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5 December 2000

Mr. Michael Young
State of Vermont DEC
Waste Management Division
103 South Main Street, West Building
Waterbury, VT 05671-0404

RE: Burnham Property Phase II ESA

Dear Mr. Peterson:

Enclosed for your review and comment is the client approved Phase II Environmental Site Assessment (ESA) for the Burnham Property (former Windsor Town Dump) located in Windsor, Vermont. This report was prepared for the Southern Windsor County Regional Planning Commission (SWCRPC) and this site is included in the Southern Windsor County Brownfields Reuse Project.

Please call if you have any questions on the enclosed report.

Sincerely,

Marin Environmental, Inc.

Carey Hengstenberg
Environmental Scientist

ch/990090104

Enclosure

cc: Diane Kelley, US EPA
Alan Peterson, US EPA
Becky Basch (cover letter only), SWCRPC

MARIN

ENVIRONMENTAL

DRAFT PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT

BURNHAM PROPERTY US ROUTE 5 WINDSOR, VERMONT

22 NOVEMBER 2000

Prepared for:

SOUTHERN WINDSOR COUNTY REGIONAL PLANNING COMMITTEE
ASCUTNEY, VERMONT

Prepared by:

MARIN ENVIRONMENTAL, INC.
RICHMOND, VERMONT

Reference No.990090-044

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SIGNATURE OF REPORT AUTHORS

This report was prepared by the employees of Marin Environmental, Inc. (Marin) whose signatures appear below. Requests for information on the content of this document should be directed to these individuals.

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Environmental Scientist

Approved for Release by:

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EXECUTIVE SUMMARY

On behalf of the Southern Windsor County Regional Planning Commission, Marin Environmental, Inc. (Marin), performed a Phase II Environmental Site Assessment (ESA) at the Burnham Property located on Route 5 in Windsor, Vermont. The Phase II ESA included the installation of six soil borings (SB-1 through SB-6), five soil boring/monitoring wells (MW-1 through MW-5), collection and analysis of ground water samples collected from three monitoring wells (MW-1, MW-4, MW-5) and the collection and analysis of one soil sample from soil boring/monitoring well MW-5. The sampling and analyses were performed in accordance with the Quality Assurance Project Plan (QAPP) submitted to the U.S. Environmental Protection Agency (US EPA) in September 2000. All site activities were performed between 3 October and 30 October 2000.

Portions of the property along a steep embankment were used as the Windsor Town Dump between 1936 and 1954 and are reported to have received industrial waste during the years of operation including cyanide wastes, cutting oils and metal scraps. In 1968, a private residence was built on the property and two bedrock supply wells were drilled. Investigations by the US EPA and Vermont Agency of Natural Resources (VTANR) revealed that one of the on-site water supply wells contained trace amounts of methylene chloride and 1,2-Dichloroethane. This Phase II ESA was initiated due to recommendations made by Michael Young of the Vermont Department of Environmental Conservation (VT DEC) dated 4 April 2000 because of contaminants detected in the on-site bedrock well and reports of past dumping activity on the property.

The results of Marin's Phase II ESA findings are as follows:

- Low levels of toluene (1.6 μg/L), barium (0.106 mg/L), chromium (0.038 mg/L), lead (0.025 mg/L) and arsenic (0.037 mg/L) were detected in groundwater samples collected from monitoring well MW-5 which is located southeast and crossgradient of the former dumping area. Concentrations of arsenic and lead exceed the Preventive Action Levels (PALs) for both metals (0.005 mg/L). No other volatile organic compounds (VOCs), polyaromatic hydrocarbons (PAHs), poly chlorinated biphenyls (PCBs), metals or cyanide were detected in ground water samples collected from MW-5.

- No VOCs, SVOCs, PCBs, metals or cyanide were reported above laboratory detection limits in ground water samples collected from MW-1 and MW-4.

- Photoionization (PID) readings on soil samples collected from MW-5 ranged from 1.7 to 1,650 parts per million (ppm), with the highest reading at 10 feet below ground surface (bgs). No elevated VOCs were detected in a soil sample collected at 10 feet bgs by laboratory analysis of VOCs (Method 8260). PID headspace readings on soil samples collected from MW-1 through MW-4 and SB-1 through SB-6 were at background levels.

- Small amounts of ash and burnt wood were detected in soil borings SB-3 and SB-4 located near the on-site residence and south of the steep embankment where dumping activities occurred. It has been reported that this area was used as a "burning dump". No other evidence of debris was noted in the six soil borings installed in the vicinity of the on-site residence and shed.

- No visual or olfactory evidence of soil contamination (e.g., oily sheens, black staining, petroleum odors, etc.) was noted above the water table during soil investigation activities performed on the property.

- Ground water at the site was encountered at approximately 50 to 70 feet below ground surface. On 18 October 2000, ground water in the overburden aquifer beneath the site appeared to be flowing north to northeast.

Based on these findings, Marin recommends the following:

- The five newly installed monitoring wells should be closed in accordance with Vermont Water Supply Rule, Section 12.3.5, Appendix A, Chapter 21.

- If the two on-site water supply wells are not going to be used then these wells should be closed in accordance with Vermont Water Supply Rule, Section 12.3.5, Appendix A, Chapter 21.

- Alternate water supply sources such as connecting to the municipal water line should be investigated. If the two existing bedrock supply wells are used as water sources, additional testing and monitoring should be performed because of contaminants previously detected in one of the supply wells.

- A Notice to the Land Record stating the prior use of the property will be submitted to the Windsor Town Clerk after it is reviewed by Mike Young of the VT DEC, Sites Management Section. After this notice is entered into the land records, the site should be considered for Site Management Activities Completed (SMAC) designation given that no contamination above VGESs was detected in groundwater collected downgradient of the former dumping area.

- Redevelopment plans should include the proper removal and disposal of debris along the steep embankment of the property.

1.0 INTRODUCTION

This report details the results of a Phase II Environmental Site Assessment (ESA) performed in October 2000 by Marin Environmental, Inc. (Marin) at the Burnham Property located on Route 5 in Windsor, Vermont (Figure 1). This report was prepared for the Southern Windsor County Regional Planning Commission. The Phase II ESA was conducted in accordance with Marin's work plan dated 23 August 2000 and a Quality Assurance Project Plan (QAPP) approved by the United Stated Environmental Protection Agency (US EPA) in a letter dated 18 September 2000 (Appendix A).

1.1 *Background*

The Town of Windsor is considering Brownfields Redevelopment of the Burnham Property located on Route 5 in Windsor, Vermont. Portions of the site were used by the Village of Windsor as an unlined municipal/industrial dump between 1936 and 1954. The site was known as the Windsor Town Dump during this time period. In 1968, a private residence was built on-site. In the early 1970's a two-story barn was constructed on the property. The site is currently unoccupied and the transfer of the property is contingent upon environmental conditions meeting established Vermont Department of Environmental Conservation (VT DEC) standards, which include the Vermont Groundwater Enforcement Standards (VGESs). Several investigations by the Vermont Agency of Natural Resources (VTANR) and the United States Environmental Protection Agency (US EPA) have been conducted at the site, they are summarized below:

- In 1989 VTANR completed a preliminary Assessment (PA) of the former Windsor Town Dump which is located on a portion of the Burnham property. It was reported that the Windsor Town Dump received industrial wastes between 1936 and 1954; including cyanide waste, cutting oils, and metal scraps from the Cone Automatic Machine Company (CAMC), a machine tool company located in Windsor, Vermont. The site was assigned medium priority. There were several private wells identified within a one-mile radius of the site.

- In 1998, Roy F. Weston, Inc. under the direction of the US EPA, completed a Site Inspection (SI) on the Burnham property. Several soil samples were collected from an intermittent stream on-site and two soil samples were collected upgradient from the former dump location. These samples along with the Burnham residential bedrock water supply well samples were analyzed for volatile organic compounds (VOCs), metals, semi-volatile organic compounds (SVOCs), pesticides, poly-chlorinated biphenyls (PCBs), and cyanide. Two VOCs, methylene chloride and 1,2-Dichloroethane were detected in the supply well sample below the VGES and EPA maximum Contaminant Levels (MCL). The EPA report indicated the detected VOCs were "at least partially attributable to on site sources" and determined that a "No Further (federal) Remediation Action Planned" (NFRP) decision was appropriate.

- In 1999, the VT DEC collected a sample from the on-site water supply well for laboratory analysis. Low concentrations of methylene chloride (0.8 μg/L) and 1,2-Dichloroethane (0.6 μg/L) were detected at values above the Vermont Health Advisory (VHA) standard of 0.5 μg/L.

- In March 2000, Ross Environmental Associates under contract to the VTANR, completed a Phase I Environmental Site Assessment (ESA) on the Burnham property. This report in included in Appendix B. The Phase I ESA included sampling of the on site bedrock water supply well for VOCs. No VOCs were detected by EPA Method 524.2 in the samples above the detection limits.

- In a letter dated 4 April 2000, the VTANR requested that additional groundwater data be collected downgradient of the former dump to determine if disposal activities at the dump have impacted groundwater on the property and before a Site Management Activity Completed (SMAC) designation can be issued for the site.

Marin was retained by the SWCRPC in August 2000, to perform a Phase II ESA at the site. The Phase II ESA was designed to collect additional data necessary to characterize environmental conditions at the site. Additional data was collected from the following locations:

- Five monitoring wells were installed downgradient of the former dump area to determine if past activities associated with dump have impacted groundwater at the site (Figure 2); and

- Six soil borings were installed on top of the embankment near the on-site buildings to confirm or refute allegations that trash and debris from the former dump underlie that portion of the property (Figure 2).

2.0 INVESTIGATIVE PROCEDURES AND RESULTS

2.1 *Soil Boring / Monitoring Well Installation*

During drilling activities, brown fine sand and silt was encountered in the soil borings to depths of up to 73 feet. Ground water was encountered at approximately 50 feet below ground surface (bgs). The original estimate for depth to groundwater was 20 feet, therefore, additional drilling was required. A total of six soil borings (SB-1 through SB-6) and five soil boring/monitoring wells (MW-1 through MW-5) were installed at the site between 3 October 2000 and 13 October 2000 to characterize contaminant and hydrogeologic conditions. All five monitoring wells were installed in the assumed downgradient direction from the dump area. No groundwater was encountered in monitoring wells MW-2 and MW-3. Soil borings SB-1 through SB-6 were installed to determine the extent of debris from the former dump. Both Geoprobe and hollow-stem auger drilling methods were used to install the soil boring/monitoring wells at the site. These methods are discussed below. Soil classification and monitoring-well construction details are included on the soil-boring and well-construction logs in Appendix C.

2.1.1 ***Geoprobe***

On 3 October and 4 October six soil borings (SB-1 through SB-6) and three monitoring well/soil borings (MW-1 through MW-3) were completed by Zebra Environmental Corp., of Albany, New York, under direct supervision of Marin personnel. The geoprobe drill rig could not drill deep enough to encounter groundwater at monitoring wells MW-2 and MW-3. The boring locations are shown on Figure 2. The sampling equipment consisted of 4-foot long 2-inch outer-diameter steel sampler. The sampling equipment was fitted with a dedicated polyurethane core liner for each sampling interval.

The monitoring wells were constructed with one-inch diameter, poly-vinyl chloride (PVC) with flush-threaded joints. Wells screens consisted of ten-foot

sections of 0.010-inch factory slotted PVC. All wells were set with ten feet of screen with the exception of MW-1, which was set with twenty feet of screen. Sections of solid PVC were added to bring the tops of the well casings to the ground surface. Clean silica #1 filter sand was placed in the borehole around each well to approximately one foot from ground surface. A granular bentonite seal, approximately one-half to one foot thick, was set above the sand pack. A PVC slip cap was fitted to the top of each well casing.

2.1.2 ***Hollow-stem Auger***

Monitoring wells MW-4 and MW-5 were installed using hollow stem auger rotary drilling methods by Green Mountain Boring of Barre, Vermont. These wells were installed because the geoprobe drill rig could not drill deep enough at MW-2 and MW-3 to encounter groundwater. Soil samples were collected at five-foot intervals from each boring using a two-foot long, split-spoon sampler. Soil recovery was generally fair to good, ranging from 75 to 100 percent. All downhole drilling and sampling equipment was decontaminated during use, as appropriate.

The monitoring wells were constructed with two-inch diameter PVC pipe with ten-foot lengths of 0.010-inch slot screen. The tops of the screen sections were set between 4 to 5 feet above the ground-water level. Sections of solid PVC riser were added to bring the tops of the well casings to approximately 3 feet above ground surface. Clean silica #1 filter sand was placed in the annular space between the borehole and monitoring well to four (MW-4) to eight (MW-5) feet above the slotted interval. A granular bentonite seal, approximately 4 feet thick, was set above the sand pack and the remainder of the annular space was filled with bentonite-cement grout. Each well casing was topped with a watertight expansion cap. Each completed monitoring well was protected by a steel well guard.

The week of 30 October 2000, LeClair Associates of Hanover, New Hampshire surveyed the monitoring wells and soil borings. Monitoring wells and soil borings were surveyed relative to existing site features.

2.2 *Soil-Screening Results*

During the soil-boring activities on 3 and 4 October and 12 and 13 October, soil samples were collected from discrete intervals in each boring for headspace screening with a photoionization detector (PID) for VOCs. PID readings for soil samples collected near the on-site residence and from MW-1 through MW-4 were at background levels ranging from 0.0 to 3.7 parts per million (ppm). Soil samples collected from MW-5 showed elevated PID readings from 5 to 20 feet bgs with the highest reading at 10 feet (1,650 ppm). No VOCs were detected in a soil sample collected from 10 to 12 feet bgs from MW-5 for laboratory analysis of VOCs by EPA Method 8260. Laboratory analytical reports are included in Appendix D.

A Marin environmental scientist screened soil samples from each soil boring for the possible presence of VOCs using a Photovac PE 2020 portable PID. The PID was calibrated in the field with an isobutylene standard gas referenced to benzene. Soil samples were placed into a polyethylene bag, which was then sealed, agitated, and allowed to equilibrate. The PID probe was inserted into the bag, and the highest headspace reading was recorded. It should be noted that PID readings from the polyethylene bags used to screen soils were up to 2.8 ppm in empty bags. PID screening results are included on the boring logs in Appendix C.

2.3 *Ground Water Analytical Results*

Groundwater samples were collected from monitoring wells MW-1, MW-4 and MW-5 for laboratory analysis of VOCs (Method 8260), Polyaromatic hydrocarbons (PAHs) (Method 8270C), RCRA 8 metals (Method 200.7, 245.1), PCBs (Method 608) and cyanide (Method 335.2). Analytical results indicate that concentrations of barium were

detected in ground water samples collected from MW-1, MW-4 and MW-5 at levels below the Vermont Groundwater Enforcement Standards (VGESs) and the Preventive Action Levels (PALs). Low levels of toluene and chromium were detected in MW-5 at concentrations below the VGESs and PALs. Toluene was detected 1.6 micrograms per liter (μg/L) and chromium at 0.038 milligrams per liter (mg/L) in groundwater samples collected from MW-5. Lead was detected in MW-5 at 0.025 mg/L, exceeding the PAL of 0.01 mg/L. Arsenic was detected in the duplicate sample MW-6, collected from MW-5, at 0.037 mg/L exceeding the PAL of 0.005 mg/L. Analytical results are included in Appendix D.

Ground water samples were collected using a solnist small diameter bladder pump and dedicated 3/8-inch polypropylene tubing. Ground water was purged until pH, conductivity and temperature stabilized or until three well volumes had been purged. Water levels were measured periodically to insure that there was not significant draw down. Detailed sampling notes are provided in Appendix F. Samples were collected directly from the tubing in the following order; VOCs, SVOCs, PCBs, cyanide and metals. Low flow rate and air pressure build up in the tubing and made it difficult to collect samples for VOC analysis, therefore, groundwater was collected in a clean glass jar and immediately transferred into the appropriate sampling jars. Purge water was discharged on the ground adjacent to each monitoring well.

The pump was decontaminated between each well using a non-phosphate detergent and distilled water. Dedicated tubing was used at each well to collect samples. Equipment blank samples were collected for analysis of VOCs, SVOCs, PCBs, metals, and cyanide after the last well was sampled using the solnist pump, dedicating tubing and distilled water. A trip blank sample was analyzed for VOCs by EPA Method 8260. All samples were transported under chain-of-custody in an ice-filled cooler to Spectrum Analytical, Inc. of Agawam, Massachusetts.

2.4 *Location of Former Dump*

Information regarding the location of the former dump area was obtained through six soil borings to 12 feet installed near the on-site residence and barn and visual observation on 3 October 2000. The purpose of this portion of the investigation was to determine the extent of potential landfill material that accumulated during the years of operation of the former Windsor Town Dump. Soil boring locations and approximate area of the dump are shown on Figure 2, soil boring logs are included in Appendix C. Photodocumentation in included in Appendix E.

It was reported by two long time residents of Windsor, Bob Estes and Elton Davis that during the years of operation, most of the material was burned on the top of the embankment near the on-site residence. They also speculated that it is possible that the portion of the property where the residence and barn are located were built on top of landfill material.

The soils samples collected from SB-1 through SB-6 were composed of brown fine to medium sand and silt with no evidence of landfill material. Some black ash and pieces of burnt wood were detected in the top three to six inches of soil at SB-3 and SB-4. Soil samples were screened for the presence of VOCs using a PID. All readings were at background levels.

The area of the former dump was determined using visual observations of surficial debris. The dump area extends laterally east of the out-of service-supply well to the wooded area near MW-5. The dump area was identified by rusty glass, metal debris, drums, oil cans, car parts, and glass jars.

2.5 *Quality Assurance/Quality Control*

2.5.1 ***Field QA/QC***

Duplicate and equipment blank samples were collected to ensure that adequate quality assurance/quality control (QA/QC) standards were maintained in the field. The trip blank sample was analyzed for VOCs by EPA Method 8260. The equipment blank sample was analyzed for VOCs (8260), SVOCs (8270C), PCBs (608), RCRA 8 metals (200.7, 245.1) and total cyanide. The equipment blank sample was collected through the solnist pump and polypropylene tubing after ground-water samples were collected from the three monitoring wells and decontamination procedures. All field procedures were conducted in accordance with Marin standard protocols. No contaminants were detected in the equipment blank sample.

A blind duplicate sample was collected from MW-5 and was labeled MW-6. Low levels of toluene, barium, chromium and lead were detected in the duplicate sample within four percent of the original sample. Arsenic was detected in the duplicate sample at levels above the PAL. Arsenic was not detected above the laboratory reporting limits for the original sample labeled MW-5.

2.5.2 ***Laboratory QA/QC***

Laboratory QA/QC results and data verification are included in Appendix F. The laboratory QA/QC included method blank sample results, laboratory control spike sample results, matrix spike sample results and matrix spike duplicate sample results. All method blank sample results are reported below the minimum analytical detection levels. Results for the replicate spiked samples are within acceptable criteria. Results for the laboratory control spike are within acceptable criteria except as follows:

DATE ANALYZED	PARAMETER	RECOVERY %
10/19/00	Dichloromethane	160
10/23/00	Dichloromethane	134

Acceptable Criteria:

Recovery: 80 to 120%

RPD: <20%, Laboratory matrix spike - 2.75%

2.5.3 ***Data Usability***

2.5.3.1 Field Duplicate Sample Results

An assessment of the data usability is based on an evaluation of the precision and accuracy of the analytical results with respect to the data quality objectives. The data quality objectives are to characterize the contaminant concentrations in the environmental media for comparison to established health-based risk numerical cleanup criteria. The QA/QC results, including those that lie outside of the acceptable criteria, indicate that the data meet the data quality objectives and thus are usable.

An analysis of field duplicate samples provides a measure of the overall precision and accuracy of the sampling in addition to analytical methodology. Results of the field duplicate, trip blank and equipment blank samples indicate an acceptable degree of precision and accuracy of the data. The analytical results from the field duplicate sample were within three percent of the original results.

2.5.3.2 Spiked Sample Recovery Results

The recovery percentage of a known concentration of a contaminant added to a particular sample is a measure of the analytical precision. The

acceptable recovery criteria are typically 80 to 120 percent of the known concentration. As noted above, the recovery percentages of several analyses fell outside of the acceptable criteria. In general, the recovery percentages are only slightly above the maximum acceptable criterion of 120 percent. In addition, the reported concentrations of those parameters are well below the established cleanup criteria. Therefore, the data are deemed usable.

The relative percent difference (RPD) between replicate spike recoveries is a measure of the analytical accuracy. The range of acceptable RPDs is from 0 to 20 percent. All RPDs were within the accepted range, therefore, the data quality objectives and the data are usable.

2.6 *Ground Water Flow*

Based on the limited hydrogeologic data collected at the site on 18 October 2000, ground-water flow in the unconfined surficial aquifer at the site is to the north-northeast towards the Connecticut River. The ground water flow gradient between wells MW-2 and MW-3 is seven percent. The vertical ground-water flow components at the site, the hydraulic relationship between the shallow unconfined aquifer and the bedrock aquifer, are currently unknown.

Fluid levels were measured in three of the on-site monitoring wells (MW-1, MW-4, MW-5) on 18 October 2000. Fluid levels were not measured in monitoring wells, MW-2 and MW-3 because they were found dry on 18 and 19 October 2000. Depth to ground water in the on-site monitoring wells ranged from 46.76 (MW-1) to 70.09 (MW-5) feet below ground surface (bgs). Static water elevations were computed for each monitoring well by subtracting the measured depth to water readings from the surveyed top-of-casing elevations, which are relative to an arbitrary datum of 100.00 feet above mean level. Water level measurements and elevation calculations are presented in Table 2. A ground water-table contour map was prepared using these data (Figure 3).

3.0 CONCLUSIONS

Based on the results of the site investigation described above, Marin concludes the following:

- Low levels of toluene (1.6 µg/L), barium (0.106 mg/L), chromium (0.038 mg/L), lead (0.025 mg/L) and arsenic (0.037 mg/L) were detected in groundwater samples collected from monitoring well MW-5 which is located southeast and crossgradient of the former dumping area. Concentrations of arsenic and lead exceed the PALs for both metals (0.005 mg/L). No VOCs, PAHs, PCBs, metals or cyanide were detected in ground water samples collected from MW-5.

- No VOCs, SVOCs, PCBs, metals or cyanide were reported above laboratory detection limits in ground water samples collected from downgradient monitoring wells MW-1 and MW-4.

- PID readings on soil samples collected from MW-5 ranged from 1.7 to 1,650 ppm, with the highest reading at 10 feet bgs. No elevated VOCs were detected in a soil sample collected at 10 feet bgs by laboratory analysis of VOCs (Method 8260). PID headspace readings on soil samples collected from MW-1 through MW-4 and SB-1 through SB-6 were at background levels.

- Small amounts of ash and burnt wood were detected in soil borings SB-3 and SB-4 located near the on-site residence and south of the steep embankment where dumping activities occurred. It has been reported that this area was used as a "burning dump". No other evidence of debris was noted in the six soil borings installed in the vicinity of the on-site residence and shed.

- No visual or olfactory evidence of soil contamination (e.g., oily sheens, black staining, petroleum odors, etc.) was noted above the water table during soil investigation activities performed on the property.

- Ground water at the site was encountered at approximately 50 to 70 feet bgs. On 18 October 2000, ground water in the overburden aquifer beneath the site appeared to be flowing north to northeast.

4.0 RECOMMENDATIONS

On the basis of the results of this investigation and the conclusions stated above, Marin recommends the following:

- The five newly installed monitoring wells should be closed in accordance with Vermont Water Supply Rule, Section 12.3.5, Appendix A, Chapter 21.

- If the two on-site water supply wells are not going to be used then these wells should be closed in accordance with Vermont Water Supply Rule, Section 12.3.5, Appendix A, Chapter 21.

- Alternate water supply sources such as connecting to the municipal water line should be investigated. If the two existing bedrock supply wells are used as water sources, additional testing and monitoring should be performed because of contaminants previously detected in one of the supply wells.

- A Notice to the Land Record stating the prior use of the property will be submitted to the Windsor Town Clerk after it is reviewed by Mike Young of the VT DEC, Sites Management Section. After this notice is entered into the land records, the site should be considered for Site Management Activities Completed (SMAC) designation given that no contamination above VGESs was detected in groundwater collected downgradient of the former dumping area.

- Redevelopment plans should include the proper removal and disposal of debris along the steep embankment of the property.

5.0 LIMITATIONS

This report was completed by Marin Environmental, Inc. (Marin) for the sole use of the Southern Windsor County Regional Planning Commission and its representatives and attorneys, in connection with an assessment of on-site environmental conditions. Use of this report by any other person or for any other use is not authorized except with prior written consent of Marin.

The work was undertaken to assess environmental conditions specifically on the subject property in accordance with generally accepted engineering and hydrogeological practices. No other warranty, express or implied, is made. Absolute assurance that any and all possible contamination at the site was identified cannot be provided.

The report conclusions are based, in part, on information provided by the client, their agents, or third parties, including state or local officials. Marin assumes no responsibility for the accuracy and completeness of the information.

Where visual observations are included in the report, they represent conditions at the time of the inspection, and may not be indicative of past or future site conditions.

6.0 REFERENCES

Reports

Ross Environmental Associates (R.E.A.), March 2000, "Site Assessment Report – Former Windsor Town Dump".

Roy F. Weston, Inc, July 1999, "Final Site Inspection Report for Windsor Town Dump, Windsor, Vermont".

Vermont Department of Environmental Conservation, August 1989, "Preliminary Assessment – Windsor Town Dump".

Interviews and Telephone Conversations

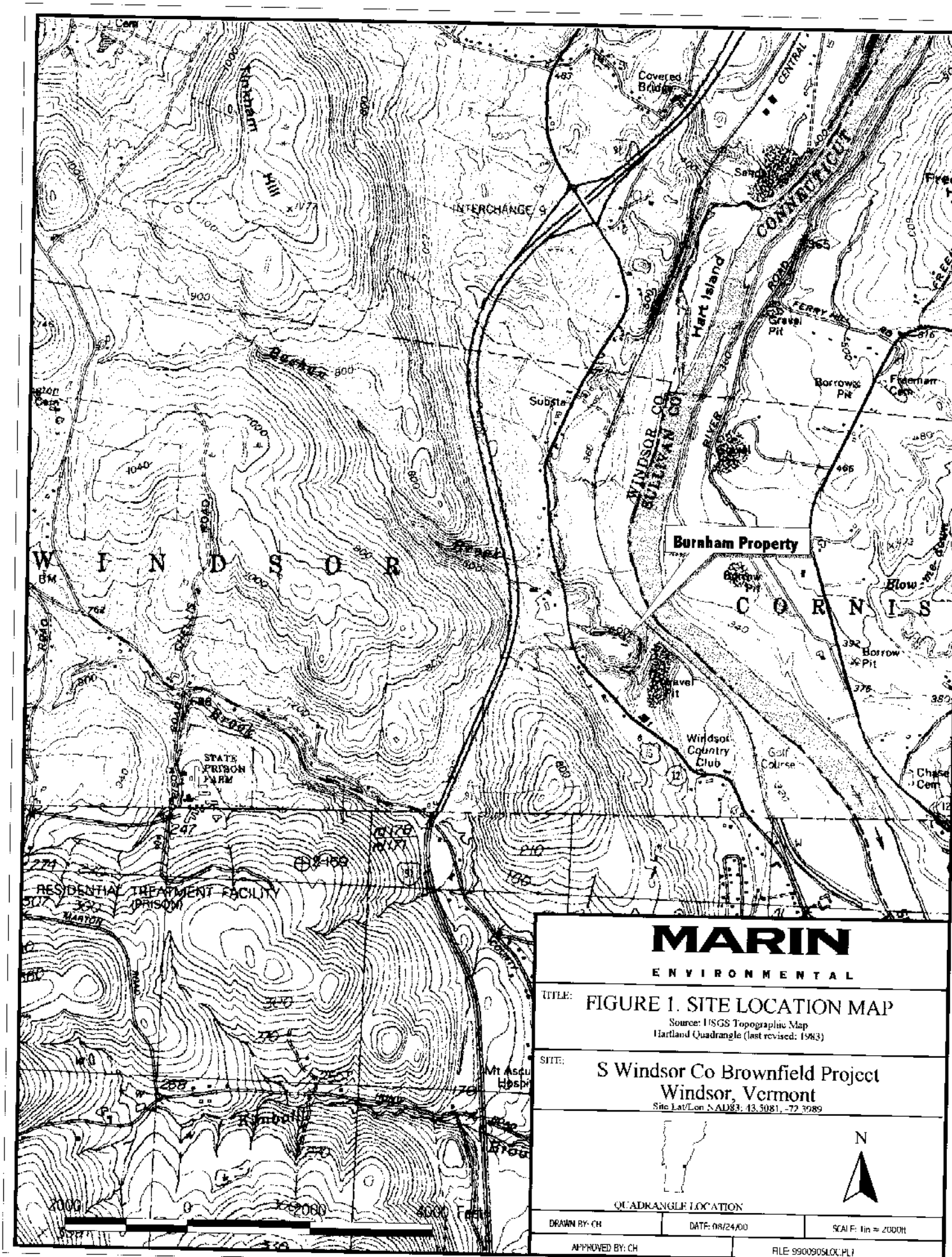
Elton Davis, 2000. Telephone conversation with Windsor resident Elton Davis, September 2000.

Bob Estes, 2000. Conversation with Windsor Resident Rob Estes, September 2000.

Gordon Stone, 2000. Telephone conversations with Executor of Delma Burnham Estate, Mr. Gordon Stone, September, 2000.

FIGURES

Figure 1	Site Location
Figure 2	Site Plan
Figure 3	Ground Water Elevation Map
Figure 4	Contaminant Distribution Map



MARIN

ENVIRONMENTAL

TITLE: FIGURE 1. SITE LOCATION MAP

Source: USGS Topographic Map
Hartland Quadrangle (last revised: 1983)

SITE: S Windsor Co Brownfield Project
Windsor, Vermont

Site Lat/Lon NAD83: 43.5081, -72.3989

QUADRANGLE LOCATION

N

DRAWN BY: CH	DATE: 08/24/00	SCALE: 1in = 2000ft
APPROVED BY: CH	FILE: 9900909SLOC.PLT	

PARCEL 430000.841
27.8± ACRES

WELL (out of service)

MW-1

MW-2 (DRY)

MW-4

MW-3 (DRY)

stone culvert

100 ft TO CONNECTICUT RIVER

APPROXIMATE LOCATION OF TOP OF BANK

AREA OF FORMER DUMP

SB 2

SB 3

SB 1

SB 4

SB 6

SB 5

MW-5

well

house

garage

shed

WILLIAM ECKERT & ROBERT, RALPH & DOROTHY FARNSWORTH

24" CMP

exist 1" solid iron rod

ROUTE 5

STEPHEN & CAROLE BROUGHTON

ESTELLE C. ALLARD REVOCABLE TRUST

ALL LOCATIONS ARE APPROXIMATE

LEGEND

MW-2 MONITORING WELL
SB 2 SOIL BORING
EXISTING GRANITE OR STONE BOUND
EXISTING CONCRETE BOUND
UTILITY POLE
FENCE LINE
STONE WALL
RAILROAD

0 80'

NOTE: MAP BASED ON SURVEY PROVIDED BY K.A. LECLAIR ASSOC., INC. LAND SURVEYORS
AREA OF FORMER DUMP BASED ON EPA SI REPORT (ROY F. WESTON, 1998) AND MARIN SITE INSPECTION PERFORMED IN SEPT. 2000.

