



Environmental Services of America, Inc.

Tri-S Division

205 Main Street
P.O. Box 1760
Brattleboro, VT 05302
Phone: (802) 254-3677
1-800-359-3677
Fax: (802) 254-7630

December 9, 1993

Richard Spiese
VT DEC SMS HMMD
103 South Main Street/West Bldg
Waterbury, VT 05671-0404

RE: Soil Vapor Screening at Little Caesar's
Canal Street, Brattleboro, Vermont

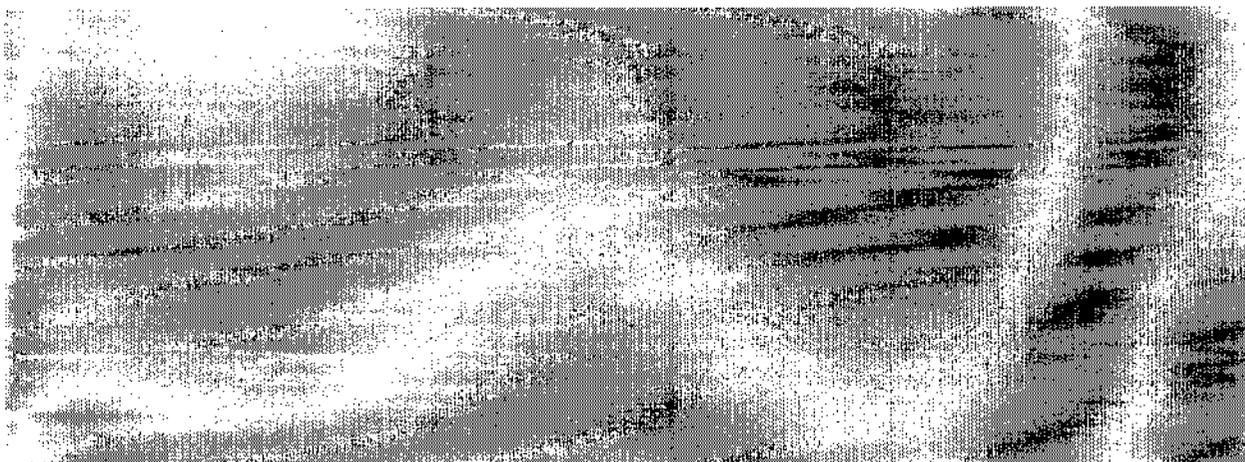
Dear Mr. Coleman:

At your request, TRI-S, Inc. Environmental Consulting (TEC) conducted a soil vapor screening on November 24, 1993, at the above referenced site, as per our Vermont Sites Management Section (VT SMS) approved work plan dated August 2, 1993. The goal of the work was to determine if there had been an impact from contamination due to the recently removed underground storage tanks and whether or not further investigatory work was required.

In order to evaluate subsurface soil conditions adjacent to an area which contained four (4) 500 -1000 gallon gasoline tanks, TRI-S emplaced a series of 5' perforated steel points (rods) at the locations indicated on the attached map. Based on the topography, a series of points were emplaced "downgradient" of the former tank location as well as at the location where the tanks were removed. All points were thoroughly cleaned with an alconox wash, then rinsed with distilled water. Each point was screened with an Organic Vapor Meter (OVM) to ensure that all traceable volatiles were removed. The OVM, equipped with a positive pressure pump was secured to the points and three volumes were extracted. Immediately following this procedure the maximum concentrations were recorded. The OVM, a photo ionization detector, calibrated to Isobutylene and adjusted for benzene, will detect select organic vapors as low as 0.1 ppm (± 5 ppm). In order to ensure that surrounding soil gases were evaluated, a one horse power blower was attached to each point for 5 - 10 seconds and the points were then sampled as above.

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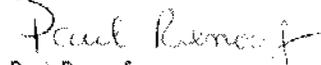
The following chart presents the findings from the November 24, 1993, soil vapor study. For point locations, see the attached site sketch.

Points	Max. PPM	Time
Point-1	1	9:50
Point-2	1	9:55
Point-3	1	9:57
Point-4	1	10:01
Point-5	1	10:03
Point-6	1	10:07
Point-7	1	10:11
Point-8	1	10:14

Please note that due to subsurface obstructions, P-3 was moved from its originally proposed location to a location closer to P-4. Results of this survey indicated that no field detectable levels of volatile organic compounds were noted in the areas surveyed (levels up to 1 ppm can be considered "background"). The ease at which the points were installed through what appeared to be coarse to fine sands indicated that if significant contamination were present, screening of soil gas at 5' depths should have detected such contamination.

