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Five-Year Review Report

First Five-Year Review Report

for

Stamina Mills Superfund Site

Town of North Smithfield

Providence County, Rhode Island

September, 2005

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Date: 9-30-05

Stamina Mills Superfund Site Five-Year Review Report

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List of Acronyms

Acronym List

µg/kg	micrograms per kilogram
µg/L	micrograms per liter
amls	above mean sea level
bgs	below ground surface
C&A	Collins & Aikman Products Company
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
COC	constituents of concern
DCE	dichloroethylene
DNAPL	dense non-aqueous-phase liquids
DPT	direct-push technology
ESD	explanation of significant difference
FS	feasibility study
FWAW	Forestdale Water Association Well
GAC	granular activated carbon
gpm	gallons per minute
gpm	gallons per minute
GWE	groundwater extraction system
GWTS	groundwater treatment system
lbs/year	pounds per year
MCL	maximum contaminant levels
MDL	method detection limit
MGY	million gallons per year
MPE	multi-phase extraction
NCP	National Contingency Plan
NPL	National Priorities List
O&M	operations and maintenance
PID	photoionization detector
POTW	publicly owned treatment works
PRG	Preliminary Remediation Goal
RA	remedial action
RAO	remedial action objectives
RCRA	Resource Conservation and Recovery Act
RD	remedial design
RI	remedial Investigation
RIDEM	Rhode Island Department of Environmental Management
ROD	Record of Decision
RPM	remedial project manager
scfm	standard cubic feet per minute
SMW	Stamina Mills Well
SVE	soil vapor extraction
SVOC	semivolatile organic compound
TBC	to be considered

TCE	Trichloroethylene
TCL	target compound list
USEPA	Environmental Protection Agency
UV	Ultraviolet
VOC	volatile organic compound
VTS	vapor treatment system

Executive Summary

The remedy for the Stamina Mills Superfund site in North Smithfield, Rhode Island, included demolition of onsite structures, sealing and backfilling of raceways, locating and removing a septic tank and its contents, grading the site, in situ vacuum extraction of trichloroethylene-contaminated soil, groundwater extraction and treatment, excavation and removal of a historical landfill, long term monitoring, and institutional controls. The trigger for this five-year review was the Preliminary Close-out Report (PCOR) in August 8, 2000.

The assessment of this five-year review found that the remedy was constructed in accordance with the requirements of the Record of Decision and the Explanation of Significant Difference.

The remedy currently protects human health and the environment because it is functioning as designed. The immediate threats have been addressed and the remedy is considered protective in the short term. However, in order for the remedy to be protective in the long-term, the following actions need to be taken: institutional controls need to be addressed, and vapor intrusion studies need to be conducted.

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site name ***(from WasteLAN)*****:** STAMINA MILLS, INC.		
EPA ID ***(from WasteLAN)*****:** RID980731442		
Region: 1	**State: RI**	**City/County: Providence**
SITE STATUS		
NPL status: **X** Final		
Remediation status (choose all that apply): **X** Operating and Complete		
Multiple OUs?* **X** NO	**Construction completion date:** August 8, 2000	
Has site been put into reuse? **X** NO		
REVIEW STATUS		
Lead agency: EPA		
Author name: Byron Mah		
Author title: Remedial Project Manager	**Author affiliation: EPA**	
Review period:** August 8, 2000 to September 30, 2005		
Date(s) of site inspection: October 14, 2004		
Type of review: Pre-SARA – Policy Review		
Review number: First		
Triggering action: **X** Construction Completion		
Triggering action date ***(from WasteLAN)*****:** August 8, 2000		
Due date ***(five years after triggering action date)*****:** August 8, 2005		

Five-Year Review Summary Form, cont'd.

Issues:

1. *Institutional Controls to prevent pumping that could jeopardize remedy are not in place.*
2. *A Database of properties with active or inactive wells does not exist.*
3. *Vapor Intrusion has not been evaluated as a site issue.*

Recommendations and Follow-up Actions:

1. *Implement Institutional controls both on-site and off-site.*
2. *Develop a database of the properties with active or in-active wells.*
3. *Evaluate the vapor intrusion pathway at this Site.*

Protectiveness Statement

The remedy currently protects human health and the environment because it is functioning as designed. The immediate threats have been addressed and the remedy is considered protective in the short term. However, in order for the remedy to be protective in the long-term, the following actions need to be taken: institutional controls need to be addressed, and vapor intrusion studies need to be conducted.

First Five-Year Review Report

Stamina Mills Superfund Site

Town of North Smithfield

Providence County, Rhode Island

I. Introduction

Purpose of the Five Year Review

The purpose of five-year reviews is to determine whether the remedy at a site is protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in Five-Year Review reports. In addition, Five-Year Review reports identify issues found during the review, if any, and recommendations to address them.

Authority for Conducting the Five-Year Review

The Agency is preparing this five-year review pursuant to CERCLA §121 and the National Contingency Plan (NCP). CERCLA §121 states:

> *If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.*

The agency interpreted this requirement further in the National Contingency Plan (NCP); 40 CFR §300.430(f)(4)(ii) states:

> *If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.*

Who Conducted the Five-Year Review

The United States Environmental Protection Agency (USEPA) Region I has conducted a five-year review of the remedial actions implemented at the Stamina Mills Superfund site in North Smithfield, RI. This review was conducted from late 2004 through September, 2005. This report documents the results of the review. EnSafe Inc., a consultant hired by the Performing Party (Kayser-Roth) has provided technical analysis in support of the five-year review.

Other Review Characteristics

This is the first five-year review for the Stamina Mills Superfund site. The triggering action for this review is the date of the Preliminary Close-out Report (PCOR) as shown in EPA's WasteLAN database: August 8, 2000. This five-year review is required due to the fact that hazardous substances, pollutants, or contaminants remain at the site above levels that allow for unlimited use and unrestricted exposure

Remedy implementation at the Stamina Mills Site required multiple activities:

- In situ vacuum extraction of the trichloroethylene (TCE) spill-area soil.

- Excavation of landfill wastes from the 100-year floodplain and consolidation with landfill wastes above the floodplain.
- Installation of a leachate collection system in the landfill.
- Capping of the landfill.
- Groundwater extraction and treatment using an ultraviolet (UV) light/hydrogen peroxide system.
- Demolition of onsite structures.
- Sealing and backfilling of raceways.
- Location of the septic tank, testing and removal of its contents, and offsite treatment and/or disposal.
- Grading of the Site.
- Long-term environmental monitoring.
- Institutional controls to regulate future land use at the Site and prevent the disturbance of the physical integrity of the remedy's components.

Treatment is ongoing, and hazardous substances are still present onsite at concentrations above levels protective of unrestricted use.

Five-Year Review Report Format

The format for this review has been adopted from the USEPA *Comprehensive Five-Year Review Guidance* (June, 2001). Elements of the five-year review are presented as outlined below:

- Section II presents a chronology of Site events.
- Section III presents the Site location information and the history of the Site, including a summary of the preliminary Site investigations, the remedial investigation (RI), the feasibility study (FS), remedial design (RD), and remedial action (RA).
- Section IV discusses the remedial actions implemented at the Site, their performance, and conclusions regarding remedy effectiveness.

- Section V – not applicable
- Section VI describes the five-year review process, including the administrative components of the five-year review, community notification and involvement, document review, data review, the Site inspection, and interviews.
- Section VII presents the technical review of the Site remedy using three questions:
    - Is the remedy functioning as intended by the decision documents?
    - Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of remedy selection still valid?
    - Has any other information come to light that could call into question the protectiveness of the remedy?
- Section VIII identifies issues at the Site that prevent the remedy from being protective.
- Section IX identifies recommendations and follow-up actions for the Site remedy.
- Section X issues the protectiveness statement for the Stamina Mills Site.
- Section XI specifies the requirement for the next five-year review.

II. Site Chronology

Table 2-1 Chronology of Events		
Date	**Event**	**Additional Information**
1824	Manufacturing operations began under the Forestdale Manufacturing Company.	
1920s	Temporary shutdown of mill operations.	
1930s	Mill Building No. 2 burns down.	Building No. 2 area used as an onsite landfill for process wastes until approximately 1968.
1940s	Forestdale Manufacturing Company transfers ownership to Stamina Mills.	
1969	TCE-scouring system installed to remove oil and dirt from newly woven fabric. Initial reports of TCE spill.	Within a few months of the spill, the Stamina Mills Well (SMW) showed evidence that it had been affected by TCE and potable use was discontinued.
1975	Stamina Mills shuts down.	Contents of the TCE storage tank are estimated at 600 to 700 gallons.
1977	Stamina Mills destroyed by fire in October 1977.	
1978	The Town of North Smithfield installed a sewer through the Site parallel to the Branch River.	The sewer was installed 20 to 30 feet below ground surface. In places this sewer extended 10 to 20 feet into bedrock, and blasting was required.
1979	Rhode Island officials identify TCE contamination in the Forestdale Water Association Well (FWAW), a community water system approximately 800 feet north of the Stamina Mills Site.	Additional sampling of 51 private wells near the Site shows elevated TCE concentrations in at least 18 wells. At this time, groundwater was the sole source of potable water for the local residents.
1981	The State of Rhode Island and the Town of North Smithfield finance the construction of a municipal water main to serve the residential area affected by contamination north of the Stamina Mills Site.	Between 1981 and 1984 only seven of the approximately 50 affected or potentially affected residences connected to the new municipal water supply, reportedly due to connection costs.
1983	Final inclusion on the National Priorities List (NPL).	
1984	USEPA initiates a removal action to extend the existing water line and to fund residents' connection costs. Approximately 50 residences were connected.	
1986-1988	A two-phase RI was conducted to determine the nature and extent of contamination in soil, groundwater, surface water, and sediment.	
1989	The Federal District Court of Rhode Island ruled that Kayser-Roth Corporation, corporate successor to Stamina Mills, is liable for past and future response costs at the Site.	
1990	The Record of Decision for the Site was signed by USEPA on September 28, 1990.	
1991	USEPA issued an Order to Kayser-Roth to perform the ROD cleanup remedy.	
1992	Kayser-Roth initiated Site preparation and predesign activities, including demolition of old mill buildings.	
1993-1996	Collins & Aikman Products Company (C&A) assumes responsibility for the cleanup of the site from Kayser-Roth. C&A completes pre-design work at the Site.	

1994	Phase I Predesign activities, including soil vapor extraction (SVE) testing and aquifer testing, were completed onsite.	Testing indicated low-vacuum SVE would be effective in permeable overburden soil, but that multi-phase extraction (MPE) would be necessary to recover TCE from highly contaminated, low permeability saprolite zones.
1995	Phase II Predesign work was completed, including installation of vapor extraction wells and performance testing.	
1997	Successful testing of the full-scale vapor extraction system completed in November 1997.	
1998/1999	Attempts to stabilize and cap the onsite landfill on the eastern portion of the Site proved hazardous to both Site workers and the adjacent Branch River. Therefore, an alternate landfill remedy was implemented to excavate, transport, and dispose of landfill materials offsite.	
2000	Successful startup of the groundwater extraction system.	
2000	USEPA issued an Explanation of Significant Differences on June 27, 2000, documenting the technical rationale for modifications to (1) groundwater treatment system, (2) vapor treatment system, and (3) the final landfill remedy.	
2002	The SVE system was mothballed in late 2002 due to extremely low vapor concentrations and the absence of significant rebound following winter shutdown periods.	
2003	The MPE system was enhanced by implementing a drop tube vapor/groundwater extraction system on 10 MPE wells.	
2004-2005	USEPA initiates five-year review.	
2005	Kayser-Roth re-assumes responsibility for the cleanup of the site due to bankruptcy of C&A.	

III. Background

The Site, which was a former textile weaving and finishing mill, was developed in the early 1800s. Currently it is abandoned except for remediation equipment and an old mill building along School Street.

General Site Description and Historical Summary

The Stamina Mills Site is in Providence County approximately 0.5 mile southwest of the intersection of Highway 146 and 146A and approximately 14 miles northwest of Providence, Rhode Island (Figure 3-1; all figures are included in Appendix A). The Site covers approximately 5 acres along the Branch River in North Smithfield, Rhode Island. The Site's coordinates are 41˚59'45" N latitude and 71˚33'45" W longitude.

The Site is bounded to the south by the Branch River and several industrial and commercial facilities. Properties to the north and east are primarily residential, with some commercial usage. A dam immediately south of the Site forms the Forestdale Pond and the Site's southern boundary. This dam provided hydromechanical power for the textile mill operations. Two raceways passed under Mill Buildings No. 1 and 2 before reentering the Branch River downstream of the dam. The southeastern section of the Site includes an area in the 100-year floodplain. Because the Site is within 50 feet of the Branch River, it is considered a wetland under Rhode Island regulations.

Manufacturing operations began at the mill in 1824, when the Forestdale Manufacturing Company started processing cotton. The mill continued operations until the late 1920s when it shut down for an undocumented period of time. After the Depression, the mill reopened and in the 1940s it changed ownership and was renamed Stamina Mills. Between 1930 and 1938 the eastern portion of the mill (Mill Building No. 2) was destroyed by fire. A portion of the burned-out building footprint was used as an onsite

landfill for process wastes until approximately 1968. A diagram of the mill layout is included in Appendix B, historical diagrams and figures.

The mill was shut down in 1975, and the remaining portion of the mill was destroyed by fire in October 1977. The Site remained vacant following the fire.

In 1978, the Town of North Smithfield installed a sewer across the Site parallel to the Branch River and through portions of the landfill area. The sewer was installed 20 to 30 feet below ground surface, and required blasting 10 to 20 feet into bedrock in places.

Kayser-Roth, corporate successors to Stamina Mills, initiated Site preparation and predesign activities in 1992 that included demolition of old mill buildings, debris recycling and/or removal, and Site regrading. Some demolition materials, debris, and Site soils were used as fill during regrading prior to the addition of topsoil and seeding. A 6-foot-high gated fence is present along School Street to prevent unauthorized access; the property is not fenced along the Branch River or Forestdale Pond. During remedial activities, Collins & Aikman Products Company (C&A) assumed all responsibility for the Site from Kayser-Roth.

In 1998 and 1999, attempts to stabilize and cap the onsite landfill on the eastern portion of the Site proved hazardous to both Site workers and the adjacent Branch River. As a result, C&A proposed an alternate landfill remedy which was approved by USEPA and RIDEM. The landfill contents were excavated and shipped offsite for disposal in a chemically secure landfill, as outlined in the *Remedial Action Report — Landfill Restoration* (EnSafe, December 1999). Figure 3-2, included in Appendix A, shows the Site conditions and topography after completion of the landfill restoration in 1999.

Active soil and groundwater remediation is ongoing along the central 2 acres of the Site. A groundwater extraction (GWE) system, SVE system, MPE system, above- and below-ground manifolds, and a treatment building housing both groundwater and vapor treatment systems (GWTS, VTS) are present onsite.

Site Topography, Geology, and Hydrogeology

The difference in relief across the Stamina Mills Site is approximately 200 feet from the north end of the property to the Branch River Valley floor (south). Ground surface topography generally mimics the buried bedrock surface. Approximately 10 to 15 feet of fill, glacial till, fluvial deposits, and surface soils overlie bedrock and extend to the ground surface. A 2- to 8-foot-thick layer of brown clayey saprolite has formed at the bedrock/overburden interface due to bedrock weathering.

Bedrock is a fine- to medium-grained quartz biotite schist of the metamorphic Blackstone series that exhibits well-developed foliation. Richmond and Quinn have estimated the total thickness of the units to be approximately 400 feet in the Georgiaville Quadrangle. Joints and fractures in the schist appear to be generally northeast-southwest and northwest-southeast. A generalized cross section is shown in Appendix B, which includes historical diagrams and figures.

The basin of the Branch River originates at the confluence of the Pascoag and Chepachet Rivers. In Woonsocket, Rhode Island, the Branch River joins the Blackstone River, which flows to the south where it joins the Providence River and empties into the Narragansett Bay.

The majority of groundwater at the Stamina Mills Site is stored in and transmitted through fractures and joints in the upper portion of the bedrock aquifer approximately 10 to 20 feet below ground surface (bgs). The lower few feet of overburden materials

are seasonally saturated, but are not regarded as a separate unit. Flow in the bedrock aquifer is toward the Branch River.

Under static conditions, regional groundwater generally flows from north to south and parallels the topography. Groundwater recharges in upland areas north of the Site and flows south toward the Branch River, then eastward, parallel to the river before discharging in the river. However, hydrogeologic investigations showed that pumping individual bedrock supply wells, including the FWAW north of Stamina Mills, can temporarily reverse the regional hydraulic gradient in such a way that the flow beneath the Stamina Mills Site is directed north toward residential areas. Reversal of the groundwater flow during previous operation of the FWAW is thought to be the mechanism by which contaminants migrated from the Site to the residential area to the north. Figures showing flow reversals during the FWAW pump test in 1988 are included in Appendix B.

Former, Current, and Future Land Use

The land to the north and east of the Site is largely residential with some commercial use. The Halliwell Memorial Elementary School is approximately four-tenths of a mile northwest of the Site. Areas directly east of the Site, which are in the floodplain of the Branch River, have been left undeveloped. The area to the south and southwest of the Site, across the Branch River, is occupied by industrial and commercial facilities.

Land use in the immediate vicinity of the Site has not changed significantly since investigations started in the 1980s.

History of Contamination

Contamination at the Stamina Mills Site was associated with historical mill operations and TCE spills that occurred during the 1960s. Select historical photographs showing Site conditions prior to RA and during RA are included as Appendix C.

Contamination Sources

Multiple contaminant sources were identified during the RI.

TCE Tank/Spill Area

In March 1969 a TCE scouring system was installed at the mill to remove oil and dirt from newly-woven fabric. Shortly thereafter, a spill occurred during the delivery of TCE to an aboveground storage tank. The volume of solvent lost is unknown. Within a few months of the spill, the SMW showed evidence of TCE contamination and potable use was discontinued.

When the mill shut down in 1975, 600 to 700 gallons of TCE remained in the storage tank. Following the fire in 1977, the TCE storage tank could not be located. The sewer line installation in 1978 passes through the historical TCE spill area.

Septic System

A septic system was identified during investigation activities as a potential source of contamination to groundwater. A sample of sludge from the septic system's drain pipe during the RI indicated the presence of TCE.

Landfill

As noted previously, a portion of the burned-out Mill Building No. 2 footprint was used as an onsite landfill for process wastes from the 1930s through the 1960s. This landfill, estimated at approximately 5 to 20 feet thick, occupied the eastern half of the Site. The southern portion of the landfill sloped steeply down toward the Branch River, with a portion within the river's 100-year floodplain. Landfill contents were a mixture of fabric wastes, plastic, paper, wood, metal, cinders, glass, and rock interbedded with layers of sandy fill. In areas closest to the Branch River, a layer of black oily soil up to 10 feet thick extended to the bedrock surface beneath the waste. Contaminants

suspected to be present in the landfill included TCE, polycyclic aromatic hydrocarbons, sulfuric acid, soda ash, salt, detergents, waste fabrics, dyes, wool oil, plasticizers, and pesticides (used for moth-proofing). The sewer line installation in 1978 passes through the historical landfill area.

At the onset of investigation activities, most of the landfill was overgrown with vegetation, including small trees, shrubs, weeds, and grass.

Raceways

During the RI the two raceways beneath the former mill buildings were identified as potential migration pathways for contamination, providing a conduit for contaminants to seep from other source areas (the septic tank, the TCE spill area, the landfill) into the Branch River either as suspended solids or as groundwater.

Discovery of Contamination

In 1979, Rhode Island officials identified TCE contamination in the FWAW, a community water system approximately 800 feet north of the Stamina Mills Site. Additional sampling of 51 private wells near the Site showed elevated TCE concentrations in at least 18 wells. At this time, groundwater was the sole source of potable water for the local residents.

Initial studies conducted as a result of this discovery indicated that the Stamina Mills Site was the most likely source of TCE contamination, prompting USEPA and RIDEM to seek the Site's inclusion on the NPL on December 30, 1982; it was listed as final in September 1983.

Initial Response

In 1981, the State of Rhode Island and the Town of North Smithfield financed the construction of a municipal water main to serve the residential area affected by

contamination north of the Stamina Mills Site. Between 1981 and 1984 only seven of the approximately 50 affected or potentially affected residences connected to the new municipal water supply, reportedly due to connection costs.

In 1984, following inclusion of the Site on the NPL, USEPA initiated a removal action to extend the existing water main and to fund residents' connection costs. Approximately 50 residences were connected.

In July 1988, USEPA initiated a second removal action that removed the contents of two deteriorating underground storage tanks and disposed of them offsite. The interiors of both tanks were decontaminated and the tanks were then decommissioned.

In August 1990, USEPA initiated a third removal action that removed the contents of an aboveground storage tank. The contents were treated and disposed of offsite, and the interior of the tank was decontaminated. The tank shell was left onsite for disposal during remedial activities.

Basis for Taking Action

Hazardous substances including volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), inorganics, and/or pesticides (primarily dieldrin) have been detected in Site soil, groundwater, surface water, and/or sediments. However, VOCs are the primary constituents of concern (COCs), with TCE posing the greatest concern.

Remedial Investigation Findings

A two-phase remedial investigation was conducted from 1986 to 1988 to determine the nature and extent of contamination in soil, groundwater, surface water, and sediment.

Soil

Soil samples collected during the RI from the area impacted by the 1969 TCE spill exhibited TCE concentrations up to 430,000 micrograms per kilogram (µg/kg). The spill area extended from the northeast corner of the former Mill Building No. 1 east to the base of the landfill, and then south to the Branch River. TCE contamination extended into the landfill directly above the water table near one of the raceways and the sewer line trench, and was assumed to be characterized by preferential migration through these more permeable zones.

Other compounds detected in Site soil included lower concentrations of SVOCs, inorganic compounds, and pesticides (particularly dieldrin).

Groundwater

Bedrock groundwater beneath the former TCE spill area exhibited TCE concentrations of up to 850,000 micrograms per liter (µg/L). Shallow groundwater, primarily associated with seasonal intrusion of bedrock groundwater into the overburden material, was also contaminated. Natural gradients, as well as the presence of the two raceways and the sewer line trench, were assumed to cause migration of impacted groundwater toward the Branch River.

As noted in pre-RI investigations, a TCE-contaminated groundwater plume in the bedrock aquifer was found to extend northwest from the Site into the residential neighborhood north of School Street. RI studies suggested that contaminants were drawn northward through pumping of the FWAW and other residential wells. Since operations at these wells had been terminated following installation of the water main during the early 1980s, decreasing concentrations were noted in the residential area. These decreases were assumed to be associated with natural flushing of the plume area following re-establishment of the natural gradient. Figure 3-3, found in Appendix A, shows the extent of contamination offsite during 1992.

Other compounds detected in Site groundwater included lower concentrations of SVOCs, inorganic compounds, and pesticides (particularly dieldrin).

Sediment and Surface Water

Surface water samples collected during the RI adjacent to and downstream of the spill area exhibited TCE and 1,2-dichloroethylene (1,2-DCE) contamination, with maximum concentrations found in the raceway exits. Sediment impacts directly adjacent to the Site were minimal due to the absence of sediment at the base of the dam; however, downstream of the Site, TCE, 1,2-DCE, SVOCs, dieldrin, and inorganics were quantified. SVOCs, pesticides, and inorganics were assumed to be associated with the mill and landfill operations.

Primary Health Threats/Basis for Action

The baseline risk assessment conducted during the RI calculated both carcinogenic and non-carcinogenic effects of Site contaminants under various current and future use scenarios, as shown in Table 3-1.

Table 3-1
Baseline Risk Assessment Results

	Cancer Risk		Hazard Index	
	Average	**Maximum**	**Average**	**Maximum**
Current Use Scenario				
Offsite Active Wells Groundwater Ingestion	3E-06	3E-06	0.1	0.3
TCE Spill Area Soil Ingestion	2E-06	8E-06	0.1	0.6
Landfill Area Soil Ingestion (0-5')	2E-06	2E-05	0.6	3.0
Other Onsite Soil Soil Ingestion (0-5')	1E-06	1E-05	0.07	1.0
Downstream of Site Fish Consumption	8E-03	3E-02	0.6	2.0
Upstream of Site Fish Consumption	4E-03	4E-03	0.002	0.002
Surface Water Ingestion via Swimming	5E-07	6E-07	0.02	0.04
Future Use Scenarios				
TCE Spill Area Groundwater Ingestion	8E-02	4E-01	50	200
Landfill Area	2E-02	7E-02	30	60

Table 3-1 Baseline Risk Assessment Results				
	Cancer Risk		**Hazard Index**	
	Average	**Maximum**	**Average**	**Maximum**
Groundwater Ingestion				
Offsite Active Wells Groundwater Ingestion	3E-06	3E-06	0.1	0.3
Landfill Area Soil Ingestion (5-20')	2E-06	3E-05	0.5	6.0

The risk assessment also identified exceedances of applicable or relevant and appropriate regulations, including:

- USEPA Maximum Contaminant Levels (MCLs)
- Ambient water quality criteria
- USEPA lifetime health advisories

Crumbling Site infrastructure and debris were also cited as physical hazards remaining onsite.

IV. Remedial Actions

This section outlines the selected remedy for the Stamina Mills Site.

Remedy Selection

USEPA's *Record of Decision* (USEPA, 1990; EPA/ROD/R01-90/048) was signed on September 28, 1990. The *Explanation of Significant Differences for Changing the Method of Treating Contaminated Groundwater and for Changing the Method of Capping the On-Site Landfill* (USEPA, 2000) was signed on June 27, 2000.

Remedial Action Objectives

The ROD identified multiple remedial action objectives for the Site.

- Restore the groundwater to federal and state drinking water standards (or criteria when drinking water standards are not available) as quickly as possible because the aquifer is a drinking water source.
- Prevent the public from direct contact with contaminated soils, sediments, and solid wastes, which may present health risks.
- Eliminate or minimize the migration of contaminants from the soil into the groundwater.
- Prevent the offsite migration of contaminants to the surface water above levels protective of public health and the environment.
- Reduce risks to human health associated with the physical hazards while implementing remedial actions at the Site.

Remedial Actions Selected

The following remedial actions were identified as major components of the Site remedy:

- Demolition of onsite structures.
- Sealing and backfilling of raceways.

- Locating the septic tank, testing and removal of its contents, and offsite treatment and/or disposal.
- Grading of the Site.
- In situ vacuum extraction of TCE spill-area soil.
- Groundwater extraction and treatment using an UV/hydrogen peroxide system.
- Excavation of landfill wastes from the 100-year floodplain and consolidation with landfill wastes above the floodplain.
- Installation of a leachate collection system in the landfill.
- Capping of the landfill.
- Long-term environmental monitoring.
- Institutional controls to regulate future land use at the Site and prevent the disturbance of the physical integrity of the remedy's components.

Remedy Implementation

Remedy implementation began under the direction of Kayser-Roth during 1992, and was completed under the direction of C&A during 2000.

Building Investigation and Demolition

Initial Site activities addressed safety hazards that were noted during the baseline risk assessment (e.g., deteriorating structures), as well as those remedial action objectives associated with contaminant migration via the former mill structures. No cleanup goals were identified with respect to this portion of the remedy.

The building investigation and demolition process occurred during June, July, and August 1992 and included the following work activities:

- Identification of the former septic tank. The concrete cover from the vessel was collapsed and no standing liquids were identified. Visual inspection indicated the

absence of sludge/still bottoms. Soil from adjacent Site work was used to backfill the vessel.

- Debris piles located on the western portion of the Site were sorted to recover recyclable metal, which was shipped offsite to the State Line Scrap Recovery facility in Johnston, Rhode Island. Wood debris and cleared vegetation were landfilled at the New England Ecological Development facility in Johnston, Rhode Island.

- Subsurface voids, including the former main building's crawlspace, the wing building basement, and the wing building extension's basement, were demolished and filled with onsite debris.

- The locations of both the new and the old raceways were confirmed using trenching operations. The old raceway was found to be blocked by sediment and fill materials. The new raceway was blocked with two reinforced concrete barrier walls approximately 15 feet east of the inlet gates.

- A sump pit was identified in a concrete box south of the raceway exits and appeared to act as a conduit for groundwater and/or surface water. The concrete box was filled with concrete to a level approximately 18 inches above the static water level in Forestdale Pond. The remainder of the box was filled with sandy loam.

- The masonry smokestack present onsite was disassembled manually. Wipe samples were collected to assess contamination; no contamination was detected in the wipe samples above contract-required reporting limits. Pigeon droppings and ash in the bottom six feet of the stack were removed with a vacuum truck and placed in a 20-cubic-yard roll off box, which was later disposed of offsite as

non-hazardous special waste at the Laidlaw Waste Systems facility in Pinewood, South Carolina.

- Asbestos-containing materials were removed from the Boiler House and disposed of offsite at the Connecticut Valley Sanitary Waste facility in Chicopee, Massachusetts. The Boiler House was demolished and the debris used for grading onsite.

- Site restoration activities included regrading to promote drainage toward the Branch River, addition of a minimum of 12 inches of topsoil, and seeding. Where necessary, erosion control netting was staked into place.

Select historical photos are included in Appendix C.

Building investigation and demolition activities are documented in the *Building Investigation and Demolition Report* (Rev. B) (January 15, 1993; Sverdrup Environmental, Inc.). All onsite work was performed by Sverdrup or its subcontractors.

Soil Vapor Extraction and Multi-phase Extraction System

SVE pilot testing, design, and installation were completed as a phased process between 1994 and 1997. The ROD established performance standards for unsaturated soil in the TCE spill area, as shown in Table 4-1.

Table 4-1
ROD-Specified Soil Cleanup Standards

Compound	Hazardous Substance Cleanup Standard (µg/kg)
Trichloroethylene	195
Tetrachloroethylene	66
1,1-Dichloroethylene	17
1,2-Dichloroethylene	151

Note:

µg/kg = micrograms per kilogram

The ROD contemplated a single SVE system installed in the TCE spill area, extending from the north wall of the old mill building southeast to the Branch River. Sampling results indicated that VOC concentrations increased with depth, suggesting that most of the TCE mass had migrated vertically and accumulated at the bedrock-vadose zone interface. Figure 4-1 (in Appendix A) shows the TCE spill area, along with the network of SVE and MPE wells installed to maximize contaminant recovery.

SVE treatability testing performed in 1994 was designed to meet the following objectives:

- Determine the effectiveness of SVE in spill-area soil.
- Obtain data needed for conceptual design of the full-scale treatment system.
- Estimate the time required to meet cleanup standards throughout the TCE spill area.

Parameter evaluation tests and point permeability tests were used to assess vadose zone characteristics in the TCE spill area. The pilot study concluded that the subsurface exhibited extreme heterogeneity, including intermingled sandy fill, silty fill, and saprolite. Data also indicated that to address saprolite, an MPE would be required to address seasonal saturation.

Vapor extraction wells were installed into both vadose soil and saprolite in 1995. Soil was field tested using a jar headspace criterion of 10 parts per million volume to determine whether a location required installation of a vapor extraction well. Field efforts indicated that the areal extent of the TCE spill area was larger than previously considered in the RI. A total of 26 wells were installed in overburden material and 31 wells were installed in the saprolite/fractured bedrock material.

The final design characteristics of each SVE well were determined in the field following installation. Brief performance tests were conducted on each well; data were used to determine:

- whether the well would be included in the SVE or MPE system.
- to confirm the conceptual design of the manifold sizing.
- to determine SVE process equipment requirements.
- to design offgas controls.

Vacuums in overburden wells typically ranged from 0.6 to 54 inches of water, with airflow rates ranging from 2 to 19 standard cubic feet per minute (scfm). Vacuum in the saprolite wells ranged from 27 to 163 inches of water following dewatering; airflow rates ranged from 1 to 8 scfm. Saprolite wells yielded between 0.01 and 2 gallons per minute (gpm) under vacuum. These yield rates were confirmed through supplemental aquifer/slug testing. Testing indicated that TCE was the primary vapor contaminant.

Full-scale equipment design and system installation occurred in 1996 and 1997. Airflow modeling and Site data suggested that a remediation system removing up to 500 pore volumes per year would be practical, for a projected operational period of one to two years. However, this determination assumed complete dewatering of the saprolite material and 12 month (continuous) operation. Subsequent startup and operation later revealed that operations were limited to 6 to 8 months per year due to freezing weather. The SVE and MPE systems were designed to operate on parallel manifolds, with the SVE system using a low-vacuum blower system to extract soil vapor. The MPE system was designed to use a high-vacuum blower and submersible pumps to draw down groundwater present within the saprolite.

The final SVE/MPE design included the components listed in Table 4-2.

Table 4-2
SVE/MPE System Components

System Component	Equipment Model	Operating Parameters	Notes
SVE Blower	Roots Universal RAI 47, displacement rotary lobe blower	3 phase 460 volt 7.5 horsepower 195 scfm at 6.5 in Hg	Two blowers in place.
MPE Blower	Travani TRO 300V liquid ring vacuum pump	3 phase 460 volt 20 horsepower 120 scfm at 17.5 in Hg	
Pneumatic Pumps *	Clean Environment Model AP-2		Bottom entry, 2-inch submersible pneumatic pumps.
MPE Air Compressor	Atlas Copco Model GA-7	50 inlet cfm at 90 psi	

Notes:

* Pneumatic pumps were eliminated from the MPE system during 2003 due to recurring problems with siltation.

Groundwater Extraction and MPE-GW Systems

The GWE system consists of 3 open borehole recovery wells (B-3, SMW, and MW-10) and their associated discharge piping, valves, and flow meters.

In 1994, samples collected from MW-10 and the SMW indicated the presence of water-bearing fractures approximately 25 to 26 feet bgs with TCE concentrations indicative of the presence of dense non-aqueous phase liquid (DNAPL). Therefore, focusing pumping on this shallow interval was deemed essential to accelerate mass removal and minimize the risk of introducing contaminants into the deeper bedrock matrix at MW-10 and SMW. A two-phase operational approach was selected to focus initial pumping on the shallow interval and subsequent pumping on both the deep and shallow intervals. Well B-3 is used to draw back the aqueous-phase plume that has migrated offsite.

Groundwater from the wells is treated in the GWTS, which consists of a holding tank, bag filters, and a skid-mounted air stripper (see Section IV for GWTS details). After treatment, the water is discharged to the Woonsocket sewage treatment plant in accordance with the Site's sewer use agreement.

Design Specifications

Before the wells were connected to the treatment system, they were redeveloped to minimize the potential for sand and grit fouling the GWTS components. After redevelopment, the wells had pumps, riser pipes, and level conductivity probes, as well as power and control wires installed. Two of the wells, SMW and MW-10, also required the installation of well packers. Well-specific information is shown on Table 4-3.

Table 4-3
Well-Specific Information

	MW-10	**B-3**	**SMW**
Depth	51 ft (with packer) 187 ft (without packer)	150 ft	50 ft (with packer) 275 ft (without packer)
Diameter/Completion	8 inch, open borehole	6 inch, open borehole	10 inch, open borehole
Yield	3-5 gpm	5-8 gpm	3-5 gpm
Pump Type	Grundfos Model 5E5 Redi-Flo4	Grundfos Model 10E8 Redi-Flo4	Grundfos Model 5E5 Redi-Flo4
Packer Depth	51 feet bgs*	No packer required	50 feet bgs*
Pump Intake Depth	44 feet bgs	144 feet bgs	45.5 feet bgs
Depth to Pump On Probe (High-Level Conductivity Probe)	33 feet bgs	43 feet bgs	34 feet bgs
Depth to Pump Off Probe (Low-Level Conductivity Probe)	43 feet bgs	122 feet bgs	44 feet bgs
Depth to Common Probe	45 feet bgs	123 feet bgs	45 feet bgs

Notes:
gpm gallons per minute
bgs below ground surface
* The packers were removed in 2000/2001 and the wells were backfilled with sand to 50 feet bgs.

To separate the shallow and deep portions of each well, TAM International Model 563-SD-01 inflatable packers were installed in recovery wells MW-10 and the SMW. Table 4-3 lists the packer depth settings, high-level (pump on) and low-level (pump off) conductivity probe settings, and the pump intake depth settings. However, packers were removed due to maintenance problems during 2000 and 2001, and the wells now operate with sand backfill present from terminal depth to approximately 50 feet bgs.

MW-10 and SMW were equipped with Grundfos Model 5E5 Redi-Flo4 environmental submersible pumps, with flow between 1.2 and 7 gallons per minute (gpm). B-3 was equipped with a Grundfos Model 10E8 pump, with flow between 5 and 14 gpm. All

three pumps have 0.5 hp, three-phase, 460-volt motors. After system startup and debugging, typical pumping rates were measured as shown in Table 4-4.

Table 4-4
Actual Recovery Well Pumping Conditions

Recovery Well and Zone	Total Operating Head (ft H_20)	Flow Rate (gpm)	Additional Comment
SMW	55 – 85	3 to 5	Operational during both phases
B-3	90 – 167	6 to 8	Operational during both phases
MW-10 Shallow	58 – 85	3 to 5	Operational during initial phase only
MW-10 Deep	115 – 170	18 to 30	Operational during terminal phase only

The GWE system was started in May 2000 and has remained operational since then. Pumping is conducted in cycles, allowing groundwater to recharge almost completely before the pumps restart, and promoting a flushing effect for the most effective practical mass removal. While this mass is being removed in the shallow source zone, deep groundwater is being recovered from well B-3, setting up a hydraulic gradient toward the Site in the aqueous plume, which historically moved offsite during FWAW pumping.

Landfill Operations

Landfill restoration activities were conducted from August 3, 1998, to October 5, 1999. The Order required restoration of the onsite landfill by consolidating all landfill wastes and affected sediments, covering them with a RCRA-type cap, and installing a leachate collection system at the toe of the landfill. During initial landfill restoration activities in August 1998, it became apparent that implementation of the remedy detailed in the Order would be difficult due to Site conditions that threatened Site workers' safety and might adversely impact the Branch River. Therefore, an alternate remedy – removal and offsite disposal of all landfill wastes and affected soil and sediment – was proposed, approved by USEPA and RIDEM, and implemented.

The performance standard for excavation and offsite disposal was the removal of all landfill wastes and affected soil and sediment. USEPA confirmed whether this performance standard was achieved through visual inspection and soil sampling.

Work tasks completed during landfill closure included:

- Clearing and grubbing the landfill area.
- Removal of eight monitoring wells, 26 gas probes, and miscellaneous piping.
- Installation of perimeter fencing.
- Construction of a temporary holding tank.
- Test pitting and demolishing a portion of the rock retaining wall.
- Construction and maintenance of temporary erosion control features and fencing during construction activities, as needed.
- Construction and maintenance of a temporary river diversion system to allow dewatering of the construction area.
- Dewatering the construction area by pumping collected storm water and infiltrating groundwater. Pumped water was discharged to the Branch River or to a temporary storage facility to allow sediment to settle before discharge to the ground onsite.
- Reconstructing the manhole located within the 100-year flood plain by extending its elevation above 194.5 feet mean sea level.
- Excavating, dewatering, and disposing of all landfill wastes, affected soil, and sediment.
- Placement of geotextile and riprap blanket along the slope of the landfill within the 100-year flood plain.
- Installing a surface runoff drainage ditch along the 100-year floodplain elevation and the raceway exit to promote surface runoff and raceway drainage.
- Placement and compaction of backfill material and top soil.
- Placement of seed/fertilizer mixture and erosion control mat over backfilled areas.

- Installation of final erosion control measures, as needed.

Most of the landfill waste and affected soil and sediment were excavated to bedrock. After excavation, USEPA inspected the exposed bedrock to ensure complete removal prior to backfilling with clean fill. Along the northern third of the landfill, in an area where the material was not excavated to bedrock, confirmatory soil samples were collected. The samples were analyzed for the Target Compound List (TCL) VOCs and pesticides; analytical results were compared to the ROD-specified soil cleanup standards presented in Table 4-1. Because a soil cleanup standard for dieldrin was not established in the ROD, USEPA developed a dieldrin standard of 200 µg/kg for landfill restoration based on risk to the environment and human health.

In areas where confirmatory soil sample results exceeded the cleanup standard, the soil was excavated to bedrock and disposed of offsite. In areas where the cleanup standard was met, the area was backfilled with clean soil to the required final grade.

The primary landfill remedial activity was the excavation and offsite disposal of approximately 24,400 tons of landfill waste, affected soil, and sediment. This material was either disposed of at the Morrow Hollow Landfill in Wendell, Massachusetts (20,025 tons), or mixed with asphalt at the Bardon Trimount facility in Saugus, Massachusetts (2,225 tons), or Aggregate Recycling Corporation facility in Eliot, Maine (2,150 tons).

As required by the USEPA and RIDEM, confirmatory soil samples were collected in landfill areas where excavation terminated above the bedrock surface. The soil samples were analyzed for the TCL VOCs and pesticides and results were compared to ROD-specified soil cleanup standards. The sampling area encompassed the northern third of the landfill area. The objective was to confirm complete removal of affected soil. If sample results exceeded the soil cleanup standards, the area represented by the soil sample was excavated to bedrock.

Representatives from the USEPA, RIDEM, EnSafe, and The Hood Companies performed a final inspection of the landfill restoration work on October 5, 1999. In an October 7, 1999, letter, USEPA stated that no punch-list items were identified by RIDEM or USEPA during the final inspection. However, the USEPA requested that the Site be inspected periodically during the winter and following spring to ensure that erosion control measures were intact and to determine whether any additional revegetative efforts and erosion control measures would be needed.

Institutional Controls

At the time of ROD signature, USEPA noted that it had proposed institutional controls with the property owner, Hydro Manufacturing, in a consent decree lodged in federal court. Hydro Manufacturing has since been dissolved, and institutional controls were never finalized for the site. Records indicate the property was purchased at auction in August 2005; USEPA is in the process of contacting the new property owner.

System Operations/Operations & Maintenance

Building Investigation and Demolition

Operation and maintenance (O&M), which was minimal for the building demolition area of the Site, consisted of inspections of the vegetative cover and erosion control measures installed after demolition. The results of the inspections indicate that vegetation and erosion control measures worked as designed and intended. Because the vegetation is now well-established, no further O&M is required in this area.

Treatment Systems

The GWTS consists of a holding tank for bulk storage, a liquid transfer pump operated by a variable frequency drive to transfer water from the holding tank through the water treatment system, bag filters for removal of suspended solids, and an air stripper for removal of VOCs contained in the groundwater.

The VTS treats SVE, MPE, and GWTS off-gas using two 3,000-pound granular activated carbon (GAC) vessels connected in series during summer months. An inline heater is installed within the vapor exhaust piping to reduce relative humidity and thereby increase carbon adsorption efficiency. Following treatment in the GAC, off-gas is discharged to the atmosphere. Any entrained water collected in the air-water separators is pumped to the GWTS. During winter operations, two 1,800-pound GAC units inside the treatment building are used to maintain treatment under cold weather conditions.

Instrumentation and controls for the SVE, MPE, and groundwater extraction and treatment systems consist of pressure, vacuum, and temperature gauges; level-sensing float switches; liquid differentiating conductivity sensors; pressure and/or flow sensors; and time and flow meters. This equipment is used to monitor run times, vacuums, and flow rates, and allows the system to operate unattended. The control scheme has an autodialer incorporated to notify offsite personnel if certain process parameters are exceeded. Key operating equipment is interlocked through the master control panel.

O&M Schedule and Tasks

The GWE portion of the system operates continuously throughout the year, and the MPE and SVE portions operate from May to November of each year. The remediation system will operate until VOC concentrations decrease to below the cleanup standards presented in the ROD or until it is determined that it is not feasible to attain the cleanup standards .

Winter GWTS/VTS Operations

During winter operations, groundwater extraction wells SMW, MW-10, and B-3 are operational. The GWTS and VTS both require routine monthly maintenance, as described in the *Operation, Maintenance, and Monitoring Plan (O&M Plan): Full Scale*

Remediation System (Version 4.0) (Envirogen, August 2000). Typical O&M activities during the winter months include, but are not limited to:

- Changing bag filters
- Checking/calibrating flow and pH meters
- Publicly owned treatment works (POTW) sampling
- Inspecting inside carbon vessels
- Vapor influent/effluent sampling using a photoionization detector (PID) or other organic vapor meter
- Recording process information (flow rates, operating parameters, etc.)

Winter operations typically require two scheduled maintenance visits per month. On average, one non-scheduled maintenance visit is required per month to respond to an alarm call.

Summer GWTS/VTS Operations

During summer operations, groundwater extraction wells SMW, MW-10, and B-3 are operational, as is the MPE drop tube system. Again, as described in the O&M Plan, the GWTS and VTS both require routine monthly maintenance. The MPE drop tube system requires checking during each maintenance visit, to ensure that drop tubes are set to the maximum depth (at the water table).

Typical O&M activities during the summer months include, but are not limited to:

- Drop tube adjustments
- Changing bag filters
- Checking/calibrating flow and pH meters
- POTW sampling (see Section VI for analytical data)
- Inspection of outside carbon vessels
- Vapor influent/effluent sampling using a PID or other organic vapor meter
- Recording process information (flow rates, operating parameters, etc.)

Summer operations typically require two scheduled maintenance visits per month. On average, one to two non-scheduled maintenance visits are required per month to respond to an alarm call.

Conversion for Winter Operations

During late October/early November, once nighttime temperatures drop below freezing, the MPE drop tube system is shut down, the manifold system is flushed with ambient air, water is drained from all necessary equipment and manifold lines, and the VTS is re-connected to the inside carbon beds.

Carbon Change-Out

As noted above, two 3,000-pound GAC vessels are located outside the treatment building, while two additional 1,800-pound GAC vessels are located inside the building. These vessels have typically required replacement every 9 to 12 months. Routine PID or organic vapor monitoring of pre-carbon, intermediate carbon, and post-carbon vapor is used to determine the need for carbon change-out.

Reporting and Sampling Tasks

Multiple sampling activities are required as a part of routine at the Stamina Mills Site.

Monthly POTW Sampling and Reporting

Monthly POTW sampling involves the collection of treatment system effluent samples from a dedicated sampling port and analysis for VOCs and pH by a local laboratory. Self-Monitoring Reports and Flow and pH Monthly Reports are submitted in accordance with Woonsocket Wastewater Discharge Permit.

Quarterly Influent Stream Sampling

GWTS influent and effluent is sampled quarterly (March, June, September, and December) for VOCs from dedicated sampling ports in conjunction with POTW sampling events, and submitted to a local laboratory.

Annual MPE Well Groundwater Sampling

Groundwater samples from the 22 MPE wells are collected annually and submitted to a local laboratory for VOC analysis.

Wellhead Vapor Sampling

Vapor sampling is performed using a PID or similar organic vapor meter on SVE and/or MPE wellheads four times throughout the year. In April, prior to MPE well development and in October following MPE system shutdown, vapor concentrations in 25 SVE wells and 31 MPE wells are evaluated. In June and August, vapor sampling is performed on only the 25 SVE wells.

Landfill

Operation and maintenance, which was minimal for the landfill restoration area of the Site, consisted of quarterly inspections of the vegetative cover, erosion control measures, and riprapped slope during the first year after construction. The objective of the inspections was to determine the condition of each component.

Inspections indicated vegetation, erosion control, and slope stabilization measures worked as designed and intended. Because the vegetation is now well-established with first-phase successional growth and the Branch River's bank is protected with heavy riprap, no further O&M is required on the landfill. However, if in the future, the vegetation becomes thin or unhealthy or the riprap appears compromised, the area will be revegetated and measures will be taken to repair the slope.

O&M Cost Evaluation

Costs for the project since ROD signature are shown in Table 4-5.

Table 4-5 Project Costs to Date		
Date Range	**Activities**	**Costs**
1992	Building demolition and Site clearing	$1,000,000
1993 through 1999	SVE and Groundwater RD, Construction, Startup	$5,900,000
1995 through 1999	Landfill RD and Construction/ Removal	$3,100,000
2000	GWTS, SVE, MPE operations	$150,000
2001	GWTS, SVE, MPE operations	$150,000 to 200,000 [a]
2002	GWTS, SVE, MPE operations	$160,000 to 210,000 [a]
2003	GWTS operations, MPE modifications	$18,000
2004	GWTS and MPE operations	$100,000
2005 [b]	GWTS and MPE operations, five-year review	$60,000

Notes:

[a] Estimated costs: complete financial information unavailable.

[b] Through June 1, 2005

V. Progress Since the Last Review – Not Applicable

This is the first five-year review conducted for the Stamina Mills Site.

VI. Five-Year Review Process

Administrative Components

USEPA notified C&A of the start of the five-year review process in August 2004; Kayser-Roth provided technical support for the five-year review process after C&A terminated its support for the Site.

The review team is described in Table 6-1.

Table 6-1
Five-Year Review Project Team

Role	Team Member	Affiliation
Project Manager	Byron Mah	USEPA
Primary Authors	Lori Anne Goetz	EnSafe Inc.
Community Involvement Coordinator	Sarah White	USEPA
Technical Support	Jim Thomas	C&A Project Manager
	Todd Howard	Kayser-Roth Project Manager
Site Project Manager for RIDEM	Louis Maccarone	RIDEM
	Lori Anne Goetz	EnSafe Inc.

The original schedule for completion of the five-year review is outlined below:

- Public notice – October 2004
- Site inspection – October 2004
- Interviews – October 2004 through February 2005
- Submittal of the *Draft 2005 Five-Year Review* – June 2005
- Submittal of the *Final 2005 Five-Year Review* – September 2005

Community Notification

At USEPA's direction, community notification occurred via a public notice in the *Woonsocket Call* on October 14, 2004, that a five-year review was being performed. A copy of this public notice is provided in Appendix D.

Once the *2005 Five-Year Review* is finalized, a public notice indicating completion of the review and its findings will be placed in the *Woonsocket Call*. Copies of the *2005 Five-Year Review* will be placed in the two public information repositories:

USEPA Record Center, 11th Floor
One Congress Street
Boston, Massachusetts 02114-2023
(617) 918-1440

North Smithfield Public Library
20 Main Street
Slatersville, Rhode Island
(401) 767-2780.

Other Community Outreach Activities

On April 6, 2005, USEPA hosted a information availability session at the North Smithfield Public Library. USEPA answered community members' questions regarding the Site and the five-year review process. A copy of the notification regarding the information availability session is included as Appendix E.

During April 2005, USEPA also conducted a water-use survey to determine which residences are still using groundwater for potable or non-potable purposes; this survey is included as Appendix F. A total of 161 surveys was sent to residents living north of School Street; 91 responses were provided (56% response rate). Survey responses are included in Appendix G.

Comments received on the surveys included the following:

- Questions whether pumping at the Site could adversely affect production in residential wells.

- Criticism about the lack of information provided to the public about the Site, specifically since the mid-1990s.

- Questions regarding why new wells are being installed in the area.

- Interest in dropping public water supply and using inactive or non-potable use wells.

- Questions regarding progress of remedial actions at the Site.

- Commendations for cleanup of the Site.

Survey responses were used to identify residents interested in participating in subsequent residential well sampling, described in Section VII; these residents were sent additional correspondence included in Appendix H.

Appendix I includes newspaper articles regarding the Site published during the five-year review period.

Document Review

The documents reviewed for Site history and remediation data:

- *Report of Pump Test of the Forestdale Water Association Well, Stamina Mills Superfund Site, North Smithfield, Rhode Island* (GHR Engineering Associates, Inc.; March 1989).

- *Remedial Investigation Report, Stamina Mills Site, North Smithfield, Rhode Island* (GHR Engineering Associates, Inc.; January 1990).

- *Feasibility Study Report, Mills Site, North Smithfield, Rhode Island* GHR Engineering Associates, Inc.; June 1990)

- *Record of Decision, Stamina Mills Site, North Smithfield, Rhode Island* (USEPA; September 28, 1990).

- *Project Operations Plan, Stamina Mills Superfund Site, North Smithfield, Rhode Island, USEPA Docket No. I-91-1070, Revision C* (Environmental and Safety Designs, Inc.; March 1992).

- *Stamina Mills Site, North Smithfield, Rhode Island*: *Building Investigation and Demolition Report, Revision B* (Sverdrup Environmental, Inc.; January, 1993).

- *Predesign Report, Stamina Mills Superfund Site, North Smithfield, Rhode Island, USEPA Docket No. I-91-1070, Revision A* (Environmental and Safety Designs, Inc.; January 1995).

- *Preliminary Design Basis Report, Stamina Mills Superfund Site, North Smithfield, Rhode Island, USEPA Docket No. I-91-1070* (Environmental and Safety Designs, Inc.; March, 1996).

- *VOC Mass Flux Evaluation Summary, Full Scale SVE/MPE System at Stamina Mills NPL Site, North Smithfield, Rhode Island* (ENVIROGEN, Inc.; February 1998).

- *Air Data Summary Report, Stamina Mills NPL Site, North Smithfield, Rhode Island, USEPA Docket No. I-91-1070* (EnSafe Inc.; February 1999).

- *Basis of Design Memorandum, Installation of Groundwater Recovery System, Stamina Mills Superfund Site, North Smithfield, Rhode Island, USEPA Docket No. I-91-1070* (EnSafe Inc.; May 1999).

- *Operation, Maintenance, and Monitoring Plan, Full Scale Remediation System at Stamina Mills Superfund Site, North Smithfield, Rhode Island, Version 4.0* (ENVIROGEN, Inc.; August 2000).

- *Remedial Action Report Soil and Groundwater Remedy, Stamina Mills Superfund Site, North Smithfield, Rhode Island, USEPA Docket No. I-91-1070* (EnSafe Inc.; January 2001).

- *Annual Summary Report, 2000 Operating Season, Stamina Mills Superfund Site, North Smithfield, Rhode Island* (ENVIROGEN, Inc.; March 2001).

- *Phase III Groundwater Monitoring Work Plan, Stamina Mills Superfund Site, North Smithfield, Rhode Island, USEPA Docket No. I-91-1070, Revision 1* (EnSafe Inc.; October 2001).

- *Annual Summary Report, 2001 Operating Season, Stamina Mills Superfund Site, North Smithfield, Rhode Island, Assessment Period January 1 2001 through December 31, 2001* (ENVIROGEN, Inc.; March 2002).

- *2002 Annual Report, Stamina Mills Superfund Site, North Smithfield, Rhode Island, USEPA Docket No. I-91-1070, Revision 0* (EnSafe, April 2003).

- *Technical Memorandum – Second Quarter 2003 Operations and Analytical Summary, Stamina Mills Superfund Site, North Smithfield, Rhode Island, USEPA Docket No. I-91-1070, Revision 0* (EnSafe Inc.; September 2003).

- *Technical Memorandum – Third Quarter 2003 Operations and Analytical Summary, Stamina Mills Superfund Site, North Smithfield, Rhode Island, USEPA Docket No. I-91-1070, Revision 0* (EnSafe Inc.; November 2003).

- *Technical Memorandum – Fourth Quarter 2003 Operations and Analytical Summary, Stamina Mills Superfund Site, North Smithfield, Rhode Island, USEPA Docket No. I-91-1070, Revision 0* (EnSafe Inc.; March 2004).

- *2003 Annual Report, Stamina Mills Superfund Site, North Smithfield, Rhode Island, USEPA Docket No. I-91-1070, Revision 0* (EnSafe, June 2004).

- *Technical Memorandum – First Quarter 2004 Operations and Analytical Summary, Stamina Mills Superfund Site, North Smithfield, Rhode Island, USEPA Docket No. I-91-1070, Revision 0* (EnSafe Inc.; June 2004).

- *Technical Memorandum – Second Quarter 2004 Operations and Analytical Summary, Stamina Mills Superfund Site, North Smithfield, Rhode Island, USEPA Docket No. I-91-1070, Revision 0* (EnSafe Inc.; September 2004).

- *Fourth Phase III Sampling Event – June 2004, Phase III Groundwater Monitoring Report, Superfund Site, North Smithfield, Rhode Island, USEPA Docket No. I-91-1070, Revision 0* (EnSafe Inc.; October 2004).

Pertinent sections of these documents (including RAOs, cleanup standards, etc.) are summarized in this five-year review.

Data Review

Multiple data sets were reviewed during the five-year review process, including:

- SVE and MPE performance.
- GWE performance.
- GWTS and VTS performance.
- Phase III groundwater monitoring data.
- GWE monitoring data.
- Annual MPE sampling results.

These data sets are discussed in more detail in the following sections.

SVE and MPE-Vapor System Performance

The SVE and MPE-vapor components extract vapor from contaminated overburden in the former TCE spill area. SVE/MPE-vapor system performance can be evaluated using the percent of available time the system has been in operation and the quantity of contaminant mass removed.

The SVE system was started in late 1997 and has been operated seasonally through 2002. However, due to low contaminant concentrations, this system has not operated since 2003. This system has been maintained in a stand-by, ready-to-restart condition in the event it is needed in the future.

Percent Operational

SVE operations, initially limited by technical problems with photocatalytic oxidation offgas control units in 1998 and 1999, were improved significantly since the vapor treatment approach was modified to use carbon in 2000, as shown in Table 6-2. Since 2000, the system maintained operations more than 80% of the season; 2002 operations exceeded six months of uptime. Since 1998, the SVE extraction network was optimized prior to and during each operating season using static and dynamic

vapor concentrations measured at wellheads. Removal was targeted specifically at those vapor extraction wells exhibiting the highest vapor concentrations, therefore the active system extracted from different SVE wells throughout the season.

Table 6-2
SVE/MPE-Vapor Operating Statistics 1998 through 2004

Year	SVE			MPE-V		
	Possible Days	Actual Days	Percent	Possible Days	Actual Days	Percent
1998	179	75	42%	--	irregular	--
1999	178	73	41%	180	54	30%
2000	180	151	84%	181	89	49%
2001	180	144	80%	178	66	37%
2002	191	191	100%	180	135	75%
2003	SVE System Not Operated		0%	140	104	74%
2004	SVE System Not Operated		0%	140	125	89%

Notes:
SVE Soil vapor extraction
MPE-V Multi-phase extraction, vapor component.
Based upon total operating season of 6 months (180 days).
MPE up-time in 1998 and 1999 was limited by pump siltation and treatment interruptions due to problems with the photocatalytic oxidation unit.
2002 operating period was longer than "expected" due to early April startup (favorable weather conditions).

Weather conditions at the Site typically preclude system startup until late April/early May, and systems are winterized in October each year. Each spring, MPE-groundwater extraction pumps are started before the MPE-vapor system in an attempt to dewater the saprolite zone. However, seasonal fluctuations in the water table and periodic siltation of pumps likely have prevented uniform dewatering. Consequently, the MPE-vapor system was operational for shorter time periods than the vadose zone SVE network, and vapor extraction has not likely been carried out uniformly across the entire MPE target zone.

Operating outages associated with MPE well siltation had adversely affected dewatering performance from the beginning. More frequent MPE-GW pump inspections and maintenance have resulted in an increase in MPE uptime since 2001, at the cost of additional labor hours. However, it was not clear that dewatering operations were

significantly improved. Pumping did not appear to suppress the water table uniformly over the entire TCE spill area, as adjacent non-pumping wells do not exhibit significant drawdown under pumping conditions and rapid recharge is noted during water-level monitoring events. Thus despite pumping, under low water table conditions 44% of the MPE wells exhibited total saturation of the well screens, and almost 70% exhibited more than 50% saturation. Under high water table conditions, 30 out of 34 MPE well screens were more than 50% saturated — the majority (73%) were fully saturated.

In 2003, after evaluation of performance data and O&M records, the vapor extraction and submersible pneumatic pump dewatering system used since system inception was mothballed due to siltation. Ten wells were selected for implementing a drop tube vapor/groundwater extraction system. The existing liquid ring pump is used to remove air and water through flexible drop tubes set at the water table; vapor and groundwater are removed using the existing manifold system. System performance has resulted in an increase in groundwater extraction rates from the MPE system, as well as improved vapor recovery.

Mass Removal

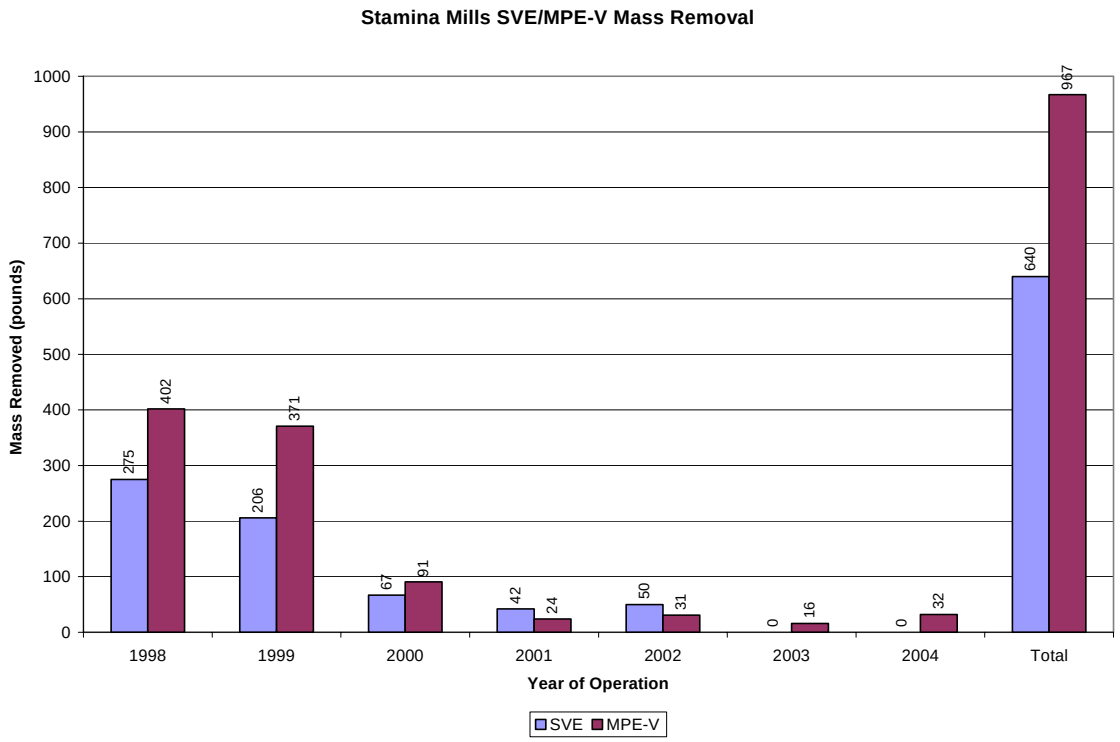
Operation of the SVE/MPE systems was expected to be conducted for two to four years. During this period, maximum mass removal was expected to occur within the initial six to 12 operating months. Mass removal rates followed this pattern, as shown in Table 6-3.

During the first two seasons of operation, approximately 1,254 lbs of TCE were removed from the TCE spill area. This is roughly 78% of the total mass removed by the vapor-phase system. As was expected, the bulk of this mass was obtained from the MPE-vapor system (62%). Since 2000, however, the vapor-phase mass removal rate has decreased significantly. Mass removed annually by SVE and MPE-vapor stabilized between 60 and 80 lbs for 2001 and 2002. Operations data for 2003 did not represent

full-scale operations for the entire season, but 32 pounds of TCE were removed from the MPE system during 2004. This value represents both contaminant in the vapor phase, as well as TCE stripped from the aqueous phase in the MPE manifold.

Table 6-3
SVE/MPE-Vapor Mass Removal Data 1998 through 2004 (pounds)

System	1998	1999	2000	2001	2002	2003	2004	Total
SVE	275	206	67	42	50	SVE System Not Operated		640
MPE-V	402	371	91	24	31	16	32	967
Total	**677**	**577**	**158**	**66**	**81**	**16**	**32**	**1,607**



Attainment of asymptotic conditions alone does not define successful performance of an SVE system, as discussed in the USEPA guidance document for assessment of soil venting performance (*Development of Recommendations and Methods to Support Assessment of Soil Venting Performance and Closure*; USEPA, 2001; EPA/600/R-01/070). However, the Site's design approach was careful to identify fully locations for vapor extraction wells and space extraction wells for effective subsurface air flow.

While vadose zone soil at the Site is heterogeneous, the remedial design process accounted for subsurface variability. Given the extent of contamination, remedial design approach, system performance, and operations of the SVE system, assessment of data from 1998 through 2002 indicate vapor concentrations from vadose soil have reached an asymptotic condition, and this condition represents removal of all readily available mass from overburden soil. Any residual concentrations observed in SVE vapor are expected to be from diffusion of contaminants found in saturated saprolite (MPE).

GWE/MPE-Groundwater System Performance

Similar to the SVE/MPE-vapor system, the GWE/MPE-groundwater system's performance can be evaluated using the percent of available time the system has been in operation and the quantity of contaminant mass removed.

Percent Operational

Overall, as shown on Table 6-4, GWE system uptime has been better than 80% since 2001. Problems encountered since startup were primarily one-time failures of parts or subsystems, and were remedied by replacement. Recurrence of similar problems is not expected until the service life of these parts is expended. The only recurrent causes for GWE system downtime during the operational period are associated with GWTS alarms, and, for the MPE component, siltation of pneumatic pumps.

Table 6-4 GWE/MPE-GW Operating Statistics 1998 through 2004				
	GWE		MPE-GW	
Year	Total Days	Percent	Total Days	Percent
1988	--	--	Irregular	Irregular
1999	--	--	54	30%
2000	164	77%	89	49%
2001	319	87%	66	37%
2002	306	84%	135	75%
2003	319	88%	104	74%
2004	318	87%	125	89%

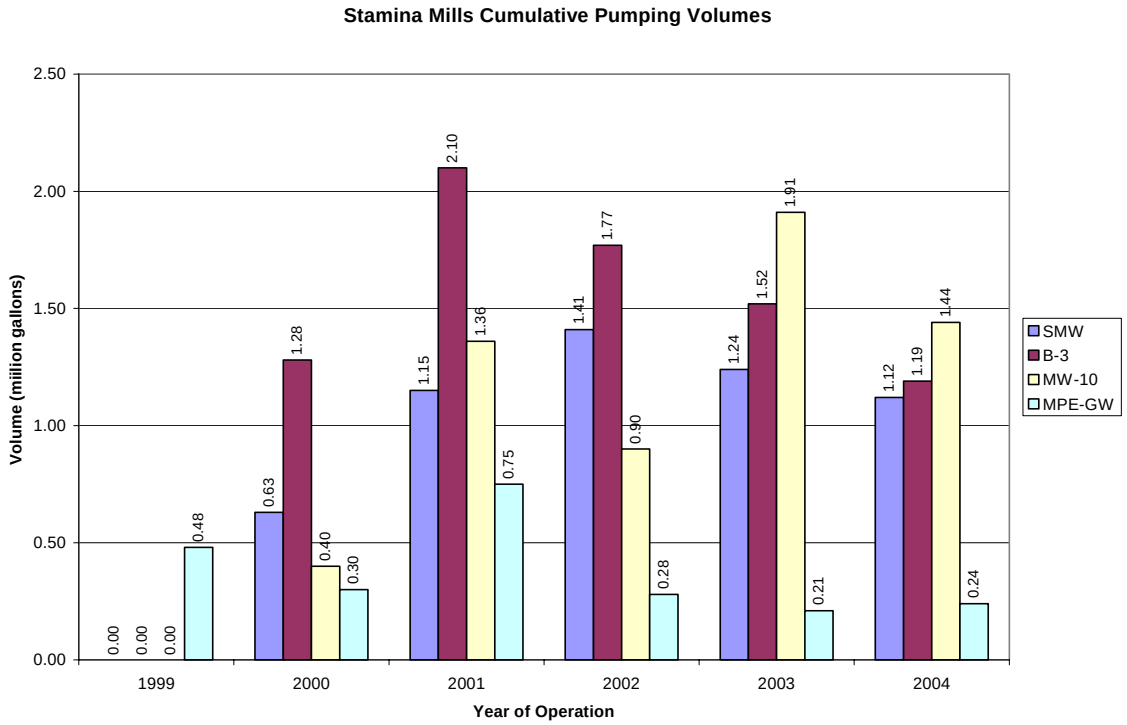
Notes:
1998 and 1999 data reflect air stripping of MPE-GW.
GWE assessment for 2000 based on total operating season of 216 days (May 30 through December 31).
GWE assessment for 2001 and 2002 based upon total operating season of 12 months (365 days).
MPE-GW assessment based upon total operating season of 6 months (180 days). Note that 2002 operating period was longer than "expected" due to early April startup (favorable weather conditions).

Flow from the GWE system has been monitored closely since 2000, when flow meters were installed as part of GWE/GWTS startup. As can be seen from Table 6-5, total flow reached or exceeded 4 million gallons per year (MGY) from 2001 through 2004, with the average rate ranging from 8 to 10 gpm from the total system. Peak flow, with all systems operating concurrently, is estimated to be 18 to 25 gpm during the summer operating season, as projected during design. The highest contribution of groundwater extracted by the system was from B-3 from 2000 through 2002 and MW-10 for 2003 and 2004.

Table 6-5

GWE/MPE-GW Flow Data 1998 through 2004 (MGY)

Component	1999	2000	2001	2002	2003	2004	Total Flow
SMW		0.63	1.15	1.41	1.24	1.12	**5.55**
B-3	--	1.28	2.10	1.77	1.52	1.19	**7.86**
MW-10		0.40	1.36	0.90	1.91	1.44	**6.01**
MPE-GW	0.48	0.30	0.75	0.28	0.21	0.24	**2.26**
Total Flow	**0.48**	**2.61**	**5.36**	**4.36**	**4.88**	**3.99**	**21.68**



Mass Removal Data

Estimated mass contributions from each of the GWE system components are shown in Table 6-6. Since commencement of full-scale GWE pumping in 2000, mass removal rates have decreased from a maximum of 471 pounds per year (lbs/year) in 2000 to 147 lbs/year in 2004. The MPE-GW system removed a total of 492 lbs in 1998 and 1999. Total mass removal through the MPE-GW/GWE system since 1998 has been 1,833 lbs.

Table 6-6
GWE System Components – Estimated Mass Contributions

Year	SMW		B-3		MW-10		MPE-GW		Total
	Mass (lbs)	Percent	Mass (lbs)	Percent	Mass (lbs)	Percent	Mass (lbs)	Percent	
1998	--	0%	--	0%	--	0%	110	100%	**110**
1999	--	0%	--	0%	--	0%	382	100%	**382**
2000	5	1%	97	21%	156	33%	213	45%	**471**
2001	15	4%	79	24%	143	43%	97	29%	**333**
2002	24	9%	42	16%	158	60%	37	14%	**261**
2003	6	5%	41	32%	69	55%	10	8%	**126**
2004	6	4%	35	24%	106	72%	0 *	0%	**147**

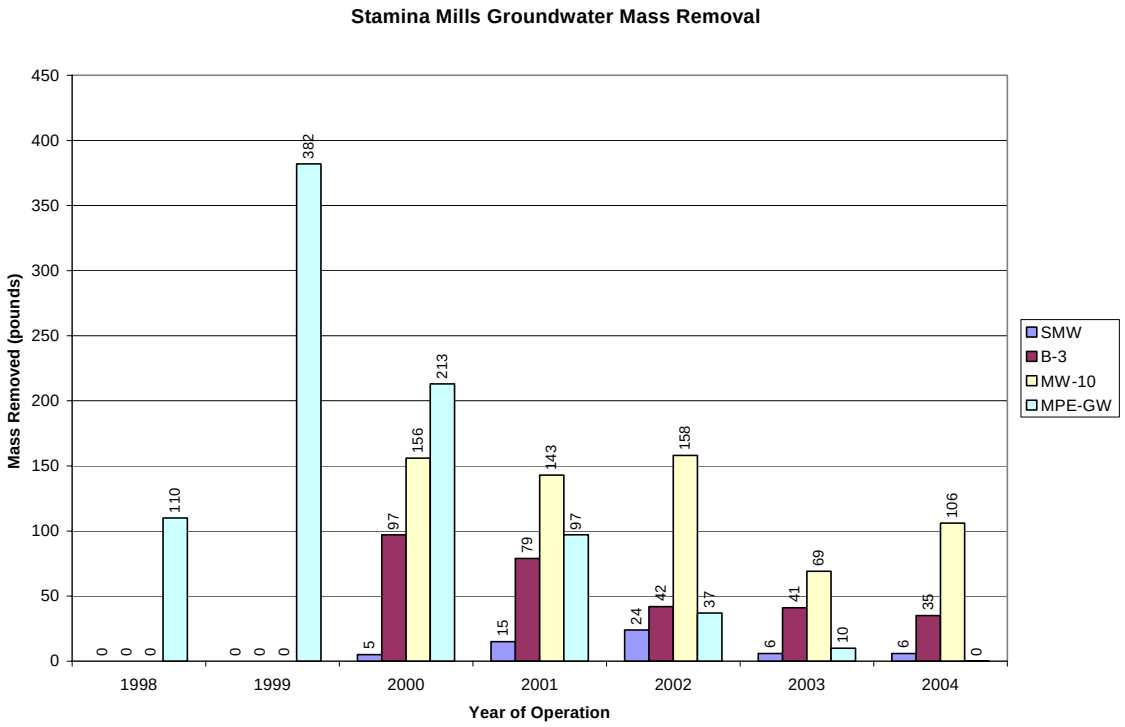
Table 6-6 GWE System Components – Estimated Mass Contributions									
	SMW		B-3		MW-10		MPE-GW		
Year	Mass (lbs)	Percent	Mass (lbs)	Percent	Mass (lbs)	Percent	Mass (lbs)	Percent	Total
Total	57	--	294	--	663	--	849	--	1,833

Notes:

Mass flow estimated based on quarterly sampling results.

Mass contributions for 2000 based on maximum concentrations; data from PS-15, Nov. 2001 assumed for MPE-GW influent.

* Mass contributions from the MPE system (combined vapor and groundwater streams) was 32 pounds during 2004.



These data indicate that in 2000 and 2001, the majority of mass into the GWTS was derived from MW-10 and MPE-GW, even though flow rates from these wells comprise only 30 to 40% of the total flow to the GWTS. From 2001 through 2004, MW-10 continued to contribute the majority of mass. This is consistent with the investigation results from 1994 through 1997, which indicated the majority of TCE mass is present in the saprolite and identified the DNAPL-containing fracture in MW-10 at 25 feet bgs.

Mass removal rates from B-3, which is intended to recover groundwater from offsite, have decreased significantly since system startup, despite increases in flow rate. If this downward trend continues, mass removal from this well may become negligible compared to the mass already recovered (294 pounds) and the volume of extracted groundwater requiring treatment. Given these decreases in mass removal rates, natural groundwater gradients, which induce flow south toward the Stamina Mills Site, may be sufficiently protective for maintenance of the Compliance Boundary.

Mass removal rates from the MPE-groundwater system are shown as negligible due to the fact that the aqueous phase contaminants strip into the vapor stream within the MPE manifold. As discussed in the *2004 Summary Annual Report* (EnSafe, April 1, 2005), MPE vapor concentrations suggest that the MPE system contributed between 10% and 45% of the VOC loading to the VTS during the 2004 operating system, with an average contribution of 19%, or approximately 32 pounds, for the year. The MPE's overall mass contribution (measured by combining both vapor and aqueous streams) is greater than that provided by the SMW.

Groundwater and Vapor Treatment System Performance

As shown in Table 6-7, the GWTS has operated consistently since installation in 2000, with a typical operations rate of 80% to 87%. To date, over 20 million gallons of groundwater have been extracted and treated at the Stamina Mills Site. Total mass removal from groundwater since 1998 has been 1,830 lbs.

Table 6-7 GWTS Operations Data 1998 through 2004							
Component	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**
Total Flow (million gallons)	-- [a]	0.48 [b]	2.63	5.18	3.99	4.88	3.99
System % Operational	--	--	77%	87%	84%	88%	87%
Influent TVOCs (mg/L)	63 to 89	8 to 38	0.7 to 9.0	4.8 to 17.8	9.3 to 38.9	0.8 to 5.5	1.6 to 5.14
Effluent TVOCs (mg/L)	0.02 to 0.37	ND to 0.03	ND	ND to 0.12	ND to 0.01	ND to 0.005	ND to 0.005
Total Mass Removed (lbs)	110	382	471	333	261	126	147

Notes:

[a] In 1998, process data reflected combined vapor from SVE-V, MPE-V, and the air stripper. MPE-GW flow rates were not presented in the *Air Data Summary Report* (EnSafe, 1999).

[b] In 1999, an additional 1.6 MG of potable make up water was added to the GWTS as a result of maintaining sufficient water supply to the acid scrubber.

Recurring operational problems noted within the GWTS since 2000 have included system control issues, such as bag filter and air stripper pressure sensors, holding tank high-level alarms, and flow meter low-flow/sensitivity issues. These operational problems are not associated with design flaws, nor do they inhibit system effectiveness. Since the primary function of groundwater extraction is mass removal (as opposed to containment) and that mass removal is governed for the most part by diffusion, only downtime durations exceeding weeks or months would be significant when evaluating overall system performance.

VTS effectiveness has more than doubled since 2000, when the photocatalytic oxidation system was replaced with granular activated carbon for offgas control. Total mass removed by the VTS is approximately 3,466 lbs. Performance data are presented in Table 6-8.

Table 6-8 VTS Operations Data 1998 through 2004							
Component	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**
Average Air Flow (scfm)	341	475	661	780	626	330	342
System % Operational	42%	41%	84%	80%	100%	88%	87%
Total Mass Removed (lbs)	788	959	640	452	356	102	169

Notes:

scfm standard cubic feet per minute
lbs pounds

Reduced removal efficiencies were noted late in 2004 due to delays in carbon change-out. Air emissions compliance data indicate that contaminant emissions rates have not exceeded Regulation No. 9 limitations during the operating period. No recurring operational problems have been noted regarding VTS performance since installation of the carbon units.

Groundwater Monitoring

Monitoring presently is performed once every nine months; in 2004, this sampling event was performed in June. A total of eight wells (four onsite and four offsite) are sampled for VOCs as outlined in the Phase III Groundwater Monitoring Work. The sample locations are shown in Table 6-9, and on Figure 6-1, found in Appendix A.

Table 6-9
Phase III Groundwater Monitoring Wells

Well	Depth (ft)	Sampling	Location Sample	Technique Notes
A-175	NA	VFW Hall	Tap	1-hour purge
I-37	350	Private Residence	Submersible pump	10-hour purge
I-12	450	Private residence	Submersible pump	10-hour purge
MW-17	86	Offsite	Submersible pump	Flowing artesian well
MW-2	52	Onsite	Submersible pump	--
SMW	275	Treatment Building	Dedicated sample port	--
B-10	50	Treatment Building	Dedicated sample port	--
B-3	150	Treatment Building	Dedicated sample port	--

Offsite groundwater has exhibited decreasing contaminant concentrations in all four offsite wells, as shown in Table 6-10. A-175, I-12, and MW-17 all comply with the ROD goal for TCE in groundwater (5 µg/L). Contaminant concentrations in I-37, the only Phase III offsite well still exceeding ROD goals, have decreased by an order of magnitude since 1998.

Table 6-10 Historical Offsite Monitoring-Well TCE Concentrations (Phase III Round 1 Wells) (μg/L)				
	A-175	**I-12**	**I-37**	**MW-17**
Nov-92	1	43	120	NS
Sep-93	ND (<1)	130	130	9
Dec-93	ND (<1)	150	190	44
Mar-94	ND (<1)	15	110	NS
Jun-94	ND (<1)	46	97	ND (<1)
Oct-94	ND (<1)	170	130	ND (<1)
Dec-94	ND (<1)	140	100	ND (<1)
Mar-95	ND (<1)	170	95	ND (<1)
Jun-95	ND (<1)	85	110	ND (<1)
Oct-95	ND (<1)	120	110	ND (<1)
Mar-96	ND (<1)	150	63	ND (<1)
Sep-96	ND (<1)	54	70	ND (<1)
Mar-97	ND (<1)	NS	110	ND (<1)
Sep-97	ND (<1)	110	100	ND (<1)
Jun-98	ND (<1)	120	130	ND (<1)
Mar-99	ND (<1)	2.0	55	ND (<1)
Dec-99	ND (<1)	92	79	ND (<1)
Sep-00	ND (<1)	4.0	35	ND (<1)
Mar-02	ND (<0.6)	3.0	28	ND (<0.6)
Dec-02	ND (<0.6)	3.1	15	ND (<0.6)
Sep-03	ND (<0.6)	10	4.7	0.98
Jun-04	ND (<0.6)	2.3	14	ND (<0.6)

Notes:
TCE = Trichloroethylene
μg/L = micrograms per liter
ND (<1) = Not detected at a method reporting limit of 1 µg/L
NS = Not sampled

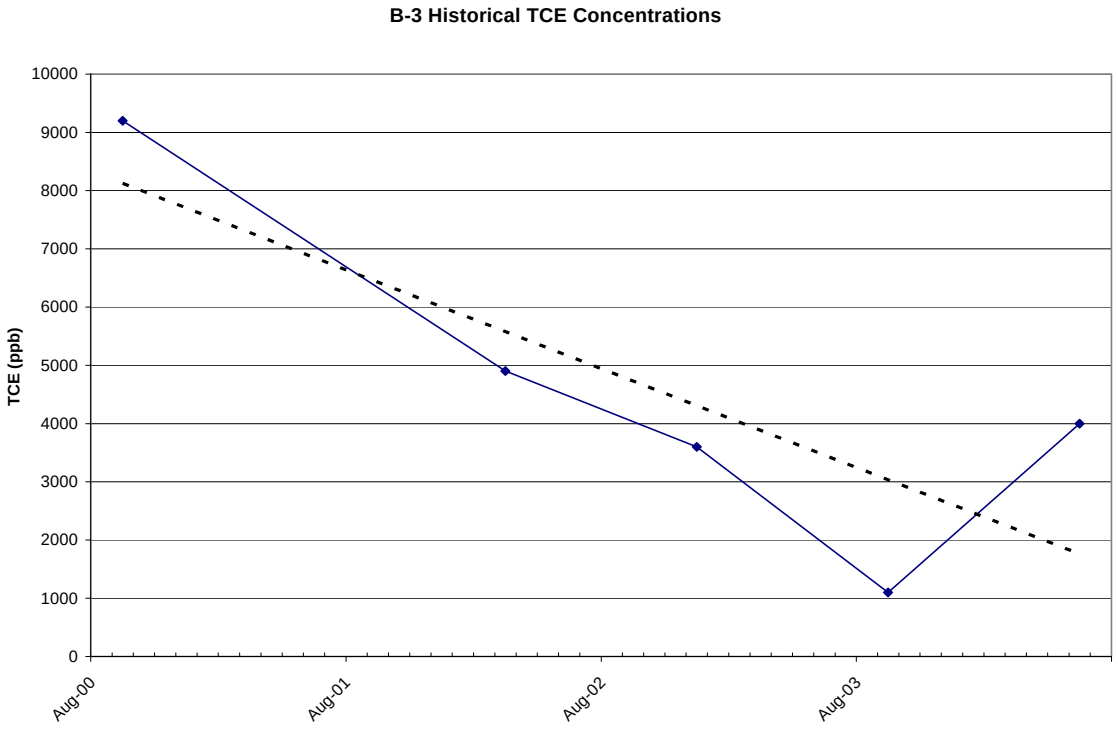
As discussed in the Phase III Groundwater Monitoring Work Plan (EnSafe, 2001), contaminant trends in these wells will be monitored until concentrations are less than the ROD-prescribed cleanup standards. Once concentrations in these outer wells meet the ROD goals, Stage 2 wells closer to the compliance boundary (I-7, I-20, I-24, I-28, and I-31) will be monitored to assess remediation of TCE affected groundwater; well locations are shown in Figure 6-1.

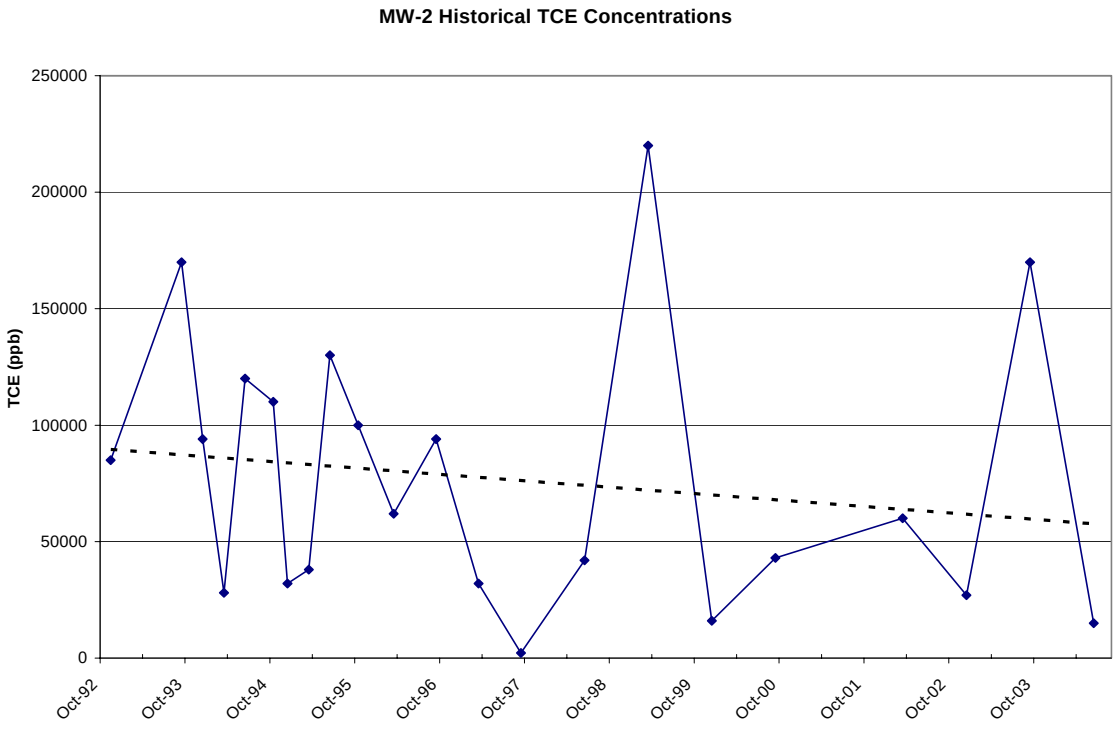
Concentrations in onsite wells monitored as part of the Phase III monitoring program are typically consistent with historical data as shown in Table 6-11.

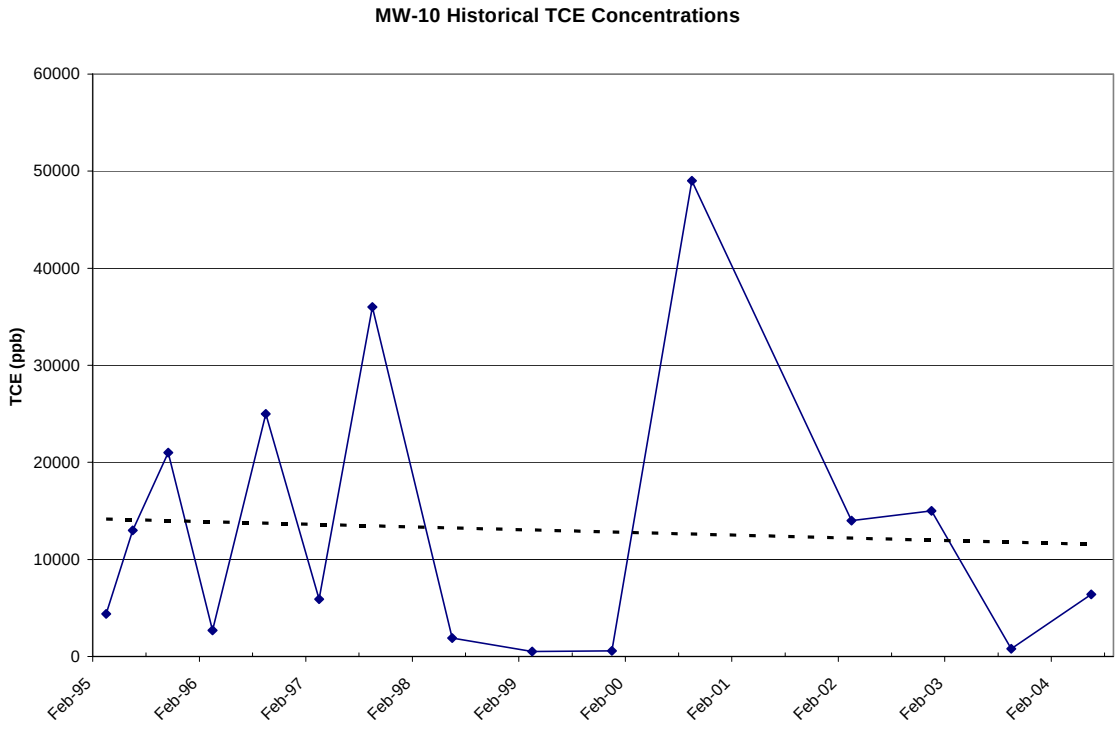
Table 6-11 Historical Onsite Monitoring Well TCE Concentrations (Phase III Round 1 Wells) (µg/L)				
	SMW	**B-3**	**MW-10 [1]**	**MW-2**
Nov-92	3,300	NS	NS	85,000
Sep-93	4,200	NS	NS	170,000
Dec-93	2,700	NS	NS	94,000
Mar-94	830	NS	NS	28,000
Jun-94	4,000	NS	NS	120,000
Oct-94	53,000	NS	NS	110,000
Dec-94	150	NS	NS	32,000
Mar-95	NS	NS	4,400	38,000
Jun-95	3,500	NS	13,000	130,000
Oct-95	5,300	NS	21,000	100,000
Mar-96	2,100	NS	2,700	62,000
Sep-96	1,900	NS	25,000	94,000
Mar-97	3,800	NS	5,900	32,000
Sep-97	4,100	NS	36,000	2,200
Jun-98	2,600	NS	1,900	42,000
Mar-99	4,500	NS	510	220,000
Dec-99	3,000	NS	570	16,000
Sep-00	NS	9,200	49,000	43,000
Mar-02	3,100	4,900	14,000	60,000
Dec-02	2,500	3,600	15,000	27,000
Sep-03	4,300	1,100	790	170,000
Jun-04	600	4,000	6,400	15,000

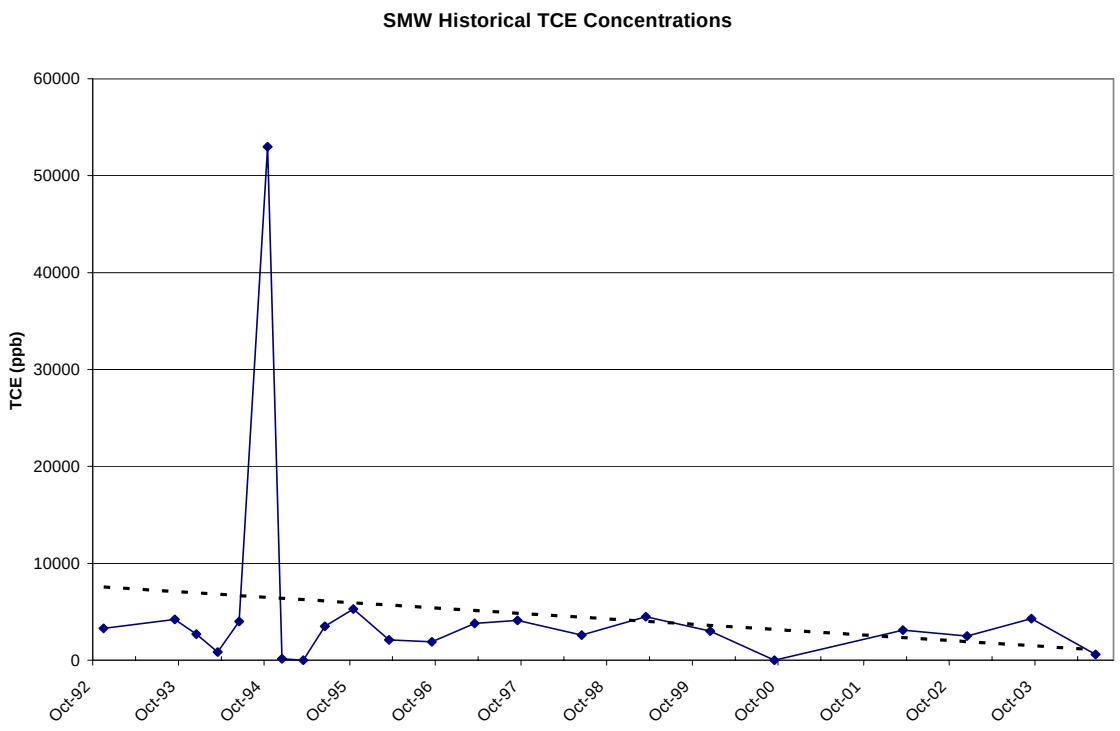
Notes:
TCE = Trichloroethylene
SMW = Stamina Mills Well
µg/L = micrograms per liter
NS = Not Sampled
[1] Prior to March 1995, MW-10 was sampled using multilevel sampling ports and data are not directly comparable; data after March 1995 are from the 26 foot bgs interval.
SMW data pre-June 1995 are not depth-specific; data after June 1995 are from the 26 foot bgs interval.

Although the wells exhibit large concentration fluctuations from one sampling event to the next, they appear to show subtle decreasing trends over the long term. This is evident in the dotted trend lines added to the following charts of each well's historical TCE concentration data. Figure 6-2 (found in Appendix A) shows the TCE plume as quantified during the June 2004 sampling event. Historical data (pre-1992) are shown in Appendix B.


B-3 Historical TCE Concentrations
TCE (ppb)
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Aug-00
Aug-01
Aug-02
Aug-03


MW-2 Historical TCE Concentrations
TCE (ppb)
250000
200000
150000
100000
50000
0
Oct-92
Oct-93
Oct-94
Oct-95
Oct-96
Oct-97
Oct-98
Oct-99
Oct-00
Oct-01
Oct-02
Oct-03





These trends will continue to be monitored as part of Phase III monitoring.

System Monitoring Results

All quarterly monitoring data for MW-10, SMW, and B-3 obtained since system startup in 2000 are summarized in Table 6-12. This quarterly data indicates that the three wells exhibit variable concentrations throughout each year as well as over the long term.

It should be noted that operations-related data are collected more frequently (quarterly) than Phase III monitoring data presented in Table 6-11; quarterly events do not coincide with Phase III events during those months in which both events occur. Overall, the data from 2000 through 2004 correlate well; however, some variability is expected when comparing datasets, given the sensitivity of fracture flow to rainfall events and system operations. Quarterly datasets have consistently indicated seasonal variability in system influent.

