NOV 09 2000

November 8, 2000

Chuck Schwer
Sites Management Section
Waste Management Division
Department of Environmental Conservation
103 South Main Street, West Office Building
Waterbury, VT 05671-0404

STONE ENVIRONMENTAL INC

Main Office:
58 East State Street
Montpelier, Vermont
05602 USA

Phone / 802. 229.4541
Fax / 802. 229.5417
E-Mail / sei@stone-env.com
Web Site / www.stone-env.com

SEI No. 98-882

RE: Limited Site Investigation Report for the
VBGS, Johnson State College Site in Johnson, Vermont.
SMS Site #98-2353

Maintenance Garage

Dear Chuck:

In response to a request made by the Vermont Department of Buildings & General Services (VBGS), Stone Environmental Inc. (SEI) has performed a limited site investigation at the Johnson State College maintenance facility in Johnson, Vermont. The work was performed using the Expressway Site Investigation procedure; the expressway notification form was presented as part of the enclosed November 10, 1998 letter from John Amadon of SEI to Bob Butler SMS.

Introduction

A limited site investigation was performed on November 5, 1998 by SEI to determine whether a significant quantity of gasoline contamination was present within an open excavation from which an underground storage tank (UST) was recently removed. The fuel pump and/or delivery system is reported to have leaked sometime in the late 1980's, resulting in staining of concrete in the area. Preliminary PID/heated headspace screening of the soils within the UST excavation indicated that gasoline was released in the area of the pump island associated with this UST and that the maximum soil concentrations were present within the saturated soils just above the surface of the bedrock. Test pits were excavated to the north, east and southwest of the UST area. The soils of these test pits were determined (by visual and olfactory observations and PID measurements) to be devoid of any measurable quantities of VOC contamination. Analysis of the groundwater collected from the excavation hole contained elevated levels of gasoline related compounds; MTBE was the predominant compound at a concentration of 605 ug/L, which is approximately 15 times greater than the State of Vermont's Groundwater Enforcement Standard for this compound. A sample collected at a groundwater seep, located to the south of the UST area and representing a likely point of discharge during wet periods, contained no detectable quantities of VOC contamination. According to the Vermont Water Supply Division records and the maintenance supervisor for the college, all water for the college campus is obtained from the municipal wells located in the Town of Johnson. Several private bedrock wells are located within 500 yards of this site.

The closest of these wells was sampled as part of this work and was determined to contain no detectable levels of VOC contamination. A small stream, located to the west of the UST area is also considered to be a point of groundwater discharge and possible receptor for this contamination. Contamination of the bedrock water system is possible since the bedrock was encountered at the bottom of the excavation hole. However, given that the level of groundwater was above the bedrock during the month of November, which is nominally a time of low water, the impact of this contamination to the bedrock water system is not likely to be significant. Because of the relatively small amount of contamination encountered in the UST area, coupled with the lack of close sensitive receptors, SEI is requesting that this site be considered eligible for a Sites Management Activities Complete (SMAC) designation. The remainder of this report outlines the work performed and presents the conclusions and recommendations drawn from the results of this limited site investigation.

Site Background

Soil contamination was discovered on October 29, 1998 during the removal of a 3,700 gallon gasoline underground storage tank (UST) at the maintenance facility of Johnson State College. The location of the UST is shown as part of Exhibit D of the enclosed February 26, 1999 letter from Strategic Environmental Management, Inc. (SEM) to Op-Tech Environmental Services, Inc (Op-tech). SEM was present during the removal activities to examine the exposed soils for contamination and Op-tech was present to conduct the UST removal. SEM recorded peak VOC concentrations (as measured using a PID/soil headspace method) of 94 ppm in the center of the pump island area. Levels as high as 532 ppm were subsequently measured on November 3, 1998, also using a PID/soil headspace method, in the pump island area by Op-tech. The results of these PID studies can be found in Exhibits C and D of the enclosed SEM report). Five test pits, to the east, north and southwest of the UST area were excavated by Op-tech to determine the extent of the contamination. All five test pits were determined to be devoid of measurable quantities of VOC contamination. The discrepancies in the results of the SEM and Op-Tech PID surveys prompted VBGS to contact SEI to take over all UST removal activities at the site.

Materials and Methods

SEI arrived on November 5, 1998 to find the excavation and the test pits still open. Additional backhoe excavation was performed below the water table to the bedrock surface to determine if a significant quantity of contamination existed below the water table. A PID/soil headspace method was used to assess the magnitude and extent of VOC contamination at the site. SEI collected three groundwater samples from the following locations: the UST excavation area; a groundwater seep located to the southeast of the UST and; a private water supply well (Morton Lord) located approximately 500 yards to the west. All three samples were analyzed at Endyne Laboratory in Williston, Vermont using EPA Method 8021B for purgeable aromatic hydrocarbons.

Results

The backhoe excavation from the zone below the water table in the UST area confirmed the presence of contamination associated with the native silt loam soils overlying the bedrock at a peak PID reading of 144 ppm. The side walls of the excavation were primarily medium to coarse sand fill and no PID assays greater than 1 ppm were encountered while screening the walls above the water table. Groundwater was present at an approximate depth of 5 feet below ground surface (bgs), no significant sheen or free phase product was evident. Approximately 20 cubic yards of soil had been stockpiled and appropriately polyencapsulated adjacent to the excavation. The results of the groundwater analyses are shown in Table 1 below.

TABLE 1

EPA 8021B Laboratory Results, ug/L

Target Compound	Pit	Seep	Mort Lord's Well
MTBE	605	<10	<10
Benzene	37.3	<1.0	<1.0
Toluene	80.8	<1.0	<1.0
Ethylbenzene	<10	<1.0	<1.0
Total Xylenes	81.2	<1.0	<1.0
1,2,4-Trimethylbenzene	22.7	<1.0	<1.0
1,3,5-Trimethylbenzene	49.1	<1.0	<1.0
Napthalene	51.3	<1.0	<1.0

Receptor Analysis

According to records at the Agency of Natural Resources Water Supply Division, there are several wells located within a mile of this site. The locations of these wells, as shown on the enclosed map in Appendix C and derived from the handwritten records of the Water Supply Division, seem to be out of place with respect to this site. The nearest two wells, according to Austin Richards (head of maintenance for the college), are the Johnson State's test well (well # 34) and Mort Lord's well (well #140). The Johnson State well has reportedly never been used. Mort Lord's well is located approximately 500 yards to the west of the site and on the western side of a small stream which is likely to be a point of discharge for the shallow groundwater leaving this site. A map showing the topography of this area is supplied in Appendix C.

Conclusions and Recommendations

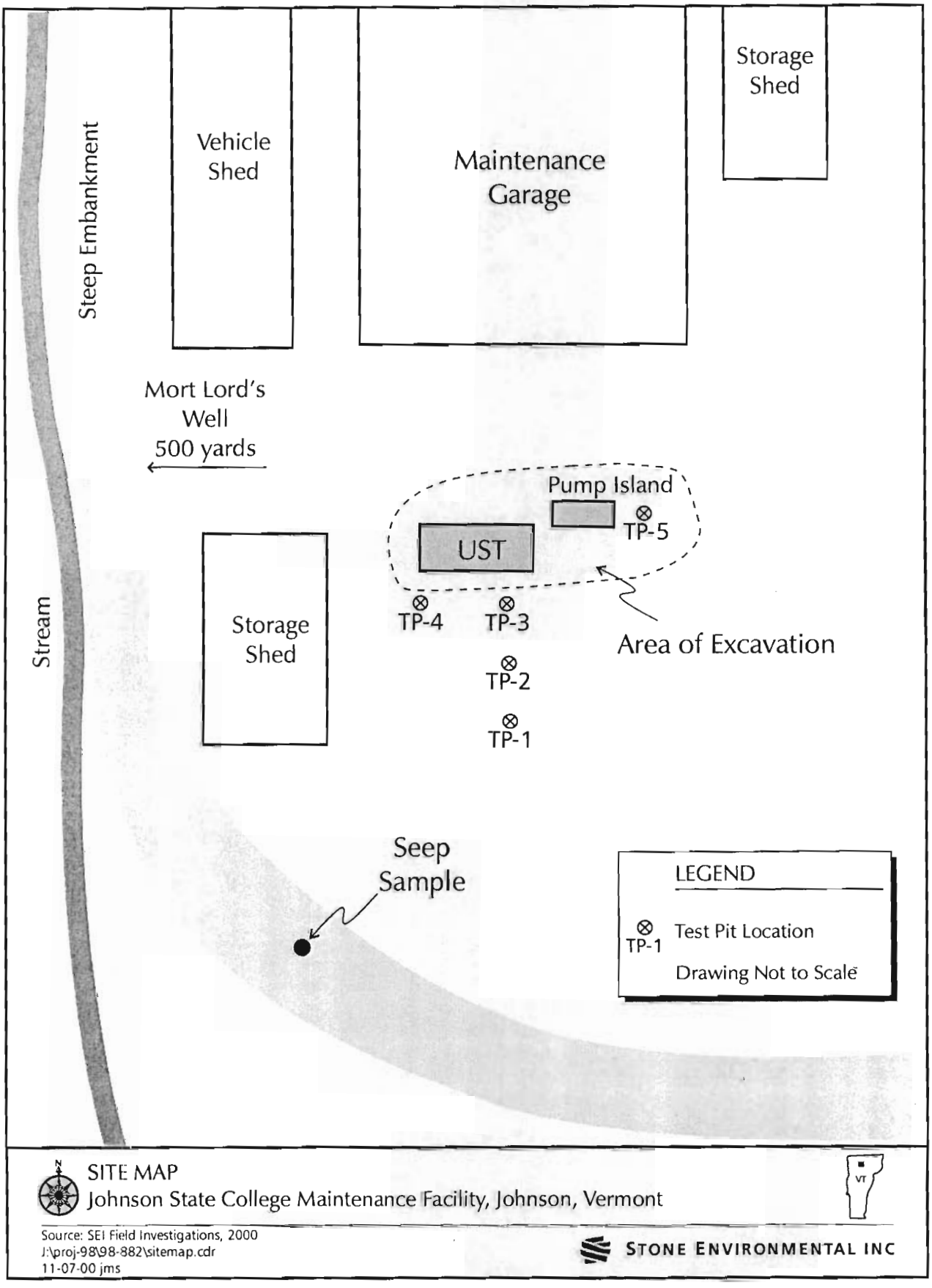
The results of the PID/headspace soil survey and groundwater analyses indicate that gasoline was released into the subsurface in the area of the UST. Specifically, based on the PID screening in and around the UST area, and reports of leaks by the maintenance personnel, the pump island appears to be the area in which the majority of fuel contamination exists. At the time of this investigation, dissolved constituents of gasoline were present in the UST area groundwater at concentrations above the State of Vermont Groundwater Enforcement Standards. The geology of the UST area is predominantly medium to course sands (believed to be fill) overlying less permeable silty soils. Bedrock is present at approximately 8 feet BGS. As shown by the presence of a groundwater seep within the downgradient embankment of this site, groundwater emanating from this UST area is likely to flow along the top of the low permeability silt toward a small stream. This stream discharges to large pond more than 1000 yards away. Analytical results of the groundwater sample taken from this seep indicate that the groundwater, likely to be emanating from the UST area, is devoid of gasoline related contamination. Although not determined as part of this work, a downward vertical component of the hydraulic gradient, across the silt, may cause the migration of dissolved gasoline constituents into the bedrock system. The closest private water supply (Lord residence, approximately 500 yards away) was determined to be devoid of gasoline related contamination. The small stream to the west of this site may be receiving very small amounts dissolved contamination however, considering the relatively low concentrations present in the UST area, it is unlikely that the contamination is detrimental to the stream's ecology.

SEI recommends that samples from the three nearest bedrock wells should be collected and analyzed for gasoline related compounds (EPA Method 8021B) to ensure that any bedrock contamination associated with this site has not reached these private wells. The three nearest wells are the Lord well (#140 on the water supply map, Appendix C), the Johnson State College well (# 34), and the Clayton Well (#26). If these three wells are determined to be devoid of gasoline related contamination, SEI will then request that this site be considered eligible for a sites management activities complete (SMAC) designation. Upon receiving this designation, the site should be removed from the State of Vermont's hazardous sites list. If you have any questions regarding this information, please call me. I look forward to hearing from you.

Sincerely yours,
STONE ENVIRONMENTAL, INC.

Michael Rossi, Project Scientist
Direct Phone / 802-229-2194, Direct E-Mail / mrossi@stone-env.com

cc. Austin Richards, Johnson State College
Rick Hoerman, Vermont Builings and General Services



SITE MAP
Johnson State College Maintenance Facility, Johnson, Vermont

Source: SEI Field Investigations, 2000
J:\proj-98\98-882\sitemap.cdr
11-07-00 jms

STONE ENVIRONMENTAL INC

Appendix A
Previous Reports and Correspondence

November 10, 1998

Bob Butler
Sites Management Section
VT Dept. Of Environmental Conservation
103 S. Main St. - West Office Bldg.
Waterbury, VT 05671-0404

STONE ENVIRONMENTAL INC

Main Office:
58 East State Street
Montpelier, Vermont
05602 USA

Phone / 802. 229.4541
Fax / 802. 229.5417
E-Mail / sei@stone-env.com
Web Site / www.stone-env.com

SEI No. 98-882
RE: Johnson State College UST Removal and Expressway Notification

Dear Bob:

As we discussed by telephone today, Stone Environmental, Inc. (SEI) responded to an UST removal situation at Johnson State College on behalf of the VT Department of Buildings & General Services (VBGS). The New York UST removal firm Optec was contracted by VBGS to perform a gasoline UST removal and other tasks at the maintenance facility at Johnson State College. The Optec folks encountered petroleum contaminated soils and contacted you for guidance last week. Due to some confusion as to the degree and extent of contamination between Optec, your office and VBGS, I went to evaluate the site and situation this past Thursday, November 5, 1998. I was pleased to find only minimal evidence of contamination within the excavation and no contamination within a downgradient seep.

