



FILE

August 9, 1999

Mr. Michael Quaid
Munson Earth Moving Corp.
20 Shunpike Road
Williston, VT 05495

**RE: Air Monitoring and Soil Screening Services
Water Line Installation, Cabot, VT**

Dear Mike,

Ms. Trina Cysz of Griffin International, Inc. (Griffin) was on-site at the above-referenced project on August 4, 5, and 6, 1999 to perform air monitoring and soil screening services along a petroleum-impacted portion of water line excavation. This work was done in accordance with Griffin's proposal to Munson Earth Moving Corp. (Munson) dated July 28, 1999 and subsequently approved by Munson on July 30, 1999.

Soils were screened in periodic intervals along the trench for the presence of volatile organic compounds (VOCs) with an HNu portable photoionization detector (PID) equipped with a 10.2 eV bulb. Headspace measurements were completed in accordance with the Griffin Jar/Polyethylene Bag Headspace Screening Protocol, which conforms with state and industry standards. The PID was calibrated daily to an isobutylene standard. The soils were also inspected for visual and olfactory evidence of petroleum impact.

VOC headspace readings along the approximately 250-foot span of trench ranged from zero parts per million (ppm) to 300 ppm. Petroleum/gasoline impacted soils (with PID readings greater than 10 ppm) were encountered at depths ranging from approximately 3'-7' below surface grade (bsg). Groundwater was encountered at approximately 6.5' bsg. A petroleum sheen was observed on groundwater in the trench in the vicinity of the Cabot Garage building.

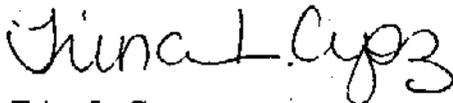
In accordance with the Vermont Department of Environmental Conservation (VTDEC) "Agency Guidelines for Petroleum Contaminated Soil and Debris," (August 1996), soils with PID readings greater than 20 ppm were removed from the excavation. These soils were transported off-site to the former Cabot Landfill for stockpiling under direction and coordination of others. As reported by you, this location had been previously approved

by the VTDEC for storage of petroleum-impacted soils. Soils with PID readings less than 20 ppm were either backfilled on-site or removed for off-site soil stockpiling under your direction and coordination. Approximately 147 cubic yards of gasoline-impacted soils were removed and transported to the approved off-site location, as observed by Griffin.

Griffin also performed air-monitoring services for Munson personnel along the impacted portions of the water line excavation. The air space within the trench was monitored periodically for VOC levels, and to determine the flammability of and oxygen levels of ambient air in and at the work area. Oxygen levels and the lower explosive limit (LEL) were measured with a Bacharach Model O₂/LEL meter. VOCs were measured with a PID. VOC readings in the trench ranged from zero ppm to 30 ppm. The Munson Health and Safety Plan (HASP) action level of 100 ppm of VOCs, which triggers an upgrade to Level C protection, was not exceeded during the work activities. Oxygen and LEL levels also did not exceed their HASP specified limits during the activities.

Please find a copy of the enclosed air monitoring logs, which are provided for your Health and Safety records. A second copy has been enclosed for forwarding to Mr. Daniel Whipple of VOSHA. During his site visit on August 6, 1999, Mr. Whipple requested that a copy of these records be forwarded to his attention. If you have any further questions, please do not hesitate to contact me.