Based on our findings, additional work does not appear to be warranted at this site. Please let me know if you have further questions. I can be reached at 254-3677.

Sincerely,
TRI-S, Inc. Environmental Consulting

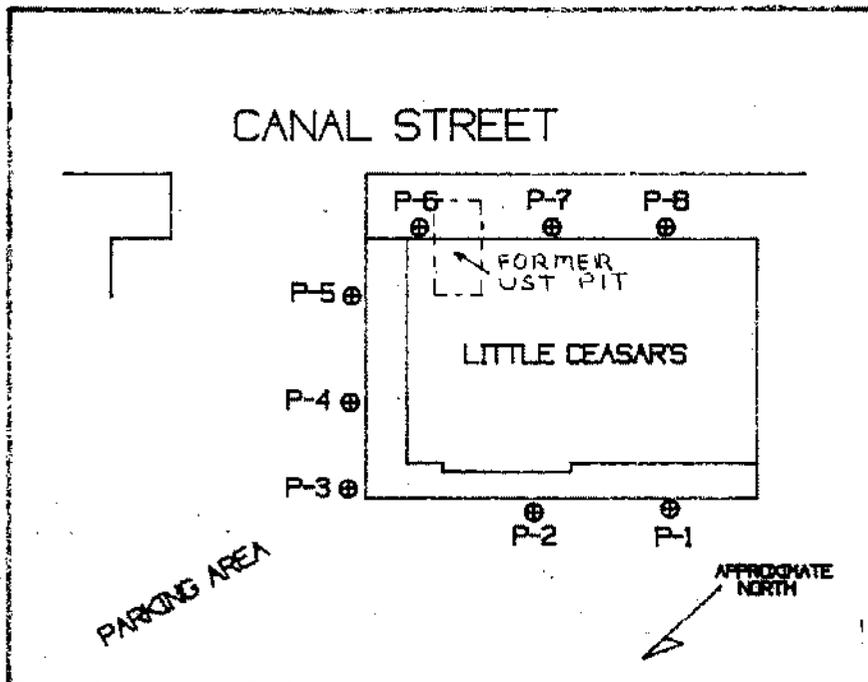

Paul Renouf
Environmental Technician

Attachments

cc: Larry Cooke, Property Owner
Marc Coleman, State of Vermont

PSR/dan

0251\final.rpt



LEGEND

⊕
P-2 APPROXIMATE LOCATION OF VAPOR EXTRACTION POINTS

MAXIMUM PPM

P-1	1	P-5	1
P-2	1	P-6	1
P-3	1	P-7	1
P-4	1	P-8	1

SOIL VAPOR STUDY
SITE SKETCH FOR 11/24/93

LITTLE CAESAR'S
CANAL STREET
BRATTLEBORO, VT

PREPARED BY:
TRI-S, INC. ENVIRONMENTAL CONSULTING
P.O. BOX 1780, 205 MAIN STREET
BRATTLEBORO, VT 05302

AUG 04 1993



Please note change of address:
2 P.O. Box 1788
205 Main Street
Brattleboro, VT 05501
~~XXXX~~
(802) 254-3677 (40 hrs.)
(802) 254-7630 (FAX)

August 2, 1993

Mr. Richard Spiese
VT DEC SMS HMMD
103 South Main St/West Bldg
Waterbury, VT 05671-0404

RE: Work Plan for Little Caesars, Canal Street, Brattleboro, VT

Dear Mr. Spiese:

Enclosed please find the above referenced work plan in accordance with your letter dated June 1, 1993.

Should you have any questions please call me at 254-3677.

Sincerely,
TRI-S, Inc. Environmental Consulting



Dave Gagnon
Project Manager

Enclosure

cc: Larry Cooke

DAG/dan

Branch Office:
25 Pinney Street, Ellington, CT 06029 (203) 875-2110 (24 hrs.)
Fax: (203) 875-8587 (24 hrs.)