On November 5 the excavation was open and the UST had already been removed. Groundwater was present at an approximate depth of 5 feet below ground surface (bgs) although no significant sheen or free phase product was evident. Approximately 20 cubic yards of soil had been stockpiled and appropriately polyencapsulated adjacent to the excavation. Optec had recorded PID assays of up to 600 ppm from the soil excavated from the top of the bedrock beneath the former pump at an approximate depth of 7 feet bgs. Additional backhoe excavation from that zone below the water table on November 5 confirmed the presence of contamination associated with the native silt loam soils overlying the bedrock at a peak PID reading of 144 ppm. The side walls of the excavation were primarily medium to coarse sand fill and no PID assays greater than 1 ppm were encountered while screening the walls above the water table.

Based on my observations of the area, the degree of contamination, and the relative lack of imminently impacted sensitive receptors I have made the following recommendations which are being implemented:

1) Backfill the excavation with clean soil/stone to above the current groundwater level, backfill the 20 yards of contaminated soil and continue backfilling to grade with clean soil to allow for the VBGS project and new AST installation to continue.

2) Complete the Initial Site Investigation process in accordance with your Departments written protocols

and guidance. A copy of the signed Expressway Notification form is enclosed here.

3) While onsite to complete the assessment and sampling of relatively nearby bedrock water supplies, the old soil stockpile (Site # 95-1845) from the same maintenance facility should be assayed by PID and, if warranted, sampled for laboratory analysis. Should the natural attenuation of that old stockpile be completed, the soil should be thinspread on the gravel driveway area of the facility.

We anticipate that completion of the site work and site investigation will occur rapidly and that the more formal Site Investigation report will be completed within 2 weeks. Thank you for your verbal telephone concurrence with these recommendations today and please feel free to call me with any further questions or comments you may have.

Sincerely yours,

Stone Environmental, Inc.

John Amadon, CPSS
Senior Geoscientist

enclosure:
cc: Bob Ladd, VT Buildings & General Services
J:\Proj-98\98-882\111098ltr.wpd

Figure 2: Notification figure

Waste Management Division
103 South Main Street/West Office
Waterbury, Vermont 05671-0404
(802) 241-3888, FAX (802) 241-3296

SITE INVESTIGATION EXPRESSWAY NOTIFICATION FORM

Site Owner: Johnson State College

Site Name, Town: Johnson, VT

X Yes, this site will participate in the Site Investigation Expressway Process.

___ No, this site will not participate in the Site Investigation Expressway Process.

If yes, please complete the checklist below:

✓ Contamination present in soils above action levels X Yes ___ No

If yes, summarize levels:
beneath pump up to 600 (?) ppm PID – 140 ppm confirmed

✓ Free product observed ___ Yes X No

✓ Groundwater contamination observed X Yes ___ No

✓ Surface water contamination observed ___ Yes X No

✓ Suspected release of hazardous substances X Yes ___ No

If yes, please explain:
gasoline from former UST pump

✓ Affected receptors ? Yes ___ No

If yes, please identify receptors including names and addresses of third party receptors:
not yet known but doubtful based on distance

Please provide an estimated date of when you expect to submit Site Investigation Report: Dec. 6, 1998

Owner's Signature/Date: Richard C. Heermann Consultant's Signature/Date: John Chandler 11/5/98

The SMS has reviewed this expressway notification form and approves / disapproves of this action.

SMS Signature/Date: _____

STRATEGIC ENVIRONMENTAL MANAGEMENT, INC.

Offices in Canton and Syracuse, New York

February 26, 1999

OP-TECH ENVIRONMENTAL SERVICES, Inc.
14 Old River Road, P.O. Box 5182
Massena, New York 13662-5182

Attn: Mr. Patrick Tufo

Reference: Underground Storage Tank Closure
Johnson State College Maintenance Facility
Johnson State College, Johnson, Vermont

SEM File: 241.02.99

Dear Mr. Tufo:

Pursuant to your request, we are pleased to provide the following which details activities performed and conditions observed by the undersigned representative of Strategic Environmental Management, Inc. (SEM), during the permanent closure (removal) of the existing 3,700-gallon underground gasoline storage tank (UST) from the referenced site. For compliance with Vermont Department of Environmental Conservation (Vermont DEC) policy, this written report is in addendum to the enclosed Underground Storage Tank Permanent Closure Form (Closure Form).

Op-Tech Environmental Services, Inc. (OP-TECH) of Massena, New York, performed the UST and associated fuel pump island removal on October 29, 1998. The UST was located at the maintenance facility of the referenced college, and as such, the land surrounding the UST is owned by the college and used for educational, residential and recreational purposes. More specifically, the UST was located approximately 63.5 feet east of the main maintenance facility building and approximately six (6) feet southeast of the fuel pump island. The UST had been used for storing gasoline for maintenance facility vehicles for approximately 21 years, according to Mr. Austin Richards, Maintenance Facility Supervisor. A site sketch depicting the location of the UST and other pertinent site features is provided on the enclosed Closure Form and select photographs documenting the tank removal process are attached as Exhibit A.

P.O. Box 30, Canton, New York 13617
Telephone: (315)386-2736 Facsimile: (315)386-4736

P.O. Box 37, Fayetteville, New York 13066
Telephone: (315)637-3944 Facsimile: (315)637-8058

Methodology and Findings

SEM was present during the UST removal activities to examine exposed soil for characteristic petroleum product odors and staining, and to field-screen soil samples for the measurable presence of volatile organic compounds (VOC). Soil samples were collected by SEM during the excavation of the tank top and of the excavation bottom and walls, once the tank was removed from the ground. The soil samples were placed in sealable plastic bags and field screened for the measurable presence of VOC with a portable photoionization detector (PID; HNu Model PI101).

Prior to excavation and removal of the UST, representatives from OP-TECH evacuated approximately 150 gallons of residual gasoline from the tank and associated remote fill piping. This product was pumped into 55-gallon barrels, and subsequently taken off-site by OP-TECH, for temporary staging at the Massena, New York facility, and later disposal at a licensed disposal facility. Documentation for the disposal of the drummed gasoline is attached as Exhibit B.

Following the removal of the tank from the ground, SEM examined the outside walls of the vessel. The examination revealed evidence of corrosion and shallow pitting along the bottom surface of the tank; however, no perforations were observed in the tank. At the request of Mr. Richards, OP-TECH representatives staged the UST on-site, in a low-use area approximately 60 feet east of the original tank location.

On October 29, 1998, soil screening samples were collected by SEM during and after the UST removal, extending to the depth of the bottom of the tank, approximately eight (8) feet below grade. Groundwater was encountered during excavation activities at an approximate depth of eight (8) feet below grade. Observation of the soil adjacent to the sides and bottom of the tank revealed evidence of black staining along the eastern wall, approximately three (3) feet below grade, and along the bottom of the southern end of the tank. A total of six (6) grab soil samples were placed in sealable plastic bags and subjected to headspace VOC screening via the PID. The grab sample locations, identified as samples 1 to 6, are depicted on the site sketch of the enclosed Closure Form. The results of the soil PID screening revealed 35 ppm and 85 ppm VOC in samples 5 (north end wall; 7 ft. below grade) and 6 (south end bottom; 8 ft. below grade), respectively. The samples exhibited slight to moderate petroleum odors. All other samples collected from the tank excavation revealed less than 5.0 ppm to no measurable VOC, with no noticeable petroleum odors. Following the removal of the pump island concrete base, a grab sample (sample 7) was collected from the bottom of the excavation. The sample exhibited moderate petroleum odors and subsequent PID screening by headspace analysis revealed 94 ppm VOC. A Daily Field Report Sheet with the results of the PID screening analysis is attached as Exhibit C.

Once evidence of petroleum contamination was discovered in the tank and pump island excavation area, SEM notified the Vermont Department of Environmental Conservation (DEC) and SEM participation in the UST closure process ceased. The petroleum-impacted soil excavation activities were subsequently undertaken and monitored

by representatives of OP-TECH on November 3, 1998. As such, questions in section C of the enclosed Closure Form pertaining to the soil excavation were completed by the OP-TECH on-site environmental technical representative who monitored said activities.

According to OP-TECH, during the course of excavation activities of the UST and pump island areas, significant contamination was encountered at approximately 6.0 to 8.0 feet below grade. The exposed soil was examined for characteristic petroleum product odors and staining, and collected soil samples were field-screened for the measurable presence of VOC with a PID (PE/Photovac Model 2020), equipped with a 10.6 eV lamp. The results of the PID screening revealed VOC levels ranging from 6.2 ppm to 532 ppm VOC in sample 3B (west side, 5.0 feet below grade) and sample 1B (north end, 7.0 feet below grade), respectively. The soil samples exhibited slight to strong petroleum odors with staining observed in the vicinity of sample 1B. Approximately 20 cubic yards of soil were removed from the tank pit/pump island area and temporarily staged on-site. The soil was placed on and covered with polyethylene sheeting by OP-TECH representatives. Field notes from the November 3, 1998 soil sampling activities performed by OP-TECH are attached as Exhibit D.

To determine the horizontal extent of petroleum impact, a total of five (5) test pits were dug to the north and east of the tank pit/pump island area, as determined by local topography. The test pits extended to bedrock (approximately 7.0 to 8.0 feet deep at TP-3 through TP-5) or approximately 11.0 to 12.0 feet deep in areas consisting of fill material (TP-1 and TP-2). No odors or staining characteristic of petroleum products were evidenced, and the results of the PID screening revealed no detectable levels of VOC. The approximate location of each test pit (identified as TP-1 through TP-5) is depicted on the site sketch of the enclosed Tank Closure form.

It is our understanding that following the impacted soil excavation activities, at the request of the Vermont Department of Buildings & General Services (VBGS), Stone Environmental Inc. (SEI) of Montpelier, Vermont, responded to the UST closure situation on November 5, 1998 and subsequently took over the Site Assessment process. Under the direction of SEI, the excavated soil was placed in the tank pit and topped with clean fill by OP-TECH representatives.

Please feel free to contact our office should you have any questions regarding this matter, or if we may be of further service. Thank you.

Respectfully,
STRATEGIC ENVIRONMENTAL MANAGEMENT, Inc.

