

Phase (check one)		Type	
✓	Initial Site Investigation		Work Scope
	Corrective Action Feasibility Investigation	✓	Technical Report
	Corrective Action Plan		PCF Reimbursement Request
	Corrective Action Summary Report		General Correspondence
	Operations & Monitoring Report		

**INITIAL SITE INVESTIGATION**

Village Square Branch  
Chittenden Bank  
25 Village Square  
Bellows Falls (Rockingham), VT 05101  
SMS Site # 96-2076

**Prepared For:**  
Chittenden Bank  
25 Village Square  
Bellows Falls, VT 05101  
Contact: John Sexton

**Prepared By:**  
STRATEGIC ANALYTICAL SYSTEMS, INC.  
25 Centennial Square  
Bellows Falls, VT 05101  
(802) 463-0733/Fax 463-0723  
Contact: Richard M. Pendleton

**March 3, 1997**  
Project #: CHI-CM-002

Andrew Shively  
Environmental Technician, Sites Management Section  
Vermont Department of Environmental Conservation  
Hazardous Materials Management Division  
Sites Management Section (VT DEC)  
103 South Main Street/West Office  
Waterbury, VT 05671-0404

**Re: Initial Site Investigation: Village Square Branch, Chittenden Bank, Bellows Falls (Rockingham), VT**

Dear Mr. Shively:

In accordance with Strategic Analytical System's (SAS) work scope of December 5, 1996 (approved January 27, 1997) we are pleased to submit the above-referenced report.

## **1.0 INTRODUCTION**

### **1.1 Objective**

The objective of the Site Investigation was to determine the risk to potential receptors, and define the degree and extent of soil and groundwater contamination (if any) through the installation of borings/monitoring wells, and any at-risk receptors. There were four tasks: (1) Work Scope Preparation, (2) Receptor Survey, (3) Boring/Monitoring Well Installation, (4) Monitoring Well Sampling/Analysis and Survey, and (5) Report Preparation/Project Management. Task 4 was not conducted as monitoring wells were not deemed necessary.

### **1.2 Project Background**

As reported to the VTDEC Sites Management Section (SMS) in our report of September 23, 1996 an undetermined amount of soil contamination was detected at the site (Figure 1) during a tank pull on September 18, 1996. The site is a parking lot behind the Chittenden Bank building in downtown Bellows Falls. The area is serviced by municipal water and sewer.

## **2.0 RESULTS**

### **2.1 Work Scope Preparation**

The work scope was prepared and submitted to the SMS prior to project startup.

## 2.2 Receptor Survey

SAS performed an area reconnaissance and review of Assessors office records. The VTDEC Water Supply wellhead protection area (WHPA) maps for Rockingham were also acquired. As shown by Figure 2 and 3 the site is in an urban area/commercial district. There are no known drinking water supplies in the area. The closest surface water body is a tailrace of the Connecticut River, located more than 300 feet east of the site. There have been no reported fuel oil odors in the Chittenden Bank building, which has a poured concrete foundation.

## 2.3 Boring Installation/Soil Analysis

Boring Installation. On February 19, 1997 a boring was advanced to 31.5 feet at the location of the former UST (Figure 3). Soil samples were collected every 5 feet (Attachment A). A Photovac 2020 calibrated to 100 ppm isobutylene was used to headspace screen the soil samples and screen the auger ambient air. The only contamination detected was 5 ppm from a sample at 9.5-11.5 feet just below the peak depth of contamination found during the tank pull (8 feet, 269 ppm). The boring was advanced to 31.5 feet to confirm that there was no other evidence of contamination.

Laboratory Analysis. Two soil samples were submitted for laboratory analysis: (1) the peak contaminated soil sample and (2) the sample from the bottom of the boring. Analytical results (Table 1, Attachment B) indicated 210 parts per million (ppm) of total petroleum hydrocarbons (TPH) from the 9.5-11.5 feet sample, and no detectable contamination in the bottom sample. The SMS guideline for TPH is 1,000 ppm (Agency Guidelines for Petroleum Contaminated Soil And Debris, August, 1996).