Table 6-12
TCE Concentrations in SMW, B-3, and MW-10 — 2000 through 2004 (µg/L)

	SMW	B-3	MW-10
2000			
First Quarter	NA	NA	NA
Second Quarter	420	1,330	1,410
Third Quarter	930	9,200	49,000
Fourth Quarter	NA	NA	NA
2001			
First Quarter	NA	NA	NA
Second Quarter	140	6,000	1,400
Third Quarter	1,320	3,360	23,000
Fourth Quarter	1,500	3,740	12,000
2002			
First Quarter	NA	NA	NA
Second Quarter	360	1,200	350
Third Quarter	3,400	5,900	56,000
Fourth Quarter	2,200	1,400	5,500
2003			
First Quarter	330	1,200	1,400
Second Quarter	590	3,400	3,400
Third Quarter	800	4,900	8,300
Fourth Quarter	610	3,800	7,600
2004			
First Quarter	720	820	2,000
Second Quarter	370	3,200	6,900
Third Quarter	490	3,200	13,000
Fourth Quarter	720	3,300	8,400

MW-10 is the most variable, with concentrations typically ranging from less than 2,000 µg/L to more than 20,000 µg/L in a given year. Third and fourth quarter concentrations in MW-10,

however, typically appear to be higher than second quarter results. These high concentrations seem to occur after seasonal high water table conditions, typically observed in Site wells in May and June, during which time groundwater extends above the top of the saprolite zone in some locations. Data from the third quarter typically exceeds 1% of TCE's solubility limit in water. These high concentrations could result from dry summer conditions that greatly reduce the potential for dilution encountered during wetter periods of the year.

Data indicate that SMW exhibits the least contamination of the three GWE wells. TCE data from B-3 typically ranges from 1,000 μg/L to 3,000 μg/L, with no apparent trends.

MPE Sampling Results

2001 and 2002 sampling data from selected saprolite (MPE) wells indicated that shallow, source-area groundwater concentrations remained elevated, with concentrations comparable to water from the GWE system, as shown in Table 6-13. These results are also shown on Figure 6-3, in Appendix A. These data show order-of-magnitude decreases in TCE concentrations in several MPE wells since the drop-tube modifications were implemented in 2003. The MPE drop tube system's configuration is modified annually to extract groundwater and vapor from the most highly contaminated wells.

Table 6-13
Select MPE Well TCE Concentrations (µg/L)

Well	Well Depth (ft bgs)	Terminal Elevation (ft amsl)	April 2002	April 2003	April 2004	April 2005
PS-01	21	189	5,300	740	120	180
PS-02	25	184	NS	360	290	45
PS-04	20	188	NS	2,800	6,000	660
PS-05	22	186	22,000	2,400	3,300	960
PS-06	25	183	NS	3,400	4,200	8,700
PS-07	26	182	NS	53,000	12,000	610
PS-08	25	183	NS	4,200	4,900	6,200
PS-09	25	183	NS	1,200	1,600	450
PS-12	21	186	NS	14,000	490	12,000
PS-13	24	184	NS	26,000	4,400	3,600
PS-15	28	180	30,000	7,100	940	810
PS-16	20	188	NS	5,800	1,900	5,700
PS-17	22	185	NS	3,400	3,300	1,600
PS-18	24	184	630	970	380	290
PS-24	25	183	3,600	3,900	1,100	410
S-2	19	183	30,000	1,100	250	1,400
S-03	19	182	NS	26,000	160	10,000
S-06	15	186	NS	250	5,000	130
S-08	16.5	186	NS	300	400	NS
S-09	14	189	NS	180	400	300
S-10	18	185	2,200	450	660	740

Notes:

µg/L micrograms per liter
NS Not sampled
ft bgs feet below ground surface
ft amsl feet above mean sea level

Site Inspection

The Site inspection was performed on October 14, 2004. The following team members were present for the Site inspection:

- Byron Mah, USEPA
- Sarah White, USEPA
- Mike Jasinski, USEPA
- Neil Handler, USEPA
- Louis Maccarone, RIDEM
- Jim Thomas, C&A
- Lori Goetz, EnSafe Inc.

The inspection team reviewed Site history and ongoing operations. During the Site inspection, Mr. Mah noted the following items/issues:

- Offsite institutional controls must be addressed in the *2005 Five-Year Review* due to recent well installation activities by adjacent offsite property owners.

- Review of toxicity and risk data would not be performed as part of the *2005 Five-Year Review*; however, because (a) cleanup goals onsite are based on protection of groundwater, and (b) toxicity data for TCE are currently under review by USEPA, the document will not recalculate health risks due to soil contamination. The *2005 Five-Year Review* will address risks for vapor intrusion from groundwater in accordance with current guidance and available screening data.

- The adequacy of current data collection for RA should be reviewed during the *2005 Five-Year Review*.

No other conclusions/findings were identified during the Site inspection. Photographs documenting Site features on October 14, 2004, are included in Appendix J.

Interviews

Several local officials and community members were interviewed for the *2005 Five-Year Review*, as shown in Table 6-14.

Table 6-14
Five-Year Review Interviews

Person Contacted	Position/Affiliation	Date Interviewed	Location
Linda Thibault Michael Phillips	North Smithfield Town Administrator North Smithfield Town Planner/ Environmental Advocate	October 14, 2004	North Smithfield Town Hall
Neil Handler	USEPA, former remedial project manager (RPM)	January 20, 2005	Telephone interview
Louis Maccarone	RIDEM, current RPM	January 20, 2005	Telephone interview
Robert Lowe Philip Kacorowski Michael Philips	North Smithfield Town Administrator North Smithfield Town Planner/ Department of Public Works North Smithfield Town Planner/	February 17, 2005	North Smithfield Town Hall

Table 6-14 Five-Year Review Interviews			
Person Contacted	**Position/Affiliation**	**Date Interviewed**	**Location**
Manuel Alverez	Environmental Advocate North Smithfield Town Planner/ Environmental Advocate		
Michael Connolly Reney Ann Mondoux	Deputy Superintendent of Enforcement, City of Woonsocket Waste Water/ Pre-Treatment Facility Pretreatment Inspector, City of Woonsocket Waste Water/ Pre-Treatment Facility	February 17, 2005	City of Woonsocket Waste Water/ Pre-Treatment Facility

October 14, 2004: Linda Thibault and Michael Phillips

Mr. Mah and Mrs. Goetz interviewed Linda Thibault, North Smithfield Town Administrator, and Michael Phillips, North Smithfield Town Planner/Environmental Advocate, on October 14, 2004. Neither Ms. Thibault nor Mr. Phillips identified any community concerns regarding the Stamina Mills Site.

The Town inquired about future use of the property for passive recreation (park, walking/bicycling trail, etc.). Mr. Mah indicated that while no risks are posed at the ground surface under a passive recreation scenario, current operations preclude use due to the presence of aboveground piping used for treatment of deeper zones (approximately 20 feet bgs). Over the next several years USEPA and Kayser-Roth will evaluate the remedy's success in cleaning up the deeper zones. Over the long term, Mr. Mah indicated it was likely that the property could be used for passive recreation, as long as the use is compatible with whatever remedy remains in place for protection of groundwater. USEPA would need to review any plans for use, and the Town would need to work directly with the present property owner to discuss access, easements, or acquisitions.

Institutional controls for offsite properties were also discussed during the interview with Ms. Thibault and Mr. Phillips. In September 2004, a property owner at the corner of Maple Street and School Street installed a potable drinking water well approximately 200 feet northeast of recovery well B-3, which is used for controlling the offsite TCE

plume. A concerned neighbor contacted USEPA and RIDEM and the property owner was advised that operation of the well could interfere with remedial actions at the Stamina Mills Site and could draw TCE contamination onto his property. The property owner indicated that he was installing the well due to a Town moratorium on connections to the water distribution system.

Mr. Mah inquired whether the Town of North Smithfield has, or has plans to implement, an ordinance preventing the installation of private, potable wells adjacent to the Stamina Mills Site or other areas of known groundwater contamination. Ms. Thibault and Mr. Phillips indicated that while no ordinance is currently in place, they are interested in passing such an ordinance. The moratorium imposed on connections to the drinking water system was due to be lifted during the spring of 2005, once agreements with the Town of Woonsocket were completed regarding supplemental water supply. Ms. Thibault and Mr. Phillips believed that an ordinance could be passed, and will research ordinance language and the extent of restrictions required.

Please note that USEPA has not been notified of any new ordinance as of the writing of this document.

January 20, 2005: Neil Handler

Mr. Neil Handler, the former USEPA remedial project manager (RPM) for the Site, was interviewed by telephone. Mr. Handler provided a historical project perspective given his involvement with the Site from the early 1990s through 2003. He noted that during this period all components of the ROD remedy were implemented, and that remedial actions were showing progress toward achieving ROD goals. He noted that while there is some uncertainty over the ultimate achievement of remediation targets (e.g., when and if the soil and groundwater remediation systems will achieve them), the progress shown to date is positive.

He indicated that community issues at the Site had been more prevalent during the early stages of the project, during building demolition in the early 1990s, but that residents were generally glad to see the building ruins (and associated dangers to trespassers/kids) removed. Over the history of the project, there had been very little regarding day-to-day trespass and vandalism issues. Occasionally residents have been known to fish on the property, as access is not completely blocked along the Branch River.

Mr. Handler made the following recommendations regarding the five-year review:

- The five-year review should promote increased communications with the Town of North Smithfield. The basis for this recommendation is two-fold:

    - Given the recent attempt by a property owner to install a residential well adjacent to the Site, Mr. Handler suggested that additional information needs to be provided to the town to ensure that town officials are aware of the TCE plume and the need to prevent any well installations that may interfere with remediation system operations.

    - He also indicated that the Town and private entities had expressed interest in the former mill office building along School Street. Over the past several years discussions regarding demolition of the office building or its relocation/preservation as a historic building had occurred, but no action has been taken regarding its ultimate fate. Site managers should continue to be sensitive to the Town's and the community's concerns regarding the deteriorating office building.

- The five-year review should include recommendations for institutional controls, given the recent private well installation attempt. Mr. Handler indicated that the

ROD had envisioned assessment of remediation system performance prior to implementation of any institutional controls, but that in his opinion, this evaluation was necessary at this time. He anticipates difficulty in establishing the institutional control boundary, and suggested evaluating the data and available information regarding public water supply connections.

- The five-year review should include some degree of community outreach. While there has not been a high level of community interest since demolition activities in the early 1990s, an update would be appropriate.

- He suggested that the five-year review consider vapor intrusion, to see if there is a concern regarding TCE vapor migration, and then document findings.

- The five-year review should include additional sampling of private residential wells that are still active. During 1999, USEPA sampled several active residential wells in close proximity to the historic TCE plume. The sampling event indicated no TCE migration into areas where private wells were still being used. He believes that while the current Phase III groundwater monitoring is adequate to assess remediation system operations, this supplemental active well sampling event would be necessary to confirm everyone's understanding of Site conditions and to assure residents that the drinking water supply was safe.

Regarding Site management activities, Mr. Handler recommended that remedial operations keep on with the current plan. He believes that remedial activities are more challenging than anticipated in the RI/FS and ROD due to the mass of TCE suspected to be present in recalcitrant saprolite zones. However, he is not sure that other technologies will be more effective than the ROD-selected remedy, as they will be hampered by the saprolite's low permeability. He expects that Site-specific limitations in addressing the recalcitrant zone can be assessed during the next five-year review.

The review should include evaluation of other technologies versus the technical impracticability of remediation in saprolite and fractured bedrock.

He is aware of the Town's interest in the property for recreational use. Currently, the presence of active remediation components above ground limits options. Over the long term, he expects that Site can be re-used once SVE/MPE piping can be removed, and that the only limitations on re-use will be related to ongoing groundwater treatment and the presence of the floodplain in the southeast portion of the Site.

January 20, 2005: Louis Maccarone

Mr. Louis Maccarone, the current RIDEM project manager for the Site, was interviewed by telephone. He indicated that his overall impressions of the Site were:

- The remedy, as implemented, was effective and was achieving mass removal.
- Recent optimization of the MPE system was good, given that there is always room for remediation system improvements.
- Communication between the project team is good.
- Recent revision of monthly progress reports to be more concise, with subsequent submittal of data and backup on a quarterly basis, was appreciated.
- The current Phase III groundwater monitoring strategy is sufficient to gauge plume status with respect to system operations.
- He noted that there were no known community impacts or trespass/security issues at the Site.
- He concurs with current Site management efforts.

Mr. Maccarone expects to see the Site operate for another five years before effectiveness is evaluated, particularly with respect to whether remediation in fractured bedrock is technically impracticable. He indicated that he would expect a rebound study to be included in the data analysis/decision process.

Mr. Maccarone was directly involved in the recent attempt by a property owner located at the northeast corner of School Street and Maple Street (Plat No. 005-130) to install a potable residential well. He indicated that his investigation into the matter suggested that communications between the resident and the Town, while following required building permit provisions, had failed to prevent the aborted well installation.[a]

Mr. Maccarone recommended that some degree of community outreach should be maintained, despite the Site's steady progress in the operations phase.

February 17, 2005: Robert Lowe, Philip Kacorowski, Michael Philips, Manuel Alvarez

Mr. Mah and Ms. White interviewed Robert Lowe, Philip Kacorowski, Michael Philips, and Manuel Alvarez at North Smithfield Town Hall on February 17, 2005. The town representatives did not identify any community concerns regarding the Stamina Mills Site except the following:

- **Residential well installation issue**

  The Town currently has a moratorium on water hookups to the potable supply system; however, residents can obtain water if there is a hardship. The town representatives discussed the possibility of an institutional control like an ordinance preventing drilling. They did not know whether an ordinance would be an effective prohibition on well installation. Requiring property owners to obtain a well installation permit, regardless of their location in town, was also discussed. The Town does not know if residents formerly connected to the potable supply system have remained connected or if they had elected to return to private well use.

[a] The building permits and/or inquiries were apparently coordinated between the property owner and the inspection division, which was not familiar with the TCE plume problem and/or did not recognize that the planned residence did not tap the public water supply.

- **Future reuse of the Site**

  Mr. Lowe inquired when USEPA actions would be completed, and whether the Site could be reused either for business or recreational use. Specifically, the Town inquired about the following reuse options:

  - Construction of buildings on the property.
  - Completion of a bike path along the property by the Branch River National Heritage Corridor Commission.

- **Contamination**

  The Town asked for a quantification of progress in terms of how much contamination is left as opposed to 10 years ago. Mr. Mah and Ms. White explained the inherent variability in sampling fractured bedrock wells in addition to the complexity of gauging mass removal at a Site. The Town requested a comparison of contaminant levels be evaluated during the five-year review process. Town representatives also inquired about potential health effects due to TCE in water, as well as air quality. Mr. Mah and Ms. White assured the Town that air quality was not an issue at the Site.

- **Former mill office building**

  Town representatives are concerned about liabilities associated with the former mill office building. They indicated that the Town has placed tax liens on the property to address this issue.

The Town indicated frustration with the length of time required to remediate the Site, particularly given the restrictions on current and future use.

The Town complained about the condition of the fence paralleling School Street, calling it an “eyesore” and indicated that there is a washout area that needs to be repaired. Mr. Mah met with Mr. Lowe and determined that an asphalt berm/curbing would be necessary and that this responsibility should fall with the Town / State Highway Dept.

The Town requested additional community outreach activities, such as publication of a fact sheet, communication through Town water bills, public service announcements on television, etc.

February 17, 2005: Michael Connolly, Reney Ann Mondoux

Mr. Mah and Ms. White interviewed Michael Connolly and Reney Ann Mondoux at the City of Woonsocket’s Waste Water/Pre-Treatment facility on February 17, 2005.

Mr. Connolly indicated that the City of Woonsocket had no issues or complaints with respect to the Site’s treatment system, indicating that:

- They are very satisfied with operations, which they describe as “first rate.”
- Reporting is being performed.
- The system is well designed.
- Communication is adequate and the City feels well informed.
- Subcontractors are responsive.

The City has never had any problems or concerns regarding Site inspections, which are performed semi-annually. The effluent is treated prior to discharge, and all results are reported to Woonsocket. Their inspections have found that the Site is secure and there are no vandalism or trespassing issues.

Mr. Connolly and Ms. Mondoux noted that the Town of North Smithfield is currently negotiating with the City of Woonsocket to be included in the water district. To their knowledge, many North Smithfield residences use private wells.

VII. Technical Assessment

A comprehensive technical assessment of the Site's remedy was performed as part of the 2005 five-year review. To evaluate the remedy, three questions were assessed:

- Question A: Is the remedy functioning as intended by the decision documents?
- Question B: Are the exposure assumptions, toxicity data, cleanup levels, and RAOs used at the time of remedy selection still valid?
- Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

QUESTION A

Question A: Is the remedy functioning as intended by the decision documents?

Performance of the Site remedy was assessed according to the criteria outlined in the USEPA's *Comprehensive Five-Year Review Guidance*. Findings are summarized in Table 7-1, and discussed in more detail in subsequent sections.

Table 7-1
Summary of Findings: Question A

Remedial Action Performance	
Site remedy	Remedial actions associated with building demolition, raceway closure, septic tank closure, and site restoration are complete and are functioning as designed. The landfill removal, as described by the ESD, removed all landfill wastes from the site.
SVE	The MPE and VTS are operating; MPE modifications completed in 2003 were successful in improving overall operations and reducing system shut downs. Operation of the SVE system has been suspended during concentrated efforts on the MPE.
GW	The GWE and GWTS are operating as designed. Offsite groundwater concentrations continue to decrease. Containment at the site has been effective. The plume area is contracting southward toward the site. Sampling performed in May 2005 does not indicate the presence of TCE in wells beyond the former plume boundary.
Long-Term Monitoring	Long-term monitoring is being implemented in accordance with the *Phase III Groundwater Monitoring Work Plan (Revision 1).*
Institutional Controls	Site institutional controls were never implemented by the former property owner (Hydro-Manufacturing). Recent attempts by adjacent property owners to install private wells have revealed a need to implement offsite institutional controls which prevent (a) potable consumption of

Table 7-1 Summary of Findings: Question A	
	groundwater, and (b) offsite pumping near the Stamina Mills site or the TCE plume.
System Operations/O&M	
Operations	Operations at the Site have been established to maintain system effectiveness. Performance data are provided to USEPA and RIDEM monthly; system progress and analytical data are documented quarterly.
Cost Variances	Causes of cost variances noted since system startup have been identified and corrective measures implemented, resulting in overall improvement in system uptime and reduction in operating costs.
Opportunities for Optimization	
Opportunities	Significant review of operations occurred in 2003, and no further opportunities for improvement have been noted at this time. Operations will be reviewed periodically to determine if further changes to the system or operations can improve performance or mitigate costs.
Early Indicators of Potential Issues	
Equipment Breakdowns	No equipment problems or other operations issues have been identified which may present a potential remedy with system operations. The majority of GWTS and GWE shutdowns are associated with natural flow variations in bedrock environments.
Protectiveness	No operational issues have been identified that could place remedy effectiveness at risk.
Implementation of Institutional Controls and Other Measures	
Access controls	Fencing is in place along the northern perimeter of the site.
Institutional Controls	An attempt by an adjacent property owner to install a private potable well at the corner of Maple Street and School Street has revealed a need to prohibit or prevent well installations near the Site or adjacent to the plume. Offsite institutional controls will need to prevent (a) potable consumption of groundwater, and (b) offsite pumping near the Stamina Mills site or the TCE plume.
Other Actions	No other actions (e.g., removal actions) are deemed necessary, as no immediate threats have been identified at the Site.

Remedial Action Performance

Remedial actions at the Site can be divided into two categories, as shown in Table 7-2.

Table 7-2 Remedial Actions and Components	
Remedial Action Type	**Remedy Component**
Remedy components that have been completed and do not require O&M.	Building demolition Raceway closure Septic tank closure Landfill removal Site restoration
Remedy components that are ongoing and require O&M.	SVE/MPE and VTS Systems GWE and GWTS Systems Long-term monitoring Institutional controls

Completed Elements of the Remedy

Many aspects of the Site remedy that addressed immediate hazards to human health and the environment have been completed, including removal of physical hazards such as building ruins and raceways, removal of the landfill, and Site restoration. Landfill removal actions were more

comprehensive and eliminated risk more thoroughly than the original remedy contemplated by the ROD (capping and leachate collection). These elements met the intent of the ROD and achieved RAOs. No further actions regarding these elements are anticipated.

Ongoing Groundwater Remedy Components

Groundwater extraction and treatment are ongoing. The intent of the GWE and GWTS, as described in the design documents, is to reduce contaminant concentrations within the plume area to below MCLs, thus restoring the aquifer to beneficial reuse.

The ROD initially contemplated that groundwater extraction and treatment would require 10 to 15 years. The GWE/GWTS has been operational for five years, and significant decreases in contaminant concentrations offsite have been quantified; continued operation is anticipated for the next five-year review period. Containment of contamination to within the Site's boundary (the "waste management area," defined by the ROD as the area within the Site boundary where wastes may be left in place), appears to be occurring based on decreasing contaminant concentrations in offsite wells I-12, I-37, and MW-17.

USEPA performed groundwater sampling in offsite residential wells being used for residential, potable use in 1999; wells sampled during the 1999 event are shown in Table 7-3; well locations are shown on the RI's Site Plan No. 4, included in Appendix B. A subset of these wells was sampled again during 2005 to verify the absence of VOCs.

Table 7-3
Sampling of Active Residential Wells

Address	Well ID	Wells Sampled July 1999	Wells Sampled May 2005
School Street	A-167	X	X
School Street	A-168	X	
School Street	A-173	X	X
Maple Avenue	A-107	X	
Kirby Lane	A-76	X	
Kirby Lane	A-78	X	
Kirby Lane	A-77	X	X
Litzen Road	A-89	X	
Litzen Road	A-86	X	
Lorraine Avenue	A-96	X	
Lorraine Avenue	A-91	X	
Lorraine Avenue	Not numbered	X	
Wildwood Road	A-205	X	

Table 7-3 Sampling of Active Residential Wells			
Address	**Well ID**	**Wells Sampled July 1999**	**Wells Sampled May 2005**
Wildwood Road	A-200	X	X
Wildwood Road	A-203	X	X
Wildwood Road	A-208	X	
Roselawn Avenue	A-146	X	
Roselawn Avenue	A-139	X	
Roselawn Avenue	A-142	X	X
Roselawn Avenue	A-143	X	X

VOCs (including TCE) were not quantified in any of these wells during either sampling event, demonstrating that the TCE plume has not migrated past the original plume boundaries. The May 2005 results are included in Appendix K.

It should be noted that the analyses performed during May 2005 inadvertently did not use the same analytical method as the July 1999 event and as a result the quantitation limit for VOCs was higher during the 2005 event (5 µg/L versus 1 µg/L). Despite this difference, the sampling performed in May 2005 is adequate for determining the extent of TCE contamination beyond the plume boundaries: the MCL for TCE is 5 µg/L, therefore the method was capable of detecting contamination at or above the MCL. In addition, the instrument used for analysis of the 2005 data typically had a method detection limit (MDL) less than 1 µg/L for VOCs, and the laboratory was asked to report any detections between the MDL and the reporting limit; no detections of TCE or daughter products were reported. A data validation memorandum for the May 2005 event is also presented in Appendix K.

As noted during community interviews, the only concern about the groundwater remedy is the apparent ability for an offsite property owner to compromise the containment system through installation of a private well near the plume area. Offsite issues will be discussed in more detail with respect to Institutional Controls. Given contaminant concentration decreases, and the continued effectiveness of the GWE system in removing contaminant mass (over 100 lbs/year), this five-year review concludes that the containment and groundwater treatment portions of the remedy (the extraction wells and the GWTS) are effective.

Ongoing Soil Remedy Components

The vapor extraction and treatment portion of the Site remedy is ongoing. The intent of this portion of the remedy, as described in the design documents, is to reduce contaminant concentrations within onsite soil to minimize leaching to groundwater.

The vapor extraction component of the remedy includes both SVE and MPE systems. As discussed previously, remedial design activities identified significantly more contamination in low-permeability saprolite zones than had originally been contemplated in the ROD. The remedial design, therefore, included both an overburden/vadose zone component (SVE) and a seasonally saturated zone/low-permeability component (MPE). The system operated for several years with both the SVE and MPE systems following a typical decrease in vapor concentrations. Review of operations data and current guidance regarding vapor-phase remedies in 2003 resulted in suspension of SVE operations and enhancement of the MPE system to better target residual mass in the saprolite, considered to be the primary source of groundwater contamination. The modified MPE system is performing as expected, and has resulted in increased water and vapor removal from the saprolite zone.

The ROD originally contemplated a one-year operation for vapor extraction operations. Due to freeze conditions onsite, the systems are only operated seasonally. Prior to suspension of operations, the SVE system had operated 634 days over four seasons, or approximately 1.7 years. This is reasonable for an SVE system, particularly given the operational limitations (wet soil) encountered during the early portion of the operating season. The MPE system, through the end of 2004, had operated 573 days over a total of six seasons, or approximately 1.6 years. Operational improvements implemented in 2003 and sustained through 2004 resulted in significant increases in uptime. The ROD did not anticipate vapor extraction from low permeability zones, and therefore the one-year estimate is not applicable to MPE operations. Vapor extraction in saturated, low permeability zones can continue for extended periods (five to 10 years).

While the original design has been altered with the MPE system modifications, the remedy's intent of protection of groundwater is still being met. The ROD requires that soil above the water table comply with the ROD goal of 195 µg/kg TCE; however, current operations target

saprolite zones beneath the water table that are not included in the ROD goal. Current operations are focused on mass removal and minimizing diffusion of contaminants into overburden soil, with the intention of long-term vadose zone compliance with ROD goals. With this modification in mind, this five-year review concludes that the soil portion of the remedy is effective.

Long-Term Monitoring

Long-term monitoring, as described in the *Phase III Groundwater Monitoring Work Plan (Revision 1)*, is ongoing. The protocol devised and implemented in this work plan provides for various stages of groundwater monitoring so that additional wells can be integrated into the program as plume conditions improve. This monitoring program clearly identifies its objectives as:

- Monitoring the progress toward achieving groundwater cleanup standards as established in the ROD.

- Determining when to initiate Phase II groundwater extraction activities (e.g., deep zone pumping in MW-10) onsite.

The monitoring wells selected for Stage 1 monitoring offsite (A-175, I-12, I-37, and MW-17) were selected to monitor conditions along the north and west edges of the contaminant plume. Monitoring wells selected for Stage 2 monitoring offsite (the wells noted above in addition to I-7, I-20, I-24, and I-31) incorporate those residential wells closer to the historic source area (MW-10/SMW). The protocol requires that Stage 2 wells be added to the program once cleanup standards are achieved at Stage 1 offsite wells.

Conditions onsite are monitored in MW-10, SMW, B-3, and MW-2. Groundwater concentrations in these wells fluctuate approximately an order of magnitude periodically, and have not declined over time, indicating that residual source material is still present within the shallow bedrock aquifer. Once sustained decreases in these zones are observed, initiation of Phase II groundwater extraction activities will be evaluated.

The long-term monitoring program has been effective in tracking groundwater concentrations. However, purge water management issues have forced reevaluation of the sampling technique. Currently, USEPA and RIDEM are evaluating the use of an interval-specific sampling approach (such as passive diffusion bag samplers) to monitor aqueous concentrations. Phase III groundwater monitoring program changes will be formally modified in an addendum to the *Phase III Groundwater Monitoring Work Plan (Revision 1)* once an approach has been determined. USEPA has also noted that the quality assurance procedures outlined in this document should be reviewed for completeness and compliance with current guidance no later than 2006.

Program changes are not expected to alter the Phase III groundwater monitoring program's ability to meet stated objectives.

Institutional Controls

The ROD initially contemplated institutional controls only to prevent disturbance of the physical integrity of the remedy's components (i.e., controls prohibiting disturbance of the landfill cap). All institutional controls must be coordinated with the property's current owner.

Initial remedial actions performed in the 1980s focused on providing potable water to residents north of the Site who had been adversely impacted by the TCE plume. Since that time, no database describing water usage north of the Site has been maintained. As noted in previous sections of this five-year review, the potential for offsite property owners to disturb the groundwater containment remedy through installation and operation of private offsite wells has been identified as a critical issue in long-term remedy effectiveness.

USEPA, RIDEM, and the Town of North Smithfield are currently evaluating options for offsite institutional controls to ensure that current and future property owners (a) do not return to private well use in the vicinity of the TCE plume, and (b) do not install new wells for private use in or near the TCE plume area.

System Operations/O&M

Operating procedures include the following elements:

- Routine system checks/inspections once every two weeks.
- Alarm response checks.
- GWTS effluent sampling in accordance with the sewer discharge permit monthly.
- GWE influent sampling quarterly.
- VTS influent and effluent sampling semi-annually.
- Phase III groundwater monitoring every 9 months.
- MPE groundwater sample collection annually (in April prior to MPE startup)
- MPE vapor sample collection in April and October.
- SVE vapor sample collection in April, June, August, and October.

System procedures require the O&M subcontractor to conduct routine Site visits (to be documented on appropriate Site forms), which are submitted to the Performing Party's supervising contractor, EnSafe. Site operations are reviewed by Resource Controls Associates and EnSafe personnel at least monthly, and operational data are submitted to USEPA and RIDEM monthly to document alarm conditions and hours of operation. The review and reporting cycle requires frequent review of system operations, and allows Resource Controls Associates and EnSafe to anticipate and schedule maintenance activities appropriately to minimize system downtime.

Recent operational modifications, O&M subcontractor changes (from Shaw Environment & Infrastructure to Resource Control Associates), and other internal changes have reduced The Performing Party's annual operating costs approximately 50%. These savings do not translate into quality reduction; in fact, remediation effectiveness has been improved, as evidenced by the increase in operational uptime.

Opportunities for Optimization

Extensive optimization of the vapor treatment system occurred in 2003, and annual review of MPE data is required prior to selecting which MPE wells will be operated each season. The annual April/May review process, with subsequent vapor analysis from

SVE wells in June and August, and then from both SVE and MPE wells in October, provides ample opportunity to evaluate vapor treatment system operations. A protocol was developed in 2003 for re-start of the SVE system mid-season if threshold vapor concentrations became too high. No further opportunities for MPE optimization have been noted at this time, but operations will be reviewed periodically to determine if further changes to the system can be made to improve performance.

Operation of the GWE and GWTS has not been modified since startup, as the containment system is integral to the Site remedy. Optimization has been applied to monitoring and reporting procedures, minimizing sampling where possible and consolidating reporting of GWE system data quarterly instead of monthly. The *2004 Annual Summary Report* proposed review of the SMW extraction well to determine whether operations in this well can be suspended, or whether its operation is critical to mass removal activities in the saprolite/shallow bedrock zone. Concentration data suggest mass removal effectiveness from this well is decreasing, but its benefits with respect to hydraulic control may be significant. Review of system operations will continue.

No opportunities for optimization are apparent with respect to long-term groundwater monitoring procedures, other than the elimination of purge water issues described earlier. Transition to a discrete interval sampling device (such as passive diffusion bag samplers) is expected to reduce both field time and equipment costs for each sampling event.

Early Indicators of Potential Issues

Review of Site data occurs frequently during normal operations. Data do not suggest potential issues with respect to remedy effectiveness.

Implementation of Institutional Controls and Other Measures

Access to the Stamina Mills Site is restricted by a 6-foot chain-link fence around the majority of the property perimeter; the Site's status as a hazardous waste Site is indicated on a sign on the front gate. The Town of North Smithfield noted its concern with the condition of the fence during interviews on February 17, 2005. The property is accessible along the Branch River both along Forestdale Pond and downstream near the U.S. Geological Survey gauging station and there is anecdotal evidence of fishing along the waterbody. Access is not anticipated to be a concern, as there is no surface expression of contaminants; aboveground components of the treatment system have not been tampered with.

No institutional controls have been implemented for the Site, despite a USEPA consent decree in federal court against the former property owner (Hydro Manufacturing). The property was purchased at auction in August 2005, and USEPA is in the process of contacting the new property owner regarding institutional controls.

As documented during five-year review interviews, in September 2004 a property owner at the corner of Maple Street and School Street installed a potable drinking water well approximately 200 feet northeast of recovery well B-3, which is used for controlling the offsite TCE plume. USEPA and RIDEM were contacted and the property owner was advised that operation of the well could interfere with remedial actions at the Stamina Mills Site. The property owner indicated that he was installing the well due to a Town moratorium on connections to the water distribution system, but abandoned the well as suggested by USEPA and RIDEM.

USEPA has discussed the potential for institutional controls, possibly including a Town of North Smithfield ordinance preventing the installation of private, potable wells adjacent to the Stamina Mills Site or other areas of known groundwater contamination. During five-year review interviews, the Town committed to researching ordinance language and the extent of restrictions required. This five-year review will recommend pursuing institutional controls (1) to prevent any offsite well from impacting the Site

remedy, and (2) to ensure that residents in and adjacent to impacted areas have access to the North Smithfield public water system.

Question B

Question B: Are the exposure assumptions, toxicity data, cleanup levels, and RAOs used at the time of remedy selection still valid?

This section reevaluates the risk-based assumptions developed for the Stamina Mills Site in accordance with the USEPA's *Comprehensive Five-Year Review Guidance*. Findings are summarized in Table 7-4, and discussed in more detail in subsequent sections.

Table 7-4
Summary of Findings: Question B

Changes in Standards and To Be Considered (TBC) Criteria	
Revisions to Standards	Cleanup standards are based on MCLs. No revisions to primary contaminants (TCE and its degradation products) have occurred. Revisions have occurred for chromium and dieldrin since ROD issuance, but monitoring has been discontinued for both compounds because concentrations had decreased significantly.
Newly Promulgated Standards	No new standards have been promulgated.
Changes in TBCs	No changes in TBCs have impacted site RGs.
Changes in Exposure Pathways	
Land-Use	No land-use changes have occurred; the site is adjacent to residential and light commercial properties.
New Exposure Pathways	In 2002, USEPA issued guidance regarding migration of volatile organics such as TCE in the vapor phase. The original ROD did not contemplate vapor migration as an exposure pathway.
New Contaminants	No new or additional sources of VOC contamination have been identified.
Unanticipated Toxic Byproducts	No unanticipated toxic byproducts have been identified at the site.
Changes at the Site	No changes have occurred at the site that could alter the protectiveness of the site remedy.
Changes in Toxicity and Other Contaminant Characteristics	
Toxicity Factors	TCE toxicity data are currently being evaluated by USEPA and various state agencies. Revisions to TCE's toxicological profile will not be complete until 2006. However, the TCE MCL remains the same; the Site remedy is based on MCL compliance.
Contaminant Characteristic Changes	USEPA guidance now assesses whether vapor migration either from a vapor plume, vapor eminating from a source area, or vapor rising from a contaminated groundwater plume poses a threat to indoor air quality. Vapor intrusion evaluations will be required at the Stamina Mills Site to further assess this pathway.
Changes in Risk Assessment Methods	
Methodology Changes	No changes in risk assessment methods, aside from consideration of vapor intrusion, have occurred since ROD issuance.

Table 7-4 Summary of Findings: Question B	
Expected Progress Toward Meeting RAOs	
Groundwater Restoration	Groundwater containment activities have resulted in contraction of the TCE plume toward the Site's Compliance Boundary. The shrinking plume will be monitored as outlined in the *Phase III Groundwater Monitoring Work Plan (Revision 1)*.
Direct Contact	The remedy has eliminated potential for the public to come into direct contact with contaminated soil and sediment. Solid wastes have been removed from the site.
Contaminant Migration	The soil remedy and cleanup goals were reviewed in 2002 and 2003, and have been modified to maximize source removal and minimize contaminant migration into groundwater.
Migration to Surface Water	Source area wastes contaminating surface water were removed in conjunction with landfill removal actions.
Physical Hazards	Physical hazards were removed from the site during the early 1990s.

Evaluation of Standards and To Be Considered Criteria

Cleanup criteria for the Site, and the basis for these criteria, are shown in Table 7-5.

Table 7-5
Cleanup Levels – Stamina Mills Site

Matrix	Contaminant	1990 Goal	1990 Basis	2005 Goals	2005 Basis
Groundwater	TCE	5 µg/L	MCL	5 µg/L	MCL
	PCE	5 µg/L	MCL*	5 µg/L	MCL
	1,1-DCE	7 µg/L	MCL	7 µg/L	MCL
	Vinyl Chloride	2 µg/L	MCL	2 µg/L	MCL
	1,2-DCE	70 µg/L	MCL*	70 µg/L	MCL
	Dieldrin	2 µg/L	Health Advisory	Variable	
	Chromium	50 µg/L	National Interim Primary Drinking Water Regulation	100 µg/L	MCL
Soil	TCE	195 µg/kg	Summers Model – based on MCL	No change based on MCL	
	PCE	66 µg/kg	Summers Model – based on MCL*	No change based on MCL	
	1,1-DCE	17 µg/kg	Summers Model – based on MCL	No change based on MCL	
	1,2-DCE	151 µg/kg	Summers Model – based on MCL*	No change based on MCL	

Notes:
Taken from Superfund Record of Decision, Stamina Mills, RI, First Remedial Action – Final, (USEPA, 1990)
MCL Maximum contaminant level
µg/L micrograms per liter
µg/kg micrograms per kilogram
* At the time of listing, this MCL was proposed, not final.

Groundwater Standards

The groundwater remedy at the Site focuses on VOCs by implementing extraction and treatment (i.e., air stripping/aeration) system to remove volatiles from groundwater. The groundwater cleanup goals for this remedy are the MCL for each specific VOC. VOC goals established in 1990 are still consistent with promulgated MCLs in 2005.

Chromium and dieldrin were also listed in the cleanup goals for groundwater, as they were detected onsite, however, they were not considered primary COCs.

- Chromium's final MCL was established as 100 µg/L, following the issuance of the 1990 ROD. As discussed in the *Phase III Groundwater Monitoring Work Plan (Revision 1)*, chromium concentrations in all wells monitored for chromium during Phase I and Phase II had decreased to less than 50 µg/L by 2001, and monitoring for chromium was discontinued due to compliance with ROD goals.

- Dieldrin's health advisories were withdrawn by USEPA in 1997, and current cleanup goals for dieldrin vary from state to state, ranging from 0.002 to 2 µg/L. As discussed in the *Phase III Groundwater Monitoring Work Plan (Revision 1)*, onsite monitoring for dieldrin was discontinued in the Phase III monitoring program because groundwater concentrations had ranged from below detection levels to a maximum of 0.34 µg/L since 1999, thus demonstrating compliance with the ROD goal.

Modifications to the drinking water standards for dieldrin are not expected to have any impact on the Stamina Mills Site's remedy, but will be reviewed further in subsequent five-year reviews, if necessary.

Soil Standards

Migration from soil to groundwater was modeled to calculate the 1990 soil cleanup goal that would be protective of groundwater based on the MCLs for various VOCs. The soil cleanup goals have been met and therefore soil does not pose risk to groundwater from leaching.

In addition to the ROD goals, USEPA defined a soil standard of 200 µg/kg for dieldrin during landfill removal activities. Residual soil at the base of the landfill was required to exhibit concentrations less than 200 µg/kg, or it was excavated to the top of bedrock. USEPA's current Region 9 industrial Preliminary Remediation Goal (PRG) for dieldrin is 110 µg/kg, representing a 1E-06 risk threshold. Use of the 200 µg/kg criterion during the landfill removal action is still considered protective of human health and the environment given the following:

- Assuming exposure assumptions used to calculate industrial PRGs are comparable to the Site's exposure scenario, even residual soil contamination at 200 µg/kg would only slightly exceed USEPA's baseline risk threshold of 1E-06 (1.8E-06).

- Soil within the landfill excavation area was excavated to bedrock, leaving no residual that exceeded the 200 µg/kg criterion.

- Likely exposure scenarios in the future are recreational, without prolonged exposures to contaminated soil characteristic of an industrial exposure (e.g., daily for 250 days/year, for 25 years), particularly given the limited areal extent of potential dieldrin exposures (e.g., less than half the property).

- Regrading may be required in the former landfill area to allow constructive reuse (e.g., fill to construct a level ballfield). Any residual dieldrin between the 110 µg/kg and 200 µg/kg thresholds is likely to be covered by fill material.

As a result, changes in toxicological calculations for dieldrin are not considered significant enough to make a difference in the overall protectiveness of the landfill removal remedy.

Progress Toward Meeting RAOs

The following RAOs are inherent to the Stamina Mills Site ROD:

- Restore the groundwater to federal and state drinking water standards (or criteria when drinking water standards are not available) as quickly as possible because the aquifer is a drinking water source.

- Prevent the public from direct contact with contaminated soils, sediments, and solid wastes, which may present health risks.

- Eliminate or minimize the migration of contaminants from the soil into the groundwater.

- Prevent the offsite migration of contaminants to the surface water above levels protective of public health and the environment.

- Reduce risks to human health associated with the physical hazards while implementing remedial actions at the Site.

Compliance with Groundwater Restoration RAO

As described in the ROD, groundwater cleanup levels must be met at the completion of the remedial action through an area extending from the compliance boundary (the northern perimeter of the Site along School Street) north through the former TCE plume area.

The ROD notes that groundwater within the waste management area (defined as those areas of the Site where wastes will be contained in place, including former raceways, debris piles, and building structures) will not necessarily meet ROD groundwater cleanup goals. Therefore, onsite wells (MW-10, SMW, MW-2) are evaluated only to gauge effectiveness of the overall remedy in reducing contaminant mass and minimizing impacts to the aquifer.

The *Phase III Groundwater Monitoring Work Plan (Revision 1)* established a staged protocol for monitoring on- and offsite wells, as outlined below:

- Stage 1 – Offsite wells I-12, I-37, A-175, and MW-17
- Stage 2 – All Stage 1 wells and offsite wells I-7, I-20, I-24, I-28, and I-31
- Waste Management Area Wells – MW-10, SMW, B-3, and MW-2

Contaminant trends in Stage 1 wells are to be monitored until concentrations are less than the ROD cleanup standards. Once goals are achieved in these wells, monitoring will be initiated in Stage 2 wells, which are closer to the compliance boundary.

Stage 1 monitoring has been ongoing since 2001. Contaminant concentration trends in these wells (including historical data) were shown in Section VI. Concentrations in these wells have decreased significantly since initiation of remedial actions:

- In I-12, decreasing from a maximum of 170 µg/L in 1994 to concentrations ranging from 2 to 10 µg/L from 2002 through 2004.

- In I-37, decreasing from a maximum of 190 µg/L in 1993 to concentrations ranging from 5 to 28 µg/L from 2002 through 2004.

- In MW-17, decreasing from a maximum of 44 µg/L in 1993 to a maximum of 0.98 µg/L in 2003. Concentrations in this well have typically been below detection levels since 1994.

TCE concentrations in Stage 1 well A-175 have been below detection levels since 1993.

Figure 7-1, included in Appendix A, shows a comparison of the TCE concentrations in 1993 and 2004, showing a clear retraction of the plume toward the compliance boundary. A RI figure showing 1979 TCE concentrations in offsite wells can be found in Appendix B. Continued monitoring of Stage 1 wells is likely to indicate stabilization at or near ROD clean-up goals, triggering sampling of Stage 2 wells.

Overall, the remedy, as implemented, has been successful in working toward the groundwater restoration RAO.

Compliance with Elimination of Direct Contact RAO

The remedy implemented at the Site has eliminated potential for the public to come into direct contact with contaminated soil and sediment and has removed solid wastes from the Site.

Building demolition and subsequent restoration activities removed physical hazards associated with deteriorating mill ruins and raceways, as well as the former septic system used onsite. Removal of the landfill in 1998 and 1999 eliminated the potential for contact with solid wastes and any contaminants present in landfill materials and sediments at the toe of the landfill. Other than these physical and landfill-related

hazards, surface soil was not determined to be a risk to human health and the environment during the RI.

Compliance with Minimizing Contaminant Migration RAO

Soil treatment goals were developed to minimize the migration of contaminants from the soil into groundwater. As discussed in the ROD, these goals must be met throughout the contaminated soil in the TCE spill area located above the bedrock aquifer.

As discussed previously, during remedial design the extent of the TCE spill area was found to be larger than expected, and supplemental investigations indicated that the majority of TCE mass was present at the bedrock-overburden interface. Therefore, both high (MPE) and low (SVE) vacuum elements were included in the design. As discussed in the *2002 Annual Report*, vapor concentrations extracted by the SVE system decreased rapidly, and mass removal rates decreased from 275 lbs/year in 1998 to between 40 and 50 lbs/year in 2001 and 2002. Vapor concentrations from the MPE system, however, remained elevated. As noted in previous sections, MPE operations had been significantly hampered by siltation and dewatering problems, resulting in system modifications implemented in 2003.

The *2002 Annual Report* discussed Site operations in terms of USEPA's guidance document *Development of Recommendations and Methods to Support Assessment of Soil Venting Performance and Closure* (EPA/600/R-01/070), noting that SVE closure assesses soil in three distinct zones:

- Zone 1 – consistently unsaturated media. At the Site, this zone is typically 0 to 15 feet bgs (i.e., between ground surface and an elevation of 195 feet above mean sea level [amsl]), and is addressed by the SVE system.

- Zone 2 – periodically unsaturated or saturated media associated with water table fluctuations. At the Site, this zone is 10 to 16 feet bgs (i.e., between an elevation of 190 and 195 feet amsl), and is addressed by both SVE and MPE wells.

- Zone 3 – saturated media. At the Site, this zone includes saprolite typically deeper than 16 to 18 feet bgs (190 to 191 feet amsl).

The closure guidance indicates that high contaminant concentrations in Zone 3 could re-contaminate Zone 2 through seasonal water table fluctuations and Zone 1 through vapor diffusion. Where this occurs, the guidance document indicates that less aggressive venting is appropriate, as re-contamination could be seasonal. Rather, the closure guidance suggested consideration of aqueous phase contamination and water table control, so that SVE systems are not operated to achieve excessively low cleanup criteria in the presence of a long-term Zone 3 source. Under this scenario, Zone 1 soil is determined to be "in compliance" when mass flux is primarily from groundwater upward to the vadose zone.

This approach, which supplants the concept of achieving a cleanup goal in the vadose zone as originally contemplated by the ROD, is directly applicable to the Site. As a result of recommendations made in the *2002 Annual Report*, system operations were reconfigured to concentrate mass removal on Zone 2 and Zone 3 soil:

- Operations in Zone 1 soil (e.g., the SVE system) were suspended.

- The MPE drop tube system was employed to improve dewatering but still allow vapor extraction during low water table conditions.

- Drop tubes were lowered systematically until dewatering was occurring within the screened interval of the MPE wells, within Zone 3 and typically 17 to 23 feet bgs, comparable to the primary TCE-contaminated fractures identified in MW-10 and SMW.

- Vapor concentrations in Zone 1 were monitored in SVE wells four times per operating season, to determine if vapor diffusion back into the overburden was occurring.

Operations during 2003 and 2004 have implemented recommendations as outlined in the closure guidance, and no rebound in vapor concentrations has been observed in SVE wells. This suggests that the highly permeable overburden soil is not accumulating vapor from the saprolite zone.

While no overburden soil sampling was performed to confirm this, evaluations conducted in 2003 concluded that sampling was not necessary until additional mass removal had occurred from the saprolite zone. Vapor data suggest that the remedy has complied with this portion of the RAO.

Minimization of downward migration from the saprolite into groundwater is harder to quantify, but continuous pumping of shallow bedrock zones (MW-10 and SMW) is expected to induce vertical hydraulic gradients within the bedrock and therefore minimize further downward migration of contaminants into the bedrock aquifer. This shallow hydraulic control approach (termed Phase 1 groundwater extraction), is outlined in the *Basis of Design Memorandum, Installation of Groundwater Recovery System* and the *Remedial Action Report – Soil and Groundwater Remedy*. O&M problems with packers and other down-well equipment required that the deeper portions of SMW and MW-10 be filled during Phase 1 activities; therefore, analytical data are not available from deeper onsite zones to assess compliance with the

groundwater portion of this RAO. The deeper portion of MW-10 will be drilled out and resampled once shallow concentrations in MW-10 and SMW show significant decreases in TCE contamination.

C*ompliance with Prevention of Offsite Migration to Surface Water RAO*

The remedy at the Site has met the intent of this RAO through complete removal of landfill wastes and contaminated media located at the toe of the landfill. Surface water is no longer sampled as a part of the routine monitoring program, as the source of surface water contamination has been removed.

Compliance with Elimination of Physical Hazards RAO

The remedy at the Site has meet the intent of this RAO through demolition of building foundations, raceways, and other structures, as well as removal of the landfill.

Changes in Land-Use and Exposure Pathways

There have been no documented changes in land-use of the Site or immediate vicinicity since the ROD.

Since the mid-1990s, USEPA, RIDEM, and other agencies have become more concerned about the potential for chlorinated solvents such as TCE to migrate in the vapor phase, resulting in longer term, vapor-phase exposures other than instantaneous volatilization from soil or groundwater. This change in understanding vapor as an exposure pathway is discussed in more detail below.

New Contaminants and/or Contaminant Sources

No new or additional sources of VOC contamination in soil or groundwater have been suggested by Site data.

Remedy Degradation and Byproducts

TCE degradation products were anticipated during remedy selection, and no new by-products have been discovered during the treatment process. Therefore, the protectiveness of the remedy would not be affected by degradation and/or by-products.

Evaluation of Toxicity Factors and Contaminant Characteristics

As noted above, cleanup goals for primary Site contaminants (TCE and daughter products) were developed primarily using MCLs (or proposed MCLs at time of ROD issuance). MCLs for these compounds have not changed since ROD signature.

However, since 1990 both toxicological information and the environmental industry's understanding of contaminant fate and transport has changed:

- TCE toxicity data is currently being evaluated by USEPA and various state agencies, with the most likely conclusions being that TCE is more toxic than believed to be in the past. As a result, risk calculations based on TCE would likely result in higher estimates than those quantified during the RI/FS for Stamina Mills. The current magnitude of risk estimates has not been recalculated because TCE toxicity factors are under debate and agencies are currently reviewing available toxicological data; final guidance regarding TCE's toxicological profile is not expected until 2006. However, the TCE MCL has not been changed. Since the TCE MCL is the basis for the Site cleanup goals and the MCL has not changed, the protectiveness of the remedy is not currently affected.

- Since 1990, industry experts have grown more concerned about vapor migration as a potential exposure route for VOCs. Methods to assess potential volatilization from soil or groundwater into buildings have become integrated with most risk assessments for VOCs. USEPA and multiple states have issued guidance for evaluation of vapor migration either as a mobile vapor phase, as a

vapor eminating from a source area, or as a vapor rising from a contaminated groundwater plume, and the subsequent intrusion of vapors into indoor air (either private residences or industrial/commercial facilities). The Stamina Mills RI/FS did not consider vapor intrusion as a potential migration pathway. Therefore, vapor intrusion was evaluated in this five-year review on a screening level to determine potential impacts to the Site and surrounding community.

Vapor Intrusion Evaluation

To assess the potential for vapor intrusion at the Stamina Mills Site, USEPA's *Draft Guidance for Assessing Vapor Intrusion* (USEPA, November 2002) was used. This guidance outlines the lines of evidence to be considered during evaluation of a vapor migration/intrusion problem:

- Tier 1 Primary Screening – evaluates fundamental potential for volatile chemicals in the subsurface

- Tier 2 Secondary Screening – evaluates limited Site-specific data regarding the contaminant source and subsurface conditions

- Tier 3 Site-Specific Pathway Assessment – evaluates detailed Site-specific information and confirmatory sub-slab and/or indoor air sampling

Tier 1 and 2 screening was performed using readily available information from the Stamina Mills RI/FS. The screening process, documented in Appendix L, indicated that a Tier 3, site-specific assessment was appropriate for the Site.

As discussed elsewhere in this five-year review, proposed methods to minimize purge water during Phase III groundwater sampling events include discrete interval sampling with diffusion samplers. These samplers will be used to determine if shallow depth

intervals in the bedrock aquifer exhibit TCE contamination above appropriate screening criteria. If TCE concentrations are below screening criteria in shallow intervals, it will be assumed that TCE in groundwater does not pose a threat to indoor air quality. If TCE concentrations in groundwater suggest a potential threat to indoor air quality, additional sampling will be proposed, which may include the following elements:

- Borings will be completed using direct-push technology apparatus and will record lithology, depth-to-bedrock, and depth-to-water (if present in overburden materials).

- If saturated soil is encountered, a water sample will be collected.

- Soil gas samples will be collected from 5 and 15 feet bgs (or immediately above bedrock) using Summa canisters and will be analyzed for VOCs using TO-15.

If depth-to-bedrock and/or saturated zones is greater than 10 feet bgs, the evaluation will proceed using Tier 2 evaluation techniques, assuming that overburden soil provides adequate homogenization of vapor within 10 feet of ground surface. Soil gas data will be used as a direct measure of contaminants in the vapor phase, and USEPA guidance will be used to complete the Tier 2 screening process.

USEPA will also survey residents along School Street to determine fundamental information regarding foundation construction, wet basements, sumps, etc., to more accurately assess the appropriateness of the Tier 2 screening.

Risk Recalculation/Reassessment

Because there have been no changes to the underlying standards used to develop cleanup goals at the Site, there is no need for risk recalculation/reassessment during this five-year review.

Kayser-Roth may perform offsite soil gas investigations to address the evolving understanding of vapor migration through building foundations, depending upon the results of discrete interval sampling conducted for Phase III groundwater monitoring. These data will be used to assess potential vapor intrusion risks and the need for additional work, described above, and will be documented in a separate deliverable.

Question C

Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

Five-year review guidance requires evaluation of any new information or changes in Site conditions that could call into question the overall protectiveness of the remedy. Table 7-6 summarizes findings of the five-year review; details are provided in subsequent sections.

Table 7-6
Summary of Findings: Question C

Other Information	
Ecological Risks	No newly identified ecological risks have been found.
Natural Disasters	No impacts from natural disasters have occurred.
Other Information	No other information has come to light that could affect the protectiveness of the remedy.

Newly Identified Ecological Risks

None identified.

Impacts from Natural Disasters

No impacts from natural disasters have affected the Site and changed the remedy.

Additional Information

No other information has come to light that could affect the protectiveness of the selected remedy.

VIII. Issues

Table 8-1 summarizes the issues identified during the *2005 Five-Year Review*.

Table 8-1 Issues		
Issues	**Affects Current Protectiveness (Y/N)**	**Affects Future Protectiveness (Y/N)**
1. USEPA, RIDEM, THE PERFORMING PARTY, and the Town of North Smithfield need to maintain a strong working relationship to ensure adequate offsite protectiveness of the groundwater remedy. As noted in the case of the recent well installation on School Street, current controls on offsite well installations are inadequate. The Town did not notify USEPA, RIDEM, or Kayser-Roth regarding the moratorium on potable water connections, nor did it notify the property owner of the adjacent Superfund Site and groundwater contamination. Uncontrolled well installations and pumping could interfere with the ROD-require remedy and groundwater containment, and cause contaminant migration offsite. Future well installations and/or pumping could affect the remedy's protectiveness in the future. Institutional controls need to be set in place on site and off site.	**N**	**Y**
2. During discussions regarding offsite residential wells, USEPA and RIDEM indicated that there is no current database of properties with active or inactive wells, nor any record of connection to the public water supply. Data collected prior to and during the RI are more than 20 years old. A database was completed during the 2005 five-year review and is included in Appendix M. If the Town of North Smithfield can provide water usage information, this list will incorporate data on whether residences are connected to public water supply, or whether non-potable wells are still used for outdoor or yard maintenance activities.	**N**	**Y**
3. The Town of North Smithfield has expressed interest in the beneficial re-use of the Site as a recreational area. While this is not possible while the aboveground infrastructure for the remedy is present, USEPA, RIDEM, THE PERFORMING PARTY, and the Town are interested in moving forward to identify beneficial re-use options, and identifying legal issues to be addressed with the Site's currently property owner.	**N**	**N**

4.	Review of risk assessment assumptions indicated that further evaluation of the vapor intrusion pathway may be required. Discrete interval sampling, discussed in relation to the Phase III groundwater monitoring program, may provide additional insight as to whether vapor migration from groundwater is an issue. However, if data indicate groundwater contamination may be a possible source for vapor migration (e.g., if shallow interval samples exceed generic target media specific concentrations), further screening may be performed to determine if vapor migration/intrusion issues are a concern offsite north of School Street. Preliminary efforts to complete a USEPA Tier 1 and Tier 2 screening were incomplete, as documented in Section 7, due to a lack of information regarding lithology and groundwater in residential areas north of the Site.	**UNKNOWN**	**UNKNOWN**
5.	The Town of North Smithfield raised concerns about the fencing parallel to School Street. This could have an impact on site security.	**N**	**N**

IX. Recommendations and Follow-up Actions

Recommendations and follow-up actions are identified below:

1. Institutional controls should be implemented to prevent uncontrolled well installations near the Site. The Town of North Smithfield will take the lead in developing ordinance language prohibiting potable well installation near the plume. The Town of North Smithfield will also lift the moratorium on potable water connections once adequate potable supply is obtained from the City of Woonsocket. USEPA, RIDEM, and Kayser-Roth will provide technical support to the Town of North Smithfield to secure institutional controls. A milestone of June 30, 2006 has been established for passage of the ordinance and lifting of the moratorium. Institutional controls on the property need to be implemented.

2. Kayser-Roth will maintain a listing of residential well owners and the status of their wells within 0.25 miles of the Site. This listing will include residences by street address, tax identification number, and USEPA well identification numbers. The database will be updated no less frequently than once every five years. Kayser-Roth and USEPA will also work with the Town of North Smithfield to identify residences connected to the public water supply, with a goal of incorporating these data into the list by June 30, 2006.

3. USEPA, RIDEM, and Kayser-Roth will explore long-term beneficial re-use options with the new property owner and the Town of North Smithfield, including but not limited to:
    - Property transition and liability issues.
    - Institutional controls on intrusive activities.
    - Timing for the end of SVE/MPE operations.

- Reconstruction of remediation system equipment below grade, if necessary.
- Treatment building and wellhead security.
- Projected O&M operations.

Initial discussions regarding long-term re-use will be completed by June 30, 2006. Draft agreements with the new property owner will be developed by December 31, 2006.

4. Pending the results of discrete-interval groundwater sampling, a Tier 2 vapor intrusion screening, using borings completed in the residential area and soil gas sampling, may be performed. This screening would be used to gauge the potential for vapor intrusion into private residences north of School Street. A soil gas sampling protocol would need to be developed following evaluation of discrete-interval groundwater sampling results. Concurrently, USEPA would perform community awareness activities, and perform a survey to evaluate basement/foundation construction details for residences in the TCE plume area. This will be performed by September 30, 2006.

5. Kayser-Roth will evaluate whether fence integrity has been compromised along School Street; if required, repairs will be implemented by December 31, 2005.

A summary schedule for follow-up actions is presented in Table 9-1.

Table 9-1 Summary Schedule for Follow-Up Actions*		
Target Completion Date	**Activity**	**Responsible Agency/Entity**
December 31, 2005	Complete fencing repairs.	Kayser-Roth
June 30, 2006	Develop on and off-site institutional controls; lift moratorium on connections to North Smithfield public water supply	Kayser-Roth, USEPA, RIDEM, Town of North Smithfield
June 30, 2006	Incorporate data regarding current public water supply users into database	Kayser-Roth
June 30, 2006	Draft agreement regarding long-term reuse	Kayser-Roth
September 30, 2006	Indoor Air / Soil Gas Testing	Kayser-Roth

*Additional non-remedy protectiveness action issues include: Phase III groundwater monitoring work plan addendum, revised community relations/outreach plan, QA/QC procedeures review.

X. Protectiveness Statement

The remedy at the Site currently protects human health and the environment because residents in the area of the plume are using municipal water, and do not have an exposure pathway to contaminated soil. Residents not using municipal water are in areas not impacted by the plume.

The remedy currently protects human health and the environment because it is functioning as designed. The immediate threats have been addressed and the remedy is considered protective in the short term. However, in order for the remedy to be protective in the long-term, the following actions need to be taken: institutional controls need to be addressed, and vapor intrusion studies need to be conducted.

XI. Next Review

The next statutory review for the Stamina Mills Site will be required in 2010, five years from the completion date (e.g., signature date) of this five-year review report.

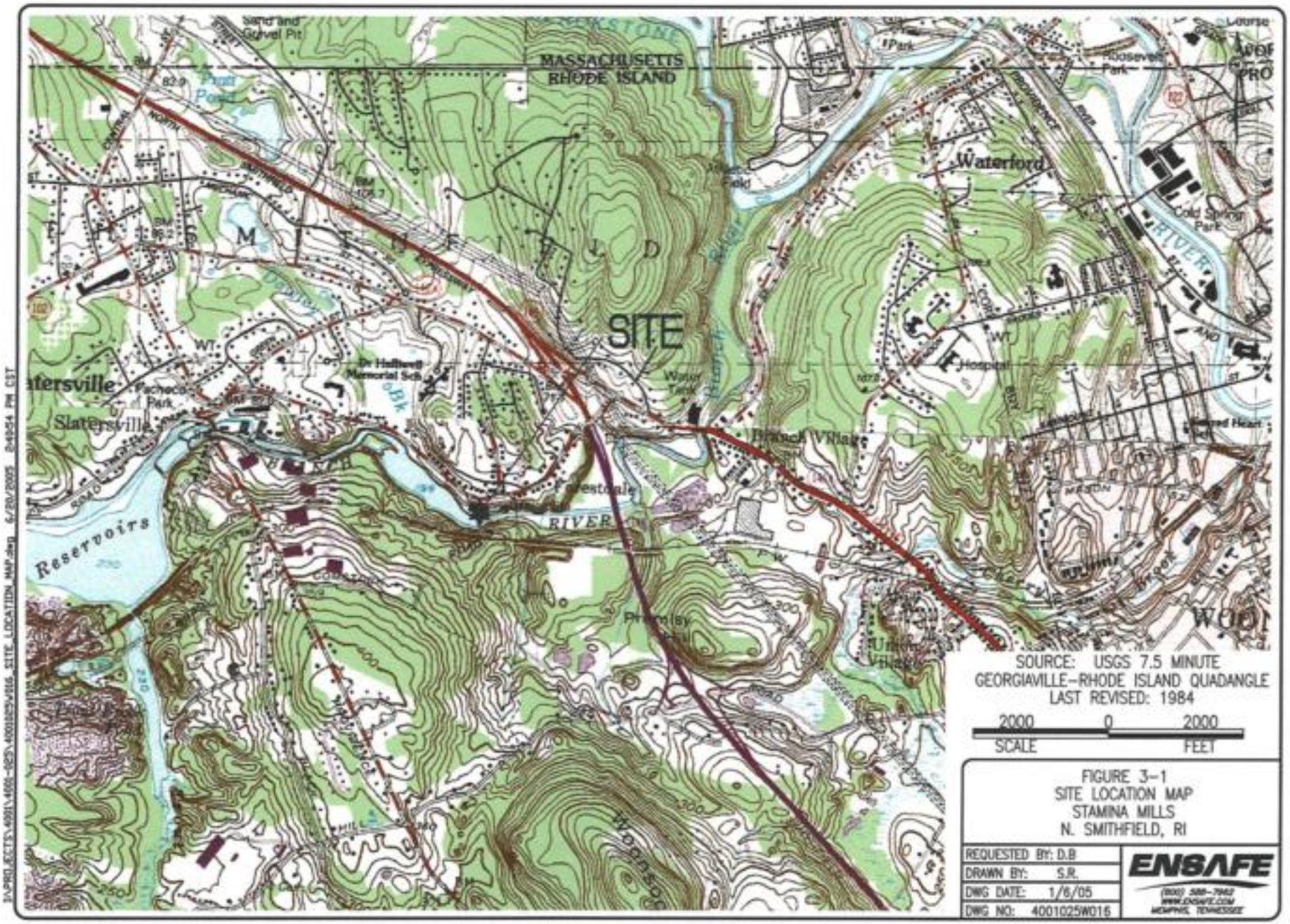
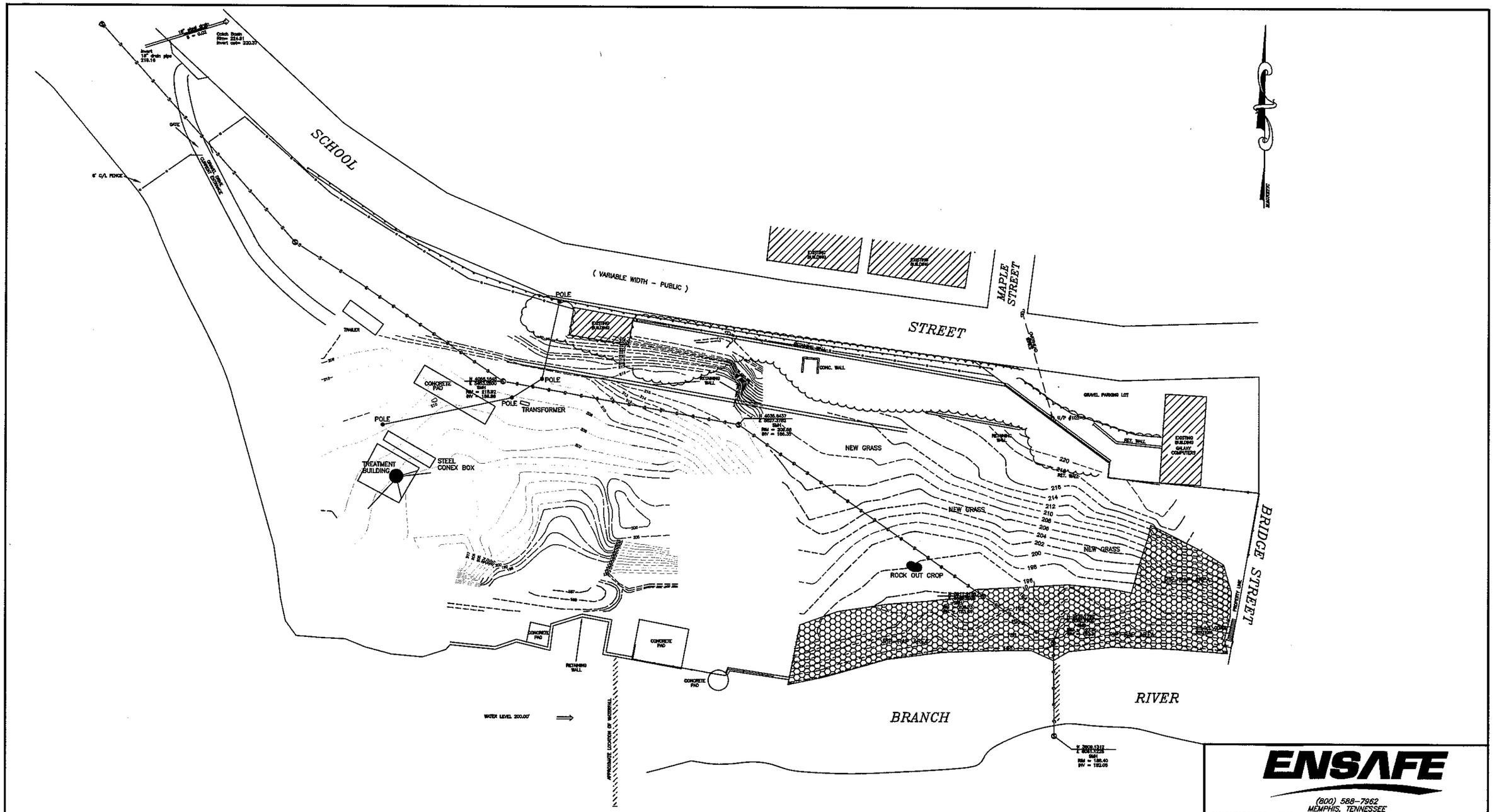


FIGURE 3-1
SITE LOCATION MAP
STAMINA MILLS
N. SMITHFIELD, RI

REQUESTED BY:	D.B
DRAWN BY:	S.R.
DWG DATE:	1/6/05
DWG NO:	4001025W016

ENSAFE
(800) 588-7962
WWW.ENSAFE.COM
MEMPHIS, TENNESSEE



LOCATION OF EXISTING UTILITIES SHOWN, ARE FROM GATE LOCATION AND EXISTING DOCUMENTATION AND MAY NOT BE ACCURATE. EXACT LOCATION TO BE DONE BY THE APPROPRIATE UTILITY COMPANY OR MUNICIPALITY PRIOR TO ANY EXCAVATION. CALL DIGSAFE @ 1-800-225-4977

NOTE:
SURVEY DATA PROVIDED BY NATIONAL SURVEYORS–DEVELOPERS INC.

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(800) 588-7962
MEMPHIS, TENNESSEE
CHARLESTON,SC CINCINNATI,OH DALLAS,TX JACKSON,TN KNOXVILLE,TN
LANCASTER,PA NASHVILLE,TN NORFOLK,VA PADUCAH,KY PENSACOLA,FL
LITTLE ROCK,AR JACKSON,MS CLEVELAND,OH

FIGURE 3-2
SITE CONDITIONS AND TOPOGRAPHY
AFTER 1999 LANDFILL REMOVAL
STAMINA MILLS
N. SMITHFIELD, RI

DWG DATE: 06/20/05 | NAME: 4001025W020

LEGEND

- ROUND I WELLS
- ROUND II WELLS
- RAILROAD
- WATER FRONT
- 100 — CONTAMINANT ISOCON
- NS — NOT SAMPLED
- NI — NOT INSTALLED

ALL UNITS MICROGRAMS PER LITER (µg/L)

NOTE:
ROUND 2 WELLS WILL BE ADDED TO THE MONITORING PROGRAM ONCE IT HAS BEEN DETERMINED THAT CLEANUP STANDARDS HAVE BEEN ATTAINED AT ROUND 1 OFFSITE MONITORING WELLS.

175 0 175
SCALE FEET

ENSAFE

(800) 588-7962
MEMPHIS, TENNESSEE
ARKANSAS FLORIDA KENTUCKY MICHIGAN MISSISSIPPI
OHIO TENNESSEE TEXAS SOUTH CAROLINA
VIRGINIA SLOVAKIA

FIGURE 3-3
TCE PLUME – NOVEMBER 1992
STAMINA MILLS
N. SMITHFIELD, RI

DWG DATE: 06/20/05 | NAME: 4001023W018

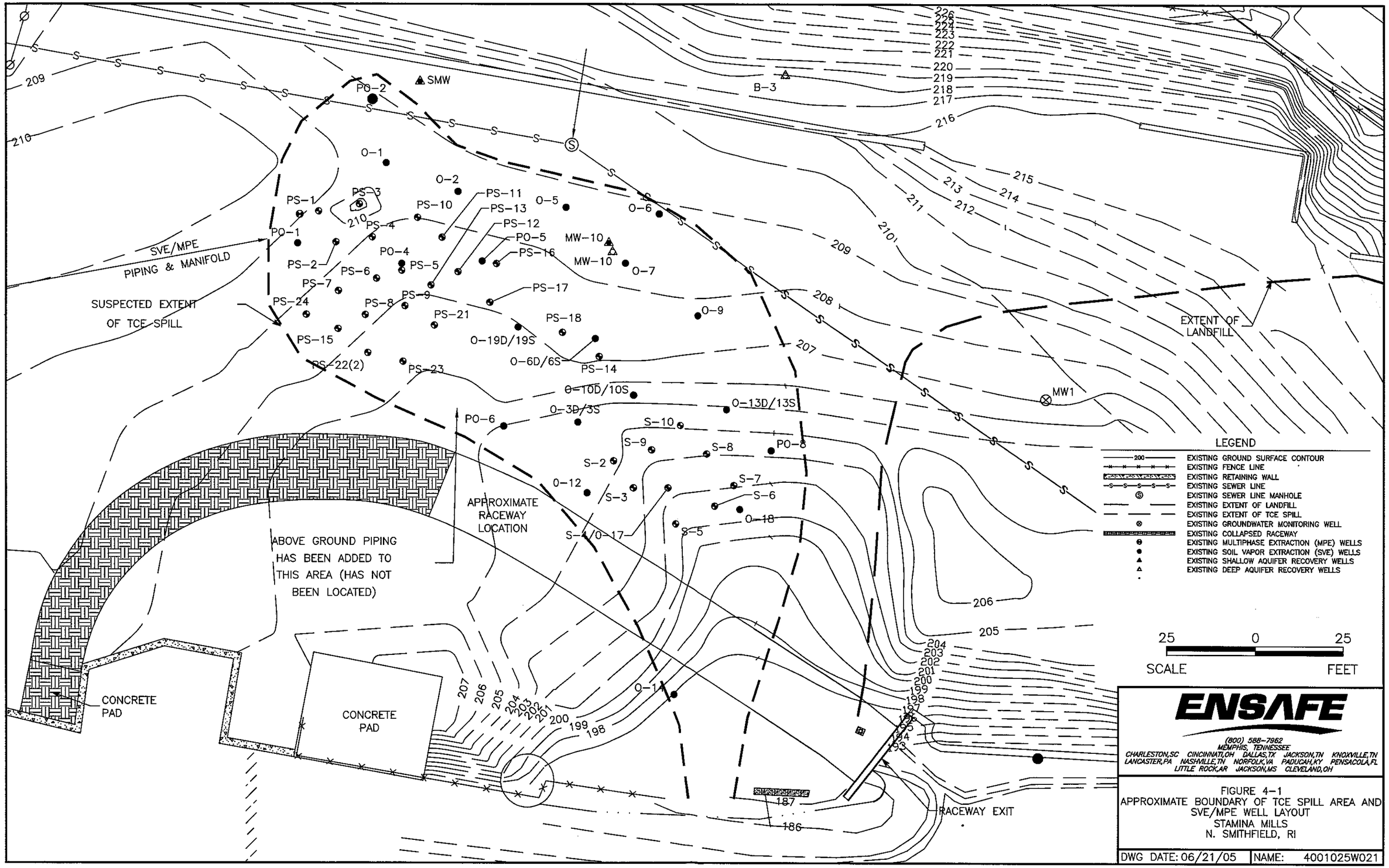
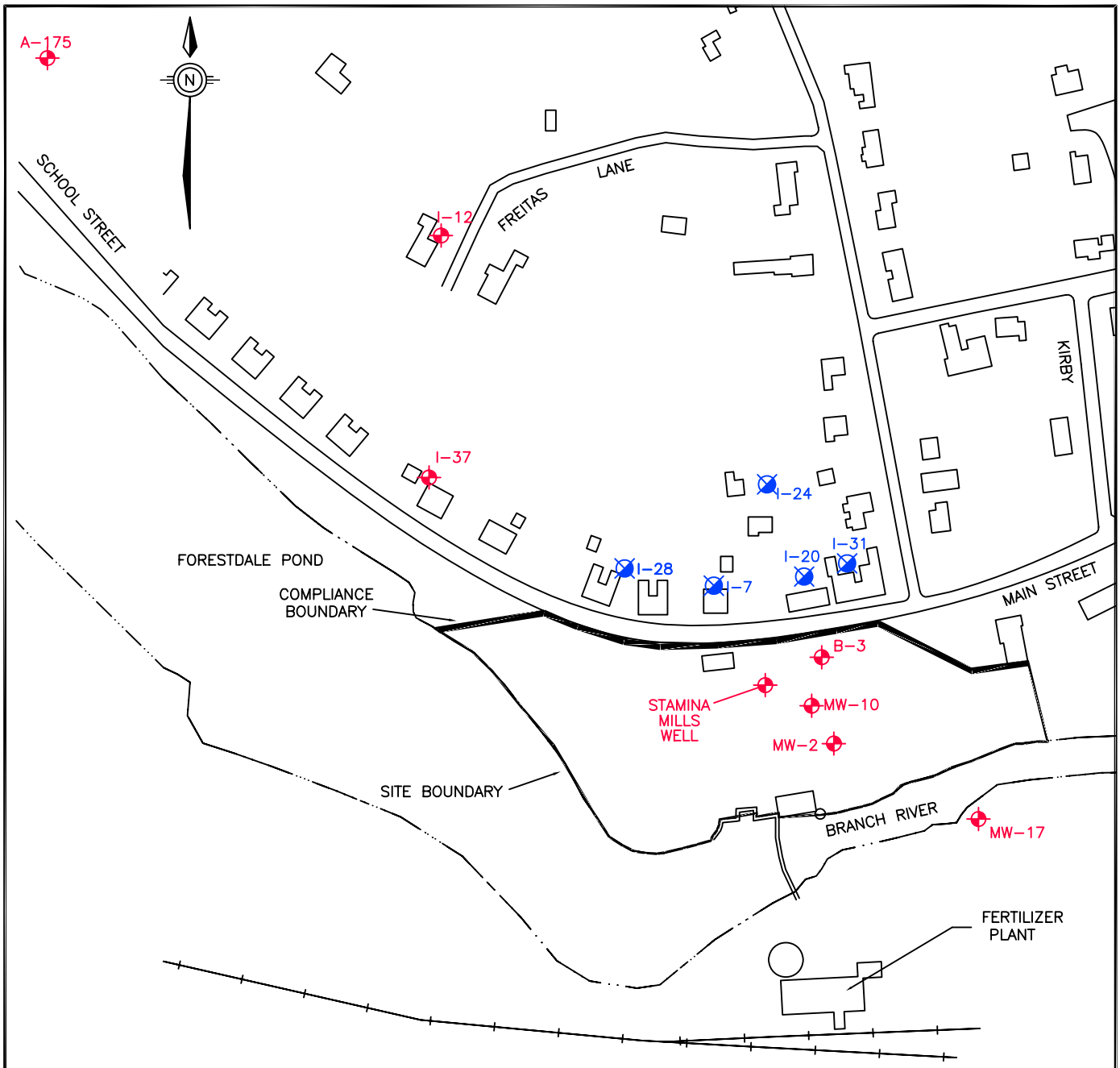


FIGURE 4-1
APPROXIMATE BOUNDARY OF TCE SPILL AREA AND SVE/MPE WELL LAYOUT
STAMINA MILLS
N. SMITHFIELD, RI



LEGEND

- ROUND I WELLS
- ROUND II WELLS
- RAILROAD
- WATER FRONT

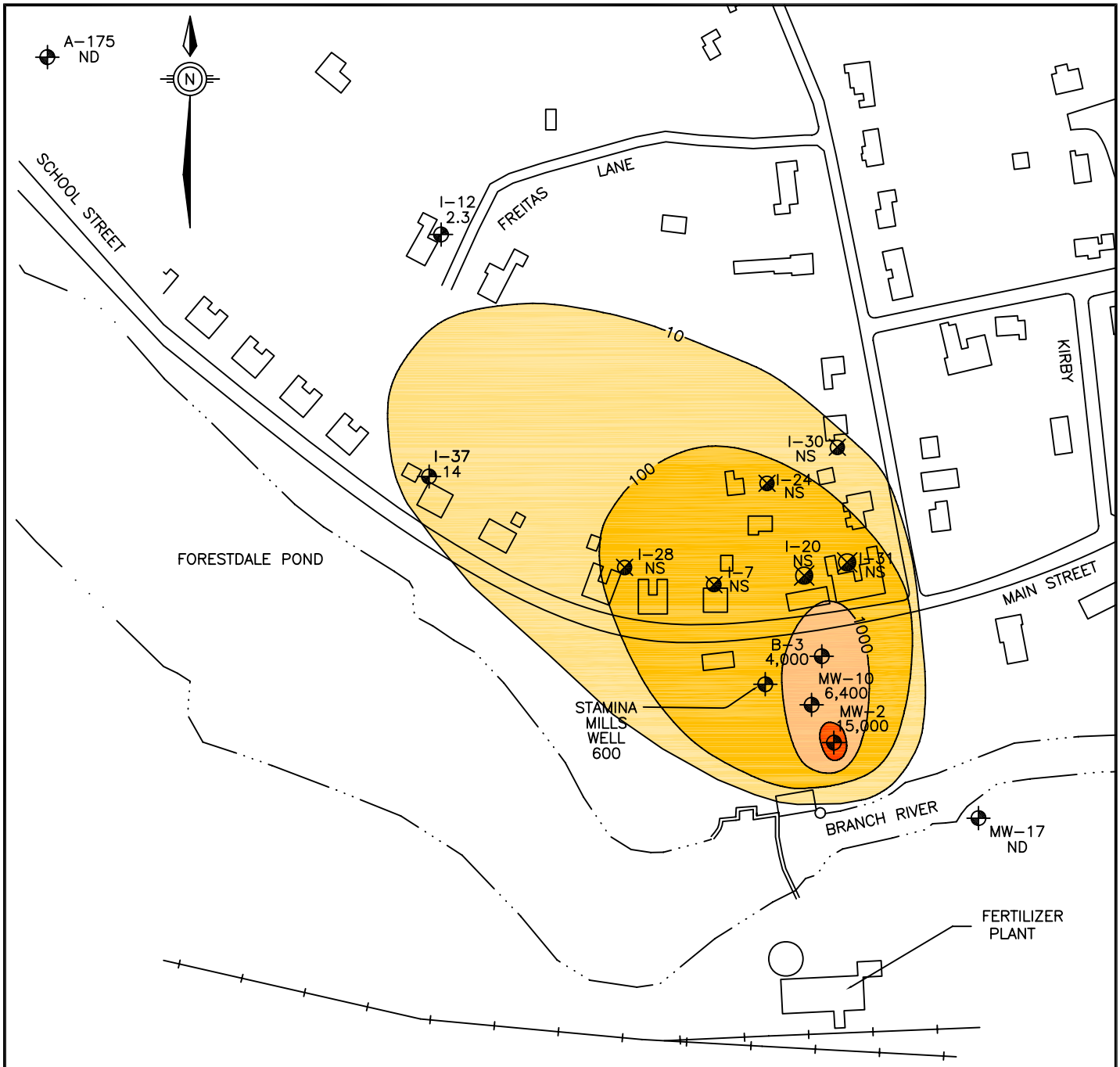
NOTE:
ROUND 2 WELLS WILL BE ADDED TO THE MONITORING PROGRAM ONCE IT HAS BEEN DETERMINED THAT CLEANUP STANDARDS HAVE BEEN ATTAINED AT ROUND 1 OFFSITE MONITORING WELLS.

175 0 175
SCALE FEET

ENSAFE
(800) 588-7962
MEMPHIS, TENNESSEE
ARKANSAS FLORIDA KENTUCKY MICHIGAN MISSISSIPPI
OHIO TENNESSEE TEXAS SOUTH CAROLINA
VIRGINIA SLOVAKIA

FIGURE 6-1
MONITORING WELL LOCATIONS/
COMPLIANCE BOUNDARY
STAMINA MILLS
N. SMITHFIELD, RI

DWG DATE: 09/22/05 | NAME: 4001023D001



LEGEND

- ROUND I & II WELLS
- RAILROAD
- WATER FRONT
- 10 — TCE CONCENTRATION (µg/L)
- NS — NOT SAMPLED, ROUND II WELL
- ND — NOT DETECTED ABOVE METHOD REPORTING LIMIT

175 0 175
SCALE FEET

ENSAFE

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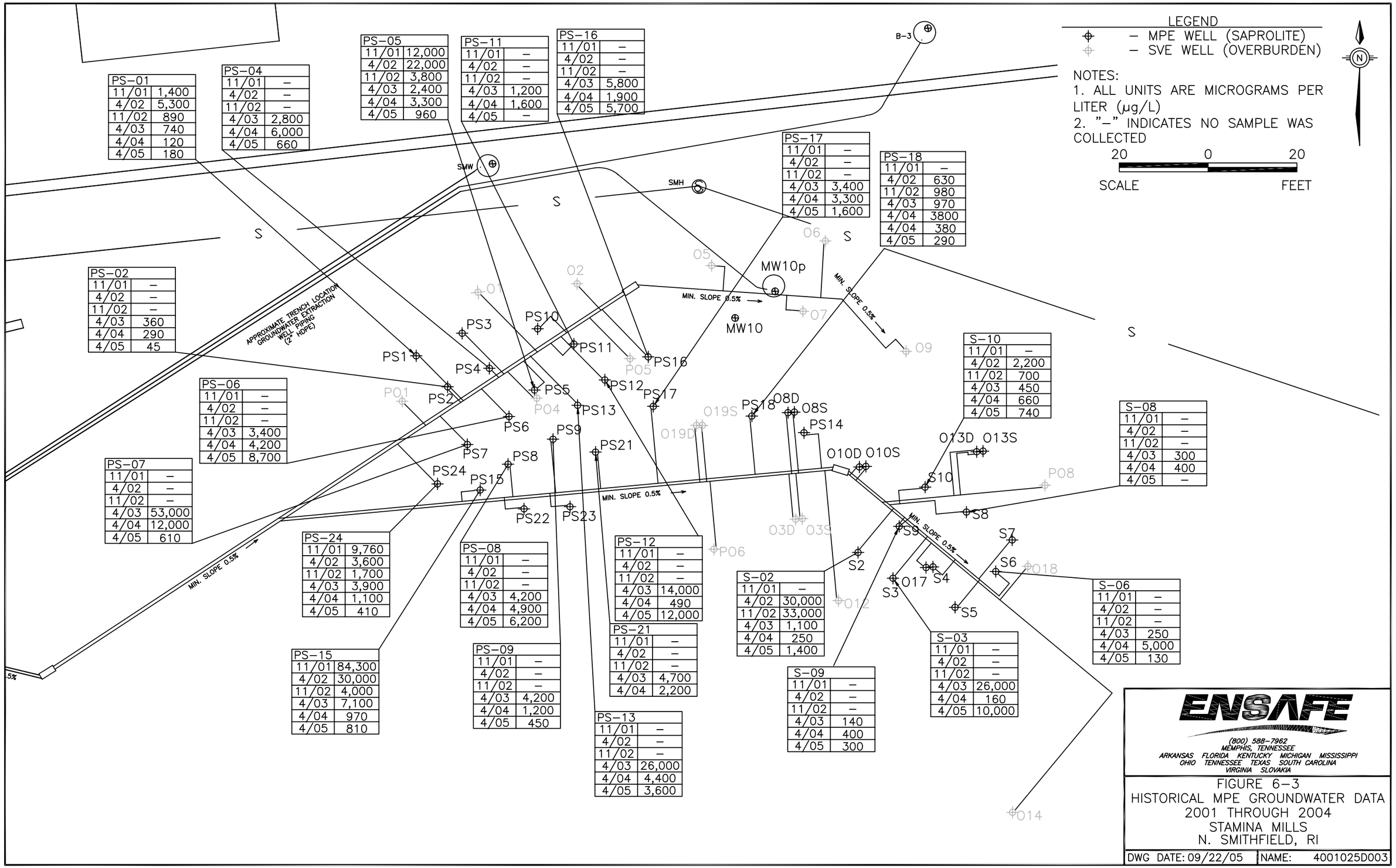
MEMPHIS, TENNESSEE
ARKANSAS FLORIDA KENTUCKY MICHIGAN MISSISSIPPI
OHIO TENNESSEE TEXAS SOUTH CAROLINA
VIRGINIA SLOVAKIA

FIGURE 6-2
TCE ISOCONCENTRATION PLUME
JUNE 2004
STAMINA MILLS
N. SMITHFIELD, RI

DWG DATE: 09/22/05 | NAME: 4001025D002



PS-01	
11/01	1,400
4/02	5,300
11/02	890
4/03	740
4/04	120
4/05	180

PS-02	
11/01	–
4/02	–
11/02	–
4/03	360
4/04	290
4/05	45

PS-04	
11/01	–
4/02	–
11/02	–
4/03	2,800
4/04	6,000
4/05	660

PS-05	
11/01	12,000
4/02	22,000
11/02	3,800
4/03	2,400
4/04	3,300
4/05	960

PS-06	
11/01	–
4/02	–
11/02	–
4/03	3,400
4/04	4,200
4/05	8,700

PS-07	
11/01	–
4/02	–
11/02	–
4/03	53,000
4/04	12,000
4/05	610

PS-08	
11/01	–
4/02	–
11/02	–
4/03	4,200
4/04	4,900
4/05	6,200

PS-09	
11/01	–
4/02	–
11/02	–
4/03	4,200
4/04	1,200
4/05	450

PS-11	
11/01	–
4/02	–
11/02	–
4/03	1,200
4/04	1,600
4/05	–

PS-12	
11/01	–
4/02	–
11/02	–
4/03	14,000
4/04	490
4/05	12,000

PS-13	
11/01	–
4/02	–
11/02	–
4/03	26,000
4/04	4,400
4/05	3,600

PS-15	
11/01	84,300
4/02	30,000
11/02	4,000
4/03	7,100
4/04	970
4/05	810

PS-16	
11/01	–
4/02	–
11/02	–
4/03	5,800
4/04	1,900
4/05	5,700

PS-17	
11/01	–
4/02	–
11/02	–
4/03	3,400
4/04	3,300
4/05	1,600

PS-18	
11/01	–
4/02	630
11/02	980
4/03	970
4/04	3800
4/04	380
4/05	290

PS-21	
11/01	–
4/02	–
11/02	–
4/03	4,700
4/04	2,200

PS-24	
11/01	9,760
4/02	3,600
11/02	1,700
4/03	3,900
4/04	1,100
4/05	410

S-02	
11/01	–
4/02	30,000
11/02	33,000
4/03	1,100
4/04	250
4/05	1,400

S-03	
11/01	–
4/02	–
11/02	–
4/03	26,000
4/04	160
4/05	10,000

S-06	
11/01	–
4/02	–
11/02	–
4/03	250
4/04	5,000
4/05	130

S-08	
11/01	–
4/02	–
11/02	–
4/03	300
4/04	400
4/05	–

S-09	
11/01	–
4/02	–
11/02	–
4/03	140
4/04	400
4/05	300

S-10	
11/01	–
4/02	2,200
11/02	700
4/03	450
4/04	660
4/05	740

ENSAFE

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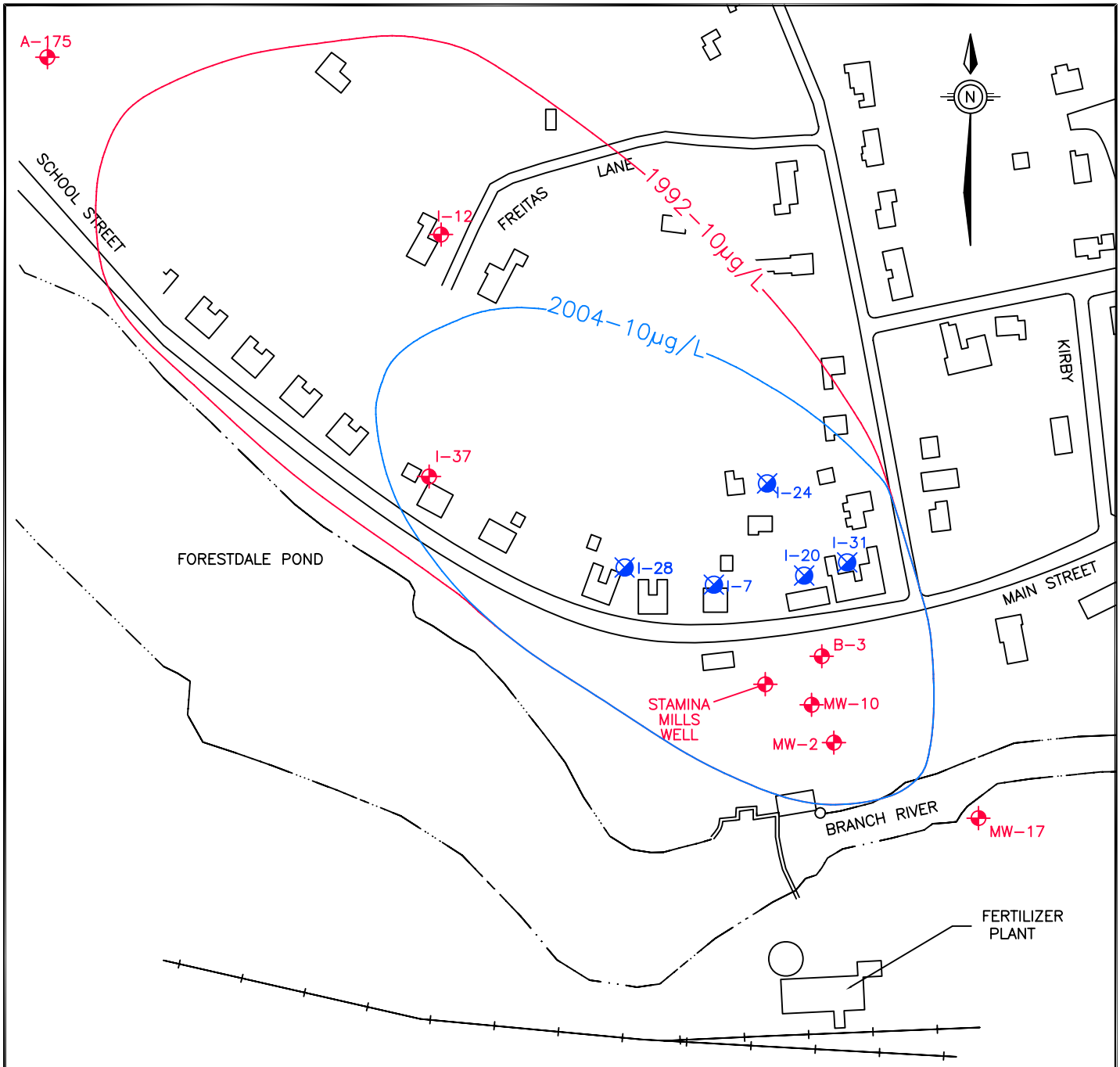
ARKANSAS FLORIDA KENTUCKY MICHIGAN MISSISSIPPI
OHIO TENNESSEE TEXAS SOUTH CAROLINA
VIRGINIA SLOVAKIA

FIGURE 6-3
HISTORICAL MPE GROUNDWATER DATA
2001 THROUGH 2004
STAMINA MILLS
N. SMITHFIELD, RI

DWG DATE: 09/22/05 | NAME: 4001025D003



LEGEND

- ROUND I WELLS
- ROUND II WELLS
- RAILROAD
- WATER FRONT
- 10µg/L TCE ISOCON – 1992
- 10µg/L TCE ISOCON – 2004

NOTE:
ROUND 2 WELLS WILL BE ADDED TO THE MONITORING PROGRAM ONCE IT HAS BEEN DETERMINED THAT CLEANUP STANDARDS HAVE BEEN ATTAINED AT ROUND 1 OFFSITE MONITORING WELLS.