Dyan C. Pcolar/fs

Sean S. Smith
Principal

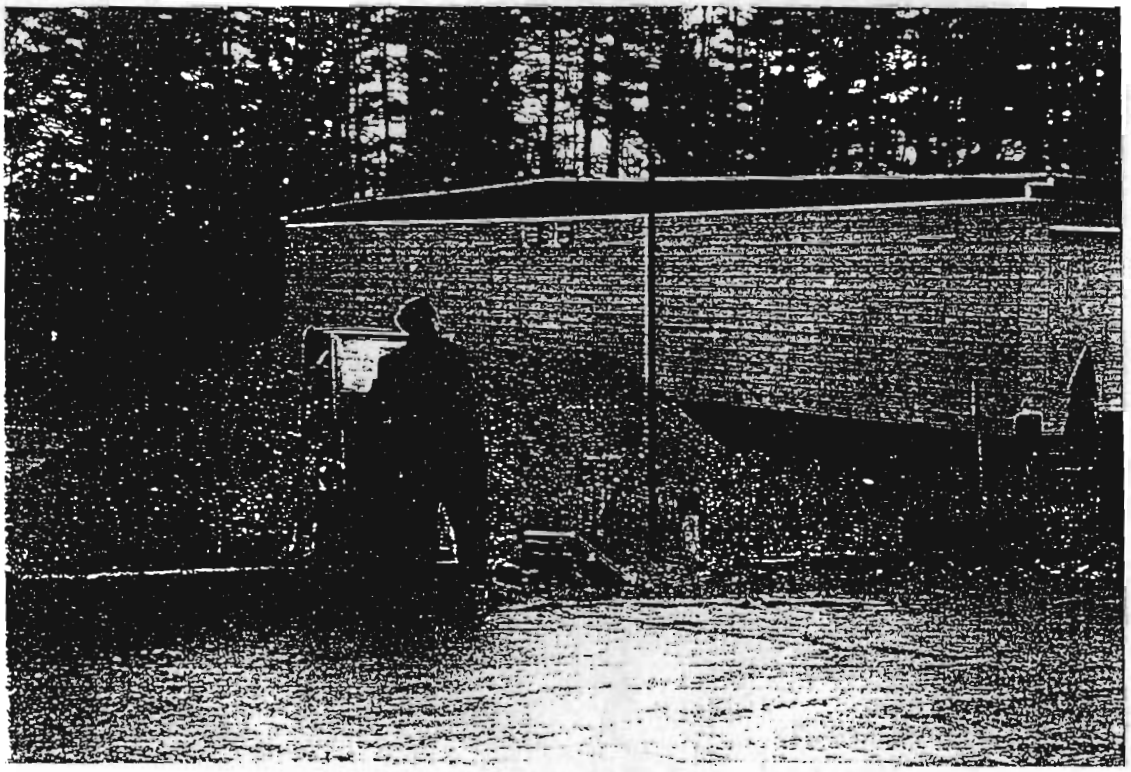
Dyan C. Pcolar

Dyan C. Pcolar
Environmental Scientist

SSS/dcp

Exhibit A
Select Photographs of UST Closure Activities

SELECTED PHOTOGRAPHS
SEM Report No. 241.12.98

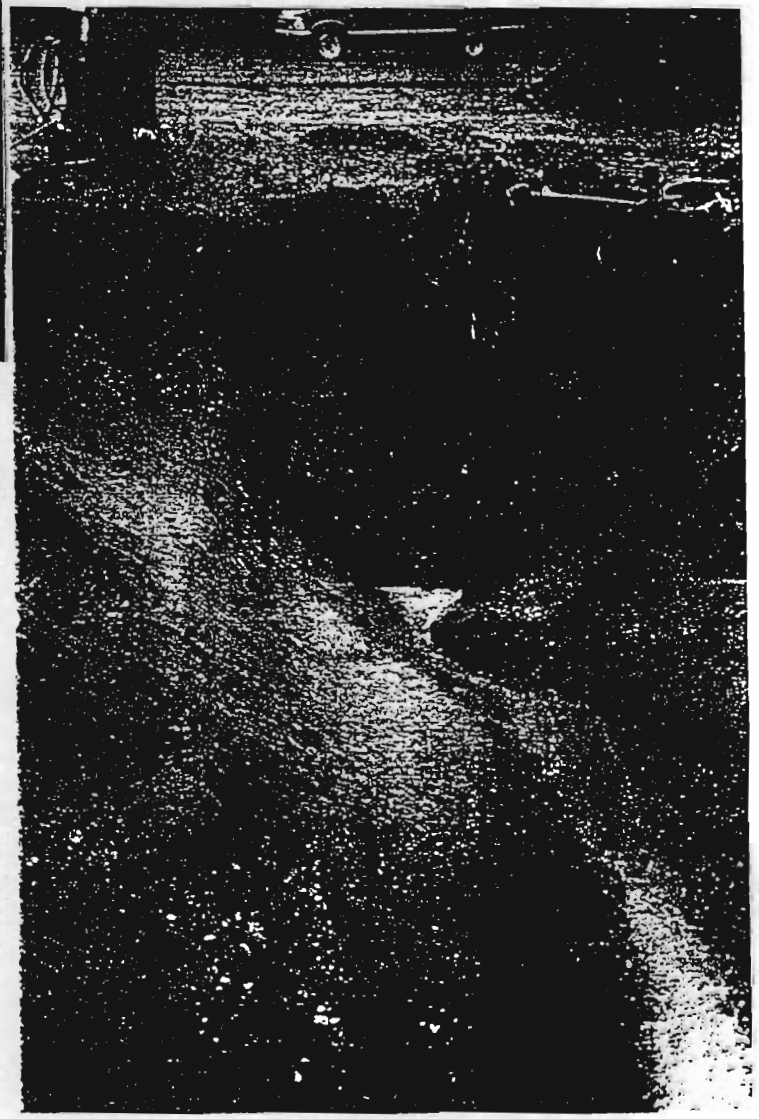


Photograph 1: Southeastern view of UST and pump island area prior to excavation.

Photograph 2: Northeastern view of UST area during gasoline removal activities.

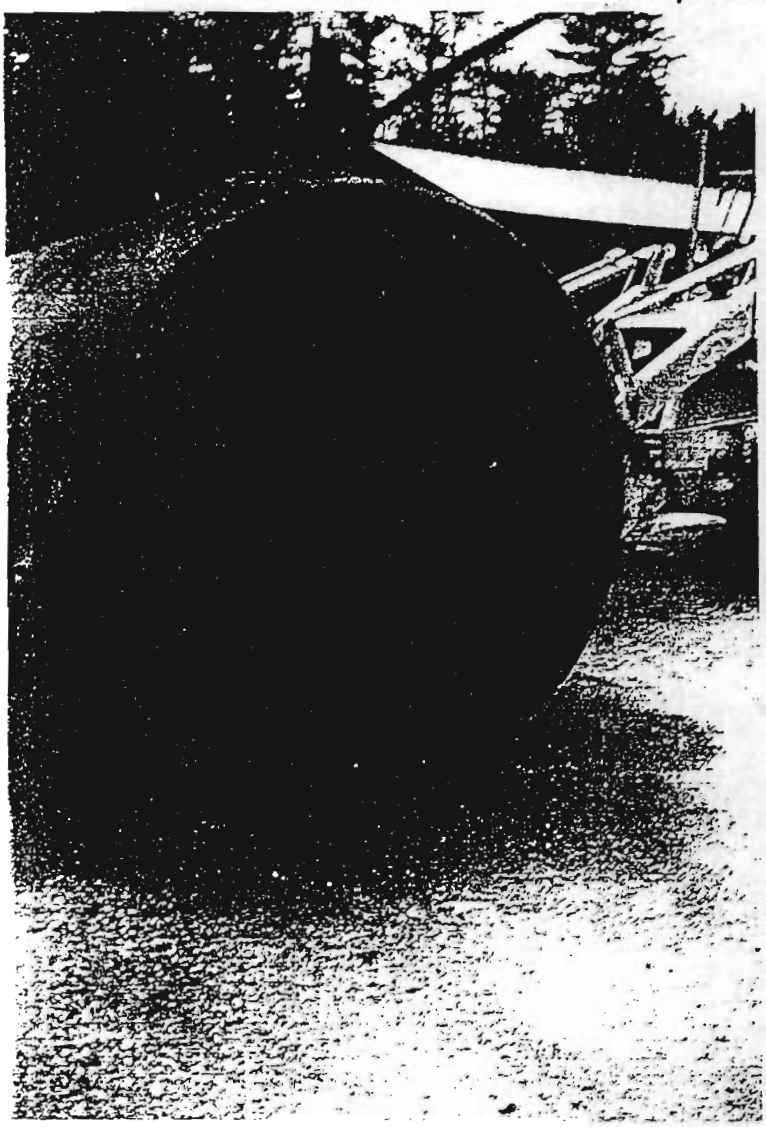
SELECTED PHOTOGRAPHS
SEM Report No. 241.12.98

Photograph 3: View of southeastern corner of UST prior to excavation.

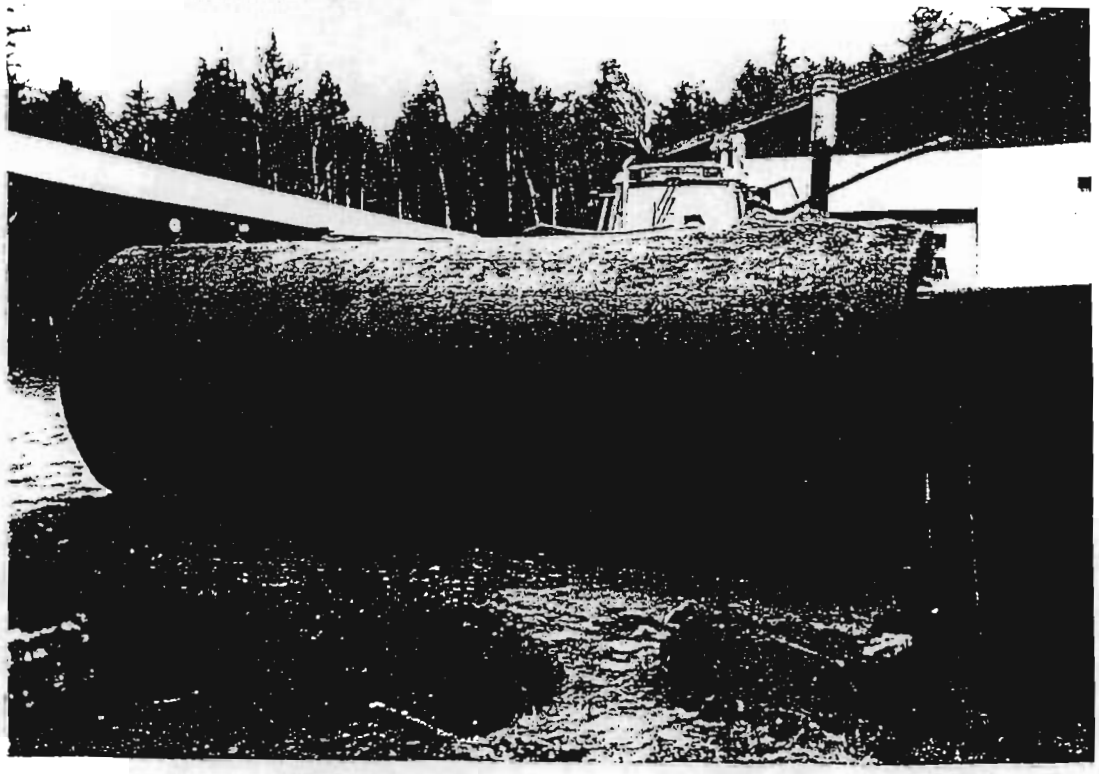


Photograph 4: Northern view of excavation area following removal of UST.

SELECTED PHOTOGRAPHS
SEM Report No. 241.12.98



Photograph 5: View of northern end of UST.



Photograph 6:
View of eastern side of UST following excavation.

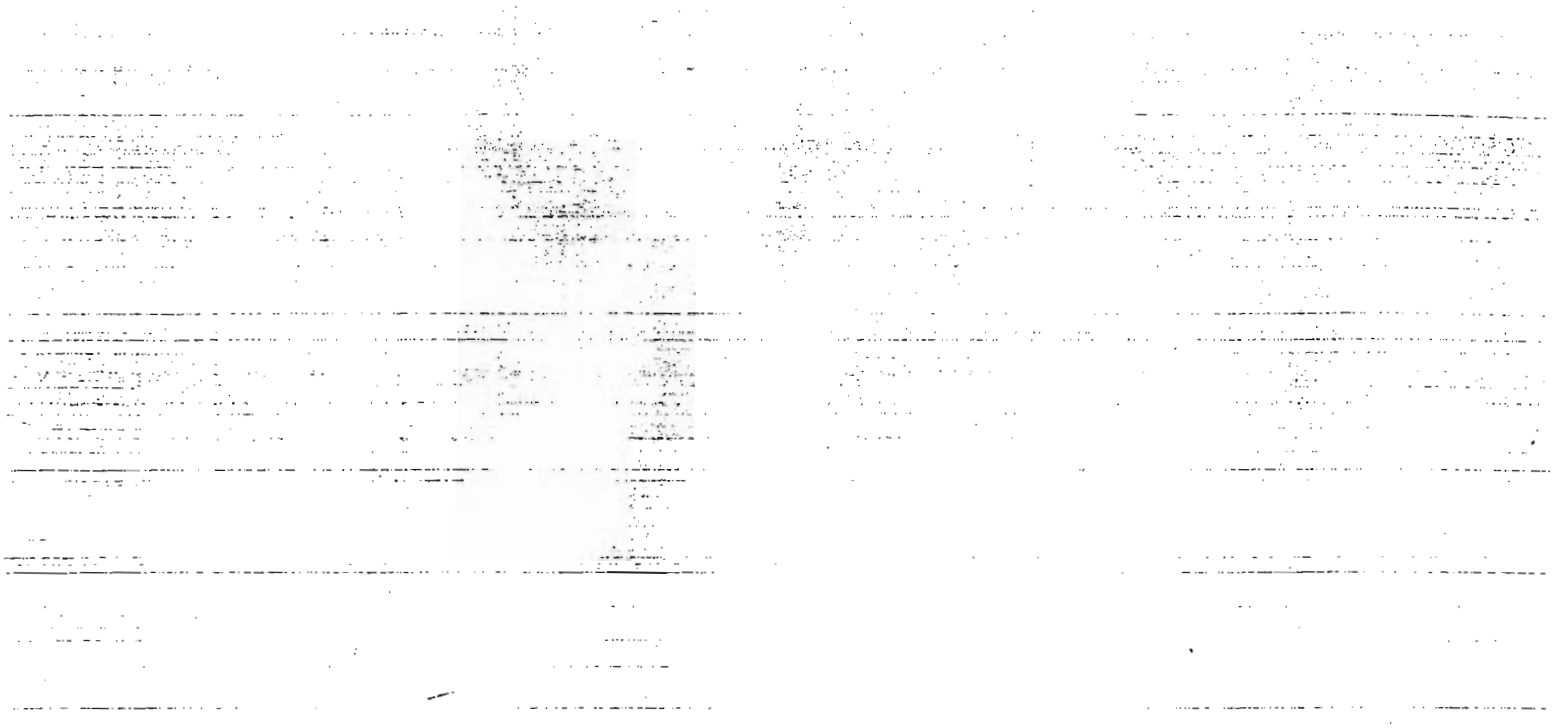


Exhibit B
Disposal Documentation for Drummed Gasoline

ACKNOWLEDGEMENT OF DISPOSAL

OP-TECH ENVIRONMENTAL SERVICES, INC. hereby acknowledge

Disposal

of 150 (Gasoline) GALS.
Total Gals.

FROM Johnson State College, Johnson VT. by
Site Address

Disposal in Accordance with OP-TECH's Part 360 Permit #6-4058-00038/00001-0
Facility #45001

12-4-98
Date

Patrick Tys
OP-TECH Environmental Services, Inc.

OP-TECH Environmental Services, Inc. SPDES Permit # NY 0002925
Massena, New York

ACKNOWLEDGEMENT OF TANK DESTRUCTION

OP-TECH ENVIRONMENTAL SERVICES, INC. hereby acknowledge

Destruction

of 3,700 Gallon Gasoline UST
Total Tanks and Sizes

Underground and/or Above Ground Storage Tank (s)

FROM Johnson State College, Vermont by
Site Address

Treatment in Accordance with OP-TECH's SPDES Permit # 6A166

3/2/99
Date

Matthew B Lee
OP-TECH Environmental Services, Inc.