## 3.0 CONCLUSIONS/RECOMMENDATIONS

SAS has the following **conclusions**:

1. The area of contamination (269 ppm total volatiles via headspace) does not extend below 11.5 feet. TPH was not detected above the VTDEC guidelines. No remediation is required at this site.

March 3, 1997

SAS has the following **recommendations**:

1. SAS recommends submittal of this report to the VTDEC along with a written request from Chittenden Bank to the SMS for a "Site Management Activity Completed" (SMAC) designation.

Please contact me with any questions.

Sincerely,  
STRATEGIC ANALYTICAL SYSTEMS, INC.

*Richard M. Pendleton*

Richard M. Pendleton  
Geologist

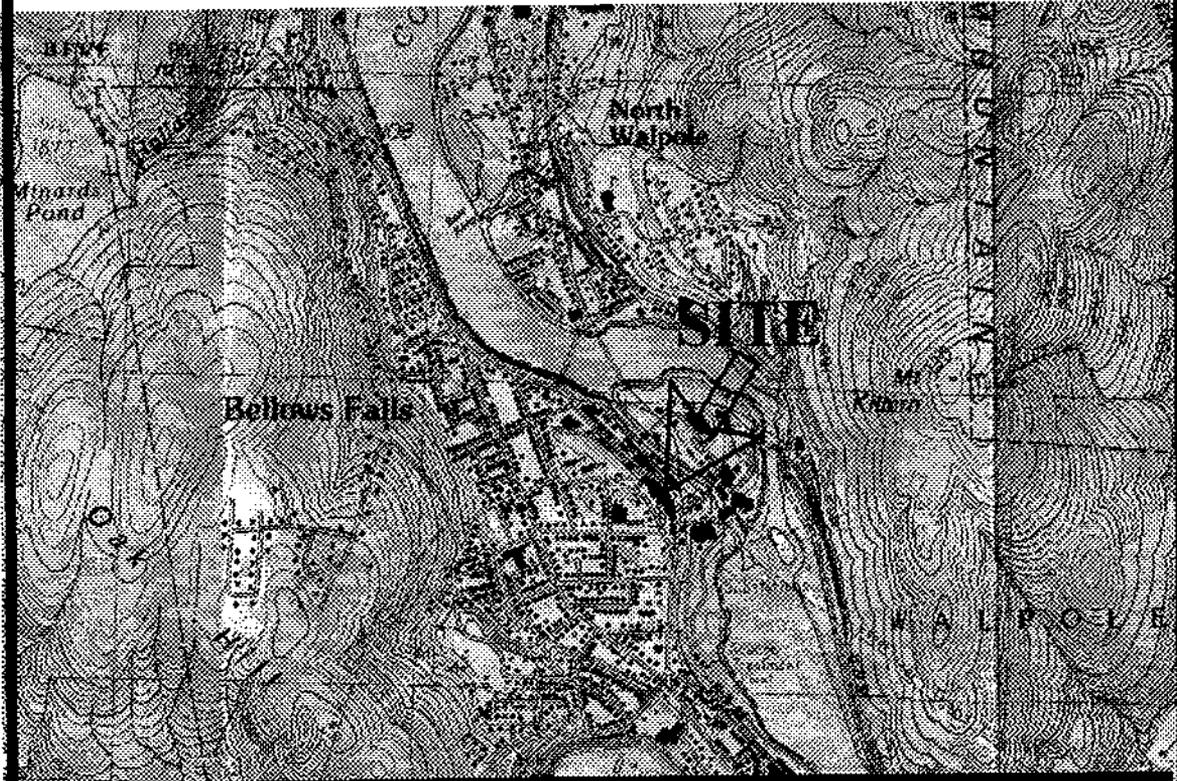
cc: John Sexton, Chittenden Bank

## TABLES

Sample Number	Depth Range (ft)	Total Petroleum Hydrocarbons, TPH (mg/kg, ppm <sup>1</sup> )
95115	9.5-11.5	210
295315	29.5-31.5	<50

Notes: 1. ppm: parts per million.

