. Client Sample ID: ACT-11 (16 ft.)
 Lab Order: 1205250 Collection Date: 5/24/2012 3:00:00 PM
 Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY) Matrix: LIQUID
 Lab ID: 1205250-05A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
1,1,1,2-Tetrachloroethane	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
1,1,1-Trichloroethane	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
1,1,2,2-Tetrachloroethane	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
1,1,2-Trichloroethane	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
1,1-Dichloroethane	U	0.5	1.0		µg/L	1	5/29/2012 3:13:00 PM
1,1-Dichloroethene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
1,1-Dichloropropene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
1,2,3-Trichlorobenzene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
1,2,3-Trichloropropane	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
1,2,4,5-Tetramethylbenzene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
1,2,4-Trichlorobenzene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
1,2,4-Trimethylbenzene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
1,2-Dibromo-3-chloropropane	U	0.5	2.0		µg/L	1	5/29/2012 3:13:00 PM
1,2-Dibromoethane	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
1,2-Dichlorobenzene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
1,2-Dichloroethane	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
1,2-Dichloropropane	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
1,3,5-Trimethylbenzene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
1,3-Dichlorobenzene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
1,3-dichloropropane	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
1,4-Dichlorobenzene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
1,4-Dioxane	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
2,2-Dichloropropane	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
2-Butanone	U	1.25	2.5	C	µg/L	1	5/29/2012 3:13:00 PM
2-Chloroethyl vinyl ether	U	0.5	1.0	C	µg/L	1	5/29/2012 3:13:00 PM
2-Chlorotoluene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
2-Hexanone	U	1.25	2.5	C	µg/L	1	5/29/2012 3:13:00 PM
2-Propanol	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
4-Chlorotoluene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
4-Isopropyltoluene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
4-Methyl-2-pentanone	U	1.25	2.5	C	µg/L	1	5/29/2012 3:13:00 PM
Acetone	U	1.25	5.0		µg/L	1	5/29/2012 3:13:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
 Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 31-May-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.

Client Sample ID: ACT-11 (16 ft.)

Lab Order: 1205250

Collection Date: 5/24/2012 3:00:00 PM

Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

Matrix: LIQUID

Lab ID: 1205250-05A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C		Analyst: LA		
Acrolein	U	5	10		µg/L	1	5/29/2012 3:13:00 PM
Acrylonitrile	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
Benzene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
Bromobenzene	U	0.5	1.0		µg/L	1	5/29/2012 3:13:00 PM
Bromochloromethane	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
Bromodichloromethane	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
Bromoform	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
Bromomethane	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
Carbon disulfide	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
Carbon tetrachloride	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
Chlorobenzene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
Chlorodifluoromethane	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
Chloroethane	U	0.25	1.0	C	µg/L	1	5/29/2012 3:13:00 PM
Chloroform	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
Chloromethane	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
cis-1,2-Dichloroethene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
cis-1,3-Dichloropropene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
Dibromochloromethane	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
Dibromomethane	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
Dichlorodifluoromethane	U	0.25	1.0	C	µg/L	1	5/29/2012 3:13:00 PM
Diisopropyl ether	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
Ethanol	U	2.5	5.0		µg/L	1	5/29/2012 3:13:00 PM
Ethyl acetate	U	0.5	1.0		µg/L	1	5/29/2012 3:13:00 PM
Ethylbenzene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
Freon-114	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
Hexachlorobutadiene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
Isopropyl acetate	U	1	2.0		µg/L	1	5/29/2012 3:13:00 PM
Isopropylbenzene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
m,p-Xylene	U	0.5	2.0		µg/L	1	5/29/2012 3:13:00 PM
Methyl Acetate	U	0.5	2.0		µg/L	1	5/29/2012 3:13:00 PM
Methyl tert-butyl ether	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
Methylene chloride	2.9	0.25	1.0	B	µg/L	1	5/29/2012 3:13:00 PM
n-Amyl acetate	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 31-May-12

ELAP ID : 11418

CLIENT:	Advanced Cleanup Technologies, Inc.	Client Sample ID:	ACT-11 (16 ft.)
Lab Order:	1205250	Collection Date:	5/24/2012 3:00:00 PM
Project:	79 Pondfield Rd., Bronxville, NY (6832-BVNY)	Matrix:	LIQUID
Lab ID:	1205250-05A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Naphthalene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
n-Butyl acetate	U	0.25	2.0		µg/L	1	5/29/2012 3:13:00 PM
n-Butylbenzene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
n-Propyl acetate	U	0.5	1.0		µg/L	1	5/29/2012 3:13:00 PM
n-Propylbenzene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
o-Xylene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
p-Diethylbenzene	U	0.5	1.0		µg/L	1	5/29/2012 3:13:00 PM
p-Ethyltoluene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
sec-Butylbenzene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
Styrene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
t-Butyl alcohol	U	1	2.0		µg/L	1	5/29/2012 3:13:00 PM
tert-Butylbenzene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
Tetrachloroethene	21	0.25	2.0		µg/L	1	5/29/2012 3:13:00 PM
Toluene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
trans-1,2-Dichloroethene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
trans-1,3-Dichloropropene	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
Trichloroethene	1.2	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
Trichlorofluoromethane	U	0.25	1.0	C	µg/L	1	5/29/2012 3:13:00 PM
Vinyl acetate	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
Vinyl chloride	U	0.25	1.0		µg/L	1	5/29/2012 3:13:00 PM
Surr: 4-Bromofluorobenzene	97.1	0	63-123		%REC	1	5/29/2012 3:13:00 PM
Surr: Dibromofluoromethane	96.3	0	68-124		%REC	1	5/29/2012 3:13:00 PM
Surr: Toluene-d8	95.5	0	67-125		%REC	1	5/29/2012 3:13:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 31-May-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.

Client Sample ID: ACT-8 (8-10 ft.)

Lab Order: 1205250

Collection Date: 5/24/2012 3:30:00 PM

Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

Matrix: SOIL

Lab ID: 1205250-06A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
PERCENT MOISTURE			D2216				Analyst: CF
Percent Moisture	8.81	0	0		wt%	1	5/29/2012
VOLATILE SW-846 METHOD 8260			SW8260C				Analyst: LA
1,1,1,2-Tetrachloroethane	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
1,1,1-Trichloroethane	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
1,1,2,2-Tetrachloroethane	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
1,1,2-Trichloroethane	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
1,1-Dichloroethane	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
1,1-Dichloroethene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
1,1-Dichloropropene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
1,2,3-Trichlorobenzene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
1,2,3-Trichloropropane	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
1,2,4,5-Tetramethylbenzene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
1,2,4-Trichlorobenzene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
1,2,4-Trimethylbenzene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
1,2-Dibromo-3-chloropropane	U	0.53	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
1,2-Dibromoethane	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
1,2-Dichlorobenzene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
1,2-Dichloroethane	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
1,2-Dichloropropane	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
1,3,5-Trimethylbenzene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
1,3-Dichlorobenzene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
1,3-dichloropropane	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
1,4-Dichlorobenzene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
1,4-Dioxane	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
2,2-Dichloropropane	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
2-Butanone	U	1.33	5.3	C	µg/Kg-dry	1	5/25/2012 6:34:00 PM
2-Chloroethyl vinyl ether	U	0.53	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
2-Chlorotoluene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
2-Hexanone	U	1.33	5.3		µg/Kg-dry	1	5/25/2012 6:34:00 PM
2-Propanol	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
4-Chlorotoluene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 31-May-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc. **Client Sample ID:** ACT-8 (8-10 ft.)
Lab Order: 1205250 **Collection Date:** 5/24/2012 3:30:00 PM
Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY) **Matrix:** SOIL
Lab ID: 1205250-06A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
4-Isopropyltoluene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
4-Methyl-2-pentanone	U	1.33	5.3		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Acetone	U	1.33	5.3		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Acrolein	U	5.32	11		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Acrylonitrile	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Benzene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Bromobenzene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Bromochloromethane	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Bromodichloromethane	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Bromoform	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Bromomethane	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Carbon disulfide	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Carbon tetrachloride	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Chlorobenzene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Chlorodifluoromethane	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Chloroethane	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Chloroform	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Chloromethane	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
cis-1,2-Dichloroethene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
cis-1,3-Dichloropropene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Dibromochloromethane	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Dibromomethane	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Dichlorodifluoromethane	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Diisopropyl ether	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Ethanol	U	2.66	5.3		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Ethyl acetate	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Ethylbenzene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Freon-114	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Hexachlorobutadiene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Isopropyl acetate	U	1.06	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Isopropylbenzene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
m,p-Xylene	U	0.53	4.3		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Methyl Acetate	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 31-May-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.

Client Sample ID: ACT-8 (8-10 ft.)

Lab Order: 1205250

Collection Date: 5/24/2012 3:30:00 PM

Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

Matrix: SOIL

Lab ID: 1205250-06A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Methyl tert-butyl ether	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Methylene chloride	10	0.27	2.1	B	µg/Kg-dry	1	5/25/2012 6:34:00 PM
n-Amyl acetate	U	0.27	2.1	C	µg/Kg-dry	1	5/25/2012 6:34:00 PM
Naphthalene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
n-Butyl acetate	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
n-Butylbenzene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
n-Propyl acetate	U	0.53	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
n-Propylbenzene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
o-Xylene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
p-Diethylbenzene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
p-Ethyltoluene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
sec-Butylbenzene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Styrene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
t-Butyl alcohol	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
tert-Butylbenzene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Tetrachloroethene	0.42	0.27	2.1	J	µg/Kg-dry	1	5/25/2012 6:34:00 PM
Toluene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
trans-1,2-Dichloroethene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
trans-1,3-Dichloropropene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Trichloroethene	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Trichlorofluoromethane	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Vinyl acetate	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Vinyl chloride	U	0.27	2.1		µg/Kg-dry	1	5/25/2012 6:34:00 PM
Surr: 4-Bromofluorobenzene	95.0	0	42-133		%REC	1	5/25/2012 6:34:00 PM
Surr: Dibromofluoromethane	98.9	0	50-133		%REC	1	5/25/2012 6:34:00 PM
Surr: Toluene-d8	93.3	0	53-130		%REC	1	5/25/2012 6:34:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 31-May-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc. Client Sample ID: ACT- 8 (13-15 ft.)
 Lab Order: 1205250 Collection Date: 5/24/2012 4:30:00 PM
 Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY) Matrix: SOIL
 Lab ID: 1205250-07A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
PERCENT MOISTURE							
Percent Moisture	17.8	0	0		wt%	1	Analyst: CF 5/29/2012
VOLATILE SW-846 METHOD 8260							
			D2216				Analyst: LA
			SW8260C				
1,1,1,2-Tetrachloroethane	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
1,1,1-Trichloroethane	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
1,1,2,2-Tetrachloroethane	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
1,1,2-Trichloroethane	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
1,1-Dichloroethane	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
1,1-Dichloroethene	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
1,1-Dichloropropene	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
1,2,3-Trichlorobenzene	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
1,2,3-Trichloropropane	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
1,2,4,5-Tetramethylbenzene	620	36.8	290		µg/Kg-dry	125	5/29/2012 3:12:00 PM
1,2,4-Trichlorobenzene	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
1,2,4-Trimethylbenzene	16	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
1,2-Dibromo-3-chloropropane	U	0.59	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
1,2-Dibromoethane	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
1,2-Dichlorobenzene	11	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
1,2-Dichloroethane	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
1,2-Dichloropropane	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
1,3,5-Trimethylbenzene	8.6	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
1,3-Dichlorobenzene	1.8	0.29	2.4	J	µg/Kg-dry	1	5/25/2012 7:06:00 PM
1,3-dichloropropane	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
1,4-Dichlorobenzene	7.8	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
1,4-Dioxane	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
2,2-Dichloropropane	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
2-Butanone	U	1.47	5.9	C	µg/Kg-dry	1	5/25/2012 7:06:00 PM
2-Chloroethyl vinyl ether	U	0.59	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
2-Chlorotoluene	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
2-Hexanone	U	1.47	5.9		µg/Kg-dry	1	5/25/2012 7:06:00 PM
2-Propanol	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
4-Chlorotoluene	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 31-May-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc. **Client Sample ID:** ACT- 8 (13-15 ft.)
Lab Order: 1205250 **Collection Date:** 5/24/2012 4:30:00 PM
Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY) **Matrix:** SOIL
Lab ID: 1205250-07A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
4-Isopropyltoluene	8.0	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
4-Methyl-2-pentanone	U	1.47	5.9		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Acetone	U	1.47	5.9		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Acrolein	U	5.89	12		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Acrylonitrile	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Benzene	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Bromobenzene	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Bromochloromethane	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Bromodichloromethane	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Bromoform	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Bromomethane	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Carbon disulfide	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Carbon tetrachloride	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Chlorobenzene	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Chlorodifluoromethane	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Chloroethane	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Chloroform	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Chloromethane	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
cis-1,2-Dichloroethene	2.3	0.29	2.4	J	µg/Kg-dry	1	5/25/2012 7:06:00 PM
cis-1,3-Dichloropropene	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Dibromochloromethane	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Dibromomethane	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Dichlorodifluoromethane	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Diisopropyl ether	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Ethanol	U	2.94	5.9		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Ethyl acetate	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Ethylbenzene	2.5	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Freon-114	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Hexachlorobutadiene	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Isopropyl acetate	U	1.18	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Isopropylbenzene	0.51	0.29	2.4	J	µg/Kg-dry	1	5/25/2012 7:06:00 PM
m,p-Xylene	6.1	0.59	4.7		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Methyl Acetate	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 31-May-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc. Client Sample ID: ACT- 8 (13-15 ft.)
 Lab Order: 1205250 Collection Date: 5/24/2012 4:30:00 PM
 Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY) Matrix: SOIL
 Lab ID: 1205250-07A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Methyl tert-butyl ether	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Methylene chloride	12	0.29	2.4	B	µg/Kg-dry	1	5/25/2012 7:06:00 PM
n-Amyl acetate	U	0.29	2.4	C	µg/Kg-dry	1	5/25/2012 7:06:00 PM
Naphthalene	92	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
n-Butyl acetate	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
n-Butylbenzene	21	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
n-Propyl acetate	U	0.59	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
n-Propylbenzene	1.8	0.29	2.4	J	µg/Kg-dry	1	5/25/2012 7:06:00 PM
o-Xylene	7.7	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
p-Diethylbenzene	180	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
p-Ethyltoluene	13	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
sec-Butylbenzene	0.91	0.29	2.4	J	µg/Kg-dry	1	5/25/2012 7:06:00 PM
Styrene	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
t-Butyl alcohol	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
tert-Butylbenzene	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Tetrachloroethene	6000	36.8	290		µg/Kg-dry	125	5/29/2012 3:12:00 PM
Toluene	0.31	0.29	2.4	J	µg/Kg-dry	1	5/25/2012 7:06:00 PM
trans-1,2-Dichloroethene	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
trans-1,3-Dichloropropene	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Trichloroethene	6.9	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Trichlorofluoromethane	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Vinyl acetate	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Vinyl chloride	U	0.29	2.4		µg/Kg-dry	1	5/25/2012 7:06:00 PM
Surr: 4-Bromofluorobenzene	93.3	0	42-133		%REC	125	5/29/2012 3:12:00 PM
Surr: 4-Bromofluorobenzene	129	0	42-133		%REC	1	5/25/2012 7:06:00 PM
Surr: Dibromofluoromethane	101	0	50-133		%REC	1	5/25/2012 7:06:00 PM
Surr: Dibromofluoromethane	101	0	50-133		%REC	125	5/29/2012 3:12:00 PM
Surr: Toluene-d8	91.5	0	53-130		%REC	125	5/29/2012 3:12:00 PM
Surr: Toluene-d8	95.9	0	53-130		%REC	1	5/25/2012 7:06:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

ANALYTICAL QC SUMMARY REPORT

CLIENT: Advanced Cleanup Technologies, Inc.

Work Order: 1205250

Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

TestCode: DryFull8260_Soil

Sample ID: V624LCS-052512HS		SampType: LCS		TestCode: DryFull8260_		Units: µg/Kg		Prep Date: 5/25/2012		RunNo: 63687	
Client ID: LCSS		Batch ID: R63687		TestNo: SW8260C				Analysis Date: 5/25/2012		SeqNo: 898003	
Analyte	Result	PQL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	37	2.0	50.00	0	74.6	40	125				
1,1,2,2-Tetrachloroethane	41	2.0	50.00	0	82.0	41	130				
1,1,2-Trichloroethane	38	2.0	50.00	0	76.5	43	121				
1,1-Dichloroethane	38	2.0	50.00	0	76.0	42	126				
1,1-Dichloroethene	35	2.0	50.00	0	70.7	40	126				
1,2-Dichlorobenzene	35	2.0	50.00	0	71.0	41	122				
1,2-Dichloroethane	38	2.0	50.00	0	76.6	42	133				
1,2-Dichloropropane	38	2.0	50.00	0	75.8	41	128				
1,3-Dichlorobenzene	37	2.0	50.00	0	73.5	45	119				
1,4-Dichlorobenzene	34	2.0	50.00	0	67.3	46	121				
2-Chloroethyl vinyl ether	32	2.0	50.00	0	64.2	30	135				
Benzene	35	2.0	50.00	0	70.1	35	123				
Bromodichloromethane	35	2.0	50.00	0	70.6	37	130				
Bromoform	38	2.0	50.00	0	76.4	43	121				
Bromomethane	29	2.0	50.00	0	57.6	32	130				
Carbon tetrachloride	38	2.0	50.00	0	76.0	37	134				
Chlorobenzene	32	2.0	50.00	0	64.3	40	124				
Chloroethane	40	2.0	50.00	0	79.4	35	141				
Chloroform	39	2.0	50.00	0	77.9	36	126				
Chloromethane	39	2.0	50.00	0	77.7	42	141				
cis-1,3-Dichloropropene	35	2.0	50.00	0	69.8	30	130				
Dibromochloromethane	36	2.0	50.00	0	71.9	43	125				
Ethylbenzene	37	2.0	50.00	0	73.2	44	122				
Methylene chloride	36	2.0	50.00	0	71.8	32	132				
Tetrachloroethene	35	2.0	50.00	0	69.1	31	120				
Toluene	35	2.0	50.00	0	70.1	42	124				
trans-1,2-Dichloroethene	34	2.0	50.00	0	67.1	38	122				
trans-1,3-Dichloropropene	32	2.0	50.00	0	64.8	45	123				
Trichloroethene	37	2.0	50.00	0	74.3	46	124				
Trichlorofluoromethane	45	2.0	50.00	0	89.1	45	137				

B

Qualifiers: B Analyte detected in the associated Method Blank H Holding times for preparation or analysis
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC columns PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205250
Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: V624LCS-052512HS	SampType: LCS	TestCode: DryFull8260_	Units: µg/Kg	Prep Date: 5/25/2012	RunNo: 63687						
Client ID: LCSS	Batch ID: R63687	TestNo: SW8260C		Analysis Date: 5/25/2012	SeqNo: 898003						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Vinyl chloride	42	2.0	50.00	0	83.2	46	139				
Surr: 4-Bromofluorobenzene	51		50.00		102	42	133				
Surr: Dibromofluoromethane	52		50.00		104	50	133				
Surr: Toluene-d8	49		50.00		98.8	53	130				

Sample ID: VBLK-052512HS	SampType: MBLK	TestCode: DryFull8260_	Units: µg/Kg	Prep Date: 5/25/2012	RunNo: 63687						
Client ID: PBS	Batch ID: R63687	TestNo: SW8260C		Analysis Date: 5/25/2012	SeqNo: 898004						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1,2-Tetrachloroethane	U	2.0									
1,1,1-Trichloroethane	U	2.0									
1,1,2,2-Tetrachloroethane	U	2.0									
1,1,2-Trichloro-1,2,2-trifluoroethane	U	2.0									
1,1,2-Trichloroethane	U	2.0									
1,1-Dichloroethane	U	2.0									
1,1-Dichloroethene	U	2.0									
1,1-Dichloropropene	U	2.0									
1,2,3-Trichlorobenzene	U	2.0									
1,2,3-Trichloropropene	U	2.0									
1,2,4,5-Tetramethylbenzene	U	2.0									
1,2,4-Trichlorobenzene	U	2.0									
1,2,4-Trimethylbenzene	U	2.0									
1,2-Dibromo-3-chloropropene	U	2.0									
1,2-Dibromoethane	U	2.0									
1,2-Dichlorobenzene	U	2.0									
1,2-Dichloroethane	U	2.0									
1,2-Dichloropropene	U	2.0									
1,3,5-Trimethylbenzene	U	2.0									
1,3-Dichlorobenzene	U	2.0									
1,3-dichloropropene	U	2.0									
1,4-Dichlorobenzene	U	2.0									

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analysis
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC columns PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205250
Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: VBLK-052512HS	SampType: MBLK	TestCode: DryFull8260_	Units: µg/Kg	Prep Date: 5/25/2012	RunNo: 63687						
Client ID: PBS	Batch ID: R63687	TestNo: SW8260C		Analysis Date: 5/25/2012	SeqNo: 898004						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane	U	2.0									
2,2-Dichloropropane	U	2.0									
2-Butanone	U	5.0									
2-Chloroethyl vinyl ether	U	2.0									
2-Chlorotoluene	U	2.0									
2-Hexanone	U	5.0									
2-Propanol	U	2.0									
4-Chlorotoluene	U	2.0									
4-Isopropyltoluene	U	2.0									
4-Methyl-2-pentanone	U	5.0									
Acetone	U	5.0									
Acrolein	U	10									
Acrylonitrile	U	2.0									
Benzene	U	2.0									
Bromobenzene	U	2.0									
Bromochloromethane	U	2.0									
Bromodichloromethane	U	2.0									
Bromoform	U	2.0									
Bromomethane	U	2.0									
Carbon disulfide	U	2.0									
Carbon tetrachloride	U	2.0									
Chlorobenzene	U	2.0									
Chlorodifluoromethane	U	2.0									
Chloroethane	U	2.0									
Chloroform	U	2.0									
Chloromethane	U	2.0									
cis-1,2-Dichloroethene	U	2.0									
cis-1,3-Dichloropropene	U	2.0									
Dibromochloromethane	U	2.0									
Dibromomethane	U	2.0									
Dichlorodifluoromethane	U	2.0									

C

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC columns
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analysis
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205250
Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: VBLK-052512HS	SampType: MBLK	TestCode: DryFull8260_	Units: µg/Kg	Prep Date: 5/25/2012	RunNo: 63687						
Client ID: PBS	Batch ID: R63687	TestNo: SW8260C		Analysis Date: 5/25/2012	SeqNo: 898004						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diisopropyl ether	U	2.0									
Ethanol	U	5.0									
Ethyl acetate	U	2.0									
Ethylbenzene	U	2.0									
Freon-114	U	2.0									
Hexachlorobutadiene	U	2.0									
Isopropyl acetate	U	2.0									
Isopropylbenzene	U	2.0									
m,p-Xylene	U	4.0									
Methyl Acetate	U	2.0									
Methyl tert-butyl ether	U	2.0									
Methylene chloride	3.7	2.0									
n-Amyl acetate	U	2.0									
Naphthalene	U	2.0									
n-Butyl acetate	U	2.0									
n-Butylbenzene	U	2.0									
n-Propyl acetate	U	2.0									
n-Propylbenzene	U	2.0									
o-Xylene	U	2.0									
p-Diethylbenzene	U	2.0									
p-Ethyltoluene	U	2.0									
sec-Butylbenzene	U	2.0									
Styrene	U	2.0									
t-Butyl alcohol	U	2.0									
tert-Butylbenzene	U	2.0									
Tetrachloroethene	U	2.0									
Toluene	U	2.0									
trans-1,2-Dichloroethene	U	2.0									
trans-1,3-Dichloropropene	U	2.0									
Trichloroethene	U	2.0									
Trichlorofluoromethane	U	2.0									

C

Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	P	>40% diff for detected conc between the two GC column	PQL	Practical Quantitation Limit	
R	RPD outside accepted recovery limits	S	Spike Recovery outside accepted recovery limits	U	Indicates the compound was analyzed	

CLIENT: Advanced Cleanup Technologies, Inc.

Work Order: 1205250

Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: VBLK-052512HS	SampType: MBLK	TestCode: DryFull8260_	Units: µg/Kg	Prep Date: 5/25/2012	RunNo: 63687						
Client ID: PBS	Batch ID: R63687	TestNo: SW8260C		Analysis Date: 5/25/2012	SeqNo: 898004						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Vinyl acetate U 2.0

Vinyl chloride U 2.0

Surr: 4-Bromofluorobenzene 49

Surr: Dibromofluoromethane 53

Surr: Toluene-d8 47

Sample ID: V624LCS-052912HS	SampType: LCS	TestCode: DryFull8260_	Units: µg/Kg	Prep Date: 5/29/2012	RunNo: 63687						
Client ID: LCSS	Batch ID: R63687A	TestNo: SW8260C		Analysis Date: 5/29/2012	SeqNo: 898007						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane 28

1,1,2,2-Tetrachloroethane 32

1,1,2-Trichloroethane 28

1,1-Dichloroethane 28

1,1-Dichloroethene 26

1,2-Dichlorobenzene 30

1,2-Dichloroethane 27

1,2-Dichloropropane 29

1,3-Dichlorobenzene 30

1,4-Dichlorobenzene 28

2-Chloroethyl vinyl ether 25

Benzene 26

Bromodichloromethane 27

Bromoform 31

Bromomethane 22

Carbon tetrachloride 28

Chlorobenzene 27

Chloroethane 28

Chloroform 29

Chloromethane 28

cis-1,3-Dichloropropene 26

Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes	H	Holding times for preparation or analy
	J	Analyte detected below quantitation limits	P	>40% diff for detected conc between the two GC column	PQL	Practical Quantitation Limit
	R	RPD outside accepted recovery limits	S	Spike Recovery outside accepted recovery limits	U	Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205250
Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: V624LCS-052912HS		SampType: LCS	TestCode: DryFull8260_		Units: µg/Kg	Prep Date: 5/29/2012		RunNo: 63687	
Client ID: LCSS		Batch ID: R63687A	TestNo: SW8260C			Analysis Date: 5/29/2012		SeqNo: 898007	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Dibromochloromethane	27	2.0	50.00	0	54.2	43	125		
Ethylbenzene	30	2.0	50.00	0	60.8	44	122		
Methylene chloride	26	2.0	50.00	0	52.6	32	132		B
Tetrachloroethene	26	2.0	50.00	0	52.1	31	120		
Toluene	27	2.0	50.00	0	53.1	42	124		
trans-1,2-Dichloroethene	25	2.0	50.00	0	50.2	38	122		
trans-1,3-Dichloropropene	24	2.0	50.00	0	47.8	45	123		
Trichloroethene	28	2.0	50.00	0	55.7	46	124		
Trichlorofluoromethane	32	2.0	50.00	0	64.0	45	137		
Vinyl chloride	30	2.0	50.00	0	59.1	46	139		C
Surr: 4-Bromofluorobenzene	51		50.00		101	42	133		
Surr: Dibromofluoromethane	50		50.00		99.9	50	133		
Surr: Toluene-d8	49		50.00		97.8	53	130		

Sample ID: VBLK-052912HS		SampType: MBLK	TestCode: DryFull8260_		Units: µg/Kg	Prep Date: 5/29/2012		RunNo: 63687	
Client ID: PBS		Batch ID: R63687A	TestNo: SW8260C			Analysis Date: 5/29/2012		SeqNo: 898008	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
1,1,1,2-Tetrachloroethane	U	2.0							
1,1,1-Trichloroethane	U	2.0							
1,1,2,2-Tetrachloroethane	U	2.0							
1,1,2-Trichloro-1,2,2-trifluoroethane	U	2.0							
1,1,2-Trichloroethane	U	2.0							
1,1-Dichloroethane	U	2.0							
1,1-Dichloroethene	U	2.0							
1,1-Dichloropropene	U	2.0							
1,2,3-Trichlorobenzene	U	2.0							
1,2,3-Trichloropropane	U	2.0							
1,2,4,5-Tetramethylbenzene	U	2.0							
1,2,4-Trichlorobenzene	U	2.0							
1,2,4-Trimethylbenzene	U	2.0							

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analy
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205250
Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: VBLK-052912HS	SampType: MBLK	TestCode: DryFull8260_	Units: µg/Kg	Prep Date: 5/29/2012	RunNo: 63687						
Client ID: PBS	Batch ID: R63687A	TestNo: SW8260C		Analysis Date: 5/29/2012	SeqNo: 898008						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	U	2.0									
1,2-Dibromoethane	U	2.0									
1,2-Dichlorobenzene	U	2.0									
1,2-Dichloroethane	U	2.0									
1,2-Dichloropropane	U	2.0									
1,3,5-Trimethylbenzene	U	2.0									
1,3-Dichlorobenzene	U	2.0									
1,3-dichloropropane	U	2.0									
1,4-Dichlorobenzene	U	2.0									
1,4-Dioxane	U	2.0									
2,2-Dichloropropane	U	2.0									
2-Butanone	U	5.0									
2-Chloroethyl vinyl ether	U	2.0									
2-Chlorotoluene	U	2.0									
2-Hexanone	U	5.0									
2-Propanol	U	2.0									
4-Chlorotoluene	U	2.0									
4-Isopropyltoluene	U	2.0									
4-Methyl-2-pentanone	U	5.0									
Acetone	U	5.0									
Acrolein	U	10									
Acrylonitrile	U	2.0									
Benzene	U	2.0									
Bromobenzene	U	2.0									
Bromochloromethane	U	2.0									
Bromodichloromethane	U	2.0									
Bromoform	U	2.0									
Bromomethane	U	2.0									
Carbon disulfide	U	2.0									
Carbon tetrachloride	U	2.0									
Chlorobenzene	U	2.0									C

C

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%d exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205250
Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: VBLK-052912HS		SampType: MBLK		TestCode: DryFull8260_		Units: µg/Kg		Prep Date: 5/29/2012		RunNo: 63687		
Client ID: PBS		Batch ID: R63687A		TestNo: SW8260C				Analysis Date: 5/29/2012		SeqNo: 898008		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorodifluoromethane		U	2.0									
Chloroethane		U	2.0									
Chloroform		U	2.0									
Chloromethane		U	2.0									
cis-1,2-Dichloroethene		U	2.0									
cis-1,3-Dichloropropene		U	2.0									
Dibromochloromethane		U	2.0									
Dibromomethane		U	2.0									
Dichlorodifluoromethane		U	2.0									
Diisopropyl ether		U	2.0									
Ethanol		U	5.0									
Ethyl acetate		U	2.0									
Ethylbenzene		U	2.0									
Freon-114		U	2.0									
Hexachlorobutadiene		U	2.0									
Isopropyl acetate		U	2.0									
Isopropylbenzene		U	2.0									
m,p-Xylene		U	4.0									
Methyl Acetate		U	2.0									
Methyl tert-butyl ether		U	2.0									
Methylene chloride		2.4	2.0									
n-Amyl acetate		U	2.0									
Naphthalene		U	2.0									
n-Butyl acetate		U	2.0									
n-Butylbenzene		U	2.0									
n-Propyl acetate		U	2.0									
n-Propylbenzene		U	2.0									
o-Xylene		U	2.0									
p-Diethylbenzene		U	2.0									
p-Ethyltoluene		U	2.0									
sec-Butylbenzene		U	2.0									

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%d exceeded for non-CCC analytes H Holding times for preparation or analysis
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205250
Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: VBLK-052912HS		SampType: MBLK		TestCode: DryFull8260_		Units: µg/Kg		Prep Date: 5/29/2012		RunNo: 63687			
Client ID: PBS		Batch ID: R63687A		TestNo: SW8260C		Analysis Date: 5/29/2012						SeqNo: 898008	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Styrene		U	2.0										
t-Butyl alcohol		U	2.0										
tert-Butylbenzene		U	2.0										
Tetrachloroethene		U	2.0										
Toluene		U	2.0										
trans-1,2-Dichloroethene		U	2.0										
trans-1,3-Dichloropropene		U	2.0										
Trichloroethene		U	2.0										
Trichlorofluoromethane		U	2.0										
Vinyl acetate		U	2.0										
Vinyl chloride		U	2.0										
Surr: 4-Bromofluorobenzene		49		50.00		98.0	42	133				C	
Surr: Dibromofluoromethane		48		50.00		96.5	50	133					
Surr: Toluene-d8		46		50.00		92.2	53	130					

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analyte
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205250
Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: V624LCS-052912YW			SampType: LCS		TestCode: Full8260_W			Units: µg/L		Prep Date: 5/29/2012		RunNo: 63687	
Client ID: LCSW		Batch ID: R63687B		TestNo: SW8260C			Analysis Date: 5/29/2012					SeqNo: 898010	
Analyte	Result	PQL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
1,1,1-Trichloroethane	31	1.0	50.00	0	62.2	38	136						
1,1,2,2-Tetrachloroethane	32	1.0	50.00	0	63.9	50	124						
1,1,2-Trichloroethane	27	1.0	50.00	0	54.4	52	128						
1,1-Dichloroethane	27	1.0	25.00	0	107	55	123						
1,1-Dichloroethene	28	1.0	50.00	0	56.5	48	128						
1,2-Dichlorobenzene	36	1.0	50.00	0	71.3	59	123						
1,2-Dichloroethane	30	1.0	50.00	0	59.1	52	129						
1,2-Dichloropropane	34	1.0	50.00	0	67.5	58	124						
1,3-Dichlorobenzene	37	1.0	50.00	0	73.4	51	124						
1,4-Dichlorobenzene	36	1.0	50.00	0	71.3	54	128						
2-Chloroethyl vinyl ether	18	1.0	50.00	0	36.7	25	141				C		
Benzene	25	1.0	25.00	0	100	53	131						
Bromodichloromethane	28	1.0	50.00	0	56.9	54	126						
Bromoform	35	1.0	50.00	0	69.7	53	127						
Bromomethane	32	1.0	50.00	0	64.1	42	150						
Carbon tetrachloride	33	1.0	50.00	0	65.5	46	135						
Chlorobenzene	32	1.0	50.00	0	64.7	53	121						
Chloroethane	35	1.0	50.00	0	70.4	40	145						
Chloroform	28	1.0	50.00	0	56.3	41	135						
Chloromethane	30	1.0	50.00	0	59.2	32	149						
cis-1,3-Dichloropropene	26	1.0	50.00	0	51.8	46	128						
Dibromochloromethane	31	1.0	50.00	0	61.8	42	124						
Ethylbenzene	32	1.0	50.00	0	65.0	52	135				B		
Methylene chloride	25	1.0	50.00	0	50.2	35	137						
Tetrachloroethene	26	2.0	50.00	0	52.3	26	126						
Toluene	26	1.0	50.00	0	52.1	51	130						
trans-1,2-Dichloroethene	27	1.0	50.00	0	53.2	49	125						
trans-1,3-Dichloropropene	24	1.0	50.00	0	48.2	43	125						
Trichloroethene	30	1.0	50.00	0	60.4	47	127						
Trichlorofluoromethane	54	1.0	50.00	0	109	50	152				C		
Vinyl chloride	35	1.0	50.00	0	70.6	50	149						

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analysis
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205250
Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: V624LCS-052912YW	SampleType: LCS	TestCode: Full8260_W	Units: µg/L	Prep Date: 5/29/2012	RunNo: 63687						
Client ID: LCSW	Batch ID: R63687B	TestNo: SW8260C		Analysis Date: 5/29/2012	SeqNo: 898010						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: 4-Bromofluorobenzene	48		50.00		95.8	63	123				
Surr: Dibromofluoromethane	47		50.00		94.1	68	124				
Surr: Toluene-d8	43		50.00		86.0	67	125				

Sample ID: VBLK-052912YW	SampleType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 5/29/2012	RunNo: 63687						
Client ID: PBW	Batch ID: R63687B	TestNo: SW8260C		Analysis Date: 5/29/2012	SeqNo: 898011						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1,2-Tetrachloroethane	U	1.0									
1,1,1-Trichloroethane	U	1.0									
1,1,2,2-Tetrachloroethane	U	1.0									
1,1,2-Trichloro-1,2,2-trifluoroethane	U	1.0									
1,1,2-Trichloroethane	U	1.0									
1,1-Dichloroethane	U	1.0									
1,1-Dichloroethene	U	1.0									
1,1-Dichloropropene	U	1.0									
1,2,3-Trichlorobenzene	U	1.0									
1,2,3-Trichloropropane	U	1.0									
1,2,4,5-Tetramethylbenzene	U	1.0									
1,2,4-Trichlorobenzene	U	1.0									
1,2,4-Trimethylbenzene	U	1.0									
1,2-Dibromo-3-chloropropane	U	2.0									
1,2-Dibromoethane	U	1.0									
1,2-Dichlorobenzene	U	1.0									
1,2-Dichloroethane	U	1.0									
1,2-Dichloropropane	U	1.0									
1,3,5-Trimethylbenzene	U	1.0									
1,3-Dichlorobenzene	U	1.0									
1,3-dichloropropane	U	1.0									
1,4-Dichlorobenzene	U	1.0									
1,4-Dioxane	U	1.0									

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analysis
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205250
Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-052912YW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 5/29/2012	RunNo: 63687						
Client ID: PBW	Batch ID: R63687B	TestNo: SW8260C		Analysis Date: 5/29/2012	SeqNo: 898011						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2-Dichloropropane	U	1.0									
2-Butanone	U	2.5									C
2-Chloroethyl vinyl ether	U	1.0									C
2-Chlorotoluene	U	1.0									
2-Hexanone	U	2.5									C
2-Propanol	U	1.0									
4-Chlorotoluene	U	1.0									
4-Isopropyltoluene	U	1.0									
4-Methyl-2-pentanone	U	2.5									
Acetone	U	5.0									
Acrolein	U	10									
Acrylonitrile	U	1.0									
Benzene	U	1.0									
Bromobenzene	U	1.0									
Bromochloromethane	U	1.0									
Bromodichloromethane	U	1.0									
Bromoform	U	1.0									
Bromomethane	U	1.0									
Carbon disulfide	U	1.0									
Carbon tetrachloride	U	1.0									
Chlorobenzene	U	1.0									
Chlorodifluoromethane	U	1.0									C
Chloroethane	U	1.0									
Chloroform	U	1.0									
Chloromethane	U	1.0									
cis-1,2-Dichloroethene	U	1.0									
cis-1,3-Dichloropropene	U	1.0									
Dibromochloromethane	U	1.0									
Dibromomethane	U	1.0									
Dichlorodifluoromethane	U	1.0									
Diisopropyl ether	U	1.0									

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analysis
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205250
Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-052912YW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 5/29/2012	RunNo: 63687						
Client ID: PBW	Batch ID: R63687B	TestNo: SW8260C		Analysis Date: 5/29/2012	SeqNo: 898011						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethanol	U	5.0									
Ethyl acetate	U	1.0									
Ethylbenzene	U	1.0									
Freon-114	U	1.0									
Hexachlorobutadiene	U	1.0									
Isopropyl acetate	U	2.0									
Isopropylbenzene	U	1.0									
m,p-Xylene	U	2.0									
Methyl Acetate	U	2.0									
Methyl tert-butyl ether	U	1.0									
Methylene chloride	2.8	1.0									
n-Amyl acetate	U	1.0									
Naphthalene	U	1.0									
n-Butyl acetate	U	2.0									
n-Butylbenzene	U	1.0									
n-Propyl acetate	U	1.0									
n-Propylbenzene	U	1.0									
o-Xylene	U	1.0									
p-Diethylbenzene	U	1.0									
p-Ethyltoluene	U	1.0									
sec-Butylbenzene	U	1.0									
Styrene	U	1.0									
t-Butyl alcohol	U	2.0									
tert-Butylbenzene	U	1.0									
Tetrachloroethene	U	2.0									
Toluene	U	1.0									
trans-1,2-Dichloroethene	U	1.0									
trans-1,3-Dichloropropene	U	1.0									
Trichloroethene	U	1.0									
Trichlorofluoromethane	U	1.0									
Vinyl acetate	U	1.0									C

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analysis
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC columns PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205250
Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-052912YW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 5/29/2012	RunNo: 63687						
Client ID: PBW	Batch ID: R63687B	TestNo: SW8260C		Analysis Date: 5/29/2012	SeqNo: 898011						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Vinyl chloride U 1.0

Surr: 4-Bromofluorobenzene 48 50.00 95.2 63 123

Surr: Dibromofluoromethane 49 50.00 97.7 68 124

Surr: Toluene-d8 50 50.00 100 67 125

Sample ID: V624LCS-052912YW	SampType: LCS	TestCode: Full8260_W	Units: µg/L	Prep Date: 5/29/2012	RunNo: 63687						
Client ID: LCSW	Batch ID: R63687C	TestNo: SW8260C		Analysis Date: 5/29/2012	SeqNo: 898014						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane 30 1.0 50.00 0 60.2 38 136

1,1,2,2-Tetrachloroethane 31 1.0 50.00 0 62.8 50 124

1,1,2-Trichloroethane 28 1.0 50.00 0 56.3 52 128

1,1-Dichloroethane 27 1.0 25.00 0 107 55 123

1,1-Dichloroethene 28 1.0 50.00 0 55.3 48 128

1,2-Dichlorobenzene 34 1.0 50.00 0 68.2 59 123

1,2-Dichloroethane 28 1.0 50.00 0 55.3 52 129

1,2-Dichloropropane 27 1.0 25.00 0 107 58 124

1,3-Dichlorobenzene 35 1.0 50.00 0 70.5 51 124

1,4-Dichlorobenzene 35 1.0 50.00 0 69.0 54 128

2-Chloroethyl vinyl ether 23 1.0 50.00 0 45.9 25 141

Benzene 26 1.0 25.00 0 106 53 131

Bromodichloromethane 29 1.0 50.00 0 58.6 54 126

Bromoform 35 1.0 50.00 0 69.2 53 127

Bromomethane 30 1.0 50.00 0 60.1 42 150

Carbon tetrachloride 32 1.0 50.00 0 63.3 46 135

Chlorobenzene 33 1.0 50.00 0 66.3 53 121

Chloroethane 34 1.0 50.00 0 68.1 40 145

Chloroform 29 1.0 50.00 0 58.4 41 135

Chloromethane 25 1.0 50.00 0 50.8 32 149

cis-1,3-Dichloropropene 27 1.0 50.00 0 54.0 46 128

Dibromochloromethane 31 1.0 50.00 0 62.1 42 124

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analy
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205250
Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: V624LCS-052912YW		SampType: LCS		TestCode: Full8260_W		Units: µg/L		Prep Date: 5/29/2012		RunNo: 63687	
Client ID: LCSW		Batch ID: R63687C		TestNo: SW8260C				Analysis Date: 5/29/2012		SeqNo: 898014	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene	32	1.0	50.00	0	64.3	52	135				B
Methylene chloride	28	1.0	50.00	0	55.1	35	137				
Tetrachloroethene	27	2.0	50.00	0	54.2	26	126				
Toluene	28	1.0	50.00	0	55.6	51	130				
trans-1,2-Dichloroethene	28	1.0	50.00	0	55.8	49	125				C
trans-1,3-Dichloropropene	25	1.0	50.00	0	49.0	43	125				
Trichloroethene	30	1.0	50.00	0	60.6	47	127				
Trichlorofluoromethane	50	1.0	50.00	0	101	50	152				
Vinyl chloride	30	1.0	50.00	0	60.0	50	149				
Surr: 4-Bromofluorobenzene	47		50.00		94.8	63	123				
Surr: Dibromofluoromethane	47		50.00		94.8	68	124				
Surr: Toluene-d8	46		50.00		91.5	67	125				

Sample ID: VBLK-052912YW		SampType: MBLK		TestCode: Full8260_W		Units: µg/L		Prep Date: 5/29/2012		RunNo: 63687	
Client ID: PBW		Batch ID: R63687C		TestNo: SW8260C				Analysis Date: 5/29/2012		SeqNo: 898015	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	U	1.0									
1,1,1-Trichloroethane	U	1.0									
1,1,2,2-Tetrachloroethane	U	1.0									
1,1,2-Trichloro-1,2,2-trifluoroethane	U	1.0									
1,1,2-Trichloroethane	U	1.0									
1,1-Dichloroethane	U	1.0									
1,1-Dichloroethene	U	1.0									
1,1-Dichloropropene	U	1.0									
1,2,3-Trichlorobenzene	U	1.0									
1,2,3-Trichloropropane	U	1.0									
1,2,4,5-Tetramethylbenzene	U	1.0									
1,2,4-Trichlorobenzene	U	1.0									
1,2,4-Trimethylbenzene	U	1.0									
1,2-Dibromo-3-chloropropane	U	2.0									

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analysis
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205250
Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-052912YW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 5/29/2012	RunNo: 63687						
Client ID: PBW	Batch ID: R63687C	TestNo: SW8260C		Analysis Date: 5/29/2012	SeqNo: 898015						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane	U	1.0									
1,2-Dichlorobenzene	U	1.0									
1,2-Dichloroethane	U	1.0									
1,2-Dichloropropane	U	1.0									
1,3,5-Trimethylbenzene	U	1.0									
1,3-Dichlorobenzene	U	1.0									
1,3-dichloropropane	U	1.0									
1,4-Dichlorobenzene	U	1.0									
1,4-Dioxane	U	1.0									
2,2-Dichloropropane	U	1.0									
2-Butanone	U	2.5									C
2-Chloroethyl vinyl ether	U	1.0									C
2-Chlorotoluene	U	1.0									
2-Hexanone	U	2.5									C
2-Propanol	U	1.0									
4-Chlorotoluene	U	1.0									
4-Isopropyltoluene	U	1.0									
4-Methyl-2-pentanone	U	2.5									C
Acetone	U	5.0									
Acrolein	U	10									
Acrylonitrile	U	1.0									
Benzene	U	1.0									
Bromobenzene	U	1.0									
Bromochloromethane	U	1.0									
Bromodichloromethane	U	1.0									
Bromoform	U	1.0									
Bromomethane	U	1.0									
Carbon disulfide	U	1.0									
Carbon tetrachloride	U	1.0									
Chlorobenzene	U	1.0									
Chlorodifluoromethane	U	1.0									

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analysis
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC columns PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205250
Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-052912YW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 5/29/2012	RunNo: 63687						
Client ID: PBW	Batch ID: R63687C	TestNo: SW8260C		Analysis Date: 5/29/2012	SeqNo: 898015						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroethane	U	1.0									C
Chloroform	U	1.0									
Chloromethane	U	1.0									
cis-1,2-Dichloroethene	U	1.0									
cis-1,3-Dichloropropene	U	1.0									
Dibromochloromethane	U	1.0									
Dibromomethane	U	1.0									
Dichlorodifluoromethane	U	1.0									C
Diisopropyl ether	U	1.0									
Ethanol	U	5.0									
Ethyl acetate	U	1.0									
Ethylbenzene	U	1.0									
Freon-114	U	1.0									
Hexachlorobutadiene	U	1.0									
Isopropyl acetate	U	2.0									
Isopropylbenzene	U	1.0									
m,p-Xylene	U	2.0									
Methyl Acetate	U	2.0									
Methyl tert-butyl ether	U	1.0									
Methylene chloride	3.0	1.0									
n-Amyl acetate	U	1.0									
Naphthalene	U	1.0									
n-Butyl acetate	U	2.0									
n-Butylbenzene	U	1.0									
n-Propyl acetate	U	1.0									
n-Propylbenzene	U	1.0									
o-Xylene	U	1.0									
p-Diethylbenzene	U	1.0									
p-Ethyltoluene	U	1.0									
sec-Butylbenzene	U	1.0									
Styrene	U	1.0									

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analysis
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205250
Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-052912YW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 5/29/2012	RunNo: 63687						
Client ID: PBW	Batch ID: R63687C	TestNo: SW8260C		Analysis Date: 5/29/2012	SeqNo: 898015						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

t-Butyl alcohol	U	2.0									
tert-Butylbenzene	U	1.0									
Tetrachloroethene	U	2.0									
Toluene	U	1.0									
trans-1,2-Dichloroethene	U	1.0									
trans-1,3-Dichloropropene	U	1.0									
Trichloroethene	U	1.0									
Trichlorofluoromethane	U	1.0									
Vinyl acetate	U	1.0									
Vinyl chloride	U	1.0									
Surr: 4-Bromofluorobenzene	47		50.00		93.9	63	123				
Surr: Dibromofluoromethane	49		50.00		98.9	68	124				
Surr: Toluene-d8	46		50.00		92.9	67	125				

C

Sample ID: V624LCS-053012aY	SampType: LCS	TestCode: Full8260_W	Units: µg/L	Prep Date:	RunNo: 63687						
Client ID: LCSW	Batch ID: R63687D	TestNo: SW8260C		Analysis Date: 5/31/2012	SeqNo: 898019						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	34	1.0	50.00	0	68.2	38	136				
1,1,2,2-Tetrachloroethane	39	1.0	50.00	0	78.2	50	124				
1,1,2-Trichloroethane	38	1.0	50.00	0	75.8	52	128				
1,1-Dichloroethane	31	1.0	50.00	0	62.3	55	123				
1,1-Dichloroethene	29	1.0	50.00	0	58.3	48	128				
1,2-Dichlorobenzene	36	1.0	50.00	0	71.5	59	123				
1,2-Dichloroethane	34	1.0	50.00	0	67.9	52	129				
1,2-Dichloropropane	36	1.0	50.00	0	71.2	58	124				
1,3-Dichlorobenzene	35	1.0	50.00	0	69.9	51	124				
1,4-Dichlorobenzene	35	1.0	50.00	0	70.1	54	128				
2-Chloroethyl vinyl ether	36	1.0	50.00	0	72.6	25	141				
Benzene	33	1.0	50.00	0	66.0	53	131				
Bromodichloromethane	34	1.0	50.00	0	67.8	54	126				

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analysis
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205250
Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: V624LCS-053012aY		SampType: LCS		TestCode: Full8260_W		Units: µg/L		Prep Date:		RunNo: 63687	
Client ID: LCSW		Batch ID: R63687D		TestNo: SW8260C				Analysis Date: 5/31/2012		SeqNo: 898019	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromoform	37	1.0	50.00	0	73.2	53	127				
Bromomethane	29	1.0	50.00	0	58.6	42	150				
Carbon tetrachloride	33	1.0	50.00	0	66.4	46	135				
Chlorobenzene	35	1.0	50.00	0	70.8	53	121				
Chloroethane	39	1.0	50.00	0	78.3	40	145				
Chloroform	34	1.0	50.00	0	67.1	41	135				
Chloromethane	35	1.0	50.00	0	69.6	32	149				
cis-1,3-Dichloropropene	34	1.0	50.00	0	68.1	46	128				
Dibromochloromethane	39	1.0	50.00	0	77.1	42	124				
Ethylbenzene	35	1.0	50.00	0	70.0	52	135				
Methylene chloride	32	1.0	50.00	0	63.4	35	137				
Tetrachloroethene	31	2.0	50.00	0	62.7	26	126				
Toluene	35	1.0	50.00	0	70.1	51	130				
trans-1,2-Dichloroethene	29	1.0	50.00	0	58.5	49	125				
trans-1,3-Dichloropropene	31	1.0	50.00	0	62.8	43	125				
Trichloroethene	32	1.0	50.00	0	65.0	47	127				
Trichlorofluoromethane	46	1.0	50.00	0	91.8	50	152				
Vinyl chloride	39	1.0	50.00	0	77.4	50	149				
Surr: 4-Bromofluorobenzene	49		50.00		99.0	63	123				
Surr: Dibromofluoromethane	50		50.00		99.8	68	124				
Surr: Toluene-d8	51		50.00		102	67	125				

B

Sample ID: VBLK-053012aYW		SampType: MBLK	TestCode: Full8260_W		Units: µg/L	Prep Date:		RunNo: 63687			
Client ID: PBW		Batch ID: R63687D	TestNo: SW8260C			Analysis Date: 5/31/2012		SeqNo: 898020			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane		U	1.0								
1,1,1-Trichloroethane		U	1.0								
1,1,2,2-Tetrachloroethane		U	1.0								
1,1,2-Trichloro-1,2,2-trifluoroethane		U	1.0								
1,1,2-Trichloroethane		U	1.0								

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analy
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205250
Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-053012aYW		SampType: MBLK		TestCode: Full8260_W		Units: µg/L		Prep Date:		RunNo: 63687		
Client ID: PBW		Batch ID: R63687D		TestNo: SW8260C				Analysis Date: 5/31/2012		SeqNo: 898020		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane		U	1.0									
1,1-Dichloroethene		U	1.0									
1,1-Dichloropropene		U	1.0									
1,2,3-Trichlorobenzene		U	1.0									
1,2,3-Trichloropropane		U	1.0									
1,2,4,5-Tetramethylbenzene		U	1.0									
1,2,4-Trichlorobenzene		U	1.0									
1,2,4-Trimethylbenzene		U	1.0									
1,2-Dibromo-3-chloropropane		U	2.0									
1,2-Dibromoethane		U	1.0									
1,2-Dichlorobenzene		U	1.0									
1,2-Dichloroethane		U	1.0									
1,2-Dichloropropane		U	1.0									
1,3,5-Trimethylbenzene		U	1.0									
1,3-Dichlorobenzene		U	1.0									
1,3-dichloropropane		U	1.0									
1,4-Dichlorobenzene		U	1.0									
1,4-Dioxane		U	1.0									
2,2-Dichloropropane		U	1.0									
2-Butanone		U	2.5									
2-Chloroethyl vinyl ether		U	1.0									
2-Chlorotoluene		U	1.0									
2-Hexanone		U	2.5									
2-Propanol		U	1.0									
4-Chlorotoluene		U	1.0									
4-Isopropyltoluene		U	1.0									
4-Methyl-2-pentanone		U	2.5									
Acetone		U	5.0									
Acrolein		U	10									
Acrylonitrile		U	1.0									
Benzene		U	1.0									

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits

C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC columns
S Spike Recovery outside accepted recovery limits

H Holding times for preparation or analysis
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205250
Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-053012aYW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date:	RunNo: 63687						
Client ID: PBW	Batch ID: R63687D	TestNo: SW8260C		Analysis Date: 5/31/2012	SeqNo: 898020						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Bromobenzene	U	1.0									
Bromochloromethane	U	1.0									
Bromodichloromethane	U	1.0									
Bromoform	U	1.0									
Bromomethane	U	1.0									
Carbon disulfide	U	1.0									
Carbon tetrachloride	U	1.0									
Chlorobenzene	U	1.0									
Chlorodifluoromethane	U	1.0									
Chloroethane	U	1.0									
Chloroform	U	1.0									
Chloromethane	U	1.0									
cis-1,2-Dichloroethene	U	1.0									
cis-1,3-Dichloropropene	U	1.0									
Dibromochloromethane	U	1.0									
Dibromomethane	U	1.0									
Dichlorodifluoromethane	U	1.0									
Diisopropyl ether	U	1.0									
Ethanol	U	5.0									
Ethyl acetate	U	1.0									
Ethylbenzene	U	1.0									
Freon-114	U	1.0									
Hexachlorobutadiene	U	1.0									
Isopropyl acetate	U	2.0									
Isopropylbenzene	U	1.0									
m,p-Xylene	U	2.0									
Methyl Acetate	U	2.0									
Methyl tert-butyl ether	U	1.0									
Methylene chloride	3.4	1.0									
n-Amyl acetate	U	1.0									
Naphthalene	U	1.0									

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205250
Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-053012aYW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date:	RunNo: 63687						
Client ID: PBW	Batch ID: R63687D	TestNo: SW8260C		Analysis Date: 5/31/2012	SeqNo: 898020						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

n-Butyl acetate	U	2.0									
n-Butylbenzene	U	1.0									
n-Propyl acetate	U	1.0									
n-Propylbenzene	U	1.0									
o-Xylene	U	1.0									
p-Diethylbenzene	U	1.0									
p-Ethyltoluene	U	1.0									
sec-Butylbenzene	U	1.0									
Styrene	U	1.0									
t-Butyl alcohol	U	2.0									
tert-Butylbenzene	U	1.0									
Tetrachloroethene	U	2.0									
Toluene	U	1.0									
trans-1,2-Dichloroethene	U	1.0									
trans-1,3-Dichloropropene	U	1.0									
Trichloroethene	U	1.0									
Trichlorofluoromethane	U	1.0									
Vinyl acetate	U	1.0									
Vinyl chloride	U	1.0									
Surr: 4-Bromofluorobenzene	49		50.00		98.5	63		123			
Surr: Dibromofluoromethane	53		50.00		105	68		124			
Surr: Toluene-d8	52		50.00		103	67		125			

Sample ID: V624LCS-053012aY	SampType: LCS	TestCode: Full8260_W	Units: µg/L	Prep Date:	RunNo: 63687						
Client ID: LCSW	Batch ID: R63687E	TestNo: SW8260C		Analysis Date: 5/31/2012	SeqNo: 898022						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	33	1.0	50.00	0	65.6	38		136			
1,1,2,2-Tetrachloroethane	32	1.0	50.00	0	64.2	50		124			
1,1,2-Trichloroethane	34	1.0	50.00	0	67.5	52		128			
1,1-Dichloroethane	32	1.0	50.00	0	64.5	55		123			

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analysis
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205250
Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: V624LCS-053012aY		SampType: LCS	TestCode: Full8260_W		Units: µg/L	Prep Date:		RunNo: 63687			
Client ID: LCSW		Batch ID: R63687E	TestNo: SW8260C			Analysis Date: 5/31/2012		SeqNo: 898022			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	34	1.0	50.00	0	67.0	48	128				
1,2-Dichlorobenzene	33	1.0	50.00	0	66.5	59	123				
1,2-Dichloroethane	34	1.0	50.00	0	67.4	52	129				
1,2-Dichloropropane	33	1.0	50.00	0	66.7	58	124				
1,3-Dichlorobenzene	31	1.0	50.00	0	62.6	51	124				
1,4-Dichlorobenzene	34	1.0	50.00	0	68.4	54	128				
2-Chloroethyl vinyl ether	34	1.0	50.00	0	68.8	25	141				
Benzene	31	1.0	50.00	0	61.9	53	131				
Bromodichloromethane	34	1.0	50.00	0	67.4	54	126				
Bromoform	33	1.0	50.00	0	65.3	53	127				
Bromomethane	30	1.0	50.00	0	60.5	42	150				
Carbon tetrachloride	33	1.0	50.00	0	66.0	46	135				
Chlorobenzene	33	1.0	50.00	0	65.1	53	121				
Chloroethane	45	1.0	50.00	0	89.9	40	145				
Chloroform	32	1.0	50.00	0	63.6	41	135				
Chloromethane	30	1.0	50.00	0	59.1	32	149				
cis-1,3-Dichloropropene	32	1.0	50.00	0	63.7	46	128				
Dibromochloromethane	36	1.0	50.00	0	71.1	42	124				
Ethylbenzene	34	1.0	50.00	0	67.1	52	135				
Methylene chloride	34	1.0	50.00	0	67.2	35	137				
Tetrachloroethene	31	2.0	50.00	0	63.0	26	126				
Toluene	33	1.0	50.00	0	65.4	51	130				
trans-1,2-Dichloroethene	31	1.0	50.00	0	62.2	49	125				
trans-1,3-Dichloropropene	30	1.0	50.00	0	59.1	43	125				
Trichloroethene	33	1.0	50.00	0	65.1	47	127				
Trichlorofluoromethane	53	1.0	50.00	0	107	50	152				
Vinyl chloride	45	1.0	50.00	0	89.4	50	149				
Surr: 4-Bromofluorobenzene	45		50.00		90.2	63	123				
Surr: Dibromofluoromethane	50		50.00		101	68	124				
Surr: Toluene-d8	49		50.00		98.1	67	125				

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analysis
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205250
Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-053012aYW		SampType: MBLK	TestCode: Full8260_W		Units: µg/L	Prep Date:		RunNo: 63687				
Client ID: PBW		Batch ID: R63687E	TestNo: SW8260C			Analysis Date: 5/31/2012		SeqNo: 898023				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane		U	1.0									
1,1,1-Trichloroethane		U	1.0									
1,1,2,2-Tetrachloroethane		U	1.0									
1,1,2-Trichloro-1,2,2-trifluoroethane		U	1.0									
1,1,2-Trichloroethane		U	1.0									
1,1-Dichloroethane		U	1.0									
1,1-Dichloroethene		U	1.0									
1,1-Dichloropropene		U	1.0									
1,2,3-Trichlorobenzene		U	1.0									
1,2,3-Trichloropropane		U	1.0									
1,2,4,5-Tetramethylbenzene		U	1.0									
1,2,4-Trichlorobenzene		U	1.0									
1,2,4-Trimethylbenzene		U	1.0									
1,2-Dibromo-3-chloropropane		U	2.0									
1,2-Dibromoethane		U	1.0									
1,2-Dichlorobenzene		U	1.0									
1,2-Dichloroethane		U	1.0									
1,2-Dichloropropane		U	1.0									
1,3,5-Trimethylbenzene		U	1.0									
1,3-Dichlorobenzene		U	1.0									
1,3-dichloropropane		U	1.0									
1,4-Dichlorobenzene		U	1.0									
1,4-Dioxane		U	1.0									
2,2-Dichloropropane		U	1.0									
2-Butanone		U	2.5									
2-Chloroethyl vinyl ether		U	1.0									
2-Chlorotoluene		U	1.0									
2-Hexanone		U	2.5									
2-Propanol		U	1.0									
4-Chlorotoluene		U	1.0									
4-Isopropyltoluene		U	1.0									

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analysis
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1205250
Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-053012aYW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date:	RunNo: 63687						
Client ID: PBW	Batch ID: R63687E	TestNo: SW8260C		Analysis Date: 5/31/2012	SeqNo: 898023						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

4-Methyl-2-pentanone	U	2.5									
Acetone	U	5.0									
Acrolein	U	10									
Acrylonitrile	U	1.0									
Benzene	U	1.0									
Bromobenzene	U	1.0									
Bromochloromethane	U	1.0									
Bromodichloromethane	U	1.0									
Bromoform	U	1.0									
Bromomethane	U	1.0									
Carbon disulfide	U	1.0									
Carbon tetrachloride	U	1.0									
Chlorobenzene	U	1.0									
Chlorodifluoromethane	U	1.0									
Chloroethane	U	1.0									
Chloroform	U	1.0									
Chloromethane	U	1.0									
cis-1,2-Dichloroethene	U	1.0									
cis-1,3-Dichloropropene	U	1.0									
Dibromochloromethane	U	1.0									
Dibromomethane	U	1.0									
Dichlorodifluoromethane	U	1.0									
Diisopropyl ether	U	1.0									
Ethanol	U	5.0									
Ethyl acetate	U	1.0									
Ethylbenzene	U	1.0									
Freon-114	U	1.0									
Hexachlorobutadiene	U	1.0									
Isopropyl acetate	U	2.0									
Isopropylbenzene	U	1.0									
m,p-Xylene	U	2.0									

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analysis
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC columns PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.

Work Order: 1205250

Project: 79 Pondfield Rd., Bronxville, NY (6832-BVNY)

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-053012aYW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date:	RunNo: 63687						
Client ID: PBW	Batch ID: R63687E	TestNo: SW8260C		Analysis Date: 5/31/2012	SeqNo: 898023						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methyl Acetate	U	2.0									
Methyl tert-butyl ether	U	1.0									
Methylene chloride	2.9	1.0									
n-Amyl acetate	U	1.0									
Naphthalene	U	1.0									
n-Butyl acetate	U	2.0									
n-Butylbenzene	U	1.0									
n-Propyl acetate	U	1.0									
n-Propylbenzene	U	1.0									
o-Xylene	U	1.0									
p-Diethylbenzene	U	1.0									
p-Ethyltoluene	U	1.0									
sec-Butylbenzene	U	1.0									
Styrene	U	1.0									
t-Butyl alcohol	U	2.0									
tert-Butylbenzene	U	1.0									
Tetrachloroethene	U	2.0									
Toluene	U	1.0									
trans-1,2-Dichloroethene	U	1.0									
trans-1,3-Dichloropropene	U	1.0									
Trichloroethene	U	1.0									
Trichlorofluoromethane	U	1.0									
Vinyl acetate	U	1.0									
Vinyl chloride	U	1.0									
Surr: 4-Bromofluorobenzene	49		50.00		97.4	63		123			
Surr: Dibromofluoromethane	49		50.00		98.8	68		124			
Surr: Toluene-d8	48		50.00		95.9	67		125			

Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	P	>40% diff for detected conc between the two GC column	PQL	Practical Quantitation Limit	
R	RPD outside accepted recovery limits	S	Spike Recovery outside accepted recovery limits	U	Indicates the compound was analyzed	

Friday, June 22, 2012

Paul P. Stewart
Advanced Cleanup Technologies, Inc.
960 So. Broadway, Suite 100
Hicksville, NY 11801

TEL: (516) 933-0655
FAX (516) 933-0659

RE: 79 Pondfield Road, Bronxville, NY

Order No.: 1206137

Dear Paul P. Stewart:

American Analytical Laboratories, LLC. received 5 sample(s) on 6/15/2012 for the analyses presented in the following report.

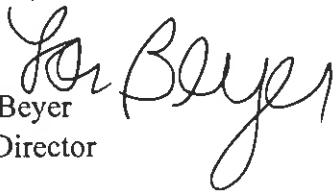
Samples were analyzed in accordance with the test procedures documented on the chain of custody and detailed throughout the text of this report.

The results reported herein relate only to the items tested or to the samples as received by the laboratory. This report may not be reproduced, except in full, without the approval of American Analytical Laboratories, LLC and is not considered complete without a cover page and chain of custody documentation. The limits (LOQ) provided in the data package are analytical reporting limits and not Federal or Local mandated values to which the sample results should be compared.

There were no problems with the analyses and all data for associated QC met laboratory specifications. If there are any exceptions a Case Narrative is provided in the report or the data is qualified. This package has been reviewed by American Analytical Laboratories' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal. This report consists of 32 pages.

If you have any questions regarding these tests results, please do not hesitate to call (631) 454-6100 or email me directly at lbeyer@american-analytical.com.

Sincerely,


Lori Beyer
Lab Director

American Analytical Laboratories, LLC.

Date: 22-Jun-12

CLIENT: Advanced Cleanup Technologies, Inc.
Project: 79 Pondfield Road, Bronxville, NY
Lab Order: 1206137

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date Collected	Date Received
1206137-01A	ACT-10 (25')	6/14/2012 10:00:00 AM	6/15/2012
1206137-02A	ACT-12 (15')	6/14/2012 11:00:00 AM	6/15/2012
1206137-03A	ACT-12 (25')	6/14/2012 12:00:00 PM	6/15/2012
1206137-04A	ACT-13 (12')	6/14/2012 2:00:00 PM	6/15/2012
1206137-05A	ACT-13 (25')	6/14/2012 3:00:00 PM	6/15/2012

CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT

CLIENT NAME/ADDRESS ACT 960 S. Broadway Hicksville NY #6832-BUNY		CONTACT: Suite 100		Paul Steward	
PROJECT LOCATION: 79 Pondfield Road Bronxville NY				ANALYSIS REQUIRED EPA 8260	
LABORATORY ID# LAB USE ONLY	MATRIX/ TYPE	NO. OF CONTAINERS	SAMPLING DATE TIME	SAMPLE # - LOCATION	
1206137-01A	W	2	6/14/12 10:00	ACT-10 (25')	X
02A	W	2	6/14/12 11:00	ACT-12 (15')	X
03A	W	2	6/14/12 12:00	ACT-12 (25')	X
04A	W	2	6/14/12 14:00	ACT-13 (12')	X
0511	W	2	6/14/12 15:00	ACT-13 (25')	X
COMMENTS / INSTRUCTIONS Samples must be on ICE ($<6^{\circ}\text{C}$)					
MATRIX S=SOIL; W=WATER; SL=SLUDGE; A=AIR; M=MISCELLANEOUS TYPE G=GRAB; C=COMPOSITE				TURNAROUND REQUIRED STANDARD ☒ STAT ☐ (7-10 business days)	
RELINQUISHED BY (SIGNATURE) Ben H. Oker				RECEIVED BY LAB (SIGNATURE) C. Fenn	
DATE TIME 6/15/12 10:50				DATE TIME 6/15/12 10:50	
RELINQUISHED BY (SIGNATURE)				RECEIVED BY LAB (SIGNATURE)	
DATE TIME				DATE TIME	

American Analytical Laboratories, LLC.

Sample Receipt Checklist

Client Name ADVANCED CLEANUP TECH

Date and Time Receive 6/15/2012 11:02:21 AM

Work Order Number 1206137

RcptNo: 1

Received by CF

COC_ID:

CoolerID:

Checklist completed by

[Signature] 6/15/12
Signature Date

Reviewed by

[Signature] 6/15/12
Initials Date

Matrix:

Carrier name Courier

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Presen ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Presen ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Presen ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☒	No ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐

Adjusted? ☐

Checked b ☐

Any No and/or NA (not applicable) response must be detailed in the comments section be

Client contacted ☐

Date contacted: ☐

Person contacted ☐

Contacted by: ☐

Regarding: ☐

Comments:

Corrective Action

American Analytical Laboratories, LLC.

Date: 22-Jun-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1206137
Project: 79 Pondfield Road, Bronxville, NY
Lab ID: 1206137-01A

Client Sample ID: ACT-10 (25")
Collection Date: 6/14/2012 10:00:00 AM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
1,1,1,2-Tetrachloroethane	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
1,1,1-Trichloroethane	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
1,1,2,2-Tetrachloroethane	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
1,1,2-Trichloroethane	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
1,1-Dichloroethane	U	0.5	1.0		µg/L	1	6/20/2012 5:14:00 AM
1,1-Dichloroethene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
1,1-Dichloropropene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
1,2,3-Trichlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
1,2,3-Trichloropropane	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
1,2,4,5-Tetramethylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
1,2,4-Trichlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
1,2,4-Trimethylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
1,2-Dibromo-3-chloropropane	U	0.5	2.0		µg/L	1	6/20/2012 5:14:00 AM
1,2-Dibromoethane	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
1,2-Dichlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
1,2-Dichloroethane	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
1,2-Dichloropropane	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
1,3,5-Trimethylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
1,3-Dichlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
1,3-dichloropropane	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
1,4-Dichlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
1,4-Dioxane	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
2,2-Dichloropropane	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
2-Butanone	U	1.25	2.5		µg/L	1	6/20/2012 5:14:00 AM
2-Chloroethyl vinyl ether	U	0.5	1.0		µg/L	1	6/20/2012 5:14:00 AM
2-Chlorotoluene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
2-Hexanone	U	1.25	2.5		µg/L	1	6/20/2012 5:14:00 AM
2-Propanol	U	0.25	1.0	C	µg/L	1	6/20/2012 5:14:00 AM
4-Chlorotoluene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
4-Isopropyltoluene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
4-Methyl-2-pentanone	U	1.25	2.5		µg/L	1	6/20/2012 5:14:00 AM
Acetone	U	1.25	5.0		µg/L	1	6/20/2012 5:14:00 AM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 22-Jun-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1206137
Project: 79 Pondfield Road, Bronxville, NY
Lab ID: 1206137-01A

Client Sample ID: ACT-10 (25')
Collection Date: 6/14/2012 10:00:00 AM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Acrolein	U	5	10	C	µg/L	1	6/20/2012 5:14:00 AM
Acrylonitrile	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
Benzene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
Bromobenzene	U	0.5	1.0		µg/L	1	6/20/2012 5:14:00 AM
Bromochloromethane	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
Bromodichloromethane	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
Bromoform	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
Bromomethane	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
Carbon disulfide	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
Carbon tetrachloride	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
Chlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
Chlorodifluoromethane	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
Chloroethane	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
Chloroform	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
Chloromethane	U	0.25	1.0	C	µg/L	1	6/20/2012 5:14:00 AM
cis-1,2-Dichloroethene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
cis-1,3-Dichloropropene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
Dibromochloromethane	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
Dibromomethane	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
Dichlorodifluoromethane	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
Diisopropyl ether	U	0.25	1.0	C	µg/L	1	6/20/2012 5:14:00 AM
Ethanol	U	2.5	5.0		µg/L	1	6/20/2012 5:14:00 AM
Ethyl acetate	U	0.5	1.0		µg/L	1	6/20/2012 5:14:00 AM
Ethylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
Freon-114	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
Hexachlorobutadiene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
Isopropyl acetate	U	1	2.0		µg/L	1	6/20/2012 5:14:00 AM
Isopropylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
m,p-Xylene	U	0.5	2.0		µg/L	1	6/20/2012 5:14:00 AM
Methyl Acetate	U	0.5	2.0		µg/L	1	6/20/2012 5:14:00 AM
Methyl tert-butyl ether	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
Methylene chloride	2.7	0.25	1.0	B	µg/L	1	6/20/2012 5:14:00 AM
n-Amyl acetate	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 22-Jun-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1206137
Project: 79 Pondfield Road, Bronxville, NY
Lab ID: 1206137-01A

Client Sample ID: ACT-10 (25')
Collection Date: 6/14/2012 10:00:00 AM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Naphthalene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
n-Butyl acetate	U	0.25	2.0		µg/L	1	6/20/2012 5:14:00 AM
n-Butylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
n-Propyl acetate	U	0.5	1.0		µg/L	1	6/20/2012 5:14:00 AM
n-Propylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
o-Xylene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
p-Diethylbenzene	U	0.5	1.0		µg/L	1	6/20/2012 5:14:00 AM
p-Ethyltoluene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
sec-Butylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
Styrene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
t-Butyl alcohol	U	1	2.0		µg/L	1	6/20/2012 5:14:00 AM
tert-Butylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
Tetrachloroethene	51	0.25	2.0		µg/L	1	6/20/2012 5:14:00 AM
Toluene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
trans-1,2-Dichloroethene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
trans-1,3-Dichloropropene	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
Trichloroethene	0.71	0.25	1.0	J	µg/L	1	6/20/2012 5:14:00 AM
Trichlorofluoromethane	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
Vinyl acetate	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
Vinyl chloride	U	0.25	1.0		µg/L	1	6/20/2012 5:14:00 AM
Surr: 4-Bromofluorobenzene	101	0	63-123		%REC	1	6/20/2012 5:14:00 AM
Surr: Dibromofluoromethane	91.4	0	68-124		%REC	1	6/20/2012 5:14:00 AM
Surr: Toluene-d8	94.3	0	67-125		%REC	1	6/20/2012 5:14:00 AM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 22-Jun-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1206137
Project: 79 Pondfield Road, Bronxville, NY
Lab ID: 1206137-02A

Client Sample ID: ACT-12 (15')
Collection Date: 6/14/2012 11:00:00 AM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
1,1,1,2-Tetrachloroethane	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
1,1,1-Trichloroethane	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
1,1,2,2-Tetrachloroethane	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
1,1,2-Trichloroethane	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
1,1-Dichloroethane	U	0.5	1.0		µg/L	1	6/20/2012 5:36:00 AM
1,1-Dichloroethene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
1,1-Dichloropropene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
1,2,3-Trichlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
1,2,3-Trichloropropane	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
1,2,4,5-Tetramethylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
1,2,4-Trichlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
1,2,4-Trimethylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
1,2-Dibromo-3-chloropropane	U	0.5	2.0		µg/L	1	6/20/2012 5:36:00 AM
1,2-Dibromoethane	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
1,2-Dichlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
1,2-Dichloroethane	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
1,2-Dichloropropane	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
1,3,5-Trimethylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
1,3-Dichlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
1,3-dichloropropane	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
1,4-Dichlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
1,4-Dioxane	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
2,2-Dichloropropane	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
2-Butanone	U	1.25	2.5		µg/L	1	6/20/2012 5:36:00 AM
2-Chloroethyl vinyl ether	U	0.5	1.0		µg/L	1	6/20/2012 5:36:00 AM
2-Chlorotoluene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
2-Hexanone	U	1.25	2.5		µg/L	1	6/20/2012 5:36:00 AM
2-Propanol	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
4-Chlorotoluene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
4-Isopropyltoluene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
4-Methyl-2-pentanone	U	1.25	2.5		µg/L	1	6/20/2012 5:36:00 AM
Acetone	U	1.25	5.0		µg/L	1	6/20/2012 5:36:00 AM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 22-Jun-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1206137
Project: 79 Pondfield Road, Bronxville, NY
Lab ID: 1206137-02A

Client Sample ID: ACT-12 (15')
Collection Date: 6/14/2012 11:00:00 AM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Acrolein	U	5	10		µg/L	1	6/20/2012 5:36:00 AM
Acrylonitrile	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
Benzene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
Bromobenzene	U	0.5	1.0		µg/L	1	6/20/2012 5:36:00 AM
Bromochloromethane	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
Bromodichloromethane	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
Bromoform	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
Bromomethane	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
Carbon disulfide	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
Carbon tetrachloride	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
Chlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
Chlorodifluoromethane	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
Chloroethane	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
Chloroform	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
Chloromethane	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
cis-1,2-Dichloroethene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
cis-1,3-Dichloropropene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
Dibromochloromethane	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
Dibromomethane	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
Dichlorodifluoromethane	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
Diisopropyl ether	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
Ethanol	U	2.5	5.0		µg/L	1	6/20/2012 5:36:00 AM
Ethyl acetate	U	0.5	1.0		µg/L	1	6/20/2012 5:36:00 AM
Ethylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
Freon-114	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
Hexachlorobutadiene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
Isopropyl acetate	U	1	2.0		µg/L	1	6/20/2012 5:36:00 AM
Isopropylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
m,p-Xylene	U	0.5	2.0		µg/L	1	6/20/2012 5:36:00 AM
Methyl Acetate	U	0.5	2.0		µg/L	1	6/20/2012 5:36:00 AM
Methyl tert-butyl ether	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
Methylene chloride	3.0	0.25	1.0	B	µg/L	1	6/20/2012 5:36:00 AM
n-Amyl acetate	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 22-Jun-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1206137
Project: 79 Pondfield Road, Bronxville, NY
Lab ID: 1206137-02A

Client Sample ID: ACT-12 (15')
Collection Date: 6/14/2012 11:00:00 AM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Naphthalene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
n-Butyl acetate	U	0.25	2.0		µg/L	1	6/20/2012 5:36:00 AM
n-Butylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
n-Propyl acetate	U	0.5	1.0		µg/L	1	6/20/2012 5:36:00 AM
n-Propylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
o-Xylene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
p-Diethylbenzene	U	0.5	1.0		µg/L	1	6/20/2012 5:36:00 AM
p-Ethyltoluene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
sec-Butylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
Styrene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
t-Butyl alcohol	U	1	2.0		µg/L	1	6/20/2012 5:36:00 AM
tert-Butylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
Tetrachloroethene	U	0.25	2.0		µg/L	1	6/20/2012 5:36:00 AM
Toluene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
trans-1,2-Dichloroethene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
trans-1,3-Dichloropropene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
Trichloroethene	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
Trichlorofluoromethane	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
Vinyl acetate	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
Vinyl chloride	U	0.25	1.0		µg/L	1	6/20/2012 5:36:00 AM
Surr: 4-Bromofluorobenzene	97.5	0	63-123		%REC	1	6/20/2012 5:36:00 AM
Surr: Dibromofluoromethane	106	0	68-124		%REC	1	6/20/2012 5:36:00 AM
Surr: Toluene-d8	89.4	0	67-125		%REC	1	6/20/2012 5:36:00 AM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
 Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 22-Jun-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1206137
Project: 79 Pondfield Road, Bronxville, NY
Lab ID: 1206137-03A

Client Sample ID: ACT-12 (25')
Collection Date: 6/14/2012 12:00:00 PM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
1,1,1,2-Tetrachloroethane	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
1,1,1-Trichloroethane	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
1,1,2,2-Tetrachloroethane	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
1,1,2-Trichloroethane	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
1,1-Dichloroethane	U	0.5	1.0		µg/L	1	6/20/2012 5:58:00 AM
1,1-Dichloroethene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
1,1-Dichloropropene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
1,2,3-Trichlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
1,2,3-Trichloropropane	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
1,2,4,5-Tetramethylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
1,2,4-Trichlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
1,2,4-Trimethylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
1,2-Dibromo-3-chloropropane	U	0.5	2.0		µg/L	1	6/20/2012 5:58:00 AM
1,2-Dibromoethane	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
1,2-Dichlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
1,2-Dichloroethane	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
1,2-Dichloropropane	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
1,3,5-Trimethylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
1,3-Dichlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
1,3-dichloropropane	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
1,4-Dichlorobenzene	0.35	0.25	1.0	J	µg/L	1	6/20/2012 5:58:00 AM
1,4-Dioxane	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
2,2-Dichloropropane	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
2-Butanone	U	1.25	2.5		µg/L	1	6/20/2012 5:58:00 AM
2-Chloroethyl vinyl ether	U	0.5	1.0		µg/L	1	6/20/2012 5:58:00 AM
2-Chlorotoluene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
2-Hexanone	U	1.25	2.5		µg/L	1	6/20/2012 5:58:00 AM
2-Propanol	U	0.25	1.0	C	µg/L	1	6/20/2012 5:58:00 AM
4-Chlorotoluene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
4-Isopropyltoluene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
4-Methyl-2-pentanone	U	1.25	2.5		µg/L	1	6/20/2012 5:58:00 AM
Acetone	U	1.25	5.0		µg/L	1	6/20/2012 5:58:00 AM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 22-Jun-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1206137
Project: 79 Pondfield Road, Bronxville, NY
Lab ID: 1206137-03A

Client Sample ID: ACT-12 (25')
Collection Date: 6/14/2012 12:00:00 PM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Acrolein	U	5	10	C	µg/L	1	6/20/2012 5:58:00 AM
Acrylonitrile	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
Benzene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
Bromobenzene	U	0.5	1.0		µg/L	1	6/20/2012 5:58:00 AM
Bromochloromethane	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
Bromodichloromethane	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
Bromoform	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
Bromomethane	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
Carbon disulfide	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
Carbon tetrachloride	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
Chlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
Chlorodifluoromethane	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
Chloroethane	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
Chloroform	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
Chloromethane	U	0.25	1.0	C	µg/L	1	6/20/2012 5:58:00 AM
cis-1,2-Dichloroethene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
cis-1,3-Dichloropropene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
Dibromochloromethane	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
Dibromomethane	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
Dichlorodifluoromethane	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
Diisopropyl ether	U	0.25	1.0	C	µg/L	1	6/20/2012 5:58:00 AM
Ethanol	U	2.5	5.0		µg/L	1	6/20/2012 5:58:00 AM
Ethyl acetate	U	0.5	1.0		µg/L	1	6/20/2012 5:58:00 AM
Ethylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
Freon-114	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
Hexachlorobutadiene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
Isopropyl acetate	U	1	2.0		µg/L	1	6/20/2012 5:58:00 AM
Isopropylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
m,p-Xylene	U	0.5	2.0		µg/L	1	6/20/2012 5:58:00 AM
Methyl Acetate	U	0.5	2.0		µg/L	1	6/20/2012 5:58:00 AM
Methyl tert-butyl ether	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
Methylene chloride	3.0	0.25	1.0	B	µg/L	1	6/20/2012 5:58:00 AM
n-Amyl acetate	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 22-Jun-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1206137
Project: 79 Pondfield Road, Bronxville, NY
Lab ID: 1206137-03A

Client Sample ID: ACT-12 (25')
Collection Date: 6/14/2012 12:00:00 PM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Naphthalene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
n-Butyl acetate	U	0.25	2.0		µg/L	1	6/20/2012 5:58:00 AM
n-Butylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
n-Propyl acetate	U	0.5	1.0		µg/L	1	6/20/2012 5:58:00 AM
n-Propylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
o-Xylene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
p-Diethylbenzene	U	0.5	1.0		µg/L	1	6/20/2012 5:58:00 AM
p-Ethyltoluene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
sec-Butylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
Styrene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
t-Butyl alcohol	U	1	2.0		µg/L	1	6/20/2012 5:58:00 AM
tert-Butylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
Tetrachloroethene	1100	2.5	20		µg/L	10	6/21/2012 5:52:00 AM
Toluene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
trans-1,2-Dichloroethene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
trans-1,3-Dichloropropene	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
Trichloroethene	0.58	0.25	1.0	J	µg/L	1	6/20/2012 5:58:00 AM
Trichlorofluoromethane	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
Vinyl acetate	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
Vinyl chloride	U	0.25	1.0		µg/L	1	6/20/2012 5:58:00 AM
Surr: 4-Bromofluorobenzene	100	0	63-123		%REC	1	6/20/2012 5:58:00 AM
Surr: 4-Bromofluorobenzene	83.7	0	63-123		%REC	10	6/21/2012 5:52:00 AM
Surr: Dibromofluoromethane	105	0	68-124		%REC	1	6/20/2012 5:58:00 AM
Surr: Dibromofluoromethane	102	0	68-124		%REC	10	6/21/2012 5:52:00 AM
Surr: Toluene-d8	93.5	0	67-125		%REC	10	6/21/2012 5:52:00 AM
Surr: Toluene-d8	108	0	67-125		%REC	1	6/20/2012 5:58:00 AM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 22-Jun-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1206137
Project: 79 Pondfield Road, Bronxville, NY
Lab ID: 1206137-04A

Client Sample ID: ACT-13 (12')
Collection Date: 6/14/2012 2:00:00 PM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
1,1,1,2-Tetrachloroethane	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
1,1,1-Trichloroethane	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
1,1,2,2-Tetrachloroethane	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
1,1,2-Trichloroethane	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
1,1-Dichloroethane	U	0.5	1.0		µg/L	1	6/20/2012 6:20:00 AM
1,1-Dichloroethene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
1,1-Dichloropropene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
1,2,3-Trichlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
1,2,3-Trichloropropane	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
1,2,4,5-Tetramethylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
1,2,4-Trichlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
1,2,4-Trimethylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
1,2-Dibromo-3-chloropropane	U	0.5	2.0		µg/L	1	6/20/2012 6:20:00 AM
1,2-Dibromoethane	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
1,2-Dichlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
1,2-Dichloroethane	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
1,2-Dichloropropane	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
1,3,5-Trimethylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
1,3-Dichlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
1,3-dichloropropane	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
1,4-Dichlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
1,4-Dioxane	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
2,2-Dichloropropane	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
2-Butanone	U	1.25	2.5		µg/L	1	6/20/2012 6:20:00 AM
2-Chloroethyl vinyl ether	U	0.5	1.0		µg/L	1	6/20/2012 6:20:00 AM
2-Chlorotoluene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
2-Hexanone	U	1.25	2.5		µg/L	1	6/20/2012 6:20:00 AM
2-Propanol	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
4-Chlorotoluene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
4-Isopropyltoluene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
4-Methyl-2-pentanone	U	1.25	2.5		µg/L	1	6/20/2012 6:20:00 AM
Acetone	U	1.25	5.0		µg/L	1	6/20/2012 6:20:00 AM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 22-Jun-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1206137
Project: 79 Pondfield Road, Bronxville, NY
Lab ID: 1206137-04A

Client Sample ID: ACT-13 (12')
Collection Date: 6/14/2012 2:00:00 PM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Acrolein	U	5	10		µg/L	1	6/20/2012 6:20:00 AM
Acrylonitrile	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
Benzene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
Bromobenzene	U	0.5	1.0		µg/L	1	6/20/2012 6:20:00 AM
Bromochloromethane	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
Bromodichloromethane	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
Bromoform	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
Bromomethane	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
Carbon disulfide	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
Carbon tetrachloride	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
Chlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
Chlorodifluoromethane	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
Chloroethane	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
Chloroform	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
Chloromethane	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
cis-1,2-Dichloroethene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
cis-1,3-Dichloropropene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
Dibromochloromethane	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
Dibromomethane	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
Dichlorodifluoromethane	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
Diisopropyl ether	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
Ethanol	U	2.5	5.0		µg/L	1	6/20/2012 6:20:00 AM
Ethyl acetate	U	0.5	1.0		µg/L	1	6/20/2012 6:20:00 AM
Ethylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
Freon-114	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
Hexachlorobutadiene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
Isopropyl acetate	U	1	2.0		µg/L	1	6/20/2012 6:20:00 AM
Isopropylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
m,p-Xylene	U	0.5	2.0		µg/L	1	6/20/2012 6:20:00 AM
Methyl Acetate	U	0.5	2.0		µg/L	1	6/20/2012 6:20:00 AM
Methyl tert-butyl ether	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
Methylene chloride	3.3	0.25	1.0	B	µg/L	1	6/20/2012 6:20:00 AM
n-Amyl acetate	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 22-Jun-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1206137
Project: 79 Pondfield Road, Bronxville, NY
Lab ID: 1206137-04A

Client Sample ID: ACT-13 (12')
Collection Date: 6/14/2012 2:00:00 PM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Naphthalene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
n-Butyl acetate	U	0.25	2.0		µg/L	1	6/20/2012 6:20:00 AM
n-Butylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
n-Propyl acetate	U	0.5	1.0		µg/L	1	6/20/2012 6:20:00 AM
n-Propylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
o-Xylene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
p-Diethylbenzene	U	0.5	1.0		µg/L	1	6/20/2012 6:20:00 AM
p-Ethyltoluene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
sec-Butylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
Styrene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
t-Butyl alcohol	U	1	2.0		µg/L	1	6/20/2012 6:20:00 AM
tert-Butylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
Tetrachloroethene	22	0.25	2.0		µg/L	1	6/20/2012 6:20:00 AM
Toluene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
trans-1,2-Dichloroethene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
trans-1,3-Dichloropropene	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
Trichloroethene	1.0	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
Trichlorofluoromethane	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
Vinyl acetate	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
Vinyl chloride	U	0.25	1.0		µg/L	1	6/20/2012 6:20:00 AM
Surr: 4-Bromofluorobenzene	102	0	63-123		%REC	1	6/20/2012 6:20:00 AM
Surr: Dibromofluoromethane	100	0	68-124		%REC	1	6/20/2012 6:20:00 AM
Surr: Toluene-d8	93.3	0	67-125		%REC	1	6/20/2012 6:20:00 AM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B Analyte detected in the associated Method Blank	C Calibration %RSD/%D exceeded for non-CCC analytes
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	LOD Limit of Detection
	LOQ Limit of Quantitation	P >40% diff for detected conc between the two GC columns
	PQL Practical Quantitation Limit	S Spike Recovery outside accepted recovery limits
	U Indicates the compound was analyzed but not detected.	

American Analytical Laboratories, LLC.