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AUG 04 1993

**WORK PLAN
LITTLE CAESAR'S
CANAL STREET
BRATTLEBORO, VT**

INTRODUCTION

At the request of Marc Coleman of the Vermont Department of Environmental Conservation (VT DEC) this work plan was developed by TRI-S, Inc. Environmental Consulting (TEC). The goal of the work outlined below is to determine if there has been an impact from contamination due to the recently removed underground storage tanks and whether or not further investigatory work is required. This work is required as no formal post removal investigatory work was completed. Because the presence of contamination has not been confirmed, soil vapor screening was selected over wells because more locations could be readily investigated at a much reduced cost.

SITE HISTORY

According to Mr. Larry Cooke, current owner of the property, the site was purchased by himself on October 19, 1983. At that time the site was a vacant lot and had remained as such until 1992. Mr. Cooke purchased the site from Brae Oil Company which sold CIFCO gasoline from this location. During the mid 1980's Mr. Cooke had Zaluzny Construction remove what he had thought was all existing USTs from the property. At the time, Mr. Cooke had no knowledge of any remaining USTs. During excavation of the site (in the fall of 1992) for construction of a Little Caesars Pizza four 500 - 1000 gallon storage tanks were discovered very close to the street side of the property. The site was backfilled with bank run gravel. Native soils in this would likely include fine to medium grained sand. Bedrock is undulating throughout this area and could be as shallow as 8 - 10 feet from grade.

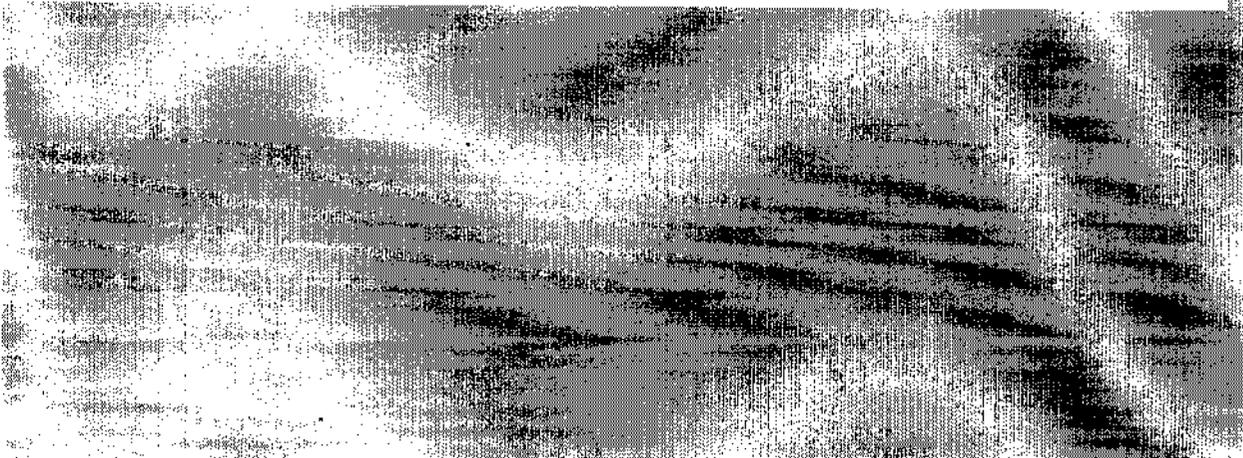
TECHNICAL APPROACH

In order to evaluate subsurface soil conditions adjacent to an area which contained four 500 -1000 gallon gasoline tanks, TRI-S has proposed that a series of 5' perforated steel points (rods) be emplaced at the locations indicated on the attached map. Based on topography a series of points are located "downgradient" of the former tank location. All points will be thoroughly cleaned with an alconox wash, then rinsed with distilled water. Each point will be screened with the OVM to ensure that all traceable volatiles are removed. Once the steel rods are emplaced a vacuum will be applied to each point to ensure the removal of at least 3 gasses. An Organic Vapor Meter (OVM) with a positive pressure pump will be secured to the points and based on flow rates and time, the three volumes will be extracted. Immediately following this procedure the maximum concentrations will be recorded. The OVM, a photo ionization detector, calibrated to isobutylene and adjusted for benzene, will detect select organic vapors as low as .1 ppm (\pm .5 ppm).

AUG 04 1993

All data will be recorded in a field note book and then presented in a brief letter report, including a sketch map with sample locations. Some sampling points may be relocated should site conditions, such as utilities, be encountered. Every effort will be made to relocate the points as close as possible to those which are presented herein. Please note that due to the porosity of the backfill materials used at the site, and the density of proposed extraction points, we anticipate adequate coverage of soil gasses in the area of possible contamination.