175 0 175
SCALE FEET

ENSAFE

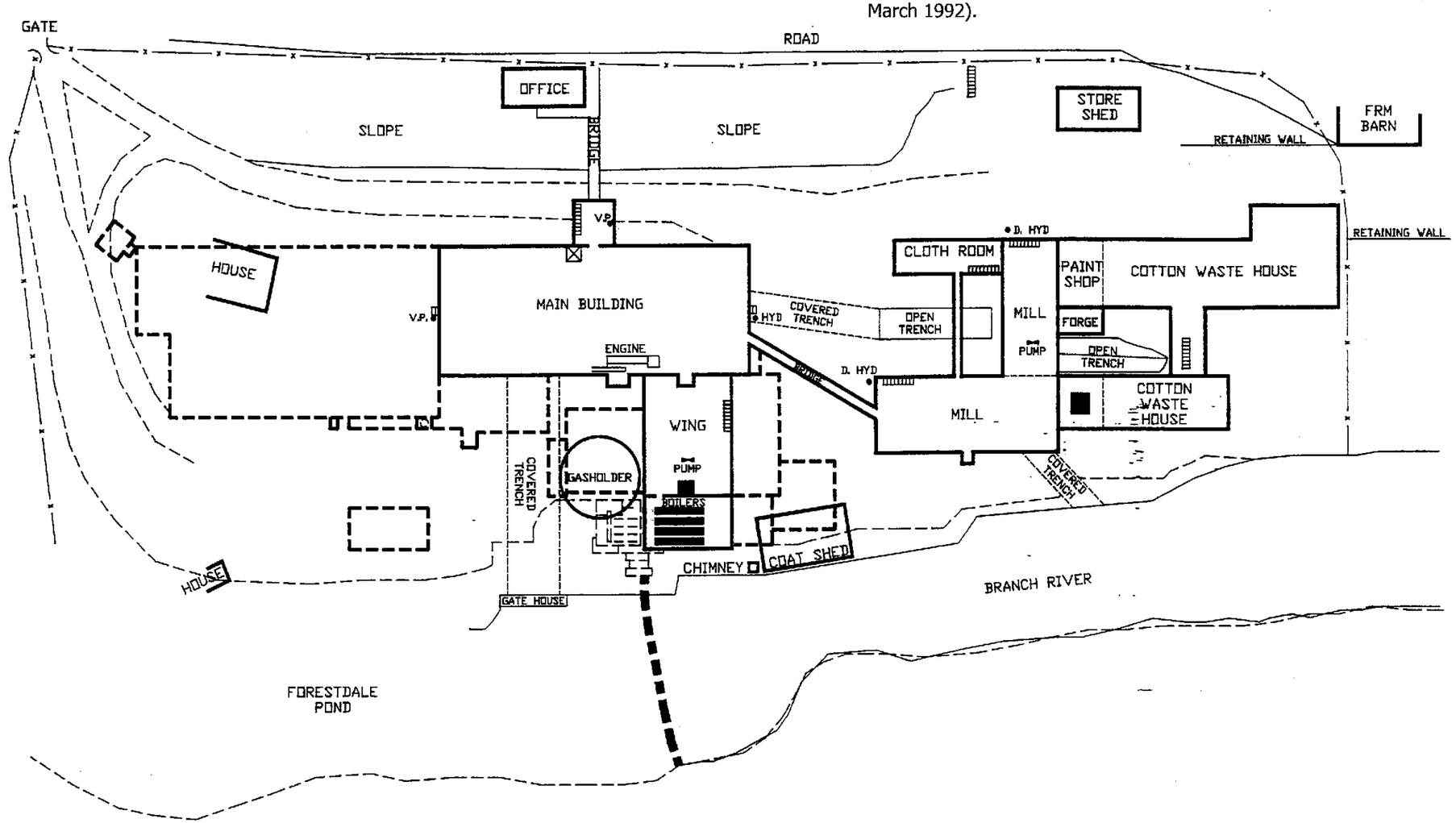
(800) 588-7962
MEMPHIS, TENNESSEE
ARKANSAS FLORIDA KENTUCKY MICHIGAN MISSISSIPPI
OHIO TENNESSEE TEXAS SOUTH CAROLINA
VIRGINIA SLOVAKIA

FIGURE 7-1
1992/2004 TCE PLUME COMPARISON
STAMINA MILLS
N. SMITHFIELD, RI

DWG DATE: 09/22/05 | NAME: 4001023D004

Appendix B
Historical Diagrams and Figures

Taken from:
Project Operations Plan, Stamina Mills Superfund Site, North Smithfield, Rhode Island, USEPA Docket No. I-91-1070, Revision C (Environmental and Safety Designs, Inc.; March 1992).



50 0 50
SCALE FEET

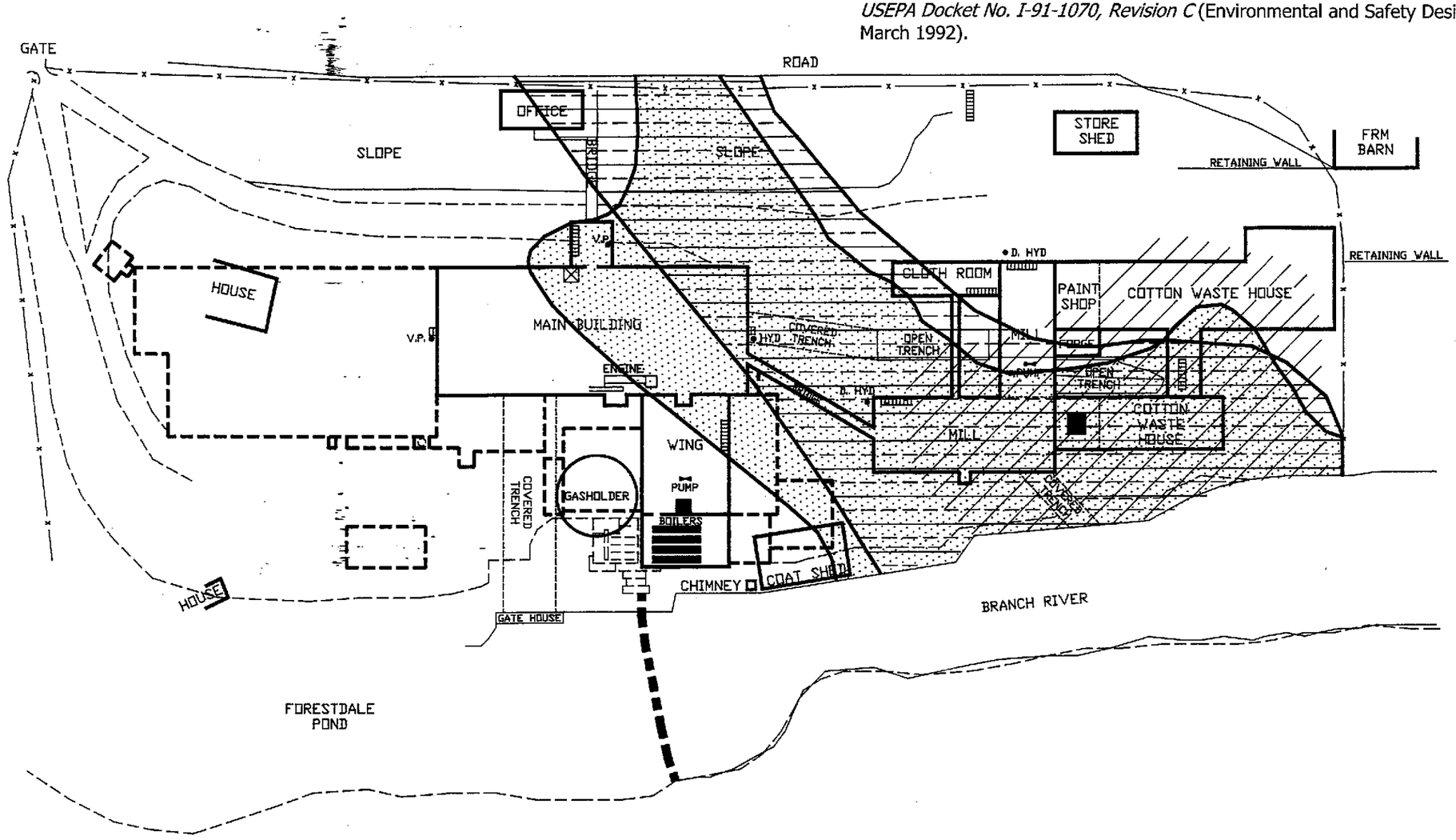
LEGEND
- YEAR 1876
- YEAR 1971
- FENCE

Environmental and Safety Designs, Inc.
EnSafe (SM)
5724 SUMMER TREES DR. MEMPHIS, TN. 38134 #(901)372-7962

FIGURE 1.2
STAMINA MILLS
N. SMITHFIELD, R.I.
PROJECT OPERATIONS PLAN

DATE: 10/14/91 | DWG NAME: STAMINA2

Taken from:
Project Operations Plan, Stamina Mills Superfund Site, North Smithfield, Rhode Island, USEPA Docket No. I-91-1070, Revision C (Environmental and Safety Designs, Inc.; March 1992).



50 0 50
SCALE FEET

NOTE: GROUNDWATER CONTAMINATION EXTENDS APPROXIMATELY 500 FEET NORTHWEST OF PROPERTY BOUNDARY IN 1988.

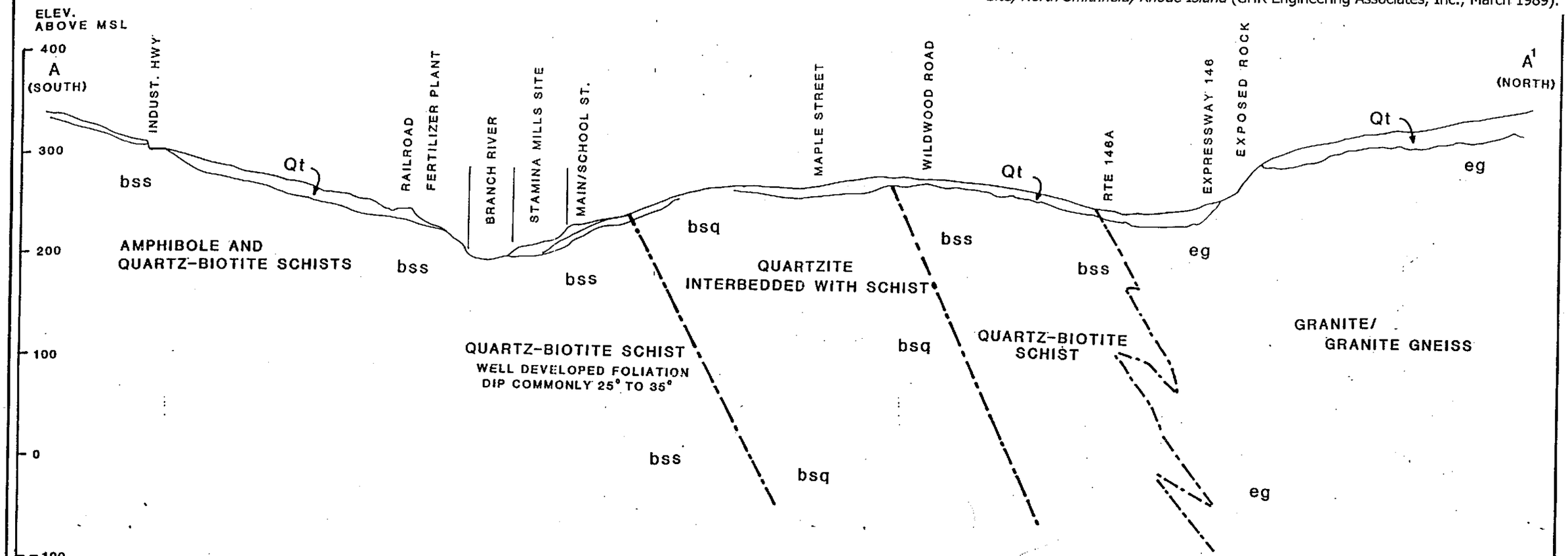
LEGEND
- YEAR 1876
- YEAR 1971
- LANDFILL
- SOIL CONTAMINATION
- GROUNDWATER CONTAMINATION (JUNE, 1988)
- FENCE

Environmental and Safety Designs, Inc.
EN SAFE (SM)
5724 SUMMER TREES DR. MEMPHIS, TN. 38134 (901)372-7962

FIGURE 1.4
CONTAMINATED AREAS
AND SAFETY CONCERNS
STAMINA MILLS
N. SMITHFIELD, R.I.
PROJECT OPERATIONS PLAN

DATE: 02/13/92 | DWG NAME: STAMIN2A

Taken from:
Report of Pump Test of the Forestdale Water Association Well, Stamina Mills Superfund Site, North Smithfield, Rhode Island (GHR Engineering Associates, Inc.; March 1989).



SCALE APPROXIMATE
VERTICAL
0' 100' 200'
0' 400' 800'
HORIZONTAL

LEGEND

eg	ESMOND GRANITE (REPORTED "HYBRID GRANITE GNEISS")
bss	BLACKSTONE SERIES SCHISTS (UNDERLYING MILLSITE AND VILLAGE)
bsq	BLACKSTONE SERIES QUARTZITE (REPORTED LOCALLY INTERBEDDED WITH SCHISTS)
Qt	GLACIAL TILL, OUTWASH SEDIMENTS AND ARTIFICIAL FILLS
— — —	APPROXIMATE CONTACT BETWEEN UNITS

NOTES:

1.) BEDROCK LITHOLOGY, STRUCTURE AND LITHOLOGIC CONTACTS INFERRED FROM THE GEOLOGY AND GROUNDWATER RESOURCES OF THE GEORGIAVILLE RI. USGS QUADRANGLE BULLETIN NO.4 DATED 1951 BY RICHMOND AND ALLEN, PLATES 1-3.

2.) REFER TO FIGURE NO. 2-1 FOR LOCATION OF PROFILE A-A'.

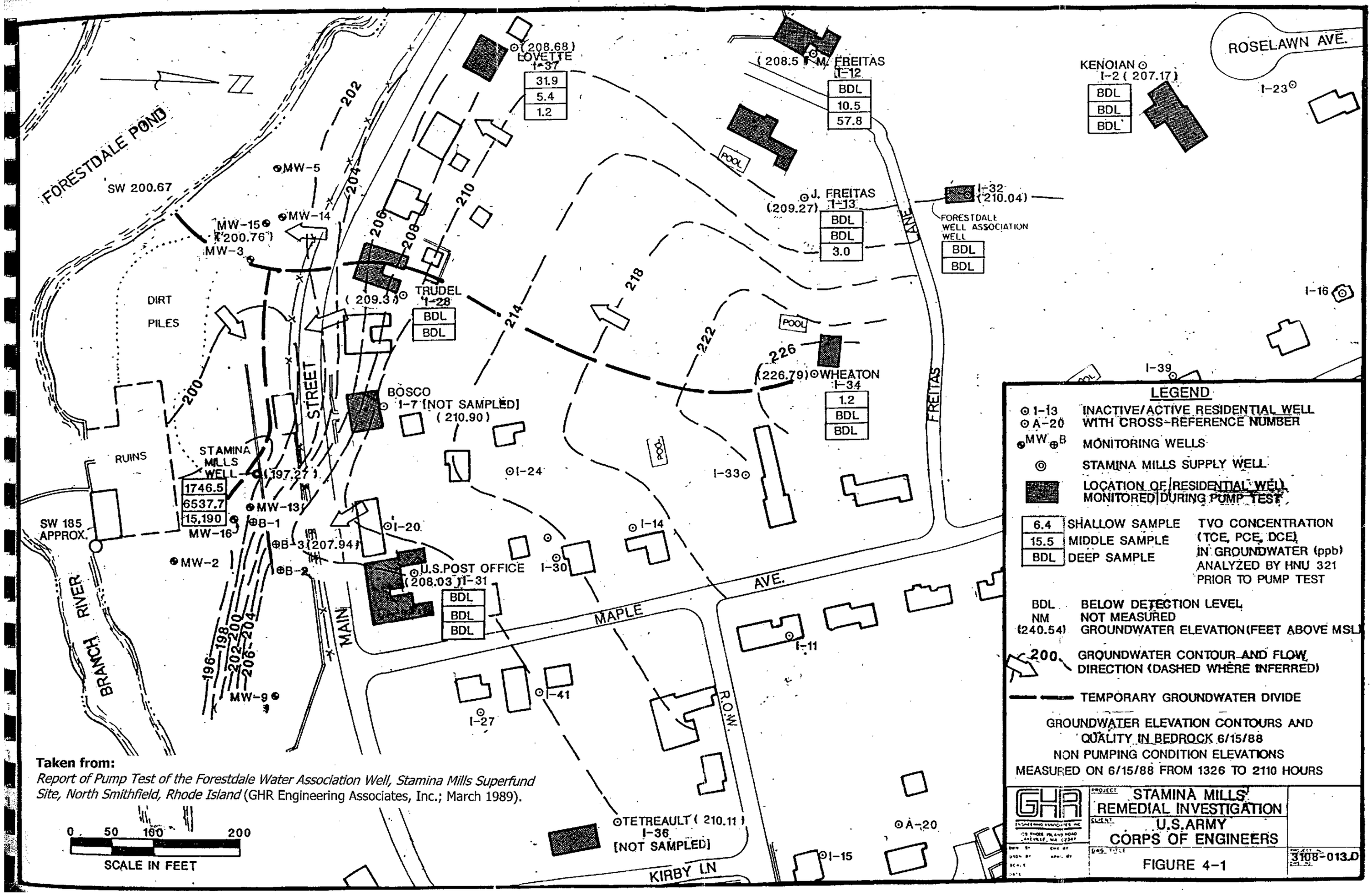
GHR ENGINEERING CORPORATION
75 TARKILN HILL ROAD
NEW BEDFORD, MA. 02745

DWN. BY: BDM CHK. BY: WRN
DSGN. BY: GM APPD. BY: JJG
SCALE: AS NOTED
DATE: 4/27/87

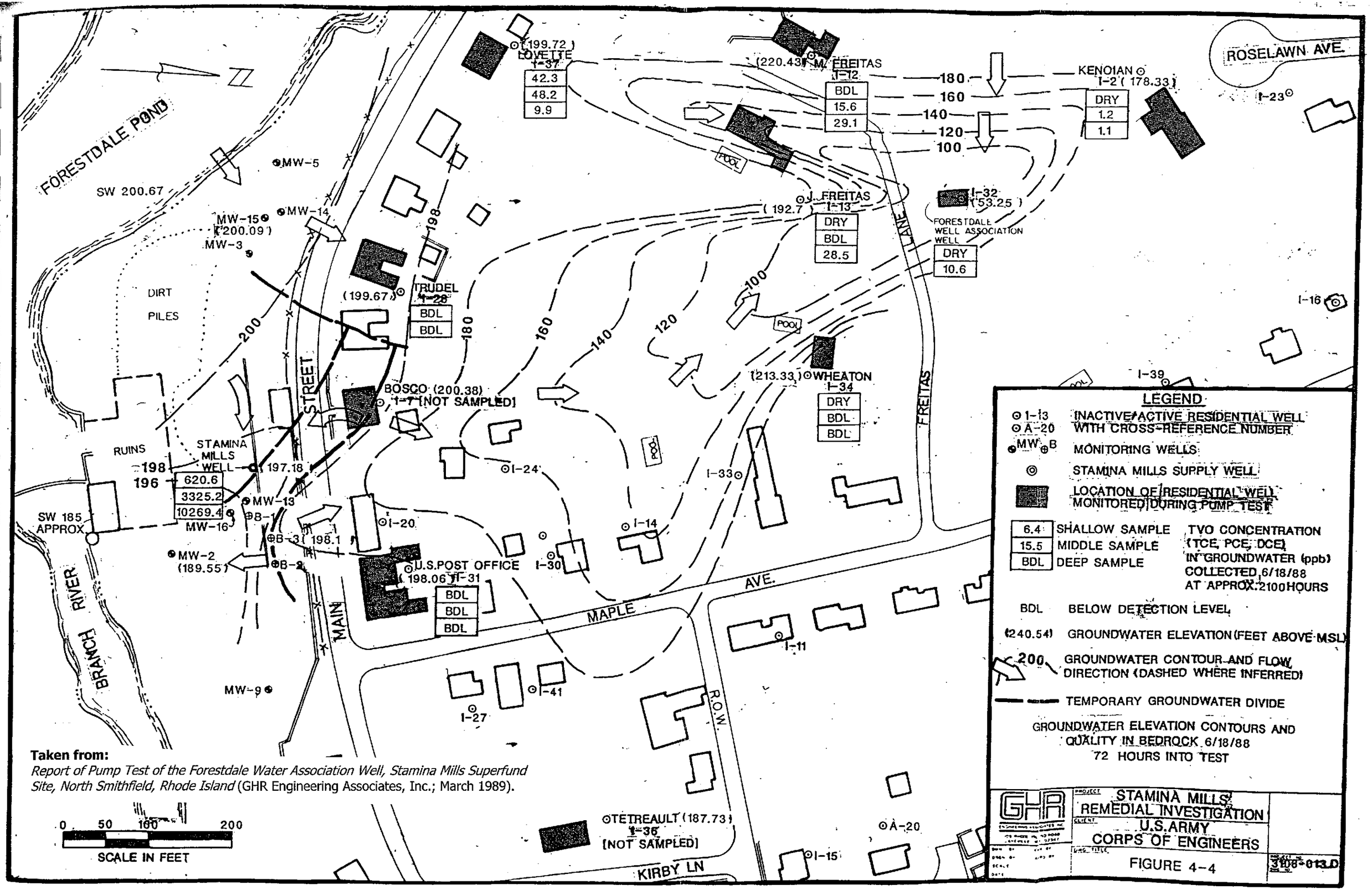
PROJECT: STAMINA MILLS SUPERFOUND SITE

CLIENT: U.S. ARMY CORPS OF ENGINEERS

DWG. TITLE: FIGURE 2-2
REGIONAL GEOLOGIC CROSS-SECTION PROFILE A-A'

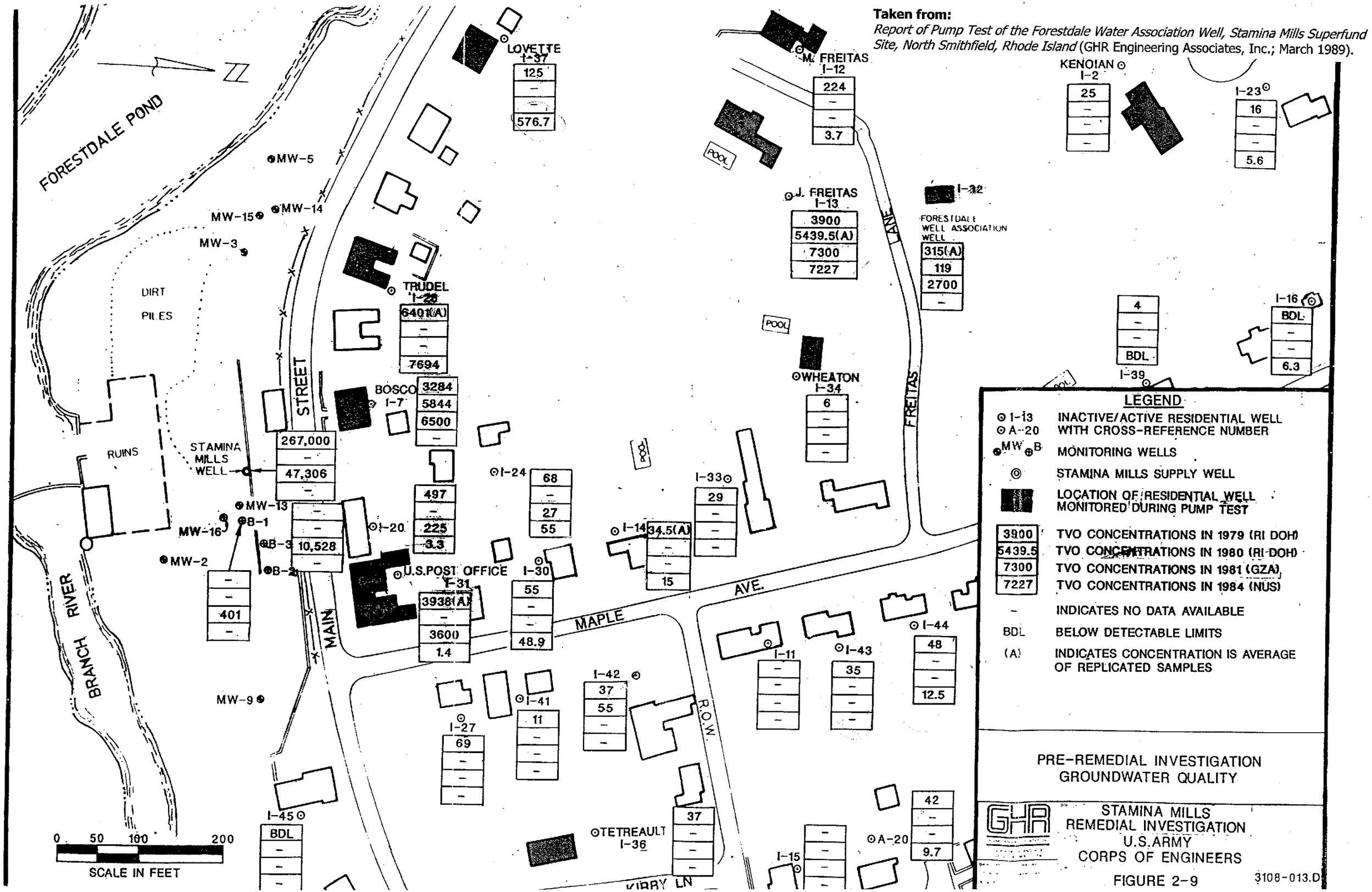


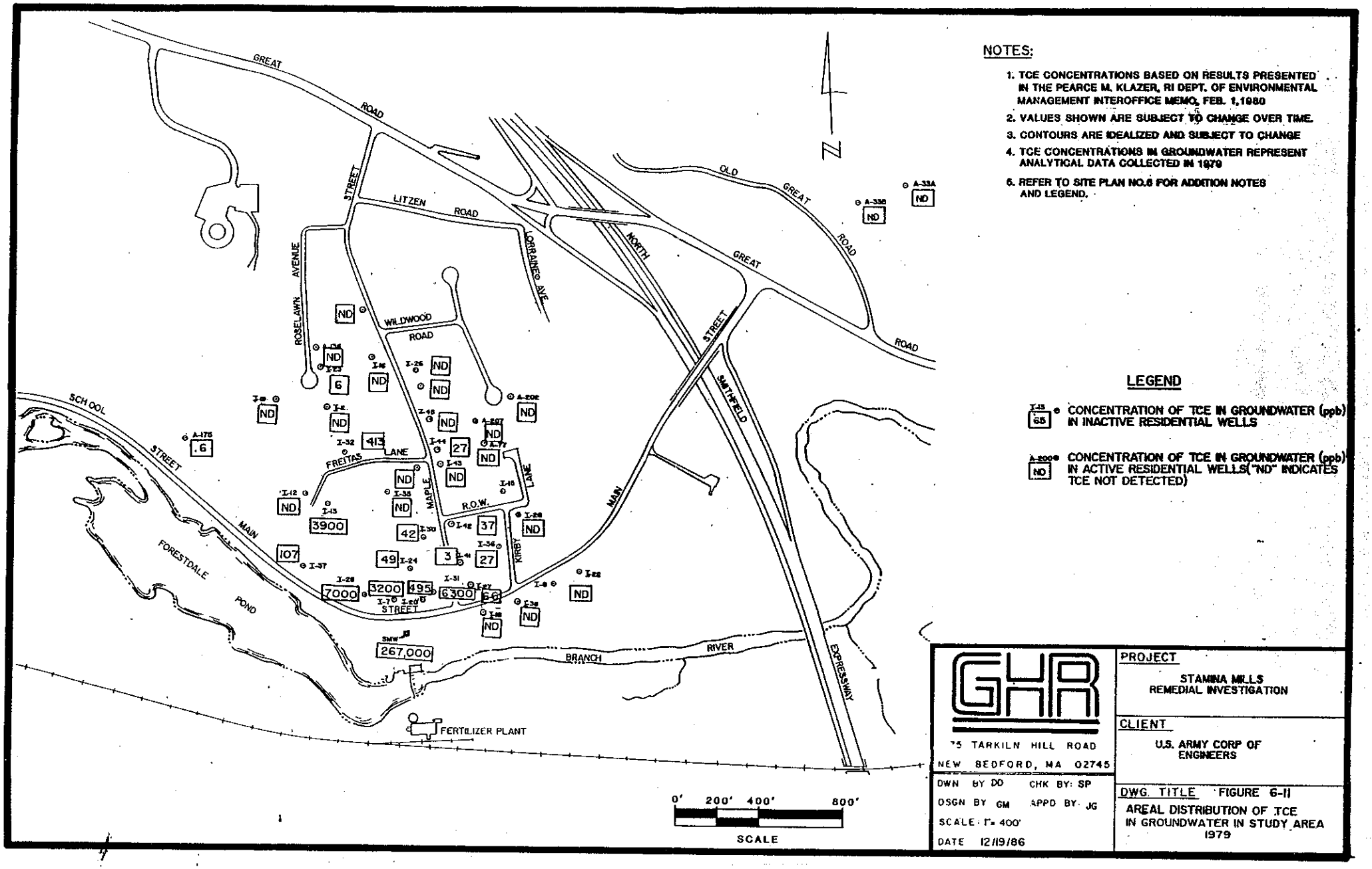
Taken from:
Report of Pump Test of the Forestdale Water Association Well, Stamina Mills Superfund Site, North Smithfield, Rhode Island (GHR Engineering Associates, Inc.; March 1989).



Taken from:
Report of Pump Test of the Forestdale Water Association Well, Stamina Mills Superfund Site, North Smithfield, Rhode Island (GHR Engineering Associates, Inc.; March 1989).

Taken from:
Report of Pump Test of the Forestdale Water Association Well, Stamina Mills Superfund Site, North Smithfield, Rhode Island (GHR Engineering Associates, Inc.; March 1989).





Taken from:
Remedial Investigation Report, Stamina Mills Site, North Smithfield, Rhode Island (GHR Engineering Associates, Inc.; January 1990).

FORESTDALE POND
UNDER CONSTRUCTION
MAIN STREET
ROSELAWN AVENUE
MAPLE STREET
KIRBY LANE
LORRAINE AVENUE
WILDWOOD ROAD
LITZEN ROAD
GREAT ROAD
SMITHFIELD EXPRESSWAY
NORTH BRANCH
BRIDGE STREET
FREITAS ROAD
PARKING
TENNIS COURT
POOL
U.S. POST OFFICE
STAMINA MILLS WELL
FORESTDALE WELL ASSOCIATION WELL
M. FREITAS
J. FREITAS
LOVETTE
TRUDEL
BOSCO
TETRAULT
RUINS
NOTES
1. REFER TO SITE PLAN SP-3 FOR NOTES AND LEGEND
2. LOT NUMBERS SHOWN IN ELLIPSES ARE BASED ON TOWN OF N. SMITHFIELD ASSESSORS PLATS 2 AND 5; LOT LINES ARE APPROXIMATE ONLY
0 50 100 200 300
SCALE IN FEET
$$ — THINK VALUE ENGINEERING — $$
Revisions
Symbol | Descriptions | Date | Approved
LOCATION MONITORED DURING PUMP TEST 9/88
LOCATION SAMPLED DURING RI INVESTIGATION 9/88
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
OMAHA, NEBRASKA
Designed by:
Drawn by:
Checked by:
Reviewed by:
Submitted by:
STAMINA MILLS
REMEDIAL INVESTIGATION
Scale: As Shown
Sheet reference number:
Date 12/8/87
Spec. No. DACA 45
Contract No. DACA 45
Drawing Code
SITE PLAN NO. 4

1100-028

Site Plan No. 4
(Map Pocket)
Taken from:
Remedial Investigation Report, Stamina Mills Site, North Smithfield, Rhode Island **(GHR Engineering Associates, Inc.; January 1990).**

Appendix C
Select Historical Photographs (Pre-RA)

The Stamina Mills Site (date unknown). View is to the north, taken from the south side of the Branch River.

Stamina Mills fire, 1977. View is from School Street, toward the southeast.

Mill Ruins, view is north, from the south side of the Branch River. Note raceway opening in the foreground.

Mill ruins, view of raceway entrance, Forestdale Pond.

Stamina Mills site following demolition of mill buildings (1992/1993). View is toward northwest.

Stamina Mills site following site restoration (1993/1994). View is to southeast, prior to construction of SVE/MPE and treatment building.

Appendix D
Public Notice

Race heats up for Mass. Legislature seats

By STEVE LeBLANC
Associated Press Writer

BOSTON – With less than three weeks to go before Election Day, the battle for seats in the Massachusetts Legislature is taking on a harsher tone.

Democrats point to a flurry of GOP-funded flyers – including one accusing Democratic incumbents of protecting sexual predators at the expense of schoolchildren – as evidence that Republicans are stooping to "lies and distortions" to press their case.

Top Democrats say the tone of the flyers undercuts Gov. Mitt Romney's message of reform. Romney is supporting most of the Republican challengers, campaigning with them and raising money. The mailings target voters in districts where Democratic incumbents are facing Republican newcomers.

"This is not reform. This is really garbage," said Democratic U.S. Rep. William Delahunt. "Nobody is being fooled."

State Republican Party Chairman Darrell Crate defended the flyers, and said Democrats have to be ready to stand by their votes.

"These lawmakers are not used to being held accountable on Beacon Hill," he said. "They say one thing in their district and go to Beacon Hill and do another."

Crate made his comments after a press conference he called to introduce "Hank the Hackbuster," a campaign worker dressed in a costume similar to characters in the movie "Ghostbusters."

One flyer showed a picture of a frightened little boy shedding a tear and featured the headline "Karen Spilka voted against background checks in our schools ... and left our children vulnerable to sexual predators."

Crate said the flyer referred to a vote Spilka, a Democratic state representative from Ashland, took against allowing school officials to go to local police to do criminal background checks on employees.

In a message posted on her web site, Spilka called the mailing "disgraceful, disgusting and knowingly dishonest." The name of her Republican challenger James Coffey isn't mentioned on the flyer.

Spilka said the vote would have allowed local police to perform criminal background checks instead of passing the requests from school superintendents directly to the Criminal History Services Board. Spilka said she voted against the amendment and in favor of setting a faster timeline for processing the requests.

The reports are now returned directly to school superintendents within 48 hours, she said, accusing Republicans of distorting the vote.

"They are practicing deception by omitting and twisting facts to unnecessarily frighten parents," she said.

Another Republican flyer targets Susan Fargo, an incumbent Democratic state senator from Lincoln, accusing her of allowing former University of Massachusetts President William Bulger to walk away with a $1 million severance deal.

Crate said the flyer referred to a vote Fargo took in favor of a UMass restructuring plan. That plan helped guarantee Bulger a job which led to him receiving a hefty pension, Crate said.

"She voted for the restructuring at UMass which gave Billy Bulger a cushy job and without that job he would not have been able to obtain that pension," Crate said.

Fargo said the flyer contained "distortions and outright lies" and said she never voted to give Bulger a pension.

"The Legislature had nothing to do with it," she said. "I am alarmed and very disappointed at the very negative tone of the campaign."

Democratic U.S. Rep Barney Frank accused Romney of using the flyers to demonize his Democratic foes.

"This kind of campaigning is degrading," he said.

But Crate said Democrats should get used to defending their votes because more flyers are on the way.

Follow your local news on the Web at www.woonsocketcall.com

Feds seize JFK boat from alleged drug dealer

MARBLEHEAD, Mass. (AP) – Federal agents Wednesday seized a sailboat that was once owned by President Kennedy, saying the boat's current owner bought it with proceeds from a large-scale marijuana trafficking operation.

Kennedy bought the Star Class sloop "Flash II" in 1934 and sailed it in races off Hyannis. He sold the boat in 1942 just before shipping out for World War II.

Federal prosecutors said Gregory Olaf Anderson bought the boat in 1996 with proceeds from his marijuana smuggling and distribution operation. He had invested $12,000 to $15,000 to buy and refurbish the sailboat, and was hoping to sell it for more than $1 million because of its association with Kennedy, authorities said.

Acting on a tip from a cooperating witness who was Anderson's partner in the alleged drug operation, DEA agents seized the boat from a storage facility in Marblehead, about 15 miles northeast of Boston.

Samantha Martin, a spokeswoman for the U.S. attorney's office in Boston, said Anderson had not been charged in connection with the seizure and was not in federal custody. She said the case remains under investigation.

Anderson was arrested in Arizona in 2001 and sentenced to a year and a half in prison for transporting 1,300 pounds of the informant's marijuana, according to prosecutors. They said that after Anderson was released, he contacted the informant to discuss starting up another trafficking business.

Anderson could not be reached Wednesday. Prosecutors would not say where he was living, but in an affidavit, the cooperating witness said he lived in Florida.

4th ANNIVERSARY
In Loving Memory
Cecile Robitaille
2000 - OCT. 14 - 2004

We sat beside your bedside,
Our hearts were crushed and sore;
We did our best to the end,
Till we could do no more.
In tears we watched you sinking,
We watched you fade away,
And though our hearts were breaking,
We knew you could not stay.
You left behind some aching hearts,
That loved you most sincere;
We never shall and never will
Forget you Mother dear.
Sadly missed by Children, Monique, Roger, Denise & Marc and Grandchildren, Ryan, Melissa & Andrea

In Loving Memory
WILLIAM LANCTOT
2001 – Oct. 13 – 2004
If tears could build a stairway,
and memories a lane,
I'd walk right up to heaven
and bring you home again.
Love Always,
Mom and Dad

THE UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
Announces a
Five-Year Review
For the
STAMINA MILLS SUPERFUND SITE
North Smithfield, Rhode Island

The United States Environmental Protection Agency will begin conducting a Five-Year Review of the clean-up activities conducted at the Stamina Mills, Rhode Island, Superfund Site in North Smithfield, Rhode Island. The Five Year Review process evaluates the remedies implemented at the Site and determines if the remedies are still protective of human health and the environment. The Review will evaluate present Site conditions.

EPA began clean-up activities at the Stamina Mills Site in the 1990's with the demolition of the old mill buildings. Following demolition, EPA initiated other components of the remedy, including soil vapor extraction in a former solvent spill area, groundwater extraction and treatment using air stripping, and removal of the old landfill area. EPA's final Record of Decision issued in September 1990 and the subsequent Explanation of Significant Differences issued in June 2000, describe in detail the selected remedy for the site.

When completed, a copy of the review report will be placed in the Information Repository located in the North Smithfield Public Library, 20 Main Street, Slatersville, Rhode Island, 401-767-2780.

EPA will also conduct a number of telephone interviews with nearby businesses, residents, local officials, state officials, and others to obtain their opinion on the clean-up process. If you would like to speak with us about this Site, please contact Byron Mah, EPA Remedial Project Manager, or Sarah White, Community Involvement Coordinator.

Byron Mah 617-918-1249 or 1-888-372-7341 ext 81249,
email: mah.byron@epa.gov

Sarah White 617-918-1026 or 1-888-372-7341 ext 81026,
email: white.sarah@epa.gov

EPA
Region 1, New England

Theresa M. Gervais

BURRILLVILLE – Mrs. Theresa M. (Tarvis) Gervais, 65, of Ashton Court, died Wednesday, Oct. 13, 2004, in the Landmark Medical Center, Woonsocket. She was the wife of 45 years of Henry M. Gervais III.

Born in Smithfield, she was the daughter of the late William and Marion (Sousa) Tarvis. She lived in Burrillville for 25 years.

Mrs. Gervais was a cosmetologist and hairdresser for the former Kornstein's Beauty Salon in Woonsocket for 10 years. She was also an employee of several area beauty salons.

Her hobbies included playing bingo.

She is also survived by two sons, Paul M. Gervais of Harrisville and Kevin A. Gervais of New York; a daughter, Karen A. Murray of Slatersville; a sister, Mary Caine of Smithfield; four grandsons; and four great-grandchildren.

She was the sister of the late Alfred, Serafin and William Travis Jr.

Her funeral will be held Saturday at 9 a.m. from the Elliot M. Robbins Chapel, 2251 Mineral Spring Ave., North Providence, with a Mass at 10 at St. Michael Church, 80 Farnum Pike, Smithfield. Burial will be in Highland Memorial Park, Johnston.

Normand E. Tellier

BURRILLVILLE – Normand E. Tellier, 65, of Perry Street, Harrisville, died Wednesday, Oct. 13, 2004, in the Philip Hulitar Inpatient Center, Providence. He was the husband of Carol (Reynolds) Tellier.

Born July 25, 1939, in Woonsocket, he was the son of the late Joseph and Loza (Machure) Tellier. He lived in Burrillville for 40 years and previously lived in Woonsocket.

Mr. Tellier was a spot welder for the General Motors Co., formerly of Framingham, Mass., for 25 years, retiring in 1989.

He was an avid fisherman.

He is also survived by four daughters, Kimberly Tellier of Harrisville, Lisa Glasberg of Chepachet, Lori Fortier of Harrisville and Dawn Nirk of Pascoag; two sisters, Lorraine Spino of North Providence and Claire Doyon of North Kingstown; and eight grandchildren.

He was the father of the late Keith Tellier.

His funeral will be held Saturday at 9 a.m. from the Brown Funeral Home, 1496 Victory Highway, Oakland, with a Mass at 10 at St. Patrick Church, 104 Main St., Harrisville. Burial will be in St. Patrick Cemetery.

Lucy E. Guilbeault

WOONSOCKET – Mrs. Lucy E. (Nobrega) Guilbeault, 83, of St. Joseph Street, died Monday, Oct. 11, 2004, in the Landmark Medical Center. She was the wife of the late Raymond Guilbeault.

Born in North Grosvenordale, Conn., she was the daughter of the late Alfred and Mary (Furtado) Nobrega.

Mrs. Guilbeault was a weaver for the former Hanora Spinning Co. for more than 20 years, retiring in 1983.

She is survived by a daughter, Betty Ann Charlette of Bradenton, Fla.; four grandchildren; and eight great-grandchildren.

She was the sister of the late Alfred and John Nobrega, Mary Roy and Ernestine Slyz.

Her funeral will be held Friday at 8 a.m. from the Fournier Funeral Home, 99 Cumberland St., with a Mass at 10 at St. Joseph Church, Main Street, North Grosvenordale. Burial will be in the parish cemetery.

Robert C. Martin

SONOMA, Calif. – Robert C. "Jack" Martin, 49, of Los Robles Drive, formerly of Woonsocket, died Sept. 29, 2004, while fishing in San Francisco Bay.

Born Feb. 14, 1955, in Woonsocket, the son of Jeanne M. (Robidoux) Martin of Woonsocket and the late Louis P. Martin, he lived in Sonoma for the past 25 years. He was a graduate of Mount St. Charles Academy in Woonsocket and the University of Massachusetts in Boston.

Mr. Martin was a sales employee for many years. He was the owner of a wine tour business, Jack Valley Wine Tours, for the last five years.

He was an avid petanque player and an amateur wine maker. His interests included gardening and Sonoma area history.

He is also survived by a son, Orion Martin of Sonoma; a daughter, Lianna Rose Martin of Sonoma; a brother, Donald R. Martin of Albion; and his companion and mother of his children, Lynda Schulte of Sonoma.

A memorial Mass will be held Saturday at 10:30 a.m. at St. Ambrose Church, School Street, Albion. Arrangements are under the direction of Menard's Funeral Home, 127 Carrington Ave., Woonsocket.

Wally Harper, 63; composer, accompanist

NEW YORK (AP) – Wally Harper, a pianist, musical director and composer who had accompanied singer Barbara Cook since her 1975 comeback concert at Carnegie Hall, died Friday. He was 63.

Harper began working on Broadway in 1969 with the short-lived musical "Billy," for which he wrote incidental music and was assistant conductor. He arranged dance music for a string of productions in the 1970s, including Stephen Sondheim's "Company" and revivals of "Irene" and "Peter Pan."

Harper was already a fan of Cook's when the two began preparing material for the singer's Carnegie Hall concert. She had largely retired from the stage since achieving fame in the 1950s and 1960s as the star of such Broadway shows as "The Music Man" and "She Loves Me."

Buoyed by the concert's critical success, the pair launched a 30-year partnership that would yield a series of cabaret recordings and concerts, including the recent Broadway shows "Mostly Sondheim" and "Barbara Cook's Broadway."

DEATH NOTICES

GERVAIS
Theresa M. (Travis) on October 13, 2004. Wife of Henry M. Gervais, III. Mother of Karen Murray, Paul and Kevin Gervais. Sister of Mary Caine. Residence Ashton Ct., Burrillville. Funeral from the Elliott M. Robbins Chapel, 2251 Mineral Spring Ave., No. Providence, Saturday at 9AM. Mass of Christian Burial in St. Michael Church, Georgiaville at 10 AM. Calling hours Friday, 5-8 PM.

GUILBEAULT
Lucy E. 83 on October 11, 2004. Wife of the late Raymond Guilbeault. Mother of Betty Ann Charlette. Grandmother of Diane Gelardi, Lynn, Aime and James Fortier. Funeral will be held Friday at 8:00 from the Fournier & Fournier Funeral Home, 99 Cumberland St. with a Mass of Christian Burial at 10:00 in St. Joseph Church, Main St. N. Grosvenordale, CT. Burial in the parish Cemetery.

LALIBERTE

Edgar O. 70 on Oct. 10, 2004. Husband of Beverly F. (Rainville) Laliberte. Father of Cynthia A. Geruso and Paula F. Menard. Grandfather of Paige, Amanda and Cameron Menard. Brother of Alphonse and Ronald Laliberte, Gracia Plante, Germaine Pacheco and Jeannine Foisey. Residence Mendon Rd., No. Smithfield. His funeral service will be held Friday 9am from the Egidio DiPardo & Sons Funeral Home, 75 Harris Ave., Woonsocket with a Mass of Christian Burial at 10 am in Our Lady Queen of Martyrs Church, Park Ave. Burial will follow in St. Jean Baptiste Cemetery, Bellingham, MA. Relatives and friends are invited and may call on Thursday from 5-8 pm.

McDANIEL
Robert C. "Bob", age 75, died on October 10, 2004. Resident of Bellingham, MA. Former Husband of Lydia M. (Gooding) McDaniel and loving Father of Robert C. McDaniel Jr., Christopher B. McDaniel; Linda D. Dunn, Gwendolyn V. Cole, Cynthia V. Hankerson and the late Cynthia V. McDaniel and loving canine companion FooBoo and numerous friends and family. Funeral Service will be held Thursday 8:00PM at CARTIER'S FUNERAL HOME 151 S. Main St. (Route 126) Bellingham, MA. Visiting hours Thursday 6-8PM prior to service. Relatives and friends invited to attend.

MILETTE
Therese C. (Bouvier) age 80 died on October 9, 2004 Residence Wrentham Manor Bellingham, MA. Beloved wife of the Late Roland R. Milette and Loving Mother of Richard R., Daniel P., Marc G. Milette. Funeral will be held Friday 8:30AM from CARTIER'S FUNERAL HOME 151 South Main Street (Route 126) Bellingham, MA with a Mass of Christian Burial at 10:00AM in St. Blaise Church 1158 South Main Street Bellingham, MA. Inurnment will follow at the VA National Cemetery Bourne, MA. Visiting time 1 hour prior to Funeral Mass 8:30-9:30AM. Relatives and friends invited to attend. In lieu of flowers memorial donations to: American Lung Association of Rhode Island 298 West Exchange Street Providence, RI 02903 would be appreciated.

TELLIER
Normand E., died on October 13, 2004. Resident of Perry St., Harrisville, RI. Husband of Carol (Reynolds) Tellier. Funeral Saturday at 9am from the BROWN FUNERAL HOME, 1496 Victory Hwy., Oakland, with a Funeral Mass at 10am in St. Patrick's Church, Harrisville. Burial will be in St. Patrick's Cemetery, in Pascoag, RI. Calling hours Friday from 5:00 PM to 8:00 PM. In lieu of flowers donations maybe made to the Home & Hospice Care of RI. 50 Maude St. Providence, RI. 02908. brownfuneralhomes.com.

Appendix E
Notice for Informational Meeting

mailed 3/23/05

The US EPA and Rhode Island DEM invite you to attend an availability session about the Stamina Mills Superfund site

EPA and RI DEM staff will be on hand to answer questions about:

- **The Five Year Review of the Stamina Superfund Site Remedy**
- **The Private Well Survey**
- **The Status of Stamina Mills Cleanup**
- **Any other community concerns regarding the Stamina Mills Superfund site**

When: Wednesday, April 6, 2005

6:00-8:00 p.m.

Where: North Smithfield Municipal Annex Bldg
575 Smithfield Rd.
N. Smithfield, RI

For more information, contact:
Sarah White, US EPA Community Involvement Coordinator
617-918-1026 or toll free: 1-888-372-7341 ext. 81026

Appendix F
Private Well Use Survey

March 17, 2005

Dear Homeowner:

Enclosed is a survey EPA is conducting on private well water use. The purpose of this survey is to inventory all active and inactive private wells in the Forestdale area as part of EPA's review of the Stamina Mills Superfund site remedy. We have also enclosed a fact sheet that explains Five Year Reviews. We ask that you take few minutes to fill this out and return it in the self addressed stamped envelope. Thank you,

Sincerely

Sarah White
Community Involvement Coordinator
US EPA

Enc.

(Please print clearly)

Name: _____

Street Address:_____Town:_____

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no_____yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

(4) If there is a well on property, does it still have a pump and associated electrical?

(5) Do you (or previous owners) have an abandoned a well on your property?
_____no
____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

(7) How deep is your well?

(8) What kind of yield (flow rate) do you get from this well?

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.

Questions? Please call Sarah White, US EPA at 617-918-1026

EPA

Superfund Today

FOCUS ON FIVE-YEAR REVIEWS INVOLVING THE COMMUNITY

Checking Up On Superfund Sites:
The Five-Year Review

The U.S. Environmental Protection Agency (EPA) conducts regular checkups, called five-year reviews, on certain Superfund sites. EPA looks at sites where cleanup left wastes that limit site use. For example, EPA will look at a landfill to make sure the protective cover is not damaged and is working properly. EPA will also review sites with cleanup activity still in progress after five years.

In both cases, EPA checks the site to make sure the cleanup continues to protect people and the environment. The EPA review team conducts the review and writes a report on its findings. At some sites, other federal agencies, a state agency, or an Indian tribe may do the review, but EPA stays in the process and approves the report.

The Five-Year Review is:

- a regular EPA checkup on a Superfund site that has been cleaned up—with waste left behind—to make sure the site is still safe;
- a way to make sure the cleanup continues to protect people and the environment; and
- a chance for you to tell EPA about site conditions and any concerns you have.

During the review, EPA studies information on the site, including the cleanup and the laws that apply, and inspects the site to make sure it continues to be safe. EPA needs information from people who are familiar with the site. As someone living close to the site, you may know about things that can help the review team decide if it is still safe.

Here are some examples of things to tell EPA about:

- Broken fences, unusual odors, dead plants, materials leaving the site, or other problems
- Buildings or land around the site being used in new ways
- Any unusual activities at the site, such as dumping, vandalism, or trespassing
- Ways the cleanup at the site has helped the neighborhood.

For More Information ...

... about a Superfund site in your neighborhood, please call the toll-free Superfund/RCRA Hotline at 1-800-424-9346 or the Community Involvement Coordinator in the EPA regional office for your state. Your local EPA office can tell you where you can go to review files on every Superfund site in your area. Often, EPA holds community meetings to let people who live near a site know about site activities. You also may find useful information on the Superfund home page (www.epa.gov/superfund). For more information on the review process, see "Comprehensive Five Year Review Guidance," EPA 540-R-01-007, OSWER 9355.7-03B-P, June 2001.

Mailed out
Week of 3/7/05

Notice to Residents of Forestdale, RI

Dear Homeowner:

During the week of March 17, a team from the US Environmental Protection Agency will be conducting a door to door survey in the Forestdale area on private well water use. The purpose of the survey is to inventory all active and inactive private wells in the area as part of EPA's Five Year Review of the Stamina Mills Superfund site remedy. If you have any questions, please call Sarah White, US EPA 617-918-1026 toll free: 1-888-372-7341 ext 81026.

Appendix G
Private Well Use Survey Results

Freitas Lane

(Please p

Name: _

Street Address: 10 FREITAS LANE Town: FORESTDALE RI. 02824

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no _____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

N. SMITHFIELD PUBLIC WATER SUPPLY

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? NO

(4) If there is a well on property, does it still have a pump and associated electrical?

NO, WELL IS DISCONNETD & NOT IN USE

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

____ yes, if so do you have abandonment records?

(6) When was your well installed (year)?

1961 & DISCONNECTED WHEN WE RECIEVED TOWN WATER SUPPLY

(7) How deep is your well?

(8) What kind of yield (flow rate) do you get from this well?

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

NONE

(10) Comments?

WELL IS ON PROPERTY BUT HAS NOT BEEN USED FOR ANYTHING SINCE WE'VE HAD TOWN WATER, WHICH IS APPROX. 15 OR SO YEARS, THERE IS NO WELL ON ADJOINING LOT, WHICH I OWN AND THERE IS NO WELL ON 3RD LOT WHICH IS ACTUALLY THE ROAD (FREITAS LANE) BUT IN TOWN RECORDS, I BELIEVE IT IS CALLED A LOT, WHICH I ALSO OWN (IT IS A PRIVATE ROAD BUT MAINTAIN BY THE TOWN

THANK YOU

ANY QUESTIONS

GUY E. WHEATON

PH. # 1-401-769-0646

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please p

Name: (

Street Address: 16 Freitas Lane POB146 Town: N. Smithfield

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no _____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain. Connected to N.S. water supply

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? no

(4) If there is a well on property, does it still have a pump and associated electrical?
yes- not connected -pump non-functional

(5) Do you (or previous owners) have an abandoned a well on your property?
✓ no
____ yes, if so do you have abandonment records?

(6) When was your well installed (year)? N|A

(7) How deep is your well? N|A

(8) What kind of yield (flow rate) do you get from this well? N|A

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal? don't know

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Ple

Nar

Street Address: 191 Freitas Lane Town: Forestdale RI

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no ____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

Yes

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

No

(4) If there is a well on property, does it still have a pump and associated electrical?

Yes

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

____ yes, if so do you have abandonment records?

(6) When was your well installed (year)?

1972

(7) How deep is your well?

280 FT

(8) What kind of yield (flow rate) do you get from this well?

5 gls P M

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

0

(10) Comments?

Well is used by inspectors When they call we connect electric to well

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

Kirby Lane

(Pleas

Name _____

Street Address: 9 Kirby LANE Town: Forestdale

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no _____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain. Yes

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? Yes

(4) If there is a well on property, does it still have a pump and associated electrical? Yes

(5) Do you (or previous owners) have an abandoned a well on your property?
✓ no
____ yes, if so do you have abandonment records?

(6) When was your well installed (year)? UNKNOWN / PRIOR TO US buying THE house IN 1999

(7) How deep is your well? UNKNOWN

(8) What kind of yield (flow rate) do you get from this well? UNKNOWN

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal? NEARLY ZERO

(10) Comments? OCCASIONALLY WE WASH OUR CARS IN THE SUMMERTIME. THATS THE ONLY TIME WE USE THE WELL WATER

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please

Name: _____

Street Address: 14 Kirby lane Town: Forestdale

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no ____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

Yes we are connected to N.S. Water Supply
We Also DRINK Bottled Water

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

NO

(4) If there is a well on property, does it still have a pump and associated electrical?

NO

(5) Do you (or previous owners) have an abandoned a well on your property?
____ no
✓ yes, if so do you have abandonment records?

We have 2 Abandoned Wells, NO Pump or Eletrical equipment.

NO ABandonment Papers on either.

(6) When was your well installed (year)?

No Idea

(7) How deep is your well?

Not Sure

(8) What kind of yield (flow rate) do you get from this well?

/

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

/

(10) Comments?

We Have 2 wells on the Property & Both are Inactive, no pump or electrical equipment

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Pl

Na

Street Address: 15 Kirby Lane ~~Forestdale RI~~ Town: North Smithfield

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no _____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain. yes

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? no

(4) If there is a well on property, does it still have a pump and associated electrical?

(5) Do you (or previous owners) have an abandoned a well on your property?
_____ no
_____ yes, if so do you have abandonment records?

(6) When was your well installed (year)?

(7) How deep is your well?

(8) What kind of yield (flow rate) do you get from this well?

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please print clearly)

Name: _____

Street Address: 19 KIRBY LANE Town: FORESTDALE, RI 02824

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? X no _____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

NORTH SMITHFIELD PUBLIC WATER SUPPLY

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? NO

(4) If there is a well on property, does it still have a pump and associated electrical?

PUMP YES - ASSOCIATED ELECTRICAL NO

(5) Do you (or previous owners) have an abandoned a well on your property?

_____ no

✓ yes, if so do you have abandonment records? NO –

(6) When was your well installed (year)? 1960

(7) How deep is your well? 209 FEET

(8) What kind of yield (flow rate) do you get from this well? N/A

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal? N/A

(10) Comments?

The well was rendered inactive when they (the town) connected town water to the property.
A section of the cellar is on ledge our electrical wires were thru the ledge, the wires were cut at the ledge.

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

Street Address: 23 Kirby ln. Town: N.S.

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ____no ✓ yes, Where is that well located? FRONT YARD

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

NO

(4) If there is a well on property, does it still have a pump and associated electrical?

YES

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

EARLY 60'S

(7) How deep is your well?

220'

(8) What kind of yield (flow rate) do you get from this well?

?

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

100 GAL. ±

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please print clearly)

Name: _____

Street Address: 29 Kirby Town: N.S.

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ____no ✓ yes, Where is that well located?

Back right corner.

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

exclusively on well water - drinking/washing

(4) If there is a well on property, does it still have a pump and associated electrical?

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

originally in 1960 redrilled 1964

(7) How deep is your well?

240'

(8) What kind of yield (flow rate) do you get from this well?

7 gallons/minute - no change in flow rate

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

(10) Comments?

Yes, would like well sampled

- have a water softener

4 neighboring homes on Kirby are on wells.

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you. Questions? Please call Sarah White, US EPA at 617-918-1026

Litzen Road

(Plea

Name. _____

Street Address: 31 Litzen Rd Town: Forestdale

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ____no X yes, Where is that well located?
31 Litzen Rd

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

N/A

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

Yes

(4) If there is a well on property, does it still have a pump and associated electrical?

Yes

(5) Do you (or previous owners) have an abandoned a well on your property?
X no
____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

1953 ±

(7) How deep is your well?

230 ft ±

(8) What kind of yield (flow rate) do you get from this well?

Unknown

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

Per week

constant
- 7 Showers
- 2 Clothes Wash
- 1 Car Wash
- Dishes (No dish Washer)
- Cleaning

Water Bowls (seasonal)

(10) Comments?

2 years ago, well ran dry a few Times. Hesitate to use much water at one Time since. Suspected the Stanina Mills site was pumping water from underground, causing problems with my well.

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Pl

Na. _____ _____

Street Address: 47 Litzen Rd Town: North Smithfield RI

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ✓ yes, Where is that well located? IN the back of house

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? No

(4) If there is a well on property, does it still have a pump and associated electrical?
YES

(5) Do you (or previous owners) have an abandoned a well on your property?
✓ no
____yes, if so do you have abandonment records?

(6) When was your well installed (year)? 1954

(7) How deep is your well? 130 Feet

(8) What kind of yield (flow rate) do you get from this well? 1½ MIN

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal? per day about 30 gal.

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please print clearly)

Mrs

Name: ___

Street Address: 50 Citizen Rd Town: N.S

401/762-3039

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ____no ✓ yes, Where is that well located?

well located on RT side of House

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

exclusively on well water - use

(4) If there is a well on property, does it still have a pump and associated electrical?

(5) Do you (or previous owners) have an abandoned a well on your property?

____no

____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

5 yrs ago in 2000

(7) How deep is your well?

150 - 200'

(8) What kind of yield (flow rate) do you get from this well?

4 gallons / minute

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

Don't Know - not much

1 resident lives here.

(10) Comments?

Yes, would like well tested

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

Lorraine Avenue

(Please pri

Name: ___

Street Address: 24 Lorraine Ave P.O. Box 68 Town: Forestdale R.I.

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ✓ yes, Where is that well located?

ON OUR FRONT PROPERTY

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

N/A

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

NO

(4) If there is a well on property, does it still have a pump and associated electrical?

yes

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

Some Where in The 1950's

(7) How deep is your well?

120'

(8) What kind of yield (flow rate) do you get from this well?

POOR

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

N/A

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please

Name: _____

Street Address: 25 LORRAINE Avenue Town: N. Smithfield RI

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no _X_ yes, Where is that well located? On the RIGHT SIDE of house - NEAR the back door.

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

(4) If there is a well on property, does it still have a pump and associated electrical?

(5) Do you (or previous owners) have an abandoned a well on your property?
_X_ no
____yes, if so do you have abandonment records?

(6) When was your well installed (year)? 1958

(7) How deep is your well?

135'

(8) What kind of yield (flow rate) do you get from this well? 5 gal. per minute

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

3 person household

constant

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please

Name: _

Street Address: 27 LORRAINE AVE. Town: NORTH SMITHFIELD

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ____ no __X__ yes, Where is that well located? 15' from the side of house

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? no

(4) If there is a well on property, does it still have a pump and associated electrical? yes

(5) Do you (or previous owners) have an abandoned a well on your property?
__X__ no
____ yes, if so do you have abandonment records?

(6) When was your well installed (year)? 1958

(7) How deep is your well? 98 feet

(8) What kind of yield (flow rate) do you get from this well?

3 - 4 gals. per minute

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

Constant use

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please print cle

Name: _____

Street Address: 33 Lorraine Ave Town: _____

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ✓ yes, Where is that well located?

dont know where located

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

Well Use it For exclusively

(4) If there is a well on property, does it still have a pump and associated electrical?

(5) Do you (or previous owners) have an abandoned a well on your property?

_____no

____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

40+

(7) How deep is your well?

Don't Know

(8) What kind of yield (flow rate) do you get from this well?

OK

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

don't know
5 people

(10) Comments?

Talk to husband

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please pri

Name: ___

Street Address: 24 Lorraine AVe P.O. Box 68 Town: Forestdale R.I.

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ✓ yes, Where is that well located?

ON OUR FRONT PROPERTY

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

N/A

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

NO

(4) If there is a well on property, does it still have a pump and associated electrical?

yes

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

_____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

Some where in The 1950's

(7) How deep is your well?

120'

(8) What kind of yield (flow rate) do you get from this well?

POOR

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

N/A

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

Maple Street

(Plea

Name _____

Street Address: CORNER MAPLE ST. & SCHOOL Town: N. S., R.I.

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no _____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

NO HOUSE ON PROPERTY

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

(4) If there is a well on property, does it still have a pump and associated electrical?

(5) Do you (or previous owners) have an abandoned a well on your property?

_____ no

_____ yes, if so do you have abandonment records?

(6) When was your well installed (year)? 2004

(7) How deep is your well?
240'

(8) What kind of yield (flow rate) do you get from this well? 10 GAL PER MIN

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please pri

Name: ___ _____

Street Address: 6 MAPLE AVE. Town: N. Smithfield (Forestdale)

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ✓ yes, Where is that well located? IN the BACK YARD

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? NO

(4) If there is a well on property, does it still have a pump and associated electrical? Yes

(5) Do you (or previous owners) have an abandoned a well on your property?
✓ no
____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

NOT SURE

(7) How deep is your well?

240 Feet

(8) What kind of yield (flow rate) do you get from this well?

3 gallons a minute

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

NOT SURE, USE MORE IN the summer.

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please print clearly)

Nam_ _ _____

Street Address: 9 Maple Avenue Town: Forestdale

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no __X__yes, Where is that well located? 9 Maple Avenue

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? Yes.

(4) If there is a well on property, does it still have a pump and associated electrical? Yes.

(5) Do you (or previous owners) have an abandoned a well on your property?
__X__no
_____yes, if so do you have abandonment records?

(6) When was your well installed (year)? Unknown.

(7) How deep is your well? Unknown.

(8) What kind of yield (flow rate) do you get from this well? Unknown.

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal? Unknown.

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please

Name: _

Street Address: 12 MAPLE AV Town: FORESTDALE

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ___X___yes, Where is that well located? BACK YARD

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

—

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

NO

(4) If there is a well on property, does it still have a pump and associated electrical?

YES

(5) Do you (or previous owners) have an abandoned a well on your property?

___X___no

_____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

(7) How deep is your well?

~~UNKNOWN~~
UNKNOWN

(8) What kind of yield (flow rate) do you get from this well?

?

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

12 gal CONSTANT

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please print clearly)

Name: —

Street Address: 14 Maple Avenue P.O. BOX 295 Town: Forestdale, RI 02824

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ____no ✓ yes, Where is that well located? Under bulkhead at rear of basement.

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

N/A

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? No

(4) If there is a well on property, does it still have a pump and associated electrical?

Yes. (I'm referring to well identified in Question 1).

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

Don't know. How was built in the 1920s.

(7) How deep is your well?

Unsure. It's an Artesian well.
I've been told from 500 - 1000 feet deep.

(8) What kind of yield (flow rate) do you get from this well?

Unsure. Pressure is O.K., not strong.

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

Only one person lives in the home.
Estimates:
9 Showers per week
Use Toilet 2 times per day
Wash hands 3-4 times a day
2 loads of laundry per week
2 full dishwasher loads per week.

(10) Comments?

I've been here since 1992. Why is this the first survey I've received?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please

Name: _____

Street Address: 18 Maple Avenue Town: Forestdale

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no _____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

NS Public Supply

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

NO

(4) If there is a well on property, does it still have a pump and associated electrical?

No

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

____ yes, if so do you have abandonment records?

(6) When was your well installed (year)?

N/A

(7) How deep is your well?

N/A

(8) What kind of yield (flow rate) do you get from this well?

N/A

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

N/A

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Ple

Nar

Street Address: 26 MAPle Ave Town: Forestdale
RI-02824-0603

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no ____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

N.S. public water

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? I sometimes used the water to water the lawn. but do not do that any more since the trash leaks

(4) If there is a well on property, does it still have a pump and associated electrical?

yes.

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

____ yes, if so do you have abandonment records?

(6) When was your well installed (year)?

?

(7) How deep is your well?

?

(8) What kind of yield (flow rate) do you get from this well?

?

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

I no longer use any water from the well since the heating tank leaks so I shut it off.

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Plea

Nam

Street Address: 27 Maple Ave Town: Forestdale, RI 02824

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no ____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

North Smithfield public water supply

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? NO

(4) If there is a well on property, does it still have a pump and associated electrical?

NO.

(5) Do you (or previous owners) have an abandoned a well on your property?

____ no

✓ yes, if so do you have abandonment records?

NO

- We do not Drink water here. IT TASTES terrible And we do NOT trust It. WATER DOES NOT supposed to have A TASTE. BUT our's does And it is BITTER.

(6) When was your well installed (year)?

(7) How deep is your well?

(8) What kind of yield (flow rate) do you get from this well?

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Plea

Nam

Street Address: 32 MAPLE AVE. Town: FORESTDALE

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no ____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

N-S. Public water supply

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? NO

(4) If there is a well on property, does it still have a pump and associated electrical?

NO

(5) Do you (or previous owners) have an abandoned a well on your property?

____ no

✓ yes, if so do you have abandonment records? NO

(6) When was your well installed (year)? ?

(7) How deep is your well? ?

(8) What kind of yield (flow rate) do you get from this well? ?

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal? N/A

(10) Comments? _____

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please print clearly)

Name: _____

Street Address: 33 Maple Town: _____

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no _____ yes, Where is that well located?

no longer in use

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

(4) If there is a well on property, does it still have a pump and associated electrical?

(5) Do you (or previous owners) have an abandoned a well on your property?

_____no

_____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

(7) How deep is your well?

(8) What kind of yield (flow rate) do you get from this well?

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please

Name:

Street Address: 34 Maple Ave Box 86 Town: Forestdale

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no _____ yes, Where is that well located? backyard - Donot use it for any purpose.

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

Yes, I am connected to NS Public Water System
No Alternate

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? NO

(4) If there is a well on property, does it still have a pump and associated electrical?

NO

(5) Do you (or previous owners) have an abandoned a well on your property?

_____ no
✓ yes, if so do you have abandonment records?

(6) When was your well installed (year)?

about 65 yrs ago.

(7) How deep is your well?

500 feet

(8) What kind of yield (flow rate) do you get from this well?

I don't know

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

I do not use the well for any household or outside use,

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please print clearly)

Name: ____ _____

Street Address: 44 Maple Town: N.S.

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no _____ yes, Where is that well located?

well not connected

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

(4) If there is a well on property, does it still have a pump and associated electrical?

(5) Do you (or previous owners) have an abandoned a well on your property?

_____ no

_____ yes, if so do you have abandonment records?

(6) When was your well installed (year)?

(7) How deep is your well?

(8) What kind of yield (flow rate) do you get from this well?

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Plea

Nam

Street Address: 47 Maple Ave PO BOX 113 Town: Forestdale RI

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? X no _____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

North Smithfield Public

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

NO

(4) If there is a well on property, does it still have a pump and associated electrical?

NO

(5) Do you (or previous owners) have an abandoned a well on your property?

_____ no

X yes, if so do you have abandonment records?

no abandonment records

(6) When was your well installed (year)?

1856

(7) How deep is your well?

Don't know

(8) What kind of yield (flow rate) do you get from this well?

Don't know

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

N/A

(10) Comments? Why are new wells being drilled on school Street

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

Street Address: 50 Maple Ave PO Box 243 Town: Forestdale, RI 02824

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _X_no_____yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

N. Smithfield water

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? No -
We have not used our well at all since being connected to the town.

(4) If there is a well on property, does it still have a pump and associated electrical?

No.

(5) Do you (or previous owners) have an abandoned a well on your property?
_____no
____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

prior to 1979 when we bought the house.

(7) How deep is your well?

(8) What kind of yield (flow rate) do you get from this well?

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please print clearly)

Name: _____

Street Address: 51 Mozler Town: N. Smith

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no _____ yes, Where is that well located?

always on town water

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

(4) If there is a well on property, does it still have a pump and associated electrical?

(5) Do you (or previous owners) have an abandoned a well on your property?

_____ no

_____ yes, if so do you have abandonment records? ?

(6) When was your well installed (year)?

(7) How deep is your well?

(8) What kind of yield (flow rate) do you get from this well?

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please pri

Name: ___ _____

Street Address: 55 Maple Town: N. Smith

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ___✓___no_____yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

(4) If there is a well on property, does it still have a pump and associated electrical?

(5) Do you (or previous owners) have an abandoned a well on your property?
_____no
____yes, if so do you have abandonment records?

Town sealed well

(Pleas

Name. _____ _____

Street Address: 60 MAPLE AVE Town: FORESTDALE

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no ____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

NORTH SMITHFIELD PUBLIC WATER

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? NO

(4) If there is a well on property, does it still have a pump and associated electrical?

NO

(5) Do you (or previous owners) have an abandoned a well on your property?

____ no

✓ yes, if so do you have abandonment records? NO

HASN'T BEEN USED, IT WAS SHUT DOWN AND DISCONNECTED WHEN TOWN CAME WITH WATER SYSTEM

(6) When was your well installed (year)?

(7) How deep is your well?

(8) What kind of yield (flow rate) do you get from this well?

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

(10) Comments?

We have encl a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? P e call Sarah White, US EPA at 617-918-1026

Roselawn Avenue

(Please p

Name: _

Street Address: 1 Rosebawn Ave Forestdale Town: No Smithfield

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? 1/2 + 1/2 no ____ yes, Where is that well located? Side of house

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain. We are connected

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? ~~yes~~ No

(4) If there is a well on property, does it still have a pump and associated electrical? yes

(5) Do you (or previous owners) have an abandoned a well on your property?
✓ no
____ yes, if so do you have abandonment records?

(6) When was your well installed (year)? 1953?

(7) How deep is your well? ?

(8) What kind of yield (flow rate) do you get from this well? maybe 1 - 1 1/2 gal./min.

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

Not sure

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please print clearly)

Name: _____

Street Address: 3 Rose lawn Ave Town: Forestdale

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ✓ yes, Where is that well located? front to the house, to right as you come to the house

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

_____

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

no

(4) If there is a well on property, does it still have a pump and associated electrical?

yes

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

1979

(7) How deep is your well?

250 ft

(8) What kind of yield (flow rate) do you get from this well?

15 gal per minute

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

All our water needs come from this well: showers, laundry, cooking . . .

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Pleas

Name.

Street Address: 4 ROSELAWN AVE. Town: No. SMITHFIELD

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no _____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain. HAVE NORTH SMITHFIELD PUBLIC WATER

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? YES, IT'S HOOKED UP TO OUT SIDE FAUCETS, WASHING MACHINE & UTILITY SINK.

(4) If there is a well on property, does it still have a pump and associated electrical?
YES

(5) Do you (or previous owners) have an abandoned a well on your property?
✓ no
____ yes, if so do you have abandonment records?

(6) When was your well installed (year)? WHEN HOUSE WAS BOILT IN 1940's

(7) How deep is your well? 75 - 100 FT ?

(8) What kind of yield (flow rate) do you get from this well?

DID 4 gal IN 1 MINUTE

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

WE USE WELL 5 to 6 DAYS A WEEK. WE DO 2 to 4 LOADS OF WASH ON THESE DAYS. 700+ GALLONS WK.

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Plea

Name. _____

Street Address: ~~4 Roslawn~~ 8 Roslawn Town: N.S.

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ✓ yes, Where is that well located?

located in Backyard

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

yes, drinking / washing

(4) If there is a well on property, does it still have a pump and associated electrical?

(5) Do you (or previous owners) have an abandoned a well on your property?

_____no

_____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

60 yrs ago

(7) How deep is your well?

200'

(8) What kind of yield (flow rate) do you get from this well?

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

enough more kids

(10) Comments?

well is fine

have water tested /

would like well tested

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please print c

Name: _____

Street Address: 9 Roseland Town: N.S.

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ✓ yes, Where is that well located?

in Front of porch.

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

use everyday - not connected to H_2O - water plants

(4) If there is a well on property, does it still have a pump and associated electrical?

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

@ 1965 (40 yrs ago)

(7) How deep is your well?

not too deep

(8) What kind of yield (flow rate) do you get from this well?

satisfied w/ flow

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

(10) Comments? - would be willing to have well tested

- Its well serviced 1/yr - serviced Jan 2005

- Has a water softener - no problems.

D+P Water Systems
179 Hill Rd
Thompson, CT 06277
Phone: 800-957-7638

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please pri

Name: _____

Street Address: 11 ROSELAWN AVE Town: FORESTDALE

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ✓ yes, Where is that well located? FRONT YARD

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? NO

(4) If there is a well on property, does it still have a pump and associated electrical?

YES

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

1965

(7) How deep is your well?

?

(8) What kind of yield (flow rate) do you get from this well?

40/60

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal? CONSTANT

30 - 50 GALS A DAY?

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Pl

Na

Street Address: 14 ROSELAWN AVE Town: FORESTDALE
North Smithfield

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no ___ yes, Where is that well located? Front yard * outside faucets only our well.

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

WE ARE CONNECTED to NS public water supply.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? YES

(4) If there is a well on property, does it still have a pump and associated electrical?

YES - OPERATING

(5) Do you (or previous owners) have an abandoned a well on your property?
X no
___ yes, if so do you have abandonment records?

(6) When was your well installed (year)? ? 1961

(7) How deep is your well?

UNKNOWN

(8) What kind of yield (flow rate) do you get from this well?

UNKNOWN - WELL WAS being USED when we PURCHASED 1992

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

SEASONAL - VARIES - 1gal to 30 gals

(10) Comments?

None.

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you. Questions? Please call Sarah White, US EPA at 617-918-1026

(Plea

Nam _____

Street Address: 15 Roselawn Ave. Town: Forestdale

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no _____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

Connected to N. S. public water.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

NO

(4) If there is a well on property, does it still have a pump and associated electrical?

NO

(5) Do you (or previous owners) have an abandoned a well on your property?

_____ no

____ yes, if so do you have abandonment records?

Not sure

(6) When was your well installed (year)?

(7) How deep is your well?

(8) What kind of yield (flow rate) do you get from this well?

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please print cle

Name: _____ _____

Street Address: 17 Roselawn Town: N.S.

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ✓ yes, Where is that well located?

Front yard / irrentation

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

use exclusively

(4) If there is a well on property, does it still have a pump and associated electrical?

(5) Do you (or previous owners) have an abandoned a well on your property?

_____no

_____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

Before 60's.

(7) How deep is your well?

250' deep

(8) What kind of yield (flow rate) do you get from this well?

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

no problems w/ Flow

(10) Comments?

Would like well tested

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

Don't Know

(Please print

Name: _____

Street Address: 18 Roselawn Ave Town: Forestdale, RI

NONE

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no _____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

NONE

Public

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? NO

(4) If there is a well on property, does it still have a pump and associated electrical?

NO

(5) Do you (or previous owners) have an abandoned a well on your property?

_____ no

✓ yes, if so do you have abandonment records? NO

(6) When was your well installed (year)? Don't Know

(7) How deep is your well? Don't Know

(8) What kind of yield (flow rate) do you get from this well?

None

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

None

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please print clearly)

Name

Street Address: 19 ROSELAWN AVE. Town: NO. SMITHFIELD
(SECTION OF FORESTDALE) RI

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? X no _____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

YES - Connected to NS water supply.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? YES

(4) If there is a well on property, does it still have a pump and associated electrical? YES

(5) Do you (or previous owners) have an abandoned a well on your property?
X no
____ yes, if so do you have abandonment records?

(6) When was your well installed (year)? Approximately 1958 with new pump and spider added in 1988.

(7) How deep is your well?

385 ft.

(8) What kind of yield (flow rate) do you get from this well?

Approximately 9 GPM

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

Seasonal only! – Lawn care – watering flowers – car washing – some pool fill (top-off only!)

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Pleas

Name _____

Street Address: 21 ROSELAWN AVE, FORESTDALE Town: North SMITHFIELD, RI

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no _____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? No

(4) If there is a well on property, does it still have a pump and associated electrical? No

(5) Do you (or previous owners) have an abandoned a well on your property?
✓ no
____ yes, if so do you have abandonment records?

(6) When was your well installed (year)?

(7) How deep is your well?

(8) What kind of yield (flow rate) do you get from this well?

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please print clearly)

Name

Street Address: 23 ROSELAWN AVE., P.O. BOX 184 Town: FORESTDALE RI 02824

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no _____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

We are connected to the North Smithfield public water supply.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

No.

(4) If there is a well on property, does it still have a pump and associated electrical?

No.

(5) Do you (or previous owners) have an abandoned a well on your property?

_____ no

✓ yes, if so do you have abandonment records? No.

(6) When was your well installed (year)?

1965

(7) How deep is your well?

350 ft.

(8) What kind of yield (flow rate) do you get from this well?

N/A

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

N/A

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

School Street

(Please

Name: _____

Street Address: 40 School St P.O. Box 187 Town: SLATERSVILLE R.I 02876

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ____no ✓ yes, Where is that well located? IN CELLAR - BACK OF HOUSE

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? No

(4) If there is a well on property, does it still have a pump and associated electrical?

YES.

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

Don't Know - BEEN HERE 40 YEARS - WAS ALREADY IN

(7) How deep is your well?

200+ feet

(8) What kind of yield (flow rate) do you get from this well?

2 to 3 Gallon a minute

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

Don't know -

(10) Comments? - Well has been tested by EPA - ALWAYS FOUND to BE OK

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you. Questions? Please call Sarah White, US EPA at 617-918-1026

(Please p

Name: _ N

Street Address: 52 SCHOOL ST, #1 Town: SLATERSVILLE, RI 02876

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? X no _____yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

N/C

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

N/C

(4) If there is a well on property, does it still have a pump and associated electrical?

NA

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

N/A

(7) How deep is your well?

N/A

(8) What kind of yield (flow rate) do you get from this well?

N/A

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

N/A

(10) Comments?

None

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please

Name: _

Street Address: 53 School STREET Town: SLATERSVILLE

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no _____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

Connected to the North Smithfield water supply.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? yes

(4) If there is a well on property, does it still have a pump and associated electrical?

yes

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

____ yes, if so do you have abandonment records?

(6) When was your well installed (year)?

Unknown

(7) How deep is your well?

Unknown

(8) What kind of yield (flow rate) do you get from this well?

Unknown

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

Seasonal. Infrequently during the summertime (June, July, August) for the garden.

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please pri

Name: _____

Street Address: 90 School Street Town: N. Smithfield

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? X no _____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

Public

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? No

(4) If there is a well on property, does it still have a pump and associated electrical?

(5) Do you (or previous owners) have an abandoned a well on your property?

X no

____ yes, if so do you have abandonment records?

(6) When was your well installed (year)?

(7) How deep is your well?

(8) What kind of yield (flow rate) do you get from this well?

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(P

Na

Street Address: 116 School ST PO Box 141 Town: Forestdale RI 02824-0141

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no _____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

N.S Public water supply

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

NO

(4) If there is a well on property, does it still have a pump and associated electrical?

NO

(5) Do you (or previous owners) have an abandoned a well on your property?

_____no

_____yes, if so do you have abandonment records?

This well has been periodical tested by EPA Representatives for many years.

(6) When was your well installed (year)?

(7) How deep is your well?

(8) What kind of yield (flow rate) do you get from this well?

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please print cle

178?
116?
118?

Name: Ms

Street Address: 118 SCHOOL ST FORESTDALE RI 02824 Town: NORTH SMITHFIEL

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ____no ✓ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

NO

(4) If there is a well on property, does it still have a pump and associated electrical?

NO

(5) Do you (or previous owners) have an abandoned a well on your property?

____no

✓ yes, if so do you have abandonment records? NO FILLED IN WITH BOULDERS 60 YEARS AGO

(Pleas

Name _____

Street Address: 118 School St. Town: No Smithfield

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no _____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

NO

(4) If there is a well on property, does it still have a pump and associated electrical?

(5) Do you (or previous owners) have an abandoned a well on your property?

X no

____ yes, if so do you have abandonment records?

(6) When was your well installed (year)?

(7) How deep is your well?

(8) What kind of yield (flow rate) do you get from this well?

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

(10) Comments?

We had concerns about a well that was dug on a lot for sale on (near Forestdale Post office) School Street - We thought new wells were not allowed

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please print clearly)

Nar

Street Address: 128 SCHOOL ST. BOX 2 Town: FORESTDALE RI. 02824

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no ____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

CONNECTED TO NORTH SMITHFIELD PUBLIC WATER SUPPLY

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

NO

(4) If there is a well on property, does it still have a pump and associated electrical?

YES (PRIVATE, NOT IN USE)

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

____ yes, if so do you have abandonment records?

(6) When was your well installed (year)?

JUNE 1978

(7) How deep is your well? 110

(8) What kind of yield (flow rate) do you get from this well?

25 GALS

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

NOT IN USE

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please print clearly)

Name: _____

Street Address: 167 School ct. Town: No. Smithfield
FORESTDALE, R.I. 02824
0092

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? X no _____ yes, Where is that well located?
Behind House Approx 6' From Rear of House.

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.
Yes we are connected To the No. Smithfield public water system

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? Yes

(4) If there is a well on property, does it still have a pump and associated electrical?
Yes

(5) Do you (or previous owners) have an abandoned a well on your property?
X no
_____ yes, if so do you have abandonment records?

(6) When was your well installed (year)?

Approx, circa, 1960

(7) How deep is your well?

480'

(8) What kind of yield (flow rate) do you get from this well?

7 gal min ?

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

Summer only to top off pool & wash cars.

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please pri

Name: ___ _____

Street Address: 179 SCHOOL ST. FORESTDALE, R.I. Town: NORTH SMITHFIELD

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no _____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

CONNECTED TO NORTH SMITHFIELD PUBLIC WATER SUPPLY

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

WELL IS ON PROPERTY — IT IS NOT USED

(4) If there is a well on property, does it still have a pump and associated electrical?

NO

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

____ yes, if so do you have abandonment records?

(6) When was your well installed (year)?

1968

(7) How deep is your well?

155 FEET

(8) What kind of yield (flow rate) do you get from this well?

14 GPM

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

WELL IS NOT USED

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please print

Name: _____

Street Address: 187 School St Town: No Smithfield
Forest Dale, RI 02824

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? X no _____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

A B

(2a) yes (2b) NO

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? NO

(4) If there is a well on property, does it still have a pump and associated electrical?
pump is in the well Electric is cut off - piping is disconnected -

(5) Do you (or previous owners) have an abandoned a well on your property?
X no
____ yes, if so do you have abandonment records?

(6) When was your well installed (year)?

20-25 yrs ago

(7) How deep is your well? 600'

(8) What kind of yield (flow rate) do you get from this well?

5 GPM

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

NONE

(10) Comments?

we were asked not to use the well when the town hooked us up to the town system - I have not used the well since however I would like to - I'd like an estimate of when the mess will be cleaned up by now you could have pumped a billion or two gallons to be purified - have you? Tamilie

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please print clearly)

Name: — — P.O. Box 75

Street Address: 193 School St. - Forestdale Town: No. Smithfield

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ____no ✓ yes, Where is that well located? in my cellar alcove

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

No

(4) If there is a well on property, does it still have a pump and associated electrical?

Yes

(5) Do you (or previous owners) have an abandoned a well on your property?

X no

____yes, if so do you have abandonment records?

(6) When was your well installed (year)? 1937

(7) How deep is your well?
288 ft

(8) What kind of yield (flow rate) do you get from this well?
4 gals per minute

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

Don't know for sure - I now live alone - so work cooking - watering flower gardens etc in summer enough for myself and also did fine with a then family of (5)

(10) Comments?

Now have a small filter on the pipeline before the holding tank - have used this water for 70 of my 75 yrs living here.

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please p

Name: _____ _____

Street Address: PO Box 716 194 School St Town: Forestdale

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ✓ yes, Where is that well located? On my property behind the house

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? No

(4) If there is a well on property, does it still have a pump and associated electrical?

N/A

(5) Do you (or previous owners) have an abandoned a well on your property?

_____no

_____yes, if so do you have abandonment records? N/A

(6) When was your well installed (year)? Before I purchasal the property in 1990

(7) How deep is your well? I don't know

(8) What kind of yield (flow rate) do you get from this well? Not Sure but it is more than adequate

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal? This is A house with 4 people living in it

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Pleas

Name

Street Address: 197 School STREET Town: FORESTDALE RI

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no _____ yes, Where is that well located? In front yard. No, but considering going back on well.

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain. Yes but considering going back on well

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? We use the well for these purposes.

(4) If there is a well on property, does it still have a pump and associated electrical? Yes

(5) Do you (or previous owners) have an abandoned a well on your property?
_____no
____yes, if so do you have abandonment records? no

(6) When was your well installed (year)? 1960's?

(7) How deep is your well? 355 feet?

(8) What kind of yield (flow rate) do you get from this well? 2 or 3 gals per min.

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

From town water we use approximately 350 gals a week so if we go back to the well it would be the same plus our use of washing vehicles, watering lawns, etc.

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

Victory Highway

(Please pr

Name: _____

Street Address: 219 Victory Hgwy Town: N. Smithfield

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ✓ yes, Where is that well located? Back yard

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? No

(4) If there is a well on property, does it still have a pump and associated electrical? Yes

(5) Do you (or previous owners) have an abandoned a well on your property?
✓ no
____yes, if so do you have abandonment records?

(6) When was your well installed (year)? Do not know was here when we moved in

(7) How deep is your well? Approximate 200 FT

(8) What kind of yield (flow rate) do you get from this well? 4 gallons per minute estimating

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal? Constant Approximate 50 -70 gallons per day

(10) Comments? Would like to have well tested

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Plea

Name

Street Address: 233 Victory Hwy. Town: Forestdale

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ✓ yes, Where is that well located? ~~Back~~ Front yard

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? No

(4) If there is a well on property, does it still have a pump and associated electrical?

Yes

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

? 1934

(7) How deep is your well?

?

(8) What kind of yield (flow rate) do you get from this well?

Slow

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

Constant daily use

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

Street Address: 246 Victory Highway Town: N. Smithfield, RI

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ✓ yes, Where is that well located? backyard

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? yes, hand dug well, as well as an artsian well. We don't use the hand dug well.

(4) If there is a well on property, does it still have a pump and associated electrical?

yes for artsian only

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

unknown

(7) How deep is your well?

450' (approximate)

(8) What kind of yield (flow rate) do you get from this well?

unknown

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

unknown
constant use, but WE DON'T DRINK IT!

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please

Name: _

Street Address: 861 Victory Hwy Town: N.S.

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no __X__yes, Where is that well located?

IN MY YARD - ON MY PROPERTY

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

NO

(4) If there is a well on property, does it still have a pump and associated electrical?

YES NEW PUMP 2004

(5) Do you (or previous owners) have an abandoned a well on your property?

__X__no

____yes, if so do you have abandonment records?

(6) When was your well installed (year)? 1975

(7) How deep is your well? 360 feet

(8) What kind of yield (flow rate) do you get from this well? 6 gal per min

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

We wash up daily + cook

(10) Comments?

Our Water is very good
We have no problem's —
We have a new pump
installed in 2004
by Artisan Well

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Ple

Nam

Street Address: 275 VICTORY Hwy. Town: No. SMITHFIELD

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ✓ yes, Where is that well located?
ON OUR FRONT LAWN.

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? No

(4) If there is a well on property, does it still have a pump and associated electrical? YES

(5) Do you (or previous owners) have an abandoned a well on your property?
✓ no
____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

30 years ago

(7) How deep is your well? ?

(8) What kind of yield (flow rate) do you get from this well?

30 gallons a minute

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

(10) Comments?

We have a lot of iron in the water but we have installed a "Rain Soft" System.

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please print clearly)

Name: _____

Street Address: 286 VICTORY HIGHWAY Town: NO SMITHFIELD

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ✓ yes, Where is that well located?

REAR OF THE HOUSE

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

NO

(4) If there is a well on property, does it still have a pump and associated electrical?

YES

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

____yes, if so do you have abandonment records?

(6) When was your well installed (year)? WAS HERE WHEN WE BOUGHT THE HOUSE 34 YEARS AGO

(7) How deep is your well?

APPROX 250 FEET

(8) What kind of yield (flow rate) do you get from this well?

APPROX 10 GALS PER MINUTE

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

50 - 100 GALS, CONSTANT

(10) Comments?

HAVE A SON EUGENE A. 27 YRS OF AGE WAS DIAGNOSED WITH CANCER 3-4 YEARS AGO (NON-hodgekins Lyphoma)

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please print clearly)

Nai _____

Street Address: 293 VICTORY HIGHWAY Town: NORTH SMITHFIELD

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ✓ yes, Where is that well located? 10 FEET FROM LEFT REAR CORNER OF HOUSE.

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? NOT SPECIFICALLY, ONLY 1 WELL.

(4) If there is a well on property, does it still have a pump and associated electrical?

YES

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

(7) How deep is your well?

(8) What kind of yield (flow rate) do you get from this well?

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Plea

Name

Street Address: 295 Victory Hwy ~~N Smithfield~~ Town: N Smithfield RI 02896

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ____no ✓ yes, Where is that well located? In back of our house ~150 feet

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? Same well, used for all!

(4) If there is a well on property, does it still have a pump and associated electrical?

yes

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

1951

(7) How deep is your well? 50 ft - it is only a dug well. We are installing an Artesian well this spring.

(8) What kind of yield (flow rate) do you get from this well? unsure, but not real good

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

Not sure. There are 2 adults, 2 children here. We drink bottled water, but do laundry here.

(10) Comments?

Thank you for helping to clean up Stamina Mills! It was so unsafe before as well as unsightly, & a danger to everyone nearby. We feel much safer now!

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Pleas

Name. _____

Street Address: 305 Victory Hwy Town: North Smithfield RI

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ____no ✓ yes, Where is that well located?

In our backyard.

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

no

(4) If there is a well on property, does it still have a pump and associated electrical?

yes,

(5) Do you (or previous owners) have an abandoned a well on your property?

____no

✓ yes, if so do you have abandonment records?

there is a dug well that was not in use when we purchased the property

(6) When was your well installed (year)?

(7) How deep is your well?

(8) What kind of yield (flow rate) do you get from this well?

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Plea

Nam

Street Address: 323 Victory Hwy. Town: N. Smithfield RI

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ____no ✓ yes, Where is that well located? Back Yard

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? NO

(4) If there is a well on property, does it still have a pump and associated electrical?

NO

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

1989?

(7) How deep is your well?

?

(8) What kind of yield (flow rate) do you get from this well?

?

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

?

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Pl

Nar

Street Address: 333 Victory Hwy Town: N. Smithfield RI

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no _____yes. Where is that well located? Front yard

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? NO

(4) If there is a well on property, does it still have a pump and associated electrical?

NO

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

?

(7) How deep is your well?

?

(8) What kind of yield (flow rate) do you get from this well?

?

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

?

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please print clearly)

Name: _____

Street Address: 354 Victory Highway Town: N Smithfield, RI

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ____no __X__yes, Where is that well located?

in front yard

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

Use the same well for all activities

(4) If there is a well on property, does it still have a pump and associated electrical?

yes

(5) Do you (or previous owners) have an abandoned a well on your property?

__X__no

____yes, if so do you have abandonment records?

(

N

Street Address: 383 VICTORY Hwy Town: NO. SMITHFIELD RI. 02896

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ✓ yes, Where is that well located? In Back of House.

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? NO

(4) If there is a well on property, does it still have a pump and associated electrical?
YES

(5) Do you (or previous owners) have an abandoned a well on your property?
X no
_____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

35 yrs. old.

(7) How deep is your well?

350'

(8) What kind of yield (flow rate) do you get from this well?

5 GPM

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal? 200 Gallons a day

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Plea

Nam

Street Address: 445 Victory Hwy. Town: N. Smithfield, RI

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no __X__yes, Where is that well located? on property.

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? no

(4) If there is a well on property, does it still have a pump and associated electrical?

yes

(5) Do you (or previous owners) have an abandoned a well on your property?

__X__no

____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

1950's

(7) How deep is your well?

150 feet

(8) What kind of yield (flow rate) do you get from this well?