Date: 22-Jun-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1206137
Project: 79 Pondfield Road, Bronxville, NY
Lab ID: 1206137-05A

Client Sample ID: ACT-13 (25')
Collection Date: 6/14/2012 3:00:00 PM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
1,1,1,2-Tetrachloroethane	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
1,1,1-Trichloroethane	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
1,1,2,2-Tetrachloroethane	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
1,1,2-Trichloroethane	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
1,1-Dichloroethane	U	0.5	1.0		µg/L	1	6/20/2012 6:42:00 AM
1,1-Dichloroethene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
1,1-Dichloropropene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
1,2,3-Trichlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
1,2,3-Trichloropropane	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
1,2,4,5-Tetramethylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
1,2,4-Trichlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
1,2,4-Trimethylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
1,2-Dibromo-3-chloropropane	U	0.5	2.0		µg/L	1	6/20/2012 6:42:00 AM
1,2-Dibromoethane	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
1,2-Dichlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
1,2-Dichloroethane	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
1,2-Dichloropropane	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
1,3,5-Trimethylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
1,3-Dichlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
1,3-dichloropropane	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
1,4-Dichlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
1,4-Dioxane	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
2,2-Dichloropropane	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
2-Butanone	U	1.25	2.5		µg/L	1	6/20/2012 6:42:00 AM
2-Chloroethyl vinyl ether	U	0.5	1.0		µg/L	1	6/20/2012 6:42:00 AM
2-Chlorotoluene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
2-Hexanone	U	1.25	2.5		µg/L	1	6/20/2012 6:42:00 AM
2-Propanol	U	0.25	1.0	C	µg/L	1	6/20/2012 6:42:00 AM
4-Chlorotoluene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
4-Isopropyltoluene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
4-Methyl-2-pentanone	U	1.25	2.5		µg/L	1	6/20/2012 6:42:00 AM
Acetone	U	1.25	5.0		µg/L	1	6/20/2012 6:42:00 AM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 22-Jun-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1206137
Project: 79 Pondfield Road, Bronxville, NY
Lab ID: 1206137-05A

Client Sample ID: ACT-13 (25')
Collection Date: 6/14/2012 3:00:00 PM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Acrolein	U	5	10	C	µg/L	1	6/20/2012 6:42:00 AM
Acrylonitrile	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
Benzene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
Bromobenzene	U	0.5	1.0		µg/L	1	6/20/2012 6:42:00 AM
Bromochloromethane	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
Bromodichloromethane	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
Bromoform	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
Bromomethane	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
Carbon disulfide	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
Carbon tetrachloride	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
Chlorobenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
Chlorodifluoromethane	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
Chloroethane	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
Chloroform	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
Chloromethane	U	0.25	1.0	C	µg/L	1	6/20/2012 6:42:00 AM
cis-1,2-Dichloroethene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
cis-1,3-Dichloropropene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
Dibromochloromethane	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
Dibromomethane	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
Dichlorodifluoromethane	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
Diisopropyl ether	U	0.25	1.0	C	µg/L	1	6/20/2012 6:42:00 AM
Ethanol	U	2.5	5.0		µg/L	1	6/20/2012 6:42:00 AM
Ethyl acetate	U	0.5	1.0		µg/L	1	6/20/2012 6:42:00 AM
Ethylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
Freon-114	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
Hexachlorobutadiene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
Isopropyl acetate	U	1	2.0		µg/L	1	6/20/2012 6:42:00 AM
Isopropylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
m,p-Xylene	U	0.5	2.0		µg/L	1	6/20/2012 6:42:00 AM
Methyl Acetate	U	0.5	2.0		µg/L	1	6/20/2012 6:42:00 AM
Methyl tert-butyl ether	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
Methylene chloride	4.3	0.25	1.0	B	µg/L	1	6/20/2012 6:42:00 AM
n-Amyl acetate	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 22-Jun-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1206137
Project: 79 Pondfield Road, Bronxville, NY
Lab ID: 1206137-05A

Client Sample ID: ACT-13 (25')
Collection Date: 6/14/2012 3:00:00 PM
Matrix: LIQUID

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Naphthalene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
n-Butyl acetate	U	0.25	2.0		µg/L	1	6/20/2012 6:42:00 AM
n-Butylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
n-Propyl acetate	U	0.5	1.0		µg/L	1	6/20/2012 6:42:00 AM
n-Propylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
o-Xylene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
p-Diethylbenzene	U	0.5	1.0		µg/L	1	6/20/2012 6:42:00 AM
p-Ethyltoluene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
sec-Butylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
Styrene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
t-Butyl alcohol	U	1	2.0		µg/L	1	6/20/2012 6:42:00 AM
tert-Butylbenzene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
Tetrachloroethene	16	0.25	2.0		µg/L	1	6/20/2012 6:42:00 AM
Toluene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
trans-1,2-Dichloroethene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
trans-1,3-Dichloropropene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
Trichloroethene	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
Trichlorofluoromethane	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
Vinyl acetate	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
Vinyl chloride	U	0.25	1.0		µg/L	1	6/20/2012 6:42:00 AM
Surr: 4-Bromofluorobenzene	99.9	0	63-123		%REC	1	6/20/2012 6:42:00 AM
Surr: Dibromofluoromethane	99.5	0	68-124		%REC	1	6/20/2012 6:42:00 AM
Surr: Toluene-d8	99.2	0	67-125		%REC	1	6/20/2012 6:42:00 AM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 22-Jun-12

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1206137
Project: 79 Pondfield Road, Bronxville, NY

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: V624LCS-061912aY		SampType: LCS		TestCode: Full8260_W		Units: µg/L		Prep Date: 6/19/2012		RunNo: 63958			
Client ID: LCSW		Batch ID: R63958		TestNo: SW8260C		Analysis Date: 6/20/2012						SeqNo: 902934	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
1,1,1-Trichloroethane	34	1.0	50.00	0	67.6	38	136						
1,1,2,2-Tetrachloroethane	42	1.0	50.00	0	84.8	50	124						
1,1,2-Trichloroethane	37	1.0	50.00	0	74.4	52	128						
1,1-Dichloroethane	32	1.0	50.00	0	63.7	55	123						
1,1-Dichloroethene	30	1.0	50.00	0	59.7	48	128						
1,2-Dichlorobenzene	40	1.0	50.00	0	80.7	59	123						
1,2-Dichloroethane	36	1.0	50.00	0	71.5	52	129						
1,2-Dichloropropane	39	1.0	50.00	0	78.8	58	124						
1,3-Dichlorobenzene	39	1.0	50.00	0	77.7	51	124						
1,4-Dichlorobenzene	38	1.0	50.00	0	76.3	54	128						
2-Chloroethyl vinyl ether	36	1.0	50.00	0	71.0	25	141						
Benzene	35	1.0	50.00	0	69.1	53	131						
Bromodichloromethane	38	1.0	50.00	0	76.8	54	126						
Bromoform	42	1.0	50.00	0	83.2	53	127						
Bromomethane	24	1.0	50.00	0	47.5	42	150						
Carbon tetrachloride	34	1.0	50.00	0	67.1	46	135						
Chlorobenzene	39	1.0	50.00	0	78.8	53	121						
Chloroethane	30	1.0	50.00	0	60.8	40	145						
Chloroform	35	1.0	50.00	0	69.7	41	135						
Chloromethane	24	1.0	50.00	0	47.4	32	149						
cis-1,3-Dichloropropene	37	1.0	50.00	0	74.1	46	128						
Dibromochloromethane	39	1.0	50.00	0	77.4	42	124						
Ethylbenzene	39	1.0	50.00	0	78.7	52	135						
Methylene chloride	34	1.0	50.00	0	68.8	35	137						
Tetrachloroethene	35	2.0	50.00	0	70.8	26	126						
Toluene	37	1.0	50.00	0	73.7	51	130						
trans-1,2-Dichloroethene	32	1.0	50.00	0	63.7	49	125						
trans-1,3-Dichloropropene	32	1.0	50.00	0	63.8	43	125						
Trichloroethene	37	1.0	50.00	0	74.7	47	127						
Trichlorofluoromethane	35	1.0	50.00	0	70.8	50	152						
B													

B

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%AD exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1206137
Project: 79 Pondfield Road, Bronxville, NY

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: V624LCS-061912aY	SampType: LCS	TestCode: Full8260_W	Units: µg/L	Prep Date: 6/19/2012	RunNo: 63958						
Client ID: LCSW	Batch ID: R63958	TestNo: SW8260C		Analysis Date: 6/20/2012	SeqNo: 902934						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Vinyl chloride	27	1.0	50.00	0	54.9	50	149				
Surr: 4-Bromofluorobenzene	50		50.00		101	63	123				
Surr: Dibromofluoromethane	44		50.00		88.5	68	124				
Surr: Toluene-d8	48		50.00		97.0	67	125				

Sample ID: VBLK-061912aYW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 6/19/2012	RunNo: 63958						
Client ID: PBW	Batch ID: R63958	TestNo: SW8260C		Analysis Date: 6/20/2012	SeqNo: 902935						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1,2-Tetrachloroethane	U	1.0									
1,1,1-Trichloroethane	U	1.0									
1,1,2,2-Tetrachloroethane	U	1.0									
1,1,2-Trichloro-1,2,2-trifluoroethane	U	1.0									
1,1,2-Trichloroethane	U	1.0									
1,1-Dichloroethane	U	1.0									
1,1-Dichloroethene	U	1.0									
1,1-Dichloropropene	U	1.0									
1,2,3-Trichlorobenzene	U	1.0									
1,2,3-Trichloropropane	U	1.0									
1,2,4,5-Tetramethylbenzene	U	1.0									
1,2,4-Trichlorobenzene	U	1.0									
1,2,4-Trimethylbenzene	U	1.0									
1,2-Dibromo-3-chloropropane	U	2.0									
1,2-Dibromoethane	U	1.0									
1,2-Dichlorobenzene	U	1.0									
1,2-Dichloroethane	U	1.0									
1,2-Dichloropropane	U	1.0									
1,3,5-Trimethylbenzene	U	1.0									
1,3-Dichlorobenzene	U	1.0									
1,3-dichloropropane	U	1.0									
1,4-Dichlorobenzene	U	1.0									

Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes	H	Holding times for preparation or analy
J		Analyte detected below quantitation limits	P	>40% diff for detected conc between the two GC column	PQL	Practical Quantitation Limit
R		RPD outside accepted recovery limits	S	Spike Recovery outside accepted recovery limits	U	Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
 Work Order: 1206137
 Project: 79 Pondfield Road, Bronxville, NY

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-061912aYW		SampType: MBLK		TestCode: Full8260_W		Units: µg/L		Prep Date: 6/19/2012		RunNo: 63958			
Client ID: PBW		Batch ID: R63958		TestNo: SW8260C		Analysis Date: 6/20/2012						SeqNo: 902935	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,4-Dioxane		U	1.0										
2,2-Dichloropropane		U	1.0										
2-Butanone		U	2.5										
2-Chloroethyl vinyl ether		U	1.0										
2-Chlorotoluene		U	1.0										
2-Hexanone		U	2.5										
2-Propanol		U	1.0										
4-Chlorotoluene		U	1.0										
4-Isopropyltoluene		U	1.0										
4-Methyl-2-pentanone		U	2.5										
Acetone		U	5.0										
Acrolein		U	10										
Acrylonitrile		U	1.0										
Benzene		U	1.0										
Bromobenzene		U	1.0										
Bromochloromethane		U	1.0										
Bromodichloromethane		U	1.0										
Bromoform		U	1.0										
Bromomethane		U	1.0										
Carbon disulfide		U	1.0										
Carbon tetrachloride		U	1.0										
Chlorobenzene		U	1.0										
Chlorodifluoromethane		U	1.0										
Chloroethane		U	1.0										
Chloroform		U	1.0										
Chloromethane		U	1.0										
cis-1,2-Dichloroethene		U	1.0										
cis-1,3-Dichloropropene		U	1.0										
Dibromochloromethane		U	1.0										
Dibromomethane		U	1.0										
Dichlorodifluoromethane		U	1.0										

Qualifiers: B Analyte detected in the associated Method Blank
 J Analyte detected below quantitation limits
 R RPD outside accepted recovery limits
 C Calibration %RSD/%D exceeded for non-CCC analytes
 P >40% diff for detected conc between the two GC column
 S Spike Recovery outside accepted recovery limits
 H Holding times for preparation or analy
 PQL Practical Quantitation Limit
 U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1206137
Project: 79 Pondfield Road, Bronxville, NY

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-061912aYW		SampType: MBLK		TestCode: Full8260_W		Units: µg/L		Prep Date: 6/19/2012		RunNo: 63958		
Client ID: PBW		Batch ID: R63958		TestNo: SW8260C				Analysis Date: 6/20/2012		SeqNo: 902935		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diisopropyl ether		U	1.0									
Ethanol		U	5.0									
Ethyl acetate		U	1.0									
Ethylbenzene		U	1.0									
Freon-114		U	1.0									
Hexachlorobutadiene		U	1.0									
Isopropyl acetate		U	2.0									
Isopropylbenzene		U	1.0									
m,p-Xylene		U	2.0									
Methyl Acetate		U	2.0									
Methyl tert-butyl ether		U	1.0									
Methylene chloride		4.8	1.0									
n-Amyl acetate		U	1.0									
Naphthalene		U	1.0									
n-Butyl acetate		U	2.0									
n-Butylbenzene		U	1.0									
n-Propyl acetate		U	1.0									
n-Propylbenzene		U	1.0									
o-Xylene		U	1.0									
p-Diethylbenzene		U	1.0									
p-Ethyltoluene		U	1.0									
sec-Butylbenzene		U	1.0									
Styrene		U	1.0									
t-Butyl alcohol		U	2.0									
tert-Butylbenzene		U	1.0									
Tetrachloroethene		U	2.0									
Toluene		U	1.0									
trans-1,2-Dichloroethene		U	1.0									
trans-1,3-Dichloropropene		U	1.0									
Trichloroethene		U	1.0									
Trichlorofluoromethane		U	1.0									

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1206137
Project: 79 Pondfield Road, Bronxville, NY

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-061912aYW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 6/19/2012	RunNo: 63958						
Client ID: PBW	Batch ID: R63958	TestNo: SW8260C		Analysis Date: 6/20/2012	SeqNo: 902935						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Vinyl acetate	U	1.0									
Vinyl chloride	U	1.0									
Surr: 4-Bromofluorobenzene	53		50.00		107	63	123				
Surr: Dibromofluoromethane	51		50.00		102	68	124				
Surr: Toluene-d8	48		50.00		96.9	67	125				

Sample ID: V624LCS-061912aY	SampType: LCS	TestCode: Full8260_W	Units: µg/L	Prep Date: 6/19/2012	RunNo: 63958						
Client ID: LCSW	Batch ID: R63958A	TestNo: SW8260C		Analysis Date: 6/20/2012	SeqNo: 902938						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	35	1.0	50.00	0	70.4	38	136				
1,1,2,2-Tetrachloroethane	37	1.0	50.00	0	73.7	50	124				
1,1,2-Trichloroethane	34	1.0	50.00	0	68.2	52	128				
1,1-Dichloroethane	28	1.0	50.00	0	55.8	55	123				
1,1-Dichloroethene	24	1.0	50.00	0	48.3	48	128				
1,2-Dichlorobenzene	39	1.0	50.00	0	77.9	59	123				
1,2-Dichloroethane	39	1.0	50.00	0	78.4	52	129				
1,2-Dichloropropane	35	1.0	50.00	0	70.1	58	124				
1,3-Dichlorobenzene	38	1.0	50.00	0	76.6	51	124				
1,4-Dichlorobenzene	37	1.0	50.00	0	74.4	54	128				
2-Chloroethyl vinyl ether	32	1.0	50.00	0	64.6	25	141				
Benzene	32	1.0	50.00	0	63.6	53	131				
Bromodichloromethane	32	1.0	50.00	0	64.3	54	126				
Bromoform	41	1.0	50.00	0	82.7	53	127				
Bromomethane	17	1.0	50.00	0	34.4	42	150				S
Carbon tetrachloride	33	1.0	50.00	0	66.7	46	135				
Chlorobenzene	40	1.0	50.00	0	79.6	53	121				
Chloroethane	33	1.0	50.00	0	66.4	40	145				
Chloroform	33	1.0	50.00	0	66.6	41	135				
Chloromethane	14	1.0	50.00	0	28.1	32	149				SC
cis-1,3-Dichloropropene	32	1.0	50.00	0	63.3	46	128				

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
 Work Order: 1206137
 Project: 79 Pondfield Road, Bronxville, NY

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: V624LCS-061912aY		SampType: LCS		TestCode: Full8260_W		Units: µg/L		Prep Date: 6/19/2012		RunNo: 63958			
Client ID: LCSW		Batch ID: R63958A		TestNo: SW8260C		Analysis Date: 6/20/2012						SeqNo: 902938	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Dibromochloromethane	39	1.0	50.00	0	77.1	42	124						
Ethylbenzene	39	1.0	50.00	0	79.0	52	135						
Methylene chloride	27	1.0	50.00	0	53.3	35	137				B		
Tetrachloroethene	33	2.0	50.00	0	65.8	26	126						
Toluene	32	1.0	50.00	0	63.5	51	130						
trans-1,2-Dichloroethene	24	1.0	50.00	0	47.7	49	125				S		
trans-1,3-Dichloropropene	28	1.0	50.00	0	56.5	43	125						
Trichloroethene	34	1.0	50.00	0	68.4	47	127						
Trichlorofluoromethane	36	1.0	50.00	0	72.0	50	152						
Vinyl chloride	24	1.0	50.00	0	48.3	50	149				S		
Surr: 4-Bromofluorobenzene	52		50.00		103	63	123						
Surr: Dibromofluoromethane	48		50.00		95.2	68	124						
Surr: Toluene-d8	48		50.00		95.8	67	125						

Sample ID: VBLK-061912aYW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 6/19/2012	RunNo: 63958						
Client ID: PBW	Batch ID: R63958A	TestNo: SW8260C		Analysis Date: 6/20/2012	SeqNo: 902939						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	U	1.0									
1,1,1-Trichloroethane	U	1.0									
1,1,2,2-Tetrachloroethane	U	1.0									
1,1,2-Trichloro-1,2,2-trifluoroethane	U	1.0									
1,1,2-Trichloroethane	U	1.0									
1,1-Dichloroethane	U	1.0									
1,1-Dichloroethene	U	1.0									
1,1-Dichloropropene	U	1.0									
1,2,3-Trichlorobenzene	U	1.0									
1,2,3-Trichloropropane	U	1.0									
1,2,4,5-Tetramethylbenzene	U	1.0									
1,2,4-Trichlorobenzene	U	1.0									
1,2,4-Trimethylbenzene	U	1.0									

Qualifiers: B Analyte detected in the associated Method Blank
 J Analyte detected below quantitation limits
 R RPD outside accepted recovery limits
 C Calibration %RSD/%D exceeded for non-CCC analytes
 P >40% diff for detected conc between the two GC column
 S Spike Recovery outside accepted recovery limits
 H Holding times for preparation or analy
 PQL Practical Quantitation Limit
 U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1206137
Project: 79 Pondfield Road, Bronxville, NY

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-061912aYW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 6/19/2012	RunNo: 63958						
Client ID: PBW	Batch ID: R63958A	TestNo: SW8260C		Analysis Date: 6/20/2012	SeqNo: 902939						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,2-Dibromo-3-chloropropane	U	2.0									
1,2-Dibromoethane	U	1.0									
1,2-Dichlorobenzene	U	1.0									
1,2-Dichloroethane	U	1.0									
1,2-Dichloropropane	U	1.0									
1,3,5-Trimethylbenzene	U	1.0									
1,3-Dichlorobenzene	U	1.0									
1,3-dichloropropane	U	1.0									
1,4-Dichlorobenzene	U	1.0									
1,4-Dioxane	U	1.0									
2,2-Dichloropropane	U	1.0									
2-Butanone	U	2.5									
2-Chloroethyl vinyl ether	U	1.0									
2-Chlorotoluene	U	1.0									
2-Hexanone	U	2.5									
2-Propanol	U	1.0									C
4-Chlorotoluene	U	1.0									
4-Isopropyltoluene	U	1.0									
4-Methyl-2-pentanone	U	2.5									
Acetone	U	5.0									
Acrolein	U	10									C
Acrylonitrile	U	1.0									
Benzene	U	1.0									
Bromobenzene	U	1.0									
Bromochloromethane	U	1.0									
Bromodichloromethane	U	1.0									
Bromoform	U	1.0									
Bromomethane	U	1.0									
Carbon disulfide	U	1.0									
Carbon tetrachloride	U	1.0									
Chlorobenzene	U	1.0									

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1206137
Project: 79 Pondfield Road, Bronxville, NY

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-061912aYW		SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 6/19/2012	RunNo: 63958					
Client ID: PBW		Batch ID: R63958A	TestNo: SW8260C		Analysis Date: 6/20/2012	SeqNo: 902939					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorodifluoromethane	U	1.0									
Chloroethane	U	1.0									
Chloroform	U	1.0									
Chloromethane	U	1.0									
cis-1,2-Dichloroethene	U	1.0									
cis-1,3-Dichloropropene	U	1.0									
Dibromochloromethane	U	1.0									
Dibromomethane	U	1.0									
Dichlorodifluoromethane	U	1.0									
Diisopropyl ether	U	1.0									
Ethanol	U	5.0									
Ethyl acetate	U	1.0									
Ethylbenzene	U	1.0									
Freon-114	U	1.0									
Hexachlorobutadiene	U	1.0									
Isopropyl acetate	U	2.0									
Isopropylbenzene	U	1.0									
m,p-Xylene	U	2.0									
Methyl Acetate	U	2.0									
Methyl tert-butyl ether	U	1.0									
Methylene chloride	3.5	1.0									
n-Amyl acetate	U	1.0									
Naphthalene	U	1.0									
n-Butyl acetate	U	2.0									
n-Butylbenzene	U	1.0									
n-Propyl acetate	U	1.0									
n-Propylbenzene	U	1.0									
o-Xylene	U	1.0									
p-Diethylbenzene	U	1.0									
p-Ethyltoluene	U	1.0									
sec-Butylbenzene	U	1.0									

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1206137
Project: 79 Pondfield Road, Bronxville, NY

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-061912aYW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 6/19/2012	RunNo: 63958						
Client ID: PBW	Batch ID: R63958A	TestNo: SW8260C		Analysis Date: 6/20/2012	SeqNo: 902939						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Styrene	U	1.0									
t-Butyl alcohol	U	2.0									
tert-Butylbenzene	U	1.0									
Tetrachloroethene	U	2.0									
Toluene	U	1.0									
trans-1,2-Dichloroethene	U	1.0									
trans-1,3-Dichloropropene	U	1.0									
Trichloroethene	U	1.0									
Trichlorofluoromethane	U	1.0									
Vinyl acetate	U	1.0									
Vinyl chloride	U	1.0									
Surr: 4-Bromofluorobenzene	52		50.00		104	63	123				
Surr: Dibromofluoromethane	46		50.00		92.8	68	124				
Surr: Toluene-d8	49		50.00		97.1	67	125				

Sample ID: V624LCS-062012bL	SampType: LCS	TestCode: Full8260_W	Units: µg/L	Prep Date: 6/20/2012	RunNo: 63958						
Client ID: LCSW	Batch ID: R63958B	TestNo: SW8260C		Analysis Date: 6/21/2012	SeqNo: 903181						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	39	1.0	50.00	0	78.4	38	136				
1,1,2,2-Tetrachloroethane	58	1.0	50.00	0	116	50	124				
1,1,2-Trichloroethane	40	1.0	50.00	0	80.9	52	128				
1,1-Dichloroethane	42	1.0	50.00	0	83.9	55	123				
1,1-Dichloroethene	36	1.0	50.00	0	71.6	48	128				
1,2-Dichlorobenzene	50	1.0	50.00	0	100	59	123				
1,2-Dichloroethane	41	1.0	50.00	0	82.6	52	129				
1,2-Dichloropropane	43	1.0	50.00	0	85.8	58	124				
1,3-Dichlorobenzene	49	1.0	50.00	0	97.9	51	124				
1,4-Dichlorobenzene	49	1.0	50.00	0	97.7	54	128				
2-Chloroethyl vinyl ether	34	1.0	50.00	0	67.8	25	141				C
Benzene	39	1.0	50.00	0	77.2	53	131				

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits

C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1206137
Project: 79 Pondfield Road, Bronxville, NY

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: V624LCS-062012bL		SampType: LCS		TestCode: Full8260_W		Units: µg/L		Prep Date: 6/20/2012		RunNo: 63958	
Client ID: LCSW		Batch ID: R63958B		TestNo: SW8260C				Analysis Date: 6/21/2012		SeqNo: 903181	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromodichloromethane	41	1.0	50.00	0	81.6	54	126				
Bromoform	45	1.0	50.00	0	90.4	53	127				
Bromomethane	21	1.0	50.00	0	41.6	42	150				S
Carbon tetrachloride	39	1.0	50.00	0	78.4	46	135				
Chlorobenzene	45	1.0	50.00	0	89.6	53	121				
Chloroethane	29	1.0	50.00	0	57.7	40	145				
Chloroform	43	1.0	50.00	0	86.0	41	135				
Chloromethane	17	1.0	50.00	0	34.6	32	149				C
cis-1,3-Dichloropropene	37	1.0	50.00	0	73.8	46	128				
Dibromochloromethane	41	1.0	50.00	0	82.0	42	124				
Ethylbenzene	45	1.0	50.00	0	90.3	52	135				
Methylene chloride	42	1.0	50.00	0	84.1	35	137				B
Tetrachloroethene	36	2.0	50.00	0	71.9	26	126				
Toluene	40	1.0	50.00	0	79.3	51	130				
trans-1,2-Dichloroethene	35	1.0	50.00	0	70.9	49	125				
trans-1,3-Dichloropropene	36	1.0	50.00	0	71.4	43	125				
Trichloroethene	40	1.0	50.00	0	80.6	47	127				
Trichlorofluoromethane	31	1.0	50.00	0	61.4	50	152				
Vinyl chloride	25	1.0	50.00	0	49.8	50	149				S
Surr: 4-Bromofluorobenzene	45		50.00		89.6	63	123				
Surr: Dibromofluoromethane	49		50.00		98.5	68	124				
Surr: Toluene-d8	50		50.00		99.2	67	125				

Sample ID: VBLK-062012bLW		SampType: MBLK		TestCode: Full8260_W		Units: µg/L		Prep Date: 6/20/2012		RunNo: 63958	
Client ID: PBW		Batch ID: R63958B		TestNo: SW8260C				Analysis Date: 6/21/2012		SeqNo: 903182	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1,2-Tetrachloroethane											
U											
1,1,1-Trichloroethane											
U											
1,1,2,2-Tetrachloroethane											
U											
1,1,2-Trichloro-1,2,2-trifluoroethane											
U											
Qualifiers:											
B		Analyte detected in the associated Method Blank				C		Calibration %RSD/%D exceeded for non-CCC analytes		H	
J		Analyte detected below quantitation limits				P		>40% diff for detected conc between the two GC column		PQL	
R		RPD outside accepted recovery limits				S		Spike Recovery outside accepted recovery limits		U	
Indicates the compound was analyzed											

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analy
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1206137
Project: 79 Pondfield Road, Bronxville, NY

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-062012bLW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 6/20/2012	RunNo: 63958						
Client ID: PBW	Batch ID: R63958B	TestNo: SW8260C		Analysis Date: 6/21/2012	SeqNo: 903182						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,2-Trichloroethane	U	1.0									
1,1-Dichloroethane	U	1.0									
1,1-Dichloroethene	U	1.0									
1,1-Dichloropropene	U	1.0									
1,2,3-Trichlorobenzene	U	1.0									
1,2,3-Trichloropropane	U	1.0									
1,2,4,5-Tetramethylbenzene	U	1.0									
1,2,4-Trichlorobenzene	U	1.0									
1,2,4-Trimethylbenzene	U	1.0									
1,2-Dibromo-3-chloropropane	U	2.0									
1,2-Dibromoethane	U	1.0									
1,2-Dichlorobenzene	U	1.0									
1,2-Dichloroethane	U	1.0									
1,2-Dichloropropane	U	1.0									
1,3,5-Trimethylbenzene	U	1.0									
1,3-Dichlorobenzene	U	1.0									
1,3-dichloropropane	U	1.0									
1,4-Dichlorobenzene	U	1.0									
1,4-Dioxane	U	1.0									C
2,2-Dichloropropane	U	1.0									C
2-Butanone	U	2.5									C
2-Chloroethyl vinyl ether	U	1.0									C
2-Chlorotoluene	U	1.0									
2-Hexanone	U	2.5									
2-Propanol	U	1.0									
4-Chlorotoluene	U	1.0									
4-Isopropyltoluene	U	1.0									
4-Methyl-2-pentanone	U	2.5									
Acetone	U	5.0									
Acrolein	U	10									C
Acrylonitrile	U	1.0									

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1206137
Project: 79 Pondfield Road, Bronxville, NY

ANALYTICAL QC SUMMARY REPORT

TestCode: Full82260_W

Sample ID: VBLK-062012bLW	SampType: MBLK	TestCode: Full8260_W	Units: µg/L	Prep Date: 6/20/2012	RunNo: 63958						
Client ID: PBW	Batch ID: R63958B	TestNo: SW8260C		Analysis Date: 6/21/2012	SeqNo: 903182						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	U	1.0									
Bromobenzene	U	1.0									
Bromochloromethane	U	1.0									
Bromodichloromethane	U	1.0									
Bromoform	U	1.0									
Bromomethane	U	1.0									
Carbon disulfide	U	1.0									
Carbon tetrachloride	U	1.0									
Chlorobenzene	U	1.0									
Chlorodifluoromethane	U	1.0									
Chloroethane	U	1.0									
Chloroform	U	1.0									
Chloromethane	U	1.0									
cis-1,2-Dichloroethene	U	1.0									
cis-1,3-Dichloropropene	U	1.0									
Dibromochloromethane	U	1.0									
Dibromomethane	U	1.0									
Dichlorodifluoromethane	U	1.0									
Diisopropyl ether	U	1.0									
Ethanol	U	5.0									
Ethyl acetate	U	1.0									
Ethylbenzene	U	1.0									
Freon-114	U	1.0									
Hexachlorobutadiene	U	1.0									
Isopropyl acetate	U	2.0									
Isopropylbenzene	U	1.0									
m,p-Xylene	U	2.0									
Methyl Acetate	U	2.0									
Methyl tert-butyl ether	U	1.0									
Methylene chloride	7.4	1.0									
n-Amyl acetate	U	1.0									

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
 Work Order: 1206137
 Project: 79 Pondfield Road, Bronxville, NY

ANALYTICAL QC SUMMARY REPORT

TestCode: Full8260_W

Sample ID: VBLK-062012bLW		SampType: MBLK		TestCode: Full8260_W		Units: µg/L		Prep Date: 6/20/2012		RunNo: 63958			
Client ID: PBW		Batch ID: R63958B		TestNo: SW8260C		Analysis Date: 6/21/2012						SeqNo: 903182	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Naphthalene	U	1.0											
n-Butyl acetate	U	2.0											
n-Butylbenzene	U	1.0											
n-Propyl acetate	U	1.0											
n-Propylbenzene	U	1.0											
o-Xylene	U	1.0											
p-Diethylbenzene	U	1.0											
p-Ethyltoluene	U	1.0											
sec-Butylbenzene	U	1.0											
Styrene	U	1.0											
t-Butyl alcohol	U	2.0											
tert-Butylbenzene	U	1.0											
Tetrachloroethene	U	2.0											
Toluene	U	1.0											
trans-1,2-Dichloroethene	U	1.0											
trans-1,3-Dichloropropene	U	1.0											
Trichloroethene	U	1.0											
Trichlorofluoromethane	U	1.0											
Vinyl acetate	U	1.0											
Vinyl chloride	U	1.0											
Surr: 4-Bromofluorobenzene	42		50.00		83.4	63				123			
Surr: Dibromofluoromethane	50		50.00		101	68				124			
Surr: Toluene-d8	47		50.00		93.5	67				125			

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD%D exceeded for non-CCC analytes H Holding times for preparation or analy
 J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
 R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

Tuesday, July 17, 2012

Paul P. Stewart
Advanced Cleanup Technologies, Inc.
960 So. Broadway, Suite 100
Hicksville, NY 11801

TEL: (516) 933-0655
FAX (516) 933-0659

RE: 79 Pondfield Rd., Bronxville, NY

Order No.: 1207111

Dear Paul P. Stewart:

American Analytical Laboratories, LLC. received 4 sample(s) on 7/13/2012 for the analyses presented in the following report.

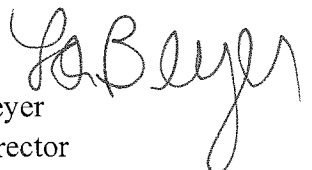
Samples were analyzed in accordance with the test procedures documented on the chain of custody and detailed throughout the text of this report.

The results reported herein relate only to the items tested or to the samples as received by the laboratory. This report may not be reproduced, except in full, without the approval of American Analytical Laboratories, LLC and is not considered complete without a cover page and chain of custody documentation. The limits (LOQ) provided in the data package are analytical reporting limits and not Federal or Local mandated values to which the sample results should be compared.

There were no problems with the analyses and all data for associated QC met laboratory specifications. If there are any exceptions a Case Narrative is provided in the report or the data is qualified. This package has been reviewed by American Analytical Laboratories' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal. This report consists of 25 pages.

If you have any questions regarding these tests results, please do not hesitate to call (631) 454-6100 or email me directly at lbeyer@american-analytical.com.

Sincerely,


Lori Beyer
Lab Director

CLIENT: Advanced Cleanup Technologies, Inc.
Project: 79 Pondfield Rd., Bronxville, NY
Lab Order: 1207111

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date Collected	Date Received
1207111-01A	ACT-14 13-15'	7/12/2012 10:00:00 AM	7/13/2012
1207111-02A	ACT-15 14-15'	7/12/2012 11:30:00 AM	7/13/2012
1207111-03A	ACT-16 13-15'	7/12/2012 1:30:00 PM	7/13/2012
1207111-04A	ACT-17 13-15'	7/12/2012 2:30:00 PM	7/13/2012

CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT									
CLIENT NAME/ADDRESS ACT 960 S Broadway, suite 100 Hicksville, NY				CONTACT: Paul Stewart		SAMPLER (SIGNATURE)		SAMPLE(S) SEALED YES / NO	
PROJECT LOCATION: #6832-BVNY 79 Pondfield Road, Bronxville, NY				SAMPLER NAME (PRINT)		CORRECT CONTAINER(S)		YES / NO	
						TEMPERATURE (°C)		3.3	
ANALYSIS REQUIRED EPA 8260									
LABORATORY ID# LAB USE ONLY	MATRIX/ TYPE	NO. OF CONTAINERS	SAMPLING DATE	SAMPLING TIME	SAMPLE # - LOCATION				
120711-01A	S	2	7/12/12	10:00	ACT-14 13-15'	X			
02A	S	2	7/12/12	11:30	ACT-15 14-15'	X			
03A	S	2	7/12/12	1:30	ACT-16 13-15'	X			
04A	S	2	7/12/12	2:30	ACT-17 13-15'	X			
COMMENTS / INSTRUCTIONS						Samples must be on ICE (<6° C)			
MATRIX S=SOIL; W=WATER; SL=SLUDGE; A=AIR; M=MISCELLANEOUS TYPE G=GRAB; C=COMPOSITE				TURNAROUND REQUIRED STANDARD ☐ STAT ☐ (7-10 business days)		E-MAIL ADDRESS FOR RESULTS:			
RELINQUISHED BY (SIGNATURE)		DATE 7/13/12 TIME 10:16		PRINTED NAME Xiaoyang Yang		RECEIVED BY LAB (SIGNATURE)		DATE 7/13/12 TIME 10:15	
RELINQUISHED BY (SIGNATURE)		DATE		PRINTED NAME		RECEIVED BY LAB (SIGNATURE)		DATE	
								PRINTED NAME	
								PRINTED NAME	

American Analytical Laboratories, LLC.

Sample Receipt Checklist

Client Name **ADVANCED CLEANUP TECH**

Date and Time Receive **7/13/2012 10:17:26 AM**

Work Order Number **1207111**

RcptNo: **1**

Received by **CF**

COC_ID:

CoolerID:

Checklist completed by

[Signature]
Signature

7/13/12
Date

Reviewed by

AB
Initials

7/13/12
Date

Matrix

Carrier name Courier

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Presen ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Presen ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Presen ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☒	Yes ☐	No ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☐

Adjusted? _____ Checked by _____

Any No and/or NA (not applicable) response must be detailed in the comments section b

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments:

Corrective Action

American Analytical Laboratories, LLC.

Date: 17-Jul-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1207111
Project: 79 Pondfield Rd., Bronxville, NY
Lab ID: 1207111-01A

Client Sample ID: ACT-14 13-15'
Collection Date: 7/12/2012 10:00:00 AM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
PERCENT MOISTURE							
Percent Moisture	19.0	0	0		wt%	1	Analyst: CF 7/16/2012
VOLATILE SW-846 METHOD 8260							
			D2216				Analyst: LA
			SW8260C				
1,1,1,2-Tetrachloroethane	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
1,1,1-Trichloroethane	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
1,1,2,2-Tetrachloroethane	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
1,1,2-Trichloroethane	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
1,1-Dichloroethane	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
1,1-Dichloroethene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
1,1-Dichloropropene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
1,2,3-Trichlorobenzene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
1,2,3-Trichloropropane	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
1,2,4,5-Tetramethylbenzene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
1,2,4-Trichlorobenzene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
1,2,4-Trimethylbenzene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
1,2-Dibromo-3-chloropropane	U	0.62	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
1,2-Dibromoethane	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
1,2-Dichlorobenzene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
1,2-Dichloroethane	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
1,2-Dichloropropane	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
1,3,5-Trimethylbenzene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
1,3-Dichlorobenzene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
1,3-dichloropropane	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
1,4-Dichlorobenzene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
1,4-Dioxane	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
2,2-Dichloropropane	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
2-Butanone	U	1.5	6.2		µg/Kg-dry	1	7/13/2012 12:50:00 PM
2-Chloroethyl vinyl ether	U	0.62	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
2-Chlorotoluene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
2-Hexanone	U	1.5	6.2		µg/Kg-dry	1	7/13/2012 12:50:00 PM
2-Propanol	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
4-Chlorotoluene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 17-Jul-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1207111
Project: 79 Pondfield Rd., Bronxville, NY
Lab ID: 1207111-01A

Client Sample ID: ACT-14 13-15'
Collection Date: 7/12/2012 10:00:00 AM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
4-Isopropyltoluene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
4-Methyl-2-pentanone	U	1.5	6.2		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Acetone	U	1.5	6.2		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Acrolein	U	6.2	12		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Acrylonitrile	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Benzene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Bromobenzene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Bromochloromethane	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Bromodichloromethane	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Bromoform	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Bromomethane	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Carbon disulfide	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Carbon tetrachloride	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Chlorobenzene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Chlorodifluoromethane	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Chloroethane	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Chloroform	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Chloromethane	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
cis-1,2-Dichloroethene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
cis-1,3-Dichloropropene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Dibromochloromethane	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Dibromomethane	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Dichlorodifluoromethane	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Diisopropyl ether	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Ethanol	U	3.1	6.2		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Ethyl acetate	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Ethylbenzene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Freon-114	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Hexachlorobutadiene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Isopropyl acetate	U	1.2	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Isopropylbenzene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
m,p-Xylene	U	0.62	4.9		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Methyl Acetate	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 17-Jul-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1207111
Project: 79 Pondfield Rd., Bronxville, NY
Lab ID: 1207111-01A

Client Sample ID: ACT-14 13-15'
Collection Date: 7/12/2012 10:00:00 AM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Methyl tert-butyl ether	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Methylene chloride	8.0	0.31	2.5	B	µg/Kg-dry	1	7/13/2012 12:50:00 PM
n-Amyl acetate	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Naphthalene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
n-Butyl acetate	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
n-Butylbenzene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
n-Propyl acetate	U	0.62	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
n-Propylbenzene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
o-Xylene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
p-Diethylbenzene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
p-Ethyltoluene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
sec-Butylbenzene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Styrene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
t-Butyl alcohol	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
tert-Butylbenzene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Tetrachloroethene	8.2	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Toluene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
trans-1,2-Dichloroethene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
trans-1,3-Dichloropropene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Trichloroethene	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Trichlorofluoromethane	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Vinyl acetate	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Vinyl chloride	U	0.31	2.5		µg/Kg-dry	1	7/13/2012 12:50:00 PM
Surr: 4-Bromofluorobenzene	93.5	0	42-133		%REC	1	7/13/2012 12:50:00 PM
Surr: Dibromofluoromethane	88.2	0	50-133		%REC	1	7/13/2012 12:50:00 PM
Surr: Toluene-d8	99.6	0	53-130		%REC	1	7/13/2012 12:50:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 17-Jul-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1207111
Project: 79 Pondfield Rd., Bronxville, NY
Lab ID: 1207111-02A

Client Sample ID: ACT-15 14-15'
Collection Date: 7/12/2012 11:30:00 AM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
PERCENT MOISTURE							
Percent Moisture	22.8	0	0		wt%	1	Analyst: CF 7/16/2012
VOLATILE SW-846 METHOD 8260							
			D2216				Analyst: LA
			SW8260C				
1,1,1,2-Tetrachloroethane	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
1,1,1-Trichloroethane	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
1,1,2,2-Tetrachloroethane	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
1,1,2-Trichloroethane	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
1,1-Dichloroethane	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
1,1-Dichloroethene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
1,1-Dichloropropene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
1,2,3-Trichlorobenzene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
1,2,3-Trichloropropane	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
1,2,4,5-Tetramethylbenzene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
1,2,4-Trichlorobenzene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
1,2,4-Trimethylbenzene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
1,2-Dibromo-3-chloropropane	U	0.63	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
1,2-Dibromoethane	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
1,2-Dichlorobenzene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
1,2-Dichloroethane	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
1,2-Dichloropropane	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
1,3,5-Trimethylbenzene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
1,3-Dichlorobenzene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
1,3-dichloropropane	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
1,4-Dichlorobenzene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
1,4-Dioxane	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
2,2-Dichloropropane	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
2-Butanone	U	1.6	6.3		µg/Kg-dry	1	7/13/2012 1:13:00 PM
2-Chloroethyl vinyl ether	U	0.63	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
2-Chlorotoluene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
2-Hexanone	U	1.6	6.3		µg/Kg-dry	1	7/13/2012 1:13:00 PM
2-Propanol	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
4-Chlorotoluene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
 Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 17-Jul-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1207111
Project: 79 Pondfield Rd., Bronxville, NY
Lab ID: 1207111-02A

Client Sample ID: ACT-15 14-15'
Collection Date: 7/12/2012 11:30:00 AM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
4-Isopropyltoluene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
4-Methyl-2-pentanone	U	1.6	6.3		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Acetone	U	1.6	6.3		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Acrolein	U	6.3	13		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Acrylonitrile	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Benzene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Bromobenzene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Bromochloromethane	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Bromodichloromethane	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Bromoform	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Bromomethane	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Carbon disulfide	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Carbon tetrachloride	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Chlorobenzene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Chlorodifluoromethane	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Chloroethane	U	0.32	2.5	C	µg/Kg-dry	1	7/13/2012 1:13:00 PM
Chloroform	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Chloromethane	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
cis-1,2-Dichloroethene	0.81	0.32	2.5	J	µg/Kg-dry	1	7/13/2012 1:13:00 PM
cis-1,3-Dichloropropene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Dibromochloromethane	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Dibromomethane	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Dichlorodifluoromethane	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Diisopropyl ether	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Ethanol	U	3.2	6.3		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Ethyl acetate	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Ethylbenzene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Freon-114	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Hexachlorobutadiene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Isopropyl acetate	U	1.3	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Isopropylbenzene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
m,p-Xylene	U	0.63	5.1		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Methyl Acetate	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 17-Jul-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.

Client Sample ID: ACT-15 14-15'

Lab Order: 1207111

Collection Date: 7/12/2012 11:30:00 AM

Project: 79 Pondfield Rd., Bronxville, NY

Matrix: SOIL

Lab ID: 1207111-02A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Methyl tert-butyl ether	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Methylene chloride	8.9	0.32	2.5	B	µg/Kg-dry	1	7/13/2012 1:13:00 PM
n-Amyl acetate	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Naphthalene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
n-Butyl acetate	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
n-Butylbenzene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
n-Propyl acetate	U	0.63	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
n-Propylbenzene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
o-Xylene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
p-Diethylbenzene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
p-Ethyltoluene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
sec-Butylbenzene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Styrene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
t-Butyl alcohol	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
tert-Butylbenzene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Tetrachloroethene	33	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Toluene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
trans-1,2-Dichloroethene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
trans-1,3-Dichloropropene	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Trichloroethene	2.2	0.32	2.5	J	µg/Kg-dry	1	7/13/2012 1:13:00 PM
Trichlorofluoromethane	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Vinyl acetate	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Vinyl chloride	U	0.32	2.5		µg/Kg-dry	1	7/13/2012 1:13:00 PM
Surr: 4-Bromofluorobenzene	95.5	0	42-133		%REC	1	7/13/2012 1:13:00 PM
Surr: Dibromofluoromethane	90.7	0	50-133		%REC	1	7/13/2012 1:13:00 PM
Surr: Toluene-d8	98.8	0	53-130		%REC	1	7/13/2012 1:13:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 17-Jul-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1207111
Project: 79 Pondfield Rd., Bronxville, NY
Lab ID: 1207111-03A

Client Sample ID: ACT-16 13-15'
Collection Date: 7/12/2012 1:30:00 PM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
PERCENT MOISTURE							
Percent Moisture	15.3	0	D2216 0		wt%	1	Analyst: CF 7/16/2012
VOLATILE SW-846 METHOD 8260							
			SW8260C				Analyst: LA
1,1,1,2-Tetrachloroethane	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
1,1,1-Trichloroethane	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
1,1,2,2-Tetrachloroethane	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
1,1,2-Trichloroethane	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
1,1-Dichloroethane	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
1,1-Dichloroethene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
1,1-Dichloropropene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
1,2,3-Trichlorobenzene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
1,2,3-Trichloropropane	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
1,2,4,5-Tetramethylbenzene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
1,2,4-Trichlorobenzene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
1,2,4-Trimethylbenzene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
1,2-Dibromo-3-chloropropane	U	0.59	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
1,2-Dibromoethane	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
1,2-Dichlorobenzene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
1,2-Dichloroethane	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
1,2-Dichloropropane	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
1,3,5-Trimethylbenzene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
1,3-Dichlorobenzene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
1,3-dichloropropane	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
1,4-Dichlorobenzene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
1,4-Dioxane	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
2,2-Dichloropropane	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
2-Butanone	U	1.5	5.9		µg/Kg-dry	1	7/13/2012 1:36:00 PM
2-Chloroethyl vinyl ether	U	0.59	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
2-Chlorotoluene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
2-Hexanone	U	1.5	5.9		µg/Kg-dry	1	7/13/2012 1:36:00 PM
2-Propanol	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
4-Chlorotoluene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 17-Jul-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1207111
Project: 79 Pondfield Rd., Bronxville, NY
Lab ID: 1207111-03A

Client Sample ID: ACT-16 13-15'
Collection Date: 7/12/2012 1:30:00 PM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
4-Isopropyltoluene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
4-Methyl-2-pentanone	U	1.5	5.9		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Acetone	U	1.5	5.9		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Acrolein	U	5.9	12		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Acrylonitrile	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Benzene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Bromobenzene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Bromochloromethane	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Bromodichloromethane	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Bromoform	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Bromomethane	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Carbon disulfide	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Carbon tetrachloride	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Chlorobenzene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Chlorodifluoromethane	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Chloroethane	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Chloroform	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Chloromethane	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
cis-1,2-Dichloroethene	1.2	0.29	2.3	J	µg/Kg-dry	1	7/13/2012 1:36:00 PM
cis-1,3-Dichloropropene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Dibromochloromethane	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Dibromomethane	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Dichlorodifluoromethane	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Diisopropyl ether	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Ethanol	U	2.9	5.9		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Ethyl acetate	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Ethylbenzene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Freon-114	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Hexachlorobutadiene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Isopropyl acetate	U	1.2	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Isopropylbenzene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
m,p-Xylene	U	0.59	4.7		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Methyl Acetate	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
 Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 17-Jul-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1207111
Project: 79 Pondfield Rd., Bronxville, NY
Lab ID: 1207111-03A

Client Sample ID: ACT-16 13-15'
Collection Date: 7/12/2012 1:30:00 PM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Methyl tert-butyl ether	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Methylene chloride	7.5	0.29	2.3	B	µg/Kg-dry	1	7/13/2012 1:36:00 PM
n-Amyl acetate	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Naphthalene	0.77	0.29	2.3	J	µg/Kg-dry	1	7/13/2012 1:36:00 PM
n-Butyl acetate	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
n-Butylbenzene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
n-Propyl acetate	U	0.59	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
n-Propylbenzene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
o-Xylene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
p-Diethylbenzene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
p-Ethyltoluene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
sec-Butylbenzene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Styrene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
t-Butyl alcohol	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
tert-Butylbenzene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Tetrachloroethene	270	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Toluene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
trans-1,2-Dichloroethene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
trans-1,3-Dichloropropene	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Trichloroethene	2.1	0.29	2.3	J	µg/Kg-dry	1	7/13/2012 1:36:00 PM
Trichlorofluoromethane	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Vinyl acetate	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Vinyl chloride	U	0.29	2.3		µg/Kg-dry	1	7/13/2012 1:36:00 PM
Surr: 4-Bromofluorobenzene	92.3	0	42-133		%REC	1	7/13/2012 1:36:00 PM
Surr: Dibromofluoromethane	90.7	0	50-133		%REC	1	7/13/2012 1:36:00 PM
Surr: Toluene-d8	101	0	53-130		%REC	1	7/13/2012 1:36:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 17-Jul-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.

Client Sample ID: ACT-17 13-15'

Lab Order: 1207111

Collection Date: 7/12/2012 2:30:00 PM

Project: 79 Pondfield Rd., Bronxville, NY

Matrix: SOIL

Lab ID: 1207111-04A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
PERCENT MOISTURE							
Percent Moisture	18.4	0	0		wt%	1	Analyst: CF 7/16/2012
VOLATILE SW-846 METHOD 8260							
			D2216				Analyst: LA
			SW8260C				
1,1,1,2-Tetrachloroethane	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
1,1,1-Trichloroethane	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
1,1,2,2-Tetrachloroethane	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
1,1,2-Trichloroethane	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
1,1-Dichloroethane	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
1,1-Dichloroethene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
1,1-Dichloropropene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
1,2,3-Trichlorobenzene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
1,2,3-Trichloropropane	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
1,2,4,5-Tetramethylbenzene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
1,2,4-Trichlorobenzene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
1,2,4-Trimethylbenzene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
1,2-Dibromo-3-chloropropane	U	0.61	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
1,2-Dibromoethane	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
1,2-Dichlorobenzene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
1,2-Dichloroethane	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
1,2-Dichloropropane	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
1,3,5-Trimethylbenzene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
1,3-Dichlorobenzene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
1,3-dichloropropane	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
1,4-Dichlorobenzene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
1,4-Dioxane	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
2,2-Dichloropropane	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
2-Butanone	U	1.5	6.1		µg/Kg-dry	1	7/13/2012 1:59:00 PM
2-Chloroethyl vinyl ether	U	0.61	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
2-Chlorotoluene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
2-Hexanone	U	1.5	6.1		µg/Kg-dry	1	7/13/2012 1:59:00 PM
2-Propanol	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
4-Chlorotoluene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 17-Jul-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1207111
Project: 79 Pondfield Rd., Bronxville, NY
Lab ID: 1207111-04A

Client Sample ID: ACT-17 13-15'
Collection Date: 7/12/2012 2:30:00 PM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
4-Isopropyltoluene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
4-Methyl-2-pentanone	U	1.5	6.1		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Acetone	U	1.5	6.1		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Acrolein	U	6.1	12		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Acrylonitrile	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Benzene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Bromobenzene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Bromochloromethane	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Bromodichloromethane	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Bromoform	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Bromomethane	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Carbon disulfide	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Carbon tetrachloride	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Chlorobenzene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Chlorodifluoromethane	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Chloroethane	U	0.3	2.4	C	µg/Kg-dry	1	7/13/2012 1:59:00 PM
Chloroform	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Chloromethane	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
cis-1,2-Dichloroethene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
cis-1,3-Dichloropropene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Dibromochloromethane	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Dibromomethane	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Dichlorodifluoromethane	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Diisopropyl ether	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Ethanol	U	3	6.1		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Ethyl acetate	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Ethylbenzene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Freon-114	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Hexachlorobutadiene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Isopropyl acetate	U	1.2	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Isopropylbenzene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
m,p-Xylene	U	0.61	4.8		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Methyl Acetate	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 17-Jul-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1207111
Project: 79 Pondfield Rd., Bronxville, NY
Lab ID: 1207111-04A

Client Sample ID: ACT-17 13-15'
Collection Date: 7/12/2012 2:30:00 PM
Matrix: SOIL

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C			Analyst: LA	
Methyl tert-butyl ether	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Methylene chloride	8.3	0.3	2.4	B	µg/Kg-dry	1	7/13/2012 1:59:00 PM
n-Amyl acetate	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Naphthalene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
n-Butyl acetate	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
n-Butylbenzene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
n-Propyl acetate	U	0.61	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
n-Propylbenzene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
o-Xylene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
p-Diethylbenzene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
p-Ethyltoluene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
sec-Butylbenzene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Styrene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
t-Butyl alcohol	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
tert-Butylbenzene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Tetrachloroethene	0.70	0.3	2.4	J	µg/Kg-dry	1	7/13/2012 1:59:00 PM
Toluene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
trans-1,2-Dichloroethene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
trans-1,3-Dichloropropene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Trichloroethene	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Trichlorofluoromethane	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Vinyl acetate	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Vinyl chloride	U	0.3	2.4		µg/Kg-dry	1	7/13/2012 1:59:00 PM
Surr: 4-Bromofluorobenzene	94.3	0	42-133		%REC	1	7/13/2012 1:59:00 PM
Surr: Dibromofluoromethane	89.3	0	50-133		%REC	1	7/13/2012 1:59:00 PM
Surr: Toluene-d8	101	0	53-130		%REC	1	7/13/2012 1:59:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 17-Jul-12

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1207111
Project: 79 Pondfield Rd., Bronxville, NY

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: V624LCS-071312YS		SampType: LCS		TestCode: DryFull8260_			Units: µg/Kg		Prep Date: 7/13/2012		RunNo: 64277	
Client ID: LCSS		Batch ID: R64277		TestNo: SW8260C					Analysis Date: 7/13/2012		SeqNo: 908314	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Lowlimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1,1-Trichloroethane	43	2.0	50.00	0	85.7	40	125					
1,1,2,2-Tetrachloroethane	41	2.0	50.00	0	82.2	41	130					
1,1,2-Trichloroethane	44	2.0	50.00	0	88.5	43	121					
1,1-Dichloroethane	44	2.0	50.00	0	87.8	42	126					
1,1-Dichloroethene	51	2.0	50.00	0	101	40	126					
1,2-Dichlorobenzene	42	2.0	50.00	0	83.9	41	122					
1,2-Dichloroethane	44	2.0	50.00	0	87.5	42	133					
1,2-Dichloropropane	47	2.0	50.00	0	93.2	41	128					
1,3-Dichlorobenzene	43	2.0	50.00	0	85.3	45	119					
1,4-Dichlorobenzene	42	2.0	50.00	0	84.3	46	121					
2-Chloroethyl vinyl ether	48	2.0	50.00	0	97.0	30	135					
Benzene	45	2.0	50.00	0	90.1	35	123					
Bromodichloromethane	41	2.0	50.00	0	82.5	37	130					
Bromoform	42	2.0	50.00	0	83.1	43	121					
Bromomethane	31	2.0	50.00	0	62.2	32	130					
Carbon tetrachloride	43	2.0	50.00	0	86.8	37	134					
Chlorobenzene	45	2.0	50.00	0	89.3	40	124					
Chloroethane	24	2.0	50.00	0	49.0	35	141					
Chloroform	39	2.0	50.00	0	78.9	36	126					
Chloromethane	33	2.0	50.00	0	65.9	42	141					
cis-1,3-Dichloropropene	41	2.0	50.00	0	82.6	30	130					
Dibromochloromethane	43	2.0	50.00	0	85.2	43	125					
Ethylbenzene	45	2.0	50.00	0	90.6	44	122					
Methylene chloride	44	2.0	50.00	0	88.8	32	132					
Tetrachloroethene	40	2.0	50.00	0	80.3	31	120					
Toluene	47	2.0	50.00	0	93.5	42	124					
trans-1,2-Dichloroethene	42	2.0	50.00	0	84.6	38	122					
trans-1,3-Dichloropropene	39	2.0	50.00	0	78.8	45	123					
Trichloroethene	45	2.0	50.00	0	89.6	46	124					
Trichlorofluoromethane	38	2.0	50.00	0	75.7	45	137					

B

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1207111
Project: 79 Pondfield Rd., Bronxville, NY

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: V624LCS-071312YS	SampType: LCS	TestCode: DryFull8260_	Units: µg/Kg	Prep Date: 7/13/2012	RunNo: 64277						
Client ID: LCSS	Batch ID: R64277	TestNo: SW8260C		Analysis Date: 7/13/2012	SeqNo: 908314						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Vinyl chloride	41	2.0	50.00	0	82.4	46	139				
Surr: 4-Bromofluorobenzene	48		50.00		96.6	42	133				
Surr: Dibromofluoromethane	50		50.00		99.3	50	133				
Surr: Toluene-d8	52		50.00		104	53	130				

Sample ID: VBLK-071312YS	SampType: MBLK	TestCode: DryFull8260_	Units: µg/Kg	Prep Date: 7/13/2012	RunNo: 64277						
Client ID: PBS	Batch ID: R64277	TestNo: SW8260C		Analysis Date: 7/13/2012	SeqNo: 908315						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1,2-Tetrachloroethane	U	2.0									
1,1,1-Trichloroethane	U	2.0									
1,1,2,2-Tetrachloroethane	U	2.0									
1,1,2-Trichloro-1,2,2-trifluoroethane	U	2.0									
1,1,2-Trichloroethane	U	2.0									
1,1-Dichloroethane	U	2.0									
1,1-Dichloroethene	U	2.0									
1,1-Dichloropropene	U	2.0									
1,2,3-Trichlorobenzene	U	2.0									
1,2,3-Trichloropropane	U	2.0									
1,2,4,5-Tetramethylbenzene	U	2.0									
1,2,4-Trichlorobenzene	U	2.0									
1,2,4-Trimethylbenzene	U	2.0									
1,2-Dibromo-3-chloropropane	U	2.0									
1,2-Dibromoethane	U	2.0									
1,2-Dichlorobenzene	U	2.0									
1,2-Dichloroethane	U	2.0									
1,2-Dichloropropane	U	2.0									
1,3,5-Trimethylbenzene	U	2.0									
1,3-Dichlorobenzene	U	2.0									
1,3-dichloropropane	U	2.0									
1,4-Dichlorobenzene	U	2.0									

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits

C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1207111
Project: 79 Pondfield Rd., Bronxville, NY

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: VBLK-071312YS		SampType: MBLK		TestCode: DryFull8260_		Units: µg/Kg		Prep Date: 7/13/2012		RunNo: 64277		
Client ID: PBS		Batch ID: R64277		TestNo: SW8260C				Analysis Date: 7/13/2012		SeqNo: 908315		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane		U	2.0									
2,2-Dichloropropane		U	2.0									
2-Butanone		U	5.0									
2-Chloroethyl vinyl ether		U	2.0									
2-Chlorotoluene		U	2.0									
2-Hexanone		U	5.0									
2-Propanol		U	2.0									
4-Chlorotoluene		U	2.0									
4-Isopropyltoluene		U	2.0									
4-Methyl-2-pentanone		U	5.0									
Acetone		U	5.0									
Acrolein		U	10									
Acrylonitrile		U	2.0									
Benzene		U	2.0									
Bromobenzene		U	2.0									
Bromochloromethane		U	2.0									
Bromodichloromethane		U	2.0									
Bromoform		U	2.0									
Bromomethane		U	2.0									
Carbon disulfide		U	2.0									
Carbon tetrachloride		U	2.0									
Chlorobenzene		U	2.0									
Chlorodifluoromethane		U	2.0									
Chloroethane		U	2.0									
Chloroform		U	2.0									
Chloromethane		U	2.0									
cis-1,2-Dichloroethene		U	2.0									
cis-1,3-Dichloropropene		U	2.0									
Dibromochloromethane		U	2.0									
Dibromomethane		U	2.0									
Dichlorodifluoromethane		U	2.0									

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1207111
Project: 79 Pondfield Rd., Bronxville, NY

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: VBLK-071312YS		SampType: MBLK		TestCode: DryFull8260_		Units: µg/Kg		Prep Date: 7/13/2012		RunNo: 64277		
Client ID: PBS		Batch ID: R64277		TestNo: SW8260C				Analysis Date: 7/13/2012		SeqNo: 908315		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diisopropyl ether		U	2.0									
Ethanol		U	5.0									
Ethyl acetate		U	2.0									
Ethylbenzene		U	2.0									
Freon-114		U	2.0									
Hexachlorobutadiene		U	2.0									
Isopropyl acetate		U	2.0									
Isopropylbenzene		U	2.0									
m,p-Xylene		U	4.0									
Methyl Acetate		U	2.0									
Methyl tert-butyl ether		U	2.0									
Methylene chloride		5.3	2.0									
n-Amyl acetate		U	2.0									
Naphthalene		U	2.0									
n-Butyl acetate		U	2.0									
n-Butylbenzene		U	2.0									
n-Propyl acetate		U	2.0									
n-Propylbenzene		U	2.0									
o-Xylene		U	2.0									
p-Diethylbenzene		U	2.0									
p-Ethyltoluene		U	2.0									
sec-Butylbenzene		U	2.0									
Styrene		U	2.0									
t-Butyl alcohol		U	2.0									
tert-Butylbenzene		U	2.0									
Tetrachloroethene		U	2.0									
Toluene		U	2.0									
trans-1,2-Dichloroethene		U	2.0									
trans-1,3-Dichloropropene		U	2.0									
Trichloroethene		U	2.0									
Trichlorofluoromethane		U	2.0									

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analysis
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1207111
Project: 79 Pondfield Rd., Bronxville, NY

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: VBLK-071312YS	SampType: MBLK	TestCode: DryFull8260_	Units: µg/Kg	Prep Date: 7/13/2012	RunNo: 64277						
Client ID: PBS	Batch ID: R64277	TestNo: SW8260C		Analysis Date: 7/13/2012	SeqNo: 908315						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Vinyl acetate	U	2.0									
Vinyl chloride	U	2.0									
Surr: 4-Bromofluorobenzene	47		50.00		94.2	42	133				
Surr: Dibromofluoromethane	50		50.00		101	50	133				
Surr: Toluene-d8	50		50.00		101	53	130				

Sample ID: V624LCS-071312YS	SampType: LCS	TestCode: DryFull8260_	Units: µg/Kg	Prep Date: 7/13/2012	RunNo: 64277						
Client ID: LCSS	Batch ID: R64277A	TestNo: SW8260C		Analysis Date: 7/13/2012	SeqNo: 908318						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	46	2.0	50.00	0	92.7	40	125				
1,1,2,2-Tetrachloroethane	45	2.0	50.00	0	89.7	41	130				
1,1,2-Trichloroethane	49	2.0	50.00	0	97.8	43	121				
1,1-Dichloroethane	47	2.0	50.00	0	94.4	42	126				
1,1-Dichloroethene	55	2.0	50.00	0	109	40	126				
1,2-Dichlorobenzene	45	2.0	50.00	0	89.2	41	122				
1,2-Dichloroethane	49	2.0	50.00	0	97.2	42	133				
1,2-Dichloropropane	50	2.0	50.00	0	100	41	128				
1,3-Dichlorobenzene	45	2.0	50.00	0	90.1	45	119				
1,4-Dichlorobenzene	44	2.0	50.00	0	88.7	46	121				
2-Chloroethyl vinyl ether	52	2.0	50.00	0	103	30	135				
Benzene	47	2.0	50.00	0	94.2	35	123				
Bromodichloromethane	46	2.0	50.00	0	91.8	37	130				
Bromoform	44	2.0	50.00	0	88.4	43	121				
Bromomethane	37	2.0	50.00	0	73.3	32	130				
Carbon tetrachloride	46	2.0	50.00	0	92.1	37	134				
Chlorobenzene	45	2.0	50.00	0	89.4	40	124				
Chloroethane	25	2.0	50.00	0	50.4	35	141				
Chloroform	46	2.0	50.00	0	91.0	36	126				
Chloromethane	41	2.0	50.00	0	82.8	42	141				
cis-1,3-Dichloropropene	46	2.0	50.00	0	91.1	30	130				C

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1207111
Project: 79 Pondfield Rd., Bronxville, NY

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: V624LCS-071312YS		SampType: LCS		TestCode: DryFull8260_		Units: µg/Kg		Prep Date: 7/13/2012		RunNo: 64277	
Client ID: LCSS		Batch ID: R64277A		TestNo: SW8260C				Analysis Date: 7/13/2012		SeqNo: 908318	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dibromochloromethane	47	2.0	50.00	0	93.7	43	125				
Ethylbenzene	46	2.0	50.00	0	92.2	44	122				
Methylene chloride	50	2.0	50.00	0	100	32	132				
Tetrachloroethene	44	2.0	50.00	0	87.6	31	120				
Toluene	49	2.0	50.00	0	98.8	42	124				
trans-1,2-Dichloroethene	45	2.0	50.00	0	89.9	38	122				
trans-1,3-Dichloropropene	43	2.0	50.00	0	86.9	45	123				B
Trichloroethene	48	2.0	50.00	0	96.7	46	124				
Trichlorofluoromethane	41	2.0	50.00	0	82.7	45	137				
Vinyl chloride	45	2.0	50.00	0	90.6	46	139				
Surr: 4-Bromofluorobenzene	48		50.00		96.5	42	133				
Surr: Dibromofluoromethane	52		50.00		103	50	133				
Surr: Toluene-d8	52		50.00		105	53	130				

Sample ID: VBLK-071312YS		SampType: MBLK		TestCode: DryFull8260_		Units: µg/Kg		Prep Date: 7/13/2012		RunNo: 64277	
Client ID: PBS		Batch ID: R64277A		TestNo: SW8260C				Analysis Date: 7/13/2012		SeqNo: 908319	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	U	2.0									
1,1,1-Trichloroethane	U	2.0									
1,1,2,2-Tetrachloroethane	U	2.0									
1,1,2-Trichloro-1,2,2-trifluoroethane	U	2.0									
1,1,2-Trichloroethane	U	2.0									
1,1-Dichloroethane	U	2.0									
1,1-Dichloroethene	U	2.0									
1,1-Dichloropropene	U	2.0									
1,2,3-Trichlorobenzene	U	2.0									
1,2,3-Trichloropropane	U	2.0									
1,2,4,5-Tetramethylbenzene	U	2.0									
1,2,4-Trichlorobenzene	U	2.0									
1,2,4-Trimethylbenzene	U	2.0									

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1207111
Project: 79 Pondfield Rd., Bronxville, NY

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: VBLK-071312YS	SampType: MBLK	TestCode: DryFull8260_	Units: µg/Kg	Prep Date: 7/13/2012	RunNo: 64277						
Client ID: PBS	Batch ID: R64277A	TestNo: SW8260C		Analysis Date: 7/13/2012	SeqNo: 908319						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	U	2.0									
1,2-Dibromoethane	U	2.0									
1,2-Dichlorobenzene	U	2.0									
1,2-Dichloroethane	U	2.0									
1,2-Dichloropropane	U	2.0									
1,3,5-Trimethylbenzene	U	2.0									
1,3-Dichlorobenzene	U	2.0									
1,3-dichloropropane	U	2.0									
1,4-Dichlorobenzene	U	2.0									
1,4-Dioxane	U	2.0									
2,2-Dichloropropane	U	2.0									
2-Butanone	U	5.0									
2-Chloroethyl vinyl ether	U	2.0									
2-Chlorotoluene	U	2.0									
2-Hexanone	U	5.0									
2-Propanol	U	2.0									
4-Chlorotoluene	U	2.0									
4-Isopropyltoluene	U	2.0									
4-Methyl-2-pentanone	U	5.0									
Acetone	U	5.0									
Acrolein	U	10									
Acrylonitrile	U	2.0									
Benzene	U	2.0									
Bromobenzene	U	2.0									
Bromochloromethane	U	2.0									
Bromodichloromethane	U	2.0									
Bromoform	U	2.0									
Bromomethane	U	2.0									
Carbon disulfide	U	2.0									
Carbon tetrachloride	U	2.0									
Chlorobenzene	U	2.0									

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %KSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1207111
Project: 79 Pondfield Rd., Bronxville, NY

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: VBLK-071312YS	SampType: MBLK	TestCode: DryFull8260_	Units: µg/Kg	Prep Date: 7/13/2012	RunNo: 64277						
Client ID: PBS	Batch ID: R64277A	TestNo: SW8260C		Analysis Date: 7/13/2012	SeqNo: 908319						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorodifluoromethane	U	2.0									C
Chloroethane	U	2.0									
Chloroform	U	2.0									
Chloromethane	U	2.0									
cis-1,2-Dichloroethene	U	2.0									
cis-1,3-Dichloropropene	U	2.0									
Dibromochloromethane	U	2.0									
Dibromomethane	U	2.0									
Dichlorodifluoromethane	U	2.0									
Diisopropyl ether	U	2.0									
Ethanol	U	5.0									
Ethyl acetate	U	2.0									
Ethylbenzene	U	2.0									
Freon-114	U	2.0									
Hexachlorobutadiene	U	2.0									
Isopropyl acetate	U	2.0									
Isopropylbenzene	U	2.0									
m,p-Xylene	U	4.0									
Methyl Acetate	U	2.0									
Methyl tert-butyl ether	U	2.0									
Methylene chloride	5.7	2.0									
n-Amyl acetate	U	2.0									
Naphthalene	U	2.0									
n-Butyl acetate	U	2.0									
n-Butylbenzene	U	2.0									
n-Propyl acetate	U	2.0									
n-Propylbenzene	U	2.0									
o-Xylene	U	2.0									
p-Diethylbenzene	U	2.0									
p-Ethyltoluene	U	2.0									
sec-Butylbenzene	U	2.0									

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits
C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1207111
Project: 79 Pondfield Rd., Bronxville, NY

ANALYTICAL QC SUMMARY REPORT

TestCode: DryFull8260_Soil

Sample ID: VBLK-071312YS		SampType: MBLK		TestCode: DryFull8260_		Units: µg/Kg		Prep Date: 7/13/2012		RunNo: 64277			
Client ID: PBS		Batch ID: R64277A		TestNo: SW8260C		Analysis Date: 7/13/2012						SeqNo: 908319	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Styrene	U	2.0											
t-Butyl alcohol	U	2.0											
tert-Butylbenzene	U	2.0											
Tetrachloroethene	U	2.0											
Toluene	U	2.0											
trans-1,2-Dichloroethene	U	2.0											
trans-1,3-Dichloropropene	U	2.0											
Trichloroethene	U	2.0											
Trichlorofluoromethane	U	2.0											
Vinyl acetate	U	2.0											
Vinyl chloride	U	2.0											
Surr: 4-Bromofluorobenzene	49		50.00		97.3	42		133					
Surr: Dibromofluoromethane	51		50.00		101	50		133					
Surr: Toluene-d8	51		50.00		103	53		130					

Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes	H	Holding times for preparation or analy
J		Analyte detected below quantitation limits	P	>40% diff for detected conc between the two GC column	PQL	Practical Quantitation Limit
R		RPD outside accepted recovery limits	S	Spike Recovery outside accepted recovery limits	U	Indicates the compound was analyzed

Thursday, August 23, 2012

Paul P. Stewart
Advanced Cleanup Technologies, Inc.
960 So. Broadway, Suite 100
Hicksville, NY 11801

TEL: (516) 933-0655

FAX (516) 933-0659

RE: 79 Pondfield Rd., Bronxville, NY (#8832-B

Order No.: 1208178

Dear Paul P. Stewart:

American Analytical Laboratories, LLC. received 2 sample(s) on 8/20/2012 for the analyses presented in the following report.

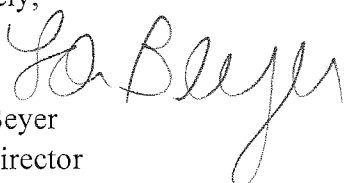
Samples were analyzed in accordance with the test procedures documented on the chain of custody and detailed throughout the text of this report.

The results reported herein relate only to the items tested or to the samples as received by the laboratory. This report may not be reproduced, except in full, without the approval of American Analytical Laboratories, LLC and is not considered complete without a cover page and chain of custody documentation. The limits (LOQ) provided in the data package are analytical reporting limits and not Federal or Local mandated values to which the sample results should be compared.

There were no problems with the analyses and all data for associated QC met laboratory specifications. If there are any exceptions a Case Narrative is provided in the report or the data is qualified either on the sample results or in the QC section of the report. This package has been reviewed by American Analytical Laboratories' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal. This report consists of 12 pages.

If you have any questions regarding these tests results, please do not hesitate to call (631) 454-6100 or email me directly at lbeyer@american-analytical.com.

Sincerely,



Lori Beyer
Lab Director

American Analytical Laboratories, LLC.

Date: 23-Aug-12

CLIENT: Advanced Cleanup Technologies, Inc.
Project: 79 Pondfield Rd., Bronxville, NY (#8832-BVN)
Lab Order: 1208178

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date Collected	Date Received
1208178-01A	Blower Exhaust	8/15/2012 2:00:00 PM	8/20/2012
1208178-02A	Exhaust	8/15/2012 2:00:00 PM	8/20/2012

CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT

[illegible]

American Analytical Laboratories, LLC.

Sample Receipt Checklist

Client Name **ADVANCED CLEANUP TECH**

Date and Time Receive **8/20/2012 2:04:45 PM**

Work Order Numbe **1208178**

RcptNo: **1**

Received by **PM**

COC_ID:

CoolerID:

Checklist completed b

Signature

Date

Reviewed by

Initials

Date

Matrix

Carrier name Courier

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Presen ☐

Custody seals intact on shipping container/cooler?

Yes ☐

No ☐

Not Presen ☒

Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Presen ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☐

No ☒

Container/Temp Blank temperature in compliance?

Yes ☒

No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☒

Yes ☐

No ☐

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☐

Adjusted? _____

Checked b _____

Any No and/or NA (not applicable) response must be detailed in the comments section b

Client contacted _____

Date contacted: _____

Person contacted _____

Contacted by: _____

Regarding _____

Comments:

Corrective Action

TEOLARS OUTSIDE 75 haw HT.

American Analytical Laboratories, LLC.

Date: 23-Aug-12

ELAP ID : 11418

CLIENT:	Advanced Cleanup Technologies, Inc.	Client Sample ID:	Blower Exhaust
Lab Order:	1208178	Collection Date:	8/15/2012 2:00:00 PM
Project:	79 Pondfield Rd., Bronxville, NY (#8832-BVN)	Matrix:	AIR
Lab ID:	1208178-01A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILES TO-15M LIST			TO-15			Analyst: LA	
1,1,1-Trichloroethane	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
1,1,2,2-Tetrachloroethane	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
1,1,2-Trichloroethane	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
1,1-Dichloroethane	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
1,1-Dichloroethene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
1,2,4-Trichlorobenzene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
1,2,4-Trimethylbenzene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
1,2-Dibromoethane	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
1,2-Dichlorobenzene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
1,2-Dichloroethane	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
1,2-Dichloropropane	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
1,3,5-Trimethylbenzene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
1,3-Dichlorobenzene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
1,4-Dichlorobenzene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
alpha-Chlorotoluene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
Benzene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
Bromomethane	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
Carbon tetrachloride	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
Chlorobenzene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
Chloroethane	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
Chloroform	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
Chloromethane	U	0.2	1.0	CH	ppbv	1	8/21/2012 1:16:00 PM
Chloroprene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
cis-1,2-Dichloroethene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
cis-1,3-Dichloropropene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
Dichlorodifluoromethane	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
Ethylbenzene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
Freon-114	U	0.2	1.0	CH	ppbv	1	8/21/2012 1:16:00 PM
Hexachlorobutadiene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
m,p-Xylene	U	0.4	2.0	H	ppbv	1	8/21/2012 1:16:00 PM
Methylene chloride	3800	0.2	1.0	BH	ppbv	1	8/21/2012 1:16:00 PM
o-Xylene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 23-Aug-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.

Client Sample ID: Blower Exhaust

Lab Order: 1208178

Collection Date: 8/15/2012 2:00:00 PM

Project: 79 Pondfield Rd., Bronxville, NY (#8832-BVN)

Matrix: AIR

Lab ID: 1208178-01A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILES TO-15M LIST			TO-15			Analyst: LA	
p-Ethyltoluene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
Styrene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
Tetrachloroethene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
Toluene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
trans-1,3-Dichloropropene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
Trichloroethene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
Trichlorofluoromethane	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
Vinyl chloride	U	0.2	1.0	H	ppbv	1	8/21/2012 1:16:00 PM
Surr: 4-Bromofluorobenzene	108	0	54-134	H	%REC	1	8/21/2012 1:16:00 PM
Surr: Dibromofluoromethane	101	0	52-132	H	%REC	1	8/21/2012 1:16:00 PM
Surr: Toluene-d8	99.7	0	51-127	H	%REC	1	8/21/2012 1:16:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 23-Aug-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.

Client Sample ID: Exhaust

Lab Order: 1208178

Collection Date: 8/15/2012 2:00:00 PM

Project: 79 Pondfield Rd., Bronxville, NY (#8832-BVN)

Matrix: AIR

Lab ID: 1208178-02A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILES TO-15M LIST			TO-15			Analyst: LA	
1,1,1-Trichloroethane	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
1,1,2,2-Tetrachloroethane	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
1,1,2-Trichloroethane	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
1,1-Dichloroethane	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
1,1-Dichloroethene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
1,2,4-Trichlorobenzene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
1,2,4-Trimethylbenzene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
1,2-Dibromoethane	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
1,2-Dichlorobenzene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
1,2-Dichloroethane	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
1,2-Dichloropropane	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
1,3,5-Trimethylbenzene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
1,3-Dichlorobenzene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
1,4-Dichlorobenzene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
alpha-Chlorotoluene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
Benzene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
Bromomethane	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
Carbon tetrachloride	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
Chlorobenzene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
Chloroethane	U	0.2	1.0	CH	ppbv	1	8/21/2012 1:40:00 PM
Chloroform	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
Chloromethane	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
Chloroprene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
cis-1,2-Dichloroethene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
cis-1,3-Dichloropropene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
Dichlorodifluoromethane	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
Ethylbenzene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
Freon-114	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
Hexachlorobutadiene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
m,p-Xylene	U	0.4	2.0	H	ppbv	1	8/21/2012 1:40:00 PM
Methylene chloride	3500	0.2	1.0	BH	ppbv	1	8/21/2012 1:40:00 PM
o-Xylene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 23-Aug-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.

Client Sample ID: Exhaust

Lab Order: 1208178

Collection Date: 8/15/2012 2:00:00 PM

Project: 79 Pondfield Rd., Bronxville, NY (#8832-BVN)

Matrix: AIR

Lab ID: 1208178-02A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILES TO-15M LIST			TO-15			Analyst: LA	
p-Ethyltoluene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
Styrene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
Tetrachloroethene	140	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
Toluene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
trans-1,3-Dichloropropene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
Trichloroethene	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
Trichlorofluoromethane	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
Vinyl chloride	U	0.2	1.0	H	ppbv	1	8/21/2012 1:40:00 PM
Surr: 4-Bromofluorobenzene	103	0	54-134	H	%REC	1	8/21/2012 1:40:00 PM
Surr: Dibromofluoromethane	103	0	52-132	H	%REC	1	8/21/2012 1:40:00 PM
Surr: Toluene-d8	104	0	51-127	H	%REC	1	8/21/2012 1:40:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 23-Aug-12

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1208178
Project: 79 Pondfield Rd., Bronxville, NY (#8832-BVN)

ANALYTICAL QC SUMMARY REPORT

TestCode: TO15m

Sample ID: V624LCS-082112YS		SampType: LCS	TestCode: TO15m		Units: ppbv	Prep Date:		RunNo: 64836			
Client ID: ZZZZZZ		Batch ID: R64836	TestNo: TO-15			Analysis Date: 8/21/2012		SeqNo: 917561			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	17000	1.0	20040	0	84.8	51	139				
Benzene	12000	1.0	15670	0	78.1	53	135				
Chlorobenzene	8100	1.0	10920	0	74.0	58	142				
Toluene	10000	1.0	13430	0	77.1	50	142				
Trichloroethene	7400	1.0	9404	0	78.7	53	131				
Surr: 4-Bromofluorobenzene	14000		12870		111	54	134				
Surr: Dibromofluoromethane	11000		10820		105	52	132				
Surr: Toluene-d8	12000		12470		99.2	51	127				

Sample ID: VBLK-082112YS		SampType: MBLK	TestCode: TO15m		Units: ppbv	Prep Date:		RunNo: 64836				
Client ID: ZZZZZZ		Batch ID: R64836	TestNo: TO-15			Analysis Date: 8/21/2012		SeqNo: 917562				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane		U	1.0									
1,1,2,2-Tetrachloroethane		U	1.0									
1,1,2-Trichloro-1,2,2-trifluoroethane		U	1.0									
1,1,2-Trichloroethane		U	1.0									
1,1-Dichloroethane		U	1.0									
1,1-Dichloroethene		U	1.0									
1,2,4-Trichlorobenzene		U	1.0									
1,2,4-Trimethylbenzene		U	1.0									
1,2-Dibromoethane		U	1.0									
1,2-Dichlorobenzene		U	1.0									
1,2-Dichloroethane		U	1.0									
1,2-Dichloropropane		U	1.0									
1,3,5-Trimethylbenzene		U	1.0									
1,3-Dichlorobenzene		U	1.0									
1,4-Dichlorobenzene		U	1.0									
alpha-Chlorotoluene		U	1.0									

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analyte
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1208178
Project: 79 Pondfield Rd., Bronxville, NY (#8832-BVN)

ANALYTICAL QC SUMMARY REPORT

TestCode: TO15m

Sample ID: VBLK-082112YS		SampType: MBLK	TestCode: TO15m	Units: ppbv	Prep Date:		RunNo: 64836				
Client ID: ZZZZZZ		Batch ID: R64836	TestNo: TO-15		Analysis Date: 8/21/2012		SeqNo: 917562				
Analyte	Result	PQL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	U	1.0									
Bromomethane	U	1.0									
Carbon tetrachloride	U	1.0									
Chlorobenzene	U	1.0									
Chloroethane	U	1.0									
Chloroform	U	1.0									
Chloromethane	U	1.0									C
Chloroprene	U	1.0									
cis-1,2-Dichloroethene	U	1.0									
cis-1,3-Dichloropropene	U	1.0									
Dichlorodifluoromethane	U	1.0									
Ethylbenzene	U	1.0									
Freon-114	U	1.0									C
Hexachlorobutadiene	U	1.0									
m,p-Xylene	U	2.0									
Methylene chloride	3300	1.0									
o-Xylene	U	1.0									
p-Ethyltoluene	U	1.0									
Styrene	U	1.0									
Tetrachloroethene	U	1.0									
Toluene	U	1.0									
trans-1,3-Dichloropropene	U	1.0									
Trichloroethene	U	1.0									
Trichlorofluoromethane	U	1.0									
Vinyl chloride	U	1.0									
Surr: 4-Bromofluorobenzene	14000		12870		112	54		134			
Surr: Dibromofluoromethane	12000		10820		107	52		132			
Surr: Toluene-d8	13000		12470		102	51		127			

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analy
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1208178
Project: 79 Pondfield Rd., Bronxville, NY (#8832-BVN)

ANALYTICAL QC SUMMARY REPORT

TestCode: TO15m

Sample ID: V624LCS-082112YS	SampType: LCS	TestCode: TO15m	Units: ppbv	Prep Date:	RunNo: 64836						
Client ID: ZZZZZZ	Batch ID: R64836A	TestNo: TO-15		Analysis Date: 8/21/2012	SeqNo: 917564						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1-Dichloroethene	17000	1.0	20040	0	87.1	51	139				
Benzene	15000	1.0	15670	0	93.2	53	135				
Chlorobenzene	8500	1.0	10920	0	77.6	58	142				
Toluene	11000	1.0	13430	0	85.1	50	142				
Trichloroethene	7600	1.0	9404	0	81.2	53	131				
Surr: 4-Bromofluorobenzene	14000		12870		110	54	134				
Surr: Dibromofluoromethane	12000		10820		114	52	132				
Surr: Toluene-d8	13000		12470		104	51	127				

Sample ID: VBLK-082112YS	SampType: MBLK	TestCode: TO15m	Units: ppbv	Prep Date:	RunNo: 64836						
Client ID: ZZZZZZ	Batch ID: R64836A	TestNo: TO-15		Analysis Date: 8/21/2012	SeqNo: 917565						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	U	1.0									
1,1,1,2-Tetrachloroethane	U	1.0									
1,1,2-Trichloro-1,2,2-trifluoroethane	U	1.0									
1,1,2-Trichloroethane	U	1.0									
1,1-Dichloroethane	U	1.0									
1,1-Dichloroethene	U	1.0									
1,2,4-Trichlorobenzene	U	1.0									
1,2,4-Trimethylbenzene	U	1.0									
1,2-Dibromoethane	U	1.0									
1,2-Dichlorobenzene	U	1.0									
1,2-Dichloroethane	U	1.0									
1,2-Dichloropropane	U	1.0									
1,3,5-Trimethylbenzene	U	1.0									
1,3-Dichlorobenzene	U	1.0									
1,4-Dichlorobenzene	U	1.0									
alpha-Chlorotoluene	U	1.0									
Benzene	U	1.0									
Bromomethane	U	1.0									

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analyte
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1208178
Project: 79 Pondfield Rd., Bronxville, NY (#8832-BVN)

ANALYTICAL QC SUMMARY REPORT

TestCode: TO15m

Sample ID: VBLK-082112YS		SampType: MBLK		TestCode: TO15m		Units: ppbv		Prep Date:		RunNo: 64836			
Client ID: ZZZZZZ		Batch ID: R64836A		TestNo: TO-15		Analysis Date: 8/21/2012						SeqNo: 917565	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Carbon tetrachloride		U	1.0										
Chlorobenzene		U	1.0										
Chloroethane		U	1.0										
Chloroform		U	1.0										
Chloromethane		U	1.0										
Chloroprene		U	1.0										
cis-1,2-Dichloroethene		U	1.0										
cis-1,3-Dichloropropene		U	1.0										
Dichlorodifluoromethane		U	1.0										
Ethylbenzene		U	1.0										
Freon-114		U	1.0										
Hexachlorobutadiene		U	1.0										
m,p-Xylene		U	2.0										
Methylene chloride		3000	1.0										
o-Xylene		U	1.0										
p-Ethyltoluene		U	1.0										
Styrene		U	1.0										
Tetrachloroethene		U	1.0										
Toluene		U	1.0										
trans-1,3-Dichloropropene		U	1.0										
Trichloroethene		U	1.0										
Trichlorofluoromethane		U	1.0										
Vinyl chloride		U	1.0										
Surr: 4-Bromofluorobenzene		14000		12870		106	54				134		
Surr: Dibromofluoromethane		12000		10810		108	52				132		
Surr: Toluene-d8		12000		12470		100	51				127		

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analyte
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

Monday, September 10, 2012

Paul P. Stewart
Advanced Cleanup Technologies, Inc.
960 So. Broadway, Suite 100
Hicksville, NY 11801

TEL: (516) 933-0655

FAX (516) 933-0659

RE: 79-81 Pondfield Rd., Bronxville, NY (6832-

Order No.: 1209032

Dear Paul P. Stewart:

American Analytical Laboratories, LLC. received 3 sample(s) on 9/7/2012 for the analyses presented in the following report.

Samples were analyzed in accordance with the test procedures documented on the chain of custody and detailed throughout the text of this report.

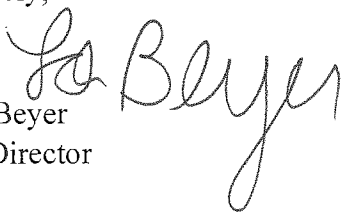
The results reported herein relate only to the items tested or to the samples as received by the laboratory. This report may not be reproduced, except in full, without the approval of American Analytical Laboratories, LLC and is not considered complete without a cover page and chain of custody documentation. The limits (LOQ) provided in the data package are analytical reporting limits and not Federal or Local mandated values to which the sample results should be compared.

There were no problems with the analyses and all data for associated QC met laboratory specifications. If there are any exceptions a Case Narrative is provided in the report or the data is qualified either on the sample results or in the QC section of the report. This package has been reviewed by American Analytical Laboratories' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal. This report consists of 12 pages.

If you have any questions regarding these tests results, please do not hesitate to call (631) 454-6100 or email me directly at lbeyer@american-analytical.com.

Sincerely,

Lori Beyer
Lab Director



American Analytical Laboratories, LLC.

Date: 10-Sep-12

CLIENT: Advanced Cleanup Technologies, Inc.
Project: 79-81 Pondfield Rd., Bronxville, NY (6832-BV)
Lab Order: 1209032

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date Collected	Date Received
1209032-01A	Exhaust #1	9/6/2012 11:00:00 AM	9/7/2012
1209032-02A	Exhaust #2	9/6/2012 1:00:00 PM	9/7/2012
1209032-03A	Exhaust #3	9/6/2012 2:00:00 PM	9/7/2012

CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT

[illegible]

American Analytical Laboratories, LLC.

Sample Receipt Checklist

Client Name **ADVANCED CLEANUP TECH**

Date and Time Receive **9/7/2012 9:49:20 AM**

Work Order Numbe **1209032**

RcptNo: **1**

Received by **CF**

COC_ID:

CoolerID:

Checklist completed b

Signature [Signature] Date 9/7/12

Reviewed by

Initials [Signature] Date 9/7/12

Matrix

Carrier name Courier

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Presen ☐

Custody seals intact on shipping container/cooler?

Yes ☐

No ☐

Not Presen ☒

Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Presen ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Container/Temp Blank temperature in compliance?

Yes ☒

No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☒

Yes ☐

No ☐

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☐

Adjusted? _____

Checked b _____

Any No and/or NA (not applicable) response must be detailed in the comments section b

Client contacted _____

Date contacted: _____

Person contacted _____

Contacted by: _____

Regarding _____

Comments: _____

Corrective Action _____

American Analytical Laboratories, LLC.

Date: 10-Sep-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
 Lab Order: 1209032
 Project: 79-81 Pondfield Rd., Bronxville, NY (6832-BV)
 Lab ID: 1209032-01A

Client Sample ID: Exhaust #1
 Collection Date: 9/6/2012 11:00:00 AM
 Matrix: AIR

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILES TO-15M LIST			TO-15			Analyst: LA	
1,1,1-Trichloroethane	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
1,1,2,2-Tetrachloroethane	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
1,1,2-Trichloroethane	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
1,1-Dichloroethane	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
1,1-Dichloroethene	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
1,2,4-Trichlorobenzene	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
1,2,4-Trimethylbenzene	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
1,2-Dibromoethane	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
1,2-Dichlorobenzene	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
1,2-Dichloroethane	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
1,2-Dichloropropane	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
1,3,5-Trimethylbenzene	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
1,3-Dichlorobenzene	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
1,4-Dichlorobenzene	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
alpha-Chlorotoluene	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
Benzene	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
Bromomethane	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
Carbon tetrachloride	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
Chlorobenzene	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
Chloroethane	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
Chloroform	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
Chloromethane	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
Chloroprene	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
cis-1,2-Dichloroethene	48	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
cis-1,3-Dichloropropene	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
Dichlorodifluoromethane	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
Ethylbenzene	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
Freon-114	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
Hexachlorobutadiene	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
m,p-Xylene	U	0.4	2.0		ppbv	1	9/7/2012 5:14:00 PM
Methylene chloride	3000	0.2	1.0	B	ppbv	1	9/7/2012 5:14:00 PM
o-Xylene	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 10-Sep-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1209032
Project: 79-81 Pondfield Rd., Bronxville, NY (6832-BV)
Lab ID: 1209032-01A

Client Sample ID: Exhaust #1
Collection Date: 9/6/2012 11:00:00 AM
Matrix: AIR

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILES TO-15M LIST				TO-15		Analyst: LA	
p-Ethyltoluene	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
Styrene	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
Tetrachloroethene	1200	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
Toluene	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
trans-1,3-Dichloropropene	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
Trichloroethene	47	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
Trichlorofluoromethane	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
Vinyl chloride	U	0.2	1.0		ppbv	1	9/7/2012 5:14:00 PM
Surr: 4-Bromofluorobenzene	87.8	0	54-134		%REC	1	9/7/2012 5:14:00 PM
Surr: Dibromofluoromethane	89.0	0	52-132		%REC	1	9/7/2012 5:14:00 PM
Surr: Toluene-d8	90.8	0	51-127		%REC	1	9/7/2012 5:14:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 10-Sep-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1209032
Project: 79-81 Pondfield Rd., Bronxville, NY (6832-BV)
Lab ID: 1209032-02A

Client Sample ID: Exhaust #2
Collection Date: 9/6/2012 1:00:00 PM
Matrix: AIR

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILES TO-15M LIST				TO-15		Analyst: LA	
1,1,1-Trichloroethane	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
1,1,2,2-Tetrachloroethane	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
1,1,2-Trichloroethane	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
1,1-Dichloroethane	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
1,1-Dichloroethene	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
1,2,4-Trichlorobenzene	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
1,2,4-Trimethylbenzene	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
1,2-Dibromoethane	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
1,2-Dichlorobenzene	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
1,2-Dichloroethane	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
1,2-Dichloropropane	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
1,3,5-Trimethylbenzene	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
1,3-Dichlorobenzene	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
1,4-Dichlorobenzene	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
alpha-Chlorotoluene	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
Benzene	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
Bromomethane	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
Carbon tetrachloride	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
Chlorobenzene	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
Chloroethane	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
Chloroform	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
Chloromethane	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
Chloroprene	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
cis-1,2-Dichloroethene	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
cis-1,3-Dichloropropene	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
Dichlorodifluoromethane	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
Ethylbenzene	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
Freon-114	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
Hexachlorobutadiene	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
m,p-Xylene	U	0.4	2.0		ppbv	1	9/7/2012 6:01:00 PM
Methylene chloride	3200	0.2	1.0	B	ppbv	1	9/7/2012 6:01:00 PM
o-Xylene	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 10-Sep-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.
Lab Order: 1209032
Project: 79-81 Pondfield Rd., Bronxville, NY (6832-BV)
Lab ID: 1209032-02A

Client Sample ID: Exhaust #2
Collection Date: 9/6/2012 1:00:00 PM
Matrix: AIR

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILES TO-15M LIST				TO-15		Analyst: LA	
p-Ethyltoluene	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
Styrene	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
Tetrachloroethene	1300	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
Toluene	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
trans-1,3-Dichloropropene	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
Trichloroethene	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
Trichlorofluoromethane	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
Vinyl chloride	U	0.2	1.0		ppbv	1	9/7/2012 6:01:00 PM
Surr: 4-Bromofluorobenzene	86.6	0	54-134		%REC	1	9/7/2012 6:01:00 PM
Surr: Dibromofluoromethane	91.0	0	52-132		%REC	1	9/7/2012 6:01:00 PM
Surr: Toluene-d8	91.2	0	51-127		%REC	1	9/7/2012 6:01:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 10-Sep-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.

Client Sample ID: Exhaust #3

Lab Order: 1209032

Collection Date: 9/6/2012 2:00:00 PM

Project: 79-81 Pondfield Rd., Bronxville, NY (6832-BV

Matrix: AIR

Lab ID: 1209032-03A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILES TO-15M LIST			TO-15			Analyst: LA	
1,1,1-Trichloroethane	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
1,1,2,2-Tetrachloroethane	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
1,1,2-Trichloroethane	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
1,1-Dichloroethane	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
1,1-Dichloroethene	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
1,2,4-Trichlorobenzene	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
1,2,4-Trimethylbenzene	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
1,2-Dibromoethane	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
1,2-Dichlorobenzene	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
1,2-Dichloroethane	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
1,2-Dichloropropane	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
1,3,5-Trimethylbenzene	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
1,3-Dichlorobenzene	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
1,4-Dichlorobenzene	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
alpha-Chlorotoluene	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
Benzene	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
Bromomethane	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
Carbon tetrachloride	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
Chlorobenzene	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
Chloroethane	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
Chloroform	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
Chloromethane	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
Chloroprene	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
cis-1,2-Dichloroethene	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
cis-1,3-Dichloropropene	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
Dichlorodifluoromethane	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
Ethylbenzene	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
Freon-114	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
Hexachlorobutadiene	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
m,p-Xylene	U	0.4	2.0		ppbv	1	9/7/2012 6:48:00 PM
Methylene chloride	3300	0.2	1.0	B	ppbv	1	9/7/2012 6:48:00 PM
o-Xylene	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 10-Sep-12

ELAP ID : 11418

CLIENT:	Advanced Cleanup Technologies, Inc.	Client Sample ID:	Exhaust #3
Lab Order:	1209032	Collection Date:	9/6/2012 2:00:00 PM
Project:	79-81 Pondfield Rd., Bronxville, NY (6832-BV)	Matrix:	AIR
Lab ID:	1209032-03A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILES TO-15M LIST			TO-15				Analyst: LA
p-Ethyltoluene	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
Styrene	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
Tetrachloroethene	540	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
Toluene	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
trans-1,3-Dichloropropene	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
Trichloroethene	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
Trichlorofluoromethane	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
Vinyl chloride	U	0.2	1.0		ppbv	1	9/7/2012 6:48:00 PM
Surr: 4-Bromofluorobenzene	86.8	0	54-134		%REC	1	9/7/2012 6:48:00 PM
Surr: Dibromofluoromethane	90.2	0	52-132		%REC	1	9/7/2012 6:48:00 PM
Surr: Toluene-d8	91.4	0	51-127		%REC	1	9/7/2012 6:48:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735
 Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 10-Sep-12

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1209032
Project: 79-81 Pondfield Rd., Bronxville, NY (6832-BV)

ANALYTICAL QC SUMMARY REPORT

TestCode: TO15m

Sample ID: V624LCS-090712LW	SampType: LCS	TestCode: TO15m	Units: ppbv	Prep Date:	RunNo: 65089						
Client ID: ZZZZZZ	Batch ID: R65089	TestNo: TO-15		Analysis Date: 9/7/2012	SeqNo: 921832						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1-Dichloroethene	18000	1.0	20040	0	88.2	51	139				
Benzene	14000	1.0	15670	0	86.4	53	135				
Chlorobenzene	10000	1.0	10920	0	93.9	58	142				
Toluene	11000	1.0	13430	0	85.4	50	142				
Trichloroethene	8400	1.0	9404	0	88.9	53	131				
Surr: 4-Bromofluorobenzene	6700		7026		95.8	54	134				
Surr: Dibromofluoromethane	11000		10820		102	52	132				
Surr: Toluene-d8	12000		12470		95.7	51	127				

Sample ID: VBLK-090712LW	SampType: MBLK	TestCode: TO15m	Units: ppbv	Prep Date:	RunNo: 65089						
Client ID: ZZZZZZ	Batch ID: R65089	TestNo: TO-15		Analysis Date: 9/7/2012	SeqNo: 921833						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	U	1.0									
1,1,2,2-Tetrachloroethane	U	1.0									
1,1,2-Trichloro-1,2,2-trifluoroethane	U	1.0									
1,1,2-Trichloroethane	U	1.0									
1,1-Dichloroethane	U	1.0									
1,1-Dichloroethene	U	1.0									
1,2,4-Trichlorobenzene	U	1.0									
1,2,4-Trimethylbenzene	U	1.0									
1,2-Dibromoethane	U	1.0									
1,2-Dichlorobenzene	U	1.0									
1,2-Dichloroethane	U	1.0									
1,2-Dichloropropane	U	1.0									
1,3,5-Trimethylbenzene	U	1.0									
1,3-Dichlorobenzene	U	1.0									
1,4-Dichlorobenzene	U	1.0									
alpha-Chlorotoluene	U	1.0									

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits

C Calibration %gSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1209032
Project: 79-81 Pondfield Rd., Bronxville, NY (6832-BV)

ANALYTICAL QC SUMMARY REPORT

TestCode: TO15m

Sample ID: VBLK-090712LW	SampType: MBLK	TestCode: TO15m	Units: ppbv	Prep Date:	RunNo: 65089						
Client ID: ZZZZZZ	Batch ID: R65089	TestNo: TO-15		Analysis Date: 9/7/2012	SeqNo: 921833						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	U	1.0									
Bromomethane	U	1.0									
Carbon tetrachloride	U	1.0									
Chlorobenzene	U	1.0									
Chloroethane	U	1.0									
Chloroform	U	1.0									
Chloromethane	U	1.0									
Chloroprene	U	1.0									
cis-1,2-Dichloroethene	U	1.0									
cis-1,3-Dichloropropene	U	1.0									
Dichlorodifluoromethane	U	1.0									
Ethylbenzene	U	1.0									
Freon-114	U	1.0									
Hexachlorobutadiene	U	1.0									
m,p-Xylene	U	2.0									
Methylene chloride	4600	1.0									
o-Xylene	U	1.0									
p-Ethyltoluene	U	1.0									
Styrene	U	1.0									
Tetrachloroethene	U	1.0									
Toluene	U	1.0									
trans-1,3-Dichloropropene	U	1.0									
Trichloroethene	U	1.0									
Trichlorofluoromethane	U	1.0									
Vinyl chloride	U	1.0									
Surr: 4-Bromofluorobenzene	6500		7026		92.8	54		134			
Surr: Dibromofluoromethane	11000		10820		105	52		132			
Surr: Toluene-d8	12000		12470		92.9	51		127			

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or anal
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC columns PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

Wednesday, September 19, 2012

Paul P. Stewart
Advanced Cleanup Technologies, Inc.
960 So. Broadway, Suite 100
Hicksville, NY 11801

TEL: (516) 933-0655

FAX (516) 933-0659

RE: 79-81 Pondfield Rd., Bronxville, NY (6832-

Order No.: 1209136

Dear Paul P. Stewart:

American Analytical Laboratories, LLC. received 1 sample(s) on 9/13/2012 for the analyses presented in the following report.