Upon completion of the above work a letter report will be submitted with conclusions and recommendations for future work if required. A plan to sample soils and/or groundwater will be submitted should elevated levels of contaminants be discovered with the OVM.



Rhododendron

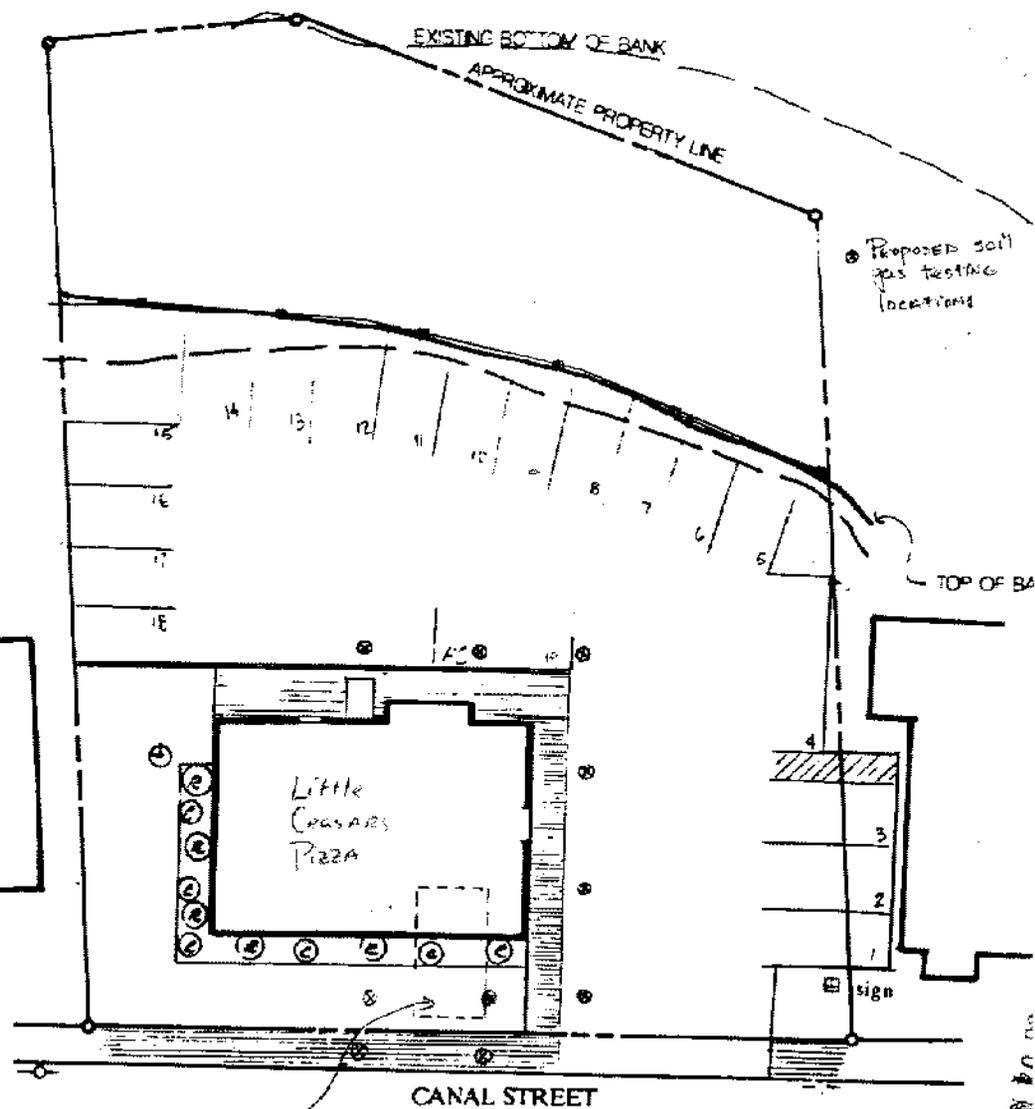
Falsecypress

WM JEWELL and COMPANY
Environmental Consultants
PO BOX 799
Brattleboro, VT 05301

LITTLE CAESARS PIZZA
Larry L. Cooke
73 Canal Street
Brattleboro, VT

SCALE 1"=20'
DRAWN by WJ
DATE 3/23/92
CHECKED by

AS BUILT PLAN



Proposed soil gas testing locations

TOP OF BANK

CANAL STREET

Approximate location of former water collection tanks