OP-TECH Environmental Services, Inc. SPDES Permit # 6A166
Massena, New York

Exhibit C
Field Report Sheet

STRATEGIC ENVIRONMENTAL MANAGEMENT, INC.

Offices in Canton and Syracuse, New York

DAILY FIELD REPORT SHEET

Date: October 29, 1998
SEM File No.: 241.10.98

PROJECT LOCATION: Johnson State College, Johnson, Vermont
CLIENT: Op-Tech Environmental Services, Inc.
SEM REPRESENTATIVE: Dyan C. Pcolar
CLIENT REPRESENTATIVE: Pat Tufo
WEATHER: Overcast, raining, 30s.

Description of Service: Monitor the removal of an existing 3,700-gallon underground gasoline storage tank and associated pump island from the referenced site. Collect and field analyze soil samples from the excavation areas for presence of petroleum product odors, staining and VOC.

Samples Collected: X YES _____ NO

Description and Methodology: A total of seven (7) grab soil samples were collected from the bottom and walls of the excavation areas, and subjected to PID screening.

Comments/Observations/Notes: Following are the results of the PID screening:

Sample 1: East wall; 3.5 fbg; 2.3 ppm; No Noticeable Petroleum Odor.
Sample 2: South wall; 6.0 fbg; ND ppm; No Noticeable Petroleum Odor.
Sample 3: West wall; 6.0 fbg; ND ppm; No Noticeable Petroleum Odor.
Sample 4: Northeast end bottom; ND ppm; No Noticeable Petroleum Odor.
Sample 5: Northwest end bottom; 35 ppm; Slight Petroleum Odor.
Sample 6: South end bottom; 85 ppm; Moderate Petroleum Odor.
Sample 7: Pump island center bottom; 94 ppm; Moderate Petroleum Odor.

(NOTE: ND = None Detected; ppm = parts per million)

Chain of Custody Complete: _____ YES X NO
Equipment Cleaned: X YES _____ NO
DEC Contacted: X YES _____ NO

P.O. Box 30, Canton, New York 13617
Telephone: (315) 386-2736 Facsimile: (315) 384-4736

P.O. Box 37, Fayetteville, New York 13066
Telephone: (315) 637-3944 Facsimile: (315) 637-8058

Exhibit D
OP-TECH Field Notes

OP-TECH
ENVIRONMENTAL SERVICES, INC.

HNU AIR MONITORING DATA

Client: Johnson State College

Project Location: Johnson VT.

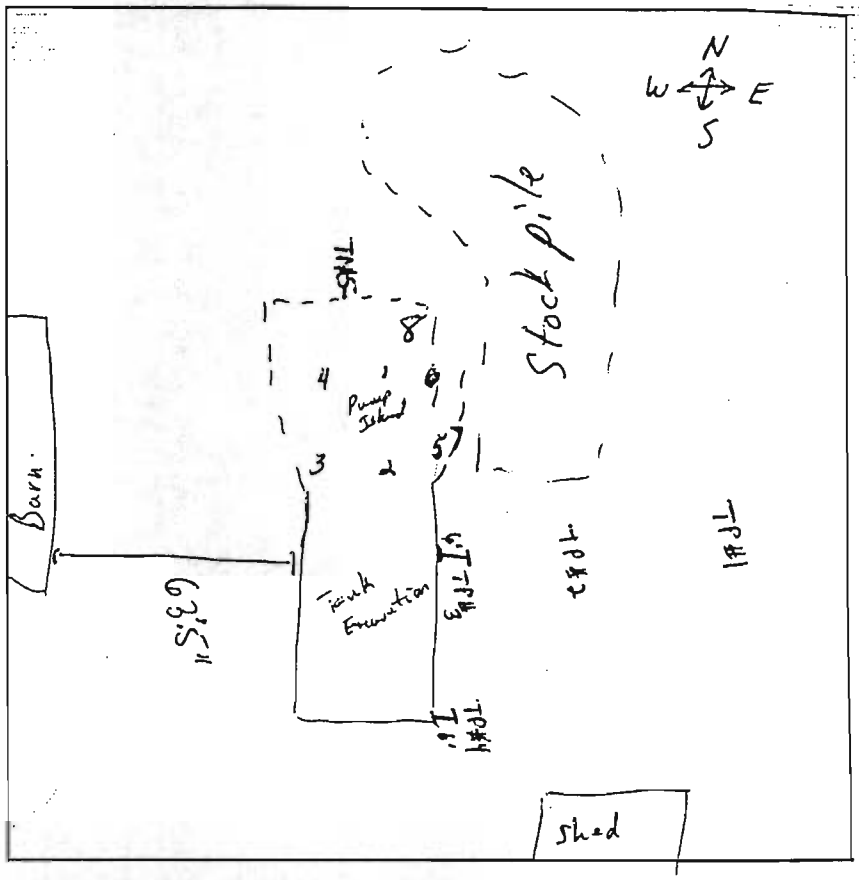
Project #: _____ Date: 11/3/98

HNU Model: photovac 2020

OP-TECH Representatives: N. Rose M. Bolio

Client Representatives: _____

Site Map



Location	Depth (ft).	Description/Soil Characteristics/Observations (Color, Texture, Moisture, Odor)	PID (ppm)
1	2'	mild odor, Sand	45
2	2'	"	51
1a	4'	slight odor, Sand	32
2a	4'	slight odor, Sand	18
3	3'	mild odor, Sand	46
4	3'	mild odor, Sand	60

Note: ND - None Detected
NA - Not Applicable

Soil characteristics described above represent field visual observations only.

OP-TECH Environmental Services, Inc.
14 Old River Road / P.O. Box 5182 / Massena, New York 13662-5182 / Telephone 315-764-1917 / Fax 315-764-9453

OP-TECH
ENVIRONMENTAL SERVICES

HNU AIR MONITORING DATA

Location	Depth (ft.)	Description/Soil Characteristics/Observations/ (Color, Texture, Moisture, Odor)	PID (ppm)
4a	4'	Strong odor, sand	87
3a	4'	Mild odor, sand	32
3b	5'	slight odor, sand	6.2
4b	5'	Strong odor, sand	75
5	3'	Strong odor, sand	44
5a	5'	Strong odor, sand	83
5b	6'	slight odor, sand	2.2
6	4'	slight odor	18
6a	6'	slight odor	13
7	4'	Mild odor	22
7a	5'	Mild odor	24
7b	6'	slight odor	14
8	5'	slight odor, on wall	8
1b	7'	Black soil strong odor, bedrock - 8'to9' muddy, water collecting in excavation from rain	532
Variety	1-6'	vent in excavation w/ photovac & took numerous readings on all sidewalls at various depths - little to no odor	< 10

Note: ND - None Detected
NA - Not Applicable
Soil characteristics described above represent field visual observations only.

OP-TECH
ENVIRONMENTAL SERVICES

HNU AIR MONITORING DATA

Location	Depth (ft.)	Description/Soil Characteristics/Observations/ (Color, Texture, Moisture, Odor)	PID (ppm)
TP1-5	7'-10'	dug test pits around excavation; found no contamination through PID meter Reading	0

Note: ND - None Detected
NA - Not Applicable
Soil characteristics described above represent field visual observations only.

TP#1 - went 11-12' in depth - clean fill - no cont. found

TP#2 - "

TP#3 - excavated down to bedrock from original excavation to @ 6' towards TP#2
- no contamination found

TP#4 - excavated down to bedrock from original excavation to @ 6' towards edge of Maintenance building

TP#5 - excavated down to bedrock, no contamination found

South wall & bottom are clean
east wall & bottom are clean

Heavy contamination was found from 6'-8' in depth. Bedrock is 7 to 8' in depth. No contamination was discovered to migrate beyond tank excavation. Believed to have possibly migrated through a fracture in bedrock.

* Need Track hoe & 5-6 Dump Trucks
estimate @ 75-100 yds

* What parameters does the landfill want for Analysis?
* What landfill

UNDERGROUND STORAGE TANK PERMANENT CLOSURE FORM

Vermont Agency of Natural Resources, Department of Environmental Conservation, Waste Management Division
103 South Main Street, West Building, Waterbury, Vermont 05671-0404, Telephone: (802) 241-3888

Agency Use Only
Date of scheduled Activity __/__/__ Facility ID # 635 2356 Closing: __tanks, __piping, __system
DEC initials: SMS # 95(90C) DEC evaluator: ST

Section A. Facility Information:
Name of facility: Johnson State College Maintenance Facility Number of employees: 11
Street address: Johnson State College, Clay Hill Town/city Johnson
Owner of UST(s) to be closed: Johnson State College Contact(if different than owner): Austin Richards
Mailing address of owner: Clay Hill, Johnson, Vermont
Telephone number of owner: (802) 635-2356 Contact telephone #: (802) 635-1284

Section B. UST Closure Information: (please check one)
Reason for initiating UST closure: __Suspected Leak __Liability X Replacement __Abandoned

USTs (piping is considered a part of UST system) undergoing permanent closure. Include condition of USTs

UST #	Product	Size (gallons)	Tank age	Tank Condition	Piping age	Piping condition
1	Gasoline	3,700	30-35 yrs.	slight corrosion; shallow pitting	21 yrs.	slight corrosion

Which tanks, if any, will be closed in-place: USTs# Authorized by: Date: __/__/__
Disposal/destruction of removed UST(s): Location Massena, NY Method Cut, Torches Date: __/__/__
Amount (gal.) and type of waste generated from USTs: 150 gallons gasoline
(tank contents are hazardous wastes unless recovered as usable product)
Tank cleaning company (must be trained in confined space entry) Op-Tech Environmental Services, Inc.
Certified hazardous waste hauler : NYS 6A166 Generator ID number:

Section C. Initial site characterization:
Work in this section must be completed by a professional environmental consultant or hydrogeologist with experience in environmental sampling for the presence of hazardous materials. A full report from the consultant must accompany this form.
Excavation information: *(some tank pulls require more than one excavation)*

Tank(s) # and Excavation (A,B,C,etc)	Depth (ft)	Excavation size(ft^2)	Peak PID reading	Depth of Peak (ft)	Avg PID reading	Bedrock Depth (ft)	Groundwater encountered? (y/n) and at depth (ft)	Soil type
1A	8.0		532	7.0	60	8.0-9.0	Y; 8.0	SAND.

Dig Safe Number:
PID information:
Make: HNu Model: PI 101 Calibration information (date, time, gas): 10/24/98 3:00 PM

Locate all readings and samples on site diagram
Number of soil samples collected for laboratory analysis? 0 results due date __/__/__
Have any soils been polyencapsulated on site? Yes__ (#yds³__ PID range above zero ^{low} __-__ ^{peak}) No X
Have any soils been transported off site? Yes__ list amount (yds³): No X
Location transported to: DEC official who approved
Amount of soils backfilled(yds³): PID range above zero ^{low} __-__ ^{peak}
Have limits of contamination been defined? Yes X No__
Is there any other known contamination on- site? Yes__ No X Comments:

Free Phase product encountered? Yes__ :*thickness*__ *sheen*__ No X
Groundwater encountered? Yes X depth(ft) 8.0 No__
Are there existing monitoring wells on-site? Yes__ how many: __(locate on site diagram)No X
Have new monitoring wells been installed? Yes__ how many: __(locate on site diagram)No X
Samples obtained from monitoring wells for lab analysis? Yes__ results due date __/__/__ No X

Is there a water supply well on site? Yes__(check type: shallow__ rock__ spring__) No X
Number of public water supply wells are located within a 0.5 mile radius? 0 min. distance (ft.): 0
Number of private water supply wells located within a 0.5 mile radius? 5 min distance (ft.): 1,000

Receptors impacted? X soil __indoor air __ambient air *groundwater __surface water __water supply

* Groundwater observed entering tank excavation pit at approximately 8.0 feet below grade, within the observed zone of petroleum-impacted soil.

Facility ID# 6352356

Section D: Tanks/Piping Remaining/installed

Regardless of size, include USTs at site as to *status, e.g. "abandoned", "in use", or "to be installed". (Most installations require permits and advance notice to this office.)

UST#	Product	Size(gallons)	Tank age	*Tank status	Piping age	*Piping Status

X There are no other tanks at this site.

Section E. Statements of UST closure compliance:
(must have both signatures or site assessment not complete)

As the party responsible for compliance with the Vermont UST Regulations and related statutes at this facility, I hereby certify that the all of the information provided on this form is true and correct to the best of my knowledge.

Signature of UST owner or owner's authorized representative — Date of signature: 10/29/98

As the environmental consultant on site, I hereby certify that the site assessment requirements were performed in accordance with DEC policy and regulations, and that information which I have provided on this form is true and correct to the best of my knowledge.

