



TWIN STATE ENVIRONMENTAL CORP.

P.O. Box 711, St. Albans, VT 05478 • TEL: (802) 527-8144 FAX: (802) 527-0198

MAY 27 1993

file copy

May 19, 1993

Mr. Leo Brown
South Burlington School District
Dorset Street
S. Burlington, VT. 05403

RE: Central School Groundwater Data
SMS Site #
TSEC Project No. 93-040

Dear Mr. Brown;

This letter is written to present the data generated as a result of a groundwater sampling and analysis and vapor monitoring episode at the Central School in South Burlington, Vt. On April 28, 1993 TSEC purged and sampled (3) three monitoring wells proximate to a underground fuel oil storage tank previously closed in place. Additionally, TSEC measured vapors from a below grade vault beneath the boiler room in the school building with a photoionization detector (PID) calibrated with isobutylene to read as benzene equivalents.

The groundwater analysis did not show concentrations greater than the detection limits for the compounds tested typical of No. 2 fuel oil. The results of analysis well sample MW-2 did show a concentration of Methyl-tert-butyl-ether (MTBE) at 7.4 ug/l. The detection limit for MTBE is 5.0 ug/l. MTBE is an additive typically found in gasoline and it is likely that this is a result of cross-contamination from the sample bottle, or the laboratory. Since this was the last of the three samples collected, it does not appear to be cross-contamination from the sample bailer.

Results of PID measurements from the boiler room vault did not show any positive results. Based on the findings presented above, there does not appear to be any impact to the groundwater or the boiler room vaults. TSEC, therefore, does not recommend any further action at the site. It is also recommended that this site be closed by the State of Vermont Sites Management Section (SMS).

Once you have had the opportunity to review this letter, please contact me with any questions or comments. I will forward a copy of this letter to the SMS once I have spoken with you.

Sincerely,

TWIN STATE ENVIRONMENTAL CORPORATION

John Diego
Project Manager

JD/abc
encl.
sbschool.ltr



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SOUTH BURLINGTON
SCHOOL DISTRICT
DORSET STREET
SO. BURLINGTON, VT. 05403

MAY 10, 1993
SB SCHOOL
TSEC # 93-040

ATT: LEO BROWN

DESCRIPTION OF WORK

GROUNDWATER SAMPLING AND ANALYSIS/
PID MOUNTING OF FURNACE VAULTS

<u>LABOR</u>	<u>DATE</u>	<u>HOURS</u>	<u>RATE</u>	<u>TOTAL</u>
J. DIEGO	5/01/93	2	\$65.00	\$130.00
J. DIEGO	5/22/93	1	\$65.00	\$65.00
<u>TOTAL LABOR</u>				\$195.00

DIRECT EXPENSES

<u>ITEM</u>	<u>AMOUNT</u>
MILEAGE/20@\$0.28	\$5.60
PID RENTAL	\$18.00
PUMP RENTAL	\$35.00
<u>TOTAL DIRECT</u>	\$58.60

REIMBURSABLE EXPENSES

<u>ITEM</u>	<u>AMOUNT</u>
LAB ANALYSIS	\$180.00
<u>SUBTOTAL</u>	\$180.00
<u>VT SALES TAX 5%</u>	\$0.00
<u>REIMBURSABLE SUBTOTAL</u>	\$180.00
<u>REIMBURSABLE MARKUP</u>	\$18.00
<u>TOTAL REIMBURSABLE</u>	\$198.00
<u>TOTAL EXPENSES</u>	\$256.60

AMOUNT DUE THIS INVOICE \$451.60



ENDYNE, INC.

Laboratory Services

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

REPORT OF LABORATORY ANALYSIS

CLIENT: TSEC
PROJECT NAME: Central School
REPORT DATE: May 10, 1993
DATE SAMPLED: April 28, 1993

PROJECT CODE: TSEC1461
REF.#: 45,029 - 45,031

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. Chain of custody did not indicate sample preservation.