Samples were analyzed in accordance with the test procedures documented on the chain of custody and detailed throughout the text of this report.

The results reported herein relate only to the items tested or to the samples as received by the laboratory. This report may not be reproduced, except in full, without the approval of American Analytical Laboratories, LLC and is not considered complete without a cover page and chain of custody documentation. The limits (LOQ) provided in the data package are analytical reporting limits and not Federal or Local mandated values to which the sample results should be compared.

There were no problems with the analyses and all data for associated QC met laboratory specifications. If there are any exceptions a Case Narrative is provided in the report or the data is qualified either on the sample results or in the QC section of the report. This package has been reviewed by American Analytical Laboratories' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal. This report consists of 2 pages.

If you have any questions regarding these tests results, please do not hesitate to call (631) 454-6100 or email me directly at lbeyer@american-analytical.com.

Sincerely,


Lori Beyer
Lab Director

American Analytical Laboratories, LLC.

Date: 19-Sep-12

CLIENT: Advanced Cleanup Technologies, Inc.
Project: 79-81 Pondfield Rd., Bronxville, NY (6832-BV)
Lab Order: 1209136

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date Collected	Date Received
1209136-01A	Exhaust	9/12/2012 2:00:00 PM	9/13/2012

WHITE-OFFICE / CANARY-LAB / PINK-SAMPLE CUSTODIAN / GOLDENROD-CLIENT

American Analytical Laboratories, LLC.

Sample Receipt Checklist

Client Name **ADVANCED CLEANUP TECH**

Date and Time Receive **9/13/2012 4:25:19 PM**

Work Order Number **1209136**

RcptNo: **1**

Received by **CF**

COC_ID:

CoolerID:

Checklist completed by

Signature

Date

Reviewed by

Initials

Date

Matrix

Carrier name Courier

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Presen ☐

Custody seals intact on shipping container/cooler?

Yes ☐

No ☐

Not Presen ☒

Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Presen ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Container/Temp Blank temperature in compliance?

Yes ☒

No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☒

Yes ☐

No ☐

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☐

Adjusted? _____

Checked by _____

Any No and/or NA (not applicable) response must be detailed in the comments section b

Client contacted _____

Date contacted: _____

Person contacted _____

Contacted by: _____

Regarding _____

Comments:

Corrective Action _____

American Analytical Laboratories, LLC.

Date: 19-Sep-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.

Client Sample ID: Exhaust

Lab Order: 1209136

Collection Date: 9/12/2012 2:00:00 PM

Project: 79-81 Pondfield Rd., Bronxville, NY (6832-BV

Matrix: AIR

Lab ID: 1209136-01A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILES TO-15M LIST			TO-15			Analyst: LA	
1,1,1-Trichloroethane	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
1,1,2,2-Tetrachloroethane	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
1,1,2-Trichloroethane	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
1,1-Dichloroethane	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
1,1-Dichloroethene	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
1,2,4-Trichlorobenzene	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
1,2,4-Trimethylbenzene	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
1,2-Dibromoethane	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
1,2-Dichlorobenzene	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
1,2-Dichloroethane	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
1,2-Dichloropropane	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
1,3,5-Trimethylbenzene	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
1,3-Dichlorobenzene	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
1,4-Dichlorobenzene	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
alpha-Chlorotoluene	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
Benzene	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
Bromomethane	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
Carbon tetrachloride	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
Chlorobenzene	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
Chloroethane	U	0.2	1.0	C	ppbv	1	9/14/2012 11:51:00 AM
Chloroform	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
Chloromethane	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
Chloroprene	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
cis-1,2-Dichloroethene	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
cis-1,3-Dichloropropene	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
Dichlorodifluoromethane	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
Ethylbenzene	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
Freon-114	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
Hexachlorobutadiene	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
m,p-Xylene	U	0.4	2.0		ppbv	1	9/14/2012 11:51:00 AM
Methylene chloride	4100	0.2	1.0	B	ppbv	1	9/14/2012 11:51:00 AM
o-Xylene	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Sep-12

ELAP ID : 11418

CLIENT: Advanced Cleanup Technologies, Inc.

Client Sample ID: Exhaust

Lab Order: 1209136

Collection Date: 9/12/2012 2:00:00 PM

Project: 79-81 Pondfield Rd., Bronxville, NY (6832-BV)

Matrix: AIR

Lab ID: 1209136-01A

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILES TO-15M LIST			TO-15			Analyst: LA	
p-Ethyltoluene	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
Styrene	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
Tetrachloroethene	150	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
Toluene	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
trans-1,3-Dichloropropene	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
Trichloroethene	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
Trichlorofluoromethane	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
Vinyl chloride	U	0.2	1.0		ppbv	1	9/14/2012 11:51:00 AM
Surr: 4-Bromofluorobenzene	99.7	0	54-134		%REC	1	9/14/2012 11:51:00 AM
Surr: Dibromofluoromethane	98.0	0	52-132		%REC	1	9/14/2012 11:51:00 AM
Surr: Toluene-d8	100	0	51-127		%REC	1	9/14/2012 11:51:00 AM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, NY, Zip - 11735

Tel - 6314546100 Fax - 6314548027 www.American-Analytical.com



Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calibration %RSD/%D exceeded for non-CCC analytes
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	LOD	Limit of Detection
	LOQ	Limit of Quantitation	P	>40% diff for detected conc between the two GC columns
	PQL	Practical Quantitation Limit	S	Spike Recovery outside accepted recovery limits
	U	Indicates the compound was analyzed but not detected.		

American Analytical Laboratories, LLC.

Date: 19-Sep-12

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1209136
Project: 79-81 Pondfield Rd., Bronxville, NY (6832-BV)

ANALYTICAL QC SUMMARY REPORT

TestCode: TO15m

Sample ID: V624LCS-091412YW	SampType: LCS	TestCode: TO15m	Units: ppbv	Prep Date:	RunNo: 65297						
Client ID: ZZZZZZ	Batch ID: R65297	TestNo: TO-15		Analysis Date: 9/14/2012	SeqNo: 925415						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1-Dichloroethene	16000	1.0	20040	0	81.5	51	139				
Benzene	12000	1.0	15670	0	79.2	53	135				
Chlorobenzene	9000	1.0	10920	0	82.3	58	142				
Toluene	11000	1.0	13430	0	81.6	50	142				
Trichloroethene	7500	1.0	9404	0	79.2	53	131				
Surr: 4-Bromofluorobenzene	13000		12870		101	54	134				
Surr: Dibromofluoromethane	11000		10820		105	52	132				
Surr: Toluene-d8	12000		12470		100	51	127				

Sample ID: VBLK-091412YW	SampType: MBLK	TestCode: TO15m	Units: ppbv	Prep Date:	RunNo: 65297						
Client ID: ZZZZZZ	Batch ID: R65297	TestNo: TO-15		Analysis Date: 9/14/2012	SeqNo: 925416						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	U	1.0									
1,1,2,2-Tetrachloroethane	U	1.0									
1,1,2-Trichloro-1,2,2-trifluoroethane	U	1.0									
1,1,2-Trichloroethane	U	1.0									
1,1-Dichloroethane	U	1.0									
1,1-Dichloroethene	U	1.0									
1,2,4-Trichlorobenzene	U	1.0									
1,2,4-Trimethylbenzene	U	1.0									
1,2-Dibromoethane	U	1.0									
1,2-Dichlorobenzene	U	1.0									
1,2-Dichloroethane	U	1.0									
1,2-Dichloropropane	U	1.0									
1,3,5-Trimethylbenzene	U	1.0									
1,3-Dichlorobenzene	U	1.0									
1,4-Dichlorobenzene	U	1.0									
alpha-Chlorotoluene	U	1.0									

Qualifiers: B Analyte detected in the associated Method Blank C Calibration %RSD/%D exceeded for non-CCC analytes H Holding times for preparation or analy
J Analyte detected below quantitation limits P >40% diff for detected conc between the two GC column PQL Practical Quantitation Limit
R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits U Indicates the compound was analyzed

CLIENT: Advanced Cleanup Technologies, Inc.
Work Order: 1209136
Project: 79-81 Pondfield Rd., Bronxville, NY (6832-BV)

ANALYTICAL QC SUMMARY REPORT

TestCode: TO15m

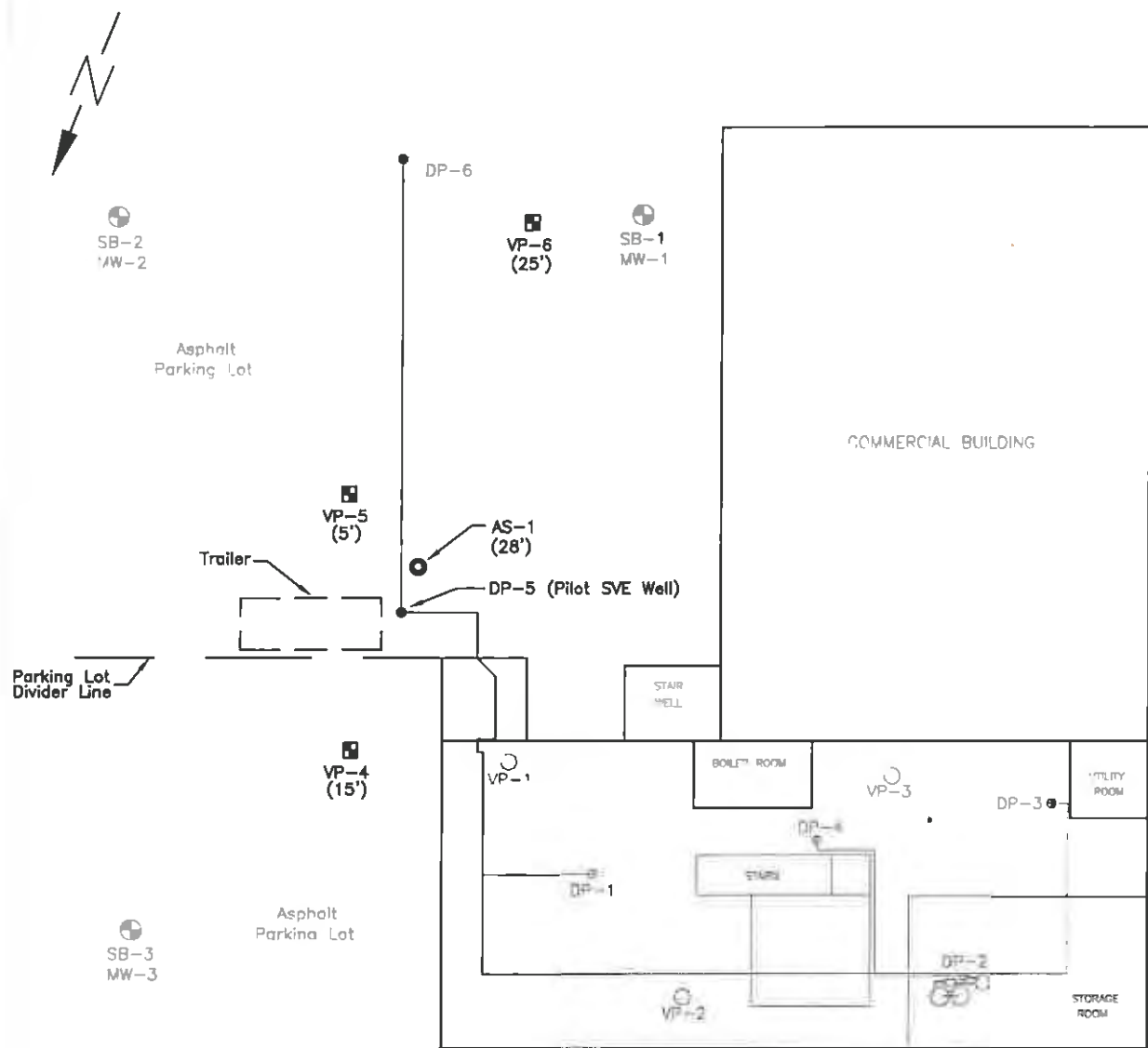
Sample ID: VBLK-091412YW		SampType: MBLK		TestCode: TO15m		Units: ppbv		Prep Date:		RunNo: 65297	
Client ID: ZZZZZZ		Batch ID: R65297		TestNo: TO-15				Analysis Date: 9/14/2012		SeqNo: 925416	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	U	1.0									
Bromomethane	U	1.0									
Carbon tetrachloride	U	1.0									
Chlorobenzene	U	1.0									
Chloroethane	U	1.0									
Chloroform	U	1.0									
Chloromethane	U	1.0									
Chloroprene	U	1.0									
cis-1,2-Dichloroethene	U	1.0									
cis-1,3-Dichloropropene	U	1.0									
Dichlorodifluoromethane	U	1.0									
Ethylbenzene	U	1.0									
Freon-114	U	1.0									
Hexachlorobutadiene	U	1.0									
m,p-Xylene	U	2.0									
Methylene chloride	3300	1.0									
o-Xylene	U	1.0									
p-Ethyltoluene	U	1.0									
Styrene	U	1.0									
Tetrachloroethene	U	1.0									
Toluene	U	1.0									
trans-1,3-Dichloropropene	U	1.0									
Trichloroethene	U	1.0									
Trichlorofluoromethane	U	1.0									
Vinyl chloride	U	1.0									
Surr: 4-Bromofluorobenzene	13000		12870		103	54	134				
Surr: Dibromofluoromethane	12000		10820		109	52	132				
Surr: Toluene-d8	13000		12470		102	51	127				

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits

C Calibration %RSD/%D exceeded for non-CCC analytes
P >40% diff for detected conc between the two GC column
S Spike Recovery outside accepted recovery limits
H Holding times for preparation or analy
PQL Practical Quantitation Limit
U Indicates the compound was analyzed

Appendix F

Pilot Test Results

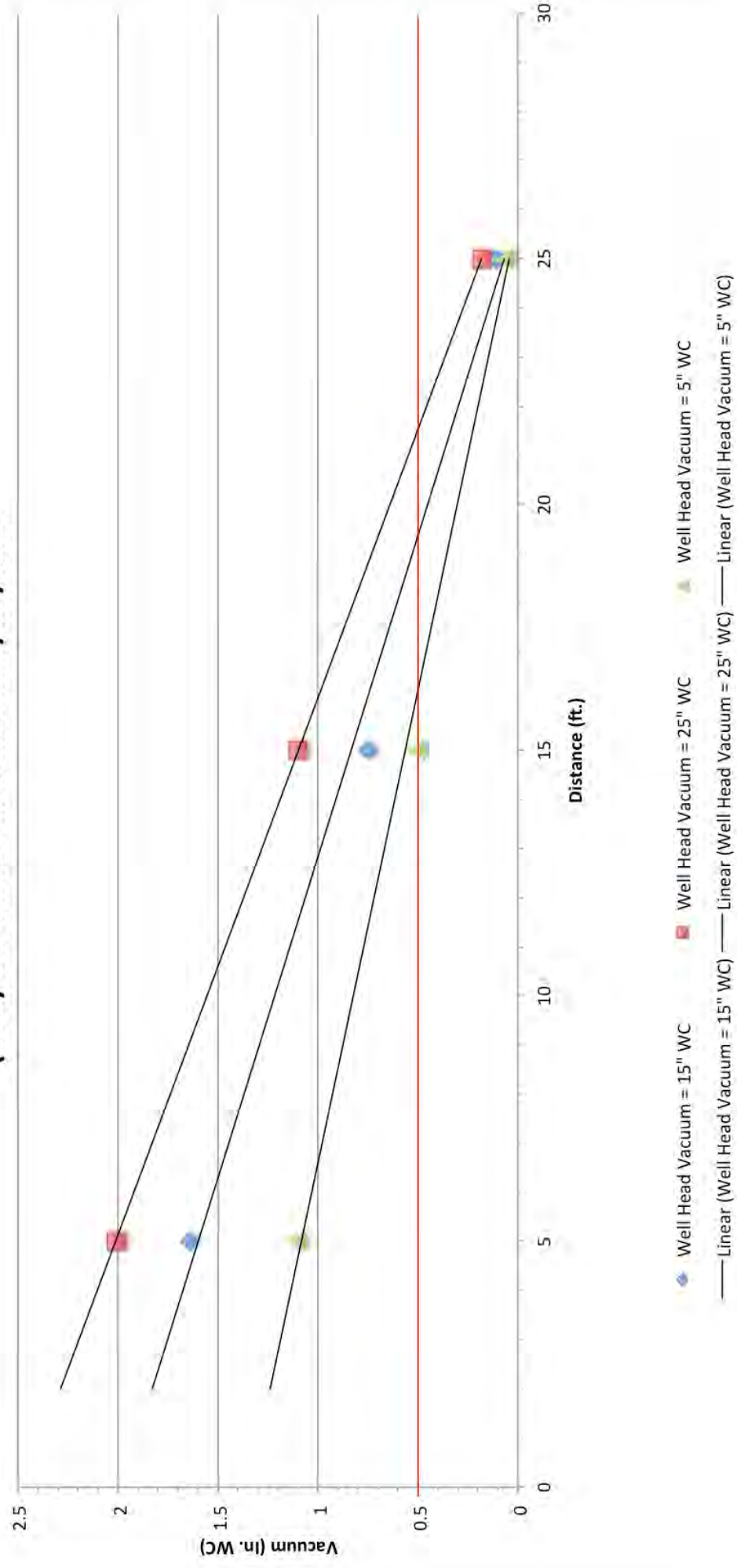


LEGEND

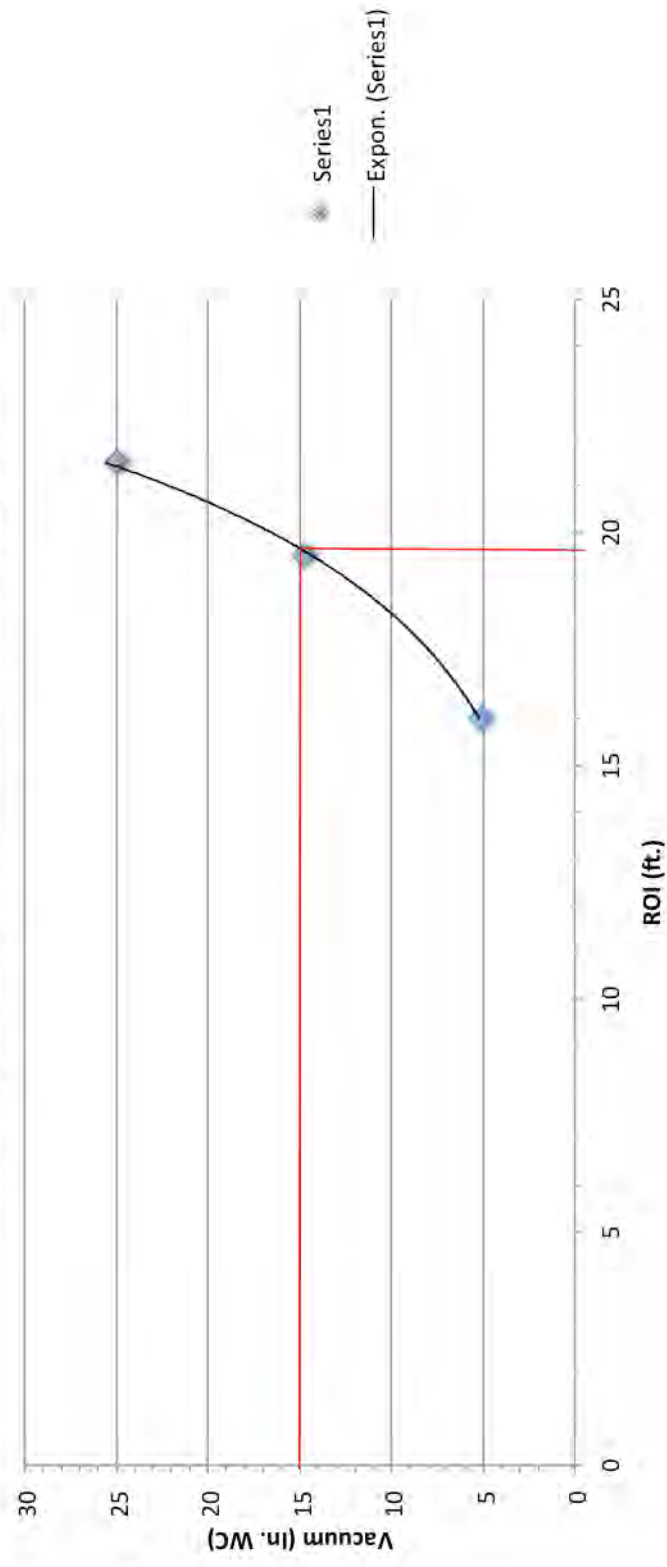
- 
DP-4 Existing Depressurization Well
- 
VP-1 Existing Vacuum Point
- 
SB-1 MW-2 Soil Boring / Multi-level Well
- 
VP-5 (Dist. From AS-1) Vacuum Point
- 
AS-1 (Depth bgs) Pilot Air Sparge Well

AS/SVE PILOT TEST SYSTEM LAYOUT <i>Advanced Cleanup Technologies, Inc.</i> ENVIRONMENTAL CONSULTANTS	
960 S. Broadway, Suite 100, Hicksville, New York 11801 Tel: 516-933-0655 Fax: 516-933-0659	
Project No: 6832-BVNY	Figure No: 1
Date: 03/26/2014	Scale: Not To Scale

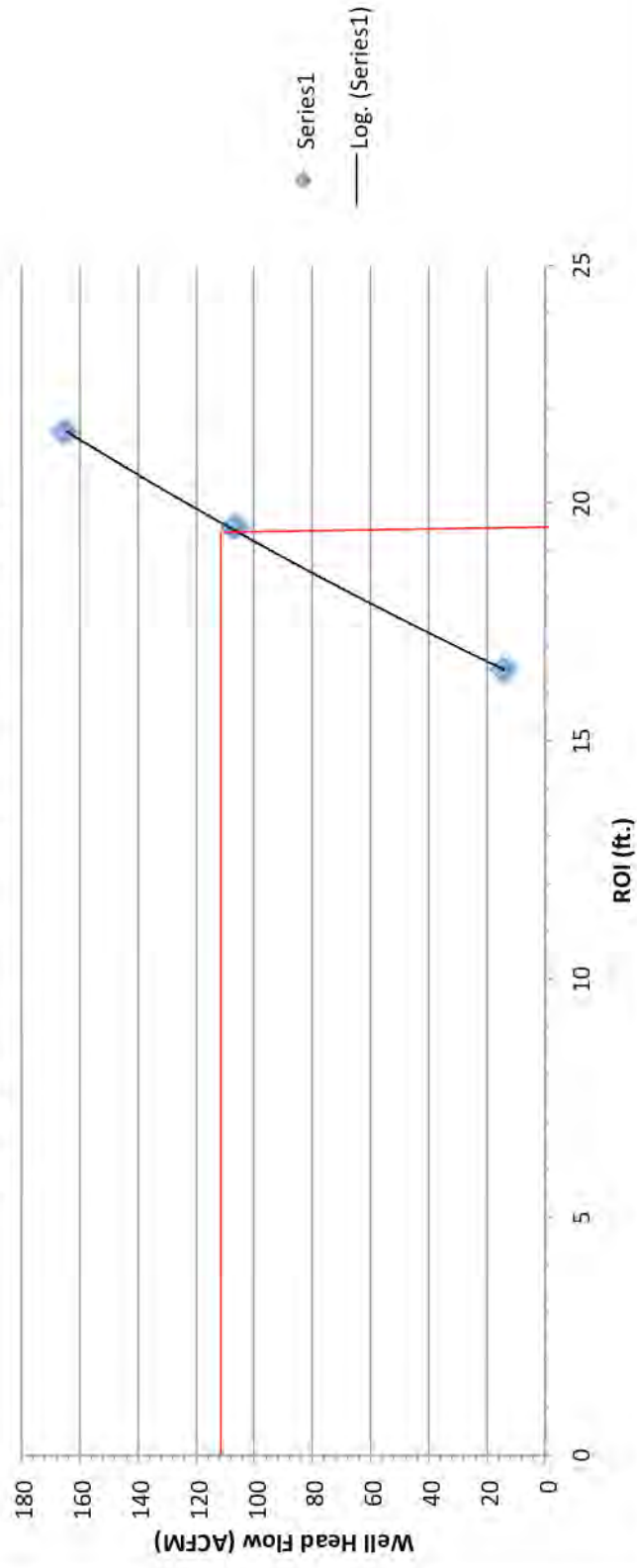
(SVE) Distance Vs. Vacuum 3/27/2014



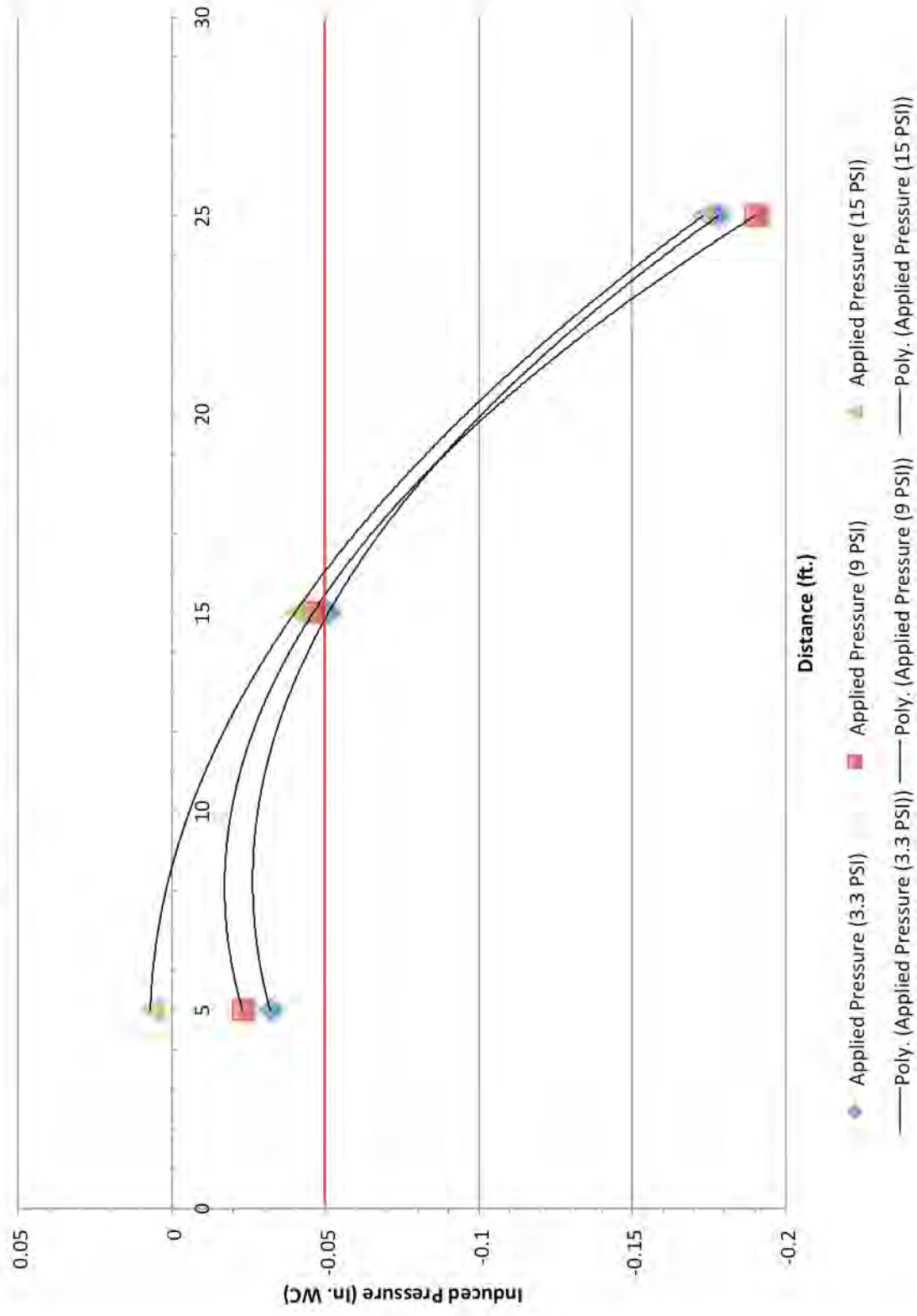
SVE ROI Vs. Well Head Vacuum 3/27/2014



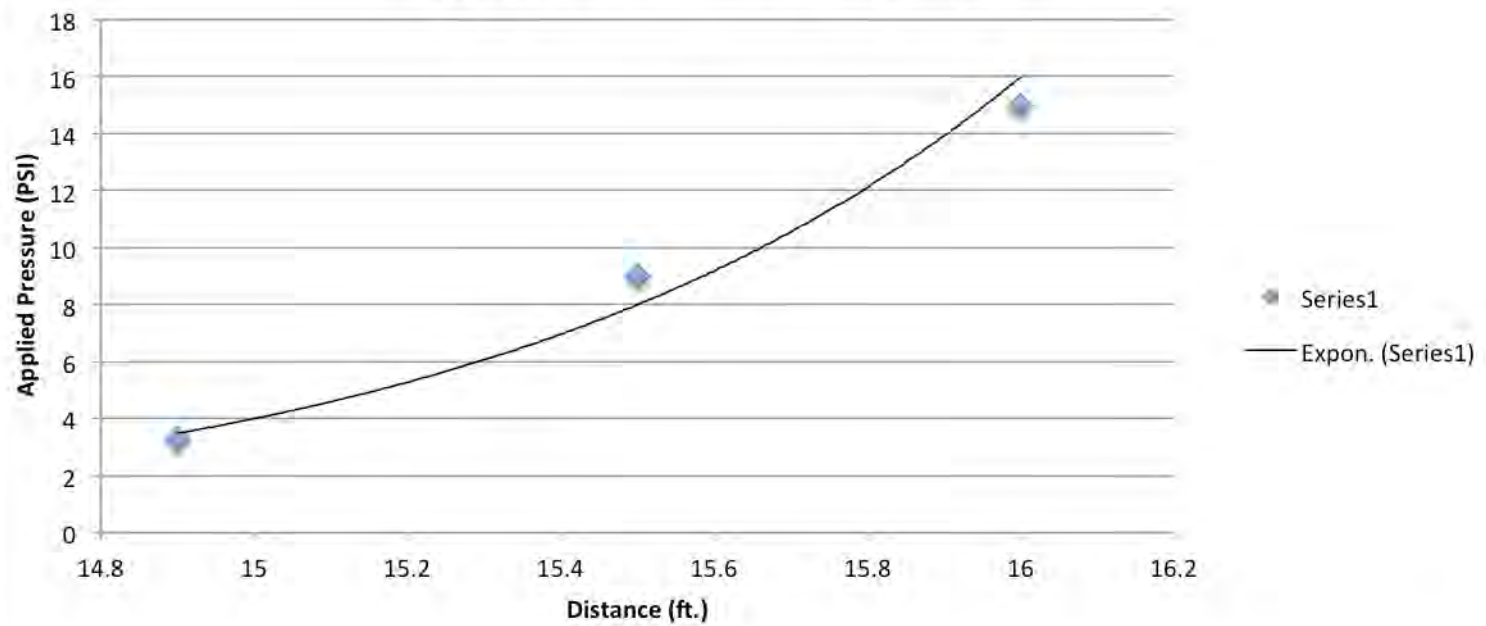
(SVE) ROI Vs. Well Head Flow 3/27/2014



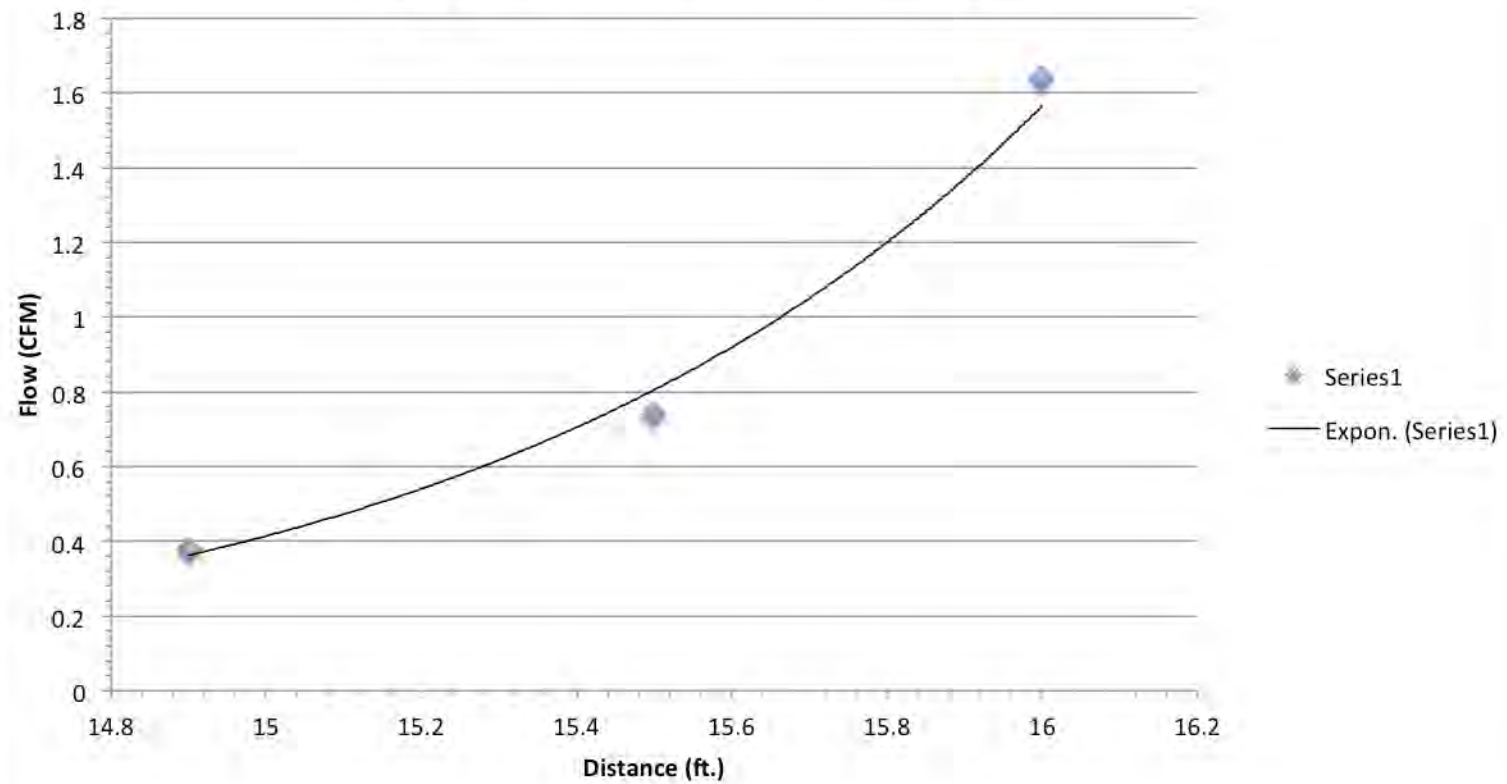
(AS) Distance Vs. Pressure 3/27/14



(AS) ROI Vs Pressure 3/27/14



(AS) ROI Vs Well Head Flow 3/27/14



Appendix G

Equipment Specifications



Operation & Maintenance Manual

NES PROJECT NUMBER: 12-198, August, 2012

PROJECT NAME: **SVE Blower, Control Panel, and Instruments**

Prepared for:

**Advanced Cleanup Technologies Inc.
960 South Broadway
Suite 100
Hicksville, NY 11801**

**Sales: (508)226-1100 Option 2
Technical Support: (508)226-1100 Option 3**

Phone (508) 226-1100 Fax (508) 226-1180 84 Dunham Street Attleboro, MA 02703
www.nes-inc.biz

**MAJOR COMPONENT SUMMARY**

Project No.:

12-198 (August 2012)

Project:

Advanced Cleanup Technologies - SVE Blower, Control Panel, and Instruments

COMPONENT	QTY	MANUFACTURER	MODEL	SERIAL NO:
Control Panel Components				
Panel Enclosure	1	Hoffman	C-SD242012	UL: CB-822754
Variable Frequency Drive, 15hp	1	AC Tech	ESV113N02TXB	13365180360461219
Soil Vapor Extraction Components				
Regenerative Blower, 7.5hp	1	FPZ	K08-MS-7.5-3	U05750
MS Level Switches	2	Dwyer	F6-HPS-31	N/A
Discharge Temperature Switch	1	United Electric	B54-103	K1751996-475410

CONTROL SYSTEM DESCRIPTION

NES JOB NUMBER: 12-198

Advanced Cleanup Technologies – Regenerative Blower Control Panel

CONTROLLER – Relay based

CAPABLE OF CONTROLLING

(1) SVE Blower 7.5HP, 230V, 3 Phase (via VFD used as a phase converter)

ALARMS - Manual reset unless noted otherwise

- Moisture separator warning level (auto reset)
- Moisture separator high level
- SVE Blower High Discharge Temperature
- VFD Fault

NORMAL OPERATION

Equipment will operate if the panel switch is in the AUTO position and no alarm is present. Equipment will operate if the panel switch is in the HAND position with or without an alarm condition.

ALARM OPERATION

Alarm – Moisture separator warning level

Panel response – The alarm light is illuminated only when liquid level within the separator is above the warning level switch.

Alarm – Moisture separator high sump level

Panel response – The SVE blower is shut down and the alarm light is illuminated.

Alarm – SVE Blower High Discharge Temperature

Panel response – The SVE blower is shut down and the alarm light is illuminated.

Alarm – Moisture separator high sump level

Panel response – The SVE blower is shut down and the alarm light is illuminated.

The control panel also includes a timer to automatically restart the SVE blower following a power outage.

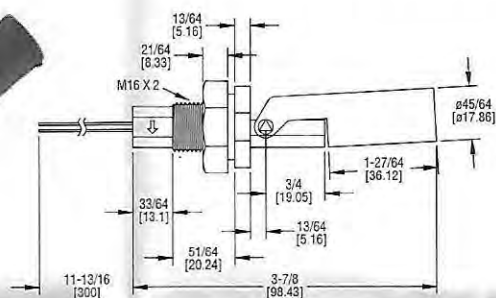
Refer to the Control Panel Drawings & Individual Component Instructions for further information.

Series F6 Horizontal and Vertical Mount Level Switches

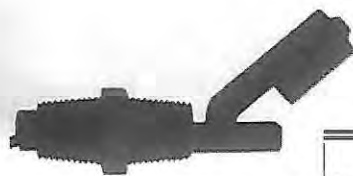
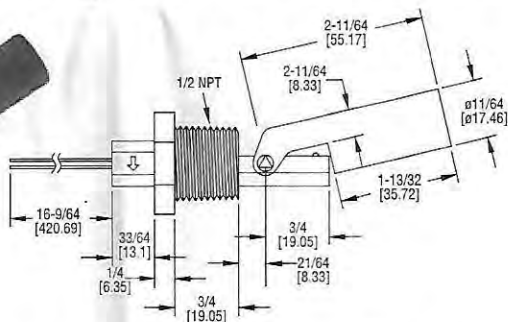
Specifications - Installation and Operating Instructions



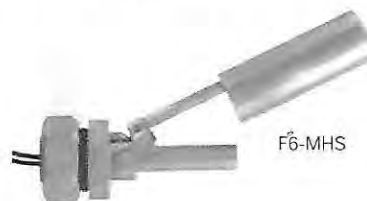
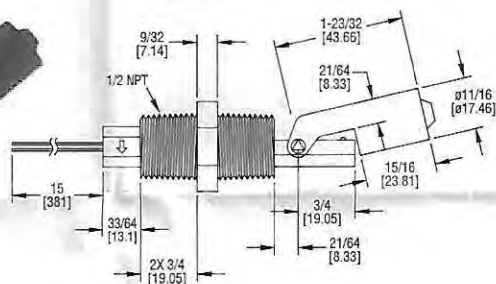
F6-HPS-11



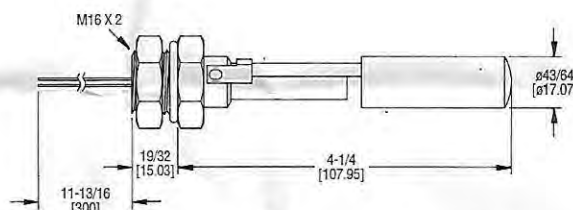
F6-HPS-21



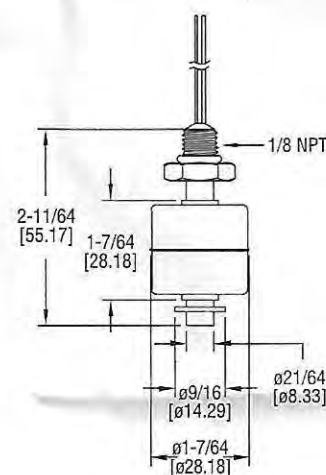
F6-HPS-31



F6-MHS



F6-SS



Series F6 Level Switches provide a simple, inexpensive control of the liquid level within a tank. Switch ratings are suitable for many solid-state control systems and monitors or alarms. Simple relay interfaces can be used for higher current applications. Hermetically sealed reed switches are actuated by magnets permanently bonded inside the float and can be easily adapted to open or close a circuit on rising or falling levels.

SPECIFICATIONS

Service: Compatible liquids.

Wetted Materials: See model table.

Temperature Limit: F6-SS & F6-MHS: -4 to 257°F (-20 to 125°C). F6-HPS-11, 21, 31: 14 to 176°F (-10 to 80°C).

Pressure Limit: F6-SS & F6-MHS: 218 psi (15 bar). F6-HPS-11, 21, 31: 116 psi (8 bar).

Enclosure Rating: General purpose.

Switch Type: SPST Hermetically sealed reed switch, reversible for N.O. or N.C.

Electrical Rating: 20VA: 0.17A @ 120VAC, 0.08A @ 240 VAC.

Electrical Connections: 22 AWG, 11.811" (300mm) long.

Process Connection: F6-SS: 1/8" NPT, HPS-21, 31: 1/2" NPT, F6-MHS, F6-HPS-11: M16*2.

Mounting Orientation: F6-SS: vertical $\pm 20^\circ$, F6-MHS/HPS: horizontal with index arrow pointing up or down.

Weight: F6-HPS-11, 21: 1.23 oz (38 g), F6-MHS-31: 1.41 oz (40 g), F6-MHS: 3.35 oz (95 g), F6-SS: 1.59 oz (45 g).

Agency Approvals: CE.

Specific Gravity: F6-SS: 0.65, F6-MHS: 0.85, F6-HPS-11, 21, 31: 0.6.

Switch Action (Normally Open, Normally Closed)

Vertical Models

Vertical mount models are shipped with normally open switch contacts that close as the float rises toward the mounting threads. To reverse the switch action, remove the float, rotate it end-for-end, and then replace it back on the stem. The floats will be marked for Normal Open and Normal Closed orientation.

Horizontal Models

Contacts in the horizontal models F6-HPS-11 (internally mounted), F6-HPS-21 (externally mounted), and F6-HPS-31 (internally or externally mounted) have indicating arrows on the wrench flat end of the switch to confirm float alignment. When the indicating arrow points up and the float is below the stem the switch is normally open and when the indicating arrow points down and the float is above the stem the switch is normally closed. The model F6-MHS does not have an indication arrow to show normally open or closed orientation. The F6-MHS is normally open when the switch is oriented so that the float is directly below the stem and normally closed when the switch is oriented so that the float is directly above the stem.

Installation

Choose a location away from fill pipes, drains, or other areas where turbulence or wave motion might occur. Turbulence will cause false actuations and shorten contact life. Excess contaminants in fluid may inhibit float operation and an occasional wipe-down may be necessary. Care should be taken that switches are always operated within electrical ratings.

Mounting

Install the vertical mount model in an appropriate 1/8" NPT fitting. The vertical model mounts internally. It should be aligned within $\pm 20^\circ$ of vertical, or select optional fittings for external mounting. Models F6-HPS-11 and F6-MHS must be mounted internally, which means the switch must be secured to the wall of the tank or vessel from the inside. Install horizontal models F6-HPS-11 and F6-MHS in a M16 suitable size hole and secure them with the nut provided. Model F6-HPS-21 requires a horizontal 1/2" NPT fitting and can be fitted to the tank or vessel from the outside. Model F6-HPS-31 requires a horizontal 1/2" NPT fitting and can be mounted from the inside or outside (internally or externally) of the tank or vessel.

MAINTENANCE

Upon final installation of the Series F6 Level Switches, no routine maintenance is required. A periodic check of system calibration is recommended. The Series F6 is not field serviceable and should be returned if repair is needed (field repair should not be attempted and may void warranty). Be sure to include a brief description of the problem plus any relevant application notes. Contact customer service to receive a return goods authorization number before shipping.



54 Series Temperature Switches

Types

**B54, B54S, C54, C54S, C54A, C54AS,
E54, E54S, F54, F54S**



UNITED ELECTRIC
CONTROLS

Installation and Maintenance Instructions

Please read all instructional literature carefully and thoroughly before starting. Refer to the final page for the listing of Recommended Practices, Liabilities and Warranties.

GENERAL

Type B54, B54S, C54, C54S, C54A, C54AS (Immersion Stem)

Temperature variations are sensed by a liquid filled sensor which expands or contracts against a bellows which actuates a snap-action switch at a predetermined set point.

Type E54, E54S, F54, F54S (Bulb & Capillary)

Temperature variations of a liquid filled sensing bulb are hydraulically transmitted to a diaphragm which actuates a snap-acting switch at a predetermined set point.



MAXIMUM TEMPERATURE* STATED IN LITERATURE AND ON NAMEPLATE MUST NEVER BE EXCEEDED, EVEN BY SURGES IN THE SYSTEM. OCCASIONAL OPERATION OF UNIT UP TO MAX. TEMPERATURE IS ACCEPTABLE (E.G., START-UP, TESTING). CONTINUOUS OPERATION SHOULD BE RESTRICTED TO THE DESIGNATED ADJUSTABLE RANGE.

*Maximum Temperature - the highest temperature to which a sensing element may be occasionally operated at, without adversely affecting set point calibration and repeatability.



THIS PRODUCT DOES NOT HAVE FIELD REPLACEABLE PARTS.

Please refer to product bulletin for product specifications. Product bulletins may be found at www.ueonline.com.

Part I - Installation

MOUNTING



INSTALL UNIT WHERE SHOCK, VIBRATION AND TEMPERATURE FLUCTUATIONS ARE MINIMAL. DO NOT MOUNT UNIT IN AMBIENT TEMPERATURES EXCEEDING PUBLISHED LIMITS. 54 SERIES TEMPERATURE SWITCHES CAN BE MOUNTED IN ANY POSITION, PROVIDED THE ELECTRICAL CONDUIT IS NOT FACING UP. ORIENT UNIT SO THAT MOISTURE IS PREVENTED FROM ENTERING THE ENCLOSURE*.

Remove Cover (Enclosed version only). Cover is held on by one captive screw located on the front of the cover.

54 Series temperature switches can be mounted in any position by using either the Mounting Screw holes on the bracket or the NPT connector on the

immersion stem (local mounted only). Optional union connectors or separable well kits are available for remote bulb types.

A 7/8" diameter hole has been provided in the bracket plate for mounting a standard conduit fitting.



FOR LOCAL MOUNTING, ALWAYS HOLD A WRENCH ON THE TEMPERATURE HOUSING HEX WHEN MOUNTING UNIT. DO NOT TIGHTEN BY TURNING ENCLOSURE. THIS WILL DAMAGE SENSOR AND WEAKEN SOLDERED OR WELDED JOINTS.

For remote mounting, fully immerse the bulb and 6" of capillary in the control zone. It is generally desirable to place the bulb close to the heating or cooling source in order to sense temperature fluctuations quickly. Be sure to locate the bulb so that it will not be exposed to temperatures beyond the instrument range limits.

WIRING



DISCONNECT ALL SUPPLY CIRCUITS BEFORE WIRING UNIT. ELECTRICAL RATINGS STATED IN LITERATURE AND ON NAMEPLATE MUST NOT BE EXCEEDED. OVERLOAD ON A SWITCH CAN CAUSE FAILURE ON THE FIRST CYCLE. WIRE UNITS ACCORDING TO NATIONAL AND LOCAL ELECTRICAL CODES. MAXIMUM RECOMMENDED WIRE SIZE IS #14 AWG.

Conduit Connection (Enclosed units only)



FOR ENCLOSED UNITS, CONNECT THE CONDUIT TO THE HOLE IN ACCORDANCE WITH NATIONAL AND LOCAL CODES. BRING WIRES UP TO THE TERMINALS FROM THE REAR. MAXIMUM RECOMMENDED WIRE SIZE - #14 AWG.

Part II - Adjustments

Tools Needed

1/4" Open-ended wrench
1/16" Allen wrench
(single switch calibrated units)



MAKE SURE THAT LIVE ELECTRICAL SUPPLIES TO THE TEMPERATURE SWITCH ARE DISCONNECTED BEFORE PERFORMING ANY DISASSEMBLY. THIS MAY REQUIRE DISCONNECTING MORE THAN ONE CIRCUIT.

Dual Switch Units (C54A, C54AS)



ON DUAL SWITCH UNITS, "LOW SET" SWITCH MUST ALWAYS BE SET EQUAL OR BELOW THE "HIGH SET" SWITCH.

* If applicable



® F.P.Z. effepizeta s.r.l.
Via F.lli Cervi 16/18
20049 Concorezzo - (MI) - ITALIA
Tel. +39 039 604 1820
Fax +39 039 604 1296
www.fpz.com



COMPRESSORI - ASPIRATORI A CANALE LATERALE 'SCL K-MS MOR'

LATERAL CHANNEL BLOWERS - EXHAUSTERS 'SCL K-MS MOR'

COMPRESSEURS - ASPIRATEURS A CANAL LATERAL 'SCL K-MS MOR'

SEITENKANALVERDICHTER - VAKUUMPUMPEN BAUREIHE 'SCL K-MS MOR'

COMPRESORES - ASPIRADORES DE CANAL LATERAL 'SCL K-MS MOR'

ISTRUZIONI I

INSTRUCTIONS GB

INSTRUCTIONS F

BETRIEBSANLEITUNG D

INSTRUCCIONES E



LEGGERE ATTENTAMENTE TUTTE LE ISTRUZIONI E CONSERVARLE I

PLEASE READ CAREFULLY ALL INSTRUCTIONS AND KEEP THEM FOR FUTURE REFERENCE GB

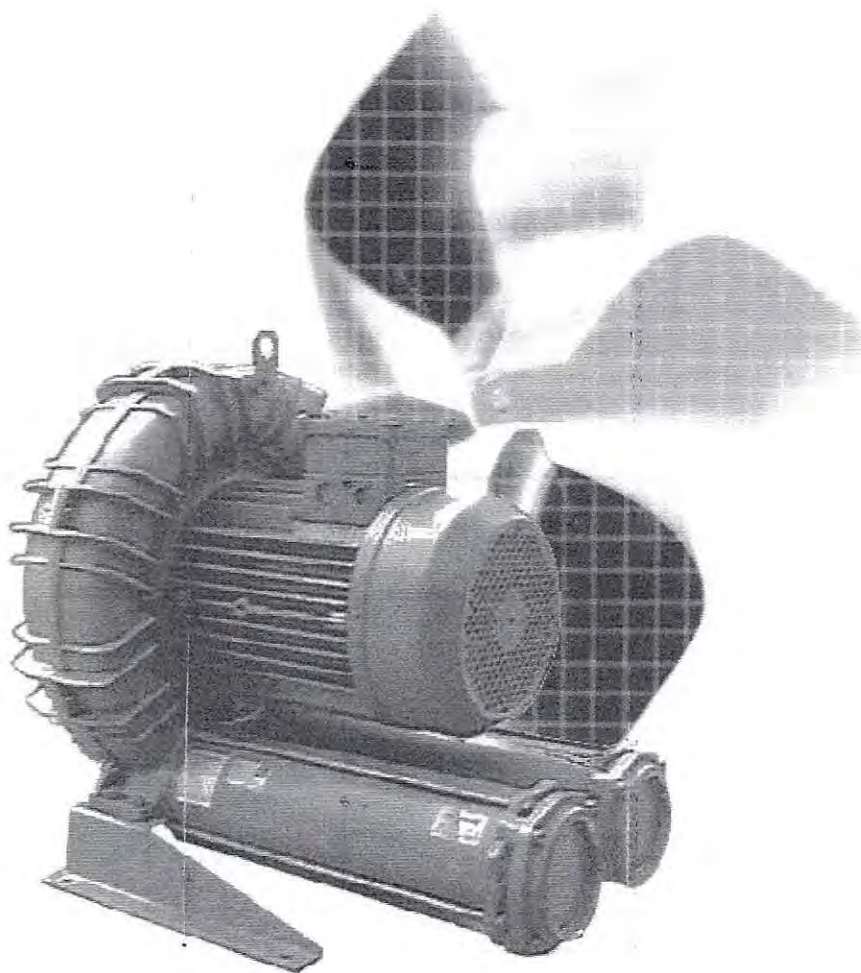
LIRE ATTENTIVEMENT TOUTES LES INSTRUCTIONS ET LES CONSERVER F

ALLE ANLEITUNGEN SIND SORGFÄLTIG ZU LESEN UND AUFZUBEWAHREN! D

SIRVASE LEER CUIDADOSAMENTE TODAS LAS INSTRUCCIONES Y CONSERVARLAS PARA FUTURA REFERENCIA E

SN 1968-2

SCL K07 / K75 / K08 / K09 / K10 / K11



AZIENDA CON SISTEMA DI
GESTIONE PER LA QUALITÀ
CERTIFICATO DA DNV
= UNI EN ISO 9001:2000 =



**DICHIARAZIONE DI CONFORMITÀ ALLA DIRETTIVA MACCHINE
DECLARATION OF CONFORMITY TO THE MACHINERY DIRECTIVE**

Unità tipo - *Unit type*

**SCL K07-MS MOR - SCL K75-MS MOR - SCL K08-MS MOR
SCL K09-MS MOR - SCL K10-MS MOR - SCL K11-MS MOR**

1. L'unità è in conformità con:

- DIRETTIVA MACCHINE CE 98/37;
- DIRETTIVA EMC CE 89/336 come modificata dalle Direttive CE 92/31 e CE 93/68;
- DIRETTIVA BASSA TENSIONE CE 73/23 come modificata dalla Direttiva CE 93/68.

È tuttavia vietata la messa in servizio prima che la macchina in cui sarà incorporata sia dichiarata conforme con le citate Direttive.

2. Sottoposta a collaudo funzionale è risultata conforme alle caratteristiche richieste.

1. *The unit conforms to the:*

- *MACHINERY DIRECTIVE CE 98/37;*
- *EMC DIRECTIVE CE 89/336 as ammended by the CE Directives 92/31 and 93/68;*
- *LOW VOLTAGE DIRECTIVE CE 73/23 as ammended by the CE Directive 93/68.*

Nevertheless it is forbidden to put the unit in service before the machine in which will be incorporated is declared in conformity with the above Directives.

2. *The unit has been tested and meets its operating performances.*

10.06

Amministratore Delegato
Managing Director

DATI CARATTERISTICI I
PERFORMANCE TABLE GB
CARACTÉRISTIQUES TECHNIQUES F
LEISTUNGSDATEN D
DATOS CARACTERISTICOS E

SI - Unità / Units / Unités / Einheiten / Unidades

Modello Model Modèle Modell Modelo	Potenza installata Installed power Puissance installée Installierte Motorleistung Potencia instalada	Pressione massima differenziale Maximum differential pressure Pression différentielle maxi Druckdifferenz Presión diferencial máxima	Rumorosità massima Max noise level Max niveau sonore Max Schalldruckpegel Rumoresidad máxima	Pressione massima assoluta Maximum absolute pressure Pression absolue maxi Maximal absoluter druck Presión absoluta máxima	Massa Weight Masse Gewicht Peso			
	kW		hPa (mbar)		Lp / Lw (1) dB (A)		Ps max A	M
	50 Hz 2900 min ⁻¹	60 Hz 3500 min ⁻¹	50 Hz 2900 min ⁻¹	60 Hz 3500 min ⁻¹	50 Hz 2900 min ⁻¹	60 Hz 3500 min ⁻¹	MPa (bar)	kg
SCL K07-MS	2.2	2.55	- 130 / + 130	- 100 / + 100	76.4	78.4	0.28 (2.8)	46.5
	3.0	3.45	- 200 / + 200	- 175 / + 175	76.7	78.7	0.28 (2.8)	47.5
	4.0	4.6	- 280 / + 280	- 250 / + 250	77.0	79.0	0.28 (2.8)	51.0
	5.5	6.3	- 325 / + 400	- 375 / + 375	77.3	79.3	0.28 (2.8)	61.5
	-	8.7	- / -	- / + 450	-	79.6	0.28 (2.8)	66.5
SCL K75-MS	4.0	4.6	- 150 / + 150	- 100 / + 100	77.4	79.4	0.28 (2.8)	51.5
	5.5	6.3	- 250 / + 250	- 200 / + 200	77.7	79.7	0.28 (2.8)	62.0
	7.5	8.7	- / + 325	- 300 / + 300	78.0	80.0	0.28 (2.8)	67.0
	9.2	10.6	- / -	- / + 400	-	80.3	0.28 (2.8)	76.5
SCL K08-MS	3.0	3.45	- 125 / + 125	- 100 / + 100	77.4	79.4	0.28 (2.8)	49.0
	4.0	4.6	- 180 / + 180	- 150 / + 150	77.7	79.7	0.28 (2.8)	52.5
	5.5	6.3	- 275 / + 275	- 250 / + 250	78.0	80.0	0.28 (2.8)	63.0
	7.5	8.7	- 350 / + 400	- 375 / + 375	78.3	80.3	0.28 (2.8)	68.0
	9.2	10.6	- / + 450	- / + 450	78.6	80.6	0.28 (2.8)	77.5
SCL K09-MS	4.0	4.6	- 130 / + 130	- 85 / + 85	78.0	80.0	0.28 (2.8)	62.0
	5.5	6.3	- 210 / + 210	- 150 / + 150	78.2	80.2	0.28 (2.8)	72.5
	7.5	8.7	- 290 / + 290	- 250 / + 250	78.5	80.5	0.28 (2.8)	77.5
	9.2	10.6	- 350 / + 350	- 325 / + 325	78.7	80.7	0.28 (2.8)	87.0
	11	12.7	- / + 450	- 375 / + 400	79.0	81.0	0.28 (2.8)	87.5
	-	17.4	- / -	- / + 500	-	81.3	0.28 (2.8)	92.5
SCL K10-MS	5.5	6.3	- 160 / + 160	- 115 / + 115	78.1	80.1	0.28 (2.8)	75.0
	7.5	8.7	- 250 / + 250	- 200 / + 200	78.5	80.5	0.28 (2.8)	80.0
	9.2	10.6	- 300 / + 300	- 270 / + 270	79.0	81.0	0.28 (2.8)	89.5
	11	12.7	- 350 / + 400	- 375 / + 375	79.4	81.4	0.28 (2.8)	90.0
	15	17.4	- / + 500	- / + 500	79.6	81.6	0.28 (2.8)	95.0
SCL K11-MS	5.5	-	- 100 / + 100	- / -	78.5	-	0.28 (2.8)	78.5
	7.5	8.7	- 175 / + 175	- 130 / + 130	80.0	82.0	0.28 (2.8)	83.5
	9.2	10.6	- 230 / + 230	- 175 / + 175	80.5	82.5	0.28 (2.8)	93.0
	11	12.7	- 300 / + 300	- 250 / + 250	81.0	83.0	0.28 (2.8)	93.5
	15	17.4	- 350 / + 400	- 350 / + 350	81.8	83.8	0.28 (2.8)	98.5
	18.5	21.5	- / + 500	- / + 500	83.6	85.6	0.28 (2.8)	128.5

- (1) Rumorosità misurata alla distanza di 1 m con aspirazione e mandata canalizzate, secondo la Normativa ISO 3744.
(1) Noise measured at 1 m distance with inlet and outlet ports piped, in accordance to ISO 3744.
(1) Niveau de bruit mesuré à 1 m de distance, conduits d'aspiration et refoulement raccordés selon la norme ISO 3744.
(1) Schalldruckpegel, mit angeschlossener Schlauchleitung am Ein- und Auslass, im Abstand von 1 m gemäß ISO 3744 gemessen.
(1) Rumoresidad medida a la distancia de 1 m con vías de acceso de aspiración e impulsión canalizadas, según la Normativa ISO 3744.

DATI CARATTERISTICI I
PERFORMANCE TABLE GB
CARACTÉRISTIQUES TECHNIQUES F
LEISTUNGSDATEN D
DATOS CARACTERISTICOS E

US - Unità / Units / Unités / Einheiten / Unidades

Modello Model Modèle Modell Modelo	Potenza installata Installed power Puissance installée Installierte Motorleistung Potencia instalada	Pressione massima differenziale Maximum differential pressure Pression différentielle maxi Druckdifferenz Presión diferencial máxima	Rumorosità massima Max noise level Max niveau sonore Max Schalldruckpegel Rumorosidad máxima	Pressione massima assoluta Maximum absolute pressure Pression absolue maxi Maximal absoluter druck Presión absoluta máxima	Massa Weight Masse Gewicht Peso			
	Hp	In Hg / In WG		Lp / Lw (1) dB (A)		Ps max	M	
	60 Hz 3500 rpm	50 Hz 2900 rpm	60 Hz 3500 rpm	50 Hz 2900 rpm	60 Hz 3500 rpm	50 Hz 2900 rpm	In Hg	lbs
SCL K07-MS	4	4	- 3.7 / + 50	- 4.6 / + 63	78.7	76.7	82.7	104.50
	5 ½	5 ½	- 5.6 / + 75	- 6.3 / + 86	79.0	77.0	82.7	112.20
	7 ½	7 ½	- 9.6 / + 130	- 8.9 / + 138	79.3	77.3	82.7	135.20
	10	10	- 11.1 / + 181	- / + 161	79.6	77.6	82.7	146.30
SCL K75-MS	5 ½	5 ½	- 2.9 / + 40	- 4.8 / + 65	79.4	77.4	82.7	113.30
	7 ½	7 ½	- 4.8 / + 65	- 7.4 / + 100	79.7	77.7	82.7	136.30
	10	10	- 7.4 / + 100	- / + 130	80.0	78.0	82.7	147.40
	15	15	- 8.8 / + 160	- / -	80.3	78.3	82.7	168.40
SCL K08-MS	5 ½	5 ½	- 2.9 / + 40	- 3.8 / + 52	79.7	77.7	82.7	115.70
	7 ½	7 ½	- 5.9 / + 80	- 6.6 / + 90	80.0	78.0	82.7	138.90
	10	10	- 8.5 / + 115	- 9.2 / + 125	80.3	78.3	82.7	150.00
	15	15	- 11.1 / + 181	- / + 181	80.6	78.6	82.7	170.80
SCL K09-MS	7 ½	7 ½	- 3.7 / + 50	- 4.6 / + 63	80.2	78.2	82.7	159.80
	10	10	- 5.9 / + 80	- 7.0 / + 95	80.5	78.5	82.7	170.90
	15	15	- 10.3 / + 140	- 10.4 / + 155	81.0	79.0	82.7	192.90
	20	20	- 11.1 / + 181	- / + 181	81.3	79.3	82.7	203.90
SCL K10-MS	7 ½	7 ½	- 2.7 / + 36	- 3.8 / + 51	80.1	78.1	82.7	165.30
	10	10	- 4.7 / + 64	- 5.9 / + 80	80.5	78.5	82.7	176.40
	15	15	- 8.8 / + 120	- 9.9 / + 135	81.0	79.0	82.7	198.40
	20	20	- 11.1 / + 167	- / + 191	81.4	79.4	82.7	253.00
	25	25	- / + 211	- / + 201	81.6	79.6	82.7	319.10
SCL K11-MS	10	10	- 2.9 / + 40	- 3.9 / + 53	82.0	80.0	82.7	184.10
	15	15	- 6.0 / + 82	- 7.1 / + 97	82.5	80.5	82.7	206.10
	20	20	- 9.2 / + 125	- 10.4 / + 141	83.0	81.0	82.7	217.20
	25	25	- 11.1 / + 162	- / + 162	85.6	83.6	82.7	283.30

- (1) Rumorosità misurata alla distanza di 1 m con aspirazione e mandata canalizzate, secondo la Normativa ISO 3744.
(1) Noise measured at 1 m distance with inlet and outlet ports piped, in accordance to ISO 3744.
(1) Niveau de bruit mesuré a 1 m de distance, conduits d'aspiration et refoulement raccordés selon la norme ISO 3744.
(1) Schalldruckpegel, mit angeschlossener Schlauchleitung am Ein- und Auslass, im Abstand von 1 m gemäß ISO 3744 gemessen.
(1) Rumorosidad medida a la distancia de 1 m con vías de acceso de aspiración e impulsión canalizadas, según la Normativa ISO 3744.

INDEX

1. GENERAL INSTRUCTIONS	13
1.1 CONDITIONS OF USE	13
1.2 STORAGE AND SHIPPING	13
1.3 INSTALLATION	13
1.3.1 SCL K BLOWER - EXHAUSTER	13
1.3.2 ELECTRIC MOTOR	14
1.3.2.1 CURRENT MEASUREMENT	14
1.4 COMMISSIONING	14
1.5 OPERATING ADJUSTMENTS	14
1.6 MAINTENANCE	14
 2. INSTALLATION SKETCHES	 15
2.1 PRESSURE SERVICE	15
2.2 PARALLEL PRESSURE SERVICE	15
2.3 SERIES PRESSURE SERVICE	15
2.4 VACUUM SERVICE	15
2.5 PARALLEL VACUUM SERVICE	15
2.6 LIST ACCESSORIES	15
 3. INTERNAL CLEANING INSTRUCTIONS	 16
3.1 CLEANING INSTRUCTIONS	16
3.2 REPLACEMENT SOUND-ABSORBING PANELS	16
 4. SILENCER HOUSING MOUNTING INSTRUCTIONS	 17
4.1 USING THE 90° MANIFOLD KIT TYPE CK	17
 5. TROUBLESHOOTING	 18

1. GENERAL INSTRUCTIONS

CAUTION!

The 'SCL K' blowers - exhausters have been designed and manufactured for use in an industrial environment, operated by qualified personnel and as a unit to be incorporated in a machine, which conforms to the CE Machinery Directive.



The 'SCL K' blowers - exhausters, like all machinery and equipment with live and moving parts, can be a source of serious hazards unless properly used and protected.



The user is committed to ensure that:

All handling, assembly, installation, connection, maintenance and repair operations are undertaken by qualified personnel. Such people who by their background, training and experience as well as through their knowledge of statutory regulations, legislation, safety measures and operating conditions are able to carry out any necessary steps avoiding all possible risks to health and damage.

Such personnel should have received all the instructions and information, including any local legislation, and will follow them during the performance of any operation.

It shall be forbidden for unqualified personnel to carry out any operation, even indirectly, on the machines and equipment.

During the installation, all the prescribed working conditions, including any possible local requirements, shall be observed.

Additionally it is forbidden to put the unit in service before the machines of which they are a part are declared to conform to the CE Machinery Directive.

The user must be aware that in operation:

- the surface temperatures can reach 160°C;
- the unit cannot contain high internal pressures, no greater than P_s max referred to in PERFORMANCE TABLE - page 3-4;
- there is small loss of the fluid handled;
- the level of noise may be unacceptable in certain applications.

1.1 CONDITIONS OF USE

The 'SCL K' blowers - exhausters are designed for the continuous movement of air or non-explosive, non-hazardous and non-flammable gases and for service in non-explosive environments.

Solid particles, however small, including dirt can cause serious damage; therefore it is essential that such substances should be removed from the gas by suitable filters upstream of the inlet. (Units which do not have an adequate filter ARE NOT COVERED BY THE GUARANTEE).

The maximum driving pressure must never be exceeded (Maximum differential pressure of PERFORMANCE TABLE - page 3-4).

UNDER NO CIRCUMSTANCES OPERATE THE UNIT WITH THE GAS INLET OR OUTLET CLOSED. IN PARTICULAR THIS APPLIES TO THE UNITS WITH THE CAPACITY FOR HIGHER DRIVING PRESSURES.

Protect the units with an appropriate safety valve.

The performance characteristics are liable to variations due to the following factors:

- Differences of the suction or discharge pressures from the reference conditions (1013 mbar);

- Operation in a system with both a low suction pressure and a high back pressure;
- Operation with a gas at a different temperature or of a different specific gravity from the reference data (1.23 kg/m³; 15 °C);
- Variations in the rotational velocity of the fan with respect to the reference value.

Both the gas inlet temperature and the ambient temperature must be in the range of -15°C to +40°C.

At the same time, ensure that the unit has good ambient ventilation, especially when subjected to severe operating conditions.

A unit subjected to frequent starting or to high ambient temperatures may be prone to overheating and in such cases further information should be requested.

Similarly, where flammable gases may be present, information must be requested for alternative models certified for the Ex. environment.

1.2 STORAGE AND SHIPPING

Store the unit in a dry place, preferably in original packaging.

Do not remove the protection plugs from the ports.

Avoid stacking anything on top of the packaging.

To move the packed boxes, use the largest pallet or support base possible to obtain the maximum stability. On all occasions handle the units with care and avoid sudden impacts.

Lifting eyes are provided to unpack units weighting more than 25 kg.

(The weight of the unit is M in PERFORMANCE TABLE - page 3-4).

1.3 INSTALLATION

1.3.1 'SCL K' BLOWER - EXHAUSTER

It is important that the unit is installed in a well-ventilated environment where the temperature does not exceed 40°C.

If outside, protect the unit from direct sunlight and avoid the possibility of water collecting in the external crevices especially when installed with the axis vertical.

IMPORTANT!

Ingress of foreign matter, however small, will cause serious damage.

Such matter includes dust, sand, masonry debris, impurities in the tubes, cutting burrs or filings, welding or soldering slag and splatter, metal burrs and any residues from sealing and making the tube connections.

The unit can be mounted with the axis in any position.

As supplied, the unit is balanced and will not transmit vibrations, however it is recommended that it be mounted on vibration damping supports.

To connect the machine to the piping, remove the flanges and connect using flexible hoses. Do not use rigid connections as these may cause stress and harmful vibrations. Insert gaskets and tighten.

Remember to protect the inlet with suitable filters.

If it is necessary to regulate the flow, install a bypass valve (refer to section 1.5).

Only remove the plugs on the ports when making the final connections.

Select the tube size and the couplings to minimize the pressure drop, in particular:

- Do not use tubing of a smaller diameter than the ports of the unit; When installing units in parallel, size the manifold and main conduit accordingly;
- Utilise large radius bends and avoid using elbows;
- Avoid using valves which have a reduced orifice relative to the general system; Use swing check valves (utilising lightweight discs) which have the lowest pressure drop, rather than spring loaded check valves;
- For oxygenation select low loss diffusers (lowest pressure drop) and note that the pressure drop across plugs and porous membranes will increase over time due to progressive clogging.

A safety relief valve should be installed to avoid overloading the unit as a result of pressure differential variations.

Make the electrical connections to the motor and check the direction of rotation before connecting the conduit.

The 'SCL K' blowers - exhausters are already supplied as standard with silencers in the suction and exhaust ports (the noise levels L_p / L_w , with piped inlet and outlet flow, are detailed in PERFORMANCE TABLE - page 3-4).

For operation into free air (either suction or discharge) the free flow noise can be muffled with additional silencers.

In every situation avoid installing the unit on a structure, which can transmit or amplify any noise (tanks, sheet metal etc.).

Installation sketches - please refer to next page.

Further information should be requested regarding additional noise reduction by installing the unit in soundproof enclosures.

1.3.2 ELECTRIC MOTOR

WARNING

BEFORE UNDERTAKING ANY OPERATION ENSURE THAT THE UNIT IS DISCONNECTED FROM THE ELECTRICITY SUPPLY.

The electric motor has been selected for service in an ambient temperature between -15°C and $+40^{\circ}\text{C}$ at an altitude no higher than 1000 m. Ensure that the information on the nameplate is consistent with the supply voltage and frequency.

Variations in the supply voltage up to $\pm 10\%$ are acceptable.

Outside the normal operating conditions the motor cannot deliver full power and problems can arise with starting, especially for single-phase motors.

Make the electrical connections referring to the wiring diagram in the terminal box, connecting an earth cable of adequate capacity to the earth terminal.

The fuses are designed only for short circuit protection and not to safeguard the motor. Therefore overload cut-outs (temperature or current) are essential to guard against the risk of overloads on the motor — for example failure of one line in a three phase supply, an excessively high start up frequency, unacceptable variations in the supply voltage, stalled rotor, etc.

Set the overload cutouts at the nominal current specified on the nameplate.

The fuses should be rated for the peak currents or use "slow blow" fuses especially in applications of direct starting.

THE ENTIRE GUARANTEE SHALL CEASE TO APPLY WHEN INADEQUATE PROTECTION IS PROVIDED.

1.3.2.1 CURRENT MEASUREMENT

The current drawn refers to normal operating conditions.

Departures from the nominal operating conditions can result in variations of 10%.

There can be small differences in the measured value of each phase. These are tolerable up to a maximum deviation of 9% (ref. IEC 34-1).

1.4 COMMISSIONING

To commission the unit:

- Set the operating pressure or vacuum using a suitable gauge.
- Check the relieving pressure of the safety valve.
- Measure the current drawn by the motor and verify that it is within the limit stated on the name plate (refer to Para. 1.3.2.1).
- Adjust the overload cutouts accordingly.
- After one hour's operation, repeat the current measurements and verify that they are still within the stated limits.

1.5 OPERATING ADJUSTMENTS

The 'SCL K' blowers - exhausters will automatically generate the driving pressure required at the point of use.

Since the power absorbed and the operating temperature is primarily a function of the driving pressure, it is possible that these can exceed the permitted operating conditions for the unit.

Frequently the pressure losses of the tubing are overlooked as the major factor determining the driving pressure.

The driving pressure can be reduced by eliminating all possible obstructions and restrictions in the flow path.

If it is still too high, the flow can be reduced by installing a bypass valve.

Never choke the flow by throttling the suction or the discharge.

1.6 MAINTENANCE

After every 10-15 days of use clean the cartridge filter.

Replace the cartridge frequently in dusty environments.

A dirty filter will create a strong suction resistance and consequently a higher driving pressure, a higher operating temperature and an increase in the absorbed power.

Check that the driving pressure does not change over time.

It is important that a unit in service is subjected to periodic inspections by qualified personnel to insure against failures, which, directly or indirectly, could cause damage.

Departures from the normal operating conditions (e.g. a rise in the absorbed power, unusual operating noises, vibrations, etc.) are a sign of abnormal operation, which can lead to failure.

See paragraph 5 - TROUBLESHOOTING to be dealt with and/or avoiding possible breakage or faults.

Under normal working conditions (refers to PERFORMANCE TABLE - page 3-4) the machine's bearings should be replaced by qualified personnel after 25,000 working hours max or 4 years.

In the event of difficulties please contact F.P.Z. or the relevant sales agent.

Please note that repairs undertaken by a third party will invalidate the guarantee.

Periodically remove any surface deposits which otherwise can cause the operating temperature to rise.

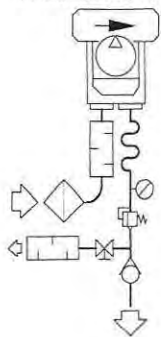
Commitments, agreements or legal relationships are governed by the corresponding sales contract. The above items are in no way limited by the contents of this manual.

The quality of the materials and of the workmanship is guaranteed as set out by the standard conditions of sales. The guarantee is not valid for the following: damage incurred during transport; inadequate storage; faulty installation; incorrect use; exceeding performance limits; electrical or mechanical mis-use.

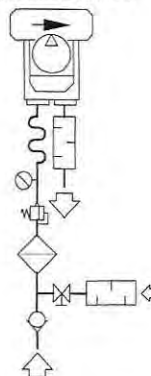
Store the packaging for possible future use.

2. INSTALLATION SKETCHES

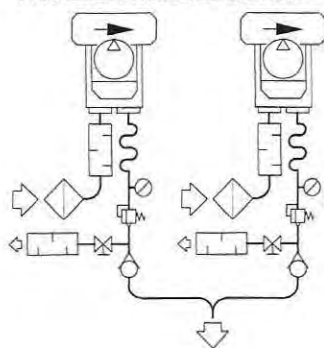
2.1 PRESSURE SERVICE



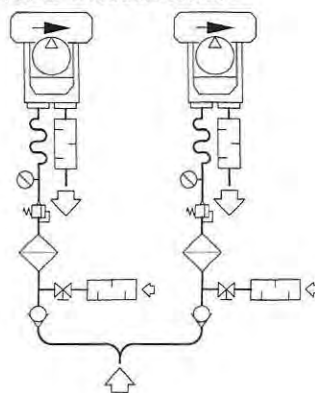
2.4 VACUUM SERVICE



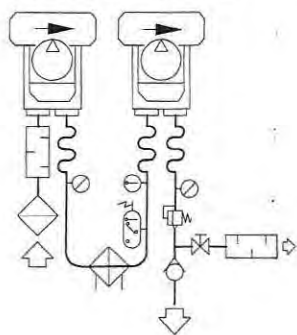
2.2 PARALLEL PRESSURE SERVICE



2.5 PARALLEL VACUUM SERVICE



2.3 SERIES PRESSURE SERVICE



2.6 LIST ACCESSORIES

Item		Denomination	Item		Denomination
1		Filter – Inline filter	7		Valve
(2)		Silencer	(8)		Cooler
3		Flexible coupling	(9)		Thermometer
4		Pressure – Vacuum gauge	(10)		Temperature switch
5		Safety valve			
6		Non return valve	(x) IF NECESSARY		

3. INTERNAL CLEANING INSTRUCTIONS

CAUTION!

Internal deposit build up can cause:

- performance variations;
- alteration in clearances resulting in seizing;
- out of balance rotor.

3.1 CLEANING INSTRUCTIONS

In case it is necessary to clean the inside of the blower, proceed as follows:

1. Remove in order #915 and #902 screws placed on #162 cover.
2. Remove #162 cover by using the two threaded holes placed on cover itself.
3. Remove the #900 screw and #365 washer.
4. Remove the #360 bearing cover and extract the #321 bearing using a bearing puller.

N.B.: The #935 shims washers are included when necessary to accommodate the axial clearance. Be careful not to misplace.

5. Remove the #230 impeller, using a puller if necessary.

6. Clean and reassemble in reverse order.

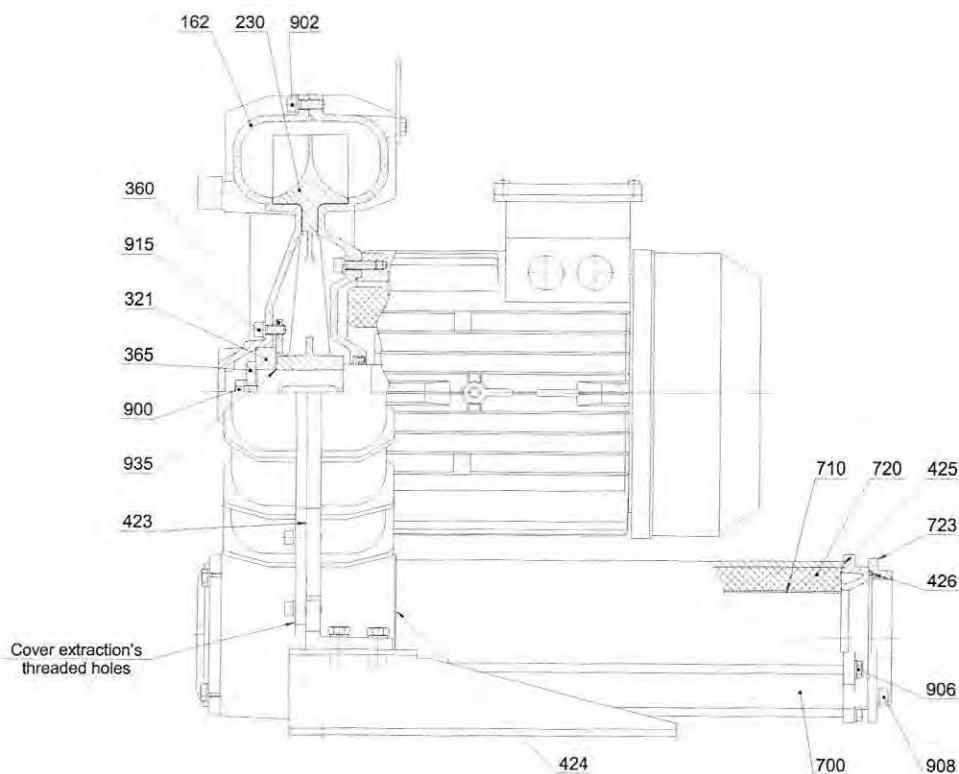
If needed, reconstruct #423 seal using Loctite 598 or similar, after cleaning the sealing surfaces of any existing sealant.

3.2 REPLACEMENT SOUND-ABSORBING PANELS

If needed, replace the foam sound-absorbing panels, proceed as follows:

1. Remove #723 flange and related #426 O-Ring by removing #908 screws.
2. Remove #906 screws.
3. Take away the #700 silencers from the unit, being careful not to lose the #424 gaskets.
4. Extract the #720 panels from the silencer housings.
5. Clean up the #710 retaining screen.
6. Replace and reassemble proceeding in reverse order, remembering to include the #424 and #426 gaskets.

If needed, reconstruct #425 seal using Loctite 598 or similar, after cleaning the sealing surfaces of any existing sealant.



4. SILENCER HOUSING MOUNTING INSTRUCTIONS

The 'SCL K-MS' series was designed to provide maximum flexibility in the positioning of the silencer housings to meet various installation configurations.

The blower is supplied with the silencers configured as in Fig. 1

If this configuration needs to be modified, proceed as follows:

1. Identify the desired configuration (Fig. 2, Fig. 3, Fig. 4).
2. **Disassembly of the silencer housing:**
 - 2.1 Remove #908 screws, taking away #723 flange with the #426 O-ring.
 - 2.2 Remove the #906 screws.
 - 2.3 Take away the #700 silencer from the unit along with the #424 gasket.
3. **Disassembly of the #730 blind flange:**
 - 3.1 Remove the #909 screws, taking away the #730 flange along with the #427 gasket.

Reassemble in reverse order-do not forget the #424 #426 and #427 gaskets.

If needed, reconstruct #425 seal using Loctite 598 or similar, after cleaning the sealing surfaces of any existing sealant.

4.1 USING THE 90° MANIFOLD KIT TYPE CK (accessory)

The 90° manifold can only be installed on the #162 cover ports and as shown in the Figures below, there are multiple configurations.

The 90° manifold kit type CK comes supplied with;

- 1 x manifold
- 1 x gasket and
- 4 x M8x25 UNI 5739 screws.

To mount the 90° manifold, proceed as follows:

1. Disassemble the silencer housing (see point 2)
2. Place the gasket between the #162 cover and the 90° manifold and seal with the M8x25 UNI 5739 screws.

Assemble the silencer housing in reverse order-do not forget the #424 and #426 gaskets.

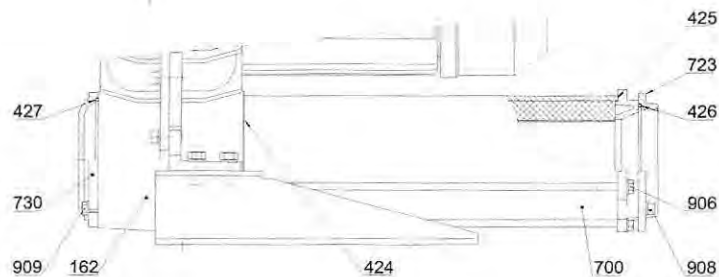


Fig.1



Fig.2



Fig.3



Fig.4

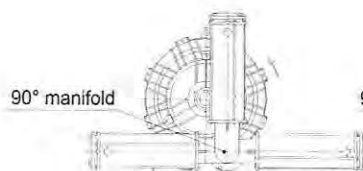


Fig. 2 with 90° manifold

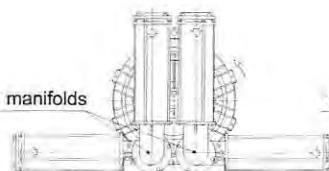


Fig.3 with two 90° manifolds



Fig.4 with 90° manifold

5. TROUBLESHOOTING

Problem	Cause	Solution
The unit does not start	The electric wiring is incorrect.	Check the electric wiring against the wiring diagram in the terminal board box.
	The power supply voltage is not suitable.	Check that the power supply voltage, measured at the motor's terminals, is within $\pm 5\%$ of the nominal voltage.
	The impeller is stuck.	Get trained personnel to repair the machine.
Air flow rate zero or insufficient	Rotation direction incorrect.	Check that the direction of rotation is as indicated on the motor's fan cowling.
	Intake filter clogged.	Clean or replace the cartridge.
Power absorption exceeds the maximum allowed	Wiring incorrect.	Check the electric wiring against the wiring diagram in the terminal board box.
	Voltage drop on the power supply.	Return the power supply voltage at the terminals to within the values allowed.
	Intake filter clogged.	Clean or replace the cartridge.
	Deposits have built up inside the unit.	Get trained personnel to clean the machine internally.
	The unit is operating at a pressure and/or vacuum that exceeds that allowed.	Adjust the plant and/or the regulating valve to reduce the pressure differentials.
Delivery air temperature high	The unit is operating at a pressure / vacuum that exceeds that allowed.	Adjust the plant and/or the regulating valve to reduce the pressure differentials.
	Intake filter clogged.	Clean or replace the cartridge.
	Deposits have built up inside the unit.	Get trained personnel to clean the machine internally.
	Intake and/or delivery piping clogged.	Remove the obstructions.
	Air temperature at intake exceeds 40°C.	Use a heat exchanger to reduce the air temperature at the intake.
Excessive noise	The soundproofing fabric is damaged.	Replace the soundproofing fabric.
	The impeller is scraping against the chassis:	
	a. The unit is operating at a pressure / vacuum that exceeds that allowed.	Adjust the plant to reduce the pressure differentials.
	b. The play allowed during assembly has been reduced due to internal deposits (dust, impurities in the pipes, process residue, etc.).	Get trained personnel to clean the machine internally.
	Bearing worn.	Replace the bearing.
Abnormal vibrations	Installation position of the unit not suitable.	Install the units on structures that cannot transmit or amplify the noise (tanks, steel plating, etc.).
	The impeller is damaged.	Replace the impeller.
	Deposits have built up on the impeller.	Get trained personnel to clean the machine internally.
	The unit is fixed incorrectly.	Fix the unit on anti-vibration supports.



Operation & Maintenance Manual

NES PROJECT NUMBER: 12-198 April 2015
PROJECT NAME: Air Sparge Equipment & Control Panel System

Prepared for:

**Advanced Cleanup Technologies Inc.
110 Main Street
Suite 103
Port Washington, NY 11050**

**Sales: (508)226-1100 Option 2
Technical Support: (508)226-1100 Option 3**

Phone (508) 226-1100 Fax (508) 226-1180 84 Dunham Street Attleboro, MA 02703
www.nes-inc.biz



OPERATION & MAINTENANCE MANUAL

12-198 - AIR SPARGE EQUIPMENT - ACT - NY

SECTION 1 - SUMMARY OF EQUIPMENT

COMPONENT SUMMARY

WARRANTY STATEMENT

SECTION 2 - MECHANICAL DRAWINGS & TABLE(S)

M-1, PROCESS & INSTRUMENTATION DIAGRAM (P&ID)

T-1, P&ID INSTRUMENTATION TABLE

SECTION 3 - PROCESS EQUIPMENT & VALVES

ROTARY VANE COMPRESSOR - BECKER KDT3.60 -5 HP

INLET FILTER SILENCER, 1.5 IN - SOLBERG FS-19P-150

BLEED FILTER SILENCER, 1 IN - SOLBERG FS-19P-100

GATE VALVE, 1.5 IN BRASS - LEGEND LEG104-467

SWING CHECK VALVE, 1.5 IN BRASS - LEGEND PRO105-107

SECTION 4 - PROCESS INSTRUMENTATION

PRESSURE INDICATOR, 0-60 PSI - DWYER SGY-D10422N-GF

PRESSURE SWITCH, 0-10 PSI - DWYER CS-10

PRESSURE SWITCH, 0-30 PSI - DWYER CS-30

TEMPERATURE SWITCH, 0-225 F - UNITED ELECTRIC B54-103

TEMPERATURE GAUGE, 0-250 F - AV 1NFY4

SECTION 5 - ELECTRICAL DRAWINGS & TABLE(S)

T-2, INTERLOCK TABLE

I-1, CONTROL PANEL LAYOUT DRAWING



T-3, PANEL BILL OF MATERIALS (BOM)

I-2, WIRING DIAGRAMS & TERMINAL DETAILS

E-1, LINE DIAGRAM

E-2, VFD SETTINGS

SECTION 6 - CONTROL COMPONENTS

CONTROL PANEL ENCLOSURE 24 X 24 X 12 - MILD STEEL/GRAY - HAMMOND EN4SD242412GY

VENT FAN 105CFM 115VAC 4.7" W/ FILTER GRILL 24 IN CORD - HAMMOND DNFF120BK115

VENT FAN ADJUSTABLE 30-140F BI-METAL TEMP SWITCH N.O. - HAMMOND SKT011419NO

VFD, 33 AMP RATING - AC TECH ESV752N02TXB

POWER SUPPLY, 24VDC, 1.3A, 1PH, 30W - IDEC PS5R-C24

TIMER ON-DELAY - SQUARE D RE17RAMU_



SECTION 1 - SUMMARY OF EQUIPMENT

COMPONENT SUMMARY

WARRANTY STATEMENT

NES MAJOR COMPONENT SUMMARY

REVISION A

APRIL 2015

PROJECT NO.:

12-198

AIR SPARGE EQUIPMENT

ACT - NY

COMPONENT	TAG	QTY	MANUFACTURER	MODEL	SERIAL NUMBER
SECTION 1 - SUMMARY OF EQUIPMENT					
COMPONENT SUMMARY					
WARRANTY STATEMENT					
SECTION 2 - MECHANICAL DRAWINGS & TABLE(S)					
M-1, PROCESS & INSTRUMENTATION DIAGRAM (P&ID)	M-1				
T-1, P&ID INSTRUMENTATION TABLE	T-1				
SECTION 3 - PROCESS EQUIPMENT & VALVES					
ROTARY VANE COMPRESSOR	C-1	1	BECKER	KDT3.60 -5 HP	D2855726
COMPRESSOR MOTOR, 5 HP, 208VAC, 3-PHASE, TEFC	C-1	1	TOSHIBA	00545DSR44A-P	14100140897
INLET FILTER SILENCER, 1.5 IN	F-1	1	SOLBERG	FS-19P-150	N/A
BLEED FILTER SILENCER, 1 IN	F-2	1	SOLBERG	FS-19P-100	N/A
GATE VALVE, 1.5 IN BRASS	GV	1	LEGEND	LEG104-467	N/A
SWING CHECK VALVE, 1.5 IN BRASS	CV	1	LEGEND	PRO105-107	N/A
SECTION 4 - PROCESS INSTRUMENTATION					
PRESSURE INDICATOR, 0-60 PSI	PI-101, 102	2	DWYER	SGY-D10422N-GF	KC-L14 / KC-L14
PRESSURE SWITCH, 0-10 PSI	PSL-101	1	DWYER	CS-10	M13092-T10AA
PRESSURE SWITCH, 0-30 PSI	PSH-102	1	DWYER	CS-30	M13316-T10AA
TEMPERATURE SWITCH, 0-225 F	TSH-101	1	UNITED ELECTRIC	B54-103	1509-K2116292
TEMPERATURE GAUGE, 0-250 F	TI-101, 102	2	AV	1NFY4	N/A
SECTION 5 - ELECTRICAL DRAWINGS & TABLE(S)					
T-2, INTERLOCK TABLE (BY TERRATHERM)	T-2				
I-1, CONTROL PANEL LAYOUT DRAWING	I-1				
T-3, PANEL BILL OF MATERIALS (BOM)	T-3				
I-2, WIRING DIAGRAMS & TERMINAL DETAILS	I-2				
E-1, LINE DIAGRAM	E-1				
E-2, VFD SETTINGS	E-2				
SECTION 6 - CONTROL COMPONENTS					
CONTROL PANEL ENCLOSURE 24 X 24 X 12 - MILD STEEL/GRAY	ENCL	1	HAMMOND	EN4SD242412GY	UL: A11975128
BACK-PANEL - FITS ENCL, 24 X 24 - STEEL/WHT	ENCL	1	HAMMOND	EP2424	N/A
MOUNTING FEET SET OF 4 - ZINC PLATED	ENCL	1	HAMMOND	EZPMFHD	N/A
VENT FAN 105CFM 115VAC 4.7" W/ FILTER GRILL 24 IN CORD	VF	1	HAMMOND	DNFF120BK115	N/A
VENT FAN ADJUSTABLE 30-140F BI-METAL TEMP SWITCH N.O.	VF	1	HAMMOND	SKT011419NO	N/A
VENT FAN RAINHOOD NEMA 3R	VF	2	HAMMOND	RH20000GY	N/A
VENT FAN GRILL / SOLID COVER KIT	VF	2	HAMMOND	RHA20000G	N/A
CIRCUIT BREAKER 6A 1-POLE 120/240 VAC 1-PHASE 10KA DIN-MOUNT	CB	1	SQUARE D	MG24430_	N/A
VFD, 33 AMP RATING	VFD	1	AC TECH	ESV752N02TXB	13469543329651500
RELAY 1 POLE 24VDC	CR	3	IDEC	RV8H-L-D24_	N/A
RELAY 3PDT 120VAC W/INDICATOR LIGHT	CR	4	IDEC	RH3B-UL-AC 120V	N/A
RELAY SOCKET FOR RH3B	CR	4	IDEC	SH3B- 05	N/A
RH1B-ULDC12V SPDT W/ LIGHT RELAY	CR	2	IDEC	RH1B-ULDC12V	N/A
RELAY SOCKET FOR RH1B	CR	3	IDEC	SH1B- 05	N/A
POWER SUPPLY, 24VDC, 1.3A, 1PH, 30W	PS	1	IDEC	PS5R-C24	914701D02244R
TIMER ON-DELAY	T	2	SQUARE D	RE17RAMU_	N/A
LEGEND PLATE HOLDER	PB	6	SQUARE D	ZBZ33-	N/A
PILOT LIGHT HEAD, RED	LT	4	SQUARE D	ZB5AV04 3	N/A
MOUNTING BASE, 120V RED PROTECTED LED	LT	4	SQUARE D	ZB5AVG 4	N/A
PUSH BUTTON OPERATOR NON-ILLUM BLACK	SW	1	SQUARE D	ZB5AA 2	N/A
3 POSITION SELECTOR SWITCH ILLUM. GREEN MOMENTARY	SW	1	SQUARE D	ZB5AK1733_	N/A
MOUNTING BASE 120V GREEN PROTECTED LED	SW	1	SQUARE D	ZB5AVG3_	N/A
TERMINAL BLOCK SCREW CLAMP 20 AMP 600 V GRAY	TB	12	SQUARE D	NSYTRV22	N/A
TERMINAL BLOCK END BARRIERS GRAY	TB	3	SQUARE D	NSYTRAC22	N/A
TERMINAL BLOCK END ANCHORS	TB	6	SQUARE D	NSYTRAABV35	N/A

NES MAJOR COMPONENT SUMMARY

REVISION A

APRIL 2015

PROJECT NO.:

12-198

AIR SPARGE EQUIPMENT

ACT - NY

COMPONENT	TAG	QTY	MANUFACTURER	MODEL	SERIAL NUMBER
LOAD CENTER GROUND BAR 12 TERMINALS	GB	1	SQUARE D	PK15GTA	N/A



WARRANTY

All products not manufactured by RapidTech LLC d/b/a National Environmental Systems, carry the original manufacturer's warranty. Copies are available on request.