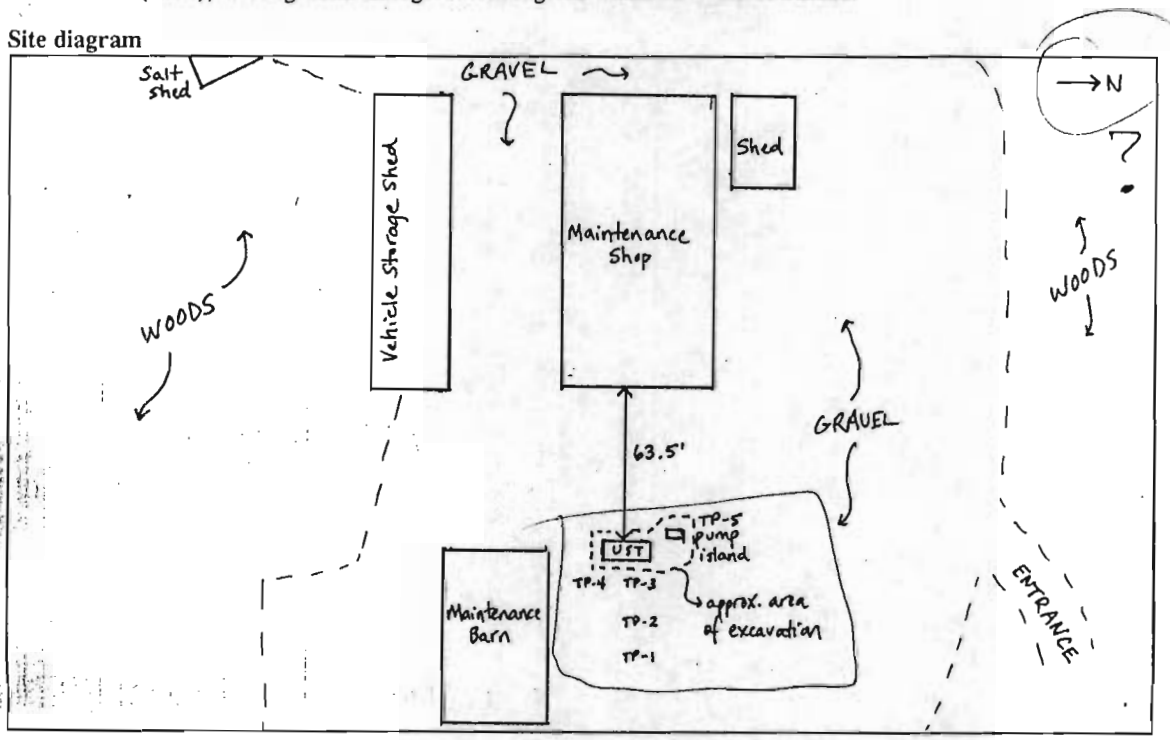
Signature of Environmental Consultant — Date of signature: 2/5/99

Company: Strategic Environmental Mgmt., Inc.

Telephone #: (315) 386-2736 Date of Closure: __/__/__ Date of Assessment __/__/__

Return form along with complete narrative report and photographs to the Department of Environmental Conservation(DEC), Underground Storage Tank Program within 72 hours of closure.

Site diagram



This Closure Form may only be issued for the facility and the date indicated at top of page 1. **Changes in the scheduled closure date should be phoned in at least 48 hours in advance.** Both the yellow and white copies of this form must be returned to the address on the top of page 1 of this form; the pink copy should be retained by the UST owner. A written report from an environmental consultant covering all aspects of closure and site assessment, complete with photographs and any other relevant data, must accompany this form. All procedures must be conducted by qualified personnel, to include training required by 29 CFR 1910.120. Documentation of all methods and materials used must be adequate. All work must be performed in compliance with DEC policy "UST Closure and Site Assessment Requirements" as well as all applicable statues, regulations, and additional policies. The DEC may reject inadequate closure forms and reports.

Vermont Underground Storage Tank Form

Notification and Permit Application (if applicable)

Read instruction sheet carefully before completing this form. Please type or print in ink all items except for the "signature." For additional information call The Vermont Underground Storage Tank Program at (802) 241-3888

I. OWNERSHIP OF TANKS

Name Johnson State College (CORPORATION, INDIVIDUAL, PUBLIC AGENCY, OR OTHER ENTITY)

Mailing Address College Hill

City Johnson State VT Zip 05656

Phone (802) 635-2356

II. OPERATOR OF TANKS (if different than owner)

Name (CORPORATION, INDIVIDUAL, PUBLIC AGENCY, OR OTHER ENTITY)

Mailing Address

City State Zip

Phone ( )

III. CONTACT PERSON (person responsible for the day to day operation of tanks)

☐ Check if same as owner

☐ Check if same as operator

If different than owner or operator:

Name Richard Mahoney

Mailing Address

City State Zip

Phone ( )

IV. LOCATION OF THE TANKS

Name Johnson State College (TRADE NAME, COMPANY NAME OR DBA)

Street Address College Hill (ROAD NAME, HIGHWAY #)

~~City~~/Town Johnson, VT Zip 05656

County Lamoille

Phone (802) 635-2356

V. SITE LEAK HISTORY (if applicable)

a) Year of Tank or Piping Leak

Substance Leaked

b) For Overfill or Spill in excess of 25 gallons:

Year of Overfill/Spill

Substance Overfilled/Spilled

TANK REMOVAL Year 1995 HOW MANY 1

Replacement 1 x Site Assessment

VI. TYPE OF FACILITY (check one)

☒ Institutional	☐ State
☐ Bulk Plant	☐ Town
☐ Retail	☐ Federal
☐ Commercial	☐ Farm
☐ Service Station	☐ Residential

VII. PERMITTEE (person or entity filing for Category One Tank Permit, if applicable)

☒ Check if same as owner

☐ Check if same as operator

☐ NA Notified UST only

VIII. NUMBER OF TANKS AT THIS LOCATION

2 3 Number owned by person named in I. above

____ Number owned by another party

Owned by:

IX. LANDOWNER

Name Vermont State Colleges

CERTIFICATION: I certify under penalty of law that the information provided on this form and all attached documents, is true, accurate, and complete to the best of my knowledge. Further, I recognize that by signing this application I am giving consent to employees of the State to enter the subject property (facility) for the purpose of processing this application.

Johnson State College, Richard Mahoney, Director of Physical Plant
Printed name of owner. If a corporation, add name and title of authorized representative

Printed name of permittee if different than owner. If a corporation, add name and title of authorized representative

Signature of owner or owner's representative — Date 8/24/95

Signature of permittee or permittee's representative — Date

LOCAL USE ONLY

Date recorded 11/8/95 12:30 P.m.

Book Number 74

Page Number 531

Town of Johnson Land Records

Helen W. Neill
Signature of Town or City Clerk

Amends VT form of record in Book No. ____, Page ____

filed by:
Agency of Natural Resources
Department of Environmental Conservation
UST Program, West Building
103 South Main Street
Waterbury, VT 05671-0404

STATE USE ONLY

☐ First ☒ Amended ☒ Notification ☐ Permit

☐ Change of Ownership

☒ Change of Tank Information

Number of COTs 1 ONE Permit Fee $

Check # Amount $

Date Received 9/6/95 Date Issued

Jane Middleton UST Program
(Notification Approval)

(Permit Approval)

LUST Site Number

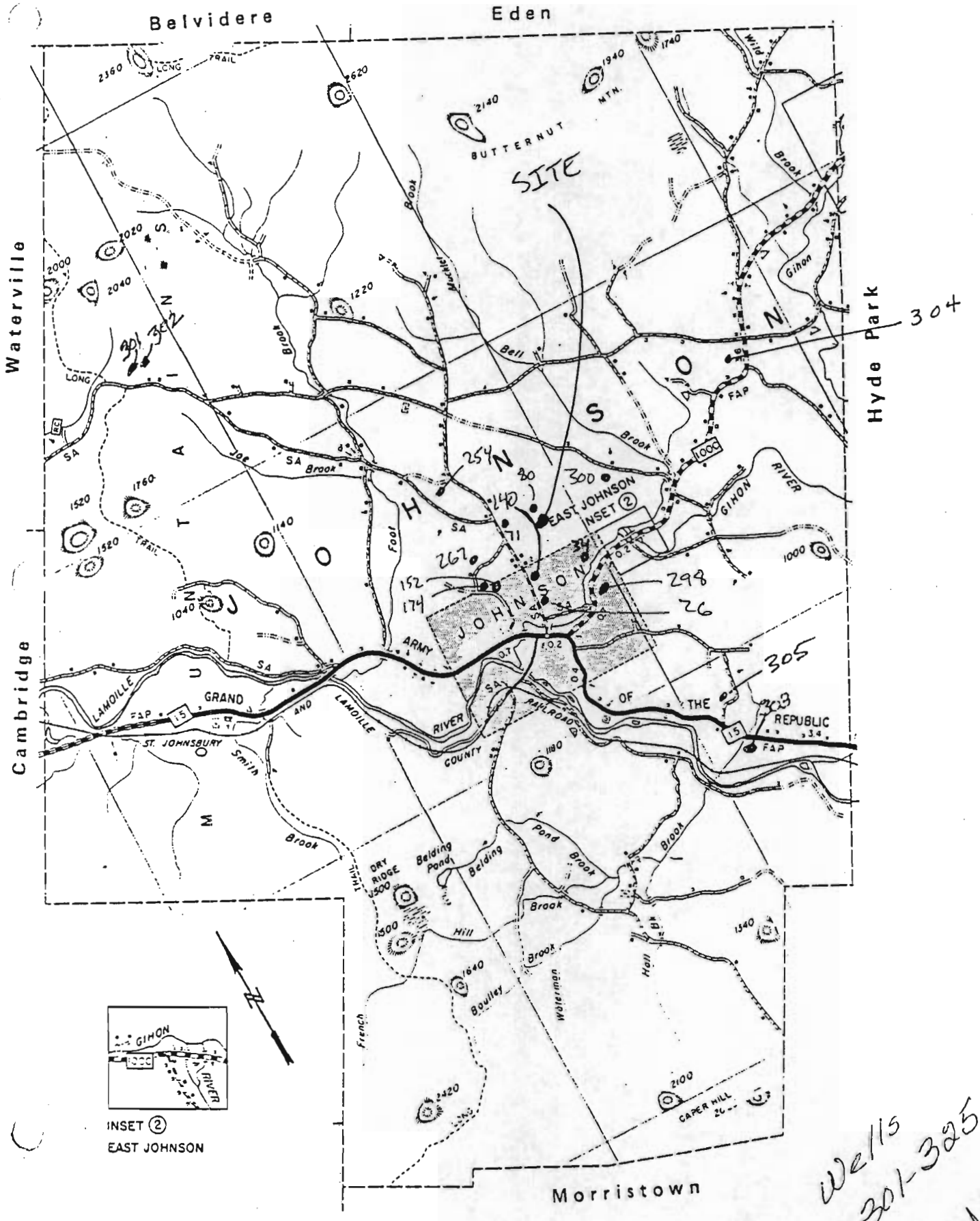
Date Permit Expires

Facility ID Number 63523356

Financial Responsibility

Appendix B
Receptor Analysis
Data and Maps

MAP SOURCE: VERMONT AGENCY OF TRANSPORTATION



SCALE

0.5 0 1 2 MILES

1 2.5 0 1 2 KILOMETERS

Wells 301-325.

logged 12/4/15

Wells Drilled in the town of : Johnson 11/06/2000

Includes Well Completion Reports For Map Cell: 32A6

Rept #	Owner (if known) Or purchaser	Map Cell	Yield GPM	Total Depth (feet)	Depth Rock (feet)	Casing length (feet)	Static Water level	Date Drilled	Driller ID
4	HILL , BLAINE	32A6	8.00	99.00	0.00	94.00	0.00	1/04/69	8
6	RED BARON, THE ,	32A6	25.00	98.00	0.00	54.00	0.00	10/28/68	8
7	DESMARAIS , GEORGE	32A6	12.00	135.00	0.00	131.00	0.00	2/26/68	8
8	NADEAU , ALBERT	32A6	50.00	148.00	0.00	144.00	0.00	4/03/69	8
9	BYRNE , MARVIN	32A6	0.00	424.00	0.00	51.00	0.00	6/12/69	8
12	VERMONT ELEC. CO-OP ,	32A6	17.00	275.00	0.00	29.00	0.00	8/11/69	8
14	CRISP , ALONZO	32A6	4.00	175.00	0.00	85.00	0.00	10/22/69	8
20	BARAW , DAYTON	32A6	1.00	248.00	0.00	20.00	0.00	9/09/70	8
25	PARKER , EVERETT	32A6	20.00	192.00	0.00	11.00	0.00	7/30/69	8
26	RUSSELL , CLAYTON	32A6	3.00	73.00	0.00	5.00	0.00	7/18/69	8
28	NOE , H.	32A6	1.00	303.00	0.00	24.00	0.00	8/20/71	8
30	COLBURN , JOSEPH	32A6	5.00	87.00	0.00	16.00	0.00	8/17/71	8
31	JOHNSON, VILLAGE OF ,	32A6	90.00	138.00	0.00	135.00	0.00	10/08/71	8
33	JOHNSON, VILLAGE OF ,	32A6	300.00	139.00	0.00	130.00	110.00	11/24/72	24
34	JOHNSON STATE COLLEGE ,	32A6	15.00	348.00	0.00	21.00	0.00	7/07/72	8
37	JONES, JR. , ROGER	32A6	20.00	109.00	0.00	102.00	0.00	2/16/72	8
38	DAYTON , CEDRIC	32A6	5.00	275.00	0.00	21.00	0.00	11/01/72	8
39	SWEETSER , LEONARD	32A6	4.00	199.00	0.00	27.00	0.00	10/10/72	8
42	MANLEY , RICHARD	32A6	1.00	299.00	0.00	31.00	0.00	10/30/72	8
43	LAROSE , RICHARD	32A6	2.00	223.00	0.00	29.00	0.00	5/25/72	8
48	WOSCOM , CLIFFORD	32A6	15.00	222.00	0.00	38.00	0.00	4/19/73	115
59	BARRY , FRANK	32A6	1.00	248.00	0.00	29.00	0.00	4/24/75	8
66	CONGER , CHARLES	32A6	4.00	272.00	0.00	11.00	0.00	8/12/75	8
68	HUBBELL , CARL	32A6	0.00	274.00	0.00	33.00	0.00	8/05/75	8
71	MILLER , ROGER	32A6	4.00	149.00	0.00	21.00	0.00	7/24/75	8
75	KITTELL , ARTHUR	32A6	3.00	175.00	0.00	21.00	0.00	8/21/75	8
76	KITTELL , ARTHUR	32A6	0.00	400.00	0.00	35.00	0.00	8/20/75	8
81	BRADLEY , PAUL	32A6	5.00	173.00	0.00	8.00	0.00	12/08/75	8
84	JONES , FLOYD	32A6	1.00	398.00	0.00	62.00	0.00	10/14/75	8
93	MANLEY , DON	32A6	8.00	123.00	0.00	15.00	0.00	6/03/77	8
118	WHITING , ALICE	32A6	15.00	72.00	0.00	48.00	0.00	8/12/80	8
124	SHAW , WALTER	32A6	1.00	223.00	0.00	20.00	0.00	4/01/81	8
126	CARPENTER , CHIP	32A6	2.00	197.00	0.00	55.00	0.00	4/13/81	8
132	WESCOM TRAILER PARK ,	32A6	6.00	297.00	0.00	70.00	0.00	7/12/82	8
133	WESCOM , JUNE	32A6	2.00	498.00	0.00	73.00	0.00	7/09/82	8