Very good

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

All daily acctivities - constant

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Ple

Nan

Street Address: 503 Victory Highway Town: N. Smithfield

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ✓ yes, Where is that well located? ON PROPERTY OF COURSE.

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? NO

(4) If there is a well on property, does it still have a pump and associated electrical? Yes

(5) Do you (or previous owners) have an abandoned a well on your property?
✓ no
_____ yes, if so do you have abandonment records?

(6) When was your well installed (year)? ESTIMATED — 30 YEARS AGO

(7) How deep is your well? Don't Know — MAYBE 15'

(8) What kind of yield (flow rate) do you get from this well? ?

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal? 5—10

(10) Comments? I think we live more then 1/2 miles FROM STAMIUA Mills.

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please p

Name: __ _____

Street Address: 575 Victory Highway Town: North Smithfield

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no __X__yes, Where is that well located? side yard off kitchen

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? NO

(4) If there is a well on property, does it still have a pump and associated electrical?

yes

(5) Do you (or previous owners) have an abandoned a well on your property?

__X__no

_____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

1948

(7) How deep is your well?

about 150 ft

(8) What kind of yield (flow rate) do you get from this well?

unknown

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

5 gal/day

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please

Name: _____

Street Address: 246 Victory Highway Town: N. Smithfield, RI

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ✓ yes, Where is that well located? backyard

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? yes, hand dug well, aswell as an artisian well. We don't use the hand dug well.

(4) If there is a well on property, does it still have a pump and associated electrical?

yes for artisian only

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

_____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

unknown

(7) How deep is your well?

450' (approximate)

(8) What kind of yield (flow rate) do you get from this well?

unknown

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

unknown
constant use, but WE DON'T DRINK IT!

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please]

Name: _ _____

Street Address: 233 Victory Hwy. Town: Forestdale

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ✓ yes, Where is that well located? ~~Back~~ Front yard

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? No

(4) If there is a well on property, does it still have a pump and associated electrical?

Yes

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

? 1934

(7) How deep is your well?

?

(8) What kind of yield (flow rate) do you get from this well?

Slow

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

Constant daily use

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

Wildwood Road

(Please print c

Name: _____

Street Address: 1 WILDWOOD RD. BOX 263 Town: FORESTDALE, R.I. 02824

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no _____yes, Where is that well located? FRONT OF HOUSE

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? NO

(4) If there is a well on property, does it still have a pump and associated electrical?
YES

(5) Do you (or previous owners) have an abandoned a well on your property?
_____no
_____yes, if so do you have abandonment records?

(6) When was your well installed (year)? 1964

(7) How deep is your well? 525 FT

(8) What kind of yield (flow rate) do you get from this well? 1 1/2 gal per minute

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal? 100 GAL

(10) Comments? WHEN LAST TESTED, TRACES of MTBE WERE EVIDENCED.

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please

Name: _____

Street Address: 1 Waldwood Town: N. S.

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ✓ yes, Where is that well located?

Use For drinking, car washing

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

(4) If there is a well on property, does it still have a pump and associated electrical?

yes

(5) Do you (or previous owners) have an abandoned a well on your property?

_____no

_____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

installed 39 years ago - 1963

(7) How deep is your well?

500' +/-

(8) What kind of yield (flow rate) do you get from this well?

Slow - 10 gallons/minute

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

normal household use

(10) Comments?

Would like well tested

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please print clearly)

Na _____

Street Address: 2 Wildwood Rd Town: FORESTDALE

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ✓ yes, Where is that well located? To The Right of the Rear Door.

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

We have one well for all uses.
We are not connected to town water.

(4) If there is a well on property, does it still have a pump and associated electrical?

Yes

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

_____yes, if so do you have abandonment records?

(6) When was your well installed (year)? 1959

(7) How deep is your well? 90 Feet

(8) What kind of yield (flow rate) do you get from this well?

I DON'T KNOW

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

SEASONAL USE

NORMAL USE ON A DAILY BASIS : COOKING, SHOWER, etc.

(10) Comments?

I WILL RETURN TO FORESTDALE ON MAY 5.

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

" Mailing address: "
P.O. Box 178
Woonsocket, R.I. 02895

(Please print clearly)

Name _____

Street Address: 3 Wildwood Rd. Town: Forestdale

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ____no ✓ yes, Where is that well located? garage

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.
NO

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? yes

(4) If there is a well on property, does it still have a pump and associated electrical?
yes

(5) Do you (or previous owners) have an abandoned a well on your property?
✓ no
____yes, if so do you have abandonment records?
not that we know of!

(6) When was your well installed (year)?"
approximately "1954" Neighbor says that's when this house was built!"

(7) How deep is your well?

"I don't know"
feel free to come check it out!
Neighbors says hers is 300 feet or so!

(8) What kind of yield (flow rate) do you get from this well?

Jan. 03 Replaced pump & put charcoal filter on water tank, WATER FLOW is O.K. until the filter gets dirty. Picks up lots of iron

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

constant, 500-700 gallons per week. Estimated!

(10) Comments?

I'll CALL to see how deep the well is, from the company that put the pump in.

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Pleas

Name _____

Street Address: 6 Wildwood Town: N.S.

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ____no ✓ yes, Where is that well located?

Front of House (Bird feeder)

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

use for consumption

(4) If there is a well on property, does it still have a pump and associated electrical?

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

___yes, if so do you have abandonment records?

(6) When was your well installed (year)?

1970 & late 1980's

(7) How deep is your well?

Front of House (Bird Feeder)

(8) What kind of yield (flow rate) do you get from this well?

2 gal / minute

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

NOT a LOT

(10) Comments?

would like it tested.

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please print clearly)

Name: _____

Street Address: 8 Wildwood Rd Town: Forestdale RI 02824

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ✓ yes, Where is that well located? Front YARd - 8 Wildwood Rd
Forestdale, RI 02824

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? Yes

(4) If there is a well on property, does it still have a pump and associated electrical?

Yes

(5) Do you (or previous owners) have an abandoned a well on your property?

X no

_____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

@ 1965

(7) How deep is your well?

@ 200 ft

(8) What kind of yield (flow rate) do you get from this well?

? Good flow

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

constant - Daily Activities

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Ple

Nan

Street Address: 9 WILDWOOD RD Town: FORESTDALE R.I. 02824-0182

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ✓ yes, Where is that well located? 20 FEET OUT FROM HOUSE

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? NO

(4) If there is a well on property, does it still have a pump and associated electrical?

(5) Do you (or previous owners) have an abandoned a well on your property?
✓ no
_____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

1953

(7) How deep is your well?

ABOUT 170 FEET

(8) What kind of yield (flow rate) do you get from this well?

ABOUT 3 GALS PER MINUTE.

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

? ALL THAT IS NEEDED INSIDE OR OUTSIDE.

(10) Comments?

ALL PREVIOUS SAMPLES IN PAST YEARS WERE FREE OF ANY CONTAMINATES.

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please prin

Name: ____ _____

Street Address: 10 Wildwood Town: _____

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ✓ yes, Where is that well located?

Corner of the house / Forsythia

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

drinking/ use it for irrigation

(4) If there is a well on property, does it still have a pump and associated electrical?

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

1961

(7) How deep is your well?

625' / pump 300 1/4

(8) What kind of yield (flow rate) do you get from this well?

1 1/2 gallons / minute.

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

shower / washers

(10) Comments?

would like well tested

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please print clearly)

Name: _____ _____

Street Address: 11 WILDWOOD RD Town: FORESTDALE

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ✓ yes, Where is that well located? IN FRONT OF HOUSE, BELOW THE DRIVEWAY

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? well water is used for both potable & non-potable activities (car washing)

(4) If there is a well on property, does it still have a pump and associated electrical?

YES

(5) Do you (or previous owners) have an abandoned a well on your property?

✓ no

_____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

1965

(7) How deep is your well?

?

(8) What kind of yield (flow rate) do you get from this well?

?

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

amount? CONSTANT

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please

Name: _

Street Address: 14 Wildwood Rd - Forestdale Town: No Smithfield

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no X yes, Where is that well located? in front of house

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

N/A

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

No

(4) If there is a well on property, does it still have a pump and associated electrical?

Yes

(5) Do you (or previous owners) have an abandoned a well on your property?

X no

_____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

Approx 1960

(7) How deep is your well?

440 feet

(8) What kind of yield (flow rate) do you get from this well?

4 gallons per minute

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

? – Constant use

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

Address Unknown

(F

N

Street Address: _____ Town: of North Smithfield

(village of Forestdale)

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no ___X___yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

NO!

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? only one

(4) If there is a well on property, does it still have a pump and associated electrical?

of course

(5) Do you (or previous owners) have an abandoned a well on your property?

X no

____yes, if so do you have abandonment records?

(6) When was your well installed (year)? probably about 1954

(7) How deep is your well? ?

(8) What kind of yield (flow rate) do you get from this well? ?

adequate

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

(10) Comments? I am sorry your staff did not appear today - I had several questions to ask inasmuch as the next door neighbor's well had to be "fractured" (?) last fall when the house was sold -

Oh, well!

E Ridge

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you. Questions? Please call Sarah White, US EPA at 617-918-1026

(Please print clearly)

[redacted]

Name: _____ _____

Street Address: [redacted] Town: _____

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _____no __X__yes, Where is that well located?

Near driveway

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)?

1 well used for all purposes

(4) If there is a well on property, does it still have a pump and associated electrical?

Yes

(5) Do you (or previous owners) have an abandoned a well on your property?

__X__no Not that I Know of

____yes, if so do you have abandonment records?

(6) When was your well installed (year)?

We assume when the house was built - approx 1958

(7) How deep is your well?

UnKnown

(8) What kind of yield (flow rate) do you get from this well?

UnKnown

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

UnKnown - used for daily bathing, toilet flushing, washing laundry, drinking

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please print clearly)

Street Address: PO Box 21 Town: Forestdale

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? ✓ no _____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

We are connected to the North Smithfield public water supply.

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? no

(4) If there is a well on property, does it still have a pump and associated electrical?

no

(5) Do you (or previous owners) have an abandoned a well on your property?

_____ no

✓ yes, if so do you have abandonment records? No records

(6) When was your well installed (year)? June 22, 1976

(7) How deep is your well? 125 ft.

(8) What kind of yield (flow rate) do you get from this well? Well is not in use.

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal? Well is not in use.

(10) Comments?

During the Stamina Mill clean up, samples of water were taken from the well.

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

(Please)

Name: _

Street Address: 110 GRAHAM DR. Town: SLATERSVILLE

Private well Survey Questions:

1) Do you use well water for domestic use/consumption? _X_ no _____ yes, Where is that well located?

(2) If no, are you connected to the North Smithfield public water supply, or do you use an alternate source of water? If an alternate source, please explain.

CONNECTED TO N. S. PUBLIC WATER SUPPLY

(3) Do you have a well on property used for non-potable activities (e.g., car washing, irrigation, swimming pool)? NO. THE WELL IS COVERED UP AND CLOSED, FORMERLY TOWN PUMP HOUSE

(4) If there is a well on property, does it still have a pump and associated electrical?

NO.

(5) Do you (or previous owners) have an abandoned a well on your property?

_____ no

_✓_ yes, if so do you have abandonment records?

I HAVE NO RECORD OF ABANDONMENT.

(6) When was your well installed (year)?

UNKNOWN - FORMER TOWN WELL

(7) How deep is your well?

UNKOWN

(8) What kind of yield (flow rate) do you get from this well?

UNKNOWN

(9) How much water do you generally use per day or per week from this well? Is this constant, or seasonal?

0 - NONE

(10) Comments?

We have enclosed a prepaid envelope. Please fill out this survey and return to the EPA. Thank you.
Questions? Please call Sarah White, US EPA at 617-918-1026

Appendix H
Access Agreement for Private Well Sampling

Certified letter
sent 4/13/05

Dear_____:

As part of the US EPA's Five Year Review if the Stamina Mills Superfund site remedy, EPA has identified homes located within 1/4 mile of the site which still use well water exclusively. Our records indicate that EPA tested your wells in 1999. For comparative reasons and to ensure that the remedy has remained protective, we are interested in testing your well again. We are also seeking permission to access your property to take the samples.

Enclosed is an access agreement. Please sign and return in the self addressed envelope no later than Friday, April 22, 2005.

Over the next two weeks and upon receipt of the access agreement, Sarah White, US EPA Community Involvement Coordinator will contact you to set up a date and time to sample your well. If you have any questions, please call Sarah at 617-918-1026 or 1-888-372-7341. Thank you.

Sincerely,

Byron Mah
Remedial Project Manager
New Hampshire / Rhode Island Superfund Section

Enc.

CONSENT FOR ACCESS TO PROPERTY

NAME: _____

PROPERTY ADDRESS: _____

_____

I consent to the officers, employees, agents, contractors, subcontractors, consultants, and other authorized representatives of the United States Environmental Protection Agency ("EPA"), the Connecticut Department of Environmental Protection, and Connecticut Department of Public Health entering and having access to the above-referenced property for the purpose of conducting indoor air and soil gas sampling.

Access to the Property is undertaken pursuant to EPA's response and enforcement authorities under the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §9604(e), and under Section 3007 of the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. §6927.

I give this written permission voluntarily with knowledge of my right to refuse.

_____

Signature of property owner or authorized representative Date

_____

Telephone number of authorized contact person

Appendix I
Media Articles Regarding
Stamina Mills Five-Year Review

WOONSOCKETCALL.com

03/17/2005

Poll to see if all's well near Superfund site

MICHAEL HOLTZMAN , Staff Writer

NORTH SMITHFIELD -- Federal EPA employees on Thursday plan to poll dozens of residents living in the area of the Stamina Mills Superfund site in Forestdale on their use of well water.
The work is an effort, done every five years, to survey active and inactive wells under the EPA's review of the cleanup initiated in the early 1980s and completed in 2000.

Kayser-Roth Corp., which owned the 19th century textile manufacturing mill at the time of contamination, agreed to reimburse the government about $7.2 million for the cleanup, the EPA said.

An unknown quantity of trichloroethylene (TCE), a solvent used to clean cloth, spilled in 1969 at the site, located on five acres along the Branch River and opposite the Forestdale post office on School Street.

The five-year review of the remedy, said Sarah White, EPA community coordinator, "is to make sure the remedy in place is effective."

"We want to make sure we have a handle on all of the private wells" within a quarter- to a half-mile of the site, White said.

She and EPA Project Manager Byron Mah will discuss well surveys with some of the nearly 200 residents who should have received the inquiries last week. Other residents are asked to submit theirs to the EPA. Carrying government identification tags, they'll begin the surveying about 10 this morning.

See POLL -- Page A-4

Continued from Page A-3

Nine questions listed on the mailed surveys include: whether the residents use well water for domestic consumption or alternative uses, such as swimming pools; if a well on the property contains electrical equipment; whether there's an abandoned well; and when one might have been installed, its depth and flow rate.

"How much water do you generally use per day or per week from this well?" the survey asks.

Five years ago the EPA asked residents to participate in a well testing program after remediation to the contamination was put in place.

Between 1981 and 1987 local and state officials had a water line extended into Forestdale to provide residents with public water. That resulted from the small Forestdale system and private wells becoming contaminated.

About 300 people who live within a quarter mile of the mill site, and about 1,000 residents within a half-mile; many of them will be surveyed, White said. Along with School Street, other roads include Maple, Roselawn, Freitas, Kirby, Litzen, Wildwood and a portion of Victory Highway,

"This is like a check up," said Mah, the project manager. "We expect everything to be fine. But we want to check. If there's been a lot of pumping activity, there's potential for contaminants to migrate."

For several years starting in 1988, the EPA continued its remediation by removing contents of storage tanks and disposing of them. In 1990, the cleanup included placing vacuum extraction equipment to remove TCE contaminated soil from the spill area. They also extracted contaminated groundwater, removing volatile organic chemicals with carbon treatment.

"A monitoring program for the groundwater, soil, surface water and sediments was to be implemented to ensure the effectiveness of the selected remedies," continues the EPA summary listed on its web site.

The quarterly ground water sampling began in 1992 to establish a baseline. A soil vapor extraction and treatment system became operational in May 1998, and continues to run seasonally, from May to November each year, the EPA said.

"With the completion of the groundwater extraction and treatment system, all construction activities at the site were completed and cleanup activities at the site entered the operations and maintenance phase," the EPA reported. "Cleanup of the groundwater is expected to take at least 10 years."

Town Administrator Robert B. Lowe, who lives on one of the area streets being surveyed, Freitas Lane, said he and other department heads met with the EPA officials recently. He said the water filtering from the Super Fund equipment can be seen beyond the small yellow building at the former mill site. It's that filtering that in future years should rid the ground water of its contaminants, he said.

The mill was built initially as a scythe factory in 1824, and with other additions burned in a spectacular fire in 1977.

EPA officials said yesterday that while their immediate work will be to take the written surveys and related information, they may seek other monitoring wells this year. Their five-year assessment report will be completed by the end of the federal fiscal year, Sept. 30. Copies of the report would be available at the town library.

The town has two other Super Fund sites, the Landfill Resource & Recovery site off Tifft Road and the Western Sand & Gravel at the Burrillville line by Route 7.

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WOONSOCKETCALL.com

04/06/2005

Officials to review Superfund site tonight

MICHAEL HOLTZMAN , Staff Writer

NORTH SMITHFIELD -- State and federal environmental officials will continue their five-year review of the Stamina Mill Superfund site in Forestdale by holding an informational meeting tonight from 6 to 8 at the Municipal Building, 575 Smithfield Road.

Project managers for the U.S. Environmental Protection Agency and state Department of Environmental Management will discuss the status of the mill cleanup, a recently conducted written well survey and its remediation of the site. They are Byron Mah for the EPA and Lou Maccarone for the DEM.

Stamina Mills was a 19th century textile mill that required federal intervention after an unknown quantity of trichloroethylene (TCE), a solvent to clean cloth, spilled in 1969. The EPA initiated the cleanup in the early 1980s and completed it in 2000.

Kayser-Roth Corp., which owned the manufacturing mill at the time, agreed to reimburse the government $7.2 million. The five-acre site is located along the Branch River and across from the Forestdale post office on School Street.

The EPA's written survey issued during the past couple of weeks concentrates on residences in the School Street area that use private wells for their domestic needs, including drinking water. Officials have received 72 responses out of 183 surveys distributed, said Sarah White, EPA community coordinator for the Stamina Mills cleanup.

White and Mah also questioned about a dozen residents during the recent surveying, she said.

"I thought people were very interested, very cooperative," White said. Many expressed an interest in having their wells tested, a specific provision of the five-year review.

Their intention is to place monitor wells at eight homes, although that part of the program is still being completed. Nor have the survey results been compiled, White said.

White said that town officials have not contacted her about this informal information session but they are welcome to attend. So is anyone wanting to ask the officials about their water or other issues related to the Stamina Mills Superfund cleanup.

She said these officials are not, however, directly knowledgeable about another of the town's Superfund sites, the Landfill & Resource Recovery Inc. site near Tifft Road. That's been widely discussed because one of the town's wells, scheduled to be redeveloped, is half a mile from L&RR.

Anyone wishing further information is encouraged to contact White at 1-888-372-7341, ext. 81026, or the EPA Web site, which provides information on its Superfund cleanups by region.

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The Valley Breeze; March 17, 2005

North Smithfield, Blackstone & Woonsocket Edition

EPA surveyors will visit Forestdale homes today

NORTH SMITHFIELD - Staff from the United States Environmental Protection Agency will conduct a door to door survey of 175 homes in Forestdale on private well water use today, March 17.

"The purpose of this survey is to inventory all active and inactive private wells in the area as part of the EPA's five-year review of the Stamina Mills Superfund site remedy," said Sarah White, community involvement coordinator for the United States EPA.

She said staff will begin talking with residents around 9:30 a.m. Surveys will be left at the door for those who are not home.

Stamina Mills, located on a five-acre parcel of land in Forestdale, began as a textile mill in the early 1900s and was destroyed by fire two years after the mill closed in 1975. According to the EPA, In 1981, private well contamination was discovered leading the Rhode Island Water Resources Board and the Town of North Smithfield to install a public water line to area residences.

However, not all residences were connected to the service. The EPA later provided resources to extend the water system and complete connections to those residences so that by 1987 all residences impacted by the spill were connected to the public water supply.

For more information, call White at 1-888-372-7341, ext. 81026.

Appendix J
Site Photographs
October 14, 2005 Site Visit

Entrance gate to Stamina Mills Superfund Site. View is to the southeast.

Treatment building., view to the east. Discharge stack, external carbon vessels shown.

Vapor extraction manifold, view to the east.

SVE/MPE wellfield. Arched black tubing identifies wells connected to the MPE drop-tube system.

SVE/MPE wellfield as seen from School Street, view to south. MW-10 is in the foreground.

MW-10 with remediation vault, at north edge of SVE/MPE wellfield, view to south.

SMW, former Stamina Mills production well, with remediation vault, view to north.

Former landfill area, view to southeast (toward USGS gauging station and downstream portions of the Branch River).

Former landfill area, view to south, showing sewer manhole extension and sewer crossing in the Branch River (marked by rill on left side of picture).

Former landfill area, view to west (toward Forestdale Pond); note sewer manhole at left.

Riprap at toe of former landfill; note USGS gauging station downstream. View to east.

Residences/businesses on School Street, viewed from southeast corner of the intersection of School Street and Maple Street. Building on right is US Post Office (Plat No. 435); inactive well I-31 is behind this structure. View to west.

Residences on School Street, viewed from northeast corner of Stamina Mills driveway. View to east (Plat Nos. 143, 142, and 141 are visible).

Former mill office building at northern edge of Stamina Mills property along School Street. View is to east.

Abandoned private residential well installed on lot at northeast corner of School Street and Maple Street (Plat No. 130). View is to northeast.

Appendix K
May 2005 Residential Sampling Results

Data Validation Report

ENSAFE VALIDATION SUMMARY REPORT
VOLATILE ORGANIC COMPOUNDS

Site Name:	Stamina Mills - North Smithfield, Rhode Island
Laboratory:	Mitkem Corporation
Sample Delivery Group:	MD0534
Matrix:	Aqueous
Tier Level:	III
Validation Guidance:	*Region I, EPA-New England Data Validation Functional Guidelines for Evaluating Environmental Analyses*, revised December 1996.
Analysis:	Volatile Organic Compounds (VOCs) by SW-846 Method 8260B

A Tier III data validation was performed on the volatile organic analytical data for nine aqueous samples, including two field duplicates, collected by Resource Controls from the Stamina Mills site. The data validation was performed using the *Region I, EPA-New England Data Validation Functional Guidelines for Evaluating Environmental Analyses*, December 1996 criteria. The samples were analyzed in one sample delivery group (SDG): MD0534. The following samples were analyzed in this SDG: 5YRGA20300, 5YRGA07700, 5YRGA14300, 5YRHA14300 (field duplicate of 5YRGA14300), 5YRGA16700, 5YRHA16700 (field duplicate of 5YRGA16700), 5YRGA17300, 5YRGA20000, and 5YRGA14200.

The data were evaluated based on the following parameters:

- Overall Evaluation of Data and Potential Usability Issues
- * Data completeness
- * Preservation and technical holding times
- * GC/MS Instrument Performance Check (Instrument tuning)
- Initial and continuing calibration
- * Blank analysis
- * Surrogate compounds
- * Internal standards
- * Field duplicates
- Sensitivity check
- * Laboratory control sample
- * Target compound identification
- * Compound quantitation and reported quantitation limits
- * Tentatively identified compounds
- * System performance

An asterisk (*) above indicates that all criteria were met. Specific data review findings are detailed in the worksheets prepared by EnSafe which are attached to this summary. Acceptable data parameters (indicated with an asterisk above) will not be discussed further in the following sections. A summary of the major findings are described below.

ENSAFE VALIDATION SUMMARY REPORT
VOLATILE ORGANIC COMPOUNDS

Overall Evaluation of Data and Potential Usability Issues

The data quality objective (DQO) for this data set is to verify the absence of trichloroethene (TCE) in active offsite residential wells. The analytical method used to analyze the samples was SW-846 Method 8260B with a standard 5 milliliter (mL) purge. This method provides higher detection limits than what can be achieved using alternate analytical methods.

The TCE detection limit was 5 micrograms per liter (μg/L), which is at the maximum contaminant level (MCL). Although the MDLs were established 6 days over yearly MDL requirement, the laboratory proved they could detect TCE at the MCL of 5 μg/L because this was the low point of the calibration curve. Therefore, the data provided by the laboratory is adequate for the DQO.

Undetected acetone, 2-hexanone, trichlorofluoromethane were flagged as estimated "UJ" due to calibration outliers. All other results were acceptable without qualification.

Calibration

Three undetected compound were flagged as estimated ("UJ") due to initial and/or continuing calibration outside control limits. The relative standard deviation (%RSD) criteria of 30% was used for the initial calibration and a percent difference (%D) criteria of 25% was used for the continuing calibration per *Region I, EPA-New England Data Validation Functional Guidelines for Evaluating Environmental Analyses*. All relative response factors for the initial and continuing calibrations were acceptable because they were greater than 0.05. The following table summarizes the volatile initial calibration and continuing calibration compounds which failed to meet the data review criteria.

Calibration Outliers

Compound	Initial Calibration	Continuing Calibration	Action
acetone	%RSD = 49.8	acceptable	All results were undetected and were flagged UJ.
2-hexanone	%RSD = 31.5	acceptable	All results were undetected and were flagged UJ.
trichlorofluoromethane	acceptable	%D = 34.2	All results were undetected and were flagged UJ.

Notes:
%RSD = percent relative standard deviation
%D = percent difference
UJ = undetected and estimated

When the low point (5 μg/L) was eliminated, and a four point calibration curve was used for acetone and 2-hexanone, the %RSDs were 4.67 and 20.0, respectively. Although linearity was established with four points, all acetone and 2-hexanone results were undetected at a quantitation limit of 5 μg/L. Therefore, they were flagged as estimated "UJ" because the quantitation limit was below the linear portion of the curve.

Sensitivity Check

The laboratory reported analytical results between their method detection limit (MDL) and the lowest point on the calibration curve (quantitation limit), with a J-flag. Their MDLs were established on May 4, 2004 and the samples were analyzed on May 10, 2005, which was one year and 6 days after the MDLs were effective. The MDLs were reported from a different instrument than what was used for sample analysis; MDLs were established on instrument V1 and the samples were analyzed on instrument V2. The laboratory's standard operating procedure is to report MDLs from the least sensitive instrument, with the highest calculated values, for all volatile instruments. The following table presents the MDLs provided by the laboratory.

Mitkem Corporation SW8260 Method Detection Limits - 2004

Analyte	MDL (μg/L)	Analyte	MDL (μg/L)
1,1,1,2-Tetrachloroethane	0.77	Carbon disulfide	0.69
1,1,1-Trichloroethane	0.51	Carbon tetrachloride	0.56
1,1,2,2-Tetrachloroethane	1.5	Chlorobenzene	0.53
1,1,2-Trichloroethane	0.75	Chloroethane	1.6
1,1-Dichloroethane	0.5	Chloroform	0.35
1,1-Dichloroethene	0.76	Chloromethane	0.58
1,1-Dichloropropene	0.94	cis-1,2-Dichloroethene	0.53
1,2,3-Trichlorobenzene	0.66	cis-1,3-Dichloropropene	0.57
1,2,3-Trichloropropane	0.57	Dibromochloromethane	0.8
1,2,4-Trichlorobenzene	0.62	Dibromomethane	0.42
1,2,4-Trimethylbenzene	0.65	Dichlorodifluoromethane	1.7
1,2-Dibromo-3-chloropropane	1.9	Ethylbenzene	0.5
1,2-Dibromoethane	0.78	Hexachlorobutadiene	0.76
1,2-Dichlorobenzene	0.76	Iodomethane	0.39
1,2-Dichloroethane	0.45	Isopropylbenzene	0.61
1,2-Dichloropropane	0.64	m,p-Xylene	1.1
1,3,5-Trimethylbenzene	0.71	Methyl tert-butyl ether	0.71
1,3-Dichlorobenzene	0.58	Methylene chloride	0.56

ENSAFE VALIDATION SUMMARY REPORT
VOLATILE ORGANIC COMPOUNDS

Mitkem Corporation SW8260 Method Detection Limits - 2004

Analyte	MDL (µg/L)	Analyte	MDL (µg/L)
1,3-Dichloropropane	0.42	n-Butylbenzene	0.5
1,4-Dichlorobenzene	0.56	n-Propylbenzene	0.88
2,2-Dichloropropane	0.94	Naphthalene	0.4
2-Butanone	1.2	o-Xylene	0.61
2-Chlorotoluene	0.96	sec-Butylbenzene	0.5
2-Hexanone	0.96	Styrene	0.59
4-Chlorotoluene	0.57	tert-Butylbenzene	0.9
4-Isopropyltoluene	0.58	Tetrachloroethene	0.52
4-Methyl-2-pentanone	0.98	Toluene	0.33
Acetone	3.9	trans-1,2-Dichloroethene	0.5
Benzene	0.5	trans-1,3-Dichloropropene	0.66
Bromobenzene	0.97	Trichloroethene	0.5
Bromochloromethane	0.66	Trichlorofluoromethane	1.5
Bromodichloromethane	1.7	Vinyl acetate	0.79
Bromoform	1	Vinyl chloride	0.51
Bromomethane	0.6	Xylene (Total)	1.5

Notes:
MDL = method detection limit
µg/L = microgram per liter

Attachment 1

Data Assessment Worksheets

REGION I, EPA-NE ORGANIC REGIONAL DATA ASSESSMENT (ORDA)*

CASE #: _____

SITE NAME: Stamina Mills

LAB NAME: Mitkem Corporation

OF SAMPLES/MATRIX: 9 / AQ

SDG #: MD0534

VALIDATION CONTRACTOR: EnSafe

SOW #/CONTRACT #: SW846-8260B

VALIDATOR'S NAME: Tina Cantwell

EPA-NE DV TIER LEVEL: III

DATE DP REC'D BY EPA-NE: _____

TPO/PO: **ACTION ____ FYI ____

DV COMPLETION DATE: 6/6/05

ANALYTICAL DATA QUALITY SUMMARY

	VOA	SV	Pest/PCB
1. Preservation and Contractual Holding Times	o	Not Applicable	
2. GC/MS / GC/ECD Instrument Performance Check	o		
3. Initial Calibration	o		
4. Continuing Calibration	o		
5. Blanks	o		
6. Surrogate Compounds	o		
7. Internal Standards	o		
8. Matrix Spike/Matrix Spike Duplicate	—		
9. Sensitivity Check	o		
10. PE Samples-Accuracy Check	o		
11. Target Compound Identification	o		
12. Compound Quantitation and Reported QLs	o		
13. Tentatively Identified Compounds	o		
14. Semivolatile Cleanup/Pesticide/PCB Cleanup	—		
15. Data Completeness	o		
16. Overall Evaluation of Data	o		

o = Data had no problems or were qualified due to minor contractual problems.
m = Data were qualified due to major contractual problems.
z = Data were rejected as unusable due major contractual problems.

ACTION ITEMS: (z items) _____

AREAS OF CONCERN: (m items) _____

COMMENTS: _____

*This form assesses the analytical data quality in terms of contractual compliance only. It does not assess sampling errors and/or non-contractual analytical issues that affect data quality.

**Check "ACTION" only if contractual defects resulted in reduced payment/data rejection recommendations.

Validator: Tina Cantwell

Date: 6/6/05

INSTRUCTIONS ON REVERSE SIDE

EPA-NE
Data Validation Worksheet Cover Page - Page 1

Site Name Stamina Mills
Reference No. _____

REGION I ORGANIC DATA VALIDATION

The following data package has been validated:

Lab Name Mitkem Corporation
Case/Project No. _____
SDG No. MD0534
No. of Samples/Matrix 9 / Aqueous

SOW/Method No. SW846 8260B
Sampling Date(s) May 9, 2005
Shipping Date(s) May 9, 2005
Date Rec'd by lab May 9, 2005 (hand-delivered)

Traffic Report Sample Nos. 5YRGA20300, 5YRGA07700, 5YRGA14300, 5YRHA14300, 5YRGA16700, 5YRGA17300, 5YRHA16700, 5YRGA20000, 5YRGA14200
Trip Blank No. _____
Equipment Blank No. _____
Bottle Blank No. _____
Field Duplicate Nos. 5YRHA14300 (dup of 5YRGA14300), 5YRHA16700 (dup of 5YRGA16700)
PES Nos. _____

The Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, revision 12/96 was used to evaluate the data and/or approved modifications to the EPA-NE Functional Guidelines were used to evaluate the data and are attached to this cover page: (attach modified criteria from EPA approved QAPjP or amendment to QAPjP).

A Tier II or Tier III evaluation was used to validate the data (circle one). If a Tier II validation with a partial Tier III was used, then identify samples, parameters, etc. that received partial Tier III validation

_____.

The data were evaluated based upon the following parameters:

- Overall Evaluation of Data
- Data Completeness (CSF Audit - Tier I)
- Preservation & Technical Holding Times
- GC/MS & GC/ECD Instrument Performance Check
- Initial & Continuing Calibrations
- Blanks
- Surrogate Compounds
- Internal Standards
- Matrix Spike/Matrix Spike Duplicate
- Field Duplicates
- Sensitivity Check
- PE Samples/Accuracy Check
- Target Compound Identification
- Compound Quantitation and Reported Quantitation Limits
- TICs
- Semivolatile and Pesticide/PCB Cleanup
- System Performance

Region I Definitions and Qualifiers:

A - Acceptable Data
J - Numerical value associated with compound is an estimated quantity.
R - The data are rejected as unusable. The R replaces the numerical value or sample quantitation limit.
U - Compound not detected at that numerical sample quantitation limit.
UJ - The sample quantitation limit is an estimated quantity.
TB, BB, EB - Compound detected in aqueous trip blank, aqueous bottle blank, or aqueous equipment blank associated with soil/sediment samples.

Validator's Name Dina Canfield Company Name EnSafe Phone Number 901-372-7962

Date Validation Started 6/6/05 Date Validation Completed 6/6/05

The data validator generates a Data Validation Report, applicable to Data Validation Tiers II and III, that consists of the following components in the order specified below: (Refer to Section 11 for a description of each of the Data Validation Report components).

1. Organic Regional Data Assessment/Inorganic Regional Data Assessment (ORDA/IRDA) Form
2. Data Validation Memorandum
   a. Narrative
   b. Table I-Qualifier Recommendation Summary Table
   c. Table II-Overall Evaluation of Data
   d. Table III-Tentatively Identified Compounds
   e. Data Summary Tables
3. Standard Data Validation Worksheets
   a. Manual
   b. Automated Data Review Reports (i.e., CADRE)
4. Support Documentation
   a. Copy of non-CLP analytical method, e.g., DAS methods, modified EPA methods
   b. Copies of PES Score Reports/Vendor PES QC Acceptance Limits
   c. Copies of Telephone Logs/Communication Forms for:
      - RSCC communications
      - Requests for laboratory data resubmissions/clarifications
      - Communications with samplers resolving sampling problems
      - Communications with TPO/Lead Chemist to report contractually-deficient data for rejection/reduced payment
      - Communications with EPA Site Manager concerning possible data rejection
      - EPA Site Manager authorization for alternate DV tier
   d. Copies of data supporting recommendations for reduced payment resulting from CSF Audit and/or PE sample result evaluation
   e. Original data to support recommendations for data rejection/non-payment identified from Tier II or Tier III data validation
   f. Copies of field sampling notes and/or field report supplied by field sampler
   g. Copies of EPA-approved amendments to QAPjP and/or SAP describing modified criteria to be used for validating site data
5. CSF Completeness Evidence Audit
6. DQO Summary Form

The data validator is responsible for implementing all corrective actions required by the contractor Lead Chemist in response to EPA-NE data validation oversight findings.

EPA-N Data Validation Worksheet
Overall Evaluation of Data - Data Validation Memorandum - Table II

VOLATILE ORGANICS					
DQO (list all DQOs)	Sampling and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		
To verify the absence of trichloroethene in off-site residential wells.	SW-846 method 8260B with Standard 5mL purge provides higher detection limits than what can be obtained using alternative methods. However TCE	Acetone, 2-hexane, and trichlorofluoromethane results in all samples were flagged due to ICAL and CCal outliers	No apparent Sampling errors	No apparent Sampling Variability	All calibration outliers were flagged "UJ"
	Detection limit was at the maximum contaminant level of 5ug/L. Therefore, 8260B is adequate for the DQO.				

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: Dina Cantwell

Date: 6/6/05

EPA-N Data Validation Worksheet
Overall Evaluation of Data - Data Validation Memorandum - Table II

SEMIVOLATILE ORGANICS					
DQO (list all DQOs)	Sampling and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		
		Not Applicable			

* The evaluation of "sampling error" cannot be completely assessed in data validation.

** Sampling variability is not assessed in data validation.

Validator: Dena Cartwell

Date: 6/6/05

12/96

EPA-NE - Data Validation
VOA/SV - I PCB-I

12/96

Sampler: Charles Machelo Company: Resource Controls Contacted: Yes (No) Date: _____

I. PRESERVATION AND HOLDING TIMES - Circle sample numbers with exceeded technical holding times or omitted preservation.
List all required preservation codes and circle omitted preservation codes.
Circle all exceeded technical holding times.
Identify extraction technique after "# of Days"/(*Extraction Code).

Sample No. (TR No.)	Matrix	Pres. Code	Date Sampled	VOA			BNA					PEST/PCB				
5YR-				Date Analyzed	# of Days from Samp. to Anal.	Action	Date Extracted	# of Days from Samp. to Extr./(*)	Date Analyzed	# of Days from Extr. to Anal.	Action	Date Extracted	# of Days from Samp. to Extr./(*)	Date Analyzed	# of Days from Extr. to Anal.	Action
-GA200300	AQ	1,2,3	5/9/05	5/10/05	1	NONE										
-GA07700																
-GA14300																
-HA14300																
-GA16700																
-HA16700																
-GA17300											Not					
-GA20000												Applicable				
-GA14200																

Preservation Code:
1. Cool @ 4°C (± 2°)
2. Preserve with HCl to at least pH 2
3. Protect from light
4. Freeze
5. Room Temperature (Avoid excessive heat)

(*Extraction Code:)
L/L - Liquid/Liquid
SON - Sonication
SEP - Separatory Funnel
SOX - Soxhlet
SPE - Solid Phase Extraction

Action Code:
J - Estimate (J) Detected Values
UJ - Estimate (UJ) Non-Detected Values
R - Reject (R) Non-Detected Values

Validator: Dina Cantrell

Date: 6/6/05

II. GC/MS INSTRUMENT PERFORMANCE CHECK (TUNING)

List all Instrument Performance Checks that are outside method QC tuning acceptance criteria.

Volatile Instrument Performance Check (Compound Name)	Analysis Date and Time	Instrument	Ion(s) Affected	Percent Relative Abundance	QC Limits	Samples Affected	Action

Comments: All VOC tune criteria were met.

Semivolatile Instrument Performance Check (Compound Name)	Analysis Date and Time	Instrument	Ion(s) Affected	Percent Relative Abundance	QC Limits	Samples Affected	Action

Comments: Not Applicable

If tuning compounds and criteria are different from those specified in CLP SOW OLM03.1, then the validator should include a copy of the method-specific tuning criteria with this worksheet.

Validator: Rina Cockrell

Date: 6/6/05

A-NE - Data Validation Worksheet
VOA/SV-III

III. INITIAL CALIBRATION - List all analytes that are outside calibration criteria.

Date of ICAL	Instrument	Parameter	Matrix	Compound	% RSD	RRF	Samples Affected	Action
5/4/05	V2	VOA	AQ	Acetone	49.8	0.140	All	J(+), UJ(ND)
↓	↓	↓	↓	2-Hexanone	31.5	0.259	↓	↓

Comments: See next page for linear calibration calculation when the first point is dropped. Detection limit of 5ug/L is flagged as estimated because linearity is not established at this level.

Validator: Dana Caldwell

Date: 6/6/05

Mitkem SDG MD0534 Calibration Evaluation
Initial Calibration Date: 5/4/05

Acetone RSD Evaluation

RRF5	0.264
RRF20	0.11
RRF50	0.115
RRF100	0.105
RRF200	0.104
RRF (mean)	0.1396
STD Dev	0.069679983
%RSD	49.91402778
dropping 1st point	
RRF (mean)	0.1085
STD Dev	0.005066228
New %RSD	4.669334609

2-Hexanone RSD Evaluation

RRF5	0.143
RRF20	0.254
RRF50	0.225
RRF100	0.337
RRF200	0.337
RRF (mean)	0.2592
STD Dev	0.081860858
%RSD	31.58212097
dropping 1st point	
RRF (mean)	0.28825
STD Dev	0.057523184
New %RSD	19.95600476

EPA-N-- Data Validation Worksheet
VOA/SV-IV

IV. CONTINUING CALIBRATION - List all analytes that are outside calibration criteria.

Date of ICAL	Date of CCAL	Instrument	Parameter	Matrix	Compound	%D	RRF	Samples Affected	Action
5/4/05	5/10/05	V2	VOA	AQ	Trichlorofluoromethane	34.2	0.463	All	J(+) UJ(ND)

Comments:

Validator: Dina Cakwell

Date: 6/6/05

12/96

A-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-V-A

V. BLANK ANALYSIS

List the blank contamination below. Concentration Level: Low

Sampler: Charles Macneto Company: Resource Controls Contacted: Yes (No) Date: _____

1. Laboratory: Method, Storage and Instrument Blanks

Date Extracted	Date Analyzed	Parameter/ Matrix	Sample No. (Blank Type)	Instrument/ Column	Compound	Conc. (units)
	Method	Blank	was free	from	contamination	

2. Field: Equipment (Rinsate), Trip and Bottle Blanks None collected

Date Extracted	Date Analyzed	Parameter/ Matrix	Sample No. (Blank Type)	Instrument/ Column	Compound	Conc. (units)

Validator: Dana Cathwell Date: 6/6/05

3. Blank Actions - List the maximum concentrations of blank compounds.

Compound	Type of Blank	Date Blank Sampled/Originated	Max. Conc. (units)	Action Level (units)	Sample QL	Samples Affected	Action
		No blank					
		actions					

Comments: _____

Validator: [signature] Date: 6/6/05

EPA-NE - Data Validation Worksheet
VOA-VI

VI. VOA SURROGATE SPIKE RECOVERIES - List all surrogate compound recoveries that are outside method QC acceptance criteria.

Method	Volatile Method QC Acceptance Criteria				
	Toluene-d_8	BFB	DCE-d_4	Other:	
OLM03.2	Water 88-110 Soil 84-138	Water 86-115 Soil 59-113	Water 76-114 Soil 70-121		
OLC02.1	NA	80-120	NA		
Other:					
Sample Number/Matrix	**% Recovery**	**% Recovery**	**% Recovery**	**% Recovery**	**Action**
	All Surrogate Criteria Were met				

Validator: Rina Caldwell

Date: 6/6/05

VI. SV SURROGATE SPIKE RECOVERIES - List all surrogate compound recoveries that are outside method QC acceptance criteria.

Method	Base/Neutral Method QC Acceptance Criteria					
	NBZ-d_5	2-FBP	TPH-d_{14}	1,2-DCB-d_4*	Other:	
OLM03.2	Water Soil 35-114 23-120	Water Soil 43-116 30-115	Water Soil 33-141 18-137	Water Soil 16-110 20-130		
OLC02.1	40-110	30-110	20-140	NA		
Other:						
Sample Number/Matrix	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery	Action
		Not	Applicable			

Method	Acid Method QC Acceptance Criteria					
	Phenol-d_5	2-FP	2,4,6-TBP	2-CP-d_4*	Other:	
OLM03.2	Water Soil 10-110 24-113	Water Soil 21-110 25-121	Water Soil 10-123 19-122	Water Soil 33-110 20-130		
OLC02.1	15-115	15-110	15-130	NA		
Other:						
Sample Number/Matrix	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery	Action

* Advisory Surrogates - OLM03.2

Validator: Rina Cantwell

Date: 6/6/05

EPA-NE - Data Validation Worksheet
VOA/SV-VII

VII. INTERNAL STANDARD PERFORMANCE

List the internal standards that are outside the area count and retention time method QC acceptance criteria.
IS Area Count method QC acceptance criteria:_____
IS Retention Time method QC acceptance criteria:_____

Sample Number (TR#)	Date and Time Analyzed	Instrument	Parameter	IS Outside Area Count and/or RT Criteria	IS Area	RT Shift	Acceptable Range (IS area or RT shift)	Action
All	Internal	Standard	Criteria	were met.				

Validator: Dana Antwell

Date: 6/6/05

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/PCB-VIII

VIII. MATRIX SPIKE/MATRIX SPIKE DUPLICATE - List all MS/MSD analytes that are outside method QC acceptance criteria.

Use a separate worksheet for each MS/MSD pair.

Sample # _____ Matrix _____ Concentration Level _____

Parameter	Compound	MS %Rec	MSD %Rec	RPD	Method QC Limits		Concentration			% RSD	Action
					% Rec	RPD	Unspiked Sample	MS	MSD		
	No MS/MSD										
	was performed										

Validator: Rina Cartwelle Date: 6/6/05

EPA-N_ Data Validation Worksheet
VOA/SV - Pest/PCB-IX

IX. FIELD DUPLICATE PRECISION - List all field duplicate analytes that are outside criteria.

Use a separate worksheet for each field duplicate pair.

Sample Number 5YRGA14300 Duplicate Sample Number 5YRHA14300 Matrix AQ

Parameter	Compound	Sample Conc.	Sample QL		Duplicate Conc.	Duplicate QL		RPD	QC Acceptance Criteria RPD or NA*	Action
			SQL	2xSQL		SQL	2xSQL			

* For instances where one duplicate result is ND (or reported less than the sample QL).

Does the MS/MSD data indicate acceptable laboratory precision? Y N

Comments: Field duplicate precision was acceptable.

Sampler Name: _____ Contractor Name: _____ Date Contacted: _____

Reason for Contact and resolution obtained: _____

Validator: Dina Caldwell Date: 6/6/05

EPA-N Data Validation Worksheet
VOA/SV - Pest/PCB-IX

IX. FIELD DUPLICATE PRECISION - List all field duplicate analytes that are outside criteria.

Use a separate worksheet for each field duplicate pair.

Sample Number 5YRGA16700 Duplicate Sample Number 5YRHA16700 Matrix AQ

Parameter	Compound	Sample Conc.	Sample QL		Duplicate Conc.	Duplicate QL		RPD	QC Acceptance Criteria RPD or NA*	Action
			SQL	2xSQL		SQL	2xSQL			

* For instances where one duplicate result is ND (or reported less than the sample QL).

Does the MS/MSD data indicate acceptable laboratory precision? Y N

Comments: Field duplicate precision was acceptable

Sampler Name: _____ Contractor Name: _____ Date Contacted: _____

Reason for Contact and resolution obtained: _____

Validator: Rina Cantwell Date: 6/6/05

X. SENSITIVITY CHECK (Method Detection Limit Study)

List all compounds, surrogates, and internal standards that are outside the MDL criteria.

- Has an appropriate MDL study been submitted with seven replicates for each compound and matrix of interest? Y N
- Date of Preparation/Analysis: 5/10/05 Within 1 year? samples were analyzed 6 days after the 1-yr period. Y N
- Instrument I.D.: _____ Same as samples? Y N
- Column I.D.: _____ Same as samples? Y N

Matrix	Compound	MDL > QL	Method QC Limits < 80% or > 120%	IS Outside Area Count and/or RT Criteria	RSD > 20%	Samples Affected	Action

If an MDL study has not been submitted, use only the LFB results to evaluate data.

(Laboratory Fortified Blank) - List all LFB compounds, surrogates and internal standards that are outside criteria.

- Has an appropriate and complete LFB been submitted at the proper frequency? Y N
- Does it contain all target compounds at the method-required QLs? Y N
- Was the LFB spiked with a standard from a source (vendor) independent of the calibration standard? Y N

Matrix	Compound	Method QC Limits < 60% or > 140% Other:	IS Outside Area Count and/or RT Criteria	Samples Affected	Action
	Not Performed				

Validator: Dana Cantrell Date: 6/6/05

XI. ACCURACY CHECK (Performance Evaluation Results) - List all analytes that are outside criteria.

SDG No: MD0534 CASE: _____

Performance Evaluation Sample was not analyzed.
Laboratory Control Sample Results were acceptable.

Are more than one-half of the PES analytes within criteria for each parameter. Y N

PE Sample Number	Ampule Number	Parameter	Type of PES	Matrix	Analyte	Conc.	Region I EPA PES Scores*	Non-EPA PES Scores**	Samples Affected	Action

* For Region I PESs indicate the Region I PES Score Report Result: Action High; Action Low; TCL MISS; TCL CONTAMINANT; TIC HIT; TIC MISS; TIC CONTAMINANT

** For Non-EPA PESs indicate the Non-EPA PES Score: PES COMPOUND MISS; PES COMPOUND CONTAMINANT; PES COMPOUND HIT (% Recovery Limits)

Validator: Dina Cahill

Date: 6/6/05

XII. TARGET COMPOUND IDENTIFICATION - List the analytes that are outside the acceptance criteria.

Sample Number	Compound	MS Ions	RRT	Action
	All reported			
	target compounds			
	are acceptable			

Validator: Dina Cahwell

Date: 6/6/05

XIII. SAMPLE QUANTITATION

Recalculate, from the raw data, the concentrations for one positive detect and one reported sample quantitation limit for a non-detect in a diluted sample or soil sample per fraction. (Note: Although Section XIII, C.1.a, requires that one calculation for each fraction in each sample be performed, the validator is only required to reproduce an example, for each fraction, of one positive detect and one sample quantitation limit calculation on this worksheet.)

Do all soil/sediment samples have % solids greater than 30%? NA - Samples are aqueous Y N
If no, list sample numbers _____

Fraction		Calculation
VOA		See attached for positive detect calculation
Sample No.:	5YRGA14300	
Reported Compound:	chlorform	No sample dilutions were performed
Reported Value:	1	
Not Detected Compound:		
Reported Quantitation Limit:		
BNA		Not Applicable
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		
Pesticide/PCB		
Sample No.:		
Reported Compound:		
Reported Value:		
Not Detected Compound:		
Reported Quantitation Limit:		

Validator: Dina Cahill

Date: 6/6/05

VOA Quantitation Calculations — Water Samples

Sample ID:	5YRGA14300
Calibration Date/ID:	5/10/2005
Compound:	Chloroform

$$ug/L = \frac{(Ax)\ (IS)\ (Df)}{(Ais)\ (RRF)\ (Vo)}$$

Ax	=	Area target of compound
IS	=	Amount of internal standard (usually 250 ng)
Df	=	Dilution factor
Ais	=	Area of the internal standard
RRF	=	Average initial calibration response factor (area/ng)
Vo	=	Volume water purged (mL)

Ax	=	37491	
IS	=	250	ng
Df	=	1	
Ais	=	3036178	
RRF	=	0.537	area/ng
Vo	=	5	mL

Calculation

ug/L = 1

Lab Reported: 1

XIV. TENTATIVELY IDENTIFIED COMPOUNDS (TICs)

List the 5 TICs having the highest concentration for each sample parameter.

Sample Number	Parameter	Compound	RRT	Est. Conc.	Action
		No TICs were			
		reported in any			
		Sample			

Validator: Dana Cartwell

Date: 6/6/05

XV. SEMIVOLATILE CLEANUP - List all analytes that are outside method cleanup QC criteria.

Cleanup Procedure	Instrument # or Lot #	Date/Time GPC Calibrated or Check Solution Analyzed	Compound	% Rec	QC Limits	Samples Affected	Action
			Not Applicable				

Did the GPC column meet; resolution requirements? Y or N
peak shape requirements? Y or N
retention time shift requirements? Y or N

Was the GPC calibration, Silica Gel cleanup checked at the method required frequency with correct compounds and concentrations? Y or N

Were all compounds less than QL for the GPC/Silica Gel/Acid-Partition blank? Y or N

Did the blank surrogate recoveries and IS area counts and RTs (if added) meet method QC acceptance criteria? Y or N

Comments: _____

Validator: Dana Cantrell Date: 6/6/05

Detail Report of Mitkem MDL Study, Year 2004

TestCode: SW8260B_W

Units: µg/L

A	Analyte	# Reps	Student T	Average	Standard D	Target Conc	Ratio	MDL
	REP1 REP2 REP3 REP4 REP5 REP6 REP7 REP8 REP9 REP10							
A	1,1,1,2-Tetrachloroethane	8	2.996	5.53774	0.25632	5.00000	6.49	0.77000
	6.07843 5.39528 5.31163 5.79167 5.55730 5.70733 5.57543 5.32668							
A	1,1,1-Trichloroethane	8	2.996	5.66013	0.16950	5.00000	9.80	0.51000
	5.80521 5.57568 5.50276 5.91099 5.67828 5.52615 5.70289 5.45117							
A	1,1,2,2-Tetrachloroethane	8	2.996	6.11468	0.48739	5.00000	3.33	1.50000
	6.73842 5.81330 5.54372 6.54809 6.00254 6.62296 6.00227 5.42056							
A	1,1,2-Trichloroethane	8	2.996	5.06182	0.24880	5.00000	6.67	0.75000
	5.56236 5.14436 4.70897 5.19411 5.06988 5.08676 4.86523 4.89813							
A	1,1-Dichloroethane	8	2.996	5.59206	0.16809	5.00000	10.00	0.50000
	5.81552 5.42525 5.54400 5.82659 5.40970 5.45525 5.62465 5.82628							
A	1,1-Dichloroethene	8	2.996	5.49903	0.25378	5.00000	6.58	0.76000
	6.8883 6.33730 5.55554 5.90020 5.96311 5.32488 5.32982 5.4338							
A	1,1-Dichloropropene	8	2.996	5.22320	0.31404	5.00000	5.32	0.94000
	6.0526 5.77228 5.1623 5.1518 5.00176 5.53870 5.27373 5.22188							
A	1,2,3-Trichlorobenzene	8	2.996	3.02603	0.22011	5.00000	7.58	0.66000
	3.37025 3.13864 2.9742 3.1785 2.90502 3.10232 2.90851 2.9955							
A	1,2,3-Trichloropropane	8	2.996	5.31132	0.18958	5.00000	8.77	0.57000
	5.62683 5.37426 5.10250 5.5287 5.05546 5.37604 5.27502 5.24088							
A	1,2,4-Trichlorobenzene	8	2.996	2.87093	0.20746	5.00000	8.06	0.62000
	3.17786 2.92022 2.7538 3.02137 2.77598 3.04269 2.85960 2.86514							
A	1,2,4-Trimethylbenzene	8	2.996	5.31182	0.21559	5.00000	7.69	0.65000
	5.73360 5.2775 5.11986 5.52277 5.28370 5.50132 5.26299 5.10084							
A	1,2-Dibromo-3-chloropropane	8	2.996	4.72536	0.63604	5.00000	2.63	1.90000
	5.6222 4.71885 2.37169 5.21336 4.7[illegible] 5.[illegible]676 4.21689 3.02542							
A	1,2-Dibromoethane	8	2.996	4.98870	0.26056	5.00000	6.41	0.78000
	5.46708 4.60303 4.81755 5.[illegible]0584 4.9322 5.5[illegible]5 4.97770 4.90882							
A	1,2-Dichlorobenzene	8	2.996	5.27814	0.25505	5.00000	6.58	0.76000
	5.55[illegible]9 5.[illegible]23[illegible]9 5.[illegible]2092 5.[illegible]7827 5.2[illegible]22 5.45082 5.15305 4.58156							
A	1,2-Dichloroethane	8	2.996	5.29240	0.14953	5.00000	11.11	0.45000
	5.49052 5.2[illegible] 5.2[illegible]3 5.4[illegible]82 5.[illegible]53 5.4[illegible]635 5.2[illegible]10 5.25229							
A	1,2-Dichloropropane	8	2.996	5.75228	0.21502	5.00000	7.81	0.64000
	5.89089 5.71202 5.45011 5.65858 5.71508 5.5[illegible]50 5.51119 5.1[illegible]8							

Detail Report of Mitkem MDL Study, Year 2004

TestCode: SW8260B_W

Units: µg/L

A	Analyte	# Reps	Student T	Average	Standard D	Target Conc	Ratio	MDL
	REP1 REP2 REP3 REP4 REP5 REP6 REP7 REP8 REP9 REP10							
A	1,3,5-Trimethylbenzene	8	2.996	5.85172	0.23813	5.00000	7.04	0.71000
A	1,3-Dichlorobenzene	8	2.996	5.50872	0.19238	5.00000	8.62	0.58000
A	1,3-Dichloropropane	8	2.996	5.70055	0.13941	5.00000	11.90	0.42000
A	1,4-Dichlorobenzene	8	2.996	5.56179	0.18780	5.00000	8.93	0.56000
A	2,2-Dichloropropane	8	2.996	5.05201	0.31525	5.00000	5.32	0.94000
A	2-Butanone	8	2.996	4.21804	0.41413	5.00000	4.17	1.20000
A	2-Chlorotoluene	8	2.996	6.13274	0.31976	5.00000	5.21	0.96000
A	2-Hexanone	8	2.996	3.33535	0.31917	5.00000	5.21	0.96000
A	4-Chlorotoluene	8	2.996	5.71150	0.18941	5.00000	8.77	0.57000
A	4-Isopropyltoluene	8	2.996	4.72907	0.19470	5.00000	8.62	0.58000
A	4-Methyl-2-pentanone	8	2.996	3.68513	0.32566	5.00000	5.10	0.98000
A	Acetone	8	2.996	4.47329	1.31660	5.00000	1.28	3.90000
A	Benzene	8	2.996	5.71892	0.16623	5.00000	10.00	0.50000
A	Bromobenzene	8	2.996	6.11096	0.32230	5.00000	5.15	0.97000
A	Bromochloromethane	8	2.996	4.96763	0.21929	5.00000	7.58	0.66000
A	Bromodichloromethane	8	2.996	5.52634	0.58058	5.00000	2.94	1.70000
A	Bromoform	8	2.996	4.44964	0.33921	5.00000	5.00	1.00000

Detail Report of Mitkem MDL Study, Year 2004

TestCode: SW8260B_W

Units: µg/L

A	Analyte	# Reps	Student T	Average	Standard D	Target Conc	Ratio	MDL
	REP1 REP2 REP3 REP4 REP5 REP6 REP7 REP8 REP9 REP10							
A	Bromomethane	8	2.996	5.74805	0.20102	5.00000	8.33	0.60000
A	Carbon disulfide	8	2.996	5.83978	0.22931	5.00000	7.25	0.69000
A	Carbon tetrachloride	8	2.996	5.48160	0.18724	5.00000	8.93	0.56000
A	Chlorobenzene	8	2.996	5.53257	0.17537	5.00000	9.43	0.53000
A	Chloroethane	8	2.996	5.29191	0.53545	5.00000	3.13	1.60000
A	Chloroform	8	2.996	5.80386	0.11669	5.00000	14.29	0.35000
A	Chloromethane	8	2.996	5.31580	0.19453	5.00000	8.62	0.58000
A	cis-1,2-Dichloroethene	8	2.996	5.36572	0.17694	5.00000	9.43	0.53000
A	cis-1,3-Dichloropropene	8	2.996	4.71738	0.19051	5.00000	8.77	0.57000
A	Dibromochloromethane	8	2.996	5.09183	0.26729	5.00000	6.25	0.80000
A	Dibromomethane	8	2.996	5.19565	0.14165	5.00000	11.90	0.42000
A	Dichlorodifluoromethane	8	2.996	5.50136	0.57273	5.00000	2.94	1.70000
A	Ethylbenzene	8	2.996	5.30041	0.16686	5.00000	10.00	0.50000
A	Hexachlorobutadiene	8	2.996	4.88775	0.25503	5.00000	6.58	0.76000
A	Iodomethane	8	2.996	4.83607	0.12855	5.00000	12.82	0.39000
A	Isopropylbenzene	8	2.996	5.01226	0.20256	5.00000	8.20	0.61000

Detail Report of Mitkem MDL Study, Year 2004

TestCode: SW8260B_W

Units: µg/L

A	Analyte	# Reps	Student T	Average	Standard D	Target Conc	Ratio	MDL
	REP1 REP2 REP3 REP4 REP5 REP6 REP7 REP8 REP9 REP10							
A	m,p-Xylene	8	2.996	10.41414	0.35062	5.00000	4.55	1.10000
A	Methyl tert-butyl ether	8	2.996	4.14871	0.23585	5.00000	7.04	0.71000
A	Methylene chloride	8	2.996	5.78942	0.18682	5.00000	8.93	0.56000
A	n-Butylbenzene	8	2.996	3.49410	0.16761	5.00000	10.00	0.50000
A	n-Propylbenzene	8	2.996	5.39643	0.29216	5.00000	5.68	0.88000
A	Naphthalene	8	2.996	3.32481	0.13227	5.00000	12.50	0.40000
A	o-Xylene	8	2.996	5.14119	0.20422	5.00000	8.20	0.61000
A	sec-Butylbenzene	8	2.996	5.32869	0.16711	5.00000	10.00	0.50000
A	Styrene	8	2.996	4.67395	0.19724	5.00000	8.47	0.59000
A	tert-Butylbenzene	8	2.996	6.04200	0.30022	5.00000	5.56	0.90000
A	Tetrachloroethene	8	2.996	5.82239	0.17306	5.00000	9.62	0.52000
A	Toluene	8	2.996	5.31663	0.11043	5.00000	15.15	0.33000
A	trans-1,2-Dichloroethene	8	2.996	5.43823	0.16770	5.00000	10.00	0.50000
A	trans-1,3-Dichloropropene	8	2.996	4.38008	0.22083	5.00000	7.58	0.66000
A	Trichloroethene	8	2.996	5.29355	0.16751	5.00000	10.00	0.50000
A	Trichlorofluoromethane	8	2.996	4.60606	0.48485	5.00000	3.33	1.50000
A	Vinyl acetate	8	2.996	3.51584	0.26515	5.00000	6.33	0.79000

Detail Report of Mitkem MDL Study, Year 2004

TestCode: SW8260B_W

Units: µg/L

A	Analyte	# Reps	Student T	Average	Standard D	Target Conc	Ratio	MDL
	REP1 REP2 REP3 REP4 REP5 REP6 REP7 REP8 REP9 REP10							
A	Vinyl chloride	8	2.996	5.38569	0.16891	5.00000	9.80	0.51000
M	Xylene (Total)	8	2.996	15.55532	0.50792	5.00000	3.33	1.50000
S	1,2-Dichloroethane-d4	8	2.996	4.64493	0.31810	50.00000	52.63	0.95000
S	Bromofluorobenzene	8	2.996	4.77757	0.27949	50.00000	59.52	0.84000
S	Dibromofluoromethane	8	2.996	4.98425	0.16201	50.00000	102.04	0.49000
S	Toluene-d8	8	2.996	5.30937	0.13913	50.00000	119.05	0.42000
X	1,2-Dichloroethene, Total	8	2.996	10.80395	0.30202	5.00000	5.56	0.90000
X	1,2-Dichlorotetrafluoroethane	8	2.996	5.75048	0.88070	5.00000	1.92	2.60000
X	1,4-Dioxane	8	2.996	3.61815	0.50813	5.00000	3.33	1.50000
X	1-Chlorohexane	8	2.996	4.93481	0.18451	5.00000	9.09	0.55000
X	2-Chloro-1,3-butadiene	8	2.996	4.96075	0.09300	5.00000	17.86	0.28000
X	2-Chloroethyl vinyl ether	8	2.996	2.10271	0.21928	5.00000	7.58	0.66000
X	Acetonitrile	8	2.996	49.65415	2.72224	5.00000	0.61	8.20000
X	Acrolein	8	2.996	20.81903	3.34825	5.00000	0.50	10.00000
X	Acrylonitrile	8	2.996	22.08423	0.82668	5.00000	2.00	2.50000
X	Allyl chloride	8	2.996	3.99473	0.26136	5.00000	6.41	0.78000

MITKEM CORPORATION
175 Metro Center Boulevard
Warwick, Rhode Island 02886-1755
(401) 732-3400 • Fax (401) 732-3499
email: mitkem@mitkem.com

CHAIN-OF-CUSTODY RECORD

REPORT TO		INVOICE TO		
COMPANY: Resource Controls	PHONE: 401-728-6860	COMPANY: ENSAFE	PHONE: 901 572 7962	LAB PROJECT #:
NAME: Russel Parkman	FAX: 401 727-1849	NAME: Lori Goetz	FAX: 901 372 2454	
ADDRESS: 474 Broadway		ADDRESS: 5724 Summer Trees Dr.		TURNAROUND TIME:
CITY/ST/ZIP: Pawtucket, RI 02860		CITY/ST/ZIP: Memphis, TN 38134		STANDARD

CLIENT PROJECT NAME: STAMINA MILLS
CLIENT PROJECT #: A6556
CLIENT P.O.#: ENSAFE 11848

REQUESTED ANALYSES: VOCs by EPA 8260

SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	VOCs by EPA 8260	COMMENTS
5YR-G-A203-00	5/9 / 1:02		✓	✓			01	2	✓	
5YR-G-A077-00	5/9 / 11:41		✓	✓			02	2	✓	
5YR-G-A143-00	5/9 / 1246		✓	✓			03	2	✓	
5YR-H-A143-00	5/9 / 1252		✓	✓			04	2	✓	
5YR-G-A167-00	5/9 / 1120		✓	✓			05	2	✓	
5YR-H-A167-00	5/9 / 1122		✓	✓			06	2	✓	
5YR-G-A173-00	5/9 / 11:00		✓	✓			07	2	✓	
5YR-G-A200-00	5/9 / 1217		✓	✓			08	0	✓	
5YR-G-A142-00	5/9 / 1230		✓	✓			09	2	✓	
	/									
	/									
	/									

TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME
	[signature]	5-9-05 / 3:00	[signature]	5-9-05 / 3:00
		/		/
		/		/

ADDITIONAL REMARKS:

COOLER TEMP:

WHITE: LABORATORY COPY YELLOW: REPORT COPY PINK: CLIENT'S COPY

STAMINA MILLS
4001-00899

D0534 VOA	SAMPLE ID ------->	5YR-G-A203-00	5YR-G-A077-00	5YR-G-A143-00	5YR-H-A143-00	5YR-G-A167-00	5YR-H-A167-00
	LAB SAMPLE ID --->	D0534-01A	D0534-02A	D0534-03A	D0534-04A	D0534-05A	D0534-06A
	ORIGINAL ID ----->	5YRGA20300	5YRGA07700	5YRGA14300	5YRHA14300	5YRGA16700	5YRHA16700
	ID FROM REPORT -->	5YRGA20300	5YRGA07700	5YRGA14300	5YRHA14300	5YRGA16700	5YRHA16700
	SAMPLE DATE ----->	05/09/05	05/09/05	05/09/05	05/09/05	05/09/05	05/09/05
	DATE RECEIVED --->	05/09/05	05/09/05	05/09/05	05/09/05	05/09/05	05/09/05
	DATE EXTRACTED -->	05/10/05	05/10/05	05/10/05	05/10/05	05/10/05	05/10/05
	DATE ANALYZED --->	05/10/05	05/10/05	05/10/05	05/10/05	05/10/05	05/10/05
	MATRIX ---------->	Water	Water	Water	Water	Water	Water
	CASE # ---------->	D0534	D0534	D0534	D0534	D0534	D0534
	REPORT CODE ----->	A (Primary)	A (Primary)	A (Primary)	A (Primary)	A (Primary)	A (Primary)
	UNITS ---------->	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
CAS #	Parameter						
75-71-8	Dichlorodifluoromethane	5. U	5. U	5. U	5. U	5. U	5. U
74-87-3	Chloromethane	5. U	5. U	5. U	5. U	5. U	5. U
75-01-4	Vinyl chloride	5. U	5. U	5. U	5. U	5. U	5. U
74-83-9	Bromomethane	5. U	5. U	5. U	5. U	5. U	5. U
75-00-3	Chloroethane	5. U	5. U	5. U	5. U	5. U	5. U
75-69-4	Trichlorofluoromethane	5. UJ	5. UJ	5. UJ	5. UJ	5. UJ	5. UJ
75-35-4	1,1-Dichloroethene	5. U	5. U	5. U	5. U	5. U	5. U
67-64-1	Acetone	5. UJ	5. UJ	5. UJ	5. UJ	5. UJ	5. UJ
74-88-4	Methyl iodide	5. U	5. U	5. U	5. U	5. U	5. U
75-15-0	Carbon disulfide	5. U	5. U	5. U	5. U	5. U	5. U
75-09-2	Methylene chloride	5. U	5. U	5. U	5. U	5. U	5. U
156-60-5	trans-1,2-Dichloroethene	5. U	5. U	5. U	5. U	5. U	5. U
1634-04-4	Methyl tert-butyl ether	5. U	5. U	5. U	5. U	5. U	5. U
75-34-3	1,1-Dichloroethane	5. U	5. U	5. U	5. U	5. U	5. U
108-05-4	Vinyl acetate	5. U	5. U	5. U	5. U	5. U	5. U
78-93-3	2-Butanone (MEK)	5. U	5. U	5. U	5. U	5. U	5. U
156-59-2	cis-1,2-Dichloroethene	5. U	5. U	5. U	5. U	5. U	5. U
594-20-7	2,2-Dichloropropane	5. U	5. U	5. U	5. U	5. U	5. U
74-97-5	Chlorobromomethane	5. U	5. U	5. U	5. U	5. U	5. U
67-66-3	Chloroform	5. U	5. U	1. J	1. J	5. U	5. U
71-55-6	1,1,1-Trichloroethane	5. U	5. U	5. U	5. U	5. U	5. U
563-58-6	1,1-Dichloropropene	5. U	5. U	5. U	5. U	5. U	5. U
56-23-5	Carbon tetrachloride	5. U	5. U	5. U	5. U	5. U	5. U
107-06-2	1,2-Dichloroethane	5. U	5. U	5. U	5. U	5. U	5. U
71-43-2	Benzene	5. U	5. U	5. U	5. U	5. U	5. U
79-01-6	Trichloroethene	5. U	5. U	5. U	5. U	5. U	5. U
78-87-5	1,2-Dichloropropane	5. U	5. U	5. U	5. U	5. U	5. U
74-95-3	Dibromomethane	5. U	5. U	5. U	5. U	5. U	5. U
75-27-4	Bromodichloromethane	5. U	5. U	5. U	5. U	5. U	5. U
10061-01-5	cis-1,3-Dichloropropene	5. U	5. U	5. U	5. U	5. U	5. U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5. U	5. U	5. U	5. U	5. U	5. U
108-88-3	Toluene	5. U	5. U	5. U	5. U	5. U	5. U
10061-02-6	trans-1,3-Dichloropropene	5. U	5. U	5. U	5. U	5. U	5. U
79-00-5	1,1,2-Trichloroethane	5. U	5. U	5. U	5. U	5. U	5. U
142-28-9	1,3-Dichloropropane	5. U	5. U	5. U	5. U	5. U	5. U
127-18-4	Tetrachloroethene	5. U	5. U	5. U	5. U	5. U	5. U
591-78-6	2-Hexanone	5. UJ	5. UJ	5. UJ	5. UJ	5. UJ	5. UJ
124-48-1	Dibromochloromethane	5. U	5. U	5. U	5. U	5. U	5. U
106-93-4	1,2-Dibromoethane	5. U	5. U	5. U	5. U	5. U	5. U

*** Data Load ***

STAMINA MILLS

4001-00899

D0534 VOA							
	SAMPLE ID ------->	5YR-G-A203-00	5YR-G-A077-00	5YR-G-A143-00	5YR-H-A143-00	5YR-G-A167-00	5YR-H-A167-00
	LAB SAMPLE ID --->	D0534-01A	D0534-02A	D0534-03A	D0534-04A	D0534-05A	D0534-06A
	ORIGINAL ID ----->	5YRGA20300	5YRGA07700	5YRGA14300	5YRHA14300	5YRGA16700	5YRHA16700
	ID FROM REPORT -->	5YRGA20300	5YRGA07700	5YRGA14300	5YRHA14300	5YRGA16700	5YRHA16700
	SAMPLE DATE ----->	05/09/05	05/09/05	05/09/05	05/09/05	05/09/05	05/09/05
	DATE RECEIVED --->	05/09/05	05/09/05	05/09/05	05/09/05	05/09/05	05/09/05
	DATE EXTRACTED -->	05/10/05	05/10/05	05/10/05	05/10/05	05/10/05	05/10/05
	DATE ANALYZED --->	05/10/05	05/10/05	05/10/05	05/10/05	05/10/05	05/10/05
	MATRIX ---------->	Water	Water	Water	Water	Water	Water
	CASE # ---------->	D0534	D0534	D0534	D0534	D0534	D0534
	REPORT CODE ----->	A (Primary)	A (Primary)	A (Primary)	A (Primary)	A (Primary)	A (Primary)
	UNITS ---------->	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
CAS #	Parameter						
108-90-7	Chlorobenzene	5. U	5. U	5. U	5. U	5. U	5. U
630-20-6	1,1,1,2-Tetrachloroethane	5. U	5. U	5. U	5. U	5. U	5. U
100-41-4	Ethylbenzene	5. U	5. U	5. U	5. U	5. U	5. U
9999000-95-3	m,p-Xylene	5. U	5. U	5. U	5. U	5. U	5. U
95-47-6	o-Xylene	5. U	5. U	5. U	5. U	5. U	5. U
1330-20-7	Xylene (total)	5. U	5. U	5. U	5. U	5. U	5. U
100-42-5	Styrene	5. U	5. U	5. U	5. U	5. U	5. U
75-25-2	Bromoform	5. U	5. U	5. U	5. U	5. U	5. U
98-82-8	Isopropylbenzene	5. U	5. U	5. U	5. U	5. U	5. U
79-34-5	1,1,2,2-Tetrachloroethane	5. U	5. U	5. U	5. U	5. U	5. U
108-86-1	Bromobenzene	5. U	5. U	5. U	5. U	5. U	5. U
96-18-4	1,2,3-Trichloropropane	5. U	5. U	5. U	5. U	5. U	5. U
103-65-1	n-Propylbenzene	5. U	5. U	5. U	5. U	5. U	5. U
95-49-8	2-Chlorotoluene	5. U	5. U	5. U	5. U	5. U	5. U
108-67-8	1,3,5-trimethylbenzene	5. U	5. U	5. U	5. U	5. U	5. U
106-43-4	4-Chlorotoluene	5. U	5. U	5. U	5. U	5. U	5. U
98-06-6	tert-Butylbenzene	5. U	5. U	5. U	5. U	5. U	5. U
95-63-6	1,2,4-trimethylbenzene	5. U	5. U	5. U	5. U	5. U	5. U
135-98-8	sec-Butylbenzene	5. U	5. U	5. U	5. U	5. U	5. U
99-87-6	4-Isopropyltoluene	5. U	5. U	5. U	5. U	5. U	5. U
541-73-1	1,3-Dichlorobenzene	5. U	5. U	5. U	5. U	5. U	5. U
106-46-7	1,4-Dichlorobenzene	5. U	5. U	5. U	5. U	5. U	5. U
104-51-8	n-Butylbenzene	5. U	5. U	5. U	5. U	5. U	5. U
95-50-1	1,2-Dichlorobenzene	5. U	5. U	5. U	5. U	5. U	5. U
96-12-8	1,2-Dibromo-3-chloropropane	5. U	5. U	5. U	5. U	5. U	5. U
120-82-1	1,2,4-Trichlorobenzene	5. U	5. U	5. U	5. U	5. U	5. U
87-68-3	Hexachlorobutadiene	5. U	5. U	5. U	5. U	5. U	5. U
91-20-3	Naphthalene	5. U	5. U	5. U	5. U	5. U	5. U
87-61-6	1,2,3-Trichlorobenzene	5. U	5. U	5. U	5. U	5. U	5. U

*** Data Load ***

STAMINA MILLS
4001-00899

D0534 VOA							
	SAMPLE ID ------->	5YR-G-A173-00	5YR-G-A200-00	5YR-G-A142-00	VBL-0-0534-01		
	LAB SAMPLE ID --->	D0534-07A	D0534-08A	D0534-09A	MB-18048		
	ORIGINAL ID ----->	5YRGA17300	5YRGA20000	5YRGA14200	VBLK5E		
	ID FROM REPORT -->	5YRGA17300	5YRGA20000	5YRGA14200	VBLK5E		
	SAMPLE DATE ----->	05/06/05	05/09/05	05/09/05	05/10/05		
	DATE RECEIVED --->	05/09/05	05/09/05	05/09/05	05/10/05		
	DATE EXTRACTED -->	05/10/05	05/10/05	05/10/05	05/10/05		
	DATE ANALYZED --->	05/10/05	05/10/05	05/10/05	05/10/05		
	MATRIX ---------->	Water	Water	Water	Water		
	CASE # ---------->	D0534	D0534	D0534	D0534		
	REPORT CODE ----->	A (Primary)	A (Primary)	A (Primary)	D (Lab Blank)		
	UNITS ---------->	UG/L	UG/L	UG/L	UG/L		
CAS #	Parameter						
75-71-8	Dichlorodifluoromethane	5. U	5. U	5. U	5. U		
74-87-3	Chloromethane	5. U	5. U	5. U	5. U		
75-01-4	Vinyl chloride	5. U	5. U	5. U	5. U		
74-83-9	Bromomethane	5. U	5. U	5. U	5. U		
75-00-3	Chloroethane	5. U	5. U	5. U	5. U		
75-69-4	Trichlorofluoromethane	5. U J	5. U J	5. U J	5. U		
75-35-4	1,1-Dichloroethene	5. U	5. U	5. U	5. U		
67-64-1	Acetone	5. U J	5. U J	5. U J	5. U		
74-88-4	Methyl iodide	5. U	5. U	5. U	5. U		
75-15-0	Carbon disulfide	5. U	5. U	5. U	5. U		
75-09-2	Methylene chloride	5. U	5. U	5. U	5. U		
156-60-5	trans-1,2-Dichloroethene	5. U	5. U	5. U	5. U		
1634-04-4	Methyl tert-butyl ether	5. U	5. U	5. U	5. U		
75-34-3	1,1-Dichloroethane	5. U	5. U	5. U	5. U		
108-05-4	Vinyl acetate	5. U	5. U	5. U	5. U		
78-93-3	2-Butanone (MEK)	5. U	5. U	5. U	5. U		
156-59-2	cis-1,2-Dichloroethene	5. U	5. U	5. U	5. U		
594-20-7	2,2-Dichloropropane	5. U	5. U	5. U	5. U		
74-97-5	Chlorobromomethane	5. U	5. U	5. U	5. U		
67-66-3	Chloroform	5. U	5. U	5. U	5. U		
71-55-6	1,1,1-Trichloroethane	5. U	5. U	5. U	5. U		
563-58-6	1,1-Dichloropropene	5. U	5. U	5. U	5. U		
56-23-5	Carbon tetrachloride	5. U	5. U	5. U	5. U		
107-06-2	1,2-Dichloroethane	5. U	5. U	5. U	5. U		
71-43-2	Benzene	5. U	5. U	5. U	5. U		
79-01-6	Trichloroethene	5. U	5. U	5. U	5. U		
78-87-5	1,2-Dichloropropane	5. U	5. U	5. U	5. U		
74-95-3	Dibromomethane	5. U	5. U	5. U	5. U		
75-27-4	Bromodichloromethane	5. U	5. U	5. U	5. U		
10061-01-5	cis-1,3-Dichloropropene	5. U	5. U	5. U	5. U		
108-10-1	4-Methyl-2-Pentanone (MIBK)	5. U	5. U	5. U	5. U		
108-88-3	Toluene	5. U	5. U	5. U	5. U		
10061-02-6	trans-1,3-Dichloropropene	5. U	5. U	5. U	5. U		
79-00-5	1,1,2-Trichloroethane	5. U	5. U	5. U	5. U		
142-28-9	1,3-Dichloropropane	5. U	5. U	5. U	5. U		
127-18-4	Tetrachloroethene	5. U	5. U	5. U	5. U		
591-78-6	2-Hexanone	5. U J	5. U J	5. U J	5. U		
124-48-1	Dibromochloromethane	5. U	5. U	5. U	5. U		
106-93-4	1,2-Dibromoethane	5. U	5. U	5. U	5. U		

*** Data Load ***

STAMINA MILLS
4001-00899

D0534
VOA

SAMPLE ID ------->		5YR-G-A173-00	5YR-G-A200-00	5YR-G-A142-00	VBL-0-0534-01		
LAB SAMPLE ID --->		D0534-07A	D0534-08A	D0534-09A	MB-18048		
ORIGINAL ID ----->		5YRGA17300	5YRGA20000	5YRGA14200	VBLK5E		
ID FROM REPORT -->		5YRGA17300	5YRGA20000	5YRGA14200	VBLK5E		
SAMPLE DATE ----->		05/06/05	05/09/05	05/09/05	05/10/05		
DATE RECEIVED --->		05/09/05	05/09/05	05/09/05	05/10/05		
DATE EXTRACTED -->		05/10/05	05/10/05	05/10/05	05/10/05		
DATE ANALYZED --->		05/10/05	05/10/05	05/10/05	05/10/05		
MATRIX ---------->		Water	Water	Water	Water		
CASE # ---------->		D0534	D0534	D0534	D0534		
REPORT CODE ----->		A (Primary)	A (Primary)	A (Primary)	D (Lab Blank)		
UNITS ---------->		UG/L	UG/L	UG/L	UG/L		
CAS #	Parameter						
108-90-7	Chlorobenzene	5. U	5. U	5. U	5. U		
630-20-6	1,1,1,2-Tetrachloroethane	5. U	5. U	5. U	5. U		
100-41-4	Ethylbenzene	5. U	5. U	5. U	5. U		
9999000-95-3	m,p-Xylene	5. U	5. U	5. U	5. U		
95-47-6	o-Xylene	5. U	5. U	5. U	5. U		
1330-20-7	Xylene (total)	5. U	5. U	5. U	5. U		
100-42-5	Styrene	5. U	5. U	5. U	5. U		
75-25-2	Bromoform	5. U	5. U	5. U	5. U		
98-82-8	Isopropylbenzene	5. U	5. U	5. U	5. U		
79-34-5	1,1,2,2-Tetrachloroethane	5. U	5. U	5. U	5. U		
108-86-1	Bromobenzene	5. U	5. U	5. U	5. U		
96-18-4	1,2,3-Trichloropropane	5. U	5. U	5. U	5. U		
103-65-1	n-Propylbenzene	5. U	5. U	5. U	5. U		
95-49-8	2-Chlorotoluene	5. U	5. U	5. U	5. U		
108-67-8	1,3,5-trimethylbenzene	5. U	5. U	5. U	5. U		
106-43-4	4-Chlorotoluene	5. U	5. U	5. U	5. U		
98-06-6	tert-Butylbenzene	5. U	5. U	5. U	5. U		
95-63-6	1,2,4-trimethylbenzene	5. U	5. U	5. U	5. U		
135-98-8	sec-Butylbenzene	5. U	5. U	5. U	5. U		
99-87-6	4-Isopropyltoluene	5. U	5. U	5. U	5. U		
541-73-1	1,3-Dichlorobenzene	5. U	5. U	5. U	5. U		
106-46-7	1,4-Dichlorobenzene	5. U	5. U	5. U	5. U		
104-51-8	n-Butylbenzene	5. U	5. U	5. U	5. U		
95-50-1	1,2-Dichlorobenzene	5. U	5. U	5. U	5. U		
96-12-8	1,2-Dibromo-3-chloropropane	5. U	5. U	5. U	5. U		
120-82-1	1,2,4-Trichlorobenzene	5. U	5. U	5. U	5. U		
87-68-3	Hexachlorobutadiene	5. U	5. U	5. U	5. U		
91-20-3	Naphthalene	5. U	5. U	5. U	5. U		
87-61-6	1,2,3-Trichlorobenzene	5. U	5. U	5. U	5. U		

*** Data Load ***

Data Summary Report

MITKEM CORPORATION

"Environmental Testing For The New Millennium"

May 19, 2005

EnSafe, Inc.
5724 Summer Trees Drive
Memphis, TN 38134
Attn: Ms. Tina Cantwell

RE: Client Project: Stamina Mills, A6556
Lab Project #: D0534

Dear Ms. Cantwell:

Enclosed please find the data report of the required analyses for the samples associated with the above referenced project. If you have any questions regarding this report, please call me.

We appreciate your business.

Sincerely,

Agnes R. Ng
CLP Project Manager

175 Metro Center Boulevard • Warwick, Rhode Island 02886-1755
(401) 732-3400 • Fax (401) 732-3499 • www.mitkem.com

MITKEM CORPORATION

* Data Summary Pack *

Analytical Data Package for EnSafe, Inc.

Client Project: Stamina Mills

SDG# MD0534

Mitkem Work Order ID: D0534

May 19, 2005

Prepared For:

EnSafe, Inc.
5724 Summer Trees Drive
Memphis, TN 38134
Attn: Ms. Tina Cantwell

Prepared By:

Mitkem Corporation
175 Metro Center Boulevard
Warwick, RI 02886
(401) 732-3400

SDG Narrative

Mitkem Corporation submits the enclosed data package in response to EnSafe Inc.'s Stamina Mills project. Under this deliverable, analysis results are presented for nine aqueous samples that were received at Mitkem on May 9, 2005 and logged in under Mitkem Work Order Number D0534. Analyses were performed per specifications in the project's contract and the chain of custody forms. Sample identifications were shortened where necessary due to limitations in the software used to generate CLP-type report forms. A table of sample identifications showing full client ID, shortened client ID and laboratory ID follows this narrative, following the Mitkem Work Order.

The analyses were performed using EPA SW-846 procedures, and reported in a Level 4, CLP-format deliverable.

The following observation and/or deviations are observed for these analyses:

1. Overall Observation:

Where needed, manual integrations were performed to improve data quality. The corrections were reviewed and associated hardcopies generated and reported as required. Manual integrations are coded to provide the data reviewer justification for such action. The codes are labeled on the ion chromatogram signal (GC/MS signal) and chromatogram for GC based analysis as follows:

- M1 peak tailing or fronting.
- M2 peak co-elution.
- M3 rising or falling baseline.
- M4 retention time shift.
- M5 miscellaneous – under this category, the justification is explained.

The enclosed report includes the originals of all data with the exception of logbook pages and certain initial calibrations. Photocopies of logbook pages are included, with the originals maintained on file at the laboratory. The originals of initial calibrations that are shared among several cases are maintained on file at the laboratory, with photocopies included in the data package.

2. Volatile Analysis:

The sample was analyzed by Method 8260B. Sample results are reported down to the lowest calibration standard concentration (5ug/L). If any compound is confirmed to be detected below this level, but above the laboratory method detection limit (MDL) it is reported as an estimated concentration and qualified with a "J". The sample was acid preserved to pH <2.

The method detection limit (MDL) study is performed on an annual basis. The MDL study was performed on May 4, 2004, while the samples were analyzed on May 10, 2005. This time gap is not typically considered to be significant. The volatiles laboratory is currently performing the MDL studies for 2005. The MDLs were performed for each method. For method 8260 they were performed on instrument V1, typically the least sensitive instrument in the laboratory, while these samples were analyzed on instrument V2.

Surrogate recovery: recoveries were within the QC limits.

Laboratory control sample/laboratory control sample duplicate: spike recoveries and replicate RPDs were within the QC limits.

Sample analysis: no unusual observation was made for the analysis.

All pages in this report have been numbered consecutively, starting with the title page and ending with a page saying only "Last Page of Data Report".

I certify that this data package is in compliance, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Agnes Ng
CLP Project Manager
05/19/05

*Mitkem and Client Sample ID Summary Report**

Mitkem Workorder: D0534

Client Name: Ensafe, Inc.

Mitkem Sample ID	*Reported Client Sample ID*	*Full Client Sample ID*
D0534-01A	G-A203	5YR-G-A203-00
D0534-02A	G-A077	5YR-G-A077-00
D0534-03A	G-A143	5YR-G-A143-00
D0534-04A	H-A143	5YR-H-A143-00
D0534-05A	G-A167	5YR-G-A167-00
D0534-06A	H-A167	5YR-H-A167-00
D0534-07A	G-A173	5YR-G-A173-00
D0534-08A	G-A200	5YR-G-A200-00
D0534-09A	G-A142	5YR-G-A142-00

**** If client sample ID has not been truncated, the full client sample ID is listed in the column labeled "Reported Client Sample ID"***

Mitkem Corporation

10/May/05 07:50

WorkOrder: D0534

Client ID: ENSAFE
Project: Stamina Mills, Phase III GW Mon.
Location:
Comments: Use EnSafe EDD and include the EDD with the hard copy. Include a copy of the report to Russell Parkman @ Resource Controls.