MARIN
ENVIRONMENTAL

FIGURE 2.
SITE MAP
With Monitoring Well Locations

Burnham Property
Windsor, VT

DRAWN BY: MHF	DATE: 11/02/00	SCALE: 1"= 80'
APPROVED BY: CH	FILE No.: 990090-044R01	

PARCEL 430000.841
27.8± ACRES

WELL (out of service)

APPROXIMATE LOCATION OF TOP OF BANK

AREA OF FORMER DUMP

MW-1 [20.24']

MW-2 (DRY)

MW-4 [18.33']

MW-3 (DRY)

MW-5 [29.10']

stone culvert

100 ft TO CONNECTICUT RIVER

18'
20'
22'
24'
26'
28'

SB 1
SB 2
SB 3
SB 4
SB 5
SB 6

well

house

garage

shed

WILLIAM ECKERT & ROBERT, RALPH & DOROTHY FARNSWORTH

24" CMP

exist 1" solid iron rod

ROUTE 5

STEPHEN & CAROLE BROUGHTON

ESTELLE C. ALLARD REVOCABLE TRUST

ALL LOCATIONS ARE APPROXIMATE

LEGEND

MW-2	MONITORING WELL
SB 2	SOIL BORING
	EXISTING GRANITE OR STONE BOUND
	EXISTING CONCRETE BOUND
	UTILITY POLE
	FENCE LINE
	STONE WALL
	RAILROAD
[29.10']	GROUND WATER ELEVATION (FT.)
28'	GROUND WATER ELEVATION CONTOUR (FT.)
	INFERRED GROUND WATER FLOW DIRECTION

0 80'

NOTE: MAP BASED ON SURVEY PROVIDED BY K.A. LECLAIR ASSOC., INC. LAND SURVEYORS
AREA OF FORMER DUMP BASED ON EPA SI REPORT (ROY F. WESTON, 1998) AND MARIN SITE INSPECTION PERFORMED IN SEPT. 2000.

MARIN
ENVIRONMENTAL

FIGURE 3.
GROUNDWATER CONTOUR MAP
Monitoring Date: 18 October 2000

Burnham Property
Windsor, VT

DRAWN BY: MHF	DATE: 11/02/00	SCALE: 1"= 80'
APPROVED BY: CH	FILE No.: 990090-044R01	

PARCEL 430000.841
27.8± ACRES

WELL (out of service)

MW-1
BARIUM= 0.015
VOCS, SVOCS, PCBS,
CYANIDE, METALS= ND

MW-2
(DRY)

MW-4
BARIUM= 0.015
VOCS, SVOCS, PCBS,
CYANIDE, METALS= ND

MW-3
(DRY)

stone culvert

100 ft TO CONNECTICUT RIVER

APPROXIMATE LOCATION OF TOP OF BANK

AREA OF FORMER DUMP

SB 2

SB 3

SB 1

well

house

garage

SB 4

SB 6

SB 5

shed

MW-5
TOLUENE= 1.6
BARIUM= 0.106
CHROMIUM= 0.038
LEAD= 0.025
VOCS, SVOCS, PCBS,
CYANIDE, METALS= ND

WILLIAM ECKERT & ROBERT, RALPH & DOROTHY FARNSWORTH

24" CMP

exist 1" solid iron rod

ROUTE 5

STEPHEN & CAROLE BROUGHTON

ESTELLE C. ALLARD REVOCABLE TRUST

LEGEND

MW-2	MONITORING WELL
SB 2	SOIL BORING
	EXISTING GRANITE OR STONE BOUND
	EXISTING CONCRETE BOUND
	UTILITY POLE
	FENCE LINE
	STONE WALL
	RAILROAD
VOC= ND	VOLATILE ORGANIC COMPOUNDS
SVOCS= ND	SEMI-VOLATILE ORGANIC COMPOUNDS
METALS	RCRA 8, ARSENIC, BARIUM, CADMIUM, CHROMIUM, LEAD, SELENIUM, SILVER, MERCURY, CYANIDE (TOTAL SOLID)
PCB'S	POLYCHLORINATED BIPHENYLS
ND	NONE DETECTED

0 80'

ALL LOCATIONS ARE APPROXIMATE

NOTES: 1) MW-5 SAMPLED ON 20 OCTOBER 2000
2) MW-2, MW-3 DRY ON 18 & 20 OCTOBER 2000.
3) MAP BASED ON SURVEY PROVIDED BY K.A. LECLAIR ASSOC., INC. LAND SURVEYORS
4) AREA OF FORMER DUMP BASED ON EPA SI REPORT (ROY F WESTON, 1998) AND MARIN SITE INSPECTION PERFORMED IN SEPT. 2000.

MARIN
ENVIRONMENTAL

FIGURE 4.
CONTAMINANT DISTRIBUTION MAP
Monitoring Date: 18 October 2000

Burnham Property
Windsor, VT

DRAWN BY: MHF	DATE: 11/02/00	SCALE: 1"= 80'
APPROVED BY: CH		FILE No.: 990090-044R01

TABLES

Table 1	Laboratory Analytical Results
Table 2	Ground Water Elevation Calculations

Table 1
Summary of Ground-Water Analytical Results

Burnham Property
Windsor, VT

Sample Identification	MW-1	MW-4	MW-5	Duplicate	Equipment Blank	VGES	PAL
Collection Date	10/18/00	10/18/00	10/20/00	10/20/00	10/20/00		
RCRA 8 METALS (mg/L)							
Barium	0.015	0.027	0.106	0.109	BDL<0.005	2.0	1.0
Chromium	0.009	BDL<0.005	0.038	0.038	BDL<0.005	0.1	0.05
Lead	BDL<0.0075	BDL<0.0075			BDL<0.0075	0.015	0.005
Arsenic	BDL< 0.015	BDL< 0.015	BDL< 0.015			0.050	0.005
VOLATILE ORGANIC COMPOUNDS (VOCs) (µg/L)							
Toluene	BDL<1.0	BDL<1.0	BDL<1.0	←	1.6	1,000	500
POLYCYCLIC AROMATIC HYDROCARBONS (PAHS) (µg/L)							
None Detected							
POLYCHLORINATED BIPHENYLS (PCSs) (µg/L)							
None Detected							
CYANIDE, total (µg/L)							
None Detected							

Sample Identifica	MW-5-10
Collection Date	**10/20/2000**
VOLATILE ORGANIC COMPOUNI	
None Detected	

Notes:
VGES – Vermont Groundwater Enforcement Standard
PAL – Preventive Action Level
Exceedences of PAL are lightly shaded.
Exceedences of VGES are heavily shaded.
µg/L micrograms per liter
BDL – Below Detection Limit

Table 2
Ground-Water Elevation Calculations

Burnham Property
Windsor, VT

Well I.D.	Top of Casing Elevation	Depth to Water (ft, bgs)	Water Table Elevation
MW-1	67.00	46.76	20.24
MW-4	71.36	53.03	18.33
MW-5	100.00	70.90	29.10

Notes:
Elevations reported in feet relative to arbitrary site datum of 100.00 feet.
ft, bgs - feet, below ground surface

APPENDICES

Appendix A	US EPA Approval Letter for the QAPP
Appendix B	Phase I ESA Report (R.E.A.)
Appendix C	Soil Boring/Monitoring Well Construction Logs
Appendix D	Laboratory Reports: Soil and Ground Water
Appendix E	Photodocumentation
Appendix F	QA/QC Documentation
Appendix G	Notice to Land Records

APPENDIX A

US EPA APPROVAL LETTER FOR QAPP

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
Office of Environmental Measurement and Evaluation
60 Westview Street, Lexington, MA 02421-3185

MEMORANDUM

Date: September 18, 2000

Subject: QA approval of the Brownfields Quality Assurance Project Plans for 29 Union Street (Old Windsor High School), the Goodyear Industrial Campus, and the Burnham Property sites in Windsor, Vermont (September 2000).

From: Alan Peterson, QA Chemist

To: Diane Kelley, EPA Project Manager

The Quality Assurance Unit has reviewed Marin Environmental's response to comments on the Union St., Goodyear, and Burnham QAPPs (Dated Sept. 13, 2000). Based on the revisions provided and the following notes, the EPA QA Unit approves the plan for site work.

Notes:

1) 29 Union Street QAPP (Response to EPA Comment # 3): Contrary to Marin Environmental's response, they do not intend to collect the soil sample for VOC analysis (from the floor drain in the automotive shop) according to SW-846 Method 5035. In a follow-up telephone call with Kim Lockard, Task Manager for these projects, she stated that the VOC soil sample would be collected un-preserved and shipped to the laboratory in a cooler on ice.

2) Burnham Property (Response to EPA Comment #2): This note also applies to the groundwater sampling techniques that will be used at the Goodyear site. Contrary to Marin Environmental's response, they do not intend to collect groundwater samples for metals analysis according to their Field SOP-6c, Low Flow Purging and Sampling Procedure. Marin will be using a modified sampling method incorporating a submersible pump, capable of low flow rates, to collect the samples. Temperature, pH and specific conductance will be checked as an indicator for well stabilization (a flow-through cell will not be used). Note, this sample collection procedure is only being used to collect groundwater samples for metals analysis. Groundwater samples for all other parameters will be collected using dedicated bailers. Marin will be submitting, as an attachment to their response to comments, an SOP detailing their modified low flow groundwater sampling technique.

Should you have any questions, please feel free to contact me at 781-860-4322.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
Office of Environmental Measurement and Evaluation
60 Westview Street, Lexington, MA 02421

MEMORANDUM

Date: September 12, 2000

Subject: QA review of the Brownfields QAPP for the Burnham Property (Former Windsor Town Dump), in Windsor, Vermont (September 2000).

From: Alan Peterson, QA Chemist

To: Diane Kelley, EPA Project Manager

The above document was reviewed by the Quality Assurance Unit. Below are our comments.

GENERAL COMMENTS

1) It is recommended that the groundwater flow direction be determined as part of the project tasks.

SPECIFIC COMMENTS

2) Sampling Design (page 9 of 28): The last paragraph on this page states that the groundwater samples will be collected using low flow sampling in accordance with Marin's Standard Operating Procedures (SOPs). However, the groundwater sampling SOP provided in Exhibit 5 is for the bailer method. Please clarify which sampling procedure will be used.

Should you have any questions concerning this review, please feel free to contact me at 781-860-4322.

APPENDIX B

PHASE I ESA REPORT (R.E.A.)

ROSS ENVIRONMENTAL ASSOCIATES, INC.

Hydrogeology, Water Quality,
Contaminant Fate & Transport, Remediation,
& Regulatory Compliance and Permitting

MAR 13 2000

R.E.A. Ross Environmental Associates, Inc.

10 March, 2000

Mr. Michael Young
Depart. of Environmental Conservation
Waste Management Division
103 So. Main Street, West Bldg
Waterbury, Vermont 05671-0404

RE: *Site Assessment Report for the Former Windsor Town Dump – (SMS site # 77-0092)*

Dear Mike:

Enclosed is one copy of the final report for the Site Assessment completed at the Former Windsor Town Dump located on U.S. Route 5 in Windsor, Vermont.

Please feel free to call me, if you have any questions regarding the investigation findings or recommendations.

Sincerely,

Robert J. Ross, CGWP
Principal Hydrogeologist

Rjr/ref: 20003CL01

P.O. Box 1533 Stowe, Vermont 05672
phone 802 253 4280 fax 802 253 4829

EXECUTIVE SUMMARY

The site assessment of the former Windsor Town Dump property in Windsor, Vermont has included: a review of pertinent local, state, and federal records, a review of historical maps and photographs, an inspection of the site and surrounding area, and sample collection with laboratory analysis of samples from the on-site supply well.

Based on the findings of this site investigation, Ross Environmental Associates, Inc. ***(R.E.A.)*** recommends that the VT DEC consider the site for "Sites Management Activities Completed" (SMAC) status. However, it should be noted that no evaluation of ground-water quality in the overburden formation downgradient of the former disposal area was performed as part of this investigation. Also, as a precautionary measure ***R.E.A.*** suggests the following:

1. A visual inspection and site walk-over of the former dumping areas should be completed in late spring after the snow cover is gone.
2. Abandoning the existing on-site supply well should be considered along with connecting the property to the municipal drinking-water system.
3. Property deed should reflect past land use of the property, which included almost 20 years of municipal waste disposal.
4. Future use and/or development of the property should consider minimizing excavation in the former disposal areas.
5. The Town of Windsor should be informed of the possibilities of cross connections to the municipal drinking-water system from the abandon supply wells located along U.S. Route 5.

The significant findings of this site assessment are summarized below:

- The former Windsor Town Dump was in operation from approximately 1936 to 1954.
- After the dumping operations ceased in 1954, the property was used for agricultural purposes and in 1968 a private residence was built on site.
- The VT DEC completed a Preliminary Assessment (PA) of the property in August 1989. The site was assigned a medium priority due to "Alleged disposal of cyanide wastes, cutting oils, and metal chips from a machine tool shop."

1.0 INTRODUCTION

1.1 Purpose of the Study

The primary purpose of this site assessment was to evaluate the potential adverse environmental impacts historical land-use at the former Windsor Town Dump may have had on the property, and to collect water samples from the on-site supply well for laboratory analysis.

1.2 Property Location and Ownership

The subject property is located on the eastern side of U.S. Route 5 (North Main Street) in the town of Windsor, Vermont. The property encompasses approximately 31.8 acres, and is occupied by two buildings, a single-family house and a detached barn. A majority of the site is undeveloped woodland and open fields. The site location is shown in Figure 1 in Appendix A. The geographic coordinates for the site are Latitude 43° 30' 27" (North) and Longitude 72° 23' 56" (West).

1.3 Previous Environmental Site Assessments

No previous environmental site assessment reports pertaining to the subject property have been prepared by ***R.E.A.***; however, several environmental reports pertaining to the subject property were encountered during the research portion of this project. A chronological list of the previous site assessments and correspondence is provided below.

- US EPA. 1989. "Potential Hazardous Waste Site – Preliminary Assessment. Windsor Town Dump Windsor, Vermont." EPA ID # VTD982542854. Prepared by the Vermont Agency of Natural Resources. 30 August 1989.
- US EPA. 1998. "Trip Report – Windsor Town Dump Windsor, Vermont." CERCLIS No. VTD982542854. TDD No. 98-05-0037. Prepared by Roy F. Weston, Inc. 5/23/98.
- US EPA. 1999. "Final Site Inspection Report for Windsor Town Dump – Windsor, Vermont." CERCLIS No. VTD982542854. TDD No. 98-05-0109. Prepared by Roy F. Weston, Inc. 28 July 1999.
- VT DEC. 2000. Letter to Mr. Gordon Stone (Executor of Delma Burnham Estate) from Michael Young (Hazardous Materials Specialist – VT DEC). RE: Water Supply Analytical Results. 4 January 2000.

2.3 Site Reconnaissance

On 4 February 2000, an ***R.E.A.*** hydrogeologist performed a site visit, which included a windshield survey of the site and surrounding property. At that time, ***R.E.A.*** identified adjacent land use and inspected the general site setting.

In general, the property appeared to be well maintained. A single-story ranch-style house and a detached barn are located on site approximately 1,000 feet east of U. S. Route 5. The Windsor Industrial Park is located north of the site, and private residences occupy a majority of the property to the west. Route 5 Sand & Gravel occupies the abutting property to the southeast. Lance International and the Windsor Country Club are located to the south.

No visual evidence of dead or stressed vegetation, stained soils, discharge points, areas of dumping, fill or subsidence, or above-grade dry wells were observed on site due to snow cover.

2.4 Site Geology/Hydrogeology

The surficial geology of the area is mapped as lake bottom sediments, consisting of silt, silty clay and clay, as shown on the Surficial Geologic Map of Vermont. Ice contact outwash deposits, such as kame terraces, are also shown in the area, as are alluvial deposits along the Connecticut River (Doll 1970). The Geologic Map of Vermont indicates that the bedrock underlying the site consists of black calcite-quartz schist of the Gile Mountain formation (Doll 1961). Two lineaments are reportedly located in the vicinity of the site; one trending northeast-southwest and the other trending northwest-southeast (USGS 1959). No bedrock was observed at the site; however, bedrock outcrops were observed on the western side of U.S. Route 5, approximately 1,100 feet to the southwest, and along Inter-State 91 approximately 1,900 feet northwest of the site. Approximate locations of bedrock outcrops and possible lineaments are shown on Figure 3 in Appendix A.

Surface water runoff at the site appears to be controlled by surface topography with flow predominantly to the north, south and east. Surface topography at the site suggests that surficial ground water flow may have a radial flow component to the north, east, and south with the regional trend being toward the Connecticut River to the east-southeast (USGS 1959).

site drinking water supply well, which detected the presence of low concentrations of 1,2-dichloroethane (1.0/1.4 ug/L) and methylene chloride (1.2/2.1 ug/L). Based on the findings of the SI, EPA determined that a "No Further (federal) Remedial Action Planned" (NFRAP) decision was appropriate.

In November 1999, the VT DEC collected a water sample from the on-site supply well for laboratory analysis. Low concentrations of 1,2-dichloroethane (0.6 ug/L) and methylene chloride (0.8 ug/L) were detected at that time. Due to the presence of 1,2-dichloroethane above the Vermont Health Advisory (VHA) of 0.5 ug/L, the VT DEC indicted that additional water supply sampling would be preformed.

3.4 Historical Aerial Photographs

Review of the 1968 aerial photograph of the site and surrounding area, shows the subject property primarily as open undeveloped land. No buildings are visible on the subject property in the 1968 aerial photograph, which is consistent with information obtained during interviews completed as part of this assessment. No evidence was observed of activities related to past dumping operations on-site; although the clarity of the aerial photograph was fair to poor. The 1974 aerial photograph and orthophotograph covering the site shows the house and barn, but no areas of possible dumping or soil disturbance are visible. A copy of the 1974 orthophotograph is included as Figure 4, in Appendix A. Review of the orthophotograph from 1994 shows a layout similar to current conditions.

3.5 Results of Regulatory Review

R.E.A. reviewed the Vermont Active and Inactive Hazardous Waste Sites Lists and a recent copy of the State's Spill database to determine whether any hazardous materials or petroleum products may have been released on adjacent properties. None of the adjacent properties are included on the Active or Inactive Hazardous Waste Sites List. The spill database included one spill in the vicinity of the site, which occurred in March 1994 at the Land Air Express property, located approximately 1,200 feet to the north in the Windsor Industrial Park. At that time, approximately 50 gallons of diesel fuel was spilled from a leaking fuel tank on a truck. Review of the VT DEC databases for registered underground storage tanks (USTs) and pulled USTs did not include any

5.0 FIELD INVESTIGATION RESULTS AND PROCEDURES

On 18 February 2000, ***R.E.A.'s*** hydrogeologist conducted a site walk-over and collected samples from the on-site supply well for laboratory analysis. The walk-over was limited due to the presence of deep snow cover at the time of the site visit. Site photographs are included in Appendix C.

5.1 Contaminants of Concern

Based on available information, the contaminants of concern (COC) at former Windsor Town Dump include: 1,2-dichloroethane and methylene chloride. Both of these contaminants are volatile organic compounds that are suspected human carcinogens. In addition, the Vermont Department of Health has identified 1,2-dichloroethane as a contaminant of special concern. Methylene chloride and 1,2-dichloroethane are typically associated with varnish/paint removers and degreasing solvents. 1,2-dichloroethane is also a constituent of paint and methylene chloride is commonly used by laboratories in various analytical procedures.

5.2 Source Area Evaluation

Based on available information, the likely source of the 1,2-dichloroethane and methylene chloride previously detected in the Burnham drinking-water supply well is the historical use and operation of the former town dump. Also, the presence of methylene chloride in previous samples could possibly be due to laboratory contamination, since methylene chloride is commonly used in various analytical procedures at analytical laboratories.

No potential off-site sources of contamination were identified based on review of available information.

5.3 Supply-Well Sampling and Analysis

No volatile organic compounds (VOCs) were identified above the method detection limits in any of the samples collected by ***R.E.A.*** on 18 February 2000. Also, no VOCs were detected in the trip-blank sample, and analytical results for the blind field duplicate, collected after 110 minutes of purging (WTD-120), were the same as the original sample results (WTD-110). The analytical results from 18 February 2000 are summarized on the time-series graph in

6.0 SENSITIVE RECEPTOR IDENTIFICATION AND RISK ASSESSMENT

On the basis of the information obtained during this investigation, ***R.E.A.*** has determined that none of the identified receptors appear to be impacted by possible contamination associated with the past operation of the former Windsor Town Dump at this time. This conclusion is based on laboratory analysis from the on-site supply well, which did not detect the presence of VOCs in samples collected in January and February 2000. Also, data collected during the SI completed by Roy F. Weston in May 1998 indicates that the unnamed tributary of the Connecticut River, located along the southern and eastern property boundaries, did not appear to be impacted by past disposal operations.

6.1 Receptor Identification

The following sensitive receptors were identified in the vicinity of the former Windsor Town Dump:

- The on-site bedrock supply well, reportedly located approximately 200 feet from the former disposal area.
- Connecticut River, which is located approximately 600 feet downgradient of the former disposal area.
- Bashan Brook, which is located approximately 1,200 feet north of the former disposal area.
- An unnamed tributary of the Connecticut River, which flows along the southern and eastern property boundaries.

6.2 Risk Assessment

On the basis of the information obtained during this investigation, ***R.E.A.*** has qualitatively assessed the risks that the subsurface contamination poses to human health and the environment. The findings are summarized as follows:

- At this time, none of the identified sensitive receptors appear to be impacted by possible contamination associated with the past operation of the former Windsor Town Dump.
- In addition, no private or public sources of drinking water are located downgradient or within 1,000 feet of the property.

sample.

- No VOCs were detected in samples collected from the on-site supply well by ***R.E.A.*** on 18 February 2000.
- No private or public sources of drinking water are located downgradient or within 1,000 feet of the subject property.
- The closest off-site supply well is located on the property currently owned by Steve and Carol Broughton (formerly the Walsh property) situated approximately 1,000 feet to the southwest. Up to 14 private drinking water supply wells are located within 2,000 feet of the property, including five abandoned wells.
- Visual observations of site conditions were limited during the site visit performed by ***R.E.A.*** on 4 and 18 February 2000 due to the presence of deep snow cover.

8.0 RECOMMENDATIONS

Based on the findings of this site investigation, Ross Environmental Associates, Inc. ***(R.E.A.)*** recommends that the VT DEC consider the site for "Sites Management Activities Completed" (SMAC) status. However, it should be noted that no evaluation of ground-water quality in the overburden formation downgradient of the former disposal area was performed as part of this investigation. Also, as a precautionary measure ***R.E.A.*** suggests the following:

1. A visual inspection and site walk-over of the former dumping areas should be completed in late spring after the snow cover is gone.
2. Abandoning the existing on-site supply well should be considered along with connecting the property to the municipal drinking-water system.
3. Property deed should reflect past land use of the property, which included almost 20 years of municipal waste disposal.
4. Future use and/or development of the property should consider minimizing excavation in the former disposal areas.
5. The Town of Windsor should be informed of the possibilities of cross connections to the municipal drinking-water system from abandon supply wells located along U.S. Route 5.

10.0 REFERENCES

Publications, Maps, and Databases

Bailey-Howe Library, University of Vermont, Aerial Photographs dated 1968 (VBM 68 6-161 and 6-162) and 1974 (VT7420 11-087 and 11-088).

Doll, Charles G., et. al., "Geologic Map of Vermont". Office of the State Geologist, 1961.

Stewart and MacClintock, "Surficial Geologic Map of Vermont", Office of the State Geologist, 1970.

State of Vermont, Department of Environmental Conservation, Hazardous Waste (RCRA) Generator List, January, 2000.

Vermont Department of Environmental Conservation, Hazardous Materials Management Division. Inactive (Closed) and Active Hazardous Sites List, Fourth Quarter 1999 (includes NPL sites).

Vermont Department of Environmental Conservation, Underground Storage Tank Program, Registered UST and Pulled UST files.

Vermont Department of Environmental Conservation, Spill Program, spill reports through January 2000.

Vermont Mapping Program. Orthophotographs - Sheet No. 160108, Series 5000. 1974 and 1994. Sheet No. 160112, 156108, and 156112, Series 5000. 1974.

USGS, 1959. Hartland Quadrangle Vermont – New Hampshire. U.S. Geological Survey. 7.5 minute series (topographic). 1959, photo-revised 1980.

Interviews and Telephone Correspondence

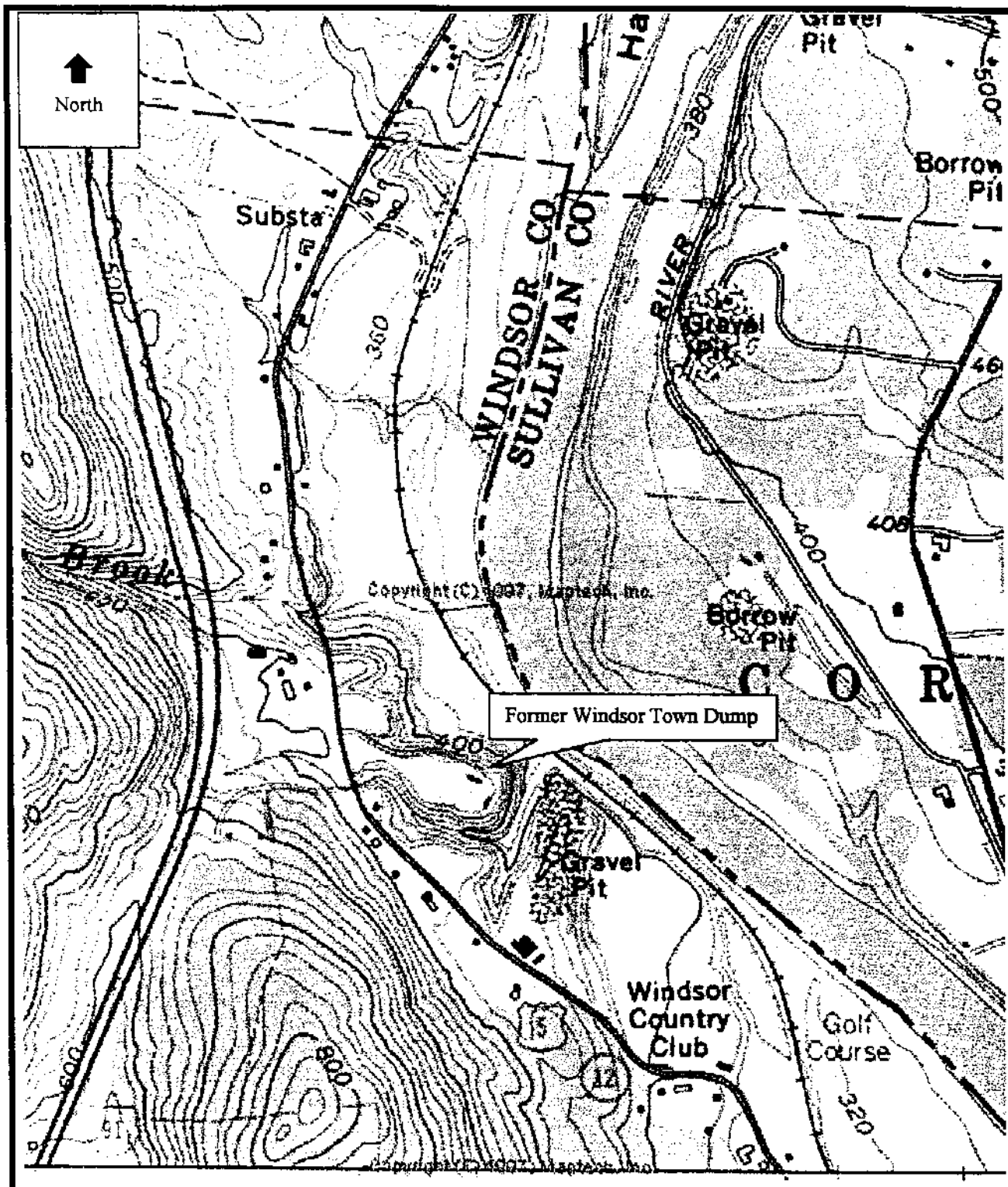
Executor of the Delma Burnham Estate, Mr. Gordon Stone

Attorney for the Delma Burnham Estate, Mr. Jonathan Springer

Windsor Town Assessor, Ms. Marianne

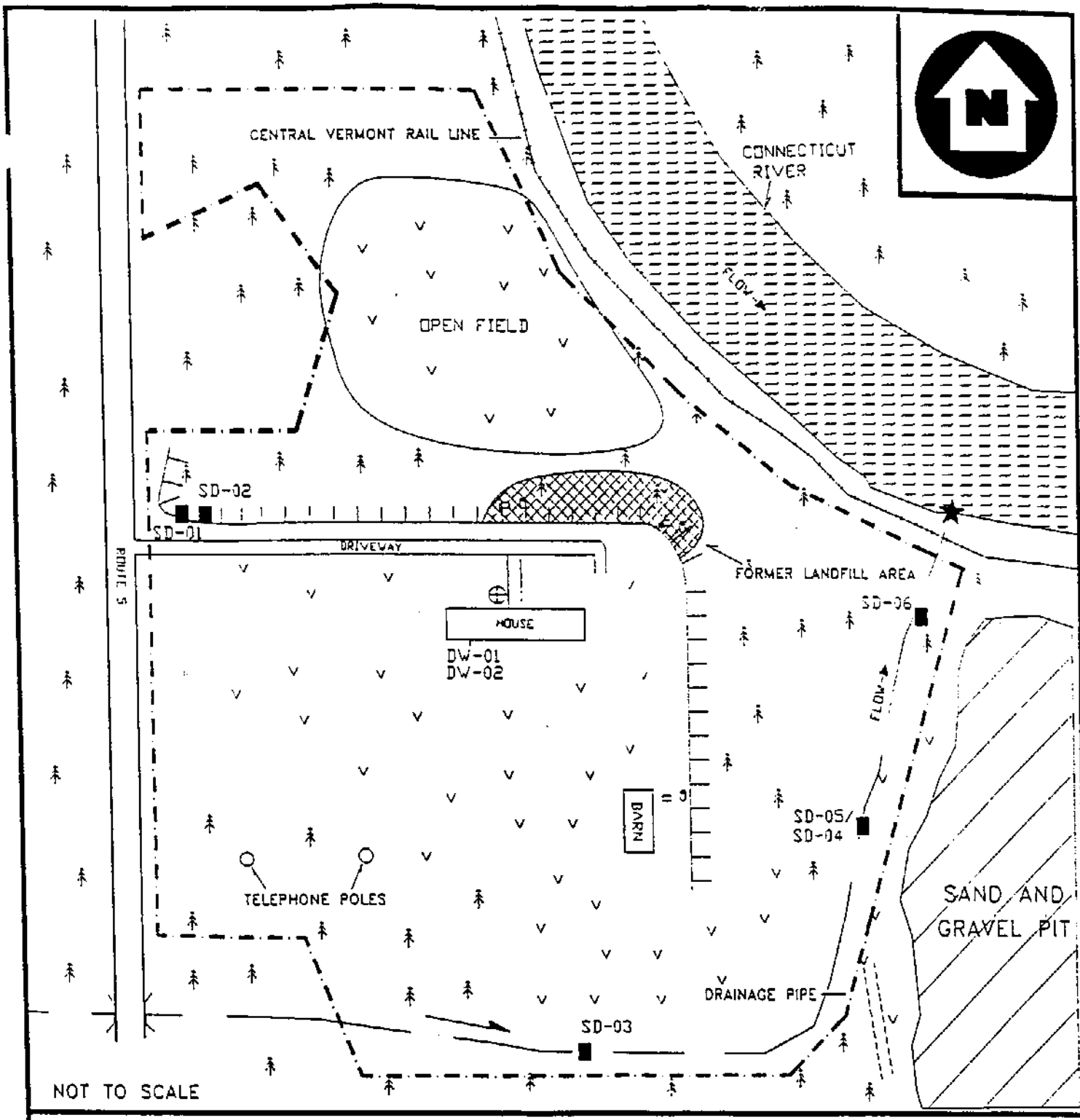
APPENDIX A

FIGURES AND TABLES



Source: USGS 1959. Hartland Quadrangle, VT-NH. Topographic Map, (7.5 minute series). Photo-revised 1980. Maptech, Inc. 1998. R.E.A. Project No. 20-003

Figure 1
Site Location Map
Former Windsor Town Dump
Windsor, Vermont



LEGEND

- DOWNSLOPE (TICKS FACE DOWN)
- GRASS
- WATER SUPPLY WELL (SCREENED IN OVERBURDEN)
- RAILROAD TRACKS
- CULVERT
- SEDIMENT SAMPLE LOCATION
- PROBABLE POINT OF ENTRY
- TREES/WOODED
- APPROXIMATE PROPERTY LINE
- SURFACE WATER
- UNNAMED INTERMITTENT STREAM
- DRUMS/DEBRIS