TEST WELL. NEWLY USED

Wells Drilled in the town of : Johnson 11/06/2000

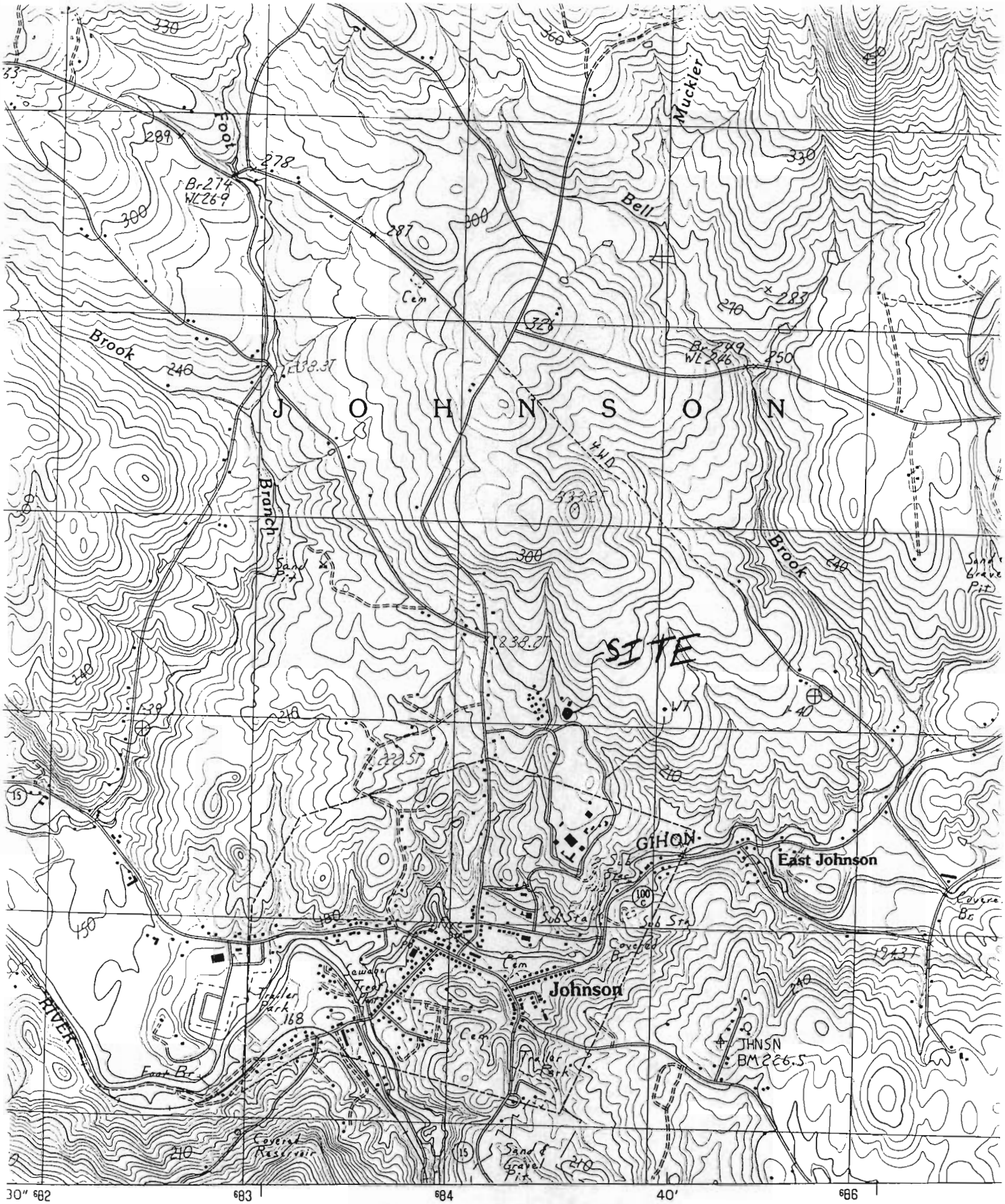
Includes Well Completion Reports For Map Cell: 32A6

Rept #	Owner (if known) Or purchaser	Map Cell	Yield GPM	Total Depth (feet)	Depth Rock (feet)	Casing length (feet)	Static Water level	Date Drilled	Driller ID
140	LORD , MORTON	32A6	6.00	123.00	0.00	20.00	0.00	12/10/82	8
146	NADEAU , ALBERT	32A6	100.00	170.00	0.00	160.00	0.00	10/25/83	8
147	WESCOM TRAILER PARK ,	32A6	25.00	55.00	0.00	54.00	0.00	11/02/83	8
148	Menard , Norman	32A6	12.00	123.00	0.00	20.00	0.00	11/01/83	8
149	NADEAU SAND & GRAVEL ,	32A6	50.00	173.00	0.00	170.00	0.00	10/03/83	8
151	SAUER , DONALD	32A6	1.00	250.00	0.00	98.00	0.00	7/22/83	115
152	HOULE , ROBERT	32A6	12.00	50.00	0.00	15.00	0.00	8/30/83	115
163	SMITH , STEVE	32A6	12.00	92.00	0.00	90.00	0.00	7/17/84	8
166	LEHOUILLIER , JOHN	32A6	2.00	247.00	0.00	20.00	0.00	1/04/84	8
167	STILES , FRANK O.	32A6	20.00	297.00	0.00	130.00	0.00	11/27/84	8
172	BYRNE , DON	32A6	0.00	373.00	0.00	60.00	0.00	6/21/85	8
174	UNDERWOOD , GARY	32A6	1.00	521.00	0.00	66.00	0.00	8/26/85	8
184	LEHOULLIER , GILLES	32A6	12.00	105.00	0.00	40.00	0.00	10/01/86	8
187	KIMBLE , ELIOT & RHODA	32A6	15.00	103.00	0.00	20.00	0.00	11/11/86	36
192	PROVONCHA ,	32A6	7.00	198.00	0.00	20.00	0.00	6/29/88	8
195	HOLMES , SUSAN	32A6	15.00	149.00	0.00	63.00	0.00	6/24/88	8
201	SLAYTON , LONNIE	32A6	25.00	172.00	0.00	61.00	0.00	6/24/88	8
204	GARDNER , MCCABE	32A6	1.00	323.00	0.00	48.00	0.00	10/20/87	8
210	WHITEHILL , BRUCE	32A6	20.00	198.00	0.00	31.00	0.00	9/15/87	8
212	SMITH , DAVID	32A6	1.00	198.00	0.00	20.00	0.00	11/21/88	8
219	TATRO , G. W.	32A6	6.00	297.00	0.00	99.00	0.00	10/23/89	8
223	BEARD , BRUCE	32A6	4.00	148.00	0.00	20.00	0.00	8/31/89	8
226	DAVIS , ED	32A6	1.00	399.00	0.00	142.00	0.00	7/19/89	8
230	PATCH , CHARLES	32A6	60.00	120.00	0.00	20.00	0.00	7/25/89	53
236	GAGNON , PAM	32A6	0.00	400.00	0.00	100.00	0.00	1/04/91	53
237	SCHULG , ROBERT	32A6	20.00	153.00	0.00	47.00	0.00	5/02/90	8
239	LETOURNEAU , RAY	32A6	1.00	323.00	0.00	33.00	0.00	6/19/90	8
243	FLETCHER , LINDA	32A6	4.00	223.00	0.00	20.00	0.00	5/19/91	8
251	FOOTE, JR. , GARRY	32A6	1.00	424.00	0.00	92.00	0.00	9/19/91	8
254	Creative Carpentry ,	32A6	1.00	273.00	0.00	93.00	0.00	6/03/92	8
262	MCKNIGHT , DANA	32A6	1.00	320.00	0.00	20.00	0.00	7/30/92	53
267	BRADLEY , PAUL	32A6	1.00	423.00	0.00	89.00	0.00	11/23/92	8
283	RUSSELL , ROGER	32A6	4.00	248.00	0.00	61.00	0.00	7/27/94	8
296	WESCOM, JR. , CLIFF	32A6	25.00	60.00	0.00	62.00	19.00	5/24/95	8
298	KEATING , JOAN	32A6	1.00	498.00	0.00	80.00	0.00	9/06/95	8

Wells Drilled in the town of : Johnson 11/06/2000

Includes Well Completion Reports For Map Cell: 32A6

Rept #	Owner (if known) Or purchaser	Map Cell	Yield GPM	Total Depth (feet)	Depth Rock (feet)	Casing length (feet)	Static Water level	Date Drilled	Driller ID
2,576	LANGAVIN , PAUL	32A6	12.00	140.00	0.00	20.00	5.00	10/02/96	16
4,180	Lamell , David	32A6	0.50	300.00	10.00	150.00	60.00	8/12/97	174
5,409	Dodge , Ann	32A6	25.00	248.00	0.00	40.90	0.00	7/11/97	8
5,410	Manchester Lumber ,	32A6	20.00	60.00	0.00	54.00	0.00	/ /	8
5,412	Otterman , Margaret	32A6	5.00	323.00	0.00	0.00	0.00	2/24/97	8
5,414	Affordable Homes ,	32A6	30.00	198.00	0.00	123.10	0.00	1/05/98	8
6,459	Wescomb , June	32A6	12.00	98.00	0.00	50.00	0.00	6/27/98	8
6,460	Wescom , Jane	32A6	20.00	116.00	0.00	116.60	0.00	6/27/98	8
7,762	Wescom , Clifton	32A6	20.00	116.00	0.00	116.00	0.00	5/27/98	8
7,763	Wescom , Clifton	32A6	12.00	98.00	0.00	50.00	0.00	5/27/98	8
8,599	Wisell , Edward	32A6	5.00	223.00	0.00	80.70	0.00	5/26/99	8
13,482	TOUCHETTE , BRIAN	32A6	4.00	224.00	0.00	81.00	35.00	3/09/00	8
13,483	Johnson Village ,	32A6	0.00	149.00	0.00	93.00	0.00	3/10/00	8
13,649	Boissoneault , Aaron	32A6	12.00	199.00	0.00	41.00	0.00	7/31/00	8
19,727	Taywood , Peter	32A6	10.00	210.00	0.00	43.00	0.00	8/18/00	198



30" 82 83 84 40' 86

INTERIOR - GEOLOGICAL SURVEY, RESTON, VIRGINIA — 1987

SCALE 1:24 000

1 .5 0 KILOMETERS 1 2
1000 0 METERS 1000 2000

.5 0 1
MILES

0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10 000
FEET

VT.

QUADRANGLE LOCATION

Appendix C
Analytical Data

ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7403

REPORT OF LABORATORY ANALYSIS

CLIENT: Stone Environmental
PROJECT NAME: Johnson State
REPORT DATE: November 9, 1998
DATE SAMPLED: November 5, 1998

PROJECT CODE: STON1642
REF.#: 130,735 - 130,736

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. Chain of custody indicated sample preservation with HCl.

All samples were prepared and analyzed by requirements outlined in the referenced method and within the specified holding times. All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced method. Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Individual sample performance was monitored by the addition of surrogate analytes to each sample. All surrogate recovery data was determined to be within laboratory QA/QC guidelines unless otherwise noted.

Reviewed by,

Harry B. Locker, Ph.D.
Laboratory Director

enclosures

ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

EPA METHOD 8021B--PURGEABLE AROMATICS

CLIENT: Stone Environmental
PROJECT NAME: Johnson State
CLIENT PROJ. #: NI

DATE RECEIVED: November 5, 1998
REPORT DATE: November 9, 1998
PROJECT CODE: STON1642

Ref. #:	130,735	130,736			
Site:	Pit	Seep			
Date Sampled:	11/5/98	11/5/98			
Time Sampled:	9:30	10:00			
Sampler:	J. Amaden	J. Amaden			
Date Analyzed:	11/9/98	11/6/98			
UIP Count:	>10	0			
Dil. Factor (%):	10	100			
Surr % Rec. (%):	92	102			
Parameter	**Conc. (ug/L)**	**Conc. (ug/L)**			
MTBE	605.	<10			
Benzene	37.3	<1			
Toluene	80.8	<1			
Ethylbenzene	TBQ <10	<1			
Xylenes	81.2	<1			
1,3,5 Trimethyl Benzene	22.7	<1			
1,2,4 Trimethyl Benzene	49.1	<1			
Naphthalene	51.3	<1			

Note: UIP = Unidentified Peaks TBQ = Trace Below Quantitation NI = Not Indicated

ENDYNE, INC.