Case:
SDG:
PO: 11848

Report Level: LEVEL 4
EDD: ASCII
HC Due: 05/23/05
Fax Due:

Sample ID	Client Sample ID	Collection Date	Date Received	Matrix	Test Code	Lab Test Comments	Iold	MS	SEL	Storage
D0534-01A	G-A203	05/09/05 13:02	05/09/05	Aqueous	SW8260B_W		☐	☐	☐	VOA
D0534-02A	G-A077	05/09/05 11:41	05/09/05	Aqueous	SW8260B_W		☐	☐	☐	VOA
D0534-03A	G-A143	05/09/05 12:46	05/09/05	Aqueous	SW8260B_W		☐	☐	☐	VOA
D0534-04A	H-A143	05/09/05 12:52	05/09/05	Aqueous	SW8260B_W		☐	☐	☐	VOA
D0534-05A	G-A167	05/09/05 11:20	05/09/05	Aqueous	SW8260B_W		☐	☐	☐	VOA
D0534-06A	H-A167	05/09/05 11:22	05/09/05	Aqueous	SW8260B_W		☐	☐	☐	VOA
D0534-07A	G-A173	05/06/05 11:00	05/09/05	Aqueous	SW8260B_W		☐	☐	☐	VOA
D0534-08A	G-A200	05/09/05 12:17	05/09/05	Aqueous	SW8260B_W		☐	☐	☐	VOA
D0534-09A	G-A142	05/09/05 12:30	05/09/05	Aqueous	SW8260B_W		☐	☐	☐	VOA

Client Rep: Benjamin F Dodge

0005

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

G-A007

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-02A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8300

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	U
78-93-3	2-Butanone	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

G-A007

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-02A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8300

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	4-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

G-A007

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-02A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8300

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

G-A142

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-09A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8307

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	U
78-93-3	2-Butanone	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

G-A142

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-09A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8307

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	4-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

G-A142

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-09A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8307

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

G-A143

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-03A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8301

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	U
78-93-3	2-Butanone	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	1	J
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

G-A143

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-03A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8301

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
----------	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	4-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

G-A143

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-03A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8301

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

G-A167

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-05A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8303

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	U
78-93-3	2-Butanone	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

G-A167

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-05A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8303

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	4-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

G-A167

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-05A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8303

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

G-A173

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-07A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8305

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	U
78-93-3	2-Butanone	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

G-A173

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-07A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8305

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	4-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

G-A173

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-07A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8305

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

G-A200

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-08A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8306

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	U
78-93-3	2-Butanone	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

G-A200

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-08A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8306

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
----------	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	4-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

G-A200

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-08A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8306

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

G-A203

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-01A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8299

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	U
78-93-3	2-Butanone	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

G-A203

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-01A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8299

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	4-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

G-A203

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-01A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8299

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H-A143

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-04A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8302

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	U
78-93-3	2-Butanone	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	1	J
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H-A143

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-04A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8302

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	4-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H-A143

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-04A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8302

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H-A167

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-06A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8304

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	U
78-93-3	2-Butanone	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H-A167

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-06A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8304

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	4-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H-A167

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-06A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8304

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

V5ELCS

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: LCS-18048

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8293

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	52	
74-87-3	Chloromethane	50	
75-01-4	Vinyl Chloride	50	
74-83-9	Bromomethane	47	
75-00-3	Chloroethane	46	
75-69-4	Trichlorofluoromethane	47	
75-35-4	1,1-Dichloroethene	46	
67-64-1	Acetone	51	
74-88-4	Iodomethane	48	
75-15-0	Carbon Disulfide	47	
75-09-2	Methylene Chloride	52	
156-60-5	trans-1,2-Dichloroethene	52	
1634-04-4	Methyl tert-butyl ether	48	
75-34-3	1,1-Dichloroethane	52	
108-05-4	Vinyl acetate	51	
78-93-3	2-Butanone	57	
156-59-2	cis-1,2-Dichloroethene	53	
590-20-7	2,2-Dichloropropane	51	
74-97-5	Bromochloromethane	51	
67-66-3	Chloroform	50	
71-55-6	1,1,1-Trichloroethane	49	
563-58-6	1,1-Dichloropropene	51	
56-23-5	Carbon Tetrachloride	47	
107-06-2	1,2-Dichloroethane	47	
71-43-2	Benzene	53	
79-01-6	Trichloroethene	51	
78-87-5	1,2-Dichloropropane	52	
74-95-3	Dibromomethane	51	
75-27-4	Bromodichloromethane	50	
10061-01-5	cis-1,3-Dichloropropene	51	
108-10-1	4-Methyl-2-pentanone	51	
108-88-3	Toluene	52	
10061-02-6	trans-1,3-Dichloropropene	49	
79-00-5	1,1,2-Trichloroethane	52	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

V5ELCS

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: LCS-18048

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8293

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	52	
127-18-4	Tetrachloroethene	53	
591-78-6	2-Hexanone	60	
124-48-1	Dibromochloromethane	49	
106-93-4	1,2-Dibromoethane	49	
108-90-7	Chlorobenzene	51	
630-20-6	1,1,1,2-Tetrachloroethane	50	
100-41-4	Ethylbenzene	51	
	m,p-Xylene	100	
95-47-6	o-Xylene	52	
1330-20-7	Xylene (Total)	150	
100-42-5	Styrene	53	
75-25-2	Bromoform	49	
98-82-8	Isopropylbenzene	50	
79-34-5	1,1,2,2-Tetrachloroethane	52	
108-86-1	Bromobenzene	50	
96-18-4	1,2,3-Trichloropropane	55	
103-65-1	n-Propylbenzene	51	
95-49-8	2-Chlorotoluene	50	
108-67-8	1,3,5-Trimethylbenzene	48	
106-43-4	4-Chlorotoluene	49	
98-06-6	tert-Butylbenzene	50	
95-63-6	1,2,4-Trimethylbenzene	50	
135-98-8	sec-Butylbenzene	51	
99-87-6	4-Isopropyltoluene	50	
541-73-1	1,3-Dichlorobenzene	52	
106-46-7	1,4-Dichlorobenzene	54	
104-51-8	n-Butylbenzene	54	
95-50-1	1,2-Dichlorobenzene	50	
96-12-8	1,2-Dibromo-3-chloropropane	49	
120-82-1	1,2,4-Trichlorobenzene	53	
87-68-3	Hexachlorobutadiene	48	
91-20-3	Naphthalene	51	
87-61-6	1,2,3-Trichlorobenzene	52	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

V5ELCSD

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: LCSD-18048

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8294

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	53	
74-87-3	Chloromethane	50	
75-01-4	Vinyl Chloride	51	
74-83-9	Bromomethane	47	
75-00-3	Chloroethane	48	
75-69-4	Trichlorofluoromethane	46	
75-35-4	1,1-Dichloroethene	46	
67-64-1	Acetone	50	
74-88-4	Iodomethane	48	
75-15-0	Carbon Disulfide	47	
75-09-2	Methylene Chloride	52	
156-60-5	trans-1,2-Dichloroethene	52	
1634-04-4	Methyl tert-butyl ether	50	
75-34-3	1,1-Dichloroethane	51	
108-05-4	Vinyl acetate	53	
78-93-3	2-Butanone	57	
156-59-2	cis-1,2-Dichloroethene	52	
590-20-7	2,2-Dichloropropane	50	
74-97-5	Bromochloromethane	52	
67-66-3	Chloroform	50	
71-55-6	1,1,1-Trichloroethane	48	
563-58-6	1,1-Dichloropropene	50	
56-23-5	Carbon Tetrachloride	46	
107-06-2	1,2-Dichloroethane	48	
71-43-2	Benzene	52	
79-01-6	Trichloroethene	52	
78-87-5	1,2-Dichloropropane	53	
74-95-3	Dibromomethane	53	
75-27-4	Bromodichloromethane	51	
10061-01-5	cis-1,3-Dichloropropene	51	
108-10-1	4-Methyl-2-pentanone	54	
108-88-3	Toluene	52	
10061-02-6	trans-1,3-Dichloropropene	51	
79-00-5	1,1,2-Trichloroethane	53	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

V5ELCSD

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: LCSD-18048

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8294

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	54	
127-18-4	Tetrachloroethene	52	
591-78-6	2-Hexanone	67	
124-48-1	Dibromochloromethane	50	
106-93-4	1,2-Dibromoethane	55	
108-90-7	Chlorobenzene	52	
630-20-6	1,1,1,2-Tetrachloroethane	51	
100-41-4	Ethylbenzene	51	
	m,p-Xylene	100	
95-47-6	o-Xylene	52	
1330-20-7	Xylene (Total)	150	
100-42-5	Styrene	53	
75-25-2	Bromoform	51	
98-82-8	Isopropylbenzene	50	
79-34-5	1,1,2,2-Tetrachloroethane	54	
108-86-1	Bromobenzene	50	
96-18-4	1,2,3-Trichloropropane	58	
103-65-1	n-Propylbenzene	50	
95-49-8	2-Chlorotoluene	49	
108-67-8	1,3,5-Trimethylbenzene	47	
106-43-4	4-Chlorotoluene	49	
98-06-6	tert-Butylbenzene	49	
95-63-6	1,2,4-Trimethylbenzene	49	
135-98-8	sec-Butylbenzene	49	
99-87-6	4-Isopropyltoluene	49	
541-73-1	1,3-Dichlorobenzene	51	
106-46-7	1,4-Dichlorobenzene	55	
104-51-8	n-Butylbenzene	52	
95-50-1	1,2-Dichlorobenzene	51	
96-12-8	1,2-Dibromo-3-chloropropane	50	
120-82-1	1,2,4-Trichlorobenzene	54	
87-68-3	Hexachlorobutadiene	48	
91-20-3	Naphthalene	54	
87-61-6	1,2,3-Trichlorobenzene	53	

2A
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

	EPA SAMPLE NO.	SMC1 #	SMC2 (DCE)#	SMC3 (TOL)#	OTHER (BFB)#	TOT OUT
01	VBLK5E	92	96	89	94	0
02	V5ELCS	94	96	95	97	0
03	V5ELCSD	93	96	95	97	0
04	G-A203	94	96	90	97	0
05	G-A007	93	94	88	94	0
06	G-A143	96	96	87	96	0
07	H-A143	96	97	88	93	0
08	G-A167	95	96	90	98	0
09	H-A167	94	96	88	96	0
10	G-A173	94	95	88	98	0
11	G-A200	95	94	88	95	0
12	G-A142	94	95	89	97	0
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		QC LIMITS
SMC1	= Dibromofluoromethane	(78-117)
SMC2 (DCE)	= 1,2-Dichloroethane-d4	(62-124)
SMC3 (TOL)	= Toluene-d8	(81-116)
OTHER(BFB)	= Bromofluorobenzene	(74-126)

Column to be used to flag recovery values

* Values outside of contract required QC limits

FORM 3
WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix Spike - Sample No.: V5ELCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Dichlorodifluoromethane	50		52	104	48-135
Chloromethane	50		50	100	60-118
Vinyl Chloride	50		50	100	65-113
Bromomethane	50		47	94	73-122
Chloroethane	50		46	92	72-118
Trichlorofluoromethane	50		47	94	68-129
1,1-Dichloroethene	50		46	92	67-121
Acetone	50		51	102	38-161
Iodomethane	50		48	96	72-130
Carbon Disulfide	50		47	94	53-137
Methylene Chloride	50		52	104	59-132
trans-1,2-Dichloroethen	50		52	104	71-124
Methyl tert-butyl ether	50		48	96	75-123
1,1-Dichloroethane	50		52	104	83-116
Vinyl acetate	50		51	102	44-160
2-Butanone	50		57	114	64-139
cis-1,2-Dichloroethene	50		53	106	83-120
2,2-Dichloropropane	50		51	102	70-129
Bromochloromethane	50		51	102	85-124
Chloroform	50		50	100	89-118
1,1,1-Trichloroethane	50		49	98	81-122
1,1-Dichloropropene	50		51	102	76-122
Carbon Tetrachloride	50		47	94	79-125
1,2-Dichloroethane	50		47	94	83-123
Benzene	50		53	106	81-120
Trichloroethene	50		51	102	77-121
1,2-Dichloropropane	50		52	104	81-116
Dibromomethane	50		51	102	86-124

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

FORM 3
WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix Spike - Sample No.: V5ELCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Bromodichloromethane	50		50	100	90-114
cis-1,3-Dichloropropene	50		51	102	78-119
4-Methyl-2-pentanone	50		51	102	57-138
Toluene	50		52	104	81-121
trans-1,3-Dichloroprope	50		49	98	85-118
1,1,2-Trichloroethane	50		52	104	44-159
1,3-Dichloropropane	50		52	104	79-125
Tetrachloroethene	50		53	106	73-121
2-Hexanone	50		60	120	53-145
Dibromochloromethane	50		49	98	80-124
1,2-Dibromoethane	50		49	98	80-124
Chlorobenzene	50		51	102	82-118
1,1,1,2-Tetrachloroetha	50		50	100	84-121
Ethylbenzene	50		51	102	80-122
Xylene (Total)	150		150	100	81-121
Styrene	50		53	106	77-128
Bromoform	50		49	98	77-130
Isopropylbenzene	50		50	100	58-148
1,1,2,2-Tetrachloroetha	50		52	104	76-125
Bromobenzene	50		50	100	76-124
1,2,3-Trichloropropane	50		55	110	57-140
n-Propylbenzene	50		51	102	72-119
2-Chlorotoluene	50		50	100	75-120
1,3,5-Trimethylbenzene	50		48	96	76-116
4-Chlorotoluene	50		49	98	78-116
tert-Butylbenzene	50		50	100	71-115
1,2,4-Trimethylbenzene	50		50	100	77-117
sec-Butylbenzene	50		51	102	67-117

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

FORM 3
WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix Spike - Sample No.: V5ELCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
4-Isopropyltoluene	50		50	100	68-118
1,3-Dichlorobenzene	50		52	104	80-116
1,4-Dichlorobenzene	50		54	108	80-114
n-Butylbenzene	50		54	108	58-121
1,2-Dichlorobenzene	50		50	100	81-116
1,2-Dibromo-3-chloropro	50		49	98	71-126
1,2,4-Trichlorobenzene	50		53	106	67-114
Hexachlorobutadiene	50		48	96	50-111
Naphthalene	50		51	102	58-133
1,2,3-Trichlorobenzene	50		52	104	64-118

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

FORM 3
WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix Spike - Sample No.: V5ELCS

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Dichlorodifluoromethane	50	53	106	2	40	48-135
Chloromethane	50	50	100	0	40	60-118
Vinyl Chloride	50	51	102	2	40	65-113
Bromomethane	50	47	94	0	40	73-122
Chloroethane	50	48	96	4	40	72-118
Trichlorofluoromethane	50	46	92	2	40	68-129
1,1-Dichloroethene	50	46	92	0	40	67-121
Acetone	50	50	100	2	40	38-161
Iodomethane	50	48	96	0	40	72-130
Carbon Disulfide	50	47	94	0	40	53-137
Methylene Chloride	50	52	104	0	40	59-132
trans-1,2-Dichloroethen	50	52	104	0	40	71-124
Methyl tert-butyl ether	50	50	100	4	40	75-123
1,1-Dichloroethane	50	51	102	2	40	83-116
Vinyl acetate	50	53	106	4	40	44-160
2-Butanone	50	57	114	0	40	64-139
cis-1,2-Dichloroethene	50	52	104	2	40	83-120
2,2-Dichloropropane	50	50	100	2	40	70-129
Bromochloromethane	50	52	104	2	40	85-124
Chloroform	50	50	100	0	40	89-118
1,1,1-Trichloroethane	50	48	96	2	40	81-122
1,1-Dichloropropene	50	50	100	2	40	76-122
Carbon Tetrachloride	50	46	92	2	40	79-125
1,2-Dichloroethane	50	48	96	2	40	83-123
Benzene	50	52	104	2	40	81-120
Trichloroethene	50	52	104	2	40	77-121
1,2-Dichloropropane	50	53	106	2	40	81-116
Dibromomethane	50	53	106	4	40	86-124

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

FORM 3
WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix Spike - Sample No.: V5ELCS

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Bromodichloromethane	50	51	102	2	40	90-114
cis-1,3-Dichloropropene	50	51	102	0	40	78-119
4-Methyl-2-pentanone	50	54	108	6	40	57-138
Toluene	50	52	104	0	40	81-121
trans-1,3-Dichloroprope	50	51	102	4	40	85-118
1,1,2-Trichloroethane	50	53	106	2	40	44-159
1,3-Dichloropropane	50	54	108	4	40	79-125
Tetrachloroethene	50	52	104	2	40	73-121
2-Hexanone	50	67	134	11	40	53-145
Dibromochloromethane	50	50	100	2	40	80-124
1,2-Dibromoethane	50	55	110	12	40	80-124
Chlorobenzene	50	52	104	2	40	82-118
1,1,1,2-Tetrachloroetha	50	51	102	2	40	84-121
Ethylbenzene	50	51	102	0	40	80-122
Xylene (Total)	150	150	100	0	40	81-121
Styrene	50	53	106	0	40	77-128
Bromoform	50	51	102	4	40	77-130
Isopropylbenzene	50	50	100	0	40	58-148
1,1,2,2-Tetrachloroetha	50	54	108	4	40	76-125
Bromobenzene	50	50	100	0	40	76-124
1,2,3-Trichloropropane	50	58	116	5	40	57-140
n-Propylbenzene	50	50	100	2	40	72-119
2-Chlorotoluene	50	49	98	2	40	75-120
1,3,5-Trimethylbenzene	50	47	94	2	40	76-116
4-Chlorotoluene	50	49	98	0	40	78-116
tert-Butylbenzene	50	49	98	2	40	71-115
1,2,4-Trimethylbenzene	50	49	98	2	40	77-117
sec-Butylbenzene	50	49	98	4	40	67-117

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

FORM 3
WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix Spike - Sample No.: V5ELCS

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
4-Isopropyltoluene	50	49	98	2	40	68-118
1,3-Dichlorobenzene	50	51	102	2	40	80-116
1,4-Dichlorobenzene	50	55	110	2	40	80-114
n-Butylbenzene	50	52	104	4	40	58-121
1,2-Dichlorobenzene	50	51	102	2	40	81-116
1,2-Dibromo-3-chloropro	50	50	100	2	40	71-126
1,2,4-Trichlorobenzene	50	54	108	2	40	67-114
Hexachlorobutadiene	50	48	96	0	40	50-111
Naphthalene	50	54	108	6	40	58-133
1,2,3-Trichlorobenzene	50	53	106	2	40	64-118

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 66 outside limits
Spike Recovery: 0 out of 132 outside limits

COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK5E

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Lab File ID: V2G8292 Lab Sample ID: MB-18048

Date Analyzed: 05/10/05 Time Analyzed: 1227

GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

Instrument ID: V2

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	V5ELCS	LCS-18048	V2G8293	1326
02	V5ELCSD	LCSD-18048	V2G8294	1352
03	G-A203	D0534-01A	V2G8299	1644
04	G-A007	D0534-02A	V2G8300	1711
05	G-A143	D0534-03A	V2G8301	1737
06	H-A143	D0534-04A	V2G8302	1804
07	G-A167	D0534-05A	V2G8303	1830
08	H-A167	D0534-06A	V2G8304	1857
09	G-A173	D0534-07A	V2G8305	1923
10	G-A200	D0534-08A	V2G8306	1950
11	G-A142	D0534-09A	V2G8307	2017
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COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK5E

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: MB-18048

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8292

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	U
78-93-3	2-Butanone	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK5E

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: MB-18048

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8292

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	4-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK5E

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: MB-18048

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8292

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	1066-40-6	SILANOL, TRIMETHYL-	5.30	12	NJ
2.					
3.					
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8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Lab File ID (Standard): V2G8291 Date Analyzed: 05/10/05

Instrument ID: V2 Time Analyzed: 1142

GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

		IS1 AREA #	RT #	IS2 (CBZ) AREA #	RT #	IS3 (DCB) AREA #	RT #
	12 HOUR STD	2825634	6.60	1620617	10.30	742294	13.17
	UPPER LIMIT	5651268	7.10	3241234	10.80	1484588	13.67
	LOWER LIMIT	1412817	6.10	810309	9.80	371147	12.67
	EPA SAMPLE NO.						
01	VBLK5E	3313833	6.60	2182176	10.31	1016497	13.18
02	V5ELCS	2806775	6.60	1641649	10.30	742323	13.17
03	V5ELCSD	2613234	6.60	1549344	10.30	707844	13.17
04	G-A203	3166591	6.59	2094832	10.30	937321	13.17
05	G-A007	3105293	6.60	2089411	10.30	953908	13.17
06	G-A143	3036178	6.60	2067786	10.30	925214	13.17
07	H-A143	3025025	6.59	2082161	10.30	921017	13.17
08	G-A167	3062537	6.60	2032908	10.30	940442	13.17
09	H-A167	3054150	6.60	2043314	10.30	928603	13.17
10	G-A173	3047050	6.60	2038457	10.30	914501	13.17
11	G-A200	3036640	6.60	2039658	10.30	934780	13.17
12	G-A142	3022365	6.60	2001293	10.30	931860	13.17
13							
14							
15							
16							
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20							
21							
22							

IS1 = Fluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

Detail Report of Mitkem MDL Study, Year 2004

TestCode: SW8260B_W

Units: µg/L

A	Analyte	# Reps	Student T	Average	Standard D	Target Conc	Ratio	MDL
		REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8	REP9	REP10			
A	1,1,1,2-Tetrachloroethane	8	2.996	5.53774	0.25632	5.00000	6.49	0.77000
	6.07843	5.39528	5.31163	5.79166	5.55750	5.70733	[illegible]	[illegible]
A	1,1,1-Trichloroethane	8	2.996	5.66013	0.16950	5.00000	9.80	0.51000
	[illegible]	5.57568	5.50276	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
A	1,1,2,2-Tetrachloroethane	8	2.996	6.11468	0.48739	5.00000	3.33	1.50000
	5.75842	5.91300	5.54372	[illegible]	6.00204	[illegible]	6.00227	[illegible]
A	1,1,2-Trichloroethane	8	2.996	5.06182	0.24880	5.00000	6.67	0.75000
	5.56255	5.14146	4.70897	[illegible]	[illegible]	[illegible]	4.86323	[illegible]
A	1,1-Dichloroethane	8	2.996	5.59206	0.16809	5.00000	10.00	0.50000
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
A	1,1-Dichloroethene	8	2.996	5.49903	0.25378	5.00000	6.58	0.76000
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
A	1,1-Dichloropropene	8	2.996	5.22320	0.31404	5.00000	5.32	0.94000
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
A	1,2,3-Trichlorobenzene	8	2.996	3.02603	0.22011	5.00000	7.58	0.66000
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
A	1,2,3-Trichloropropane	8	2.996	5.31132	0.18958	5.00000	8.77	0.57000
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
A	1,2,4-Trichlorobenzene	8	2.996	2.87093	0.20746	5.00000	8.06	0.62000
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
A	1,2,4-Trimethylbenzene	8	2.996	5.31182	0.21559	5.00000	7.69	0.65000
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
A	1,2-Dibromo-3-chloropropane	8	2.996	4.72536	0.63604	5.00000	2.63	1.90000
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
A	1,2-Dibromoethane	8	2.996	4.98870	0.26056	5.00000	6.41	0.78000
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
A	1,2-Dichlorobenzene	8	2.996	5.27814	0.25505	5.00000	6.58	0.76000
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
A	1,2-Dichloroethane	8	2.996	5.29240	0.14953	5.00000	11.11	0.45000
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
A	1,2-Dichloropropane	8	2.996	5.75228	0.21502	5.00000	7.81	0.64000
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Detail Report of Mitkem MDL Study, Year 2004

TestCode: SW8260B_W

Units: ug/L

A	Analyte	# Reps	Student T	Average	Standard D	Target Conc	Ratio	MDL
	REP1 REP2 REP3 REP4 REP5 REP6 REP7 REP8 REP9 REP10							
A	1,3,5-Trimethylbenzene	8	2.996	5.85172	0.23813	5.00000	7.04	0.71000
A	1,3-Dichlorobenzene	8	2.996	5.50872	0.19238	5.00000	8.62	0.58000
A	1,3-Dichloropropane	8	2.996	5.70055	0.13941	5.00000	11.90	0.42000
A	1,4-Dichlorobenzene	8	2.996	5.56179	0.18780	5.00000	8.93	0.56000
A	2,2-Dichloropropane	8	2.996	5.05201	0.31525	5.00000	5.32	0.94000
A	2-Butanone	8	2.996	4.21804	0.41413	5.00000	4.17	1.20000
A	2-Chlorotoluene	8	2.996	6.13274	0.31976	5.00000	5.21	0.96000
A	2-Hexanone	8	2.996	3.33535	0.31917	5.00000	5.21	0.96000
A	4-Chlorotoluene	8	2.996	5.71150	0.18941	5.00000	8.77	0.57000
A	4-Isopropyltoluene	8	2.996	4.72907	0.19470	5.00000	8.62	0.58000
A	4-Methyl-2-pentanone	8	2.996	3.68513	0.32566	5.00000	5.10	0.98000
A	Acetone	8	2.996	4.47329	1.31660	5.00000	1.28	3.90000
A	Benzene	8	2.996	5.71892	0.16623	5.00000	10.00	0.50000
A	Bromobenzene	8	2.996	6.11096	0.32230	5.00000	5.15	0.97000
A	Bromochloromethane	8	2.996	4.96763	0.21929	5.00000	7.58	0.66000
A	Bromodichloromethane	8	2.996	5.52634	0.58058	5.00000	2.94	1.70000
A	Bromoform	8	2.996	4.44964	0.33921	5.00000	5.00	1.00000

Detail Report of Mitkem MDL Study, Year 2004

TestCode: SW8260B_W

Units: µg/L

A	Analyte	# Reps	Student T	Average	Standard D	Target Conc	Ratio	MDL
	REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8	REP9	REP10
A	Bromomethane	8	2.996	5.74809	0.20102	5.00000	8.33	0.60000
A	Carbon disulfide	8	2.996	5.83978	0.22931	5.00000	7.25	0.69000
A	Carbon tetrachloride	8	2.996	5.48160	0.18724	5.00000	8.93	0.56000
A	Chlorobenzene	8	2.996	5.53257	0.17537	5.00000	9.43	0.53000
A	Chloroethane	8	2.996	5.29191	0.53545	5.00000	3.13	1.60000
A	Chloroform	8	2.996	5.80386	0.11669	5.00000	14.29	0.35000
A	Chloromethane	8	2.996	5.31580	0.19453	5.00000	8.62	0.58000
A	cis-1,2-Dichloroethene	8	2.996	5.36572	0.17694	5.00000	9.43	0.53000
A	cis-1,3-Dichloropropene	8	2.996	4.71738	0.19051	5.00000	8.77	0.57000
A	Dibromochloromethane	8	2.996	5.09183	0.26729	5.00000	6.25	0.80000
A	Dibromomethane	8	2.996	5.19565	0.14165	5.00000	11.90	0.42000
A	Dichlorodifluoromethane	8	2.996	5.50136	0.57273	5.00000	2.94	1.70000
A	Ethylbenzene	8	2.996	5.30041	0.16686	5.00000	10.00	0.50000
A	Hexachlorobutadiene	8	2.996	4.88775	0.25503	5.00000	6.58	0.76000
A	Iodomethane	8	2.996	4.83607	0.12855	5.00000	12.82	0.39000
A	Isopropylbenzene	8	2.996	5.01226	0.20256	5.00000	8.20	0.61000

Detail Report of Mitkem MDL Study, Year 2004

TestCode: SW8260B_W

Units: µg/L

A	Analyte	# Reps	Student T	Average	Standard D	Target Conc	Ratio	MDL
	REP1 REP2 REP3 REP4 REP5 REP6 REP7 REP8 REP9 REP10							
A	m,p-Xylene	8	2.996	10.41414	0.35062	5.00000	4.55	1.10000
A	Methyl tert-butyl ether	8	2.996	4.14871	0.23585	5.00000	7.04	0.71000
A	Methylene chloride	8	2.996	5.78942	0.18682	5.00000	8.93	0.56000
A	n-Butylbenzene	8	2.996	3.49410	0.16761	5.00000	10.00	0.50000
A	n-Propylbenzene	8	2.996	5.39643	0.29216	5.00000	5.68	0.88000
A	Naphthalene	8	2.996	3.32481	0.13227	5.00000	12.50	0.40000
A	o-Xylene	8	2.996	5.14119	0.20422	5.00000	8.20	0.61000
A	sec-Butylbenzene	8	2.996	3.32869	0.16711	5.00000	10.00	0.50000
A	Styrene	8	2.996	4.67395	0.19724	5.00000	8.47	0.59000
A	tert-Butylbenzene	8	2.996	6.04200	0.30022	5.00000	5.56	0.90000
A	Tetrachloroethene	8	2.996	5.82239	0.17306	5.00000	9.62	0.52000
A	Toluene	8	2.996	5.31663	0.11043	5.00000	15.15	0.33000
A	trans-1,2-Dichloroethene	8	2.996	5.43823	0.16770	5.00000	10.00	0.50000
A	trans-1,3-Dichloropropene	8	2.996	4.38008	0.22083	5.00000	7.58	0.66000
A	Trichloroethene	8	2.996	5.29355	0.16751	5.00000	10.00	0.50000
A	Trichlorofluoromethane	8	2.996	4.60606	0.48485	5.00000	3.33	1.50000
A	Vinyl acetate	8	2.996	3.51584	0.26515	5.00000	6.33	0.79000

Detail Report of Mitkem MDL Study, Year 2004

TestCode: SW8260B_W

Units: µg/L

A	Analyte	# Reps	Student T	Average	Standard D	Target Conc	Ratio	MDL
	REP1 REP2 REP3 REP4 REP5 REP6 REP7 REP8 REP9 REP10							
A	Vinyl chloride	8	2.996	5.38569	0.16891	5.00000	9.80	0.51000
M	Xylene (Total)	8	2.996	15.55532	0.50792	5.00000	3.33	1.50000
S	1,2-Dichloroethane-d4	8	2.996	4.64493	0.31810	50.00000	52.63	0.95000
S	Bromofluorobenzene	8	2.996	4.77757	0.27949	50.00000	59.52	0.84000
S	Dibromofluoromethane	8	2.996	4.98425	0.16201	50.00000	102.04	0.49000
S	Toluene-d8	8	2.996	5.30937	0.13913	50.00000	119.05	0.42000
X	1,2-Dichloroethene, Total	8	2.996	10.80395	0.30202	5.00000	5.56	0.90000
X	1,2-Dichlorotetrafluoroethane	8	2.996	5.75048	0.88070	5.00000	1.92	2.60000
X	1,4-Dioxane	8	2.996	3.61815	0.50813	5.00000	3.33	1.50000
X	1-Chlorohexane	8	2.996	4.93481	0.18451	5.00000	9.09	0.55000
X	2-Chloro-1,3-butadiene	8	2.996	4.96075	0.09300	5.00000	17.86	0.28000
X	2-Chloroethyl vinyl ether	8	2.996	2.10271	0.21928	5.00000	7.58	0.66000
X	Acetonitrile	8	2.996	49.65415	2.72224	5.00000	0.61	8.20000
X	Acrolein	8	2.996	20.81903	3.34825	5.00000	0.50	10.00000
X	Acrylonitrile	8	2.996	22.08423	0.82668	5.00000	2.00	2.50000
X	Allyl chloride	8	2.996	3.99473	0.26136	5.00000	6.41	0.78000

Laboratory Analytical Data Package
(with chromatograms)

Analytical Data Package for EnSafe, Inc.

Client Project: Stamina Mills

SDG# MD0534

Mitkem Work Order ID: D0534

May 19, 2005

Prepared For:

EnSafe, Inc.
5724 Summer Trees Drive
Memphis, TN 38134
Attn: Ms. Tina Cantwell

Prepared By:

Mitkem Corporation
175 Metro Center Boulevard
Warwick, RI 02886
(401) 732-3400

SDG Narrative

Mitkem Corporation submits the enclosed data package in response to EnSafe Inc.'s Stamina Mills project. Under this deliverable, analysis results are presented for nine aqueous samples that were received at Mitkem on May 9, 2005 and logged in under Mitkem Work Order Number D0534. Analyses were performed per specifications in the project's contract and the chain of custody forms. Sample identifications were shortened where necessary due to limitations in the software used to generate CLP-type report forms. A table of sample identifications showing full client ID, shortened client ID and laboratory ID follows this narrative, following the Mitkem Work Order.

The analyses were performed using EPA SW-846 procedures, and reported in a Level 4, CLP-format deliverable.

The following observation and/or deviations are observed for these analyses:

1. Overall Observation:

Where needed, manual integrations were performed to improve data quality. The corrections were reviewed and associated hardcopies generated and reported as required. Manual integrations are coded to provide the data reviewer justification for such action. The codes are labeled on the ion chromatogram signal (GC/MS signal) and chromatogram for GC based analysis as follows:

- M1 peak tailing or fronting.
- M2 peak co-elution.
- M3 rising or falling baseline.
- M4 retention time shift.
- M5 miscellaneous – under this category, the justification is explained.

The enclosed report includes the originals of all data with the exception of logbook pages and certain initial calibrations. Photocopies of logbook pages are included, with the originals maintained on file at the laboratory. The originals of initial calibrations that are shared among several cases are maintained on file at the laboratory, with photocopies included in the data package.

2. Volatile Analysis:

The sample was analyzed by Method 8260B. Sample results are reported down to the lowest calibration standard concentration (5ug/L). If any compound is confirmed to be detected below this level, but above the laboratory method detection limit (MDL) it is reported as an estimated concentration and qualified with a "J". The sample was acid preserved to pH <2.

The method detection limit (MDL) study is performed on an annual basis. The MDL study was performed on May 4, 2004, while the samples were analyzed on May 10, 2005. This time gap is not typically considered to be significant. The volatiles laboratory is currently performing the MDL studies for 2005. The MDLs were performed for each method. For method 8260 they were performed on instrument V1, typically the least sensitive instrument in the laboratory, while these samples were analyzed on instrument V2.

Surrogate recovery: recoveries were within the QC limits.

Laboratory control sample/laboratory control sample duplicate: spike recoveries and replicate RPDs were within the QC limits.

Sample analysis: no unusual observation was made for the analysis.

All pages in this report have been numbered consecutively, starting with the title page and ending with a page saying only "Last Page of Data Report".

I certify that this data package is in compliance, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Agnes Ng
CLP Project Manager
05/19/05

*Mitkem and Client Sample ID Summary Report**

Mitkem Workorder: D0534

Client Name: Ensafe, Inc.

Mitkem Sample ID	*Reported Client Sample ID*	*Full Client Sample ID*
D0534-01A	G-A203	5YR-G-A203-00
D0534-02A	G-A077	5YR-G-A077-00
D0534-03A	G-A143	5YR-G-A143-00
D0534-04A	H-A143	5YR-H-A143-00
D0534-05A	G-A167	5YR-G-A167-00
D0534-06A	H-A167	5YR-H-A167-00
D0534-07A	G-A173	5YR-G-A173-00
D0534-08A	G-A200	5YR-G-A200-00
D0534-09A	G-A142	5YR-G-A142-00

** If client sample ID has not been truncated, the full client sample ID is listed in the column labeled "Reported Client Sample ID"*

Mitkem Corporation

10/May/05 07:50

WorkOrder: D0534

Client ID: ENSAFE
Project: Stamina Mills, Phase III GW Mon.
Location:
Comments: Use EnSafe EDD and include the EDD with the hard copy. Include a copy of the report to Russell Parkman @ Resource Controls.

Case:
SDG:
PO: 11848

Report Level: LEVEL 4
EDD: ASCII
HC Due: 05/23/05
Fax Due:

Sample ID	Client Sample ID	Collection Date	Date Received	Matrix	Test Code	Lab Test Comments	Iold	MS	SEL	Storage
D0534-01A	G-A203	05/09/05 13:02	05/09/05	Aqueous	SW8260B_W		☐	☐	☐	VOA
D0534-02A	G-A077	05/09/05 11:41	05/09/05	Aqueous	SW8260B_W		☐	☐	☐	VOA
D0534-03A	G-A143	05/09/05 12:46	05/09/05	Aqueous	SW8260B_W		☐	☐	☐	VOA
D0534-04A	H-A143	05/09/05 12:52	05/09/05	Aqueous	SW8260B_W		☐	☐	☐	VOA
D0534-05A	G-A167	05/09/05 11:20	05/09/05	Aqueous	SW8260B_W		☐	☐	☐	VOA
D0534-06A	H-A167	05/09/05 11:22	05/09/05	Aqueous	SW8260B_W		☐	☐	☐	VOA
D0534-07A	G-A173	05/06/05 11:00	05/09/05	Aqueous	SW8260B_W		☐	☐	☐	VOA
D0534-08A	G-A200	05/09/05 12:17	05/09/05	Aqueous	SW8260B_W		☐	☐	☐	VOA
D0534-09A	G-A142	05/09/05 12:30	05/09/05	Aqueous	SW8260B_W		☐	☐	☐	VOA

Client Rep: Benjamin F Dodge

0005

Sample Transmittal Documentation

MITKEM CORPORATION
175 Metro Center Boulevard
Warwick, Rhode Island 02886-1755
(401) 732-3400 • Fax (401) 732-3499
email: mitkem@mitkem.com

CHAIN-OF-CUSTODY RECORD

REPORT TO			INVOICE TO		
COMPANY: Resource Controls	PHONE: 401-728-6860		COMPANY: ENSAFE	PHONE: 901 572 7962	LAB PROJECT #:
NAME: Russel Parkman	FAX: 401 727-1849		NAME: Lori Goetz	FAX: 901 372 2454	
ADDRESS: 474 Broadway			ADDRESS: 5724 Summer Trees Dr.		TURNAROUND TIME:
CITY/ST/ZIP: Pawtucket, RI 02860			CITY/ST/ZIP: Memphis, TN 38134		STANDARD

CLIENT PROJECT NAME:	CLIENT PROJECT #:	CLIENT P.O.#:
Stamina Mills	A 6556	ENSAFE 11848

REQUESTED ANALYSES: VOCs by EPA 8260

SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	VOCs by EPA 8260	COMMENTS
5YR-G-A203-00	5/9 / 1:02		✓	✓			01	2	✓	
5YR-G-A077-00	5/9 / 11:41		✓	✓			02	2	✓	
5YR-G-A143-00	5/9 / 1246		✓	✓			03	2	✓	
5YR-H-A143-00	5/9 / 1252		✓	✓			04	2	✓	
5YR-G-A167-00	5/9 / 1120		✓	✓			05	2	✓	
5YR-H-A167-00	5/9 / 1122		✓	✓			06	2	✓	
5YR-G-A173-00	5/9 / 11:00		✓	✓			07	2	✓	
5YR-G-A200-00	5/9 / 1217		✓	✓			08	0	✓	
5YR-G-A142-00	5/9 / 1230		✓	✓			09	2	✓	
	/									
	/									
	/									

TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME	ADDITIONAL REMARKS:	COOLER TEMP:
	Chad Mechels	5-9-05 / 3:00	[illegible]	5-9-05 / 3:00		
		/		/		
		/		/		

WHITE: LABORATORY COPY YELLOW: REPORT COPY PINK: CLIENT'S COPY

MITKEM CORPORATION
Sample Condition Form

Received By: BED | Reviewed By: [illegible] | Date: 5-9-05 | MITKEM Project #: D0534

Client Project: Stamina Mills | Client: EnSafe

Cooler Sealed Yes / No

1) Custody Seal(s) Present / Absent
Coolers / Bottles
Intact / Broken

2) Custody Seal Number(s) —

3) Chain-of-Custody Present / Absent

4) Cooler Temperature 4°C
Coolant Condition Ice

5) Airbill(s) Present / Absent
Airbill Number(s) —

6) Sample Bottles Intact/Broken/Leakin

7) Date Received 5-9-05

8) Time Received 5:00

Preservative Name/Lot No:

Lab Sample ID		Preservation (pH) HNO_3	H_2SO_4	HCl	NaOH	VOA Matrix	Soil Headspace or Air Bubbles ≥ 1/4"
D0534	-01					H	
	-02						
	-03						
	-04						
	-05						
	-06						
	-07						
	-08						
	-09						

VOA Matrix Key:
US = Unpreserved Soil **A** = Air
UA = Unpreserved Aqueo **H** = HCl
M/N= MeOH & $NaHSO_4$ **E** = Encore
N = $NaHSO_4$ **M** =MeOH

See Sample Condition Notification/Corrective Action Form yes / no

Rad OK yes/ no

Form ID: SampleCond.Form-11/04

MITKEM CORPORATION

* Volatiles *

2A
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

	EPA SAMPLE NO.	SMC1 #	SMC2 (DCE) #	SMC3 (TOL) #	OTHER (BFB) #	TOT OUT
01	VBLK5E	92	96	89	94	0
02	V5ELCS	94	96	95	97	0
03	V5ELCSD	93	96	95	97	0
04	G-A203	94	96	90	97	0
05	G-A007	93	94	88	94	0
06	G-A143	96	96	87	96	0
07	H-A143	96	97	88	93	0
08	G-A167	95	96	90	98	0
09	H-A167	94	96	88	96	0
10	G-A173	94	95	88	98	0
11	G-A200	95	94	88	95	0
12	G-A142	94	95	89	97	0
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

		QC LIMITS
SMC1	= Dibromofluoromethane	(78-117)
SMC2 (DCE)	= 1,2-Dichloroethane-d4	(62-124)
SMC3 (TOL)	= Toluene-d8	(81-116)
OTHER(BFB)	= Bromofluorobenzene	(74-126)

Column to be used to flag recovery values

* Values outside of contract required QC limits

FORM 3
WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix Spike - Sample No.: V5ELCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Dichlorodifluoromethane	50		52	104	48-135
Chloromethane	50		50	100	60-118
Vinyl Chloride	50		50	100	65-113
Bromomethane	50		47	94	73-122
Chloroethane	50		46	92	72-118
Trichlorofluoromethane	50		47	94	68-129
1,1-Dichloroethene	50		46	92	67-121
Acetone	50		51	102	38-161
Iodomethane	50		48	96	72-130
Carbon Disulfide	50		47	94	53-137
Methylene Chloride	50		52	104	59-132
trans-1,2-Dichloroethen	50		52	104	71-124
Methyl tert-butyl ether	50		48	96	75-123
1,1-Dichloroethane	50		52	104	83-116
Vinyl acetate	50		51	102	44-160
2-Butanone	50		57	114	64-139
cis-1,2-Dichloroethene	50		53	106	83-120
2,2-Dichloropropane	50		51	102	70-129
Bromochloromethane	50		51	102	85-124
Chloroform	50		50	100	89-118
1,1,1-Trichloroethane	50		49	98	81-122
1,1-Dichloropropene	50		51	102	76-122
Carbon Tetrachloride	50		47	94	79-125
1,2-Dichloroethane	50		47	94	83-123
Benzene	50		53	106	81-120
Trichloroethene	50		51	102	77-121
1,2-Dichloropropane	50		52	104	81-116
Dibromomethane	50		51	102	86-124

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

FORM 3
WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix Spike - Sample No.: V5ELCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Bromodichloromethane	50		50	100	90-114
cis-1,3-Dichloropropene	50		51	102	78-119
4-Methyl-2-pentanone	50		51	102	57-138
Toluene	50		52	104	81-121
trans-1,3-Dichloroprope	50		49	98	85-118
1,1,2-Trichloroethane	50		52	104	44-159
1,3-Dichloropropane	50		52	104	79-125
Tetrachloroethene	50		53	106	73-121
2-Hexanone	50		60	120	53-145
Dibromochloromethane	50		49	98	80-124
1,2-Dibromoethane	50		49	98	80-124
Chlorobenzene	50		51	102	82-118
1,1,1,2-Tetrachloroetha	50		50	100	84-121
Ethylbenzene	50		51	102	80-122
Xylene (Total)	150		150	100	81-121
Styrene	50		53	106	77-128
Bromoform	50		49	98	77-130
Isopropylbenzene	50		50	100	58-148
1,1,2,2-Tetrachloroetha	50		52	104	76-125
Bromobenzene	50		50	100	76-124
1,2,3-Trichloropropane	50		55	110	57-140
n-Propylbenzene	50		51	102	72-119
2-Chlorotoluene	50		50	100	75-120
1,3,5-Trimethylbenzene	50		48	96	76-116
4-Chlorotoluene	50		49	98	78-116
tert-Butylbenzene	50		50	100	71-115
1,2,4-Trimethylbenzene	50		50	100	77-117
sec-Butylbenzene	50		51	102	67-117

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

FORM 3
WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix Spike - Sample No.: V5ELCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
4-Isopropyltoluene	50		50	100	68-118
1,3-Dichlorobenzene	50		52	104	80-116
1,4-Dichlorobenzene	50		54	108	80-114
n-Butylbenzene	50		54	108	58-121
1,2-Dichlorobenzene	50		50	100	81-116
1,2-Dibromo-3-chloropro	50		49	98	71-126
1,2,4-Trichlorobenzene	50		53	106	67-114
Hexachlorobutadiene	50		48	96	50-111
Naphthalene	50		51	102	58-133
1,2,3-Trichlorobenzene	50		52	104	64-118

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

FORM 3
WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix Spike - Sample No.: V5ELCS

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Dichlorodifluoromethane	50	53	106	2	40	48-135
Chloromethane	50	50	100	0	40	60-118
Vinyl Chloride	50	51	102	2	40	65-113
Bromomethane	50	47	94	0	40	73-122
Chloroethane	50	48	96	4	40	72-118
Trichlorofluoromethane	50	46	92	2	40	68-129
1,1-Dichloroethene	50	46	92	0	40	67-121
Acetone	50	50	100	2	40	38-161
Iodomethane	50	48	96	0	40	72-130
Carbon Disulfide	50	47	94	0	40	53-137
Methylene Chloride	50	52	104	0	40	59-132
trans-1,2-Dichloroethen	50	52	104	0	40	71-124
Methyl tert-butyl ether	50	50	100	4	40	75-123
1,1-Dichloroethane	50	51	102	2	40	83-116
Vinyl acetate	50	53	106	4	40	44-160
2-Butanone	50	57	114	0	40	64-139
cis-1,2-Dichloroethene	50	52	104	2	40	83-120
2,2-Dichloropropane	50	50	100	2	40	70-129
Bromochloromethane	50	52	104	2	40	85-124
Chloroform	50	50	100	0	40	89-118
1,1,1-Trichloroethane	50	48	96	2	40	81-122
1,1-Dichloropropene	50	50	100	2	40	76-122
Carbon Tetrachloride	50	46	92	2	40	79-125
1,2-Dichloroethane	50	48	96	2	40	83-123
Benzene	50	52	104	2	40	81-120
Trichloroethene	50	52	104	2	40	77-121
1,2-Dichloropropane	50	53	106	2	40	81-116
Dibromomethane	50	53	106	4	40	86-124

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

FORM 3
WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix Spike - Sample No.: V5ELCS

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Bromodichloromethane	50	51	102	2	40	90-114
cis-1,3-Dichloropropene	50	51	102	0	40	78-119
4-Methyl-2-pentanone	50	54	108	6	40	57-138
Toluene	50	52	104	0	40	81-121
trans-1,3-Dichloroprope	50	51	102	4	40	85-118
1,1,2-Trichloroethane	50	53	106	2	40	44-159
1,3-Dichloropropane	50	54	108	4	40	79-125
Tetrachloroethene	50	52	104	2	40	73-121
2-Hexanone	50	67	134	11	40	53-145
Dibromochloromethane	50	50	100	2	40	80-124
1,2-Dibromoethane	50	55	110	12	40	80-124
Chlorobenzene	50	52	104	2	40	82-118
1,1,1,2-Tetrachloroetha	50	51	102	2	40	84-121
Ethylbenzene	50	51	102	0	40	80-122
Xylene (Total)	150	150	100	0	40	81-121
Styrene	50	53	106	0	40	77-128
Bromoform	50	51	102	4	40	77-130
Isopropylbenzene	50	50	100	0	40	58-148
1,1,2,2-Tetrachloroetha	50	54	108	4	40	76-125
Bromobenzene	50	50	100	0	40	76-124
1,2,3-Trichloropropane	50	58	116	5	40	57-140
n-Propylbenzene	50	50	100	2	40	72-119
2-Chlorotoluene	50	49	98	2	40	75-120
1,3,5-Trimethylbenzene	50	47	94	2	40	76-116
4-Chlorotoluene	50	49	98	0	40	78-116
tert-Butylbenzene	50	49	98	2	40	71-115
1,2,4-Trimethylbenzene	50	49	98	2	40	77-117
sec-Butylbenzene	50	49	98	4	40	67-117

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

FORM 3
WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix Spike - Sample No.: V5ELCS

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
4-Isopropyltoluene	50	49	98	2	40	68-118
1,3-Dichlorobenzene	50	51	102	2	40	80-116
1,4-Dichlorobenzene	50	55	110	2	40	80-114
n-Butylbenzene	50	52	104	4	40	58-121
1,2-Dichlorobenzene	50	51	102	2	40	81-116
1,2-Dibromo-3-chloropro	50	50	100	2	40	71-126
1,2,4-Trichlorobenzene	50	54	108	2	40	67-114
Hexachlorobutadiene	50	48	96	0	40	50-111
Naphthalene	50	54	108	6	40	58-133
1,2,3-Trichlorobenzene	50	53	106	2	40	64-118

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 66 outside limits
Spike Recovery: 0 out of 132 outside limits

COMMENTS: _____

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK5E

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Lab File ID: V2G8292 Lab Sample ID: MB-18048

Date Analyzed: 05/10/05 Time Analyzed: 1227

GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

Instrument ID: V2

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	V5ELCS	LCS-18048	V2G8293	1326
02	V5ELCSD	LCSD-18048	V2G8294	1352
03	G-A203	D0534-01A	V2G8299	1644
04	G-A007	D0534-02A	V2G8300	1711
05	G-A143	D0534-03A	V2G8301	1737
06	H-A143	D0534-04A	V2G8302	1804
07	G-A167	D0534-05A	V2G8303	1830
08	H-A167	D0534-06A	V2G8304	1857
09	G-A173	D0534-07A	V2G8305	1923
10	G-A200	D0534-08A	V2G8306	1950
11	G-A142	D0534-09A	V2G8307	2017
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COMMENTS:

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Lab File ID: V2G8200 BFB Injection Date: 05/04/05

Instrument ID: V2 BFB Injection Time: 1531

GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.3
75	30.0 - 60.0% of mass 95	49.1
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 100.0% of mass 95	72.6
175	5.0 - 9.0% of mass 174	5.5 (7.6)1
176	95.0 - 101.0% of mass 174	70.7 (97.4)1
177	5.0 - 9.0% of mass 176	4.9 (6.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD0502A	VSTD0502A	V2G8201	05/04/05	1617
02	VSTD0052A	VSTD0052A	V2G8202	05/04/05	1702
03	VSTD2002A	VSTD2002A	V2G8203	05/04/05	1730
04	VSTD1002A	VSTD1002A	V2G8204	05/04/05	1759
05	VSTD0202A	VSTD0202A	V2G8205	05/04/05	1827
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07					
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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Lab File ID: V2G8290 BFB Injection Date: 05/10/05

Instrument ID: V2 BFB Injection Time: 1116

GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.9
75	30.0 - 60.0% of mass 95	47.4
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 100.0% of mass 95	71.3
175	5.0 - 9.0% of mass 174	5.4 (7.5)1
176	95.0 - 101.0% of mass 174	69.9 (98.1)1
177	5.0 - 9.0% of mass 176	4.7 (6.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD0502E	VSTD0502E	V2G8291	05/10/05	1142
02	VBLK5E	MB-18048	V2G8292	05/10/05	1227
03	V5ELCS	LCS-18048	V2G8293	05/10/05	1326
04	V5ELCSD	LCSD-18048	V2G8294	05/10/05	1352
05	G-A203	D0534-01A	V2G8299	05/10/05	1644
06	G-A007	D0534-02A	V2G8300	05/10/05	1711
07	G-A143	D0534-03A	V2G8301	05/10/05	1737
08	H-A143	D0534-04A	V2G8302	05/10/05	1804
09	G-A167	D0534-05A	V2G8303	05/10/05	1830
10	H-A167	D0534-06A	V2G8304	05/10/05	1857
11	G-A173	D0534-07A	V2G8305	05/10/05	1923
12	G-A200	D0534-08A	V2G8306	05/10/05	1950
13	G-A142	D0534-09A	V2G8307	05/10/05	2017
14					
15					
16					
17					
18					
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20					
21					
22					

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Lab File ID (Standard): V2G8291 Date Analyzed: 05/10/05

Instrument ID: V2 Time Analyzed: 1142

GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

		IS1 AREA #	RT #	IS2 (CBZ) AREA #	RT #	IS3 (DCB) AREA #	RT #
	12 HOUR STD	2825634	6.60	1620617	10.30	742294	13.17
	UPPER LIMIT	5651268	7.10	3241234	10.80	1484588	13.67
	LOWER LIMIT	1412817	6.10	810309	9.80	371147	12.67
	EPA SAMPLE NO.						
01	VBLK5E	3313833	6.60	2182176	10.31	1016497	13.18
02	V5ELCS	2806775	6.60	1641649	10.30	742323	13.17
03	V5ELCSD	2613234	6.60	1549344	10.30	707844	13.17
04	G-A203	3166591	6.59	2094832	10.30	937321	13.17
05	G-A007	3105293	6.60	2089411	10.30	953908	13.17
06	G-A143	3036178	6.60	2067786	10.30	925214	13.17
07	H-A143	3025025	6.59	2082161	10.30	921017	13.17
08	G-A167	3062537	6.60	2032908	10.30	940442	13.17
09	H-A167	3054150	6.60	2043314	10.30	928603	13.17
10	G-A173	3047050	6.60	2038457	10.30	914501	13.17
11	G-A200	3036640	6.60	2039658	10.30	934780	13.17
12	G-A142	3022365	6.60	2001293	10.30	931860	13.17
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 = Fluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

G-A007

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-02A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8300

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	U
78-93-3	2-Butanone	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

G-A007

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-02A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8300

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	4-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

G-A007

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-02A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8300

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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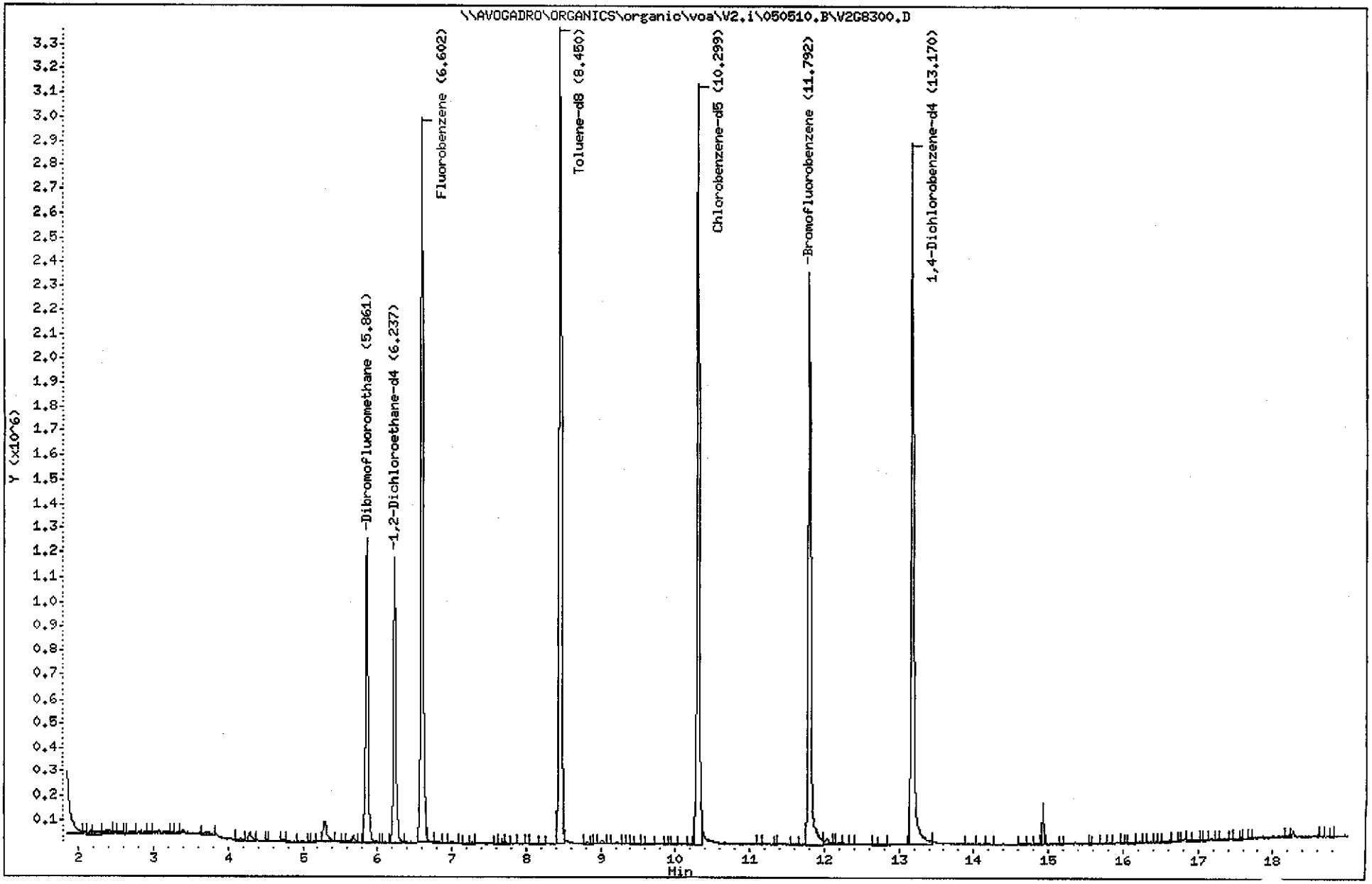
Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8300.D
Date : 10-MAY-2005 17:11
Client ID: G-A007
Sample Info: ,D0534-02A,,18057
Purge Volume: 5.0
Column phase: DB-624

Instrument: V2.i

Operator: JC SRC: JC
Column diameter: 0.25



#700

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8300.D
Report Date: 19-May-2005 11:02

Mitkem Corporation

Method 8260 Water and Medium Soil

Data file : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8300.D
Lab Smp Id: D0534-02A Client Smp ID: G-A007
Inj Date : 10-MAY-2005 17:11
Operator : JC SRC: JC Inst ID: V2.i
Smp Info : ,D0534-02A,,18057
Misc Info :
Comment :
Method : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\v28260.m
Meth Date : 19-May-2005 11:01 mtl Quant Type: ISTD
Cal Date : 04-MAY-2005 18:27 Cal File: V2G8205.D ✓
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260.sub ✓
Target Version: 4.03
Processing Host: TARGET3

Concentration Formula: Amt * DF * Uf * 5/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
$ 30 Dibromofluoromethane	113	5.861	5.865	(0.888)	878539	46.3022	46
$ 35 1,2-Dichloroethane-d4	102	6.226	6.231	(0.943)	180001	47.1600	47
* 38 Fluorobenzene	96	6.602	6.596	(1.000)	3105293	50.0000	
$ 47 Toluene-d8	98	8.450	8.454	(0.821)	2596798	44.0628	44
* 57 Chlorobenzene-d5	117	10.299	10.303	(1.000)	2089411	50.0000	
$ 68 Bromofluorobenzene	95	11.792	11.796	(1.145)	1146716	47.1809	47
* 81 1,4-Dichlorobenzene-d4	152	13.170	13.174	(1.000)	953908	50.0000	

SB 5/19/05

KL

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8300.D
Report Date: 19-May-2005 11:02

Mitkem Corporation

Method 8260 Water and Medium Soil

Data file : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8300.D
Lab Smp Id: D0534-02A Client Smp ID: G-A007
Inj Date : 10-MAY-2005 17:11
Operator : JC SRC: JC Inst ID: V2.i
Smp Info : ,D0534-02A,,18057
Misc Info :
Comment :
Method : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\v28260.m
Meth Date : 19-May-2005 11:01 mtl Quant Type: ISTD
Cal Date : 04-MAY-2005 18:27 Cal File: V2G8205.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 4.03
Processing Host: TARGET3

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

G-A142

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-09A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8307

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	U
78-93-3	2-Butanone	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

G-A142

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-09A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8307

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	4-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

G-A142

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-09A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8307

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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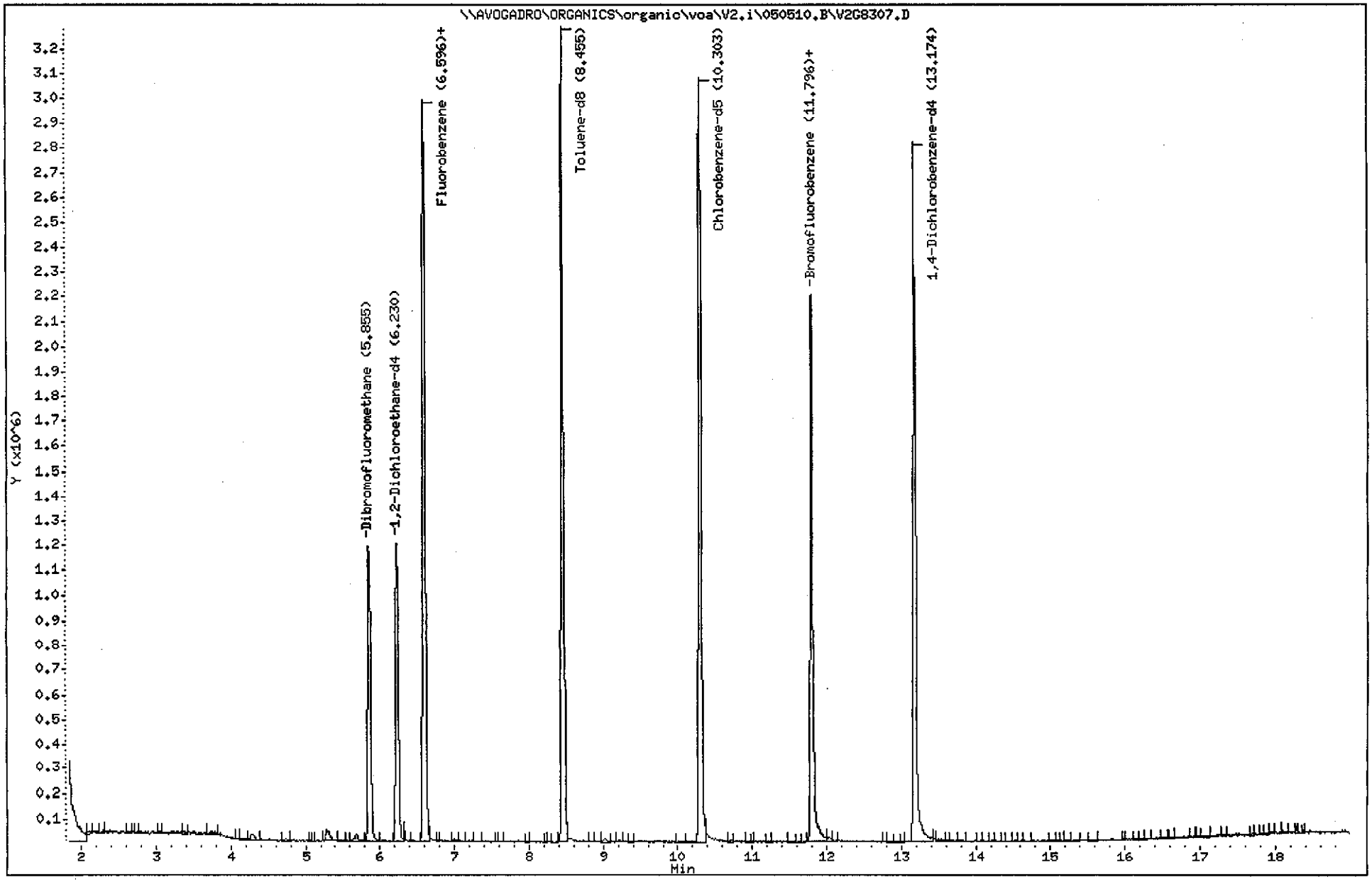
Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8307.D
Date : 10-MAY-2005 20:17
Client ID: G-A142
Sample Info: ,D0534-09A,,18057
Purge Volume: 5.0
Column phase: DB-624

Instrument: V2.i

Operator: JC SRC: JC
Column diameter: 0.25



0030

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8307.D
Report Date: 19-May-2005 11:03

Mitkem Corporation

Method 8260 Water and Medium Soil

Data file : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8307.D
Lab Smp Id: D0534-09A Client Smp ID: G-A142
Inj Date : 10-MAY-2005 20:17
Operator : JC SRC: JC Inst ID: V2.i
Smp Info : ,D0534-09A,,18057
Misc Info :
Comment :
Method : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\v28260.m
Meth Date : 19-May-2005 11:01 mtl Quant Type: ISTD
Cal Date : 04-MAY-2005 18:27 Cal File: V2G8205.D
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 4.03
Processing Host: TARGET3

Concentration Formula: Amt * DF * Uf * 5/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
$ 30 Dibromofluoromethane	113	5.854	5.865	(0.888)	865490	46.8660	47
$ 35 1,2-Dichloroethane-d4	102	6.230	6.231	(0.945)	175938	47.3602	47
* 38 Fluorobenzene	96	6.596	6.596	(1.000)	3022365	50.0000	
$ 47 Toluene-d8	98	8.454	8.454	(0.821)	2514179	44.5393	45
* 57 Chlorobenzene-d5	117	10.303	10.303	(1.000)	2001293	50.0000	
$ 68 Bromofluorobenzene	95	11.785	11.796	(1.144)	1126100	48.3727	48
* 81 1,4-Dichlorobenzene-d4	152	13.174	13.174	(1.000)	931860	50.0000	

SB
5/19/05

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8307.D
Report Date: 19-May-2005 11:03

Mitkem Corporation

Method 8260 Water and Medium Soil

Data file : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8307.D
Lab Smp Id: D0534-09A Client Smp ID: G-A142
Inj Date : 10-MAY-2005 20:17
Operator : JC SRC: JC Inst ID: V2.i
Smp Info : ,D0534-09A,,18057
Misc Info :
Comment :
Method : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\v28260.m
Meth Date : 19-May-2005 11:01 mtl Quant Type: ISTD
Cal Date : 04-MAY-2005 18:27 Cal File: V2G8205.D
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 4.03
Processing Host: TARGET3

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

G-A143

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-03A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8301

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	U
78-93-3	2-Butanone	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	1	J
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

G-A143

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-03A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8301

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	4-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

G-A143

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-03A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8301

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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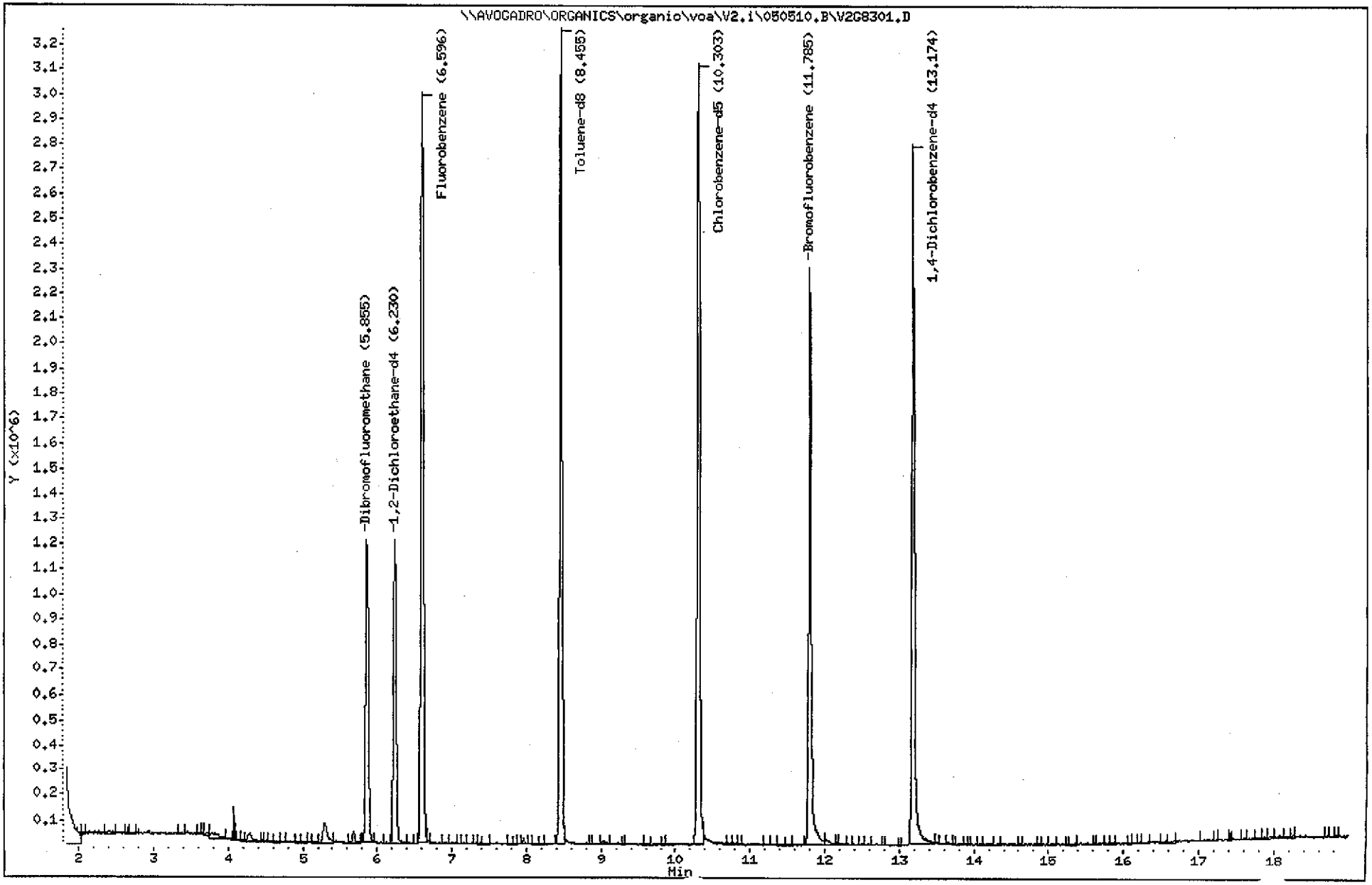
Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8301.D
Date : 10-MAY-2005 17:37
Client ID: G-A143
Sample Info: ,D0534-03A,,18057
Purge Volume: 5.0
Column phase: DB-624

Instrument: V2.i

Operator: JC SRC: JC
Column diameter: 0.25



0036

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8301.D
Report Date: 19-May-2005 11:02

Mitkem Corporation

Method 8260 Water and Medium Soil

Data file : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8301.D
Lab Smp Id: D0534-03A Client Smp ID: G-A143
Inj Date : 10-MAY-2005 17:37
Operator : JC SRC: JC Inst ID: V2.i
Smp Info : ,D0534-03A,,18057
Misc Info :
Comment :
Method : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\v28260.m
Meth Date : 19-May-2005 11:01 mtl Quant Type: ISTD
Cal Date : 04-MAY-2005 18:27 Cal File: V2G8205.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 4.03
Processing Host: TARGET3

Concentration Formula: Amt * DF * Uf * 5/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
28 Chloroform	83	5.677	5.688	(0.861)	37491	1.14944	1(a)
$ 30 Dibromofluoromethane	113	5.855	5.865	(0.888)	885863	47.7510	48
$ 35 1,2-Dichloroethane-d4	102	6.231	6.231	(0.945)	180221	48.2925	48
* 38 Fluorobenzene	96	6.596	6.596	(1.000)	3036178	50.0000	
$ 47 Toluene-d8	98	8.455	8.454	(0.821)	2551468	43.7464	44
* 57 Chlorobenzene-d5	117	10.303	10.303	(1.000)	2067786	50.0000	
$ 68 Bromofluorobenzene	95	11.785	11.796	(1.144)	1148764	47.7594	48
* 81 1,4-Dichlorobenzene-d4	152	13.174	13.174	(1.000)	925214	50.0000	

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

SB 5/19/05

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8301.D
Report Date: 19-May-2005 11:02

Mitkem Corporation

Method 8260 Water and Medium Soil

Data file : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8301.D
Lab Smp Id: D0534-03A Client Smp ID: G-A143
Inj Date : 10-MAY-2005 17:37
Operator : JC SRC: JC Inst ID: V2.i
Smp Info : ,D0534-03A,,18057
Misc Info :
Comment :
Method : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\v28260.m
Meth Date : 19-May-2005 11:01 mtl Quant Type: ISTD
Cal Date : 04-MAY-2005 18:27 Cal File: V2G8205.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 4.03
Processing Host: TARGET3

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8301.D

Date : 10-MAY-2005 17:37

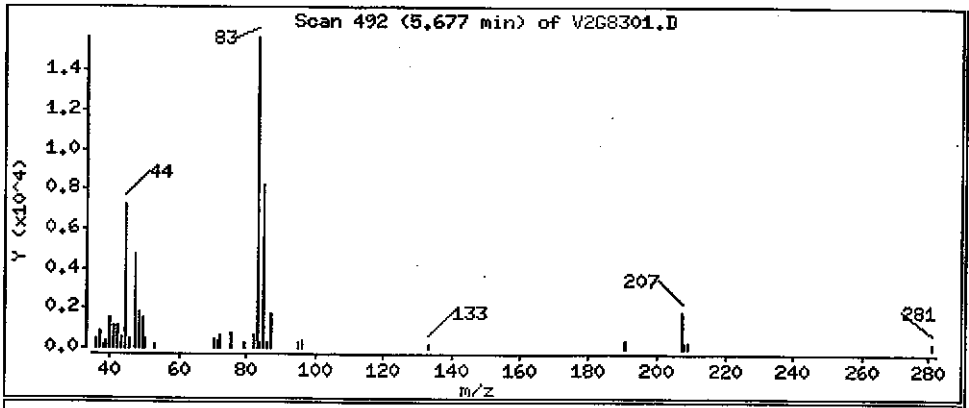
Client ID: G-A143 | Instrument: V2.i

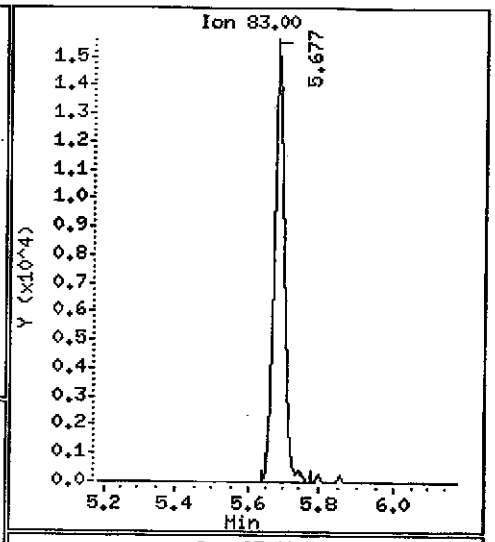
Sample Info: ,D0534-03A,,18057

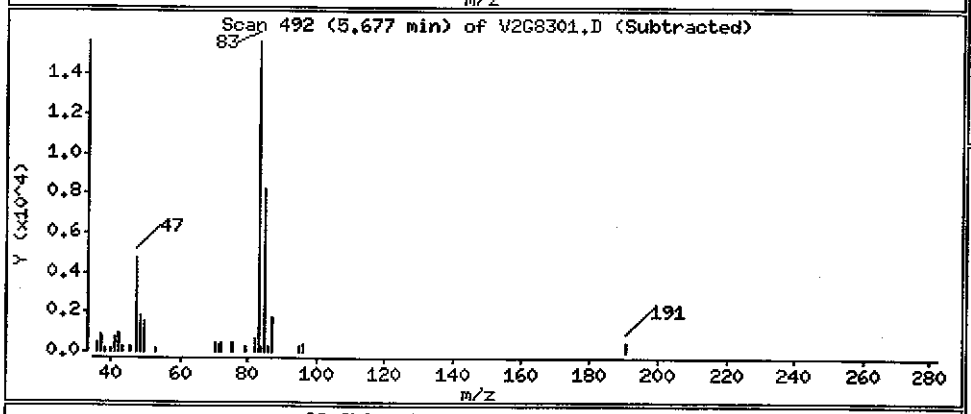
Purge Volume: 5.0 | Operator: JC SRC: JC

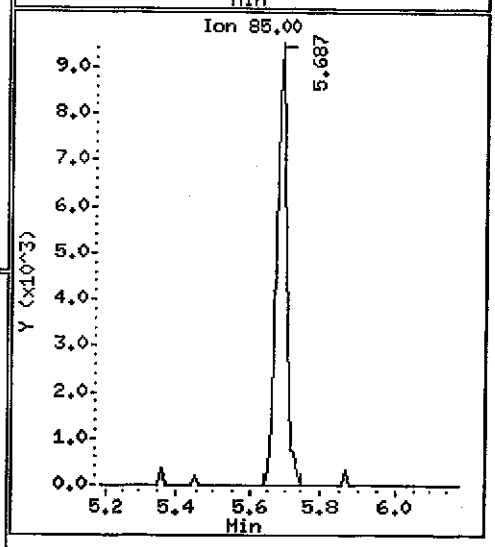
Column phase: DB-624 | Column diameter: 0.25

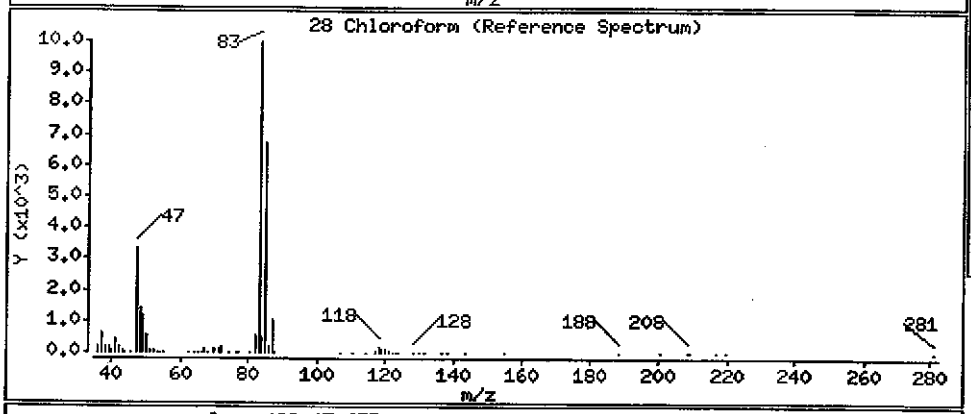
28 Chloroform | Concentration: 1 ug/L

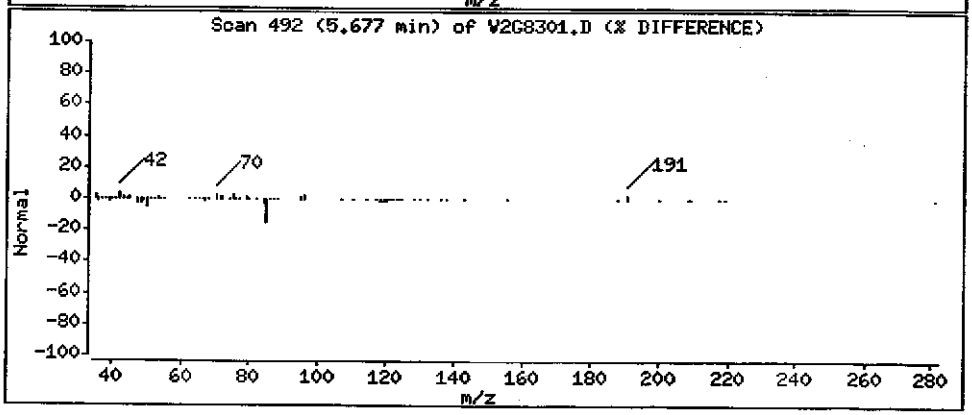












1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

G-A167

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-05A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8303

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	U
78-93-3	2-Butanone	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

G-A167

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-05A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8303

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	4-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

G-A167

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-05A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8303

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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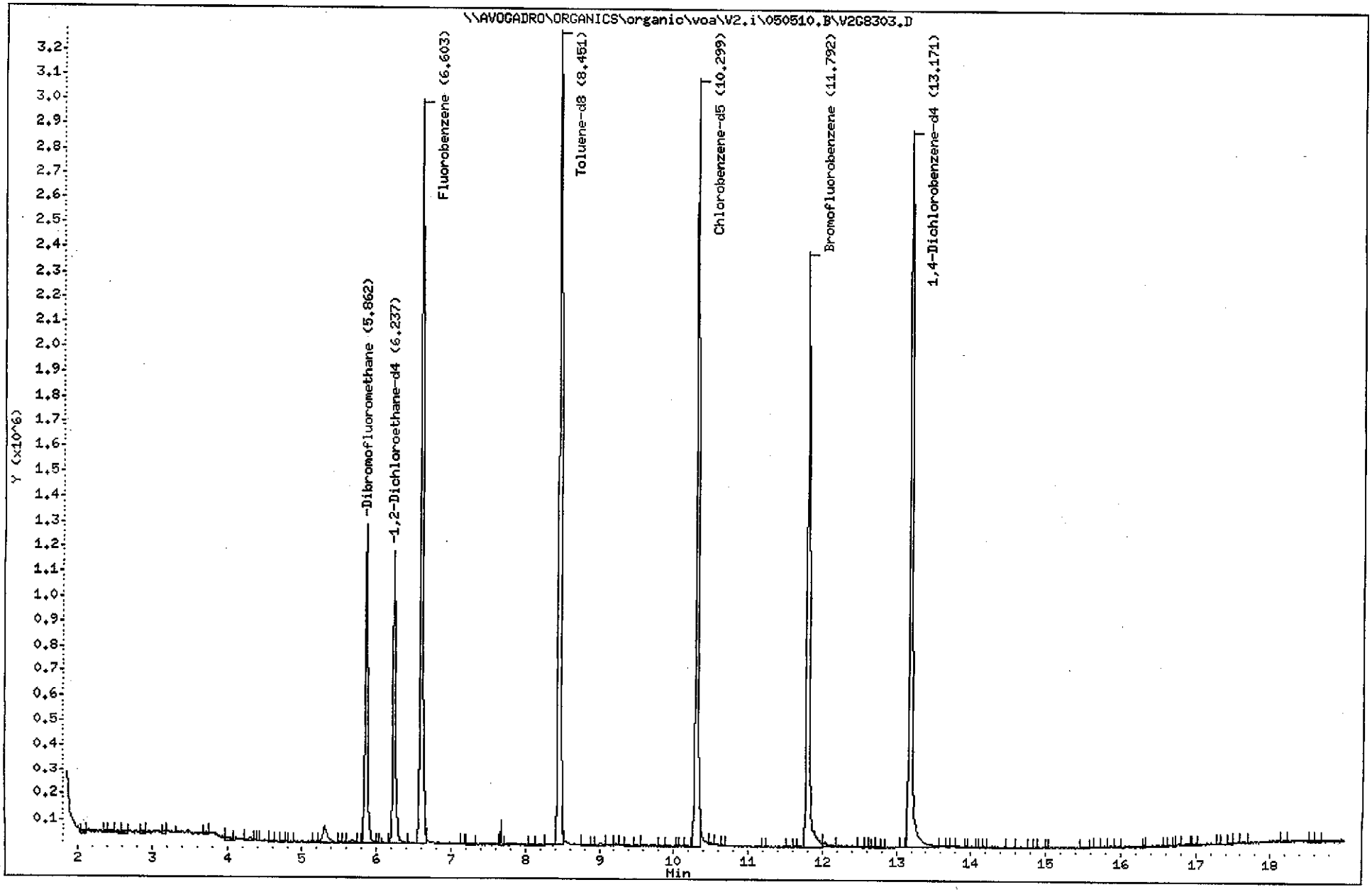
Data : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8303.D
Date : 10-MAY-2005 18:30
Client ID: G-A167
Sample Info: ,D0534-05A,,18057
Purge Volume: 5.0
Column phase: DB-624

Instrument: V2.i

Operator: JC SRC: JC
Column diameter: 0.25



Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8303.D
Report Date: 19-May-2005 11:03

Mitkem Corporation

Method 8260 Water and Medium Soil

Data file : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8303.D
Lab Smp Id: D0534-05A Client Smp ID: G-A167
Inj Date : 10-MAY-2005 18:30
Operator : JC SRC: JC Inst ID: V2.i
Smp Info : ,D0534-05A,,18057
Misc Info :
Comment :
Method : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\v28260.m
Meth Date : 19-May-2005 11:01 mtl Quant Type: ISTD
Cal Date : 04-MAY-2005 18:27 Cal File: V2G8205.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 4.03
Processing Host: TARGET3

Concentration Formula: Amt * DF * Uf * 5/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
$ 30 Dibromofluoromethane	113	5.862	5.865	(0.888)	888168	47.4632	47
$ 35 1,2-Dichloroethane-d4	102	6.237	6.231	(0.945)	180331	47.9060	48
* 38 Fluorobenzene	96	6.603	6.596	(1.000)	3062537	50.0000	
$ 47 Toluene-d8	98	8.451	8.454	(0.821)	2571901	44.8533	45
* 57 Chlorobenzene-d5	117	10.299	10.303	(1.000)	2032908	50.0000	
$ 68 Bromofluorobenzene	95	11.792	11.796	(1.145)	1165229	49.2751	49
* 81 1,4-Dichlorobenzene-d4	152	13.171	13.174	(1.000)	940442	50.0000	

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5/19/05

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Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8303.D
Report Date: 19-May-2005 11:03

Mitkem Corporation

Method 8260 Water and Medium Soil

Data file : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8303.D
Lab Smp Id: D0534-05A Client Smp ID: G-A167
Inj Date : 10-MAY-2005 18:30
Operator : JC SRC: JC Inst ID: V2.i
Smp Info : ,D0534-05A,,18057
Misc Info :
Comment :
Method : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\v28260.m
Meth Date : 19-May-2005 11:01 mtl Quant Type: ISTD
Cal Date : 04-MAY-2005 18:27 Cal File: V2G8205.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 4.03
Processing Host: TARGET3

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

G-A173

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-07A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8305

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	U
78-93-3	2-Butanone	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

G-A173

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-07A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8305

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	4-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

G-A173

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-07A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8305

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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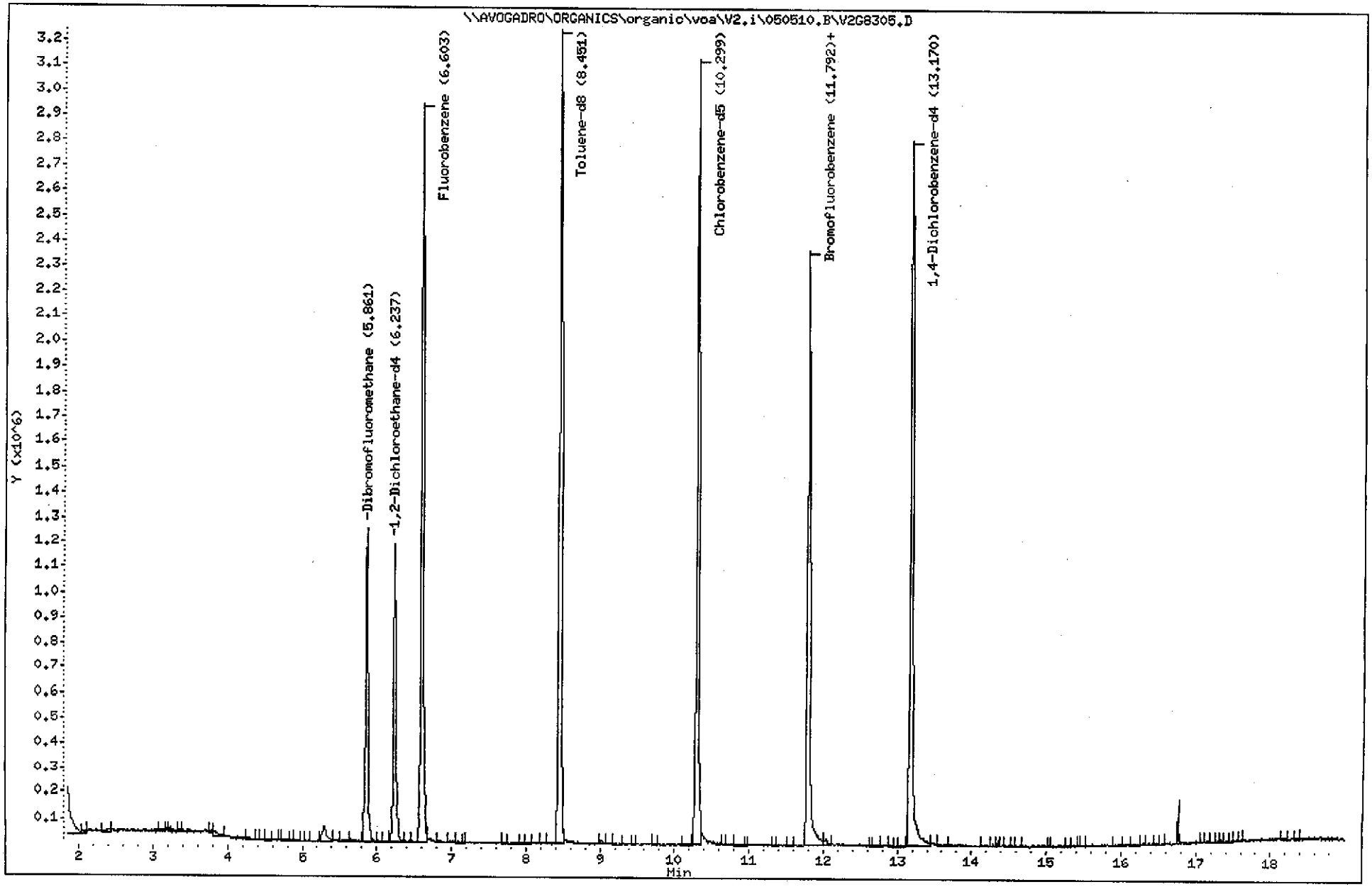
Data : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8305.D
Date : 10-MAY-2005 19:23
Client ID: G-A173
Sample Info: ,D0534-07A,,18057
Purge Volume: 5.0
Column phase: DB-624

Instrument: V2.i

Operator: JC SRC: JC
Column diameter: 0.25



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Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8305.D
Report Date: 19-May-2005 11:03

Mitkem Corporation

Method 8260 Water and Medium Soil

Data file : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8305.D
Lab Smp Id: D0534-07A Client Smp ID: G-A173
Inj Date : 10-MAY-2005 19:23
Operator : JC SRC: JC Inst ID: V2.i
Smp Info : ,D0534-07A,,18057
Misc Info :
Comment :
Method : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\v28260.m
Meth Date : 19-May-2005 11:01 mtl Quant Type: ISTD
Cal Date : 04-MAY-2005 18:27 Cal File: V2G8205.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 4.03
Processing Host: TARGET3

Concentration Formula: Amt * DF * Uf * 5/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
$ 30 Dibromofluoromethane	113	5.861	5.865	(0.888)	871948	46.8332	47
$ 35 1,2-Dichloroethane-d4	102	6.237	6.231	(0.945)	177401	47.3672	47
* 38 Fluorobenzene	96	6.603	6.596	(1.000)	3047050	50.0000	
$ 47 Toluene-d8	98	8.451	8.454	(0.821)	2519719	43.8237	44
* 57 Chlorobenzene-d5	117	10.299	10.303	(1.000)	2038457	50.0000	
$ 68 Bromofluorobenzene	95	11.792	11.796	(1.145)	1163781	49.0799	49
* 81 1,4-Dichlorobenzene-d4	152	13.170	13.174	(1.000)	914501	50.0000	

SB
5/19/05

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8305.D
Report Date: 19-May-2005 11:03

Mitkem Corporation

Method 8260 Water and Medium Soil

Data file : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8305.D
Lab Smp Id: D0534-07A Client Smp ID: G-A173
Inj Date : 10-MAY-2005 19:23
Operator : JC SRC: JC Inst ID: V2.i
Smp Info : ,D0534-07A,,18057
Misc Info :
Comment :
Method : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\v28260.m
Meth Date : 19-May-2005 11:01 mtl Quant Type: ISTD
Cal Date : 04-MAY-2005 18:27 Cal File: V2G8205.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 4.03
Processing Host: TARGET3

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

G-A200

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-08A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8306

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	U
78-93-3	2-Butanone	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

G-A200

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-08A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8306

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	4-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

G-A200

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-08A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8306

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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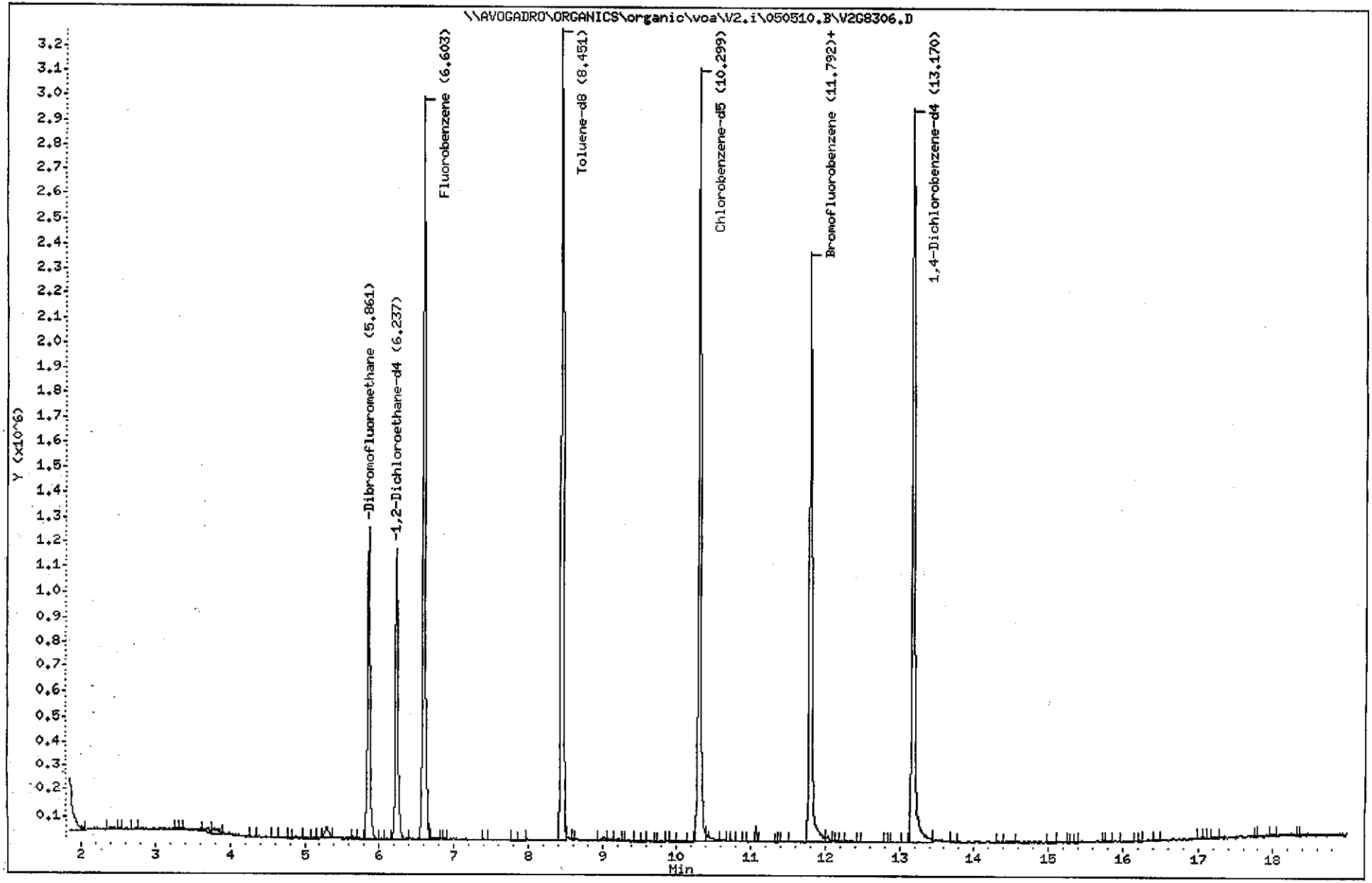
Data F \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8306.D
Date : 10-MAY-2005 19:50
Client ID: G-A200
Sample Info: ,D0534-08A,,18057
Purge Volume: 5.0
Column phase: DB-624

Instrument: V2.i

Operator: JC SRC: JC
Column diameter: 0.25



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Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8306.D
Report Date: 19-May-2005 11:03

Mitkem Corporation

Method 8260 Water and Medium Soil

Data file : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8306.D
Lab Smp Id: D0534-08A Client Smp ID: G-A200
Inj Date : 10-MAY-2005 19:50
Operator : JC SRC: JC Inst ID: V2.i
Smp Info : ,D0534-08A,,18057
Misc Info :
Comment :
Method : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\v28260.m
Meth Date : 19-May-2005 11:01 mtl Quant Type: ISTD
Cal Date : 04-MAY-2005 18:27 Cal File: V2G8205.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 4.03
Processing Host: TARGET3

Concentration Formula: Amt * DF * Uf * 5/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
$ 30 Dibromofluoromethane	113	5.861	5.865	(0.888)	878866	47.3666	47
$ 35 1,2-Dichloroethane-d4	102	6.237	6.231	(0.945)	175893	47.1256	47
* 38 Fluorobenzene	96	6.603	6.596	(1.000)	3036640	50.0000	
$ 47 Toluene-d8	98	8.451	8.454	(0.821)	2523564	43.8647	44
* 57 Chlorobenzene-d5	117	10.299	10.303	(1.000)	2039658	50.0000	
$ 68 Bromofluorobenzene	95	11.792	11.796	(1.145)	1129666	47.6131	48
* 81 1,4-Dichlorobenzene-d4	152	13.170	13.174	(1.000)	934780	50.0000	

SB
5/19/05

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8306.D
Report Date: 19-May-2005 11:03

Mitkem Corporation

Method 8260 Water and Medium Soil

Data file : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8306.D
Lab Smp Id: D0534-08A Client Smp ID: G-A200
Inj Date : 10-MAY-2005 19:50
Operator : JC SRC: JC Inst ID: V2.i
Smp Info : ,D0534-08A,,18057
Misc Info :
Comment :
Method : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\v28260.m
Meth Date : 19-May-2005 11:01 mtl Quant Type: ISTD
Cal Date : 04-MAY-2005 18:27 Cal File: V2G8205.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 4.03
Processing Host: TARGET3

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

G-A203

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-01A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8299

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	U
78-93-3	2-Butanone	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

G-A203

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-01A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8299

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	4-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

G-A203

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-01A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8299

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
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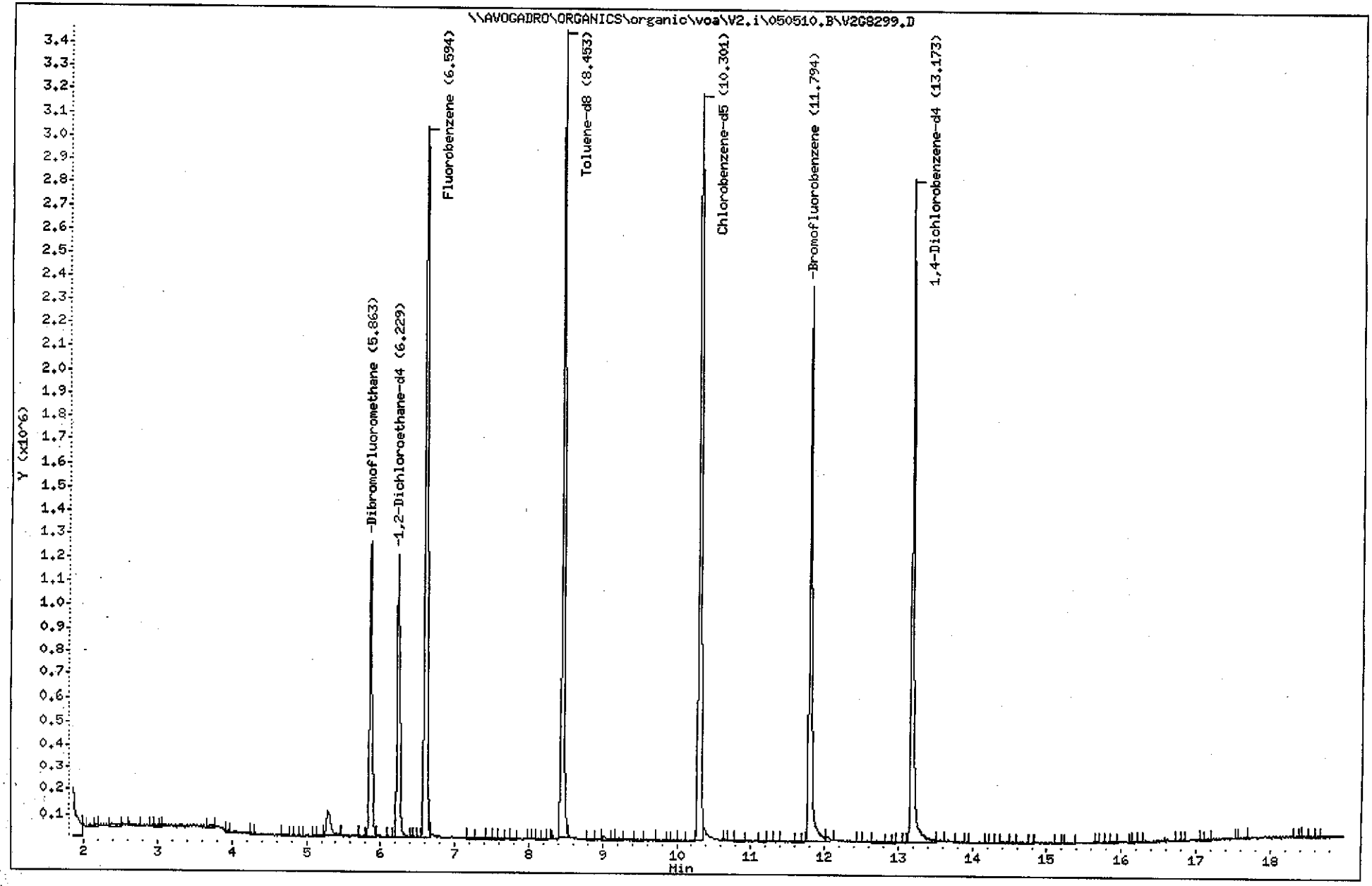
30.				