SITE SKETCH

WINDSOR TOWN DUMP

U.S. ROUTE 5

WINDSOR, VERMONT

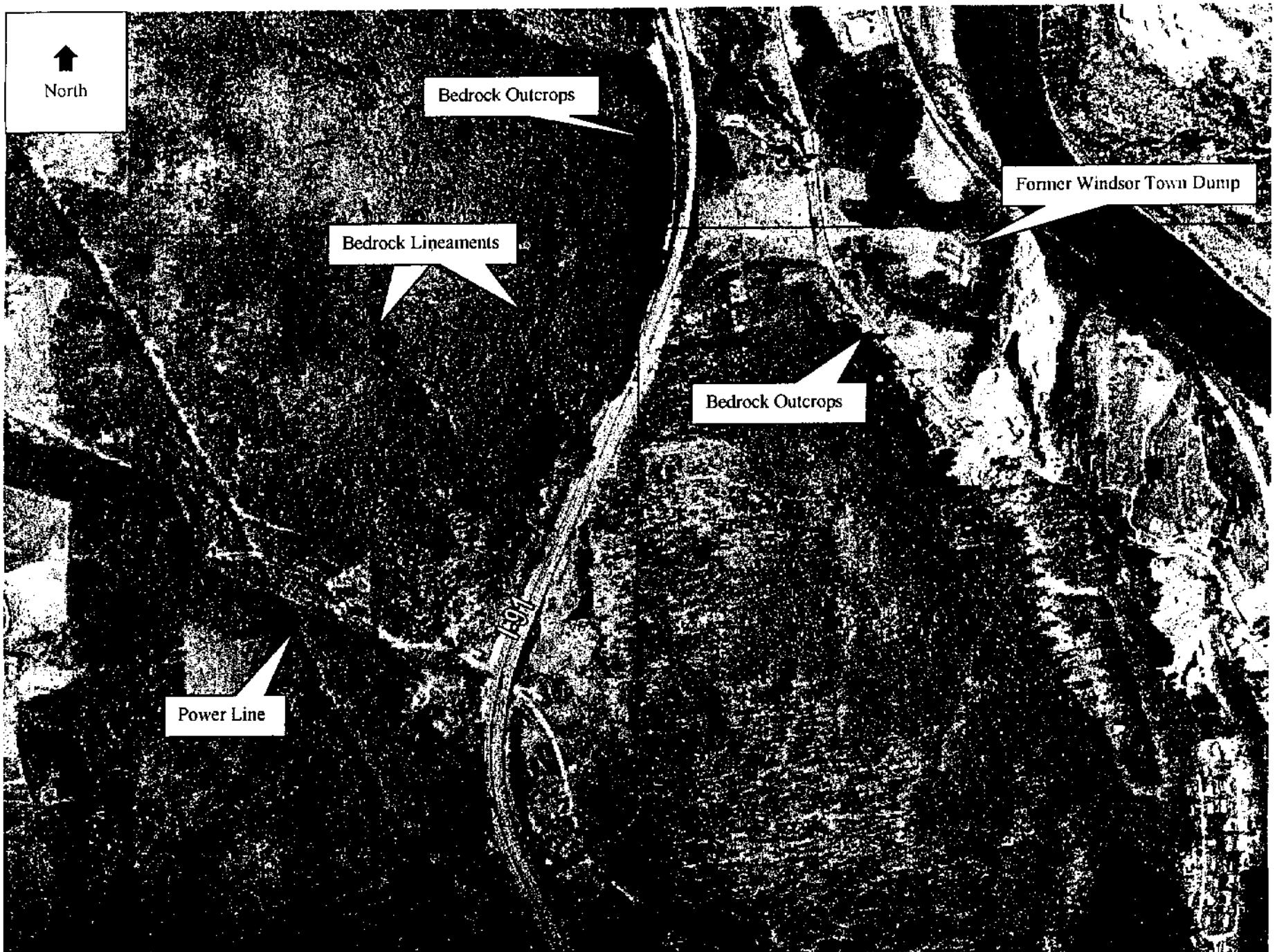
WESTON® MANAGERS DESIGNERS/CONSULTANTS

REGION I SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM

TDD #	DRAWN BY:	DATE
98-05-0037	C. VOSS	7/9/98

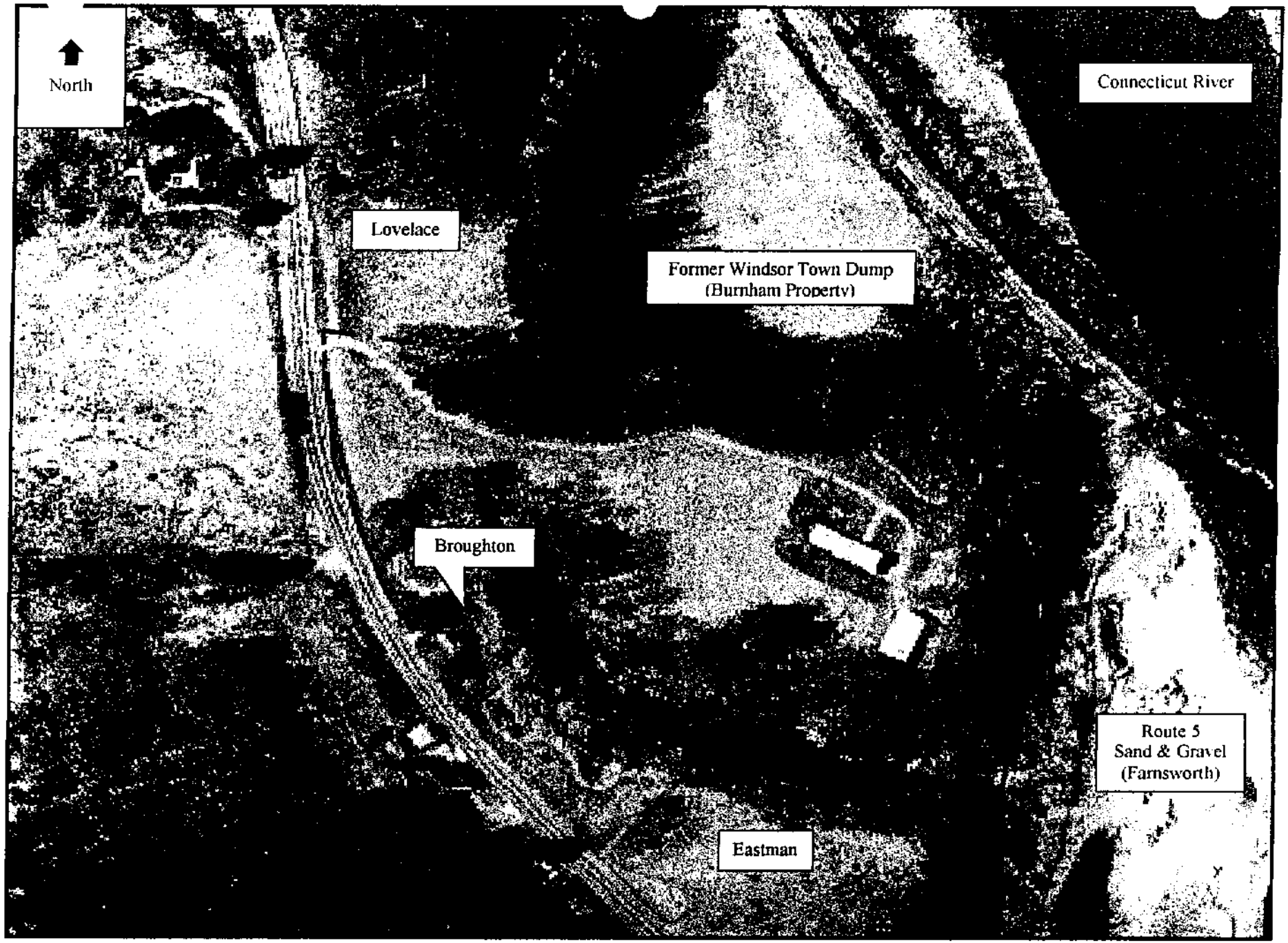
FILE NAME: S:\97040017\FIG2.DWG

FIGURE 2



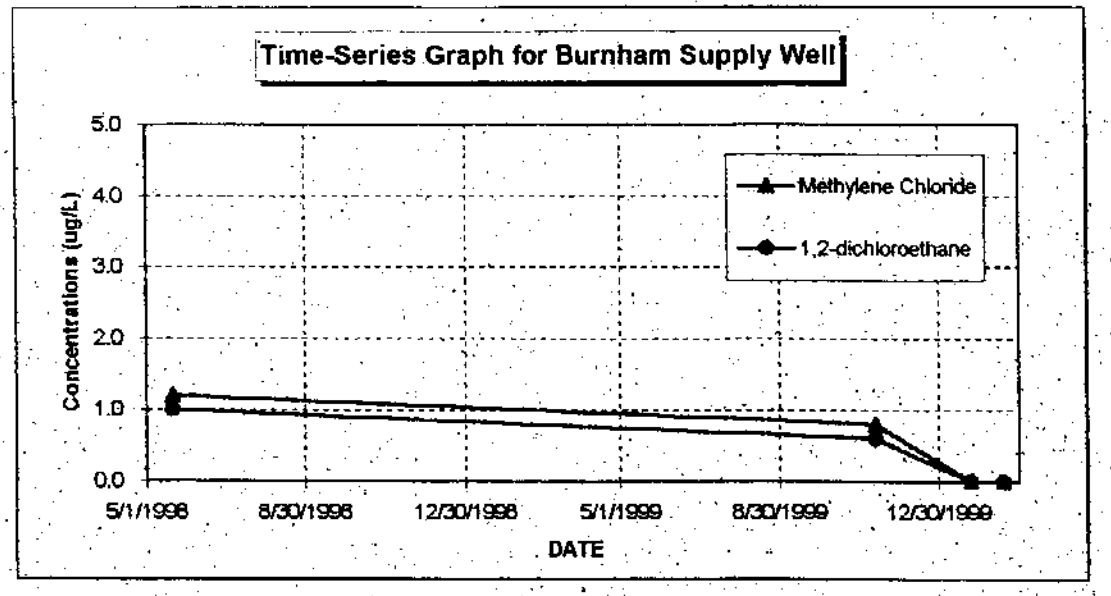
Source: 1974 Orthophotographs - 160108, 160112, 156108 and 156112.
Orthophotograph match-line

FIGURE 3
Former Windsor Town Dump



Source: 1974 Orthophotographs, 160108 and 160112.
All locations and property boundaries are approximate.

FIGURE 4
Former Windsor Town Dump



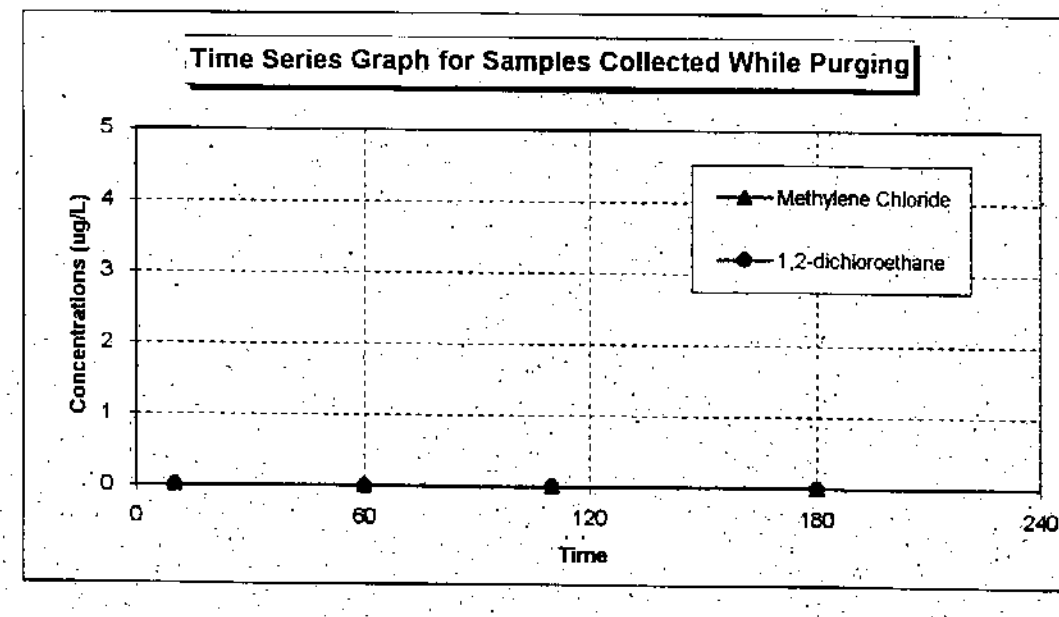
Summary of Supply Well Analytical Results

Former Windsor Town Dump
Windsor, Vermont

Date	1,2-dichloroethane	Methylene Chloride
5/21/1998	**1.0**	**1.2**
11/12/1999	**0.6**	**0.8**
1/24/2000	ND <0.5	ND <1
2/18/2000	ND <0.5	ND <1
VHA	***0.5***	---
VGES	***5.0***	***5.0***

Notes: Results given in micrograms per liter (ug/L), unless indicated otherwise.
ND- None detected at indicated detection limit.
TBQ - Trace below quantitation limit indicated.
VHA - Vermont Health Advisory
VGES - Vermont Groundwater Enforcement Standards
duplicate collected on 5/21/98 - 1,2-DCA = 1.4 ug/L and methylene chloride = 2.1 ug/L.

FIGURE 5
Time-Series Graph
Former Windsor Town Dump
Windsor, Vermont



Summary of Supply Well Results for 2/18/00

Former Windsor Town Dump
Windsor, Vermont

Time	1,2-dichloroethane	Methylene Chloride
10	ND <0.5	ND <1.0
60	ND <0.5	ND <1.0
110	ND <0.5	ND <1.0
180	ND <0.5	ND <1.0
VHA	***0.5***	—
VGES	***5.0***	***5.0***

Notes: Results given in micrograms per liter (ug/L), unless indicated otherwise.
ND- None detected at indicated detection limit.
TBQ - Trace below quantitation limit indicated.
Time = cumulative purge time in minutes.
All samples collected by ***R.E.A.*** and analyzed by Endyne, Inc.
VHA - Vermont Health Advisory
VGES - Vermont Groundwater Enforcement Standards

FIGURE 6
Time-Series Graph for Supply
Well Samples Collected on 2/18/00
Former Windsor Town Dump
Windsor, Vermont

TABLE 1
Summary of Supply Well Information

Former Windsor Town Dump
Windsor, Vermont

Owner	Location	Map/Lot	Water Supply	Type	Total Depth (ft, bgs)
Burnham Estate	841 US Rt 5	2/430017	on-site well, Former Windsor Town Dump	bedrock	445
Piper,Eric	838 US Rt 5	2/430020	possible on-site well, not confirmed	unknown	unknown
Nichols, Robert	1106 US Rt 5	4/430025	Town water, abandon well	bedrock	unknown
Allard, Peter	984/996 US Rt 5	4/430023 & 430023.001	Town water, abandon well (Formerly Putnam)	bedrock	235
Broughton, Steve and Carol	957 US RT 5	4/430022	possible on-site well, not confirmed (Formerly Walsh)	bedrock	101
Pillsbury, Ruth	1044 US Rt 5	4/430024	Town water, abandon well (Formerly Russell)	bedrock	85
George, Cassie	792 US Rt 5	2/430016	on-site well	Spring	unknown
Lance International	1255 US Rt 5	4/430032	Town water abandoned well (Formerly Hume Pipe)	bedrock	515
K, B, & D Inc.	784/786 US Rt 5	2/430014	on-site well (Formerly Bashon Brook)	bedrock	68
Lepine, Julie	54 Hillside Dr	2/460013	on-site well (Formerly Renault)	bedrock	116
White, Susan	53 Hillside Dr	2/460011	on-site well (Formerly Davis)	bedrock	168
Coffran, Scott	36 Hillside Dr	2/460012	on-site well	bedrock	unknown
Lockwood, Rose	1130, 1170, 1186 US Rt 5	4/430026 & 001, B	Town water abandoned well	dug well	unknown
Whitney, Paul	1268 US Rt 5	4/430027	on-site well	bedrock	unknown
Ennis, Joyce	918 US Rt 5	4/430018	on-site well	bedrock	unknown
Biania, Helmit & Ingeborg	920 US Rt 5	4/430019	on-site well	bedrock	unknown
Land Air Express Spencer Terminal	272 Ruth Carney Dr	2/430017.F	Town Water Industrial Park	NA	NA
Lovelace, Caroline	793 US Rt 5	2/430015	no well, undeveloped property	NA	NA
Eastman, Lee	1107 US Rt 5	4/430032.002	no well, undeveloped property	NA	NA
Farnsworth, Ralph	1295 US Rt 5	4/430032.001	no well, gravel pit	NA	NA
Windsor Country Club	1631 US Rt 5	4/430033	Town Water	NA	NA

Note: Map/Lot # correspond with Tax Maps in Appendix C.

TABLE 2.
Summary of Field Measurement Data

Former Windsor Town Dump
Windsor, Vermont

Monitoring Date: 18 February 2000

Time	pH (su)	temperature (° C)	conductivity (uS)	total dissolved solids (ppm)	oxygen reduction potential (mV)
8:01	6.41	10.5	389.8	261.0	76
8:07	7.13	9.4	382.6	256.7	71
8:11	7.57	9.2	377.8	253.5	63
8:25	7.80	9.4	380.8	255.4	42
8:40	7.93	9.3	380.0	255.0	46
8:50	7.81	9.4	381.3	255.8	38
9:00	8.12	9.4	383.2	257.3	18
9:10	8.00	9.5	384.8	258.3	25
9:21	8.02	9.6	383.8	259.6	28
9:30	8.04	9.6	385.7	259.0	30
9:40	8.07	9.4	379.1	254.4	31
10:15	8.26	10.0	367.5	246.0	11
10:20	8.10	10.0	363.3	243.0	24
10:26	8.10	9.7	364.5	244.0	28
11:15	8.10	10.5	358.3	239.2	35
11:20	8.06	10.5	359.4	240.0	38
11:25	8.10	10.9	358.6	239.2	43
11:31	8.13	10.9	358.8	239.3	41
11:36	8.08	10.6	359.7	240.1	35
12:01	8.10	10.7	360.1	240.6	44
12:06	8.03	10.4	361.2	241.3	43
12:11	8.00	10.4	361.5	241.4	44
12:15	8.00	10.5	361.5	241.5	44
12:18	7.96	10.8	360.8	240.7	48

Notes: Time = time measurement was obtained.

APPENDIX B

WINDSOR TAX MAPS

APPENDIX C

SOIL BORING/MONITORING WELL CONSTRUCTION LOGS

Marin Environmental, Inc.

SITE NAME: Burnham Property
LOCATION: Windsor, Vermont
JOB NO.: VT990090-044
DATE: 10/3/00

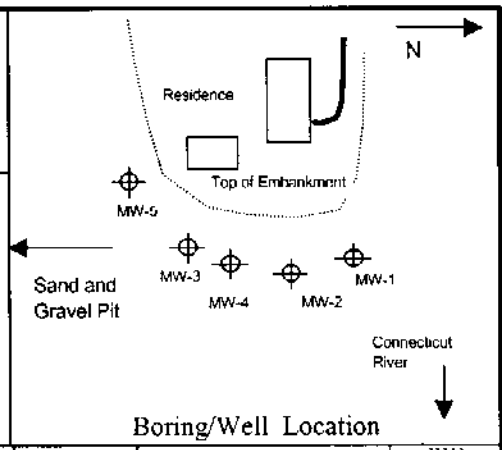
BORING NO: MW-1
TOTAL DEPTH: 49'
DEPTH TO WATER: 47'

DRILLING METHOD
Geoprobe

BORING DIAMETER

FIELD SUPERVISOR: Carey Hengstenberg
CONTRACTOR: Zebra Environmental
SAMPLING: continuous at four foot intervals

DRILLERS: Will Mealister & Tim Siciliano



Boring/Well Location

Depth (ft)	Sample No.	BLOW COUNTS PER 6" (0–6, 6–12, 12–18, 18–24)	Rec. (in)	SAMPLE DESCRIPTION	STRATA	WELL DETAIL	PID (ppm)
4			48	Dark brown peat and organics to 2". Brown to light brown fine SAND and silt, trace clay to 5'. At 5' brown fine SAND and silt; dry, no odor	fine SAND and silt	stick up PVC; Bentonite Chips	1.5
			36				0.4
8							
			34	Brown fine to coarse SAND, some silt; dry, no odor	fine to coarse SAND		1.1
12							
			34	Light brown medium to coarse SAND; dry, no odor			0.8
16							
			48				0.8
20							
			45	Light brown medium to coarse SAND, trace silt, trace gravel; dry, no odor			1.2
24							
			38	Brown fine to medium SAND; wet, no odor			0.4
28						Coarse Sand	
32							
36							
40							
44							
48							
52				Well set @ 49' Refusal @ 53'			
56							
60				Note: sediments were sampled continuosly to 28'. No sediment samples were obtained from 28'-49'.			

		BLOW COUNT		MATERIALS USED	SIZE/TYPE	QUANTITY
		0 - 4	VERY LOSE	WELL SCREEN	1.0"/PVC	20'
AND	33-50%	4 - 10	LOOSE	SLOT SIZE	0.01	
SOME	20-33%	10 - 30	MEDIUM	RISER	1.0"/PVC	30'
LITTLE	10-20%	30 - 50	DENSE	GRADED SAND		
TRACE	0-10%	> 50	VERY DENSE	BENTONITE CHIPS		
				BENTONITE GROUT		

Marin Environmental, Inc.

SITE NAME: Burnham Property
LOCATION: Windsor, Vermont
JOB NO.: VT990090-044
DATE: 10/4/00

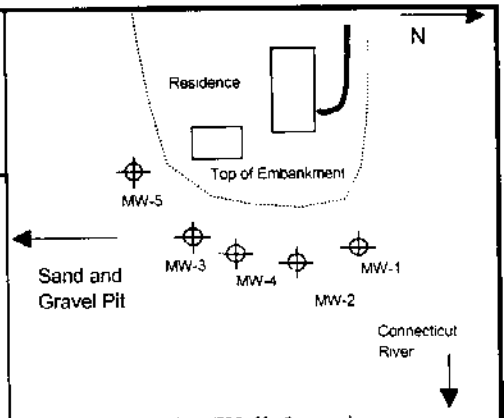
BORING NO: MW-2
TOTAL DEPTH: 45'
DEPTH TO WATER: Not encountered during drilling

DRILLING METHOD
Geoprobe

BORING DIAMETER

FIELD SUPERVISOR: Carey Hengstenberg
CONTRACTOR: Zebra Environmental
SAMPLING: continuous at four foot intervals

DRILLERS: Will Mcalister & Tim Siciliano



Boring/Well Location

Depth (ft)	Sample No.	BLOW COUNTS PER 6" 0-6	6-12	12-18	18-24	Rec. (in)	SAMPLE DESCRIPTION	STRATA	WELL DETAIL	PID (ppm)
4						32	Dark brown peat and organics to 1". Brown fine to coarse SAND, some silt; dry, no odor. At 4' light brown fine SAND and silt; dry, no odor	fine SAND and silt	stick-up PVC; Bentonite Chips	
						44				
8										
						40				
12										
						42	Brown fine SAND, some silt; dry, no odor			
16										
						44				
20										
24									Coarse Sand	
28										
32										
36										
40										
44							Well set @ 45' Refusal @ 45'			
48										
52										
56										
60							Note: sediments were sampled continuously to 20'. No sediments were sampled from 20' to 45'.			

		BLOW COUNT		MATERIALS USED	SIZE/TYPE	QUANTITY
		0 - 4	VERY LOSE	WELL SCREEN	1.0"/PVC	10'
AND	33-50%	4 - 10	LOOSE	SLOT SIZE	0.01	
SOME	20-33%	10 - 30	MEDIUM	RISER	1.0"/PVC	35'
LITTLE	10-20%	30 - 50	DENSE	GRADED SAND		
TRACE	0-10%	> 50	VERY DENSE	BENTONITE CHIPS		
				BENTONITE GROUT		

Marin Environmental, Inc.

SITE NAME: Burnham Property
LOCATION: Windsor, Vermont
JOB NO.: VT990090-044
DATE: 10/4/00

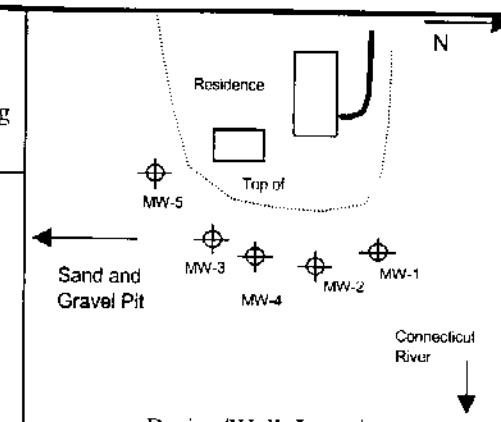
BORING NO: MW-3
TOTAL DEPTH: 39'
DEPTH TO WATER: Not encountered during drilling

DRILLING METHOD
Geoprobe

BORING DIAMETER

FIELD SUPERVISOR: Carey Hengstenberg
CONTRACTOR: Zebra Environmental
SAMPLING: continuous at four foot intervals

DRILLERS: Will Mcalister & Tim Siciliano



Boring/Well Location

Depth (ft)	Sample No.	BLOW COUNTS PER 6" (0–6, 6–12, 12–18, 18–24)	Rec. (in)	SAMPLE DESCRIPTION	STRATA	WELL DETAIL	PID (ppm)
4			39	Dark brown peat and organics to 4". Brown fine SAND and silt: dry, no odor	fine SAND and silt	stick-up PVC; Bentonite Chips	
			37				
8				Brown fine SAND, some silt; dry, no odor			
			39				
12							
			40				
16				Medium brown SILT; some fine sand; dry, no odor	SILT and fine sand		
			42				
20						Coarse Sand	
24							
28							
32							
36							
40				Well set @ 49' Refusal @ 53'			
44							
48							
52							
56							
60				Note: sediments were sampled continuously to 20'. No sediments were sampled from 20' to 39'.			

		BLOW COUNT		MATERIALS USED	SIZE/TYPE	QUANTITY
		0 - 4	VERY LOSE	WELL SCREEN	1.0"/PVC	10'
AND	33-50%	4 - 10	LOOSE	SLOT SIZE	0.01	
SOME	20-33%	10 - 30	MEDIUM	RISER	1.0"/PVC	30'
LITTLE	10-20%	30 - 50	DENSE	GRADED SAND		
TRACE	0-10%	> 50	VERY DENSE	BENTONITE CHIPS		
				BENTONITE GROUT		

Marin Environmental, Inc.

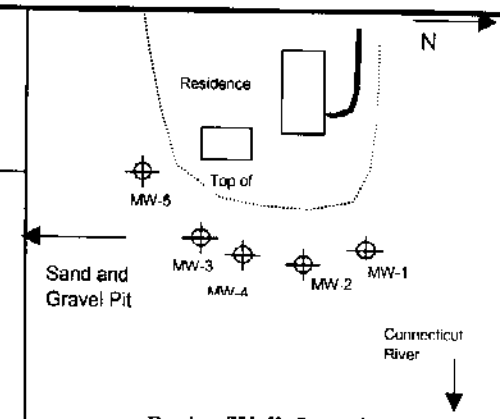
SITE NAME: Burnham Property
LOCATION: Windsor, Vermont
JOB NO.: VT990090-044
DATE: 10/12/00

BORING NO: MW-4
TOTAL DEPTH: 55'
DEPTH TO WATER: 50'

DRILLING METHOD
Hollow Stem Auger

BORING DIAMETER

FIELD SUPERVISOR: Carcy Hengstenberg
CONTRACTOR: Green Mountain Boring
SAMPLING: 2 foot spoons every 5 feet
DRILLERS: Ron & Dave



Boring/Well Location

Depth (ft)	Sample No.	BLOW COUNTS PER 6" (0-6, 6-12, 12-18, 18-24)	Rec. (in)	SAMPLE DESCRIPTION	STRATA	WELL DETAIL	PID (ppm)
5		3 3 3 4	12	Brown fine SAND, some silt; dry, no odor	fine SAND and silt	stick-up road box	0
10		3 3 3 2	14			Bentonite-Cement Grout	0.8
15		4 3 4 4	12				0.0
20		10 5 8 11	10	Brown fine SAND and silt. 1" thick layer of medium SAND at 15.6'; dry, no odor			0.0
25		10 8 8 11	18	Brown fine to coarse SAND; some gravel, trace silt; dry, no odor	fine to coarse SAND		1.2
30		9 14 16 18	19	Brown fine SAND; some silt; dry, no odor	fine SAND		0.6
35		8 10 13 13	20			Bentonite Seal	0.6
40		14 20 20 29	20	Light brown fine SAND; dry, no odor		Coarse Sand	0.9
45		17 20 29 45	18				0.0
50		16 25 24 25	18	Brown Medium SAND; wet, no odor	medium SAND		1.5
55				Well set @ 55.0'			
60							
65							
70							
75							

		BLOW COUNT		MATERIALS USED	SIZE/TYPE	QUANTITY
		0 - 4	VERY LOSE	WELL SCREEN	2.0"/PVC	10'
AND	33-50%	4 - 10	LOOSE	SLOT SIZE	0.01	
SOME	20-33%	10 - 30	MEDIUM	RISER	2.0"/PVC	45'
LITTLE	10-20%	30 - 50	DENSE	GRADED SAND		
TRACE	0-10%	> 50	VERY DENSE	BENTONITE CHIPS		
				BENTONITE GROUT		

Marin Environmental, Inc.

SITE NAME: Burnham Property
LOCATION: Windsor, Vermont
JOB NO.: VT990090-044
DATE: 10/13/00

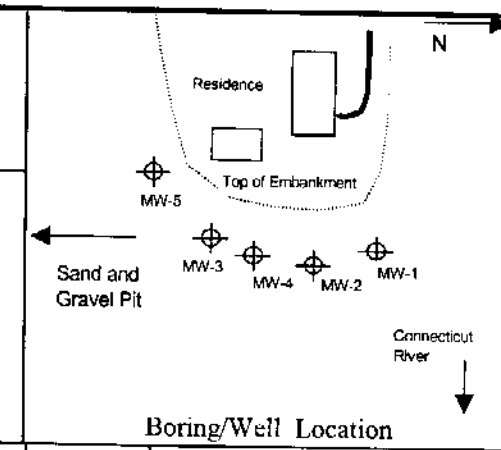
BORING NO: MW-5
TOTAL DEPTH: 66'
DEPTH TO WATER: 50'

DRILLING METHOD
Hollow Stem Auger

BORING DIAMETER

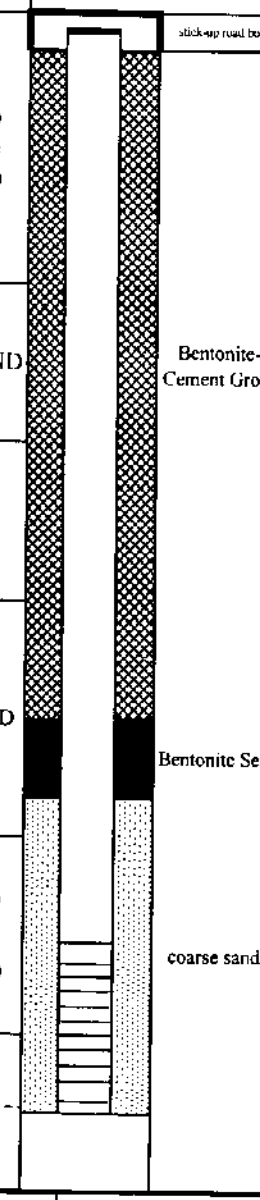
FIELD SUPERVISOR: Carey Hengstenberg
CONTRACTOR: Green Mountain Boring
SAMPLING: 2 foot spoons every 5 feet

DRILLERS: Ron & Dave



Boring/Well Location

Depth (ft)	Sample No.	BLOW COUNTS PER 6" (0–6, 6–12, 12–18, 18–24)	Rec. (in)	SAMPLE DESCRIPTION	STRATA	PID (ppm)
5		1 1 0 1	12	Brown fine to coarse SAND, trace silt, few pebbles; dry, no odor	fine to coarse SAND	365
10		5 2 3 4	18	Brown medium to coarse SAND, trace silt; dry, no odor		1650
15		3 4 5 5	6			1155
20		5 5 6 8	18			114
25		5 7 8 8	21	Brown to olive brown fine SAND, trace silt; dry. No odor	fine SAND	3.3
30		15 14 21 25	12		fine to coarse SAND	5.0
35		10 18 19 13	12	Brown fine to coarse SAND, trace gravel, trace clay; dry, no odor		10.1
40		6 10 12 20	21		fine SAND	2.0
45		8 9 11 13	24	Brown fine SAND; moist, no odor		2.6
50		19 20 24 37	18	Brown fine SAND; moist, minor amounts of layering with medium SAND		1.7
55		9 13 15 16	18		fine to coarse SAND	2.3
60		20 38 46 48	21	Brown medium to fine SAND, trace silt; moist		3.0
65		14 24 28 31	18	Brown medium to coarse SAND, trace fine sand, trace silt; wet		
70						
75				Well set @ 73.0'		



		BLOW COUNT		MATERIALS USED	SIZE/TYPE	QUANTITY
		0 - 4	VERY LOSE	WELL SCREEN	2.0"/PVC	10'
AND	33-50%	4 - 10	LOOSE	SLOT SIZE	0.01	
SOME	20-33%	10 - 30	MEDIUM	RISER	2.0"/PVC	65'
LITTLE	10-20%	30 - 50	DENSE	GRADED SAND		
TRACE	0-10%	> 50	VERY DENSE	BENTONITE CHIPS		
				BENTONITE GROUT		

Marin Environmental, Inc.