RapidTech LLC d/b/a National Environmental Systems, warrants its packaged and manufactured equipment against any defect in material or workmanship, under normal use and storage for a period of twelve (12) months from date of manufacture and invoice, regardless of system start-up date. In the event that products are found to be defective within the warranty period, RapidTech LLC d/b/a National Environmental Systems, sole obligation and remedy shall be the furnishing of replacements for any defective parts, and such replacement parts shall be furnished but not installed by RapidTech LLC d/b/a National Environmental Systems. RAPIDTECH LLC D/B/A NATIONAL ENVIRONMENTAL SYSTEMS, WILL NOT BE LIABLE FOR SPECIAL OR CONSEQUENTIAL DAMAGES IN ANY CLAIM SUIT OR PROCEEDINGS ARISING UNDER WARRANTY, NOR WILL RAPIDTECH LLC D/B/A NATIONAL ENVIRONMENTAL SYSTEMS, ACCEPT ANY LIABILITY FOR CLAIMS FOR LABOR, LOSS OR PROFIT, REPAIRS OR OTHER EXPENSES INCIDENTAL TO REPLACEMENT.

The warranty requires that the purchaser complete all operations and maintenance as detailed in each section of the Operation & Maintenance Manual supplied with the purchased system. In addition installation must comply with nationally recognized electrical and mechanical standards as well as best engineering practices in effect at the time of purchase.

The product warranty expressed above is our only warranty and may not be verbally changed or modified by any representative of RapidTech LLC d/b/a National Environmental Systems. All freight costs incurred in shipping parts to or from RapidTech LLC d/b/a National Environmental Systems, or to the manufacturer if necessary are at the expense of the customer.

RapidTech LLC dba National Environmental Systems, will invoice the cost of any replacement parts. These parts will be credited upon certification the original part was defective and the defective part was returned within one week of notifying RapidTech LLC d/b/a National Environmental Systems, of the malfunction. If the part is found to have been misused no credit will be issued. In order for RapidTech LLC d/b/a National Environmental Systems, to ship a replacement part on account, all outstanding invoices must be current.

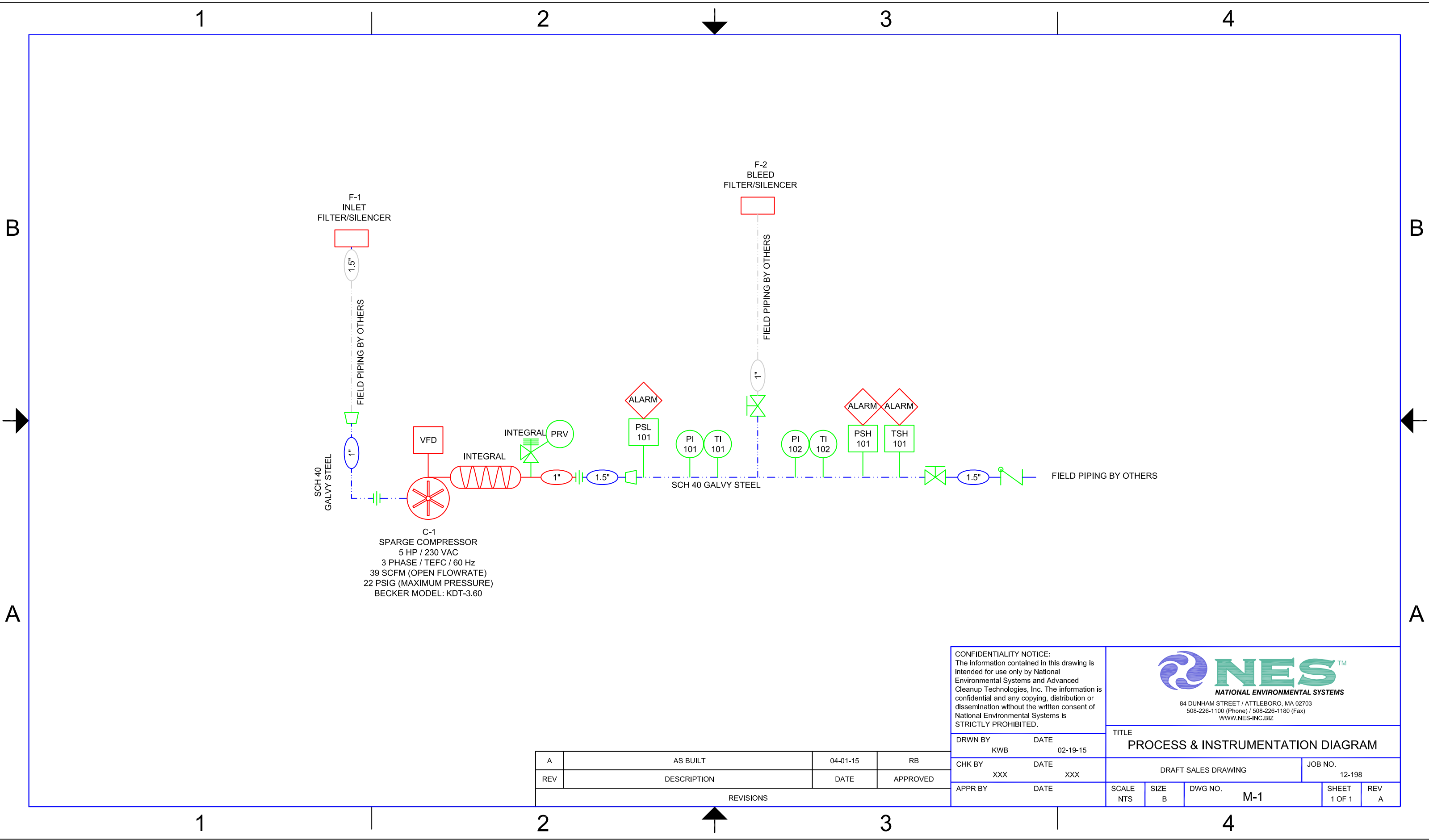
RapidTech LLC d/b/a National Environmental Systems, expressly disclaims any warranties, expressed or implied, including any warranty of merchantability or fit for particular purpose or any warranty arising from a course of dealing or usage of trade. Except to the extent required by applicable law. RapidTech LLC d/b/a National Environmental Systems, shall not be liable, in tort, contract or otherwise, for any loss or damage, whether direct, consequential or incidental, of any person or entity arising in connections with the equipment.



SECTION 2 - MECHANICAL DRAWINGS & TABLE(S)

M-1, PROCESS & INSTRUMENTATION DIAGRAM (P&ID)

T-1, P&ID INSTRUMENTATION TABLE



F-1
INLET
FILTER/SILENCER

1.5"

FIELD PIPING BY OTHERS

SCH 40
GALVY STEEL

1"

VFD

C-1
SPARGE COMPRESSOR
5 HP / 230 VAC
3 PHASE / TEFC / 60 Hz
39 SCFM (OPEN FLOWRATE)
22 PSIG (MAXIMUM PRESSURE)
BECKER MODEL: KDT-3.60

INTEGRAL

INTEGRAL

PRV

1"

1.5"

ALARM

PSL
101

PI
101

TI
101

SCH 40 GALVY STEEL

FIELD PIPING BY OTHERS

1"

F-2
BLEED
FILTER/SILENCER

1"

PI
102

TI
102

ALARM

PSH
101

ALARM

TSH
101

1.5"

FIELD PIPING BY OTHERS

CONFIDENTIALITY NOTICE:
The information contained in this drawing is intended for use only by National Environmental Systems and Advanced Cleanup Technologies, Inc. The information is confidential and any copying, distribution or dissemination without the written consent of National Environmental Systems is STRICTLY PROHIBITED.



TITLE
PROCESS & INSTRUMENTATION DIAGRAM

DRWN BY
KWB

DATE
02-19-15

CHK BY
XXX

DATE
XXX

APPR BY

DATE

SCALE
NTS

SIZE
B

DWG NO.
M-1

SHEET
1 OF 1

REV
A

A	AS BUILT	04-01-15	RB
REV	DESCRIPTION	DATE	APPROVED
REVISIONS			

TABLE 1
PROCESS INSTRUMENTATION DIAGRAM INSTRUMENT LIST

REVISION A

APRIL 2015

12-198

AIR SPARGE EQUIPMENT

TAG	ITEM	MODEL	MANUFACTURER	SPECIFICATION
PI-101, 102	PRESSURE INDICATOR, 0-60 PSI	SGY-D10422N-GF	DWYER	0-60 PSI RANGE / 2.5 INCH STAINLESS STEEL CASE / BRASS WETTED PARTS / GLYCERIN FILLED / 0.25 INCH BOTTOM MOUNT
PSL-101	PRESSURE SWITCH, 0-10 PSI	CS-10	DWYER	1-10 PSIG ADJUSTABLE RANGE / 0.4 PSIG FIXED DEADBAND / 0.25" BOTTOM MOUNT / BUNA-N & STEEL WETTED / 15 A @ 120 VAC / NEMA 1
PSH-102	PRESSURE SWITCH, 0-30 PSI	CS-30	DWYER	1-30 PSIG ADJUSTABLE RANGE / 1.0 PSIG FIXED DEADBAND / 0.25" BOTTOM MOUNT / BUNA-N & STEEL WETTED / 15 A @ 120 VAC / NEMA 1
TSH-101	TEMPERATURE SWITCH, 0-225 F	B54-103	UNITED ELECTRIC	IMMERSION PROBE TEMPERATURE SWITCH / 1-SETPOINT ADJUSTABLE - SPDT / 0° to 225°F / NEMA 1 ALUMINUM INDOOR / NON HAZARDOUS / 2-1/8 IN L BRASS PROBE / 3/8 IN NPT / 15 AMP RATING
TI-101, 102	TEMPERATURE GAUGE, 0-250 F	1NFY4	AV	BIMETAL THERMOMETER / 0 TO 250 F / 2.5 INCH STEM / 3 INCH DIAL / 0.5 INCH MNPT BACK-MOUNT / SS CASE



SECTION 3 - PROCESS EQUIPMENT & VALVES

ROTARY VANE COMPRESSOR - BECKER KDT3.60 -5 HP

INLET FILTER SILENCER, 1.5 IN - SOLBERG FS-19P-150

BLEED FILTER SILENCER, 1 IN - SOLBERG FS-19P-100

GATE VALVE, 1.5 IN BRASS - LEGEND LEG104-467

SWING CHECK VALVE, 1.5 IN BRASS - LEGEND PRO105-107

KDT Series

ISO 9001 Certified
CE Compliant

100% OIL-LESS COMPRESSORS

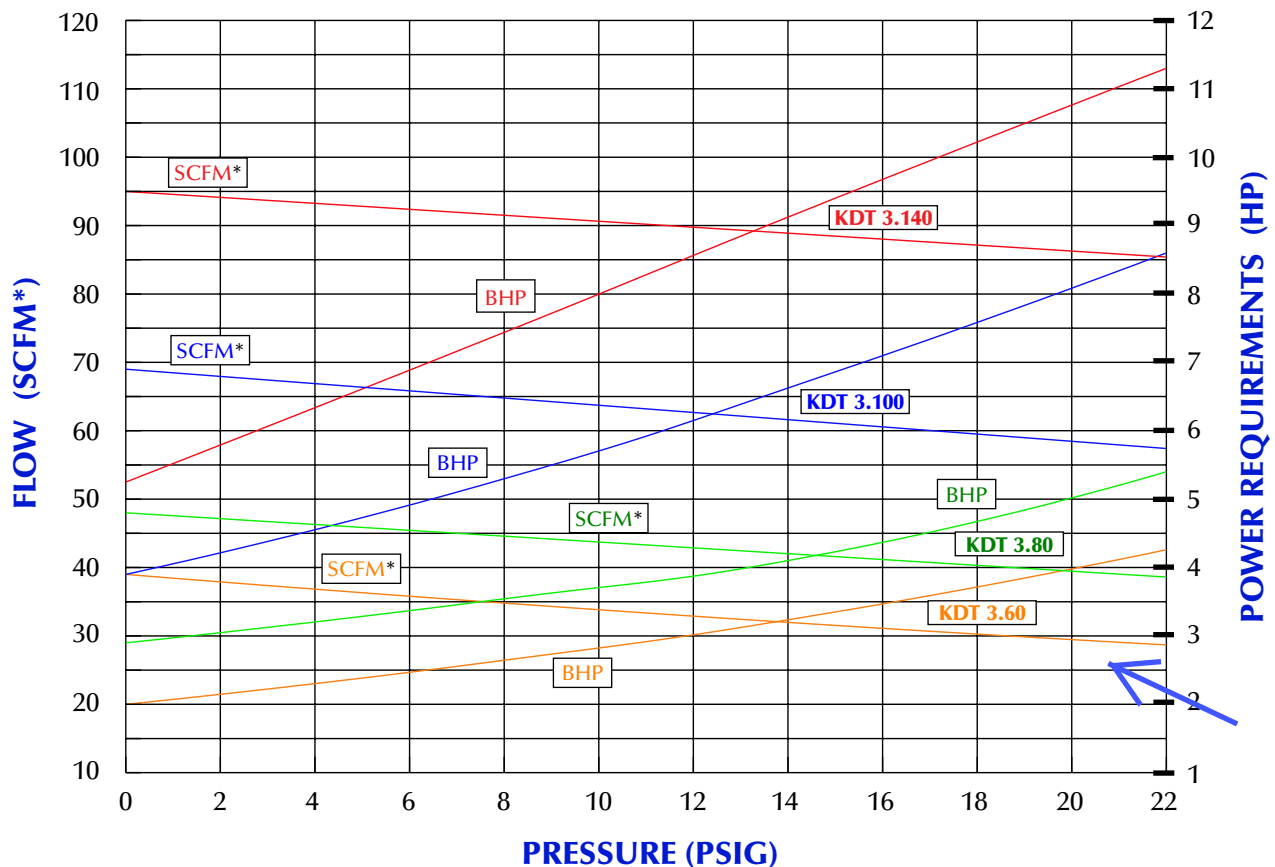
The Becker KDT series is a line of 100% Oil-less, rotary vane, low pressure compressors. They are designed to operate on a continuous basis throughout a pressure range from atmospheric pressure to 22 PSIG.

Each KDT unit is a direct drive compressor and is supplied with a TEFC flange mounted electric motor. Each unit is equipped with inlet and discharge filters, a pressure regulating valve, and vibration isolators as

standard equipment, all of which are an integral part of the compressor.

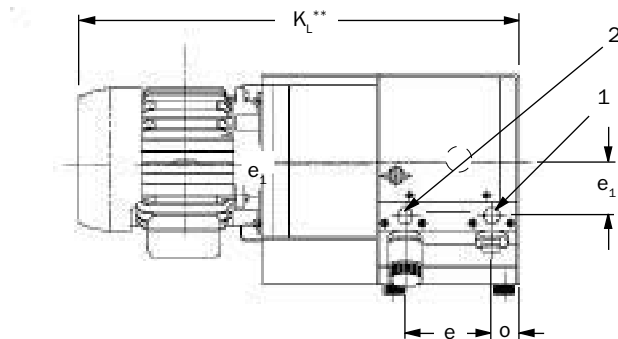


The Becker KDT compressor is ideal for applications where air is the gas and where operation is in the low pressure range where high pressure compressors are less efficient. Applications for the KDT compressor include graphic arts, soil remediation, pneumatic conveying, robotics and material handling, packaging, and paper converting.

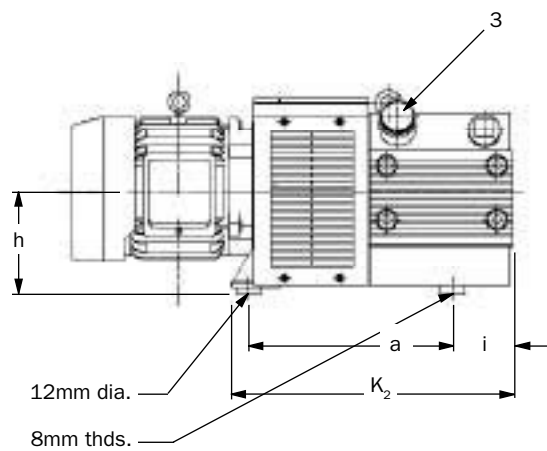


* @ 29.92" Hg Bar. Pr.; 68°F; 36% R.H.; 0.075#/ft³

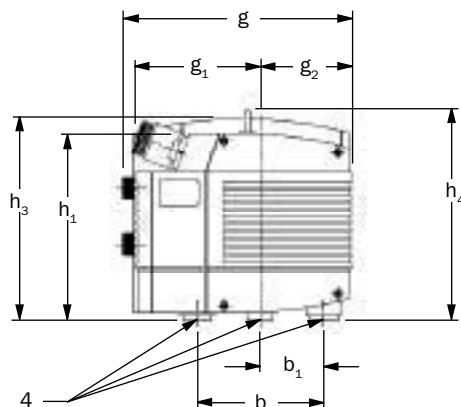
TECHNICAL DATA



Top View



Side View



End View (Opposite Motor End)

All data based on 60 Hz operation

	KDT 3.60	KDT 3.80	KDT 3.100	KDT 3.140
Flow (SCFM @ 0 PSIG)	39	48	69	95
Horsepower	5*	7 ¹ / ₂ *	10*	12*
Speed (RPM)	1740	1740	1740	1740
Maximum Pressure (PSIG)	22	22	22	22
Weight (lbs.)—w/o motor	104	108	156	172
Weight (lbs.)—w/ motor**	191*	265*	323*	368*
Noise Level (Max. dBA)	74	76	78	84
Outlet size (BSP, inches)	1	1	1 ¹ / ₂	1 ¹ / ₂
Dimensional Data				
	(Inches)			
a	12.83	12.83	15.67	15.67
b	7.5	7.5	9.65	9.65
b ₁	3.75	3.75	4.82	4.82
e	5.43	5.43	7.5	7.5
e ₁	2.56	2.56	3.75	3.75
g	13.9	13.9	18.5	18.5
g ₁	7.68	7.68	8.78	8.78
g ₂	5.55	5.55	9.06	9.06
h	6.38	6.38	6.38	6.38
h ₁	11.38	11.38	11.7	11.7
h ₃	12.28	12.28	13.0	13.0
h ₄	12.9	12.9	13.25	13.25
i	3.78	3.78	5.5	5.5
k ₂	17.64	17.64	22.17	22.17
k _L	28.2	30	34.15	36.6
o	1.81	1.81	2.36	2.36

Manufacturer reserves right to alter data without notice.

* Operation at lower pressure may use smaller motor.

** May vary with motor type and manufacturer

- 1 - Inlet Port
- 2 - Discharge Port
- 3 - Pressure Relief Valve
- 4 - Vibration Isolators

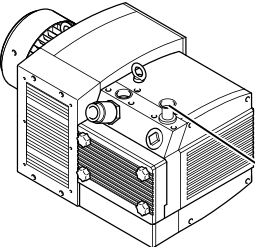
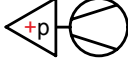
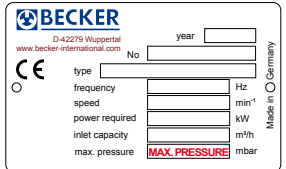
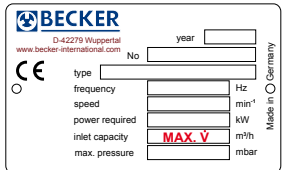
Betriebsanleitung
Operating Instructions
Instructions de service
Istruzioni d'uso
Handleiding
Instrucciones para el manejo
Manual de instruções
Naudojimosi instrukcija
Kasutusjuhend
Lietošanas instrukcija
Οδηγίες χρήσης
取扱説明書
사용설명서

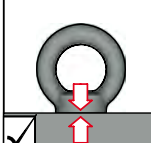
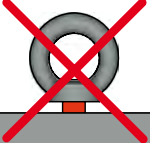
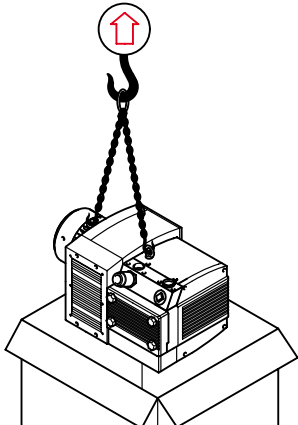
Driftsinstruks
Driftsinstruktioner
Käyttöohje
Driftsvejledning
Instrukcja obsługi
Kezelési útmutató
Návod k obsluze
Navodilo za uporabo
Navod na obsluhu
El Kitabi
Инструкция по эксплуатации
使用说明书

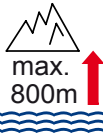
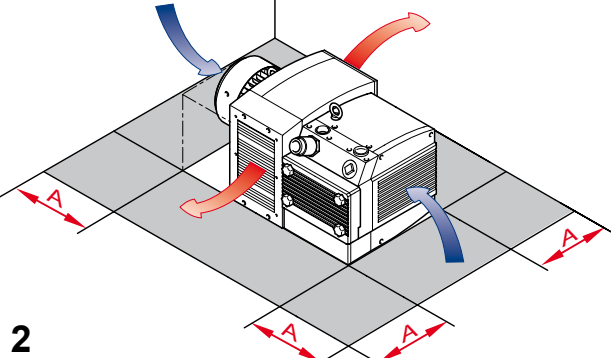
KDT 3.60

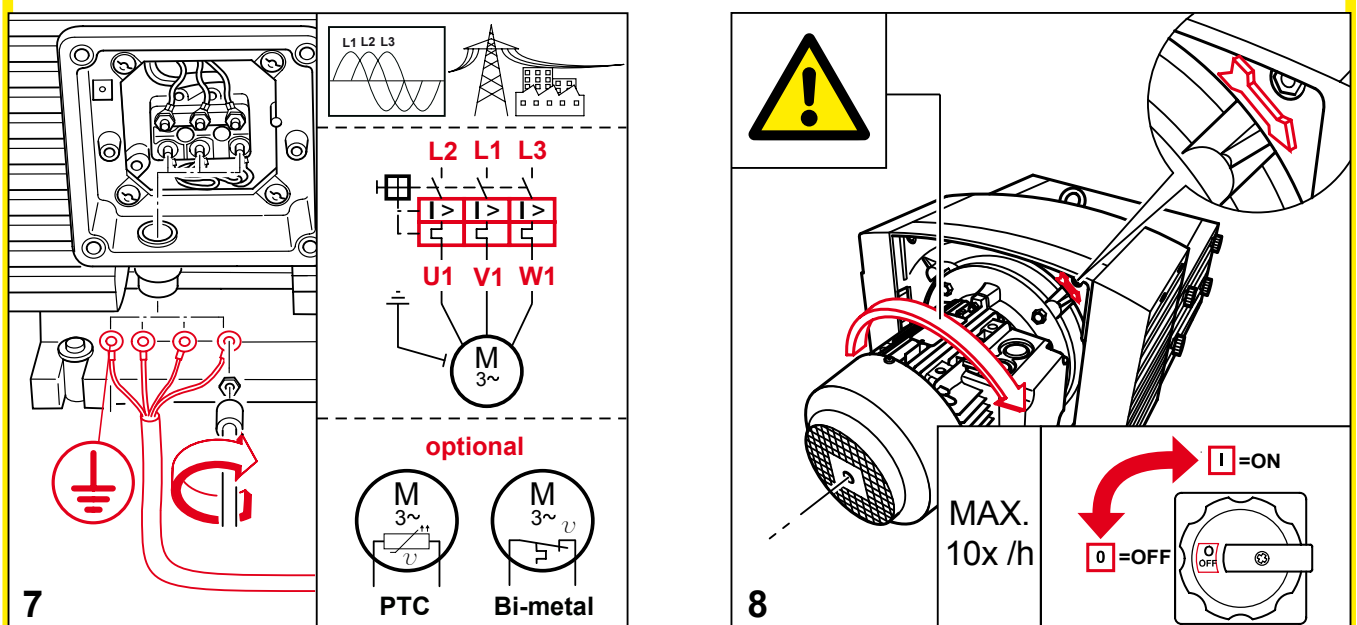
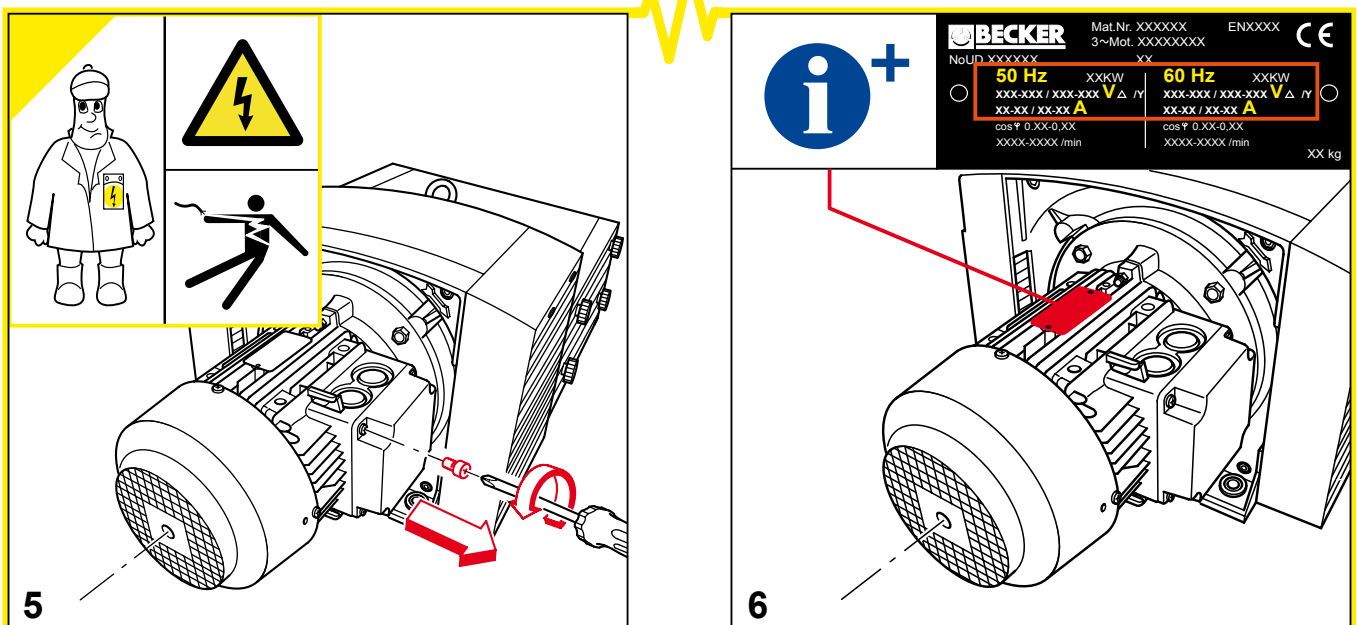
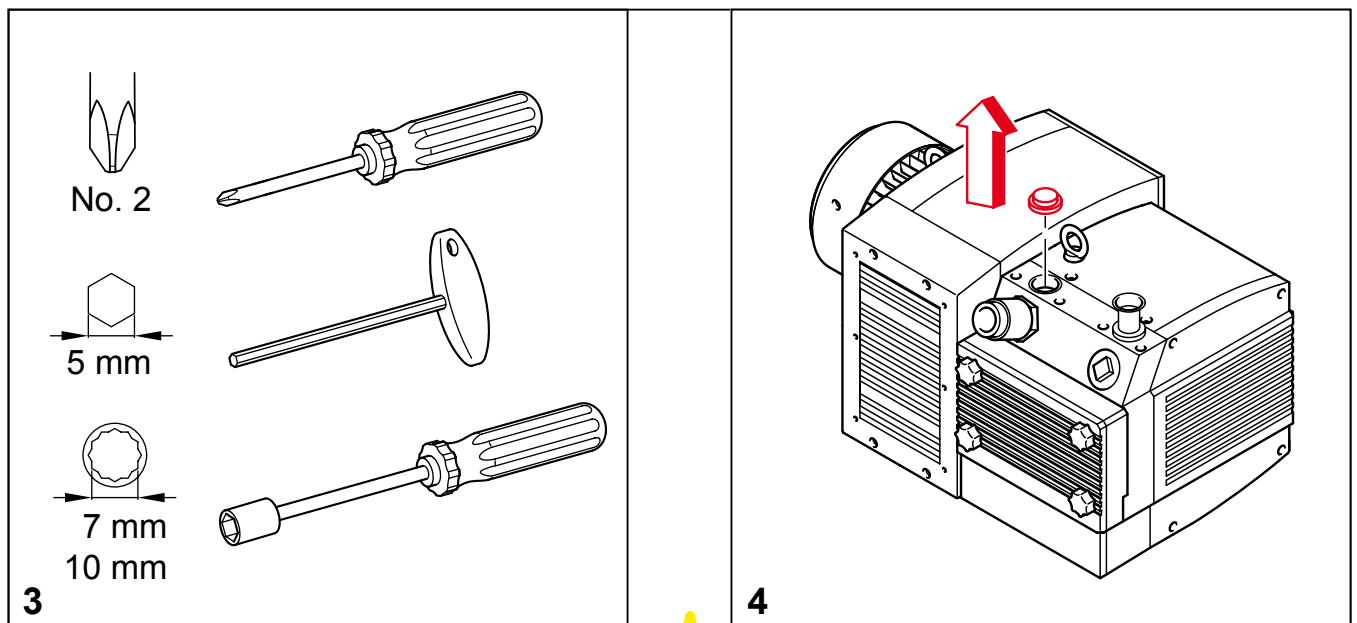
2006/42/EG

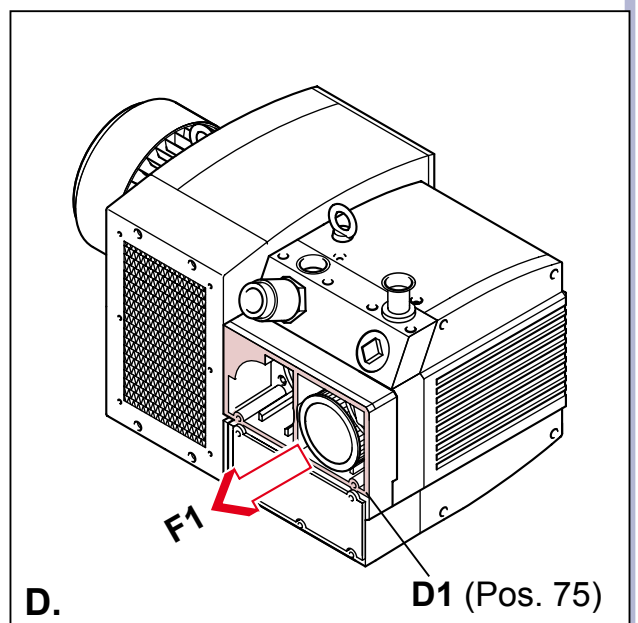
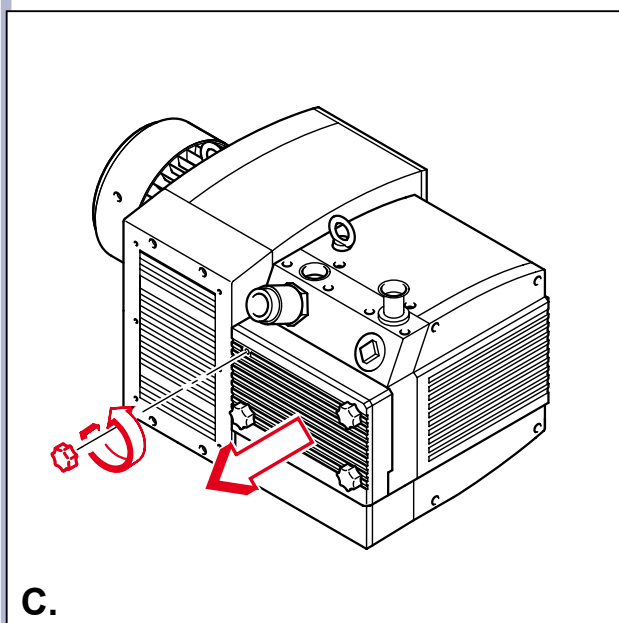
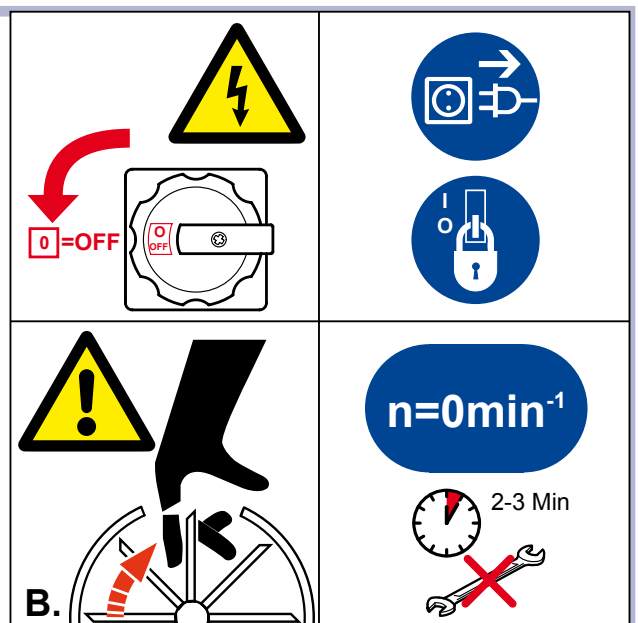
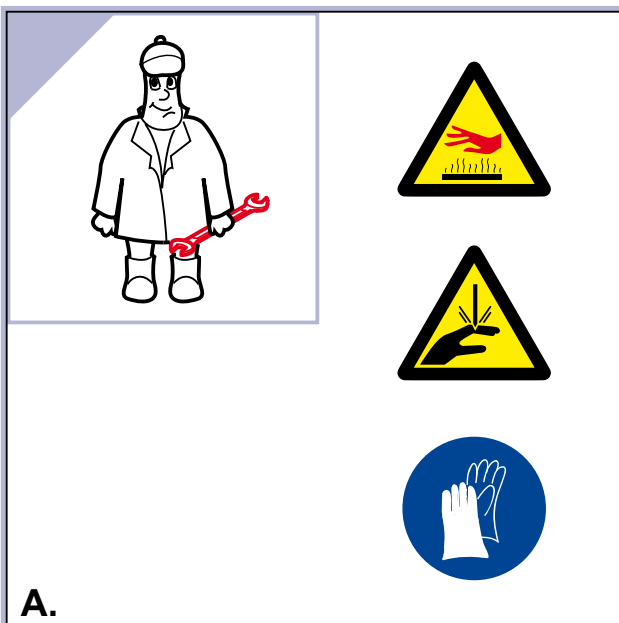
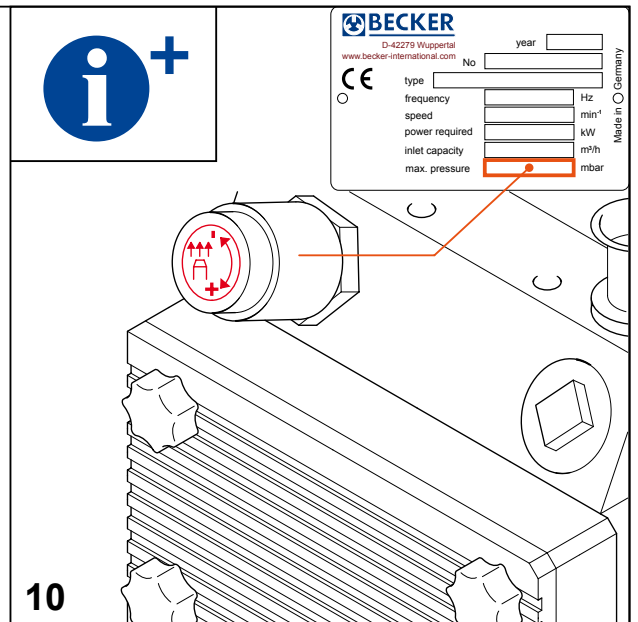
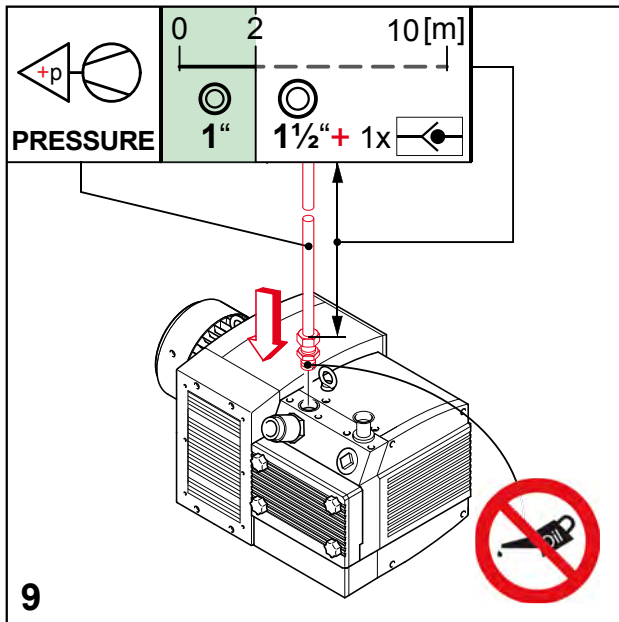


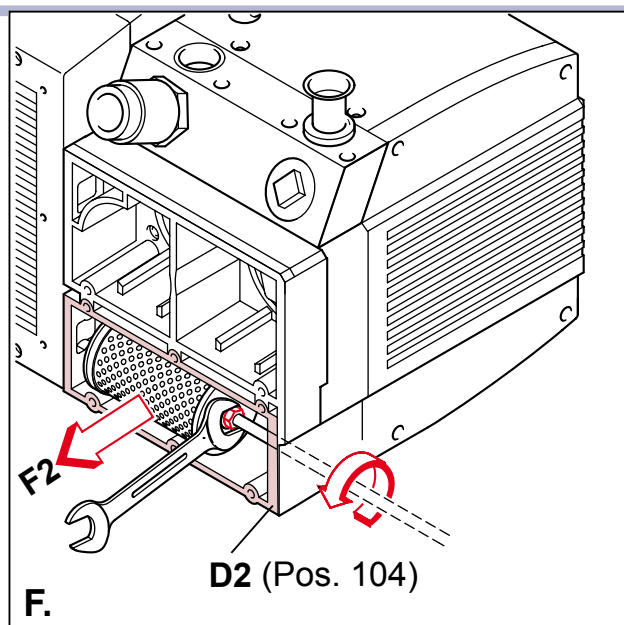
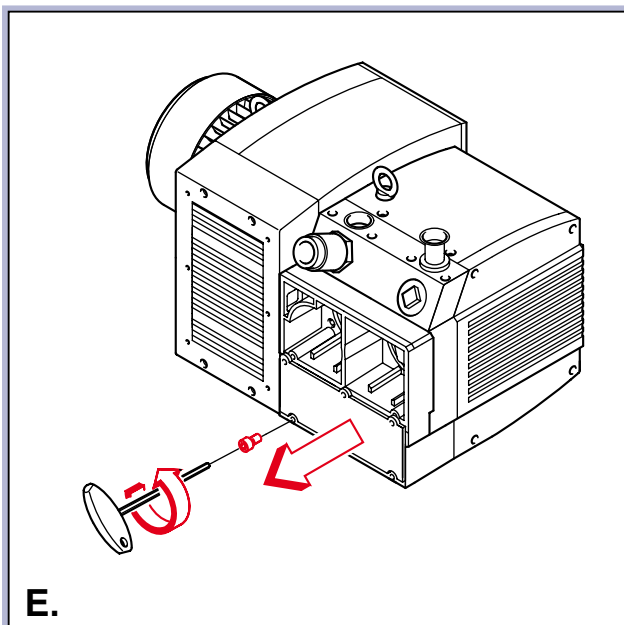
 	 		 MAX. PRESSURE	 mbar
 AIR	 		 MAX.	 m³/h DIN EN ISO 3744 L_{pA} = 72 dB(A) - 50Hz L_{pA} = 74 dB(A) - 60Hz K_{pA} = 3 dB(A)

			 71-80 kg 156-176 lbs
			

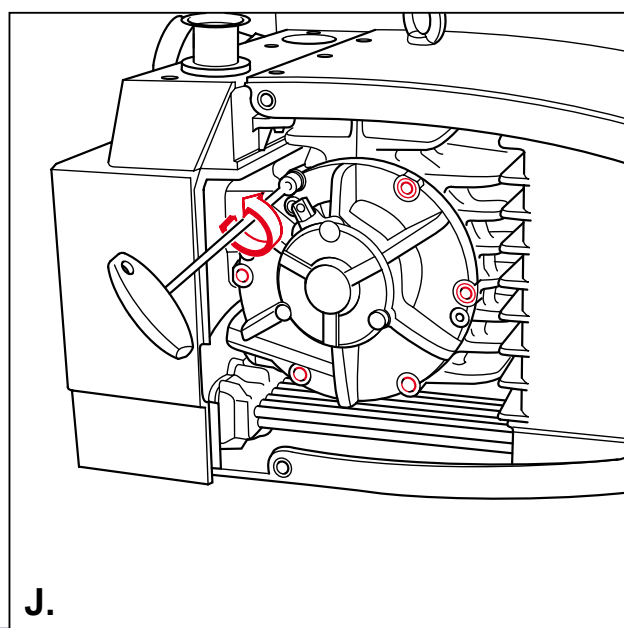
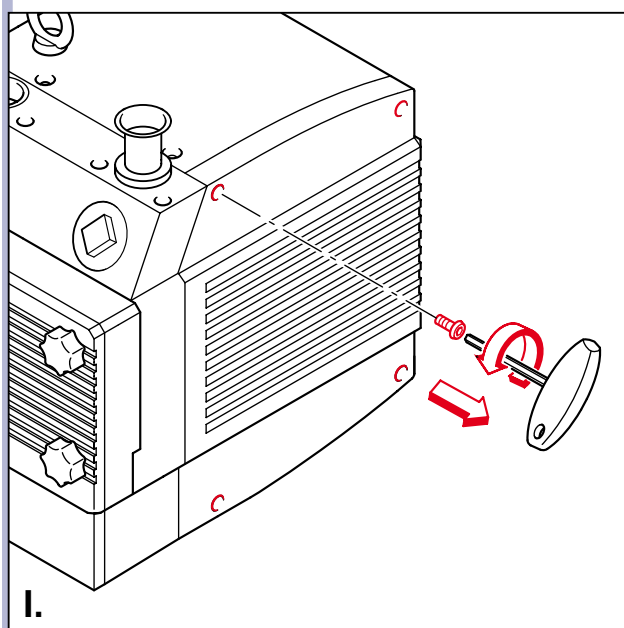
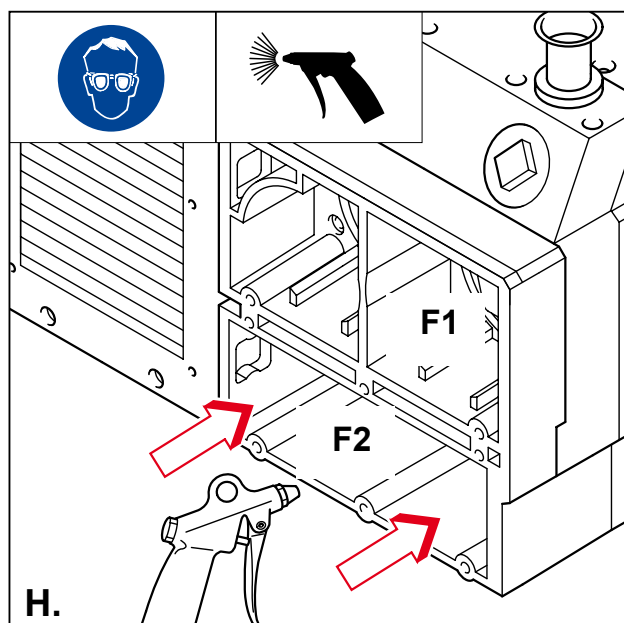
$A > 100\text{mm}$ $A > 4"$	 > 5°C/41°F < 45°C/113°F	 max. 90%	 max. 800m
			

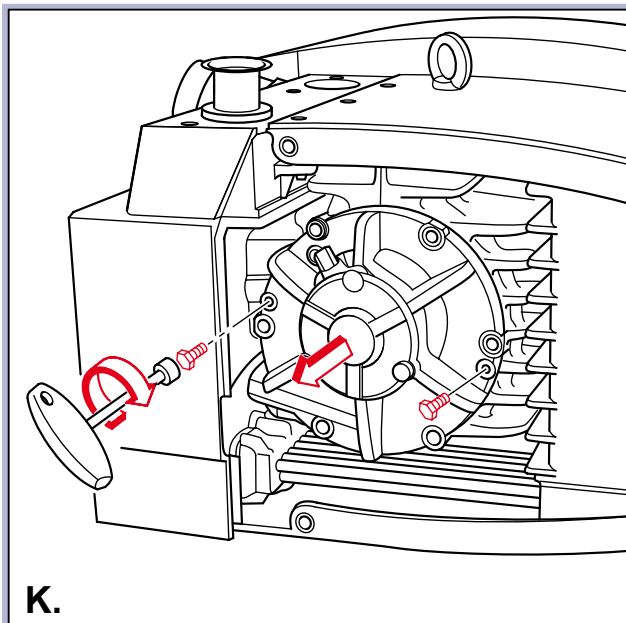


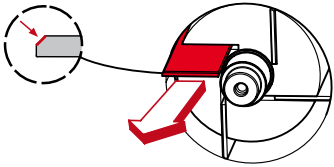
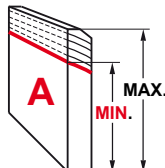




F1 (standard) No.: 909507	F1* (polyester) KDT 3.60/6 No.: 909587	F2 (standard) No.: 909510
D1 D2	Satz / Kit Pos.: 20, 24, 62, 75, 76, 85, 104, 125, 126, 127, 146, 288 No.: 549000 21100	

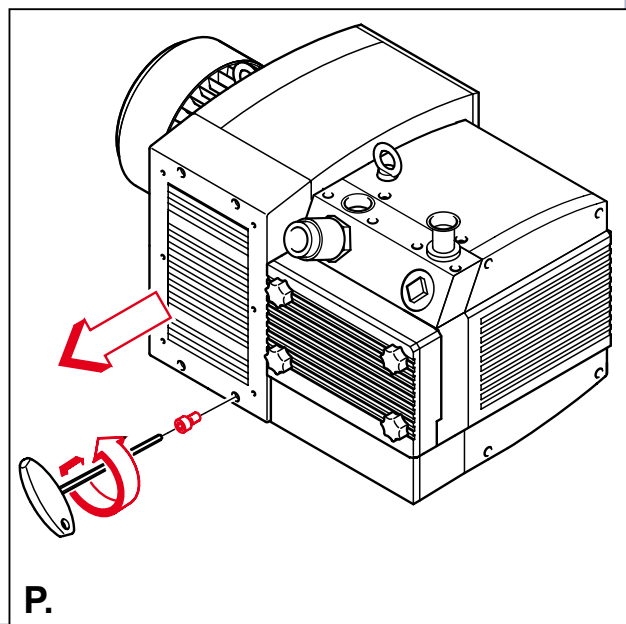
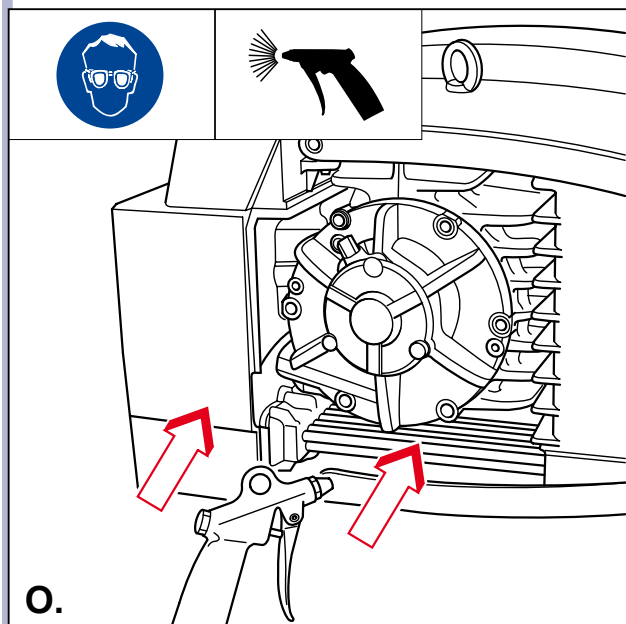
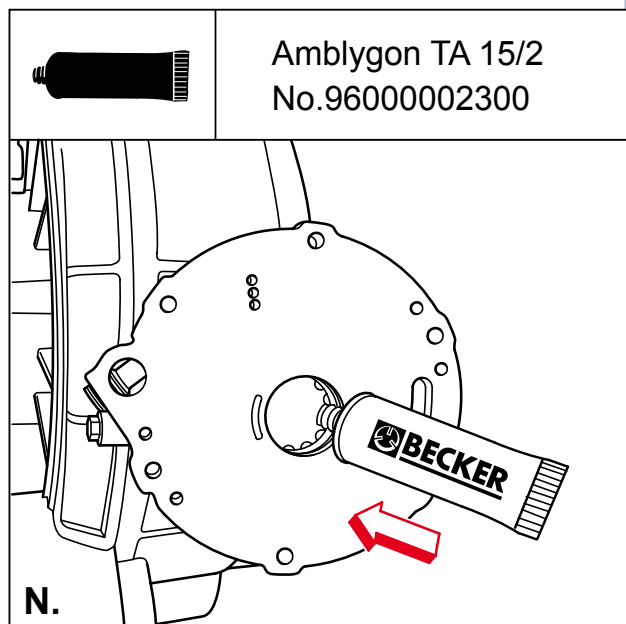
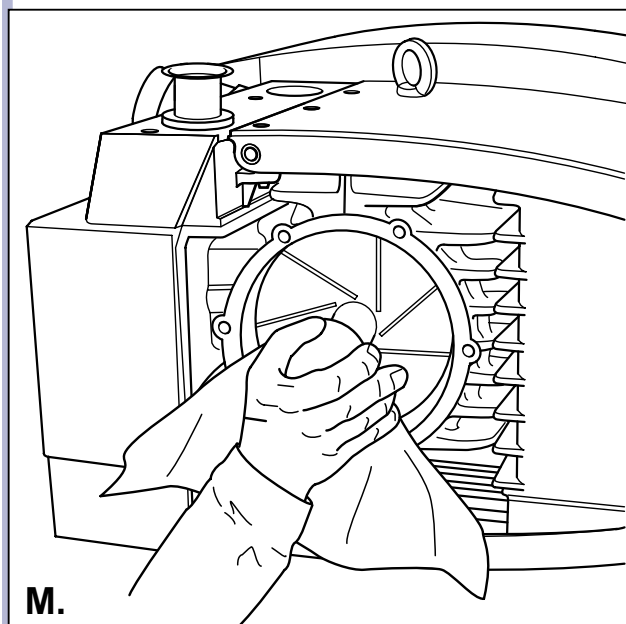


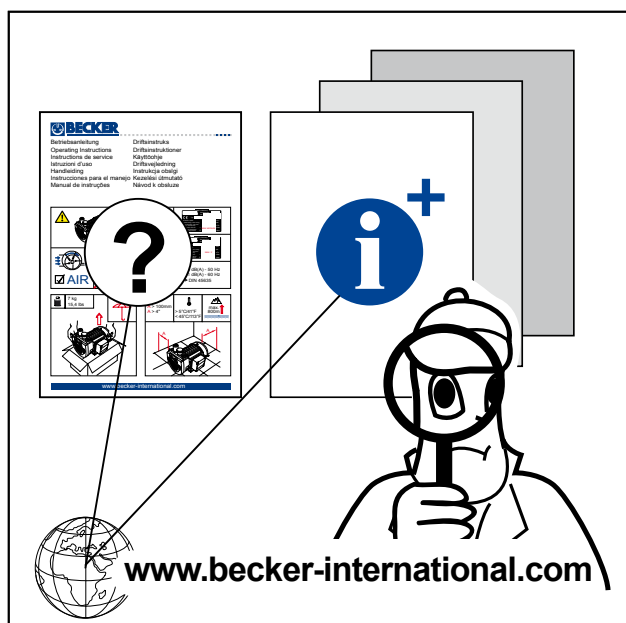
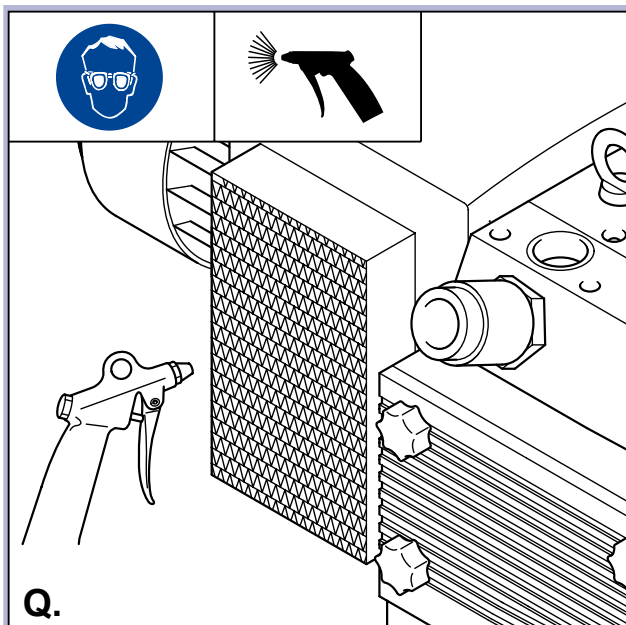


 3000 h	
	$A_{MIN} > 21mm$ $A_{MIN} < 21mm$  

L.

KDT 3.60 (standard)	→ No. 90133000004 (SET)
KDT 3.60/0-52	→ No. 90137900004 (SET)
KDT 3.60/6	→ No. 90137900004 (SET)
KDT 3.60/6-29	→ No. 90137900007 (SET)





Gebr. Becker GmbH
 Hölker Feld 29-31
 D-42279 Wuppertal

info@becker-international.com

(D) Service:

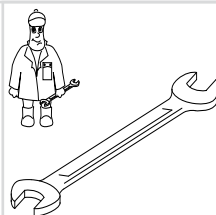
Tel: +49 (0)202 697-171

Fax: +49 (0)202 64 44 74



Gebr. Becker GmbH
Hölker Feld 29-31
D-42279 Wuppertal

**Wartung
Maintenance
Entretien
Manutenzione
Mantenimiento**



	Pos.	Menge ²⁾ Quantity Quantité Quantità Cantidad	Bestell-Nr. Ident No. No. Identificatio No. Identificazion No. de pedido	Bezeichnung Description Designation Designazione Descripcion
KDT 3.60 - 3.80	...	1	549000 21100	Dichtungssatz, Complete set of seals, Jeu de joints, Kit di guarnizioni, Junta Completa
	11	SATZ (KIT)	901330 00004	Schieber, Rotor Vane, Palette, Empujador
	11	SATZ (KIT)	901379 00004	" KDT 3.60/0-52 + KDT 3.80/0-52
	11	SATZ (KIT)	"	" KDT 3.60/6 + KDT 3.80/6
	11	SATZ (KIT)	901379 00007	" KDT 3.60/6-29
	68	1	909507 00000	Filterpatrone, Filter cartridge, Cartouche Filtrante, Cartuccia filtro, Cartucho de filt
	68	1	909587 00000	" KDT 3.60/6 + KDT 3.80/6
	91	1	909510 00000	Filterpatrone, Filter cartridge, Cartouche Filtrante, Cartuccia filtro, Cartucho de filt

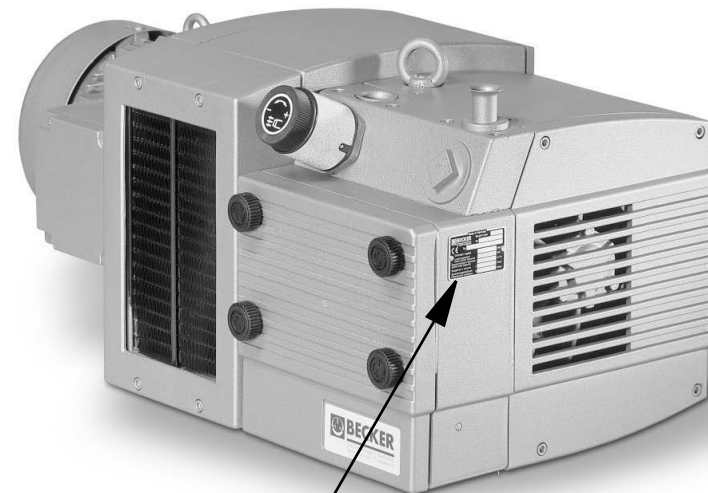
²⁾ erforderliche Bestellmenge / necessary order quantity / quantité nécessaire / quantità di ordinazione necessari / cantidad necesario



Ersatzteilliste
Spare parts list
Liste de pièces de rechange
Listino pezzi di ricambio
Lista de piezas de recambio
Lista de peças sobresselentes
Reserveonderdelenlijst
Reservedelsliste
Reservdelslista

Reservedelsliste
Varaosaluettelo
Wykaz części zamiennych
Seznam náhradních dílů
Tartalékalkatrész lista
Κατάλογος ανταλλακτικών
Перечень запасных частей
备用零件目录
スเปアパーツリスト

KDT 3.60
KDT 3.80



28000021601 07/2009

Index-D

SERVICE

Qingpu - PR CHINA
www.becker-international.com

CE

type **KDT 3.60-XX**

frequency Hz

speed min⁻¹

power required kW

inlet capacity m³/h

pressure mbar

vacuum mbar

year

No

Index Option

Made in

Service:
Tel: +49 (0)202 697-171
Fax: +49 (0)202 64 44 74
E-Mail: info@becker-international.com

www.becker-international.com



Pos.

Ident No.

Description



KDT 3.60 - 3.80



...	549000 21100	SET OF SEALS ¹⁾
6	000100 21600	PUMP BODY, KDT 3.60
6	000100 21100	PUMP BODY, KDT 3.80
9	020004 21100	ROTOR
11	901330 00004	CARBON VANES (KIT) ²⁾
15	000801 21100	LID
16	000701 21100	LID
18	001100 21100	BEARING COVER
19	001000 21100	BEARING COVER
20	025511 21100	GASKET
24	911312 00000	SEAL
26	917152 00000	COMPENSATING DISC
27	906540 00000	SHAFT-SEALING RING
28	906612 50000	BALL BEARING
29	906657 00000	BALL BEARING
31	511400 10100	SET DISTANCE DISC
37	945217 00000	HEX HEAD SCREW
38	016801 21100	CLAMPING DISC
39	949807 00000	SCREW
41	945224 00000	HEX-HEAD SCREW
42	945222 00000	HEX-HEAD SCREW
45	948742 00000	STRAIGHT PIN
47	947736 00000	KEY
50	053201 21100	CONNECTION FLANGE
52	950308 00000	WASHER
53	945337 00000	SOCKET HEAD SCREW
57	949409 00000	WASHER
58	945270 00000	SHAFT END BOLD
61	040101 21100	FILTER HOUSING
62	025501 21100	GASKET
64	946955 00000	STUD
65	951003 00000	STUD
67	964407 00000	SILENCER TUBE
68	909507 00000	FILTER CARTRIDg E C 1112/2 (1x) ²⁾
71	009000 27000	LEAF SPRING
72	948750 00000	BLIND RIVET
73	040201 21100	FILTER-COVER
75	025518 21100	GASKET
76	025516 21100	GASKET
77	022802 21100	FILTER HOLDER
79	945321 00000	SOCKET HEAD SCREW
80	946971 00000	STUD
81	947504 00000	WASHER
82	947104 00000	HEX.NUT
83	952019 00000	LOCATING PEG
85	025514 21100	GASKET
86	025515 21100	GASKET
88	560203 21100	COOLER
91	909510 00000	FILTER CARTRIDg E C 713 (1x) ²⁾
93	946965 00000	STUD
94	947105 00000	HEX.NUT
95	949450 00000	WASHER
97	950304 00000	WASHER
98	945322 00000	SOCKET HEAD SCREW
103	068801 21100	COVER
104	025513 21100	GASKET
105	945319 00000	SOCKET HEAD SCREW
110	921500 50000	HANDLE
121	560204 21100	COOLER
125	025504 21100	GASKET



Pos.

Ident No.

Description



KDT 3.60 - 3.80



126	025512 21100	GASKET
127	025517 21100	GASKET
129	945372 00000	SOCKET HEAD SCREW
130	945328 00000	SOCKET HEAD SCREW
132	946930 00000	STUD
134	005602 21100	COVER
141	016606 21100	CONNECTING PIECE
146	025507 21100	GASKET
148	945368 00000	SOCKET HEAD SCREW
149	741310 30000	RUBBER BUFFER
161	918300 21100	COVERING HOOD
163	920800 21100	AIR GUIDE HOOD
165	960700 21100	VENTILATOR HOOD
166	960701 21100	VENTILATOR HOOD
170	945321 00000	SOCKET HEAD SCREW
171	945371 00000	SOCKET HEAD SCREW
173	949806 00000	SCREW
174	951703 00000	SPRING DISC
175	741302 00000	RUBBER BUFFER
176	945634 00000	THREADED PIN
178	951602 00000	RING UNIT
182	014902 21100	FLANGES
184	951916 00000	RUBBER BUSHING
185	948772 00000	PIPE RIVET
186	947508 00000	WASHER
188	945333 00000	SOCKET HEAD SCREW
190	951018 00000	STUD
191	947506 00000	WASHER
192	947106 00000	HEX.NUT
195	902108 00000	COUPLING
196	902209 00000	COUPLING DISC
197	544501 21100	COUPLING WITH FAN
285	728000 99622	PRESSURE REGULATING VALVE / 8,7 PSI
285	728001 99622	PRESSURE REGULATING VALVE / 14,5 PSI
285	728002 99622	PRESSURE REGULATING VALVE / 29 PSI
288	948066 00000	SEALING RING
290	964307 00000	SILENCER TUBE
291	912805 00000	PLUG
400	769302 40840	FREQUENCY CONVERTOR
401	961301 19600	GASKET
402	945315 00000	SOCKET HEAD SCREW

GREASE 960000 02300 AMBLYGON TA15/2 (TUBE, 8g)

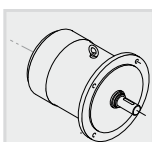
¹⁾ Set of seals - 54900021100 - Pos.: 20, 24, 62, 75, 76, 85, 86, 104, 125, 126, 127, 146, 288
²⁾ necessary order quantity / maintenance

OPTIONAL

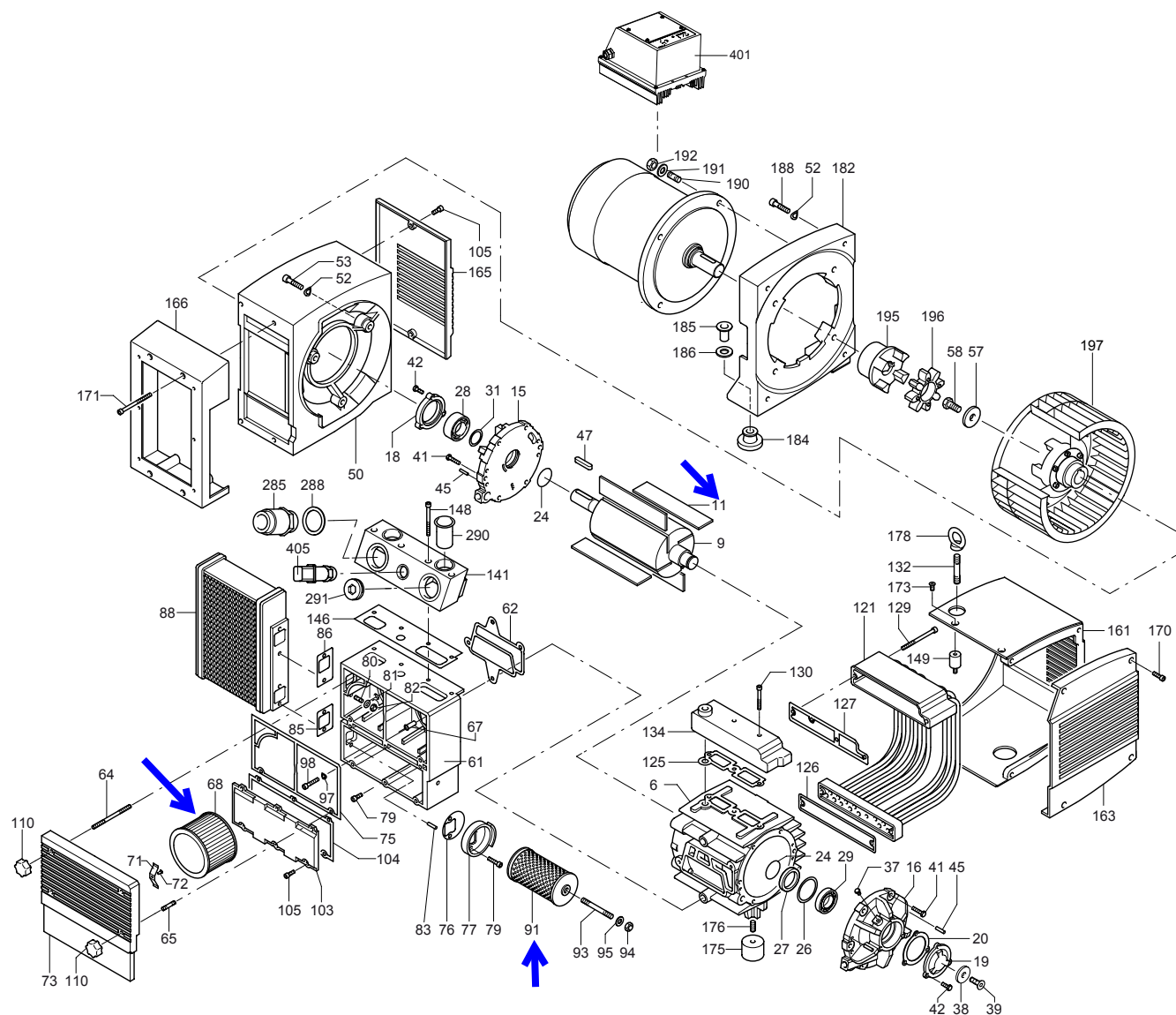
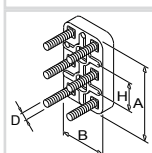
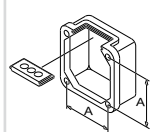
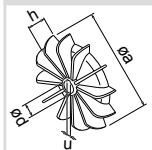
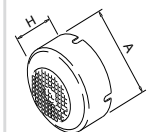
KDT 3.60	USA	all types
KDT 3.80	/0-05	Special design – corrosion protection
	/0-34	Special design – > air flow rat
	/0-52	Special design – corrosion protection and special vanes
	/0-54	Special design – refrigeration
	/0-400	Special design – with frequency convertor
	/6	Special design – corrosion protection
	/B5-200	Special design – motor flang

Items different from standard appliance see appendix (back of drawing)





SERVICE ? 



 standard

 **KDT 3.60**
KDT 3.80

optional
en option
opcionale
opcional 

optional en option optionale opcional	Variante(n) Modification Variantes	Pos ³⁾	Bestell Nr. / Ident No. / No. Identification / No. Identificazione / No. De pedido		Beschreibung / Description / Designation / Designazione / Descripcion
					
KDT 3.60/XX KDT 3.80/XX	KDT 3.60 (USA) KDT 3.80 (USA)	190 191 192 195 195		951018-00000 947506-00000 947106-00000 902100-21100 902100-21300	STIFTSCHRAUBE / STUD / PRISONNIER / L'ASTA A VITE / ESPÁRRAGO UNTERLEGSCHIEBE / WASHER / RONDELLE / RONDELLA / ARANDELA SECHSKANTMUTTER / HEX.NUT / ECROU A 6 PANS / DADO ESAGONALE / TUERCA HEXAGONAL KDT 3.60 - MOTORKUPPLUNG / COUPLING / ACCOUPLEMENT / GIUNTO / ACOPLAMIENTO KDT 3.80 - MOTORKUPPLUNG / COUPLING / ACCOUPLEMENT / GIUNTO / ACOPLAMIENTO
	KDT 3.60/0-05 KDT 3.80/0-05	9	020005 21100	020004-21100	KOLBEN / ROTOR / PISTON / ROTORE / ÉMBOLO
	KDT 3.80/0-34	6 61	000103 21100 040102 21100	000100-21100 040101-21100	GEHÄUSE / PUMP BODY / CORP DE POMPE / CARCASSA / CARCASA FILTERGEHÄUSE / FILTER HOUSING / BOITE POUR FILTRE / CARCASSA DEL FILTRO / CARCASA DE FILTRO
	KDT 3.60/0-52 KDT 3.80/0-52	9 11 285 403	020005 21100 901379 00004 734000 02000	020004-21100 901330-00004 72800X-99622	KOLBEN / ROTOR / PISTON / ROTORE / ÉMBOLO SATZ (KIT) SCHIEBER / VANES / PALETTE / PALETTE / EMPUJADOR DRUCKREGULIERVENTIL / PRESSURE REGULATING VALVE / SOUPAPE REGLAGE PRESSION / VALVOLA REGOLAZIONE PRESSIONE / VÁLVULA REGULADORA DE PRESIÓN DRUCKREGULIERVENTIL 2,2 BAR / PRESSURE REGULATING VALVE 32 PSI / SOUPAPE REGLAGE PRESSION 2,2 BAR / VALVOLA REGOLAZIONE PRESSIONE 2,2 BAR / VÁLVULA REGULADORA DE PRESIÓN 2,2 BAR
	KDT 3.60/0-54 KDT 3.80/0-54	88 166 210 230	560700 21100 019901 21100	560203-21100 960701-21100	KÜHLER / COOLER / REFROIDISSEUR / RAFFREDDATORE / REFRIGERADOR LÜFTERHAUBE / VENTILATOR HOOD / CARTER DE VENTILATEUR / CAPPOTTA DEL VENTILATORE / CAPERUZA DE VENTILADOR LÜFTERHAUBE / VENTILATOR HOOD / CARTER DE VENTILATEUR / CAPPOTTA DEL VENTILATORE / CAPERUZA DE VENTILADOR UMLENKSTÜCK / RETURN PIECE / PIECE DE RETOUR / PEZZO INVERSIONE / PIEZA DE DESVIACIÓN
	KDT 3.80/0-400	61 141 400 405	040103 21100 016608 21100 769302 41115 769302 42100	040101-21100 016606-21100	FILTERGEHÄUSE / FILTER HOUSING / BOITE POUR FILTRE / CONTENITORE FILTRO / CARCASA DE FILTRO ANSCHLUSS-STÜCK / CONNECTING PIECE / PIECE RACCORD / PEZZI RACCORDI / PIEZA DE EMPALME FREQUENZUMFORMER / FREQUENCY CONVERTOR / CONVERTISSEUR DE FRÉQUENCE / CONVERTITORE DI FREQUENZA / CONVERTIDOR DE FRECUENCIA MESSUMFORMER / MEASUREMENT CONVERTER / CONVERTISSEUR DE MESURE / CONVERTITORE DI MISURA / CONVERTIDOR DE MEDIDA
	KDT 3.60/6 KDT 3.80/6	6 6 9 11 15 16 68	000110 21600 000110 21100 020011 21100 901379 00004 000811 21100 000711 21100 909587 00000	000100-21600 000100-21100 020004-21100 901330-00004 000801-21100 000701-21100 909507-00000	KDT 3.60 - GEHÄUSE / PUMP BODY / CORP DE POMPE / CARCASSA / CARCASA KDT 3.80 - GEHÄUSE / PUMP BODY / CORP DE POMPE / CARCASSA / CARCASA KOLBEN / ROTOR / PISTON / ROTORE / ÉMBOLO SATZ (KIT) SCHIEBER / VANES / PALETTE / PALETTE / EMPUJADOR SEITENDECKEL / LID LATERAL / COUVERCLE LATÉRAL / COPERCHIO LATERALE / TAPA LATERAL SEITENDECKEL / LID LATERAL / COUVERCLE LATÉRAL / COPERCHIO LATERALE / TAPA LATERAL FILTERPATRONE / FILTER CARTRIDGE / CARTOUCHE FILTRE / CARTUCCIA FILTRO / CARTUCHO DE FILTRO
	 KDT 3.60/6-29	9 11 230	020012 21100 901379 00007 019901 21100	020011-21100 901379-00004 019901-21100	KOLBEN / ROTOR / PISTON / ROTORE / ÉMBOLO SATZ (KIT) SCHIEBER / VANES / PALETTE / PALETTE / EMPUJADOR UMLENKSTÜCK / RETURN PIECE / PIECE DE RETOUR / PEZZO INVERSIONE / PIEZA DE DESVIACIÓN
	KDT 3.60/B5/200	182 195	014900 21600 902100 21600	014900-21100 902100-00000	ZWISCHENFLANSCH / INTERMEDIATE FLANGE / BRIDE INTERMEDIAIRE / FLANGE INTERMEDIA / BRIDA INTERMEDIA MOTORKUPPLUNG / COUPLING / ACCOUPLEMENT / GIUNTO / ACOPLAMIENTO

³⁾ variantenabhängige Bauteile / variant-dependent components / composants variante-dependantes / componenti variante-dispendenti / componentes variante-dependientes



BROKEN VANE REPLACEMENT



Becker Vacuum Pumps are leaders in their field in dependability and design. The nature of an oil-free, carbon vane, rotary sliding vane vacuum pump is that the vanes do wear out eventually.

The Becker KVT 3000 series vacuum pump requires a minimum amount of preventative maintenance to ensure optimum vane life and volumetric performance. Please do not over maintain this pump. Maintenance after the initial 500 hour break-in period should be limited to once every 6 months. Grease the pump with the amblygon grease provided and inspect the vane width.

Filter cleaning is truly a function of the ambient dirt load conditions. In most plastic manufacturing facilities, they may never need to be changed. Conversely, in a CNC router operation, daily cleaning is necessary.

27 mm is the minimum recommended vane width. To remove the risk of broken vanes you may wish to replace them at 29 mm. In the event the vanes have chipped severely or broken, it is important to remove all of the broken pieces to ensure they do not re-enter the pump and break or chip the new set just installed.

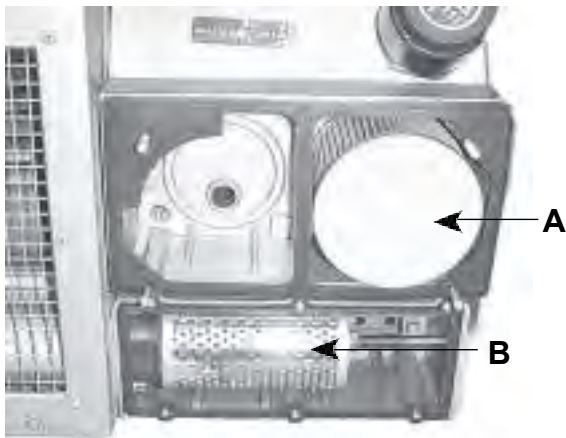


Broken Vane Replacement Procedure

NOTE: Broken vanes will be easily visible during the inspection of both the inlet filter and carbon dust separator housing. The inlet filter will have a heavy coating of dust and the carbon dust separator will be clogged and there will be broken pieces inside the housing around the filter.

To ensure that the new set of vanes will not break, immediately following installation, it is necessary to use the procedure detailed below:

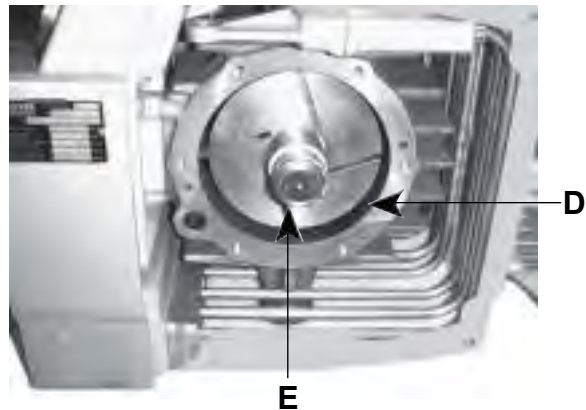
BECKER KVT 3.60



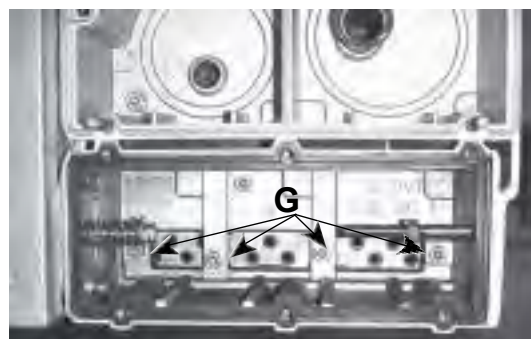
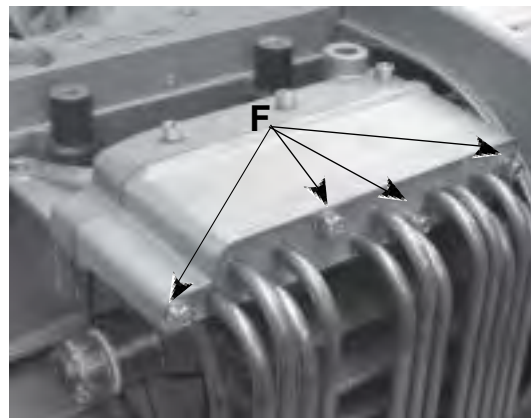
1. Remove the inlet filter (A) and carbon dust separator (B) from the pump and discard. Do not reuse these filters.



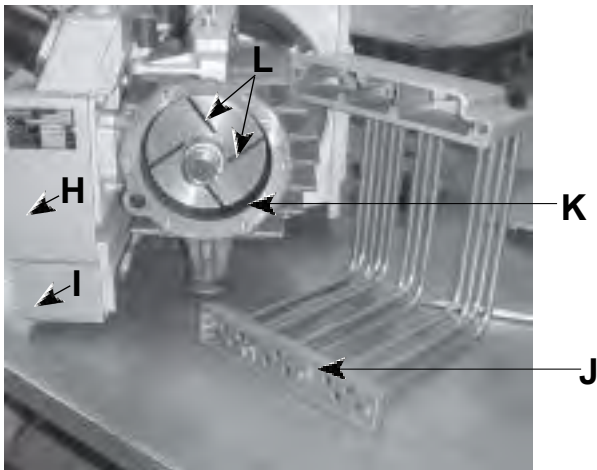
2. Remove the endshield (C) to gain access to the pump housing.



3. Remove the broken vanes from the housing (D) and rotor vane slots (E).



4. Unbolt the cooling tubes from both the top of the pump (F) and the carbon dust separator housing (G).



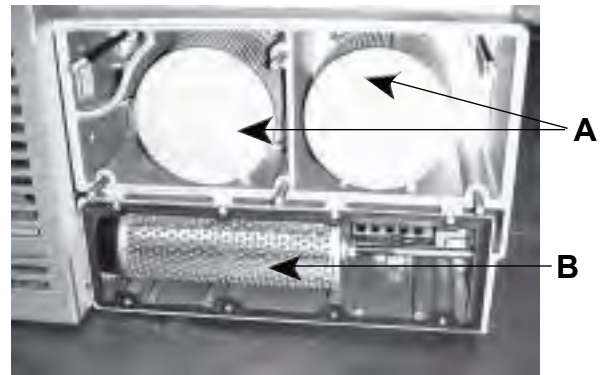
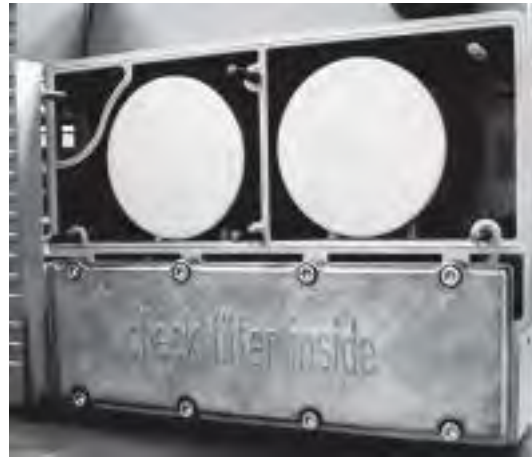
5. Using compressed air, blow out the inlet (H) and carbon dust separator (I) housings. Blow out the cooling tubes (J). Blow out the pump housing (K) and rotor vane slots (L) be sure to spin the rotor and blow out pieces from top dead center. Use a flashlight to check for pieces.

Care should be taken during this step to remove all broken pieces. This will prevent any particles from working their way back into the pump and breaking a new set of vanes.

6. After the pump is free of broken vanes, bolt cooling tubes back onto pump housing and dust separator box.
7. Install new vanes. Check to be sure high point in the tapered edge points in the direction of rotation. Ensure vanes fit freely into vane slots. Reinstall end shield ensuring no dust or debris is in the bearing chamber. Grease bearing if required. Install **new** filters. Start pump and check rotation.

The parts required to undertake the replacement of the vanes in the KVT 3.60 Becker pump are listed on page 6.

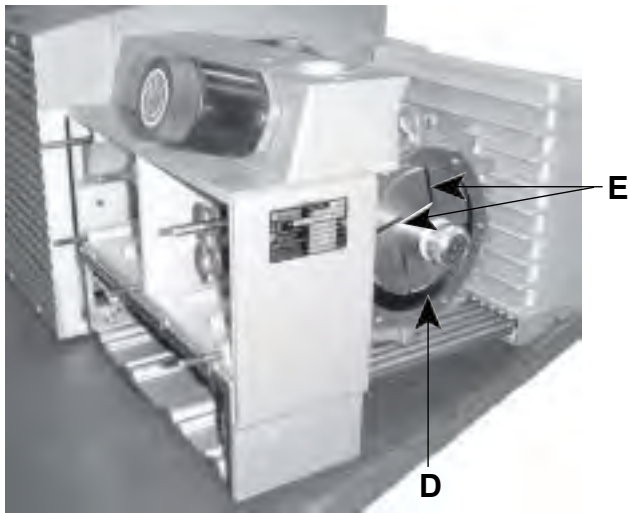
BECKER KVT 3.100



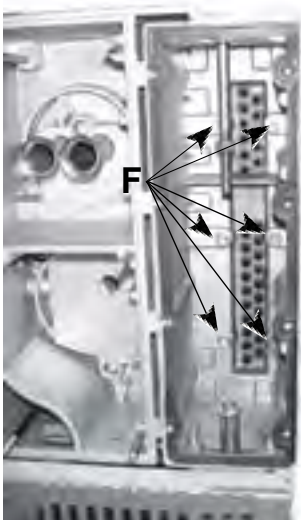
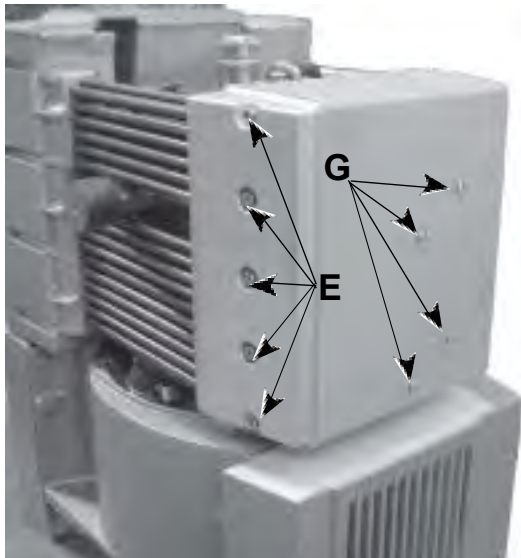
1. Remove the inlet filter (A) and carbon dust separator (B) from the pump and discard. Do not reuse these filters.



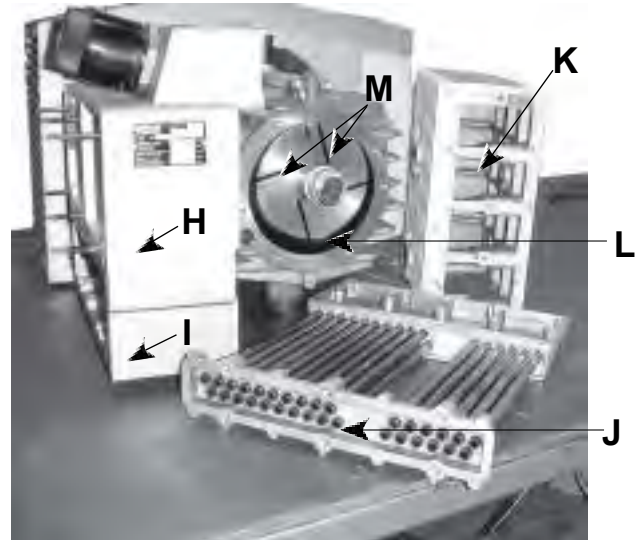
2. Remove the endshield (C) to gain access to the pump housing.



3. Remove the broken vanes from the housing (D) and rotor vane slots (E).



4. Unbolt the cooling tubes from both the discharge box (E) and the carbon dust separator housing (F). Unbolt the discharge box from the pump cylinder (G).



5. Using compressed air, blow out the inlet (H) and carbon dust separator (I) housings. Blow out the cooling tubes (J). Blow out the discharge box (K). Blow out the pump housing (L) and rotor vane slots (M). Be sure to spin the rotor and blow out debris from top dead center. Use a flashlight to check for pieces.

Care should be taken during this step to remove all broken pieces. This will prevent any particles from working their way back into the pump and breaking a new set of vanes.

6. After the pump is free of broken vanes, bolt discharge box back to cylinder. Bolt cooling tubes back to discharge box and separator housing.
7. Install new vanes. Check to be sure high point in the tapered edge points in the direction of rotation. Ensure vanes fit freely into vane slots. Reinstall end shield ensuring no dust or debris is in the bearing chamber. Grease bearing if required. Install **new** filters. Start pump and check rotation.

The parts required to undertake the replacement of the vanes in the KVT 3.100 Becker pump are listed on page 6.

Vane Replacement Parts List

Becker KVT 3.60

Vanes (4 Pc) 901330

Mann & Hummel Filters	2 only	C 1112
	1 only	C 713

Becker KVT 3.100

Vanes (4 Pc) 901333

Mann & Hummel Filters	2 only	C 1112
	1 only	C 718

Compact Filter Silencers

FS Series 1/2" - 6" MPT, Flange

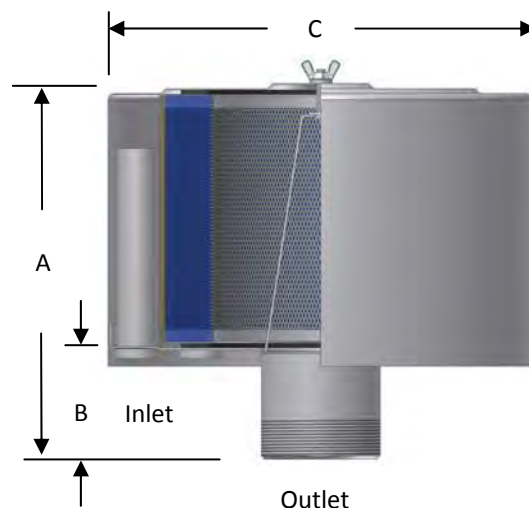


Features

- Fully drawn weatherhood - no welds to rust or vibrate apart
- Tubular silencing design - tubes are positioned to maximize attenuation and air flow while minimizing pressure drop
- Durable carbon steel construction with baked enamel finish & powder coated weatherhood

Technical Specifications

- Temp (continuous): min -15°F (-26°C) max 220°F (104°C)
- Filter change out differential: 15-20" H₂O over initial Δ P
- Pressure drop graphs available upon request
- Polyester: 99%+ removal efficiency standard to 5 micron
- Paper: 99%+ removal efficiency standard to 2 micron



Options

- 1/8" tap holes available for 3" and larger connections
- Pressure drop indicator (See page 3-11)
- Various media for different environments
- Stainless steel construction
- Epoxy coated finish
- Special connections
- Side Access Silencer Filters (LQB Series) for space restricted enclosures (select models)

Tidbit: Charlie Solberg Sr. "Senior" designed our first filter silencer in 1966. The FS-15 size filter was created for small air compressors.



SOLBERG®

Compact Filter Silencers FS Series 1/2" - 6" MPT, Flange

Outlet Connections

MPT Outlet	Assembly SCFM Rating	Assembly Part Number		Dimensions - inches			No. of Silencing Tubes	Approx. Wt. lbs	Replacement Element Part No.		Element SCFM Rating
		Polyester	Paper	A	B	C			Polyester	Paper	
1/2"	10	FS-15-050	FS-14-050	4	1 1/2	6	1	2	15	14	35
3/4"	25	FS-15-075	FS-14-075	4	1 1/2	6	2	2	15	14	35
1"	35	FS-15-100	FS-14-100	4	1 1/2	6	3	2	15	14	35
1"	55	FS-19P-100	FS-18P-100	6 5/8	1 5/8	6	3	3	19P	18P	100
1 1/2"	75	FS-19P-150	FS-18P-150	6 5/8	1 5/8	6	5	4	19P	18P	100
2"	135	FS-31P-200	FS-30P-200	7 1/4	2 1/4	10	5	8	31P	30P	195
2"	135	FS-231P-200	FS-230P-200	12 1/4	2 1/4	10	5	14	231P	230P	300
2 1/2"	195	FS-31P-250	FS-30P-250	7 1/2	2 1/2	10	5	8	31P	31P	195
2 1/2"	195	FS-231P-250	FS-230P-250	12 1/2	2 1/2	10	9	15	231P	230P	300
3"	300	FS-231P-300	FS-230P-300	13	3	10	9	15	231P	230P	300
3"	300	FS-235P-300	FS-234P-300	13	3	16	9	29	235P	234P	570
3"	300	FS-275P-300	FS-274P-300	13	3	16	9	33	275P	274P	1100
4"	520	FS-235P-400	FS-234P-400	14	4	16	9	30	235P	234P	570
4"	520	FS-275P-400	FS-274P-400	14	4	16	9	34	275P	274P	1100
5"	800	FS-245P-500	FS-244P-500	14	4	16	14	33	245P	244P	880
5"	800	FS-275P-500	FS-274P-500	14	4	16	14	36	275P	274P	1100
6"	1100	FS-275P-600	FS-274P-600	15	5	16	18	38	275P	274P	1100

See Filter Silencer Technical Data section for sizing guidelines.