Data : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8299.D
Date : 10-MAY-2005 16:44
Client ID: G-A203
Sample Info: ,D0534-01A,,18057
Purge Volume: 5.0
Column phase: DB-624

Instrument: V2.i

Operator: JC SRC: JC
Column diameter: 0.25



Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8299.D
Report Date: 19-May-2005 11:02

Mitkem Corporation

Method 8260 Water and Medium Soil

Data file : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8299.D
Lab Smp Id: D0534-01A Client Smp ID: G-A203
Inj Date : 10-MAY-2005 16:44
Operator : JC SRC: JC Inst ID: V2.i
Smp Info : ,D0534-01A,,18057
Misc Info :
Comment :
Method : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\v28260.m
Meth Date : 19-May-2005 11:01 mtl Quant Type: ISTD
Cal Date : 04-MAY-2005 18:27 Cal File: V2G8205.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 4.03
Processing Host: TARGET3

Concentration Formula: Amt * DF * Uf * 5/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
$ 30 Dibromofluoromethane	113	5.864	5.865	(0.889)	910907	47.0788	47
$ 35 1,2-Dichloroethane-d4	102	6.229	6.231	(0.945)	186300	47.8654	48
* 38 Fluorobenzene	96	6.594	6.596	(1.000)	3166591	50.0000	
$ 47 Toluene-d8	98	8.453	8.454	(0.821)	2651055	44.8671	45
* 57 Chlorobenzene-d5	117	10.301	10.303	(1.000)	2094832	50.0000	
$ 68 Bromofluorobenzene	95	11.794	11.796	(1.145)	1182329	48.5202	49
* 81 1,4-Dichlorobenzene-d4	152	13.173	13.174	(1.000)	937321	50.0000	

SB 5/19/05

KL

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8299.D
Report Date: 19-May-2005 11:02

Mitkem Corporation

Method 8260 Water and Medium Soil

Data file : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8299.D
Lab Smp Id: D0534-01A Client Smp ID: G-A203
Inj Date : 10-MAY-2005 16:44
Operator : JC SRC: JC Inst ID: V2.i
Smp Info : ,D0534-01A,,18057
Misc Info :
Comment :
Method : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\v28260.m
Meth Date : 19-May-2005 11:01 mtl Quant Type: ISTD
Cal Date : 04-MAY-2005 18:27 Cal File: V2G8205.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 4.03
Processing Host: TARGET3

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H-A143

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-04A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8302

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	U
78-93-3	2-Butanone	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	1	J
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H-A143

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-04A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8302

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	4-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H-A143

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-04A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8302

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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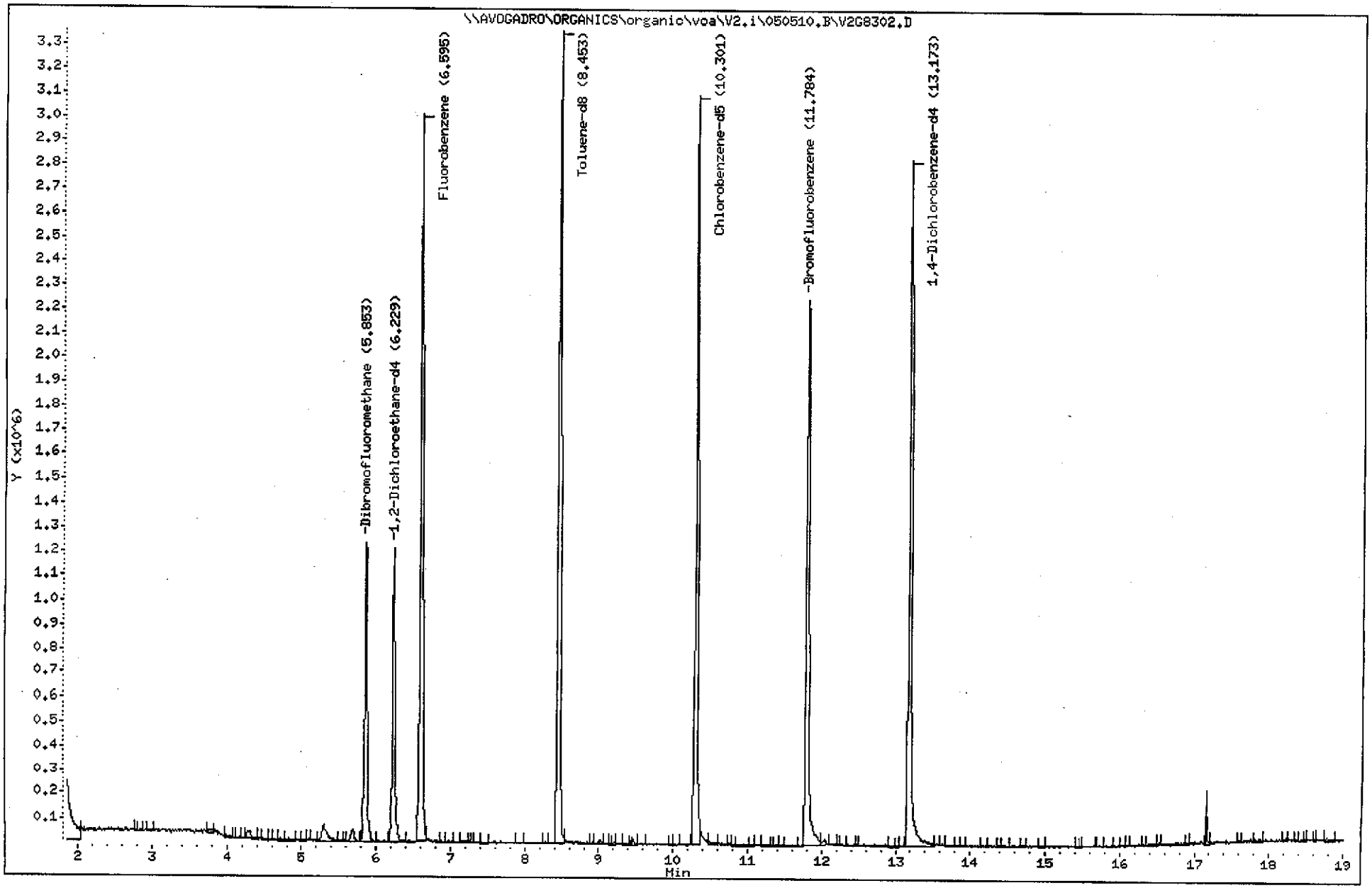
29.				
30.				

Data : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8302.D
Date : 10-MAY-2005 18:04
Client ID: H-A143
Sample Info: ,D0534-04A,,18057
Purge Volume: 5.0
Column phase: DB-624

Instrument: V2.i

Operator: JC SRC: JC
Column diameter: 0.25



Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8302.D
Report Date: 19-May-2005 11:02

Mitkem Corporation

Method 8260 Water and Medium Soil

Data file : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8302.D
Lab Smp Id: D0534-04A Client Smp ID: H-A143
Inj Date : 10-MAY-2005 18:04
Operator : JC SRC: JC Inst ID: V2.i
Smp Info : ,D0534-04A,,18057
Misc Info :
Comment :
Method : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\v28260.m
Meth Date : 19-May-2005 11:01 mtl Quant Type: ISTD
Cal Date : 04-MAY-2005 18:27 Cal File: V2G8205.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 4.03
Processing Host: TARGET3

Concentration Formula: Amt * DF * Uf * 5/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
28 Chloroform	83	5.686	5.688	(0.862)	35460	1.09118	1(a)
$ 30 Dibromofluoromethane	113	5.853	5.865	(0.888)	884398	47.8478	48
$ 35 1,2-Dichloroethane-d4	102	6.229	6.231	(0.945)	180367	48.5098	49
* 38 Fluorobenzene	96	6.595	6.596	(1.000)	3025025	50.0000	
$ 47 Toluene-d8	98	8.453	8.454	(0.821)	2572347	43.7999	44
* 57 Chlorobenzene-d5	117	10.301	10.303	(1.000)	2082161	50.0000	
$ 68 Bromofluorobenzene	95	11.784	11.796	(1.144)	1123490	46.3862	46
* 81 1,4-Dichlorobenzene-d4	152	13.173	13.174	(1.000)	921017	50.0000	

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

SB 5/19/05

KL

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8302.D
Report Date: 19-May-2005 11:02

Mitkem Corporation

Method 8260 Water and Medium Soil

Data file : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8302.D
Lab Smp Id: D0534-04A Client Smp ID: H-A143
Inj Date : 10-MAY-2005 18:04
Operator : JC SRC: JC Inst ID: V2.i
Smp Info : ,D0534-04A,,18057
Misc Info :
Comment :
Method : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\v28260.m
Meth Date : 19-May-2005 11:01 mtl Quant Type: ISTD
Cal Date : 04-MAY-2005 18:27 Cal File: V2G8205.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 4.03
Processing Host: TARGET3

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8302.D

Date : 10-MAY-2005 18:04

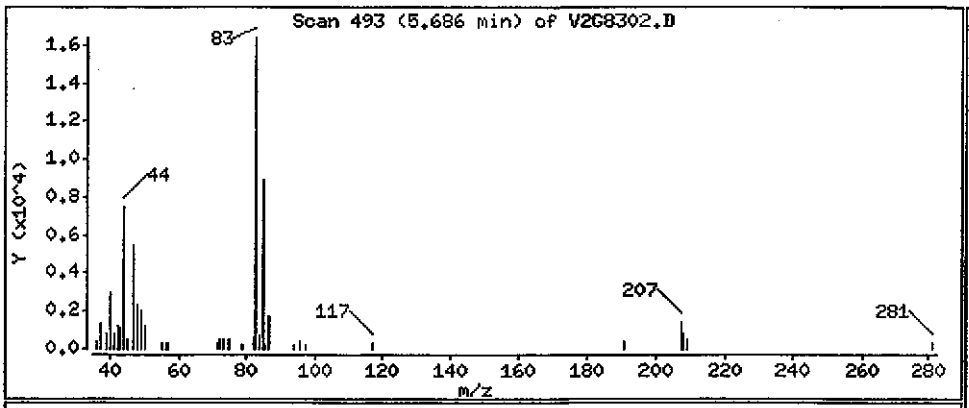
Client ID: H-A143 Instrument: V2.i

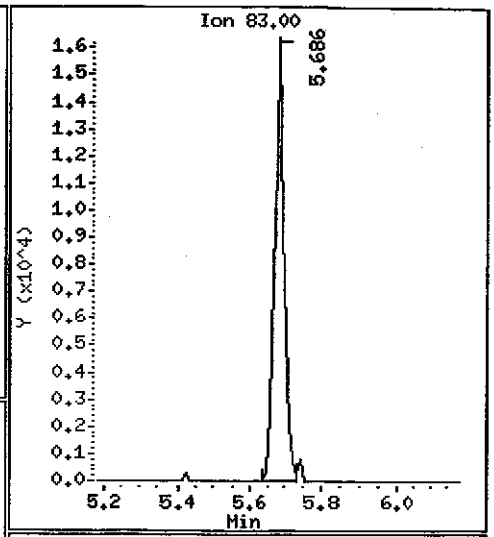
Sample Info: ,D0534-04A,,18057

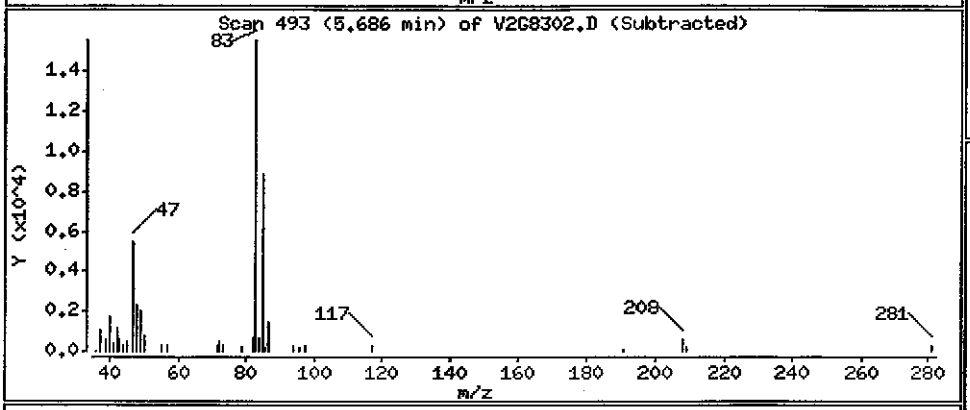
Purge Volume: 5.0 Operator: JC SRC: JC

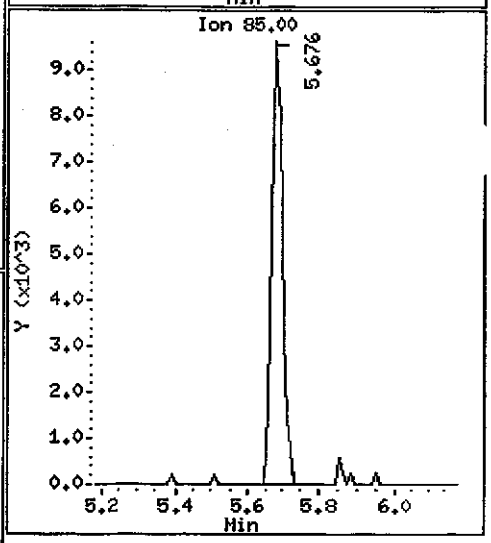
Column phase: DB-624 Column diameter: 0.25

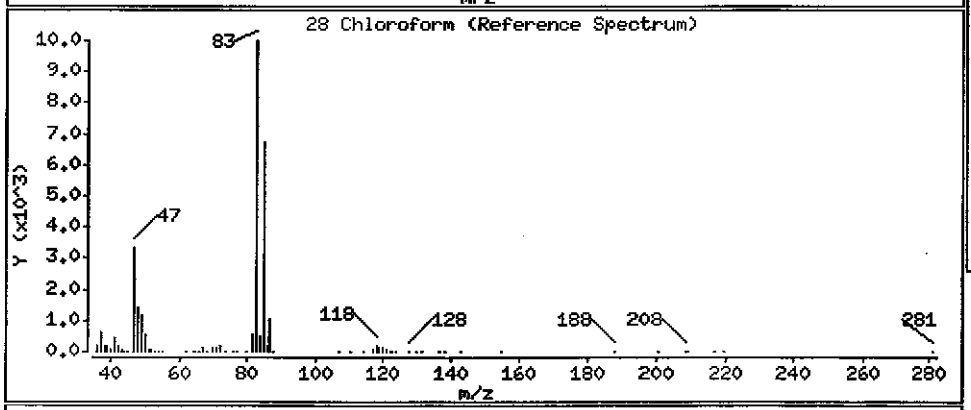
28 Chloroform Concentration: 1 ug/L

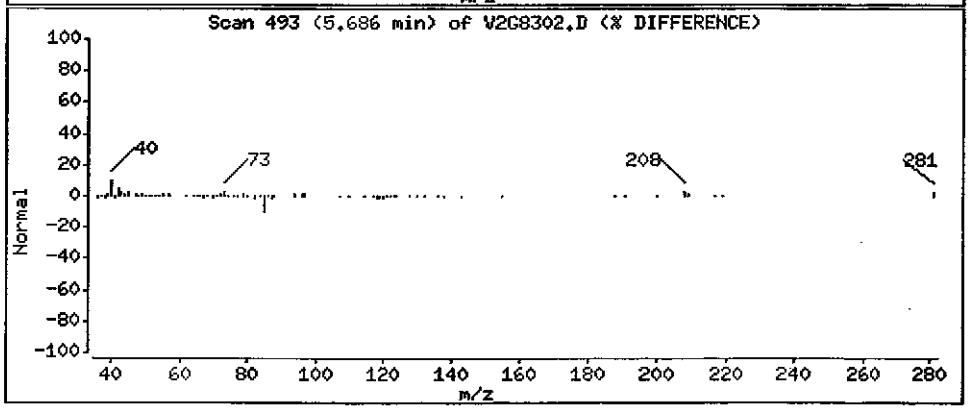












1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H-A167

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-06A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8304

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	U
78-93-3	2-Butanone	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H-A167

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-06A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8304

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	4-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H-A167

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: D0534-06A

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8304

Level: (low/med) LOW Date Received: 05/09/05

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
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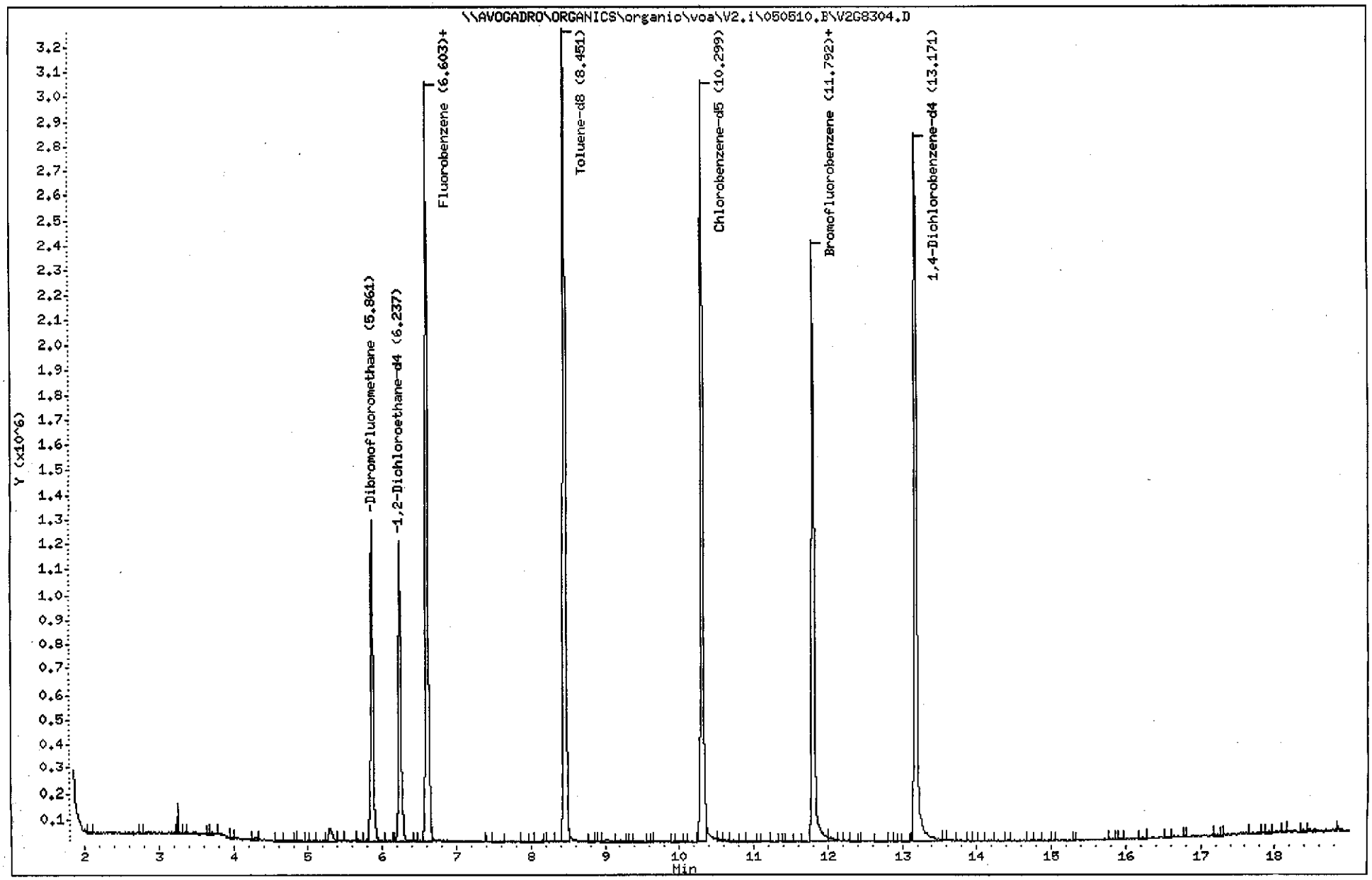
26.				
27.				
28.				
29.				
30.				

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8304.D
Date : 10-MAY-2005 18:57
Client ID: H-A167
Sample Info: ,D0534-06A,,18057
Purge Volume: 5.0
Column phase: DB-624

Instrument: V2.i

Operator: JC SRC: JC
Column diameter: 0.25



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Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8304.D
Report Date: 19-May-2005 11:03

Mitkem Corporation

Method 8260 Water and Medium Soil

Data file : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8304.D
Lab Smp Id: D0534-06A Client Smp ID: H-A167
Inj Date : 10-MAY-2005 18:57
Operator : JC SRC: JC Inst ID: V2.i
Smp Info : ,D0534-06A,,18057
Misc Info :
Comment :
Method : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\v28260.m
Meth Date : 19-May-2005 11:01 mtl Quant Type: ISTD
Cal Date : 04-MAY-2005 18:27 Cal File: V2G8205.D ✓
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 4.03
Processing Host: TARGET3

Concentration Formula: Amt * DF * Uf * 5/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
$ 30 Dibromofluoromethane	113	5.862	5.865	(0.888)	876246	46.9547	47
$ 35 1,2-Dichloroethane-d4	102	6.237	6.231	(0.945)	179670	47.8615	48
* 38 Fluorobenzene	96	6.603	6.596	(1.000)	3054150	50.0000	
$ 47 Toluene-d8	98	8.451	8.454	(0.821)	2539673	44.0657	44
* 57 Chlorobenzene-d5	117	10.299	10.303	(1.000)	2043314	50.0000	
$ 68 Bromofluorobenzene	95	11.792	11.796	(1.145)	1141437	48.0232	48
* 81 1,4-Dichlorobenzene-d4	152	13.171	13.174	(1.000)	928603	50.0000	

SB
5/19/05

KV

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8304.D
Report Date: 19-May-2005 11:03

Mitkem Corporation

Method 8260 Water and Medium Soil

Data file : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8304.D
Lab Smp Id: D0534-06A Client Smp ID: H-A167
Inj Date : 10-MAY-2005 18:57
Operator : JC SRC: JC Inst ID: V2.i
Smp Info : ,D0534-06A,,18057
Misc Info :
Comment :
Method : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\v28260.m
Meth Date : 19-May-2005 11:01 mtl Quant Type: ISTD
Cal Date : 04-MAY-2005 18:27 Cal File: V2G8205.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 4.03
Processing Host: TARGET3

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Instrument ID: V2 Calibration Date(s): 05/04/05 05/04/05

Heated Purge: (Y/N) N Calibration Time(s): 1617 1827

GC Column: DB-624 ID: 0.25 (mm)

LAB FILE ID: RRF5 =V2G8202 RRF20 =V2G8205
RRF50 =V2G8201 RRF100=V2G8204 RRF200=V2G8203

COMPOUND	RRF5	RRF20	RRF50	RRF100	RRF200	$\overline{RRF}$	% RSD
Dichlorodifluoromethane	0.325	0.293	0.299	0.282	0.279	0.296	6.2
Chloromethane *	0.402	0.377	0.344	0.356	0.336	0.363	7.4*
Vinyl Chloride	0.265	0.287	0.276	0.284	0.273	0.277	3.2
Bromomethane	0.239	0.219	0.204	0.215	0.211	0.218	6.0
Chloroethane	0.165	0.163	0.151	0.156	0.150	0.157	4.4
Trichlorofluoromethane	0.336	0.350	0.344	0.350	0.344	0.345	1.7
1,1-Dichloroethene	0.265	0.226	0.208	0.215	0.208	0.224	10.6
Acetone	0.264	0.110	0.115	0.105	0.104	0.140	49.8
Iodomethane	0.418	0.453	0.411	0.440	0.429	0.430	3.9
Carbon Disulfide	0.708	0.760	0.672	0.725	0.681	0.709	5.0
Methylene Chloride	0.334	0.296	0.262	0.278	0.265	0.287	10.3
trans-1,2-Dichloroethene	0.301	0.302	0.265	0.264	0.251	0.277	8.5
Methyl tert-butyl ether	0.913	0.939	0.818	0.887	0.846	0.881	5.6
1,1-Dichloroethane *	0.546	0.567	0.525	0.544	0.515	0.539	3.7*
Vinyl acetate	1.361	1.440	1.283	1.365	1.295	1.349	4.7
2-Butanone	0.206	0.155	0.148	0.151	0.131	0.158	17.8
cis-1,2-Dichloroethene	0.302	0.298	0.265	0.278	0.260	0.281	6.7
2,2-Dichloropropane	0.482	0.500	0.470	0.475	0.460	0.477	3.1
Bromochloromethane	0.134	0.133	0.120	0.127	0.119	0.127	5.4
Chloroform	0.564	0.560	0.508	0.536	0.518	0.537	4.7
1,1,1-Trichloroethane	0.488	0.498	0.466	0.486	0.477	0.483	2.5
1,1-Dichloropropene	0.121	0.124	0.114	0.120	0.112	0.118	4.1
Carbon Tetrachloride	0.374	0.406	0.373	0.393	0.387	0.387	3.6
1,2-Dichloroethane	0.493	0.514	0.461	0.491	0.480	0.488	3.9
Benzene	0.960	1.006	0.895	0.938	0.889	0.938	5.1
Trichloroethene	0.224	0.237	0.220	0.240	0.229	0.230	3.8
1,2-Dichloropropane	0.258	0.280	0.245	0.264	0.251	0.260	5.2
Dibromomethane	0.191	0.204	0.180	0.200	0.193	0.194	4.7
Bromodichloromethane	0.392	0.411	0.387	0.405	0.399	0.399	2.4
cis-1,3-Dichloropropene	0.422	0.478	0.420	0.459	0.444	0.445	5.5
4-Methyl-2-pentanone	0.275	0.313	0.274	0.320	0.307	0.298	7.4
Toluene	0.969	1.019	0.898	0.956	0.924	0.953	4.8
trans-1,3-Dichloropropene	0.418	0.458	0.406	0.442	0.428	0.430	4.7
1,1,2-Trichloroethane	0.200	0.222	0.197	0.218	0.210	0.209	5.3
1,3-Dichloropropane	0.627	0.667	0.581	0.646	0.633	0.631	5.0
Tetrachloroethene	0.286	0.319	0.279	0.301	0.288	0.295	5.3
2-Hexanone	0.143	0.254	0.225	0.337	0.337	0.259	31.5

* Compounds with required minimum RRF and maximim %RSD values.
All other compounds must meet a minimim RRF of 0.010.

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Instrument ID: V2 Calibration Date(s): 05/04/05 05/04/05

Heated Purge: (Y/N) N Calibration Time(s): 1617 1827

GC Column: DB-624 ID: 0.25 (mm)

LAB FILE ID: RRF5 =V2G8202 RRF20 =V2G8205
RRF50 =V2G8201 RRF100=V2G8204 RRF200=V2G8203

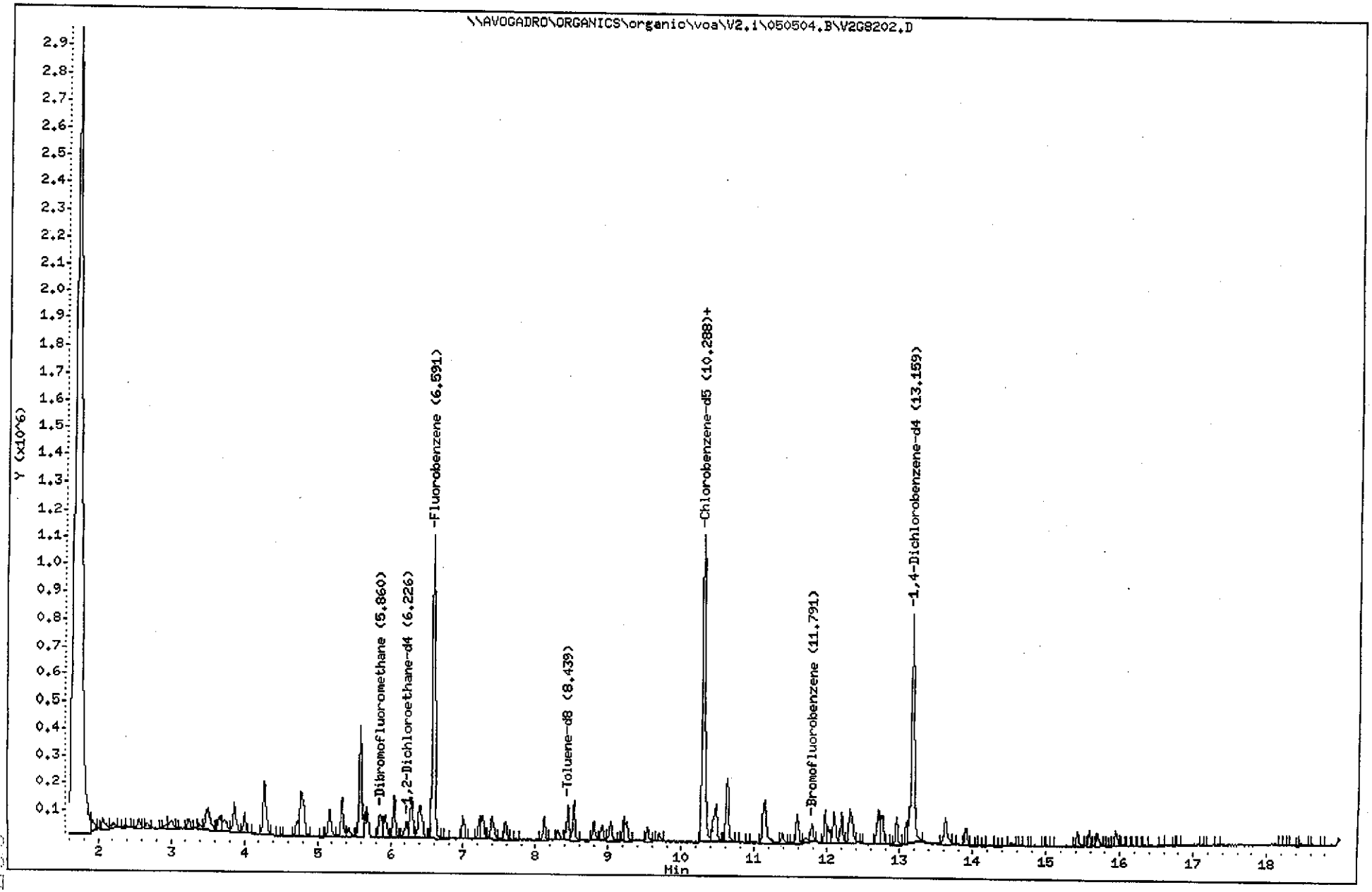
COMPOUND	RRF5	RRF20	RRF50	RRF100	RRF200	$\overline{RRF}$	% RSD
Dibromochloromethane	0.394	0.453	0.401	0.452	0.450	0.430	7.0
1,2-Dibromoethane	0.364	0.417	0.364	0.418	0.412	0.395	7.1
Chlorobenzene *	0.956	1.029	0.934	1.009	0.974	0.980	3.9*
1,1,1,2-Tetrachloroethane	0.353	0.390	0.348	0.377	0.370	0.368	4.7
Ethylbenzene	0.492	0.519	0.467	0.513	0.495	0.497	4.1
m,p-Xylene	0.620	0.661	0.585	0.618	0.595	0.616	4.8
o-Xylene	0.605	0.649	0.570	0.613	0.594	0.606	4.7
Xylene (Total)	0.615	0.657	0.580	0.616	0.595	0.613	4.8
Styrene	0.999	1.107	1.010	1.088	1.059	1.053	4.5
Bromoform *	0.284	0.326	0.279	0.330	0.333	0.310	8.5*
Isopropylbenzene	1.319	1.461	1.300	1.380	1.348	1.362	4.6
1,1,2,2-Tetrachloroethane *	1.092	1.132	0.929	1.041	0.962	1.031	8.3*
Bromobenzene	0.895	0.993	0.853	0.929	0.874	0.909	6.0
1,2,3-Trichloropropane	0.860	1.240	1.125	1.318	1.267	1.162	15.7
n-Propylbenzene	0.722	0.785	0.700	0.736	0.698	0.728	4.8
2-Chlorotoluene	0.751	0.804	0.705	0.740	0.702	0.740	5.6
1,3,5-Trimethylbenzene	2.850	2.988	2.593	2.650	2.514	2.719	7.2
4-Chlorotoluene	0.771	0.850	0.710	0.768	0.715	0.763	7.4
tert-Butylbenzene	2.738	2.998	2.627	2.689	2.577	2.726	6.0
1,2,4-Trimethylbenzene	2.622	3.036	2.619	2.774	2.642	2.739	6.5
sec-Butylbenzene	2.929	3.257	2.911	2.880	2.764	2.948	6.2
4-Isopropyltoluene	2.121	2.401	2.210	2.251	2.141	2.225	5.0
1,3-Dichlorobenzene	1.289	1.466	1.268	1.352	1.302	1.335	5.9
1,4-Dichlorobenzene	1.143	1.630	1.379	1.482	1.411	1.409	12.6
n-Butylbenzene	1.973	2.343	2.093	2.156	2.064	2.126	6.5
1,2-Dichlorobenzene	1.342	1.562	1.285	1.384	1.316	1.378	7.9
1,2-Dibromo-3-chloropropane	0.248	0.233	0.186	0.215	0.201	0.217	11.4
1,2,4-Trichlorobenzene	0.799	0.958	0.780	0.904	0.872	0.863	8.5
Hexachlorobutadiene	0.367	0.506	0.384	0.389	0.356	0.400	15.1
Naphthalene	2.105	2.350	1.732	2.185	2.034	2.081	10.9
1,2,3-Trichlorobenzene	0.777	0.940	0.751	0.844	0.804	0.823	9.0
Dibromofluoromethane	0.283	0.310	0.310	0.318	0.306	0.305	4.4
1,2-Dichloroethane-d4	0.062	0.059	0.061	0.064	0.061	0.061	2.9
Toluene-d8	1.376	1.413	1.423	1.438	1.401	1.410	1.7
Bromofluorobenzene	0.511	0.562	0.594	0.626	0.615	0.582	8.0

* Compounds with required minimum RRF and maximim %RSD values.
All other compounds must meet a minimim RRF of 0.010.

Data : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8202.D
Date : 04-MAY-2005 17:02
Client ID: VSTD0052A
Sample Info: ,VSTD0052A,VSTD0052A
Purge Volume: 5.0
Column phase: DB-624

Instrument: V2.i

Operator: JC SRC: JC
Column diameter: 0.25



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Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8202.D
Report Date: 18-May-2005 11:25

Mitkem Corporation

Method 8260 Water and Medium Soil

Data file : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8202.D
Lab Smp Id: VSTD0052A Client Smp ID: VSTD0052A
Inj Date : 04-MAY-2005 17:02
Operator : JC SRC: JC Inst ID: V2.i
Smp Info : ,VSTD0052A,VSTD0052A
Misc Info : ,1
Comment :
Method : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\v28260.m
Meth Date : 05-May-2005 10:14 mtl Quant Type: ISTD
Cal Date : 04-MAY-2005 17:02 Cal File: V2G8202.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.03
Processing Host: TARGET6

Concentration Formula: Amt * DF * Uf * 5/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Dichlorodifluoromethane	85	1.934	1.938	(0.293)	37839	5.00000	5
116 Freon114	85	2.080	2.084	(0.316)	29395	5.00000	5
2 Chloromethane	50	2.070	2.084	(0.314)	46812	5.00000	6
3 Vinyl Chloride	62	2.227	2.241	(0.338)	30799	5.00000	5
4 Bromomethane	94	2.561	2.575	(0.389)	27786	5.00000	5
5 Chloroethane	64	2.676	2.679	(0.406)	19207	5.00000	5
6 Trichlorofluoromethane	101	3.010	3.003	(0.457)	39084	5.00000	5
119 Ether	59	3.239	3.243	(0.491)	25475	5.00000	5
7 Acrolein	56	3.396	3.400	(0.515)	24649	25.0000	33
8 1,1-Dichloroethene	96	3.501	3.504	(0.531)	30812	5.00000	6
111 1,1,2-Trichloro-1,2,2-Trifluo	101	3.521	3.525	(0.534)	29072	5.00000	5
9 Acetone	43	3.563	3.556	(0.541)	30680	5.00000	9
10 Iodomethane	142	3.657	3.671	(0.555)	48697	5.00000	5
11 Carbon Disulfide	76	3.730	3.755	(0.566)	82308	5.00000	5
12 Acetonitrile	41	3.866	3.859	(0.587)	94787	50.0000	52
13 Allyl Chloride	39	3.866	3.870	(0.587)	67723	5.00000	5

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8202.D
Report Date: 18-May-2005 11:25

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	112 Methyl Acetate	43	3.897	3.890	(0.591)	32551	5.00000	6
	14 Methylene Chloride	84	4.002	4.005	(0.607)	38893	5.00000	6
	120 tert-Butanol	59	4.127	4.131	(0.626)	13345	10.0000	12
	15 Acrylonitrile	53	4.263	4.266	(0.647)	62139	25.0000	27
	16 trans-1,2-Dichloroethene	96	4.273	4.277	(0.648)	35033	5.00000	5
	17 Methyl tert-butyl ether	73	4.284	4.287	(0.650)	106250	5.00000	5
	18 1,1-Dichloroethane	63	4.722	4.715	(0.716)	63554	5.00000	5
	19 Vinyl acetate	43	4.774	4.768	(0.724)	158381	5.00000	5
	121 Diisopropyl Ether	45	4.785	4.778	(0.726)	146145	5.00000	5
	20 2-Chloro-1,3-Butadiene	53	4.816	4.809	(0.731)	58052	5.00000	5
	122 Ethyl tert-butyl ether	59	5.171	5.164	(0.785)	121660	5.00000	5
	23 cis-1,2-Dichloroethene	96	5.338	5.332	(0.810)	35108	5.00000	5
	24 2,2-Dichloropropane	77	5.338	5.332	(0.810)	56121	5.00000	5
	22 2-Butanone	43	5.359	5.352	(0.813)	23944	5.00000	7
	29 Tetrahydrofuran	72	5.641	5.655	(0.856)	6571	5.00000	8
	25 Propionitrile	54	5.432	5.425	(0.824)	41380	50.0000	58
	26 Methacrylonitrile	41	5.589	5.582	(0.848)	283643	50.0000	56
	27 Bromochloromethane	128	5.589	5.593	(0.848)	15552	5.00000	5
	28 Chloroform	83	5.672	5.676	(0.861)	65680	5.00000	5
$	30 Dibromofluoromethane	113	5.850	5.843	(0.888)	32891	5.00000	5
	31 1,1,1-Trichloroethane	97	5.881	5.874	(0.892)	56808	5.00000	5
	113 Cyclohexane	56	5.933	5.927	(0.900)	45613	5.00000	5
	32 1,1-Dichloropropene	110	6.048	6.052	(0.918)	14096	5.00000	5
	33 Carbon Tetrachloride	117	6.048	6.052	(0.918)	43459	5.00000	5
	34 Isobutyl Alcohol	43	6.194	6.188	(0.940)	19019	100.000	110
$	35 1,2-Dichloroethane-d4	102	6.215	6.219	(0.943)	7190	5.00000	5
	37 Benzene	78	6.278	6.282	(0.952)	111646	5.00000	5
	36 1,2-Dichloroethane	62	6.309	6.303	(0.957)	57348	5.00000	5
	123 tert-Amyl methyl ether	73	6.403	6.396	(0.971)	101240	5.00000	5
*	38 Fluorobenzene	96	6.591	6.585	(1.000)	1163337	50.0000	
	39 Trichloroethene	130	6.998	7.002	(1.062)	26035	5.00000	5
	114 Methylcyclohexane	83	7.218	7.221	(1.095)	30339	5.00000	5
	40 1,2-Dichloropropane	63	7.270	7.263	(1.103)	29962	5.00000	5
M	21 1,2-Dichloroethene (Total)	96				70141	10.0000	11
	41 Methyl Methacrylate	69	7.385	7.388	(1.120)	22033	5.00000	5
	42 Dibromomethane	93	7.406	7.409	(1.124)	22217	5.00000	5
	124 1,4-Dioxane	88	7.437	7.430	(1.128)	5712	100.000	130
	43 Bromodichloromethane	83	7.583	7.587	(1.150)	45636	5.00000	5
	44 2-Chloroethyl vinyl ether	63	7.270	7.263	(1.103)	29962	5.00000	5(T)
	45 cis-1,3-Dichloropropene	75	8.116	8.119	(1.231)	49130	5.00000	5
	46 4-Methyl-2-pentanone	43	8.304	8.307	(1.260)	31988	5.00000	5
$	47 Toluene-d8	98	8.439	8.443	(0.820)	95258	5.00000	5
	48 Toluene	91	8.523	8.527	(1.293)	112783	5.00000	5
	49 trans-1,3-Dichloropropene	75	8.805	8.798	(1.336)	48637	5.00000	5
	50 Ethyl Methacrylate	69	8.920	8.902	(1.353)	37251	5.00000	5
	51 1,1,2-Trichloroethane	97	9.035	9.028	(1.371)	23294	5.00000	5
	53 Tetrachloroethene	164	9.212	9.205	(0.895)	19834	5.00000	5

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8202.D
Report Date: 18-May-2005 11:25

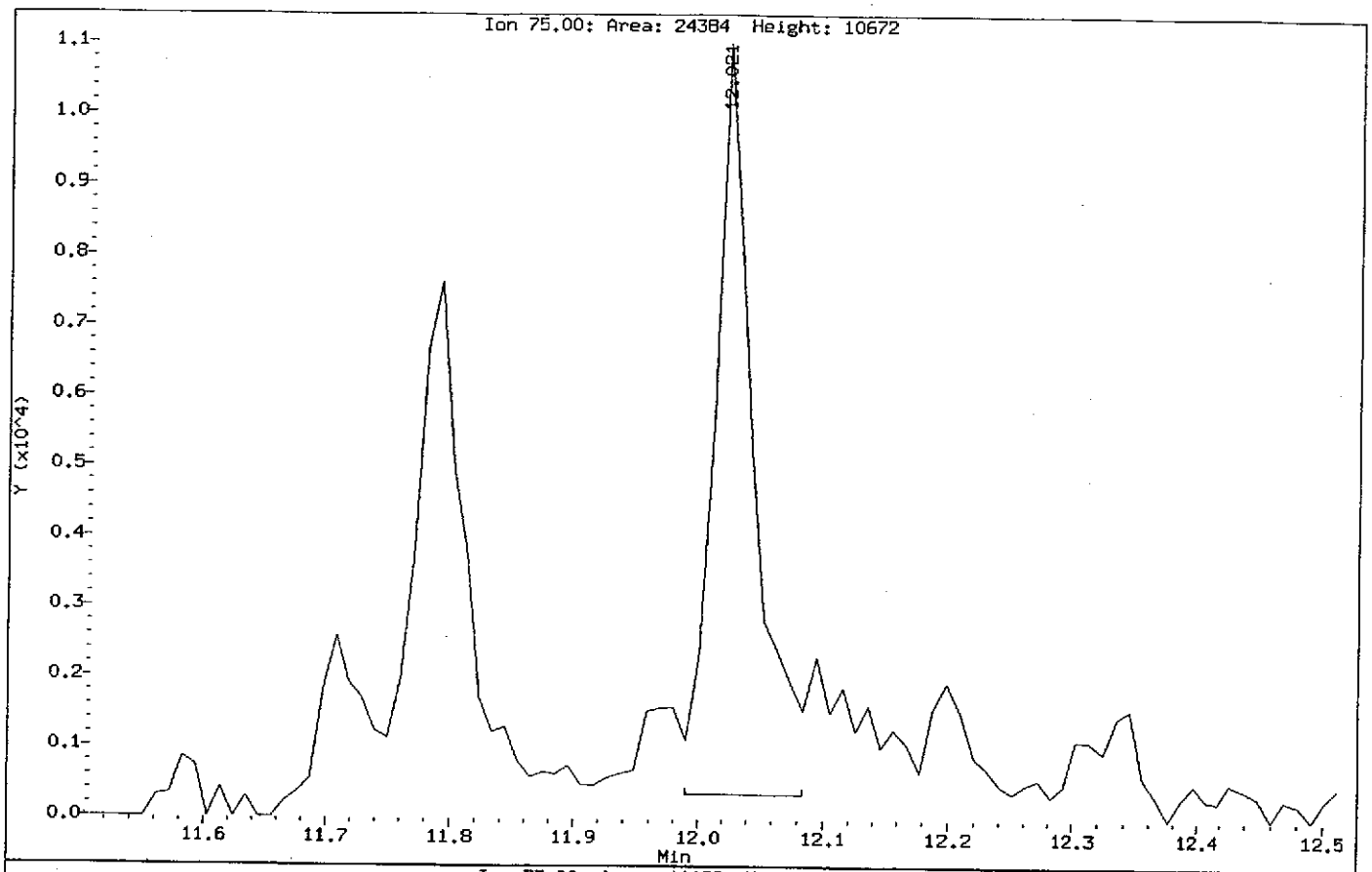
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	52 1,3-Dichloropropane	76	9.243	9.247	(0.899)	43392	5.00000	5
	54 2-Hexanone	43	9.463	9.372	(0.920)	9908	5.00000	3(a)
	55 Dibromochloromethane	129	9.536	9.540	(0.927)	27247	5.00000	5
	56 1,2-Dibromoethane	107	9.692	9.696	(0.942)	25221	5.00000	5
*	57 Chlorobenzene-d5	117	10.288	10.291	(1.000)	692216	50.0000	
	115 1-Chlorohexane	91	10.288	10.291	(1.000)	32142	5.00000	5
	58 Chlorobenzene	112	10.329	10.323	(1.004)	66176	5.00000	5
	59 1,1,1,2-Tetrachloroethane	131	10.434	10.427	(1.014)	24468	5.00000	5
	60 Ethylbenzene	106	10.476	10.469	(1.018)	34083	5.00000	5
	61 m,p-Xylene	106	10.622	10.615	(1.032)	85860	10.0000	10
	62 o-Xylene	106	11.123	11.127	(1.081)	41899	5.00000	5
	64 Styrene	104	11.154	11.148	(1.084)	69172	5.00000	5
	65 Bromoform	173	11.384	11.388	(1.107)	19668	5.00000	5
	66 Isopropylbenzene	105	11.593	11.586	(1.127)	91315	5.00000	5
	67 trans-1,4-Dichloro-2-butene	75	11.708	11.690	(1.138)	7227	5.00000	4
$	68 Bromofluorobenzene	95	11.791	11.784	(1.146)	35383	5.00000	4(a)
	69 1,1,2,2-Tetrachloroethane	83	11.969	11.962	(0.909)	30954	5.00000	5
	70 Bromobenzene	156	11.969	11.972	(0.909)	25368	5.00000	5
	71 1,2,3-Trichloropropane	75	12.021	12.014	(0.913)	24384	5.00000	4(aM) M2: SB 5/18/05
	72 n-Propylbenzene	120	12.094	12.098	(0.918)	20462	5.00000	5
	73 2-Chlorotoluene	126	12.198	12.202	(0.926)	21286	5.00000	5
	74 1,3,5-Trimethylbenzene	105	12.313	12.307	(0.935)	80784	5.00000	5
	75 4-Chlorotoluene	126	12.345	12.327	(0.937)	21870	5.00000	5
	76 tert-Butylbenzene	119	12.700	12.693	(0.964)	77614	5.00000	5
	77 1,2,4-Trimethylbenzene	105	12.762	12.756	(0.969)	74315	5.00000	5
	78 sec-Butylbenzene	105	12.950	12.954	(0.983)	83023	5.00000	5
	80 1,3-Dichlorobenzene	146	13.096	13.090	(0.994)	36542	5.00000	5
	79 4-Isopropyltoluene	119	13.128	13.131	(0.997)	60130	5.00000	5
*	81 1,4-Dichlorobenzene-d4	152	13.170	13.163	(1.000)	283479	50.0000	
	82 1,4-Dichlorobenzene	146	13.190	13.194	(1.002)	32408	5.00000	4(a)
M	63 Xylene (Total)	106				127759	15.0000	15
	83 n-Butylbenzene	91	13.608	13.601	(1.033)	55943	5.00000	5
	84 1,2-Dichlorobenzene	146	13.639	13.622	(1.036)	38029	5.00000	5
	85 Hexachloroethane	117	13.900	13.904	(1.056)	13135	5.00000	5
	86 1,2-Dibromo-3-chloropropane	75	14.527	14.520	(1.103)	7030	5.00000	6
	87 1,2,4-Trichlorobenzene	180	15.425	15.418	(1.171)	22654	5.00000	5
	88 Hexachlorobutadiene	225	15.582	15.585	(1.183)	10414	5.00000	5
	89 Naphthalene	128	15.696	15.679	(1.192)	59678	5.00000	5
	90 1,2,3-Trichlorobenzene	180	15.947	15.940	(1.211)	22023	5.00000	5

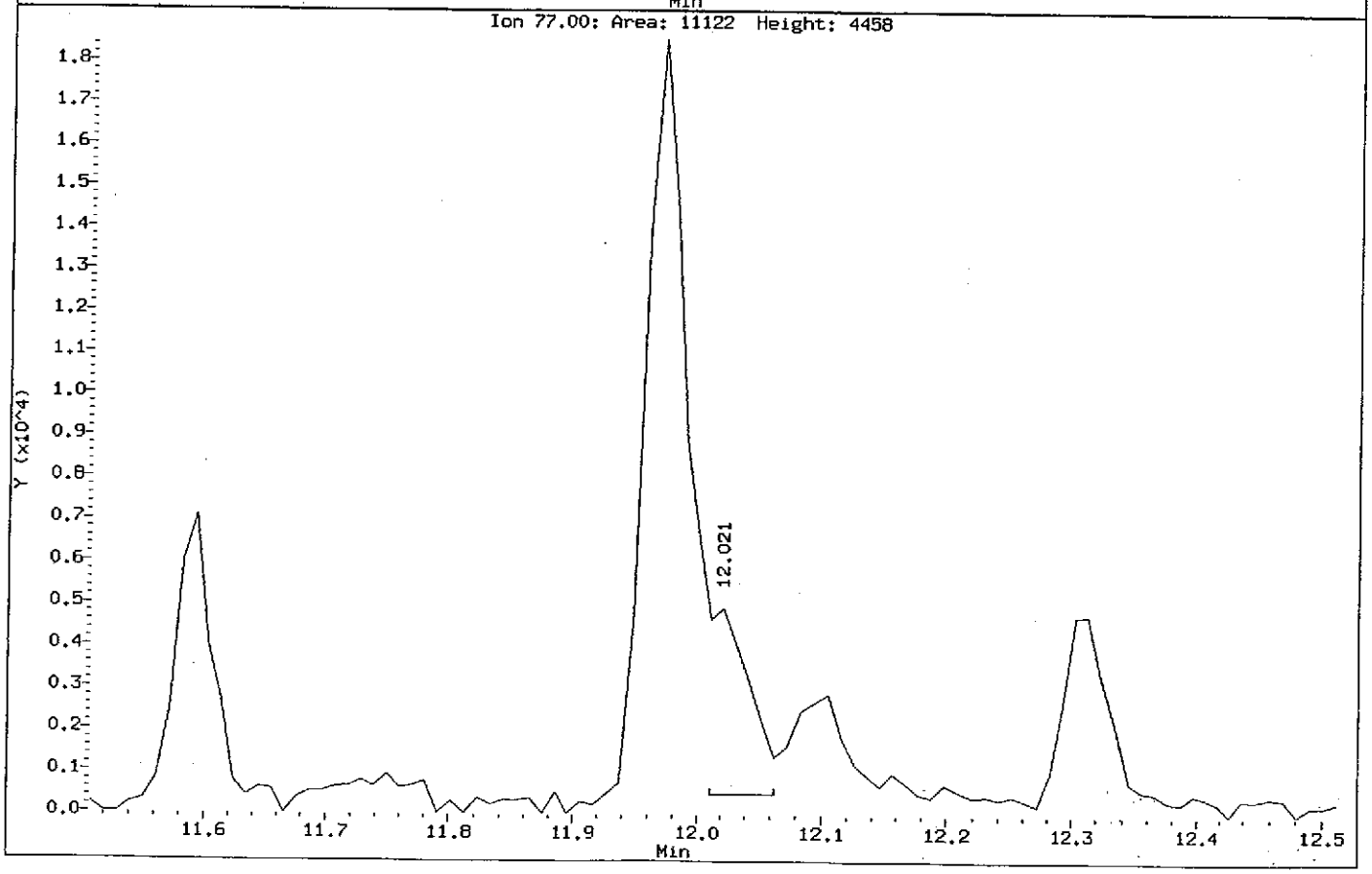
QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8202.D
Injection Date: 04-MAY-2005 17:02
Instrument: V2.i
Client Sample ID: VSTD0052A

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

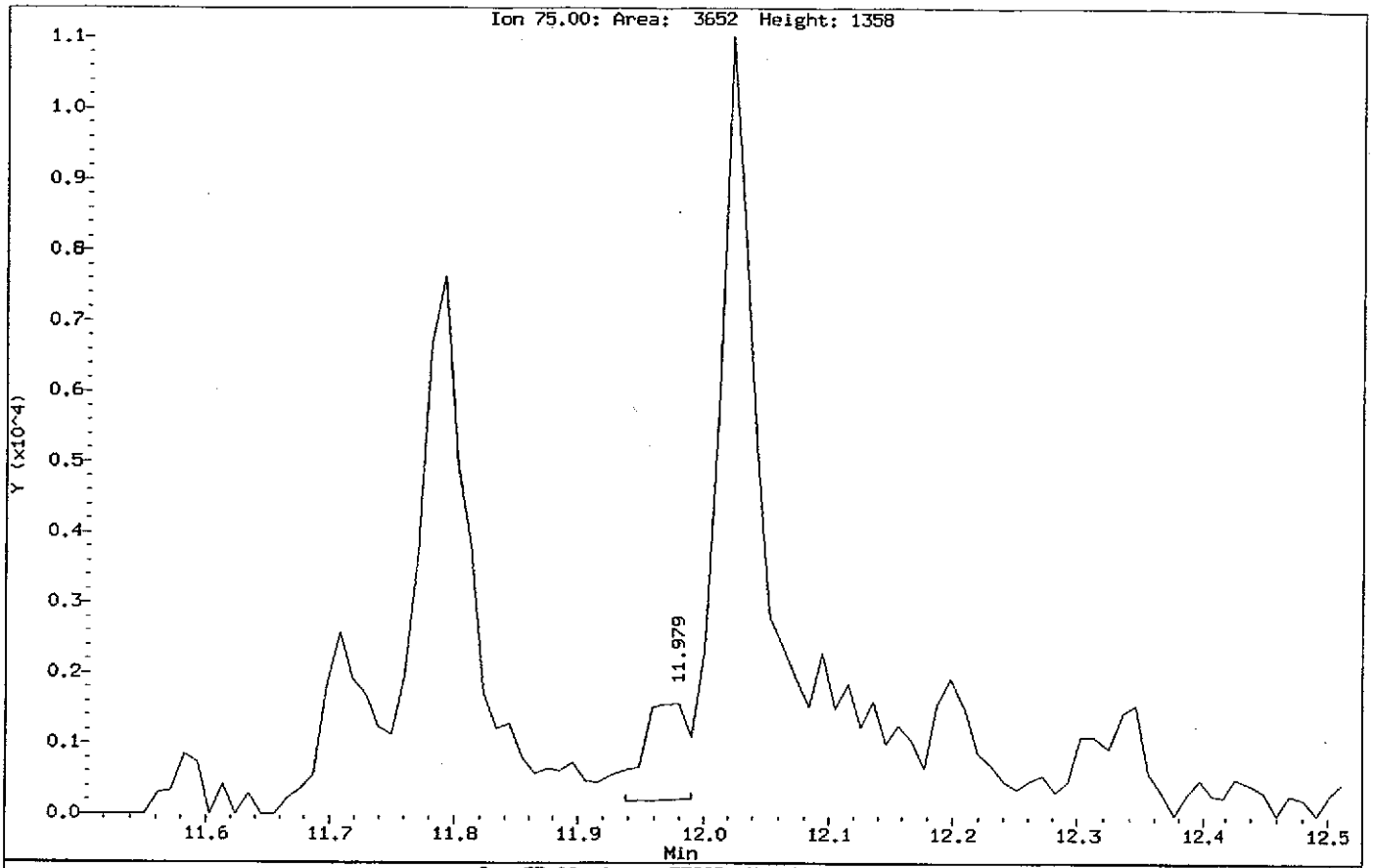


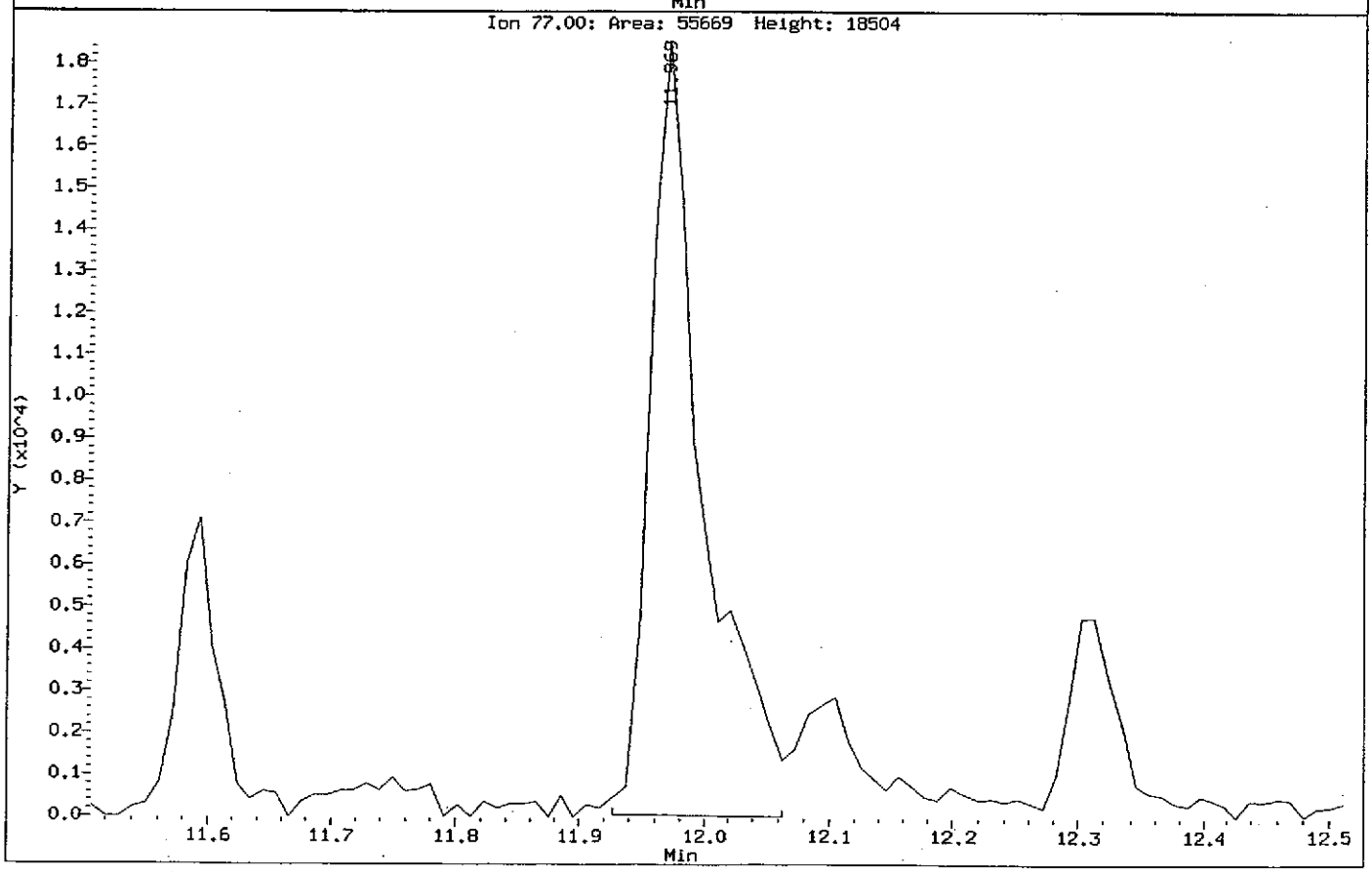


* M2: SB 5/18/05

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8202.D
Injection Date: 04-MAY-2005 17:02
Instrument: V2.i
Client Sample ID: VSTD0052A

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



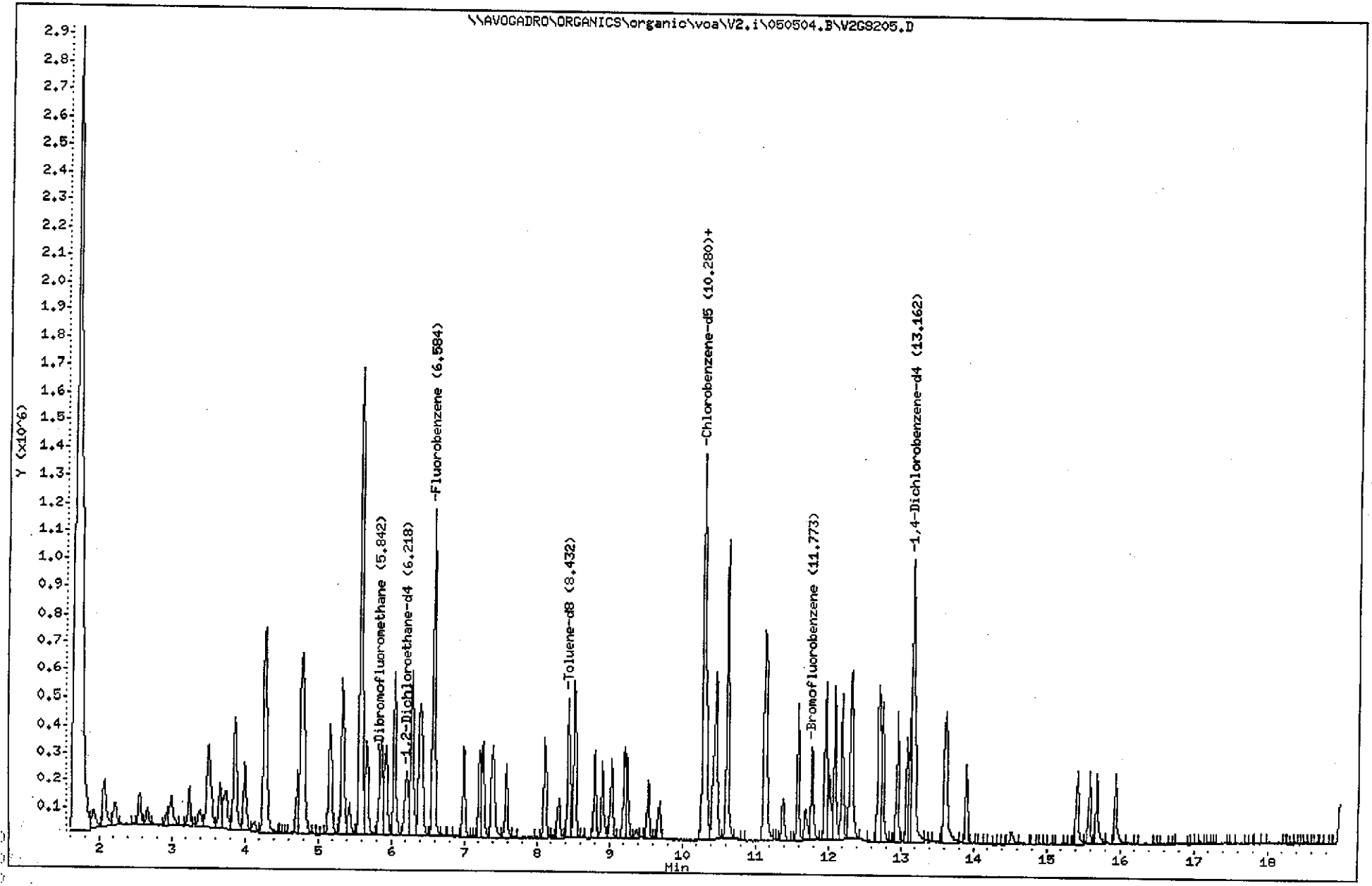


* Before M (SB) 5/18/05

Data F \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2GS205.D
Date : 04-MAY-2005 18:27
Client ID: VSTD0202A
Sample Info: ,VSTD0202A,VSTD0202A
Purge Volume: 5.0
Column phase: DB-624

Instrument: V2.i

Operator: JC SRC: JC
Column diameter: 0.25



Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8205.D
Report Date: 18-May-2005 11:14

Mitkem Corporation

Method 8260 Water and Medium Soil

Data file : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8205.D
Lab Smp Id: VSTD0202A Client Smp ID: VSTD0202A
Inj Date : 04-MAY-2005 18:27
Operator : JC SRC: JC Inst ID: V2.i
Smp Info : ,VSTD0202A,VSTD0202A
Misc Info : ,1
Comment :
Method : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\v28260.m
Meth Date : 05-May-2005 10:14 mtl Quant Type: ISTD
Cal Date : 04-MAY-2005 18:27 Cal File: V2G8205.D
Als bottle: 5 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.03
Processing Host: TARGET6

Concentration Formula: Amt * DF * Uf * 5/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Dichlorodifluoromethane	85	1.927	1.938	(0.293)	137087	20.0000	20
116 Freon114	85	2.073	2.084	(0.315)	129868	20.0000	21
2 Chloromethane	50	2.062	2.084	(0.313)	176432	20.0000	21
3 Vinyl Chloride	62	2.219	2.241	(0.337)	134257	20.0000	21
4 Bromomethane	94	2.563	2.575	(0.389)	102260	20.0000	20
5 Chloroethane	64	2.668	2.679	(0.405)	76311	20.0000	21
6 Trichlorofluoromethane	101	2.992	3.003	(0.454)	163846	20.0000	20
119 Ether	59	3.242	3.243	(0.492)	99615	20.0000	21
7 Acrolein	56	3.388	3.400	(0.515)	79932	100.000	110
8 1,1-Dichloroethene	96	3.493	3.504	(0.531)	105712	20.0000	20
111 1,1,2-Trichloro-1,2,2-Trifluo	101	3.524	3.525	(0.535)	120551	20.0000	20
9 Acetone	43	3.545	3.556	(0.538)	51639	20.0000	16
10 Iodomethane	142	3.660	3.671	(0.556)	211904	20.0000	21
11 Carbon Disulfide	76	3.733	3.755	(0.567)	355087	20.0000	21
12 Acetonitrile	41	3.858	3.859	(0.586)	394534	200.000	210
13 Allyl Chloride	39	3.858	3.870	(0.586)	254853	20.0000	20

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8205.D
Report Date: 18-May-2005 11:14

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	112 Methyl Acetate	43	3.879	3.890	(0.589)	115534	20.0000	20
	14 Methylene Chloride	84	3.994	4.005	(0.607)	138499	20.0000	21
	120 tert-Butanol	59	4.130	4.131	(0.627)	64211	40.0000	55
	15 Acrylonitrile	53	4.255	4.266	(0.646)	242495	100.000	100
	16 trans-1,2-Dichloroethene	96	4.276	4.277	(0.649)	140997	20.0000	22
	17 Methyl tert-butyl ether	73	4.276	4.287	(0.649)	438924	20.0000	21
	18 1,1-Dichloroethane	63	4.714	4.715	(0.716)	264915	20.0000	21
	19 Vinyl acetate	43	4.767	4.768	(0.724)	673115	20.0000	21
	121 Diisopropyl Ether	45	4.777	4.778	(0.726)	609603	20.0000	21
	20 2-Chloro-1,3-Butadiene	53	4.808	4.809	(0.730)	239937	20.0000	21
	122 Ethyl tert-butyl ether	59	5.163	5.164	(0.784)	512239	20.0000	21
	23 cis-1,2-Dichloroethene	96	5.330	5.332	(0.810)	139368	20.0000	21
	24 2,2-Dichloropropane	77	5.330	5.332	(0.810)	233842	20.0000	21
	22 2-Butanone	43	5.351	5.352	(0.813)	72382	20.0000	20
	29 Tetrahydrofuran	72	5.654	5.655	(0.859)	16834	20.0000	20
	25 Propionitrile	54	5.425	5.425	(0.824)	141964	200.000	200
	26 Methacrylonitrile	41	5.581	5.582	(0.848)	1069670	200.000	210
	27 Bromochloromethane	128	5.592	5.593	(0.849)	61991	20.0000	21
	28 Chloroform	83	5.665	5.676	(0.860)	261874	20.0000	21
$	30 Dibromofluoromethane	113	5.842	5.843	(0.887)	144841	20.0000	20
	31 1,1,1-Trichloroethane	97	5.873	5.874	(0.892)	232928	20.0000	21
	113 Cyclohexane	56	5.936	5.927	(0.902)	195101	20.0000	21
	32 1,1-Dichloropropene	110	6.041	6.052	(0.918)	57822	20.0000	21
	33 Carbon Tetrachloride	117	6.051	6.052	(0.919)	189920	20.0000	21
	34 Isobutyl Alcohol	43	6.187	6.188	(0.940)	99385	400.000	550
$	35 1,2-Dichloroethane-d4	102	6.218	6.219	(0.944)	27495	20.0000	19
	37 Benzene	78	6.281	6.282	(0.954)	470293	20.0000	21
	36 1,2-Dichloroethane	62	6.302	6.303	(0.957)	240114	20.0000	21
	123 tert-Amyl methyl ether	73	6.396	6.396	(0.971)	418033	20.0000	21
*	38 Fluorobenzene	96	6.583	6.585	(1.000)	1168741	50.0000	
	39 Trichloroethene	130	6.991	7.002	(1.062)	110720	20.0000	21
	114 Methylcyclohexane	83	7.210	7.221	(1.095)	135488	20.0000	21
	40 1,2-Dichloropropane	63	7.262	7.263	(1.103)	130949	20.0000	22
M	21 1,2-Dichloroethene (Total)	96				280365	40.0000	43
	41 Methyl Methacrylate	69	7.377	7.388	(1.121)	86935	20.0000	21
	42 Dibromomethane	93	7.398	7.409	(1.124)	95239	20.0000	21
	124 1,4-Dioxane	88	7.429	7.430	(1.128)	37000	400.000	830
	43 Bromodichloromethane	83	7.575	7.587	(1.151)	192205	20.0000	21
	44 2-Chloroethyl vinyl ether	63	7.262	7.263	(1.103)	130949	20.0000	22(T)
	45 cis-1,3-Dichloropropene	75	8.108	8.119	(1.232)	223696	20.0000	22
	46 4-Methyl-2-pentanone	43	8.296	8.307	(1.260)	146397	20.0000	21
$	47 Toluene-d8	98	8.432	8.443	(0.820)	394424	20.0000	20
	48 Toluene	91	8.515	8.527	(1.293)	476450	20.0000	21
	49 trans-1,3-Dichloropropene	75	8.797	8.798	(1.336)	214200	20.0000	21
	50 Ethyl Methacrylate	69	8.902	8.902	(1.352)	161895	20.0000	21
	51 1,1,2-Trichloroethane	97	9.027	9.028	(1.371)	104030	20.0000	21
	53 Tetrachloroethene	164	9.204	9.205	(0.895)	88913	20.0000	22

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8205.D
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	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	52 1,3-Dichloropropane	76	9.246	9.247	(0.899)	186123	20.0000	21
	54 2-Hexanone	43	9.371	9.372	(0.912)	70894	20.0000	20
	55 Dibromochloromethane	129	9.528	9.540	(0.927)	126542	20.0000	21
	56 1,2-Dibromoethane	107	9.685	9.696	(0.942)	116500	20.0000	21
*	57 Chlorobenzene-d5	117	10.280	10.291	(1.000)	697681	50.0000	
	115 1-Chlorohexane	91	10.290	10.291	(1.001)	138591	20.0000	22
	58 Chlorobenzene	112	10.322	10.323	(1.004)	287054	20.0000	21
	59 1,1,1,2-Tetrachloroethane	131	10.426	10.427	(1.014)	108930	20.0000	21
	60 Ethylbenzene	106	10.468	10.469	(1.018)	144936	20.0000	21
	61 m,p-Xylene	106	10.614	10.615	(1.033)	369069	40.0000	43
	62 o-Xylene	106	11.126	11.127	(1.082)	181059	20.0000	21
	64 Styrene	104	11.147	11.148	(1.084)	308991	20.0000	21
	65 Bromoform	173	11.376	11.388	(1.107)	90918	20.0000	21
	66 Isopropylbenzene	105	11.585	11.586	(1.127)	407788	20.0000	21
	67 trans-1,4-Dichloro-2-butene	75	11.690	11.690	(1.137)	38281	20.0000	19
$	68 Bromofluorobenzene	95	11.773	11.784	(1.145)	156713	20.0000	19
	69 1,1,2,2-Tetrachloroethane	83	11.961	11.962	(0.909)	132948	20.0000	22
	70 Bromobenzene	156	11.961	11.972	(0.909)	116576	20.0000	22
	71 1,2,3-Trichloropropane	75	12.013	12.014	(0.913)	145551	20.0000	21 (M) M2: SB 5/18/05
	72 n-Propylbenzene	120	12.086	12.098	(0.918)	92149	20.0000	22
	73 2-Chlorotoluene	126	12.191	12.202	(0.926)	94406	20.0000	22
	74 1,3,5-Trimethylbenzene	105	12.306	12.307	(0.935)	350809	20.0000	22
	75 4-Chlorotoluene	126	12.326	12.327	(0.937)	99788	20.0000	22
	76 tert-Butylbenzene	119	12.692	12.693	(0.964)	352015	20.0000	22
	77 1,2,4-Trimethylbenzene	105	12.755	12.756	(0.969)	356492	20.0000	22
	78 sec-Butylbenzene	105	12.953	12.954	(0.984)	382422	20.0000	22
	80 1,3-Dichlorobenzene	146	13.089	13.090	(0.994)	172058	20.0000	22
	79 4-Isopropyltoluene	119	13.120	13.131	(0.997)	281851	20.0000	22
*	81 1,4-Dichlorobenzene-d4	152	13.162	13.163	(1.000)	293507	50.0000	
	82 1,4-Dichlorobenzene	146	13.193	13.194	(1.002)	191437	20.0000	23
M	63 Xylene (Total)	106				550128	60.0000	64
	83 n-Butylbenzene	91	13.600	13.601	(1.033)	275048	20.0000	22
	84 1,2-Dichlorobenzene	146	13.621	13.622	(1.035)	183352	20.0000	23
	85 Hexachloroethane	117	13.903	13.904	(1.056)	65905	20.0000	22
	86 1,2-Dibromo-3-chloropropane	75	14.519	14.520	(1.103)	27403	20.0000	22
	87 1,2,4-Trichlorobenzene	180	15.407	15.418	(1.171)	112420	20.0000	22
	88 Hexachlorobutadiene	225	15.584	15.585	(1.184)	59459	20.0000	25
	89 Naphthalene	128	15.678	15.679	(1.191)	275910	20.0000	23
	90 1,2,3-Trichlorobenzene	180	15.939	15.940	(1.211)	110315	20.0000	23

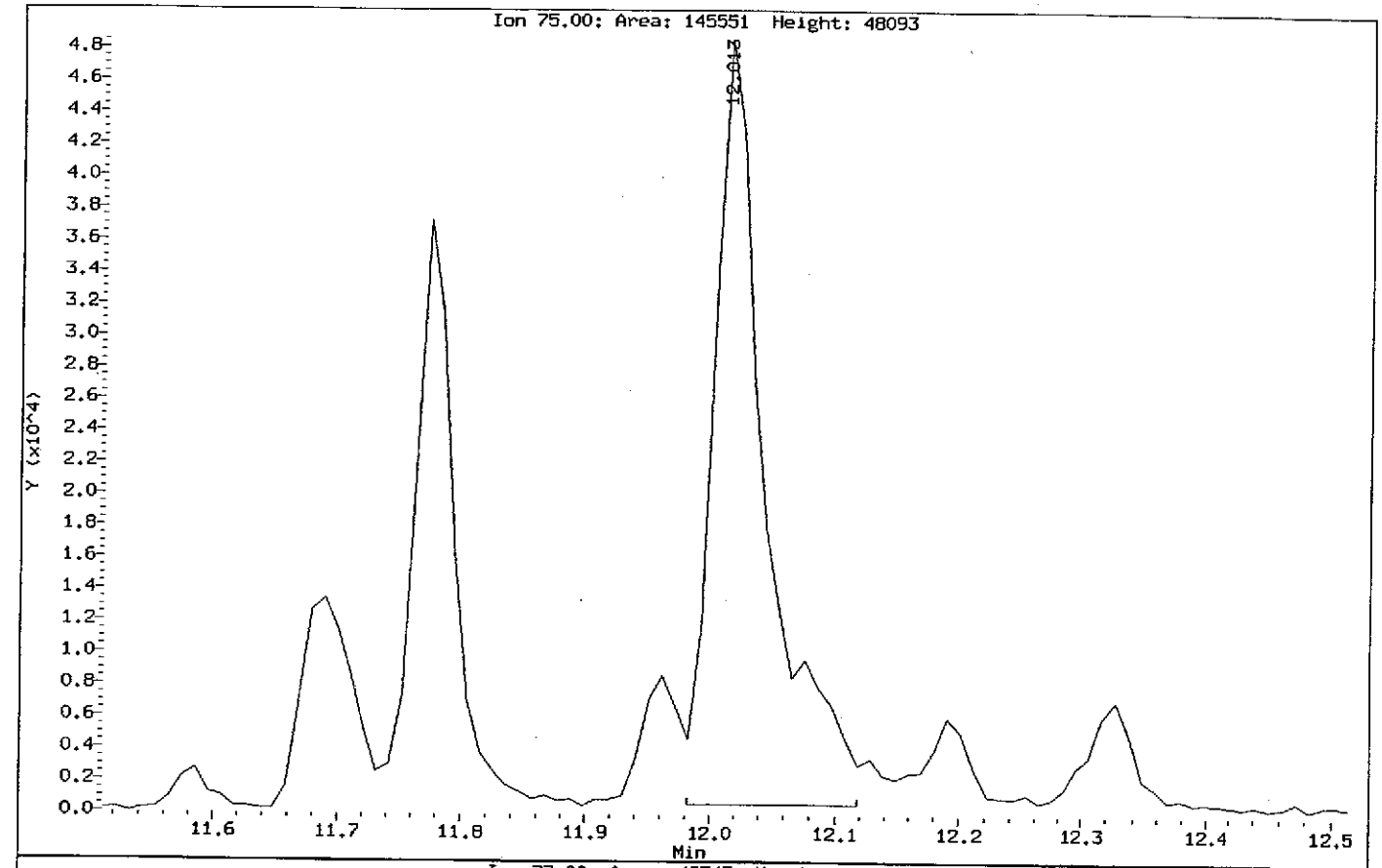
QC Flag Legend

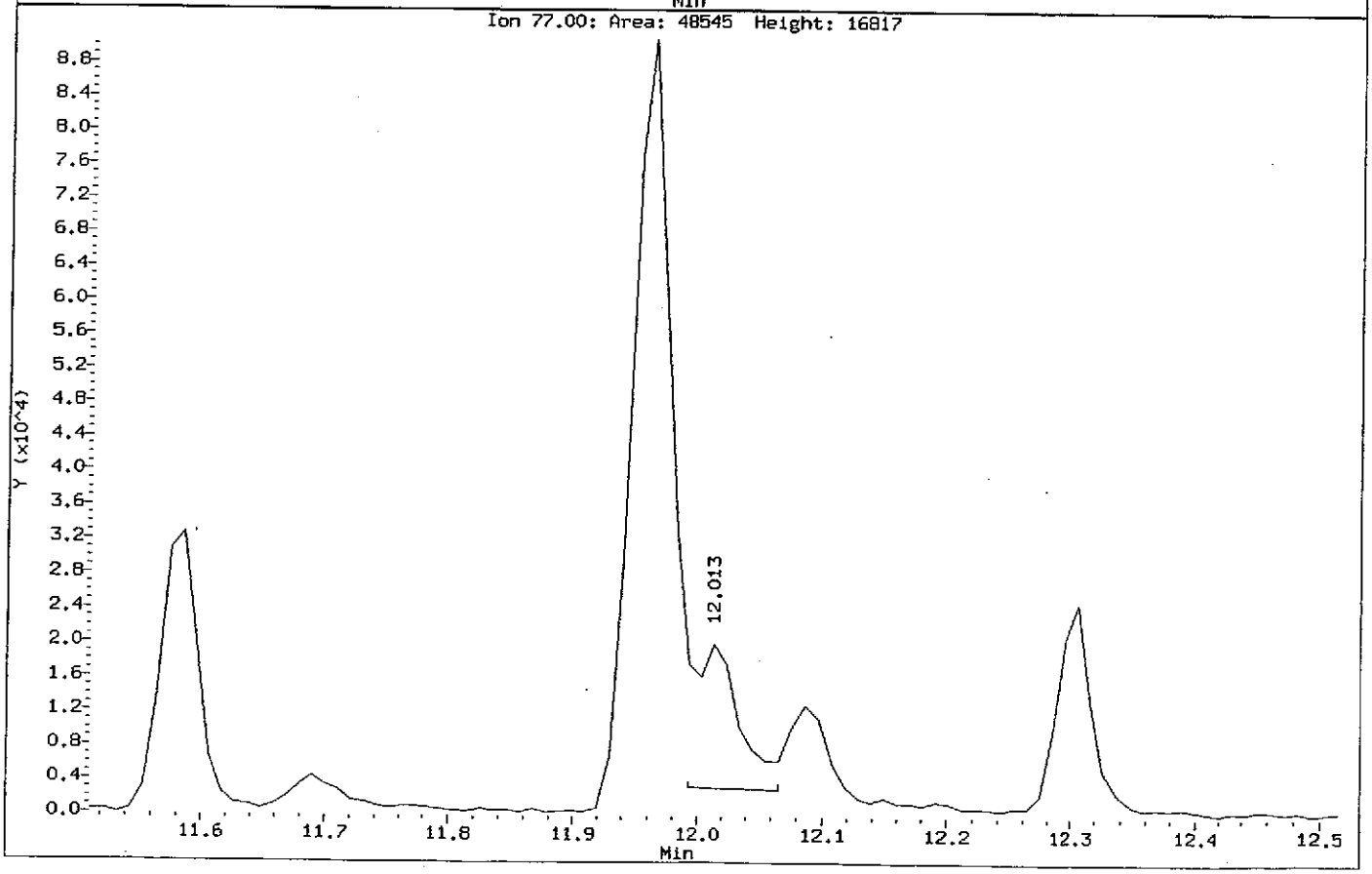
T - Target compound detected outside RT window.
M - Compound response manually integrated.