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333

31394

CHAIN-OF-CUSTODY RECORD

Project Name: SEI Johnson Site Location: Johnson State	Reporting Address: SE State St Montpelier VT 05602	Billing Address: Same
Endyne Project Number: STON1642	Company: State Environmentalist Contact Name/Phone #: Tech Specialist 229-4586	Sampler Name: Same Phone #:

Lab #	Sample Location	Matrix	GRAB	COMP	Date/Time	Sample Containers No.	Sample Containers Type/Size	Field Results/Remarks	Analysis Required	Sample Preservation	Rush
130735	pit (my wood 10x10)	GW	X		11/5/98 7:30	2	40 vials		8021B	HCl	Please
130736	Seep	GW	X		11/5/98 10:00	2	"		8021B	HCl	Please

Relinquished by: Signature	Received by: Signature	Date/Time 11/5/98 11:35 AM Cool
Relinquished by: Signature	Received by: Signature	Date/Time

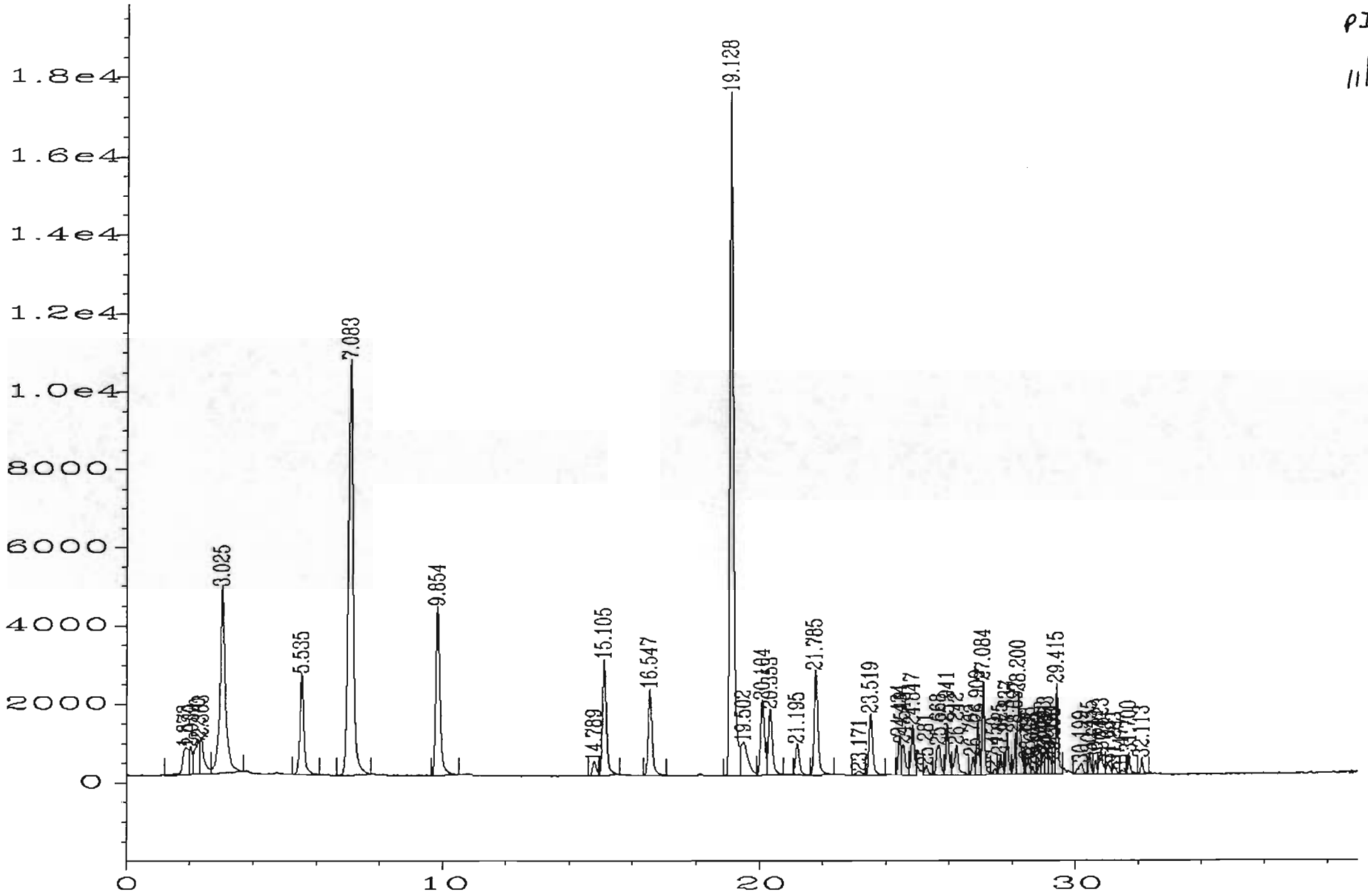
New York State Project: Yes ____ No ____

Requested Analyses

1	pH	6	TKN	11	Total Solids	16	Metals (Specify)	21	EPA 624	26	EPA 8270 B/N or Acid
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	EPA 625 B/N or A	27	EPA 8010/8020
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	EPA 418.1	28	EPA 8080 Pest/PCB
4	Nitrite N	9	BOD_5	14	Turbidity	19	BTEX	24	EPA 608 Pest/PCB		
5	Nitrate N	10	Alkalinity	15	Conductivity	20	EPA 601/602	25	EPA 8240		
29	TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)										
30	Other (Specify): Please Pesticides Chromatograms + SW report										

Please Fax results ASAP 229 5417 Thanks

130735
SEI
PIT
11/9/94
1ω1.



Sig. 1 in C:\HPCHEM\2\DATA\HOM8021I\010F0317.D

Internal Standard Report

Data File Name : C:\HPCHEM\2\DATA\HOM8021I\010F0317.D
Operator : Claire Monachino
Instrument : HOMER
Sample Name :
Run Time Bar Code:
Acquired on : 09 Nov 98 02:15 PM
Report Created on: 09 Nov 98 04:05 PM
Last Recalib on : 30 OCT 98 09:02 AM
Multiplier : 1

Page Number : 1
Vial Number : 10
Injection Number :
Sequence Line :
Instrument Method: HOM8021I.MTH
Analysis Method : HOM8021I.MTH
Sample Amount : 0
ISTD Amount :

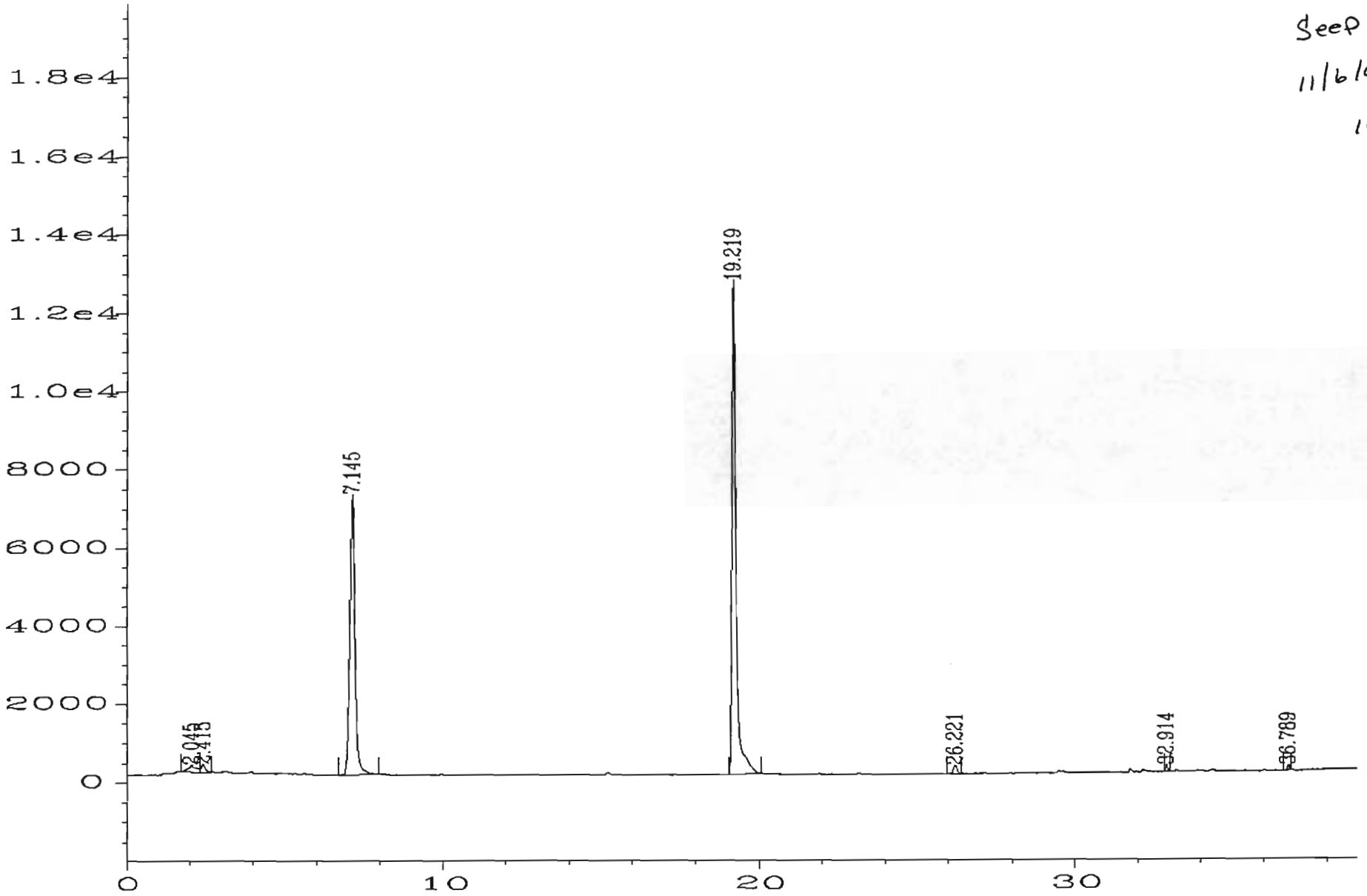
Sig. 1 in C:\HPCHEM\2\DATA\HOM8021I\010F0317.D

Ret Time	Area	Type	Width	Ref#	ppb	Name
3.107	* not found *			3		MTBE
5.535	22836	BV	0.132	3	3.728	Benzene
7.083	113177	BV	0.161	3-I	30.000	IS
9.854	40215	BB	0.139	3	8.080	Toluene
14.789	2890	BV	0.125	3	0.766	Ethylbenzene
15.105	25150	VV	0.131	3	3.967	m&p-Xylene
16.547	19104	PV	0.133	3	4.148	o-Xylene
19.128	141394	PV	0.123	3	13.819	Surrogate
20.353	14914	VV	0.134	3	2.274	1,3,5-Trim Bzene
21.785	22241	PV	0.126	3	4.910	1,2,4 Trim Bzene
29.414	8657	MM	0.069	3	5.134	Naphthalene

Not all calibrated peaks were found

User Modified

130736
SEI
Seep
11/6/98
ICP.



Sig. 1 in C:\HPCHEM\2\DATA\HOM8021I\010F0274.D

Internal Standard Report

Data File Name : C:\HPCHEM\2\DATA\HOM8021I\010F0274.D
Operator : Claire Monachino
Instrument : HOMER
Sample Name :
Run Time Bar Code:
Acquired on : 06 Nov 98 09:39 PM
Report Created on: 09 Nov 98 04:02 PM
Last Recalib on : 30 OCT 98 09:02 AM
Multiplier : 1