## FIGURES



**NORTH**



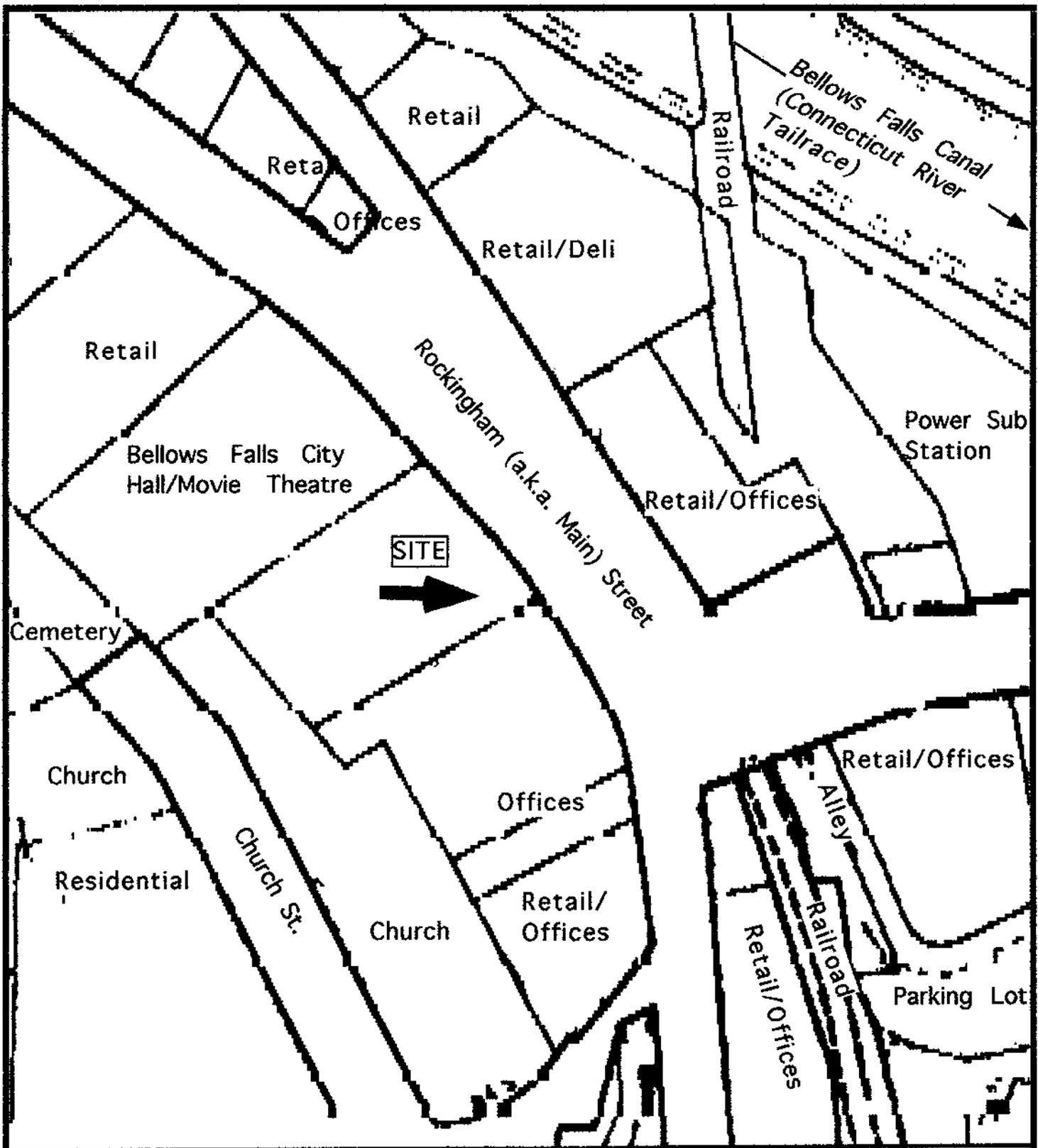
2000 ft

Portion of the Bellows Falls,  
VT-NH 1:25,000-scale metric  
topographic map

Strategic Analytical Systems, Inc.  
Bellows Falls, VT

**Figure 1. Site Location.**

Initial Site Investigation, Chittenden  
Bank, Bellows Falls (Rockingham), VT



Base map from Bellows Falls Town Clerk's Office, Map 23. Ground floor area uses shown.

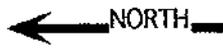
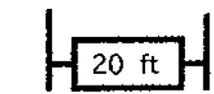
Strategic Analytical Systems, Inc.  
Bellows Falls, VT

NORTH  
↑

Figure 2. Schematic area map.  
Initial Site Investigation, Chittenden Bank, Bellows Falls (Rockingham), VT

100 ft  
Scale approximate.

Assumed Groundwater Flow  
(generalized, at site)



Base map from Bellows Falls Tax Map and on-site observations.

Strategic Analytical Systems, Inc.  
Bellows Falls, VT

Figure 3. Schematic site plan.

Initial Site Investigation, Chittenden Bank, Bellows Falls (Rockingham), VT

**ATTACHMENT A**  
**BORING LOG**

STRATEGIC ANALYTICAL SYSTEMS, INC.

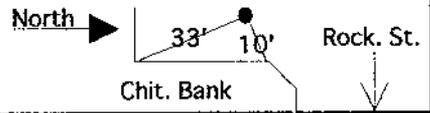
BORING LOG

PROJECT:	Chittenden Bank	Hole Diameter (in):	8
CITY, STATE:	Bellows Falls (Rockingham), VT	Screen Diameter (in):	
BORING LOCATION:	Former UST Location	Casing Diameter (in):	
DATE DRILLED:	2/19/1997	Slot Size (in):	