SB 5/18/05

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8205.D
Injection Date: 04-MAY-2005 18:27
Instrument: V2.i
Client Sample ID: VSTD0202A

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

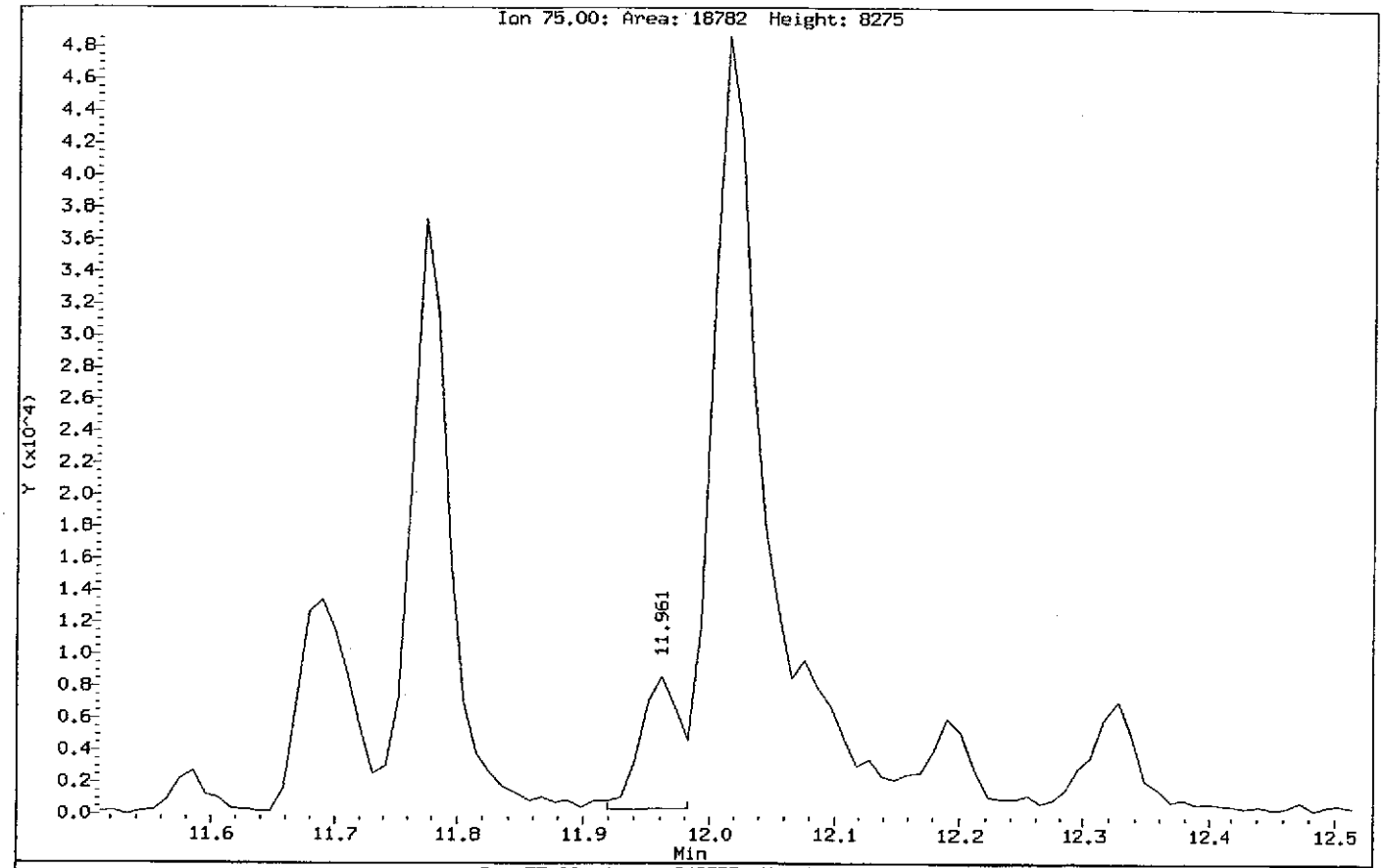


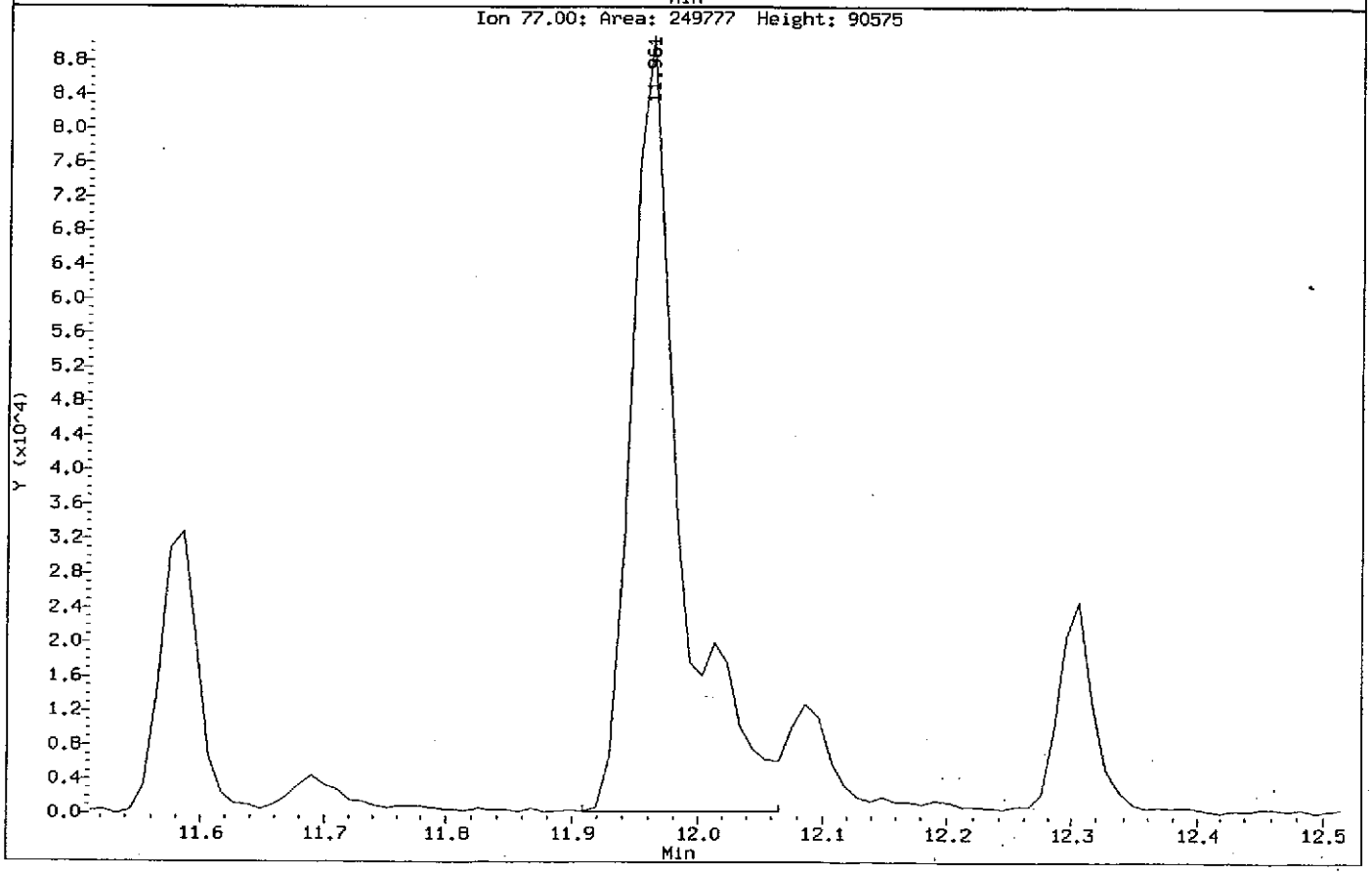


* M2: SB 5/18/05

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2GB205.D
Injection Date: 04-MAY-2005 18:27
Instrument: V2.i
Client Sample ID: VSTD0202A

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



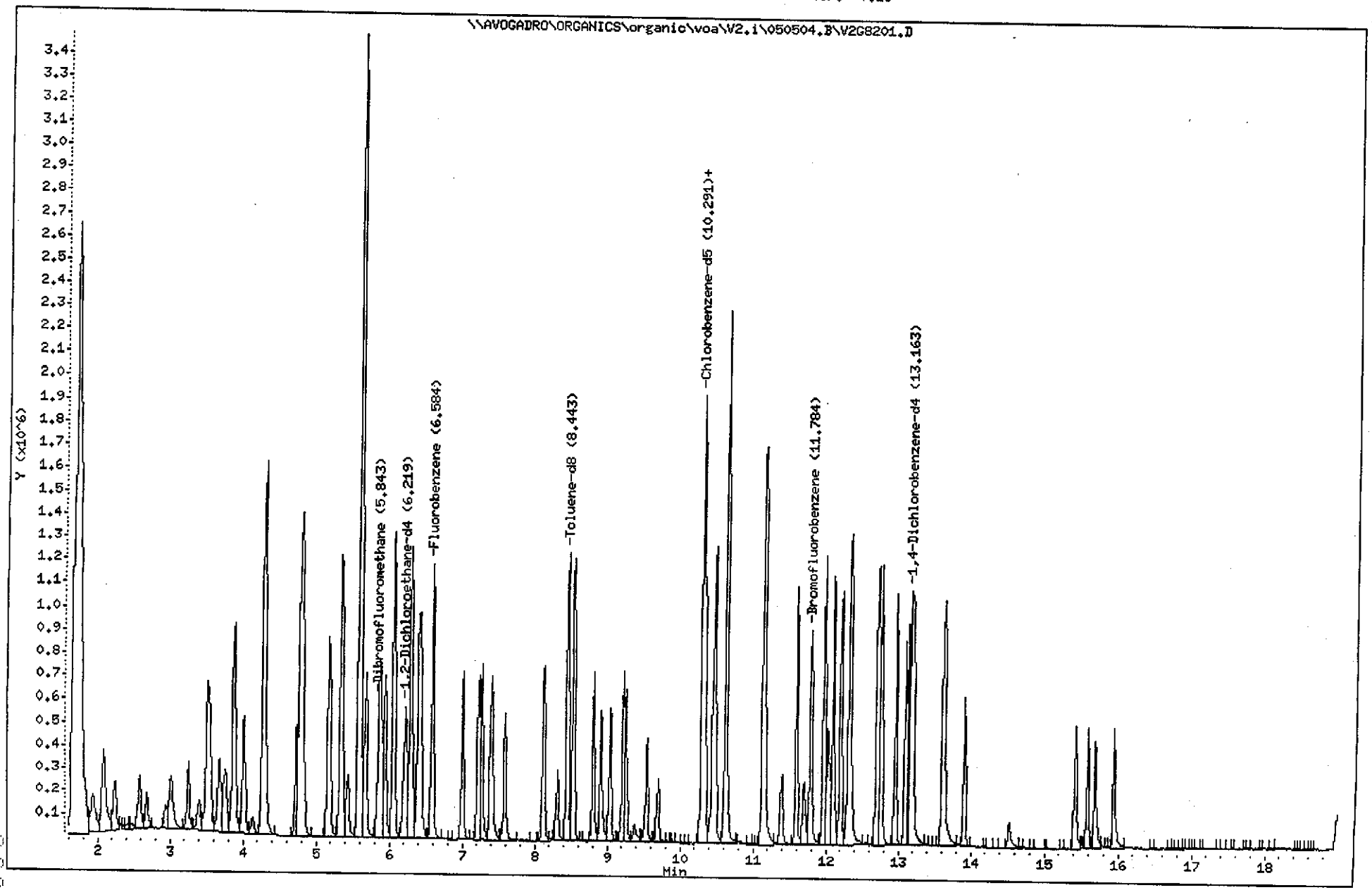


* Before m (SB) 5/18/05

Data : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8201.D
Date : 04-MAY-2005 16:17
Client ID: VSTD0502A
Sample Info: ,VSTD0502A,VSTD0502A
Purge Volume: 5.0
Column phase: DB-624

Instrument: V2.i

Operator: JC SRC: JC
Column diameter: 0.25



1600

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8201.D
Report Date: 18-May-2005 11:13

Mitkem Corporation

Method 8260 Water and Medium Soil

Data file : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8201.D
Lab Smp Id: VSTD0502A Client Smp ID: VSTD0502A
Inj Date : 04-MAY-2005 16:17
Operator : JC SRC: JC Inst ID: V2.i
Smp Info : ,VSTD0502A,VSTD0502A
Misc Info : ,2
Comment :
Method : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\v28260.m
Meth Date : 05-May-2005 10:14 mtl Quant Type: ISTD
Cal Date : 04-MAY-2005 16:17 Cal File: V2G8201.D
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.03
Processing Host: TARGET6

Concentration Formula: Amt * DF * Uf * 5/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Dichlorodifluoromethane	85	1.938	1.938	(0.294)	341239	50.0000	51
116 Freon114	85	2.084	2.084	(0.317)	313908	50.0000	52
2 Chloromethane	50	2.084	2.084	(0.317)	392173	50.0000	47
3 Vinyl Chloride	62	2.241	2.241	(0.340)	314442	50.0000	50
4 Bromomethane	94	2.575	2.575	(0.391)	233140	50.0000	47
5 Chloroethane	64	2.679	2.679	(0.407)	171959	50.0000	48
6 Trichlorofluoromethane	101	3.003	3.003	(0.456)	391726	50.0000	50
119 Ether	59	3.243	3.243	(0.493)	217194	50.0000	46
7 Acrolein	56	3.400	3.400	(0.516)	161504	250.000	220
8 1,1-Dichloroethene	96	3.504	3.504	(0.532)	237535	50.0000	46
111 1,1,2-Trichloro-1,2,2-Trifluo	101	3.525	3.525	(0.535)	280204	50.0000	49
9 Acetone	43	3.556	3.556	(0.540)	131465	50.0000	41
10 Iodomethane	142	3.671	3.671	(0.558)	468550	50.0000	48
11 Carbon Disulfide	76	3.755	3.755	(0.570)	765559	50.0000	47
12 Acetonitrile	41	3.859	3.859	(0.586)	914608	500.000	510
13 Allyl Chloride	39	3.870	3.870	(0.588)	591957	50.0000	48

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8201.D
Report Date: 18-May-2005 11:13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	112 Methyl Acetate	43	3.890	3.890	(0.591)	240200	50.0000	43
	14 Methylene Chloride	84	4.005	4.005	(0.608)	299274	50.0000	46
	120 tert-Butanol	59	4.131	4.131	(0.627)	133251	100.000	120
	15 Acrylonitrile	53	4.266	4.266	(0.648)	543837	250.000	240
	16 trans-1,2-Dichloroethene	96	4.277	4.277	(0.650)	301895	50.0000	48
	17 Methyl tert-butyl ether	73	4.287	4.287	(0.651)	932567	50.0000	46
	18 1,1-Dichloroethane	63	4.715	4.715	(0.716)	598097	50.0000	49
	19 Vinyl acetate	43	4.768	4.768	(0.724)	1462499	50.0000	48
	121 Diisopropyl Ether	45	4.778	4.778	(0.726)	1332017	50.0000	48
	20 2-Chloro-1,3-Butadiene	53	4.809	4.809	(0.730)	535761	50.0000	48
	122 Ethyl tert-butyl ether	59	5.164	5.164	(0.784)	1133998	50.0000	48
	23 cis-1,2-Dichloroethene	96	5.332	5.332	(0.810)	302206	50.0000	47
	24 2,2-Dichloropropane	77	5.332	5.332	(0.810)	536032	50.0000	49
	22 2-Butanone	43	5.352	5.352	(0.813)	168814	50.0000	47
	29 Tetrahydrofuran	72	5.655	5.655	(0.859)	35255	50.0000	42
	25 Propionitrile	54	5.425	5.425	(0.824)	356359	500.000	510
	26 Methacrylonitrile	41	5.582	5.582	(0.848)	2250251	500.000	450
	27 Bromochloromethane	128	5.593	5.593	(0.849)	136706	50.0000	47
	28 Chloroform	83	5.676	5.676	(0.862)	578753	50.0000	47
$	30 Dibromofluoromethane	113	5.843	5.843	(0.887)	354001	50.0000	51
	31 1,1,1-Trichloroethane	97	5.874	5.874	(0.892)	531440	50.0000	48
	113 Cyclohexane	56	5.927	5.927	(0.900)	441552	50.0000	49
	32 1,1-Dichloropropene	110	6.052	6.052	(0.919)	130106	50.0000	48
	33 Carbon Tetrachloride	117	6.052	6.052	(0.919)	424859	50.0000	48
	34 Isobutyl Alcohol	43	6.188	6.188	(0.940)	206133	1000.00	1200
$	35 1,2-Dichloroethane-d4	102	6.219	6.219	(0.944)	70031	50.0000	50
	37 Benzene	78	6.282	6.282	(0.954)	1020549	50.0000	48
	36 1,2-Dichloroethane	62	6.303	6.303	(0.957)	525589	50.0000	47
	123 tert-Amyl methyl ether	73	6.396	6.396	(0.971)	890562	50.0000	46
*	38 Fluorobenzene	96	6.585	6.585	(1.000)	1140023	50.0000	
	39 Trichloroethene	130	7.002	7.002	(1.063)	250276	50.0000	48
	114 Methylcyclohexane	83	7.221	7.221	(1.097)	317832	50.0000	50
	40 1,2-Dichloropropane	63	7.263	7.263	(1.103)	279780	50.0000	47
M	21 1,2-Dichloroethene (Total)	96				604101	100.000	95
	41 Methyl Methacrylate	69	7.388	7.388	(1.122)	186667	50.0000	45
	42 Dibromomethane	93	7.409	7.409	(1.125)	205435	50.0000	47
	124 1,4-Dioxane	88	7.430	7.430	(1.128)	35317	1000.00	820
	43 Bromodichloromethane	83	7.587	7.587	(1.152)	441744	50.0000	49
	44 2-Chloroethyl vinyl ether	63	7.263	7.263	(1.103)	279780	50.0000	47(T)
	45 cis-1,3-Dichloropropene	75	8.119	8.119	(1.233)	479427	50.0000	47
	46 4-Methyl-2-pentanone	43	8.307	8.307	(1.262)	312432	50.0000	46
$	47 Toluene-d8	98	8.443	8.443	(0.820)	973354	50.0000	50
	48 Toluene	91	8.527	8.527	(1.295)	1023980	50.0000	47
	49 trans-1,3-Dichloropropene	75	8.798	8.798	(1.336)	462800	50.0000	47
	50 Ethyl Methacrylate	69	8.902	8.902	(1.352)	352441	50.0000	46
	51 1,1,2-Trichloroethane	97	9.028	9.028	(1.371)	224873	50.0000	47
	53 Tetrachloroethene	164	9.205	9.205	(0.894)	190793	50.0000	47

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8201.D
Report Date: 18-May-2005 11:13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	52 1,3-Dichloropropane	76	9.247	9.247	(0.899)	397446	50.0000	46
	54 2-Hexanone	43	9.372	9.372	(0.911)	154189	50.0000	72
	55 Dibromochloromethane	129	9.540	9.540	(0.927)	274194	50.0000	47
	56 1,2-Dibromoethane	107	9.696	9.696	(0.942)	249343	50.0000	46
*	57 Chlorobenzene-d5	117	10.291	10.291	(1.000)	684041	50.0000	
	115 1-Chlorohexane	91	10.291	10.291	(1.000)	299812	50.0000	48
	58 Chlorobenzene	112	10.323	10.323	(1.003)	639061	50.0000	48
	59 1,1,1,2-Tetrachloroethane	131	10.427	10.427	(1.013)	237935	50.0000	47
	60 Ethylbenzene	106	10.469	10.469	(1.017)	319558	50.0000	47
	61 m,p-Xylene	106	10.615	10.615	(1.031)	799853	100.000	95
	62 o-Xylene	106	11.127	11.127	(1.081)	389867	50.0000	47
	64 Styrene	104	11.148	11.148	(1.083)	691023	50.0000	48
	65 Bromoform	173	11.388	11.388	(1.107)	191130	50.0000	45
	66 Isopropylbenzene	105	11.586	11.586	(1.126)	889270	50.0000	48
	67 trans-1,4-Dichloro-2-butene	75	11.690	11.690	(1.136)	82147	50.0000	43
$	68 Bromofluorobenzene	95	11.784	11.784	(1.145)	406462	50.0000	51
	69 1,1,2,2-Tetrachloroethane	83	11.962	11.962	(0.909)	273846	50.0000	45
	70 Bromobenzene	156	11.972	11.972	(0.910)	251334	50.0000	47
	71 1,2,3-Trichloropropane	75	12.014	12.014	(0.913)	331485	50.0000	59
	72 n-Propylbenzene	120	12.098	12.098	(0.919)	206348	50.0000	48
	73 2-Chlorotoluene	126	12.202	12.202	(0.927)	207874	50.0000	48
	74 1,3,5-Trimethylbenzene	105	12.307	12.307	(0.935)	764231	50.0000	48
	75 4-Chlorotoluene	126	12.327	12.327	(0.937)	209282	50.0000	47
	76 tert-Butylbenzene	119	12.693	12.693	(0.964)	774263	50.0000	48
	77 1,2,4-Trimethylbenzene	105	12.756	12.756	(0.969)	771908	50.0000	48
	78 sec-Butylbenzene	105	12.954	12.954	(0.984)	857943	50.0000	49
	80 1,3-Dichlorobenzene	146	✓ 13.090	13.090	(0.994)	373569	50.0000	47
	79 4-Isopropyltoluene	119	13.131	13.131	(0.998)	651302	50.0000	50
*	81 1,4-Dichlorobenzene-d4	152	13.163	13.163	(1.000)	294711	50.0000	
	82 1,4-Dichlorobenzene	146	✓ 13.194	13.194	(1.002)	406476	50.0000	49
M	63 Xylene (Total)	106				1189720	150.000	140
	83 n-Butylbenzene	91	13.601	13.601	(1.033)	616814	50.0000	49
	84 1,2-Dichlorobenzene	146	✓ 13.622	13.622	(1.035)	378734	50.0000	47
	85 Hexachloroethane	117	13.904	13.904	(1.056)	144340	50.0000	48
	86 1,2-Dibromo-3-chloropropane	75	14.520	14.520	(1.103)	54871	50.0000	43
	87 1,2,4-Trichlorobenzene	180	15.418	15.418	(1.171)	230035	50.0000	45
	88 Hexachlorobutadiene	225	15.585	15.585	(1.184)	113149	50.0000	48
	89 Naphthalene	128	15.679	15.679	(1.191)	510416	50.0000	42
	90 1,2,3-Trichlorobenzene	180	15.940	15.940	(1.211)	221242	50.0000	46

QC Flag Legend

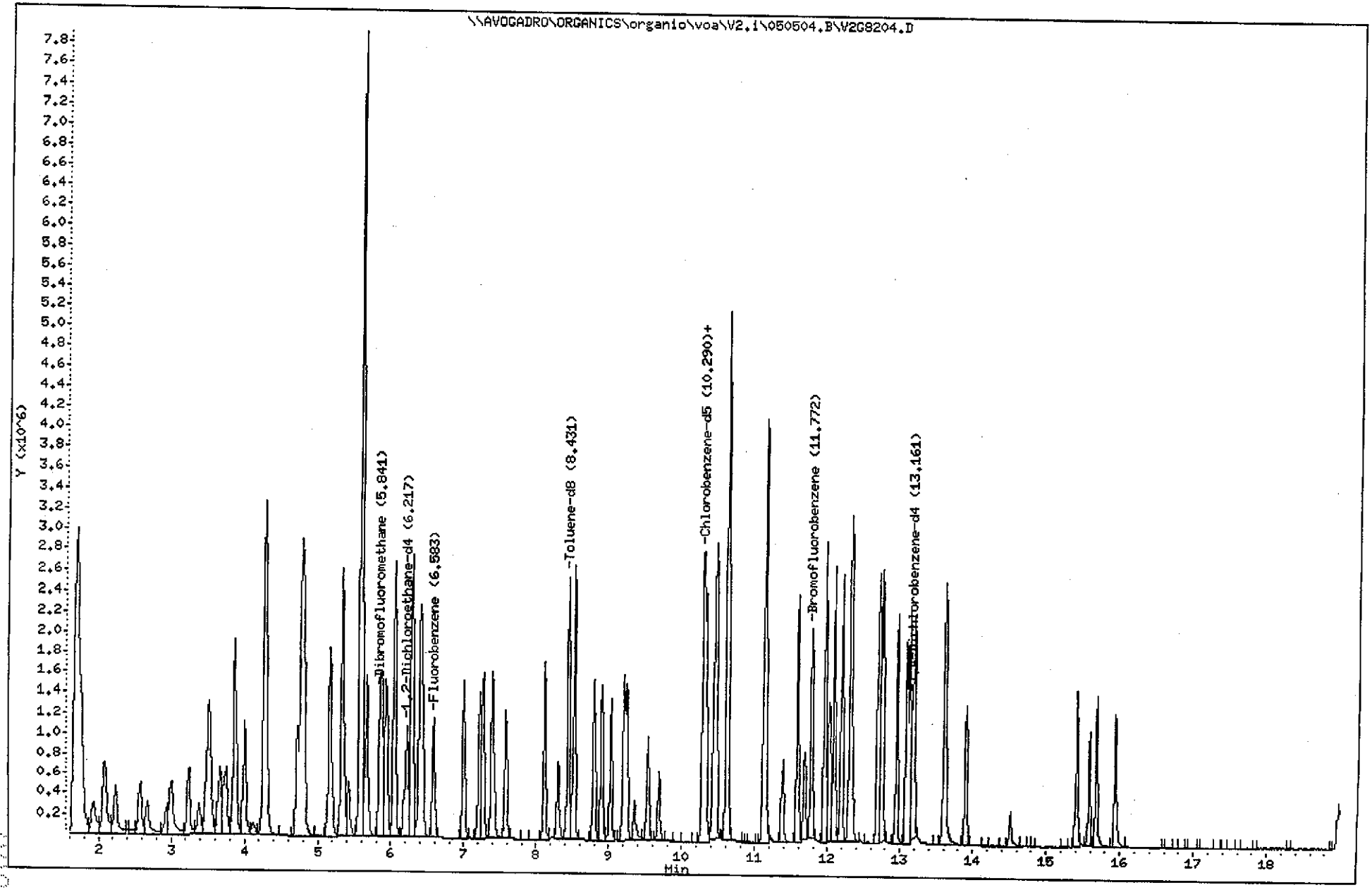
T - Target compound detected outside RT window.

SB 5/18/05

Data : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8204.D
Date : --MAY-2005 17:59
Client ID: VSTD1002A
Sample Info: ,VSTD1002A,VSTD1002A
Purge Volume: 5.0
Column phase: DB-624

Instrument: V2.i

Operator: JC SRC: JC
Column diameter: 0.25



Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8204.D
Report Date: 18-May-2005 11:14

Mitkem Corporation

Method 8260 Water and Medium Soil

Data file : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8204.D
Lab Smp Id: VSTD1002A Client Smp ID: VSTD1002A
Inj Date : 04-MAY-2005 17:59
Operator : JC SRC: JC Inst ID: V2.i
Smp Info : ,VSTD1002A,VSTD1002A
Misc Info : ,1
Comment :
Method : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\v28260.m
Meth Date : 05-May-2005 10:14 mtl Quant Type: ISTD
Cal Date : 04-MAY-2005 16:17 Cal File: V2G8201.D
Als bottle: 4 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.03
Processing Host: TARGET6

Concentration Formula: Amt * DF * Uf * 5/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Dichlorodifluoromethane	85	1.926	1.938	(0.293)	650047	100.000	95
116 Freon114	85	2.072	2.084	(0.315)	603082	100.000	99
2 Chloromethane	50	2.082	2.084	(0.316)	822424	100.000	98
3 Vinyl Chloride	62	2.239	2.241	(0.340)	655197	100.000	100
4 Bromomethane	94	2.573	2.575	(0.391)	495610	100.000	99
5 Chloroethane	64	2.678	2.679	(0.407)	359415	100.000	99
6 Trichlorofluoromethane	101	3.001	3.003	(0.456)	808431	100.000	100
119 Ether	59	3.241	3.243	(0.492)	489363	100.000	100
7 Acrolein	56	3.388	3.400	(0.515)	338432	500.000	450
8 1,1-Dichloroethene	96	3.492	3.504	(0.530)	496096	100.000	96
111 1,1,2-Trichloro-1,2,2-Trifluo	101	3.523	3.525	(0.535)	590541	100.000	100
9 Acetone	43	3.544	3.556	(0.538)	241298	100.000	75
10 Iodomethane	142	3.659	3.671	(0.556)	1015183	100.000	100
11 Carbon Disulfide	76	3.743	3.755	(0.569)	1673337	100.000	100
12 Acetonitrile	41	3.857	3.859	(0.586)	1811150	1000.00	990
13 Allyl Chloride	39	3.857	3.870	(0.586)	1223170	100.000	99

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8204.D
Report Date: 18-May-2005 11:14

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	112 Methyl Acetate	43	3.878	3.890	(0.589)	559796	100.000	100
	14 Methylene Chloride	84	3.993	4.005	(0.607)	640522	100.000	97
	120 tert-Butanol	59	4.119	4.131	(0.626)	195202	200.000	170
	15 Acrylonitrile	53	4.254	4.266	(0.646)	1138420	500.000	500
	16 trans-1,2-Dichloroethene	96	4.275	4.277	(0.649)	608872	100.000	95
	17 Methyl tert-butyl ether	73	4.275	4.287	(0.649)	2045522	100.000	100
	18 1,1-Dichloroethane	63	4.714	4.715	(0.716)	1254530	100.000	100
	19 Vinyl acetate	43	4.766	4.768	(0.724)	3148478	100.000	100
	121 Diisopropyl Ether	45	4.776	4.778	(0.726)	2793330	100.000	100
	20 2-Chloro-1,3-Butadiene	53	4.808	4.809	(0.730)	1126533	100.000	100
	122 Ethyl tert-butyl ether	59	5.163	5.164	(0.784)	2453725	100.000	100
	23 cis-1,2-Dichloroethene	96	5.330	5.332	(0.810)	641476	100.000	99
	24 2,2-Dichloropropane	77	5.330	5.332	(0.810)	1096032	100.000	99
	22 2-Butanone	43	5.351	5.352	(0.813)	348276	100.000	95
	29 Tetrahydrofuran	72	5.643	5.655	(0.857)	73066	100.000	86
	25 Propionitrile	54	5.424	5.425	(0.824)	671993	1000.00	960
	26 Methacrylonitrile	41	5.580	5.582	(0.848)	5042517	1000.00	1000
	27 Bromochloromethane	128	5.591	5.593	(0.849)	292610	100.000	100
	28 Chloroform	83	5.664	5.676	(0.860)	1235520	100.000	100
$	30 Dibromofluoromethane	113	5.841	5.843	(0.887)	733500	100.000	100
	31 1,1,1-Trichloroethane	97	5.873	5.874	(0.892)	1119841	100.000	100
	113 Cyclohexane	56	5.925	5.927	(0.900)	932083	100.000	100
	32 1,1-Dichloropropene	110	6.050	6.052	(0.919)	278131	100.000	100
	33 Carbon Tetrachloride	117	6.050	6.052	(0.919)	906445	100.000	100
	34 Isobutyl Alcohol	43	6.176	6.188	(0.938)	314975	2000.00	1800
$	35 1,2-Dichloroethane-d4	102	6.217	6.219	(0.944)	147079	100.000	100
	37 Benzene	78	6.280	6.282	(0.954)	2164432	100.000	100
	36 1,2-Dichloroethane	62	6.301	6.303	(0.957)	1132174	100.000	100
	123 tert-Amyl methyl ether	73	6.395	6.396	(0.971)	1978841	100.000	100
*	38 Fluorobenzene	96	6.583	6.585	(1.000)	1153263	50.0000	
	39 Trichloroethene	130	7.000	7.002	(1.063)	553837	100.000	100
	114 Methylcyclohexane	83	7.209	7.221	(1.095)	648889	100.000	100
	40 1,2-Dichloropropane	63	7.261	7.263	(1.103)	609971	100.000	100
M	21 1,2-Dichloroethene (Total)	96				1250348	200.000	190
	41 Methyl Methacrylate	69	7.376	7.388	(1.121)	431721	100.000	100
	42 Dibromomethane	93	7.397	7.409	(1.124)	460922	100.000	100
	124 1,4-Dioxane	88	7.418	7.430	(1.127)	58911	2000.00	1300
	43 Bromodichloromethane	83	7.575	7.587	(1.151)	935199	100.000	100
	44 2-Chloroethyl vinyl ether	63	7.261	7.263	(1.103)	609971	100.000	100(T)
	45 cis-1,3-Dichloropropene	75	8.107	8.119	(1.232)	1057972	100.000	100
	46 4-Methyl-2-pentanone	43	8.295	8.307	(1.260)	739282	100.000	110
$	47 Toluene-d8	98	8.441	8.443	(0.820)	2012006	100.000	100
	48 Toluene	91	8.515	8.527	(1.293)	2206233	100.000	100
	49 trans-1,3-Dichloropropene	75	8.796	8.798	(1.336)	1018950	100.000	100
	50 Ethyl Methacrylate	69	8.901	8.902	(1.352)	826071	100.000	110
	51 1,1,2-Trichloroethane	97	9.026	9.028	(1.371)	503937	100.000	100
	53 Tetrachloroethene	164	9.204	9.205	(0.894)	421164	100.000	100

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8204.D
Report Date: 18-May-2005 11:14

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	52 1,3-Dichloropropane	76	9.245	9.247	(0.899)	903358	100.000	100
	54 2-Hexanone	43	9.350	9.372	(0.909)	471111	100.000	130
	55 Dibromochloromethane	129	9.527	9.540	(0.926)	631749	100.000	110
	56 1,2-Dibromoethane	107	9.684	9.696	(0.941)	584547	100.000	110
*	57 Chlorobenzene-d5	117	10.290	10.291	(1.000)	699464	50.0000	
	115 1-Chlorohexane	91	10.279	10.291	(0.999)	640182	100.000	99
	58 Chlorobenzene	112	10.321	10.323	(1.003)	1411458	100.000	100
	59 1,1,1,2-Tetrachloroethane	131	10.425	10.427	(1.013)	527211	100.000	100
	60 Ethylbenzene	106	10.457	10.469	(1.016)	717242	100.000	100
	61 m,p-Xylene	106	10.613	10.615	(1.031)	1729598	200.000	200
	62 o-Xylene	106	11.125	11.127	(1.081)	857067	100.000	100
	64 Styrene	104	11.135	11.148	(1.082)	1522074	100.000	100
	65 Bromoform	173	11.376	11.388	(1.106)	461098	100.000	110
	66 Isopropylbenzene	105	11.584	11.586	(1.126)	1929919	100.000	100
	67 trans-1,4-Dichloro-2-butene	75	11.678	11.690	(1.135)	237852	100.000	120
$	68 Bromofluorobenzene	95	11.772	11.784	(1.144)	876512	100.000	110
	69 1,1,2,2-Tetrachloroethane	83	11.960	11.962	(0.909)	649867	100.000	100
	70 Bromobenzene	156	11.960	11.972	(0.909)	579842	100.000	100
	71 1,2,3-Trichloropropane	75	12.012	12.014	(0.913)	822744	100.000	140
	72 n-Propylbenzene	120	12.086	12.098	(0.918)	459307	100.000	100
	73 2-Chlorotoluene	126	12.190	12.202	(0.926)	462018	100.000	100
	74 1,3,5-Trimethylbenzene	105	12.305	12.307	(0.935)	1654336	100.000	97
	75 4-Chlorotoluene	126	12.326	12.327	(0.937)	479460	100.000	100
	76 tert-Butylbenzene	119	12.691	12.693	(0.964)	1679044	100.000	99
	77 1,2,4-Trimethylbenzene	105	12.743	12.756	(0.968)	1731792	100.000	100
	78 sec-Butylbenzene	105	12.952	12.954	(0.984)	1798320	100.000	98
	80 1,3-Dichlorobenzene	146	13.088	13.090	(0.994)	843934	100.000	100
	79 4-Isopropyltoluene	119	13.119	13.131	(0.997)	1405500	100.000	100
*	81 1,4-Dichlorobenzene-d4	152	13.161	13.163	(1.000)	312195	50.0000	
	82 1,4-Dichlorobenzene	146	13.182	13.194	(1.002)	925489	100.000	110
M	63 Xylene (Total)	106				2586666	300.000	300
	83 n-Butylbenzene	91	13.600	13.601	(1.033)	1345911	100.000	100
	84 1,2-Dichlorobenzene	146	13.620	13.622	(1.035)	863966	100.000	100
	85 Hexachloroethane	117	13.902	13.904	(1.056)	324135	100.000	100
	86 1,2-Dibromo-3-chloropropane	75	14.508	14.520	(1.102)	134148	100.000	99
	87 1,2,4-Trichlorobenzene	180	15.406	15.418	(1.171)	564596	100.000	100
	88 Hexachlorobutadiene	225	15.584	15.585	(1.184)	242893	100.000	97
	89 Naphthalene	128	15.678	15.679	(1.191)	1364056	100.000	100
	90 1,2,3-Trichlorobenzene	180	15.939	15.940	(1.211)	526748	100.000	100

QC Flag Legend

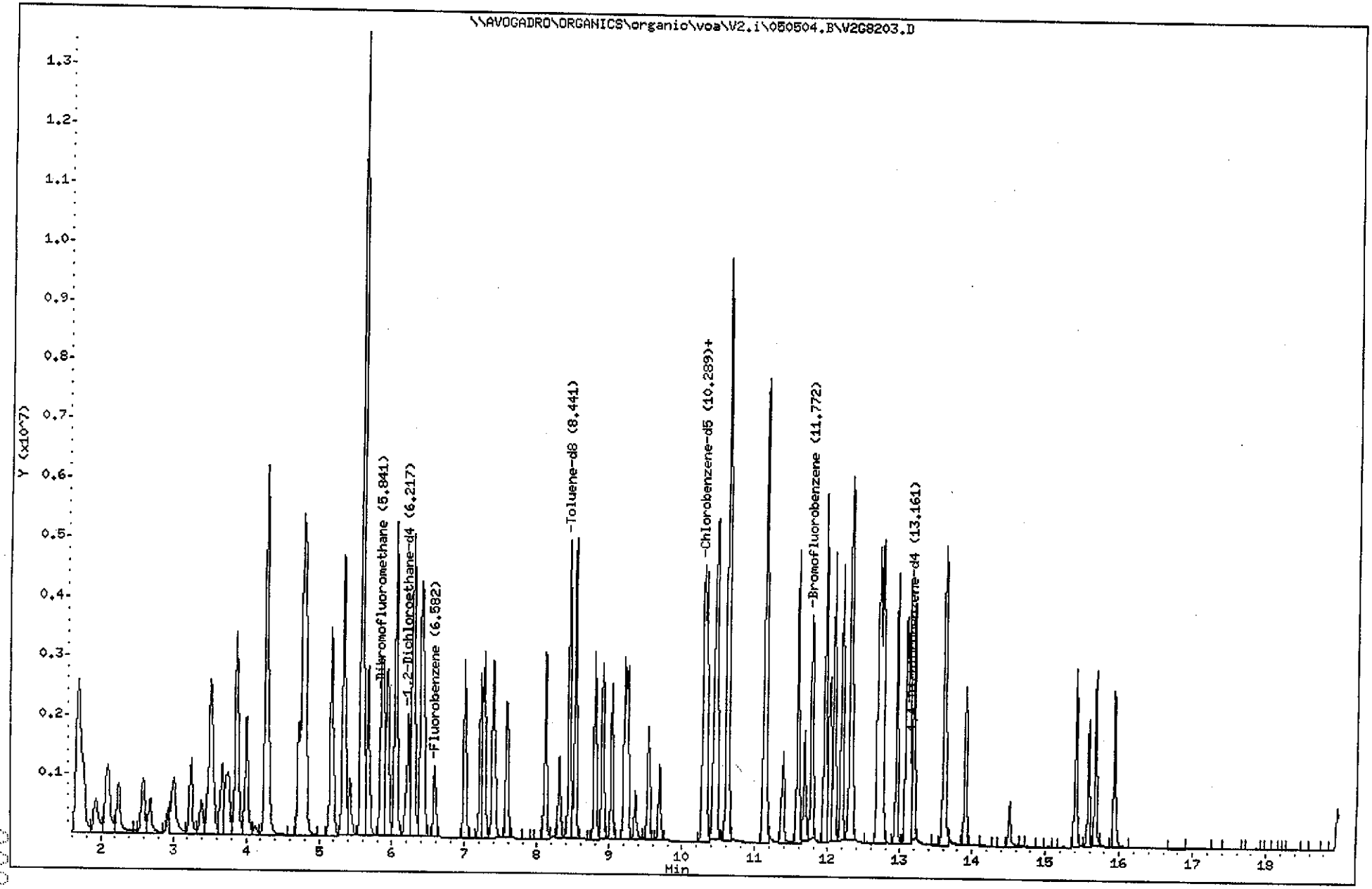
T - Target compound detected outside RT window.

5B
5/18/05

Data : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8203.D
Date : 04-MAY-2005 17:30
Client ID: VSTD2002A
Sample Info: ,VSTD2002A,VSTD2002A
Purge Volume: 5.0
Column phase: DB-624

Instrument: V2.i

Operator: JC SRC: JC
Column diameter: 0.25



6600

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8203.D
Report Date: 18-May-2005 11:14

Mitkem Corporation

Method 8260 Water and Medium Soil

Data file : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8203.D
Lab Smp Id: VSTD2002A Client Smp ID: VSTD2002A
Inj Date : 04-MAY-2005 17:30
Operator : JC SRC: JC Inst ID: V2.i
Smp Info : ,VSTD2002A,VSTD2002A
Misc Info : ,1
Comment :
Method : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\v28260.m
Meth Date : 05-May-2005 10:14 mtl Quant Type: ISTD
Cal Date : 04-MAY-2005 16:17 Cal File: V2G8201.D
Als bottle: 3 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.03
Processing Host: TARGET6

Concentration Formula: Amt * DF * Uf * 5/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Dichlorodifluoromethane	85	1.925	1.938	(0.292)	1264987	200.000	190
116 Freon114	85	2.082	2.084	(0.316)	1126998	200.000	190
2 Chloromethane	50	2.103	2.084	(0.319)	1520357	200.000	180
3 Vinyl Chloride	62	2.249	2.241	(0.342)	1234969	200.000	200
4 Bromomethane	94	2.583	2.575	(0.392)	954876	200.000	190
5 Chloroethane	64	2.688	2.679	(0.408)	681144	200.000	190
6 Trichlorofluoromethane	101	3.001	3.003	(0.456)	1557011	200.000	200
119 Ether	59	3.241	3.243	(0.492)	921050	200.000	200
7 Acrolein	56	3.387	3.400	(0.515)	626894	1000.00	850
8 1,1-Dichloroethene	96	3.502	3.504	(0.532)	942588	200.000	190
111 1,1,2-Trichloro-1,2,2-Trifluo	101	3.523	3.525	(0.535)	1136783	200.000	200
9 Acetone	43	3.544	3.556	(0.538)	471903	200.000	150
10 Iodomethane	142	3.669	3.671	(0.557)	1943083	200.000	200
11 Carbon Disulfide	76	3.753	3.755	(0.570)	3084235	200.000	190
12 Acetonitrile	41	3.857	3.859	(0.586)	3204502	2000.00	1800
13 Allyl Chloride	39	3.857	3.870	(0.586)	2305422	200.000	190

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8203.D
Report Date: 18-May-2005 11:14

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	112 Methyl Acetate	43	3.888	3.890	(0.591)	1057909	200.000	190
	14 Methylene Chloride	84	4.003	4.005	(0.608)	1199870	200.000	180
	120 tert-Butanol	59	4.128	4.131	(0.627)	204292	400.000	180
	15 Acrylonitrile	53	4.254	4.266	(0.646)	2059640	1000.00	920
	16 trans-1,2-Dichloroethene	96	4.275	4.277	(0.649)	1135352	200.000	180
	17 Methyl tert-butyl ether	73	4.285	4.287	(0.651)	3828851	200.000	190
	18 1,1-Dichloroethane	63	4.713	4.715	(0.716)	2334161	200.000	190
	19 Vinyl acetate	43	4.765	4.768	(0.724)	5862086	200.000	190
	121 Diisopropyl Ether	45	4.776	4.778	(0.726)	5138586	200.000	190
	20 2-Chloro-1,3-Butadiene	53	4.807	4.809	(0.730)	2137164	200.000	190
	122 Ethyl tert-butyl ether	59	5.162	5.164	(0.784)	4579903	200.000	190
	23 cis-1,2-Dichloroethene	96	5.329	5.332	(0.810)	1179103	200.000	190
	24 2,2-Dichloropropane	77	5.340	5.332	(0.811)	2083502	200.000	190
	22 2-Butanone	43	5.350	5.352	(0.813)	594412	200.000	170
	29 Tetrahydrofuran	72	5.653	5.655	(0.859)	130613	200.000	160
	25 Propionitrile	54	5.423	5.425	(0.824)	1171374	2000.00	1700
	26 Methacrylonitrile	41	5.580	5.582	(0.848)	9033204	2000.00	1800
	27 Bromochloromethane	128	5.590	5.593	(0.849)	540310	200.000	190
	28 Chloroform	83	5.674	5.676	(0.862)	2343722	200.000	190
$	30 Dibromofluoromethane	113	5.841	5.843	(0.887)	1387730	200.000	200(A)
	31 1,1,1-Trichloroethane	97	5.872	5.874	(0.892)	2160661	200.000	200
	113 Cyclohexane	56	5.935	5.927	(0.902)	1742058	200.000	190
	32 1,1-Dichloropropene	110	6.050	6.052	(0.919)	508996	200.000	190
	33 Carbon Tetrachloride	117	6.050	6.052	(0.919)	1753015	200.000	200(A)
	34 Isobutyl Alcohol	43	6.175	6.188	(0.938)	333807	4000.00	1900
$	35 1,2-Dichloroethane-d4	102	6.217	6.219	(0.944)	278337	200.000	200(A)
	37 Benzene	78	6.279	6.282	(0.954)	4027554	200.000	190
	36 1,2-Dichloroethane	62	6.300	6.303	(0.957)	2175830	200.000	200
	123 tert-Amyl methyl ether	73	6.394	6.396	(0.971)	3678152	200.000	190
*	38 Fluorobenzene	96	6.582	6.585	(1.000)	1132022	50.0000	
	39 Trichloroethene	130	7.000	7.002	(1.063)	1036212	200.000	200
	114 Methylcyclohexane	83	7.219	7.221	(1.097)	1226879	200.000	200
	40 1,2-Dichloropropane	63	7.261	7.263	(1.103)	1137929	200.000	190
M	21 1,2-Dichloroethene (Total)	96				2314455	400.000	370
	41 Methyl Methacrylate	69	7.386	7.388	(1.122)	811498	200.000	200
	42 Dibromomethane	93	7.397	7.409	(1.124)	873044	200.000	200
	124 1,4-Dioxane	88	7.428	7.430	(1.128)	22819	4000.00	530
	43 Bromodichloromethane	83	7.574	7.587	(1.151)	1805620	200.000	200
	44 2-Chloroethyl vinyl ether	63	7.261	7.263	(1.103)	1137929	200.000	190(T)
	45 cis-1,3-Dichloropropene	75	8.107	8.119	(1.232)	2009463	200.000	200
	46 4-Methyl-2-pentanone	43	8.305	8.307	(1.262)	1389208	200.000	210(A)
$	47 Toluene-d8	98	8.441	8.443	(0.820)	3813834	200.000	200
	48 Toluene	91	8.524	8.527	(1.295)	4182628	200.000	190
	49 trans-1,3-Dichloropropene	75	8.796	8.798	(1.336)	1940081	200.000	200
	50 Ethyl Methacrylate	69	8.900	8.902	(1.352)	1605954	200.000	210(A)
	51 1,1,2-Trichloroethane	97	9.026	9.028	(1.371)	952566	200.000	200(A)
	53 Tetrachloroethene	164	9.203	9.205	(0.894)	785078	200.000	200

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8203.D
Report Date: 18-May-2005 11:14

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	52 1,3-Dichloropropane	76	9.245	9.247	(0.899)	1723185	200.000	200(A)
	54 2-Hexanone	43	9.349	9.372	(0.909)	918678	200.000	280(A)
	55 Dibromochloromethane	129	9.537	9.540	(0.927)	1224077	200.000	210(A)
	56 1,2-Dibromoethane	107	9.684	9.696	(0.941)	1121486	200.000	210(A)
*	57 Chlorobenzene-d5	117	10.289	10.291	(1.000)	680633	50.0000	
	115 1-Chlorohexane	91	10.289	10.291	(1.000)	1215239	200.000	190
	58 Chlorobenzene	112	10.320	10.323	(1.003)	2652004	200.000	200
	59 1,1,1,2-Tetrachloroethane	131	10.425	10.427	(1.013)	1006981	200.000	200(A)
	60 Ethylbenzene	106	10.467	10.469	(1.017)	1348977	200.000	200
	61 m,p-Xylene	106	10.613	10.615	(1.031)	3240424	400.000	390
	62 o-Xylene	106	11.124	11.127	(1.081)	1617900	200.000	200
	64 Styrene	104	11.145	11.148	(1.083)	2883035	200.000	200(A)
	65 Bromoform	173	11.375	11.388	(1.106)	907499	200.000	210(A)
	66 Isopropylbenzene	105	11.584	11.586	(1.126)	3669434	200.000	200
	67 trans-1,4-Dichloro-2-butene	75	11.678	11.690	(1.135)	471691	200.000	250(A)
$	68 Bromofluorobenzene	95	11.772	11.784	(1.144)	1673287	200.000	210(A)
	69 1,1,2,2-Tetrachloroethane	83	11.960	11.962	(0.909)	1207602	200.000	190
	70 Bromobenzene	156	11.960	11.972	(0.909)	1097597	200.000	190
	71 1,2,3-Trichloropropane	75	12.012	12.014	(0.913)	1590316	200.000	270(A)
	72 n-Propylbenzene	120	12.095	12.098	(0.919)	876778	200.000	190
	73 2-Chlorotoluene	126	12.200	12.202	(0.927)	881439	200.000	190
	74 1,3,5-Trimethylbenzene	105	12.304	12.307	(0.935)	3155613	200.000	180
	75 4-Chlorotoluene	126	12.325	12.327	(0.937)	897673	200.000	190
	76 tert-Butylbenzene	119	12.691	12.693	(0.964)	3235101	200.000	190
	77 1,2,4-Trimethylbenzene	105	12.753	12.756	(0.969)	3317213	200.000	190
	78 sec-Butylbenzene	105	12.952	12.954	(0.984)	3470648	200.000	190
	80 1,3-Dichlorobenzene	146	13.087	13.090	(0.994)	1635097	200.000	200
	79 4-Isopropyltoluene	119	13.119	13.131	(0.997)	2687701	200.000	190
*	81 1,4-Dichlorobenzene-d4	152	13.161	13.163	(1.000)	313855	50.0000	
	82 1,4-Dichlorobenzene	146	13.192	13.194	(1.002)	1772000	200.000	200(A)
M	63 Xylene (Total)	106				4858324	600.000	580
	83 n-Butylbenzene	91	13.599	13.601	(1.033)	2591696	200.000	190
	84 1,2-Dichlorobenzene	146	13.620	13.622	(1.035)	1652076	200.000	190
	85 Hexachloroethane	117	13.902	13.904	(1.056)	629230	200.000	200
	86 1,2-Dibromo-3-chloropropane	75	14.508	14.520	(1.102)	252709	200.000	190
	87 1,2,4-Trichlorobenzene	180	15.406	15.418	(1.171)	1094370	200.000	200(A)
	88 Hexachlorobutadiene	225	15.583	15.585	(1.184)	447027	200.000	180
	89 Naphthalene	128	15.677	15.679	(1.191)	2554266	200.000	200
	90 1,2,3-Trichlorobenzene	180	15.938	15.940	(1.211)	1009890	200.000	200

QC Flag Legend

T - Target compound detected outside RT window.
A - Target compound detected but, quantitated amount exceeded maximum amount.

5/18/05

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Instrument ID: V2 Calibration Date: 05/10/05 Time: 1142

Lab File ID: V2G8291 Init. Calib. Date(s): 05/04/05 05/04/05

Heated Purge: (Y/N) N Init. Calib. Times: 1617 1827

GC Column: DB-624 ID: 0.25 (mm)

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D	
Dichlorodifluoromethane	0.296	0.321	0.01	8.4	20.0	
Chloromethane	0.363	0.365	0.1	0.6	20.0	
Vinyl Chloride	0.277	0.280	0.01	1.1	20.0	
Bromomethane	0.218	0.204	0.01	6.4	20.0	
Chloroethane	0.157	0.146	0.01	7.0	20.0	
Trichlorofluoromethane	0.345	0.463	0.01	34.2	20.0	<-
1,1-Dichloroethene	0.224	0.204	0.01	8.9	20.0	
Acetone	0.140	0.138	0.01	1.4	20.0	
Iodomethane	0.430	0.413	0.01	4.0	20.0	
Carbon Disulfide	0.709	0.682	0.01	3.8	20.0	
Methylene Chloride	0.287	0.303	0.01	5.6	20.0	
trans-1,2-Dichloroethene	0.277	0.297	0.01	7.2	20.0	
Methyl tert-butyl ether	0.881	0.854	0.01	3.1	20.0	
1,1-Dichloroethane	0.539	0.555	0.1	3.0	20.0	
Vinyl acetate	1.349	1.378	0.01	2.1	20.0	
2-Butanone	0.158	0.180	0.01	13.9	20.0	
cis-1,2-Dichloroethene	0.281	0.298	0.01	6.0	20.0	
2,2-Dichloropropane	0.477	0.503	0.01	5.4	20.0	
Bromochloromethane	0.127	0.128	0.01	0.8	20.0	
Chloroform	0.537	0.540	0.01	0.6	20.0	
1,1,1-Trichloroethane	0.483	0.484	0.01	0.2	20.0	
1,1-Dichloropropene	0.118	0.120	0.01	1.7	20.0	
Carbon Tetrachloride	0.387	0.366	0.01	5.4	20.0	
1,2-Dichloroethane	0.488	0.466	0.01	4.5	20.0	
Benzene	0.938	0.999	0.01	6.5	20.0	
Trichloroethene	0.230	0.238	0.01	3.5	20.0	
1,2-Dichloropropane	0.260	0.269	0.01	3.5	20.0	
Dibromomethane	0.194	0.200	0.01	3.1	20.0	
Bromodichloromethane	0.399	0.408	0.01	2.2	20.0	
cis-1,3-Dichloropropene	0.445	0.444	0.01	0.2	20.0	
4-Methyl-2-pentanone	0.298	0.289	0.01	3.0	20.0	
Toluene	0.953	0.977	0.01	2.5	20.0	
trans-1,3-Dichloropropene	0.430	0.412	0.01	4.2	20.0	
1,1,2-Trichloroethane	0.209	0.220	0.01	5.3	20.0	
1,3-Dichloropropane	0.631	0.667	0.01	5.7	20.0	
Tetrachloroethene	0.295	0.311	0.01	5.4	20.0	
2-Hexanone	0.259	0.275	0.01	6.2	20.0	

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Instrument ID: V2 Calibration Date: 05/10/05 Time: 1142

Lab File ID: V2G8291 Init. Calib. Date(s): 05/04/05 05/04/05

Heated Purge: (Y/N) N Init. Calib. Times: 1617 1827

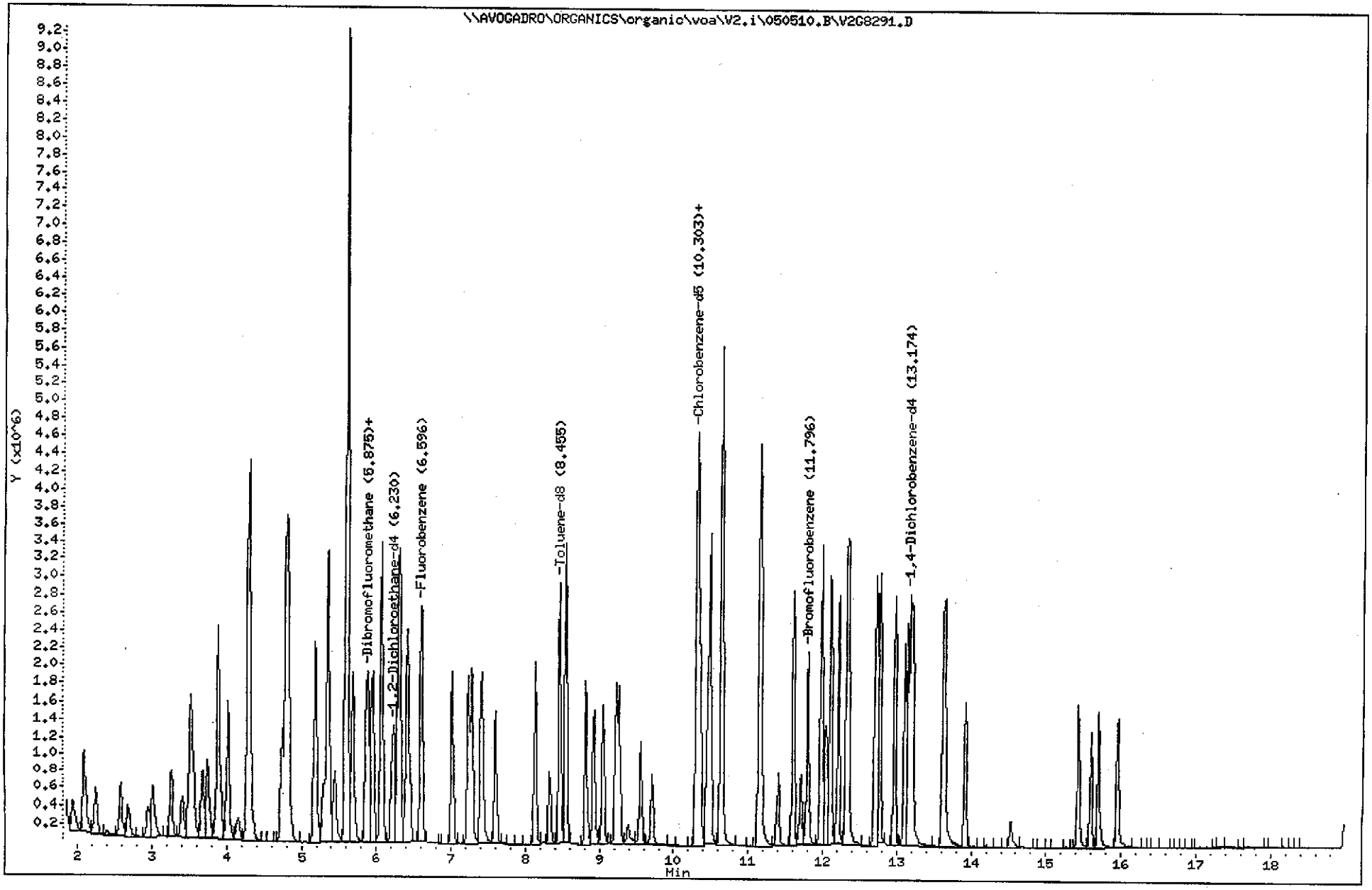
GC Column: DB-624 ID: 0.25 (mm)

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
Dibromochloromethane	0.430	0.434	0.01	0.9	20.0
1,2-Dibromoethane	0.395	0.424	0.01	7.3	20.0
Chlorobenzene	0.980	1.026	0.3	4.7	20.0
1,1,1,2-Tetrachloroethane	0.368	0.373	0.01	1.4	20.0
Ethylbenzene	0.497	0.519	0.01	4.4	20.0
m,p-Xylene	0.616	0.640	0.01	3.9	20.0
o-Xylene	0.606	0.636	0.01	5.0	20.0
Xylene (Total)	0.613	0.639	0.01	4.2	20.0
Styrene	1.053	1.127	0.01	7.0	20.0
Bromoform	0.310	0.310	0.1	0.0	20.0
Isopropylbenzene	1.362	1.405	0.01	3.2	20.0
1,1,2,2-Tetrachloroethane	1.031	1.064	0.3	3.2	20.0
Bromobenzene	0.909	0.923	0.01	1.5	20.0
1,2,3-Trichloropropane	1.162	1.242	0.01	6.9	20.0
n-Propylbenzene	0.728	0.743	0.01	2.1	20.0
2-Chlorotoluene	0.740	0.748	0.01	1.1	20.0
1,3,5-Trimethylbenzene	2.719	2.612	0.01	3.9	20.0
4-Chlorotoluene	0.763	0.752	0.01	1.4	20.0
tert-Butylbenzene	2.726	2.713	0.01	0.5	20.0
1,2,4-Trimethylbenzene	2.739	2.702	0.01	1.4	20.0
sec-Butylbenzene	2.948	2.944	0.01	0.1	20.0
4-Isopropyltoluene	2.225	2.261	0.01	1.6	20.0
1,3-Dichlorobenzene	1.335	1.349	0.01	1.0	20.0
1,4-Dichlorobenzene	1.409	1.435	0.01	1.8	20.0
n-Butylbenzene	2.126	2.253	0.01	6.0	20.0
1,2-Dichlorobenzene	1.378	1.365	0.01	0.9	20.0
1,2-Dibromo-3-chloropropane	0.217	0.203	0.01	6.4	20.0
1,2,4-Trichlorobenzene	0.863	0.922	0.01	6.8	20.0
Hexachlorobutadiene	0.400	0.392	0.01	2.0	20.0
Naphthalene	2.081	2.059	0.01	1.0	20.0
1,2,3-Trichlorobenzene	0.823	0.845	0.01	2.7	20.0
Dibromofluoromethane	0.305	0.314	0.01	3.0	20.0
1,2-Dichloroethane-d4	0.061	0.060	0.01	1.6	20.0
Toluene-d8	1.410	1.388	0.01	1.6	20.0
Bromofluorobenzene	0.582	0.583	0.01	0.2	20.0

Data : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8291.D
Date : 10-MAY-2005 11:42
Client ID: VSTD0502E
Sample Info: ,VSTD0502E,VSTD0502E
Purge Volume: 5.0
Column phase: DB-624

Instrument: V2.i

Operator: JC SRC: JC
Column diameter: 0.25



0105

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8291.D
Report Date: 19-May-2005 11:02

Mitkem Corporation

Method 8260 Water and Medium Soil

Data file : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8291.D
Lab Smp Id: VSTD0502E Client Smp ID: VSTD0502E
Inj Date : 10-MAY-2005 11:42
Operator : JC SRC: JC Inst ID: V2.i
Smp Info : ,VSTD0502E,VSTD0502E
Misc Info : ,2
Comment :
Method : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\v28260.m
Meth Date : 19-May-2005 11:01 mtl Quant Type: ISTD
Cal Date : 04-MAY-2005 18:27 Cal File: V2G8205.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 4.03
Processing Host: TARGET3

Concentration Formula: Amt * DF * Uf * 5/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Dichlorodifluoromethane	85	1.929	1.929	(0.292)	907323	50.0000	54
2 Chloromethane	50	2.075	2.075	(0.315)	1032149	50.0000	50
3 Vinyl Chloride	62	2.242	2.242	(0.340)	792668	50.0000	51
4 Bromomethane	94	2.576	2.576	(0.391)	576207	50.0000	47
5 Chloroethane	64	2.680	2.680	(0.406)	413754	50.0000	47
6 Trichlorofluoromethane	101	3.004	3.004	(0.455)	1308843	50.0000	67
8 1,1-Dichloroethene	96	3.505	3.505	(0.531)	575239	50.0000	45
9 Acetone	43	3.557	3.557	(0.539)	389616	50.0000	49
10 Iodomethane	142	3.672	3.672	(0.557)	1167055	50.0000	48
11 Carbon Disulfide	76	3.735	3.735	(0.566)	1928055	50.0000	48
14 Methylene Chloride	84	4.006	4.006	(0.607)	855698	50.0000	53
16 trans-1,2-Dichloroethene	96	4.288	4.288	(0.650)	839811	50.0000	54
17 Methyl tert-butyl ether	73	4.299	4.299	(0.652)	2414473	50.0000	49
18 1,1-Dichloroethane	63	4.727	4.727	(0.717)	1568462	50.0000	51
19 Vinyl acetate	43	4.779	4.779	(0.725)	3893077	50.0000	51
22 2-Butanone	43	5.374	5.374	(0.815)	509261	50.0000	57

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8291.D
Report Date: 19-May-2005 11:02

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	23 cis-1,2-Dichloroethene	96	5.343	5.343	(0.810)	841830	50.0000	53
	24 2,2-Dichloropropane	77	5.353	5.353	(0.812)	1420761	50.0000	53
	27 Bromochloromethane	128	5.604	5.604	(0.850)	361500	50.0000	51
	28 Chloroform	83	5.688	5.688	(0.862)	1524931	50.0000	50
$	30 Dibromofluoromethane	113	5.865	5.865	(0.889)	887153	50.0000	51
	31 1,1,1-Trichloroethane	97	5.886	5.886	(0.892)	1367329	50.0000	50
	32 1,1-Dichloropropene	110	6.063	6.063	(0.919)	340117	50.0000	51
	33 Carbon Tetrachloride	117	6.074	6.074	(0.921)	1033947	50.0000	47
$	35 1,2-Dichloroethane-d4	102	6.231	6.231	(0.945)	169183	50.0000	49
	36 1,2-Dichloroethane	62	6.314	6.314	(0.957)	1317954	50.0000	48
	37 Benzene	78	6.293	6.293	(0.954)	2823483	50.0000	53
*	38 Fluorobenzene	96	6.596	6.596	(1.000)	2825634	50.0000	
	39 Trichloroethene	130	7.014	7.014	(1.063)	674165	50.0000	52
	40 1,2-Dichloropropane	63	7.275	7.275	(1.103)	761201	50.0000	52
	42 Dibromomethane	93	7.421	7.421	(1.125)	565665	50.0000	52
	43 Bromodichloromethane	83	7.598	7.598	(1.152)	1153869	50.0000	51
	45 cis-1,3-Dichloropropene	75	8.131	8.131	(1.233)	1254058	50.0000	50
	46 4-Methyl-2-pentanone	43	8.319	8.319	(1.261)	815671	50.0000	48
$	47 Toluene-d8	98	8.454	8.454	(0.821)	2250210	50.0000	49
	48 Toluene	91	8.538	8.538	(1.294)	2759638	50.0000	51
	49 trans-1,3-Dichloropropene	75	8.810	8.810	(1.336)	1164932	50.0000	48
	51 1,1,2-Trichloroethane	97	9.050	9.050	(1.372)	622857	50.0000	53
	52 1,3-Dichloropropane	76	9.259	9.259	(0.899)	1081006	50.0000	53
	53 Tetrachloroethene	164	9.217	9.217	(0.895)	503547	50.0000	53
	54 2-Hexanone	43	9.384	9.384	(0.911)	446401	50.0000	53
	55 Dibromochloromethane	129	9.551	9.551	(0.927)	703204	50.0000	50
	56 1,2-Dibromoethane	107	9.708	9.708	(0.942)	687273	50.0000	54
*	57 Chlorobenzene-d5	117	10.303	10.303	(1.000)	1620617	50.0000	
	58 Chlorobenzene	112	10.344	10.344	(1.004)	1663475	50.0000	52
	59 1,1,1,2-Tetrachloroethane	131	10.449	10.449	(1.014)	604494	50.0000	51
	60 Ethylbenzene	106	10.480	10.480	(1.017)	841327	50.0000	52
	61 m,p-Xylene	106	10.637	10.637	(1.032)	2075665	100.000	100
	62 o-Xylene	106	11.138	11.138	(1.081)	1031155	50.0000	52
M	63 Xylene (Total)	106				3106820	150.000	160
	64 Styrene	104	11.159	11.159	(1.083)	1826798	50.0000	54
	65 Bromoform	173	11.399	11.399	(1.106)	502661	50.0000	50
	66 Isopropylbenzene	105	11.598	11.598	(1.126)	2277502	50.0000	52
$	68 Bromofluorobenzene	95	11.796	11.796	(1.145)	945427	50.0000	50
	69 1,1,2,2-Tetrachloroethane	83	11.973	11.973	(0.909)	789535	50.0000	52
	70 Bromobenzene	156	11.973	11.973	(0.909)	684874	50.0000	51
	71 1,2,3-Trichloropropane	75	12.036	12.036	(0.914)	921741	50.0000	53
	72 n-Propylbenzene	120	12.109	12.109	(0.919)	551448	50.0000	51
	73 2-Chlorotoluene	126	12.214	12.214	(0.927)	555325	50.0000	51
	74 1,3,5-Trimethylbenzene	105	12.318	12.318	(0.935)	1939019	50.0000	48
	75 4-Chlorotoluene	126	12.339	12.339	(0.937)	557850	50.0000	49
	76 tert-Butylbenzene	119	12.704	12.704	(0.964)	2013958	50.0000	50
	77 1,2,4-Trimethylbenzene	105	12.767	12.767	(0.969)	2006036	50.0000	49

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8291.D
Report Date: 19-May-2005 11:02

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
78 sec-Butylbenzene	105	12.965	12.965	(0.984)	2185309	50.0000	50
79 4-Isopropyltoluene	119	13.143	13.143	(0.998)	1678629	50.0000	51
80 1,3-Dichlorobenzene	146	13.101	13.101	(0.994)	1001217	50.0000	51
* 81 1,4-Dichlorobenzene-d4	152	13.174	13.174	(1.000)	742294	50.0000	
82 1,4-Dichlorobenzene	146	13.206	13.206	(1.002)	1064955	50.0000	51
83 n-Butylbenzene	91	13.613	13.613	(1.033)	1672579	50.0000	53
84 1,2-Dichlorobenzene	146	13.634	13.634	(1.035)	1012962	50.0000	50
86 1,2-Dibromo-3-chloropropane	75	14.532	14.532	(1.103)	150660	50.0000	47
87 1,2,4-Trichlorobenzene	180	15.419	15.419	(1.170)	684381	50.0000	53
88 Hexachlorobutadiene	225	15.597	15.597	(1.184)	290781	50.0000	49
89 Naphthalene	128	15.691	15.691	(1.191)	1528482	50.0000	49
90 1,2,3-Trichlorobenzene	180	15.952	15.952	(1.211)	627561	50.0000	51

5/19/05

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8200.D

Date : 04-MAY-2005 15:31

Client ID: BFB2A

Instrument: V2.i

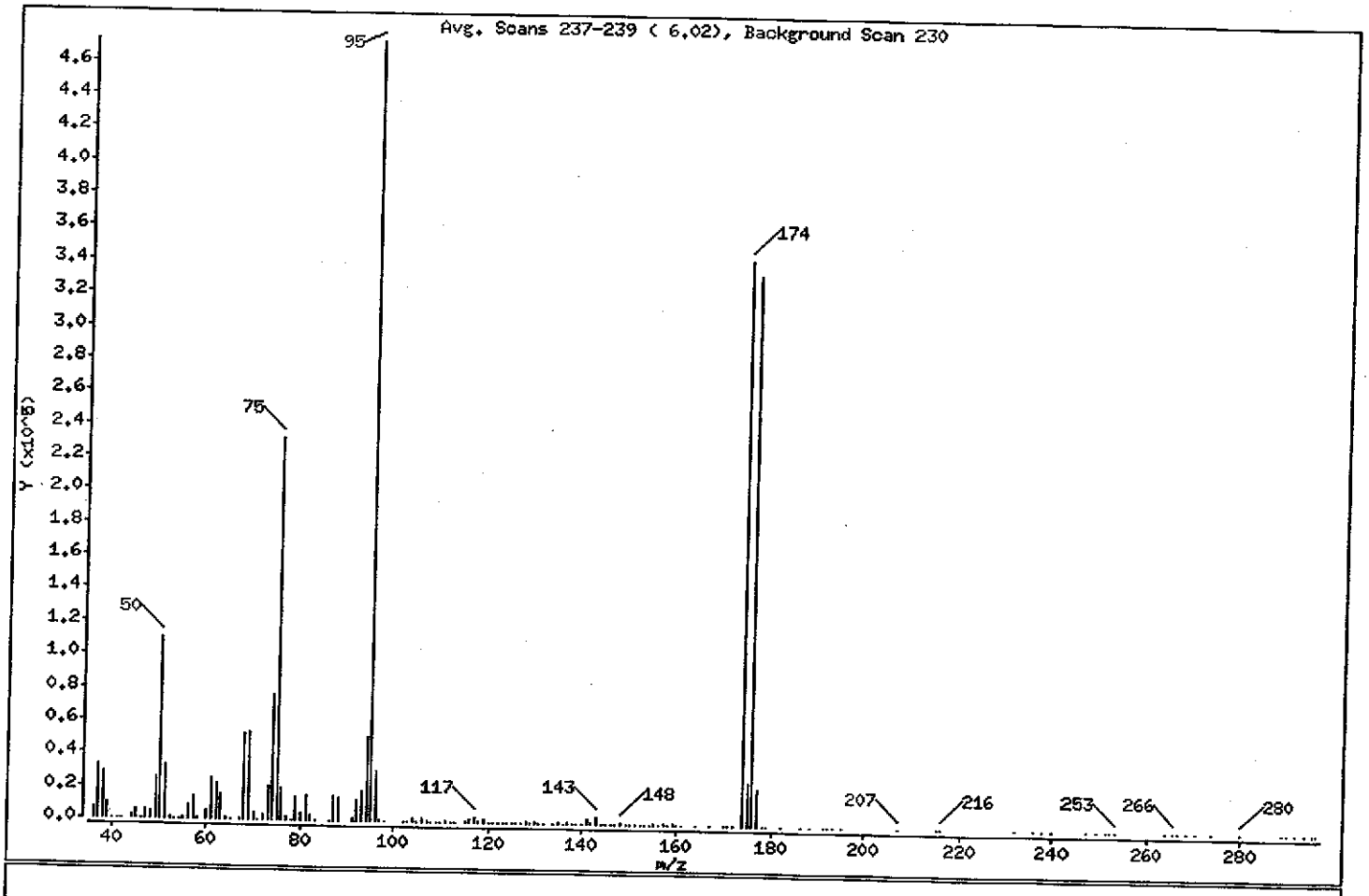
Sample Info: ,BFB2A,BFB2A

Operator: JC

Column phase: DB-624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	23.29
75	30.00 - 60.00% of mass 95	49.13
96	5.00 - 9.00% of mass 95	6.51
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	72.61
175	5.00 - 9.00% of mass 174	5.50 (7.58)
176	95.00 - 101.00% of mass 174	70.70 (97.37)
177	5.00 - 9.00% of mass 176	4.87 (6.88)

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8200.D

Date : 04-MAY-2005 15:31

Client ID: BFB2A

Instrument: V2.i

Sample Info: ,BFB2A,BFB2A

Operator: JC

Column phase: DB-624

Column diameter: 0.25

Data File: V2G8200.D

Spectrum: Avg. Scans 237-239 (6.02), Background Scan 230

Location of Maximum: 95.00

Number of points: 157

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	7001	79.00	14577	127.00	173	175.00	26000
37.00	32968	80.00	3872	128.00	1443	176.00	334208
38.00	28016	81.00	15095	129.00	539	177.00	23000
39.00	9927	82.00	2739	130.00	1409	178.00	506
40.00	176	83.00	293	131.00	456	179.00	7
41.00	66	86.00	130	132.00	24	182.00	19
42.00	28	87.00	15365	134.00	97	186.00	44
44.00	2185	88.00	14024	135.00	657	188.00	45
45.00	5577	91.00	1835	136.00	175	191.00	27
46.00	390	92.00	13288	137.00	782	192.00	19
47.00	5718	93.00	19000	138.00	51	193.00	104
48.00	4463	94.00	51680	139.00	119	195.00	23
49.00	24688	95.00	472704	140.00	308	207.00	193
50.00	110072	96.00	30752	141.00	3750	215.00	18
51.00	33040	97.00	910	142.00	611	216.00	21
52.00	1463	98.00	154	143.00	4330	232.00	35
53.00	108	102.00	38	144.00	180	236.00	21
54.00	10	103.00	268	145.00	406	238.00	20
55.00	1508	104.00	1831	146.00	512	240.00	21
56.00	8440	105.00	396	147.00	371	247.00	35
57.00	14346	106.00	1921	148.00	1150	249.00	57
58.00	576	107.00	587	149.00	384	251.00	36
60.00	5262	108.00	30	150.00	297	252.00	17
61.00	25000	109.00	49	151.00	28	253.00	65
62.00	21384	110.00	226	152.00	174	264.00	19
63.00	15338	111.00	549	153.00	342	266.00	79
64.00	1420	112.00	215	154.00	278	267.00	52
65.00	106	113.00	412	155.00	894	269.00	78
67.00	1404	115.00	678	156.00	123	271.00	59
68.00	52096	116.00	1649	157.00	736	274.00	19
69.00	53168	117.00	2747	158.00	51	280.00	79
70.00	4000	118.00	1250	159.00	555	289.00	17
71.00	79	119.00	1786	160.00	78	290.00	19
72.00	2831	120.00	150	161.00	523	292.00	37
73.00	20192	121.00	29	164.00	46	294.00	26

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8200.D

Date : 04-MAY-2005 15:31

Client ID: BFB2A

Instrument: V2.i

Sample Info: ,BFB2A,BFB2A

Operator: JC

Column phase: DB-624

Column diameter: 0.25

Data File: V2G8200.D

Spectrum: Avg. Scans 237-239 (6.02), Background Scan 230

Location of Maximum: 95.00

Number of points: 157

m/z	Y	m/z	Y	m/z	Y	m/z	Y
74.00	75752	122.00	93	167.00	23	296.00	19
75.00	232256	123.00	81	170.00	18	297.00	33
76.00	20128	124.00	291	171.00	160		
77.00	2280	125.00	157	172.00	37		
78.00	437	126.00	199	174.00	343232		

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050504.B\V2G8200.D

Date : 04-MAY-2005 15:31

Client ID: BFB2A

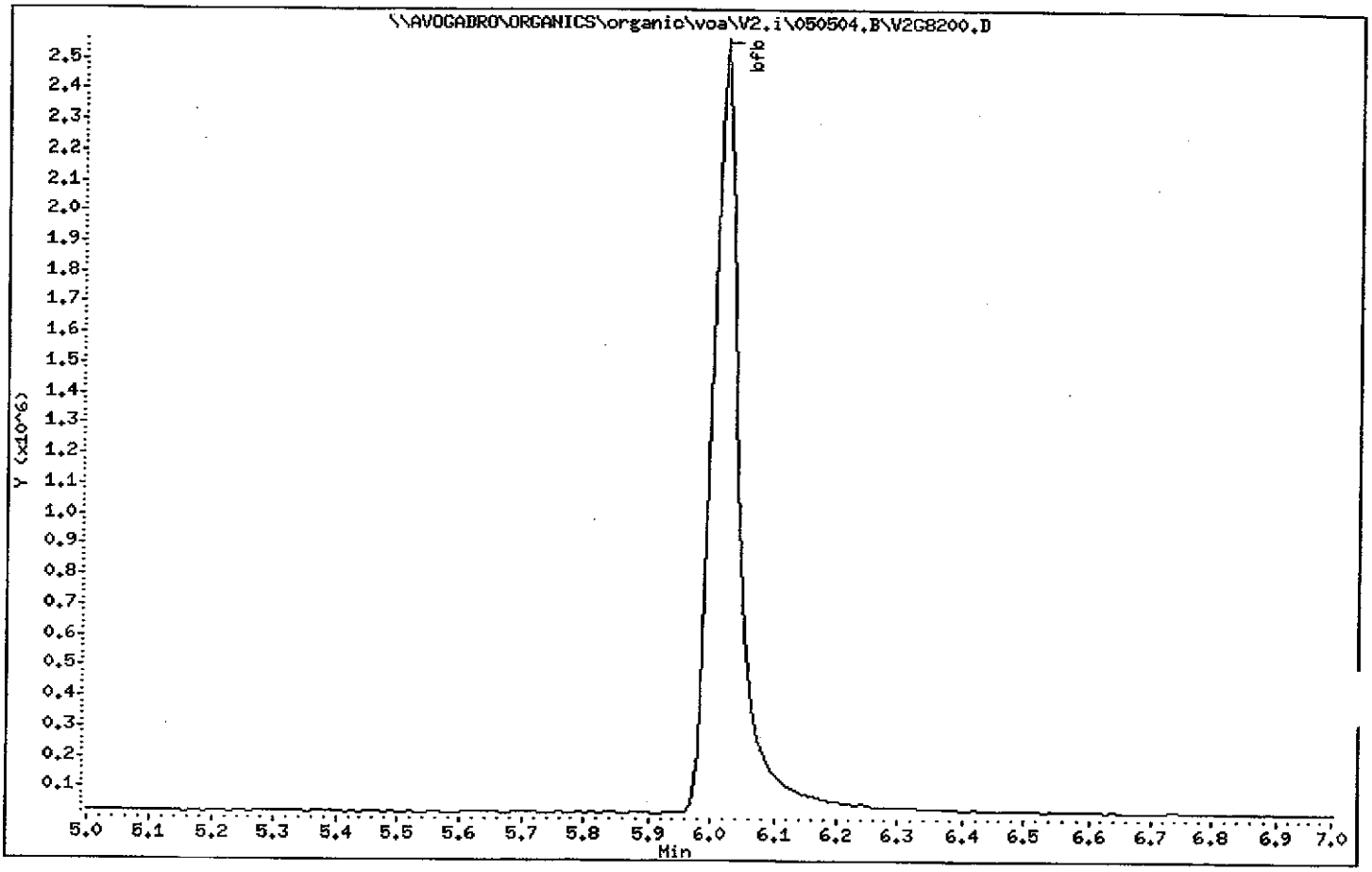
Instrument: V2.i

Sample Info: ,BFB2A,BFB2A

Operator: JC

Column phase: DB-624

Column diameter: 0.25



Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8290.D

Date : 10-MAY-2005 11:16

Client ID: BFB2E

Instrument: V2.i

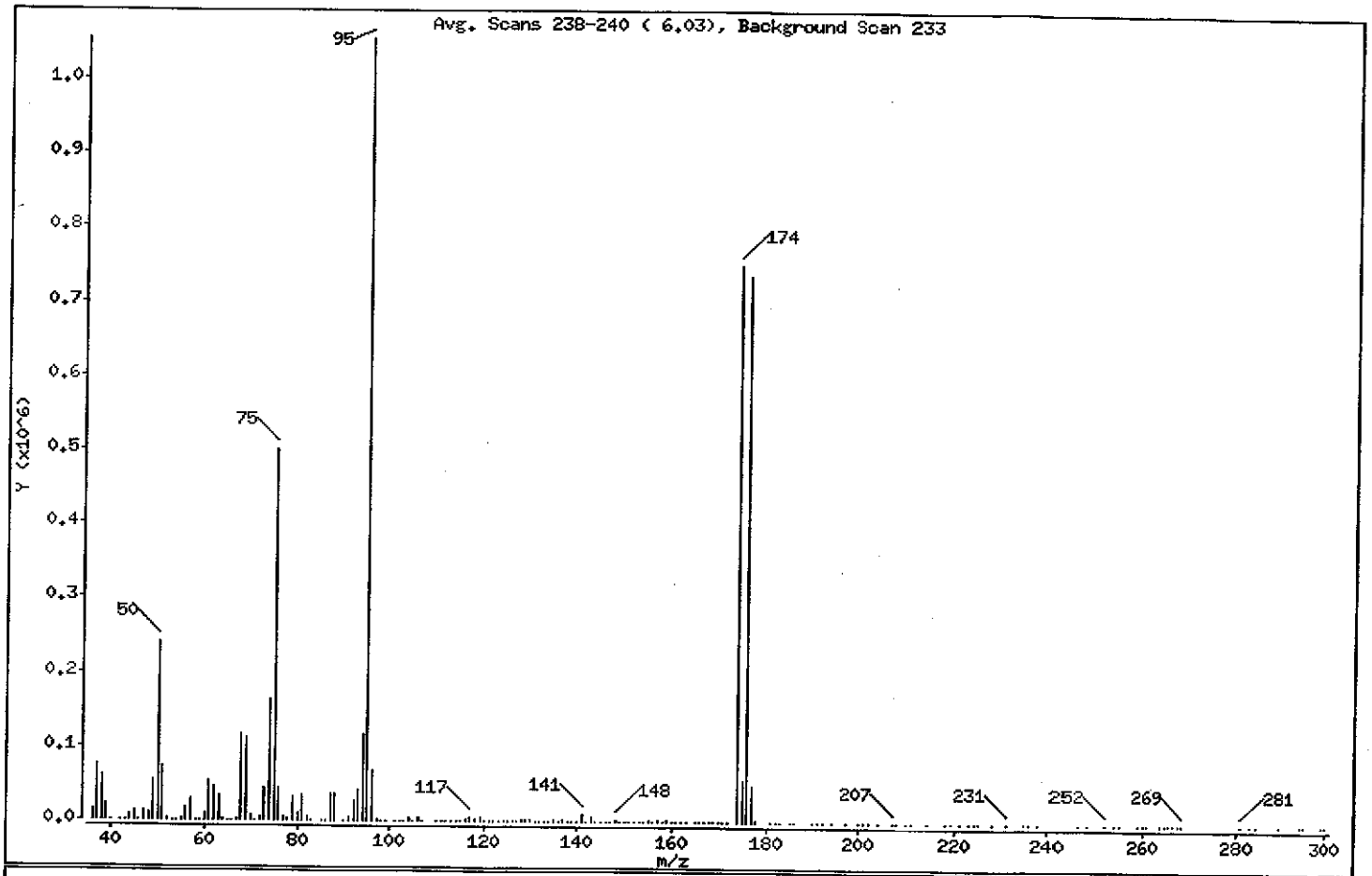
Sample Info: ,BFB2E,BFB2E

Operator: JC

Column phase: DB-624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	22.86
75	30.00 - 60.00% of mass 95	47.43
96	5.00 - 9.00% of mass 95	6.54
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	71.26
175	5.00 - 9.00% of mass 174	5.37 (7.54)
176	95.00 - 101.00% of mass 174	69.93 (98.13)
177	5.00 - 9.00% of mass 176	4.72 (6.75)

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8290.D

Date : 10-MAY-2005 11:16

Client ID: BFB2E

Instrument: V2.i

Sample Info: ,BFB2E,BFB2E

Operator: JC

Column phase: DB-624

Column diameter: 0.25

Data File: V2G8290.D
Spectrum: Avg. Scans 238-240 (6.03), Background Scan 233
Location of Maximum: 95.00
Number of points: 187

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	15757	85.00	41	136.00	179	191.00	39
37.00	75904	86.00	653	137.00	1654	192.00	87
38.00	61368	87.00	36752	138.00	71	194.00	27
39.00	22760	88.00	35200	139.00	274	197.00	43
40.00	825	90.00	23	140.00	371	200.00	41
42.00	439	91.00	3688	141.00	8989	201.00	46
43.00	995	92.00	26704	142.00	1108	202.00	17
44.00	6238	93.00	41224	143.00	8366	204.00	17
45.00	11069	94.00	116600	144.00	346	207.00	581
46.00	398	95.00	1053184	145.00	695	208.00	88
47.00	11743	96.00	68856	146.00	1089	210.00	34
48.00	8765	97.00	1775	147.00	561	211.00	64
49.00	54056	98.00	44	148.00	2391	214.00	39
50.00	240768	99.00	28	149.00	557	218.00	58
51.00	72040	101.00	59	150.00	1210	219.00	50
52.00	2855	102.00	26	151.00	62	221.00	37
53.00	264	103.00	358	152.00	382	223.00	21
54.00	207	104.00	3950	153.00	450	224.00	111
55.00	3473	105.00	846	154.00	415	225.00	127
56.00	17840	106.00	3895	155.00	1855	228.00	25
57.00	29776	107.00	804	156.00	328	231.00	147
58.00	1058	110.00	742	157.00	1705	235.00	66
59.00	155	111.00	810	158.00	169	236.00	20
60.00	10860	112.00	654	159.00	1296	238.00	33
61.00	52968	113.00	813	160.00	103	246.00	28
62.00	46344	114.00	93	161.00	1049	248.00	23
63.00	33424	115.00	1090	162.00	56	252.00	107
64.00	2338	116.00	3523	163.00	104	254.00	24
65.00	424	117.00	5598	165.00	46	255.00	64
66.00	330	118.00	2953	166.00	51	259.00	55
67.00	2931	119.00	4415	167.00	68	260.00	41
68.00	115984	120.00	329	168.00	29	261.00	23
69.00	112776	121.00	75	169.00	90	264.00	40
70.00	7692	122.00	268	170.00	92	265.00	28
71.00	452	123.00	276	171.00	31	266.00	60

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8290.D

Date : 10-MAY-2005 11:16

Client ID: BFB2E

Instrument: V2.i

Sample Info: ,BFB2E,BFB2E

Operator: JC

Column phase: DB-624

Column diameter: 0.25

Data File: V2G8290.D
Spectrum: Avg. Scans 238-240 (6.03), Background Scan 233
Location of Maximum: 95.00
Number of points: 187

m/z	Y	m/z	Y	m/z	Y	m/z	Y
72.00	5068	124.00	831	172.00	427	267.00	75
73.00	42816	125.00	224	174.00	750464	268.00	20
74.00	162112	126.00	406	175.00	56608	269.00	91
75.00	499520	127.00	610	176.00	736448	281.00	346
76.00	43088	128.00	2815	177.00	49720	283.00	14
77.00	4800	129.00	1412	178.00	1262	284.00	130
78.00	1432	130.00	3056	181.00	19	289.00	24
79.00	32752	131.00	1112	182.00	8	294.00	31
80.00	8644	132.00	94	183.00	36	295.00	34
81.00	34048	133.00	167	185.00	61	299.00	20
82.00	6053	134.00	106	186.00	165	300.00	25
83.00	497	135.00	1324	190.00	57		

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8290.D

Date : 10-MAY-2005 11:16

Client ID: BFB2E

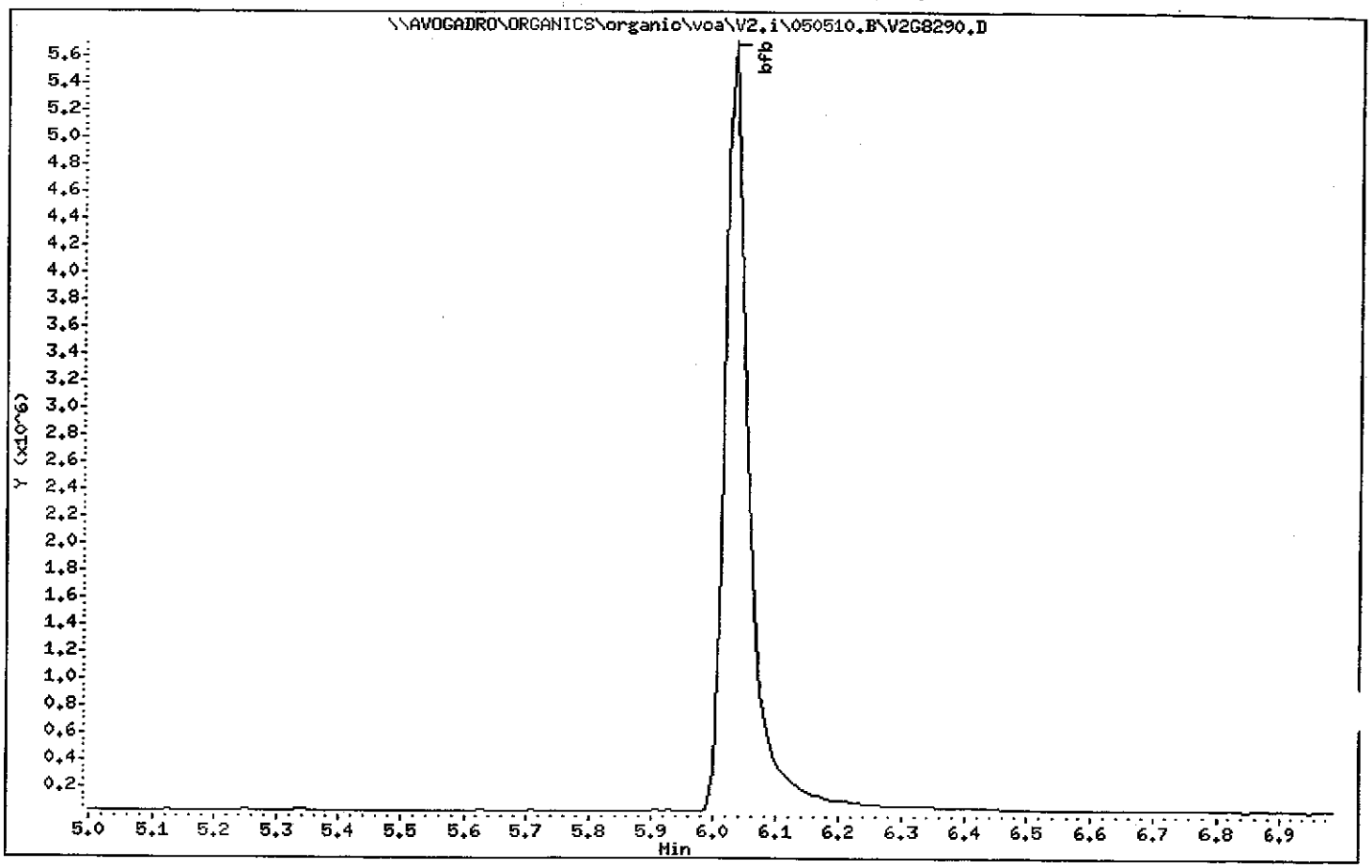
Instrument: V2.i

Sample Info: ,BFB2E,BFB2E

Operator: JC

Column phase: DB-624

Column diameter: 0.25



1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK5E

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: MB-18048

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8292

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
74-88-4	Iodomethane	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
108-05-4	Vinyl acetate	5	U
78-93-3	2-Butanone	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
590-20-7	2,2-Dichloropropane	5	U
74-97-5	Bromochloromethane	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK5E

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: MB-18048

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8292

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	4-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK5E

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: MB-18048

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8292

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

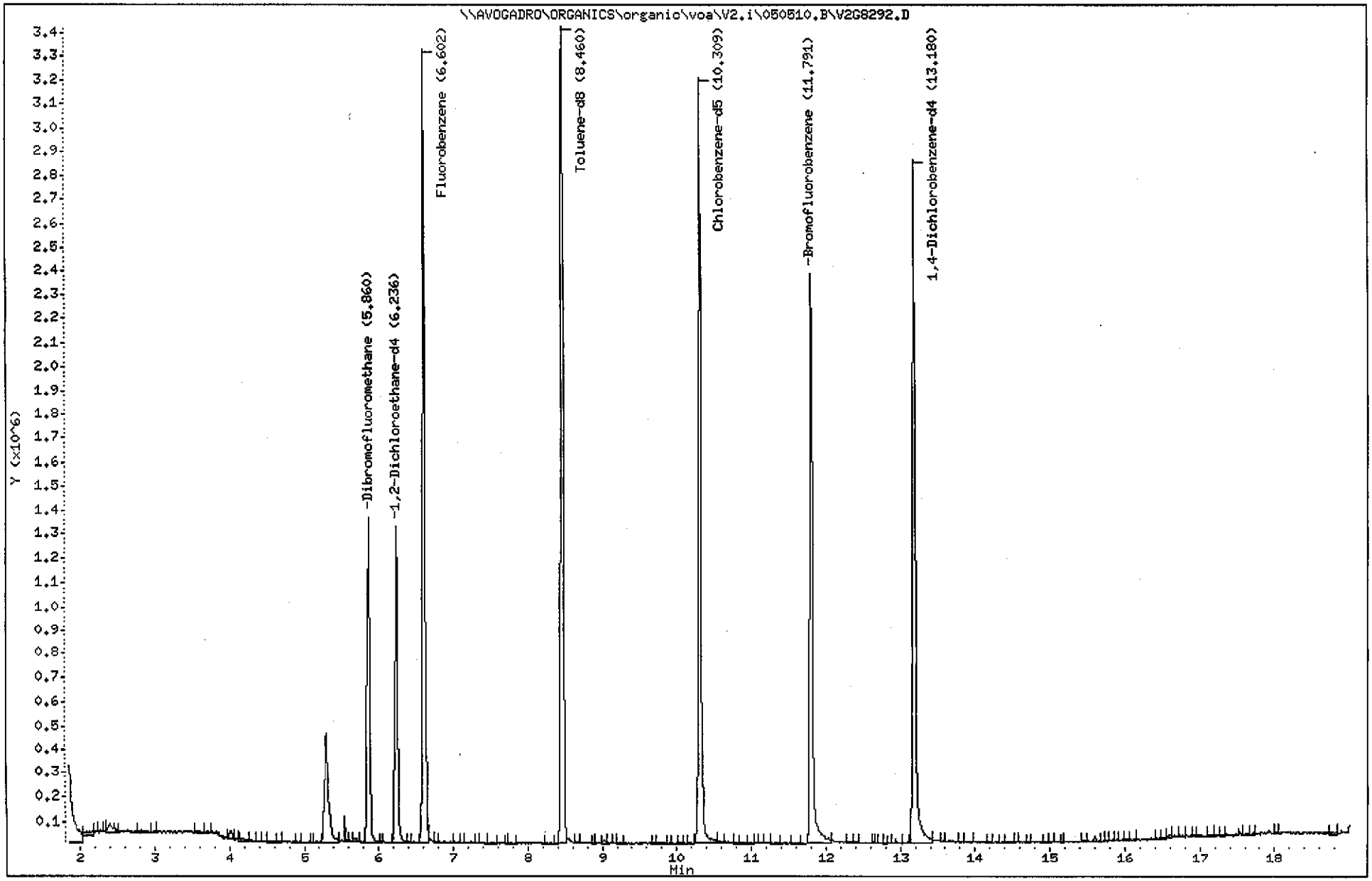
CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 1066-40-6	SILANOL, TRIMETHYL-	5.30	12	NJ
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8292.D
Date : 10-MAY-2005 12:27
Client ID: VBLK5E
Sample Info: ,MB-18048,VBLK5E,18048
Purge Volume: 5.0
Column phase: DB-624

Instrument: V2.i

Operator: JC SRC: JC
Column diameter: 0.25



0120

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8292.D
Report Date: 19-May-2005 11:02

Mitkem Corporation

Method 8260 Water and Medium Soil

Data file : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8292.D
Lab Smp Id: MB-18048 Client Smp ID: VBLK5E
Inj Date : 10-MAY-2005 12:27
Operator : JC SRC: JC Inst ID: V2.i
Smp Info : ,MB-18048,VBLK5E,18048
Misc Info :
Comment :
Method : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\v28260.m
Meth Date : 19-May-2005 11:01 mtl Quant Type: ISTD
Cal Date : 04-MAY-2005 18:27 Cal File: V2G8205.D
Als bottle: 2 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 4.03
Processing Host: TARGET3

Concentration Formula: Amt * DF * Uf * 5/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
$ 30 Dibromofluoromethane	113	5.860	5.865	(0.888)	931321	45.9951	46
$ 35 1,2-Dichloroethane-d4	102	6.236	6.231	(0.945)	195015	47.8783	48
* 38 Fluorobenzene	96	6.602	6.596	(1.000)	3313833	50.0000	
$ 47 Toluene-d8	98	8.460	8.454	(0.821)	2745859	44.6115	45
* 57 Chlorobenzene-d5	117	10.309	10.303	(1.000)	2182176	50.0000	
$ 68 Bromofluorobenzene	95	11.791	11.796	(1.144)	1190779	46.9111	47
* 81 1,4-Dichlorobenzene-d4	152	13.180	13.174	(1.000)	1016497	50.0000	

SB
5/19/05

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8292.D
Report Date: 19-May-2005 11:02

Mitkem Corporation

Method 8260 Water and Medium Soil

Data file : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8292.D
Lab Smp Id: MB-18048 Client Smp ID: VBLK5E
Inj Date : 10-MAY-2005 12:27
Operator : JC SRC: JC Inst ID: V2.i
Smp Info : ,MB-18048,VBLK5E,18048
Misc Info :
Comment :
Method : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\v28260.m
Meth Date : 19-May-2005 11:01 mtl Quant Type: ISTD
Cal Date : 04-MAY-2005 18:27 Cal File: V2G8205.D
Als bottle: 2 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 4.03
Processing Host: TARGET3

Concentration Formula: Amt * DF * Uf * 5/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged (mL)

ISTD	RT	AREA	AMOUNT
* 38 Fluorobenzene	6.602	7475807	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/L)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Silanol, trimethyl-					CAS #: 1066-40-6		
5.296	1786953	11.9515726	12	91	NBS75K.L	62980	38(L)

QC Flag Legend

L - Operator selected an alternate library search match.