SITE NAME: Burnham Property
LOCATION: Windsor, Vermont
JOB NO.: VT990090-044
DATE: 10/3/00

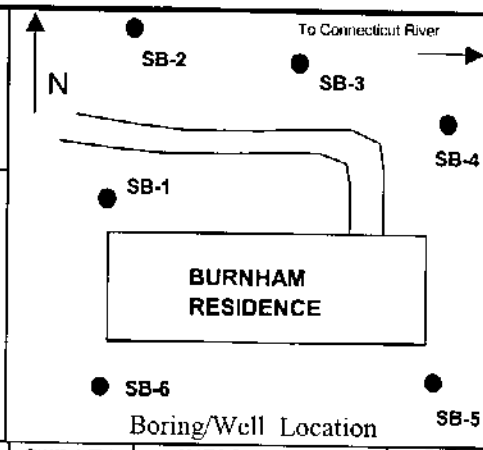
BORING NO: SB-1
TOTAL DEPTH: 12'
DEPTH TO WATER: N/A

DRILLING METHOD
Geoprobe

BORING DIAMETER

FIELD SUPERVISOR: Carey Hengstenberg
CONTRACTOR: Zebra Environmental
SAMPLING: continuous at four foot intervals

DRILLERS: Will Mcalister & Tim Siciliano



Boring/Well Location

Depth (ft)	Sample No.	BLOW COUNTS PER 6" (0–6, 6–12, 12–18, 18–24)	Rec. (in)	SAMPLE DESCRIPTION	STRATA	WELL DETAIL	PID (ppm)
2				Dark brown peat and organics to 1". Brown SILT to 6". At 6", Brown fine SAND; dry, no odor, no debris.	fine SAND		
4			34				2.2
6				Brown fine to coarse SAND; dry, no odor, no debris.	fine to coarse SAND		
8			36				0.6
10							
12			38				2.5
14							
16							
18							
20							
22							
24							
26							
28							
30							

		BLOW COUNT		MATERIALS USED	SIZE/TYPE	QUANTITY
		0 - 4	VERY LOSE	WELL SCREEN	1.0"/PVC	
		4 - 10	LOOSE	SLOT SIZE	0.01	
SOME	20-33%	10 - 30	MEDIUM	RISER	1.0"/PVC	
LITTLE	10-20%	30 - 50	DENSE	GRADED SAND		
TRACE	0-10%	> 50	VERY DENSE	BENTONITE CHIPS		
				BENTONITE GROUT		

Marin Environmental, Inc.

SITE NAME: Burnham Property
LOCATION: Windsor, Vermont
JOB NO.: VT990090-044
DATE: 10/3/00

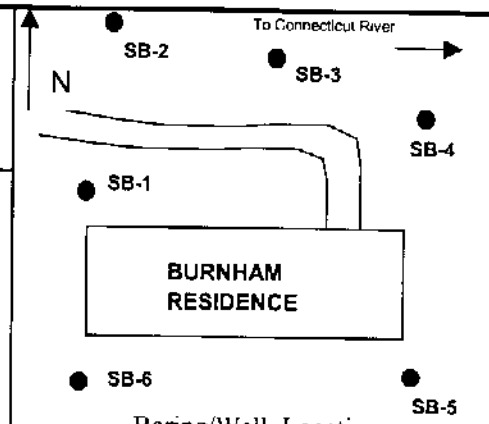
BORING NO: SB-2
TOTAL DEPTH: 12'
DEPTH TO WATER: N/A

DRILLING METHOD
Geoprobe

BORING DIAMETER

FIELD SUPERVISOR: Carey Hengstenberg
CONTRACTOR: Zebra Environmental
SAMPLING: continuous at four foot intervals

DRILLERS: Will Mcalister & Tim Sicilliano



Boring/Well Location

Depth (ft)	Sample No.	BLOW COUNTS PER 6" (0–6, 6–12, 12–18, 18–24)	Rec. (in)	SAMPLE DESCRIPTION	STRATA	WELL DETAIL	PID (ppm)
2							
4			30	Dark brown peat and organics to 1". At 6", Brown fine to coarse SAND; dry, no odor, no debris.	fine to coarse SAND		2.0
6							
8			28				1.1
10				Brown SILT, some fine sand; dry, no odor, no debris.	SILT		
12			27				1.8
14							
16							
18							
20							
22							
24							
26							
28							
30							

		BLOW COUNT		MATERIALS USED	SIZE/TYPE	QUANTITY
		0 - 4	VERY LOSE	WELL SCREEN	1.0"/PVC	
		4 - 10	LOOSE	SLOT SIZE	0.01	
SOME	20-33%	10 - 30	MEDIUM	RISER	1.0"/PVC	
LITTLE	10-20%	30 - 50	DENSE	GRADED SAND		
TRACE	0-10%	> 50	VERY DENSE	BENTONITE CHIPS		
				BENTONITE GROUT		

Marin Environmental, Inc.

SITE NAME: Burnham Property
LOCATION: Windsor, Vermont
JOB NO.: VT990090-044
DATE: 10/3/00

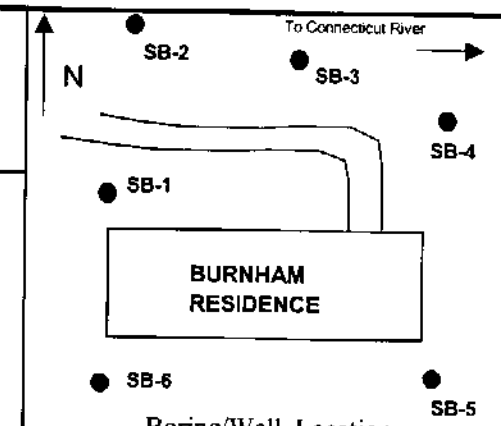
BORING NO: SB-3
TOTAL DEPTH: 12'
DEPTH TO WATER: N/A

DRILLING METHOD
Geoprobe

BORING DIAMETER

FIELD SUPERVISOR: Carey Hengstenberg
CONTRACTOR: Zebra Environmental
SAMPLING: continuous at four foot intervals

DRILLERS: Will Mcalister & Tim Siciliano



Boring/Well Location

Depth (ft)	Sample No.	BLOW COUNTS PER 6" (0–6, 6–12, 12–18, 18–24)	Rec. (in)	SAMPLE DESCRIPTION	STRATA	WELL DETAIL	PID (ppm)
2							
4			26				3.0
6				Dark brown peat and organics, small pieces of burnt wood and ash to 6". Light brown fine to coarse SAND; dry, no odor, no debris.	fine to coarse SAND		
8			36				3.7
10							
12			38	Grey to brown SILT, trace fine sand, trace clay; wet, no odor, no debris.	SILT		3.0
14							
16							
18							
20							
22							
24							
26							
28							
30							

		BLOW COUNT		MATERIALS USED	SIZE/TYPE	QUANTITY
		0 - 4	VERY LOSE	WELL SCREEN	1.0"/PVC	
		4 - 10	LOOSE	SLOT SIZE	0.01	
SOME	20-33%	10 - 30	MEDIUM	RISER	1.0"/PVC	
LITTLE	10-20%	30 - 50	DENSE	GRADED SAND		
TRACE	0-10%	> 50	VERY DENSE	BENTONITE CHIPS		
				BENTONITE GROUT		

Marin Environmental, Inc.

SITE NAME: Burnham Property
LOCATION: Windsor, Vermont
JOB NO.: VT990090-044
DATE: 10/3/00

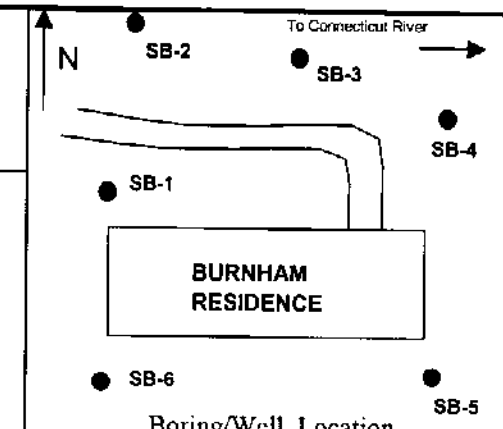
BORING NO: SB-4
TOTAL DEPTH: 12'
DEPTH TO WATER: N/A

DRILLING METHOD
Geoprobe

BORING DIAMETER

FIELD SUPERVISOR: Carcy Hengstenberg
CONTRACTOR: Zebra Environmental
SAMPLING: continuous at four foot intervals

DRILLERS: Will Mcalister & Tim Siciliano



Boring/Well Location

Depth (ft)	Sample No.	BLOW COUNTS PER 6" 0-6	6-12	12-18	18-24	Rec. (in)	SAMPLE DESCRIPTION	STRATA	WELL DETAIL	PID (ppm)
2										
4						36				3.5
6							Dark brown peat and organics, small pieces of burnt wood and ash to 3". Light brown fine to coarse SAND; dry, no odor, no debris.	fine to coarse SAND		
8						34				3.7
10										
12						38				2.6
14										
16										
18										
20										
22										
24										
26										
28										
30										

		BLOW COUNT		MATERIALS USED	SIZE/TYPE	QUANTITY
		0 - 4	VERY LOSE	WELL SCREEN	1.0"/PVC	
		4 - 10	LOOSE	SLOT SIZE	0.01	
SOME	20-33%	10 - 30	MEDIUM	RISER	1.0"/PVC	
LITTLE	10-20%	30 - 50	DENSE	GRADED SAND		
TRACE	0-10%	> 50	VERY DENSE	BENTONITE CHIPS		
				BENTONITE GROUT		

Marin Environmental, Inc.

SITE NAME: Burnham Property
LOCATION: Windsor, Vermont
JOB NO.: VT990090-044
DATE: 10/3/00

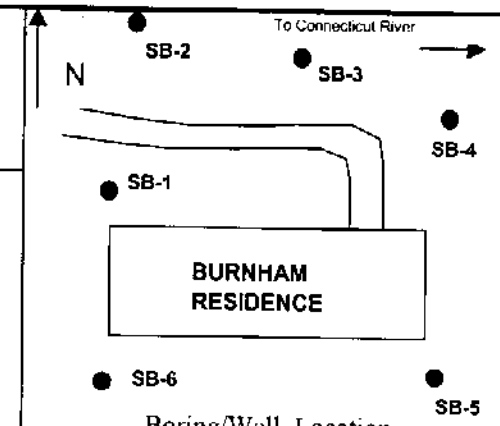
BORING NO: SB-5
TOTAL DEPTH: 12'
DEPTH TO WATER: N/A

DRILLING METHOD
Geoprobe

BORING DIAMETER

FIELD SUPERVISOR: Carey Hengstenberg
CONTRACTOR: Zebra Environmental
SAMPLING: continuous at four foot intervals

DRILLERS: Will Mcalister & Tim Siciliano



Boring/Well Location

Depth (ft)	Sample No.	BLOW COUNTS PER 6" (0-6, 6-12, 12-18, 18-24)	Rec. (in)	SAMPLE DESCRIPTION	STRATA	WELL DETAIL	PID (ppm)
2				Dark brown silt, peat and organics to 6". Reddish-brown fine SAND, some silt to 3'.			
4			36				0.0
6					fine to coarse SAND		
8			38	Light brown fine to coarse SAND; dry, no odor, no debris.			0.0
10							
12			36				0.0
14							
16							
18							
20							
22							
24							
26							
28							
30							

		BLOW COUNT		MATERIALS USED	SIZE/TYPE	QUANTITY
		0 - 4	VERY LOSE	WELL SCREEN	1.0"/PVC	
		4 - 10	LOOSE	SLOT SIZE	0.01	
SOME	20-33%	10 - 30	MEDIUM	RISER	1.0"/PVC	
LITTLE	10-20%	30 - 50	DENSE	GRADED SAND		
TRACE	0-10%	> 50	VERY DENSE	BENTONITE CHIPS		
				BENTONITE GROUT		

Marin Environmental, Inc.

SITE NAME: Burnham Property
LOCATION: Windsor, Vermont
JOB NO.: VT990090-044
DATE: 10/3/00

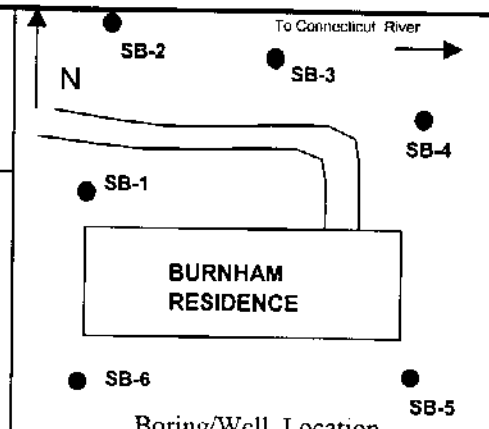
BORING NO: SB-3
TOTAL DEPTH: 12'
DEPTH TO WATER: N/A

DRILLING METHOD
Geoprobe

BORING DIAMETER

FIELD SUPERVISOR: Carey Hengstenberg
CONTRACTOR: Zebra Environmental
SAMPLING: continuous at four foot intervals

DRILLERS: Will Mcalister & Tim Siciliano



Boring/Well Location

Depth (ft)	Sample No.	BLOW COUNTS PER 6" (0–6, 6–12, 12–18, 18–24)	Rec. (in)	SAMPLE DESCRIPTION	STRATA	WELL DETAIL	PID (ppm)
2				Dark brown silt, peat and organics to 2". Light brown silt, trace fine SAND to 1.5'. At 1.5', light brown fine to coarse SAND, moist, no odor, no debris.	fine to coarse SAND		
4			36				1.9
6							
8			34	Brown SILT, some fine sand; moist to wet, no odor, no debris.	SILT		2.8
10							
12			36				3.3
14							
16							
18							
20							
22							
24							
26							
28							
30							

		BLOW COUNT		MATERIALS USED	SIZE/TYPE	QUANTITY
		0 - 4	VERY LOSE	WELL SCREEN	1.0"/PVC	
		4 - 10	LOOSE	SLOT SIZE	0.01	
SOME	20-33%	10 - 30	MEDIUM	RISER	1.0"/PVC	
LITTLE	10-20%	30 - 50	DENSE	GRADED SAND		
TRACE	0-10%	> 50	VERY DENSE	BENTONITE CHIPS		
				BENTONITE GROUT		

APPENDIX D

LABORATORY REPORTS: SOIL AND GROUND WATER

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393
Florida # E87600

Marin Environmental
73 Millet Street
Richmond, VT 05477

10/25/00

Attn: Carey Hengstenberg

Client Project Number: VT990090 **Location:** Burnham Property - Windsor, VT

Laboratory ID	Client Sample ID	Analyses Requested
AC13688	MW-1	VOCs by GC/MS
		Separatory Funnel Extraction
		PAHs by GC/MS
		Total Cyanide
		Metals Digestion
		Mercury Digestion
		Total RCRA8 Metals
		Total Mercury
		Polychlorinated Biphenyls by GC
		Metals Matrix Spike
AC13689	MW-4	VOCs by GC/MS
		Separatory Funnel Extraction
		PAHs by GC/MS
		Total Cyanide
		Metals Digestion
		Mercury Digestion
		Total RCRA8 Metals
		Total Mercury
		Polychlorinated Biphenyls by GC
AC13690	Trip	VOCs by GC/MS
AC13691	Equip	VOCs by GC/MS
		Separatory Funnel Extraction
		PAHs by GC/MS
		Total Cyanide
		Metals Digestion
		Mercury Digestion
		Total RCRA8 Metals

11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
24 Toucy Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860 242-4012

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Client Project Number: VT990090 **Location:** Burnham Property - Windsor, VT

Laboratory ID	Client Sample ID	Analyses Requested
AC13691	Equip	Total Mercury Polychlorinated Biphenyls by GC

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Payeh
President/Laboratory Director

11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: Burnham Property - Windsor, VT
Client: MARIN
Lab ID No: AC13688
Client Id: MW-1

Client Project No: VT990090
Submittal Date: 10/20/00
Collection Date: 10/18/00
Matrix: Ground Water

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Volatile Organic Compounds							
VOCs by GC/MS							
Acetone	Not detected	ug/L	100.0	10/23/00	10/23/00	DG	SW846 8260B
Acrylonitrile	Not detected	ug/L	10.0	10/23/00	10/23/00	DG	SW846 8260B
Benzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Bromobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Bromochloromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Bromodichloromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Bromoform	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Bromomethane	Not detected	ug/L	2.0	10/23/00	10/23/00	DG	SW846 8260B
2-Butanone (MEK)	Not detected	ug/L	50.0	10/23/00	10/23/00	DG	SW846 8260B
n-Butylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
sec-Butylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
tert-Butylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Carbon disulfide	Not detected	ug/L	5.0	10/23/00	10/23/00	DG	SW846 8260B
Carbon tetrachloride	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Chlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Chloroethane	Not detected	ug/L	2.0	10/23/00	10/23/00	DG	SW846 8260B
Chloroform	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Chloromethane	Not detected	ug/L	2.0	10/23/00	10/23/00	DG	SW846 8260B
2-Chlorotoluene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
4-Chlorotoluene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	Not detected	ug/L	2.0	10/23/00	10/23/00	DG	SW846 8260B
Dibromochloromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,2-Dibromoethane (EDB)	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Dibromomethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,2-Dichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,3-Dichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,4-Dichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Dichlorodifluoromethane	Not detected	ug/L	2.0	10/23/00	10/23/00	DG	SW846 8260B
1,1-Dichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,2-Dichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,1-Dichloroethene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
cis-1,2-Dichloroethene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
trans-1,2-Dichloroethene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,2-Dichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B

Lab ID No: AC13688
Client Id: MW-1

Collection Date: 10/18/00
Matrix: Ground Water

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
1,3-Dichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
2,2-Dichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,1-Dichloropropene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
cis-1,3-Dichloropropene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
trans-1,3-Dichloropropene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Ethylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Hexachlorobutadiene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
2-Hexanone (MBK)	Not detected	ug/L	100.0	10/23/00	10/23/00	DG	SW846 8260B
Isopropylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
4-Isopropyltoluene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Methyl-tert-butyl ether (MTBE)	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	20.0	10/23/00	10/23/00	DG	SW846 8260B
Methylene chloride	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Naphthalene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
n-Propylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Styrene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,1,1,2-Tetrachloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Tetrachloroethene (PCE)	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Toluene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,2,3-Trichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,2,4-Trichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,1,1-Trichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,1,2-Trichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Trichloroethene (TCE)	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Trichlorofluoromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,2,3-Trichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,2,4-Trimethylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,3,5-Trimethylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Vinyl chloride	Not detected	ug/L	2.0	10/23/00	10/23/00	DG	SW846 8260B
m,p-Xylenes	Not detected	ug/L	2.0	10/23/00	10/23/00	DG	SW846 8260B
o-Xylene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
4-Bromofluorobenzene (%SR)	98	ug/L		10/23/00	10/23/00	DG	SW846 8260B
1,4-Difluorobenzene (%SR)	106	ug/L		10/23/00	10/23/00	DG	SW846 8260B
Chlorobenzene-d5 (%SR)	100	ug/L		10/23/00	10/23/00	DG	SW846 8260B
SVOC Preparation							
Separatory Funnel Extraction	Completed			10/24/00	10/24/00	NA	SW846 3510C
Semivolatile Organic Compounds							
PAHs by GC/MS							
Naphthalene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
2-Methylnaphthalene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C

Lab ID No: AC13688
Client Id: MW-1

Collection Date: 10/18/00
Matrix: Ground Water

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Acenaphthylene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Acenaphthene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Fluorene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Phenanthrene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Anthracene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Fluoranthene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Pyrene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Benzo (a) anthracene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Chrysene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Benzo (b) fluoranthene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Benzo (k) fluoranthene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Benzo (a) pyrene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Indeno (1,2,3-cd) pyrene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Dibenzo (a,h) anthracene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Benzo (g,h,i) perylene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
2-Fluorobiphenyl (%SR)	64	ug/L	0.	10/24/00	10/24/00	MSL	SW846 8270C
Terphenyl-d14 (%SR)	61	ug/L	0.	10/24/00	10/24/00	MSL	SW846 8270C
Semivolatile Organic Compounds							
Polychlorinated Biphenyls by GC							
PCB-1016	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1221	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1232	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1242	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1248	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1254	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1260	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
Decachlorobiphenyl (%SR)	62	ug/L		10/24/00	10/24/00	TG	EPA 608
Metals Preparation							
Mercury Digestion	Completed			10/25/00	10/25/00	YV	EPA 245.1
Metals Digestion	Completed			10/25/00	10/25/00	YV	EPA 200.7
Metals Analysis							
Total RCRA8 Metals							
Total Arsenic	Below det lim	mg/L	0.015	10/25/00	10/25/00	JLC	EPA 200.7
Total Barium	0.015	mg/L	0.005	10/25/00	10/25/00	JLC	EPA 200.7
Total Cadmium	Below det lim	mg/L	0.0025	10/25/00	10/25/00	JLC	EPA 200.7
Total Chromium	0.009	mg/L	0.005	10/25/00	10/25/00	JLC	EPA 200.7
Total Lead	Below det lim	mg/L	0.0075	10/25/00	10/25/00	JLC	EPA 200.7
Total Selenium	Below det lim	mg/L	0.015	10/25/00	10/25/00	JLC	EPA 200.7
Total Silver	Below det lim	mg/L	0.010	10/25/00	10/25/00	JLC	EPA 200.7
Total Mercury	Below det lim	mg/L	0.0004	10/25/00	10/25/00	YV	EPA 245.1

Lab ID No: AC13688
Client Id: MW-1

Collection Date: 10/18/00
Matrix: Ground Water

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
General Chemistry							
Total Cyanide	Below det lim	mg/L	0.01	10/24/00	10/24/00	DMM	SM 4500 CN E

Lab ID No: AC13689
Client Id: MW-4

Collection Date: 10/18/00
Matrix: Ground Water

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Volatile Organic Compounds							
VOCs by GC/MS							
Acetone	Not detected	ug/L	100.0	10/23/00	10/23/00	DG	SW846 8260B
Acrylonitrile	Not detected	ug/L	10.0	10/23/00	10/23/00	DG	SW846 8260B
Benzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Bromobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Bromochloromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Bromodichloromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Bromoform	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Bromomethane	Not detected	ug/L	2.0	10/23/00	10/23/00	DG	SW846 8260B
2-Butanone (MEK)	Not detected	ug/L	50.0	10/23/00	10/23/00	DG	SW846 8260B
n-Butylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
sec-Butylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
tert-Butylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Carbon disulfide	Not detected	ug/L	5.0	10/23/00	10/23/00	DG	SW846 8260B
Carbon tetrachloride	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Chlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Chloroethane	Not detected	ug/L	2.0	10/23/00	10/23/00	DG	SW846 8260B
Chloroform	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Chloromethane	Not detected	ug/L	2.0	10/23/00	10/23/00	DG	SW846 8260B
2-Chlorotoluene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
4-Chlorotoluene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	Not detected	ug/L	2.0	10/23/00	10/23/00	DG	SW846 8260B
Dibromochloromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,2-Dibromoethane (EDB)	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Dibromomethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,2-Dichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,3-Dichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,4-Dichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Dichlorodifluoromethane	Not detected	ug/L	2.0	10/23/00	10/23/00	DG	SW846 8260B
1,1-Dichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,2-Dichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,1-Dichloroethene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
cis-1,2-Dichloroethene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
trans-1,2-Dichloroethene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,2-Dichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,3-Dichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
2,2-Dichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,1-Dichloropropene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
cis-1,3-Dichloropropene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
trans-1,3-Dichloropropene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B

Lab ID No: AC13689
Client Id: MW-4

Collection Date: 10/18/00
Matrix: Ground Water

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Ethylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Hexachlorobutadiene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
2-Hexanone (MBK)	Not detected	ug/L	100.0	10/23/00	10/23/00	DG	SW846 8260B
Isopropylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
4-Isopropyltoluene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Methyl-tert-butyl ether (MTBE)	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	20.0	10/23/00	10/23/00	DG	SW846 8260B
Methylene chloride	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Naphthalene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
n-Propylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Styrene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,1,1,2-Tetrachloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Tetrachloroethene (PCE)	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Toluene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,2,3-Trichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,2,4-Trichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,1,1-Trichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,1,2-Trichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Trichloroethene (TCE)	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Trichlorofluoromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,2,3-Trichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,2,4-Trimethylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
1,3,5-Trimethylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
Vinyl chloride	Not detected	ug/L	2.0	10/23/00	10/23/00	DG	SW846 8260B
m,p-Xylenes	Not detected	ug/L	2.0	10/23/00	10/23/00	DG	SW846 8260B
o-Xylene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	SW846 8260B
4-Bromofluorobenzene (%SR)	102	ug/L		10/23/00	10/23/00	DG	SW846 8260B
1,4-Difluorobenzene (%SR)	102	ug/L		10/23/00	10/23/00	DG	SW846 8260B
Chlorobenzene-d5 (%SR)	107	ug/L		10/23/00	10/23/00	DG	SW846 8260B
SVOC Preparation							
Separatory Funnel Extraction	Completed			10/24/00	10/24/00	NA	SW846 3510C
Semivolatile Organic Compounds							
PAHs by GC/MS							
Naphthalene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
2-Methylnaphthalene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Acenaphthylene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Acenaphthene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Fluorene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Phenanthrene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Anthracene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C

Lab ID No: AC13689
Client Id: MW-4

Collection Date: 10/18/00
Matrix: Ground Water

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Fluoranthene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Pyrene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Benzo (a) anthracene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Chrysene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Benzo (b) fluoranthene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Benzo (k) fluoranthene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Benzo (a) pyrene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Indeno (1,2,3-cd) pyrene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Dibenzo (a,h) anthracene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Benzo (g,h,i) perylene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
2-Fluorobiphenyl (%SR)	62	ug/L	0.	10/24/00	10/24/00	MSL	SW846 8270C
Terphenyl-d14 (%SR)	60	ug/L	0.	10/24/00	10/24/00	MSL	SW846 8270C
Semivolatile Organic Compounds							
Polychlorinated Biphenyls by GC							
PCB-1016	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1221	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1232	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1242	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1248	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1254	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1260	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
Decachlorobiphenyl (%SR)	57	ug/L		10/24/00	10/24/00	TG	EPA 608
Metals Preparation							
Mercury Digestion	Completed			10/25/00	10/25/00	YV	EPA 245.1
Metals Digestion	Completed			10/25/00	10/25/00	YV	EPA 200.7
Metals Analysis							
Total RCRA8 Metals							
Total Arsenic	Below det lim	mg/L	0.015	10/25/00	10/25/00	JLC	EPA 200.7
Total Barium	0.027	mg/L	0.005	10/25/00	10/25/00	JLC	EPA 200.7
Total Cadmium	Below det lim	mg/L	0.0025	10/25/00	10/25/00	JLC	EPA 200.7
Total Chromium	Below det lim	mg/L	0.005	10/25/00	10/25/00	JLC	EPA 200.7
Total Lead	Below det lim	mg/L	0.0075	10/25/00	10/25/00	JLC	EPA 200.7
Total Selenium	Below det lim	mg/L	0.015	10/25/00	10/25/00	JLC	EPA 200.7
Total Silver	Below det lim	mg/L	0.010	10/25/00	10/25/00	JLC	EPA 200.7
Total Mercury	Below det lim	mg/L	0.0004	10/25/00	10/25/00	YV	EPA 245.1
General Chemistry							
Total Cyanide	Below det lim	mg/L	0.01	10/24/00	10/24/00	DMM	SM 4500 CN E

Lab ID No: AC13690
Client Id: Trip

Collection Date: 10/18/00
Matrix: Ground Water

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Volatile Organic Compounds							
VOCs by GC/MS							
Acetone	Not detected	ug/L	100.0	10/23/00	10/23/00	CH	SW846 8260B
Acrylonitrile	Not detected	ug/L	10.0	10/23/00	10/23/00	CH	SW846 8260B
Benzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Bromobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Bromochloromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Bromodichloromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Bromoform	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Bromomethane	Not detected	ug/L	2.0	10/23/00	10/23/00	CH	SW846 8260B
2-Butanone (MEK)	Not detected	ug/L	50.0	10/23/00	10/23/00	CH	SW846 8260B
n-Butylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
sec-Butylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
tert-Butylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Carbon disulfide	Not detected	ug/L	5.0	10/23/00	10/23/00	CH	SW846 8260B
Carbon tetrachloride	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Chlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Chloroethane	Not detected	ug/L	2.0	10/23/00	10/23/00	CH	SW846 8260B
Chloroform	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Chloromethane	Not detected	ug/L	2.0	10/23/00	10/23/00	CH	SW846 8260B
2-Chlorotoluene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
4-Chlorotoluene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	Not detected	ug/L	2.0	10/23/00	10/23/00	CH	SW846 8260B
Dibromochloromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,2-Dibromoethane (EDB)	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Dibromomethane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,2-Dichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,3-Dichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,4-Dichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Dichlorodifluoromethane	Not detected	ug/L	2.0	10/23/00	10/23/00	CH	SW846 8260B
1,1-Dichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,2-Dichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,1-Dichloroethene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
cis-1,2-Dichloroethene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
trans-1,2-Dichloroethene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,2-Dichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,3-Dichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
2,2-Dichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,1-Dichloropropene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
cis-1,3-Dichloropropene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
trans-1,3-Dichloropropene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B

Lab ID No: AC13690
Client Id: Trip

Collection Date: 10/18/00
Matrix: Ground Water

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Ethylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Hexachlorobutadiene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
2-Hexanone (MBK)	Not detected	ug/L	100.0	10/23/00	10/23/00	CH	SW846 8260B
Isopropylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
4-Isopropyltoluene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Methyl-tert-butyl ether (MTBE)	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	20.0	10/23/00	10/23/00	CH	SW846 8260B
Methylene chloride	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Naphthalene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
n-Propylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Styrene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,1,1,2-Tetrachloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Tetrachloroethene (PCE)	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Toluene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,2,3-Trichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,2,4-Trichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,1,1-Trichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,1,2-Trichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Trichloroethene (TCE)	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Trichlorofluoromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,2,3-Trichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,2,4-Trimethylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,3,5-Trimethylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Vinyl chloride	Not detected	ug/L	2.0	10/23/00	10/23/00	CH	SW846 8260B
m,p-Xylenes	Not detected	ug/L	2.0	10/23/00	10/23/00	CH	SW846 8260B
o-Xylene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
4-Bromofluorobenzene (%SR)	94	ug/L		10/23/00	10/23/00	CH	SW846 8260B
1,4-Difluorobenzene (%SR)	100	ug/L		10/23/00	10/23/00	CH	SW846 8260B
Chlorobenzene-d5 (%SR)	92	ug/L		10/23/00	10/23/00	CH	SW846 8260B