BORING NUM.:	B-1	Tot Dep-boring (ft):	30
Drilling Company:	T&K Drilling	Tot Dep-well (ft):	
Driller:	Alan Tommila/Kevin Kennedy	Screen Length (ft):	
Drilling Method:	HSA/Custom Rig	Casing Length (ft):	
Logged By:	Richard Pendleton	Type:	

DEPTH (feet)	Well Materials	Well Schematic	Blows/6"	PID (ppm)		Lithol. Schem.	Depth Range (ft): Description (texture, color, size) (recovery, ft)	
				HSA	Headpace			
0							Pavement @ surface	0
	none	None.	GRAB		0		0-2: Brown med. SAND some silt, tr. crs sand. dry. [FILL]	
2.5		Hole backfilled with native materials and sealed with concrete.						2.5
5					0 0		4.5-6.5: Brown SAND some cinder. Dry. [FILL]	5
7.5								7.5
10					0 5		9.5-11.5: Gray-brown broken GRAVEL and COBBLE. Slight pet. odor.	10
12.5								12.5
15								15

NOTES: Screening conducted with Photovac MicroTip 2020.

Materials Used: Sand, Concrete



STRATEGIC ANALYTICAL SYSTEMS, INC.

BORING LOG

PROJECT:	Chittenden Bank	Hole Diameter (in):	8
CITY, STATE:	Bellevue Falls (Rockingham), VT	Screen Diameter (in):	
BORING LOCATION:	0	Casing Diameter (in):	
DATE DRILLED:	Z/12/1997	Slot Size (in):	
WELL NUMBER:	B-1	Tot Dep-boring (ft):	30
Drilling Company:	T&K Drilling	Tot Dep-well (ft):	
Driller:	Alan Tammila/Kevin Kennedy	Screen Length (ft):	
Drilling Method:	HSA/Custom Rig	Casing Length (ft):	
Logged By:	Richard Pendleton	Type:	