Dimension tolerance $\pm 1/4"$

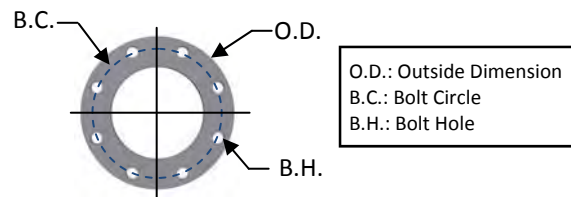
Flange Outlet Connections

Flange Outlet	Assembly SCFM Rating	Assembly Part Number		Dimensions - inches			No. of Silencing Tubes	Approx. Wt. lbs	Replacement Element Part No.		Element SCFM Rating
		Polyester	Paper	A	B	C			Polyester	Paper	
4"	520	FS-235P-400F	FS-234P-400F	14	4	16	9	33	235P	234P	570
4"	520	FS-275P-400F	FS-274P-400F	14	4	16	9	39	275P	274P	1100
5"	800	FS-245P-500F	FS-244P-500F	14	4	16	14	38	245P	244P	880
5"	800	FS-275P-500F	FS-274P-500F	14	4	16	14	41	275P	274P	1100
6"	1100	FS-275P-600F	FS-274P-600F	15	5	16	18	42	275P	274P	1100

See Filter Silencer Technical Data section for sizing guidelines.

Dimension tolerance $\pm 1/4"$

125/150# Pattern Flg	Dimensions - inches			No. of Holes	Flange Thickness
	O.D.	B.C.	B.H.		
4"	9	7 1/2	0.75	8	0.38
5"	10	8 1/2	0.88	8	0.38
6"	11	9 1/2	0.88	8	0.38



Note: Model offerings and design parameters may change without notice. See www.solbergmfg.com for most current offering.



SOLBERG



Filter Silencers and Inlet Filters Maintenance Manual

www.solbergmfg.com

Note: Please read the maintenance instructions given by the OEM for the machinery first. The OEM's manual should be adhered to in order to protect the equipment. Solberg Manufacturing, Inc has made every effort to make sure that these instructions are accurate but is not responsible for any typos, slight variations or for human errors that may occur.

Solberg Manufacturing, Inc., 1151 Ardmore Itasca, IL 60143 USA
Ph: 630.773.1363 Fax: 630.773.0727 Email: sales@solbergmfg.com Web: www.solbergmfg.com
Rev: MMIFS-1146

Maintenance Manual

Solberg Air Inlet Filters and Filter Silencers

CONTENTS

Section A

Introduction	pg. 3
--------------------	-------

Section B

General Information

1. Identification of Solberg Filters	pg. 3
2. Filtration Rules of Thumb	pg. 4
3. Element Specifications.....	pg. 6
4. Element Cleaning.....	pg. 7

Section C

Procedures

1. Installation.....	pg. 8
2. Disconnecting canister top from base	pg. 8
3. Removing element for service/maintenance.	pg. 9
4. Securing Element.....	pg. 9
5. Securing canister top to canister base.	pg. 10
6. Equipment Startup.....	pg. 10

Section D

Maintenance Recommendations

1. General.....	pg. 11
2. Spare Parts List.....	pg. 11

****For Further Information Please Call: 630-773-1363***



Section A

INTRODUCTION

The purpose of this manual is instruction on the proper assembly and care of Solberg inlet air filters.

WARNING

This manual must be read and thoroughly understood before using and caring for this air filter. Failure to comply could result in explosion, product/system contamination or personal injury.

This manual should be used as a supplement to the user's understanding of the proper care needed to maintain a safe and dependable air filter. It is the responsibility of the user to interpret and explain all instructions to persons who do not read or understand English BEFORE they are allowed to maintain and use this filter.

This manual should be readily available to all operators responsible for operation and maintenance of the inlet air filters.

We thank you for selecting products from Solberg Manufacturing, Inc. We are confident that our superior filter designs will meet your application requirements.

Section B

GENERAL INFORMATION

1. Identification of Solberg Inlet Air Filters.

All Solberg inlet air filters should have an identification label/nameplate that gives the following information:

Assembly Model #
Replacement Element #

(The exception is OEM supplied units. In this case, please enter the OEM part numbers below.)

Fill in the actual nameplate data from your new Solberg inlet filter(s):

Page 3

*Solberg Manufacturing, Inc., 1151 Ardmore Itasca, IL 60143 USA
Ph: 630.773.1363 Fax: 630.773.0727 Email: sales@solbergmfg.com Web: www.solbergmfg.com
Rev: MMIFS-1146*

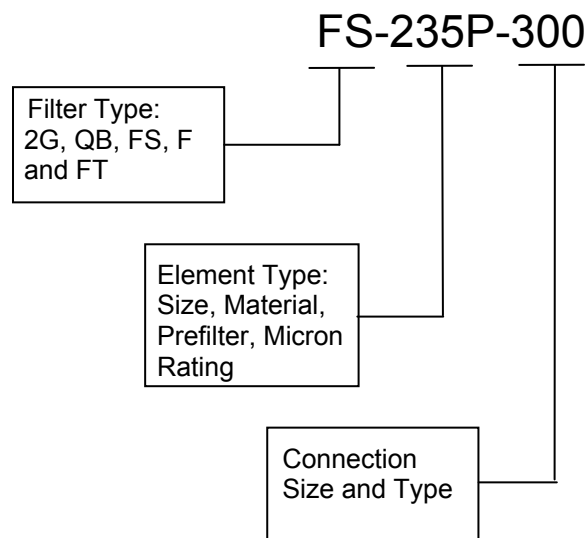


SOLBERG

No.	Filter Model Number	Replacement Element	Initial Delta P Readings
1			
2			
3			
4			
5			

Table 1

The model number designates the filter type, the original element configuration and housing connection size. For example, the following part number identifies the filter as being a 'FS' design filter with a 235 element with prefilter and 3" MPT connection size:



2. Filtration Rules of Thumb

General: For peak output performance from a compressor, blower, vacuum pump, engine, or any other machine that consumes air, one must have clean, unrestricted air. Proper filtration can help stabilize the working environment within rotating equipment even when the external conditions may be quite severe. A critical component in creating the right working conditions is filter sizing. With the properly sized filter, equipment will run smoothly over its entire expected operating life.

A major factor in filtration and filter sizing is air velocity through the filter media. Generally, the slower the velocity of air through a media the higher the filter efficiency and, conversely, the lower the pressure drop. Therefore, the primary



goal in filter sizing is to optimize the velocity of air through the media (sometimes called face velocity).

Rule of Thumb #1: Always begin with the filter cartridge requirements when sizing a filter. Once the appropriate element has been selected then move on to the housing requirements.

Rule of Thumb #2: Always ask or specify a filter based on a micron rating **with filtration efficiencies**. As an example, stating a requirement for a 1-micron filter is misleading because no efficiency rating has been specified. A 1-micron filter at 95% efficiency may be less efficient than a 5-micron filter at 99% efficiency. For proper air system performance in light and industrial duty environments, a filter with a minimum of 99% filtration efficiency at 5 microns is required.

Rule of Thumb #3: Size your filter correctly by understanding the impact air velocity through a media has on efficiency and pressure drop. Maintain the suggested Air-to-Media ratios listed below based on the external environment listings and Filtration efficiency needs.

Filtration Efficiency Requirements (99%+ efficiency)	Environmental Conditions	Air to Media Ratio	
<i>Industrial Grade 2-micron Paper</i>	Industrial Duty (clean, office/warehouse-like)	30 CFM/ft ²	(51m ³ /h)/cm ²
	Severe Duty (workshop, factory-like)	15 CFM/ft ²	(25.5m ³ /h)/cm ²
	Extreme Duty (Foundry, Construction-like)	10 CFM/ft ²	(17m ³ /h)/cm ²
<i>Industrial Grade 5-micron Polyester</i>	Industrial Duty (clean, office/warehouse-like)	50 CFM/ft ²	(85m ³ /h)/cm ²
	Severe Duty (workshop, factory-like)	40 CFM/ft ²	(68m ³ /h)/cm ²
	Extreme Duty (Foundry, Construction-like)	25 CFM/ft ²	(42.5m ³ /h)/cm ²
<i>Industrial Grade 1-micron Polyester</i>	Severe Duty (Foundry, Construction-like)	10 CFM/ft ²	(17m ³ /h)/cm ²
<i>Industrial Grade 0.3-micron HEPA Glass @ 99.97% Efficiency</i>	Industrial Duty (Pre-filtered Applications)	10 CFM/ft ²	(17m ³ /h)/cm ²
	Severe Duty (workshop, factory-like)	7 CFM/ft ²	(12m ³ /h)/cm ²
	Extreme Duty (Foundry, Construction-like)	5 CFM/ft ²	(8.5m ³ /h)/cm ²

Table 2

Rule of Thumb #4: Pressure drop is also caused by the dirt holding capacity of the element. As the element fills up with dirt, the pressure drop increases. It is



important to document the pressure drop across a given filter when it is new and then clean or replace it when the pressure drop increases by 10" to 15" / 250-280mm H₂O over the original reading.

Rule of Thumb #5: The inlet connection greatly influences the overall pressure drop of the filter system. To minimize the restriction contributed by an inlet filter, a velocity of 6,000 ft/min (10200m³/h) or less is suggested through the outlet pipe. The table below lists the suggested flows based on pipe size:

Pipe Size (inches)	Max Airflow		Pipe Size (inches)	Max Airflow		Pipe Size (inches)	Airflow	
1/4"	6 CFM	10m ³ /h	1 1/4"	60 CFM	102m ³ /h	6"	1,100 CFM	1870m ³ /h
3/8"	8 CFM	14m ³ /h	1 1/2"	80 CFM	136m ³ /h	8"	1,800 CFM	3060m ³ /h
1/2"	10 CFM	17m ³ /h	2"	135 CFM	230m ³ /h	10"	3,300 CFM	5610m ³ /h
3/4"	20 CFM	34m ³ /h	2 1/2"	195 CFM	332m ³ /h	12"	4,700 CFM	7990m ³ /h
1"	35 CFM	60m ³ /h	3"	300 CFM	510m ³ /h	14"	6,000 CFM	10200m ³ /h
			4"	520 CFM	884m ³ /h			
			5"	800 CFM	1360m ³ /h			

Table 3

**Note: This information is for general use only. A qualified engineer must properly design each system.*

3. Element Specifications

Temperature Range: -15° to 220°F / -26° to 105°C

Filter Change-Out Differential: 10" to 15" / 250-380mm H₂O Over Initial Delta P

Media	Micron Rating
Standard Paper	99+% @ 2 micron
Standard Polyester	99+% @ 5 micron
"S" Series Wire Mesh	Epoxy Coated Wire Mesh
"Z" Series Polyester	99+% @ 1 micron
"HE" Series HEPA	99.97% @ 0.3 microns
"U" Series Polyester	99+% @ 25 micron
"W" Series Polyester	99+% @ 100 micron
"S2" Series	Stainless Steel Wire Mesh
"AC" & "ACP" Series	N/A
"Y" Series Polypropylene	99+% @ 5 micron

Table 4

Temperature Range: -15° to 385°F / -26° to 196°C

Filter Change-Out Differential: 10" to 15" / 250-380mm H₂O Over Initial Delta P



Media	Micron Rating
"MX" & "MXD" Series – Nomex Cloth	99+% @ 5 micron

Table 5

4. Element Cleaning - Inlet Filtration

Solberg elements should be cleaned or replaced, once the pressure drop reaches 15 to 20-inches water column (380 - 500mm WC) above the initial pressure drop of the installation.

The decision to clean the element rather than replace it is left to the discretion of the operator. Any damage which results from by-pass or additional pressure drop created by element cleaning is the sole responsibility of the operator.

WARNING

The overall performance of a filter element is altered once cleaned.

The initial pressure drop after cleaning will be greater than the original, clean pressure drop of the element.

After each subsequent cleaning, the initial pressure drop will continue to increase.

Under all circumstances, the initial pressure drop of the element needs to be maintained at less than 20-inches water column (500mm WC).

Cleaned elements that exceed 20-inches water column (500mm WC) at start-up should be replaced with new elements.

With many types of equipment, the maximum pressure drop allowed will be dictated by the ability of the equipment to perform to its rated capacity. Under all circumstances, the operator should avoid exceeding the manufacturer's recommended maximum pressure drop for their specific equipment.

- A. **Polyester Element:** The polyester element may be washed in warm soapy water, vacuumed, gently blown out or replaced. The element



should be dry before reinstallation. The element should be replaced after a maximum of three cleanings.

- B. **Paper Element:** The paper element may be lightly blown with low pressure air. It is disposable and in most cases should be replaced with a new element.
- C. **Polyurethane Prefilter:** The prefilter may be washed as a sponge or replaced to give the element a longer service life.
- D. **Epoxy Coated Wire Mesh and Stainless Steel Wire Mesh Elements:** Cleaning instructions similar to polyester, except mild solvents may be used.
- E. **Activated Carbon Element:** Not cleanable
- F. **Polypropylene Element:** Cleaning instructions similar to polyester
- G. **Nomex Cloth Element:** Cleaning instructions similar to polyester

If you are not confident that the integrity of the element was maintained during cleaning, it is recommended that a new element be installed. Also, spare parts such as gaskets, wing nuts and washers can be supplied upon request.

Section C

PROCEDURES

1. Installation.

- A. Maximum operating temperature for most Solberg inlet air filter products is 220°F / 105°C. Temperatures in excess of this could cause damage to elements, media and elastomers. High temperature products are available.
- B. Direction of flow is typically from the outside of the element to the inside of the element. Most products have arrows indicating direction of flow on the inlet and outlet ports.
- C. Ensure that pipe/flange connections are adequately sealed so the potential for leaks is reduced to a minimum.

2. Disconnecting canister top from canister base.

- A. FS-04-06-10 (or 05-07-11): Twist top housing to open. Use care to support bottom housing while removing top housing. Fitting damage can occur if fitting is torqued in the wrong direction.
- B. Small QB/FS/F/FT: Remove weather hood or top plate by loosening hex nut or wing nut and lifting off.



- C. Large 2Q/QB/FS/F/FT: Remove cover by loosening hex nut or wing nut and lifting off.

3. Removing element for service/maintenance.

- A. Carefully remove retaining hex head/wing-nut and washer over top plate, and then remove element. Note: Model "04-06-10" elements should be free when housing tops are removed.
- B. Clean sealing surfaces of housing, top plates and element endcaps so that they are free of dirt or any other particulate.

WARNING

Failure to comply with these instructions may result in system or equipment contamination.

4. Securing Element.

- A. Place new or cleaned element evenly on base plate. Be sure element seats properly on base and there is no dirt or particulate present on sealing surfaces. With multiple element stacks place elements in line with base element and ensure elements seat properly.
- B. Place top plate (if necessary) on element by centering on tap bolt.
- C. Secure washer and wing nut to end cap (or top plate) and tap bolt. Element must be tightly secured. Note: Do NOT over tighten!

WARNING

Defective installation may cause system or pump contamination. Use only genuine Solberg replacement parts.



5. Securing canister top to canister base.

- A. Make sure all surfaces are free from dust and other particulate.
- B. Small QB/FS/F/FT: Replace top plate and/or weather hood if necessary. Feed threaded rod into corresponding bolthole and tighten. Note: Do NOT over tighten!
- C. Large 2G/QB/FS/F/FT: Replace cover. Feed threaded rod into corresponding bolt hole(s) and tighten. Note: Do NOT over tighten!
- D. FS-04-06-10 (or 05-07-11): Reassemble top housing to bottom housing by aligning tabs and turning into place.

6. Equipment Startup.

- A. Be sure to read the instructions on installation or element replacement as listed above before starting equipment.

WARNING

If at any time the operator is unable to verify the integrity of the element or any housing feature, the factory or a regional representative should be contacted prior to start-up.

- B. Please check the listed steps prior to startup.

- 1. Check element to make sure it is seated properly on element base or sealing surface.

WARNING

Failure to seat the element properly may result in contaminant by-pass resulting in damage to equipment.

- 2. Check element top plate or cover to make sure it is seated properly on element.
- 3. Check housing cover (if applicable) that it is installed correctly onto housing.



4. Be sure all fasteners and hardware (if applicable) have been tightened.

WARNING

If the air flow is reversed through a Solberg filter unit, be sure to check the element and housing internals for damage. Failure to do so may result in damage to equipment.

Section D

MAINTENANCE RECOMMENDATIONS

1. Pressure drop readings are recommended to have an effective air filter. Always document initial pressure drop during start-up when element is clean. Replacement cartridge is needed when system experiences 10" to 15" / 250-380mm H²O above drop above the initial reading. Refer to page 4 for initial values.
2. Always check replacement cartridge gaskets to insure they are adhered uniformly along the end caps during handling. If not, contact Solberg Manufacturing, Inc. immediately. Do not modify or change!
3. Always check inlets/outlets, element base and its components when replacing element to insure cleanliness. Wipe clean if necessary.
4. Operate only when a proper seal exists.

SPARE PARTS LIST:

Contact your Solberg Representative for spare part model numbers.





BRASS GATE VALVES

CAST BRASS ECONOMY VERSION
I.P.S. AND CXC



MODEL
T-408



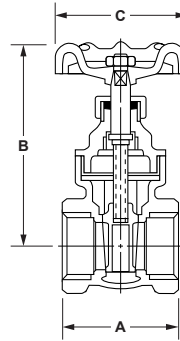
MODEL
S-408

MATERIAL SPECIFICATION	
PART	MATERIAL
BODY	BRASS
BONNET	BRASS
STEM	BRASS
PACKING NUT	BRASS
DISC	BRASS
HAND WHEEL	CAST IRON
WHEEL NUT	BRASS
LOCK NUT	BRASS
GLAND	BRASS
PACKING	ASBESTOS FREE GRAPHITE

PRESSURE RATING
200 W.O.G.
NON-SHOCK to 200°F

LEGEND MODELS T-408/S-408 gate valves are constructed of heavy duty cast brass. Body and bonnet are connected with a tight metal to metal leakproof seat. They have a screwed bonnet, non-rising stem, solid wedge disc, and integral seats. Recommended for non-steam use in residential applications. The T-408/S-408 is Legend's newest entry into the competitive gate valve market.

DIMENSIONS IN INCHES				
VALVE SIZE	A (IPS.)	A (CXC)	B	C
1/2"	1.71	1.69	2.92	2.01
3/4"	1.81	2.33	3.31	2.21
1"	2.13	2.72	3.90	2.56
1 1/4"	2.24	2.94	4.61	2.76
1 1/2"	2.44	3.29	5.08	3.11
2"	2.68	3.98	5.99	3.70
2 1/2"	3.70		6.90	4.02
3"	4.02		8.47	5.00
4"	4.53		9.89	5.00



COMPRESSION END GATE VALVE

CAST BRASS



MODEL
T-402

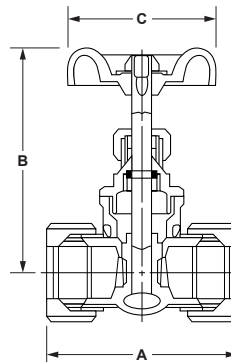
MATERIAL SPECIFICATION	
PART	MATERIAL
BODY	BRASS
BONNET	BRASS
STEM	BRASS
PACKING NUT	BRASS
DISC	BRASS
HAND WHEEL	CAST IRON
GLAND	BRASS
PACKING	ASBESTOS FREE GRAPHITE
COMPRESSION RING	BRASS TUBE
NUT	BRASS

PRESSURE RATING
200 W.O.G.
NON-SHOCK to 200°F

LEGEND MODEL T-402 gate valves are the same construction as the T-401/S-401 but with labor saving compression ends. They have a screwed bonnet, non-rising stem, solid wedge disc, and integral seats. Recommended for non-steam use in residential and light commercial applications. May be repacked while in service under pressure.

Excellent for use as a repair valve.

DIMENSIONS IN INCHES			
VALVE SIZE	A	B	C
1/2"	2.52	3.39	2.13
3/4"	2.76	4.00	2.13
1"	3.15	4.45	2.40



BRONZE GLOBE VALVE

I.P.S.



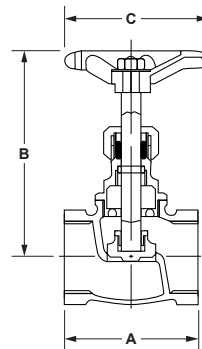
**MODEL
T-421**

MATERIAL SPECIFICATION	
PART	MATERIAL
BODY	BRONZE
BONNET	BRONZE
STEM	FORGED BRASS
PACKING NUT	BRASS
DISC	BRASS
HAND WHEEL	ALUMINUM
WHEEL NUT	BRASS
GLAND	BRASS
GLAND PACKING	GRAPHITE/TEFLON*

*DUPONT REG T.M.

PRESSURE RATING
200 W.O.G. NON-SHOCK
125 W.S.P.

LEGEND MODEL T-421 bronze globe valves have a screwed bonnet, rising stem, integral seat and swivel disc for accurate throttling and flow control. The body and bonnet are constructed of heavy duty bronze. Recommended for heavy industrial use when the valve is to be operated frequently



DIMENSIONS IN INCHES

VALVE SIZE	A (I.P.S.)	B	C
1/2"	1.96	2.81	1.97
3/4"	2.18	3.27	2.21
1"	2.56	3.90	2.36
1 1/4"	2.92	4.30	3.23
1 1/2"	3.29	4.94	3.34
2"	3.90	5.95	3.94

BRASS SWING CHECK VALVE

I.P.S. AND CxX



**MODEL
T-451**

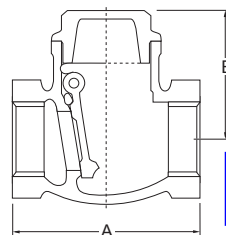


**MODEL
S-451**

MATERIAL SPECIFICATION	
PART	MATERIAL
CAP	BRASS
BODY	BRASS
DISC	BRASS
HINGE PIN	BRASS
SCREW	BRASS

PRESSURE RATING
200 W.O.G. NON-SHOCK

LEGEND MODELS T-451/S-451 check valves are constructed of heavy duty brass. They have a screwed cap, swing type disc and integral seat. They prevent backflow while offering full flow performance with a minimum of turbulence or pressure loss. Recommended for residential and commercial applications.



DIMENSIONS IN INCHES

VALVE SIZE	A (I.P.S.)	A (CXX)	B
3/8"	2.01		1.40
1/2"	2.01	2.44	1.34
3/4"	2.29	3.03	1.42
1"	2.48	3.74	1.54
1 1/4"	3.15	4.37	1.89
1 1/2"	3.47	5.12	2.17
2"	3.98	5.95	2.56
2 1/2"	5.16	6.90	2.96
3"	5.79	7.60	3.82
4"	6.86		3.94



SECTION 4 - PROCESS INSTRUMENTATION

PRESSURE INDICATOR, 0-60 PSI - DWYER SGY-D10422N-GF

PRESSURE SWITCH, 0-10 PSI - DWYER CS-10

PRESSURE SWITCH, 0-30 PSI - DWYER CS-30

TEMPERATURE SWITCH, 0-225 F - UNITED ELECTRIC B54-103

TEMPERATURE GAUGE, 0-250 F - AV 1NFY4



Series
SGY

2.5" Stainless Steel Industrial Pressure Gage

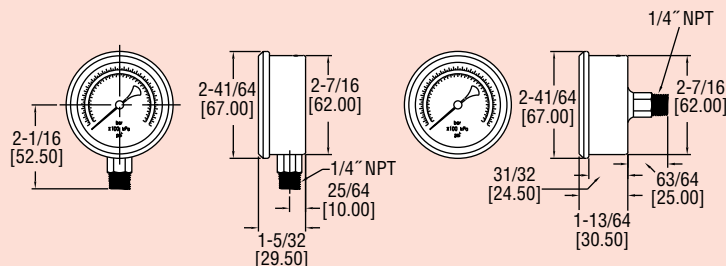
1.5% FS Accuracy, Brass Wetted Parts, Dual PSI/Bar x100 kPa Scales



SGY Bottom



SGY Back with
Accessory Pointers



The **Series SGY Gages** have dual psi and bar (x100 kPa) scales with $\pm 1.5\%$ full-scale accuracy. The Series SGY gages are designed with 304 SS housings and brass wetted parts for excellent chemical compatibility. These gages cover a wide variety of ranges from full vacuum to 1,000 psi and are available in both bottom or back connections. Series SGY gages employ an easy-open breather plug on top, which allows liquid filled units to breathe, relieving any built up internal pressures. Plug easily pops open and does not need to be entirely removed or cut like a typical gages' rubber plug grommet.

APPLICATIONS

- Vacuums in pneumatic conveying lines
- Positive pressure in compressed air headers

Model	Range	Model	Range
SGY-D10122N	30" Hg to 0	SGY-D10722N	0 to 200 psi
SGY-D10322N	0 to 30 psi	SGY-D11022N	0 to 300 psi
SGY-D10422N	0 to 60 psi	SGY-D11122N	0 to 500 psi
SGY-D10522N	0 to 100 psi	SGY-D11222N	0 to 1000 psi
SGY-D10622N	0 to 160 psi		

Note: To order with glycerin fill add - GF to the end of the model

For back connect, change ending from 22N to 42N

SPECIFICATIONS

Service: Compatible gases and liquids.

Wetted Materials: Brass connection, bronze tube.

Housing: 304 SS.

Lens: Polycarbonate.

Accuracy: $\pm 1.5\%$ FS.

Pressure Limit: FS range.

Temperature Limits: -4 to 140°F (-20 to 60°C).

Size: 2.5" (63 mm).

Process Connections: 1/4" male NPT.

Weight: 4.9 oz (139 g) bottom, 5.8 oz (164 g) back. Add 2.8 oz (78 g) for fill.

ACCESSORIES

A-445D, U-Bracket Mounting Kit for 2.5" Gage

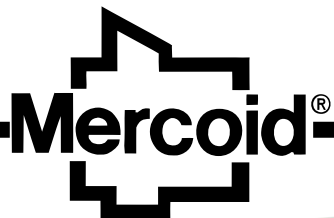
A-499R, Red Sliding Color Pointer

A-499Y, Yellow Sliding Color Pointer

A-499G, Green Sliding Color Pointer

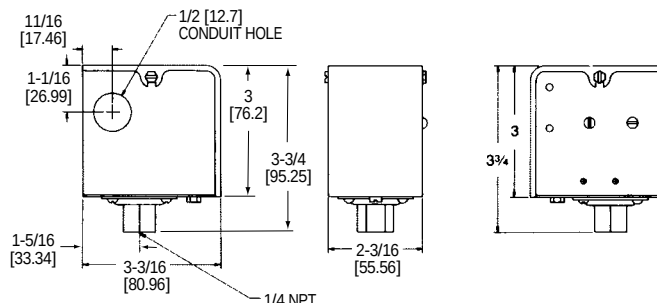
OPTION

For NIST traceable calibration certificate, use order code NISTCAL-PG1.



Series CS Low Cost Diaphragm Pressure Switches

Specifications – Installation and Operating Instructions



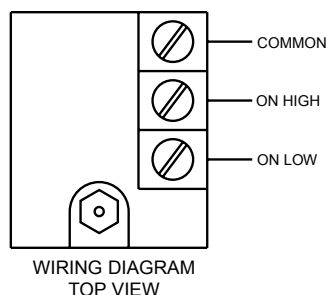
The **Series CS Low Cost Diaphragm Pressure Switch** is ideal for instrument panels, small compressors and general industrial applications. Visible set point and easy-to-wire SPDT snap switch reduce installation time. This switch operates in any position and is vibration resistant.

INSTALLATION/MOUNTING

The control can be pipe mounted. Do not twist the case when installing. Use wrench on the pressure connection flats.

WIRING

All wiring must conform to the National Electrical code and local regulations. Do not install control to handle loads in excess of electrical rating shown in specifications or as indicated on instructions inside control cover. Connect wiring to screw terminals depending on the action required. Common and High contacts will close and Common and Low contacts will open when increasing pressure (or vacuum) reaches set point. The reverse will occur when pressure (or vacuum) drops below the set point less the deadband.



CAUTIONS: Do not oil any parts. Mount control securely. Never exceed electrical rating for switch. Use only with compatible.

WARNING

A failure resulting in injury or damage can be caused by over-pressure, excessive vibration or pressure pulsation, excessive temperature, corrosion of pressure containing parts and movement assembly, electrical overload or other misuse.

PHYSICAL DATA

Temperature Limits: -30 to 150°F (-34.4 to 65.6°C)

Pressure Connections: 1/4" NPT(F)

Electrical Ratings: 12 A @ 120 VAC; 8 A @ 240 VAC; 7A @ 277 VAC; 1/8 HP @ 120 VAC; 1/4 HP @ 240 VAC

Switch Type: SPDT snap acting

Conduit Opening: 1/2"

Wiring Connections: Three screw type, common, N.O., N.C.

Set Point Adjustment: Screw type, inside cover

Housing: Galvanized steel, NEMA 1

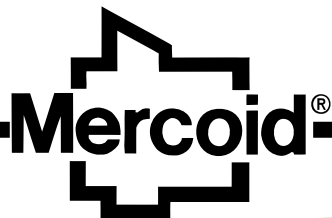
Diaphragm: Buna-N/Nylon

Calibration Spring: Plated steel

Installation: Any position

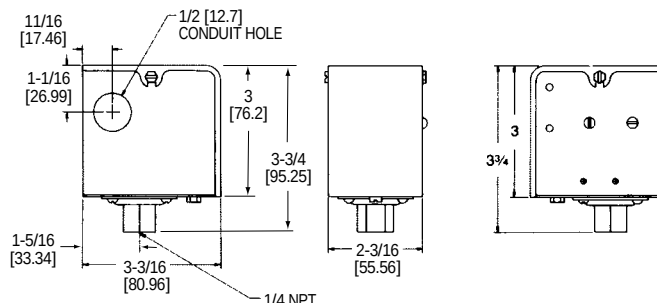
Weight: 1/2 lb. (0.23 kg)

Model No.	Adjustable Operating Range	Fixed Deadband		Max. Pressure
		Maximum	Minimum	
CS-1	1-30" Hg. Vac.	1.5" Hg.	1" Hg. VAC	30 psig
	2.5-75 cm Hg. Vac	3.8 cm Hg. Vac	2.5 cm Hg. Vac	
CS-3	10-100" w.c.	7" w.c.	5" w.c.	30 psig
	2.5-250 cm w.c.	17.8 cm w.c.	12.7 cm w.c.	
CS-10	1-10 psig 0.07-0.7 kg/cm ²	0.4 psig 0.03 kg/cm ²	0.25 psig 0.02 kg/cm ²	30 psig
CS-30	1-30 psig 0.07-2.1 kg/cm ²	1.0 psig 0.07 kg/cm ²	0.5 psig 0.035 kg/cm ²	50 psig
CS-150	10-150 psig 0.07-10.5 kg/cm ²	5 psig 0.35 kg/cm ²	1.5 psig 0.1 kg/cm ²	175 psig



Series CS Low Cost Diaphragm Pressure Switches

Specifications – Installation and Operating Instructions



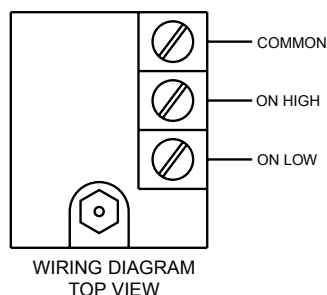
The **Series CS Low Cost Diaphragm Pressure Switch** is ideal for instrument panels, small compressors and general industrial applications. Visible set point and easy-to-wire SPDT snap switch reduce installation time. This switch operates in any position and is vibration resistant.

INSTALLATION/MOUNTING

The control can be pipe mounted. Do not twist the case when installing. Use wrench on the pressure connection flats.

WIRING

All wiring must conform to the National Electrical code and local regulations. Do not install control to handle loads in excess of electrical rating shown in specifications or as indicated on instructions inside control cover. Connect wiring to screw terminals depending on the action required. Common and High contacts will close and Common and Low contacts will open when increasing pressure (or vacuum) reaches set point. The reverse will occur when pressure (or vacuum) drops below the set point less the deadband.



CAUTIONS: Do not oil any parts. Mount control securely. Never exceed electrical rating for switch. Use only with compatible.

WARNING

A failure resulting in injury or damage can be caused by over-pressure, excessive vibration or pressure pulsation, excessive temperature, corrosion of pressure containing parts and movement assembly, electrical overload or other misuse.

PHYSICAL DATA

Temperature Limits: -30 to 150°F (-34.4 to 65.6°C)

Pressure Connections: 1/4" NPT(F)

Electrical Ratings: 12 A @ 120 VAC; 8 A @ 240 VAC; 7A @ 277 VAC; 1/8 HP @ 120 VAC; 1/4 HP @ 240 VAC

Switch Type: SPDT snap acting

Conduit Opening: 1/2"

Wiring Connections: Three screw type, common, N.O., N.C.

Set Point Adjustment: Screw type, inside cover

Housing: Galvanized steel, NEMA 1

Diaphragm: Buna-N/Nylon

Calibration Spring: Plated steel

Installation: Any position

Weight: 1/2 lb. (0.23 kg)

Model No.	Adjustable Operating Range	Fixed Deadband		Max. Pressure
		Maximum	Minimum	
CS-1	1-30" Hg. Vac.	1.5" Hg.	1" Hg. VAC	30 psig
	2.5-75 cm Hg. Vac	3.8 cm Hg. Vac	2.5 cm Hg. Vac	
CS-3	10-100" w.c.	7" w.c.	5" w.c.	30 psig
	2.5-250 cm w.c.	17.8 cm w.c.	12.7 cm w.c.	
CS-10	1-10 psig	0.4 psig	0.25 psig	30 psig
	0.07-0.7 kg/cm ²	0.03 kg/cm ²	0.02 kg/cm ²	
CS-30	1-30 psig	1.0 psig	0.5 psig	50 psig
	0.07-2.1 kg/cm ²	0.07 kg/cm ²	0.035 kg/cm ²	
CS-150	10-150 psig	5 psig	1.5 psig	175 psig
	0.07-10.5 kg/cm ²	0.35 kg/cm ²	0.1 kg/cm ²	

PRESSURE, VACUUM AND TEMPERATURE



FEATURES

- Compact Size
- Wide Selection of Adjustable Ranges:
Pressure: 30" Hg Vac to 6000 psi (-1 to 413,7 bar)
Temperature: -130 to 650°F (-90 to 343.3°C)
- Choice of One or Two Switch Outputs
- Adjustable or Narrow Deadband Options
- Reference Dial or Hex Screw-Type Setting



54 Series

54 Series

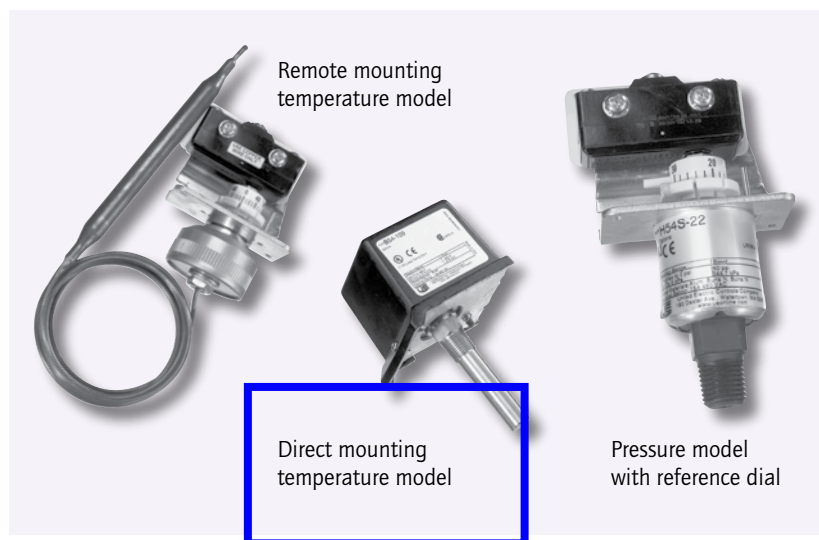
OVERVIEW

The 54 Series offers the OEM a combination of reliable performance and low cost. Available in pressure and temperature versions, with single or dual SPDT outputs and enclosed or open frame (skeleton) construction, the 54 Series family provides design versatility.

The 54 has been field-proven in a wide variety of OEM applications, including medical, laboratory, fire protection and heating equipment.

FEATURES

- Compact size
- Choice of one or two switch outputs
- Reference dial or hex screw-type setting
- Optional 1/2" NPT (male) by 1/8" NPT (female) polysulfone® pressure connection
- Optional external manual reset
- NEMA 1 or open frame (skeleton) versions for OEM applications
- Brass bellows models



Polysulfone® is a registered trademark of Amoco

SPECIFICATIONS

STORAGE TEMPERATURE	-65 to 160°F (-54 to 71°C)
AMBIENT TEMPERATURE LIMITS	
Pressure Models	Models 126-164, 610-614: -40 to 160°F (-40 to 71°C); Models 22-28: 0 to 160°F (-18 to 71°C)
Temperature Models	-40 to 160°F (-40 to 71°C). Set point typically shifts less than 1% of range for a 50°F (28°C) ambient temperature change.
SHOCK	Set point repeats after 15 G, 10 millisecond duration
VIBRATION	Set point repeats after 2.5 G, 5-500 CPS
ENCLOSURE CLASSIFICATION	Types C54, C54A, B54, F54, E54, J54, J54A, H54: complies with NEMA 1 requirements. Types C54S, B54S, F54S, E54S, J54S, J54AS, H54S: not applicable
SET POINT REPEATABILITY	
Pressure Models	Models 22-28, 126-164: ± 1% of adjustable range; Models 610-614: ± 1.5% of adjustable range
Temperature Models	± 1% of adjustable range
SWITCH OUTPUT	One or two SPDT snap action switch(es); dual switch may be separated up to 100% of range; switches may be wired "normally open" or "normally closed"
ELECTRICAL RATING	15A 125/250/480 VAC resistive. Electrical switches have limited DC capabilities. Consult UE for additional information.
ENCLOSURE MATERIAL	Lexan® black finish for Types J54, J54A, H54, B54, C54, C54A, E54, F54 only
WEIGHT	Approximately 12 oz.
ELECTRICAL CONNECTION	Types J54 & H54, C54, C54A, B54, E54, F54: 7/8" diameter hole; Type J54A: 1-1/16" diameter hole
PRESSURE CONNECTION	Models 22-28: 1/4" NPT (male); 126-164, 610-614: 1/4" NPT (female)
TEMPERATURE ASSEMBLY	Bulb and Capillary: 6 feet copper or 304 stainless steel capillary Immersion Stem: Brass
TEMPERATURE FILL	Non-toxic oil
TEMPERATURE DEADBAND	Typically 1% of range under laboratory conditions (70°F circulating bath at rate of 1/2°F per minute change)

APPROVALS

**UNITED STATES AND CANADA****Type J54, J54A, H54****UL Listed, cUL Certified**

Pressure: UL 508, CSA C22.2 No. 14, file # E42272

Type J54S, J54AS, H54S**UL Recognized, cUL Recognized**

Pressure: UL 508, CSA C22.2 No. 14, file #E42272

Type B54, C54, E54, F54**UL listed, CSA Certified**

Temperature: UL 873, file # E10667;

CSA C22.2 No. 0 & 24, file # LR7814

Type B54S, C54S, E54S, F54S**UL Recognized, CSA Certified**

Temperature: UL 873, file # E10667;

CSA C22.2 No. 0 & 24, file # LR7814

EUROPE**Low Voltage Directive (LVD) (73/23/ED & 93/68/EEC)**

UEC compliant to LVD

Products rated lower than 50 VAC and 75 VDC are outside of the scope of the LVD

Pressure Equipment Directive (PED) (97/23/EC)

Compliant to PED

Products rated lower than 7.5 psi are outside the scope of the PED

Lexan® is a registered trademark of General Electric Company

TEMPERATURE MODEL CHART

Model	Adjustable Set Point Range		Max. Temperature		Scale*** Division		Stem Size
	°F	°C	°F	°C	°F	°C	NPT x BT (inches)
B54, B54S, C54, C54S, C54A, C54AS , Brass immersion stem							
103	0 to 225	-17.8 to 107.2	250	121.1	10	5	3/8 x 2-1/8
109	200 to 425	93.3 to 218.3	425	218.3	10	5	3/8 x 2-1/8
							OD x Length
E54, F54 , Copper bulb and capillary							
D20BC	-130 to 120	-90 to 48.9	170	76.7	10	5	3/8 x 4-1/2
D21BC	0 to 150	-17.8 to 65.6	200	93.3	5	5	3/8 x 6-7/8
D22BC	50 to 300	10 to 148.9	350	176.7	10	5	3/8 x 4-1/2
D23BC	150 to 650	65.6 to 343.3	700	371.1	25	10	3/8 x 3-5/8
E54, F54 , Stainless steel bulb and capillary							
D20BS†	-130 to 120	-90 to 48.9	170	76.7	10	5	3/8 x 4-1/2
D21BS	0 to 150	-17.8 to 65.6	200	93.3	5	5	3/8 x 6-7/8
D22BS	50 to 300	10 to 148.9	350	176.7	10	5	3/8 x 4-1/2
D23BS	150 to 650	65.6 to 343.3	700	371.1	25	10	3/8 x 3-5/8
E54S, F54S , Copper bulb and capillary							
D21BC	0 to 150	-17.8 to 65.6	200	93.3	5	5	3/8 x 6-7/8
D22BC	50 to 300	10 to 148.9	350	176.7	10	5	3/8 x 4-1/2
D23BC	150 to 650	65.6 to 343.3	700	371.1	25	10	3/8 x 3-5/8
E54S, F54S , Stainless steel bulb and capillary							
D21BS	0 to 150	-17.8 to 65.6	200	93.3	5	5	3/8 x 6-7/8
D22BS	50 to 300	10 to 148.9	350	176.7	10	5	3/8 x 4-1/2
D23BS	150 to 650	65.6 to 343.3	700	371.1	25	10	3/8 x 3-5/8

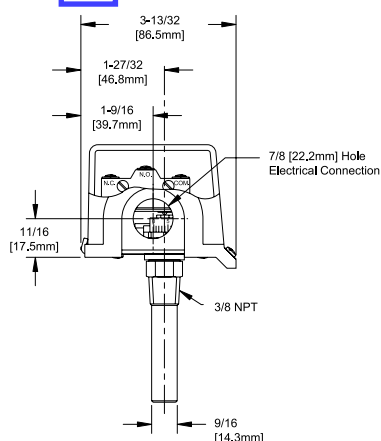
† Not available Type F54

*** Applies to Types B54, B54S, E54, E54S only

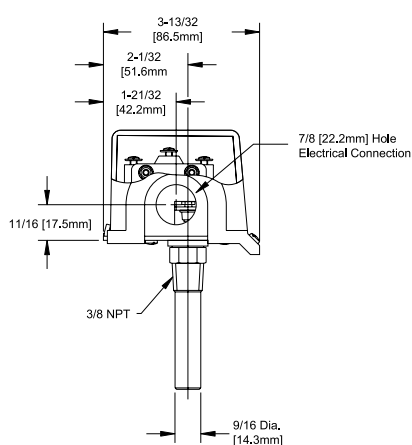
DIMENSIONAL DRAWINGS

Temperature Models

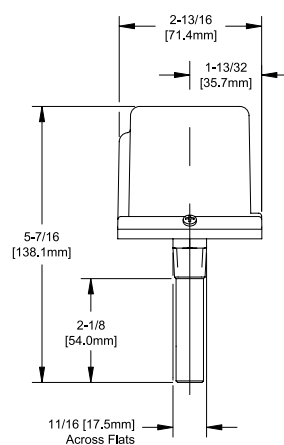
Types B54, C54



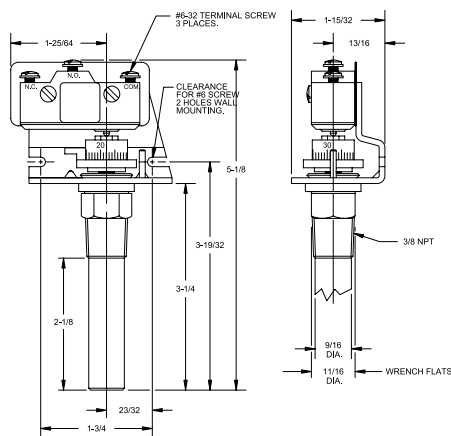
Type C54A



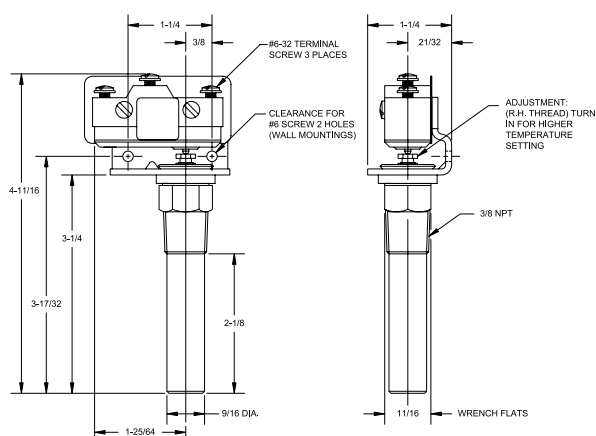
Types B54, C54, C54A



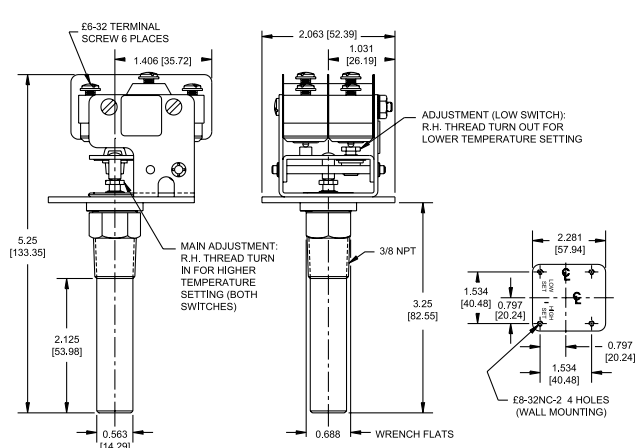
Type B54S



Type C54S



Type C54AS



All dimensions stated in inches (millimeters)

GRAINGER® FOR THE ONES WHO GET IT DONE GRAINGER INTERNATIONAL, INC. GLOBAL SOURCING DIVISION	-- GGS TECHNICAL SPECIFICATION --			
	SPECIFICATION NUMBER: 1NFY4_TSRev1.doc	AUTHOR: Hoskinson	TITLE: ENG	REL. DATE: 5/25/07
	GGS MODEL NUMBER(s): 1NFY4	DESCRIPTION: Industrial thermometer	REVISION #: 1	REV. DATE: 8/10/07

1.0 BRAND:	No brand
2.0 PRODUCT DESCRIPTION:	Bimetal Industrial Thermometer

3.0 PRODUCT PHOTO(S):



4.0 PRODUCT REQUIREMENTS:

4.1 Features & Performance	Requirement
Temperature scale(s)	°F: 0 to 250 °C: -20 to 120
Connection location/type	Back; 1/2 inch NPT
Dial size (inches)	3
Stem length (inches)	2 1/2
Stem diameter (inches)	1/4 In
Rotated degrees	N/A
Angled degrees	N/A
Full scale accuracy	≤40°F: ±1.5% 41 to 200°F: ±1% ≥201°F: ±1.5%
Calibration	External Adjustment

4.2 Materials & Construction	Requirement
Case	Stainless Steel Hermetically Sealed to Prevent Icing/Fogging Inside
Stem	Stainless Steel
Coil dampening	Silicone for Superior Time Response and Vibration Dampening
Dial face	Glass

4.3 Finish / Color	Requirement
All Surface Finishes	a) Surface finishes must be uniform and continuous. The surface finish must not exhibit any visual defects such as blisters, rust, corrosion, scratches, peeling, bubbles, and/or cracking. b) All exposed surfaces must be free of burrs and sharp edges. c) All applied finishes must adhere to the surface and show no signs of delamination or peeling.
Finish	Stainless Steel



SECTION 5 - ELECTRICAL DRAWINGS & TABLE(S)

T-2, INTERLOCK TABLE

I-1, CONTROL PANEL LAYOUT DRAWING

T-3, PANEL BILL OF MATERIALS (BOM)

I-2, WIRING DIAGRAMS & TERMINAL DETAILS

E-1, LINE DIAGRAM

E-2, VFD SETTINGS



TABLE 2

INTERLOCK SCHEDULE
NES 12-198, REVISION A (04-01-15)
Advanced Cleanup Technologies
Sparge Blower Control

Interlock	Interlock ID	Interlock Description	C-1, Sparge Blower						
			OPERATOR INTERFACE				INSTRUMENT TYPE		
			Alarm Notification (Local Panel Display)						
			Manual Reset (Warning / Alarm)						
			Remote Alarm Contacts (for Notification)						
0		No alarm present and SVE Running	I						
1	PSL-101	Sparge Low Pressure Switch				Y*		Y	D
2	PSH-101	Sparge High Pressure Switch	O			Y	Y	Y	D
3	TSH-101	Sparge High Temperature Switch	O			Y	Y	Y	D
4	VFD FAULT	VFD Fault (Overload is most common fault)	O			Y			
5	SVE RUN	SVE Running Contact	I/O						

Note:

- O - Off
- I - On
- I/O - On / Off Control

- Y - Yes

- D - Digital

- * - Time Delayed

1

2

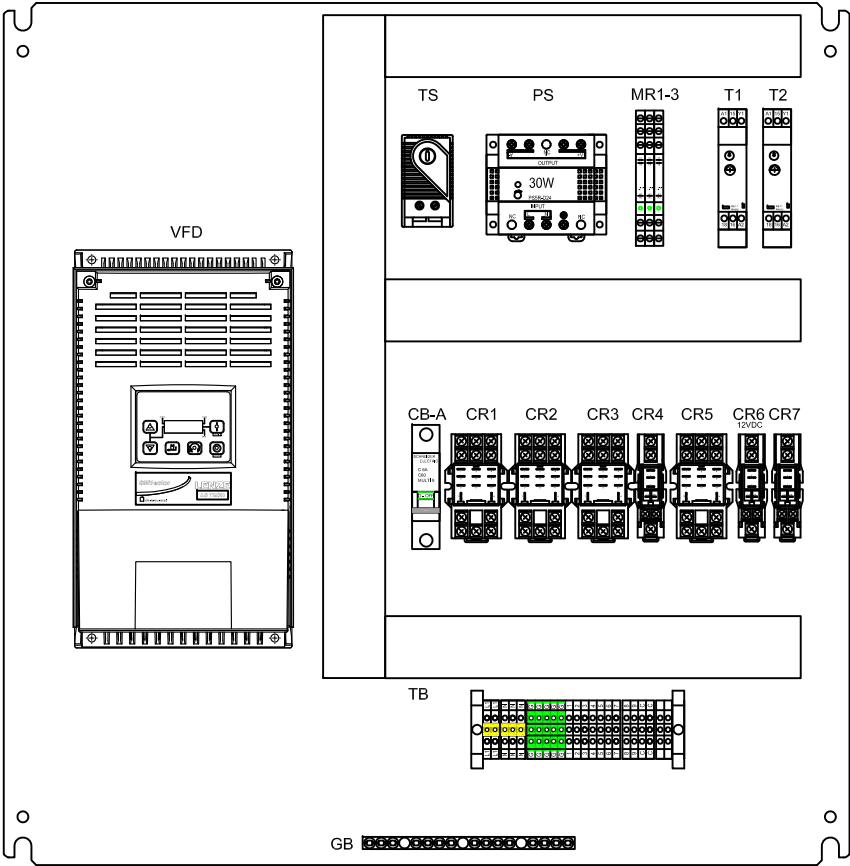
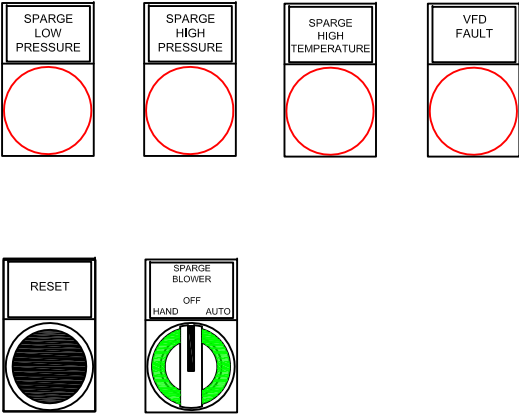
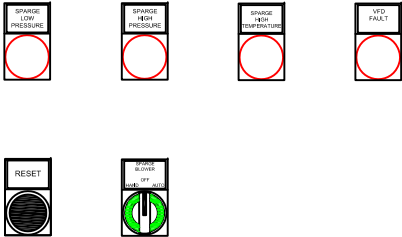
3

4

PANEL EXTERIOR

OPERATOR DETAIL

PANEL INTERIOR



ENCLOSURE EXTERNAL DIMENSIONS: 24"L X 24"W X 12"D

NOTES:
1. CONTROL PANEL HAS COOLING FAN AND RAIN HOODS
INSTALLED ON ENCLOSURE.
2. ALL OPERATORS ARE SPRING RETURN FROM HAND TO OFF POSITION.

ABBREV.	LEGEND
CB	- CIRCUIT BREAKER
CR	- CONTROL RELAY
GB	- GROUND BAR
MR	- MINI-RELAY
PS	- POWER SUPPLY
T	- TIMER
TB	- TERMINAL BLOCK
TS	- THERMOSTAT
VFD	- VARIABLE FREQUENCY DRIVE

A	AS BUILT	RB	04-02-15
REV	DESCRIPTION	DATE	APPROVED
REVISIONS			

CONFIDENTIALITY NOTICE:
The information contained in this drawing is intended for use only by National Environmental Systems and ACT. The information is confidential and any copying, distribution or dissemination without the written consent of National Environmental Systems is STRICTLY PROHIBITED.

DRWN BY	DATE
RJD	03-12-15
CHK BY	DATE
APPR BY	DATE



NATIONAL ENVIRONMENTAL SYSTEMS

84 DUNHAM STREET / ATTLEBORO, MA 02703
508-226-1100 (Phone) / 508-226-1180 (Fax)
WWW.NES-INC.BIZ

TITLE

CONTROL PANEL LAYOUT DRAWING

ADVANCED CLEANUP TECHNOLOGIES (ACT) SPARGE CONTROL PANEL	JOB NO. 12-198			
SCALE NTS	SIZE B	DWG NO. I-1	SHEET 1 OF 1	REV A

TABLE 3
PANEL BILL OF MATERIALS

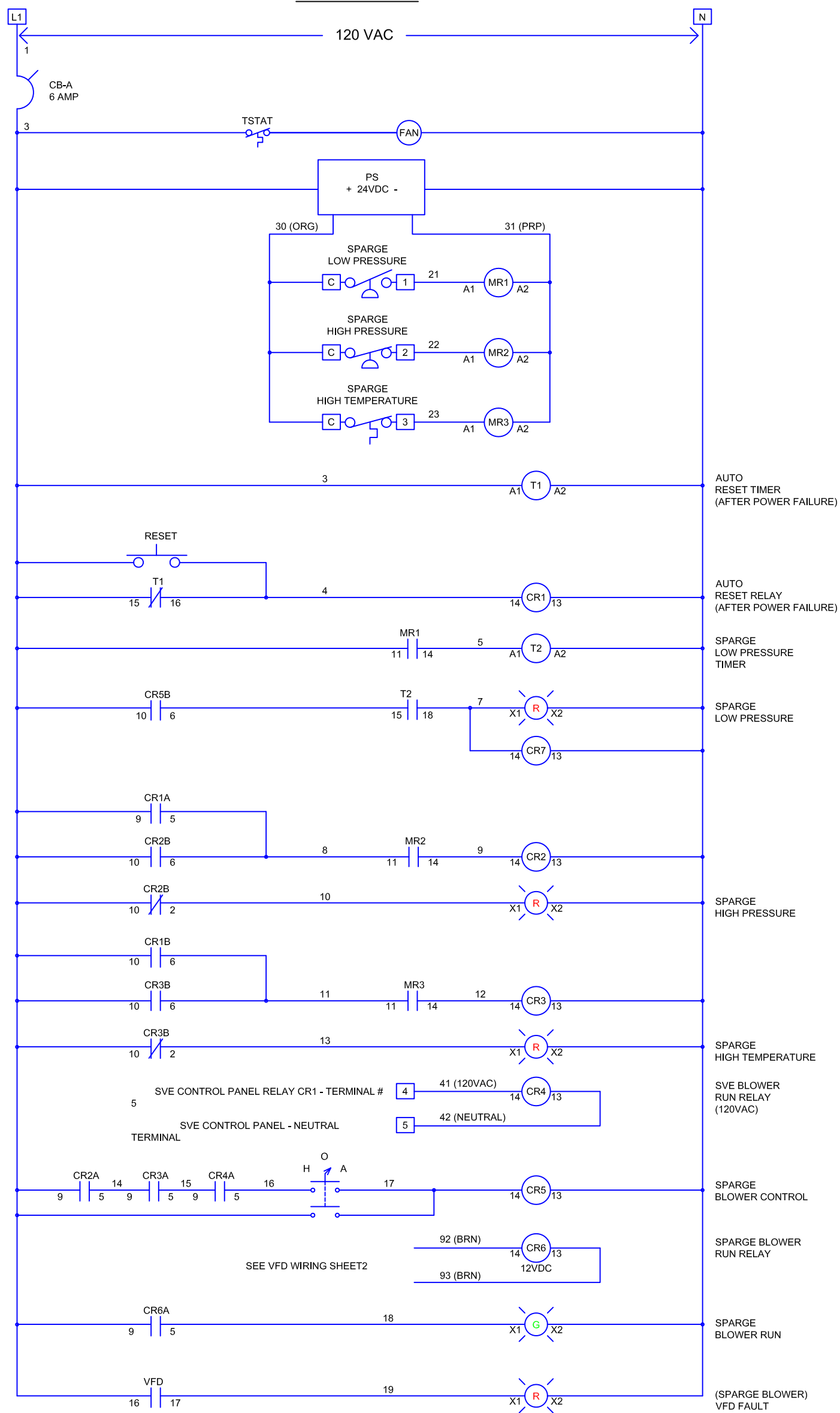
REVISION A

APRIL 2015

12-198

AIR SPARGE EQUIPMENT

TAG	QUANTITY	ITEM	MODEL	MANUFACTURER
ENCL	1	CONTROL PANEL ENCLOSURE 24 X 24 X 12 - MILD STEEL/GRAY	EN4SD242412GY	HAMMOND
ENCL	1	BACK-PANEL - FITS ENCL. 24 X 24 - STEEL/WHT	EP2424	HAMMOND
ENCL	1	MOUNTING FEET SET OF 4 - ZINC PLATED	EZPMFHD	HAMMOND
VF	1	VENT FAN 105CFM 115VAC 4.7" W/ FILTER GRILL 24 IN CORD	DNFF120BK115	HAMMOND
VF	1	VENT FAN ADJUSTABLE 30-140F BI-METAL TEMP SWITCH N.O.	SKT011419NO	HAMMOND
VF	2	VENT FAN RAINHOOD NEMA 3R	RH20000GY	HAMMOND
VF	2	VENT FAN GRILL / SOLID COVER KIT	RHA20000G	HAMMOND
CB	1	CIRCUIT BREAKER 6A 1-POLE 120/240 VAC 1-PHASE 10KA DIN-MOUNT	MG24430_	SQUARE D
VFD	1	VFD, 33 AMP RATING	ESV752N02TXB	AC TECH
CR	3	RELAY 1 POLE 24VDC	RV8H-L-D24_	IDEC
CR	4	RELAY 3PDT 120VAC W/INDICATOR LIGHT	RH3B-UL-AC 120V	IDEC
CR	4	RELAY SOCKET FOR RH3B	SH3B- 05	IDEC
CR	2	RH1B-ULDC12V SPDT W/ LIGHT RELAY	RH1B-ULDC12V	IDEC
CR	2	RELAY SOCKET FOR RH1B	SH1B- 05	IDEC
PS	1	POWER SUPPLY, 24VDC, 1.3A, 1PH, 30W	PS5R-C24	IDEC
T	2	TIMER ON-DELAY	RE17RAMU_	SQUARE D
PB	8	LEGEND PLATE HOLDER	ZBZ33-	SQUARE D
LT	5	PILOT LIGHT HEAD, RED	ZB5AV04 3	SQUARE D
LT	5	MOUNTING BASE, 120V RED PROTECTED LED	ZB5AVG 4	SQUARE D
SW	1	PUSH BUTTON OPERATOR NON-ILLUM BLACK	ZB5AA 2	SQUARE D
SW	1	3 POSITION SELECTOR SWITCH ILLUM. GREEN MOMENTARY	ZB5AK1733_	SQUARE D
SW	1	MOUNTING BASE 120V GREEN PROTECTED LED	ZB5AVG3_	SQUARE D
TB	12	TERMINAL BLOCK SCREW CLAMP 20 AMP 600 V GRAY	NSYTRV22	SQUARE D
TB	2	TERMINAL BLOCK END BARRIERS GRAY	NSYTRAC22	SQUARE D
TB	2	TERMINAL BLOCK END ANCHORS	NSYTRAABV35	SQUARE D
GB	1	LOAD CENTER GROUND BAR 12 TERMINALS	PK15GTA	SQUARE D



50 12 4 51 7 SPARGE HIGH PRESSURE CR2C

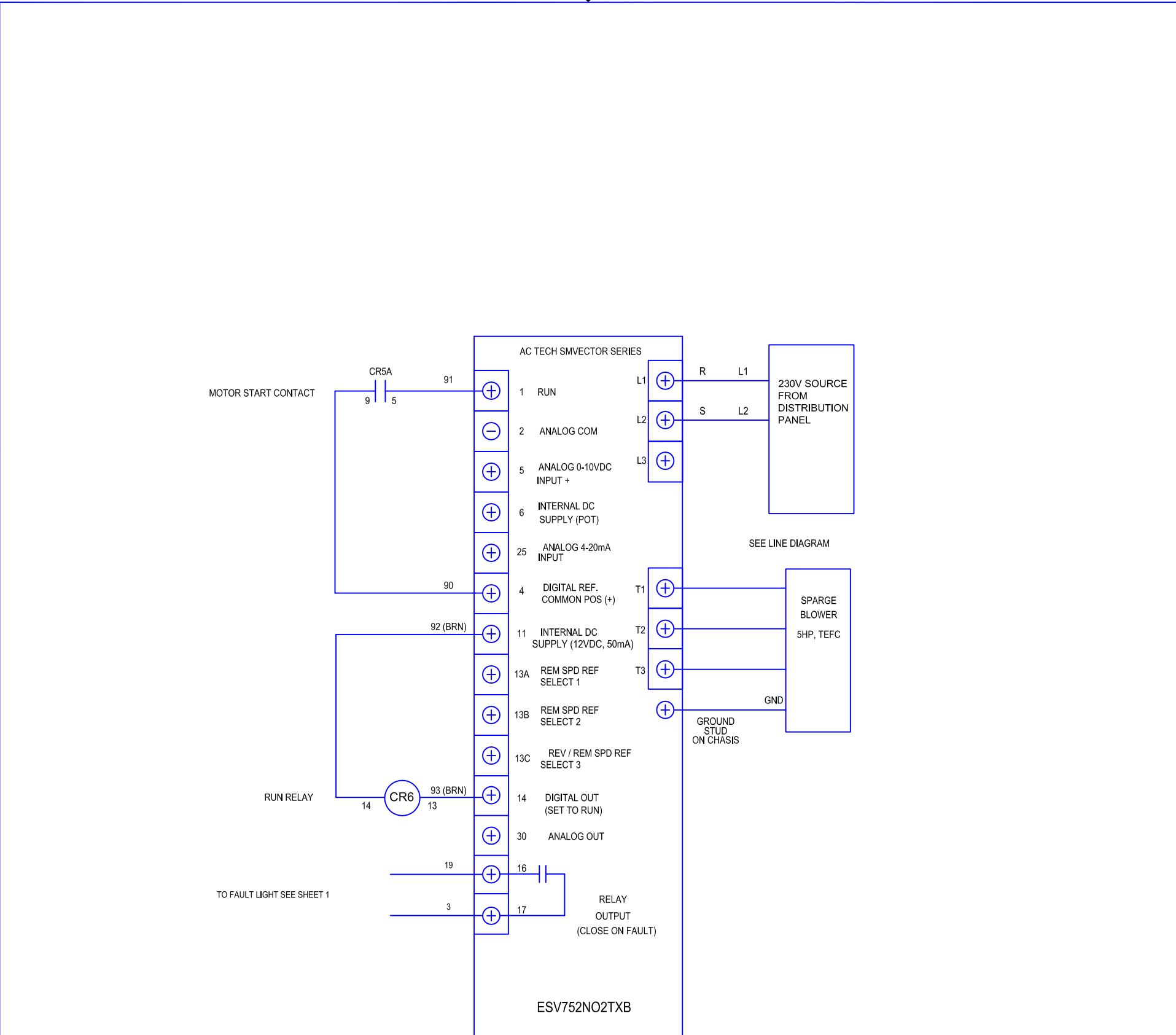
12 4 52 8 SPARGE HIGH TEMPERATURE CR3C

9 5 53 9 SPARGE LOW PRESSURE CR7A

 **NES**™
NATIONAL ENVIRONMENTAL SYSTEMS

84 DUNHAM STREET / ATTLEBORO, MA 02703
508-226-1100 (Phone) / 508-226-1180 (Fax)
WWW.NES-INC.BIZ

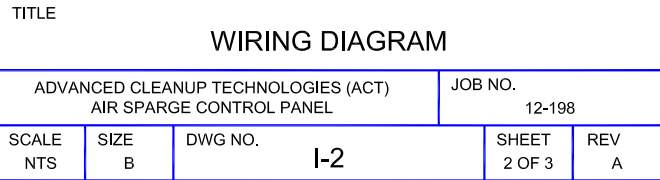
				RJD 03-11-15		WIRING DIAGRAM				
A	AS BUILT	04-01-15	RB	CHK BY DATE		ADVANCED CLEANUP TECHNOLOGIES (ACT) AIR SPARGE CONTROL PANEL			JOB NO. 12-198	
REV	DESCRIPTION	DATE	APPROVED	APPR BY DATE		SCALE NTS	SIZE B	DWG NO. I-2	SHEET 1 OF 3	REV A
REVISIONS										

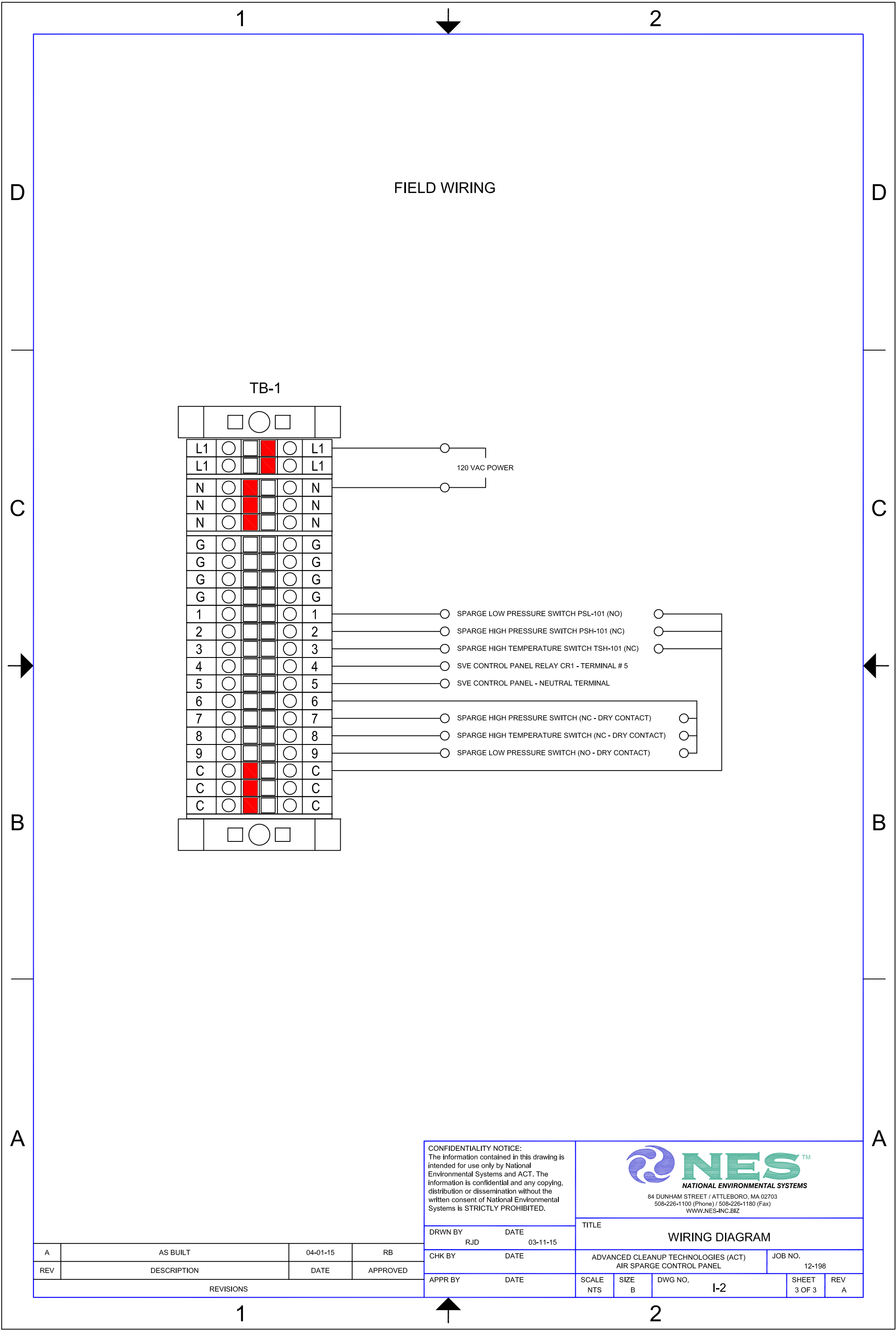


CONFIDENTIALITY NOTICE: The information contained in this drawing is intended for use only by National Environmental Systems and ACT. The information is confidential and any copying, distribution or dissemination without the written consent of National Environmental Systems is STRICTLY PROHIBITED.		 NESTM NATIONAL ENVIRONMENTAL SYSTEMS 84 DUNHAM STREET / ATTLEBORO, MA 02703 508-226-1100 (Phone) / 508-226-1180 (Fax) WWW.NES-INC.BIZ				
DRWN BY DATE RJD 03-11-15		TITLE WIRING DIAGRAM				
CHK BY DATE		ADVANCED CLEANUP TECHNOLOGIES (ACT) AIR SPARGE CONTROL PANEL		JOB NO. 12-198		
APPR BY DATE		SCALE NTS	SIZE B	DWG NO. I-2	SHEET 2 OF 3	REV A

CONFIDENTIALITY NOTICE:
The information contained in this drawing is intended for use only by National Environmental Systems and ACT. The information is confidential and any copying, distribution or dissemination without the written consent of National Environmental Systems is **STRICTLY PROHIBITED**.

DRWN BY RJD	DATE 03-11-15
CHK BY	DATE
APPR BY	DATE





D

C

B

A

D

C

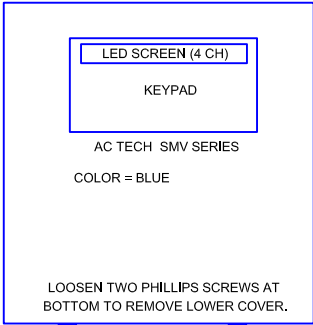
B

A

1

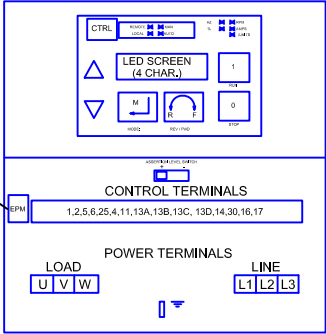
2

VFD EXTERIOR



VFD INTERIOR

ELECTRONIC PROGRAMMING MODULE
CONTAINS VFD PARAMETER SETTINGS ON CHIP.
ALLOWS EASY DRIVE CHANGEOUT.



- TO CLEAR FAULTS
1. CORRECT CONDITION CAUSING FAULT.
 2. PRESS STOP TO CLEAR FAULT. IF FAULT CLEARS (I.E. "FAULT: FOLLOWER")
 3. CYCLE POWER & STOP/RUN CONTACT (AUTO TO OFF THEN BACK TO AUTO)

VFD PARAMETER SETTINGS

AS ADJUSTED/PROGRAMMED BY NES

PARAM. #	PARAMETER NAME AS APPEARS IN MANUAL	SETTINGS			
		VFD1	VFD2	VFD3	VFD4
P108	MOTOR OL(SEE CALC. AT BOTTOM)	45 (%)	N/A	N/A	N/A
P100	CONTROL (START STOP REF SIG)	1 (= TERM STRIP)			
P102	MIN FREQ (FREQUENCY)	30 (Hz)			
P104	ACCEL (RAMP UP TIME)	10 (SEC)			
P110	START	1 (=POWER UP)			
P140	RELAY	4 (= <i>INVERSE</i> FAULT)			
P142	TB14 OUT (NPN OPEN COLL TRANS.)	1 (= <i>RUN</i>)			
P150	TB10A OUT (ANALOG OUTPUT)	2 (= <i>2-10V</i> , FREQ)			
	NOTEWORTHY FACTORY DEFAULTS LISTED BELOW:				
P111	STOP METHOD	1 (= <i>COAST</i>)			
P112	ROTATION	0 (= <i>FORWARD ONLY</i>)			
P305	RPM	3600			
SOME PARAMETERS FOR DIAGNOSTICS/MONITORING:		EXAMPLE DISPLAY:			
P508	MOTOR CURRENT	13 (= <i>AMPS</i>)			
P527	OUTPUT FREQUENCY	60 (HZ)			
P540	RUN TIME	102.5 (HOURS)			
MOTOR FULL LOAD CALC.					
SVE BLOWER FLA =		13			
VFD MODEL: ESV113NO2TXB MAX OUTPUT:		29			
OVERLOAD SETTING (IN % OF MAX):		13/29 = 45			

- NOTES FOR ABOVE TABLE
1. ALL PARAMETERS NOT LISTED ABOVE REMAIN AT FACTORY DEFAULT SETTINGS.
 2. SEE DRAWINGS FOR VFD AND MOTOR SIZES.

TO PROGRAM VFD (OR ACCESS PARAMETERS):

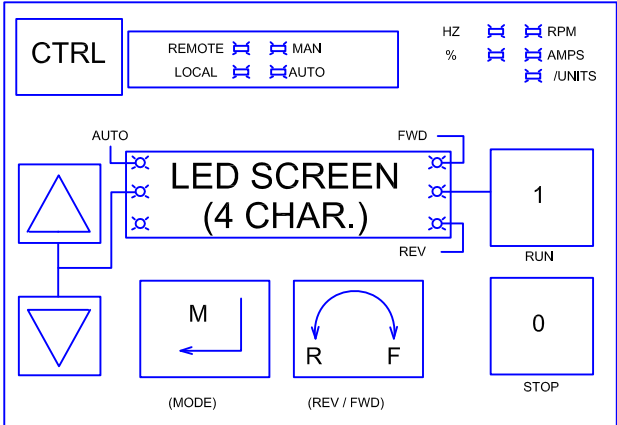
1. PRESS DISPLAY GOES TO PARAMETER

P100

USE ARROW BUTTONS TO GET TO DESIRED PARAMETER NUMBER.
2. PRESS DISPLAY GOES TO PARAMETER SETTING

1
3. PRESS OR TO REVEAL CHOICES OF PARAMETERS
SEE MANUAL FOR AVAILABLE PARAMETER CHOICES.
4. PRESS TO SAVE PARAMETER CHOICE.
(SCREEN GOES TO STOP).

VFD KEYPAD



FOR MANUAL ADJUSTMENT OF MOTOR SPEED (VFD FREQUENCY)

1. PRESS OR TO INCREASE OR DECREASE.
2. VFD WILL RETURN TO SETPOINT KEYPAD FREQUENCY WHEN POWER IS REMOVED AND RESTORED.

COMMON DISPLAYS:

- 1.) DRIVE STOPPED
- 2.) RUNNING @ 45.0 Hz

COMMON FAULTS:

- 1.) F_PF = MOTOR OVERLOADED
- 2.) F_AF = HIGH TEMPERATURE FAULT

NOTE: PARMAETERS MAY BE RE-ACCESSED UP TO 2 MINUTES FOR CHECKING.
PRESSING PROG WILL BRING BACK LAST ACCESSED PARAMETER.
SEE AC TECH SMV SERIES MANUAL FOR ADDITIONAL INFORMATION.

A	AS BUILT	04-01-15	RB
REV	DESCRIPTION	DATE	APPROVED
REVISIONS			

CONFIDENTIALITY NOTICE: The information contained in this drawing is intended for use only by National Environmental Systems and ACT. The information is confidential and any copying, distribution or dissemination without the written consent of National Environmental Systems is STRICTLY PROHIBITED.		 NATIONAL ENVIRONMENTAL SYSTEMS 84 DUNHAM STREET / ATTLEBORO, MA 02703 508-226-1100 (Phone) / 508-226-1180 (Fax) WWW.NES-INC.BIZ	
DRWN BY RJD	DATE 03-11-15	TITLE VFD SETTINGS	
CHK BY	DATE	ADVANCED CLEANUP TECHNOLOGIES (ACT) AIR SPARGE CONTROL PANEL	JOB NO. 12-198
APPR BY	DATE	SCALE NTS	SIZE B
		DWG NO. E-2	SHEET 1 OF 1
			REV A

1

2

TABLE 3
PANEL BILL OF MATERIALS

REVISION A

APRIL 2015

12-198

AIR SPARGE EQUIPMENT

TAG	QUANTITY	ITEM	MODEL	MANUFACTURER
ENCL	1	CONTROL PANEL ENCLOSURE 24 X 24 X 12 - MILD STEEL/GRAY	EN4SD242412GY	HAMMOND
ENCL	1	BACK-PANEL - FITS ENCL. 24 X 24 - STEEL/WHT	EP2424	HAMMOND
ENCL	1	MOUNTING FEET SET OF 4 - ZINC PLATED	EZPMFHD	HAMMOND
VF	1	VENT FAN 105CFM 115VAC 4.7" W/ FILTER GRILL 24 IN CORD	DNFF120BK115	HAMMOND
VF	1	VENT FAN ADJUSTABLE 30-140F BI-METAL TEMP SWITCH N.O.	SKT011419NO	HAMMOND
VF	2	VENT FAN RAINHOOD NEMA 3R	RH20000GY	HAMMOND
VF	2	VENT FAN GRILL / SOLID COVER KIT	RHA20000G	HAMMOND
CB	1	CIRCUIT BREAKER 6A 1-POLE 120/240 VAC 1-PHASE 10KA DIN-MOUNT	MG24430_	SQUARE D
VFD	1	VFD, 33 AMP RATING	ESV752N02TXB	AC TECH
CR	3	RELAY 1 POLE 24VDC	RV8H-L-D24_	IDEC
CR	4	RELAY 3PDT 120VAC W/INDICATOR LIGHT	RH3B-UL-AC 120V	IDEC
CR	4	RELAY SOCKET FOR RH3B	SH3B- 05	IDEC
CR	2	RH1B-ULDC12V SPDT W/ LIGHT RELAY	RH1B-ULDC12V	IDEC
CR	2	RELAY SOCKET FOR RH1B	SH1B- 05	IDEC
PS	1	POWER SUPPLY, 24VDC, 1.3A, 1PH, 30W	PS5R-C24	IDEC
T	2	TIMER ON-DELAY	RE17RAMU_	SQUARE D
PB	8	LEGEND PLATE HOLDER	ZBZ33-	SQUARE D
LT	5	PILOT LIGHT HEAD, RED	ZB5AV04 3	SQUARE D
LT	5	MOUNTING BASE, 120V RED PROTECTED LED	ZB5AVG 4	SQUARE D
SW	1	PUSH BUTTON OPERATOR NON-ILLUM BLACK	ZB5AA 2	SQUARE D
SW	1	3 POSITION SELECTOR SWITCH ILLUM. GREEN MOMENTARY	ZB5AK1733_	SQUARE D
SW	1	MOUNTING BASE 120V GREEN PROTECTED LED	ZB5AVG3_	SQUARE D
TB	12	TERMINAL BLOCK SCREW CLAMP 20 AMP 600 V GRAY	NSYTRV22	SQUARE D
TB	2	TERMINAL BLOCK END BARRIERS GRAY	NSYTRAC22	SQUARE D
TB	2	TERMINAL BLOCK END ANCHORS	NSYTRAABV35	SQUARE D
GB	1	LOAD CENTER GROUND BAR 12 TERMINALS	PK15GTA	SQUARE D



SECTION 6 - CONTROL COMPONENTS

CONTROL PANEL ENCLOSURE 24 X 24 X 12 - MILD STEEL/GRAY - HAMMOND EN4SD242412GY

VENT FAN 105CFM 115VAC 4.7" W/ FILTER GRILL 24 IN CORD - HAMMOND DNFF120BK115

VENT FAN ADJUSTABLE 30-140F BI-METAL TEMP SWITCH N.O. - HAMMOND SKT011419NO

VFD, 33 AMP RATING - AC TECH ESV752N02TXB

POWER SUPPLY, 24VDC, 1.3A, 1PH, 30W - IDEC PS5R-C24

TIMER ON-DELAY - SQUARE D RE17RAMU

Type 4 Mild Steel Wallmount Enclosure *Eclipse Series*

Hinge Door with Quarter Turn/Handle



Application

- Designed to enclose electrical and/or electronic equipment and protect against harsh, industrial environments for wallmount applications.
- Impressive styling features like hidden hinges, attractive latching systems make the Eclipse a suitable addition to any high-tech equipment installation.
- A wide range of sizes and practical accessories make this product line a complete package.

Standards

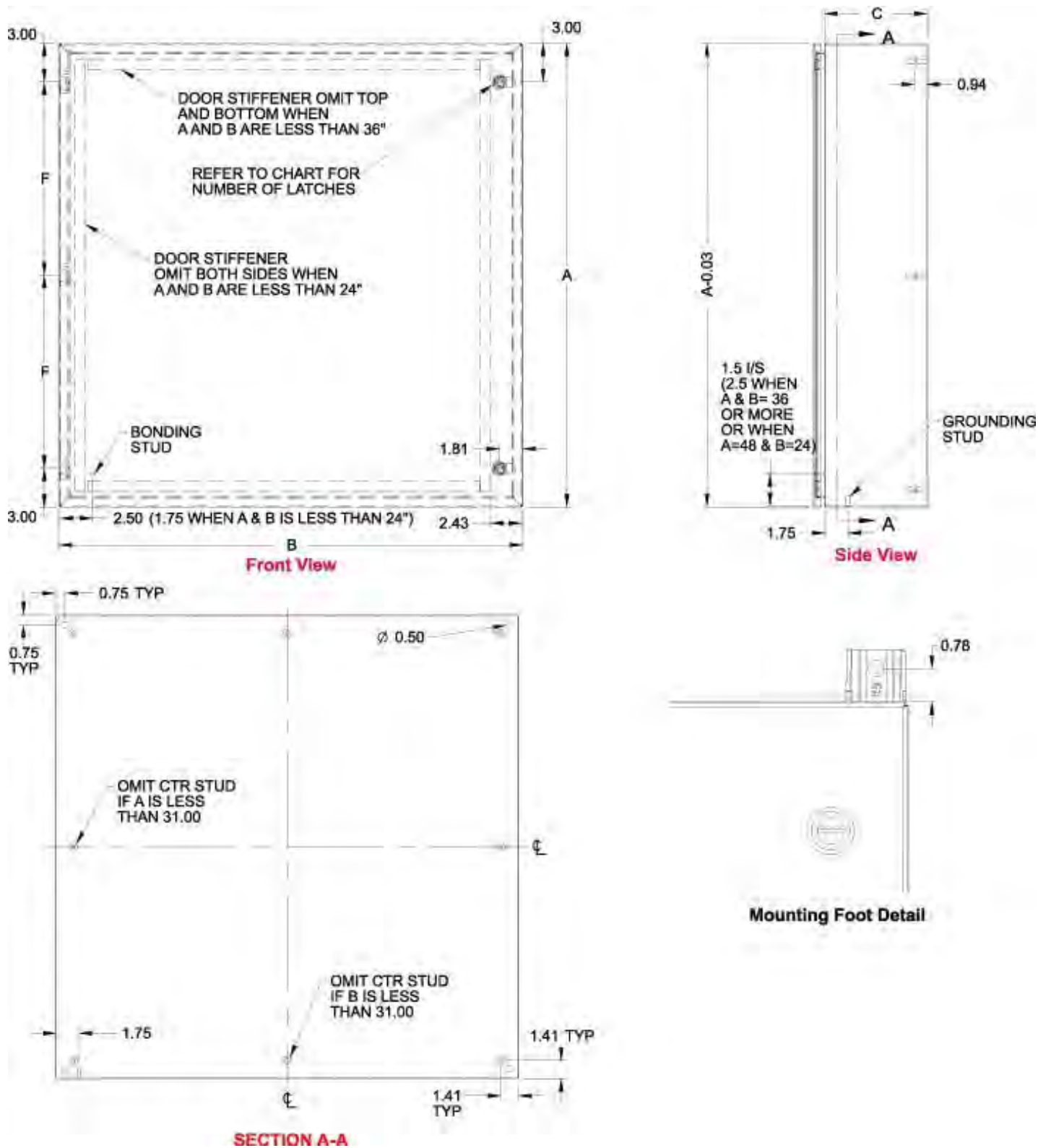
- UL 508 Type 3R, 4, and 12
- CSA Type 3R, 4, and 12
- Complies with
 - NEMA Type 3R, 4, and 12
 - IEC 60529, IP66

Construction

- Formed 14 or 16 gauge steel.
- Smooth, continuously welded seams ground smooth.
- Door stiffeners are provided where required for increased strength and rigidity - designed to also permit additional mounting options.
- Formed lip on enclosure to exclude flowing liquids and contaminants.
- Door latches feature the added safety of quarter turn slot requiring use of tool for opening.
- Doors may be easily removed for modifications and are interchangeable.
- Seamless poured-in place gasket.
- Collar studs provided for mounting inner panel.
- Includes hardware kit with panel mounting nuts and sealing washers for wall mounting holes.
- Bonding stud provided on door and grounding stud installed in enclosure.
- Hinges are constructed from 304 stainless steel.
- Hinge pins are stainless steel.
- Quarter turn latch and multi-point handle (key lockable) are zinc diecast with black epoxy finish.
- Door alignment guide provided on 36" wide enclosures.

Finish

- Cover and enclosure are phosphatized and finished with a recoatable powder inside and out with choice of ANSI 61 smooth Gray (GY) or RAL7035 textured light gray (LG).



Part No. (ANSI 61 Gray)	Part No. (RAL 7035 Light Gray)	Overall Dimensions			Door/Body	Qty	Latches	Opt. Panel Part No.	Panel Size		# Hinges	F	Ship Wt. (lbs)
		A	B	C					D	E			
EN4SD12126GY	EN4SD12126LG	12.00	12.00	6.00	16	1	Qtr Turn	EP1212	10.20	10.20	2	6.00	12
EN4SD12246GY	EN4SD12246LG	12.00	24.00	6.00	16	1	Qtr Turn	EP1224	10.20	22.20	2	18.00	24
EN4SD16126GY	EN4SD16126LG	16.00	12.00	6.00	16	1	Qtr Turn	EP1612	14.20	10.20	2	10.00	16
EN4SD16166GY	EN4SD16166LG	16.00	16.00	6.00	16	1	Qtr Turn	EP1616	14.20	14.20	2	10.00	19
EN4SD16206GY	EN4SD16206LG	16.00	20.00	6.00	16	1	Qtr Turn	EP1620	14.20	18.20	2	10.00	22
EN4SD20126GY	EN4SD20126LG	20.00	12.00	6.00	16	1	Qtr Turn	EP2012	18.20	10.20	2	14.00	20

EN4SD242410GY	EN4SD242410LG	24.00	24.00	10.00	14	2	Qtr. Turn	EP2424	22.20	22.20	2	18.00	45
EN4SD243010GY	EN4SD243010LG	24.00	30.00	10.00	14	2	Qtr. Turn	EP2430	22.20	28.20	2	18.00	53
EN4SD302010GY	EN4SD302010LG	30.00	20.00	10.00	14	2	Qtr. Turn	EP3020	28.20	18.20	3	12.00	47
EN4SD302410GY	EN4SD302410LG	30.00	24.00	10.00	14	2	Qtr. Turn	EP3024	28.20	22.20	3	12.00	53
EN4SD303010GY	EN4SD303010LG	30.00	30.00	10.00	14	2	Qtr. Turn	EP3030	28.20	28.20	3	12.00	75
EN4SD362410GY	EN4SD362410LG	36.00	24.00	10.00	14	2	Qtr. Turn	EP3624	34.20	22.20	3	15.00	70
EN4SD363010GY	EN4SD363010LG	36.00	30.00	10.00	14	2	Qtr. Turn	EP3630	34.20	28.20	3	15.00	84
EN4SD363610GY	EN4SD363610LG	36.00	36.00	10.00	14	2	Qtr. Turn	EP3636	34.20	34.20	3	15.00	100
EN4SD423010GY	EN4SD423010LG	42.00	30.00	10.00	14	1	3-point	EP4230	40.20	28.20	4	12.00	107
EN4SD423610GY	EN4SD423610LG	42.00	36.00	10.00	14	1	3-point	EP4236	40.20	34.20	4	12.00	117
EN4SD482410GY	EN4SD482410LG	48.00	24.00	10.00	14	1	3-point	EP4824	46.20	22.20	4	14.00	95
EN4SD483010GY	EN4SD483010LG	48.00	30.00	10.00	14	1	3-point	EP4830	46.20	28.20	4	14.00	120
EN4SD483610GY	EN4SD483610LG	48.00	36.00	10.00	14	1	3-point	EP4836	46.20	34.20	4	14.00	125
EN4SD603610GY	EN4SD603610LG	60.00	36.00	10.00	14	1	3-point	EP6036	58.20	34.20	4	18.00	150
EN4SD201612GY	EN4SD201612LG	20.00	16.00	12.00	16	1	Qtr Turn	EP2016	18.20	14.20	2	14.00	32
EN4SD202012GY	EN4SD202012LG	20.00	20.00	12.00	16	1	Qtr Turn	EP2020	18.20	18.20	2	14.00	34
EN4SD242012GY	EN4SD242012LG	24.00	20.00	12.00	16	1	Qtr Turn	EP2420	22.20	18.20	2	18.00	38
EN4SD242412GY	EN4SD242412LG	24.00	24.00	12.00	14	2	Qtr Turn	EP2424	22.20	22.20	2	18.00	47
EN4SD302412GY	EN4SD302412LG	30.00	24.00	12.00	14	2	Qtr Turn	EP3024	28.20	22.20	3	12.00	57
EN4SD303012GY	EN4SD303012LG	30.00	30.00	12.00	14	2	Qtr Turn	EP3030	28.20	28.20	3	12.00	80
EN4SD362412GY	EN4SD362412LG	36.00	24.00	12.00	14	2	Qtr Turn	EP3624	34.20	22.20	3	15.00	62
EN4SD363012GY	EN4SD363012LG	36.00	30.00	12.00	14	2	Qtr Turn	EP3630	34.20	28.20	3	15.00	91
EN4SD363612GY	EN4SD363612LG	36.00	36.00	12.00	14	2	Qtr Turn	EP3636	34.20	34.20	3	15.00	104
EN4SD423012GY	EN4SD423012LG	42.00	30.00	12.00	14	1	3-point	EP4230	40.20	28.20	4	12.00	111
EN4SD423612GY	EN4SD423612LG	42.00	36.00	12.00	14	1	3-point	EP4236	40.20	34.20	4	12.00	121
EN4SD482412GY	EN4SD482412LG	48.00	24.00	12.00	14	1	3-point	EP4824	46.20	22.20	4	14.00	98
EN4SD483612GY	EN4SD483612LG	48.00	36.00	12.00	14	1	3-point	EP4836	46.20	34.20	4	14.00	148
EN4SD603612GY	EN4SD603612LG	60.00	36.00	12.00	14	1	3-point	EP6036	58.20	34.20	4	18.00	165
EN4SD723012GY	EN4SD723012LG	72.00	30.00	12.00	14	2	Qtr Turn, 5-point	EP7230	70.20	28.20	5	16.50	190
EN4SD723612GY	EN4SD723612LG	72.00	36.00	12.00	14	2	Qtr Turn, 5-point	EP7236	70.20	34.20	5	16.50	195
EN4SD242016GY	EN4SD242016LG	24.00	20.00	16.00	16	1	Qtr Turn	EP2420	22.20	18.20	2	18.00	52
EN4SD242416GY	EN4SD242416LG	24.00	24.00	16.00	14	2	Qtr Turn	EP2424	22.20	22.20	2	18.00	66
EN4SD302416GY	EN4SD302416LG	30.00	24.00	16.00	14	2	Qtr Turn	EP3024	28.20	22.20	3	12.00	85
EN4SD363016GY	EN4SD363016LG	36.00	30.00	16.00	14	2	Qtr Turn	EP3630	34.20	28.20	3	15.00	102
EN4SD423616GY	EN4SD423616LG	42.00	36.00	16.00	14	1	3-point	EP4236	40.20	34.20	4	12.00	140
EN4SD483616GY	EN4SD483616LG	48.00	36.00	16.00	14	1	3-point	EP4836	46.20	34.20	4	14.00	148
EN4SD603616GY	EN4SD603616LG	60.00	36.00	16.00	14	1	3-point	EP6036	58.20	34.20	4	18.00	200
EN4SD723016GY	EN4SD723016LG	72.00	30.00	16.00	14	2	Qtr Turn, 5-point	EP7230	70.20	28.20	5	16.50	215
EN4SD723616GY	EN4SD723616LG	72.00	36.00	16.00	14	2	Qtr Turn, 5-point	EP7236	70.20	34.20	5	16.50	217
EN4SD242420GY	EN4SD242420LG	24.00	24.00	20.00	14	2	Qtr Turn	EP2424	22.20	22.20	2	18.00	70
EN4SD302420GY	EN4SD302420LG	30.00	24.00	20.00	14	2	Qtr Turn	EP3024	28.20	22.20	3	12.00	82
EN4SD363020GY	EN4SD363020LG	36.00	30.00	20.00	14	2	Qtr Turn	EP3630	34.20	28.20	3	15.00	117

Filter Fan Kits *DNFF Series*

Features



- Kit includes one (1) of the following:
 - Fan
 - Plastic Filter Grill
 - Filter
 - Metal Grill
 - Wire Cord or Leads (see table)
 - Includes Mounting Hardware
- Flame retardant, ABS plastic filter fan grill is molded in a choice of four colors to match our racks & accessories.
 - "BK" (Black)
 - "GY" (ANSI 61 Gray)
 - "LG" (Light Gray - RAL7035)
 - "CG" (Gray/Beige - RAL7032)
- Fan is cooled by incoming air.
- Fan component is UL recognized to UL 507, and cUL recognized or CSA certified to CSA-C22.2 No. 113.