Lab ID No: AC13691
Client Id: Equip

Collection Date: 10/18/00
Matrix: Ground Water

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Volatile Organic Compounds							
VOCs by GC/MS							
Acetone	Not detected	ug/L	100.0	10/23/00	10/23/00	CH	SW846 8260B
Acrylonitrile	Not detected	ug/L	10.0	10/23/00	10/23/00	CH	SW846 8260B
Benzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Bromobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Bromochloromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Bromodichloromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Bromoform	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Bromomethane	Not detected	ug/L	2.0	10/23/00	10/23/00	CH	SW846 8260B
2-Butanone (MEK)	Not detected	ug/L	50.0	10/23/00	10/23/00	CH	SW846 8260B
n-Butylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
sec-Butylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
tert-Butylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Carbon disulfide	Not detected	ug/L	5.0	10/23/00	10/23/00	CH	SW846 8260B
Carbon tetrachloride	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Chlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Chloroethane	Not detected	ug/L	2.0	10/23/00	10/23/00	CH	SW846 8260B
Chloroform	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Chloromethane	Not detected	ug/L	2.0	10/23/00	10/23/00	CH	SW846 8260B
2-Chlorotoluene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
4-Chlorotoluene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	Not detected	ug/L	2.0	10/23/00	10/23/00	CH	SW846 8260B
Dibromochloromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,2-Dibromoethane (EDB)	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Dibromomethane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,2-Dichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,3-Dichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,4-Dichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Dichlorodifluoromethane	Not detected	ug/L	2.0	10/23/00	10/23/00	CH	SW846 8260B
1,1-Dichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,2-Dichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,1-Dichloroethene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
cis-1,2-Dichloroethene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
trans-1,2-Dichloroethene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,2-Dichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,3-Dichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
2,2-Dichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,1-Dichloropropene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
cis-1,3-Dichloropropene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
trans-1,3-Dichloropropene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B

Lab ID No: AC13691
Client Id: Equip

Collection Date: 10/18/00
Matrix: Ground Water

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Ethylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Hexachlorobutadiene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
2-Hexanone (MBK)	Not detected	ug/L	100.0	10/23/00	10/23/00	CH	SW846 8260B
Isopropylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
4-Isopropyltoluene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Methyl-tert-butyl ether (MTBE)	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	20.0	10/23/00	10/23/00	CH	SW846 8260B
Methylene chloride	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Naphthalene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
n-Propylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Styrene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,1,1,2-Tetrachloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Tetrachloroethene (PCE)	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Toluene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,2,3-Trichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,2,4-Trichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,1,1-Trichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,1,2-Trichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Trichloroethene (TCE)	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Trichlorofluoromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,2,3-Trichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,2,4-Trimethylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
1,3,5-Trimethylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
Vinyl chloride	Not detected	ug/L	2.0	10/23/00	10/23/00	CH	SW846 8260B
m,p-Xylenes	Not detected	ug/L	2.0	10/23/00	10/23/00	CH	SW846 8260B
o-Xylene	Not detected	ug/L	1.0	10/23/00	10/23/00	CH	SW846 8260B
4-Bromofluorobenzene (%SR)	95	ug/L		10/23/00	10/23/00	CH	SW846 8260B
1,4-Difluorobenzene (%SR)	101	ug/L		10/23/00	10/23/00	CH	SW846 8260B
Chlorobenzene-d5 (%SR)	93	ug/L		10/23/00	10/23/00	CH	SW846 8260B
SVOC Preparation							
Separatory Funnel Extraction	Completed			10/20/00	10/20/00	DS	SW846 3510C
Semivolatile Organic Compounds							
PAHs by GC/MS							
Naphthalene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
2-Methylnaphthalene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Acenaphthylene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Acenaphthene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Fluorene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Phenanthrene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Anthracene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C

Lab ID No: AC13691
Client Id: Equip

Collection Date: 10/18/00
Matrix: Ground Water

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Fluoranthene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Pyrene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Benzo (a) anthracene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Chrysene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Benzo (b) fluoranthene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Benzo (k) fluoranthene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Benzo (a) pyrene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Indeno (1,2,3-cd) pyrene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Dibenzo (a,h) anthracene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Benzo (g,h,i) perylene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
2-Fluorobiphenyl (%SR)	58	ug/L	0.	10/24/00	10/24/00	MSL	SW846 8270C
Terphenyl-d14 (%SR)	56	ug/L	0.	10/24/00	10/24/00	MSL	SW846 8270C
Semivolatile Organic Compounds							
Polychlorinated Biphenyls by GC							
PCB-1016	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1221	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1232	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1242	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1248	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1254	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1260	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
Decachlorobiphenyl (%SR)	49	ug/L		10/24/00	10/24/00	TG	EPA 608
Metals Preparation							
Mercury Digestion	Completed			10/25/00	10/25/00	YV	EPA 245.1
Metals Digestion	Completed			10/25/00	10/25/00	YV	EPA 200.7
Metals Analysis							
Total RCRA8 Metals							
Total Arsenic	Below det lim	mg/L	0.015	10/25/00	10/25/00	JLC	EPA 200.7
Total Barium	Below det lim	mg/L	0.005	10/25/00	10/25/00	JLC	EPA 200.7
Total Cadmium	Below det lim	mg/L	0.0025	10/25/00	10/25/00	JLC	EPA 200.7
Total Chromium	Below det lim	mg/L	0.005	10/25/00	10/25/00	JLC	EPA 200.7
Total Lead	Below det lim	mg/L	0.0075	10/25/00	10/25/00	JLC	EPA 200.7
Total Selenium	Below det lim	mg/L	0.015	10/25/00	10/25/00	JLC	EPA 200.7
Total Silver	Below det lim	mg/L	0.010	10/25/00	10/25/00	JLC	EPA 200.7
Total Mercury	Below det lim	mg/L	0.0004	10/25/00	10/25/00	YV	EPA 245.1
General Chemistry							
Total Cyanide	Below det lim	mg/L	0.01	10/24/00	10/24/00	DMM	SM 4500 CN E

Lab ID No: AC13691
Client Id: Equip

Collection Date: 10/18/00
Matrix: Ground Water

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

10/25/00

SPECTRUM ANALYTICAL, INC.
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HANIBAL TECHNOLOGY

Laboratory Report Supplement
References

SW 846	Test Methods for Evaluating Solid Waste. Third edition, 1998
40 CFR 136	Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act
40 CFR 141	National Primary Drinking Water Regulations
40 CFR 143	National Secondary Drinking Water Regulations
40 CFR 160	Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), Good Laboratory Practice Standards
APHA-AWWA-WPCF	Standard Methods for the Examination of Water and Wastewater. 19th edition, 1995
ASTM D 3328	Standard Methods for the Comparison of Waterborne Petroleum Oils by Gas Chromatography
EPA 540/G-87/003	Data Quality Objectives for Remediation Response Activities, Development Process
EPA 600/4-79-012	Quality Assurance Handbook for Analytical Quality Control in Water and Wastewater Laboratories
EPA 600/4-79-019	Handbook for Analytical Quality Control in Water and Wastewater Laboratories
EPA 600/4-79-020	Method for the Chemical Analysis of Water and Wastes
EPA 600/4-82-057	Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater
EPA 600/4-85/056	Choosing Cost-Effective QA/QC Programs for Chemical Analysis
EPA 600/4-88/039	Method for the Determination of Organic Compounds in Drinking Water
CT ETPH	Analysis of Extractable Total Petroleum Hydrocarbons (ETPH)
MADEP EPH	Method for the Determination of Extractable Petroleum Hydrocarbons (EPH)
MADEP VPH	Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)
QAMS 004/80	Guidelines and Specifications for Preparing Quality Assurance Program Plans, USEPA Office of Monitoring System and Quality Assurance
GC-D-52-77	.Oil Spill Identification System

Acronyms & Abbreviations

AA	Atomic Absorption
ASTM	American Society for Testing and Materials
BOD	Biological Oxygen Demand
°C	degree(s) Celsius
COD	Chemical Oxygen Demand
CMR	Code of Massachusetts Regulations
DEP	Department of Environmental Protection
DI	De-ionized
DO	Dissolved Oxygen
EPA	Environmental Protection Agency
EPH	Extractable Petroleum Hydrocarbons
FID	Flame Ionization Detector
GC	Gas Chromatograph
GC / MS	Gas Chromatograph / Mass Spectrometer
ICP	Inductively Coupled Plasma
Id	Identification
MCL	Maximum Contaminant Level
MDL	Minimum Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NTU	Nephelometric Turbidity Units
PAHs	Polynuclear Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
PID	Photo Ionization Detector
PQL	Practical Quantitation Limit
R	Recovery (%R: Percent Recovery)
RSD	Relative Standard Deviation
SM	Standard Method
SR	Surrogate Recovery (%SR)
SW	Solid Waste
THM	Trihalomethane(s)
TOC	Total Organic Carbon
TOX	Total Organic Halogen
TPH	Total Petroleum Hydrocarbons
VOC	Volatile Organic Compound
VPH	Volatile Petroleum Hydrocarbons

Definitions

Equipment Blank: A sample of analyte-free media, which has been used to rinse the sampling equipment. It is collected after completion of decontamination and prior to sampling. This blank is useful in documenting adequate decontamination of sampling equipment.

Field Duplicate: Independent samples, which are collected as close as possible to the same point in space and time. They are two separate samples taken from the same source, stored in separate containers, and analyzed independently. These duplicates are useful in documenting the precision of the sampling process.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Matrix Spike Duplicates: Intra-laboratory split of samples spiked with identical concentrations of target analyte(s). The spiking occurs prior to sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reporting Limit (RL) The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. The RL is generally 5 to 10 times the MDL. However, it may be nominally chosen within these guidelines to simplify data reporting. For many analytes the RL analyte concentration is selected as the lowest non-zero standard in the calibration curve. Sample RLs are highly matrix-dependent.

Precision: The agreement among a set of replicate measurements without assumption of knowledge of the true value. Precision is estimated by means of duplicate/replicate analyses. These samples should contain concentrations of analyte above the MDL, and may involve the use of matrix spikes. The Relative Percent Difference (%RPD) is used to estimate the precision between two samples.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Trip Blank: A sample of analyte-free media taken from the laboratory to the sampling site and returned to the laboratory unopened. A trip blank is used to document contamination attributable to shipping and field handling procedures. This type of blank is useful in documenting contamination of volatile organic samples.

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CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: 10/23
- All TATs are subject to laboratory approval.
- Min. 24-hour notification is needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: Carey Hengstenberg
MARIN ENVIROMENTAL
73 Millet St.

Project Mgr.: Joe Hayes

Invoice To: Same

P.O. No.: RQN:

Project No.: V4990090-044
Site Name: Burnham Property
Location: Windsor State: VT
Sampler(s): Carey / Brian

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9= 10=

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1= X2= X3=

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	8260	8270 PAH	Cyanide (TDS)	RCRA 8 Metals	PCBs (608)	Notes:
AB	MW-1	10/18/00	1600	G	GW	2,4,5	2	2	~~2~~	2	X	X	X	X	X	
AB	MW-4		1430			2,4,5	2	2	~~2~~	2	X	X	X	X	X	
AB	TRIP		100			2	2	~~2~~			X					
AB	Equip		1130			2,4,5	2	2		2	X	X	X	X	X	
AB																
AB																
AB																
AB																
AB																
AB																

Containers:

Additional Instructions:
Request QA/QC

☐ Fax results when available to (802) 434-6076
☐ E-mail results when available to

Relinquished By:	Received By:	Date:	Time:
Carey Hengst		10/19/00	430

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Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393
Florida # E87600

Marin Environmental
73 Millet Street
Richmond, VT 05477

10/25/00

Attn: Carey Hengstenberg

Client Project Number: VT990090 **Location:** Burnham Property - Windsor, VT

Laboratory ID	Client Sample ID	Analyses Requested
AC13876	MW-5	VOCs by GC/MS
		Separatory Funnel Extraction
		PAHs by GC/MS
		Total Cyanide
		Metals Digestion
		Mercury Digestion
		Total RCRA8 Metals
		Total Mercury
		Polychlorinated Biphenyls by GC
AC13877	MW-6	VOCs by GC/MS
		Separatory Funnel Extraction
		PAHs by GC/MS
		Total Cyanide
		Metals Digestion
		Mercury Digestion
		Total RCRA8 Metals
		Total Mercury
		Polychlorinated Biphenyls by GC

11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
24 Jacks Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

SPECTRUM ANALYTICAL, INC.
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HANIBAL TECHNOLOGY

Client Project Number: VT990090 **Location:** Burnham Property - Windsor, VT

Laboratory ID	Client Sample ID	Analyses Requested

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
24 Torrey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: Burnham Property - Windsor, VT
Client: MARIN
Lab ID No: AC13876
Client Id: MW-5

Client Project No: VT990090
Submittal Date: 10/23/00
Collection Date: 10/20/00
Matrix: Ground Water

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Volatile Organic Compounds							
VOCs by GC/MS							
Acetone	Not detected	ug/L	100.0	10/23/00	10/23/00	KW	SW846 8260B
Acrylonitrile	Not detected	ug/L	10.0	10/23/00	10/23/00	KW	SW846 8260B
Benzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Bromobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Bromochloromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Bromodichloromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Bromoform	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Bromomethane	Not detected	ug/L	2.0	10/23/00	10/23/00	KW	SW846 8260B
2-Butanone (MEK)	Not detected	ug/L	50.0	10/23/00	10/23/00	KW	SW846 8260B
n-Butylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
sec-Butylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
tert-Butylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Carbon disulfide	Not detected	ug/L	5.0	10/23/00	10/23/00	KW	SW846 8260B
Carbon tetrachloride	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Chlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Chloroethane	Not detected	ug/L	2.0	10/23/00	10/23/00	KW	SW846 8260B
Chloroform	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Chloromethane	Not detected	ug/L	2.0	10/23/00	10/23/00	KW	SW846 8260B
2-Chlorotoluene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
4-Chlorotoluene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	Not detected	ug/L	2.0	10/23/00	10/23/00	KW	SW846 8260B
Dibromochloromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,2-Dibromoethane (EDB)	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Dibromomethane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,2-Dichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,3-Dichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,4-Dichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Dichlorodifluoromethane	Not detected	ug/L	2.0	10/23/00	10/23/00	KW	SW846 8260B
1,1-Dichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,2-Dichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,1-Dichloroethene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
cis-1,2-Dichloroethene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
trans-1,2-Dichloroethene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,2-Dichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B

Lab ID No: AC13876 **Collection Date:** 10/20/00
Client Id: MW-5 **Matrix:** Ground Water

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
1,3-Dichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
2,2-Dichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,1-Dichloropropene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
cis-1,3-Dichloropropene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
trans-1,3-Dichloropropene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Ethylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Hexachlorobutadiene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
2-Hexanone (MBK)	Not detected	ug/L	100.0	10/23/00	10/23/00	KW	SW846 8260B
Isopropylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
4-Isopropyltoluene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Methyl-tert-butyl ether (MTBE)	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	20.0	10/23/00	10/23/00	KW	SW846 8260B
Methylene chloride	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Naphthalene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
n-Propylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Styrene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,1,1,2-Tetrachloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Tetrachloroethene (PCE)	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Toluene	1.6	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,2,3-Trichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,2,4-Trichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,1,1-Trichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,1,2-Trichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Trichloroethene (TCE)	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Trichlorofluoromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,2,3-Trichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,2,4-Trimethylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,3,5-Trimethylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Vinyl chloride	Not detected	ug/L	2.0	10/23/00	10/23/00	KW	SW846 8260B
m,p-Xylenes	Not detected	ug/L	2.0	10/23/00	10/23/00	KW	SW846 8260B
o-Xylene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
4-Bromofluorobenzene (%SR)	94	ug/L		10/23/00	10/23/00	KW	SW846 8260B
1,4-Difluorobenzene (%SR)	104	ug/L		10/23/00	10/23/00	KW	SW846 8260B
Chlorobenzene-d5 (%SR)	108	ug/L		10/23/00	10/23/00	KW	SW846 8260B
SVOC Preparation							
Separatory Funnel Extraction	Completed			10/24/00	10/24/00	NB	SW846 3510C
Semivolatile Organic Compounds							
PAHs by GC/MS							
Naphthalene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
2-Methylnaphthalene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C

Lab ID No: AC13876 **Collection Date:** 10/20/00
Client Id: MW-5 **Matrix:** Ground Water

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Acenaphthylene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Acenaphthene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Fluorene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Phenanthrene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Anthracene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Fluoranthene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Pyrene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Benzo (a) anthracene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Chrysene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Benzo (b) fluoranthene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Benzo (k) fluoranthene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Benzo (a) pyrene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Indeno (1,2,3-cd) pyrene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Dibenzo (a,h) anthracene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Benzo (g,h,i) perylene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
2-Fluorobiphenyl (%SR)	60	ug/L	0.	10/24/00	10/24/00	MSL	SW846 8270C
Terphenyl-d14 (%SR)	57	ug/L	0.	10/24/00	10/24/00	MSL	SW846 8270C
Semivolatile Organic Compounds							
Polychlorinated Biphenyls by GC							
PCB-1016	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1221	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1232	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1242	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1248	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1254	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1260	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
Decachlorobiphenyl (%SR)	70	ug/L		10/24/00	10/24/00	TG	EPA 608
Metals Preparation							
Mercury Digestion	Completed			10/24/00	10/24/00	YV	EPA 245.1
Metals Digestion	Completed			10/24/00	10/24/00	YV	EPA 200.7
Metals Analysis							
Total RCRA8 Metals							
Total Arsenic	Below det lim	mg/L	0.015	10/25/00	10/25/00	JLC	EPA 200.7
Total Barium	0.106	mg/L	0.005	10/25/00	10/25/00	JLC	EPA 200.7
Total Cadmium	Below det lim	mg/L	0.0025	10/25/00	10/25/00	JLC	EPA 200.7
Total Chromium	0.038	mg/L	0.005	10/25/00	10/25/00	JLC	EPA 200.7
Total Lead	0.025	mg/L	0.0075	10/25/00	10/25/00	JLC	EPA 200.7
Total Selenium	Below det lim	mg/L	0.015	10/25/00	10/25/00	JLC	EPA 200.7
Total Silver	Below det lim	mg/L	0.010	10/25/00	10/25/00	JLC	EPA 200.7
Total Mercury	Below det lim	mg/L	0.0004	10/24/00	10/24/00	YV	EPA 245.1

Lab ID No: AC13876
Client Id: MW-5

Collection Date: 10/20/00
Matrix: Ground Water

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
General Chemistry							
Total Cyanide	Below det lim	mg/L	0.01	10/24/00	10/24/00	DMM	SM 4500 CN E

Lab ID No: AC13877 **Collection Date:** 10/20/00
Client Id: MW-6 **Matrix:** Ground Water

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Volatile Organic Compounds							
VOCs by GC/MS							
Acetone	Not detected	ug/L	100.0	10/23/00	10/23/00	KW	SW846 8260B
Acrylonitrile	Not detected	ug/L	10.0	10/23/00	10/23/00	KW	SW846 8260B
Benzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Bromobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Bromochloromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Bromodichloromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Bromoform	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Bromomethane	Not detected	ug/L	2.0	10/23/00	10/23/00	KW	SW846 8260B
2-Butanone (MEK)	Not detected	ug/L	50.0	10/23/00	10/23/00	KW	SW846 8260B
n-Butylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
sec-Butylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
tert-Butylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Carbon disulfide	Not detected	ug/L	5.0	10/23/00	10/23/00	KW	SW846 8260B
Carbon tetrachloride	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Chlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Chloroethane	Not detected	ug/L	2.0	10/23/00	10/23/00	KW	SW846 8260B
Chloroform	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Chloromethane	Not detected	ug/L	2.0	10/23/00	10/23/00	KW	SW846 8260B
2-Chlorotoluene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
4-Chlorotoluene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	Not detected	ug/L	2.0	10/23/00	10/23/00	KW	SW846 8260B
Dibromochloromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,2-Dibromoethane (EDB)	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Dibromomethane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,2-Dichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,3-Dichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,4-Dichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Dichlorodifluoromethane	Not detected	ug/L	2.0	10/23/00	10/23/00	KW	SW846 8260B
1,1-Dichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,2-Dichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,1-Dichloroethene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
cis-1,2-Dichloroethene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
trans-1,2-Dichloroethene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,2-Dichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,3-Dichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
2,2-Dichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,1-Dichloropropene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
cis-1,3-Dichloropropene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
trans-1,3-Dichloropropene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B

Lab ID No: AC13877 **Collection Date:** 10/20/00
Client Id: MW-6 **Matrix:** Ground Water

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Ethylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Hexachlorobutadiene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
2-Hexanone (MBK)	Not detected	ug/L	100.0	10/23/00	10/23/00	KW	SW846 8260B
Isopropylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
4-Isopropyltoluene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Methyl-tert-butyl ether (MTBE)	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	20.0	10/23/00	10/23/00	KW	SW846 8260B
Methylene chloride	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Naphthalene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
n-Propylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Styrene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,1,1,2-Tetrachloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Tetrachloroethene (PCE)	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Toluene	1.6	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,2,3-Trichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,2,4-Trichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,1,1-Trichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,1,2-Trichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Trichloroethene (TCE)	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Trichlorofluoromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,2,3-Trichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,2,4-Trimethylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
1,3,5-Trimethylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
Vinyl chloride	Not detected	ug/L	2.0	10/23/00	10/23/00	KW	SW846 8260B
m,p-Xylenes	Not detected	ug/L	2.0	10/23/00	10/23/00	KW	SW846 8260B
o-Xylene	Not detected	ug/L	1.0	10/23/00	10/23/00	KW	SW846 8260B
4-Bromofluorobenzene (%SR)	92	ug/L		10/23/00	10/23/00	KW	SW846 8260B
1,4-Difluorobenzene (%SR)	104	ug/L		10/23/00	10/23/00	KW	SW846 8260B
Chlorobenzene-d5 (%SR)	108	ug/L		10/23/00	10/23/00	KW	SW846 8260B
SVOC Preparation							
Separatory Funnel Extraction	Completed			10/24/00	10/24/00	NA	SW846 3510C
Semivolatile Organic Compounds							
PAHs by GC/MS							
Naphthalene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
2-Methylnaphthalene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Acenaphthylene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Acenaphthene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Fluorene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Phenanthrene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Anthracene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C

Lab ID No: AC13877 **Collection Date:** 10/20/00
Client Id: MW-6 **Matrix:** Ground Water

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Fluoranthene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Pyrene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Benzo (a) anthracene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Chrysene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Benzo (b) fluoranthene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Benzo (k) fluoranthene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Benzo (a) pyrene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Indeno (1,2,3-cd) pyrene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Dibenzo (a,h) anthracene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
Benzo (g,h,i) perylene	Not detected	ug/L	5.0	10/24/00	10/24/00	MSL	SW846 8270C
2-Fluorobiphenyl (%SR)	62	ug/L	0.	10/24/00	10/24/00	MSL	SW846 8270C
Terphenyl-d14 (%SR)	57	ug/L	0.	10/24/00	10/24/00	MSL	SW846 8270C
Semivolatile Organic Compounds							
Polychlorinated Biphenyls by GC							
PCB-1016	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1221	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1232	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1242	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1248	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1254	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1260	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
Decachlorobiphenyl (%SR)	60	ug/L		10/24/00	10/24/00	TG	EPA 608
Metals Preparation							
Mercury Digestion	Completed			10/24/00	10/24/00	YV	EPA 245.1
Metals Digestion	Completed			10/24/00	10/24/00	YV	EPA 200.7
Metals Analysis							
Total RCRA8 Metals							
Total Arsenic	0.037	mg/L	0.015	10/25/00	10/25/00	JLC	EPA 200.7
Total Barium	0.109	mg/L	0.005	10/25/00	10/25/00	JLC	EPA 200.7
Total Cadmium	Below det lim	mg/L	0.0025	10/25/00	10/25/00	JLC	EPA 200.7
Total Chromium	0.038	mg/L	0.005	10/25/00	10/25/00	JLC	EPA 200.7
Total Lead	0.026	mg/L	0.0075	10/25/00	10/25/00	JLC	EPA 200.7
Total Selenium	Below det lim	mg/L	0.015	10/25/00	10/25/00	JLC	EPA 200.7
Total Silver	Below det lim	mg/L	0.010	10/25/00	10/25/00	JLC	EPA 200.7
Total Mercury	Below det lim	mg/L	0.0004	10/24/00	10/24/00	YV	EPA 245.1
General Chemistry							
Total Cyanide	Below det lim	mg/L	0.01	10/24/00	10/24/00	DMM	SM 4500 CN E

Lab ID No: AC13877
Client Id: MW-6

Collection Date: 10/20/00
Matrix: Ground Water

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

10/25/00

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report Supplement
References

SW 846	Test Methods for Evaluating Solid Waste. Third edition, 1998
40 CFR 136	Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act
40 CFR 141	National Primary Drinking Water Regulations
40 CFR 143	National Secondary Drinking Water Regulations
40 CFR 160	Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), Good Laboratory Practice Standards
APHA-AWWA-WPCF	Standard Methods for the Examination of Water and Wastewater. 19th edition, 1995
ASTM D 3328	Standard Methods for the Comparison of Waterborne Petroleum Oils by Gas Chromatography
EPA 540/G-87/003	Data Quality Objectives for Remediation Response Activities, Development Process
EPA 600/4-79-012	Quality Assurance Handbook for Analytical Quality Control in Water and Wastewater Laboratories
EPA 600/4-79-019	Handbook for Analytical Quality Control in Water and Wastewater Laboratories
EPA 600/4-79-020	Method for the Chemical Analysis of Water and Wastes
EPA 600/4-82-057	Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater
EPA 600/4-85/056	Choosing Cost-Effective QA/QC Programs for Chemical Analysis
EPA 600/4-88/039	Method for the Determination of Organic Compounds in Drinking Water
CT ETPH	Analysis of Extractable Total Petroleum Hydrocarbons (ETPH)
MADEP EPH	Method for the Determination of Extractable Petroleum Hydrocarbons (EPH)
MADEP VPH	Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)
QAMS 004/80	Guidelines and Specifications for Preparing Quality Assurance Program Plans, USEPA Office of Monitoring System and Quality Assurance
GC-D-52-77	Oil Spill Identification System

Acronyms & Abbreviations

AA	Atomic Absorption	MS	Matrix Spike
ASTM	American Society for Testing and Materials	MSD	Matrix Spike Duplicate
BOD	Biological Oxygen Demand	NTU	Nephelometric Turbidity Units
°C	degree(s) Celsius	PAHs	Polynuclear Aromatic Hydrocarbons
COD	Chemical Oxygen Demand	PCBs	Polychlorinated Biphenyls
CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
DEP	Department of Environmental Protection	PQL	Practical Quantitation Limit
DI	De-ionized	R	Recovery (%R: Percent Recovery)
DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons

Definitions

Equipment Blank: A sample of analyte-free media, which has been used to rinse the sampling equipment. It is collected after completion of decontamination and prior to sampling. This blank is useful in documenting adequate decontamination of sampling equipment.

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Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Matrix Spike Duplicates: Intra-laboratory split of samples spiked with identical concentrations of target analyte(s). The spiking occurs prior to sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.

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Reporting Limit (RL) The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. The RL is generally 5 to 10 times the MDL. However, it may be nominally chosen within these guidelines to simplify data reporting. For many analytes the RL analyte concentration is selected as the lowest non-zero standard in the calibration curve. Sample RLs are highly matrix-dependent.

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SPECTRUM ANALYTICAL, INC.
Featuring
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Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393
Florida # E87600

Marin Environmental
73 Millet Street
Richmond, VT 05477

10/20/00

Attn: Kim Lockard

Client Project Number: 990090-D **Location:** Burnham Property - Windsor, VT

Laboratory ID	Client Sample ID	Analyses Requested
AC12989	MW-5-10	% Solids
		VOC Extraction (solid)
		VOCs by GC/MS

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: Burnham Property - Windsor, VT
Client: MARIN
Lab ID No: AC12989
Client Id: MW-5-10

Client Project No: 990090-D
Submittal Date: 10/17/00
Collection Date: 10/15/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
VOC Preparation							
VOC Extraction (solid)	Lab ext			10/19/00	10/19/00	KW	SW846 5035
Volatile Organic Compounds							
VOCs by GC/MS							
Acetone	Not detected	ug/Kg	1100	10/19/00	10/19/00	KW	SW846 8260B
Acrylonitrile	Not detected	ug/Kg	110	10/19/00	10/19/00	KW	SW846 8260B
Benzene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
Bromobenzene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
Bromochloromethane	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
Bromodichloromethane	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
Bromoform	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
Bromomethane	Not detected	ug/Kg	22.0	10/19/00	10/19/00	KW	SW846 8260B
2-Butanone (MEK)	Not detected	ug/Kg	550	10/19/00	10/19/00	KW	SW846 8260B
n-Butylbenzene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
sec-Butylbenzene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
tert-Butylbenzene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
Carbon disulfide	Not detected	ug/Kg	55.0	10/19/00	10/19/00	KW	SW846 8260B
Carbon tetrachloride	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
Chlorobenzene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
Chloroethane	Not detected	ug/Kg	22.0	10/19/00	10/19/00	KW	SW846 8260B
Chloroform	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
Chloromethane	Not detected	ug/Kg	22.0	10/19/00	10/19/00	KW	SW846 8260B
2-Chlorotoluene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
4-Chlorotoluene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	Not detected	ug/Kg	22.0	10/19/00	10/19/00	KW	SW846 8260B
Dibromochloromethane	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
1,2-Dibromoethane (EDB)	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
Dibromomethane	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
1,2-Dichlorobenzene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
1,3-Dichlorobenzene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
1,4-Dichlorobenzene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
Dichlorodifluoromethane	Not detected	ug/Kg	22.0	10/19/00	10/19/00	KW	SW846 8260B
1,1-Dichloroethane	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
1,2-Dichloroethane	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
1,1-Dichloroethene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B

Lab ID No: AC12989 **Collection Date:** 10/15/00
Client Id: MW-5-10 **Matrix:** Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method
cis-1,2-Dichloroethene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
trans-1,2-Dichloroethene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
1,2-Dichloropropane	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
1,3-Dichloropropane	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
2,2-Dichloropropane	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
1,1-Dichloropropene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
cis-1,3-Dichloropropene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
trans-1,3-Dichloropropene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
Ethylbenzene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
Hexachlorobutadiene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
2-Hexanone (MBK)	Not detected	ug/Kg	1100	10/19/00	10/19/00	KW	SW846 8260B
Isopropylbenzene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
4-Isopropyltoluene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
Methyl-tert-butyl ether (MTBE)	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
4-Methyl-2-pentanone (MIBK)	Not detected	ug/Kg	220	10/19/00	10/19/00	KW	SW846 8260B
Methylene chloride	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
Naphthalene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
n-Propylbenzene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
Styrene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
1,1,1,2-Tetrachloroethane	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
1,1,2,2-Tetrachloroethane	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
Tetrachloroethene (PCE)	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
Toluene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
1,2,3-Trichlorobenzene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
1,2,4-Trichlorobenzene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
1,1,1-Trichloroethane	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
1,1,2-Trichloroethane	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
Trichloroethene (TCE)	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
Trichlorofluoromethane	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
1,2,3-Trichloropropane	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
1,2,4-Trimethylbenzene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
1,3,5-Trimethylbenzene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
Vinyl chloride	Not detected	ug/Kg	22.0	10/19/00	10/19/00	KW	SW846 8260B
m,p-Xylenes	Not detected	ug/Kg	22.0	10/19/00	10/19/00	KW	SW846 8260B
o-Xylene	Not detected	ug/Kg	11.0	10/19/00	10/19/00	KW	SW846 8260B
4-Bromofluorobenzene (%SR)	95	ug/Kg	0.000	10/19/00	10/19/00	KW	SW846 8260B
1,4-Difluorobenzene (%SR)	106	ug/Kg	0.000	10/19/00	10/19/00	KW	SW846 8260B
Chlorobenzene-d5 (%SR)	109	ug/Kg	0.000	10/19/00	10/19/00	KW	SW846 8260B
% Solids	96.7	%		10/19/00	10/19/00	KW	SM2540 B Mod

Lab ID No: AC12989
Client Id: MW-5-10

Collection Date: 10/15/00
Matrix: Soil

Parameter	Results	Units	Reporting Limit	Start Date	End Date	Analyst	Method

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

10/19/00

SPECTRUM ANALYTICAL, INC.
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Laboratory Report Supplement
References

SW 846	Test Methods for Evaluating Solid Waste. Third edition, 1998
40 CFR 136	Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act
40 CFR 141	National Primary Drinking Water Regulations
40 CFR 143	National Secondary Drinking Water Regulations
40 CFR 160	Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), Good Laboratory Practice Standards
APHA-AWWA-WPCF	Standard Methods for the Examination of Water and Wastewater. 19th edition, 1995
ASTM D 3328	Standard Methods for the Comparison of Waterborne Petroleum Oils by Gas Chromatography
EPA 540/G-87/003	Data Quality Objectives for Remediation Response Activities, Development Process
EPA 600/4-79-012	Quality Assurance Handbook for Analytical Quality Control in Water and Wastewater Laboratories
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CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: 10/20
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: Carey - VT
Marin Environmental

Invoice To: Joe Hayes
Marin - VT

Project No.: 990090-D44
Site Name: Burnham Property
Location: Windsor State: VT
Sampler(s): ICL

Project Mgr.:
P.O. No.: 990090 RQN:

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8= $NaHSO_4$ 9= 10=

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1= X2= X3=

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic		X 8260							Notes:
AC 12989	MW-5-10	10/15/00	10:00	G	SO	1	4					X							
AC																			Include QAQC report - thanks
AC																			
AC																			
AC																			
AC																			
AC																			
AC																			
AC																			
AC																			

Additional Instructions:

☑ Fax results when available to (803) 434 6076

☐ E-mail results when available to

Relinquished by:	Received by:	Date:	Time:
Kim Lockard		10/15/00	12:00
Ted K	U.K.	10/17/00	10:00

APPENDIX E

PHOTODOCUMENTATION

Four-wheel drive road at the bottom of embankment, MW-2 is a small white stick-up PVC pipe. View is to the south

View of on-site residence. Soil boring locations are marked by stakes with orange flags. View is to the southeast.