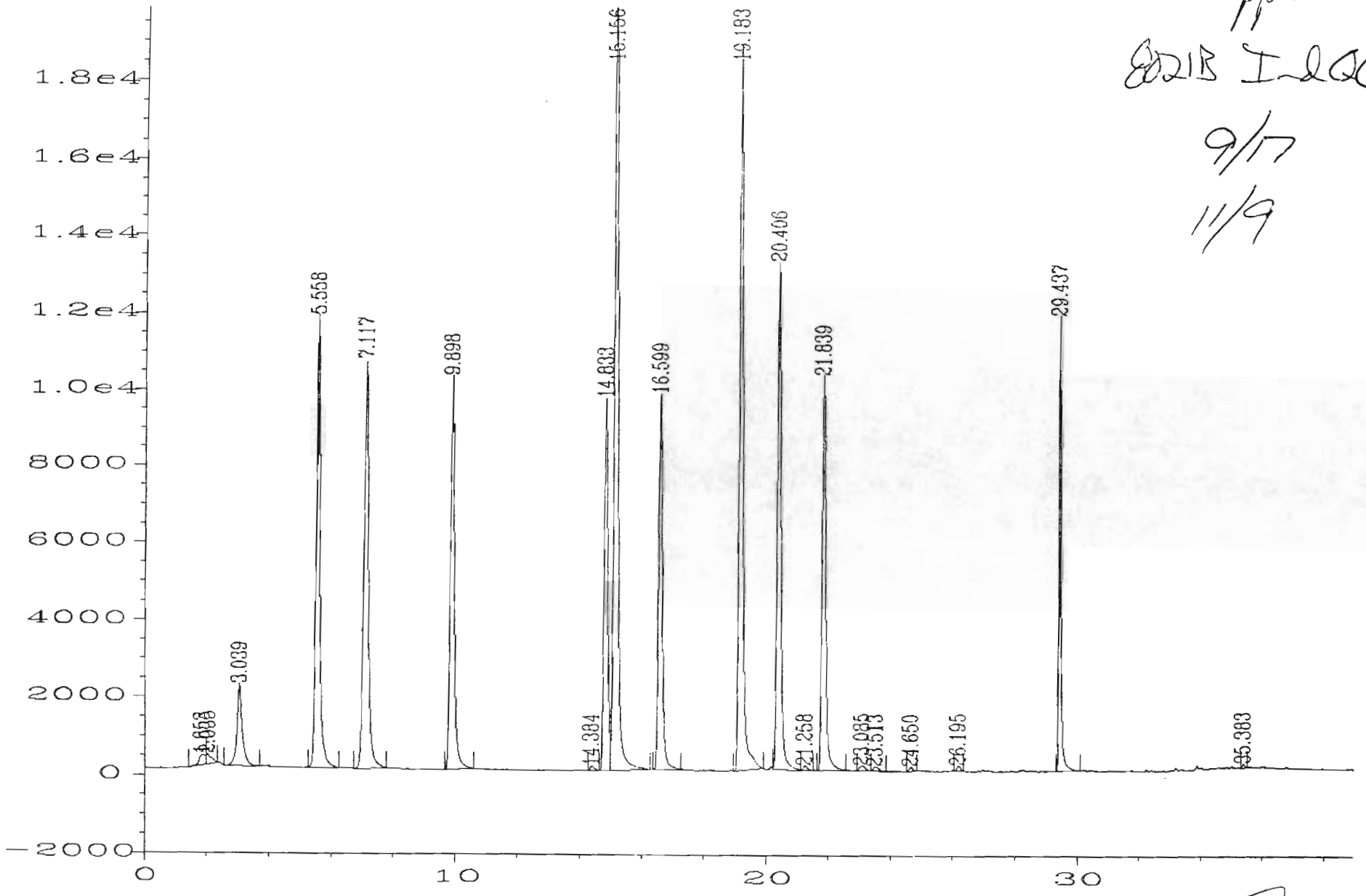
Page Number : 1
Vial Number : 10
Injection Number :
Sequence Line :
Instrument Method: HOM8021I.MTH
Analysis Method : HOM8021I.MTH
Sample Amount : 0
ISTD Amount :

Sig. 1 in C:\HPCHEM\2\DATA\HOM8021I\010F0274.D

Ret Time	Area	Type	Width	Ref#	ppb	Name
3.107	* not found *			3		MTBE
5.575	* not found *			3		Benzene
7.145	81006	BV	0.168	3-I	30.000	IS
9.910	* not found *			3		Toluene
14.848	* not found *			3		Ethylbenzene
15.185	* not found *			3		m&p-Xylene
16.620	* not found *			3		o-Xylene
19.219	111834	BV	0.132	3	15.270	Surrogate
20.430	* not found *			3		1,3,5-Trim Bzene
21.870	* not found *			3		1,2,4 Trim Bzene
29.460	* not found *			3		Naphthalene

Not all calibrated peaks were found

20 ppb
8021B I-CC
9/17
11/9



Sig. 1 in C:\HPCHEM\2\DATA\HOM8021I\010F0315.D

Internal Standard Report

Data File Name : C:\HPCHEM\2\DATA\HOM8021I\010F0315.D
Operator : Claire Monachino
Instrument : HOMER
Sample Name :
Run Time Bar Code:
Acquired on : 09 Nov 98 12:48 PM
Report Created on: 09 Nov 98 01:27 PM
Last Recalib on : 30 OCT 98 09:02 AM
Multiplier : 1

Page Number : 1
Vial Number : 10
Injection Number :
Sequence Line :
Instrument Method: HOM8021I.MTH
Analysis Method : HOM8021I.MTH
Sample Amount : 0
ISTD Amount :

Sig. 1 in C:\HPCHEM\2\DATA\HOM8021I\010F0315.D

Ret Time	Area	Type	Width	Ref#	ppb	Name
3.039	23727	BV	0.161	3	24.213	MTBE
5.558	102028	BV	0.129	3	20.638	Benzene
7.117	113295	BV	0.157	3-I	30.000	IS
9.898	94582	PV	0.141	3	19.077	Toluene
14.833	79365	VV	0.127	3	18.813	Ethylbenzene
15.156	194395	VV	0.131	3	38.252	m&p-Xylene
16.599	82656	PV	0.129	3	18.815	o-Xylene
19.183	153691	BV	0.125	3	15.005	Surrogate
20.406	109737	VV	0.129	3	18.785	1,3,5-Trim Bzene
21.839	83794	BB	0.125	3	18.636	1,2,4 Trim Bzene
29.437	55591	BV	0.072	3	20.961	Naphthalene

ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

REPORT OF LABORATORY ANALYSIS

CLIENT: Stone Environmental, Inc.
PROJECT NAME: SEI 98-882
REPORT DATE: December 9, 1998
DATE SAMPLED: December 1, 1998

PROJECT CODE: STON1849
REF.#: 132,077

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. Chain of custody indicated sample preservation with HCl.

All samples were prepared and analyzed by requirements outlined in the referenced method and within the specified holding times. All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced method. Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Individual sample performance was monitored by the addition of surrogate analytes to each sample. All surrogate recovery data was determined to be within laboratory QA/QC guidelines unless otherwise noted.

Reviewed by,

Harry B. Locker, Ph.D.
Laboratory Director

enclosures

ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

EPA METHOD 8021B--PURGEABLE AROMATICS

CLIENT: Stone Environmental, Inc.
PROJECT NAME: SEI 98-882
CLIENT PROJ. #: 98-882

DATE RECEIVED: December 1, 1998
REPORT DATE: December 9, 1998
PROJECT CODE: STON1849

Ref. #:	132,077				
Site:	Tap				
Date Sampled:	12/1/98				
Time Sampled:	12:00				
Sampler:	J. Amaden				
Date Analyzed:	12/9/98				
UIP Count:	0				
Dil. Factor (%):	100				
Surr % Rec. (%):	96				
Parameter	Conc. (ug/L)				
MTBE	<10				
Benzene	<1				
Toluene	<1				
Ethylbenzene	<1				
Xylenes	<1				
1,3,5 Trimethyl Benzene	<1				
1,2,4 Trimethyl Benzene	<1				
Naphthalene	<1				

Note: UIP = Unidentified Peaks TBQ = Trace Below Quantitation NI = Not Indicated

ENDYNE, INC.

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333

31770

CHAIN-OF-CUSTODY RECORD

Project Name: SEI 98-882 Site Location: Johnson	Reporting Address: 58 E. State St Montpelier VT 05602	Billing Address: Same
Endyne Project Number: STOM849	Company: Stone Environmental Inc Contact Name/Phone #: John Arnold 229-4541	Sampler Name: Same Phone #:

Lab #	Sample Location	Matrix	GRAB	COMP	Date/Time	Sample Containers No.	Sample Containers Type/Size	Field Results/Remarks	Analysis Required	Sample Preservation	Rush
13077	Tap	Water	X		12/1/98 1400	2	Glass Vials		8021B	HCl	Same

Relinquished by: Signature John Arnold	Received by: Signature Laura M. Wheeler	Date/Time 12-1-98 3:50
Relinquished by: Signature	Received by: Signature	Date/Time

New York State Project: Yes ____ No ____

Requested Analyses

1	pH	6	TKN	11	Total Solids	16	Metals (Specify)	21	EPA 624	26	EPA 8270 B/N or Acid
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	EPA 625 B/N or A	27	EPA 8010/8020
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	EPA 418.1	28	EPA 8080 Pest/PCB
4	Nitrite N	9	BOD_5	14	Turbidity	19	BTEX	24	EPA 608 Pest/PCB		
5	Nitrate N	10	Alkalinity	15	Conductivity	20	EPA 601/602	25	EPA 8240		
29	TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)										
30	Other (Specify):										

Please provide copies of all results

Internal Standard Report

Data File Name : C:\HPCHEM\2\DATA\HOM8021K\012F0410.D
Operator : Claire Monachino
Instrument : HOMER
Sample Name :
Run Time Bar Code:
Acquired on : 09 Dec 98 02:01 AM
Report Created on: 09 Dec 98 10:02 AM
Last Recalib on : 25 NOV 98 04:36 PM
Multiplier : 1

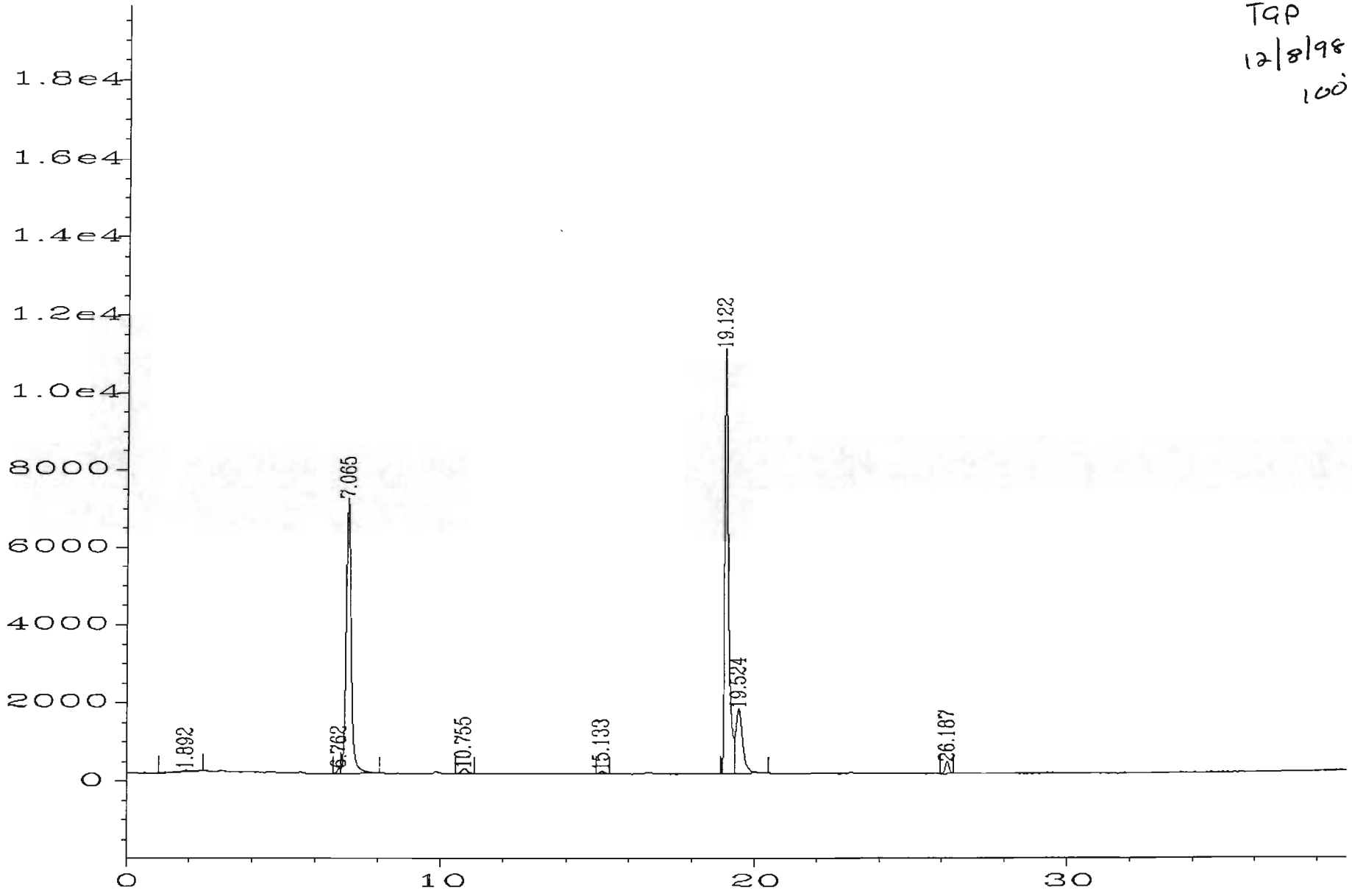
Page Number : 1
Vial Number : 12
Injection Number :
Sequence Line :
Instrument Method: HOM8021K.MTH
Analysis Method : HOM8021K.MTH
Sample Amount : 0
ISTD Amount :

Sig. 1 in C:\HPCHEM\2\DATA\HOM8021K\012F0410.D

Ret Time	Area	Type	Width	Ref#	ppb	Name
3.014	* not found *			3		MTBE
5.471	* not found *			3		Benzene
7.065	77404	VB	0.166	3-I	30.000	IS
9.960	* not found *			3		Toluene
14.709	* not found *			3		Ethylbenzene
15.133	656	BB	0.144	3	0.103	m&p-Xylene
16.476	* not found *			3		o-Xylene
19.122	96581	BV	0.134	3	14.358	Surrogate
20.483	* not found *			3		1,3,5-Trim Bzene
21.918	* not found *			3		1,2,4 Trim Bzene
29.427	* not found *			3		Naphthalene

Not all calibrated peaks were found

132077
SEI
TQP
12/8/98
100%



Sig. 1 in C:\HPCHEM\2\DATA\HOM8021K\012F0410.D

Appendix D
Photographs

UST REMOVAL ACTIVITIES
Johnson State College, Johnson, Vermont

Source: SEI Field Investigations, 2000
J:\proj-98\98-882\photos.cdr
11-07-00 jms

STONE ENVIRONMENTAL INC