DEPTH (feet)	Well Materials	Well Schematic	Blows/6"	PID (ppm)		Lithol. Schem.	Depth-Range (ft): Description (texture, color, size) (recovery, ft)	
				HSA	Headspace			
15		none installed	23-14-16-19	0	0		14.5-16.5: Variegated gray brown broken GRAVEL, some sand, little cobble. Dry. (0.8)	15
17.5								17.5
20			31-24-25-22	0	0		19.5-21.5: same as above (0.5)	20
22.5								22.5
25			14-24-24-26	0	0		24.5-26.5: Variegated gray brown SAND some broken cobble and gravel -0.8	25
27.5								27.5
30				0	0		29.5-31.5: Variegated gray brown SAND some broken cobble and gravel trace silt. Dry. (1.2)	30

NOTES:

**ATTACHMENT B**  
**ANALYTICAL RESULTS**



# Strategic Analytical Systems, Inc.



ENVIRONMENTAL CONSULTING AND ANALYSIS  
"From Field to Laboratory"

DATE: 3/20/97 **FACSIMILE**

TO: Andrew Shively

COMPANY: state of Vermont - DEC

FAX NO: 802-241-~~3872~~ 3296

FROM: Lida Brown (for Richard Pendleton)

No. of pages 4 (including this page)

SUBJECT: - Attachment B - analytical results  
for Chittenden Bank Report  
- our apologies for this  
oversight.

## NOTICE OF CONFIDENTIALITY

THE INFORMATION CONTAINED IN THIS FACSIMILE MESSAGE IS PRIVILEGED AND CONFIDENTIAL INFORMATION. IT IS INTENDED ONLY FOR THE USE OF THE INDIVIDUAL OR ENTITY NAMED AS ADDRESSED ABOVE. IF THE READER OF THIS MESSAGE IS NOT THE INTENDED RECIPIENT, YOU ARE HEREBY NOTIFIED THAT ANY DISSEMINATION, DISTRIBUTION, OR COPY OF THIS COMMUNICATION IS STRICTLY PROHIBITED.



# LABORATORY REPORT

Eastern Analytical, Inc. ID#: 7974 SASVT

Client: Strategic Analytical Systems

Client Designation: CH1-CM-002

## Total Petroleum Hydrocarbons

Sample ID:	05115	285316
Matrix:	Soil	Soil
Date Received:	2/20/97	2/20/97
Units:	mg/kg	mg/kg
Date of Extraction:	2/20/97	2/20/97
Date of Analysis:	2/20/97	2/20/97
Analyst:	DJS	DJS
EPA Method:	8100(mod)	8100(mod)
Carbon Range:	C9-C40*	C9-C40*
Total Petroleum Hydrocarbons	210	< 50

\* Fuel (Diesel) and Lubricating Oil Range Organics.

Approved By: Timothy Schaper, Organics Supervisor

MAR 3 1997

**eastern analytical***professional laboratory services*

Richard Pendleton  
Strategic Analytical Systems  
25 Centennial Square  
Bellows Falls, VT 05101

Subject: Laboratory Report

Eastern Analytical, Inc. ID: 7974 SASVT  
Client Identification: CH1-CM-002  
Date Received: 02/20/97  
Sample Quantity/Type: 2 soil

Dear Mr. Pendleton:

Enclosed please find the laboratory report for the above identified project. All analyses were subjected to rigorous quality control measures to assure data accuracy.

The following standard abbreviations and conventions apply throughout all Eastern Analytical, Inc. reports:

- < = "less than" followed by the detection limit
- TNR = Testing Not Requested
- ND = None Detected, no established detection limit
- BRL = Below Reporting Limits

If you have any questions regarding the results contained within, please feel free to directly contact me, the department supervisor, or the analytical chemist who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Will Brunkhorst, President

2/27/97

Date

MAR 3 1997