View to the east from on-site residence. Evidence of ash and burnt wood was discovered in soil boring SB-4 (marked by stake and orange flag).

View to the south of on-site residence, barn and soil boring SB-5.

Out of service bedrock supply well. The well is located at the bottom of the embankment, north of the residence.

A tire and miscellaneous debris at the bottom of the embankment between monitoring wells MW-1 and MW-2.

Metal drums at bottom of embankment near MW-1, view is towards the west.

View of metal drums and debris at bottom of embankment near MW-2, view is towards the west.

APPENDIX F

QA/QC DOCUMENTATION

SPECTRUM ANALYTICAL, INC.
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HANIBAL TECHNOLOGY
Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

RECEIVED
NOV 6 2000

Marin Environmental
73 Millet Street
Richmond, VT 05477

11/03/00

Attn: Kim Lockard

Client Project Number: 990090-D **Location:** Burnham Property - Windsor, VT

Laboratory ID	Client Sample ID	Analyses Requested
AC12989	MW-5-10	QC Data

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES
11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
[illegible] • Bloomfield, Connecticut 06002 • 860-242-6204 • Fax 860-242-4012

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Method Blank Report

Location: QC Sample
Client:
Lab ID No: AC12805
Client Id: QC101900

Client Project No:
Submittal Date: 10/19/00
Collection Date: 10/19/00
Matrix: QC

Parameter	Result	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Volatile QC							
EPA Method 524.2 Blank							
Benzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Bromobenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Bromochloromethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Bromodichloromethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Bromoform	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Bromomethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
n-Butylbenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
sec-Butylbenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
tert-Butylbenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Carbon tetrachloride	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Chlorobenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Chloroethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Chloroform	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Chloromethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
2-Chlorotoluene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
4-Chlorotoluene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Dibromochloromethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,2-Dibromoethane (EDB)	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Dibromomethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,2-Dichlorobenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,3-Dichlorobenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,4-Dichlorobenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Dichlorodifluoromethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,1-Dichloroethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,2-Dichloroethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,1-Dichloroethene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
cis-1,2-Dichloroethene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
trans-1,2-Dichloroethene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,2-Dichloropropane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,3-Dichloropropane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
2,2-Dichloropropane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,1-Dichloropropene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
cis-1,3-Dichloropropene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2

Lab ID No: AC12805 **Collection Date:** 10/19/00
Client Id: QC101900 **Matrix:** QC

Parameter	Result	Units	Reporting Limit	Start Date	End Date	Analyst	Method
trans-1,3-Dichloropropene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Ethylbenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Hexachlorobutadiene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Isopropylbenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
4-Isopropyltoluene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Methylene chloride	Not detected	ug/L	5.0	10/19/00	10/19/00	KW	EPA 524.2
Naphthalene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
n-Propylbenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Styrene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,1,1,2-Tetrachloroethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Tetrachloroethene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Toluene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,2,3-Trichlorobenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,2,4-Trichlorobenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,1,1-Trichloroethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,1,2-Trichloroethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Trichloroethene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Trichlorofluoromethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,2,3-Trichloropropane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,2,4-Trimethylbenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,3,5-Trimethylbenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
m,p-Xylenes	Not detected	ug/L	2.0	10/19/00	10/19/00	KW	EPA 524.2
o-Xylene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Vinyl chloride	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
BFB Surrogate Recovery (%)	94	ug/L	0.00	10/19/00	10/19/00	KW	EPA 524.2
p-DFB Surrogate Recovery (%)	106	ug/L	0.00	10/19/00	10/19/00	KW	EPA 524.2
CLB-d5 Surrogate Recovery (%)	108	ug/L	0.00	10/19/00	10/19/00	KW	EPA 524.2
Methyl-t-butyl ether	Not detected	ug/L	2.0	10/19/00	10/19/00	KW	EPA 524.2
Acetone	Not detected	ug/L	80	10/19/00	10/19/00	KW	EPA 524.2
2-Butanone (MEK)	Not detected	ug/L	80	10/19/00	10/19/00	KW	EPA 524.2
2-Hexanone (MBK)	Not detected	ug/L	80	10/19/00	10/19/00	KW	EPA 524.2
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	80	10/19/00	10/19/00	KW	EPA 524.2
Freon-113	Not detected	ug/L	80	10/19/00	10/19/00	KW	EPA 524.2
Carbon Disulfide	Not detected	ug/L	80	10/19/00	10/19/00	KW	EPA 524.2
Vinyl acetate	Not detected	ug/L	80	10/19/00	10/19/00	KW	EPA 524.2
2-Chloroethyl vinyl ether	Not detected	ug/L	80	10/19/00	10/19/00	KW	EPA 524.2
Methyl Iodide	Not detected	ug/L	80	10/19/00	10/19/00	KW	EPA 524.2

Lab ID No: AC12805
Client Id: QC101900

Collection Date: 10/19/00
Matrix: QC

Parameter	Result	Units	Reporting Limit	Start Date	End Date	Analyst	Method

Reviewed by:

MB

Quality Service/Quality Assurance Depts.

Validated by:

11/03/00

President/Laboratory Director

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Laboratory Control Spike

Location: QC Sample
Client:
Lab ID No: AC12805
Client Id: QC101900

Client Project No:
Submittal Date: 10/19/00
Collection Date: 10/19/00
Matrix: QC

Parameter	% Recovery	Spiked Conc.	Units	Start Date	End Date	Analyst	Method
Volatile QC							
EPA Method 524.2 LCS							
Dichlorodifluoromethane	115	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Chloromethane	121	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Vinyl chloride	120	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Bromomethane	70	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Chloroethane	78	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Trichlorofluoromethane	109	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,1-Dichloroethene	112	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Dichloromethane	160*	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Methyl-tert-butyl ether	103	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
trans-1,2-Dichloroethene	107	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,1-Dichloroethane	117	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
2,2-Dichloropropane	73	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
cis-1,2-Dichloroethene	100	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Bromochloromethane	108	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Chloroform	119	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,1,1-Trichloroethane	103	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Carbon tetrachloride	115	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,1-Dichloropropene	109	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Benzene	110	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,2-Dichloroethane	116	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Trichloroethene	106	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,2-Dichloropropane	110	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Dibromomethane	109	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Bromodichloromethane	112	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
cis-1,3-Dichloropropane	97	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Toluene	100	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
trans-1,3-Dichloropropene	95	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,1,2-Trichloroethane	110	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Tetrachloroethene	100	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,3-Dichloropropane	113	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Dibromochloromethane	103	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,2-Dibromoethane (EDB)	107	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Chlorobenzene	109	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,1,1,2-Trichloroethane	103	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2

Lab ID No: AC12805
Client Id: QC101900

Collection Date: 10/19/00
Matrix: QC

Parameter	% Recovery	Spiked Conc.	Units	Start Date	End Date	Analyst	Method
Ethylbenzene	98	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
m,p-Xylenes	103	40	ug/L	10/19/00	10/19/00	KW	EPA 524.2
o-Xylene	104	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Styrene	92	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Bromoform	99	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Isopropylbenzene	101	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Bromobenzene	102	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,1,2,2-Trichloroethane	106	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,2,3-Trichloropropane	77	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
n-Propylbenzene	100	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
2-Chlorotoluene	99	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
4-Chlorotoluene	98	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,3,5-Trimethylbenzene	99	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
tert-Butylbenzene	105	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,2,4-Trimethylbenzene	100	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
sec-Butylbenzene	98	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,3-Dichlorobenzene	96	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Isopropyltoluene	93	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,4-Dichlorobenzene	95	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,2-Dichlorobenzene	99	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
n-Butylbenzene	86	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Dibromochloropropane	104	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,2,4-Trichlorobenzene	85	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Hexachlorobutadiene	78	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Naphthalene	82	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,2,3-Trichlorobenzene	86	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
4-Bromofluorobenzene (%SR)	96	0.00	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,4-Difluorobenzene (%SR)	106	0.00	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Chlorobenzene-d5 (%SR)	107	0.00	ug/L	10/19/00	10/19/00	KW	EPA 524.2

Reviewed by:

MB

Quality Service/Quality Assurance Depts.

Validated by:

11/03/00

President/Laboratory Director

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Matrix Spike

Location:
Client:
Lab ID No: AC11965
Client Id:

Client Project No:
Submittal Date: 10/06/00
Collection Date: 10/06/00
Matrix: Ground Water

Parameter	% Recovery	Start Date	End Date	Analyst	Method
VOC Matrix Spike Recovery					
1,1-Dichloroethene	88	10/19/00	10/19/00	KW	SW846 8260
Trichloroethene	89	10/19/00	10/19/00	KW	SW846 8260
Chlorobenzene	89	10/19/00	10/19/00	KW	SW846 8260
Benzene	86	10/19/00	10/19/00	KW	SW846 8260
Toluene	87	10/19/00	10/19/00	KW	SW846 8260

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

11/03/00

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Matrix Spike Duplicate

Location:
Client:
Lab ID No: AC11965
Client Id:

Client Project No:
Submittal Date: 10/06/00
Collection Date: 10/06/00
Matrix: Ground Water

Parameter	% Recovery	% Difference	Start Date	End Date	Analyst	Method
Duplicate VOC Matrix Spike Recov						
1,1-Dichloroethene	85	4.0	10/19/00	10/19/00	KW	SW846 8260
Trichloroethene	86	4.0	10/19/00	10/19/00	KW	SW846 8260
Chlorobenzene	88	1.2	10/19/00	10/19/00	KW	SW846 8260
Benzene	84	1.9	10/19/00	10/19/00	KW	SW846 8260
Toluene	84	3.0	10/19/00	10/19/00	KW	SW846 8260

Reviewed by:

LB

Quality Service/Quality Assurance Depts.

Validated by:

11/03/00

President/Laboratory Director

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY
Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

Marin Environmental
73 Millet Street
Richmond, VT 05477

10/30/00

Attn: Kim Lockard

Client Project Number: 990090-D **Location:** Burnham Property - Windsor, VT

Laboratory ID	Client Sample ID	Analyses Requested
AC12989	MW-5-10	QC Data

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal O. Tayeh
President/Laboratory Director

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ENVIRONMENTAL ANALYSES
11 Kimgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Method Blank Report

Location: QC Sample
Client:
Lab ID No: AC12805
Client Id: QC101900

Client Project No:
Submittal Date: 10/19/00
Collection Date: 10/19/00
Matrix: QC

Parameter	Result	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Volatile QC							
EPA Method 524.2 Blank							
Benzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Bromobenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Bromochloromethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Bromodichloromethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Bromoform	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Bromomethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
n-Butylbenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
sec-Butylbenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
tert-Butylbenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Carbon tetrachloride	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Chlorobenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Chloroethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Chloroform	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Chloromethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
2-Chlorotoluene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
4-Chlorotoluene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Dibromochloromethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,2-Dibromoethane (EDB)	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Dibromomethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,2-Dichlorobenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,3-Dichlorobenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,4-Dichlorobenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Dichlorodifluoromethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,1-Dichloroethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,2-Dichloroethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,1-Dichloroethene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
cis-1,2-Dichloroethene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
trans-1,2-Dichloroethene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,2-Dichloropropane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,3-Dichloropropane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
2,2-Dichloropropane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,1-Dichloropropene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
cis-1,3-Dichloropropene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2

Lab ID No: AC12805
Client Id: QC101900

Collection Date: 10/19/00
Matrix: QC

Parameter	Result	Units	Reporting Limit	Start Date	End Date	Analyst	Method
trans-1,3-Dichloropropene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Ethylbenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Hexachlorobutadiene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Isopropylbenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
4-Isopropyltoluene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Methylene chloride	Not detected	ug/L	5.0	10/19/00	10/19/00	KW	EPA 524.2
Naphthalene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
n-Propylbenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Styrene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,1,1,2-Tetrachloroethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Tetrachloroethene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Toluene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,2,3-Trichlorobenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,2,4-Trichlorobenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,1,1-Trichloroethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,1,2-Trichloroethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Trichloroethene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Trichlorofluoromethane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,2,3-Trichloropropane	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,2,4-Trimethylbenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
1,3,5-Trimethylbenzene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
m,p-Xylenes	Not detected	ug/L	2.0	10/19/00	10/19/00	KW	EPA 524.2
o-Xylene	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
Vinyl chloride	Not detected	ug/L	1.0	10/19/00	10/19/00	KW	EPA 524.2
BFB Surrogate Recovery (%)	94	ug/L	0.00	10/19/00	10/19/00	KW	EPA 524.2
p-DFB Surrogate Recovery (%)	106	ug/L	0.00	10/19/00	10/19/00	KW	EPA 524.2
CLB-d5 Surrogate Recovery (%)	108	ug/L	0.00	10/19/00	10/19/00	KW	EPA 524.2
Methyl-t-butyl ether	Not detected	ug/L	2.0	10/19/00	10/19/00	KW	EPA 524.2
Acetone	Not detected	ug/L	80	10/19/00	10/19/00	KW	EPA 524.2
2-Butanone (MEK)	Not detected	ug/L	80	10/19/00	10/19/00	KW	EPA 524.2
2-Hexanone (MBK)	Not detected	ug/L	80	10/19/00	10/19/00	KW	EPA 524.2
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	80	10/19/00	10/19/00	KW	EPA 524.2
Freon-113	Not detected	ug/L	80	10/19/00	10/19/00	KW	EPA 524.2
Carbon Disulfide	Not detected	ug/L	80	10/19/00	10/19/00	KW	EPA 524.2
Vinyl acetate	Not detected	ug/L	80	10/19/00	10/19/00	KW	EPA 524.2
2-Chloroethyl vinyl ether	Not detected	ug/L	80	10/19/00	10/19/00	KW	EPA 524.2
Methyl Iodide	Not detected	ug/L	80	10/19/00	10/19/00	KW	EPA 524.2

Lab ID No: AC12805
Client Id: QC101900

Collection Date: 10/19/00
Matrix: QC

Parameter	Result	Units	Reporting Limit	Start Date	End Date	Analyst	Method

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

10/30/00

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Laboratory Control Spike

Location: QC Sample
Client:
Lab ID No: AC12805
Client Id: QC101900

Client Project No:
Submittal Date: 10/19/00
Collection Date: 10/19/00
Matrix: QC

Parameter	% Recovery	Spiked Conc.	Units	Start Date	End Date	Analyst	Method
Volatile QC							
EPA Method 524.2 LCS							
Dichlorodifluoromethane	115	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Chloromethane	121	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Vinyl chloride	120	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Bromomethane	70	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Chloroethane	78	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Trichlorofluoromethane	109	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,1-Dichloroethene	112	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Dichloromethane	160*	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Methyl-tert-butyl ether	103	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
trans-1,2-Dichloroethene	107	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,1-Dichloroethane	117	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
2,2-Dichloropropane	73	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
cis-1,2-Dichloroethene	100	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Bromochloromethane	108	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Chloroform	119	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,1,1-Trichloroethane	103	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Carbon tetrachloride	115	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,1-Dichloropropene	109	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Benzene	110	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,2-Dichloroethane	116	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Trichloroethene	106	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,2-Dichloropropane	110	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Dibromomethane	109	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Bromodichloromethane	112	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
cis-1,3-Dichloropropane	97	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Toluene	100	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
trans-1,3-Dichloropropene	95	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,1,2-Trichloroethane	110	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Tetrachloroethene	100	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,3-Dichloropropane	113	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Dibromochloromethane	103	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,2-Dibromoethane (EDB)	107	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Chlorobenzene	109	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,1,1,2-Trichloroethane	103	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2

Lab ID No: AC12805
Client Id: QC101900

Collection Date: 10/19/00
Matrix: QC

Parameter	% Recovery	Spiked Conc.	Units	Start Date	End Date	Analyst	Method
Ethylbenzene	98	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
m,p-Xylenes	103	2.0	ug/L	10/19/00	10/19/00	KW	EPA 524.2
o-Xylene	104	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Styrene	92	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Bromoform	99	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Isopropylbenzene	101	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Bromobenzene	102	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,1,2,2-Trichloroethane	106	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,2,3-Trichloropropane	77	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
n-Propylbenzene	100	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
2-Chlorotoluene	99	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
4-Chlorotoluene	98	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,3,5-Trimethylbenzene	99	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
tert-Butylbenzene	105	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,2,4-Trimethylbenzene	100	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
sec-Butylbenzene	98	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,3-Dichlorobenzene	96	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Isopropyltoluene	93	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,4-Dichlorobenzene	95	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,2-Dichlorobenzene	99	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
n-Butylbenzene	86	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Dibromochloropropane	104	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,2,4-Trichlorobenzene	85	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Hexachlorobutadiene	78	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
Naphthalene	82	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,2,3-Trichlorobenzene	86	20	ug/L	10/19/00	10/19/00	KW	EPA 524.2
4-Bromofluorobenzene (%SR)	96		ug/L	10/19/00	10/19/00	KW	EPA 524.2
1,4-Difluorobenzene (%SR)	106		ug/L	10/19/00	10/19/00	KW	EPA 524.2
Chlorobenzene-d5 (%SR)	107		ug/L	10/19/00	10/19/00	KW	EPA 524.2

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

10/30/00

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Matrix Spike

Location:
Client:
Lab ID No: AC11965
Client Id:

Client Project No:
Submittal Date: 10/06/00
Collection Date: 10/06/00
Matrix: Ground Water

Parameter	% Recovery	Start Date	End Date	Analyst	Method
VOC Matrix Spike Recovery					
1,1-Dichloroethene	88	10/19/00	10/19/00	KW	SW846 8260
Trichloroethene	89	10/19/00	10/19/00	KW	SW846 8260
Chlorobenzene	89	10/19/00	10/19/00	KW	SW846 8260
Benzene	86	10/19/00	10/19/00	KW	SW846 8260
Toluene	87	10/19/00	10/19/00	KW	SW846 8260

Reviewed by:

MB

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

10/30/00

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Matrix Spike Duplicate

Location:
Client:
Lab ID No: AC11965
Client Id:

Client Project No:
Submittal Date: 10/06/00
Collection Date: 10/06/00
Matrix: Ground Water

Parameter	% Recovery	% Difference	Start Date	End Date	Analyst	Method
Duplicate VOC Matrix Spike Recov						
1,1-Dichloroethene	85	4.0	10/19/00	10/19/00	KW	SW846 8260
Trichloroethene	86	4.0	10/19/00	10/19/00	KW	SW846 8260
Chlorobenzene	88	1.2	10/19/00	10/19/00	KW	SW846 8260
Benzene	84	1.9	10/19/00	10/19/00	KW	SW846 8260
Toluene	84	3.0	10/19/00	10/19/00	KW	SW846 8260

Reviewed by:

MB

Quality Service/Quality Assurance Depts.

Validated by:

10/30/00

President/Laboratory Director

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY
Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

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Marin Environmental
73 Millet Street
Richmond, VT 05477

11/03/00

Attn: Carcy Hengstenberg

Client Project Number: VT990090 **Location:** Burnham Property - Windsor, VT

Laboratory ID	Client Sample ID	Analyses Requested
AC13876	MW-5	QC Data
AC13877	MW-6	QC Data

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES
11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413-789-4076
24 Tobey Road • Bloomfield, Connecticut 06002 • 860-242-6294 • Fax 860-242-4012

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Method Blank Report

Location: QC Sample
Client:
Lab ID No: AC13934
Client Id: QC102300

Client Project No:
Submittal Date: 10/23/00
Collection Date: 10/23/00
Matrix: QC

Parameter	Result	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Volatile QC							
EPA Method 524.2 Blank							
Benzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Bromobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Bromochloromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Bromodichloromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Bromoform	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Bromomethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
n-Butylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
sec-Butylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
tert-Butylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Carbon tetrachloride	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Chlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Chloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Chloroform	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Chloromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
2-Chlorotoluene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
4-Chlorotoluene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Dibromochloromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,2-Dibromoethane (EDB)	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Dibromomethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,2-Dichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,3-Dichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,4-Dichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Dichlorodifluoromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,1-Dichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,2-Dichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,1-Dichloroethene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
cis-1,2-Dichloroethene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
trans-1,2-Dichloroethene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,2-Dichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,3-Dichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
2,2-Dichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,1-Dichloropropene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
cis-1,3-Dichloropropene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2

Lab ID No: AC13934
Client Id: QC102300

Collection Date: 10/23/00
Matrix: QC

Parameter	Result	Units	Reporting Limit	Start Date	End Date	Analyst	Method
trans-1,3-Dichloropropene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Ethylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Hexachlorobutadiene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Isopropylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
4-Isopropyltoluene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Methylene chloride	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Naphthalene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
n-Propylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Styrene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,1,1,2-Tetrachloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Tetrachloroethene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Toluene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,2,3-Trichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,2,4-Trichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,1,1-Trichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,1,2-Trichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Trichloroethene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Trichlorofluoromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,2,3-Trichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,2,4-Trimethylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,3,5-Trimethylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
m,p-Xylenes	Not detected	ug/L	2.0	10/23/00	10/23/00	DG	EPA 524.2
o-Xylene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Vinyl chloride	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
BFB Surrogate Recovery (%)	100	ug/L	0.00	10/23/00	10/23/00	DG	EPA 524.2
p-DFB Surrogate Recovery (%)	107	ug/L	0.00	10/23/00	10/23/00	DG	EPA 524.2
CLB-d5 Surrogate Recovery (%)	105	ug/L	0.00	10/23/00	10/23/00	DG	EPA 524.2
Methyl-t-butyl ether	Not detected	ug/L	2.0	10/23/00	10/23/00	DG	EPA 524.2
Acetone	Not detected	ug/L	80	10/23/00	10/23/00	DG	EPA 524.2
2-Butanone (MEK)	Not detected	ug/L	80	10/23/00	10/23/00	DG	EPA 524.2
2-Hexanone (MBK)	Not detected	ug/L	80	10/23/00	10/23/00	DG	EPA 524.2
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	80	10/23/00	10/23/00	DG	EPA 524.2
Freon-113	Not detected	ug/L	80	10/23/00	10/23/00	DG	EPA 524.2
Carbon Disulfide	Not detected	ug/L	80	10/23/00	10/23/00	DG	EPA 524.2
Vinyl acetate	Not detected	ug/L	80	10/23/00	10/23/00	DG	EPA 524.2
2-Chloroethyl vinyl ether	Not detected	ug/L	80	10/23/00	10/23/00	DG	EPA 524.2
Methyl Iodide	Not detected	ug/L	80	10/23/00	10/23/00	DG	EPA 524.2

Lab ID No: AC13934
Client Id: QC102300

Collection Date: 10/23/00
Matrix: QC

Parameter	Result	Units	Reporting Limit	Start Date	End Date	Analyst	Method

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

11/03/00

President/Laboratory Director

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Laboratory Control Spike

Location: QC Sample
Client:
Lab ID No: AC13934
Client Id: QC102300

Client Project No:
Submittal Date: 10/23/00
Collection Date: 10/23/00
Matrix: QC

Parameter	% Recovery	Spiked Conc.	Units	Start Date	End Date	Analyst	Method
Volatile QC							
EPA Method 524.2 LCS							
Dichlorodifluoromethane	114	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Chloromethane	111	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Vinyl chloride	122	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Bromomethane	93	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Chloroethane	105	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Trichlorofluoromethane	98	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,1-Dichloroethene	103	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Dichloromethane	134*	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Methyl-tert-butyl ether	99	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
trans-1,2-Dichloroethene	102	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,1-Dichloroethane	108	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
2,2-Dichloropropane	85	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
cis-1,2-Dichloroethene	95	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Bromochloromethane	102	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Chloroform	110	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,1,1-Trichloroethane	97	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Carbon tetrachloride	109	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,1-Dichloropropene	103	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Benzene	104	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,2-Dichloroethane	111	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Trichloroethene	99	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,2-Dichloropropane	104	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Dibromomethane	102	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Bromodichloromethane	108	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
cis-1,3-Dichloropropane	97	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Toluene	97	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
trans-1,3-Dichloropropene	93	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,1,2-Trichloroethane	105	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Tetrachloroethene	96	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,3-Dichloropropane	106	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Dibromochloromethane	98	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,2-Dibromoethane (EDB)	99	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Chlorobenzene	104	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,1,1,2-Trichloroethane	102	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2

Lab ID No: AC13934
Client Id: QC102300

Collection Date: 10/23/00
Matrix: QC

Parameter	% Recovery	Spiked Conc.	Units	Start Date	End Date	Analyst	Method
Ethylbenzene	100	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
m,p-Xylenes	99	40	ug/L	10/23/00	10/23/00	KW	EPA 524.2
o-Xylene	101	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Styrene	90	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Bromoform	96	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Isopropylbenzene	100	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Bromobenzene	99	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,1,2,2-Trichloroethane	105	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,2,3-Trichloropropane	72	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
n-Propylbenzene	103	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
2-Chlorotoluene	100	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
4-Chlorotoluene	101	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,3,5-Trimethylbenzene	97	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
tert-Butylbenzene	105	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,2,4-Trimethylbenzene	96	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
sec-Butylbenzene	100	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,3-Dichlorobenzene	96	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Isopropyltoluene	94	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,4-Dichlorobenzene	95	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,2-Dichlorobenzene	99	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
n-Butylbenzene	93	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Dibromochloropropane	91	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,2,4-Trichlorobenzene	92	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Hexachlorobutadiene	88	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Naphthalene	90	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,2,3-Trichlorobenzene	93	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
4-Bromofluorobenzene (%SR)	98	0.00	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,4-Difluorobenzene (%SR)	103	0.00	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Chlorobenzene-d5 (%SR)	107	0.00	ug/L	10/23/00	10/23/00	KW	EPA 524.2

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

11/03/00

President/Laboratory Director

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Matrix Spike

Location:
Client:
Lab ID No: AC12966
Client Id:

Client Project No:
Submittal Date: 10/12/00
Collection Date: 10/11/00
Matrix: Ground Water

Parameter	% Recovery	Start Date	End Date	Analyst	Method
VOC Matrix Spike Recovery					
1,1-Dichloroethene	98	10/23/00	10/23/00	KW	SW846 8260
Trichloroethene	98	10/23/00	10/23/00	KW	SW846 8260
Chlorobenzene	101	10/23/00	10/23/00	KW	SW846 8260
Benzene	100	10/23/00	10/23/00	KW	SW846 8260
Toluene	97	10/23/00	10/23/00	KW	SW846 8260

Reviewed by:

KB

Quality Service/Quality Assurance Depts.