Part No. Black Filter Grill	Part No. ANSI 61 Gray Filter Grill	Part No. Gray/Beige Filter Grill	Part No. Light Gray Filter Grill	VAC	Fan Size	CFM	Cord Length
DNFF080BK115	DNFF080GY115	DNFF080CG115	DNFF080LG115	115	3.15	32	11 Inch leads
DNFF120BK115	DNFF120GY115	DNFF120CG115	DNFF120LG115	115	4.70	105	24 Inch cord
DNFF254BK115	DNFF254GY115	DNFF254CG115	DNFF254LG115	115	10.00	550	24 Inch cord
DNFF080BK230	DNFF080GY230	DNFF080CG230	DNFF080LG230	230	3.15	32	11 Inch leads
DNFF120BK230	DNFF120GY230	DNFF120CG230	DNFF120LG230	230	4.70	105	24 Inch cord
DNFF254BK230	DNFF254GY230	DNFF254CG230	DNFF254LG230	230	10.00	550	24 Inch cord

Data subject to change without notice

Thermostats *SKT Series*



Features

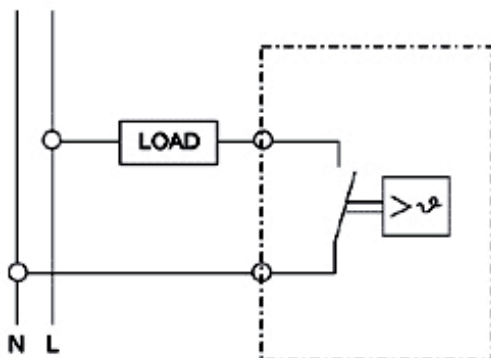
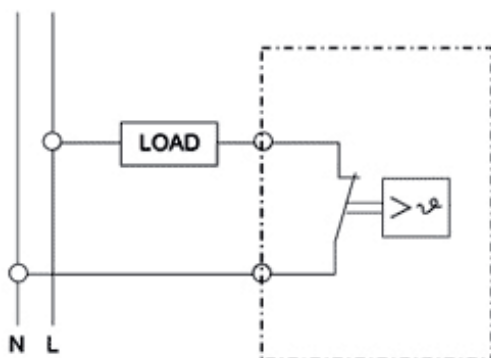
- Designed to provide air temperature control and monitoring in cabinets.
- Thermostat NC (Normally Closed) for the control of heaters and heater fans
- Thermostat NO (Normally Open) for the control of cooling units, or for switching signal transmitters in case of overheating.
- Available in Fahrenheit or Celsius.

NC - Normally Closed (Red)

- Used in conjunction with heaters.
- Contact opens when rising temperatures reach the set point temperature, shutting heater off.

NO - Normally open (Blue)

- Used in conjunction with fans.
- Contact closes when rising temperatures reach the set point temperature, turning fan on.



Part No.	Scale	Contact Type	Dimensions		Switching Capacity	Ship Wt. lbs
			Height x Width x Depth			
SKT011409NC	F°	Normally Closed	2.8 x 1.5 x 1.4		15 A (1) AC 120 V, 10 A (1) AC 250 V	1

Part No.	Scale	Contact Type	Dimensions		Switching Capacity	Ship Wt. lbs
			Height x Width x Depth			
SKT011409NC-C	C°	Normally Closed	2.8 x 1.5 x 1.4	15 A (1) AC 120 V, 10 A (1) AC 250 V		1
SKT011419NO	F°	Normally Open	2.8 x 1.5 x 1.4	15 A (1) AC 120 V, 10 A (1) AC 250 V		1
SKT011419NO-C	C°	Normally Open	2.8 x 1.5 x 1.4	15 A (1) AC 120 V, 10 A (1) AC 250 V		1

Sensor Element:	Thermostatic bi-metal
Switching difference (hysteresis):	+ or - 4°F (+or- 3°K)
Adjustment Range:	30 - 140°F
Noise Suppression:	N (according to VDE 0875)
Connection:	2 pole terminal for AWG 14 (2.5 mm²)
Mounting:	Easily installed by clip mounting on 35 or 38mm DIN rail (included)
Housing:	Flame retardant plastic UL94VO
Color:	Gray (SB)
Protection:	IP20
Approval:	UL Recognized Component, cUL Recognized Component, CE

Data subject to change without notice

SMVector Drive

Flexible, simple, economical



Lenze

SMVector | Our promise

Commitment to Value

The finest product at the best price is serious business. It takes continuous life cycle management to achieve this goal. We are always investigating techniques to improve efficiency and take advantage of the latest microprocessor and power module technology. When we achieve efficiency gains or material cost reductions, we pass those savings on to our customers. This simple philosophy has permitted us to build and maintain a very loyal base of customers.

Commitment to Quality

From product design to manufacture, service and training, quality is at the foundation of Lenze Americas corporate philosophy. A quality product is built of superior materials by highly skilled personnel equipped with state-of-the art instruments. And a quality product is backed by expert training, knowledgeable sales representatives and experienced repair personnel. Continuous life cycle improvement fueled by our pledge to our Customers drives our technology forward. We feel so strongly about quality that each SMVector is backed with a two-year warranty.

Commitment to Innovation

We pride ourselves on delivering products to the market that are designed to meet specific customer needs. Our portfolio of innovative products is broad and covers very simple variable speed applications up through complex motion control. Each product, including the SMVector, is positioned so our customers pay only for the level of technology necessary for their application.

Commitment to Simplicity

One of the cornerstones of our design philosophy is to make our products simple to use. Technology only benefits the user if it can be easily understood and applied. The SMVector's intuitive display and EPM technology dramatically simplifies installation, commissioning and operation for our customers

Commitment to Performance

The SMVector is in a class by itself when it comes to performance. At the heart of the SMV are sophisticated vector algorithms that achieve new heights in torque production and speed control. This technology breakthrough allows our customers to cover a full range of applications from simple speed control through advanced torque and process control with the same product.

Our Promise

At Lenze Americas it is not good enough to deliver part of a promise. Our products deliver the entire package; Value, Quality, Innovation, Simplicity and Performance.

Lenze



Lenze Americas N.A. Headquarters, Uxbridge, MA

SMVector | Features and Benefits:

The SMVector continues our price leadership tradition in the highly competitive AC drive market. Its performance and flexibility make it an attractive solution for a broad range of applications including:

- ▶ Food processing machinery
- ▶ Packaging machinery
- ▶ Material handling/conveying systems
- ▶ HVAC systems

The SMVector makes good its promise of price leadership in delivering unparalleled performance and simplicity. The SMVector is the right choice when you need it all – performance, power, packaging and intuitive programming.



SMV NEMA 4X (IP65)

SMV NEMA 1 (IP31)

Two Year Warranty

Superior Performance

- ▶ Modes of Operation:
 - V/Hz (Constant and Variable)
 - Enhanced V/Hz (Constant and Variable)
 - Vector Speed Control
 - Vector Torque Control
- ▶ Dynamic Torque Response
- ▶ Sophisticated Auto-tuning (Motor Calibration)
- ▶ Impressive Low Speed Operation
- ▶ Sequencer with 16 Programmable Segments

Flexible Power Ranges

- ▶ International Voltages:
 - 120/240V, 1Ø (up to 1.5 Hp)
 - 200/240V, 1/3Ø (up to 3 Hp)
 - 200/240V, 3Ø (up to 20 Hp)
 - 400/480V, 3Ø (up to 60 Hp)
 - 480/600V, 3Ø (up to 60 Hp)

Industrial Grade Packaging

- ▶ NEMA Type 1 (IP31) Enclosure
- ▶ NEMA 4X (IP65) Indoor Only
- ▶ NEMA 4X (IP65) Indoor/Outdoor

Simplicity

- ▶ Intuitive User Interface
- ▶ Electronic Memory Module (EPM)
- ▶ Optional Disconnect Switch (NEMA 4X only)
- ▶ Optional Potentiometer Switch (NEMA 4X only)

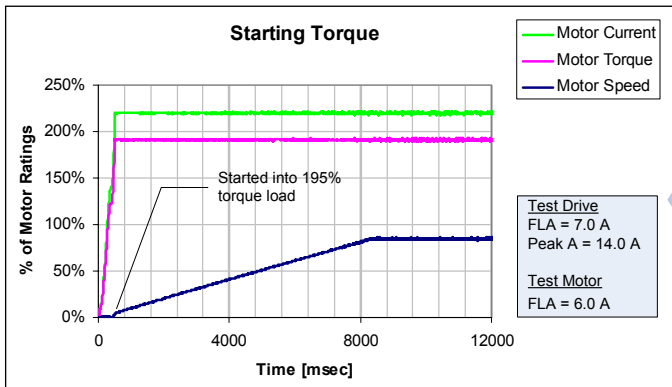
EPM | Just think of it as ... Ever Present Memory



When you need to program or replace a drive, whether it is 1 or 100 drives, the Electronic Programming Module (EPM) gets it done simply, quickly and most important, accurately. There is no hassle of reconfiguring each parameter or resetting the drive to factory or user default settings.

When drive reset is necessary, reset to factory default or customer settings in seconds with the EPM. When the EPM equipped drive is used on a line containing multiple drives with the identical setup, it takes just minutes to program the entire line. And EPMs can be replaced with or without power connected. When a drive must be replaced, the parameter configuration is not lost, simply plug in the pre-programmed EPM. You are good to go with Ever Present Memory.

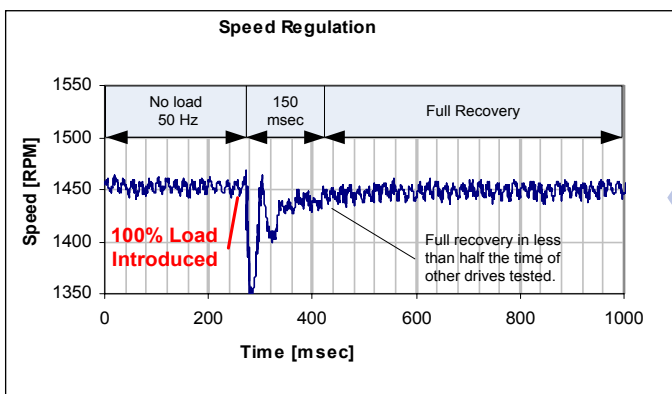
SMVector | Performance



Exceptional Starting Torque

Overpower demanding applications

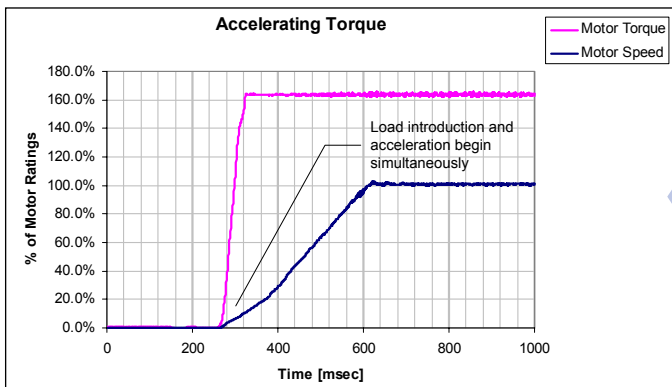
The SMVector is peerless in controlling the motor's ability to convert current into torque. In this example, the SMVector is started into a stiff 195% torque load. Not only does the motor start the load, but it also delivers a full 195% torque while accelerating to 50 Hz in 8 seconds.



Dynamic Speed Regulation

Recovery from 100% shock load in 0.15 seconds

Shock loads are no match for the SMVector. Here an instantaneous 100% load is dealt with in a mere 0.15 seconds. Remarkably, this level of speed regulation is achieved open loop without the benefit of a feedback device.



Quick Acceleration

0 to 100 in 0.33 seconds!

Motors controlled by the SMVector benefit from a sophisticated motor control algorithm that drives motor performance to maximum levels. In this application the the motor is able to drive a 165% torque load while accelerating from 0 to 100% speed in an impressive 0.33 seconds.

The SMV Thrives in Harsh Environments

Plastic Housing/Black Anodized Heatsink

- Light weight and corrosion resistant
- Available for indoor and indoor/outdoor use

Totally Enclosed Non-Ventilating Housing

Compact Enclosures

Optional Potentiometer



Optional Disconnect Switch

- Available on certain models

High Pressure Washdown Version

- Can be ordered without keypad and display

Optional Integrated EMC Filters

- Meets CE regulations

SMV NEMA 4X (IP65)
With Disconnect and Potentiometer

SMVector | Specifications

World Class Control

Modes of Operation

- Open Loop Flux Vector, Speed or Torque Control with/without Auto Tuning
- V/Hz (Constant or Variable)
- Base Frequency Adjustable to Motor Specs
- Enhanced V/Hz with Auto-tuning

Acceleration/Deceleration Profiles

- Two Independent Accel Ramps
- Two Independent Decel Ramps
- Linear, S-Type
- Auxiliary Ramp(or Coast)-to-Stop

Fixed Accel Boost for Improved Starting

500 Hz Output Frequency

High Carrier (PWM Sine-Coded) Frequency

- 4, 6, 8, 10 kHz

Universal Logic Assertion (Selectable)

- Positive or Negative Logic Input
- Digital Reference Available

Braking Functions

- DC Injection Braking
- Optional Dynamic Braking
- Flux Braking w/ Adjustable Flux Level & Decel Time

Speed Commands

- Keypad, Potentiometer
- Jog, 8 Preset Speeds
- Floating Point Control
- Sequencer, 16 Segments
- Voltage: Scalable 0 –10 VDC
- Current: Scalable 4 – 20 mA

Process Control

- PID Modes: Direct and Reverse Acting
- PID Sleep Mode w/ Adjustable Recovery Threshold
- Analog Output (Speed, Load, Torque, kW)
- Network Speed (Baud Rate)
- Terminal and Keypad Status
- Elapsed Run or Power On Time (Hours)

Status Outputs

- Programmable Form "A" Relay Output
- Programmable Open Collector Output
- Scalable 0-10 VDC / 2-10 VDC Analog Output
- 4-20mA w/500 Ohm Total Impedance

Environment

Ambient Temperature

- 10 to 55°C
- Derate 2.5% per °C Above 40°C

Comprehensive Diagnostic Tools

Real Time Monitoring

- 8 Register Fault History
- Software Version
- Drive Network ID
- DC Bus Voltage (V)
- Motor Voltage (V)
- Output Current (%)
- Motor Current (A)
- Motor Torque (%)
- Power (kW)
- Energy Consumption (kWh)
- Heatsink Temperature (°C)
- 0 – 10 VDC Input (User Defined)
- 4 – 20 mA Input (User Defined)
- PID Feedback (User Defined)

Vigilant System Protection

Voltage Monitoring

- Low and High DC Bus V Protection
- Low Line V Compensation

Current Monitoring

- Motor Overload Protection
- Current Limiting Safeguard
- Ground Fault
- Short Circuit Protection

Four ReStarts

- Three Flying and One Auto
- User Enabled

Loss of Follower Management

- Protective Fault
- Go to Preset Speed or Preset Setpoint
- Initiate System Notification

Over Temperature Protection

International Voltages

- +10/-15% Tolerance
- 120/240V, 1Ø
- 200/240V, 1 or 3Ø
- 200/240V, 3Ø
- 400/480V, 3Ø
- 480/600V, 3Ø

Global Standards

- UL GOST
- cUL C-Tick
- CE Low Voltage (EN61800-5-1)
- CE EMC (EN61800-3) with optional EMC filter

Simple Six Button Programming

- Start
- Stop
- Forward/Reverse
- Scroll Up
- Scroll Down
- Enter/Mode

Informative LED Display

Vivid Illumination

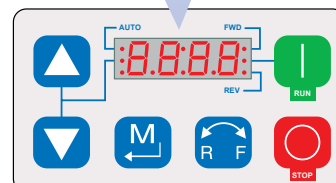
- Easily Read from a Distance

Five Status LEDs

- Run
- Automatic Speed mode
- Manual Speed Mode
- Forward Rotation
- Reverse Rotation

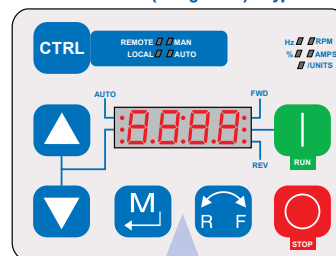
Status Display

- Motor Status
- Fault Management
- Operational Information



NEMA1 (Up to 10HP), NEMA4/4x Keypad

NEMA1 15HP (and greater) Keypad



Additional CTRL Button

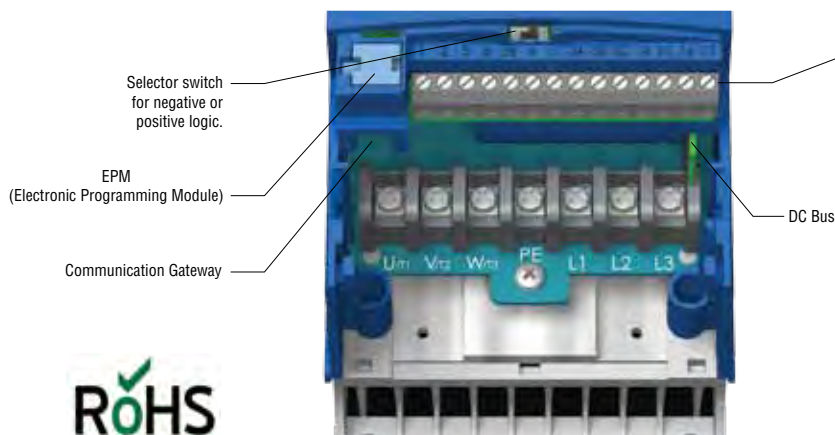
Switch between control modes

- Local-Manual
- Local-Auto
- Remote-Manual
- Remote-Auto

Additional LED Indicators

Define the units being displayed

- Hz
- RPM
- %
- Amps
- /Units



Control Terminals

- Digital Inputs
 - Dedicated Start/Stop
 - (3) Programmable
- Digital Outputs
 - Form "A" Relay
 - Open Collector
- Analog Inputs
 - 0 - 10 VDC
 - 4 - 20 mA
- Analog Outputs
 - 0 - 10 VDC/2 - 10 VDC
- Power Supplies
 - 10 VDC Potentiometer Ref
 - 12 VDC, 20 mA Digital Input Ref or 0VDC Common
 - 12 VDC, 50 mA Supply Common

Additional Control Terminals

(NEMA1, 15HP and greater models)

- 1 Programmable Digital Input
- 1 Common
- RS-485 Modbus Communications
 - TXA
 - TXB

Lenze
AC Tech

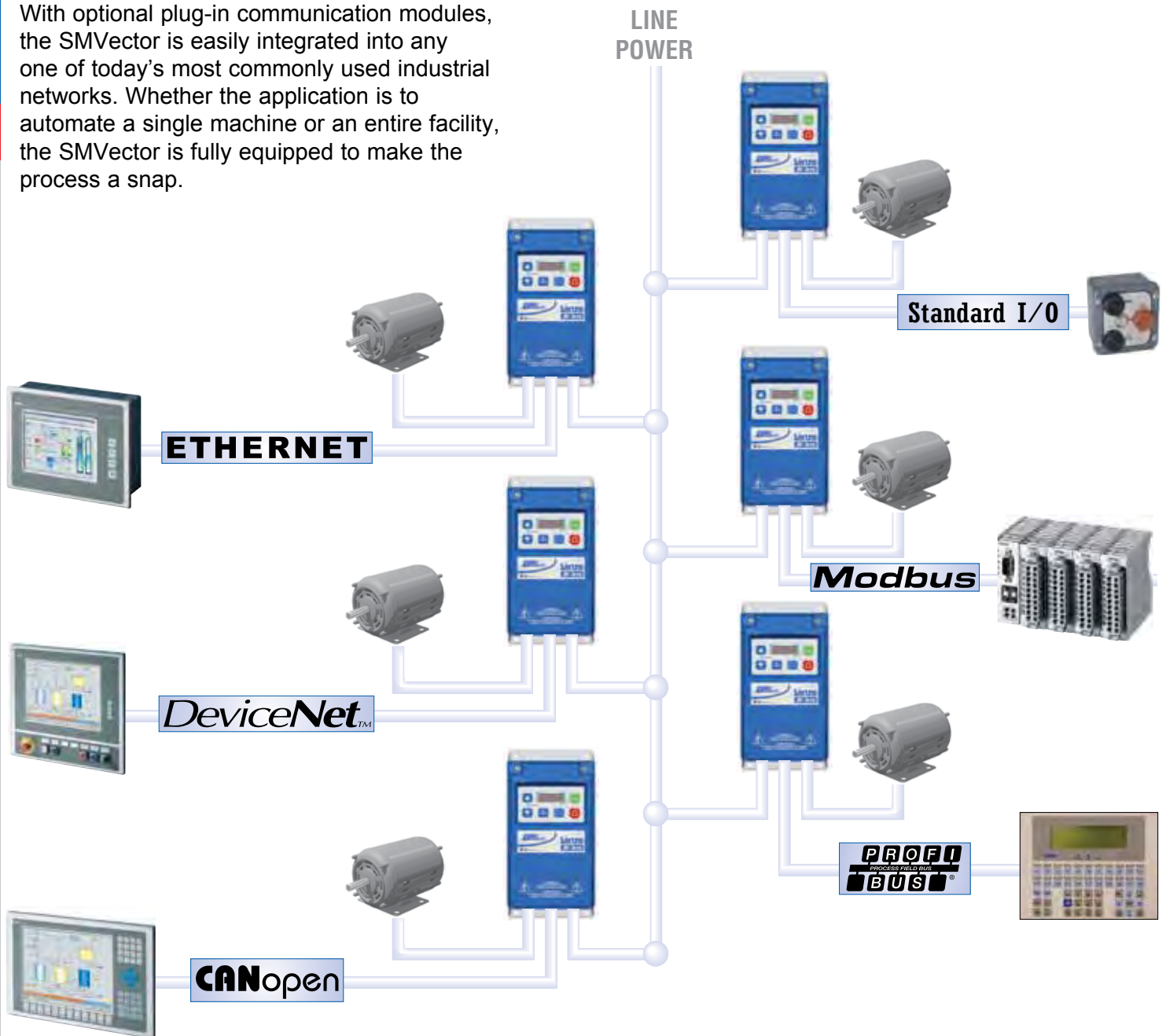
ROHS
COMPLIANT

Removable terminal cover and steel conduit plate (not shown).
Easy access for control & power wiring.

An extra IP21 finger guard ships with every drive.

SMVector | Connectivity

With optional plug-in communication modules, the SMVector is easily integrated into any one of today's most commonly used industrial networks. Whether the application is to automate a single machine or an entire facility, the SMVector is fully equipped to make the process a snap.



NOTE: Communication options are available in NEMA 1 (IP31) and NEMA 4X (IP65) models.



Communication Module

Setting up a drive in a network has never been so simple. Order the SMVector and your choice of communication module. Simply snap the communication module into the terminal cover and the drive is ready to connect to the network. Or if the SMVector is already installed it can be easily upgraded in the field.

Lenze
AC Tech

SMVector | Ratings & Dimensions

120/240V* - 1Ø Input (3Ø Output)

Power		NEMA1		NEMA4X - Indoor [C]/Outdoor[E]		NEMA4X w/Disconnect - Indoor	
Hp	kW	Model	Size	Model	Size	Model	Size
0.33	0.25	ESV251N01SXB	G1	N/A			
0.5	0.37	ESV371N01SXB	G1	ESV371N01SX[C] or [E]	R1	ESV371N01SMC	AA1
1	0.75	ESV751N01SXB	G1	ESV751N01SX[C] or [E]	R1	ESV751N01SMC	AA1
1.5	1.1	ESV112N01SXB	G2	ESV112N01SX[C] or [E]	R2	ESV112N01SMC	AA2

*120/240V models provide 0-230V output even with 120V input applied.

200/240V - 1 or 3Ø Input (3Ø Output)

Power		NEMA1		NEMA4X - Indoor [C]/Outdoor[E]*		NEMA4X w/Disconnect - Indoor**	
Hp	kW	Model	Size	Model	Size	Model	Size
0.33	0.25	ESV251N02SXB***	G1	N/A			
0.5	0.37	ESV371N02YXB	G1	ESV371N02YX[C] or [E]	R1	ESV371N02YMC	AA1
1	0.75	ESV751N02YXB	G1	ESV751N02YX[C] or [E]	R1	ESV751N02YMC	AA1
1.5	1.1	ESV112N02YXB	G2	ESV112N02YX[C] or [E]	R2	ESV112N02YMC	AA2
2	1.5	ESV152N02YXB	G2	ESV152N02YX[C] or [E]	R2	ESV152N02YMC	AA2
3	2.2	ESV222N02YXB	G2	ESV222N02YX[C] or [E]	S1	ESV222N02YMC	AD1

*Filter versions are also available in 1-phase: Replace the "YX" in the Model Part Number with an "SF".

**Filter versions are also available in 1-phase: Replace the "YM" in the Model Part Number with an "SL".

***Model ESV251N02SXB is single-phase input only.

200/240V - 3Ø Input (3Ø Output)

Power		NEMA1		NEMA4X - Indoor [C or D]/Outdoor[E or F]		NEMA4X w/Disconnect - Indoor	
Hp	kW	Model	Size	Model	Size	Model	Size
1.5	1.1	ESV112N02TXB	G2	N/A			
2	1.5	ESV152N02TXB	G2	N/A			
3	2.2	ESV222N02TXB	G2	N/A			
5	4	ESV402N02TXB	G3	ESV402N02TX[C] or [E]	V1	ESV402N02TMC	AC1
7.5	5.5	ESV552N02TXB	H1	ESV552N02TX[D] or [F]	T1	ESV552N02TMD	AB1
10	7.5	ESV752N02TXB	H1	ESV752N02TX[D] or [F]	T1	ESV752N02TMD	AB1
15	11	ESV113N02TXB	J1	ESV113N02TX[D] or [F]	W1	ESV113N02TMD	AF1
20	15	ESV153N02TXB	J1	ESV153N02TX[D] or [F]	W1	ESV153N02TMD	AF1

400/480V - 3Ø Input (3Ø Output)

Power		NEMA1		NEMA4X - Indoor [C or D]/Outdoor[E or F]*		NEMA4X w/Disconnect - Indoor**	
Hp	kW	Model	Size	Model	Size	Model	Size
0.5	0.37	ESV371N04TXB	G1	ESV371N04TX[C] or [E]	R1	ESV371N04TMC	AA1
1	0.75	ESV751N04TXB	G1	ESV751N04TX[C] or [E]	R1	ESV751N04TMC	AA1
1.5	1.1	ESV112N04TXB	G2	ESV112N04TX[C] or [E]	R2	ESV112N04TMC	AA2
2	1.5	ESV152N04TXB	G2	ESV152N04TX[C] or [E]	R2	ESV152N04TMC	AA2
3	2.2	ESV222N04TXB	G2	ESV222N04TX[C] or [E]	R2	ESV222N04TMC	AA2
5	4	ESV402N04TXB	G3	ESV402N04TX[C] or [E]	V1	ESV402N04TMC	AC1
7.5	5.5	ESV552N04TXB	H1	ESV552N04TX[C] or [E]	V1	ESV552N04TMC	AC1
10	7.5	ESV752N04TXB	H1	ESV752N04TX[D] or [F]	T1	ESV752N04TMD	AB1
15	11	ESV113N04TXB	J1	ESV113N04TX[D] or [F]	W1	ESV113N04TMD	AE1
20	15	ESV153N04TXB	J1	ESV153N04TX[D] or [F]	W1	ESV153N04TMD	AE1
25	18.5	ESV183N04TXB	J1	ESV183N04TX[D] or [F]	W1	ESV183N04TMD	AF1
30	22	ESV223N04TXB	J1	ESV223N04TX[D] or [F]	X1	ESV223N04TMD	AF1
40	30	ESV303N04TXB	K1	N/A			
50	37.5	ESV373N04TXB	K2	N/A			
60	45	ESV453N04TXB	K3	N/A			

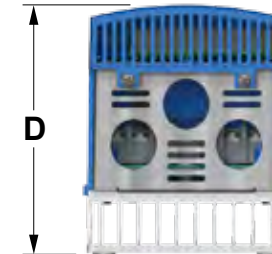
*Filter versions are also available in 1-phase: Replace the "X" in the Model Part Number with an "F".

**Filter versions are also available in 1-phase: Replace the "M" in the Model Part Number with an "L".

600V - 3Ø Input (3Ø Output)

Power		NEMA1		NEMA4X - Indoor [C or D]/Outdoor[E or F]		NEMA4X w/Disconnect - Indoor	
Hp	kW	Model	Size	Model	Size	Model	Size
1	0.75	ESV751N06TXB	G1	ESV751N06TX[C] or [E]	R1	ESV751N06TMC	AA1
2	1.5	ESV152N06TXB	G2	ESV152N06TX[C] or [E]	R2	ESV152N06TMC	AA2
3	2.2	ESV222N06TXB	G2	ESV222N06TX[C] or [E]	R2	ESV222N06TMC	AA2
5	4	ESV402N06TXB	G3	ESV402N06TX[C] or [E]	V1	ESV402N06TMC	AC1
7.5	5.5	ESV552N06TXB	H1	ESV552N06TX[C] or [E]	V1	ESV552N06TMC	AC1
10	7.5	ESV752N06TXB	H1	ESV752N06TX[D] or [F]	T1	ESV752N06TMD	AB1
15	11	ESV113N06TXB	J1	ESV113N06TX[D] or [F]	W1	ESV113N06TMD	AE1
20	15	ESV153N06TXB	J1	ESV153N06TX[D] or [F]	W1	ESV153N06TMD	AE1
25	18.5	ESV183N06TXB	J1	ESV183N06TX[D] or [F]	W1	ESV183N06TMD	AF1
30	22	ESV223N06TXB	J1	ESV223N06TX[D] or [F]	X1	ESV223N06TMD	AF1
40	30	ESV303N06TXB	K1	N/A			
50	37.5	ESV373N06TXB	K2	N/A			
60	45	ESV453N06TXB	K3	N/A			

SMV NEMA 1 (IP31)



Bottom Entry with NEMA 1 Steel Conduit Plate



Bottom Entry with IP31 Finger Guard

Dimensions

	H		W		D	
	in.	mm	in.	mm	in.	mm
G1	7.50	190	3.90	99	4.40	111
G2	7.60	191	3.90	99	5.50	138
G3	7.60	191	3.90	99	5.80	147
H1	9.90	250	5.20	130	6.30	160
J1	12.50	318	7.00	176	8.10	205
K1	14.19	360	8.72	221	10.07	256
K2	17.19	436	8.72	221	10.07	256
K3	20.19	513	8.72	221	10.07	256
R1	8.00	203	6.30	160	4.50	114
R2	8.00	203	6.30	160	6.30	160
S1	8.00	203	7.10	181	6.80	172
T1	10.00	254	8.10	204	8.00	203
V1	10.00	254	9.00	228	8.00	203
W1	14.40	366	9.40	240	9.50	241
X1	18.50	470	9.40	240	9.50	241
AA1	11.00	279	6.30	160	5.40	136
AA2	11.00	279	6.30	160	7.20	182
AB1	13.00	330	8.10	204	8.90	225
AC1	13.00	330	9.00	228	9.00	226
AD1	11.00	279	7.10	181	7.70	194
AE1	14.40	366	9.40	240	10.20	259
AF1	18.50	470	9.40	240	10.20	259

SMV

Frequency Inverter



Operating instructions EN



Lenze

Copyright © 2013 - 2006 Lenze AC Tech Corporation

All rights reserved. No part of this manual may be reproduced or transmitted in any form without written permission from Lenze AC Tech Corporation. The information and technical data in this manual are subject to change without notice. Lenze AC Tech Corporation makes no warranty of any kind with respect to this material, including, but not limited to, the implied warranties of its merchantability and fitness for a given purpose. Lenze AC Tech Corporation assumes no responsibility for any errors that may appear in this manual.

All information given in this documentation has been carefully selected and tested for compliance with the hardware and software described. Nevertheless, discrepancies cannot be ruled out. We do not accept any responsibility nor liability for damages that may occur. Any necessary corrections will be implemented in subsequent editions.

This document printed in the United States

Contents

About these Instructions	2
1 Safety Information	3
2 Technical Data	7
2.1 Standards and Application Conditions	7
2.2 SMV Type Number Designation	8
2.3 Ratings	9
3 Installation	12
3.1 Dimensions and Mounting	12
3.1.1 NEMA 1 (IP31) Models ≤ 30HP (22kW)	12
3.1.2 NEMA 1 (IP31) Models > 30HP (22kW)	13
3.1.3 NEMA 4X (IP65) Models	14
3.1.4 NEMA 4X (IP65) Models with Disconnect Switch	15
3.2 Electrical Installation	16
3.2.1 Power Connections	16
3.2.1.1 Mains Connection to 120VAC Single-Phase Supply	16
3.2.1.2 Mains Connection to 240VAC Single-Phase Supply	17
3.2.1.3 Mains Connection to Three-Phase Supply	17
3.2.1.4 Motor Connection	17
3.2.1.5 Installation Recommendations for EMC Compliance	18
3.2.1.6 NEMA 4X (IP65) Input Terminal Block	18
3.2.1.7 Dynamic Brake Connections	19
3.2.2 Fuses/Cable Cross-Sections	20
3.2.3 Control Terminals	21
4 Commissioning	23
4.1 Local Keypad & Display	23
4.2 Drive Display and Modes of Operation	25
4.3 Parameter Setting	26
4.4 Electronic Programming Module (EPM)	26
4.5 Parameter Menu	27
4.5.1 Basic Setup Parameters	27
4.5.2 I/O Setup Parameters	31
4.5.3 Advanced Setup Parameters	35
4.5.4 PID Parameters	39
4.5.5 Vector Parameters	41
4.5.6 Network Parameters	43
4.5.7 Diagnostic Parameters	44
4.5.7.1 Terminal & Protection Status Display	45
4.5.7.2 Keypad Status Display	45
4.5.8 Onboard Communications Parameters 15-60HP (11-45kW)	46
4.5.9 Sequencer Parameters	47
4.5.9.1 Sequencer Flow Diagram Left	55
4.5.9.2 Sequencer Flow Diagram Right	56
4.5.9.3 Sequencer Status	57
5 Troubleshooting and Diagnostics	58
5.1 Status/Warning Messages	58
5.2 Drive Configuration Messages	59
5.3 Fault Messages	59
Appendix A	62
A.1 Permissible Cable Lengths	62

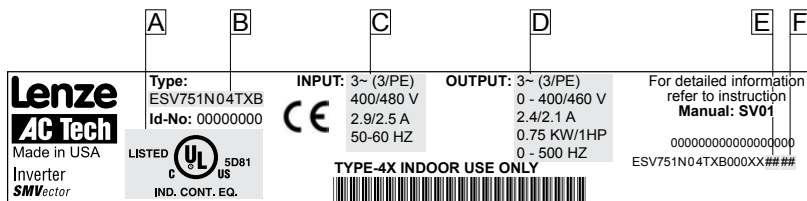


About These Instructions

This documentation applies to the SMV frequency inverter and contains important technical data regarding the installation, operation, and commissioning of the inverter.

These instructions are only valid for SMV frequency inverters with software revision 4.23 or higher for version 4.23 software, the drive nameplate illustrated below would show “42” in the “F” location.

Please read these instructions in their entirety before commissioning the drive.



A	B	C	D	E	F
Certifications	Type	Input Ratings	Output Ratings	Hardware Version	Software Version

Scope of delivery	Important
1 SMV Inverter with EPM installed (see Section 4.4) 1 Operating Instructions manual	After receipt of the delivery, check immediately whether the items delivered match the accompanying papers. Lenze AC Tech does not accept any liability for deficiencies claimed subsequently. Claim: - visible transport damage immediately to the forwarder. - visible deficiencies /incompleteness immediately to your Lenze AC Tech representative

Related Documents

The documentation listed herein contains information relevant to the operation of the SMVector frequency inverter. To obtain the latest documentation, visit the Technical Library at <http://www.lenzeamericas.com>.

Document #	Description
CMVINS01	SMVector Communications Module Installation Instruction
CMVMB401	SMVector ModBus RTU over RS485 Communications Reference Guide
CMVLC401	SMVector Locom Communications Reference Guide
CMVCAN01	SMVector CANopen Communications Reference Guide
CMVDVN01	SMVector DeviceNet Communications Reference Guide
CMVETH01	SMVector EtherNet/IP Communications Reference Guide
CMVPFB01	SMVector PROFIBUS Communications Reference Guide
ALSV01	SMVector Additional I/O Module Installation and Operation Manual
DBV01	SMVector Dynamic Braking
PTV01	SMVector Potentiometer Install Instructions
RKV01	SMVector ESZVK1 Remote Keypad
RKVU01	SMVector ESZVXH0 Remote Keypad (for NEMA 1 15-60HP (11-45kW) Drives)



1 Safety Information

General

Some parts of Lenze AC Tech controllers can be electrically live and some surfaces can be hot. Non-authorized removal of the required cover, inappropriate use, and incorrect installation or operation creates the risk of severe injury to personnel and/or damage to equipment.

All operations concerning transport, installation, and commissioning as well as maintenance must be carried out by qualified, skilled personnel who are familiar with the installation, assembly, commissioning, and operation of variable frequency drives and the application for which it is being used.

Installation

Ensure proper handling and avoid excessive mechanical stress. Do not bend any components and do not change any insulation distances during transport, handling, installation or maintenance. Do not touch any electronic components or contacts. This drive contains electrostatically sensitive components, which can easily be damaged by inappropriate handling. Static control precautions must be adhered to during installation, testing, servicing and repairing of this drive and associated options. Component damage may result if proper procedures are not followed.

To ensure proper operation, do not install the drive where it is subjected to adverse environmental conditions such as combustible, oily, or hazardous vapors; corrosive chemicals; excessive dust, moisture or vibration; direct sunlight or extreme temperatures.

This drive has been tested by Underwriters Laboratory (UL) and is UL Listed in compliance with the UL508C Safety Standard. This drive must be installed and configured in accordance with both national and international standards. Local codes and regulations take precedence over recommendations provided in this and other Lenze AC Tech documentation.

The SMVector drive is considered a component for integration into a machine or process. It is neither a machine nor a device ready for use in accordance with European directives (reference machinery directive and electromagnetic compatibility directive). It is the responsibility of the end user to ensure that the machine meets the applicable standards.

Electrical Connection

When working on live drive controllers, applicable national safety regulations must be observed. The electrical installation must be carried out according to the appropriate regulations (e.g. cable cross-sections, fuses, protective earth [PE] connection). While this document does make recommendations in regards to these items, national and local codes must be adhered to.

The documentation contains information about installation in compliance with EMC (shielding, grounding, filters and cables). These notes must also be observed for CE-marked controllers. The manufacturer of the system or machine is responsible for compliance with the required limit values demanded by EMC legislation.

Application

The drive must not be used as a safety device for machines where there is a risk of personal injury or material damage. Emergency Stops, over-speed protection, acceleration and deceleration limits, etc must be made by other devices to ensure operation under all conditions.

The drive does feature many protection devices that work to protect the drive and the driven equipment by generating a fault and shutting the drive and motor down. Mains power variances can also result in shutdown of the drive. When the fault condition disappears or is cleared, the drive can be configured to automatically restart, it is the responsibility of the user, OEM and/or integrator to ensure that the drive is configured for safe operation.



Safety Information

Explosion Proof Applications

Explosion proof motors that are not rated for inverter use lose their certification when used for variable speed. Due to the many areas of liability that may be encountered when dealing with these applications, the following statement of policy applies:

Lenze AC Tech Corporation inverter products are sold with no warranty of fitness for a particular purpose or warranty of suitability for use with explosion proof motors. Lenze AC Tech Corporation accepts no responsibility for any direct, incidental or consequential loss, cost or damage that may arise through the use of AC inverter products in these applications. The purchaser expressly agrees to assume all risk of any loss, cost or damage that may arise from such application.

Operation

Systems including controllers must be equipped with additional monitoring and protection devices according to the corresponding standards (e.g. technical equipment, regulations for prevention of accidents, etc.). The controller may be adapted to your application as described in this documentation.



DANGER!

- After the controller has been disconnected from the supply voltage, live components and power connection must not be touched immediately, since capacitors could be charged. Please observe the corresponding notes on the controller.
- Close all protective covers and doors prior to and during operation.
- Do not cycle input power to the controller more than once every two minutes.
- For SMVector models that are equipped with a Disconnect Switch (11th character in model number is L or M), the Disconnect Switch is intended as a motor service disconnect and does not provide branch circuit protection to the inverter or motor. When servicing the motor, it is necessary to wait 3 minutes after turning this switch to the off position before working on motor power wiring as the inverter stores electrical power. To service the inverter, it is necessary to remove mains ahead of the drive and wait 3 minutes.

Safety Notifications

All safety information given in these Operating Instructions includes a visual icon, a bold signal word and a description.



Signal Word! (characterizes the severity of the danger)

NOTE (describes the danger and informs on how to proceed)

Icon	Signal Word	Meaning	Consequences if ignored
	DANGER!	Warns of hazardous electrical voltage.	Death or severe injuries.
	WARNING!	Warns of potential, very hazardous situations.	Risk of severe injury to personnel and/or damage to equipment.
	WARNING! Hot Surface	Warns of hot surface and risk of burns. Labels may be on or inside the equipment to alert people that surfaces may reach dangerous temperatures.	Risk of severe injury to personnel.
	STOP!	Warns of potential damage to material and equipment.	Damage to the controller/drive or its environment.
	NOTE	Designates a general, useful note.	None. If observed, then using the controller/drive system is made easier.



Harmonics Notification in accordance with EN 61000-3-2, EN 61000-3-12:

Operation in public supply networks (Limitation of harmonic currents i.a.w. EN 61000-3-2, Electromagnetic Compatibility (EMC) Limits). Limits for harmonic current emissions (equipment input current up to 16A/phase).

Directive	Total Power connected to Mains (public supply)	Additional Measures Required for Compliance ⁽²⁾
EN 61000-3-2	< 0.5kW	with mains choke
	0.5 ... 1kW	with active filter
	> 1kW	complies without additional measures
EN 61000-3-12	16 ... 75amp	Additional measures are required for compliance with the standard

(1) For compliance with EMC regulations, the permissible cable lengths may change.

(2) The additional measures described only ensure that the controller meets the requirements of the EN 61000-3-2. The machine/system manufacturer is responsible for the machine's compliance with the regulations.

Safety Information in accordance with EN 61800-5-1:



DANGER! - Risk of Electric Shock

Capacitors retain charge for approximately 180 seconds after power is removed. Disconnect incoming power and wait at least 3 minutes before touching the drive.

DANGER! - Risque de choc électrique

Les condensateurs restent sous charge pendant environ 180 secondes après une coupure de courant. Couper l'alimentation et patienter pendant au moins 3 minutes avant de toucher l'entraînement.



WARNING!

- This product can cause a d.c. current in the PE conductor. Where a residual current-operated (RCD) or monitoring (RCM) device is used for protection in case of direct or indirect contact, only an RCD or RCM Type B is allowed on the supply side of this product.
- Leakage Current may exceed 3.5mA AC. The minimum size of the PE conductor shall comply with local safety regulations for high leakage current equipment.
- In a domestic environment, this product may cause radio interference in which case supplementary mitigation measures may be required.



Safety Information

Safety Information in accordance with UL:

Note for UL approved system with integrated controllers: UL warnings are notes which apply to UL systems.
The documentation contains special information about UL.



- Integral solid state protection does not provide branch circuit protection. Branch circuit protection must be provided in accordance with the National Electrical Code and any additional local codes. The use of fuses or circuit breakers is the only approved means for branch circuit protection.
- When protected by CC and T Class Fuses, suitable for use on a circuit capable of delivering not more than 200,000 rms symmetrical amperes, at the maximum voltage rating marked on the drive.
- Additionally suitable when protected by a circuit breaker having an interrupting rating not less than 200,000 rms symmetrical amperes, at the maximum voltage rating marked on the drive. (Excludes ESV113xx2T, ESV153xx2T, ESV113xx4T, ESV153xx4T, ESV183xx4T, ESV223xx4T, ESV303xx4T, ESV113xx6T, ESV153xx6T, ESV183xx6T, ESV223xx6T, and ESV303xx6T).
- Use minimum 75°C copper wire only, except for control circuits.
- For control circuits, use wiring suitable for NEC Class 1 circuits only.
- Torque Requirements (in accordance with UL) are listed in section 3.2.1, Power Connections and in 3.2.3, Control terminals
- Shall be installed in a pollution degree 2 macro-environment.
- NEMA 1 (IP31) models shall be installed in a pollution degree 2 macro-environment.
- All models are suitable for installation in a compartment handling Conditioned Air (i.e., plenum rated).



WARNING!

The opening of branch-circuit protective device may be an indication that a fault has been interrupted. To reduce the risk of fire or electric shock, current carrying parts and other components of the controller should be examined and replaced if damaged.



AVERTISSEMENT!

Le déclenchement du dispositif de protection du circuit de dérivation peut être dû à une coupure qui résulte d'un courant de défaut. Pour limiter le risque d'incendie ou de choc électrique, examiner les pièces porteuses de courant et les autres éléments du contrôleur et les remplacer s'ils sont endommagés. En cas de grillage de l'élément traverse par le courant dans un relais de surcharge, le relais tout entier doit être remplacé.



NOTE

Control and communications terminals provide reinforced insulation (i.e. considered SELV or PELV, providing protection in case of direct contact) when the drive is connected to a power system rated up to 300VAC between phase to ground (PE) and the applied voltage on Terminals 16 and 17 is less than 150VAC between phase to ground. Otherwise, control and communications terminals provide basic insulation.



2 Technical Data

2.1 Standards and Application Conditions

Conformity	CE	Low Voltage (2006/95/EC) & EMC (2004/108/EC) Directives
Approvals	UL508C	Underwriters Laboratories -Power Conversion Equipment
Input voltage phase imbalance	≤ 2%	
Supported Power Systems	TT TN	- For central grounded systems, operation is permitted without restrictions. - For corner grounded 400/500V systems, operation is possible but reinforced insulation to control circuits is compromised.
Humidity	≤ 95% non-condensing	
Temperature range	Transport	-25 ... +70°C
	Storage	-20 ... +70°C
	Operation	-10 ... +55°C (with 2.5%/°C current derating above +40°C)
Installation height	0 - 4000m a.m.s.l.	(with 5%/1000 m current derating above 1000m a.m.s.l.)
Vibration resistance	acceleration resistant up to 1.0g	
⚠ Earth leakage current	> 3.5 mA to PE	
Max Permissible Cable Length ⁽¹⁾	≤ 4.0 Hp (3.0 kW)	30 meters shielded, 60 meters un-shielded
	> 5.0 Hp (3.7 kW)	50 meters shielded, 100 meters un-shielded.
Enclosure	IP31/NEMA 1	IP65/NEMA 4X
	NEMA 1 and NEMA 4X model enclosures are plenum rated in accordance with UL 508C and are suitable for installation in a compartment handling conditioned air.	
Protection measures against	Earth fault, phase loss, over voltage, under voltage, motor stalling, over temperature motor overload (125% of FLA), short circuit (SCCR=200kA at rated voltage)	
Compliance with EN 61000-3-2 Requirements ⁽²⁾	< 0.5kW	with mains choke
	0.5 ... 1kW	with active filter
	> 1kW	without additional measures
Compliance with EN 61000-3-12 Requirements ⁽²⁾	16 ... 75amp	Additional measures required for compliance with EN 61000-3-12

Operation in public supply networks (Limitation of harmonic currents i.a.w. EN 61000-3-2, Electromagnetic Compatibility (EMC) Limits). Limits for harmonic current emissions (equipment input current up to 16A/phase).

(1) The stated cable lengths are permissible at default carrier frequencies (refer to parameter P166).

(2) The additional measures described only ensure that the controller meets the requirements of the EN 61000-3-2. The machine/system manufacturer is responsible for the machine's compliance with the regulations.



2.2 SMV Type Number Designation

The table herein describes the Type numbering designation for the SMVector Inverter models.

	ESV	152	NO	2	T	X	B
Electrical Products in the SMVector Series							
Power Rating in kW:							
251 = 0.25kW (0.33HP)		113 = 11.0kW (15HP)					
371 = 0.37kW (0.5HP)		153 = 15.0kW (20HP)					
751 = 0.75kW (1HP)		183 = 18.5kW (25HP)					
112 = 1.1kW (1.5HP)		223 = 22.0kW (30HP)					
152 = 1.5kW (2HP)		303 = 30.0kW (40HP)					
222 = 2.2kW (3HP)		373 = 37.5kW (50HP)					
302 = 3.0kW (4HP)		453 = 45.0kW (60HP)					
402 = 4.0kW (5HP)							
552 = 5.5kW (7.5HP)							
752 = 7.5kW (10HP)							
Installed I/O & Communication Module(s):							
C_ = CANopen (Available all models)		The " _ " blank can be:					
D_ = DeviceNet (Available all models)		0 = Standard Keypad					
E_ = Ethernet/IP, (Available all models)							
R_ = RS-485 / ModBus /Lecom (Avail all models)							
P_ = Profibus-DP (Available all models)							
N_ = No Communications installed							
Input Voltage:							
1 = 120 VAC (doubler output) or 240 VAC							
2 = 240 VAC							
4 = 400/480 VAC							
6 = 600 VAC							
Input Phase:							
S = Single Phase Input only							
Y = Single or Three Phase Input							
T = Three Phase Input only							
Input Line Filter							
F = Integral EMC Filter							
L = Integral EMC Filter and Integrated Disconnect Switch (NEMA 4X/IP65 Models only)							
M = Integrated Disconnect Switch (NEMA 4X/IP65 Models only)							
X = No EMC Filter/ No Disconnect Switch							
Enclosure:							
B = NEMA 1/IP31; Indoor only							
C = NEMA 4X/IP65; Indoor only; Convection cooled							
D = NEMA 4X/IP65; Indoor only; Fan cooled							
E = NEMA 4X/IP65; Indoor/Outdoor; Convection cooled							
F = NEMA 4X/IP65; Indoor/Outdoor; Fan cooled							



NOTE

Prior to installation make sure the enclosure is suitable for the end-use environment

Variables that influence enclosure suitability include (but are not limited to) temperature, airborne contaminants, chemical concentration, mechanical stress and duration of exposure (sunlight, wind, precipitation).



2.3 Ratings

120V / 240VAC Models

Mains = 120V Single Phase (1/N/PE) (90...132V), 240V Single Phase (2/PE) (170...264V); 48...62Hz									
Type	Power		Mains Current		Output Current		Heat Loss (Watts)		
	Hp	kW	120V A	240V A	Cont (I _n) A	Max I %	N1/IP31	N4X/IP65 No filtre	N4X/IP65 W/ filtre
ESV251--1S--	0.33	0.25	6.8	3.4	1.7	200	24		
ESV371--1S--	0.5	0.37	9.2	4.6	2.4	200	32	32	
ESV751--1S--	1	0.75	16.6	8.3	4.2	200	52	41	
ESV112--1S--	1.5	1.1	20	10.0	6.0	200	74	74	

NOTES:

Output Current: The Output Current Maximum (%) is a percentage of the Output Current Continuous Amps (I_n) rating and is adjustable in parameter P171.

240VAC Models

Mains = 240V Single Phase (2/PE) (170...264V); 48...62Hz									
Type	Power		Mains Current		Output Current		Heat Loss (Watts)		
	Hp	kW	240V A		Cont (I _n) A	Max I %	N1/IP31	N4X/IP65 No filtre	N4X/IP65 W/ filtre
ESV251--2S--	0.33	0.25	3.4		1.7	200	20		
ESV371--2S--	0.5	0.37	5.1		2.4	200			30
ESV751--2S--	1	0.75	8.8		4.2	200			42
ESV112--2S--	1.5	1.1	12.0		6.0	200			63
ESV152--2S--	2	1.5	13.3		7.0	200			73
ESV222--2S--	3	2.2	17.1		9.6	200			97

240V Single Phase (2/PE) (170...264V), 240V Three Phase (3/PE) (170...264V); 48...62Hz									
Type	Power		Mains Current		Output Current		Heat Loss (Watts)		
	Hp	kW	1~ (2/PE) A	3~ (3/PE) A	Cont (I _n) A	Max I %	N1/IP31	N4X/IP65 No filtre	N4X/IP65 W/ filtre
ESV371--2Y--	0.5	0.37	5.1	2.9	2.4	200	27	26	
ESV751--2Y--	1	0.75	8.8	5.0	4.2	200	41	38	
ESV112--2Y--	1.5	1.1	12.0	6.9	6.0	200	64	59	
ESV152--2Y--	2	1.5	13.3	8.1	7.0	200	75	69	
ESV222--2Y--	3	2.2	17.1	10.8	9.6	200	103	93	

240V Three Phase (3/PE) (170...264V); 48...62Hz									
Type	Power		Mains Current		Output Current		Heat Loss (Watts)		
	Hp	kW	240V A		Cont (I _n) A	Max I %	N1/IP31	N4X/IP65 No filtre	N4X/IP65 W/ filtre



Technical Data

ESV112--2T--	1.5	1.1	6.9	6	200	64		
ESV152--2T--	2	1.5	8.1	7	200	75		
ESV222--2T--	3	2.2	10.8	9.6	200	103		
ESV402--2T--	5	4.0	18.6	16.5	200	154	139	
ESV552--2T--	7.5	5.5	26	23	200	225	167	
ESV752--2T--	10	7.5	33	29	200	274	242	
ESV113--2T--	15	11	48	42	180	485	468	
ESV153--2T--	20	15	59	54	180	614	591	

NOTES:

Output Current: The Output Current Maximum (%) is a percentage of the Output Current Continuous Amps (In) rating and is adjustable in parameter P171.

400...480VAC Models

400 ... 480V Three Phase (3/PE) (400V: 340...440V), (480V: 340...528V); 48...62Hz											
Type	Power		Mains Current		Output Current				Heat Loss (Watts)		
	Hp	kW	400V A	480V A	Cont (I _n) A		Max I %		N1/IP31	N4X/IP65 No filte	N4X/IP65 W/ filte
					400V	480V	400V	480V			
ESV371--4T--	0.5	0.37	1.7	1.5	1.3	1.1	175	200	23	21	25
ESV751--4T--	1	0.75	2.9	2.5	2.4	2.1	175	200	37	33	37
ESV112--4T--	1.5	1.1	4.2	3.6	3.5	3.0	175	200	48	42	46
ESV152--4T--	2	1.5	4.7	4.1	4.0	3.5	175	200	57	50	54
ESV222--4T--	3	2.2	6.1	5.4	5.5	4.8	175	200	87	78	82
ESV302--4T--	4	3.0	8.3	7.0	7.6	6.3	175	200			95
ESV402--4T--	5	4.0	10.6	9.3	9.4	8.2	175	200	128	103	111
ESV552--4T--	7.5	5.5	14.2	12.4	12.6	11.0	175	200	178	157	165
ESV752--4T--	10	7.5	18.1	15.8	16.1	14.0	175	200	208	190	198
ESV113--4T--	15	11	27	24	24	21	155	180	418	388	398
ESV153--4T--	20	15	35	31	31	27	155	180	493	449	459
ESV183--4T--	25	18.5	44	38	39	34	155	180	645	589	600
ESV223--4T--	30	22	52	45	46	40	155	180	709	637	647
ESV303--4T--	40	30	68	59	60	52	155	180	1020		
ESV373--4T--	50	37.5	85	74	75	65	155	180	1275		
ESV453--4T--	60	45	100	87	88	77	155	180	1530		

NOTES:

Output Current: The Output Current Maximum (%) is a percentage of the Output Current Continuous Amps (In) rating and is adjustable in parameter P171.

For 400...480 VAC models, the output current maximum (%) in the 400V column is used when P107 = 0

For 400...480 VAC models, the output current maximum (%) in the 480V column is used when P107 = 1



600VAC Models

600V Three Phase (3/PE) (425...660V); 48...62Hz								
Type	Power		Mains Current	Output Current		Heat Loss (Watts)		
	Hp	kW	A	Cont (I _n) A	Max I %	N1/IP31	N4X/IP65 No filte	N4X/IP65 W/ filte
ESV751--6T--	1	0.75	2	1.7	200	37	31	
ESV152--6T--	2	1.5	3.2	2.7	200	51	43	
ESV222--6T--	3	2.2	4.4	3.9	200	68	57	
ESV402--6T--	5	4	6.8	6.1	200	101	67	
ESV552--6T--	7.5	5.5	10.2	9	200	148	116	
ESV752--6T--	10	7.5	12.4	11	200	172	152	
ESV113--6T--	15	11	19.7	17	180	380	356	
ESV153--6T--	20	15	25	22	180	463	431	
ESV183--6T--	25	18.5	31	27	180	560	519	
ESV223--6T--	30	22	36	32	180	640	592	
ESV303--6T--	40	30	47	41	180	930		
ESV373--6T--	50	37.5	59	52	180	1163		
ESV453--6T--	60	45	71	62	180	1395		

NOTES:

Output Current: The Output Current Maximum (%) is a percentage of the Output Current Continuous Amps (I_n) rating and is adjustable in parameter P171.



STOP!

- For installations above 1000m a.m.s.l., derate I_n by 5% per 1000m, do not exceed 4000m a.m.s.l.
- Operation above 40°C, derate I_n by 2.5% per °C, do not exceed 55°C.

Output Current (I_n) derating for Carrier Frequency (P166) for NEMA 1 (IP31) Models:

- If P166=2 (8 kHz), derate I_n to 92% of drive rating
- If P166=3 (10 kHz), derate I_n to 84% of drive rating

Output Current (I_n) derating for Carrier Frequency (P166) for NEMA 4X (IP65) Models:

- If P166=1 (6 kHz), derate I_n to 92% of drive rating
- If P166=2 (8 kHz), derate I_n to 84% of drive rating
- If P166=3 (10 kHz), derate I_n to 76% of drive rating



Installation

3 Installation

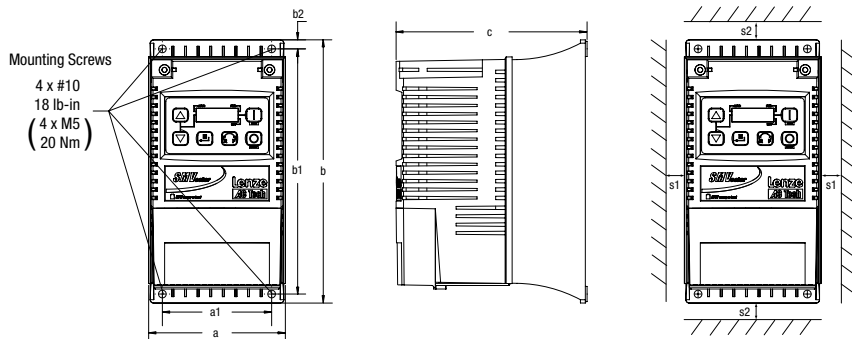
3.1 Dimensions and Mounting



WARNING!

Drives must not be installed where subjected to adverse environmental conditions such as: combustible, oily, or hazardous vapors; corrosive chemicals; excessive dust, moisture or vibration; direct sunlight or extreme temperatures.

3.1.1 NEMA 1 (IP31) Models ≤ 30HP (22kW)

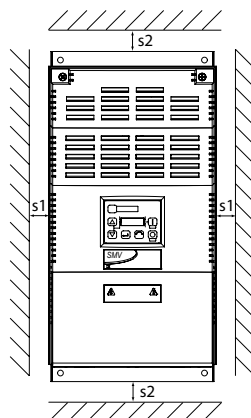
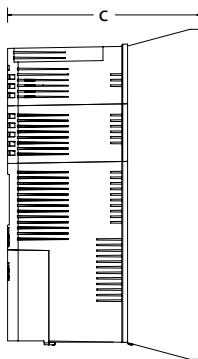
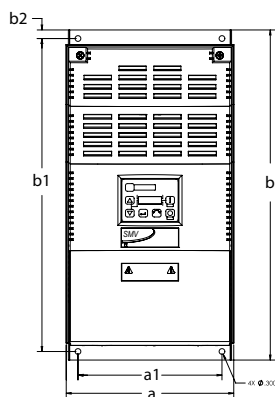


	Type	a in (mm)	a1 in (mm)	b in (mm)	b1 in (mm)	b2 in (mm)	c in (mm)	s1 in (mm)	s2 in (mm)	m lb (kg)
G1	ESV251-----B; ESV371 ESV751-----B	3.90 (99)	3.12 (79)	7.48 (190)	7.00 (178)	0.24 (6)	4.35 (111)	0.6 (15)	2.0 (50)	2.0 (0.9)
G2	ESV112-----B; ESV152-----B ESV222-----B	3.90 (99)	3.12 (79)	7.52 (191)	7.00 (178)	0.26 (7)	5.45 (138)	0.6 (15)	2.0 (50)	2.8 (1.3)
G3	ESV402-----B	3.90 (99)	3.12 (79)	7.52 (191)	7.00 (178)	0.30 (8)	5.80 (147)	0.6 (15)	2.0 (50)	3.2 (1.5)
H1	ESV552-----B; ESV752-----B	5.12 (130)	4.25 (108)	9.83 (250)	9.30 (236)	0.26 (7)	6.30 (160)	0.6 (15)	2.0 (50)	6.0 (2.0)
J1	ESV113-----B; ESV153-----B ESV183-----B; ESV223-----B	6.92 (176)	5.75 (146)	12.50 (318)	11.88 (302)	0.31 (8)	8.09 (205)	0.6 (15)	2.0 (50)	13.55 (6.15)

Conduit Hole Dimensions	Type	N in (mm)	P in (mm)	P1 in (mm)	Q in (mm)	S in (mm)
	G1	1.84 (47)	1.93 (49)	.70 (18)	1.00 (25)	.88 (22)
	G2	1.84 (47)	3.03 (77)	.70 (18)	1.00 (25)	.88 (22)
	G3	1.84 (47)	3.38 (86)	.70 (18)	1.00 (25)	.88 (22)
	H1	2.46 (62)	3.55 (90)	.13 (3)	1.38 (35)	1.13 (29) .88 (22)
	J1	3.32 (84)	4.62 (117)	.73 (19)	1.40 (36)	1.31 (33) .88 (22)



3.1.2 NEMA 1 (IP31) Models > 30HP (22kW)



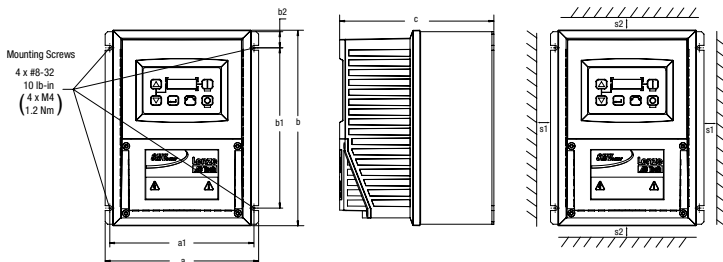
	Type	a in (mm)	a1 in (mm)	b in (mm)	b1 in (mm)	b2 in (mm)	c in (mm)	s1 in (mm)	s2 in (mm)	m lb (kg)
K1	ESV303~4~B; ESV303~6~B	8.72 (221)	7.50 (190)	14.19 (360)	13.30 (338)	0.45 (11.4)	10.07 (256)	0.6 (15)	2.0 (50)	24 (10.9)
K2	ESV373~4~B; ESV373~6~B	8.72 (221)	7.50 (190)	17.19 (436)	16.30 (414)	0.45 (11.4)	10.07 (256)	0.6 (15)	2.0 (50)	31 (14.1)
K3	ESV453~4~B ESV453~6~B	8.72 (221)	7.50 (190)	20.19 (513)	19.30 (490)	0.45 (11.4)	10.07 (256)	0.6 (15)	2.0 (50)	35 (15.9)

Conduit Hole Dimensions	Type	N in (mm)	P in (mm)	P1 in (mm)	Q in (mm)	S in (mm)	S1 in (mm)
	K1	3.75 (95)	5.42 (137)	1.50 (38.1)	1.75 (44.4)	1.75 (44.4)	0.875 (22.2)
	K2	3.75 (95)	5.42 (137)	1.50 (38.1)	1.75 (44.4)	1.75 (44.4)	0.875 (22.2)
	K3	3.75 (95)	5.42 (137)	1.50 (38.1)	1.75 (44.4)	1.75 (44.4)	0.875 (22.2)



Installation

3.1.3 NEMA 4X (IP65) Models



	Type	a in (mm)	a1 in (mm)	b in (mm)	b1 in (mm)	b2 in (mm)	c in (mm)	s1 in (mm)	s2 in (mm)	m lb (kg)
R1	ESV371N01SX ; ESV751N01SX ; ESV371N02YX ; ESV751N02YX ; ESV371N04TX ; ESV751N04TX ; ESV751N06TX ; ESV371N02SF ; ESV751N02SF ; ESV371N04TF ; ESV751N04TF ;	6.28 (160)	5.90 (150)	8.00 (203)	6.56 (167)	0.66 (17)	4.47 (114)	2.00 (51)	2.00 (51)	3.6 (1.63)
R2	ESV112N01SX ; ESV112N02YX ; ESV152N02YX ; ESV112N04TX ; ESV152N04TX ; ESV222N04TX ; ESV152N06TX ; ESV222N06TX ; ESV112N02SF ; ESV152N02SF ; ESV112N04TF ; ESV152N04TF ; ESV222N04TF ; ESV302N04TF ;	6.28 (160)	5.90 (150)	8.00 (203)	6.56 (167)	0.66 (17)	6.31 (160)	2.00 (51)	2.00 (51)	5.9 (2.68)
S1	ESV222N02YX ; ESV222N02SF ;	7.12 (181)	6.74 (171)	8.00 (203)	6.56 (167)	0.66 (17)	6.77 (172)	2.00 (51)	2.00 (51)	7.1 (3.24)
T1	ESV552N02TX- ; ESV752N02TX- ESV752N04TX- ; ESV752N06TX- ; ESV752N04TF- ;	8.04 (204)	7.56 (192)	10.00 (254)	8.04 (204)	0.92 (23)	8.00 (203)	4.00 (102)	4.00 (102)	10.98 (4.98)
V1	ESV402N02TX ; ESV402N04TX ; ESV552N04TX ; ESV402N06TX ; ESV552N06TX ; ESV402N04TF ; ESV552N04TF ;	8.96 (228)	8.48 (215)	10.00 (254)	8.04 (204)	0.92 (23)	8.00 (203)	4.00 (102)	4.00 (102)	11.58 (5.25)
W1	ESV113N02TX- ; ESV153N02TX- ESV113N04TX- ; ESV153N04TX- ESV113N04TF- ; ESV153N04TF- ESV113N06TX- ; ESV153N06TX- ESV183N04TX- ; ESV183N04TF- ESV183N06TX- ;	9.42 (240)	8.94 (228)	14.50 (368)	12.54 (319)	0.92 (24)	9.45 (241)	4.00 (102)	4.00 (102)	22.0 (10.0)
X1	ESV223N04TX- ; ESV223N04TF- ESV223N06TX- ;	9.42 (240)	8.94 (228)	18.5 (470)	16.54 (420)	0.92 (24)	9.45 (241)	4.00 (102)	4.00 (102)	25.5 (11.6)

_ = Last digit of part number:

C = N4X Indoor (convection cooled)

E = N4X In/Outdoor (convection cooled)

~ = Last digit of part number:

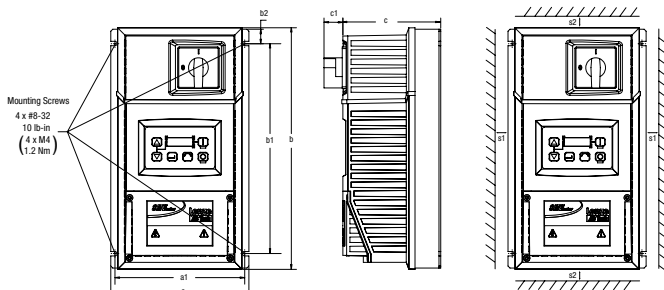
D = N4X Indoor (fan cooled)

F = N4X In/Outdoor (fan cooled)

Conduit Hole Dimensions		Type	N in (mm)	P in (mm)	Q in (mm)	S in (mm)	S1 in (mm)
		R1	3.14 (80)	2.33 (59)	1.50 (38)	.88 (22)	n/a
		R2	3.14 (80)	4.18 (106)	1.50 (38)	.88 (22)	n/a
		S1	3.56 (90)	4.63 (118)	1.50 (38)	.88 (22)	n/a
		T1	4.02 (102)	5.00 (127)	1.85 (47)	1.06 (27)	n/a
		V1	4.48 (114)	5.00 (127)	1.85 (47)	1.06 (27)	n/a
		W1	4.71 (120)	5.70 (145)	2.00 (51)	1.375 (35)	1.125 (28)
		X1	4.71 (120)	5.70 (145)	2.00 (51)	1.375 (35)	1.125 (28)



3.1.4 NEMA 4X (IP65) Models with Disconnect Switch



	Type	a in (mm)	a1 in (mm)	b in (mm)	b1 in (mm)	b2 in (mm)	c in (mm)	c1 in (mm)	s1 in (mm)	s2 in (mm)	m lb (kg)	
AA1	ESV371N01SM; ESV371N02YM; ESV371N02SL; ESV371N04TM; ESV371N04TL; ESV371N06TM; ESV751N01SM; ESV751N02YM; ESV751N02SL; ESV751N04TM; ESV751N04TL; ESV751N06TM;	6.28 (160)	5.90 (150)	10.99 (279)	9.54 (242)	0.66 (17)	4.47 (114)	.86 (22)	2.00 (51)	2.00 (51)	4.7 (2.13)	
	ESV112N01SM; ESV112N02YM; ESV112N02SL; ESV112N04TM; ESV112N04TL; ESV152N02YM; ESV152N02SL; ESV152N04TM; ESV152N04TL; ESV152N06TM; ESV222N04TM; ESV222N04TL; ESV222N06TM; ESV302N04TL;	6.28 (160)	5.90 (150)	10.99 (279)	9.54 (242)	0.66 (17)	6.31 (160)	.86 (22)	2.00 (51)	2.00 (51)	7.9 (3.58)	
	AD1	ESV222N02SL; ESV222N02YM;	7.12 (181)	6.74 (171)	10.99 (279)	9.54 (242)	0.66 (17)	6.77 (172)	.86 (22)	2.00 (51)	2.00 (51)	9.0 (4.08)
	AB1	ESV552N02TM~; ESV752N02TM~; ESV752N04TM~; ESV752N06TM~; ESV752N04TL~;	8.04 (204)	7.56 (192)	13.00 (330)	11.04 (280)	0.92 (23)	8.00 (203)	.86 (22)	4.00 (102)	4.00 (102)	13.9 (6.32)
	AC1	ESV402N02TM~; ESV402N04TM~; ESV552N04TM~; ESV402N06TM~; ESV552N06TM~; ESV402N04TL~; ESV552N04TL~;	8.96 (228)	8.48 (215)	13.00 (330)	11.04 (280)	0.92 (23)	8.04 (204)	.86 (22)	4.00 (102)	4.00 (102)	14.7 (6.66)
AE1	ESV113N04TM~; ESV153N04TM~; ESV113N06TM~; ESV153N06TM~;	9.42 (240)	8.94 (228)	14.50 (368)	12.54 (319)	0.92 (24)	9.45 (241)	0.73 (19)	4.00 (102)	4.00 (102)	23.0 (10.4)	
	AF1	ESV113N02TM~; ESV153N02TM~; ESV113N04TL~; ESV153N04TL~; ESV183N04TL~; ESV223N04TL~; ESV183N04TM~; ESV223N04TM~; ESV183N06TM~; ESV223N06TM~;	9.42 (240)	8.94 (228)	18.5 (470)	16.54 (420)	0.92 (24)	9.45 (241)	0.73 (19)	4.00 (102)	4.00 (102)	28.5 (12.9)

_ = Last digit of part number: C = N4X Indoor (convection cooled)

~ = Last digit of part number: D = N4X Indoor (fan cooled)

Conduit Hole Dimensions		Type	N in (mm)	P in (mm)	Q in (mm)	S in (mm)	S1 in (mm)
		AA1	3.14 (80)	2.33 (59)	1.50 (38)	.88 (22)	n/a
		AA2	3.14 (80)	4.18 (106)	1.50 (38)	.88 (22)	n/a
		AD1	3.56 (90)	4.63 (118)	1.50 (38)	.88 (22)	n/a
		AB1	4.02 (102)	5.00 (127)	1.85 (47)	1.06 (27)	n/a
		AC1	4.48 (114)	5.00 (127)	1.85 (47)	1.06 (27)	n/a
		AE1	4.71 (120)	5.70 (145)	2.00 (51)	1.375 (35)	1.125 (28)
		AF1	4.71 (120)	5.70 (145)	2.00 (51)	1.375 (35)	1.125 (28)



Installation

3.2 Electrical Installation

Installation After a Long Period of Storage



STOP!

Severe damage to the drive can result if it is operated after a long period of storage or inactivity without reforming the DC bus capacitors.

If input power has not been applied to the drive for a period of time exceeding three years (due to storage, etc), the electrolytic DC bus capacitors within the drive can change internally, resulting in excessive leakage current. This can result in premature failure of the capacitors if the drive is operated after such a long period of inactivity or storage.

In order to reform the capacitors and prepare the drive for operation after a long period of inactivity, apply input power to the drive for 8 hours prior to actually operating the motor.

3.2.1 Power Connections



STOP!

If the kVA rating of the AC supply transformer is greater than 10 times the input kVA rating of the drive(s), an isolation transformer or 2-3% input line reactor must be added to the line side of the drive(s).



DANGER! Hazard of electrical shock!

Circuit potentials up to 600 VAC are possible. Capacitors retain charge after power is removed. Disconnect power and wait at least three minutes before servicing the drive.

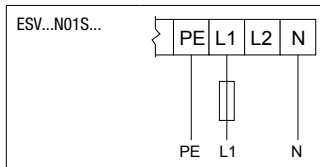


STOP!

- Verify mains voltage before connecting to drive.
- Do not connect mains power to the output terminals (U,V,W)! Severe damage to the drive will result.
- Do not cycle mains power more than once every two minutes. Damage to the drive may result.

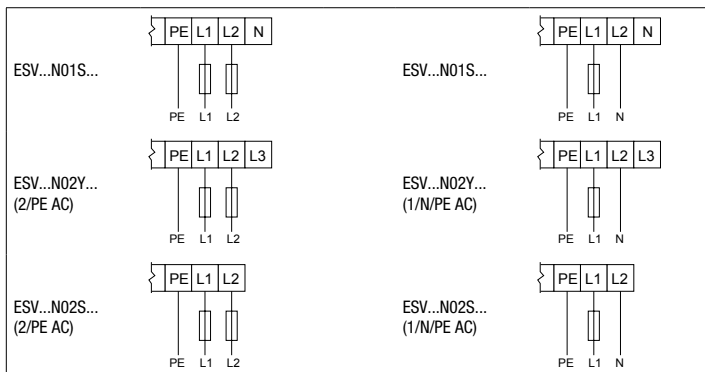
	Mains and Motor Terminations		
	Type	Torque	Strip Length
	<5HP	12 lb-in (1.3 Nm)	5/16 in (8mm)
	ESV552xx2T, ESV752xx2T, ESV113xx4/6, ESV153xx4/6, ESV183xx6, ESV223xx6	16 lb-in (1.8 Nm)	5/16 in (8mm)
	ESV552xx4Txx, ESV752xx4Txx, ESV552xx6Txx, ESV752xx6Txx	12 lb-in (1.3Nm)	0.25 in (6mm)
	ESV113xx2xxx, ESV153xx2xxx, ESV183xx4xxx, ESV223xx4xxx, ESV303xx4xxx	24 lb-in (2.7 Nm)	7/16 in (10mm)
	ESV373xx4xxx, ESV453xx4xxx	27 lb-in (3.05 Nm)	0.75 in (19mm)
Torque: N4X/IP65 Door Screws			
	N4X/IP65	6-7 lb-in (0.67-0.79 Nm)	0.25 in (6mm)

3.2.1.1 Mains Connection to 120VAC Single-Phase Supply

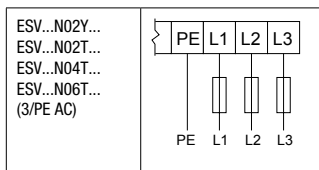




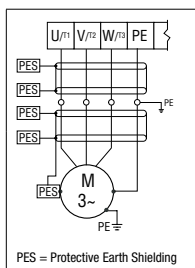
3.2.1.2 Mains Connection to 240VAC Single-Phase Supply



3.2.1.3 Mains Connection to Three-Phase Supply



3.2.1.4 Motor Connection



WARNING!

If the cable connection between the drive and the motor has an in-line contactor or circuit breaker then the drive must be stopped prior to opening/closing the contacts. Failure to do so may result in Overcurrent trips and/or damage to the inverter.



WARNING!

Leakage current may exceed 3.5 mA AC. The minimum size of the protective earth (PE) conductor shall comply with local safety regulations for high leakage current equipment.



STOP!

In the case of a Spinning Motor:

To bring free-wheeling loads such as fans to a rest before starting the drive, use the DC injection braking function. Starting a drive into a freewheeling motor creates a direct short-circuit and may result in damage to the drive.

Confirm motor suitability for use with DC injection braking.

Consult parameter P110 for starting / restarting into spinning motors.



Installation

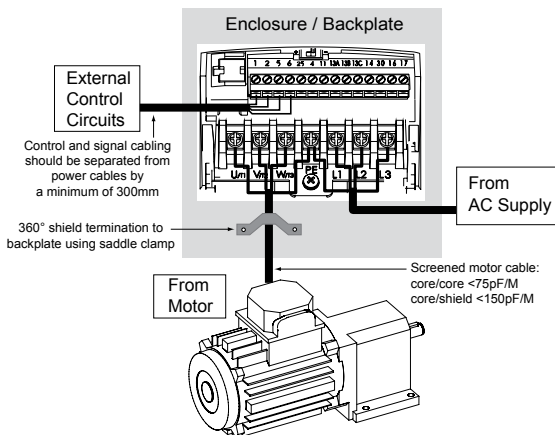
3.2.1.5 Installation Recommendations for EMC Compliance

For compliance with EN 61800-3 or other EMC standards, motor cables, line cables and control or communications cables must be shielded with each shield/screen clamped to the drive chassis. This clamp is typically located at the conduit mounting plate.

The EMC requirements apply to the final installation in its entirety, not to the individual components used. Because every installation is different, the recommended installation should follow these guidelines as a minimum. Additional equipment (such as ferrite core absorbers on power conductors) or alternative practices may be required to meet conformance in some installations.

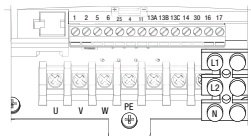
Motor cable should be low capacitance (core/core <75pF/m, core/shield <150pF/m). Filtered drives can meet the class A limits of EN 55011 and EN 61800-3 Category 2 with this type of motor cable up to 10 meters.

NOTE: Refer to Appendix A for recommended cable lengths. Any external line filter should have its chassis connected to the drive chassis by mounting hardware or with the shortest possible wire or braid.

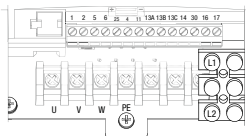


3.2.1.6 NEMA 4X (IP65) Input Terminal Block

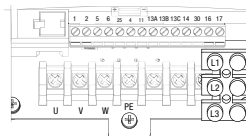
For NEMA 4X (IP65) models with integrated EMC filter and/or integrated line disconnect, the input terminal block is located on the right-hand side of the SMV inverter in the NEMA 4 X (IP65) enclosure. The single and three phase models are illustrated herein. Refer to paragraph 3.2.3 Control Terminals for pin out information.



Single Phase (2/PE) 120/240 VAC models (ESVxxxN01SMC) with integrated line disconnect



Single Phase (2/PE) 240 VAC models with Filter and/or integrated line disconnect



Three Phase (3/PE) models with Filter and/or integrated line disconnect



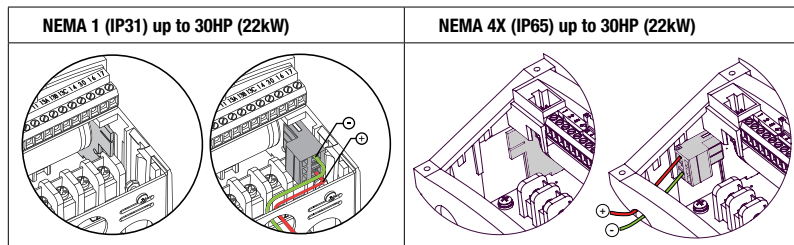
WARNING

Power remains present for up to 3 minutes on power input terminals (L1, L2 and L3) and output terminals (U, V and W) even when the disconnect switch is in the OFF position. Remove input power ahead of the drive and wait 3 minutes before removing the terminal cover.

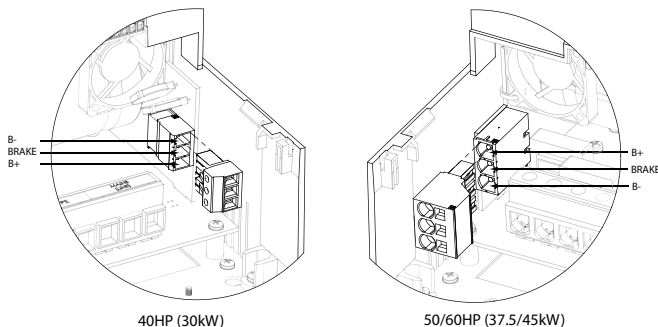


3.2.1.7 Dynamic Brake Connections

For NEMA 1 and NEMA 4X Drives rated up to 30HP (22kW) the Dynamic Brake connections are made as illustrated herein. Refer to the SMV Dynamic Brake Instructions (DBV01) for complete information.



The SMV 40...60Hp (30...45kW) models include a dynamic brake transistor as standard and only require the connection of an external resistor kit for dynamic braking operation. The dynamic brake resistor connections for 40...60 Hp (30...45kW) drives are standard built-in connections as illustrated in the diagram below. In the 40Hp (30kW) model drives, the dynamic brake connector is on the right-hand side of the drive and the terminals from top to bottom are B-, BRAKE and B+. In the 50/60HP (37.5/45 kW) model drives, the dynamic brake connector is on the left-hand side of the drive and the terminals from top to bottom are B+, BRAKE and B-.



External resistor kits must be connected to terminals B+ and BRAKE (no connection to B-). Refer to the table herein for external resistor kit selection. Refer to parameter P189 for enabling the dynamic brake function in the 40...60Hp (30...45kW) models.

400/480 VAC SMV Inverter			Resistor Kit			
Type	Hp	kW	Resistance (Ω)	Power (W)	Catalog #	SAP#
ESV303**4T**	40	30	23.5	1020	841-013	13317724
ESV373**4T**	50	37	17	1400	841-015	13317626
ESV453**4T**	60	45	17	1400	841-015	13317626
600 VAC SMV Inverter			Resistor Kit			
Type	Hp	kW	Resistance (Ω)	Power (W)	Catalog #	SAP#
ESV303**6T**	40	30	35	1070	841-014	13317624
ESV373**6T**	50	37	24	1560	841-016	13317628
ESV453**6T**	60	45	24	1560	841-016	13317628



Installation

3.2.2 Fuses/Cable Cross-Sections



NOTE: Observe local regulations. Local codes may supersede these recommendations

WARNING: Use a FUSE * for 240V drives requiring > 40A protection and for 400/480/600V drives requiring >32A protection.

Type		Recommendations				
		Fuse	Miniature circuit breaker ⁽¹⁾	Fuse ⁽²⁾ or Breaker ⁽³⁾ (N. America)	Input Power Wiring (L1, L2, L3, PE)	
					[mm ²]	[AWG]
120V 1~ (1/N/PE)	ESV251N01SXB	M10 A	C10 A	10 A	1.5	14
	ESV371N01SXB, ESV371N01SX*	M16 A	C16 A	15 A	2.5	14
	ESV751N01SXB, ESV751N01SX*	M25 A	C25 A	25 A	4	10
	ESV112N01SXB, ESV112N01SX*	M32 A	C32 A	30A	4	10
240V 1~ (2/PE)	ESV251N01SXB, ESV251N02SXB, ESV371N01SXB, ESV371N02YXB, ESV371N02SF*	M10 A	C10 A	10 A	1.5	14
	ESV751N01SXB, ESV751N02YXB, ESV751N02SF*	M16 A	C16 A	15 A	2.5	14
	ESV112N02YXB, ESV112N02SFC, ESV112N01SXB, ESV112N01SX*	M20 A	C20 A	20 A	2.5	12
	ESV152N02YXB, ESV152N02SF*	M25 A	C25 A	25 A	2.5	12
	ESV222N02YXB, ESV222N02SF*	M32 A	C32A	30 A	4	10
	ESV371N02YXB, ESV751N02YXB, ESV371N02Y_*, ESV751N02Y_*	M10 A	C10 A	10 A	1.5	14
240V 3~ (3/PE)	ESV112N02YXB, ESV152N02YXB, ESV112N02TXB, ESV152N02TXB, ESV112N02Y_*, ESV152N02Y_*	M16 A	C16 A	12 A	1.5	14
	ESV222N02YXB, ESV222N02TXB, ESV222N02YX*	M20 A	C20 A	20 A	2.5	12
	ESV402N02TXB, ESV402N02T_*	M32 A	C32 A	30 A	4.0	10
	ESV552N02TXB, ESV552N02T_*	M40 A	C40 A	35 A	6.0	8
	ESV752N02TXB, ESV752N02T_*	M50 A	* use Fuse only	45 A *	10	8
	ESV113N02TXB, ESV113N02TX_*, ESV113N02TM_*	M80 A	* use Fuse only	80 A *	16	6
	ESV153N02TXB, ESV153N02TX_*, ESV153N02TM_*	M100 A	* use Fuse only	90 A *	16	4
	ESV371N04TXB, ...ESV222N04TXB, ESV371N04T_*, ...ESV222N04T_*, ESV371N04TF*, ...ESV222N04TF*	M10 A	C10 A	10 A	1.5	14
	ESV302N04T_*	M16 A	C16 A	15 A	2.5	14
	ESV402N04TXB, ESV402N04T_*	M16 A	C16 A	20 A	2.5	14
400V or 480V 3~(3/PE)	ESV552N04TXB, ESV552N04T_*	M20 A	C20 A	20 A	2.5	14
	ESV752N04TXB, ESV752N04T_*	M25 A	C25 A	25 A	4.0	10
	ESV113N04TXB, ESV113N04T_*	M40 A	* use Fuse only	40 A *	4	8
	ESV153N04TXB, ESV153N04T_*	M50 A	* use Fuse only	50 A *	10	8
	ESV183N04TXB, ESV183N04T_*	M63 A	* use Fuse only	70 A *	10	6
	ESV223N04TXB, ESV223N04T_*	M80 A	* use Fuse only	80 A *	16	6
	ESV303N04TXB	M100 A	* use Fuse only	100 A *	25	4
	ESV373N04TXB	M125 A	* use Fuse only	125 A *	35	2
	ESV453N04TXB	M160 A	* use Fuse only	150 A *	35	1
	ESV113N06TXB, ...ESV222N06TXB, ESV751N06T_*, ...ESV222N06T_*	M10 A	C10 A	10 A	1.5	14
400V or 480V 3~(3/PE)	ESV402N06TXB, ESV402N06T_*	M16 A	C16 A	12 A	1.5	14
	ESV552N06TXB, ESV552N06T_*	M16 A	C16 A	15 A	2.5	14
	ESV752N06TXB, ESV752N06T_*	M20 A	C20 A	20 A	2.5	12
	ESV113N06TXB, ESV113N06TX_*, ESV113N06TM_*	M32 A	C32 A	30 A	4	10
	ESV153N06TXB, ESV153N06TX_*, ESV153N06TM_*	M40 A	* use Fuse only	40 A *	4	8
	ESV183N06TXB, ESV183N06TX_*, ESV183N06TM_*	M50 A	* use Fuse only	50 A *	6	8
	ESV223N06TXB, ESV223N06TX_*, ESV223N06TM_*	M63 A	* use Fuse only	60 A *	10	8
	ESV303N06TXB	M80 A	* use Fuse only	70 A *	16	6
	ESV373N06TXB	M100 A	* use Fuse only	90 A *	16	4
	ESV453N06TXB	M125 A	* use Fuse only	110 A *	25	2
	ESV751N06TXB, ...ESV222N06TXB, ESV751N06T_*, ...ESV222N06T_*	M10 A	C10 A	10 A	1.5	14
	ESV402N06TXB, ESV402N06T_*	M16 A	C16 A	12 A	1.5	14
	ESV552N06TXB, ESV552N06T_*	M16 A	C16 A	15 A	2.5	14
	ESV752N06TXB, ESV752N06T_*	M20 A	C20 A	20 A	2.5	12
	ESV113N06TXB, ESV113N06TX_*, ESV113N06TM_*	M32 A	C32 A	30 A	4	10
	ESV153N06TXB, ESV153N06TX_*, ESV153N06TM_*	M40 A	* use Fuse only	40 A *	4	8
	ESV183N06TXB, ESV183N06TX_*, ESV183N06TM_*	M50 A	* use Fuse only	50 A *	6	8
	ESV223N06TXB, ESV223N06TX_*, ESV223N06TM_*	M63 A	* use Fuse only	60 A *	10	8
	ESV303N06TXB	M80 A	* use Fuse only	70 A *	16	6
	ESV373N06TXB	M100 A	* use Fuse only	90 A *	16	4
	ESV453N06TXB	M125 A	* use Fuse only	110 A *	25	2



Notes for Fuse and Cable Table:

- (1) Installations with high fault current due to large supply mains may require a type D circuit breaker.
- (2) UL Class CC or T fast-acting current-limiting type fuses, 200,000 AIC, preferred. Bussman KTK-R, JN or JJS or equivalent.
- (3) Thermomagnetic type breakers preferred.

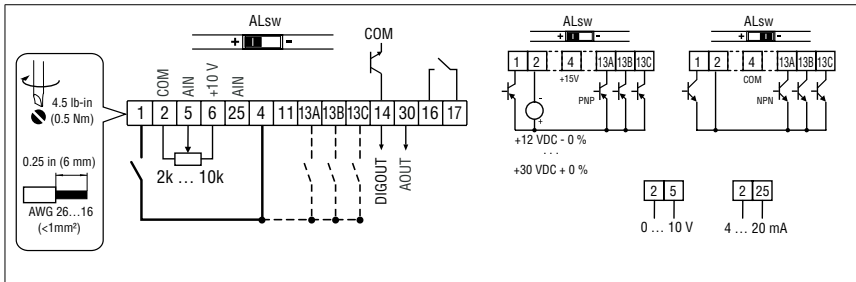
- _ 11th digit of part number: F = Integral EMC Filter
L = Integral EMC Filter and Integrated Disconnect Switch (NEMA 4X/IP65 Models only)
M = Integrated Disconnect Switch (NEMA 4X/IP65 Models only)
X = No EMC Filter/ No Disconnect Switch
C = N4X Indoor only (convection cooled)
E = N4X Indoor/Outdoor (convection cooled)
D = N4X Indoor only (fan cooled)
F = N4X Indoor/Outdoor (fan cooled)
- * = Last digit of part number:
~ = Last digit of part number:

Observe the following when using Ground Fault Circuit Interrupters (GFCIs):

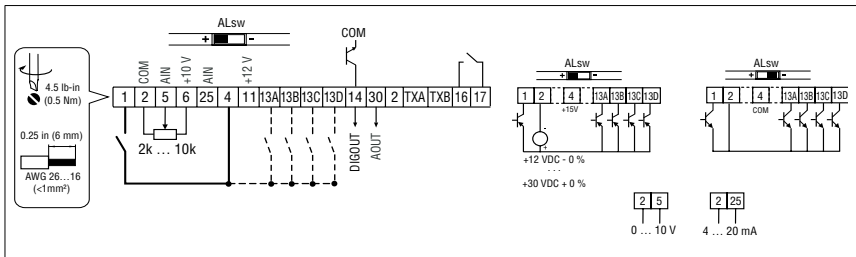
- Installation of GFCI only between supplying mains and controller.
- The GFCI can be activated by:
 - capacitive leakage currents between the cable screens during operation (especially with long, screened motor cables)
 - connecting several controllers to the mains at the same time
 - RFI filters

3.2.3 Control Terminals

Control Terminal Strip for 0.33 - 10 HP (0.25 - 7.5 kW):



Control Terminal Strip for 15HP (11 kW) and Greater Drives:



NOTE

Control and communications terminals provide basic insulation when the drive is connected to a power system rated up to 300V between phase to ground (PE) and the applied voltage on terminals 16 and 17 is less than 250 VAC between phase to phase and ground (PE).



Installation

Control Terminal Strip Descriptions

Terminal	Description	Important
1	Digital Input: Start/Stop	input resistance = 4.3k Ω
2	Analog Common	
5	Analog Input: 0...10 VDC	input resistance: >50 k Ω
6	Internal DC supply for speed pot	+10 VDC, max. 10 mA
25	Analog Input: 4...20 mA	input resistance: 250 Ω
4	Digital Reference/Common	+15 VDC / 0 VDC, depending on assertion level
11	Internal DC supply for external devices	+12 VDC, max. 50 mA
13A	Digital Input: Configurable with P121	input resistance = 4.3k Ω
13B	Digital Input: Configurable with P122	
13C	Digital Input: Configurable with P123	
13D*	Digital Input: Configurable with P124	
14	Digital Output: Configurable with P142, P144	DC 24 V / 50 mA; NPN
30	Analog Output: Configurable with P150...P155	0...10 VDC, max. 20 mA
2*	Analog Common	
TXA*	RS485 TxA	
TXB*	RS485 TxB	
16	Relay output: Configurable with P140, P144	AC 250 V / 3 A
17		DC 24 V / 2 A ... 240 V / 0.22 A, non-inductive

* = Terminal is part of the terminal strip for the 15HP (11kW) and higher models only.

Assertion level of digital inputs

The digital inputs can be configured for active-high or active-low by setting the Assertion Level Switch (ALsw) and P120. If wiring to the drive inputs with dry contacts or with PNP solid state switches, set the switch and P120 to "High" (+). If using NPN devices for inputs, set both to "Low" (-). Active-high (+) is the default setting.

HIGH = +12 ... +30 V

LOW = 0 ... +3 V



NOTE

An **F_AL** fault will occur if the Assertion Level switch (ALsw) position does not match the parameter P120 setting and P100 or any of the digital inputs (P121...P124) is set to a value other than 0.