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



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LABORATORY REPORT

EPA METHOD 8020 -- PURGEABLE AROMATICS

CLIENT: TSEC
PROJECT NAME: Central School
REPORT DATE: May 10, 1993
DATE SAMPLED: April 28, 1993
DATE RECEIVED: April 28, 1993
ANALYSIS DATE: May 6, 1993

PROJECT CODE: TSEC1461
REF.#: 45,029
STATION: MW-3
TIME SAMPLED: 7:50
SAMPLER: J. Diego

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

Bromobenzene Surrogate Recovery: 100%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected



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LABORATORY REPORT

EPA METHOD 8020 -- PURGEABLE AROMATICS

CLIENT: TSEC
PROJECT NAME: Central School
REPORT DATE: May 10, 1993
DATE SAMPLED: April 28, 1993
DATE RECEIVED: April 28, 1993
ANALYSIS DATE: May 6, 1993

PROJECT CODE: TSEC1461
REF.#: 45,030
STATION: MW-1
TIME SAMPLED: 8:00
SAMPLER: J. Diego

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

Bromobenzene Surrogate Recovery: 102%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected



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LABORATORY REPORT

EPA METHOD 8020 -- PURGEABLE AROMATICS

CLIENT: TSEC
PROJECT NAME: Central School
REPORT DATE: May 10, 1993
DATE SAMPLED: April 28, 1993
DATE RECEIVED: April 28, 1993
ANALYSIS DATE: May 6, 1993

PROJECT CODE: TSEC1461
REF.#: 45,031
STATION: MW-2
TIME SAMPLED: 8:15
SAMPLER: J. Diego

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	7.4

Bromobenzene Surrogate Recovery: 102%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 1

NOTES:

1 None detected



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EPA METHOD 602 LABORATORY REPORT

MATRIX SPIKE AND DUPLICATE LABORATORY CONTROL DATA

CLIENT: TSEC
PROJECT NAME: Central School
REPORT DATE: May 10, 1993
DATE SAMPLED: April 28, 1993
DATE RECEIVED: April 28, 1993
ANALYSIS DATE: May 6, 1993

PROJECT CODE: TSEC1461
REF.#: 45,031
STATION: MW-2
TIME SAMPLED: 8:15
SAMPLER: J. Diego

<u>Parameter</u>	<u>Sample(ug/L)</u>	<u>Spike(ug/L)</u>	<u>Dup1(ug/L)</u>	<u>Dup2(ug/L)</u>	<u>Avg % Rec</u>
Benzene	0	10	12.0	12.7	123%
Toluene	0	10	11.8	12.4	121%
Ethylbenzene	0	10	11.8	12.4	121%
Xylenes	0	30	31.1	32.9	107%



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CHAIN-OF-CUSTODY RECORD

006837

Project Name: <u>CENTRAL SCHOOL</u>	Reporting Address: <u>TSEC</u>	Billing Address:
Site Location: <u>50, BURLINGTON</u>	<u>PO BOX 711 ST ALBANS VT</u>	<u>SAME</u>
Endyne Project Number:	Company: <u>TSEC</u>	Sampler Name: <u>J. DIEZU</u>
<u>TSEC 14/61</u>	Contact Name/Phone #: <u>JOHN DIEZU</u>	Phone #:
	<u>527-8144</u>	

Lab #	Sample Location	Matrix	G R A B	C O M P	Date/Time	Sample Containers		Field Results/Remarks	Analysis Required	Sample Preservation	Rush
						No.	Type/Size				
45029	MW 3	WTR	X		0750	2	40ml		8020	4 C	
45030	MW 1		X		0800	2	40ml				
45031	MW 2		X		0815	2	40ml				

Relinquished by: Signature <u>[Signature]</u>	Received by: Signature <u>[Signature]</u>	Date/Time <u>4/20/93 9:05 AM</u>
Relinquished by: Signature	Received by: Signature	Date/Time

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 Pesu/PCB
4	Nitrite N	9	BOD ₅	14	Turbidity	19	BTEX	24	EPA 608 Pesu/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):										