Validated by:

11/03/00

President/Laboratory Director

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Matrix Spike Duplicate

Location:
Client:
Lab ID No: AC12966
Client Id:

Client Project No:
Submittal Date: 10/12/00
Collection Date: 10/11/00
Matrix: Ground Water

Parameter	% Recovery	% Difference	Start Date	End Date	Analyst	Method
Duplicate VOC Matrix Spike Recov						
1,1-Dichloroethene	93	5.5	10/24/00	10/24/00	KW	SW846 8260
Trichloroethene	94	3.7	10/24/00	10/24/00	KW	SW846 8260
Chlorobenzene	98	3.4	10/24/00	10/24/00	KW	SW846 8260
Benzene	98	2.7	10/24/00	10/24/00	KW	SW846 8260
Toluene	93	3.7	10/24/00	10/24/00	KW	SW846 8260

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

11/03/00

President/Laboratory Director

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Method Blank Report

Location: QC Sample
Client:
Lab ID No: AC13936
Client Id: QC102400

Client Project No:
Submittal Date: 10/24/00
Collection Date: 10/24/00
Matrix: QC

Parameter	Result	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Semi-Volatile QC							
SW846 Method 8270 Blank							
Pyridine	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
n-Nitrosodimethylamine	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Aniline	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Bis (2-chloroethyl) ether	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Phenol	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
2-Chlorophenol	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
1,3-Dichlorobenzene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
1,4-Dichlorobenzene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
1,2-Dichlorobenzene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Benzyl alcohol	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Bis (2-chloroisopropyl) ether	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
2-Methylphenol (o-cresol)	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Hexachloroethane	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
n-Nitroso-di-n-propylamine	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
4-Methylphenol (p-cresol)	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Nitrobenzene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Isophorone	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
2-Nitrophenol	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
2,4-Dimethylphenol	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Bis (2-chloroethoxy) methane	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
2,4-Dichlorophenol	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
1,2,4-Trichlorobenzene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Naphthalene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
4-Chloroaniline	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Hexachlorobutadiene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
4-Chloro-3-methylphenol	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
2-Methylnaphthalene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Hexachlorocyclopentadiene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
2,4,6-Trichlorophenol	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
2,4,5-Trichlorophenol	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
2-Chloronaphthalene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
2-Nitroaniline	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Acenaphthylene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Dimethylphthalate	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270

Lab ID No: AC13936
Client Id: QC102400

Collection Date: 10/24/00
Matrix: QC

Parameter	Result	Units	Reporting Limit	Start Date	End Date	Analyst	Method
2,6-Dinitrotoluene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Acenaphthene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
3-Nitroaniline	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
2,4-Dinitrophenol	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Dibenzofuran	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
2,4-Dinitrotoluene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
4-Nitrophenol	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Fluorene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
4-Chlorophenyl phenyl ether	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Diethyl phthalate	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
4-Nitroaniline	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
n-Nitrosodiphenylamine	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Azobenzene/Diphenyldiazine	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
4-Bromophenyl phenyl ether	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Hexachlorobenzene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Pentachlorophenol	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Phenanthrene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Anthracene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Di-n-butylphthalate	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Fluoranthene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Benzidine	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Pyrene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Butyl benzyl phthalate	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
3,3'-Dichlorobenzidine	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Benzo (a) anthracene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Chrysene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Bis (2-ethylhexyl) phthalate	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Di-n-octylphthalate	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Benzo (b) fluoranthene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Benzo (k) fluoranthene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Benzo (a) pyrene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Indeno (1,2,3-cd) pyrene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Dibenz (a,h) anthracene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Benzo (g,h,i) perylene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270

Lab ID No: AC13936
Client Id: QC102400

Collection Date: 10/24/00
Matrix: QC

Parameter	Result	Units	Reporting Limit	Start Date	End Date	Analyst	Method

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

11/03/00

President/Laboratory Director

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Laboratory Control Spike

Location: QC Sample
Client:
Lab ID No: AC13936
Client Id: QC102400

Client Project No:
Submittal Date: 10/24/00
Collection Date: 10/24/00
Matrix: QC

Parameter	% Recovery	Spiked Conc.	Units	Start Date	End Date	Analyst	Method
Semi-Volatile QC							
SW846 Method 8270 LCS							
Pyridine	64	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
n-Nitrosodimethylamine	76	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Aniline	52	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Bis (2-chloroethyl) ether	63	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Phenol	75	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2-Chlorophenol	72	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
1,3-Dichlorobenzene	80	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
1,4-Dichlorobenzene	73	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
1,2-Dichlorobenzene	73	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Benzyl alcohol	76	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Bis (2-chloroisopropyl) ether	78	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2-Methylphenol (o-cresol)	76	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Hexachloroethane	69	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
n-Nitroso-di-n-propylamine	78	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
4-Methylphenol (p-cresol)	78	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Nitrobenzene	74	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Isophorone	88	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2-Nitrophenol	71	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2,4-Dimethylphenol	72	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Bis (2-chloroethoxy) methane	78	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2,4-Dichlorophenol	76	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
1,2,4-Trichlorobenzene	78	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Naphthalene	85	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
4-Chloroaniline	79	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Hexachlorobutadiene	59	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
4-Chloro-3-methylphenol	79	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2-Methylnaphthalene	80	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Hexachlorocyclopentadiene	85	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2,4,6-Trichlorophenol	58	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2,4,5-Trichlorophenol	80	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2-Chloronaphthalene	86	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2-Nitroaniline	78	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Acenaphthylene	86	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Dimethylphthalate	91	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270

Lab ID No: AC13936
Client Id: QC102400

Collection Date: 10/24/00
Matrix: QC

Parameter	% Recovery	Spiked Conc.	Units	Start Date	End Date	Analyst	Method
2,6-Dinitrotoluene	83	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Acenaphthene	85	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
3-Nitroaniline	81	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2,4-Dinitrophenol	85	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Dibenzofuran	89	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2,4-Dinitrotoluene	86	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
4-Nitrophenol	51	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Fluorene	87	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
4-Chlorophenyl phenyl ether	86	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Diethyl phthalate	90	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
4-Nitroaniline	79	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
4,6-Dinitro-2-methylphenol	51	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
n-Nitrosodiphenylamine	91	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Azobenzene/Diphenyldiazine	89	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
4-Bromophenyl phenyl ether	89	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Hexachlorobenzene	91	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Pentachlorophenol	61	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Phenanthrene	91	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Anthracene	91	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Di-n-butylphthalate	97	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Fluoranthene	91	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Benzidine	46	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Pyrene	95	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Butyl benzyl phthalate	97	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
3,3'-Dichlorobenzidine	73	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Benzo (a) anthracene	89	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Chrysene	92	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Bis (2-ethylhexyl) phthalate	98	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Di-n-octylphthalate	99	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Benzo (b) fluoranthene	85	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Benzo (k) fluoranthene	94	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Benzo (a) pyrene	91	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Indeno (1,2,3-cd) pyrene	87	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Dibenz (a,h) anthracene	85	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Benzo (g,h,i) perylene	86	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2-Fluorophenol (%SR)	68	0.00	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Phenol-d5 (%SR)	75	0.00	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Nitrobenzene-d5 (%SR)	73	0.00	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2-Fluorobiphenyl (%SR)	84	0.00	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2,4,6-Tribromophenol (%SR)	84	0.00	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Terphenyl-d14 (%SR)	90	0.00	ug/L	10/24/00	10/24/00	MSL	SW846 8270

Lab ID No: AC13936
Client Id: QC102400

Collection Date: 10/24/00
Matrix: QC

Parameter	% Recovery	Spiked Conc.	Units	Start Date	End Date	Analyst	Method

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

11/03/00

President/Laboratory Director

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Method Blank Report

Location: QC Sample
Client:
Lab ID No: AC13938
Client Id: QC102400

Client Project No:
Submittal Date: 10/24/00
Collection Date: 10/24/00
Matrix: QC

Parameter	Result	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Semi-Volatile QC							
EPA Method 608 Blank							
PCB-1016	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1221	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1232	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1242	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1248	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1254	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1260	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
Decachlorobiphenyl (%)	78	ug/L		10/24/00	10/24/00	TG	EPA 608

Reviewed by:

MB

Quality Service/Quality Assurance Depts.

Validated by:

11/03/00

President/Laboratory Director

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Laboratory Control Spike

Location: QC Sample
Client:
Lab ID No: AC13938
Client Id: QC102400

Client Project No:
Submittal Date: 10/24/00
Collection Date: 10/24/00
Matrix: QC

Parameter	% Recovery	Spiked Conc.	Units	Start Date	End Date	Analyst	Method
Semi-Volatile QC							
EPA Method 608 LCS							
PCB-1016	Not run	10	ug/L	10/24/00	10/24/00	TG	EPA 608
PCB-1221	Not run	10	ug/L	10/24/00	10/24/00	TG	EPA 608
PCB-1232	Not run	10	ug/L	10/24/00	10/24/00	TG	EPA 608
PCB-1242	Not run	10	ug/L	10/24/00	10/24/00	TG	EPA 608
PCB-1248	Not run	10	ug/L	10/24/00	10/24/00	TG	EPA 608
PCB-1254	Not run	10	ug/L	10/24/00	10/24/00	TG	EPA 608
PCB-1260	103	10	ug/L	10/24/00	10/24/00	TG	EPA 608
Decachlorobiphenyl (%)	94		ug/L	10/24/00	10/24/00	TG	EPA 608

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

11/03/00

President/Laboratory Director

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Matrix Spike

Location:
Client:
Lab ID No: AC13980
Client Id:

Client Project No:
Submittal Date: 10/23/00
Collection Date: 10/19/00
Matrix: Soil

Parameter	% Recovery	Start Date	End Date	Analyst	Method
Pesticide & PCBs Matrix Spike Re					
PCB-1016	Not detected	10/24/00	10/24/00	TG	EPA 608
PCB-1221	Not detected	10/24/00	10/24/00	TG	EPA 608
PCB-1232	Not detected	10/24/00	10/24/00	TG	EPA 608
PCB-1242	Not detected	10/24/00	10/24/00	TG	EPA 608
PCB-1248	Not detected	10/24/00	10/24/00	TG	EPA 608
PCB-1254	Not detected	10/24/00	10/24/00	TG	EPA 608
PCB-1260	87	10/24/00	10/24/00	TG	EPA 608
PCB-1268	Not detected	10/24/00	10/24/00	TG	EPA 608

Reviewed by:

LB

Quality Service/Quality Assurance Depts.

Validated by:

11/03/00

President/Laboratory Director

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Matrix Spike Duplicate

Location:
Client:
Lab ID No: AC13980
Client Id:

Client Project No:
Submittal Date: 10/23/00
Collection Date: 10/19/00
Matrix: Soil

Parameter	% Recovery	% Difference	Start Date	End Date	Analyst	Method
Pesticide & PCB Dup Matrix Spike						
PCB-1016	Not detected	NC	10/24/00	10/24/00	TG	EPA 608
PCB-1221	Not detected	NC	10/24/00	10/24/00	TG	EPA 608
PCB-1232	Not detected	NC	10/24/00	10/24/00	TG	EPA 608
PCB-1242	Not detected	NC	10/24/00	10/24/00	TG	EPA 608
PCB-1248	Not detected	NC	10/24/00	10/24/00	TG	EPA 608
PCB-1254	Not detected	NC	10/24/00	10/24/00	TG	EPA 608
PCB-1260	87	0.0	10/24/00	10/24/00	TG	EPA 608
PCB-1268	Not detected	NC	10/24/00	10/24/00	TG	EPA 608

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

11/03/00

President/Laboratory Director

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Method Blank Report

Location: QC Sample
Client:
Lab ID No: AC13937
Client Id: QC102400

Client Project No:
Submittal Date: 10/24/00
Collection Date: 10/24/00
Matrix: QC

Parameter	Result	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals QC							
Metals Blank							
Total Aluminum	Not detected	ppm	0.03	10/24/00	10/24/00	CR	EPA 200.7
Total Antimony	Not detected	ppm	0.03	10/24/00	10/24/00	CR	EPA 200.7
Total Arsenic	Not detected	ppm	0.03	10/24/00	10/24/00	CR	EPA 200.7
Total Barium	Not detected	ppm	0.01	10/24/00	10/24/00	CR	EPA 200.7
Total Beryllium	Not detected	ppm	0.005	10/24/00	10/24/00	CR	EPA 200.7
Total Boron	Not run	ppm	0.01	10/24/00	10/24/00	CR	EPA 200.7
Total Cadmium	Not detected	ppm	0.005	10/24/00	10/24/00	CR	EPA 200.7
Total Calcium	Not detected	ppm	0.10	10/24/00	10/24/00	CR	EPA 200.7
Total Chromium	Not detected	ppm	0.01	10/24/00	10/24/00	CR	EPA 200.7
Total Cobalt	Not detected	ppm	0.01	10/24/00	10/24/00	CR	EPA 200.7
Total Copper	Not detected	ppm	0.01	10/24/00	10/24/00	CR	EPA 200.7
Total Iron	Not detected	ppm	0.01	10/24/00	10/24/00	CR	EPA 200.7
Total Lead	Not detected	ppm	0.015	10/24/00	10/24/00	CR	EPA 200.7
Total Magnesium	Not detected	ppm	0.05	10/24/00	10/24/00	CR	EPA 200.7
Total Manganese	Not detected	ppm	0.002	10/24/00	10/24/00	CR	EPA 200.7
Total Mercury	Not detected	ppm	0.001	10/24/00	10/24/00	CR	EPA 200.7
Total Molybdenum	Not detected	ppm	0.01	10/24/00	10/24/00	CR	EPA 200.7
Total Nickel	Not detected	ppm	0.01	10/24/00	10/24/00	CR	EPA 200.7
Total Phosphorus	Not detected	ppm	0.03	10/24/00	10/24/00	CR	EPA 200.7
Total Potassium	Not run	ppm	0.10	10/24/00	10/24/00	CR	EPA 200.7
Total Selenium	Not detected	ppm	0.03	10/24/00	10/24/00	CR	EPA 200.7
Total Silver	Not detected	ppm	0.02	10/24/00	10/24/00	CR	EPA 200.7
Total Sodium	Not run	ppm	0.10	10/24/00	10/24/00	CR	EPA 200.7
Total Strontium	Not detected	ppm	0.01	10/24/00	10/24/00	CR	EPA 200.7
Total Thallium	Not detected	ppm	0.03	10/24/00	10/24/00	CR	EPA 200.7
Total Tin	Not detected	ppm	0.01	10/24/00	10/24/00	CR	EPA 200.7
Total Titanium	Not run	ppm	0.01	10/24/00	10/24/00	CR	EPA 200.7
Total Vanadium	Not detected	ppm	0.01	10/24/00	10/24/00	CR	EPA 200.7
Total Zinc	Not detected	ppm	0.01	10/24/00	10/24/00	CR	EPA 200.7

Lab ID No: AC13937
Client Id: QC102400

Collection Date: 10/24/00
Matrix: QC

Parameter	Result	Units	Reporting Limit	Start Date	End Date	Analyst	Method

Reviewed by:

MB

Quality Service/Quality Assurance Depts.

Validated by:

11/03/00

President/Laboratory Director

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Laboratory Control Spike

Location: QC Sample
Client:
Lab ID No: AC13937
Client Id: QC102400

Client Project No:
Submittal Date: 10/24/00
Collection Date: 10/24/00
Matrix: QC

Parameter	% Recovery	Spiked Conc.	Units	Start Date	End Date	Analyst	Method
Metals QC							
Metals LCS							
Total Aluminum	93	1	ppm	10/24/00	10/24/00	CR	EPA 200.7
Total Antimony	99	1	ppm	10/24/00	10/24/00	CR	EPA 200.7
Total Arsenic	101	1	ppm	10/24/00	10/24/00	CR	EPA 200.7
Total Barium	100	1	ppm	10/24/00	10/24/00	CR	EPA 200.7
Total Beryllium	100	1	ppm	10/24/00	10/24/00	CR	EPA 200.7
Total Boron	Not run	1	ppm	10/24/00	10/24/00	CR	EPA 200.7
Total Cadmium	103	1	ppm	10/24/00	10/24/00	CR	EPA 200.7
Total Calcium	99	1	ppm	10/24/00	10/24/00	CR	EPA 200.7
Total Chromium	95	1	ppm	10/24/00	10/24/00	CR	EPA 200.7
Total Cobalt	100	1	ppm	10/24/00	10/24/00	CR	EPA 200.7
Total Copper	92	1	ppm	10/24/00	10/24/00	CR	EPA 200.7
Total Iron	96	1	ppm	10/24/00	10/24/00	CR	EPA 200.7
Total Lead	101	1	ppm	10/24/00	10/24/00	CR	EPA 200.7
Total Magnesium	97	1	ppm	10/24/00	10/24/00	CR	EPA 200.7
Total Manganese	98	1	ppm	10/24/00	10/24/00	CR	EPA 200.7
Total Mercury	102	0.005	ppm	10/24/00	10/24/00	CR	EPA 200.7
Total Molybdenum	97	1	ppm	10/24/00	10/24/00	CR	EPA 200.7
Total Nickel	96	1	ppm	10/24/00	10/24/00	CR	EPA 200.7
Total Phosphorus	101	1	ppm	10/24/00	10/24/00	CR	EPA 200.7
Total Potassium	Not run	10	ppm	10/24/00	10/24/00	CR	EPA 200.7
Total Selenium	102	1	ppm	10/24/00	10/24/00	CR	EPA 200.7
Total Silver	91	1	ppm	10/24/00	10/24/00	CR	EPA 200.7
Total Sodium	Not run	1	ppm	10/24/00	10/24/00	CR	EPA 200.7
Total Strontium	104	1	ppm	10/24/00	10/24/00	CR	EPA 200.7
Total Thallium	96	1	ppm	10/24/00	10/24/00	CR	EPA 200.7
Total Tin	98	1	ppm	10/24/00	10/24/00	CR	EPA 200.7
Total Titanium	Not run	1	ppm	10/24/00	10/24/00	CR	EPA 200.7
Total Vanadium	94	1	ppm	10/24/00	10/24/00	CR	EPA 200.7
Total Zinc	96	1	ppm	10/24/00	10/24/00	CR	EPA 200.7

Lab ID No: AC13937
Client Id: QC102400

Collection Date: 10/24/00
Matrix: QC

Parameter	% Recovery	Spiked Conc.	Units	Start Date	End Date	Analyst	Method

Reviewed by:

MB

Quality Service/Quality Assurance Depts.

Validated by:

11/03/00

President/Laboratory Director

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Method Blank Report

Location: QC Sample
Client:
Lab ID No: AC13942
Client Id: QC102500

Client Project No:
Submittal Date: 10/25/00
Collection Date: 10/25/00
Matrix: QC

Parameter	Result	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals QC							
Metals Blank							
Total Aluminum	Not detected	ppm	0.03	10/25/00	10/25/00	CR	EPA 200.7
Total Antimony	Not detected	ppm	0.03	10/25/00	10/25/00	CR	EPA 200.7
Total Arsenic	Not detected	ppm	0.03	10/25/00	10/25/00	CR	EPA 200.7
Total Barium	Not detected	ppm	0.01	10/25/00	10/25/00	CR	EPA 200.7
Total Beryllium	Not detected	ppm	0.005	10/25/00	10/25/00	CR	EPA 200.7
Total Boron	Not detected	ppm	0.01	10/25/00	10/25/00	CR	EPA 200.7
Total Cadmium	Not detected	ppm	0.005	10/25/00	10/25/00	CR	EPA 200.7
Total Calcium	Not detected	ppm	0.10	10/25/00	10/25/00	CR	EPA 200.7
Total Chromium	Not detected	ppm	0.01	10/25/00	10/25/00	CR	EPA 200.7
Total Cobalt	Not detected	ppm	0.01	10/25/00	10/25/00	CR	EPA 200.7
Total Copper	Not detected	ppm	0.01	10/25/00	10/25/00	CR	EPA 200.7
Total Iron	Not detected	ppm	0.01	10/25/00	10/25/00	CR	EPA 200.7
Total Lead	Not detected	ppm	0.015	10/25/00	10/25/00	CR	EPA 200.7
Total Magnesium	Not detected	ppm	0.05	10/25/00	10/25/00	CR	EPA 200.7
Total Manganese	Not detected	ppm	0.002	10/25/00	10/25/00	CR	EPA 200.7
Total Mercury	Not detected	ppm	0.001	10/25/00	10/25/00	CR	EPA 200.7
Total Molybdenum	Not detected	ppm	0.01	10/25/00	10/25/00	CR	EPA 200.7
Total Nickel	Not detected	ppm	0.01	10/25/00	10/25/00	CR	EPA 200.7
Total Phosphorus	Not detected	ppm	0.03	10/25/00	10/25/00	CR	EPA 200.7
Total Potassium	Not run	ppm	0.10	10/25/00	10/25/00	CR	EPA 200.7
Total Selenium	Not detected	ppm	0.03	10/25/00	10/25/00	CR	EPA 200.7
Total Silver	Not detected	ppm	0.02	10/25/00	10/25/00	CR	EPA 200.7
Total Sodium	Not run	ppm	0.10	10/25/00	10/25/00	CR	EPA 200.7
Total Strontium	Not detected	ppm	0.01	10/25/00	10/25/00	CR	EPA 200.7
Total Thallium	Not detected	ppm	0.03	10/25/00	10/25/00	CR	EPA 200.7
Total Tin	Not detected	ppm	0.01	10/25/00	10/25/00	CR	EPA 200.7
Total Titanium	Not detected	ppm	0.01	10/25/00	10/25/00	CR	EPA 200.7
Total Vanadium	Not detected	ppm	0.01	10/25/00	10/25/00	CR	EPA 200.7
Total Zinc	Not detected	ppm	0.01	10/25/00	10/25/00	CR	EPA 200.7

Lab ID No: AC13942
Client Id: QC102500

Collection Date: 10/25/00
Matrix: QC

Parameter	Result	Units	Reporting Limit	Start Date	End Date	Analyst	Method

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

11/03/00

President/Laboratory Director

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Laboratory Control Spike

Location: QC Sample
Client:
Lab ID No: AC13942
Client Id: QC102500

Client Project No:
Submittal Date: 10/25/00
Collection Date: 10/25/00
Matrix: QC

Parameter	% Recovery	Spiked Conc.	Units	Start Date	End Date	Analyst	Method
Metals QC							
Metals LCS							
Total Aluminum	Not run	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Antimony	100	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Arsenic	101	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Barium	102	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Beryllium	102	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Boron	Not run	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Cadmium	102	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Calcium	98	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Chromium	99	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Cobalt	101	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Copper	95	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Iron	99	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Lead	102	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Magnesium	96	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Manganese	101	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Mercury	99	0.005	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Molybdenum	98	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Nickel	96	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Phosphorus	103	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Potassium	Not run	10	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Selenium	98	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Silver	103	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Sodium	Not run	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Strontium	104	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Thallium	98	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Tin	99	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Titanium	96	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Vanadium	96	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Zinc	99	1	ppm	10/25/00	10/25/00	CR	EPA 200.7

Lab ID No: AC13942
Client Id: QC102500

Collection Date: 10/25/00
Matrix: QC

Parameter	% Recovery	Spiked Conc.	Units	Start Date	End Date	Analyst	Method

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

11/03/00

President/Laboratory Director

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY
Massachusetts Certification # M-MA138
Rhode Island # 98 Maine # MA138
Florida # E87600 / 87562
New Hampshire # 2538
Connecticut # PH-0777
New York # 11393

NOV 2000

Marin Environmental
73 Millet Street
Richmond, VT 05477

11/03/00

Attn: Carey Hengstenberg

Client Project Number: VT990090 **Location:** Burnham Property - Windsor, VT

Laboratory ID	Client Sample ID	Analyses Requested
AC13688	MW-1	QC Data
AC13689	MW-4	QC Data
AC13690	Trip	QC Data
AC13691	Equip	QC Data

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method including any data obtained from a subcontract laboratory.

Authorized by:

Hanibal C. Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES
11 Almgren Drive • Agawam, Massachusetts 01001 • 1-800-789-9115 • 413-789-9018 • Fax 413 789-4076
24 Toney Road • Bloomfield, Connecticut 06002 • 860 242-6294 • Fax 860-242-4012

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Method Blank Report

Location: QC Sample
Client:
Lab ID No: AC13934
Client Id: QC102300

Client Project No:
Submittal Date: 10/23/00
Collection Date: 10/23/00
Matrix: QC

Parameter	Result	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Volatile QC							
EPA Method 524.2 Blank							
Benzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Bromobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Bromochloromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Bromodichloromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Bromoform	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Bromomethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
n-Butylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
sec-Butylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
tert-Butylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Carbon tetrachloride	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Chlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Chloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Chloroform	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Chloromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
2-Chlorotoluene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
4-Chlorotoluene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Dibromochloromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,2-Dibromoethane (EDB)	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Dibromomethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,2-Dichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,3-Dichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,4-Dichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Dichlorodifluoromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,1-Dichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,2-Dichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,1-Dichloroethene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
cis-1,2-Dichloroethene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
trans-1,2-Dichloroethene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,2-Dichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,3-Dichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
2,2-Dichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,1-Dichloropropene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
cis-1,3-Dichloropropene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2

Lab ID No: AC13934
Client Id: QC102300

Collection Date: 10/23/00
Matrix: QC

Parameter	Result	Units	Reporting Limit	Start Date	End Date	Analyst	Method
trans-1,3-Dichloropropene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Ethylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Hexachlorobutadiene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Isopropylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
4-Isopropyltoluene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Methylene chloride	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Naphthalene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
n-Propylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Styrene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,1,1,2-Tetrachloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Tetrachloroethene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Toluene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,2,3-Trichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,2,4-Trichlorobenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,1,1-Trichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,1,2-Trichloroethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Trichloroethene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Trichlorofluoromethane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,2,3-Trichloropropane	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,2,4-Trimethylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
1,3,5-Trimethylbenzene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
m,p-Xylenes	Not detected	ug/L	2.0	10/23/00	10/23/00	DG	EPA 524.2
o-Xylene	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
Vinyl chloride	Not detected	ug/L	1.0	10/23/00	10/23/00	DG	EPA 524.2
BFB Surrogate Recovery (%)	100	ug/L	0.00	10/23/00	10/23/00	DG	EPA 524.2
p-DFB Surrogate Recovery (%)	107	ug/L	0.00	10/23/00	10/23/00	DG	EPA 524.2
CLB-d5 Surrogate Recovery (%)	105	ug/L	0.00	10/23/00	10/23/00	DG	EPA 524.2
Methyl-t-butyl ether	Not detected	ug/L	2.0	10/23/00	10/23/00	DG	EPA 524.2
Acetone	Not detected	ug/L	80	10/23/00	10/23/00	DG	EPA 524.2
2-Butanone (MEK)	Not detected	ug/L	80	10/23/00	10/23/00	DG	EPA 524.2
2-Hexanone (MBK)	Not detected	ug/L	80	10/23/00	10/23/00	DG	EPA 524.2
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	80	10/23/00	10/23/00	DG	EPA 524.2
Freon-113	Not detected	ug/L	80	10/23/00	10/23/00	DG	EPA 524.2
Carbon Disulfide	Not detected	ug/L	80	10/23/00	10/23/00	DG	EPA 524.2
Vinyl acetate	Not detected	ug/L	80	10/23/00	10/23/00	DG	EPA 524.2
2-Chloroethyl vinyl ether	Not detected	ug/L	80	10/23/00	10/23/00	DG	EPA 524.2
Methyl Iodide	Not detected	ug/L	80	10/23/00	10/23/00	DG	EPA 524.2

Lab ID No: AC13934
Client Id: QC102300

Collection Date: 10/23/00
Matrix: QC

Parameter	Result	Units	Reporting Limit	Start Date	End Date	Analyst	Method

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

11/03/00

President/Laboratory Director

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Laboratory Control Spike

Location: QC Sample
Client:
Lab ID No: AC13934
Client Id: QC102300

Client Project No:
Submittal Date: 10/23/00
Collection Date: 10/23/00
Matrix: QC

Parameter	% Recovery	Spiked Conc.	Units	Start Date	End Date	Analyst	Method
Volatile QC							
EPA Method 524.2 LCS							
Dichlorodifluoromethane	114	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Chloromethane	111	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Vinyl chloride	122	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Bromomethane	93	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Chloroethane	105	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Trichlorofluoromethane	98	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,1-Dichloroethene	103	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Dichloromethane	134*	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Methyl-tert-butyl ether	99	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
trans-1,2-Dichloroethene	102	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,1-Dichloroethane	108	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
2,2-Dichloropropane	85	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
cis-1,2-Dichloroethene	95	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Bromochloromethane	102	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Chloroform	110	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,1,1-Trichloroethane	97	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Carbon tetrachloride	109	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,1-Dichloropropene	103	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Benzene	104	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,2-Dichloroethane	111	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Trichloroethene	99	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,2-Dichloropropane	104	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Dibromomethane	102	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Bromodichloromethane	108	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
cis-1,3-Dichloropropane	97	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Toluene	97	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
trans-1,3-Dichloropropene	93	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,1,2-Trichloroethane	105	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Tetrachloroethene	96	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,3-Dichloropropane	106	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Dibromochloromethane	98	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,2-Dibromoethane (EDB)	99	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Chlorobenzene	104	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,1,1,2-Trichloroethane	102	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2

Lab ID No: AC13934
Client Id: QC102300

Collection Date: 10/23/00
Matrix: QC

Parameter	% Recovery	Spiked Conc.	Units	Start Date	End Date	Analyst	Method
Ethylbenzene	100	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
m,p-Xylenes	99	40	ug/L	10/23/00	10/23/00	KW	EPA 524.2
o-Xylene	101	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Styrene	90	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Bromoform	96	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Isopropylbenzene	100	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Bromobenzene	99	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,1,2,2-Trichloroethane	105	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,2,3-Trichloropropane	72	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
n-Propylbenzene	103	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
2-Chlorotoluene	100	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
4-Chlorotoluene	101	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,3,5-Trimethylbenzene	97	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
tert-Butylbenzene	105	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,2,4-Trimethylbenzene	96	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
sec-Butylbenzene	100	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,3-Dichlorobenzene	96	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Isopropyltoluene	94	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,4-Dichlorobenzene	95	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,2-Dichlorobenzene	99	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
n-Butylbenzene	93	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Dibromochloropropane	91	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,2,4-Trichlorobenzene	92	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Hexachlorobutadiene	88	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Naphthalene	90	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,2,3-Trichlorobenzene	93	20	ug/L	10/23/00	10/23/00	KW	EPA 524.2
4-Bromofluorobenzene (%SR)	98	0.00	ug/L	10/23/00	10/23/00	KW	EPA 524.2
1,4-Difluorobenzene (%SR)	103	0.00	ug/L	10/23/00	10/23/00	KW	EPA 524.2
Chlorobenzene-d5 (%SR)	107	0.00	ug/L	10/23/00	10/23/00	KW	EPA 524.2

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

11/03/00

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Matrix Spike

Location:
Client:
Lab ID No: AC12966
Client Id:

Client Project No:
Submittal Date: 10/12/00
Collection Date: 10/11/00
Matrix: Ground Water

Parameter	% Recovery	Start Date	End Date	Analyst	Method
VOC Matrix Spike Recovery					
1,1-Dichloroethene	98	10/23/00	10/23/00	KW	SW846 8260
Trichloroethene	98	10/23/00	10/23/00	KW	SW846 8260
Chlorobenzene	101	10/23/00	10/23/00	KW	SW846 8260
Benzene	100	10/23/00	10/23/00	KW	SW846 8260
Toluene	97	10/23/00	10/23/00	KW	SW846 8260

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

11/03/00

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Matrix Spike Duplicate

Location:
Client:
Lab ID No: AC12966
Client Id:

Client Project No:
Submittal Date: 10/12/00
Collection Date: 10/11/00
Matrix: Ground Water

Parameter	% Recovery	% Difference	Start Date	End Date	Analyst	Method
Duplicate VOC Matrix Spike Recov						
1,1-Dichloroethene	93	5.5	10/24/00	10/24/00	KW	SW846 8260
Trichloroethene	94	3.7	10/24/00	10/24/00	KW	SW846 8260
Chlorobenzene	98	3.4	10/24/00	10/24/00	KW	SW846 8260
Benzene	98	2.7	10/24/00	10/24/00	KW	SW846 8260
Toluene	93	3.7	10/24/00	10/24/00	KW	SW846 8260

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

11/03/00

President/Laboratory Director

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Method Blank Report

Location: QC Sample
Client:
Lab ID No: AC13936
Client Id: QC102400

Client Project No:
Submittal Date: 10/24/00
Collection Date: 10/24/00
Matrix: QC

Parameter	Result	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Semi-Volatile QC							
SW846 Method 8270 Blank							
Pyridine	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
n-Nitrosodimethylamine	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Aniline	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Bis (2-chloroethyl) ether	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Phenol	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
2-Chlorophenol	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
1,3-Dichlorobenzene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
1,4-Dichlorobenzene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
1,2-Dichlorobenzene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Benzyl alcohol	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Bis (2-chloroisopropyl) ether	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
2-Methylphenol (o-cresol)	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Hexachloroethane	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
n-Nitroso-di-n-propylamine	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
4-Methylphenol (p-cresol)	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Nitrobenzene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Isophorone	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
2-Nitrophenol	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
2,4-Dimethylphenol	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Bis (2-chloroethoxy) methane	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
2,4-Dichlorophenol	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
1,2,4-Trichlorobenzene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Naphthalene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
4-Chloroaniline	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Hexachlorobutadiene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
4-Chloro-3-methylphenol	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
2-Methylnaphthalene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Hexachlorocyclopentadiene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
2,4,6-Trichlorophenol	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
2,4,5-Trichlorophenol	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
2-Chloronaphthalene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
2-Nitroaniline	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Acenaphthylene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Dimethylphthalate	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270

Lab ID No: AC13936
Client Id: QC102400

Collection Date: 10/24/00
Matrix: QC

Parameter	Result	Units	Reporting Limit	Start Date	End Date	Analyst	Method
2,6-Dinitrotoluene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Acenaphthene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
3-Nitroaniline	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
2,4-Dinitrophenol	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Dibenzofuran	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
2,4-Dinitrotoluene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
4-Nitrophenol	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Fluorene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
4-Chlorophenyl phenyl ether	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Diethyl phthalate	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
4-Nitroaniline	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
n-Nitrosodiphenylamine	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Azobenzene/Diphenyldiazine	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
4-Bromophenyl phenyl ether	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Hexachlorobenzene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Pentachlorophenol	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Phenanthrene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Anthracene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Di-n-butylphthalate	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Fluoranthene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Benzidine	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Pyrene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Butyl benzyl phthalate	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
3,3'-Dichlorobenzidine	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Benzo (a) anthracene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Chrysene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Bis (2-ethylhexyl) phthalate	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Di-n-octylphthalate	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Benzo (b) fluoranthene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Benzo (k) fluoranthene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Benzo (a) pyrene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Indeno (1,2,3-cd) pyrene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Dibenz (a,h) anthracene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270
Benzo (g,h,i) perylene	Not detected	ug/L	1.0	10/24/00	10/24/00	MSL	SW846 8270