4 Commissioning

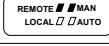
4.1 Local Keypad & Display

SMV Models: 0.33-10HP (0.25-7.5kW)	SMV Models: 15HP (11kW) and greater
4-Character Display	4-Character plus CTRL Display

Display	START BUTTON
	In Local Mode (P100 = 0, 4, 6), this button will start the drive.
	STOP BUTTON
	Stops the drive, regardless of which mode the drive is in. WARNING! When JOG is active, the STOP button will not stop the drive!
	ROTATION
	In Local Mode (P100 = 0, 4, 6), this selects the motor rotation direction: - The LED for the present rotation direction (FWD or REV) will be on - Press R/F; the LED for the opposite rotation direction will blink - Press M within 4 seconds to confirm the change - The blinking direction LED will turn on, and the other LED will turn off When rotation direction is changed while the drive is running, the commanded direction LED will blink until the drive is controlling the motor in the selected direction. Rotation is set in P112. When P112 = 0, rotation is forward only. When P112 = 1 rotation is forward and reverse.
	MODE
	Used to enter/exit the Parameter Menu when programming the drive and to enter a changed parameter value.
	UP AND DOWN BUTTONS
 	Used for programming and can also be used as a reference for speed, PID setpoint, or torque setpoint. When the ▲ and ▼ buttons are the active reference, the middle LED on the left side of the display will be on.



Commissioning

Display	INDICATING LEDs (on 4-character display)			
	FWD LED: Indicate the present rotation direction is forward. Refer to ROTATION description above.			
	REV LED: Indicate the present rotation direction is reverse. Refer to ROTATION description above.			
	AUTO LED: Indicates that the drive has been put into Auto mode from one of the TB13 inputs (P121...P124 set to 1...7). Indicates that PID mode is active (if PID mode is enabled). Indicates that sequencer mode is active (if sequencer mode is enabled).			
	RUN LED: Indicates that the drive is running.			
	▲ ▼ LED: Indicates that the ▲ ▼ are the active reference.			
	NOTE If the keypad is selected as the auto reference (P121...P124 is 6) and the corresponding TB-13 input is closed, the AUTO LED and ▲ ▼ LEDs will both be on.			
FUNCTIONS THAT FOLLOW ARE APPLICABLE TO SMV DRIVES 15HP (11kW) AND HIGHER				
	CTRL The CTRL pushbutton selects the start and speed reference control sources for the drive. Press  mode button to accept the new control mode selection.			
	CTRL LEDs		START CONTROL	REFERENCE CONTROL
		[LOCAL] [MAN]	Keypad	P101 Settings
		[LOCAL] [AUTO]	Keypad	Terminal 13x Settings
		[REMOTE] [MAN]	Terminal Strip	P101 Settings
		[REMOTE] [AUTO]	Terminal Strip	Terminal 13x Settings
	If P100 = 6 the CTRL button is used to toggle start control between the terminal strip [REMOTE] and the keypad [LOCAL]		- REM/LOC LED indicating the present start control source is ON - Press [CTRL]; the LED for other start control source will blink - Press [M] within 4 sec to confirm the change - Blinking LED will turn ON (the other LED will turn OFF)	
	If P113 = 1 the CTRL button is used to toggle reference control between the TB-13x setup [AUTO] and P101 [MANUAL]		- AUT/MAN LED indicating present reference control is ON - Press [CTRL]; the other reference control will blink - Press [M] within 4 sec to confirm change - Blinking LED will turn ON (the other LED will turn OFF)	
	If P100 = 6 and P113 = 1, it is possible to change the start and reference control sources at the same time			



Display	START CONTROL	
	The REMOTE/LOCAL LEDs indicate the current start control source. If the start control source is a remote keypad or the network, then both LEDs will be OFF.	
	REFERENCE CONTROL	
	The AUTO/MANUAL LEDs indicate the current reference control source.	
	IF P113 = 0 or 2, the AUTO/MANUAL LEDs will match the AUTO LED on the 4-character display. IF P113 = 0 and no AUTO reference has been setup on the terminal strip, the MANUAL LED will turn ON and the AUTO LED will turn OFF.	
	IF P113 = 1, the AUTO/MANUAL LEDS show the commanded reference control source as selected by the [CTRL] button. If the [CTRL] button is used to set the reference control source to AUTO but no AUTO reference has been setup on the terminal strip, reference control will follow P101 but the AUTO LED will remain ON.	
	UNITS LEDs	
	HZ: current display value is in Hz	In Speed mode, if P178 = 0 then HZ LED will be ON. If P178 > 0, the Units LEDs follow the setting of P177 when the drive is in run (non-programming) mode.
	%: current display value is in %	
	RPM: current display value is in RPM	In Torque mode, the HZ LED will be ON when the drive is in run (non-programming) mode.
	AMPS: current display value is in Amps	
	/UNITS current display value is a per unit (i.e./sec, /min, /hr, etc.)	
	In Pid mode, the Units LEDs follow the setting of P203 when the drive is in run (non-programming) mode. If P179 > 0, the Units LEDs will show the unit of the diagnostic parameter that is being displayed.	

4.2 Drive Display and Modes of Operation

Speed Mode Display

In the standard mode of operation, the drive frequency output is set directly by the selected reference (keypad, analog reference, etc.). In this mode, the drive display will show the drive's output frequency.

PID Mode Display

When the PID mode is enabled and active, the normal run display shows the actual PID setpoint. When PID mode is not active, the display returns to showing the drive's output frequency.

Torque Mode Display

When the drive is operating in Vector Torque mode, the normal run display shows the drive's output frequency.

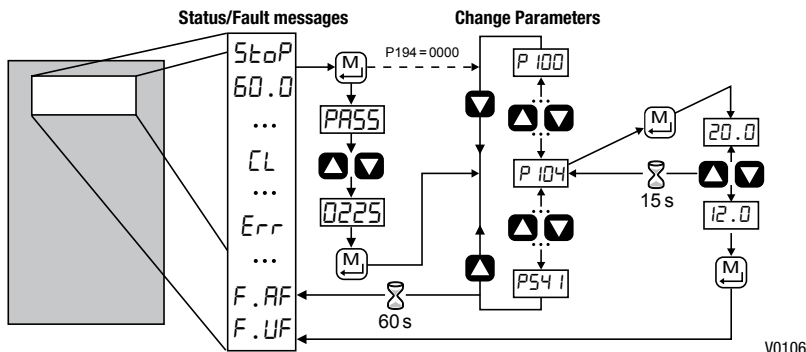
Alternate (Run-Screen) Display

When P179 (Run Screen Display) is set to a value other than 0, one of the diagnostic parameters (P501...P599) is displayed. Example: if P179 is set to 1, then diagnostic parameter P501 (Software version) is displayed. If P179 = 2, then P502 (Drive ID) is displayed.



Commissioning

4.3 Parameter Setting



4.4 Electronic Programming Module (EPM)

The EPM contains the drives operational memory. Parameter settings are stored in the EPM and setting changes are made to the "User settings" in the EPM.

An optional EPM Programmer (model EEPM1RA) is available that allows:

- An EPM to be copied directly to another EPM.
- An EPM to be copied to the memory of the EPM Programmer.
- Stored files can be modified in the EPM Programmer.
- Stored files can be copied to another EPM.



EPM Module
in SMV Drive

As the EPM Programmer is battery operated, parameter settings can be copied to an EPM and inserted into a drive without power being applied to the drive. This means that the drive will be fully operational with the new settings on the next application of power.

Additionally, when the drives parameter settings are burned into an EPM with the EPM Programmer, the settings are saved in two distinct locations; the "User settings" and the "OEM default settings". While the User settings can be modified in the drive, the OEM settings cannot. Thus, the drive can be reset not only to the "factory" drive default settings (shown in this manual), but can be set to the Original Machine settings as programmed by the OEM.

The user area contents of the EPM are what are copied into the OEM space by the EPM programmer. When parameter modifications are made to the drive and then a copy made via the EPM Programmer, these are the settings that will be available by the OEM selections from P199. The EPM Programmer is the only way to load the OEM area of the EPM.

While the EPM can be removed for copying or to use in another drive, it must be installed for the drive to operate (a missing EPM will trigger an F_F I fault)

4.5 Parameter Menu

4.5.1 Basic Setup Parameters

Code		Possible Settings		IMPORTANT
No.	Name	Default	Selection	
P 100	Start Control Source	0	0 Local Keypad	Use RUN button on front of drive to start
			1 Terminal Strip	Use start/stop circuit wired into the terminal strip. Refer to section 3.2.3
			2 Remote Keypad Only	Use RUN button on optional Remote Keypad to start
			3 Network Only	- Start command must come from network (Modbus, CANopen, etc) - SMV models <15HP (11kW) require optional communication module (refer to the network module documentation). - Must also set one of the TB-13 inputs to 9 (Network Enable); see P121...P124
			4 Terminal Strip or Local Keypad	Allows start control to be switched between terminal strip and local keypad using one of the TB-13 inputs. See note below.
			5 Terminal Strip or Remote Keypad	Allows start control to be switched between terminal strip and optional remote keypad using one of the TB-13 inputs. See Note below
			6 CTRL button select	Allows start control to be switched between terminal strip and local keypad using the CTRL button. NOTE: P100 Selection 6 is applicable to SMV 15HP (11kW) and higher models only.
			WARNING! P100 = 0 disables TB-1 as a STOP input! STOP circuitry may be disabled if parameters are reset back to defaults (see P199)	
			NOTE - P100 = 4, 5: To switch between control sources, one of the TB-13 inputs (P121...P124) must be set to 08 (Control Select); TB-13x OPEN (or not configured): Terminal strip control TB-13x CLOSED: Local (P100 = 4) or Remote (P100 = 5) keypad - P100 = 0, 1, 4, 6: Network can take control if P121...P124 = 9 and the corresponding TB-13x input is CLOSED. - The STOP button on the front of the drive is always active except in JOG mode. - TB-1 is an active STOP input if P100 is set to a value other than 0. - An F_{RL} fault will occur if the Assertion Level switch (ALsw) position does not match the P120 setting and P100 is set to a value other than 0.	
P 101	Standard Reference Source	0	0 Keypad (Local or Remote)	Selects the default speed or torque reference when no Auto Reference is selected using the TB-13 inputs.
			1 0-10 VDC	
			2 4-20 mA	
			3 Preset #1 (P131)	
			4 Preset #2 (P132)	
			5 Preset #3 (P133)	
			6 Network	
			7 Preset Sequence Segment #1 (P710)	Selections 7, 8 & 9 are not valid for PID setpoint or torque reference.
			8 Preset Sequence Segment #2 (P715)	
			9 Preset Sequence Segment #3 (P720)	



Commissioning

Code		Possible Settings				IMPORTANT
No.	Name	Default	Selection			
P 102	Minimum Frequency	0.0	0.0	{Hz}	P103	- P102, P103 are active for all speed references - When using an analog speed reference, also see P160, P161
P 103	Maximum Frequency	60.0	7.5	{Hz}	500	
			NOTE - P103 cannot be set below Minimum Frequency (P102) - To set P103 above 120 Hz: - Scroll up to 120 Hz; display shows H.Fr (flashing). - Release ▽ button and wait one second. - Press ▽ button again to continue increasing P103.			
WARNING! Consult motor/machine manufacturer before operating above rated frequency. Overspeeding the motor/machine may cause damage to equipment and injury to personnel!						
P 104	Acceleration Time 1	20.0	0.0	{s}	3600	- P104 = time of frequency change from 0 Hz to P167 (base frequency) - P105 = time of frequency change from P167 to 0 Hz - For S-ramp accel/decel, adjust P106
P 105	Deceleration Time 1	20.0	0.0	{s}	3600	
	EXAMPLE: IF P103 = 120 Hz, P104 = 20.0 s and P167 (base frequency) = 60 Hz; then the rate of frequency change from 0 Hz to 120 Hz = 40.0 s					
P 106	S-Ramp Integration Time	0.0	0.0	{s}	50.0	- P106 = 0.0: Linear accel/decel ramp - P106 > 0.0: Adjusts S-ramp curve for smoother ramp
P 107 ⁽¹⁾	Line Voltage Selection	1*	0 Low (120, 200, 400, 480VAC) 1 High (120, 240, 480, 600VAC)			* The default setting is 1 for all drives except when using "Reset to 50Hz default settings" (Parameter P199, selection 4) with 480V models. In this case, the default setting is 0.
P 108	Motor Overload	100	30	{%}	100	P108 = $\frac{\text{motor current rating}}{\text{SMV output rating}} \times 100$ Example: if motor = 3amps and SMV = 4amps, then P108 = 75%
P 109	Motor Overload Type	0	0 Speed Compensation			 V0108
			1 No Speed Compensation Example: Motor is cooled by forced ventilation as apposed to shaft mounted, self cooling fans.			

(1) Any changes to this parameter will not take effect until the drive is stopped.

Code		Possible Settings		IMPORTANT
No.	Name	Default	Selection	
P110	Start Method	0	0 Normal	Drive will automatically start when power is applied.
			1 Start on Power-up	When start command is applied, drive will apply DC braking according to P174, P175 prior to starting the motor
			2 Start with DC Brake	
			3 Auto Restart	Drive will automatically restart after faults, or when power is applied.
			4 Auto Restart with DC Brake	Combines settings 2 and 3
			5 Flying Start/Restart - Type 1	• Drive will automatically restart after faults, or when power is applied. • After 3 failed attempts, drive will Auto Restart with DC brake. • P110 = 5, 7: Performs speed search, starting at Max Frequency (P103) • P110 = 6, 8: Performs speed search, starting at the last output frequency prior to faulting or power loss • If P111 = 0, a flying START is performed when a start command is applied. • P110 = 7,8: Utilizes P280/281 to set Max Current Level and Decel Time for restart
			6 Flying Start/Restart - Type 1	
			7 Flying Start /Restart - Type 2 for 2-pole motors requiring a flying restart	
			8 Flying Start/Restart - Type 2 for 2-pole motors requiring a flying restart	
		 NOTE • P110 = 0, 2: Start command must be applied at least 2 seconds after power-up; F_{UF} fault will occur if start command is applied too soon. • P110 = 1, 3...6: For automatic start/restart, the start source must be the terminal strip and the start command must be present. • P110 = 2, 4...6: If P175=999.9, dc braking will be applied for 15s. • P110 = 3...6: Drive will attempt 5 restarts; if all restart attempts fail, drive displays LC (fault lockout) and requires manual reset. • P110 = 5, 6: If drive cannot catch the spinning motor, drive will trip into F_{rF} fault. • P110 = 5, 6: If drive trips into F_{DF} fault, try P110 = 7 or 8.		
 WARNING! Automatic starting/restarting may cause damage to equipment and/or injury to personnel! Automatic starting/restarting should only be used on equipment that is inaccessible to personnel.				
P111	Stop Method	0	0 Coast	Drive's output will shut off immediately upon a stop command, allowing the motor to coast to a stop
			1 Coast with DC Brake	The drive's output will shut off and then the DC Brake will activate (refer to P174, P175)
			2 Ramp	The drive will ramp the motor to a stop according to P105 or P126.
			3 Ramp with DC Brake	The drive will ramp the motor to 0 Hz and then the DC Brake will activate (refer to P174, P175)
P112	Rotation	0	0 Forward Only	If PID mode is enabled, reverse direction is disabled (except for Jog).
			1 Forward and Reverse	



Commissioning

Code		Possible Settings		IMPORTANT
No.	Name	Default	Selection	
P 113	Auto/Manual Control	0	0 Terminal Strip Control	The reference is dictated by the settings and state of the TB-13x terminals. If no AUTO reference has been setup on the terminal strip then reference control is dictated by P101.
			1 Auto/Manual (CTRL button select)	Allows the reference to be switched between auto and manual using the CTRL pushbutton on the drive keypad. If the CTRL pushbutton has selected AUTO reference but no AUTO reference has been setup on the terminal strip, then reference control is dictated by P101.
			2 Manual Control Only	Reference is dictated by P101 regardless of any AUTO source that may be selected by the TB-13x terminals.
			NOTE P113 is applicable to SMV 15HP (11kW) and higher models only.	
P 115	MOP Speed Initialization at Power-Up	0	0 Set to last MOP speed at power up	Output frequency at power-up = last MOP speed
			1 Set to 0.0Hz at power up	Output frequency at power-up = 0Hz
			2 Set to Preset #3 (P133) at power up	Output frequency at power-up = P133



4.5.2 I/O Setup Parameters

Code		Possible Settings		IMPORTANT
No.	Name	Default	Selection	
P 120	Assertion Level	2	1 Low	P120 and the Assertion Level switch must both match the desired assertion level unless P100, P121...P124 are all set to 0. Otherwise an F.AL fault will occur.
			2 High	
P 121	TB-13A Digital Input	0	0 None	Disables input
P 122	TB-13B Digital Input (Priority > TB13A) Same as TB13A except: 3 = Preset #2 23 = Seq Seg, #2		1 AUTO Reference: 0-10 VDC	For frequency mode, see P160...P161, For PID mode, see P204...P205, For vector torque mode, see P330
		2 AUTO Reference: 4-20 mA	For frequency mode see P131...P137, For PID mode, see P231...P233, For torque mode see, P331...P333	
P 123	TB-13C Digital Input (Priority > TB13B, A) Same as TB13A except: 3 = Preset #3 23 = Seq Seg, #4	3 AUTO Reference: Preset #1	• Normally open: Close input to increase or decrease speed, PID or torque setpoint. • MOP Up is not active while in STOP	
		* 13D: 3 = Reserved		
P 124	TB-13D* Digital Input (Priority > TB13C, B, A) Same as TB13A except: 3 = Preset #4 23 = Seq Seg, #8	4 AUTO Reference: MOP Up	Use when P100 = 4, 5 to switch between terminal strip control and local or remote keypad control. Required to start the drive through the network. Open = Forward Closed = Reverse	
		5 AUTO Reference: MOP Down		
		6 AUTO Reference: Keypad	Refer to Note for typical circuit	
		7 AUTO Reference: Network		
		8 Control Select	Refer to Note for typical circuit	
		9 Network Enable		
		10 Reverse Rotation	Jog Forward speed = P134 Jog Reverse speed = P135 ⚠ Active even if P112 = 0	
		11 Start Forward		
		12 Start Reverse	Refer to P125, P126	
		13 Run Forward		
		14 Run Reverse	Refer to P174; close input to override P175	
		15 Jog Forward		
		16 Jog Reverse	Normally closed: Opening input will ramp drive to STOP according to P127, even if P111 is set to Coast (0 or 1).	
		17 Accel/Decel #2		
		18 DC Brake	Close to reset fault	
		19 Auxiliary Ramp to Stop		
		20 Clear Fault	Normally closed circuit; open to trip	
		21 External Fault F_EF		
		22 Inverse External Fault F_EF	Normally open circuit; close to trip	
		23 AUTO Ref: Sequence Segment #1		
		24 Start Sequence	Works in Speed Mode only	
		25 Step Sequence		
		26 Suspend Sequence	Transition from non-asserted to asserted state	
 WARNING Jog overrides all STOP commands! To stop the drive while in Jog mode, the Jog input must be deactivated or a fault condition induced.				
 WARNING If the input defined to “Start Sequence” is opened during a sequence, the drive will exit sequencer mode and will run at the specified standard or alternate speed source (dependent on drive configuration).				



Commissioning

Code		Possible Settings		IMPORTANT																																																										
No.	Name	Default	Selection																																																											
i	NOTE - When input is activated, settings 1...7 override P101 - When TB-13A...TB-13D are configured for Auto References other than MOP, TB-13D overrides TB-13C, TB-13C overrides TB-13B and TB-13B overrides TB-13A. Any other Auto Reference will have priority over MOP. - Settings 10...14 are only valid in Terminal Strip mode (P100 = 1, 4, 5, 6) - If Start/Run/Jog Forward and Start/Run/Jog Reverse are both activated, drive will STOP - If Jog input is activated while drive is running, the drive will enter Jog mode; when Jog input is deactivated, drive will STOP - An F_{RL} fault will occur if the Assertion Level switch (ALsw) position does not match the P120 setting and any of the digital inputs (P121...P124) are set to a value other than 0. - An F_{IL} fault will occur under the following conditions: - TB-13A...TB-13D settings are duplicated (each setting, except 0, 3 and 23, can only be used once) - One input is set to "MOP Up" and another is not set to "MOP Down", or vice-versa. - One input is set to 10 and another input is set to 11...14. - One input is set to 11 or 12 and another input is set to 13 or 14. - Typical control circuits are shown below: - If any input is set to 10, 12 or 14, P112 must be set to 1 for Reverse action to function. Run / Stop with Direction P121 = 10 1413A STOPFWD RUNREV Start Forward / Start Reverse P121 = 11, P122 = 12 1413A13B STOPFWD RUNREV Run Forward / Run Reverse P121 = 13, P122 = 14 1413A13B RUNFWD RUNREV																																																													
	P 125	Acceleration Time 2	20.0	0.0	{s}	3600	- Selected using TB-13A...TB-13D (P121...P124 = 17) - For S-ramp accel/decel, adjust P106																																																							
	P 126	Deceleration Time 2	20.0	0.0	{s}	3600																																																								
	P 127	Deceleration Time for Auxiliary Ramp to Stop	20.0	0.0	{s}	3600	- Selected using TB-13A...TB-13D (P121...P124 = 19). - For S-ramp accel/decel, adjust P106 - Once executed, this ramp time has priority over P105 and P126.																																																							
	P 129	Automatic Accel/Decel rate switch threshold	0.0	0.0	{Hz}	1000	If Actual Frequency < P129 Use Accel/decel time #2 (P125/P126) If Actual Frequency > P129 Use Accel/decel time #1 (P104/P105)																																																							
	P 131	Preset Speed #1	0.0	0.0	{Hz}	500	<table><tr><th>PRESET SPEED</th><th>13A</th><th>13B</th><th>13C</th><th>13D</th></tr><tr><td>1</td><td>X</td><td>--</td><td>--</td><td>--</td></tr><tr><td>2</td><td>--</td><td>X</td><td>--</td><td>--</td></tr><tr><td>3</td><td>--</td><td>--</td><td>X</td><td>--</td></tr><tr><td>4</td><td>X</td><td>X</td><td>--</td><td>--</td></tr><tr><td>4 (alternate)</td><td>--</td><td>--</td><td>--</td><td>X</td></tr><tr><td>5</td><td>X</td><td>--</td><td>X</td><td>--</td></tr><tr><td>6</td><td>--</td><td>X</td><td>X</td><td>--</td></tr><tr><td>7</td><td>X</td><td>X</td><td>X</td><td>--</td></tr><tr><td>8 (alternate)</td><td>--</td><td>X</td><td>--</td><td>X</td></tr><tr><td>8 (alternate)</td><td>--</td><td>--</td><td>X</td><td>X</td></tr></table>	PRESET SPEED	13A	13B	13C	13D	1	X	--	--	--	2	--	X	--	--	3	--	--	X	--	4	X	X	--	--	4 (alternate)	--	--	--	X	5	X	--	X	--	6	--	X	X	--	7	X	X	X	--	8 (alternate)	--	X	--	X	8 (alternate)	--	--	X	X
	PRESET SPEED	13A	13B	13C	13D																																																									
	1	X	--	--	--																																																									
	2	--	X	--	--																																																									
	3	--	--	X	--																																																									
4	X	X	--	--																																																										
4 (alternate)	--	--	--	X																																																										
5	X	--	X	--																																																										
6	--	X	X	--																																																										
7	X	X	X	--																																																										
8 (alternate)	--	X	--	X																																																										
8 (alternate)	--	--	X	X																																																										
P 132	Preset Speed #2	0.0	0.0	{Hz}	500																																																									
P 133	Preset Speed #3	0.0	0.0	{Hz}	500																																																									
P 134	Preset Speed #4	0.0	0.0	{Hz}	500																																																									
P 135	Preset Speed #5	0.0	0.0	{Hz}	500																																																									
P 136	Preset Speed #6	0.0	0.0	{Hz}	500																																																									
P 137	Preset Speed #7	0.0	0.0	{Hz}	500																																																									
P 138	Preset Speed #8	0.0	0.0	{Hz}	500	- Speed setting is used by P158 13D available on 15HP (11kW) & higher drives.																																																								



Code		Possible Settings		IMPORTANT
No.	Name	Default	Selection	
P 140	Relay Output TB-16, 17	0	0 None	Disables the output
			1 Run	Energizes when the drive is running
			2 Reverse	Energizes when reverse rotation is active
			3 Fault	De-energizes when the drive trips, or power is removed
			4 Inverse Fault	Energizes when the drive trips
			5 Fault Lockout	P110 = 3...6: De-energizes if all restart attempts fail
			6 At Speed	Energizes when output frequency = commanded frequency
			7 Above Preset Speed #6	Energizes when output frequency > P136
			8 Current Limit	Energizes when motor current = P171
			9 Follower Loss (4-20 mA)	Energizes when 4-20 mA signal is < P164
			10 Loss of Load	Energizes when motor load drops below P145; Refer to P146 also
			11 Local Keypad Control Active	
			12 Terminal Strip Control Active	Energizes when the selected source is active for start control
			13 Remote Keypad Control Active	
			14 Network Control Active	
			15 Standard Reference Active	Energizes when P101 reference is active
			16 Auto Reference Active	Energizes when Auto Reference is activated using TB-13 input; refer to P121...P124
			17 Sleep Mode Active	Refer to P240...P242
			18 PID Feedback < Min. Alarm	Energizes when PID feedback signal < P214
			19 Inverse PID Feedback < Min. Alarm	De-energizes when PID feedback signal < P214
			20 PID Feedback > Max Alarm	Energizes when PID feedback signal > P215
			21 Inverse PID Feedback > Max Alarm	De-energizes when PID feedback signal > P215
			22 PID Feedback within Min/Max Alarm range	Energizes when PID feedback signal is within the Min/Max Alarm range; refer to P214, P215
			23 PID Feedback outside Min/Max Alarm range	Energizes when PID feedback signal is outside the Min/Max Alarm range; refer to P214, P215
			24 Reserved	
			25 Network Controlled	SMV models < 15HP (11kW) require an optional communication module (refer to the network module documentation).
			26 Loss of 0-10V Input	Energizes when 0-10V signal is < P158
			27 Sequencer Controlled	State set in individual sequencer segments
			28 Sequencer Active	
			29 Sequencer Suspended	
			30 Sequence Done	End Sequence
			31 Output Frequency = 0.0Hz	Output inactive
P 142	TB-14 Output	0	0...23 (same as P140)	
			24 Dynamic Braking	For use with Dynamic Braking option
			25...31 (same as P140)	



Commissioning

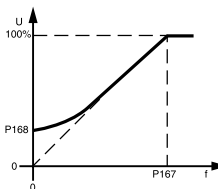
Code		Possible Settings				IMPORTANT															
No.	Name	Default	Selection																		
P 144	Digital Output Inversion		<table><tr><td>P144</td><td>Invert P142</td><td>Invert P140</td></tr><tr><td>0</td><td>NO</td><td>NO</td></tr><tr><td>1</td><td>NO</td><td>YES</td></tr><tr><td>2</td><td>YES</td><td>NO</td></tr><tr><td>3</td><td>YES</td><td>YES</td></tr></table>				P144	Invert P142	Invert P140	0	NO	NO	1	NO	YES	2	YES	NO	3	YES	YES
			P144	Invert P142	Invert P140																
			0	NO	NO																
			1	NO	YES																
2	YES	NO																			
3	YES	YES																			
	NOTE Inverting P140 or P142 when the parameter is set to NONE (0) will result in the output being energized continuously.																				
	NOTE For SMVector drives rated at 0.33 to 10 HP (0.25 to 7.5 kW), P144 is only available with software versions 3.0 and higher (refer to P501).																				
P 145	Loss of Load Threshold	0	0	{%}	200	P140, P142 = 10: Output will energize if motor load falls below the P145 value longer than the P146 time															
P 146	Loss of Load Delay	0.0	0.0	{s}	240.0																
P 149	Analog Output Offset	0.0	0	{%}	100	Scaled value. Example: P149 = 10%, Scaled variable = freq, P150 = 1, P152 = 60Hz; then TB30 = 0VDC below 6Hz															
P 150	TB-30 Output	0	0 None			2-10 VDC signal can be converted to 4-20 mA with a total circuit impedance of 500 Ω															
			1 0-10 VDC Output Frequency																		
			2 2-10 VDC Output Frequency																		
			3 0-10 VDC Load																		
			4 2-10 VDC Load																		
			5 0-10 VDC Torque																		
			6 2-10 VDC Torque																		
			7 0-10 VDC Power (kW)																		
			8 2-10 VDC Power (kW)																		
			9 Network Controlled			SMV models < 15HP (11kW) require an optional communication module (refer to the network module documentation).															
10 Sequencer Controlled			Value set in individual sequencer segments																		
P 151	Add Analog Input to TB-30 Output	0	<table><tr><td>P151</td><td>Add TB-25 (4-20mA)</td><td>Add TB-5 (0-10VDC)</td></tr><tr><td>0</td><td>NO</td><td>NO</td></tr><tr><td>1</td><td>NO</td><td>YES</td></tr><tr><td>2</td><td>YES</td><td>NO</td></tr><tr><td>3</td><td>YES</td><td>YES</td></tr></table>			P151	Add TB-25 (4-20mA)	Add TB-5 (0-10VDC)	0	NO	NO	1	NO	YES	2	YES	NO	3	YES	YES	This parameter adds the analog input signal(s) to the TB-30 Output signal. EXAMPLE: If a drive is running at 60Hz with P150 set to 1 (0-10VDC Freq) and P152 set to 240.0Hz, the output at TB-30 would be 2.5VDC. If there is a 2.0VDC signal going into TB-5 and P151 is set to 1 (ADD TB-5), the output at TB-30 would become 4.5VDC.
			P151	Add TB-25 (4-20mA)	Add TB-5 (0-10VDC)																
			0	NO	NO																
			1	NO	YES																
			2	YES	NO																
3	YES	YES																			
P 152	TB-30 Scaling: Frequency	60.0	3.0	{Hz}	2000	If P150 = 1 or 2, sets the frequency at which output equals 10 VDC															
P 153	TB-30 Scaling: Load	200	10	{%}	500	If P150 = 3 or 4, sets the Load (as a percent of drive current rating) at which output equals 10 VDC.															
P 154	TB-30 Scaling: Torque	100	10	{%}	1000	If P150 = 5 or 6, sets the Torque (as a percent of motor rated torque) at which output equals 10 VDC															
P 155	TB-30 Scaling: Power (kW)	1.0	0.1	{kW}	200.0	If P150 = 7 or 8, sets the power at which output equals 10 VDC															

4.5.3 Advanced Setup Parameters

Code		Possible Settings			IMPORTANT
No.	Name	Default	Selection		
P 156	Analog Inputs Configuration	0	0 TB5: (0-10 VDC); TB25: (4-20mA) 1 TB5: (0 - 5 VDC); TB25: (4-20mA) 2 TB5: (2 - 10 VDC); TB25: (4-20mA) 4 TB5: (0-10 VDC); TB25: (0-20mA) 5 TB5: (0 - 5 VDC); TB25: (0-20mA) 6 TB5: (2 - 10 VDC); TB25: (0-20mA)		
P 157	TB5 (0-10V) Analog Input Monitoring Action	0	0 No Action 1 If TB5 < P158 - Trip Fault F_FAU 2 If TB5 < P158 - Run Preset #8 3 If TB5 < P158 - Run Preset Seg. #16 4 If TB5 > P158 - Trip Fault F_FAU 5 If TB5 > P158 - Run Preset #8 6 If TB5 > P158 - Run Preset Seg. #16		Selects the reaction to a loss of the 0-10V signal at TB5 500ms is the minimum time above/below Monitoring Level (P158) before triggering the drive to trip or run at a preset speed. For P157 = 3 or 6, the accel/decel time is set in P786. NOTE: P157 has priority over P163 and TB-13 presets/auto references (P121-P124)
P 158	TB5 (0-10V) Analog Input Monitoring Level (ML)	0.0	-10.0	{VDC} 10.0	Negative input voltage is not currently supported.
P 159	0-10V Analog Input Deadband	0.0	0	{VDC} 10.0	Not active if [-10 to +10 VDC] option is selected.
P 160	Speed at Minimum Signal	0.0	-999.0	{Hz} 1000	 V0111
P 161	Speed at Maximum Signal	60.0	-999.0	{Hz} 1000	
			NOTE - P160 sets the output frequency at 0% analog input - P161 sets the output frequency at 100% analog input - P160 or P161 < 0.0 Hz: For scaling purposes only; does not indicate opposite direction! - P160 > P161: Drive will react inversely to analog input signal		
P 162	Analog Input Filter	0.01	0.00	{s} 10.00	- Adjusts the filter on the analog inputs (TB-5 and TB-25) to reduce the effect of signal noise - The P162 delay time will affect the response time of diagnostic parameters (P520-P523).
P 163	TB-25 (4-20mA) Analog Input Monitoring Action	0	0 No Action 1 If TB25 < P164 - Trip Fault F_FaL 2 If TB25 < P164 - Run Preset #7 3 If TB25 < P164 - Run Preset Seg. #15 4 If TB25 ≥ P164 - Trip Fault F_FaL 5 If TB25 ≥ P164 - Run Preset #7 6 If TB25 ≥ P164 - Run Preset Seg. #15		- Selects the reaction to a loss of the 4-20 mA signal at TB-25. - Signal is considered lost if it falls below the value set in P164 - Digital outputs can also indicate a loss of 4-20 mA signal; see P140, P142 - For P163 = 3 or 6, the accel/decel time is set in P781. NOTE: P163 has priority over TB-13 presets/auto references (P121-P124)



Commissioning

Code		Possible Settings				IMPORTANT
No.	Name	Default	Selection			
P 164	TB-25 (4-20mA) Analog Input Monitoring Level	2.0	0.0	{mA}	20.0	Valid for V/Hz mode only. Set voltage for bus compensation in V/Hz mode - As carrier frequency is increased, motor noise is decreased - Observe derating in section 2.3 - Automatic shift to 4 kHz at 120% load - NEMA 4X (IP65) Models: Default = 0 (4kHz) - NEMA 1 (IP31) Models: Default = 1 (6kHz)  V0112
P 165	Base Voltage		15	{V}	1000	
P 166	Carrier Frequency	See Notes	0 4 kHz 1 6 kHz 2 8 kHz 3 10 kHz			
P 167 ⁽¹⁾	Base Frequency	60.0	10.0	{Hz}	1500	
P 168	Fixed Boost		0.0	{%}	40.0	
			NOTE - P167 = rated motor frequency for standard applications - P165, P168 = default setting depends on drive rating			
P 169	Accel Boost	0.0	0.0	{%}	20.0	Accel Boost is only active during acceleration
P 170	Slip Compensation	0.0	0.0	{%}	40.0	Increase P170 until the motor speed no longer changes between no load and full load conditions.
P 171 ⁽¹⁾	Current Limit	Max I	30	{%}	Max I	- When the limit is reached, the drive displays CL (Current Limit), and either the acceleration time increases or the output frequency decreases. - Digital outputs can also indicate when the limit is reached; see P140, P142. - Refer to section 2.3 for the maximum output current Max I (%)
P 172	Current Limit Reduction	0	0 Current Limit Reduction Active - Normal response 1 Current Limit Reduction Active - Fast response 2 Current Limit Reduction Disabled - Normal response 3 Current Limit Reduction Disabled - Fast response			In field weakening, the Current Limit is inversely proportional to the speed.
P 173	Decel Override Time	2.0	0.0	{s}	60.0	Maximum time before drive trips into HF fault.
P 174	DC Brake Voltage	0.0	0.0	{%}	50.0	Setting is a percent of the nominal DC bus voltage.

(1) Any changes to this parameter will not take effect until the drive is stopped.

Commissioning



Code		Possible Settings		IMPORTANT
No.	Name	Default	Selection	
P 175	DC Brake Time	0.0	0.0 {s} 999.9	NOTE: CONFIRM MOTOR SUITABILITY FOR USE WITH DC BRAKING DC Brake voltage (P174) is applied for the time specified by P175 with the following exceptions: • If P111=1, 3 and P175=999.9 the brake voltage will be applied continuously until a run or fault condition occurs. • If P110=2, 4...6 and P175=999.9, brake voltage will be applied for 15s • If P121...P124=18 and the corresponding TB-13 input is CLOSED, brake voltage will be applied until the TB-13 input is OPENED or a fault condition occurs.
P 176	Keypad Setpoint Single Press Increment	0.1	0.1 100.0	Used for run screen setpoint editing only. If P176 >0.1 then scrolling of keypad setpoint is enabled.
P 177 ⓘ	Speed Units	0	0 Hz	Select the UNITS LED that will be illuminated when the drive is running in speed control mode. For this parameter to be used, P178 must be set to a value other than 0. If P178 is set to 0, the Hz LED will be illuminated regardless of the value set in P177.
			1 RPM	
			2 %	
			3 /UNITS	
P 178	Display Frequency Multiplier	0.00	0.00 650.00	• Allows frequency display to be scaled • P178 = 0.00: Scaling disabled • P178 > 0.00: Display = Actual Frequency X P178
			EXAMPLE If P178 = 29.17 and actual frequency = 60 Hz, then Drive displays 1750 (rpm)	
P 179	Run Screen Display	0	0 {Parameter Number} 599	• 0 = Normal Run Screen, this display depends on mode of operation. Refer to section 4.2. • Other selections choose a diagnostic parameter to display (P501...P599). • Parameters P560 - P564 are selectable if the sequencer is enabled (P700 is not 0). P560-P564 are not visible until P700 is enabled.
P 180	Oscillation Damping Control	0	0 80	0 = Damping disabled Compensation for resonances within drive
P 181	Skip frequency 1	0.0	0.0 {Hz} 500	• Drive will not run in the defined skip range; used to skip over frequencies that cause mechanical vibration • P181 and P182 define the start of the skip ranges • P184 > 0 defines the bandwidth of both ranges.
P 182	Skip frequency 2	0.0	0.0 {Hz} 500	
P 184	Skip frequency bandwidth	0.0	0.0 {Hz} 10.0	
			NOTE Bandwidth (Hz) = f _s (Hz) + P184 (Hz) f _s = P181 or P182 EXAMPLE: P181 = 18 Hz and P184 = 4 Hz; skip range is from 18 to 22 Hz	
P 185	Voltage Midpoint V/Hz characteristic	0	0.0 {V} P165	Valid only when P300 = 0 or 2. Use with P187 to define midpoint on V/Hz curve.
P 187 ⓘ	Frequency Midpoint V/Hz characteristic	0.0	0.0 {Hz} P167	Valid only when P300 = 0 or 2. Use with P185 to define midpoint on V/Hz curve.
P 189 ⓘ	Integrated Dynamic Brake		0 Disabled	
			1 Enabled	

(2) Parameter applicable to SMV models 15HP (11kW) and higher.

(3) Parameter applicable to SMV models 40HP (30kW) and higher.



Commissioning

Code		Possible Settings		IMPORTANT
No.	Name	Default	Selection	
P 190	Motor Braking		0 Disabled	Flux brake OFF.
			1 Braking with BUS threshold	When drive is in deceleration and $V_{bus} > V_{deceleration\ freeze}$ (114% of the rated V_{bus}), the flux brake will be turned ON.
			2 Braking always on with deceleration	As long as drive is in deceleration, the flux brake will be ON.
			3 Braking with bus regulator	When drive is in deceleration and $V_{bus} > V_{deceleration\ freeze}$ (114% of the rated V_{bus}), the motor speed will be increased to reduce the bus voltage. Determined by the value in P191, the speed increment = slip speed * P191(%) / 37.
			4 Special	(Consult factory before using)
			WARNING Flux braking can cause heat in the motor. To avoid damage to the motor, use a PTC to protect the motor. If the flux brake is used too frequently, the drive will trip fault "F_PF".	
P 191	Motor Brake Level	0	0 { } 75 (flux braking disabled)	Active when P190 > 0 and drive is in deceleration mode. Use to reduce deceleration time on high inertia loads. NOTE: Over usage of P190 can cause frequent 'overload' trips "F,PF" Not active for P300 = 5 (Torque mode)
P 192	Motor Braking Deceleration Reduction Level	0.0	0 P167 (base freq) Raising the value of P191 reduces the drive deceleration rate during flux braking.	Active when P190 > 0 and P192 > 0.0. Drive is in deceleration mode. Use to reduce deceleration time on high inertia loads. NOTE: Usage of P192 can cause the drive to decelerate faster than settings in P105/P127. Not active for P300 = 5 (Torque mode)
P 194	Password	0	0000 9999	- Must enter password to access parameters - P194 = 0000: Disables password
P 197	Clear Fault History	0	0 No Action 1 Clear Fault History	
P 199	Program Selection		0 Operate from User settings	Refer to Notes 1, 2 and 3 Refer to Note 1 - Refer to Note 4 - Parameters are reset to the defaults listed in this manual. - For P199=4, the following exceptions apply: - P103, P152, P161, P167 = 50.0 Hz - P165 = 400V (400/480V drives only) - P304 = 50 Hz - P305 = 1450 RPM - P107 = 0 (480 V drives only)
			1 Operate from OEM settings	
			2 Reset to OEM default settings	
			3 Reset to 60 Hz default settings	
			4 Reset to 50 Hz default settings	
			5 Translate	Refer to Note 5
			WARNING! Modification of P199 can affect drive functionality! STOP and EXTERNAL FAULT circuitry may be disabled! Check P100 and P121...P124	
			NOTE 1 If the EPM does not contain valid OEM settings, a flashing GF will be displayed when P199 is set to 1 or 2. NOTE 2 When P199 is set to 1, the drive operates from the OEM settings stored in the EPM Module and no other parameters can be changed (GF will be displayed if attempted). NOTE 3 Auto Calibration is not possible when operating from OEM Settings. NOTES 4 and 5 - on next page.	



Code		Possible Settings		IMPORTANT
No.	Name	Default	Selection	
P199	Program Selection		NOTE 4 Resetting to 50 and 60 Hz default settings will set the Assertion Level (P120) to "2" (High). P120 may need to be reset for the digital input devices being used. An F_{AL} fault may occur if P120 and the Assertion switch are not set identically. NOTE 5 If an EPM that contains data from a previous compatible software version is installed: - The drive will operate according to the previous data, but parameters cannot be changed (cE will be displayed if attempted) - To update the EPM to the current software version, set P199 = 5. The parameters can now be changed but the EPM is incompatible with previous software revisions.	

4.5.4 PID Parameters

Code		Possible Settings		IMPORTANT
No.	Name	Default	Selection	
P200	PID Mode	0	0 Disabled 1 Normal-acting 2 Reverse-acting 3 Normal-acting, Bi-directional 4 Reverse-acting, Bi-directional	- Normal-acting: As feedback increases, motor speed decreases - Reverse-acting: As feedback increases, motor speed increases - PID mode is disabled in Vector Torque mode (P300 = 5) - Selections 3, 4: If P112=1, PID controller output sets the speed, (range -max freq to +max freq)
			NOTE To activate PID mode, one of the TB-13 inputs (P121...P124) must be used to select the Auto Reference that matches the desired PID setpoint reference. If the selected PID setpoint reference uses the same analog signal as the PID feedback (P201), an F_{AL} fault will occur. Example: The desired PID setpoint reference is the keypad (▲ and ▼). Set TB-13x = 6 (Auto Reference: Keypad): - TB-13x = closed: PID mode is active - TB-13x = open: PID mode is disabled and the drive speed will be controlled by the reference selected in P101.	
P201	PID Feedback Source	0	0 4-20 mA (TB-25) 1 0-10 VDC (TB-5) 2 Drive Load (P507) 3 Feedback from Network	Must be set to match the PID feedback signal
P202	PID Decimal Point	1	0 PID Display = XXXX 1 PID Display = XXX.X 2 PID Display = XX.XX 3 PID Display = X.XXX 4 PID Display = .XXXX	Applies to P204, P205, P214, P215, P231...P233, P242, P522, P523
P203	PID Units	0	0 % 1 /UNITS 2 AMPS 3 NONE	Select the UNITS LED that will be illuminated when the drive is running in PID control mode
P204	Feedback at Minimum Signal	0.0	-99.9 3100.0	Set to match the range of the feedback signal being used
P205	Feedback at Maximum Signal	100.0	-99.9 3100.0	Example: Feedback signal is 0 - 300 PSI; P204 = 0.0, P205 = 300.0

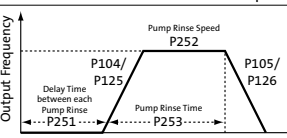
(2) Parameter applicable to SMV models 15HP (11kW) and higher.



Commissioning

Code		Possible Settings				IMPORTANT
No.	Name	Default	Selection			
P207	Proportional Gain	5.0	0.0	{%}	1000.0	Used to tune the PID loop: • Increase P207 until system becomes unstable, then decrease P207 by 10-15% • Next, increase P208 until feedback matches setpoint • If required, increase P209 to compensate for sudden changes in feedback
P208	Integral Gain	0.0	0.0	{s}	20.0	
P209	Derivative Gain	0.0	0.0	{s}	20.0	
			NOTE • Derivative Gain is very sensitive to noise on the feedback signal. Use with care. • Derivative Gain is not normally required in pump and fan applications			
P210	PID Setpoint Ramp	20.0	0.0	{s}	100.0	• time of setpoint change from P204 to P205 or vice versa. • Used to smooth the transition from one PID setpoint to another, such as when using the Preset PID Setpoints (P231...P233)
P214	Minimum Alarm	0.0	P204		P205	Use with P140, P142 = 18...23
P215	Maximum Alarm	0.0	P204		P205	
P231	Preset PID Setpoint #1	0.0	P204		P205	TB-13A activated; P121 = 3 and P200 = 1 or 2
P232	Preset PID Setpoint #2	0.0	P204		P205	TB-13B activated; P122 = 3 and P200 = 1 or 2
P233	Preset PID Setpoint #3	0.0	P204		P205	TB-13C activated; P123 = 3 and P200 = 1 or 2
P234	Preset PID Setpoint #4	0.0	P204		P205	TB-13D activated; P124 = 3 and P200 = 1 or 2
P240	Sleep Threshold	0.0	0.0	{Hz}	500.0	• If drive speed < P240 for longer than P241, output frequency = 0.0 Hz; drive display = SLP • P240 = 0.0: Sleep mode is disabled. • P200 = 0...2: Drive will start again when speed command is above P240 • P242 > 0.0: Drive will restart when the PID feedback differs from the setpoint by more than the value of P242 or when the PID loop requires a speed above P240.
P241	Sleep Delay	30.0	0.0	{s}	300.0	
P242	Sleep Bandwidth	0.0			B _{max}	
			Where: B _{max} = I(P205 - P204)			
P243	Feedback Sleep Entry Threshold	0.0	P204		P205	Active only when P244 = 1 or 2
P244	Sleep Entry Mode	0	0 Enter SLEEP if Drive Speed <P240			For time longer than P241
			1 Enter SLEEP if Feedback >P243			For time longer than P241 or same as Sel 0
			2 Enter SLEEP if Feedback <P243			For time longer than P241 or same as Sel 0
P245	Sleep Entry Stop Type	0	0 Coast to Stop			
			1 Ramp to Stop			
			2 Stop with P111 settings			
P246	Feedback Recovery from Sleep Threshold	0.0	P204		P205	Active only when P247 = 1 or 2
P247	Sleep Recovery Mode	0	0 Recovery if Speed Setpoint > P240 or if PID feedback differs from setpoint by more than P242			
			1 Recovery only if Feedback < P246			
			2 Recovery only if Feedback > P246			

(2) Parameter applicable to SMV models 15HP (11kW) and higher.

Code		Possible Settings			IMPORTANT
No.	Name	Default	Selection		
P250	Auto Rinse in Sleep Mode	0	0 Disabled 1 Enabled		Activated in sleep mode only. Sleep Recovery cancels Auto Rinse
P251	Time Delay between Auto Rinses	30.0	0.0 {min}	6553.5	Time delay reset by re/entering sleep mode
P252	Auto Rinse Speed	0.0	-500.0 {Hz}	500.0	If P112 = 1, negative sign = reverse direction
P253	Auto Rinse Time	0.0	0.0 {sec}	6553.5	Does not include time to decel back to speed
			Auto Pump Rinse Setup: P250=1 (Enabled) P251=# minutes between each PumpRinse P252=Hz speed of Pump Rinse P253=# seconds Pump Rinse duration		
P280	Current Level: Flying Restart Type 2	70.0	0.0 { % }	P171	Maximum current during Type 2 flying restart operation
P281	Decel Time: Flying Restart Type 2	3.0	0.0 {sec}	3600.0	Deceleration rate used during Type 2 flying restart operation

4.5.5 Vector Parameters

Code		Possible Settings		
No.	Name	Default	Selection	IMPORTANT
P300 ⁽¹⁾	Drive Mode	0	0 Constant V/Hz	Constant torque V/Hz control for general applications
			1 Variable V/Hz	
			2 Enhanced Constant V/Hz	For single or multiple motor applications that require better performance than settings 0 or 1, but cannot use Vector mode, due to: • Missing required motor data • Vector mode causing unstable motor operation
			3 Enhanced Variable V/Hz	
			4 Vector Speed	For single-motor applications requiring higher starting torque and speed regulation
			5 Vector Torque	For single-motor applications requiring torque control independent of speed
				NOTE To configure the drive for either Vector mode or Enhanced V/Hz mode: • P300 = 4, 5: - Set P302...P306 according to motor nameplate - Set P399 = 1 or 2 (if option 1 failed or in case of non-standard motor) - Make sure motor is cold (20° - 25° C) and apply a Start command - Display will indicate CAL for about 40 seconds - Once the calibration is complete, the display will indicate Stop; apply another Start command to actually start the motor - If an attempt is made to start the drive in Vector or Enhanced V/Hz mode before performing the Motor Calibration, the drive will display F_n Id and will not operate • P300 = 2, 3: Same as above but only need to set P302...P304
P302 ⁽¹⁾	Motor Rated Voltage	0	{V} 600	• Default setting = drive rating
P303 ⁽¹⁾	Motor Rated Current	0.1	{A} 500.0	• Set to motor nameplate data

(1) Any changes to this parameter will not take effect until the drive is stopped.



Commissioning

Code		Possible Settings			IMPORTANT
No.	Name	Default	Selection		
P304 ⁽¹⁾	Motor Rated Frequency	60	0	{Hz} 1000	Set to motor nameplate data
P305 ⁽¹⁾	Motor Rated Speed	1750	300	{RPM} 65000	
P306 ⁽¹⁾	Motor Cosine Phi	0.80	0.40	0.99	
			NOTE If motor cosine phi is not known, use one of the following formulas: cos phi = motor Watts / (motor efficiency X P302 X P303 X 1.732) cos phi = cos [sin ⁻¹ (magnetizing current / motor current)]		
P310 ⁽¹⁾	Motor Stator Resistance		0.00	{Ω} 64.00	- P310, 311 default setting depends on drive rating - Will be automatically programmed by P399 - Changing these settings can adversely affect performance. Contact factory technical support prior to changing
P311 ⁽¹⁾	Motor Stator Inductance		0.0	{mH} 2000	
P315	Dead Time Compensation Factor	0.0	-50.0	{%} +50.0	- Adjust dead time correction from internal default - Takes effect when P399 = 3.
P330	Torque Limit	100	0	{%} 400	When P300 = 5, sets the maximum output torque.
P331	Preset Torque Setpoint #1	100	0	{%} 400	TB-13A activated; P121 = 3 and P300 = 5
P332	Preset Torque Setpoint #2	100	0	{%} 400	TB-13B activated; P122 = 3 and P300 = 5
P333	Preset Torque Setpoint #3	100	0	{%} 400	TB-13C activated; P123 = 3 and P300 = 5
P334 ⁽²⁾	Preset Torque Setpoint #4	100	0	{%} 400	TB-13D activated; P124 = 3 and P300 = 5
P340 ⁽¹⁾	Current Loop P Gain	0.25	0.00	16.0	Changing these settings can adversely affect performance. Contact factory technical support prior to changing.
P341 ⁽¹⁾	Current Loop I Gain	65	12	{ms} 9990	
P342 ⁽¹⁾	Speed Loop Adjust	0.0	0.0	{%} 20.0	
P343	Slip Compensation Response Filter	99	90	{ms} 9999	Low pass filter time constant for varying the slip compensation response to changes in the motor current.
P399	Motor Auto-calibration	0	0	Calibration Not Done	- If P300 = 4 or 5, motor calibration must be performed if P399 is not set to 3 (bypass calibration). - If P300=2 or 3, motor calibration is recommended. - Use option 2 if option 1 failed or in case of non-standard motors - An alternating CAL / Err will occur if: - attempt motor calibration with P300 = 0 or 1 - motor calibration is attempted before programming motor data
			1	Standard Calibration Enabled	
			2	Advanced Calibration Enabled	
			3	Bypass Calibration, enable operation in vector mode w/o Auto Calibration	
			4	Standard Calibration Complete	
			5	Advanced Calibration Complete	
			NOTE: To run the Auto Calibration: - Set P302...P306 according to motor nameplate - Set P399 = 1 or 2 (if option 1 failed or in case of non-standard motor) - Make sure motor is cold (20° - 25° C) - Apply a Start command - Display will indicate CAL for about 40 seconds - Once the calibration is complete, the display will indicate Stop; apply another Start command to actually start the motor - Parameter P399 will now be set to 4 or 5.		

(1) Any changes to this parameter will not take effect until the drive is stopped.

(2) Parameter applicable to SMV models 15HP (11kW) and higher.

4.5.6 Network Parameters

Code		Possible Settings		IMPORTANT
No.	Name	Default	Selection	
P400	Network Protocol		0 Not Active 1 Remote Keypad 2 Modbus RTU 3 CANopen 4 DeviceNet 5 Ethernet 6 Profibus 7 Lecom-B 8 I/O Module	This parameter setting is based upon the network or I/O module that is installed.
P401	Module Type Installed	0	0 No Module Installed 1 Basic I/O (0x0100, 1.0.0) 2 RS485/Rem. Keypad (0x0200, 2.0.0) 3 CANopen (0x0300, 3.0.0) 11 PROFIBUS (0x1100, 11.0.0) 12 Ethernet (0x1200, 12.0.0)	Module type format: 0xAABC; Drive Display: AA.B.C AA = Module Type B = Major revision C = minor revision
P402	Module Status	0	0 Not Initialized 1 Initialization: Module to EPM 2 Initialization: EPM to Module 3 Online 4 Failed Initialization Error 5 Time-out Error 6 Initialization Failed 7 Initialization Error	Module type mismatch P401 Protocol selection mismatch P400
P403	Module Reset	0	0 No Action 1 Reset parameters to default values	Returns module parameters 401...499 to the default values shown in the manual
P404	Module Timeout Action	3	0 No Fault 1 STOP (see P111) 2 Quick Stop 3 Fault (F _{ntF})	Action to be taken in the event of a Module/Drive Time-out. Time is fixed at 200ms STOP is by the method selected in P111.
P405	Current Network Fault		0 No Fault 1 F.nF1 2 F.nF2 3 F.nF3 4 F.nF4 5 F.nF5 6 F.nF6 7 F.nF7	Netidle Mode Loss of Ethernet I/O connection Network Fault Explicit Message Timeout Overall Network Timeout Overall Explicit Timeout Overall I/O Message Timeout
P406	Proprietary			Manufacturer specific
P407 ... P499		Module Specific Parameters		Refer to the Communications Reference Guide specific to the network or I/O module installed.



Commissioning

4.5.7 Diagnostic Parameters

Code		Display Range (READ ONLY)		IMPORTANT
No.	Name			
P500	Fault History			- Displays the last 8 faults - Format: n.xxx where: n = 1..8, 1 is the newest fault; xxx = fault message (w/o the F.) - Refer to section 5.3
P501	Software Version			Format: x.yz
P502	Drive ID			A flashing display indicates that the Drive ID stored in the EPM does not match the drive model it is plugged into.
P503	Internal Code			Alternating Display: xxx-; -yy
P505	DC Bus Voltage	0	{VDC} 1500	
P506	Motor Voltage	0	{VAC} 1000	
P507	Load	0	{%} 255	Motor load as % of drive's output current rating. Refer to section 2.3.
P508	Motor Current	0.0	{A} 1000	Actual motor current
P509	Torque	0	{%} 500	Torque as % of motor rated torque (vector mode only)
P510	Output Power kW	0.00	{kW} 650.0	
P511	Total kWh	0.0	{kWh} 9999999	Alternating display: xxx-; yyyy when value exceeds 9999
P512	Heatsink Temp	0	{°C} 150	Heatsink temperature
P520	0-10 VDC Input	0.0	{VDC} 10.0	Actual value of signal at TB-5 (See P162)
P521	4-20 mA Input	0.0	{mA} 20.0	Actual value of signal at TB-25 (See P162)
P522	TB-5 Feedback	P204	P205	TB-5 signal value scaled to PID feedback units (See P162)
P523	TB-25 Feedback	P204	P205	TB-25 signal value scaled to PID feedback units (See P162)
P524	Network Feedback	P204	P205	Network signal value scaled to PID feedback units
P525	Analog Output	0	{VDC} 10.0	Refer to P150...P155
P527	Actual Output Frequency	0	{Hz} 500.0	
P528	Network Speed Command	0	{Hz} 500.0	Command speed if (Auto: Network) is selected as the speed source
P530	Terminal and Protection Status			Indicates terminal status using segments of the LED display. (Refer to section 4.5.7.1)
P531	Keypad Status			Indicates keypad button status using segments of the LED display. (Refer to section 4.5.7.2)
P540	Total Run Time	0	{h} 9999999	Alternating display: xxx-; yyyy when value exceeds 9999
P541	Total Power On Time	0	{h} 9999999	
P550	Fault History	1	8	- Displays the last 8 faults - Format: n.xxx where: n = 1..8, 1 is the newest fault; xxx = fault message (w/o the F.) - Refer to section 5.3
P551	Fault History Time	0	{h} 999999	Display: "n.hh-" "hhhh" "mm.ss" = fault #, hours, seconds The "hhhh" screen is displayed after hours exceed 999.
P552	Fault History Counter	0	255	Number of sequential occurrences of a fault. For example: 3 external faults occur over a period of time with no other errors occurring. Then P552 will indicate 3, P550 will indicate the error EF and P551 will indicate the time of the first fault occurrence.

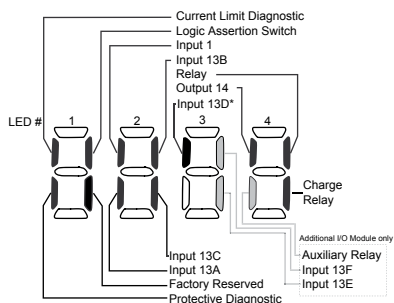
Code		Display Range (READ ONLY)		IMPORTANT
No.	Name			
P560	Sequencer: Currently Active Segment	0	17	
P561	Sequencer: Time since Start of Active Segment	0.0 0	{P708} {P708} 6553.5 65535	Unit depends on P708 (0.1sec, sec or minutes)
P562	Sequencer: Time Remaining in Active Segment	0.0 0	{P708} {P708} 6553.5 65535	Unit depends on P708 (0.1sec, sec or minutes)
P563	Sequencer: Number of cycles since start	0	65535	
P564	Sequencer: Number of cycles remaining	0	65535	
		NOTE: Parameters P560-P564 are visible only when P700 > 0 (i.e. the sequencer is enabled)		

4.5.7.1 Terminal & Protection Status Display

Parameter P530 allows monitoring of the control terminal points and common drive conditions:

An illuminated LED segment indicates:

- the protective circuit is active (LED 1)
- the Logic Assertion Switch is set to High (+)
- input terminal is asserted (LED 2)
- output terminal is energized (LED 4)
- the Charge Relay is not a terminal, this segment will be illuminated when the Charge Relay is energized (LED 4).



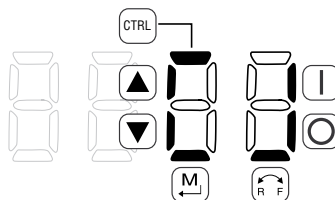
* Input 13D available on 15-60HP (11-45kW) models only

4.5.7.2 Keypad Status Display

Parameter P531 allows monitoring of the keypad pushbuttons:

An illuminated LED segment indicates when the button is depressed.

LED 1 and LED 2 are used to indicate pushbutton presses on a remote keypad that is attached to the drive. LED 3 and LED 4 indicate button presses on the local drive keypad.





Commissioning

4.5.8 Onboard Communications Parameters 15-60HP (11-45kW)

The P6xx Onboard Communication parameters are applicable to the 15HP (11kW) and higher models only.

Code		Possible Settings		IMPORTANT
No.	Name	Default	Selection	
P600	Network Enable	0	0 Disabled 1 Remote Keypad 2 Modbus 7 Lecom	This parameter enables the onboard network communications. If the onboard communications are disabled, the user will not have access to any of the other P6xx parameters.
			NOTE: Onboard Communications will be disabled if: - P600 = 0, or - P600 = 1 and P400 = 1, or - P600 = 2 and P400 = 2, 3, 4, 5, 6 or 7 - P600 = 7 and P400 = 2, 3, 4, 5, 6 or 7	
P610	Network Address	1	1 - 247	Modbus
		1	1 - 99	Lecom
P611	Network Baud Rate	2	0 2400 bps 2 9600 bps 1 4800 bps 3 19200 bps	Modbus
		0	0 9600 bps 1 4800 bps 2 2400 bps 3 1200 bps 4 19200 bps	Lecom
P612	Network Data Format	0	0 8, N, 2 1 8, N, 1 2 8, E, 1 3 8, O, 1	Modbus Only
P620	Network Control Level	0	0 Monitor Only 1 Parameter Programming 2 Programming and Setpoint Control 3 Full Control	Lecom Only
P624	Network Powerup Start Status	0	0 Quick Stop 1 Controller Inhibit	Lecom Only
P625	Network Timeout	10.0	0.0 - 300.0 seconds	Modbus
		50	0 - 65000 milliseconds	Lecom
P626	Network Timeout Action	4	0 No action 1 Stop (P111) 2 Quick Stop 3 Controller Inhibit 4 Trip Fault, F.nF1	Modbus
		0	0 No action 1 Controller Inhibit 2 Quick Stop 3 Trip Fault, F.nF1	Lecom
P627	Network Messages Received		Read-Only: 0 - 9999 NOTE: When the number of messages exceeds 9999, the counter resets and resumes counting from 0.	Valid network messages received

4.5.9 Sequencer Parameters

The P700 Sequencer parameters are listed herein. Refer to section 4.5.7 for P56x Sequencer Diagnostic Parameters. The sequencer function consists of 16 step segments, each individual step segment can have its own ramp time, time spent in individual segment and output frequency entered. The sequencer has 3 different modes to control how the drive moves through each individual step segment: Timer Transition, Step Sequence or Timer and Step Sequence.

P700= 1 (Timer Transition)

Starting at the segment number entered in the "Start Segment" parameter, the drive will automatically move through each of the segments. The time spent in each segment is determined by the values set in the individual "Time in Current Step" parameters.

P700= 2 (Step Sequence)

Starting at the segment number entered in the "Start Segment" parameter the sequencer will only move to the next segment when a rising edge is applied to the highest priority digital input which is programmed to "Step Sequence" selection "24".

P700= 3 (Timer Transition or Step Sequence)

Starting at the segment number entered in the "Start Segment" parameter, the drive will automatically move through each of the segments. The time spent in each segment is determined by the values set in the individual "Time in Current Step" parameters, however if a rising edge is applied to the highest priority digital input which is programmed to "Step Sequence" selection "24" it will force the sequencer to step into the next segment.

NOTE: A value of "0" in the "Time in current step" parameter (ex: P712), will result in the segment being skipped.

Code		Possible Settings		IMPORTANT
No.	Name	Default	Selection	
P700	Sequencer Mode	0	0 Disabled 1 Enabled: transition on timer only 2 Enabled: transition on rising edge (P121, 122, 123 = 25 step sequence) 3 Enabled: transition on timer or rising edge	If P700 = 0 and no reference (P121, P101) points to any of the sequence segments, then P701-P799 will not be displayed on the local keypad.
P701	Sequencer: TB13A Trigger Segment	1	1 - 16 TB13A = lowest priority	Asserting TB13A with selection #24 (Start Sequence), starts the sequence operation from the segment specified in this parameter.
P702	Sequencer: TB13B Trigger Segment	1	1 - 16 TB13B: higher priority than TB13A	Asserting TB13B with selection #24 (Start Sequence), starts the sequence operation from the segment specified in this parameter.
P703	Sequencer: TB13C Trigger Segment	1	1 - 16 TB13C: higher priority than TB13B, A	Asserting TB13C with selection #24 (Start Sequence), starts the sequence operation from the segment specified in this parameter.
P704 ⁽²⁾	Sequencer: TB13D Trigger Segment	1	1 - 16 TB13D: higher priority than TB13C, B, A	Asserting TB13D with selection #24 (Start Sequence), starts the sequence operation from the segment specified in this parameter.
P706	Sequencer: Action after Stop/Start transition or Fault Restart	0	0 Restart at beginning of sequence 1 Restart at beginning of current seg 2 Start at beginning of prior segment 3 Start at beginning of next segment	Pointed by TB13x
P707	Sequencer: Number of cycles	1	1 65535	1 = single scan; 65535 = continuous loop

(2) Parameter applicable to SMV models 15HP (11kW) and higher.



Commissioning

Code		Possible Settings				IMPORTANT																																					
No.	Name	Default	Selection																																								
P708	Sequencer: Time units/scaling	0	0	0.1	{sec}	6553.5	Setup units/scaling for all sequencer time related parameters																																				
			1	1	{sec}	65535																																					
			2	1	{min}	65535																																					
			NOTE: P708 rescales the following sequencer related parameters: - Segment Times in current step: P712, P717, P722, P727, P732, P737, P742, P747, P752, P757, P762, P767, P772, P777, P782, P787, P792 - Sequence diagnostic/status: P561, P562																																								
Segment #1																																											
P710	Segment #1 Frequency Setpoint	0.0	-500.0	{Hz}	500.0	If P112 = 1, negative sign forces reverse direction																																					
P711	Segment #1 Accel/Decel Time	20.0	0.0	{sec}	3600.0																																						
P712	Segment #1 Time in current step	0.0 0	0.0 0	{P708} {P708}	6553.5 65535	Scaling/units depend on P708 Skip segment if time = 0																																					
P713	Segment #1 Digital Output State	0	<table><tr><td>Value set in P713</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr><tr><td>Relay (Bit 0)</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr><tr><td>TB14 (Bit 1)</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>I/O option Relay (Bit 2)</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr></table> NOTE: P441 is the Relay Output (TB-19, 20, 21) of the optional Digital I/O module (ESVZAL0, ESVZAL1).				Value set in P713	0	1	2	3	4	5	6	7	Relay (Bit 0)	0	1	0	1	0	1	0	1	TB14 (Bit 1)	0	0	1	1	0	0	1	1	I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1	bit = 0: OFF (De-energized) bit = 1: ON (Energized) The corresponding digital output/relay must be set to accept data from the sequencer: P140, P142, P441 = 27
Value set in P713	0	1	2	3	4	5	6	7																																			
Relay (Bit 0)	0	1	0	1	0	1	0	1																																			
TB14 (Bit 1)	0	0	1	1	0	0	1	1																																			
I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1																																			
P714	Segment #1 TB30 Analog Output Value	0.00	0.00	{VDC}	10.00	TB30 configuration parameter must be set to accept this value: P150 = 10																																					
Segment #2																																											
P715	Segment #2 Frequency Setpoint	0.0	-500.0	{Hz}	500.0	If P112 = 1, negative sign forces reverse direction																																					
P716	Segment #2 Accel/Decel Time	20.0	0.0	{sec}	3600.0																																						
P717	Segment #2 Time in current step	0.0 0	0.0 0	{P708} {P708}	6553.5 65535	Scaling/units depend on P708 Skip segment if time = 0																																					
P718	Segment #2 Digital Output State	0	<table><tr><td>Value set in P718</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr><tr><td>Relay (Bit 0)</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr><tr><td>TB14 (Bit 1)</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>I/O option Relay (Bit 2)</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr></table> NOTE: P441 is the Relay Output (TB-19, 20, 21) of the optional Digital I/O module (ESVZAL0, ESVZAL1).				Value set in P718	0	1	2	3	4	5	6	7	Relay (Bit 0)	0	1	0	1	0	1	0	1	TB14 (Bit 1)	0	0	1	1	0	0	1	1	I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1	bit = 0: OFF (De-energized) bit = 1: ON (Energized) The corresponding digital output/relay must be set to accept data from the sequencer: P140, P142, P441 = 27
Value set in P718	0	1	2	3	4	5	6	7																																			
Relay (Bit 0)	0	1	0	1	0	1	0	1																																			
TB14 (Bit 1)	0	0	1	1	0	0	1	1																																			
I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1																																			
P719	Segment #2 TB30 Analog Output Value	0.00	0.00	{VDC}	10.00	TB30 configuration parameter must be set to accept this value: P150 = 10																																					

Commissioning



Code		Possible Settings				IMPORTANT																																					
No.	Name	Default	Selection																																								
Segment #3																																											
P120	Segment #3 Frequency Setpoint	0.0	-500.0	{Hz}	500.0	If P112 = 1, negative sign forces reverse direction																																					
P121	Segment #3 Accel/Decel Time	20.0	0.0	{sec}	3600.0																																						
P122	Segment #3 Time in current step	0.0 0	0.0 0	{P708} {P708}	6553.5 65535	Scaling/units depend on P708 Skip segment if time = 0																																					
P123	Segment #3 Digital Output State	0	<table><tr><td>Value set in P723</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr><tr><td>Relay (Bit 0)</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr><tr><td>TB14 (Bit 1)</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>I/O option Relay (Bit 2)</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr></table> NOTE: P441 is the Relay Output (TB-19, 20, 21) of the optional Digital I/O module (ESVZAL0, ESVZAL1).				Value set in P723	0	1	2	3	4	5	6	7	Relay (Bit 0)	0	1	0	1	0	1	0	1	TB14 (Bit 1)	0	0	1	1	0	0	1	1	I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1	bit = 0: OFF (De-energized) bit = 1: ON (Energized) The corresponding digital output/relay must be set to accept data from the sequencer: P140, P142, P441 = 27
Value set in P723	0	1	2	3	4	5	6	7																																			
Relay (Bit 0)	0	1	0	1	0	1	0	1																																			
TB14 (Bit 1)	0	0	1	1	0	0	1	1																																			
I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1																																			
P124	Segment #3 TB30 Analog Output Value	0.00	0.00	{VDC}	10.00	TB30 configuration parameter must be set to accept this value: P150 = 10																																					
Segment #4																																											
P125	Segment #4 Frequency Setpoint	0.0	-500.0	{Hz}	500.0	If P112 = 1, negative sign forces reverse direction																																					
P126	Segment #4 Accel/Decel Time	20.0	0.0	{sec}	3600.0																																						
P127	Segment #4 Time in current step	0.0 0	0.0 0	{P708} {P708}	6553.5 65535	Scaling/units depend on P708 Skip segment if time = 0																																					
P128	Segment #4 Digital Output State	0	<table><tr><td>Value set in P728</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr><tr><td>Relay (Bit 0)</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr><tr><td>TB14 (Bit 1)</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>I/O option Relay (Bit 2)</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr></table> NOTE: P441 is the Relay Output (TB-19, 20, 21) of the optional Digital I/O module (ESVZAL0, ESVZAL1).				Value set in P728	0	1	2	3	4	5	6	7	Relay (Bit 0)	0	1	0	1	0	1	0	1	TB14 (Bit 1)	0	0	1	1	0	0	1	1	I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1	bit = 0: OFF (De-energized) bit = 1: ON (Energized) The corresponding digital output/relay must be set to accept data from the sequencer: P140, P142, P441 = 27
Value set in P728	0	1	2	3	4	5	6	7																																			
Relay (Bit 0)	0	1	0	1	0	1	0	1																																			
TB14 (Bit 1)	0	0	1	1	0	0	1	1																																			
I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1																																			
P129	Segment #4 TB30 Analog Output Value	0.00	0.00	{VDC}	10.00	TB30 configuration parameter must be set to accept this value: P150 = 10																																					
Segment #5																																											
P130	Segment #5 Frequency Setpoint	0.0	-500.0	{Hz}	500.0	If P112 = 1, negative sign forces reverse direction																																					
P131	Segment #5 Accel/Decel Time	20.0	0.0	{sec}	3600.0																																						
P132	Segment #5 Time in current step	0.0 0	0.0 0	{P708} {P708}	6553.5 65535	Scaling/units depend on P708 Skip segment if time = 0																																					
P133	Segment #5 Digital Output State	0	<table><tr><td>Value set in P733</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr><tr><td>Relay (Bit 0)</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr><tr><td>TB14 (Bit 1)</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>I/O option Relay (Bit 2)</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr></table> NOTE: P441 is the Relay Output (TB-19, 20, 21) of the optional Digital I/O module (ESVZAL0, ESVZAL1).				Value set in P733	0	1	2	3	4	5	6	7	Relay (Bit 0)	0	1	0	1	0	1	0	1	TB14 (Bit 1)	0	0	1	1	0	0	1	1	I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1	bit = 0: OFF (De-energized) bit = 1: ON (Energized) The corresponding digital output/relay must be set to accept data from the sequencer: P140, P142, P441 = 27
Value set in P733	0	1	2	3	4	5	6	7																																			
Relay (Bit 0)	0	1	0	1	0	1	0	1																																			
TB14 (Bit 1)	0	0	1	1	0	0	1	1																																			
I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1																																			
P134	Segment #5 TB30 Analog Output Value	0.00	0.00	{VDC}	10.00	TB30 configuration parameter must be set to accept this value: P150 = 10																																					



Commissioning

Code		Possible Settings				IMPORTANT																																					
No.	Name	Default	Selection																																								
Segment #6																																											
P135	Segment #6 Frequency Setpoint	0.0	-500.0	{Hz}	500.0	If P112 = 1, negative sign forces reverse direction																																					
P136	Segment #6 Accel/Decel Time	20.0	0.0	{sec}	3600.0																																						
P137	Segment #6 Time in current step	0.0 0	0.0 0	{P708} {P708}	6553.5 65535	Scaling/units depend on P708 Skip segment if time = 0																																					
P138	Segment #6 Digital Output State	0	<table><tr><td>Value set in P738</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr><tr><td>Relay (Bit 0)</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr><tr><td>TB14 (Bit 1)</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>I/O option Relay (Bit 2)</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr></table> NOTE: P441 is the Relay Output (TB-19, 20, 21) of the optional Digital I/O module (ESVZAL0, ESVZAL1).				Value set in P738	0	1	2	3	4	5	6	7	Relay (Bit 0)	0	1	0	1	0	1	0	1	TB14 (Bit 1)	0	0	1	1	0	0	1	1	I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1	bit = 0: OFF (De-energized) bit = 1: ON (Energized) The corresponding digital output/relay must be set to accept data from the sequencer: P140, P142, P441 = 27
Value set in P738	0	1	2	3	4	5	6	7																																			
Relay (Bit 0)	0	1	0	1	0	1	0	1																																			
TB14 (Bit 1)	0	0	1	1	0	0	1	1																																			
I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1																																			
P139	Segment #6 TB30 Analog Output Value	0.00	0.00	{VDC}	10.00	TB30 configuration parameter must be set to accept this value: P150 = 10																																					
Segment #7																																											
P140	Segment #7 Frequency Setpoint	0.0	-500.0	{Hz}	500.0	If P112 = 1, negative sign forces reverse direction																																					
P141	Segment #7 Accel/Decel Time	20.0	0.0	{sec}	3600.0																																						
P142	Segment #7 Time in current step	0.0 0	0.0 0	{P708} {P708}	6553.5 65535	Scaling/units depend on P708 Skip segment if time = 0																																					
P143	Segment #7 Digital Output State	0	<table><tr><td>Value set in P743</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr><tr><td>Relay (Bit 0)</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr><tr><td>TB14 (Bit 1)</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>I/O option Relay (Bit 2)</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr></table> NOTE: P441 is the Relay Output (TB-19, 20, 21) of the optional Digital I/O module (ESVZAL0, ESVZAL1).				Value set in P743	0	1	2	3	4	5	6	7	Relay (Bit 0)	0	1	0	1	0	1	0	1	TB14 (Bit 1)	0	0	1	1	0	0	1	1	I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1	bit = 0: OFF (De-energized) bit = 1: ON (Energized) The corresponding digital output/relay must be set to accept data from the sequencer: P140, P142, P441 = 27
Value set in P743	0	1	2	3	4	5	6	7																																			
Relay (Bit 0)	0	1	0	1	0	1	0	1																																			
TB14 (Bit 1)	0	0	1	1	0	0	1	1																																			
I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1																																			
P144	Segment #7 TB30 Analog Output Value	0.00	0.00	{VDC}	10.00	TB30 configuration parameter must be set to accept this value: P150 = 10																																					
Segment #8																																											
P145	Segment #8 Frequency Setpoint	0.0	-500.0	{Hz}	500.0	If P112 = 1, negative sign forces reverse direction																																					
P146	Segment #8 Accel/Decel Time	20.0	0.0	{sec}	3600.0																																						
P147	Segment #8 Time in current step	0.0 0	0.0 0	{P708} {P708}	6553.5 65535	Scaling/units depend on P708 Skip segment if time = 0																																					
P148	Segment #8 Digital Output State	0	<table><tr><td>Value set in P748</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr><tr><td>Relay (Bit 0)</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr><tr><td>TB14 (Bit 1)</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>I/O option Relay (Bit 2)</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr></table> NOTE: P441 is the Relay Output (TB-19, 20, 21) of the optional Digital I/O module (ESVZAL0, ESVZAL1).				Value set in P748	0	1	2	3	4	5	6	7	Relay (Bit 0)	0	1	0	1	0	1	0	1	TB14 (Bit 1)	0	0	1	1	0	0	1	1	I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1	bit = 0: OFF (De-energized) bit = 1: ON (Energized) The corresponding digital output/relay must be set to accept data from the sequencer: P140, P142, P441 = 27
Value set in P748	0	1	2	3	4	5	6	7																																			
Relay (Bit 0)	0	1	0	1	0	1	0	1																																			
TB14 (Bit 1)	0	0	1	1	0	0	1	1																																			
I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1																																			
P149	Segment #8 TB30 Analog Output Value	0.00	0.00	{VDC}	10.00	TB30 configuration parameter must be set to accept this value: P150 = 10																																					

Commissioning



Code		Possible Settings				IMPORTANT																																					
No.	Name	Default	Selection																																								
Segment #9																																											
P750	Segment #9 Frequency Setpoint	0.0	-500.0	{Hz}	500.0	If P112 = 1, negative sign forces reverse direction																																					
P751	Segment #9 Accel/Decel Time	20.0	0.0	{sec}	3600.0																																						
P752	Segment #9 Time in current step	0.0 0	0.0 0	{P708} {P708}	6553.5 65535	Scaling/units depend on P708 Skip segment if time = 0																																					
P753	Segment #9 Digital Output State	0	<table><tr><td>Value set in P753</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr><tr><td>Relay (Bit 0)</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr><tr><td>TB14 (Bit 1)</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>I/O option Relay (Bit 2)</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr></table> NOTE: P441 is the Relay Output (TB-19, 20, 21) of the optional Digital I/O module (ESVZAL0, ESVZAL1).				Value set in P753	0	1	2	3	4	5	6	7	Relay (Bit 0)	0	1	0	1	0	1	0	1	TB14 (Bit 1)	0	0	1	1	0	0	1	1	I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1	bit = 0: OFF (De-energized) bit = 1: ON (Energized) The corresponding digital output/relay must be set to accept data from the sequencer: P140, P142, P441 = 27
Value set in P753	0	1	2	3	4	5	6	7																																			
Relay (Bit 0)	0	1	0	1	0	1	0	1																																			
TB14 (Bit 1)	0	0	1	1	0	0	1	1																																			
I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1																																			
P754	Segment #9 TB30 Analog Output Value	0.00	0.00	{VDC}	10.00	TB30 configuration parameter must be set to accept this value: P150 = 10																																					
Segment #10																																											
P755	Segment #10 Frequency Setpoint	0.0	-500.0	{Hz}	500.0	If P112 = 1, negative sign forces reverse direction																																					
P756	Segment #10 Accel/Decel Time	20.0	0.0	{sec}	3600.0																																						
P757	Segment #10 Time in current step	0.0 0	0.0 0	{P708} {P708}	6553.5 65535	Scaling/units depend on P708 Skip segment if time = 0																																					
P758	Segment #10 Digital Output State	0	<table><tr><td>Value set in P758</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr><tr><td>Relay (Bit 0)</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr><tr><td>TB14 (Bit 1)</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>I/O option Relay (Bit 2)</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr></table> NOTE: P441 is the Relay Output (TB-19, 20, 21) of the optional Digital I/O module (ESVZAL0, ESVZAL1).				Value set in P758	0	1	2	3	4	5	6	7	Relay (Bit 0)	0	1	0	1	0	1	0	1	TB14 (Bit 1)	0	0	1	1	0	0	1	1	I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1	bit = 0: OFF (De-energized) bit = 1: ON (Energized) The corresponding digital output/relay must be set to accept data from the sequencer: P140, P142, P441 = 27
Value set in P758	0	1	2	3	4	5	6	7																																			
Relay (Bit 0)	0	1	0	1	0	1	0	1																																			
TB14 (Bit 1)	0	0	1	1	0	0	1	1																																			
I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1																																			
P759	Segment #10 TB30 Analog Output Value	0.00	0.00	{VDC}	10.00	TB30 configuration parameter must be set to accept this value: P150 = 10																																					
Segment #11																																											
P760	Segment #11 Frequency Setpoint	0.0	-500.0	{Hz}	500.0	If P112 = 1, negative sign forces reverse direction																																					
P761	Segment #11 Accel/Decel Time	20.0	0.0	{sec}	3600.0																																						
P762	Segment #11 Time in current step	0.0 0	0.0 0	{P708} {P708}	6553.5 65535	Scaling/units depend on P708 Skip segment if time = 0																																					
P763	Segment #11 Digital Output State	0	<table><tr><td>Value set in P763</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr><tr><td>Relay (Bit 0)</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr><tr><td>TB14 (Bit 1)</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>I/O option Relay (Bit 2)</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr></table> NOTE: P441 is the Relay Output (TB-19, 20, 21) of the optional Digital I/O module (ESVZAL0, ESVZAL1).				Value set in P763	0	1	2	3	4	5	6	7	Relay (Bit 0)	0	1	0	1	0	1	0	1	TB14 (Bit 1)	0	0	1	1	0	0	1	1	I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1	bit = 0: OFF (De-energized) bit = 1: ON (Energized) The corresponding digital output/relay must be set to accept data from the sequencer: P140, P142, P441 = 27
Value set in P763	0	1	2	3	4	5	6	7																																			
Relay (Bit 0)	0	1	0	1	0	1	0	1																																			
TB14 (Bit 1)	0	0	1	1	0	0	1	1																																			
I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1																																			
P764	Segment #11 TB30 Analog Output Value	0.00	0.00	{VDC}	10.00	TB30 configuration parameter must be set to accept this value: P150 = 10																																					



Commissioning

Code		Possible Settings				IMPORTANT																																				
No.	Name	Default	Selection																																							
Segment #12																																										
P165	Segment #12 Frequency Setpoint	0.0	-500.0	{Hz}	500.0	If P112 = 1, negative sign forces reverse direction																																				
P166	Segment #12 Accel/Decel Time	20.0	0.0	{sec}	3600.0																																					
P167	Segment #12 Time in current step	0.0 0	0.0 0	{P708} {P708}	6553.5 65535	Scaling/units depend on P708 Skip segment if time = 0																																				
P168	Segment #12 Digital Output State	0	<table><tr><td>Value set in P768</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr><tr><td>Relay (Bit 0)</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr><tr><td>TB14 (Bit 1)</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>I/O option Relay (Bit 2)</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr></table> NOTE: P441 is the Relay Output (TB-19, 20, 21) of the optional Digital I/O module (ESVZAL0, ESVZAL1).			Value set in P768	0	1	2	3	4	5	6	7	Relay (Bit 0)	0	1	0	1	0	1	0	1	TB14 (Bit 1)	0	0	1	1	0	0	1	1	I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1	bit = 0: OFF (De-energized) bit = 1: ON (Energized) The corresponding digital output/relay must be set to accept data from the sequencer: P140, P142, P441 = 27
Value set in P768	0	1	2	3	4	5	6	7																																		
Relay (Bit 0)	0	1	0	1	0	1	0	1																																		
TB14 (Bit 1)	0	0	1	1	0	0	1	1																																		
I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1																																		
P169	Segment #12 TB30 Analog Output Value	0.00	0.00	{VDC}	10.00	TB30 configuration parameter must be set to accept this value: P150 = 10																																				
Segment #13																																										
P170	Segment #13 Frequency Setpoint	0.0	-500.0	{Hz}	500.0	If P112 = 1, negative sign forces reverse direction																																				
P171	Segment #13 Accel/Decel Time	20.0	0.0	{sec}	3600.0																																					
P172	Segment #13 Time in current step	0.0 0	0.0 0	{P708} {P708}	6553.5 65535	Scaling/units depend on P708 Skip segment if time = 0																																				
P173	Segment #13 Digital Output State	0	<table><tr><td>Value set in P773</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr><tr><td>Relay (Bit 0)</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr><tr><td>TB14 (Bit 1)</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>I/O option Relay (Bit 2)</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr></table> NOTE: P441 is the Relay Output (TB-19, 20, 21) of the optional Digital I/O module (ESVZAL0, ESVZAL1).			Value set in P773	0	1	2	3	4	5	6	7	Relay (Bit 0)	0	1	0	1	0	1	0	1	TB14 (Bit 1)	0	0	1	1	0	0	1	1	I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1	bit = 0: OFF (De-energized) bit = 1: ON (Energized) The corresponding digital output/relay must be set to accept data from the sequencer: P140, P142, P441 = 27
Value set in P773	0	1	2	3	4	5	6	7																																		
Relay (Bit 0)	0	1	0	1	0	1	0	1																																		
TB14 (Bit 1)	0	0	1	1	0	0	1	1																																		
I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1																																		
P174	Segment #13 TB30 Analog Output Value	0.00	0.00	{VDC}	10.00	TB30 configuration parameter must be set to accept this value: P150 = 10																																				
Segment #14																																										
P175	Segment #14 Frequency Setpoint	0.0	-500.0	{Hz}	500.0	If P112 = 1, negative sign forces reverse direction																																				
P176	Segment #14 Accel/Decel Time	20.0	0.0	{sec}	3600.0																																					
P177	Segment #14 Time in current step	0.0 0	0.0 0	{P708} {P708}	6553.5 65535	Scaling/units depend on P708 Skip segment if time = 0																																				
P178	Segment #14 Digital Output State	0	<table><tr><td>Value set in P778</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr><tr><td>Relay (Bit 0)</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr><tr><td>TB14 (Bit 1)</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>I/O option Relay (Bit 2)</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr></table> NOTE: P441 is the Relay Output (TB-19, 20, 21) of the optional Digital I/O module (ESVZAL0, ESVZAL1).			Value set in P778	0	1	2	3	4	5	6	7	Relay (Bit 0)	0	1	0	1	0	1	0	1	TB14 (Bit 1)	0	0	1	1	0	0	1	1	I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1	bit = 0: OFF (De-energized) bit = 1: ON (Energized) The corresponding digital output/relay must be set to accept data from the sequencer: P140, P142, P441 = 27
Value set in P778	0	1	2	3	4	5	6	7																																		
Relay (Bit 0)	0	1	0	1	0	1	0	1																																		
TB14 (Bit 1)	0	0	1	1	0	0	1	1																																		
I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1																																		
P179	Segment #14 TB30 Analog Output Value	0.00	0.00	{VDC}	10.00	TB30 configuration parameter must be set to accept this value: P150 = 10																																				

Commissioning



Code		Possible Settings				IMPORTANT																																					
No.	Name	Default	Selection																																								
Segment #15																																											
P780	Segment #15 Frequency Setpoint	0.0	-500.0	{Hz}	500.0	If P112 = 1, negative sign forces reverse direction																																					
P781	Segment #15 Accel/Decel Time	20.0	0.0	{sec}	3600.0																																						
P782	Segment #15 Time in current step	0.0 0	0.0 0	{P708} {P708}	6553.5 65535	Scaling/units depend on P708 Skip segment if time = 0																																					
P783	Segment #15 Digital Output State	0	<table><tr><td>Value set in P783</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr><tr><td>Relay (Bit 0)</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr><tr><td>TB14 (Bit 1)</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>I/O option Relay (Bit 2)</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr></table> NOTE: P441 is the Relay Output (TB-19, 20, 21) of the optional Digital I/O module (ESVZAL0, ESVZAL1).				Value set in P783	0	1	2	3	4	5	6	7	Relay (Bit 0)	0	1	0	1	0	1	0	1	TB14 (Bit 1)	0	0	1	1	0	0	1	1	I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1	bit = 0: OFF (De-energized) bit = 1: ON (Energized) The corresponding digital output/relay must be set to accept data from the sequencer: P140, P142, P441 = 27
Value set in P783	0	1	2	3	4	5	6	7																																			
Relay (Bit 0)	0	1	0	1	0	1	0	1																																			
TB14 (Bit 1)	0	0	1	1	0	0	1	1																																			
I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1																																			
P784	Segment #15 TB30 Analog Output Value	0.00	0.00	{VDC}	10.00	TB30 configuration parameter must be set to accept this value: P150 = 10																																					
Segment #16																																											
P785	Segment #16 Frequency Setpoint	0.0	-500.0	{Hz}	500.0	If P112 = 1, negative sign forces reverse direction																																					
P786	Segment #16 Accel/Decel Time	20.0	0.0	{sec}	3600.0																																						
P787	Segment #16 Time in current step	0.0 0	0.0 0	{P708} {P708}	6553.5 65535	Scaling/units depend on P708 Skip segment if time = 0																																					
P788	Segment #16 Digital Output State	0	<table><tr><td>Value set in P788</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr><tr><td>Relay (Bit 0)</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr><tr><td>TB14 (Bit 1)</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>I/O option Relay (Bit 2)</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr></table> NOTE: P441 is the Relay Output (TB-19, 20, 21) of the optional Digital I/O module (ESVZAL0, ESVZAL1).				Value set in P788	0	1	2	3	4	5	6	7	Relay (Bit 0)	0	1	0	1	0	1	0	1	TB14 (Bit 1)	0	0	1	1	0	0	1	1	I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1	bit = 0: OFF (De-energized) bit = 1: ON (Energized) The corresponding digital output/relay must be set to accept data from the sequencer: P140, P142, P441 = 27
Value set in P788	0	1	2	3	4	5	6	7																																			
Relay (Bit 0)	0	1	0	1	0	1	0	1																																			
TB14 (Bit 1)	0	0	1	1	0	0	1	1																																			
I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1																																			
P789	Segment #16 TB30 Analog Output Value	0.00	0.00	{VDC}	10.00	TB30 configuration parameter must be set to accept this value: P150 = 10																																					
End Segment																																											
P790	End Segment: Frequency Setpoint	0.0	-500.0	{Hz}	500.0	If P112 = 1, negative sign forces reverse direction																																					
P791	End Segment: Accel/Decel Time	5.0	0.0	{sec}	3600.0																																						
P792	End Segment: Delay before P793, 794 & 795 activation		0.0 0	{P708} {P708}	6553.5 65535	Scaling/units depend on P708																																					
P793	End Segment: Digital Output State		<table><tr><td>Value set in P793</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr><tr><td>Relay (Bit 0)</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr><tr><td>TB14 (Bit 1)</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>I/O option Relay (Bit 2)</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr></table> NOTE: P441 is the Relay Output (TB-19, 20, 21) of the optional Digital I/O module (ESVZAL0, ESVZAL1).				Value set in P793	0	1	2	3	4	5	6	7	Relay (Bit 0)	0	1	0	1	0	1	0	1	TB14 (Bit 1)	0	0	1	1	0	0	1	1	I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1	bit = 0: OFF (De-energized) bit = 1: ON (Energized) The corresponding digital output/relay must be set to accept data from the sequencer: P140, P142, P441 = 27
Value set in P793	0	1	2	3	4	5	6	7																																			
Relay (Bit 0)	0	1	0	1	0	1	0	1																																			
TB14 (Bit 1)	0	0	1	1	0	0	1	1																																			
I/O option Relay (Bit 2)	0	0	0	0	1	1	1	1																																			



Commissioning

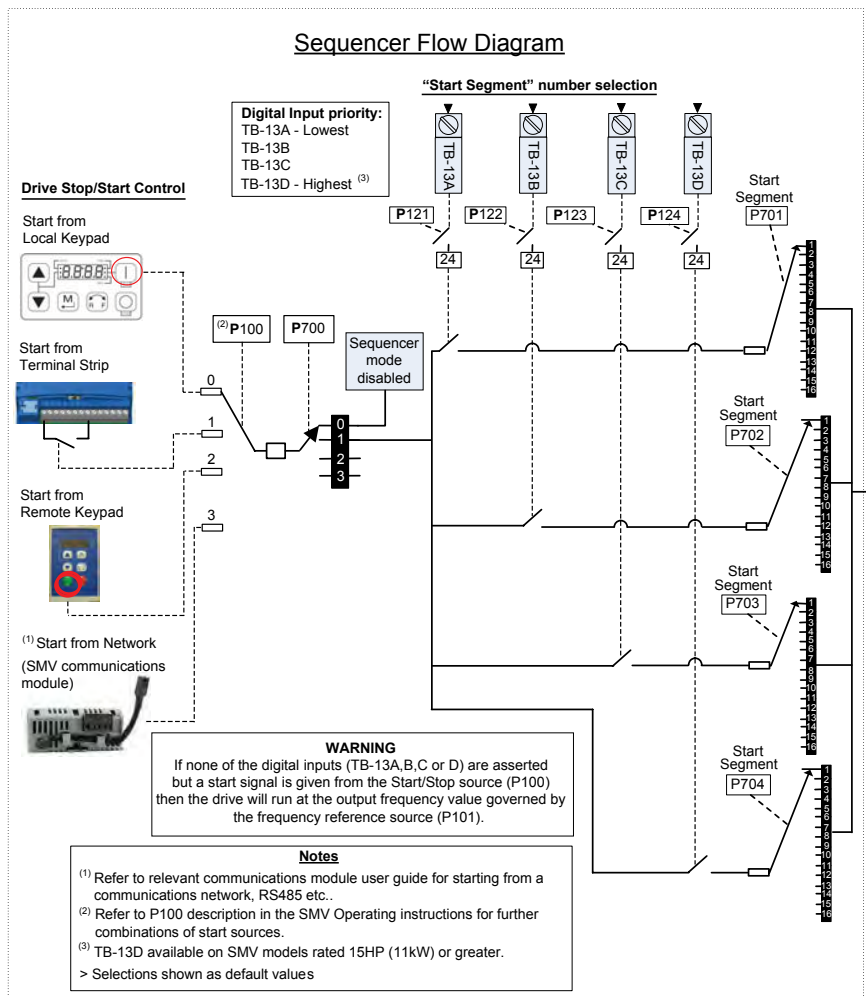
Code		Possible Settings				IMPORTANT
No.	Name	Default	Selection			
P794	End Segment: TB30 Analog Output Value	0.00	0.00	{VDC}	10.00	TB30 configuration parameter must be set to accept this value: P150 = 10
P795	End Segment: Drive Action	0	0	Keep Running		Recovery: Toggling the START SEQUENCE will start the cycle from 'end segment Stop' or 'end segment DC Brake'.
			1	Stop (based on P111)		
			2	Coast to Stop		
			3	Quick Stop (per P127)		
			4	Coast with DC Brake		
			5	Ramp with DC Brake		
			WARNING! If P795 = 0 then toggling the start sequence input will also restart the sequencer cycle but in the interim where TB13X is open the drive will ramp to the standard or specified alternate speed source depending on the drive configuration.			