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8292.D

Date : 10-MAY-2005 12:27

Client ID: VBLK5E

Instrument: V2.i

Sample Info: ,MB-18048,VBLK5E,18048

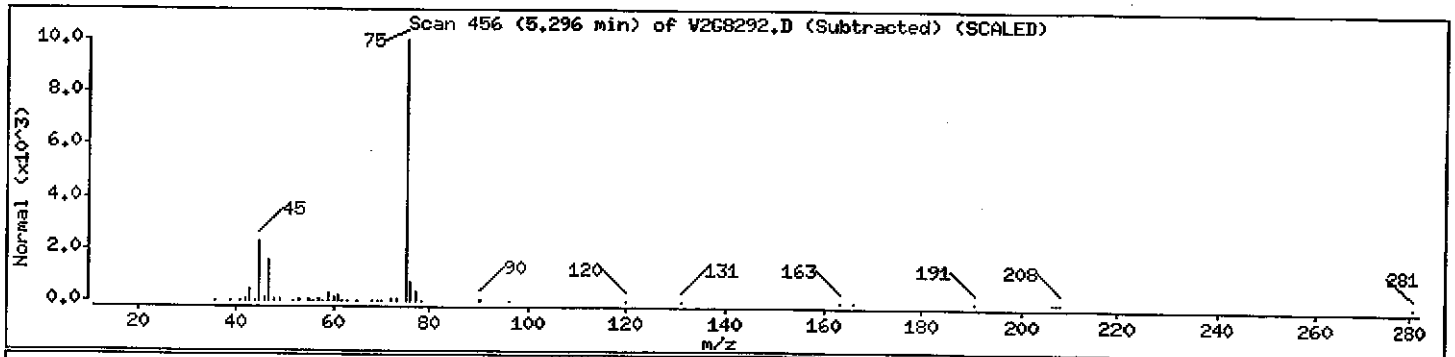
Purge Volume: 5.0

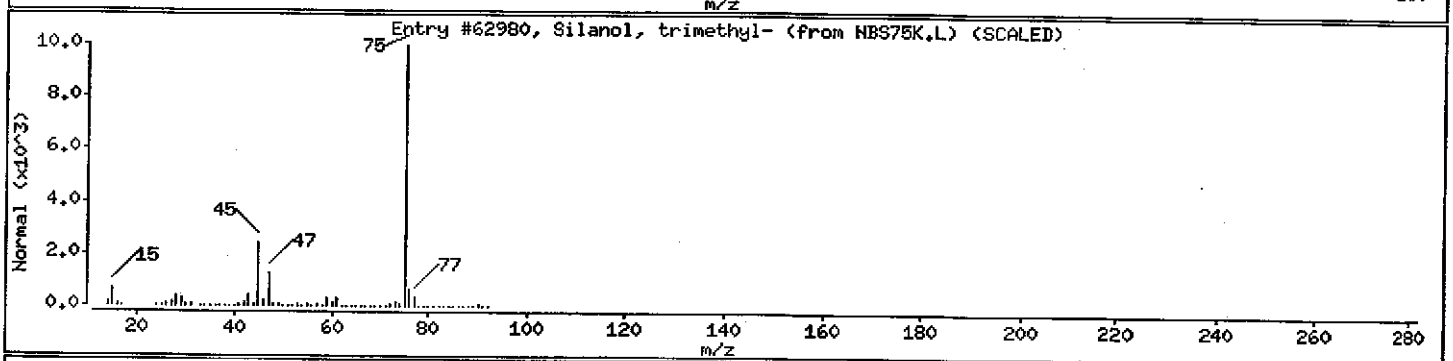
Operator: JC SRC: JC

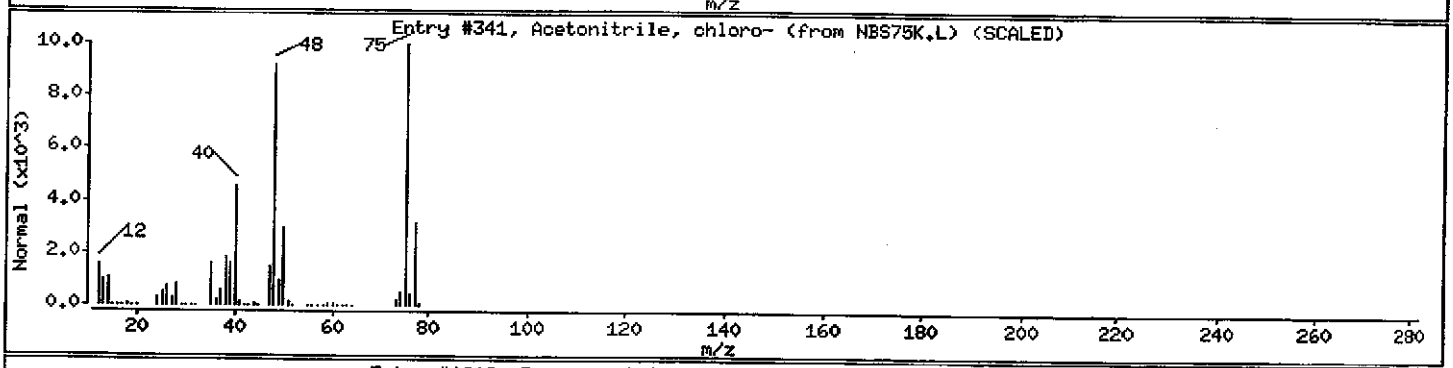
Column phase: DB-624

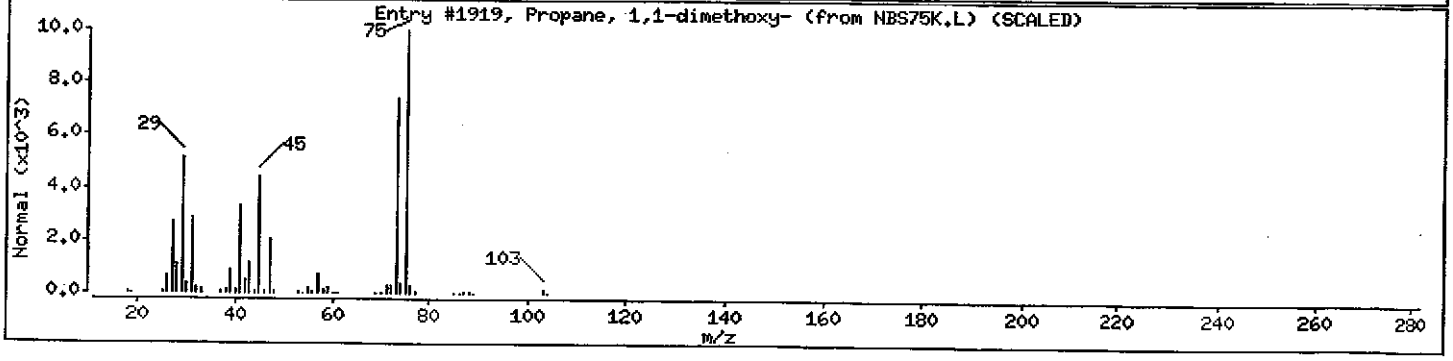
Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Silanol, trimethyl-	1066-40-6	NBS75K.L	62980	91	C3H10OSi	90
Acetonitrile, chloro-	107-14-2	NBS75K.L	341	9	C2H2ClN	75
Propane, 1,1-dimethoxy-	4744-10-9	NBS75K.L	1919	4	C5H12O2	104









1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

V5ELCS

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: LCS-18048

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8293

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	52	
74-87-3	Chloromethane	50	
75-01-4	Vinyl Chloride	50	
74-83-9	Bromomethane	47	
75-00-3	Chloroethane	46	
75-69-4	Trichlorofluoromethane	47	
75-35-4	1,1-Dichloroethene	46	
67-64-1	Acetone	51	
74-88-4	Iodomethane	48	
75-15-0	Carbon Disulfide	47	
75-09-2	Methylene Chloride	52	
156-60-5	trans-1,2-Dichloroethene	52	
1634-04-4	Methyl tert-butyl ether	48	
75-34-3	1,1-Dichloroethane	52	
108-05-4	Vinyl acetate	51	
78-93-3	2-Butanone	57	
156-59-2	cis-1,2-Dichloroethene	53	
590-20-7	2,2-Dichloropropane	51	
74-97-5	Bromochloromethane	51	
67-66-3	Chloroform	50	
71-55-6	1,1,1-Trichloroethane	49	
563-58-6	1,1-Dichloropropene	51	
56-23-5	Carbon Tetrachloride	47	
107-06-2	1,2-Dichloroethane	47	
71-43-2	Benzene	53	
79-01-6	Trichloroethene	51	
78-87-5	1,2-Dichloropropane	52	
74-95-3	Dibromomethane	51	
75-27-4	Bromodichloromethane	50	
10061-01-5	cis-1,3-Dichloropropene	51	
108-10-1	4-Methyl-2-pentanone	51	
108-88-3	Toluene	52	
10061-02-6	trans-1,3-Dichloropropene	49	
79-00-5	1,1,2-Trichloroethane	52	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

V5ELCS

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: LCS-18048

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8293

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

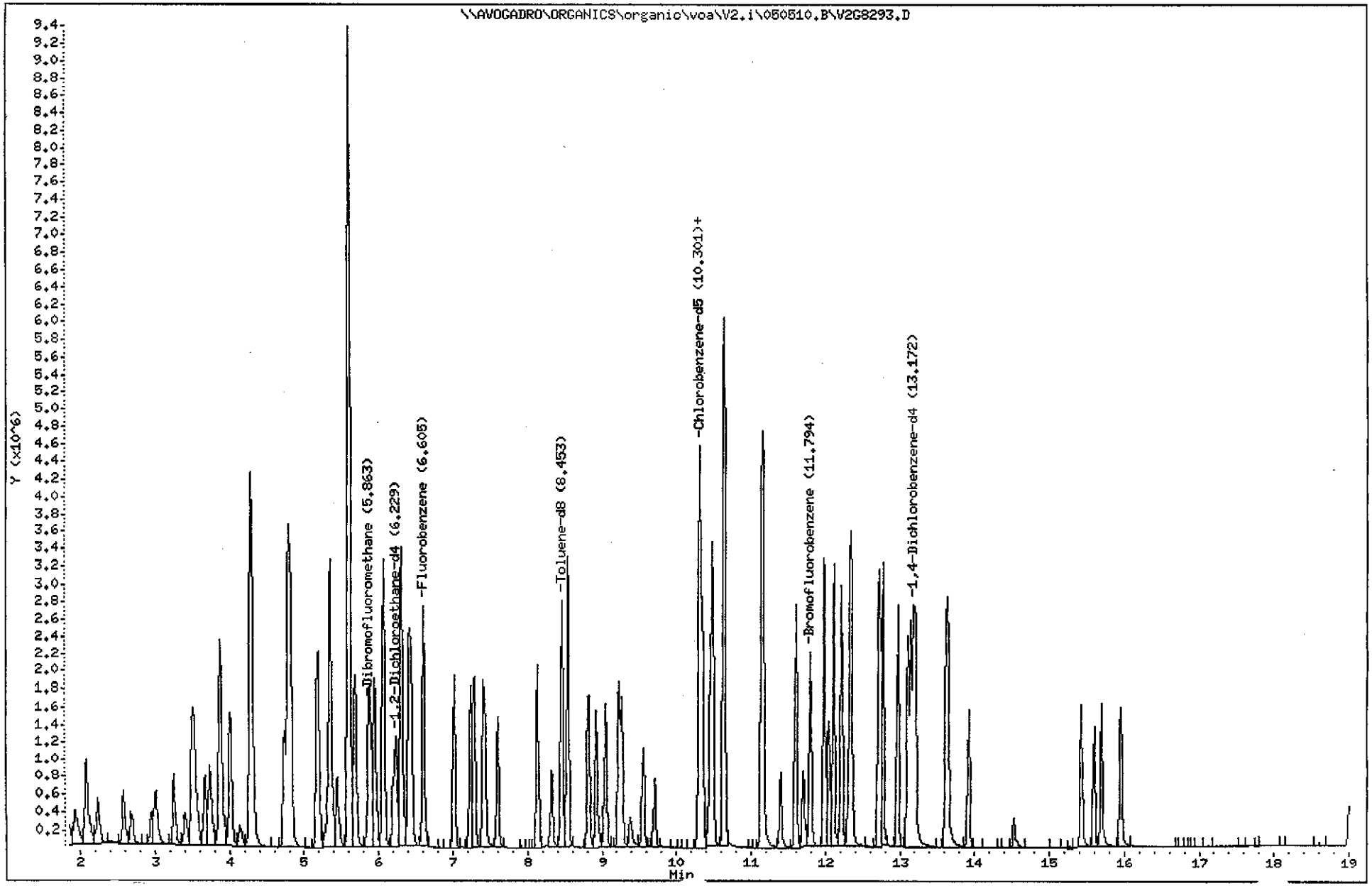
Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	52	
127-18-4	Tetrachloroethene	53	
591-78-6	2-Hexanone	60	
124-48-1	Dibromochloromethane	49	
106-93-4	1,2-Dibromoethane	49	
108-90-7	Chlorobenzene	51	
630-20-6	1,1,1,2-Tetrachloroethane	50	
100-41-4	Ethylbenzene	51	
	m,p-Xylene	100	
95-47-6	o-Xylene	52	
1330-20-7	Xylene (Total)	150	
100-42-5	Styrene	53	
75-25-2	Bromoform	49	
98-82-8	Isopropylbenzene	50	
79-34-5	1,1,2,2-Tetrachloroethane	52	
108-86-1	Bromobenzene	50	
96-18-4	1,2,3-Trichloropropane	55	
103-65-1	n-Propylbenzene	51	
95-49-8	2-Chlorotoluene	50	
108-67-8	1,3,5-Trimethylbenzene	48	
106-43-4	4-Chlorotoluene	49	
98-06-6	tert-Butylbenzene	50	
95-63-6	1,2,4-Trimethylbenzene	50	
135-98-8	sec-Butylbenzene	51	
99-87-6	4-Isopropyltoluene	50	
541-73-1	1,3-Dichlorobenzene	52	
106-46-7	1,4-Dichlorobenzene	54	
104-51-8	n-Butylbenzene	54	
95-50-1	1,2-Dichlorobenzene	50	
96-12-8	1,2-Dibromo-3-chloropropane	49	
120-82-1	1,2,4-Trichlorobenzene	53	
87-68-3	Hexachlorobutadiene	48	
91-20-3	Naphthalene	51	
87-61-6	1,2,3-Trichlorobenzene	52	

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8293.D
Date : 10-MAY-2005 13:26
Client ID: V5ELCS
Sample Info: ,LCS-18048,V5ELCS,18048
Purge Volume: 5.0
Column phase: DB-624

Instrument: V2.i

Operator: JC SRC: JC
Column diameter: 0.25



Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8293.D
Report Date: 19-May-2005 11:01

Mitkem Corporation

Method 8260 Water and Medium Soil

Data file : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8293.D
Lab Smp Id: LCS-18048 Client Smp ID: V5ELCS
Inj Date : 10-MAY-2005 13:26
Operator : JC SRC: JC Inst ID: V2.i
Smp Info : ,LCS-18048,V5ELCS,18048
Misc Info :
Comment :
Method : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\v28260.m
Meth Date : 19-May-2005 11:01 mtl Quant Type: ISTD
Cal Date : 04-MAY-2005 18:27 Cal File: V2G8205.D
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 4.03
Processing Host: TARGET3

Concentration Formula: Amt * DF * Uf * 5/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
1 Dichlorodifluoromethane	85	1.937	1.929	(0.293)	860167	51.8014	52
2 Chloromethane	50	2.083	2.075	(0.315)	1019611	50.0060	50
3 Vinyl Chloride	62	2.240	2.242	(0.339)	776727	49.9681	50
4 Bromomethane	94	2.574	2.576	(0.390)	570462	46.7082	47
5 Chloroethane	64	2.679	2.680	(0.406)	405660	46.0033	46
6 Trichlorofluoromethane	101	3.013	3.004	(0.456)	918335	47.4345	47
8 1,1-Dichloroethene	96	3.503	3.505	(0.530)	582537	46.2205	46
9 Acetone	43	3.566	3.557	(0.540)	396495	50.5717	51
10 Iodomethane	142	3.671	3.672	(0.556)	1148464	47.5316	48
11 Carbon Disulfide	76	3.733	3.735	(0.565)	1872668	47.0491	47
14 Methylene Chloride	84	4.005	4.006	(0.606)	845315	52.4401	52
16 trans-1,2-Dichloroethene	96	4.287	4.288	(0.649)	812708	52.3689	52
17 Methyl tert-butyl ether	73	4.297	4.299	(0.651)	2396606	48.4859	48
18 1,1-Dichloroethane	63	4.736	4.727	(0.717)	1571699	51.9064	52
19 Vinyl acetate	43	4.788	4.779	(0.725)	3889430	51.3707	51
22 2-Butanone	43	5.372	5.374	(0.813)	508715	57.2837	57

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8293.D
Report Date: 19-May-2005 11:01

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
	23 cis-1,2-Dichloroethene	96	5.352	5.343	(0.810)	830556	52.7095	53
	24 2,2-Dichloropropane	77	5.352	5.353	(0.810)	1362981	50.8353	51
	27 Bromochloromethane	128	5.613	5.604	(0.850)	359434	50.6254	51
	28 Chloroform	83	5.686	5.688	(0.861)	1514664	50.2338	50
$	30 Dibromofluoromethane	113	5.863	5.865	(0.888)	802567	46.7969	47
	31 1,1,1-Trichloroethane	97	5.895	5.886	(0.892)	1328408	48.9861	49
	32 1,1-Dichloropropene	110	6.062	6.063	(0.918)	335960	50.5497	51
	33 Carbon Tetrachloride	117	6.072	6.074	(0.919)	1016551	46.8503	47
$	35 1,2-Dichloroethane-d4	102	6.239	6.231	(0.945)	165397	47.9426	48
	36 1,2-Dichloroethane	62	6.323	6.314	(0.957)	1285086	46.9305	47
	37 Benzene	78	6.302	6.293	(0.954)	2797693	53.1467	53
*	38 Fluorobenzene	96	6.605	6.596	(1.000)	2806775	50.0000	
	39 Trichloroethene	130	7.012	7.014	(1.062)	660159	51.1697	51
	40 1,2-Dichloropropane	63	7.283	7.275	(1.103)	764187	52.4057	52
	42 Dibromomethane	93	7.419	7.421	(1.123)	555679	51.1549	51
	43 Bromodichloromethane	83	7.597	7.598	(1.150)	1131051	50.4945	50
	45 cis-1,3-Dichloropropene	75	8.129	8.131	(1.231)	1269875	50.8620	51
	46 4-Methyl-2-pentanone	43	8.317	8.319	(1.259)	850863	50.8808	51
$	47 Toluene-d8	98	8.453	8.454	(0.821)	2200815	47.5293	48
	48 Toluene	91	8.536	8.538	(1.292)	2772587	51.8044	52
	49 trans-1,3-Dichloropropene	75	8.818	8.810	(1.335)	1188713	49.1900	49
	51 1,1,2-Trichloroethane	97	9.048	9.050	(1.370)	613570	52.1047	52
	52 1,3-Dichloropropane	76	9.267	9.259	(0.900)	1076352	51.9782	52
	53 Tetrachloroethene	164	9.226	9.217	(0.896)	508814	52.5867	53
	54 2-Hexanone	43	9.382	9.384	(0.911)	508317	59.6937	60
	55 Dibromochloromethane	129	9.549	9.551	(0.927)	685818	48.5971	49
	56 1,2-Dibromoethane	107	9.706	9.708	(0.942)	638148	49.1781	49
*	57 Chlorobenzene-d5	117	10.301	10.303	(1.000)	1641649	50.0000	
	58 Chlorobenzene	112	10.343	10.344	(1.004)	1656422	51.4596	51
	59 1,1,1,2-Tetrachloroethane	131	10.447	10.449	(1.014)	598919	49.6127	50
	60 Ethylbenzene	106	10.479	10.480	(1.017)	836790	51.2373	51
	61 m,p-Xylene	106	10.635	10.637	(1.032)	2056390	101.696	100
	62 o-Xylene	106	11.136	11.138	(1.081)	1034646	51.9844	52
M	63 Xylene (Total)	106				3091036	153.680	150
	64 Styrene	104	11.157	11.159	(1.083)	1846255	53.4148	53
	65 Bromoform	173	11.397	11.399	(1.106)	495210	48.5828	49
	66 Isopropylbenzene	105	11.596	11.598	(1.126)	2237407	50.0493	50
$	68 Bromofluorobenzene	95	11.794	11.796	(1.145)	925782	48.4800	48
	69 1,1,2,2-Tetrachloroethane	83	11.972	11.973	(0.909)	795288	51.9442	52
	70 Bromobenzene	156	11.982	11.973	(0.910)	673353	49.9103	50(Q)
	71 1,2,3-Trichloropropane	75	12.034	12.036	(0.914)	947896	54.9535	55
	72 n-Propylbenzene	120	12.107	12.109	(0.919)	552655	51.1204	51
	73 2-Chlorotoluene	126	12.212	12.214	(0.927)	550030	50.0321	50
	74 1,3,5-Trimethylbenzene	105	12.316	12.318	(0.935)	1933422	47.8987	48
	75 4-Chlorotoluene	126	12.348	12.339	(0.937)	555392	49.0354	49
	76 tert-Butylbenzene	119	12.713	12.704	(0.965)	2017345	49.8481	50
	77 1,2,4-Trimethylbenzene	105	12.765	12.767	(0.969)	2024290	49.7872	50

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8293.D
Report Date: 19-May-2005 11:01

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
78 sec-Butylbenzene	105	12.964	12.965	(0.984)	2220526	50.7284	51
79 4-Isopropyltoluene	119	13.141	13.143	(0.998)	1653948	50.0748	50
80 1,3-Dichlorobenzene	146	13.099	13.101	(0.994)	1020952	51.5018	52
* 81 1,4-Dichlorobenzene-d4	152	13.172	13.174	(1.000)	742323	50.0000	
82 1,4-Dichlorobenzene	146	13.204	13.206	(1.002)	1122463	53.6450	54
83 n-Butylbenzene	91	13.611	13.613	(1.033)	1691234	53.5862	54
84 1,2-Dichlorobenzene	146	13.642	13.634	(1.036)	1028993	50.3114	50
86 1,2-Dibromo-3-chloropropane	75	14.519	14.532	(1.102)	159003	49.4120	49
87 1,2,4-Trichlorobenzene	180	15.428	15.419	(1.171)	677344	52.8880	53
88 Hexachlorobutadiene	225	15.595	15.597	(1.184)	283392	47.6529	48
89 Naphthalene	128	15.689	15.691	(1.191)	1582954	51.2286	51
90 1,2,3-Trichlorobenzene	180	15.950	15.952	(1.211)	640066	52.3810	52

QC Flag Legend

Q - Qualifier signal failed the ratio test.

SB 5/19/05

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

V5ELCSD

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: LCSD-18048

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8294

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	53	
74-87-3	Chloromethane	50	
75-01-4	Vinyl Chloride	51	
74-83-9	Bromomethane	47	
75-00-3	Chloroethane	48	
75-69-4	Trichlorofluoromethane	46	
75-35-4	1,1-Dichloroethene	46	
67-64-1	Acetone	50	
74-88-4	Iodomethane	48	
75-15-0	Carbon Disulfide	47	
75-09-2	Methylene Chloride	52	
156-60-5	trans-1,2-Dichloroethene	52	
1634-04-4	Methyl tert-butyl ether	50	
75-34-3	1,1-Dichloroethane	51	
108-05-4	Vinyl acetate	53	
78-93-3	2-Butanone	57	
156-59-2	cis-1,2-Dichloroethene	52	
590-20-7	2,2-Dichloropropane	50	
74-97-5	Bromochloromethane	52	
67-66-3	Chloroform	50	
71-55-6	1,1,1-Trichloroethane	48	
563-58-6	1,1-Dichloropropene	50	
56-23-5	Carbon Tetrachloride	46	
107-06-2	1,2-Dichloroethane	48	
71-43-2	Benzene	52	
79-01-6	Trichloroethene	52	
78-87-5	1,2-Dichloropropane	53	
74-95-3	Dibromomethane	53	
75-27-4	Bromodichloromethane	51	
10061-01-5	cis-1,3-Dichloropropene	51	
108-10-1	4-Methyl-2-pentanone	54	
108-88-3	Toluene	52	
10061-02-6	trans-1,3-Dichloropropene	51	
79-00-5	1,1,2-Trichloroethane	53	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

V5ELCSD

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: MD0534

Matrix: (soil/water) WATER Lab Sample ID: LCSD-18048

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V2G8294

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 05/10/05

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

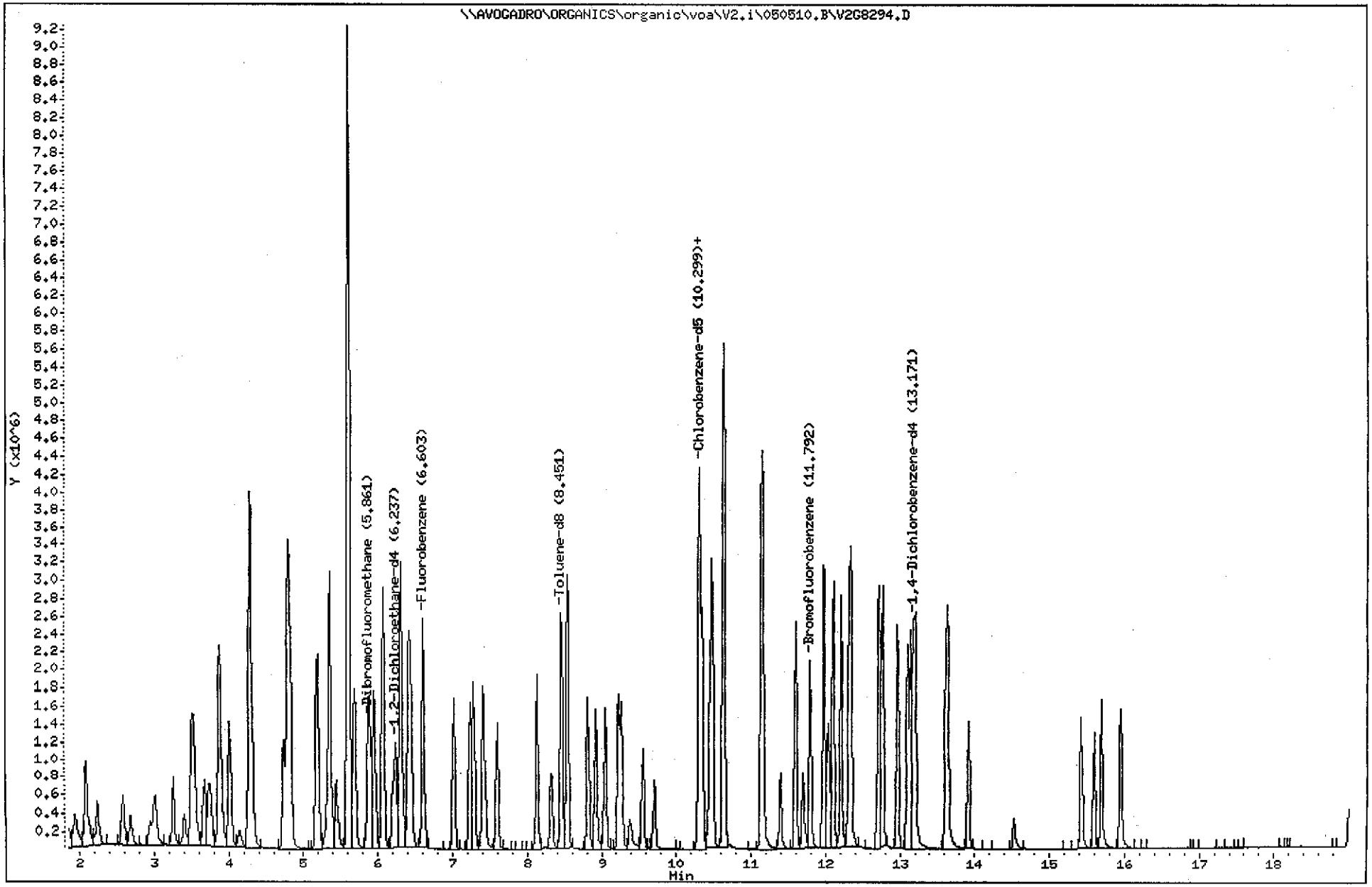
Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
142-28-9	1,3-Dichloropropane	54	
127-18-4	Tetrachloroethene	52	
591-78-6	2-Hexanone	67	
124-48-1	Dibromochloromethane	50	
106-93-4	1,2-Dibromoethane	55	
108-90-7	Chlorobenzene	52	
630-20-6	1,1,1,2-Tetrachloroethane	51	
100-41-4	Ethylbenzene	51	
	m,p-Xylene	100	
95-47-6	o-Xylene	52	
1330-20-7	Xylene (Total)	150	
100-42-5	Styrene	53	
75-25-2	Bromoform	51	
98-82-8	Isopropylbenzene	50	
79-34-5	1,1,2,2-Tetrachloroethane	54	
108-86-1	Bromobenzene	50	
96-18-4	1,2,3-Trichloropropane	58	
103-65-1	n-Propylbenzene	50	
95-49-8	2-Chlorotoluene	49	
108-67-8	1,3,5-Trimethylbenzene	47	
106-43-4	4-Chlorotoluene	49	
98-06-6	tert-Butylbenzene	49	
95-63-6	1,2,4-Trimethylbenzene	49	
135-98-8	sec-Butylbenzene	49	
99-87-6	4-Isopropyltoluene	49	
541-73-1	1,3-Dichlorobenzene	51	
106-46-7	1,4-Dichlorobenzene	55	
104-51-8	n-Butylbenzene	52	
95-50-1	1,2-Dichlorobenzene	51	
96-12-8	1,2-Dibromo-3-chloropropane	50	
120-82-1	1,2,4-Trichlorobenzene	54	
87-68-3	Hexachlorobutadiene	48	
91-20-3	Naphthalene	54	
87-61-6	1,2,3-Trichlorobenzene	53	

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8294.D
Date : 10-MAY-2005 13:52
Client ID: V5ELCSD
Sample Info: ,LCSD-18048,V5ELCSD,18048
Purge Volume: 5.0
Column phase: DB-624

Instrument: V2.i

Operator: JC SRC: JC
Column diameter: 0.25



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Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8294.D
Report Date: 19-May-2005 11:01

Mitkem Corporation

Method 8260 Water and Medium Soil

Data file : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8294.D
Lab Smp Id: LCSD-18048 Client Smp ID: V5ELCSD
Inj Date : 10-MAY-2005 13:52
Operator : JC SRC: JC Inst ID: V2.i
Smp Info : ,LCSD-18048,V5ELCSD,18048
Misc Info :
Comment :
Method : \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\v28260.m
Meth Date : 19-May-2005 11:01 mtl Quant Type: ISTD
Cal Date : 04-MAY-2005 18:27 Cal File: V2G8205.D
Als bottle: 4 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 4.03
Processing Host: TARGET3

Concentration Formula: Amt * DF * Uf * 5/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vo	5.000	Sample Volume purged (mL)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
1 Dichlorodifluoromethane	85	1.935	1.929	(0.293)	814502	52.6842	53
2 Chloromethane	50	2.082	2.075	(0.315)	945634	49.8127	50
3 Vinyl Chloride	62	2.238	2.242	(0.339)	738073	50.9980	51
4 Bromomethane	94	2.583	2.576	(0.391)	533264	46.8962	47
5 Chloroethane	64	2.687	2.680	(0.407)	390965	47.6206	48
6 Trichlorofluoromethane	101	3.011	3.004	(0.456)	825300	45.7861	46
8 1,1-Dichloroethene	96	3.512	3.505	(0.532)	536416	45.7132	46
9 Acetone	43	3.564	3.557	(0.540)	363472	49.7932	50
10 Iodomethane	142	3.669	3.672	(0.556)	1088137	48.3702	48
11 Carbon Disulfide	76	3.742	3.735	(0.567)	1752654	47.2951	47
14 Methylene Chloride	84	4.013	4.006	(0.608)	787540	52.4743	52
16 trans-1,2-Dichloroethene	96	4.285	4.288	(0.649)	751698	52.0250	52
17 Methyl tert-butyl ether	73	4.295	4.299	(0.651)	2293716	49.8411	50
18 1,1-Dichloroethane	63	4.734	4.727	(0.717)	1442162	51.1558	51
19 Vinyl acetate	43	4.786	4.779	(0.725)	3719132	52.7595	53
22 2-Butanone	43	5.371	5.374	(0.813)	473258	57.2380	57

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8294.D
Report Date: 19-May-2005 11:01

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
	23 cis-1,2-Dichloroethene	96	5.350	5.343	(0.810)	765858	52.2032	52
	24 2,2-Dichloropropane	77	5.350	5.353	(0.810)	1237854	49.5877	50
	27 Bromochloromethane	128	5.611	5.604	(0.850)	345640	52.2880	52
	28 Chloroform	83	5.684	5.688	(0.861)	1397870	49.7938	50
$	30 Dibromofluoromethane	113	5.862	5.865	(0.888)	743459	46.5609	47
	31 1,1,1-Trichloroethane	97	5.893	5.886	(0.892)	1206801	47.7977	48
	32 1,1-Dichloropropene	110	6.070	6.063	(0.919)	309927	50.0864	50
	33 Carbon Tetrachloride	117	6.070	6.074	(0.919)	933693	46.2186	46
$	35 1,2-Dichloroethane-d4	102	6.237	6.231	(0.945)	153700	47.8516	48
	36 1,2-Dichloroethane	62	6.321	6.314	(0.957)	1233572	48.3857	48
	37 Benzene	78	6.300	6.293	(0.954)	2566517	52.3660	52
*	38 Fluorobenzene	96	6.603	6.596	(1.000)	2613234	50.0000	
	39 Trichloroethene	130	7.021	7.014	(1.063)	623312	51.8919	52
	40 1,2-Dichloropropane	63	7.282	7.275	(1.103)	717043	52.8145	53
	42 Dibromomethane	93	7.417	7.421	(1.123)	532866	52.6879	53
	43 Bromodichloromethane	83	7.595	7.598	(1.150)	1058492	50.7550	51
	45 cis-1,3-Dichloropropene	75	8.127	8.131	(1.231)	1194171	51.3722	51
	46 4-Methyl-2-pentanone	43	8.315	8.319	(1.259)	845781	54.3227	54
$	47 Toluene-d8	98	8.451	8.454	(0.821)	2071482	47.4014	47
	48 Toluene	91	8.535	8.538	(1.293)	2596717	52.1117	52
	49 trans-1,3-Dichloropropene	75	8.816	8.810	(1.335)	1146606	50.9616	51
	51 1,1,2-Trichloroethane	97	9.046	9.050	(1.370)	581051	52.9976	53
	52 1,3-Dichloropropane	76	9.265	9.259	(0.900)	1051867	53.8220	54
	53 Tetrachloroethene	164	9.224	9.217	(0.896)	477766	52.3196	52
	54 2-Hexanone	43	9.380	9.384	(0.911)	540642	67.2723	67
	55 Dibromochloromethane	129	9.547	9.551	(0.927)	669772	50.2876	50
	56 1,2-Dibromoethane	107	9.704	9.708	(0.942)	671523	54.8332	55
*	57 Chlorobenzene-d5	117	10.299	10.303	(1.000)	1549344	50.0000	
	58 Chlorobenzene	112	10.341	10.344	(1.004)	1584639	52.1625	52
	59 1,1,1,2-Tetrachloroethane	131	10.445	10.449	(1.014)	579666	50.8786	51
	60 Ethylbenzene	106	10.477	10.480	(1.017)	792340	51.4060	51
	61 m,p-Xylene	106	10.633	10.637	(1.032)	1965160	102.974	100
	62 o-Xylene	106	11.135	11.138	(1.081)	968118	51.5397	52
M	63 Xylene (Total)	106				2933278	154.514	150
	64 Styrene	104	11.155	11.159	(1.083)	1723361	52.8298	53
	65 Bromoform	173	11.396	11.399	(1.106)	490293	50.9661	51
	66 Isopropylbenzene	105	11.594	11.598	(1.126)	2097155	49.7069	50
$	68 Bromofluorobenzene	95	11.792	11.796	(1.145)	870979	48.3274	48
	69 1,1,2,2-Tetrachloroethane	83	11.970	11.973	(0.909)	785620	53.8122	54
	70 Bromobenzene	156	11.980	11.973	(0.910)	647378	50.3223	50(Q)
	71 1,2,3-Trichloropropane	75	12.033	12.036	(0.914)	948215	57.6497	58
	72 n-Propylbenzene	120	12.106	12.109	(0.919)	514645	49.9233	50
	73 2-Chlorotoluene	126	12.210	12.214	(0.927)	511391	48.7833	49
	74 1,3,5-Trimethylbenzene	105	12.314	12.318	(0.935)	1796584	46.6767	47
	75 4-Chlorotoluene	126	12.346	12.339	(0.937)	534607	49.4994	49
	76 tert-Butylbenzene	119	12.711	12.704	(0.965)	1872361	48.5192	49
	77 1,2,4-Trimethylbenzene	105	12.763	12.767	(0.969)	1880756	48.5102	49

Data File: \\AVOGADRO\ORGANICS\organic\voa\V2.i\050510.B\V2G8294.D
Report Date: 19-May-2005 11:01

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
78 sec-Butylbenzene	105	12.962	12.965	(0.984)	2025670	48.5310	49
79 4-Isopropyltoluene	119	13.139	13.143	(0.998)	1542887	48.9877	49
80 1,3-Dichlorobenzene	146	✓13.098	13.101	(0.994)	967413	51.1781	51
* 81 1,4-Dichlorobenzene-d4	152	13.171	13.174	(1.000)	707844	50.0000	
82 1,4-Dichlorobenzene	146	✓13.202	13.206	(1.002)	1092032	54.7328	55
83 n-Butylbenzene	91	13.609	13.613	(1.033)	1564190	51.9750	52
84 1,2-Dichlorobenzene	146	✓13.641	13.634	(1.036)	998999	51.2241	51
86 1,2-Dibromo-3-chloropropane	75	14.518	14.532	(1.102)	152634	49.7432	50
87 1,2,4-Trichlorobenzene	180	15.426	15.419	(1.171)	660402	54.0769	54
88 Hexachlorobutadiene	225	15.593	15.597	(1.184)	271010	47.7906	48
89 Naphthalene	128	15.687	15.691	(1.191)	1597192	54.2072	54
90 1,2,3-Trichlorobenzene	180	15.948	15.952	(1.211)	621579	53.3459	53

QC Flag Legend

Q - Qualifier signal failed the ratio test.

JB 5/19/05

Instrument V 2
Injection Log

Mitkem Corporation
Volatiles Laboratory

METHOD: V8260
INITIAL CAL: 5-4-05
COMMENTS:

CAL ID: VW050425A-IS
IS/SS ID: VW050425B-SS
VW050425C-STD

ANALYST: JC
DATE: 5-4-05
DATE PRINTED:
DATE LOADED:

AS #	FILE		MITKEM ID	CLIENT ID	SAMPLE SIZE	DIL	COMMENTS	IS	SS	pH
	V2G82	00	BFB2A	BFB2A	2ml	-	Passed 15:31			
		01	VSTD0502A	VSTD0502A	5ml	-				
		02	VSTD0052A	VSTD0052A		-	Trial for			
		03	VSTD2002A	VSTD2002A		-	8260 Ad			
		04	VSTD1002A	VSTD1002A		-				
		05	VSTD0202A	VSTD0202A		-				
	V2G8206		ICV	ICV	5ml	-				

N/A
5-5-05

Logbook ID 90.0206-03/05

Reviewed By: SB 5/18/05

Page #: 034

Instrument V 2
Injection Log

Mitkem Corporation
Volatiles Laboratory

METHOD: V28260
INITIAL CAL: 5/4/05
COMMENTS:

CAL ID: VW050425A -IS
IS/SS ID: VW050425B -SS
VW050425C - STD

ANALYST: JC
DATE: 5/10/05
DATE PRINTED:
DATE LOADED:

AS #	FILE		MITKEM ID		CLIENT ID	SAMPLE SIZE	DIL	COMMENTS	IS	SS	pH
	V2G82	90	BFB2E		BFB2E	2ml	-	OK (11:16)			
		91	VSTD0502E		VSTD0502E	5ml	-	OK			
		92	MB-18048		VBLK5E		-	OK	✓	✓	
		93	LCS-18048		V5ELCS		-	OK	✓	✓	
		94	LCSD-18048		V5ELCSD	5ml	-	OK	✓	✓	
		95	D0486-	01A	0504-06490-001	25ml	-	ok	✓	N/A	Air
		96	↓	02A	0504-06490-002		-	ok	✓	N/A	Air
		97	D0486-	03A	0504-06490-003		-	ok	✓	N/A	Air
		98	D0503-	01A	SVE EFFLUENT	25ml	-	ok	✓	N/A	Air
		99	D0534-	01A	G-A203	5ml	-	ok	✓	✓	
	V2G83	00		02A	G-A077		-	OK	✓	✓	
		01		03A	G-A143		-	OK	✓	✓	
		02		04A	H-A143		-	OK	✓	✓	
		03		05A	G-A167		-	ok	✓	✓	
		04		06A	H-A167		-	OK	✓	✓	
		05		07A	G-A173		-	OK	✓	✓	
		06	↓	08A	G-A200		-	ok	✓	✓	
		07	D0534	09A	G-A142		-	ok (20:17)	✓	✓	
		08	VIBLK2E		VIBLK2E		-	ok	✓	✓	
		09	↓		↓		-	ok	✓	✓	
		10	VIBLK2E		VIBLK2E		-	ok	✓	✓	
	V2G83	11	D0407-	01J	Pond 6 Culvert	5ml	-	RR2X (2-But: 330)	✓	✓	624
						N/A					

Logbook ID 90.0206-03/05

Reviewed By: SB 5/19/05

Page #: 038

MITKEM CORPORATION: VOLATILES RECEIVING LOGBOOK

VOA Log-In Date	Workorder	Client	Sample Numbers	Relinquished By	Refrigerator ID	Comments
5/09/05	D0529	DAY	01 — 03	JH	R-4	250ml's — 1 HCl
5/9/05	D0534	Ensafe	01 → 09	[illegible]	R-10	
5/9/05	D0532	GZA/Mianc	01 → 04	[illegible]	R-10	
5/10/05	D0536	Maguire	01	SB	R4	72hr TAT
	D0522	Ensafe	12-18	SB	R10	(Spl #18 run at DL)
	D0521	Berger	19-20		R4	
	D0538	Tectonic	01-04		R10	04 = AQTB
	D0537	Berger	01-12		R4	
	D0539	CH2M Hill	01-09	SB	R4	only 1 vial for -03B
5.10.05	D0483	GZA	08-09	JH	R4	
5.10.05	D0540	CDM	01-02	JH	R4	
5.11.05	D0542	EnvTech	01-03	JH	R-4	
5.11.05	D0541	TRC	01-08, 12-14, 10	JH	R-10	
5-11-05	D0540	RIRRC	03, 04, 05	JC	R4	
5-12-05	D0546	RIRRC ~~01-04~~ JC 5-12-05	01-04	JC	R4	

Logbook 0.0191-05/04 Reviewed By: SB 5/1[illegible] Page #: 91

Last Page of Data Report

Appendix L
Vapor Intrusion Screening

To assess the potential for vapor intrusion at the Stamina Mills Site, USEPA's *Draft Guidance for Assessing Vapor Intrusion* (USEPA, November 2002) was used. This guidance outlines the lines of evidence to be considered during evaluation of a vapor migration/intrusion problem:

- Tier 1 Primary Screening – evaluates fundamental potential for volatile chemicals in the subsurface

- Tier 2 Secondary Screening – evaluates limited Site-specific data regarding the contaminant source and subsurface conditions

- Tier 3 Site-Specific Pathway Assessment – evaluates detailed Site-specific information and confirmatory sub-slab and/or indoor air sampling

Tier 1 and 2 screening was performed using readily available information from the Stamina Mills RI/FS.

The analysis concluded that while there are no vapor intrusion issues onsite, data are insufficient to screen out the potential for vapor migration/intrusion offsite from groundwater due to uncertainties regarding depth to bedrock, depth to groundwater, current groundwater quality, and building foundation construction.

Vapor Intrusion Screening			
Question Number	**Question**	**Response**	**Comments/ Actions Required**
Tier 1 – Primary Screening			
Q1	Are chemicals of sufficient volatility and toxicity known or reasonably suspected to be present in the subsurface (e.g., in unsaturated soils, soil gas, or the uppermost portions of the groundwater and/or capillary fringe – see Table 1).	Yes – TCE, DCE, and VC are all present or reasonably expected to be present onsite and in the groundwater plume north of the compliance boundary.	
Q2	Are currently (or potentially) inhabited buildings or areas of concern under future development scenarios located *near* subsurface contaminants found in Table 1?	Yes – the groundwater plume extends north of the compliance boundary beneath residences north of School Street, and residential wells indicate the piezometric surface varies from 8 to 50 feet below ground surface. Residences are approximately 100 feet or more from the source area.	It is unclear whether the water table measurements represent confined or unconfined conditions. No wells are screened in overburden materials north of School Street. Well data are homogenized across the entire well depth; no discrete interval data are available to show where contamination is within the aquifer.
Q3	Does evidence suggest immediate action may be warranted to mitigate current risks?	No – no evidence suggests that vapor intrusion is occurring.	Note: use of the wet basement criterion is compromised offsite, as residences are uphill and basement status may be more representative of localized drainage/infiltration issues than of groundwater conditions.
Tier 2 – Secondary Screening			
Q4(a)	Are indoor air quality data available?	No	
Q4(c)	Is there any potential contamination (source of vapors) in the unsaturated zone soil at any depth above the water table?	No – no known source is present in vadose soil offsite. TCE contamination was limited in extent to the TCE spill area onsite.	

Vapor Intrusion Screening			
Question Number	**Question**	**Response**	**Comments/ Actions Required**
Q4(d)	Do measured or reasonably estimated groundwater concentrations exceed the generic target media-specific concentrations given in Tables 2(a), 2(b), and 2(c)?	Yes – the generic target media specific concentrations for TCE are: 1E-06 = 5.0 µg/L 1E-05 = 5.0 µg/L 1E-04 = 5.3 µg/L Groundwater concentrations in currently monitored offsite wells range from 3 to 28 µg/L. In wells not monitored during Phase II and Phase III activities, 1986 through 1993 data indicate a contaminant range from below detection limits to a maximum of 250 µg/L. Maximum detection in November 1992 was not reproduced in subsequent 1993 events.	Well data are homogenized across the entire well depth; no discrete interval data are available. Shallower intervals may or may notmeet generic target media-specific criteria.
Q5(a)	Do groundwater and/or soil gas concentrations for any constituents of potential concern exceed target media-specific concentrations by a factor greater than 50?	No – see concentration ranges above. Most recent concentration data are: I-12 = 2.3 µg/L (June 2004) I-37 = 14 µg/L (June 2004) A-175 = <0.6 µg/L (June 2004) I-7 = 89 µg/L (Dec. 1993) I-20 = Not Available I-31 = <1 µg/L (Nov. 1992) I-24 = 2 µg/L (Nov. 1992)	
Q5(b)	Are there Site specific conditions and/or data limitations under which we would not recommend the use of semi-Site specific attenuation factors (based on the Johnson-Ettinger Model)?	Yes – there are several unknowns regarding offsite conditions, including: - potential groundwater at depths of less than 15 feet bgs - unknowns regarding fracture connectivity and outcrops, creating preferential pathways. Site specific assessment required.	Assess depth to bedrock, presence of water in saturated overburden, collect soil gas samples from overburden materials.

Appendix M
Residential Well Index

APPENDIX M - RESIDENTIAL WELL INDEX
STAMINA MILLS SUPERFUND SITE
NORTH SMITHFIELD, RI

			SURVEY RESULTS						
PLAT-LOT	LOCATION	Well ID	HOUSENUM	PRIVATE WELL	PUBLIC WATER	NON POTABLE WELL	INACTIVE WELL	YEAR INSTALLED	TOTAL DEPTH
005-393	FREITAS LANE	I-34	10		X		X		
005-284	FREITAS LANE	I-13	16		X		X		
005-277	FREITAS LANE	I-21	19		X		X	1972	280
005-285	FREITAS LANE	I-12	20						
005-345	KIRBY LANE	I-36	8						
005-328	KIRBY LANE	I-10	9		X	X			
005-329	KIRBY LANE	I-25	11						
005-309	KIRBY LANE	I-15	14		X		X		
005-330	KIRBY LANE	I-5	15		X				
005-340	KIRBY LANE	A-76	16						
005-331	KIRBY LANE	I-15	19		X		X	1960	209
005-334	KIRBY LANE	A-79	23	X				1960	220
005-335	KIRBY LANE	A-78	25						
005-338	KIRBY LANE	A-77	29	X				1964	440
005-300	LITZEN RD	A-89	22						
005-304	LITZEN RD	A-84	28						
005-301	LITZEN RD	A-85	31	X				1953	230
005-296	LITZEN RD	A-87	37						
005-310	LITZEN RD	A-83	44						
005-303	LITZEN RD	A-90	47	X				1954	130
005-391	LITZEN RD	A-88	50	X				2000	150
005-356	LITZEN RD		56						
005-379	LITZEN RD	A-86	59						
005-281	LITZEN RD								
005-358	LORRAINE AVE	A-98	23						
005-456	LORRAINE AVE	A-92	24	X				1950	120
005-359	LORRAINE AVE	A-96	25	X				1958	135
005-373	LORRAINE AVE	A-97	26	X				1958	98
005-374	LORRAINE AVE	A-95	27						
005-353	LORRAINE AVE	A-91	33	X					
005-366	LORRAINE AVE		38						
005-041	LORRAINE AVE	A-93	42						
005-233	MAPLE AVE	A-107	5						
005-295	MAPLE AVE	A-109	6	X					240
005-206	MAPLE AVE	A-111	9	X					
005-298	MAPLE AVE	A-99	11						
005-174	MAPLE AVE	A-105	12	X					
005-185	MAPLE AVE	A-103	14	X					
005-171	MAPLE AVE	A-100	16						
005-238	MAPLE AVE		18		X				
005-181	MAPLE AVE		21						
005-201	MAPLE AVE	A-102	22						
005-183	MAPLE AVE		25						
005-248	MAPLE AVE		26		X	X			
005-204	MAPLE AVE		27		X				
005-199	MAPLE AVE	I-16	29						
005-315	MAPLE AVE	I-26	30						
005-186	MAPLE AVE		31						
005-316	MAPLE AVE		32		X				
005-209	MAPLE AVE	I-39	33		X				
005-231	MAPLE AVE	I-40	37		X		X	1940	500
005-252	MAPLE AVE	I-45	42						
005-133	MAPLE AVE		43						
005-178	MAPLE AVE	I-44	44		X		X		
005-286	MAPLE AVE	I-43	46						
005-134	MAPLE AVE	I-33	47		X			1856	
005-282	MAPLE AVE	I-11	50		X		X		
005-269	MAPLE AVE	I-14	51		X				
005-136	MAPLE AVE	I-30	53						
005-437	MAPLE AVE	I-42	54						
005-137	MAPLE AVE		55						
005-265	MAPLE AVE	I-41	58		X		X		
005-259	MAPLE AVE	I-27	60		X		X		
005-034	MAPLE AVE		62						
005-132	MAPLE AVE	I-32							
005-243	MAPLE AVE								
005-299	ROSELAWN AVE	A-137	1	X	X			1953	
005-020	ROSELAWN AVE	A-138	3	X				1979	250
005-187	ROSELAWN AVE	A-144	4		X	X		1940	75
005-234	ROSELAWN AVE	A-146	8	X				1950	200
005-403	ROSELAWN AVE	A-139	9	X				1965	
005-420	ROSELAWN AVE	A-142	10						
005-419	ROSELAWN AVE		11	X				1965	
005-424	ROSELAWN AVE	A-141	12						
005-388	ROSELAWN AVE	A-136	14		X	X		1961	
005-370	ROSELAWN AVE		15		X				
005-230	ROSELAWN AVE	I-23	16						
005-444	ROSELAWN AVE	A-143	17	X				1950	250
005-412	ROSELAWN AVE	I-2	18		X				
005-408	ROSELAWN AVE	A-140	19		X	X		1958	385
005-446	ROSELAWN AVE	I-9	21		X				
005-409	ROSELAWN AVE	I-19	23		X		X	1965	350
005-434	ROSELAWN AVE (REAR)								
006-001	SCHOOL ST		20						
005-305	SCHOOL ST		22						
005-006	SCHOOL ST		30						
005-007	SCHOOL ST		40	X					200
005-008	SCHOOL ST		42						
005-372	SCHOOL ST		43						
005-383	SCHOOL ST		47						
005-009	SCHOOL ST		52		X				
005-105	SCHOOL ST		53		X	X			
005-010	SCHOOL ST		54						
005-011	SCHOOL ST		58						

APPENDIX M - RESIDENTIAL WELL INDEX
STAMINA MILLS SUPERFUND SITE
NORTH SMITHFIELD, RI

PLAT-LOT	LOCATION	Well ID	SURVEY RESULTS						
			HOUSENUM	PRIVATE WELL	PUBLIC WATER	NON POTABLE WELL	INACTIVE WELL	YEAR INSTALLED	TOTAL DEPTH
005-400	SCHOOL ST		59						
005-004	SCHOOL ST		60						
005-012	SCHOOL ST		62						
005-208	SCHOOL ST		66						
005-013	SCHOOL ST		70						
005-406	SCHOOL ST		73						
005-014	SCHOOL ST		74						
005-237	SCHOOL ST		76						
005-015	SCHOOL ST		78						
005-017	SCHOOL ST		82						
005-283	SCHOOL ST		84						
005-423	SCHOOL ST		90		X				
005-175	SCHOOL ST		94						
005-176	SCHOOL ST	A-175, A-176	98						
005-170	SCHOOL ST		100						
005-150	SCHOOL ST		104						
005-149	SCHOOL ST		108						
005-148	SCHOOL ST	A-152	110						
005-147	SCHOOL ST		112						
005-146	SCHOOL ST		114						
005-145	SCHOOL ST	I-37	116		X		X		
005-144	SCHOOL ST		118		X				
005-143	SCHOOL ST		120						
005-142	SCHOOL ST	I-28	122						
005-141	SCHOOL ST		124						
005-140	SCHOOL ST	I-7	126						
005-139	SCHOOL ST	I-24	128		X		X	1978	110
005-138	SCHOOL ST	I-20	130						
005-435	SCHOOL ST	I-31	134						
005-257	SCHOOL ST		152						
005-035	SCHOOL ST	A-167	162		X	X		1960	480
005-038	SCHOOL ST	A-147	166						
005-153	SCHOOL ST		173						
005-271	SCHOOL ST	A-174	174						
005-154	SCHOOL ST	I-16	175						
005-155	SCHOOL ST	I-38	177						
005-152	SCHOOL ST	A-168	178						
005-156	SCHOOL ST	I-8	179		X		X	1968	155
005-157	SCHOOL ST	I-3	181						
005-158	SCHOOL ST	I-22	183		X		X		600
005-159	SCHOOL ST	I-17	187						
005-160	SCHOOL ST		189						
005-288	SCHOOL ST	I-1	191						
005-355	SCHOOL ST	A-173	193	X				1937	288
005-106	SCHOOL ST	A-156	194	X					
005-046	SCHOOL ST	A-162	197		X	X		1960	355
005-047	SCHOOL ST	A-164	201						
005-476	SCHOOL ST		203						
005-048	SCHOOL ST	A-155	205						
005-294	SCHOOL ST	A-165	207						
005-005	SCHOOL ST								
005-033	SCHOOL ST								
005-039	SCHOOL ST	A-159							
005-168	SCHOOL ST								
005-249	SCHOOL ST								
005-346	SCHOOL ST								
002-061	VICTORY HWY		219	X					200
002-023	VICTORY HWY		233	X				1934	
002-053	VICTORY HWY		235						
005-240	VICTORY HWY		246	X					450
005-245	VICTORY HWY	A-106	250						
002-024	VICTORY HWY	A-215	261	X				1975	360
002-026	VICTORY HWY		267						
002-043	VICTORY HWY		270						
002-104	VICTORY HWY		275	X				1980	
002-046	VICTORY HWY		285						
002-062	VICTORY HWY		286	X					250
002-076	VICTORY HWY		293	X					
002-102	VICTORY HWY		295	X				1951	50
002-063	VICTORY HWY		302						
002-052	VICTORY HWY		305	X					
002-140	VICTORY HWY	A-214	323	X				1989	
002-010	VICTORY HWY		333	X					
002-051	VICTORY HWY		354	X					
002-009	VICTORY HWY		355						
002-124	VICTORY HWY	A-216	356						
002-069	VICTORY HWY		357						
002-041	VICTORY HWY		358						
002-091	VICTORY HWY		383	X				1970	350
002-090	VICTORY HWY		405						
002-113	VICTORY HWY		431						
002-065	VICTORY HWY		443						
002-086	VICTORY HWY		445	X				1950	150
002-082	VICTORY HWY		451						
002-050	VICTORY HWY		460						
002-084	VICTORY HWY		473						
002-167	VICTORY HWY		484						
002-085	VICTORY HWY		489						
002-159	VICTORY HWY		490						
002-221	VICTORY HWY		502						
002-083	VICTORY HWY		503	X				1975	15
002-087	VICTORY HWY		515	X				1948	150
002-027	VICTORY HWY		531						
002-136	VICTORY HWY		536						

APPENDIX M - RESIDENTIAL WELL INDEX
STAMINA MILLS SUPERFUND SITE
NORTH SMITHFIELD, RI

			SURVEY RESULTS						
PLAT-LOT	LOCATION	Well ID	HOUSENUM	PRIVATE WELL	PUBLIC WATER	NON POTABLE WELL	INACTIVE WELL	YEAR INSTALLED	TOTAL DEPTH
002-081	VICTORY HWY		539						
002-143	VICTORY HWY		544						
002-301	VICTORY HWY		554						
002-116	VICTORY HWY		557						
002-300	VICTORY HWY		570						
002-218	VICTORY HWY								
005-468	VICTORY HWY								
005-314	WILDWOOD RD	A-205	1	X				1963	500
005-235	WILDWOOD RD	A-200	2	X				1959	90
005-313	WILDWOOD RD	A-210	3	X				1954	
005-317	WILDWOOD RD	A-201	5						
005-326	WILDWOOD RD	A-206	6	X				1970	
005-318	WILDWOOD RD	A-203	7						
005-327	WILDWOOD RD		8	X				1965	200
005-319	WILDWOOD RD		9	X				1953	170
005-401	WILDWOOD RD	A-209	10	X				1961	625
005-320	WILDWOOD RD	A-202	11	X				1965	
005-040	WILDWOOD RD	A-196	12						
005-387	WILDWOOD RD	A-199	14	X				1960	440
005-325	WILDWOOD RD		16						
005-322	WILDWOOD RD		17						
005-323	WILDWOOD RD	A-208	19						

APPENDIX M - RESIDENTIAL WELL INDEX
STAMINA MILLS SUPERFUND SITE
NORTH SMITHFIELD, RI

PLAT-LOT	LOCATION	Well ID	HOUSENUM	OWNER (2005)	STREET ADDRESS		
005-277	FREITAS LANE	I-21	19	LOWE ROBERT B & MARION F	19 FREITAS LANE POB 698	FORESTDALE RI 02824-0000	
005-284	FREITAS LANE	I-13	16	CHRISMAN GERALDINE F	16 FREITAS LANE PO BOX 146	FORESTDALE RI 02824-0000	
005-285	FREITAS LANE	I-12	20	CHRISTIE KEITH A & KIM J T/E	20 FREITAS LANE PO BOX 635	FORESTDALE RI 02824-0000	
005-393	FREITAS LANE	I-34	10	WHEATON GUY E JR & DONNA J	10 FREITAS LANE POB 73	FORESTDALE RI 02824-0000	
005-309	KIRBY LANE	I-15	14	GRENIER ROBERT P & ANNA T/E	14 KIRBY LANE	FORESTDALE RI 02824	
005-328	KIRBY LANE	I-10	9	GIGUERE CLIVE E & LAURA N T/E	PO BOX 621	FORESTDALE RI 02824-0000	
005-329	KIRBY LANE	I-25	11	CAPRARO THOMAS E & LISA A GAGNON T/E	11 KIRBY LANE	NORTH SMITHFIELD RI 02896	
005-330	KIRBY LANE	I-5	15	BARTLETT THERESE R	15 KIRBY LANE PO BOX 233	FORESTDALE RI 02824-0000	
005-331	KIRBY LANE	I-15	19	THE BELISLE FAMILY LIVING TRUST	C/O FLORENCE BELISLE	P O BOX 163	FORESTDALE RI 02824-0000
005-334	KIRBY LANE	A-79	23	MASSE MARCEL D	23 KIRBY LANE	PO BOX 183	FORESTDALE RI 02824
005-335	KIRBY LANE	A-78	25	FORGET DONNA A	25 KIRBY LANE PO BOX 88	FORESTDALE RI 02824-0000	
005-338	KIRBY LANE	A-77	29	DAVIS HAROLD W & CAROL I T/E	29 KIRBY LANE PO BOX 252	FORESTDALE RI 02824-0000	
005-340	KIRBY LANE	A-76	16	O'MALLEY THOMAS P & HARRINGTON BONNIE T/	16 KIRBY LANE	PO BOX 125	FORESTDALE RI 02824
005-345	KIRBY LANE	I-36	8	TETREAULT GAIL L	8 KIRBY LANE PO BOX 122	FORESTDALE RI 02824-0000	
005-281	LITZEN RD			LIGHTOWLER THERESA	PO BOX 114	FORESTDALE RI 02824-0000	
005-296	LITZEN RD	A-87	37	CLOUGH KEITH A	37 LITZEN RD	FORESTDALE RI 02824	
005-300	LITZEN RD	A-89	22	LIGHTOWLER FRANK E & THERESA C	22 LITZEN RD PO BOX 114	FORESTDALE RI 02824-0000	
005-301	LITZEN RD	A-85	31	GOULD DANA J	PO BOX 1094	SLATERSVILLE RI 02876-1094	
005-303	LITZEN RD	A-90	47	HAFFNER LAMAR L & DOROTHY CO-TRUSTEES	47 LITZEN RD	N SMITHFIELD RI 02896-0000	
005-304	LITZEN RD	A-84	28	SHERMAN MITCHELL M & KATHLEEN M T/E	28 LITZEN RD	N SMITHFIELD RI 02896-0000	
005-310	LITZEN RD	A-83	44	CHEAMITRU VICTORIA	44 LITZEN RD	N SMITHFIELD RI 02896	
005-356	LITZEN RD		56	VADENAIS DIANE L & DENNIS J T/E	56 LITZEN ROAD	NORTH SMITHFIELD RI 02896	
005-379	LITZEN RD	A-86	59	ST ONGE DOROTHEA L TRUSTEE	59 LITZEN RD	PO BOX 278	FORESTDALE RI 02824
005-391	LITZEN RD	A-88	50	HEROUX ELAINE V	50 LITZEN RD PO BOX 904	SLATERSVILLE RI 02876-0000	
005-041	LORRAINE AVE	A-93	42	BOUCHARD CORA C & BROWN LORRAINE D JT	42 LORRAINE AVE POB 175	FORESTDALE RI 02824-0000	
005-353	LORRAINE AVE	A-91	33	BRODEUR ROBERT C & GAIL L T/E	33 LORRAINE AVE	NORTH SMITHFIELD RI 02896	
005-358	LORRAINE AVE	A-98	23	SCHWEGLER JOHN & JULIE T/E	23 LORRAINE AVE	NORTH SMITHFIELD RI 02896	
005-359	LORRAINE AVE	A-96	25	MCCOOEY THOMAS S & SALLY N T/E	25 LORRAINE AVE	N SMITHFIELD RI 02896-0000	
005-366	LORRAINE AVE		38	TELLIER RICHARD N & DEBORAH T/E	38 LORRAINE AVE	FORESTDALE RI 02824	
005-373	LORRAINE AVE	A-97	26	KIERNAN BERNARD J & JOHNNA M T/E	26 LORRAINE AVE	N SMITHFIELD RI 02896-0000	
005-374	LORRAINE AVE	A-95	27	DUFAULT ANDRE R & DENISE M T/E	27 LORRAINE AVE POB 674	FORESTDALE RI 02824-0000	
005-456	LORRAINE AVE	A-92	24	ROUSSELLE MARCEL P & PATRICIA A	24 LORRAINE AVE PO BOX 68	FORESTDALE RI 02824-0000	
005-034	MAPLE AVE		62	TRINQUE DENNIS R & DONNA M	60 MAPLE AVE PO BOX 682	FORESTDALE RI 02824	
005-132	MAPLE AVE	I-32		FORESTDALE WATER SYSTEM	.	. . 02876-0000	
005-133	MAPLE AVE		43	BURNISKE JEFFREY R	43 MAPLE AVE	FORESTDALE RI 02824	
005-134	MAPLE AVE	I-33	47	LILLEY JOHN S & FIELER ANN Y T/E	47 MAPLE AVE PO BOX 113	FORESTDALE RI 02824-0000	
005-136	MAPLE AVE	I-30	53	HARPIN-TUTAJ LISA J	PO BOX 21	FORESTDALE RI 02824-0000	
005-137	MAPLE AVE		55	TOLLIVER SANDRA A & BRIAN BURSELL	55 MAPLE AVE	P O BOX 116	FORESTDALE RI 02824
005-171	MAPLE AVE	A-100	16	GIBBS SCOTT A & JANET ELIZABETH T/E	16 MAPLE AVE PO BOX 4	FORESTDALE RI 02824-0000	
005-174	MAPLE AVE	A-105	12	SMITH EMMETT T JR TRUSTEE	12 MAPLE AVE	FORESTDALE RI 02824	
005-178	MAPLE AVE	I-44	44	COURNOYER PAUL R & RACHEL L T/E	44 MAPLE AVE PO BOX 193	FORESTDALE RI 02824-0000	
005-181	MAPLE AVE		21	WHITTON ALAN E & STACEY T/E	21 MAPLE AVE	PO BOX 463	SLATERSVILLE RI 02876
005-183	MAPLE AVE		25	WOJCIK MARY	PO BOX 606	FORESTDALE RI 02824	
005-185	MAPLE AVE	A-103	14	PARENT RONALD G	14 MAPLE AVE PO BOX 295	FORESTDALE RI 02824-0000	
005-186	MAPLE AVE		31	GLATKI WILLIAM S & GARY W JT	31 MAPLE AVE PO BOX 131	FORESTDALE RI 02824-0000	
005-199	MAPLE AVE	I-16	29	CONNELL WILLIAM J & DIANE M T/E	P.O. BOX 698	FORESTDALE RI 02824-0000	
005-201	MAPLE AVE	A-102	22	CORRIVEAU DONNA ANN & BRIAN N T/E	22 MAPLE AVE PO BOX 653	FORESTDALE RI 02824	
005-204	MAPLE AVE		27	CHAMPAGNE JAMES M & ANNE MARIE T/E	27 MAPLE AVE PO BOX 636	FORESTDALE RI 02824-0000	
005-206	MAPLE AVE	A-111	9	SMITH MICHELLE M	POB 651	FORESTDALE RI 02824-0000	
005-209	MAPLE AVE	I-39	33	LEDUC SUSAN R	33 MAPLE AVE	FORESTDALE RI 02824	
005-231	MAPLE AVE	I-40	37	JANELLE ROBERTA ANN &	MARGUERITE JANELLE LIFE ESTATE	PO BOX 86	FORESTDALE RI 02824-0086
005-233	MAPLE AVE	A-107	5	GERVAIS LUC +	RAY A + JACQUELINE R GERVAIS L/E	5 MAPLE AVE	FORESTDALE RI 02824
005-238	MAPLE AVE		18	BISSONNETTE MARC P & JOAN E T/E	PO BOX 235	FORESTDALE RI 02824-0235	
005-243	MAPLE AVE			JANELLE ROBERT M TRUSTEE	37 MAPLE AVE PO BOX 86	FORESTDALE RI 02824-0000	
005-248	MAPLE AVE		26	WINKLEMAN JOHN J JR	26 MAPLE AVE PO BOX 605	FORESTDALE RI 02824-0000	
005-252	MAPLE AVE	I-45	42	GRAY THOMAS D & TARA L T/E	PO BOX 711	FORESTDALE RI 02824	
005-259	MAPLE AVE	I-27	60	TRINQUE DENNIS R & DONNA M	60 MAPLE AVE PO BOX 682	FORESTDALE RI 02824-0682	
005-265	MAPLE AVE	I-41	58	BARKER ELIZABETH	58 MAPLE AVE PO BOX 242	FORESTDALE RI 02824-0000	

APPENDIX M - RESIDENTIAL WELL INDEX
STAMINA MILLS SUPERFUND SITE
NORTH SMITHFIELD, RI

PLAT-LOT	LOCATION	Well ID	HOUSENUM	OWNER (2005)	STREET ADDRESS		
005-269	MAPLE AVE	I-14	51	ROUSSELLE MARC P & DOREEN E T/E	51 MAPLE AVE PO BOX 154	FORESTDALE RI 02824-0000	
005-282	MAPLE AVE	I-11	50	DUCHARME ROBERT R & BARBARA M	50 MAPLE AVE PO BOX 243	FORESTDALE RI 02824-0000	
005-286	MAPLE AVE	I-43	46	HANSON PATRICIA M	46 MAPLE AVE PO BOX 253	FORESTDALE RI 02824-0000	
005-295	MAPLE AVE	A-109	6	HAGAN PAUL J & DONNA M T/E	6 MAPLE AVE PO BOX 176	FORESTDALE RI 02824-0000	
005-298	MAPLE AVE	A-99	11	BRYAN THOMAS & CYNTHIA T/E	11 MAPLE AVE	FORESTDALE RI 02824	
005-315	MAPLE AVE	I-26	30	SYMES ROBERT H & MARION TRUSTEES	30 MAPLE AVE PO BOX 44	FORESTDALE RI 02824-0000	
005-316	MAPLE AVE		32	SOLTYS MARTIN J + NANCY T/E	32 MAPLE AVE	P O BOX 225	FORESTDALE RI 02824
005-437	MAPLE AVE	I-42	54	BATEMAN JOHN J	54 MAPLE AVE PO BOX 694	FORESTDALE RI 02824-0000	
005-020	ROSELAWN AVE	A-138	3	BOUCHER HENRY J & LOUISE T T/E	3 ROSELAWN AVE POB 654	FORESTDALE RI 02824-0000	
005-187	ROSELAWN AVE	A-144	4	BERTHERMAN JAMES E & MARY LOU	4 ROSELAWN AVE PO BOX 123	SLATERSVILLE RI 02876-0000	
005-230	ROSELAWN AVE	I-23	16	SCHMIDT JAMES R & JULIA J	16 ROSELAWN AVE	FORESTDALE RI 02824-0000	
005-234	ROSELAWN AVE	A-146	8	MARSHALL DIANE H & CLIFFORD JT	8 ROSELAWN AVE POB 244	FORESTDALE RI 02824-0000	
005-299	ROSELAWN AVE	A-137	1	BOUCHER ELIZABETH E	1 ROSELAWN AVE	FORESTDALE RI 02824	
005-370	ROSELAWN AVE		15	LHEUREUX LYNN A	PO BOX 279	FORESTDALE RI 02824	
005-388	ROSELAWN AVE	A-136	14	ST VINCENT ROLAND D & CAROLYN J T/E	PO BOX 686	FORESTDALE RI 02824-0000	
005-403	ROSELAWN AVE	A-139	9	ORLANDO FLORENCE T & HUESTIS LINDA S J/T	9 ROSELAWN AVE PO BOX 121	FORESTDALE RI 02824-0000	
005-408	ROSELAWN AVE	A-140	19	KIERNAN PAUL E & SUZANNE T TRUSTEES	19 ROSELAWN AVE POB 623	FORESTDALE RI 02824-0000	
005-409	ROSELAWN AVE	I-19	23	LAFONTAINE CHARLES R & MURIEL L T/E	23 ROSELAWN AVE POB 184	FORESTDALE RI 02824-0000	
005-412	ROSELAWN AVE	I-2	18	KENOIAN CHARLES S & ROBIN M T/E	18 ROSELAWN AVE	FORESTDALE RI 02824-0000	
005-419	ROSELAWN AVE		11	MCGOVERN ROBERT C JR & PATRICIA N T/E	11 ROSELAWN AVE	FORESTDALE RI 02824	
005-420	ROSELAWN AVE	A-142	10	TOWNSEND GLENN P & CAROL A T/E	10 ROSELAWN AVE	FORESTDALE RI 02824	
005-424	ROSELAWN AVE	A-141	12	CABRAL MARK V & SARA PETERSON T/E	12 ROSELAWN AVENUE	FORESTDALE RI 02824	
005-444	ROSELAWN AVE	A-143	17	PELLETIER JEFFREY G & LYNNE A T/E	17 ROSELAWN AVE PO BOX 226	FORESTDALE RI 02824-0226	
005-446	ROSELAWN AVE	I-9	21	COTE MARCEL A & MARTHA M	21 ROSELAWN AVE PO BOX 162	FORESTDALE RI 02824-0000	
005-434	ROSELAWN AVE (REAR)			AMERICAN TEL & TEL CO	PPYT TAX DIVISION	PO BOX 7207	BEDMINSTER NJ 07921-7207
005-001	SCHOOL ST		20	CARCHIA JOSEPH & MARIA T/E	20 SCHOOL ST POB 914	SLATERSVILLE RI 02876-0000	
005-004	SCHOOL ST		60	VILLAGE ASSOCIATES	C/O ROBERT GAUDREAU	4 CATHEDRAL SQUARE SUITE G	PROVIDENCE RI 02903-0000
005-005	SCHOOL ST			TOWN OF N SMITHFIELD	1 MAIN ST	SLATERSVILLE RI 02876-0000	
005-006	SCHOOL ST		30	WIENS RICHARD H & DANIELLE D T/E	30 SCHOOL ST PO BOX 311	SLATERSVILLE RI 02876-0000	
005-007	SCHOOL ST		40	VADENAIS NORMAND G & MARGUERITE C	40 SCHOOL ST POB 187	SLATERSVILLE RI 02876-0000	
005-008	SCHOOL ST		42	LEITAO JUDITH C	42 SCHOOL ST	PO BOX 680	SLATERSVILLE RI 02876
005-009	SCHOOL ST		52	KENOIAN HAROLD H & LILLIAN	52 SCHOOL ST	SLATERSVILLE RI 02876-0000	
005-010	SCHOOL ST		54	SLATERSVILLE CONGREGATL CHURCH	25 GREEN ST	SLATERSVILLE RI 02876-0000	
005-011	SCHOOL ST		58	FRECHETTE DAVID WILLIAM & KELLY T/E	58 SCHOOL ST	SLATERSVILLE RI 02876	
005-012	SCHOOL ST		62	COLE ROBERT A	62 SCHOOL ST PO BOX 241	SLATERSVILLE RI 02876-0000	
005-013	SCHOOL ST		70	HOUDE RUSSELL L JR & MONICA K T/E	72 SCHOOL ST PO BOX 1042	SLATERSVILLE RI 02876-0000	
005-014	SCHOOL ST		74	ARPIN JACQUELINE A	P O BOX 398	SLATERSVILLE RI 02876	
005-015	SCHOOL ST		78	BERGERON RONALD R JR	78 SCHOOL ST	SLATERSVILLE RI 02876	
005-017	SCHOOL ST		82	LAHOUSSE ANDREW D & NICOLE R T/E	271 GREAT RD	NORTH SMITHFIELD RI 02896	
005-033	SCHOOL ST			NORTH SMITHFIELD 9-04	C/O HAROLD R SMITH	140 RESERVOIR AVE	PROVIDENCE RI 02907
005-035	SCHOOL ST	A-167	162	ONEILL JOHN R & SUZANNE JT	162 SCHOOLST PO BOX 92	FORESTDALE RI 02824-0000	
005-038	SCHOOL ST	A-147	166	DAIGNAULT CHERYL A & RALPHAEL JR T/E	166 SCHOOL STREET	PO BOX	FORESTDALE RI 02824
005-039	SCHOOL ST	A-159		ELEANOR HOWARD SCHOOL	0	N SMITHFIELD RI 02896	
005-046	SCHOOL ST	A-162	197	KERRIGAN ALICE A	197 SCHOOL ST PO BOX 165	FORESTDALE RI 02824-0000	
005-047	SCHOOL ST	A-164	201	HOPPE FREDERICK W SR & BARBARA A T/E	205 SCHOOL ST PO BOX 181	FORESTDALE RI 02824-0000	
005-048	SCHOOL ST	A-155	205	HOPPE FREDERICK W SR & BARBARA A T/E	205 SCHOOL ST PO BOX 181	FORESTDALE RI 02824-0000	
005-105	SCHOOL ST		53	SZARO JEANNETTE D	53 SCHOOL ST POB 498	SLATERSVILLE RI 02876-0000	
005-106	SCHOOL ST	A-156	194	BELLOWS FREDERICK & YUK PING T/E	194 SCHOOL ST PO BOX 716	FORESTDALE RI 02824-0000	
005-138	SCHOOL ST	I-20	130	MARTINEZ ELIUD & REINA A J/T	130 SCHOOL ST	FORESTDALE RI 02824	
005-139	SCHOOL ST	I-24	128	SIMINSKI FRANCES M	128 SCHOOL ST	FORESTDALE RI 02824-0000	
005-140	SCHOOL ST	I-7	126	BOSCO GEORGIANNA G	125 SCHOOL ST	FORESTDALE RI 02824	
005-141	SCHOOL ST		124	FRECHETTE RAYMOND L	110 BEAMIS AVE	CUMBERLAND RI 02864-0000	
005-142	SCHOOL ST	I-28	122	TRUDEL ALAN D & LYNNE M TE	122 SCHOOL ST PO BOX 613	FORESTDALE RI 02824-0000	
005-143	SCHOOL ST		120	PEREZ CARLOS & HILERIO CANDI T/E	120 SCHOOL ST	PO BOX 262	FORESTDALE RI 02824
005-144	SCHOOL ST		118	RECORE RICHARD A & CLAUDETTE H T/E	118 SCHOOL ST PO BOX 234	FORESTDALE RI 02824-0000	
005-145	SCHOOL ST	I-37	116	LOVETT PATRICIA A	116 SCHOOL ST PO BOX 141	FORESTDALE RI 02824-0000	
005-146	SCHOOL ST		114	DIONNE ROBERT P & SARANNE M T/E	2 NEW RD	PO BOX 342	GLOCESTER RI 02814
005-147	SCHOOL ST		112	DIONNE ROBERT P & SARANNE M T/E	2 NEW RD	PO BOX 342	GLOCESTER RI 02814

APPENDIX M - RESIDENTIAL WELL INDEX
STAMINA MILLS SUPERFUND SITE
NORTH SMITHFIELD, RI

PLAT-LOT	LOCATION	Well ID	HOUSENUM	OWNER (2005)	STREET ADDRESS		
005-148	SCHOOL ST	A-152	110	DIONNE ROBERT P & SARANNE M T/E	2 NEW RD	PO BOX 342	GLOCESTER RI 02814
005-149	SCHOOL ST		108	DIONNE ROBERT P & SARANNE M T/E	2 NEW RD	PO BOX 342	GLOCESTER RI 02814
005-150	SCHOOL ST		104	ANNIS ARTHUR J & YVONNE J/T	PO BOX 83	SLATERSVILLE RI 02876	
005-152	SCHOOL ST	A-168	178	PHANEUF DARYL E & KUCHARSKI JODY L J/T	178 SCHOOL ST PO BOX 134	FORESTDALE RI 02824-0000	
005-153	SCHOOL ST		173	MARA GENERAL CONTRACTORS	1322 CHALKSTONE AVE	PROVIDENCE RI 02908	
005-154	SCHOOL ST	I-18	175	HOPPE FREDERICK W SR & BARBARA A T/E	205 SCHOOL ST PO BOX 181	FORESTDALE RI 02824-0000	
005-155	SCHOOL ST	I-38	177	CONTILDES ALFRED C TRUSTEE 1/2 &	ALFRED CONTILDES III & CHRISTINE	177 SCHOOL ST	FORESTDALE RI 02824
005-156	SCHOOL ST	I-8	179	CAMARA FRANCIS R & PATRICIA L T/E	179 SCHOOL ST PO BOX 8	FORESTDALE RI 02824-0000	
005-157	SCHOOL ST	I-3	181	GALLAGHER KERRY ANN & LOZEAU PAUL G JR	181 SCHOOL ST	FORESTDALE RI 02824	
005-158	SCHOOL ST	I-22	183	MANDEVILLE R ELAINE & THOMAS R TRUSTEES	183 SCHOOL ST PO BOX 151	FORESTDALE RI 02824-0000	
005-159	SCHOOL ST	I-17	187	DOHERTY CHARLES B & LISA M T/E	187 SCHOOL ST PO BOX 281	FORESTDALE RI 02824-0000	
005-160	SCHOOL ST		189	SALEMI ROBERT E & RICHARD G J/T	189 SCHOOL ST	P O BOX 152	FORESTDALE RI 02824
005-168	SCHOOL ST			ONE FIFTY TWO SCHOOL ST RE PARTNERSHIP	PO BOX 129	FORESTDALE RI 02824-0000	
005-170	SCHOOL ST		100	ETHIER JOHN C & ANN MARIE T/E	1075 QUAKER HIGHWAY	UXBRIDGE MA 01504	
005-175	SCHOOL ST		94	BRANCHAUD NORMAND L & EVA L T/E	94 SCHOOL ST PO BOX 251	FORESTDALE RI 02824-0000	
005-176	SCHOOL ST	A-175, A-1	98	LECLAIR-KOZLIK-LOGAN & BASSETT	VFW POST 6342	PO BOX 96	FORESTDALE RI 02824-0096
005-208	SCHOOL ST		66	INZER RONALD & NANCY JT	66 SCHOOL ST PO BOX 339	SLATERSVILLE RI 02876-0000	
005-237	SCHOOL ST		76	HOPPE CAROL A & MARSHALL VAUGHN	76 SCHOOL STREET	PO BOX 366	SLATERSVILLE RI 02876
005-249	SCHOOL ST			EDS CONSTRUCTION INC	34 UNION ST	BLACKSTONE MA 01504-0000	
005-257	SCHOOL ST		152	ONE FIFTY TWO SCHOOL ST RE PARTNERSHIP	PO BOX 129	FORESTDALE RI 02824-0000	
005-271	SCHOOL ST	A-174	174	DESROSIERS ROBERT O & DEBORAH L T/E	174 SCHOOL ST	PO BOX 667	FORESTDALE RI 02824
005-283	SCHOOL ST		84	PARADIS PAUL E	PO BOX 105	FORESTDALE RI 02824-0105	
005-288	SCHOOL ST	I-1	191	CADOGAN NANCY J	PO BOX 208	FORESTDALE RI 02824-0000	
005-294	SCHOOL ST	A-165	207	MERCURE ROLAND &	MERCURE WALLACE & ETTOILA L/E	PO BOX 72	FORESTDALE RI 02824
005-305	SCHOOL ST		22	COURNOYER JEFFREY ETAL	PO BOX 231	SLATERSVILLE RI 02876-0231	
005-346	SCHOOL ST			ONE FIFTY TWO SCHOOL ST RE PARTNERSHIP	PO BOX 129	FORESTDALE RI 02824-0000	
005-355	SCHOOL ST	A-173	193	VANHOUWE LOUISE P TRUSTEE	193 SCHOOL ST PO BOX 75	FORESTDALE RI 02824-0000	
005-372	SCHOOL ST		43	CARRIERE ROSEMARIE T	A/K/A/ KOURY ROSE MARIE	43 SCHOOL ST	N SMITHFIELD RI 02896-0000
005-383	SCHOOL ST		47	POTENZA RICHARD F	47 SCHOOL ST	SLATERSVILLE RI 02876-0000	
005-400	SCHOOL ST		59	HOYLE WAYNE B & GERTRUDE G T/E	59 SCHOOL ST PO BOX 687	SLATERSVILLE RI 02876-0000	
005-406	SCHOOL ST		73	MASSE ARTHUR W JR & TIMOTHY A JT	73 SCHOOL ST PO BOX 442	SLATERSVILLE RI 02876-0000	
005-423	SCHOOL ST		90	V-H INC	90 SCHOOL ST PO BOX 669	FORESTDALE RI 02824-0000	
005-435	SCHOOL ST	I-31	134	GAUTHIER GREGORY A &	MCGEE THOMAS P 1V JT	3 TEAL LANE	CUMBERLAND RI 02864-0000
005-476	SCHOOL ST		203	HOPPE FREDERICK W JR & DIANE J TE	203 SCHOOL ST PO BOX 203	FORESTDALE RI 02824-0000	
002-009	VICTORY HWY		355	DAVIS HELEN M	355 VICTORY HWY	NO SMITHFIELD RI 02896-0000	
002-010	VICTORY HWY		333	BAZINET JOHN R & KAREN T/E	333 VICTORY HWY	NORTH SMITHFIELD RI 02896	
002-023	VICTORY HWY		233	ONEILL BEATRICE	233 VICTORY HWY	N SMITHFIELD RI 02896-0000	
002-024	VICTORY HWY	A-215	261	NERBONNE ANNETTE E	261 VICTORY HWY	N SMITHFIELD RI 02896-0000	
002-025	VICTORY HWY		267	RICHARD EDGAR J ETAL	267 VICTORY HWY	N SMITHFIELD RI 02896-0000	
002-027	VICTORY HWY		531	SCOTLAND LINDA LEE	531 VICTORY HWY	N SMITHFIELD RI 02896-0000	
002-041	VICTORY HWY		358	DR HARRY L HALLIWELL	MEMORIAL SCHOOL	358 VICTORY HWY	N SMITHFIELD RI 02896
002-043	VICTORY HWY		270	QUIJANO ERIC & RODRIQUES IRMA I T/E	270 VICTORY HWY	N SMITHFIELD RI 02896	
002-046	VICTORY HWY		285	GLAUDE GEORGE H & RITA F T/E	285 VICTORY HWY	N SMITHFIELD RI 02896-0000	
002-050	VICTORY HWY		460	ELDREDGE ROBERT J & AMY M T/E	460 VICTORY HWY	NORTH SMITHFIELD RI 02896	
002-051	VICTORY HWY		354	GARNEAU LISA M & PAUL R T/E	354 VICTORY HWY	NORTH SMITHFIELD RI 02896	
002-052	VICTORY HWY		305	CHARRETTE JOYCE B	305 VICTORY HWY	NORTH SMITHFIELD RI 02896	
002-053	VICTORY HWY		235	COTE CLEMENT J & MARY ANN T/E	235 VICTORY HWY	N SMITHFIELD RI 02896-0000	
002-061	VICTORY HWY		219	BEAULIEU MICHAEL D & SUZANNE C T/E	219 VICTORY HWY	N SMITHFIELD RI 02896-0000	
002-062	VICTORY HWY		286	MURRAY EUGENE F & ANNE E	286 VICTORY HWY	NORTH SMITHFIELD RI 02896	
002-063	VICTORY HWY		302	BAILLARGEON ERIC A & COSTELLO ANN MARIE	302 VICTORY HWY	N SMITHFIELD RI 02896-0000	
002-065	VICTORY HWY		443	RAFFERTY EDWARD J III & EILEEN M T/E	443 VICTORY HWY POB 164	FORESTDALE RI 02824-0000	
002-069	VICTORY HWY		357	WORDELL KENNETH	357 VICTORY HWY	NORTH SMITHFIELD RI 02896	
002-076	VICTORY HWY		293	COUSINEAU PAUL J & LISA E T/E	293 VICTORY HWY	N SMITHFIELD RI 02896-0000	
002-081	VICTORY HWY		539	POIRIER KEVIN W & KIMBERLY	539 VICTORY HWY	N SMITHFIELD RI 02896-0000	
002-082	VICTORY HWY		451	KELLY PAUL S & EILEEN B T/E	451 VICTORY HWY	N SMITHFIELD RI 02896-0000	
002-083	VICTORY HWY		503	MARTINEAU BRUCE W & MADELEINE L JT	503 VICTORY HWY	N SMITHFIELD RI 02896-0000	
002-084	VICTORY HWY		473	PERRY WILLIAM C & JOAN L	473 VICTORY HWY PO BOX 542	SLATERSVILLE RI 02876-0000	
002-085	VICTORY HWY		489	FORGET ROBERT A & ANTOINETTE J T/E	273 GREEN ACRES RD	GAFFNEY SC 29341	

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STAMINA MILLS SUPERFUND SITE
NORTH SMITHFIELD, RI

PLAT-LOT	LOCATION	Well ID	HOUSENUM	OWNER (2005)	STREET ADDRESS		
002-086	VICTORY HWY		445	CHAUSSE ROBERT & SANDRA A JT	445 VICTORY HWY	N SMITHFIELD RI 02896-0000	
002-087	VICTORY HWY		515	KERSHAW NANCY M	102 SPRING GROVE RD	CHEPACHET RI 02814	
002-090	VICTORY HWY		405	GLAUDE JOSEPH M & TAMMY L T/E	405 VICTORY HWY	NORTH SMITHFIELD RI 02896	
002-091	VICTORY HWY		383	ROY RONALD J & CONSTANCE C TE	383 VICTORY HWY	N SMITHFIELD RI 02896-0000	
002-102	VICTORY HWY		295	MORRIS AMEY L	295 VICTORY HIGHWAY	NORTH SMITHFIELD RI 02896	
002-104	VICTORY HWY		275	GERMAIN ALBERT & RITA R T/E	275 VICTORY HWY	N SMITHFIELD RI 02896-0000	
002-113	VICTORY HWY		431	KOZIOL KAREN M	431 VICTORY HWY	PO BOX 64	SLATERSVILLE RI 02876
002-116	VICTORY HWY		557	LABOSSIERE EDWARD JR & PATRICIA L	557 VICTORY HWY	NORTH SMITHFIELD RI 02896	
002-124	VICTORY HWY	A-216	356	BABINEAU JOHN M & JANE M	356 VICTORY HWY	N SMITHFIELD RI 02896-0000	
002-136	VICTORY HWY		536	CUTITAR NICHOLAS G & GERTRUDE	278 MAIN ST	WOONSOCKET RI 02895-0000	
002-140	VICTORY HWY	A-214	323	BAZINET JOHN R & KAREN T/E	323 VICTORY HWY	NORTH SMITHFIELD RI 02896	
002-143	VICTORY HWY		544	HAVUNEN KIM M	18 MARIA ST	LINCOLN RI 02865-0000	
002-159	VICTORY HWY		490	WIGGINS EDWARD J & HELEN A TE	PO BOX 1454	PROVIDENCE RI 02903-0000	
002-167	VICTORY HWY		484	WIGGINS EDWARD J & HELEN A TE	PO BOX 1454	PROVIDENCE RI 02903-0000	
002-218	VICTORY HWY			AMERICAN TEL & TEL CO	PPYT TAX DIVISION	PO BOX 7207	BEDMINSTER NJ 07921-7207
002-221	VICTORY HWY		502	WIGGINS EDWARD J & HELEN A TE	PO BOX 1454	PROVIDENCE RI 02903-0000	
002-300	VICTORY HWY		570	GAUTHIER THOMAS J & JEANNINE E T/E	570 VICTORY HWY POB 691	SLATERSVILLE RI 02876-0000	
002-301	VICTORY HWY		554	NIEDZWIADEK DANUTA	554 VICTORY HWY	N SMITHFIELD RI 02896-0000	
005-240	VICTORY HWY		246	GOODWIN SCOTT A & LISA M	246 VICTORY HWY	N SMITHFIELD RI 02896-0000	
005-245	VICTORY HWY	A-106	250	MARKS LINDA L TRUSTEE	250 VICTORY HWY	NORTH SMITHFIELD RI 02896	
005-468	VICTORY HWY			GOODWIN SCOTT A & LISA M	246 VICTORY HWY	N SMITHFIELD RI 02896-0000	
005-040	WILDWOOD RD	A-196	12	LAFONTAINE DAVID C & LYNN M TRUSTEES	12 WILDWOOD RD PO BOX 55	FORESTDALE RI 02824-0000	
005-235	WILDWOOD RD	A-200	2	DAVEY JAMES F & MARCIA B J/T	2 WILDWOOD RD PO BOX 15	FORESTDALE RI 02824-0000	
005-313	WILDWOOD RD	A-210	3	HARNOIS PHILIP A	3 WILDWOOD RD PO BOX 178	WOONSOCKET RI 02895-0000	
005-314	WILDWOOD RD	A-205	1	JALOWY JOSEPH J & GLORIA B TRUSTEES	1 WILDWOOD RD PO BOX 262	FORESTDALE RI 02824-0000	
005-317	WILDWOOD RD	A-201	5	COUTINHO JOHN M & REBECCA L T/E	PO BOX 82	FORESTDALE RI 02824	
005-318	WILDWOOD RD	A-203	7	RIDGE ETHELWYNNE A TRUSTEE	7 WILDWOOD RD	FORESTDALE RI 02824	
005-319	WILDWOOD RD		9	MCCOOEY THOMAS S & MARGARET M	9 WILDWOOD RD PO BOX 182	FORESTDALE RI 02824-0000	
005-320	WILDWOOD RD	A-202	11	GERUSO ROBERT M & SUZANNE M T/E	11 WILDWOOD RD POB 632	FORESTDALE RI 02824-0000	
005-322	WILDWOOD RD		17	HANKINS JONATHAN M & BRENDA R T/E	17 WILDWOOD RD	PO BOX	FORESTDALE RI 02824
005-323	WILDWOOD RD	A-208	19	MCCOEY SALLY N &	LOIS R NORTH L/E	PO BOX 128	FORESTDALE RI 02824
005-325	WILDWOOD RD		16	FREIBERGER ROBERT E	16 WILDWOOD RD		FORESTDALE RI 02824
005-326	WILDWOOD RD	A-206	6	ROLLINS NELLIE M TRUSTEE	PO BOX 206	FORESTDALE RI 02824-0206	
005-327	WILDWOOD RD		8	HOLMES PETER K & JOANNE S T/E	8 WILDWOOD RD POB 673	FORESTDALE RI 02824-0000	
005-387	WILDWOOD RD	A-199	14	ALLISON MARIE M	14 WILDWOOD RD POB 213	FORESTDALE RI 02824-0000	
005-401	WILDWOOD RD	A-209	10	OBRIEN JAMES J & MARILYN L	10 WILDWOOD RD PO BOX 103	FORESTDALE RI 02824-0000	
002-042				MURRAY EUGENE F & ANNE E	286 VICTORY HWY	NORTH SMITHFIELD RI 02896	
002-054				BEAULIEU MICHAEL D & SUZANNE C T/E	219 VICTORY HWY	N SMITHFIELD RI 02896-0000	
005-022				WHEATON GUY E JR & DONNA J	10 FREITAS LANE POB 73	FORESTDALE RI 02824-0000	
005-032				SLATERSVILLE RIVER PROPERTIES INC	PO BOX 158	SLATERSVILLE RI 02876	
005-131				WHITTON ALAN E & STACEY T/E	21 MAPLE AVE	PO BOX 463	SLATERSVILLE RI 02876
005-151				ANNIS ARTHUR J & YVONNE J/T	PO BOX 83	SLATERSVILLE RI 02876	
005-177				BAILLARGEON ERIC A & COSTELLO ANN MARIE	302 VICTORY HWY	N SMITHFIELD RI 02896-0000	
005-264				BATEMAN JOHN J	54 MAPLE AVE PO BOX 694	FORESTDALE RI 02824-0000	
005-321				GERUSO ROBERT M & SUZANNE M T/E	11 WILDWOOD RD POB 632	FORESTDALE RI 02824-0000	
005-324				MCCOEY SALLY N &	LOIS R NORTH L/E	PO BOX 128	FORESTDALE RI 02824
005-332				THE BELISLE FAMILY LIVING TRUST	C/O FLORENCE BELISLE	P O BOX 163	FORESTDALE RI 02824-0000
005-333				MASSE MARCEL D	23 KIRBY LANE	PO BOX 183	FORESTDALE RI 02824
005-336				FORGET DONNA A	25 KIRBY LANE PO BOX 88	FORESTDALE RI 02824-0000	
005-339				DAVIS HAROLD W & CAROL I T/E	29 KIRBY LANE PO BOX 252	FORESTDALE RI 02824-0000	
005-341				O'MALLEY THOMAS P & HARRINGTON BONNIE T/	16 KIRBY LANE	PO BOX 125	FORESTDALE RI 02824
005-342				O'MALLEY THOMAS P & HARRINGTON BONNIE T/	16 KIRBY LANE	PO BOX 125	FORESTDALE RI 02824
005-344				BATEMAN JOHN J	54 MAPLE AVE PO BOX 694	FORESTDALE RI 02824-0000	
005-365				PARENT RONALD G	14 MAPLE AVE PO BOX 295	FORESTDALE RI 02824-0000	
005-367				ORLANDO FLORENCE T & HUESTIS LINDA S J/T	9 ROSELAWN AVE PO BOX 121	FORESTDALE RI 02824-0000	
005-368				GRENIER ROBERT P & ANNA T/E	14 KIRBY LANE	FORESTDALE RI 02824	
005-394				WHEATON GUY E JR & DONNA J	10 FREITAS LANE POB 73	FORESTDALE RI 02824-0000	