Lab ID No: AC13936
Client Id: QC102400

Collection Date: 10/24/00
Matrix: QC

Parameter	Result	Units	Reporting Limit	Start Date	End Date	Analyst	Method

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

11/03/00

President/Laboratory Director

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Laboratory Control Spike

Location: QC Sample
Client:
Lab ID No: AC13936
Client Id: QC102400

Client Project No:
Submittal Date: 10/24/00
Collection Date: 10/24/00
Matrix: QC

Parameter	% Recovery	Spiked Conc.	Units	Start Date	End Date	Analyst	Method
Semi-Volatile QC							
SW846 Method 8270 LCS							
Pyridine	64	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
n-Nitrosodimethylamine	76	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Aniline	52	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Bis (2-chloroethyl) ether	63	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Phenol	75	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2-Chlorophenol	72	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
1,3-Dichlorobenzene	80	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
1,4-Dichlorobenzene	73	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
1,2-Dichlorobenzene	73	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Benzyl alcohol	76	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Bis (2-chloroisopropyl) ether	78	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2-Methylphenol (o-cresol)	76	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Hexachloroethane	69	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
n-Nitroso-di-n-propylamine	78	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
4-Methylphenol (p-cresol)	78	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Nitrobenzene	74	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Isophorone	88	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2-Nitrophenol	71	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2,4-Dimethylphenol	72	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Bis (2-chloroethoxy) methane	78	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2,4-Dichlorophenol	76	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
1,2,4-Trichlorobenzene	78	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Naphthalene	85	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
4-Chloroaniline	79	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Hexachlorobutadiene	59	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
4-Chloro-3-methylphenol	79	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2-Methylnaphthalene	80	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Hexachlorocyclopentadiene	85	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2,4,6-Trichlorophenol	58	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2,4,5-Trichlorophenol	80	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2-Chloronaphthalene	86	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2-Nitroaniline	78	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Acenaphthylene	86	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Dimethylphthalate	91	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270

Lab ID No: AC13936
Client Id: QC102400

Collection Date: 10/24/00
Matrix: QC

Parameter	% Recovery	Spiked Conc.	Units	Start Date	End Date	Analyst	Method
2,6-Dinitrotoluene	83	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Acenaphthene	85	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
3-Nitroaniline	81	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2,4-Dinitrophenol	85	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Dibenzofuran	89	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2,4-Dinitrotoluene	86	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
4-Nitrophenol	51	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Fluorene	87	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
4-Chlorophenyl phenyl ether	86	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Diethyl phthalate	90	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
4-Nitroaniline	79	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
4,6-Dinitro-2-methylphenol	51	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
n-Nitrosodiphenylamine	91	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Azobenzene/Diphenyldiazine	89	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
4-Bromophenyl phenyl ether	89	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Hexachlorobenzene	91	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Pentachlorophenol	61	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Phenanthrene	91	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Anthracene	91	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Di-n-butylphthalate	97	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Fluoranthene	91	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Benzidine	46	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Pyrene	95	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Butyl benzyl phthalate	97	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
3,3'-Dichlorobenzidine	73	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Benzo (a) anthracene	89	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Chrysene	92	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Bis (2-ethylhexyl) phthalate	98	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Di-n-octylphthalate	99	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Benzo (b) fluoranthene	85	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Benzo (k) fluoranthene	94	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Benzo (a) pyrene	91	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Indeno (1,2,3-cd) pyrene	87	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Dibenz (a,h) anthracene	85	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Benzo (g,h,i) perylene	86	50	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2-Fluorophenol (%SR)	68	0.00	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Phenol-d5 (%SR)	75	0.00	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Nitrobenzene-d5 (%SR)	73	0.00	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2-Fluorobiphenyl (%SR)	84	0.00	ug/L	10/24/00	10/24/00	MSL	SW846 8270
2,4,6-Tribromophenol (%SR)	84	0.00	ug/L	10/24/00	10/24/00	MSL	SW846 8270
Terphenyl-d14 (%SR)	90	0.00	ug/L	10/24/00	10/24/00	MSL	SW846 8270

Lab ID No: AC13936
Client Id: QC102400

Collection Date: 10/24/00
Matrix: QC

Parameter	% Recovery	Spiked Conc.	Units	Start Date	End Date	Analyst	Method

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

11/03/00

President/Laboratory Director

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Method Blank Report

Location: QC Sample
Client:
Lab ID No: AC13938
Client Id: QC102400

Client Project No:
Submittal Date: 10/24/00
Collection Date: 10/24/00
Matrix: QC

Parameter	Result	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Semi-Volatile QC							
EPA Method 608 Blank							
PCB-1016	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1221	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1232	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1242	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1248	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1254	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
PCB-1260	Not detected	ug/L	0.2	10/24/00	10/24/00	TG	EPA 608
Decachlorobiphenyl (%)	78	ug/L		10/24/00	10/24/00	TG	EPA 608

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

11/03/00

President/Laboratory Director

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Laboratory Control Spike

Location: QC Sample
Client:
Lab ID No: AC13938
Client Id: QC102400

Client Project No:
Submittal Date: 10/24/00
Collection Date: 10/24/00
Matrix: QC

Parameter	% Recovery	Spiked Conc.	Units	Start Date	End Date	Analyst	Method
Semi-Volatile QC							
EPA Method 608 LCS							
PCB-1016	Not run	10	ug/L	10/24/00	10/24/00	TG	EPA 608
PCB-1221	Not run	10	ug/L	10/24/00	10/24/00	TG	EPA 608
PCB-1232	Not run	10	ug/L	10/24/00	10/24/00	TG	EPA 608
PCB-1242	Not run	10	ug/L	10/24/00	10/24/00	TG	EPA 608
PCB-1248	Not run	10	ug/L	10/24/00	10/24/00	TG	EPA 608
PCB-1254	Not run	10	ug/L	10/24/00	10/24/00	TG	EPA 608
PCB-1260	103	10	ug/L	10/24/00	10/24/00	TG	EPA 608
Decachlorobiphenyl (%)	94		ug/L	10/24/00	10/24/00	TG	EPA 608

Reviewed by:

NB

Quality Service/Quality Assurance Depts.

Validated by:

11/03/00

President/Laboratory Director

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Matrix Spike

Location:
Client:
Lab ID No: AC13980
Client Id:

Client Project No:
Submittal Date: 10/23/00
Collection Date: 10/19/00
Matrix: Soil

Parameter	% Recovery	Start Date	End Date	Analyst	Method
Pesticide & PCBs Matrix Spike Re					
PCB-1016	Not detected	10/24/00	10/24/00	TG	EPA 608
PCB-1221	Not detected	10/24/00	10/24/00	TG	EPA 608
PCB-1232	Not detected	10/24/00	10/24/00	TG	EPA 608
PCB-1242	Not detected	10/24/00	10/24/00	TG	EPA 608
PCB-1248	Not detected	10/24/00	10/24/00	TG	EPA 608
PCB-1254	Not detected	10/24/00	10/24/00	TG	EPA 608
PCB-1260	87	10/24/00	10/24/00	TG	EPA 608
PCB-1268	Not detected	10/24/00	10/24/00	TG	EPA 608

Reviewed by:

KB

Quality Service/Quality Assurance Depts.

Validated by:

11/03/00

President/Laboratory Director

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Matrix Spike Duplicate

Location:
Client:
Lab ID No: AC13980
Client Id:

Client Project No:
Submittal Date: 10/23/00
Collection Date: 10/19/00
Matrix: Soil

Parameter	% Recovery	% Difference	Start Date	End Date	Analyst	Method
Pesticide & PCB Dup Matrix Spike						
PCB-1016	Not detected	NC	10/24/00	10/24/00	TG	EPA 608
PCB-1221	Not detected	NC	10/24/00	10/24/00	TG	EPA 608
PCB-1232	Not detected	NC	10/24/00	10/24/00	TG	EPA 608
PCB-1242	Not detected	NC	10/24/00	10/24/00	TG	EPA 608
PCB-1248	Not detected	NC	10/24/00	10/24/00	TG	EPA 608
PCB-1254	Not detected	NC	10/24/00	10/24/00	TG	EPA 608
PCB-1260	87	0.0	10/24/00	10/24/00	TG	EPA 608
PCB-1268	Not detected	NC	10/24/00	10/24/00	TG	EPA 608

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

11/03/00

President/Laboratory Director

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Method Blank Report

Location: QC Sample
Client:
Lab ID No: AC13942
Client Id: QC102500

Client Project No:
Submittal Date: 10/25/00
Collection Date: 10/25/00
Matrix: QC

Parameter	Result	Units	Reporting Limit	Start Date	End Date	Analyst	Method
Metals QC							
Metals Blank							
Total Aluminum	Not detected	ppm	0.03	10/25/00	10/25/00	CR	EPA 200.7
Total Antimony	Not detected	ppm	0.03	10/25/00	10/25/00	CR	EPA 200.7
Total Arsenic	Not detected	ppm	0.03	10/25/00	10/25/00	CR	EPA 200.7
Total Barium	Not detected	ppm	0.01	10/25/00	10/25/00	CR	EPA 200.7
Total Beryllium	Not detected	ppm	0.005	10/25/00	10/25/00	CR	EPA 200.7
Total Boron	Not detected	ppm	0.01	10/25/00	10/25/00	CR	EPA 200.7
Total Cadmium	Not detected	ppm	0.005	10/25/00	10/25/00	CR	EPA 200.7
Total Calcium	Not detected	ppm	0.10	10/25/00	10/25/00	CR	EPA 200.7
Total Chromium	Not detected	ppm	0.01	10/25/00	10/25/00	CR	EPA 200.7
Total Cobalt	Not detected	ppm	0.01	10/25/00	10/25/00	CR	EPA 200.7
Total Copper	Not detected	ppm	0.01	10/25/00	10/25/00	CR	EPA 200.7
Total Iron	Not detected	ppm	0.01	10/25/00	10/25/00	CR	EPA 200.7
Total Lead	Not detected	ppm	0.015	10/25/00	10/25/00	CR	EPA 200.7
Total Magnesium	Not detected	ppm	0.05	10/25/00	10/25/00	CR	EPA 200.7
Total Manganese	Not detected	ppm	0.002	10/25/00	10/25/00	CR	EPA 200.7
Total Mercury	Not detected	ppm	0.001	10/25/00	10/25/00	CR	EPA 200.7
Total Molybdenum	Not detected	ppm	0.01	10/25/00	10/25/00	CR	EPA 200.7
Total Nickel	Not detected	ppm	0.01	10/25/00	10/25/00	CR	EPA 200.7
Total Phosphorus	Not detected	ppm	0.03	10/25/00	10/25/00	CR	EPA 200.7
Total Potassium	Not run	ppm	0.10	10/25/00	10/25/00	CR	EPA 200.7
Total Selenium	Not detected	ppm	0.03	10/25/00	10/25/00	CR	EPA 200.7
Total Silver	Not detected	ppm	0.02	10/25/00	10/25/00	CR	EPA 200.7
Total Sodium	Not run	ppm	0.10	10/25/00	10/25/00	CR	EPA 200.7
Total Strontium	Not detected	ppm	0.01	10/25/00	10/25/00	CR	EPA 200.7
Total Thallium	Not detected	ppm	0.03	10/25/00	10/25/00	CR	EPA 200.7
Total Tin	Not detected	ppm	0.01	10/25/00	10/25/00	CR	EPA 200.7
Total Titanium	Not detected	ppm	0.01	10/25/00	10/25/00	CR	EPA 200.7
Total Vanadium	Not detected	ppm	0.01	10/25/00	10/25/00	CR	EPA 200.7
Total Zinc	Not detected	ppm	0.01	10/25/00	10/25/00	CR	EPA 200.7

Lab ID No: AC13942
Client Id: QC102500

Collection Date: 10/25/00
Matrix: QC

Parameter	Result	Units	Reporting Limit	Start Date	End Date	Analyst	Method

Reviewed by:

Quality Service/Quality Assurance Depts.

Validated by:

President/Laboratory Director

11/03/00

SPECTRUM ANALYTICAL, INC.

Laboratory QC Report

Laboratory Control Spike

Location: QC Sample
Client:
Lab ID No: AC13942
Client Id: QC102500

Client Project No:
Submittal Date: 10/25/00
Collection Date: 10/25/00
Matrix: QC

Parameter	% Recovery	Spiked Conc.	Units	Start Date	End Date	Analyst	Method
Metals QC							
Metals LCS							
Total Aluminum	Not run	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Antimony	100	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Arsenic	101	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Barium	102	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Beryllium	102	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Boron	Not run	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Cadmium	102	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Calcium	98	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Chromium	99	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Cobalt	101	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Copper	95	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Iron	99	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Lead	102	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Magnesium	96	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Manganese	101	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Mercury	99	0.005	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Molybdenum	98	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Nickel	96	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Phosphorus	103	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Potassium	Not run	10	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Selenium	98	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Silver	103	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Sodium	Not run	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Strontium	104	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Thallium	98	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Tin	99	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Titanium	96	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Vanadium	96	1	ppm	10/25/00	10/25/00	CR	EPA 200.7
Total Zinc	99	1	ppm	10/25/00	10/25/00	CR	EPA 200.7

Lab ID No: AC13942
Client Id: QC102500

Collection Date: 10/25/00
Matrix: QC

Parameter	% Recovery	Spiked Conc.	Units	Start Date	End Date	Analyst	Method

Reviewed by:

KB

Quality Service/Quality Assurance Depts.

Validated by:

11/03/00

President/Laboratory Director

Memorandum

To: Burnham Property File

CC: Joe Hayes

From: Patricia Coppolino

Date: 11/09/00

Re: QAQC Review

This review was completed by Patricia Coppolino for the Burnham Property. All samples were completed within the proper holding time, and within the specified EPA methods. All proper field and laboratory QC requirements were completed. The trip blank, and equipment blank were free of contamination. The duplicate was within the specified RPD %, and the laboratory Matrix spike was within all % recovery with the exception of Dichloromethane which was above the % recovery limits. This presents no impact on the reported data from the lab because this compound was not present in any of the samples that were analyzed.

All the analytical data that was presented by Spectrum Analytical, and all the field procedures have been completed according to the SOPs set forth by Marin Environmental, and the EPA.

QAQC review sheets are attached with memo.

Filed as:990090/Burnham Property/memo

11/9/00

MARIN
ENVIRONMENTAL

LABORATORY DATA
QUALITY ASSURANCE / QUALITY CONTROL (QA/QC) CHECKLIST

Site Name: Burnham Property

Sample Identification: Equip Blank

Job Number: 990090-D

Sampler: CH

QA/QC Completed By: PC

Analytical Laboratory: Spectrum

EPA Analytical Method: 8270C

Were any abnormalities presented within Lab cover letter? NO

If yes, explain:

Sample Matrix: Water

Extraction Date (if applicable): 10/23/00

Sample Date: 10/18/00

Analysis Date: 10/23/00

Was analysis completed within EPA Method specified holding time? ☒ Yes ☐ No

Any compounds detected in field or trip blanks? ☐ Yes ☒ No

If yes, were these compounds detected in any of the samples analyzed? ☐ Yes ☐ No

Were all samples properly labeled? ☐ Yes ☐ No

Calculate sample and duplicate RPD below:

$$RPD = \frac{(sample - dup)}{\left(\frac{sample + dup}{2}\right)} * 100\%$$

No compounds above detection limits

Is RPD >25%? ☐ Yes ☐ No

If yes, is there any likely justification:

Were laboratory surrogate recovery concentrations acceptable? ☒ Yes ☒ No

Were laboratory matrix spike and matrix spike duplicates acceptable? ☒ Yes ☐ No

Are detection limit multipliers acceptable? ☒ Yes ☐ No

Any additional comments: Decachlorobiphenyl too low

MARIN
ENVIRONMENTAL

LABORATORY DATA
QUALITY ASSURANCE / QUALITY CONTROL (QA/QC) CHECKLIST

Site Name: Burnham Property

Sample Identification: Trip Blank

Job Number: 99190

Sampler: CH

QA/QC Completed By: RC

Analytical Laboratory: _____

EPA Analytical Method: 8260B

Were any abnormalities presented within Lab cover letter? NO

If yes, explain: _____

Sample Matrix: Water

Extraction Date (if applicable): _____

Sample Date: 10/18/00

Analysis Date: 10/23/00

Was analysis completed within EPA Method specified holding time? ☒ Yes ☐ No

Any compounds detected in field or trip blanks? ☐ Yes ☒ No

If yes, were these compounds detected in any of the samples analyzed? ☐ Yes ☐ No

Were all samples properly labeled? ☐ Yes ☐ No

Calculate sample and duplicate RPD below:

$$RPD = \frac{(sample - dup)}{\left(\frac{sample + dup}{2}\right)} * 100\%$$

Is RPD >25%? ☐ Yes ☐ No

If yes, is there any likely justification: _____

Were laboratory surrogate recovery concentrations acceptable? ☒ Yes ☐ No

Were laboratory matrix spike and matrix spike duplicates acceptable? ☒ Yes ☐ No

Are detection limit multipliers acceptable? ☒ Yes ☐ No

Any additional comments: _____

MARIN
ENVIRONMENTAL

LABORATORY DATA
QUALITY ASSURANCE / QUALITY CONTROL (QA/QC) CHECKLIST

Site Name: Burnham Property

Sample Identification: MW-5 (Dup)

Job Number: 990090-D

Sampler: CH

QA/QC Completed By: PC

Analytical Laboratory: Spectrum

EPA Analytical Method: 8260B

Were any abnormalities presented within Lab cover letter? NO

If yes, explain: _____

Sample Matrix: _____

Extraction Date (if applicable): _____

Sample Date: _____

Analysis Date: _____

Was analysis completed within EPA Method specified holding time? ☐ Yes ☐ No

Any compounds detected in field or trip blanks? ☐ Yes ☒ No

If yes, were these compounds detected in any of the samples analyzed? ☐ Yes ☐ No

Were all samples properly labeled? ☐ Yes ☐ No

Calculate sample and duplicate RPD below:

$$RPD = \frac{(sample - dup)}{\left(\frac{sample + dup}{2}\right)} * 100\%$$

$$\frac{1.81 - 1.769}{1.81} \times 100 \quad 2.27\%$$

Is RPD >25%? ☒ Yes ☐ No

If yes, is there any likely justification: _____

Were laboratory surrogate recovery concentrations acceptable? ☒ Yes ☐ No

Were laboratory matrix spike and matrix spike duplicates acceptable? ☒ Yes ☐ No

Are detection limit multipliers acceptable? ☐ Yes ☐ No

Any additional comments: _____

MARIN
ENVIRONMENTAL

LABORATORY DATA
QUALITY ASSURANCE / QUALITY CONTROL (QA/QC) CHECKLIST

Site Name: Burnham Property

Sample Identification: MW-1

Job Number: 990090-D

Sampler: CH

QA/QC Completed By: PC

Analytical Laboratory: _____

EPA Analytical Method: 8260B

Were any abnormalities presented within Lab cover letter? NO

If yes, explain: _____

Sample Matrix: Water

Extraction Date (if applicable): _____

Sample Date: 10/18/00

Analysis Date: 10/23/00

Was analysis completed within EPA Method specified holding time? ☒ Yes ☐ No

Any compounds detected in field or trip blanks? ☐ Yes ☒ No

If yes, were these compounds detected in any of the samples analyzed? ☐ Yes ☐ No

Were all samples properly labeled? ☒ Yes ☐ No

Calculate sample and duplicate RPD below:

$$RPD = \frac{(sample - dup)}{\left(\frac{sample + dup}{2}\right)} * 100\%$$

Is RPD >25%? ☐ Yes ☐ No

If yes, is there any likely justification: _____

Were laboratory surrogate recovery concentrations acceptable? ☒ Yes ☐ No

Were laboratory matrix spike and matrix spike duplicates acceptable? ☐ Yes ☒ No

Are detection limit multipliers acceptable? ☒ Yes ☐ No

Any additional comments: Decachlorobiphenyl (% SR) too low

MARIN
ENVIRONMENTAL

LABORATORY DATA
QUALITY ASSURANCE / QUALITY CONTROL (QA/QC) CHECKLIST

Site Name: Burnham Property

Sample Identification: MW-4

Job Number: 990090-D

Sampler: CH

QA/QC Completed By: PC

Analytical Laboratory: _____

EPA Analytical Method: 8260B

Were any abnormalities presented within Lab cover letter? NO

If yes, explain: _____

Sample Matrix: Water

Extraction Date (if applicable): _____

Sample Date: 10/18/00

Analysis Date: 10/23/00

Was analysis completed within EPA Method specified holding time? ☒ Yes ☐ No

Any compounds detected in field or trip blanks? ☐ Yes ☒ No

If yes, were these compounds detected in any of the samples analyzed? ☐ Yes ☐ No

Were all samples properly labeled? ☒ Yes ☐ No

Calculate sample and duplicate RPD below:

$$RPD = \frac{(sample - dup)}{\left(\frac{sample + dup}{2}\right)} * 100\%$$

Is RPD >25%? ☐ Yes ☐ No

If yes, is there any likely justification: _____

Were laboratory surrogate recovery concentrations acceptable? ☐ Yes ☐ No

Were laboratory matrix spike and matrix spike duplicates acceptable? ☐ Yes ☐ No

Are detection limit multipliers acceptable? ☐ Yes ☐ No

Any additional comments: _____

MARIN
ENVIRONMENTAL

LABORATORY DATA
QUALITY ASSURANCE / QUALITY CONTROL (QA/QC) CHECKLIST

Site Name: Burnham Property

Sample Identification: Lab Control Spike

Job Number: 990090

Sampler: CH

QA/QC Completed By: PC

Analytical Laboratory: Spectrum

EPA Analytical Method: 524.2 8270 OK

Were any abnormalities presented within Lab cover letter? NO

If yes, explain:

Sample Matrix: QC

Extraction Date (if applicable):

Sample Date: 10/19/00

Analysis Date: 10/19/00

Was analysis completed within EPA Method specified holding time? ☐ Yes ☐ No

Any compounds detected in field or trip blanks? ☐ Yes ☐ No

If yes, were these compounds detected in any of the samples analyzed? ☐ Yes ☐ No

Were all samples properly labeled? ☐ Yes ☐ No

Calculate sample and duplicate RPD below:

$$RPD = \frac{(sample - dup)}{\left(\frac{sample + dup}{2}\right)} * 100\%$$

Is RPD >25%? ☐ Yes ☐ No

If yes, is there any likely justification:

Were laboratory surrogate recovery concentrations acceptable? ☒ Yes ☐ No

Were laboratory matrix spike and matrix spike duplicates acceptable? ☐ Yes ☒ No OK

Are detection limit multipliers acceptable? ☒ Yes ☐ No

Any additional comments: - Dichloromethane above % Recovery limits (524.2)

MARIN
ENVIRONMENTAL

LABORATORY DATA
QUALITY ASSURANCE / QUALITY CONTROL (QA/QC) CHECKLIST

Site Name: Burnham Property

Sample Identification: MW-6

Job Number: 990090-D

Sampler: CH

QA/QC Completed By: PC

Analytical Laboratory: Spectrum

EPA Analytical Method: 8260 B
8270C
608
200.7
245.1
4500CN C

Were any abnormalities presented within Lab cover letter? ND

If yes, explain:

Sample Matrix: Water

Extraction Date (if applicable):

Sample Date: 10/20/00

Analysis Date: 10/23/00

Was analysis completed within EPA Method specified holding time? ☐ Yes ☐ No

Any compounds detected in field or trip blanks? ☐ Yes ☐ No

If yes, were these compounds detected in any of the samples analyzed? ☐ Yes ☐ No

Were all samples properly labeled? ☐ Yes ☐ No

Calculate sample and duplicate RPD below:

$$RPD = \frac{(sample - dup)}{\left(\frac{sample + dup}{2}\right)} * 100\%$$

Is RPD >25%? ☐ Yes ☐ No

If yes, is there any likely justification:

Were laboratory surrogate recovery concentrations acceptable? ☒ Yes ☐ No

Were laboratory matrix spike and matrix spike duplicates acceptable? ☒ Yes ☐ No

Are detection limit multipliers acceptable? ☒ Yes ☐ No

Any additional comments:

MARIN
ENVIRONMENTAL

LABORATORY DATA
QUALITY ASSURANCE / QUALITY CONTROL (QA/QC) CHECKLIST

Site Name: Burnham Property

Sample Identification: MW-5-10

Job Number: 990090-D

Sampler: CH

QA/QC Completed By: PC

Analytical Laboratory: Spectrum

EPA Analytical Method: 8260B

Were any abnormalities presented within Lab cover letter? NO

If yes, explain:

Sample Matrix: Soil

Extraction Date (if applicable):

Sample Date: 10/15/00

Analysis Date: 10/19/00

Was analysis completed within EPA Method specified holding time? ☐ Yes ☐ No

Any compounds detected in field or trip blanks? ☐ Yes ☒ No

If yes, were these compounds detected in any of the samples analyzed? ☐ Yes ☐ No

Were all samples properly labeled? ☒ Yes ☐ No

Calculate sample and duplicate RPD below:

$$RPD = \frac{(sample - dup)}{\left(\frac{sample + dup}{2}\right)} * 100\%$$

Is RPD >25%? ☐ Yes ☐ No

If yes, is there any likely justification:

Were laboratory surrogate recovery concentrations acceptable? ☒ Yes ☐ No

Were laboratory matrix spike and matrix spike duplicates acceptable? ☒ Yes ☐ No

Are detection limit multipliers acceptable? ☒ Yes ☐ No

Any additional comments: Dichloromethane ↑

MARIN
ENVIRONMENTAL

LABORATORY DATA
QUALITY ASSURANCE / QUALITY CONTROL (QA/QC) CHECKLIST

Site Name: Burnham Property

Sample Identification: Matrix Spike Dup.

Job Number: 990090-D

Sampler: CH

QA/QC Completed By: PC

Analytical Laboratory: Spectrum

EPA Analytical Method: 8260

Were any abnormalities presented within Lab cover letter? NO

If yes, explain: _____

Sample Matrix: Water

Extraction Date (if applicable): _____

Sample Date: 10/6/00

Analysis Date: 10/19/00

Was analysis completed within EPA Method specified holding time? ☐ Yes ☐ No

Any compounds detected in field or trip blanks? ☐ Yes ☒ No

If yes, were these compounds detected in any of the samples analyzed? ☐ Yes ☐ No

Were all samples properly labeled? ☒ Yes ☐ No

Calculate sample and duplicate RPD below:

$$RPD = \frac{(sample - dup)}{\left(\frac{sample + dup}{2}\right)} * 100\%$$

$$\frac{439 - 427}{439} \times 100 = 2.73\%$$

Is RPD >25%? ☐ Yes ☒ No

If yes, is there any likely justification: _____

Were laboratory surrogate recovery concentrations acceptable? ☐ Yes ☐ No

Were laboratory matrix spike and matrix spike duplicates acceptable? ☐ Yes ☐ No

Are detection limit multipliers acceptable? ☐ Yes ☐ No

Any additional comments: _____

BROWNFIELD FIELD SAMPLING SHEET

Site ID: Burnham

Sample ID: MW-1

Source/Matrix: GW

Date of Sampling: 10/18/00

Weather Conditions: Raining ~ 45°

Samplers: Carey/Brian

Sampling Equipment: Solinist submersible pump and vinyl tubing

Samplers:

Comments: No pH - Meter Broke

TIME	DTW	COND	Temp
1330	46.76	397	9.9
1333		373	9.7
1341		368	10.2
1353		370	9.9
1401		374	9.7
1409		371	9.7

Purged ~ 2.25 gallon

BROWNFIELD FIELD SAMPLING SHEET

Site ID: Burnham

Sample ID: MW-4

Source/Matrix: gw

Date of Sampling: 10/18/00

Weather Conditions: RAINING / Cool

Samplers: Carey / Bryan

Sampling Equipment: Solinist Sub. Pump and vinyl tubing

Samplers: CAREY / BRYAN

Comments: pH METER = Broken

TIME	COND	TEMP	DTW
1455	497	10°	53.03
1505	508	9.7°	
1520	486	9.6°	53.01
1530	486	9.6°	
1540	479	9.5	
1553	473	9.7	

Purged ~ 15-20 gallons

BROWNFIELD FIELD SAMPLING SHEET

Site ID: Burnham

Sample ID: MW-5 (and dup - MW-6)

Source/Matrix: GW

Date of Sampling: 10/20/00

Weather Conditions: cloudy ~ 35-40°

Samplers: Carey / Brian

Sampling Equipment: Solinist sub. pump and poly tubing

Samplers: CAREY

Comments: Silty,

TIME	DTW	COND	pH	TEMP
945	71.24	687	7.[illegible]	6.9
955	71.32	698	7.7	7.4
1005	71.32	622	7.8	13.3
1010	71.34	586	7.8	14.2
1015	71.34	607	7.9	12.4

Purged 1.5 gallons - then sampled

FINAL 1210 636 8.0 15.4

No cal fluid for Cal meter - prob. bad measurements

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CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☐ Rush TAT - Date Needed: _____
- All TATs are subject to laboratory approval.
- Min. 24-hour notification is needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: [illegible]

Project Mgr.: [illegible]

Invoice To: _____

P.O. No.: _____ RQN: _____

Project No.: [illegible]

Site Name: [illegible]

Location: [illegible] State: [illegible]

Sampler(s): [illegible]

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=_____ 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1= _____ X2= _____ X3= _____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses:								Notes:
AB	[illegible] ✓	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				
AB	[illegible] ✓		[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				
AB	[illegible] ✓		1100			[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				
AB	[illegible] ✓		1120			[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				
AB																			
AB																			
AB																			
AB																			
AB																			
AB																			

Additional Instructions: [illegible]

☐ Fax results when available to (80[illegible]) 424 [illegible]

☐ E-mail results when available to _____

Relinquished By:	Received By:	Date:	Time:
[illegible]		[illegible]	[illegible]

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SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☑ Rush TAT - Date Needed: [illegible]
- All TATs are subject to laboratory approval.
- Min. 24-hour notification is needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: [illegible]
[illegible]
[illegible]
[illegible]
Project Mgr.: [illegible]

Invoice To: [illegible]
P.O. No.: _____ RQN: _____

Project No.: [illegible]
Site Name: [illegible]
Location: [illegible] State: [illegible]
Sampler(s): [illegible]

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=_____ 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
SW= Surface Water SO=Soil SL=Sludge O=Oil A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	[illegible]	Analyses: [illegible]	[illegible] Total	[illegible] Metals	[illegible]					Notes:
AB	MW-5	10/20/00	10:20	G	GW	↓	[illegible]	[illegible]		[illegible]	X	[illegible]	X	[illegible]	X					
AB	MW-6	10/20/00	11:30	G	GW	↓	[illegible]	[illegible]		[illegible]	X	X	X	X	X					
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				
AB																				

Additional Instructions: [illegible]

☐ Fax results when available to ([illegible]) [illegible]
☐ E-mail results when available to _____

Relinquished By:	Received By:	Date:	Time:
[illegible]		[illegible]	[illegible]

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APPENDIX G

NOTICE TO LAND RECORDS

NOTICE

This is to serve as notice to the Town of Windsor that a Residential property located at 841 Route 5 North in the Town of Windsor, State of Vermont (Vermont Site # 77-0092) has been recommended, by the Agency of Natural Resources, for a Site Management Activity Completed (SMAC) designation. The property is identified in the Windsor tax map Number 2 as lot 430000.841. This recommendation is based on available information that indicates the site does not pose a significant threat to human health of the environment.

Prior to conducting any subsurface work, to include the installation of water supply wells, anywhere on the property, the Agency of Natural Resources, Sites Management Section, must be notified. The status of this notice may only be updated or altered by the Agency of Natural Resources, Sites Management Section.

FOR FURTHER INFORMATION CONTACT:

Agency of Natural Resources
Sites Management Section
103 South Main Street
West Office Building
Waterbury, VT 05671-0404

Agency of Natural Resources

_____ _____

George Desch, P.E. Date
Chief
Sites Management Section