WARNING

If the input defined to "Start Sequence" is opened during a sequence, the drive will exit sequencer mode and will run at the specified standard or alternate speed source (dependent on drive configuration).

4.5.9.1 Sequencer Flow Diagram Left



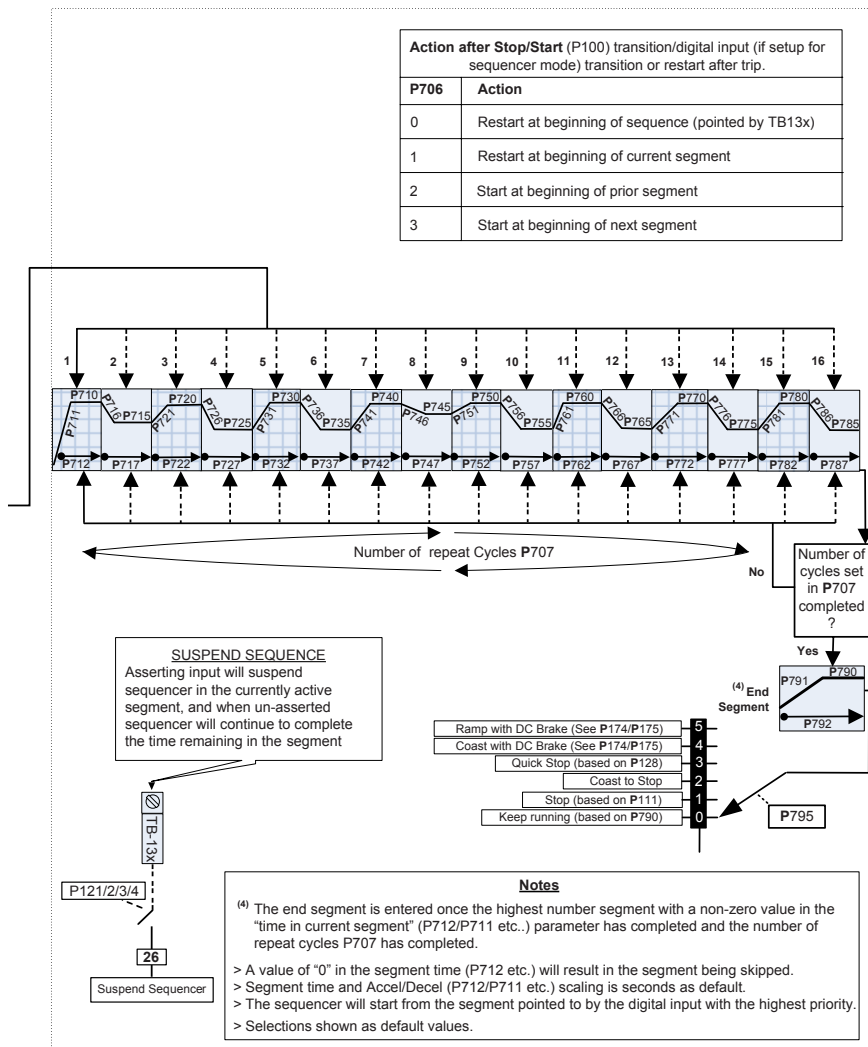
WARNING

If the input defined to “Start Sequence” is opened during a sequence, the drive will exit sequencer mode and will run at the specified standard or alternate speed source (dependent on drive configuration).

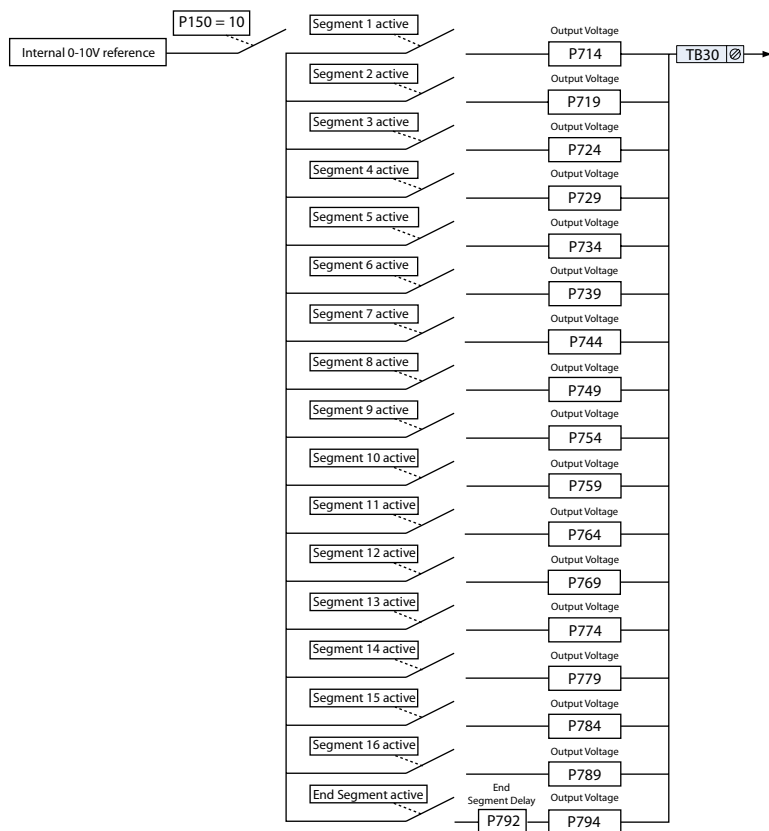


Commissioning

4.5.9.2 Sequencer Flow Diagram Right



4.5.9.3 Sequencer Status



NOTE

On the "End Segment", the output voltage is not present until after the end segment delay P792 has expired. On the other segments the output voltage is present on entry to the segment. The same is true for the digital outputs.

(1) The drive can only be restarted if the error message has been reset.



Troubleshooting and Diagnostics

5 Troubleshooting and Diagnostics

5.1 Status/Warning Messages

Status / Warning	Cause	Remedy
br DC-injection brake active	DC-injection brake activated - activation of digital input (P121...P124 = 18) - automatically (P110 = 2, 4...6) - automatically (P111 = 1, 3)	Deactivate DC-injection brake - deactivate digital input - automatically after P175 time has expired
bF Drive ID warning	The Drive ID (P502) stored on the EPM does not match the drive model.	- Verify motor data (P302...P306) and perform Auto Calibration. - Set drive mode (P300) to 0 or 1 - Reset the drive (P199 to 3 or 4) and reprogram.
CAL Motor Auto-calibration active	Refer to P300, P399	Motor Auto-calibration is being performed
cE An EPM that contains valid data from a previous software version has been installed	An attempt was made to change parameter settings	Parameter settings can only be changed after the EPM data is converted to the current version (P199 = 5)
CL Current Limit (P171) reached	Motor overload	- Increase P171 - Verify drive/motor are proper size for application
dEC Decel Override	The drive has stopped decelerating to avoid tripping into HF fault, due to excessive motor regen (2 sec max).	If drive trips into HF fault: - Increase P105, P126 - Install Dynamic Braking option
Err Error	Invalid data was entered, or an invalid command was attempted	
FCL Fast Current Limit	Overload	Verify drive/motor are proper size for application
FSt Flying Restart Attempt after Fault	P110 = 5,6	
GE OEM Settings Operation warning	An attempt was made to change parameter settings while the drive is operating in OEM Settings mode.	In OEM Settings mode (P199 = 1), making changes to parameters is not permitted.
GF OEM Defaults data warning	An attempt was made to use (or reset to) the OEM default settings (P199 = 1 or 2) using an EPM without valid OEM data.	Install an EPM containing valid OEM Defaults data
LC Fault Lockout	The drive attempted 5 restarts after a fault but all attempts were unsuccessful (P110 = 3...6)	- Drive requires manual reset - Check Fault History (P500) and correct fault condition
PdEC PID Deceleration Status	PID setpoint has finished its ramp but the drive is still decelerating to a stop.	
PId PID Mode Active	Drive has been put into PID Mode.	Refer to P200
SLP Sleep Mode is active	Refer to P240...P242	
SP Start Pending	The drive has tripped into a fault and will automatically restart (P110 = 3...6)	To disable Auto-Restart, set P110 = 0...2
SPd PID Mode disabled.	Drive has been taken out of PID Mode. Refer to P200.	
StoP Output frequency = 0 Hz (outputs U, V, W inhibited)	Stop has been commanded from the keypad, terminal strip, or network	Apply Start command (Start Control source depends on P100)

(1) The drive can only be restarted if the error message has been reset.



5.2 Drive Configuration Message

When the Mode button is pressed and held, the drive's display will provide a 4-digit code that indicates how the drive is configured. If the drive is in a Stop state when this is done, the display will also indicate which control source commanded the drive to Stop (the two displays will alternate every second).

Configuration Display			
Format = x.y.z	x = Control Source: L = Local Keypad t = Terminal Strip r = Remote Keypad n = Network	y = Mode: S = Speed mode P = PID mode t = Torque mode C = Sequencer mode	zz = Reference: CP = Keypad ▲ ▼ EU = 0-10 VDC (TB-5) EI = 4-20 mA (TB-25) JG = Jog nt = Network OP = MOP P L...P7 = Preset 1...7 Q L...16 = Sequencer Segment
Example: L.S.CP = Local Keypad Start control, Speed mode, Keypad speed reference t.P.EU = Terminal Strip Start control, PID mode, 0-10 VDC setpoint reference t.C.I2 = Terminal Strip Start control, Sequencer Operation (Speed mode), Segment #12 n.t.P2 = Network Start control, Vector Torque mode, Preset Torque #2 reference n.S.O3 = Network Start control, Speed mode, Speed reference from Sequencer segment #03			
Stop Source Display			
Format = x.StP	L.StP = Stop command came from Local Keypad t.StP = Stop command came from Terminal Strip r.StP = Stop command came from Remote Keypad n.StP = Stop command came from Network		

5.3 Fault Messages

The messages below show how they will appear on the display when the drive trips. When looking at the Fault History (P500), the **F_u** will not appear in the fault message.

Fault	Cause	Remedy ⁽¹⁾
F_{AF}	High Temperature fault	Drive is too hot inside • Reduce drive load • Improve cooling
F_{AL}	Assertion Level fault	• Assertion Level switch is changed during operation • P120 is changed during operation • P100 or P121...P124 are set to a value other than 0 and P120 does not match the Assertion Level Switch. • Make sure the Assertion Level switch and P120 are both set for the type of input devices being used, prior to setting P100 or P121...P124. Refer to 3.2.3 and P120.
F_{bF}	Personality fault	Drive Hardware
F_{CF}	Control fault	An EPM has been installed that is either blank or corrupted
F_{cF}	Incompatible EPM fault	An EPM has been installed that contains data from an incompatible parameter version
F_{cFt}	Forced Translation fault	An EPM from an old drive put in new drive causes drive to trip F_{cFt} fault.
		Press [M] (mode button) twice to reset



Troubleshooting and Diagnostics

Fault		Cause	Remedy ⁽¹⁾
F_dbF	Dynamic Braking fault	Dynamic braking resistors are overheating	• Increase active decel time (P105, P126, P127). • Check mains voltage and P107
F_EF	External fault	• P121...P124 = 21 and that digital input has been opened. • P121...P124 = 22 and that digital input has been closed.	• Correct the external fault condition • Make sure digital input is set properly for NC or NO circuit
F_F I	EPM fault	EPM missing or defective	Power down and replace EPM
F_F2 ... F_F I2	Internal faults		Contact factory technical support
F_Fnr	Control Configuration Fault	The drive is setup for REMOTE KEYPAD control (P100=2 or 5) but is not setup to communicate with a remote keypad	Set P400 = 1, or P600 = 1
		The drive is setup for NETWORK ONLY control (P100=3) but is not setup for network communications	Set P400 or P600 to a valid network communications protocol selection
F_FoL	TB25 (4-20 mA signal) Threshold fault	4-20 mA signal (at TB-25) drops below the value set in P164.	• Check signal/signal wire • Refer to parameters P163 and P164.
F_GF	OEM Defaults data fault	Drive is powered up with P199 =1 and OEM settings in the EPM are not valid.	Install an EPM containing valid OEM Defaults data or change P199 to 0.
F_HF	High DC Bus Voltage fault	Mains voltage is too high	Check mains voltage and P107
		Decel time is too short, or too much regen from motor	Increase active decel time (P105, P126, P127) or install Dynamic Braking option
F_IL	Digital Input Configuration fault (P121...P124)	More than one digital input set for the same function	Each setting can only be used once (except settings 0 and 3)
		Only one digital input configured for MOP function (Up, Down)	One input must be set to MOP Up, another must be set to MOP Down
		PID mode is entered with setpoint reference and feedback source set to the same analog signal	Change PID setpoint reference (P121...P124) or feedback source (P201).
		One of the digital inputs (P121...P124) is set to 10 and another is set to 11...14.	Reconfigure digital inputs
		One of the digital inputs (P121...P124) is set to 11 or 12 and another is set to 13 or 14.	
		PID enabled in Vector Torque mode (P200 = 1 or 2 and P300 = 5)	PID cannot be used in Vector Torque mode
F_JF	Remote keypad fault	Remote keypad disconnected	Check remote keypad connections
F_LF	Low DC Bus Voltage fault	Mains voltage too low	Check mains voltage
F_n Id	No Motor ID fault	An attempt was made to start the drive in Vector or Enhanced V/Hz mode prior to performing the Motor Auto-calibration	Refer to parameters P300...P399 for Drive Mode setup and calibration.
F_nLF	Module communication fault	Communication failure between drive and Network Module.	Check module connections
F_nF I ... F_nF9	Network Faults	Refer to the module documentation. for Causes and Remedies.	



Fault		Cause	Remedy ⁽¹⁾
F_DF	Output fault: Transistor fault	Output short circuit	Check motor/motor cable
		Acceleration time too short	Increase P104, P125
		Severe motor overload, due to: • Mechanical problem • Drive/motor too small for application	• Check machine / system • Verify drive/motor are proper size for application
		Boost values too high	Decrease P168, P169
		Excessive capacitive charging current of the motor cable	• Use shorter motor cables with lower charging current • Use low capacitance motor cables • Install reactor between motor and drive.
		Failed output transistor	Contact factory technical support
F_DF I	Output fault: Ground fault	Grounded motor phase	Check motor and motor cable
		Excessive capacitive charging current of the motor cable	Use shorter motor cables with lower charging current
F_PF	Motor Overload fault	Excessive motor load for too long	• Verify proper setting of P108 • Verify drive and motor are proper size for application
F_rF	Flying Restart fault	Controller was unable to synchronize with the motor during restart attempt; (P110 = 5 or 6)	Check motor / load
F_SF	Single-Phase fault	A mains phase has been lost	Check mains voltage
F_UF	Start fault	Start command was present when power was applied (P110 = 0 or 2).	• Must wait at least 2 seconds after power-up to apply Start command • Consider alternate starting method (P110).
F_FAU	TB5 (0-10V signal) Threshold fault	0-10V signal (at TB5) drops below the value set in P158.	• Check signal/signal wire • Refer to parameters P157 and P158

(1) The drive can only be restarted if the error message has been reset.



Appendix

Appendix A

A.1 Permissible Cable Lengths

The table herein lists the permissible cable lengths for use with an SMV inverter with an internal EMC filter.



NOTE

This table is intended as a reference guideline only; application results may vary. The values in this table are based on testing with commonly available low-capacitance shielded cable and commonly available AC induction motors. Testing is conducted at worst case speeds and loads.

Maximum Permissible Cable Lengths (Meters) for SMV Model with Internal EMC Filters									
Mains	Model	4 kHz Carrier (P166 = 0)		6 kHz Carrier (P166 = 1)		8 kHz Carrier (P166 = 2)		10 kHz Carrier (P166 = 3)	
		Class A	Class B	Class A	Class B	Class A	Class B	Class A	Class B
240 V, 1-phase (2/PE)	ESV251 $\phi\phi$ 2SF ϕ	38	12	35	10	33	5	30	N/A
	ESV371 $\phi\phi$ 2SF ϕ	38	12	35	10	33	5	30	N/A
	ESV751 $\phi\phi$ 2SF ϕ	38	12	35	10	33	5	30	N/A
	ESV112 $\phi\phi$ 2SF ϕ	38	12	35	10	33	5	30	N/A
	ESV152 $\phi\phi$ 2SF ϕ	38	12	35	10	33	5	30	N/A
	ESV222 $\phi\phi$ 2SF ϕ	38	12	35	10	33	5	30	N/A
400/480 V, 3-phase (3/PE)	ESV371 $\phi\phi$ 4TF ϕ	30	4	25	2	20	N/A	10	N/A
	ESV751 $\phi\phi$ 4TF ϕ	30	4	25	2	20	N/A	10	N/A
	ESV112 $\phi\phi$ 4TF ϕ	30	4	25	2	20	N/A	10	N/A
	ESV152 $\phi\phi$ 4TF ϕ	30	4	25	2	20	N/A	10	N/A
	ESV222 $\phi\phi$ 4TF ϕ	30	4	25	2	20	N/A	10	N/A
	ESV302 $\phi\phi$ 4TF ϕ	30	4	25	2	20	N/A	10	N/A
	ESV402 $\phi\phi$ 4TF ϕ	54	5	48	3	42	2	N/A	N/A
	ESV552 $\phi\phi$ 4TF ϕ	54	5	48	3	42	2	N/A	N/A
	ESV752 $\phi\phi$ 4TF ϕ	54	5	48	3	42	2	N/A	N/A

NOTE: The “ $\phi\phi$ ” and “ ϕ ” symbols are place holders in the Model part number that contain different information depending on the specific configuration of the model. Refer to the SMV Type Number Designation table in section 2.2 for more information.

Lenze SMVector 13465100 EDBSV01 EN v18



Lenze Americas Corporation
630 Douglas Street
Uxbridge, MA 01569
USA

 800 217-9100
 508 278-7873
 marketing@lenzeamericas.com
 www.Lenze.com

Service
Lenze AC Tech Corporation
630 Douglas Street
Uxbridge, MA 01569
USA

 508 278-9100
 508 278-6620
 repair@lenzeamericas.com

Standard Model Key Features



- Wide Power Range: 7.5W-240W
- Universal Input :
7.5W-75W: 85-264V AC/105-370V DC
100W: 100-120V AC/200-240V AC
(Selectable) 240-370V DC
120W-240W: 85-264V AC/105-370V AC
- Overcurrent/Overvoltage Protection
- Power Factor Correction (75W, 120W, 240W models)
EN61000-3-3
EN61000-3-2
- Voltage adjustment $\pm 10\%$
- Spring-up Screw Terminal, IP20 (finger-safe)
- DIN rail or Panel Surface Mount
- Approvals:
CE marked
UL 508 Listed
UL, c-UL
TÜV approved
EMC Directives:
EN50081-2
EN50082-2
EN61000-6-2
LVD EN60950:2000



Standard Power Supplies



7.5 Watt Power Supply

Part Number	Rated Voltage	Rated Current
PS5R-A05	5V DC	1.5A
PS5R-A12	12V DC	0.6A
PS5R-A24	24V DC	0.3A



15 Watt Power Supply

Part Number	Rated Voltage	Rated Current
PS5R-B05	5V DC	2.5A
PS5R-B12	12V DC	1.2A
PS5R-B24	24V DC	0.6A



30 Watt Power Supply

Part Number	Rated Voltage	Rated Current
PS5R-C12	12V DC	2.5A
PS5R-C24	24V DC	1.3A



50 Watt Power Supply

Part Number	Rated Voltage	Rated Current
PS5R-D24	24V DC	2.1A



75 Watt Power Supply

Part Number	Rated Voltage	Rated Current
PS5R-Q24	24V DC	3.1A



100 Watt Power Supply

Part Number	Rated Voltage	Rated Current
PS5R-E24	24V DC	4.2A



120 Watt Power Supply

Part Number	Rated Voltage	Rated Current
PS5R-F24	24V DC	5A



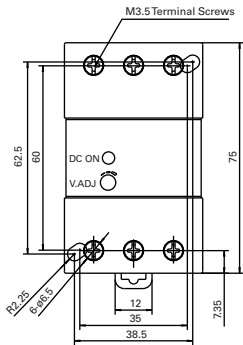
240 Watt Power Supply

Part Number	Rated Voltage	Rated Current
PS5R-G24	24V DC	10A

Standard Power Supply Dimensions

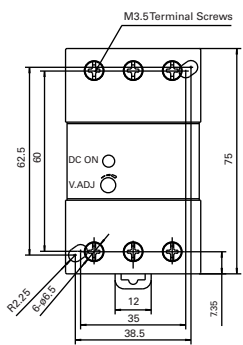
PS5R-A (7.5W)

Height 75.0 mm
Width 45.0 mm
Depth 70.0 mm



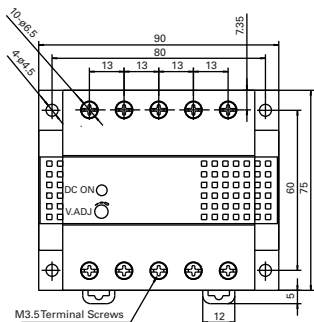
PS5R-B (15W)

Height 75.0 mm
Width 45.0 mm
Depth 95.0 mm



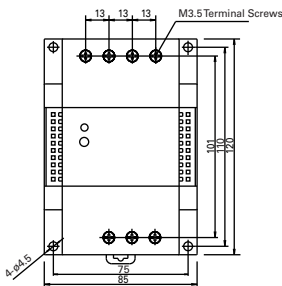
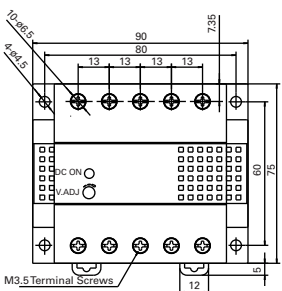
PS5R-C (30W)

Height 75.0 mm
Width 90.0 mm
Depth 95.0 mm



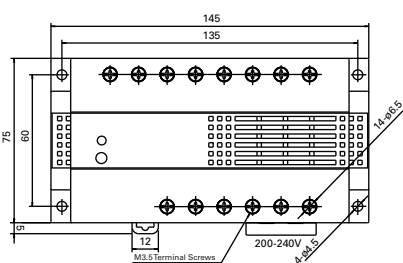
PS5R-D (50W)

Height 75.0 mm
Width 90.0 mm
Depth 95.0 mm



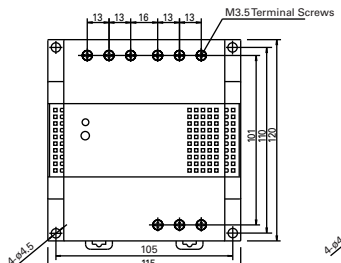
PS5R-Q (75W)

Height 120.0 mm
Width 85.0 mm
Depth 140.0 mm



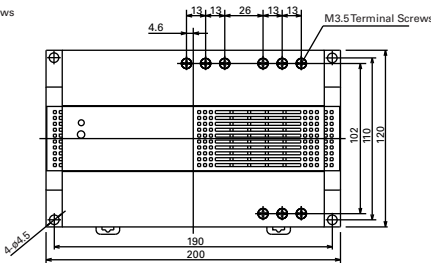
PS5R-E (100W)

Height 75.0 mm
Width 145.0 mm
Depth 95.0 mm



PS5R-F (120W)

Height 120.0 mm
Width 115.0 mm
Depth 140.0 mm



PS5R-G (240W)

Height 120.0mm
Width 200.0mm
Depth 140.0mm

- en**
- 1 T time delay range
 - 2 T time delay setting
 - 3 Function selection
 - 4 LED Indication (Except solid state output)

- de**
- 1 Verzögerungsbereich T
 - 2 Verzögerungseinstellung T
 - 3 Funktionsauswahl
 - 4 LED-Anzeige (außer Halbleiterausgang)

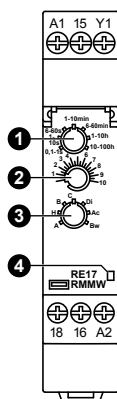
- it**
- 1 Gamma di temporizzazione T
 - 2 Regolazione temporizzazione T
 - 3 Selezione funzione
 - 4 Indicazione LED (eccetto uscita statica)

- fr**
- 1 Gamme de temporisation T
 - 2 Réglage temporisation T
 - 3 Sélection de fonction
 - 4 Voyant (sauf la sortie statique)

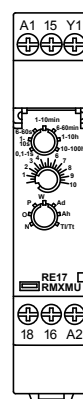
- es**
- 1 Gama de temporización T
 - 2 Reglaje temporización T
 - 3 Selección de la función
 - 4 Indicador LED (excepto la salida de estado sólido)

- zh**
- 1 时间范围的确定 T
 - 2 延时时间设定 T
 - 3 功能选择
 - 4 LED 指示 (固态输出除外)

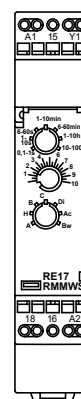
RE17RMMW



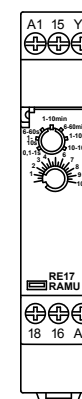
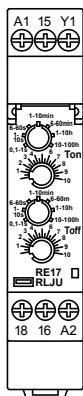
RE17RXXMU



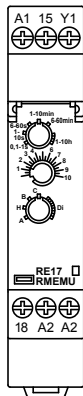
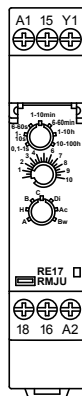
RE17RMMWS



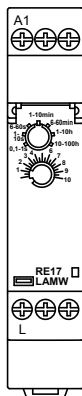
RE17RAMU

RE17RBMU
RE17RCMU
RE17RHMURE17RLJU
RE17RLMU

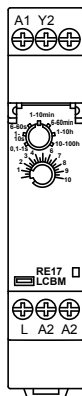
RE17RMEMU

RE17RMJU
RE17RMMU

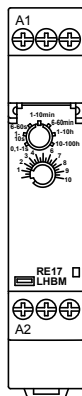
RE17LAMW



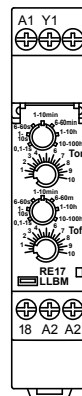
RE17LCBM



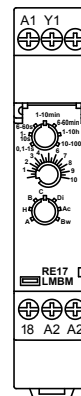
RE17LHBM



RE17LLBM



RE17LMBM



Functions / Fonctions / Funktionen / Funciones / Funzione / 功能

- en**
- U: Supply
R: Relay or solid state output
T: Timing period
C: Control contact
G: Gate
Ta: Adjustable On-delay
Tr: Adjustable Off-delay

Function diagram:

- Relay de-energised
Relay energised
Output open
Output closed

- es**
- U: Alimentación
R: Salida de estado sólido o relé
T: Período de temporización
C: Contacto de control
G: Puerta
Ta: Retardo de conexión ajustable
Tr: Retardo de desconexión ajustable

Diagrama de la función:

- Relé sin alimentación
Relé con alimentación
Salida abierta
Salida cerrada

- fr**
- U: Alimentation
R: Sortie relais ou statique
T: Temporisation
C: Commande
G: Porte (Gate)
Ta: Temporisation travail réglable
Tr: Temporisation repos réglable

Diagramme:

- Relais hors tension
Relais sous tension
Sortie non passante
Sortie passante

- it**
- U: Alimentazione
R: Uscita relé o statica
T: Temporizzazione
C: Comando
G: Porta (Gate)
Ta: Temporizzazione funzionamento regolabile
Tr: Temporizzazione riposo regolabile

Diagramma funzionale:

- Relé non alimentato
Relé alimentato
Uscita aperta
Uscita chiusa

- de**
- U: Spannungsversorgung
R: R: Relais- oder Halbleiterausgang
T: Verzögerung
C: Steuerkontakt
G: Logikgatter
Ta: Einstellbare Ansprechverzögerung
Tr: Einstellbare Rückfallverzögerung

Funktionsdiagramm:

- Relais ohne angelegte Spannung
Relais mit Spannung versorgt
Ausgang geöffnet
Ausgang geschlossen

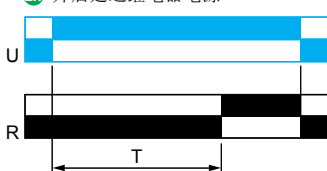
- zh**
- U: 电源
R: 继电器或固态输出
T: 定时时段
C: 控制触点
G: 门
Ta: 可调节接通延迟
Tr: 可调节断开延迟

功能图:

- 继电器已断电
继电器已加电
输出断开
输出闭合

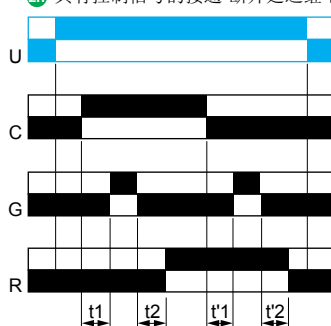
A RE17RMMW RE17RMJU
RE17RMMWS RE17RMMU
RE17RAMU RE17LAMW
RE17RMEMU RE17LMBM

- en** Power on delay relay
fr Relais temporisé à la mise sous tension
de Ansprechverzögertes Zeitrelais
es Relé de retardo de arranque
it Relé ritardato all'accensione
zh 开启延迟继电器电源



Ac RE17RMMW RE17RMJU RE17LMBM
RE17RMMWS RE17RMMU

- en** On- and off-delay relay with control signal
fr Relais de temporisation travail et repos avec signal de contrôle
de Ansprech- und rückfallverzögertes Zeitrelais mit Steuersignal
es Relé de retardo de conexión y desconexión con señal de control
it Relé ritardato all'inserzione e alla disinserzione con segnale di comando
zh 具有控制信号的接通-断开延迟继电器



$$T = t_1 + t_2 + \dots$$

$$T = t_1' + t_2' + \dots$$

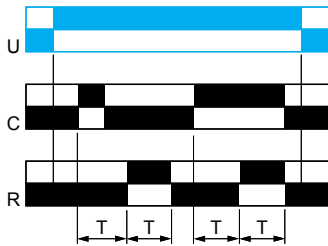
Ad RE17RXXMU

- en** Pulse delayed relay with control signal
fr Relais à impulsion temporisée avec signal de contrôle
de Impulsverzögertes Zeitrelais mit Steuersignal
es Relé de retardo de pulso con señal de control
it Relé a impulso ritardato con segnale di comando
zh 具有控制信号的脉冲延迟继电器

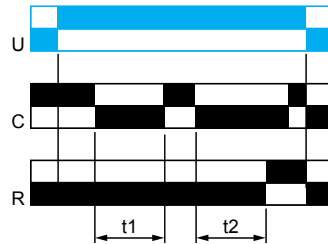


Ah RE17RMXMU

- en Pulse delayed relay (single cycle) with control signal
- fr Relais à impulsion temporisée (un seul cycle) avec signal de contrôle
- de Impulsverzögertes Zeitrelais (einfacher Zyklus) mit Steuersignal
- es Relé de retardo de pulso (ciclo único) con señal de control
- it Relè a impulso ritardato (ciclo singolo) con segnale di comando
- zh 具有控制信号的脉冲延迟继电器 (单循环)

**At** RE17RMMW RE17RMJU
RE17RMMWS RE17RMMU
RE17RAMU RE17LMBM
RE17RMEMU

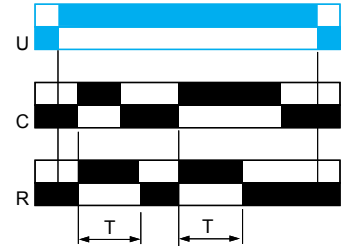
- en Power on delay relay (summation) with control signal
- fr Relais temporisé à la mise sous tension (somme) avec signal de contrôle
- de Ansprechverzögertes Zeitrelais (additiv) mit Steuersignal
- es Relé de retardo de arranque (suma) con señal de control
- it Relè ritardato all'accensione (somma) con segnale di comando
- zh 开启具有控制信号的延迟继电器 (求和) 电源



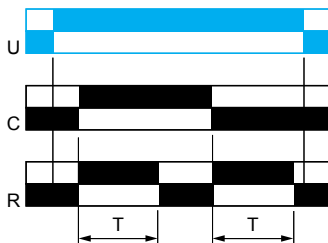
$$T = t_1 + t_2 + \dots$$

B RE17RMMW RE17RMJU
RE17RMMWS RE17RMMU
RE17RBMU RE17LMBM
RE17RMEMU

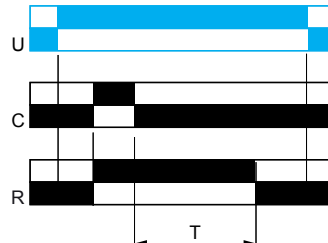
- en Interval relay with control signal
- fr Relais d'intervalle avec signal de contrôle
- de Wischrelais mit Steuersignal
- es Relé de intervalo con señal de control
- it Relè a intervallo con segnale di comando
- zh 具有控制信号的间隔定时继电器

**Bw** RE17RMMW RE17RMMU
RE17RMMWS RE17LMBM
RE17RMJU

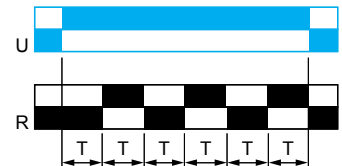
- en Double interval relay with control signal
- fr Relais d'intervalle double avec signal de contrôle
- de Doppeltes Wischrelais mit Steuersignal
- es Relé de intervalo doble con señal de control
- it Relè a doppio intervallo con segnale di comando
- zh 具有控制信号的双间隔定时继电器

**C** RE17RMMW RE17RMJU
RE17RMMWS RE17RMMU
RE17RCMU RE17LCBM
RE17RMEMU RE17LMBM

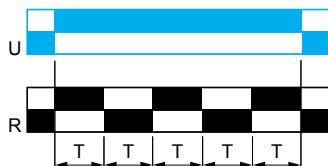
- en Off-delay relay with control signal
- fr Relais de temporisation repos avec signal de contrôle
- de Rückfallverzögertes Zeitrelais mit Steuersignal
- es Relé de retardo de desconexión con señal de control
- it Relè ritardato alla disinserzione con segnale di comando
- zh 具有控制信号的断开延迟继电器

**D** RE17RMMW RE17RMJU
RE17RMMWS RE17RMMU
RE17RMEMU RE17LMBM

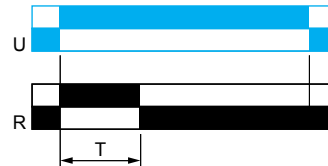
- en Symmetrical flasher relay (starting pulse off)
- fr Relais de clignotant symétrique (impulsion de départ repos)
- de Symmetrisches Blinkrelais (pausebeginnend)
- es Relé señalizador simétrico (pulso inicial desconectado)
- it Relè a intermittenza simmetrica (impulso avvio off)
- zh 对称式闪光继电器 (启动脉冲停止)

**Di** RE17RMMW RE17RMMU
RE17RMMWS RE17LMBM
RE17RMEMU
RE17RMJU

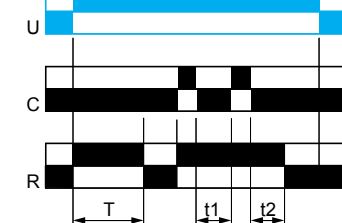
- en Symmetrical flasher relay (starting pulse on)
- fr Relais de clignotant symétrique (impulsion de départ travail)
- de Symmetrisches Blinkrelais (impulsbeginnend)
- es Relé señalizador simétrico (pulso inicial conectado)
- it Relè a intermittenza simmetrica (impulso avvio on)
- zh 对称式闪光继电器 (启动脉冲开启)

**H** RE17RMMW RE17RMJU
RE17RMMWS RE17RMMU
RE17RHMU RE17LHBM
RE17RMEMU RE17LMBM

- en Interval relay
- fr Relais d'intervalle
- de Wischrelais
- es Relé de intervalo
- it Relè intervallo
- zh 间隔定时继电器

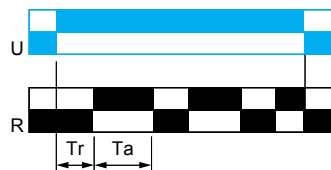
**Ht** RE17RMMW RE17RMJU
RE17RMMWS RE17RMMU
RE17RHMU RE17LMBM
RE17RMEMU

- en Interval relay (summation) with control signal
- fr Relais d'intervalle (somme) avec signal de contrôle
- de Wischrelais (additiv) mit Steuersignal
- es Relé de intervalo (suma) con señal de control
- it Relè a intervallo (somma) con segnale di comando
- zh 具有控制信号的间隔定时继电器 (求和)

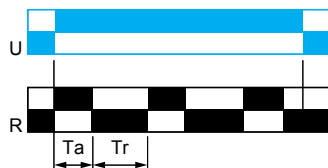


$$T = t_1 + t_2 + \dots$$

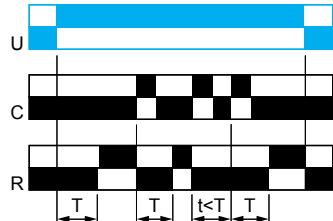
- L** RE17RLJU
RE17RLMU
RE17LLBM
- en Asymmetrical flasher relay (starting pulse off)
 - fr Relais de clignotant asymétrique (impulsion de départ repos)
 - de Asymmetrisches Blinkrelais (pausebeginnend)
 - es Relé señalizador asimétrico (pulso inicial desconectado)
 - it Relè a intermittenza asimmetrica (impulso avvio off)
 - zh 非对称式闪光继电器 (启动脉冲停止)



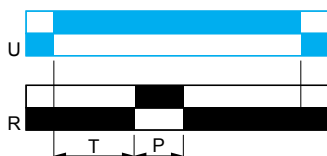
- Li** RE17RLJU
RE17RLMU
RE17LLBM
- en Asymmetrical flasher relay (starting pulse on)
 - fr Relais de clignotant asymétrique (impulsion de départ travail)
 - de Asymmetrisches Blinkrelais (impulsbeginnend)
 - es Relé señalizador asimétrico (pulso inicial conectado)
 - it Relè a intermittenza asimmetrica (impulso avvio on)
 - zh 非对称式闪光继电器 (启动脉冲开启)



- O** RE17RMXMU
- en Retriggerable interval delayed relay with control signal on
 - fr Relais temporisé d'intervalle redéclenchable avec signal de contrôle travail
 - de Nachtriggerbares intervallverzögertes Zeitrelais mit Steuersignal
 - es Relé de retardo de intervalo redisparable con señal de control activada
 - it Relè a intervallo ritardato ripristinabile all'inizio del segnale di comando
 - zh 开启控制信号的可再触发式间隔延迟继电器

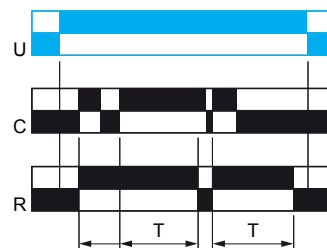


- P** RE17RMXMU
- en Pulse delayed relay with fixed pulse length
 - fr Relais à impulsion temporisée avec longueur d'impulsion fixe
 - de Impulsverzögertes Zeitrelais mit fester Impulslänge
 - es Relé de retardo de pulso con duración fija del pulso
 - it Relè a impulso ritardato con lunghezza impulso fissa
 - zh 具有混合脉冲长度的脉冲延迟继电器

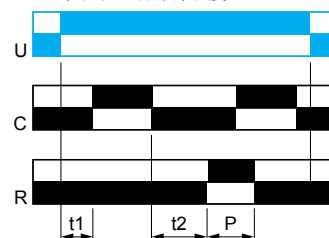


P = 500 ms

- N** RE17RMXMU
- en Retriggerable interval relay with control signal on
 - fr Relais d'intervalle redéclenchable avec signal de contrôle travail
 - de Nachtriggerbares Wischrelais mit Steuersignal
 - es Relé de intervalo redisparable con señal de control activada
 - it Relè a intervallo ripristinabile all'inizio del segnale di comando
 - zh 开启控制信号的可再触发式间隔定时继电器

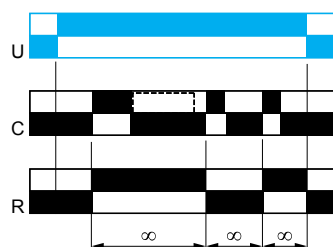


- Pt** RE17RMXMU
- en Pulse delayed relay (summation and fixed pulse length) with control signal off
 - fr Relais à impulsion temporisée (somme et longueur d'impulsion fixe) avec signal de contrôle repos
 - de Impulsverzögertes Zeitrelais (additiv und feste Impulslänge) ohne Steuersignal
 - es Relé con retardo de pulso (suma y duración fija de pulso) con señal de control desactivada
 - it Relè a impulso ritardato (somma e lunghezza impulso fissa) senza segnale di comando
 - zh 关闭控制信号的脉冲延迟继电器 (求和和混合脉冲长度)

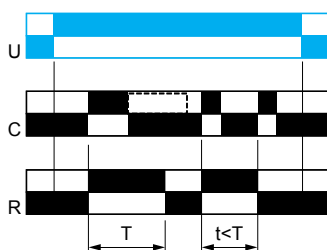


T = t1 + t2 + ...
P = 500 ms

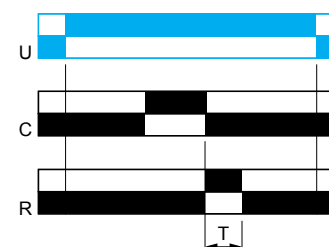
- T** RE17RMXMU
- en Bistable relay with control signal on
 - fr Relais bistable avec signal de contrôle travail
 - de Bistabiles Relais mit Steuersignal
 - es Relé biestable con señal de control activada
 - it Relè bistabile con invio segnale di comando
 - zh 开启控制信号的双稳态继电器

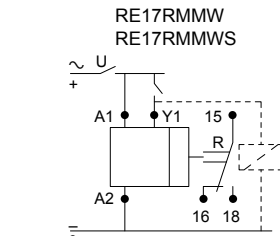
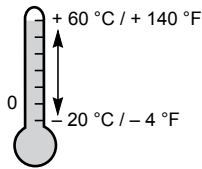


- Tt** RE17RMXMU
- en Retriggerable bistable relay with control signal on
 - fr Relais bistable redéclenchable avec signal de contrôle travail
 - de Nachtriggerbares bistabiles Relais mit Steuersignal
 - es Relé biestable redisparable con señal de control activada
 - it Relè bistabile ripristinabile all'inizio del segnale di comando
 - zh 开启控制信号的可再触发式双稳态继电器

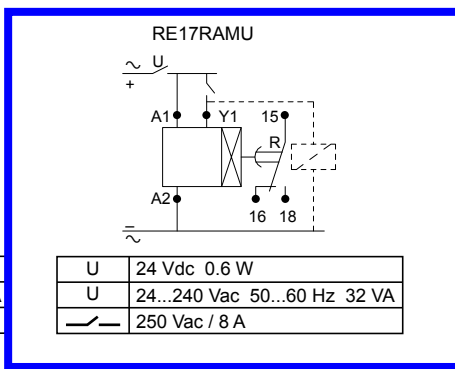


- W** RE17RMXMU
- en Interval relay with control signal off
 - fr Relais d'intervalle avec signal de contrôle repos
 - de Wischrelais ohne Steuersignal
 - es Relé de intervalo con señal de control desactivada
 - it Relè a intervallo senza segnale di comando
 - zh 关闭控制信号的间隔定时继电器

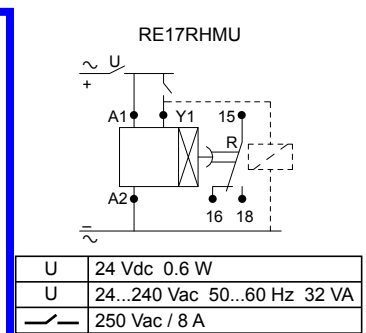




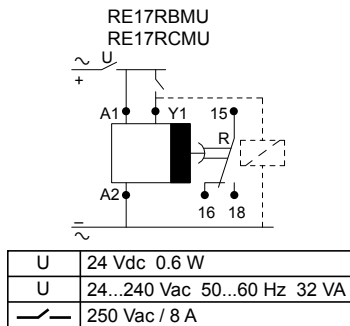
U	12...240 Vdc 1,5 W
U	12...240 Vac 50...60 Hz 3 VA
—	250 Vac / 8 A



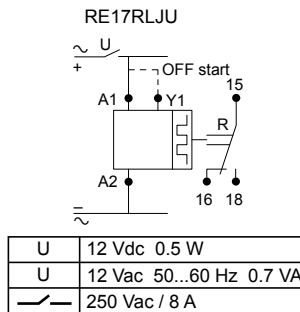
U	24 Vdc 0.6 W
U	24...240 Vac 50...60 Hz 32 VA
—	250 Vac / 8 A



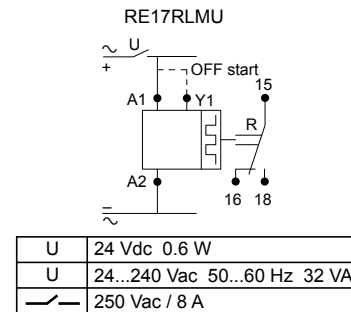
U	24 Vdc 0.6 W
U	24...240 Vac 50...60 Hz 32 VA
—	250 Vac / 8 A



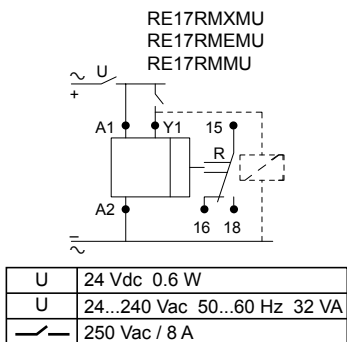
U	24 Vdc 0.6 W
U	24...240 Vac 50...60 Hz 32 VA
—	250 Vac / 8 A



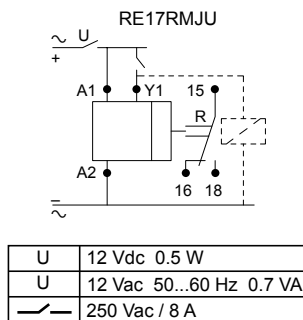
U	12 Vdc 0.5 W
U	12 Vac 50...60 Hz 0.7 VA
—	250 Vac / 8 A



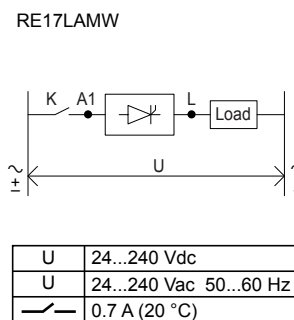
U	24 Vdc 0.6 W
U	24...240 Vac 50...60 Hz 32 VA
—	250 Vac / 8 A



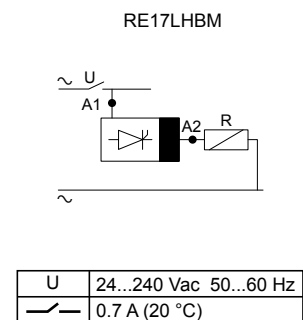
U	24 Vdc 0.6 W
U	24...240 Vac 50...60 Hz 32 VA
—	250 Vac / 8 A



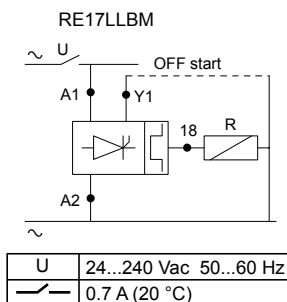
U	12 Vdc 0.5 W
U	12 Vac 50...60 Hz 0.7 VA
—	250 Vac / 8 A



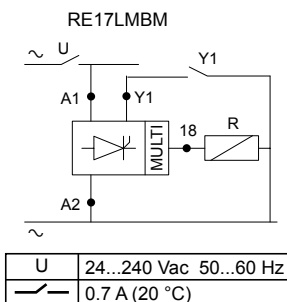
U	24...240 Vdc
U	24...240 Vac 50...60 Hz
—	0.7 A (20 °C)



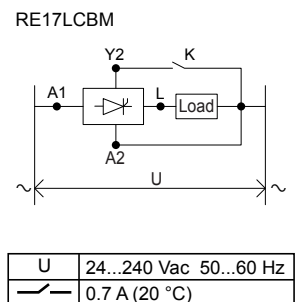
U	24...240 Vac 50...60 Hz
—	0.7 A (20 °C)



U	24...240 Vac 50...60 Hz
—	0.7 A (20 °C)



U	24...240 Vac 50...60 Hz
—	0.7 A (20 °C)



U	24...240 Vac 50...60 Hz
—	0.7 A (20 °C)

Wire sizes and torque / Calibre de fils et couple / Drahtstärken und Anzugsmoment / Tamaños de cable y par de apriete / Sezioni filo e coppia / 电线尺寸和扭矩

All references except RE17RMMWS / Toutes les références sauf RE17RMMWS / Alle Referenzen außer RE17RMMWS / Todas las referencias excepto RE17RMMWS /
Tutti i prodotti eccetto RE17RMMWS / 所有参考 (RE17RMMWS 除外)

mm in.	6 0.24				
mm ²		0.5...3.33	0.5...2.5	0.2...2.5	0.2...1.5
AWG		20...12	20...14	24...14	24...16

		N•m	0.6...1
Ø 3,5 mm / 0.14 in.		lb-in	5.3...8.8

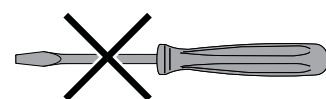
Only for RE17RMMWS (spring terminals) / Uniquement pour RE17RMMWS (bornes à ressort) / Nur für RE17RMMWS (Federklemmen)
Solo RE17RMMWS (terminales de resorte) / Solo per RE17RMMWS (morsetti a molla) / 仅适用于 RE17RMMWS (弹簧端子)

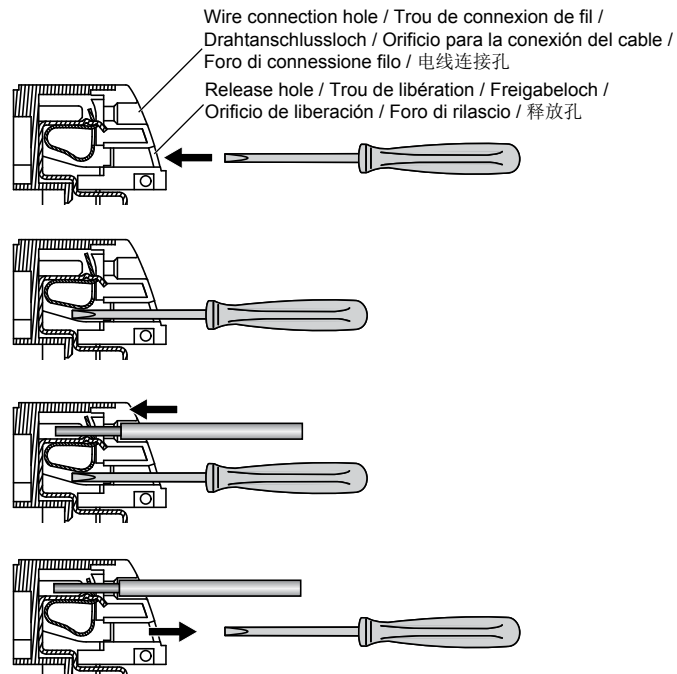
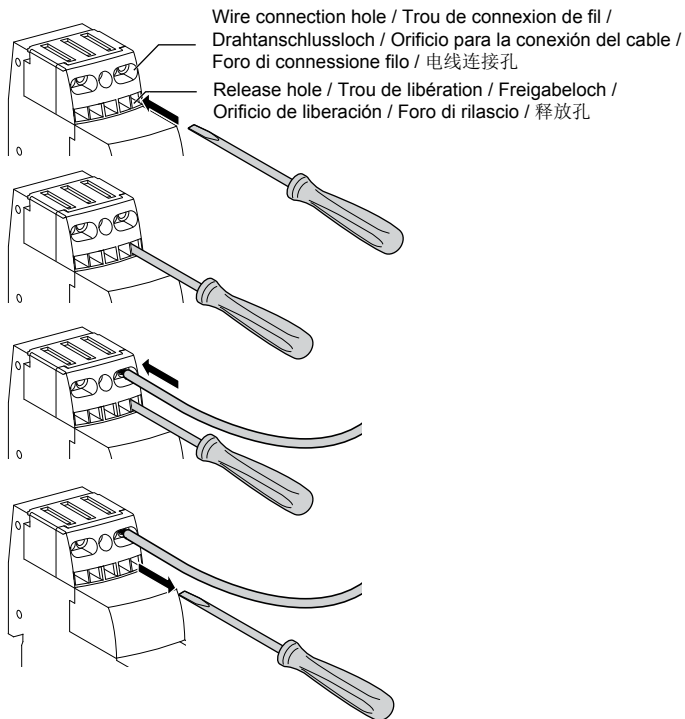
mm in.	8 0.31		
mm ²		0.2...1.5	0.2...1.5
AWG		24...16	24...16

• Flathead screwdriver, Parallel tip / Tournevis plat, pointe parallèle /
Flachkopf-Schraubendreher, parallele Spitze /
Destornillador de cabeza plana, punta paralela /
Cacciavite a testa piatta, punta parallela / 一字螺丝刀, 平行尖端

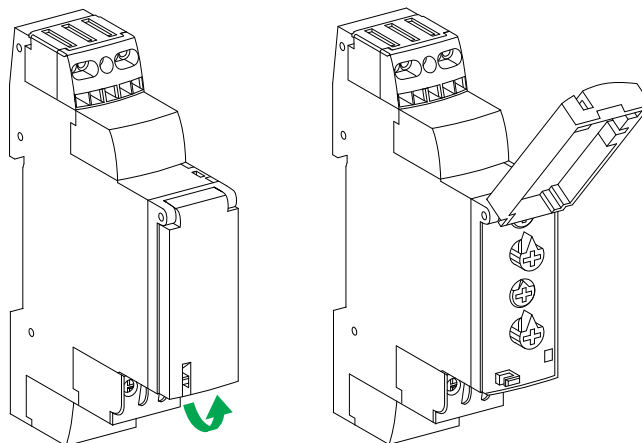


• Flathead screwdriver, Flared tip / Tournevis plat, pointe évasée /
Flachkopf-Schraubendreher, aufgeweitete Spitze /
Destornillador de cabeza plana, punta ancha /
Cacciavite a testa piatta, punta svasata / 一字螺丝刀, 外展尖端

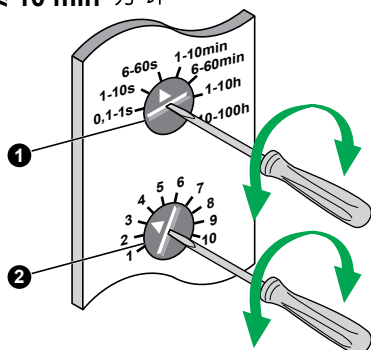




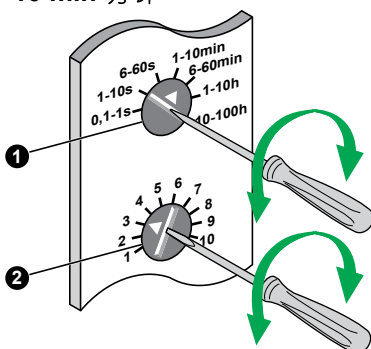
3 Set / Réglez / Einstellung / Regule / Regolate / 设定



$T \leq 10$ min 分钟



$T \geq 10$ min 分钟



Example / Exemple / Biespiel / Ejemplo / Esempio / 例子

	①	➔	②
$T = 60$ s			
$T = 45$ s			

NOT RECOMMENDED /
NON RECOMMANDÉ /
NICHT EMPFOHLEN /
NO RECOMENDADO /
NON CONSIGLIATO /
不建议

Example / Exemple / Biespiel / Ejemplo / Esempio / 例子

	①	➔	②	➔	①
$T = 7$ h 00					

⚠ ⚠ DANGER / DANGER / GEFAHR / PERICOLO / PELIGRO / 危险		
HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH • Disconnect all power before servicing equipment. • Confirm that the product power supply voltage and its tolerances are compatible with those of the network. Failure to follow these instructions will result in death or serious injury.	RISQUE D'ELECTROCUTION, D'EXPLOSION OU D'ARC ELECTRIQUE • Coupez l'alimentation avant de travailler sur cet appareil. • Assurez-vous que la tension d'alimentation du produit, avec ses tolérances, est compatible avec celle du réseau. Le non-respect de cette instruction entraînera la mort ou des blessures graves.	STROMSCHLAG-, EXPLOSIONS- ODER LICHTBOGENGEFAHR • Vor dem Arbeiten an dem Gerätessen Stromversorgung abschalten. • Stelle Sie sicher, dass die Versorgungsspannung des Produkts einschließlich Toleranzen mit den Netzbedingungen vereinbar ist. Die Nichtbeachtung dieser Anweisung wird den Tod oderschwere Körpverletzung zur Folge haben.
RISCHIO DI SCOSSA ELETTRICA, DI ESPLOSIONE O DI OFTALMIA DA FLASH • Scollegare l'apparecchio dalla presa di corrente prima di qualsiasi intervento. • Assicurarsi che la tensione di alimentazione del prodotto e le relative tolleranze sia compatibile con quelle della rete. La mancata osservanza di questa istruzioni comporta gravi rischi per la vita e l'incolumità personale.	RIESGO DE ELECTROCUCIÓN, EXPLOSIÓN O ARCO ELÉCTRICO • Desconecte toda alimentación antes de realizar el servicio. • Asegúrese de que la tensión de alimentación del producto y sus tolerancias son compatibles con las de la red eléctrica. Si no se respetan estas instrucciones, se producirán graves daños corporales o la muerte.	存在电击、爆炸或电弧危险 • 维修设备前，请断开所有电源连接。 • 确认产品电源电压及其公差兼容于网络的这些参数。 若不遵守这些说明，可能会导致严重的人身伤害甚至死亡。

- (en)** Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.
- (fr)** Les équipements électriques doivent être installés, exploités et entretenus par un personnel qualifié. Schneider Electric décline toute responsabilité quant aux conséquences de l'utilisation de ce matériel.
- (de)** Elektrische Geräte dürfen nur von Fachpersonal installiert, betrieben, gewartet und instand gesetzt werden. Schneider Electric haftet nicht für Schäden, die aufgrund der Verwendung dieses Materials entstehen.
- (es)** Sólo el personal de servicio cualificado podrá instalar, utilizar, reparar y mantener el equipo eléctrico. Schneider Electric no asume las responsabilidades que pudieran surgir como consecuencia de la utilización de este material.
- (it)** Le apparecchiature elettriche devono essere installate, usate e riparate solo da personale qualificato. Schneider Electric non assume nessuna responsabilità per qualunque conseguenza derivante dall'uso di questo materiale.
- (zh)** 电气设备的安装、操作、维修和维护工作仅限于合格人员执行。
对于超出本资料所引发的任何后果，Schneider Electric 概不负责。

Schneider Electric Industries SAS
35, rue Joseph Monier
CS 30323
F - 92506 Rueil-Malmaison Cedex

施耐德电气生产工厂
无锡普洛菲斯电子有限公司
江苏省无锡国家高新技术产业开发区发
汉江路20号中国地区客服电话：
+86 400 810 1315

This product must be installed, connected and used in compliance with prevailing standards and/or installation regulations.
As standards, specifications and designs develop from time to time, always ask for confirmation of the information given in this publication.

Waterloo Multilevel Groundwater Monitoring System*

The Waterloo System is used to obtain groundwater samples, hydraulic head measurements and permeability measurements from many discretely isolated zones in a single borehole.

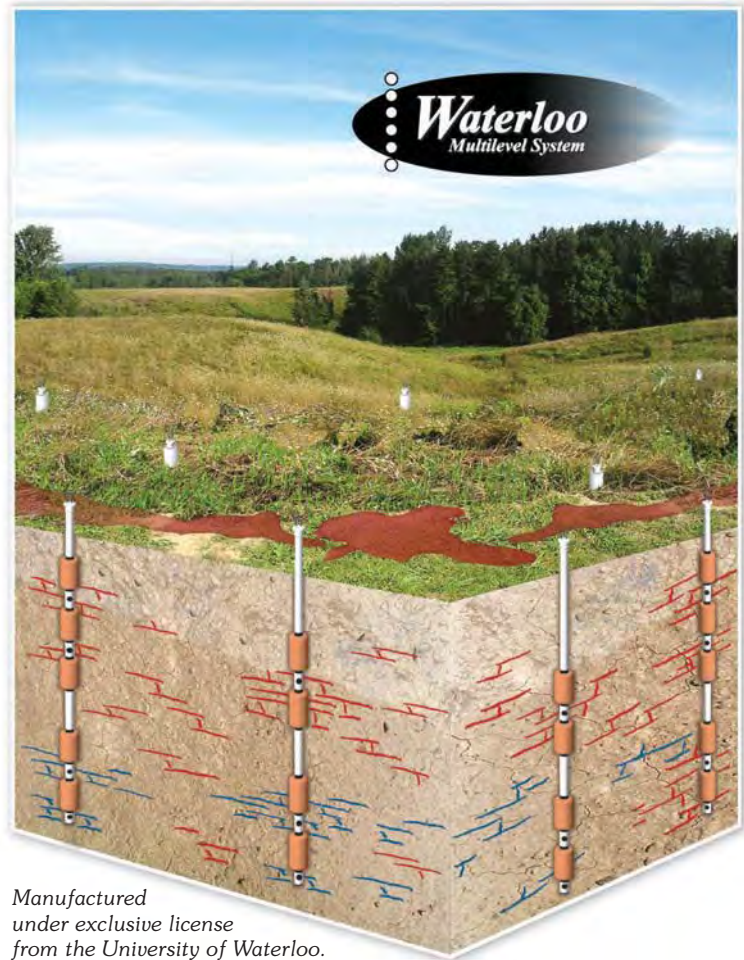
The Waterloo System originated with Dr. John Cherry at the Groundwater Institute of the University of Waterloo in 1984. Ongoing development of the System by Solinst has taken place on a continuous basis since then, with encouragement and suggestions from Dr. Cherry.

Detailed 3-D Data

When a number of Waterloo Systems are used at a site, they allow detailed three-dimensional groundwater information to be obtained at a reasonable cost. Fewer drilled holes are an advantage and monitoring times are reduced.

The simple modular system is customized for the needs of each project. This allows monitoring zones to be placed at desired depths using options suitable for either bedrock, overburden or combination applications and with either permanent or removable systems.

Discrete zone monitoring is the only means of obtaining accurate data for site interpretation and assessments. Transects of multilevels provide the detailed data necessary to calculate mass flux and conservatively assess risk to receptors.



*Manufactured
under exclusive license
from the University of Waterloo.
Canadian Patent #1232836
U.S. Patent #5048605 & International Patents.*



[Get Quote](#) | [More Info](#)

Advantages

- Detailed 3D data of flow and concentrations
- Data integrity
- Reduced project costs
- Purging and sampling times reduced
- Fewer drilled holes
- Reduced site disturbance
- Variety of monitoring options

Installations

- **Overburden or Bedrock Installations**
 - Allow monitoring of multiple zones in any geologic setting
- **Permanent Waterloo Packers**
 - Excellent in bedrock or cased holes
 - Engineered for permanent seals
- **Removable Hydraulic Packers**
 - Reuse at new zones or locations
 - Easy decommissioning

* Solinst and Levellogger are registered trademarks of Solinst Canada Ltd.

Why Multilevels

Superior quality of data is obtained when monitoring a series of discrete isolated intervals at various depths in a single borehole. The detailed information provided by Multilevels in the form of horizontal and vertical flow, in conjunction with discrete zone sampling for contaminants, is ideal for accurate site assessments.

- **Biases with Long Screened Wells**

- Contaminant mixing over long screens masks vertical variations resulting in underestimating the aerial extent of plumes and diluting the true concentration of contaminants.
- Ambient vertical flow within the well has potential to transmit contaminants to previously isolated zones.

- **Detailed Multilevel Data – Advantages**

- Transects of Multilevels across a groundwater flow path provide the best data to use for Mass Flux calculations. This has proven to be an important tool for site assessments that require realistic estimates of maximum contaminant concentration/risk to receptors.
- Optimize performance of in-situ remediation by using detailed 3-D data from a series of Multilevels. Subsequently, transects can be used to evaluate the success of the chosen remediation option and any improvements.

- **Economics**

- Proven cost reductions for drilling and sediment disposal
- Savings, both in field personnel time and disposal costs, when purge volumes are reduced. The discrete interval that a Multilevel port encompasses allows for smaller purge volumes, rapid responses to level changes and is ideal for low flow sampling techniques.

The Waterloo System

The System uses modular components which form a sealed casing string of various casing lengths, packers, ports, a base plug and a surface manifold. This allows accurate placement of ports at precise monitoring zones.

Monitoring tubes attached to the stem of each port individually connect that monitoring zone to the surface. The standard system is built on 2" (50 mm) Sch. 80 PVC to fit 3"- 4" (75 - 100 mm) boreholes and uses 3 ft. (915 mm) long packers. Stainless steel components, custom packer materials and sizes, Teflon® tubing are available.



Manifold

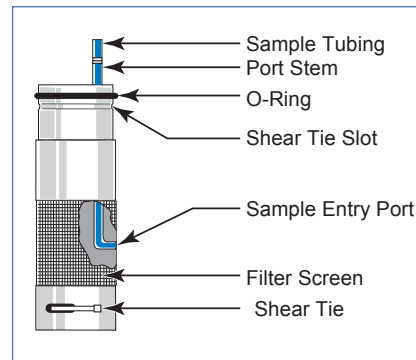


O-Ring Joints with Shear Wire

Ports

Monitoring ports are constructed from 316 stainless steel. Ports are isolated by packers at each desired monitoring zone and are individually connected to the surface manifold with narrow diameter tubing. Thus formation water enters the port, passes into the stem, up into the monitoring tube attached to the stem, to its static level.

A sampling pump or pressure transducer may be dedicated to each monitoring zone by attachment to the port stem. Dual stem ports are available to allow both sampling and hydraulic head measurements from the same port. Alternatively, the monitoring tubes may be left open to allow sampling and hydraulic head measurements with portable equipment. For installations in silty deposits there are special sampling ports with extra screening to prevent silt entry into the port.



Stainless Steel Ports



Joints*

The patented method of joining components of the Waterloo System uses a nylon shear wire and an o-ring. This gives reliable, leakproof joints so that the core of the Waterloo casing string is isolated from external formation waters. Groundwater is only accessible via the port stems and attached monitoring equipment. This water-tight seal also prevents contact between packer inflation water inside the casing and the formation water outside the casing.

Manifolds

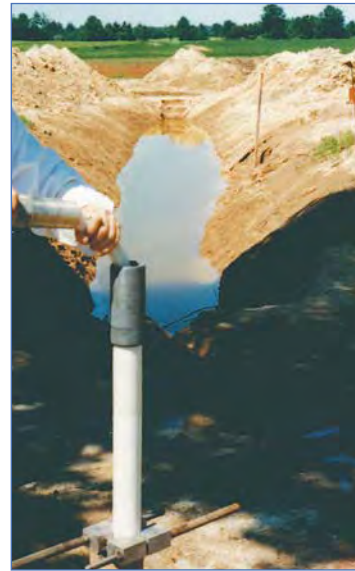
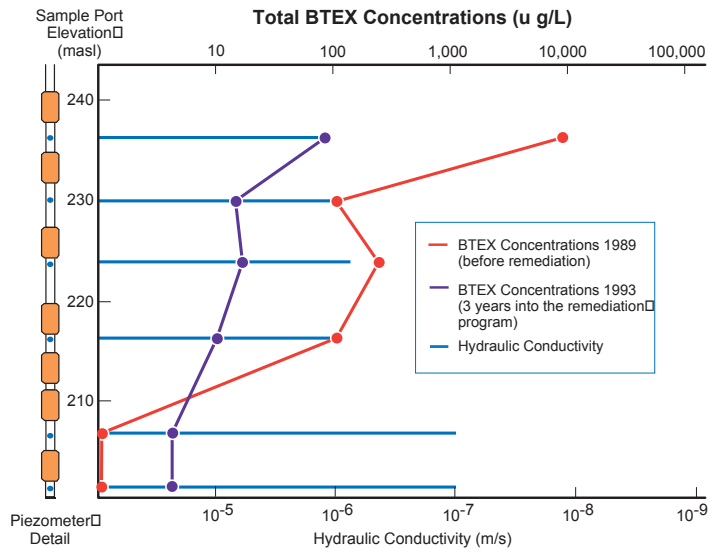
The manifold completes the system at surface. It organizes, identifies, and coordinates the tubes and/or cables from each monitoring zone.

The manifold allows connection to each transducer in turn, and a simple, one-step connection for operation of pumps. When dedicated pumps are selected, it allows individual zones to be purged separately, or purging of many zones simultaneously to reduce field times.

* US Patent 5,255,945 ®Teflon is a registered trade-mark of the DuPont Corp.

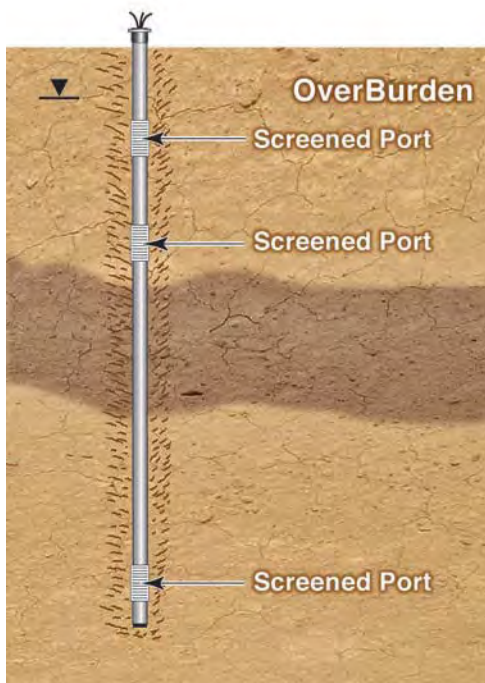
Reliable Data

The effectiveness of the Waterloo System is proven by its ability to accurately and repeatedly obtain pressure and groundwater chemistry data from several distinct zones in a single borehole. The data set below shows a decrease in Total BTEX contamination due to ongoing pump and treat operations at an oil pipeline leak.



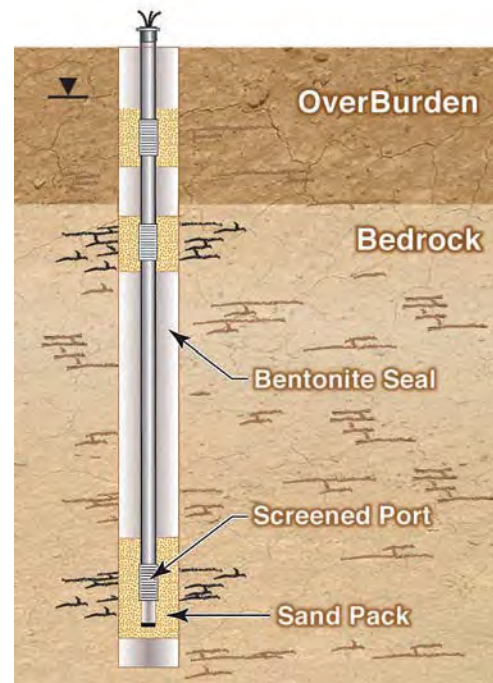
Underground oil pipeline leak assessment. Three 150 ft. (45m) installations. Two point rising head permeability tests were conducted in each interval of the Multilevel System. (See diagram showing contaminant distribution at left.)

Overburden



Direct Burial: Formation Collapse with Screened Ports

Bedrock and/or Overburden



Direct Placement: Sand and Bentonite with Screened Ports

System Flexibility

The Waterloo System is extremely flexible to your design criteria. Each System is customized to suit monitoring needs, site conditions and budget constraints:

- Removable or permanent system
- Bedrock or overburden applications for groundwater or vadose zone monitoring

Packers and ports can be accurately placed to monitor each zone of interest.

Materials

For particular applications specific materials may be chosen. These may include stainless steel casing and packer bodies, and stainless steel, nylon or Teflon® tubing.

Borehole Size

Waterloo or removable packers are designed for use in 3" - 4" boreholes (75 - 100 mm). Systems can be installed in larger boreholes using:

- Placement of sand and bentonite to isolate parts around a Waterloo casing string with no packers.
- 3-4" screen and casing, installed within a larger hole, completed by installing a Waterloo System with packers.

Number of Monitoring Zones/Hole

The maximum number of monitoring zones for a System is determined by the number of tubes and/or cables that will fit inside the casing string. This number is dependent on the monitoring options chosen. Systems can be designed to monitor from 2 to as many as 24 zones.

Standard 2"(50 mm) Waterloo system	
Site Dependent Monitoring Options	# Zones
Dedicated Pumps and Transducers	8
Open Tubes Only (varies with tube size)	15
Dedicated Pumps and Open Tubes	6
Dedicated Pumps Only	12
Dedicated Pressure Transducers Only	24



Using core logs to identify placement of Ports and Packers



Multi-Purge Manifold with Transducers and Dedicated Pumps for four zone monitoring

Monitoring Options

- **Dedicated sampling pumps and/or pressure transducers**

Each monitoring port may be fitted with a dedicated sampling pump and/or pressure transducer. This maximizes the speed with which each data set can be obtained, and avoids the need to decontaminate and repeatedly lower portable devices. The sampling pumps are suitable for sampling many types of contaminants, including VOCs.

Purge volumes are very small. With dedicated pumps all zones can be purged simultaneously. Ports with two stems allows a dedicated pump and a transducer to be placed at exactly the same level.

- **Open tubes**

The most basic version uses open tubes attached to each port. This option allows monitoring with a portable sampler and a narrow diameter Water Level Meter. This provides a very economical and flexible multilevel monitoring device.

- **Mix of open tubes and dedicated equipment**

A third option is to choose a mix of open tubes and dedicated equipment in different zones. This method combines the advantages of less expensive portable equipment for shallower zones (i.e. 100 ft., 30 m) and the more time efficient dedicated equipment for deeper zones.

- **Water level monitoring only**

The System can comprise pressure transducers only, for pressure monitoring in up to 24 discrete zones.

Dedicated Sampling Pumps

Dedicated equipment reduces the time and effort required to obtain data, as equipment is not lowered down the borehole and purge volumes are reduced. It gives significant cost savings and avoids cross contamination.

For long term or frequent sampling Waterloo Systems most commonly use the gas drive, Solinst Double Valve Pumps with stainless steel and Teflon® valves. A pump is connected directly to the stem of each port and dual line polyethylene or Teflon® tubing connects the pump to the wellhead manifold.

Both automatic and manual pump control units are simple to use. They have quick-connect couplings with only a single connection to the manifold required. Samples from all levels are easily and rapidly obtained. Purging from some or all levels simultaneously is accommodated by the multi-purge feature of the manifold.



Collecting a Sample from a Dedicated DVP

Low Flow Purging and Sampling

Purge volumes are very small due to the small annular space and tubing diameters used in the system. Consequently sampling is rapid, even though flows are low, especially with dedicated pumps when all zones can be purged simultaneously.

Dedicated Bladder and Double Valve Pumps, (DVP), as well as a portable DVP are ideal for use when low flow sampling and purging techniques are desired.

Portable Micro Double Valve Pump

The Micro Double Valve Pump (Micro DVP) provides high quality samples, uses coaxial Teflon® tubing, and is small enough to fit in 1/2" (13 mm) ID tubing. The unique combination of flexibility and size make the pump ideal for sampling at depth in small flexible tubes.



*Model 408M
Double Valve
Pump*



*Taking pressure measurements
with Model 404 Geokon Vibrating Wire Readout*

Dedicated Transducers

Dedicated pressure transducers allow rapid and accurate measurement of temperature and total water pressure. Unless static water levels are shallow, transducers are the preferred method of water level measurement, both from an efficiency and an accuracy point of view.

The transducers chosen for use in the Waterloo System are vibrating wire transducers, which are very accurate and rugged. They have superior long term operation with minimal drift over time. They can be read with a manual readout, or with a datalogger which can provide remote, unattended monitoring and telemetry, if desired. Transducers are available with pressure ranges from 50 psi to 500 psi. (7.25 kPa to 72.5 kPa).



Model 102 P1 Water Level Meter



*Dedicated
Sampling Pump
& Transducer*

Portable Monitoring Equipment

Water level measurements can be made in Waterloo ports fitted with an open tube using the narrow, Solinst Model 102, P1 Water Level Meter. It has a weighted, flexible probe, 1/4" OD by 1.5" long (6.35mm x 38 mm).

Sampling may be performed in open tubes using a Mini Inertial Pump, Micro Double Valve Pump, or a Peristaltic Pump.

Designing Your System

The options chosen for each System will be site and application specific.

Each design is dependent on:

- Zones of interest
- Geology of the site
- Monitoring methods preferred
- Cost considerations
- Borehole depth, diameter and type

Refer to the drawings below, then select the type of installation that suits your project. Consider the size and depth of each borehole, and whether casing is to be present. Decide if permanent or temporary Systems are preferred, the number of zones and depth of each zone per System, the monitoring options preferred, and any special materials required.

During development of your plans, the Solinst technical staff will be pleased to help evaluate the options and customize a System that best suits your needs.

Projects

Waterloo Systems have been used to monitor:

- Salt water intrusion
- Industrial cleanups
- Pipeline leaks
- Dam leakage/rehabilitation
- Contaminant identification/cleanup
- DNAPL & LNAPL spill sites
- Waste disposals/landfills
- Soil gas surveys

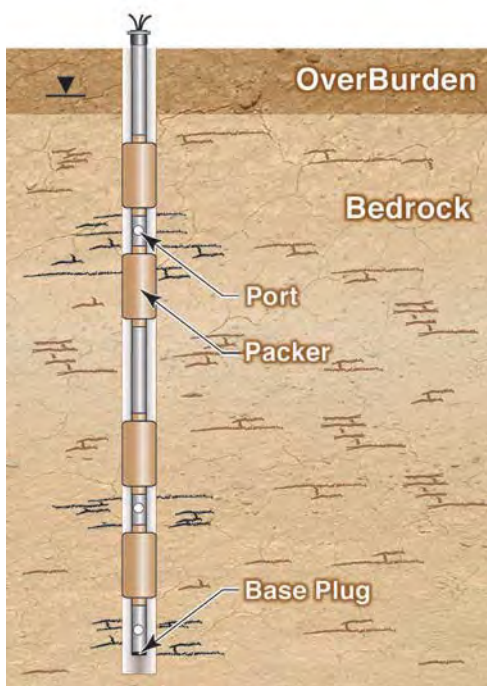
Applications

The Waterloo System has been specified by various industries and consultants for numerous sites across the United States, Canada and overseas. Waterloo Systems have been specified and approved at several sites with Superfund or RCRA designations and in each of the U.S. E.P.A. regions.

The System has been used for:

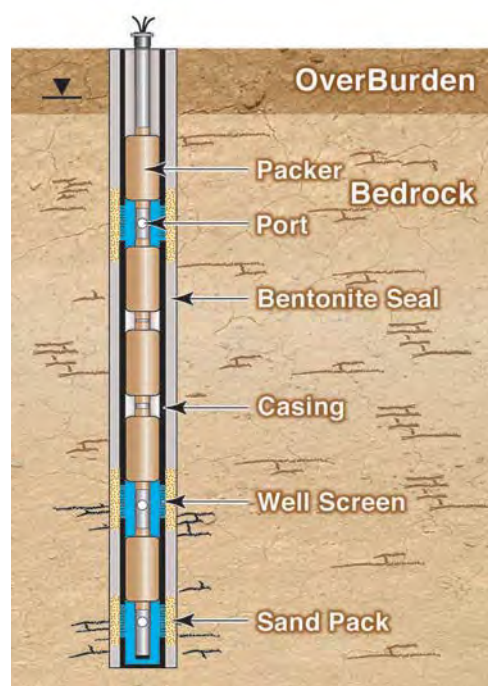
- defining groundwater flow patterns
- performance monitoring of pump and treat systems
- identification and determination of spatial distribution of contaminants
- early warning system/detection of migrating contaminants

Bedrock



Permanent or Removable Packers
in Cored Hole

Bedrock and/or Overburden

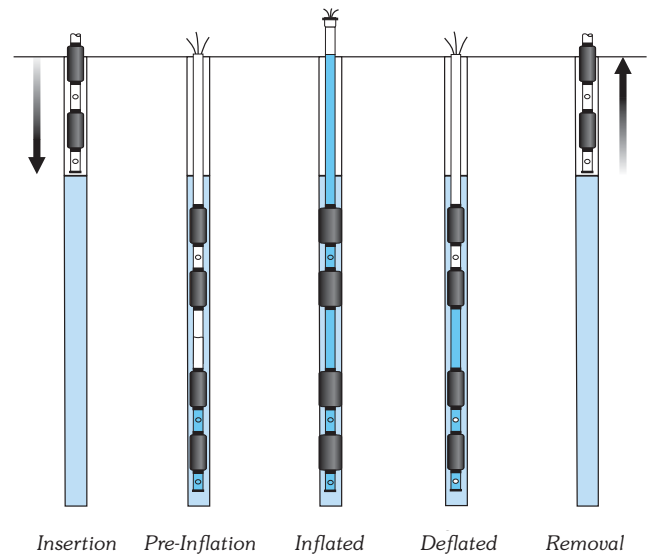
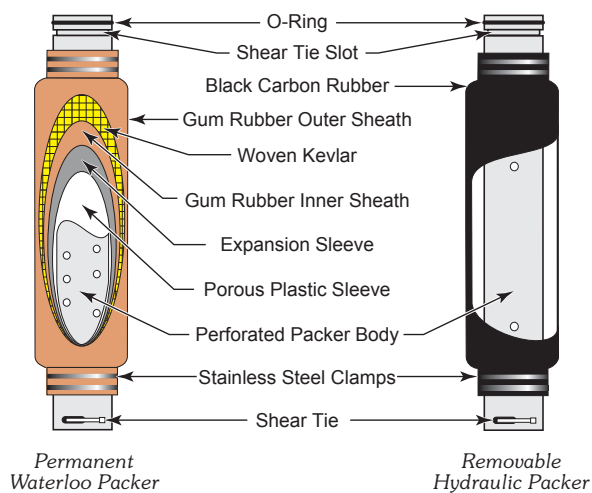


Permanent or Removable Packers
in Casing or Well Screen

Permanent Waterloo Packers

Permanent packers ensure long term integrity of seals in cored bedrock holes and cased wells. They use a water activated expansion sleeve fitted over the perforated packer body. A layer of porous plastic distributes water evenly to the packer expansion material. A Rubber/Kevlar/Rubber sheath envelops the expansion material. The Kevlar layer provides strength to bridge across large fissures. The pliant gum rubber forms an effective seal against the borehole wall.

Water is added to the inside of the sealed casing string after installation. The water passes through the packer body into the expansion sleeve, causing the material to expand. Thus an engineered seal is permanently formed against the borehole wall.



Removable Hydraulic Packers

These packers allow reuse of the system at other zones or new locations. They facilitate system maintenance and borehole decommissioning, simplify grouting of the hole and allow parts of the system to be reused.

Removable packers are made with black carbon rubber and are inflated hydraulically or pneumatically by pressurizing the interior of the Waterloo System casing string. Packers can be constructed to suit various diameters of holes.

Installation within Wellscreen/Casing

A permanent 3" or 4" casing and screen string can be installed by a drilling contractor using typical sand and bentonite placement methods. Then a Waterloo System with either permanent or removable packers can be installed within the screen and casing string, as in a bedrock borehole.

Installs Quickly

Installation of the Waterloo System is quick and easy. Starting with the base plug and lowermost sections, the components are joined together in the order required. As each new port is put into position a new monitoring tube, dedicated pump and/or transducer is connected to it. Successive components are threaded over these tubes, building the casing string, until the System is complete. Typically, installations are completed in a day, using a 3-4 member team. Depending on the depth, a drill rig may be required. Solinst can provide a trained technician to assist with installation.

Overburden Applications

Waterloo Multilevel Systems can be used to monitor multiple zones within unconsolidated formations, as well as in bedrock. There are three methods of System installation:

- Within hollow stem augers or temporary casing. Special screened ports are used and flowing sand formations are allowed to collapse around the System.
- Within hollow stem augers or temporary casing using standard tremie methods to place sand around the ports and bentonite seals in the annular space between the monitoring zones, as the augers or temporary casing is lifted.
- Within a cased and screened well, using packers to seal zones.



Waterloo Systems comprised entirely of stainless steel casing, packers and ports with Teflon-lined tubing were used to monitor contaminant flow in this bedrock application.



Contaminant investigation at a U.S. Air Force Base. Waterloo Systems installed to 700 ft. in overburden using screened and cased wells. Up to 6 zones per hole with dedicated pumps and transducers.



Detailed investigation of PCE delineation in carbonate bedrock. A cost analysis of the 14 Waterloo Systems compared with nested piezometers indicated savings both on the capital costs and on the on-going monitoring.



Landfill site over fractured granite, monitored with five Waterloo Systems. Each System comprised of dedicated Double Valve Pumps and Pressure Transducers in 4-6 intervals to depths of 275 feet (84m). The Multi-Purge Manifold allowed the monitoring of 21 zones to be completed in less than 2 days.



An EPA regulated site in Northeast, USA. This multilevel array allowed a sampling team to purge and sample from 40 monitoring zones across 10 borehole locations in just 4 days. These Waterloo Systems were installed in overburden using preinstalled casing.



750ft. (230m) Waterloo System installation for a deep tunnel assessment study. Three zones monitored with dedicated Double-Valve Pumps and pressure transducers. Picture shows technician obtaining pressure measurements and groundwater samples with portable readout and pump control unit.



An investigation of hydraulic properties beneath a large waste site. Waterloo Multilevel Systems were chosen to allow water quality sampling and to help determine the zones of highest permeability within the aquifer.



A large Midwestern USA research project studying agricultural effects on water quality. 22 Waterloo System installations with 3-4 zones each were installed to depths of 24-60 ft. (7.3-18.3 m) in overburden. Dedicated Double Valve Pumps and Peristaltic Pumps were used.

Appendix H

Easement and Proof of Filing

The Office of the Westchester County Clerk: This page is part of the instrument; the County Clerk will rely on the information provided on this page for purposes of indexing this instrument. To the best of submitter's knowledge, the information contained on this Recording and Endorsement Cover Page is consistent with the information contained in the attached document.



581593529EAS001B

Westchester County Recording & Endorsement Page

Submitter Information

Name: National Real Estate Services Inc. (PICK UP ALL NEV) Phone: 914-686-5600
Address 1: 222 Bloomingdale Road Fax: 914-686-1440
Address 2: Suite 306 Email: nresirecordings@allnyt.com
City/State/Zip: White Plains NY 10605 Reference for Submitter: ACR-8562^

Document Details

Control Number: **581593529** Document Type: **Easement (EAS)**
Package ID: 2018060800281001001 Document Page Count: **9** Total Page Count: **11**

Parties

☐ Additional Parties on Continuation page

1st PARTY

2nd PARTY

1: 81 PONDFIELD RD CO - Other 1: NEW YORK STATE DEPT OF ENVIRONMENTAL CONSERV - Other
2: 2:

Property

☒ Additional Properties on Continuation page

Street Address: 79 PONDFIELD RD Tax Designation: 4-1-5
City/Town: EASTCHESTER Village: BRONXVILLE

Cross- References

☐ Additional Cross-Refs on Continuation page

1: 2: 3: 4:

Supporting Documents

1: TP-584

Recording Fees

Statutory Recording Fee: \$40.00
Page Fee: \$50.00
Cross-Reference Fee: \$0.00
Mortgage Affidavit Filing Fee: \$0.00
RP-5217 Filing Fee: \$0.00
TP-584 Filing Fee: \$5.00
Total Recording Fees Paid: **\$95.00**

Transfer Taxes

Consideration: \$10.00
Transfer Tax: \$0.00
Mansion Tax: \$0.00
Transfer Tax Number: 16163

Mortgage Taxes

Document Date:
Mortgage Amount:

Basic: \$0.00
Westchester: \$0.00
Additional: \$0.00
MTA: \$0.00
Special: \$0.00
Yonkers: \$0.00
Total Mortgage Tax: **\$0.00**

Dwelling Type: Exempt: ☐
Serial #:

RECORDED IN THE OFFICE OF THE WESTCHESTER COUNTY CLERK



Recorded: 07/26/2019 at 04:24 PM
Control Number: **581593529**
Witness my hand and official seal

Timothy C. Idoni

Timothy C. Idoni
Westchester County Clerk

Record and Return To

☐ Pick-up at County Clerk's office

McCullough, Goldberger & Staudt, LLP
1311 Mamaroneck Avenue
Suite 340
White Plains, NY 10605
Attn: Linda B. Whitehead, Esq.

The Office of the Westchester County Clerk: This page is part of the instrument; the County Clerk will rely on the information provided on this page for purposes of indexing this instrument. To the best of submitter's knowledge, the information contained on this Recording and Endorsement Cover Page is consistent with the information contained in the attached document.

581593529EAS001B

Westchester County Recording & Endorsement Page

Document Details

Control Number: **581593529**

Document Type: **Easement (EAS)**

Package ID: 2018060800281001001

Document Page Count: 9

Total Page Count: 11

Properties Addendum

81 PONDFIELD RD 10708

EASTCHESTER

BRONXVILLE

4 1 8

**ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36
OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW**

THIS INDENTURE ^{as J.C.} made this 10th day of June, 2014, between Owner(s) 81 Pondfield Road Company, having an office at c/o McCullough, Goldberger & Staudt, LLP, 1311 Mamaroneck Avenue, Suite 340, White Plains, New York 10605, County of Westchester, State of New York (the "Grantor"), and The People of the State of New York (the "Grantee"), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, is the owner of real property located at the address of 79 and 81 Pondfield Road in the Village of Bronxville, Town of Eastchester, County of Westchester and State of New York, known and designated on the tax map of the County Clerk of Westchester as tax map parcel numbers: Section 4 Block 1 Lots 5 and 8, being the same as that property conveyed to Grantor by deed dated April 28, 1992 and recorded in the Westchester County Clerk's Office in Liber and Page 8220/343. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 0.2873 +/- acres, and is hereinafter more fully described in the Land Title Survey dated April 29, 2014 prepared by William H. Free, Jr., L.L.S. of Ward Carpenter Engineers Inc., which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation

established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the mutual covenants contained herein and the terms and conditions of Brownfield Cleanup Agreement Index Number: C360130-07-13, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement").

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Westchester County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining

contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential or Restricted Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i) and (ii), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

**This property is subject to an Environmental Easement held
by the New York State Department of Environmental Conservation**

pursuant to Title 36 of Article 71 of the Environmental Conservation Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5) the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to: Site Number: C360130
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to: Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and

communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

11. Consistency with the SMP. To the extent there is any conflict or inconsistency between the terms of this Environmental Easement and the SMP, regarding matters specifically addressed by the SMP, the terms of the SMP will control.

Remainder of Page Intentionally Left Blank

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

81 Pondfield Road Company:

By: Paul A. Lee

Print Name: Paul A. Lee

Title: Co-executor and Representative
of Estate of John J. Lee,
Winding-up Partner of
81 Pondfield Road Company Date: 5/29/19

Grantor's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF WESTCHESTER)

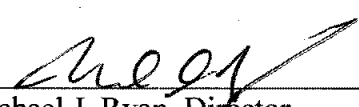
On the 29TH day of MAY, in the year 2019, before me, the undersigned, personally appeared PAUL A. LEE, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Eileen Bartosh
Notary Public - State of New York

EILEEN BARTOSH
Notary Public, State of New York
No. 01BA4790408
Qualified in Dutchess County
Certificate Filed in Westchester County
Commission Expires 11-13-2021

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting by and Through the Department of Environmental Conservation as Designee of the Commissioner,

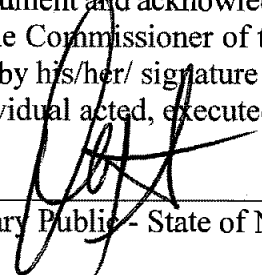
By:


Michael J. Ryan, Director
Division of Environmental Remediation

Grantee's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF ALBANY)

On the 10th day of June, in the year 2019, before me, the undersigned, personally appeared Michael J. Ryan, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.


Notary Public - State of New York

David J. Chiusano
Notary Public, State of New York
No. 01CH5032146
Qualified in Schenectady County
Commission Expires August 22, 2022

SCHEDULE "A" PROPERTY DESCRIPTION

ALL that certain plot, piece or parcel of land, with the building and improvements thereon erected, situate, lying and being in the Village of Bronxville, Town of Eastchester, County of Westchester and State of New York, consisting of parts of Lots 3 and 4 and parts of Lots 18 and 19, in Block H., on a certain map entitled, "Map Number 2 of Lawrence Park and Associated Properties, situated at Bronxville, Westchester Co. N.Y." made by William A. Smith, dated February 17, 1920, and filed in the Office of the County Clerk, Division of Land Records, formerly Register's Office of Westchester County, New York, on March 24, 1920, as Map Number 2237, said plot being more particularly bounded and described as follows:

BEGINNING at a point on the easterly side of Pondfield Road as widened, said point being distant southerly 186.63 feet from the southerly end of a curve having a radius of 15.07 feet and a length of 26.28 feet, which curve connects the southerly side of Garden Road, formerly known as Underhill Avenue, with the easterly side of Pondfield Road, as widened; running thence through Lot 19 and Lot 3, in Block H, as shown on said map, north $76^{\circ} 48'$ east 125 feet to the northeasterly corner of premises being described herein; running thence through Lots 3 and 4 on a course, south $13^{\circ} 12'$ east 99.98 feet to the southeasterly corner of premises being described; running thence south $76^{\circ} 40' 40''$ west through Lots 4 and 18, in Block "H", 125 feet to the easterly side of Pondfield Road as widened; running thence along the easterly side of Pondfield Road as widened, north $13^{\circ} 12'$ west 100.25 feet to the point and place of beginning.

Containing approximately 0.2873 acres more or less.

Said premises also known as Section 4, Block 1, Lots 5 and 8 on the Official Tax Map.