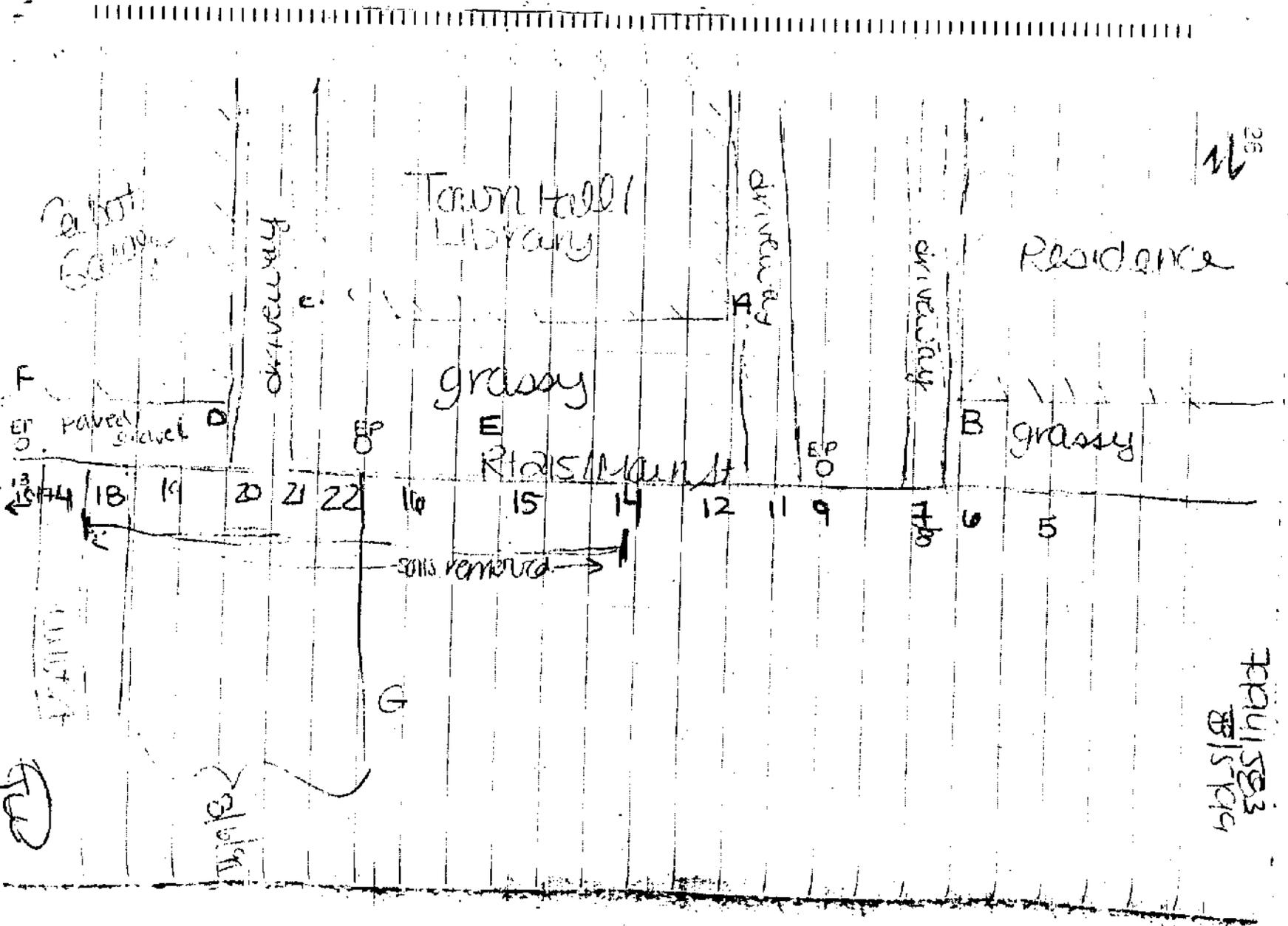
Sincerely,



Trina L. Cysz
Environmental Scientist

Encl.

cc: File



N³⁶

top of 553
 553/5194

P. ZEV 0113
 HNW PID HW 101
 Calibrated 080499
 0820hrs
 Bacharach model
 02/LEL meter
 calibrated 041999

GRIFFIN INTERNATIONAL, INC.
 DAILY CHECK LIST

Date: 080499/080599
 Sampler: T. Cysz

Job Number: 79941583
 Job Name: Cabot H₂O Line Installation
 Location: Cabot VT

Date / Time	Location	Comments	PID (ppm) Reading	LEL %	O ₂ %	Ambient air Condition Temp. Weather
080499 1045	A	ambient conditions	0	N/A	N/A	≈ 70°, cloudy + rain
	B					
	C					
	D					
	E					
1120	1	station 32+50 3' bsg at intersection of Rt 218 and Whittier Hill Rd soil = oppr	0			
1510	2	4' bsg across from white Hill Rd Rt 218 sign soil oppr	0			
1530	3	4' bsg across from white Hill Rd Rt 218 sign soil oppr	0			
080599 0800	A	ambient air conditions	0			≈ 70°, cloudy, foggy
	B				20.2	0.2 ev bulb HNW PID HW-101 calibrated 0730 Bacharach model 02/LEL meter calibrated 041999
	C					
	D					
	E					
0845	4	3' bsg, above culvert for stream in front of Cabot Garage	1 soil 0 air	0	20.3	
0910	5	5'-7' bsg, next to H ₂ O line near W.P. from residence	2 soil 0 air	0	20.7	
1000	6	5'-6' bsg, in front of house	4 soil 0 air	0	20.8	
1045	7	5.5' bsg in front of house driveway	40 soil 0 air	0	21.2	

GRIFFIN INTERNATIONAL, INC.
DAILY CHECK LIST

Job Number: 79941583
Job Name: cabot H2O line
Location: Cabot VT

Date: 080599
Sampler: TCYSE

Date / Time	Location	Comments	PID (ppm) Reading	LEL %	O2 %	Ambient a Condition Temp. Weather
080599 1900	8	5'-7' bsg, below sample #7 wet	4 soil 0 air	0	20.9	70°, sunny
1125	9	3' 5' bsg, in front of electrical pole	5.5 soil 0 air	-	-	
1215	10	past Cabot Garage (E) 3' 5' bsg no one in trench	1.5 soil 0 air	-	-	
1315	11	next to Town Hall Driveway 4' 5' bsg	13 soil 0 air	0	21.3	
1330	12	5'-6' bsg, in line w/ Town Hall bldg	0 soil 0 air	0	21.4	
1335	13	4' 5' bsg, in front of light pole, Cabot Garage.	0.5 soil 0 air	-	-	
1345	14	0' bsg, in front of Town Hall near culvert	40 soil 0.5 air	0	21.1	
1355	15	5' bsg, in front of town Hall	250 soil 23 air	0	21.1	
1420	16	6' 5' bsg in front of Town Hall	300 soil 20 air	0	21.6	
1510	17	7' 5' bsg, in front of Cabot Garage on other side of culvert; no trench work	0 soil 0 air	-	-	
1550	18	3' 5' bsg, in front of Cabot Garage on opposite side of culvert	55 soil 2 air	0	21.1	

GRIFFIN INTERNATIONAL, INC.
DAILY CHECK LIST

Job Number: 70941583
Job Name: CONCRETE H 201112
Location: CARROT VT

Date: 08/29/08
Sampler: FCU52

Date / Time	Location	Comments	PID (ppm) Reading	LEL %	O2 %	Ambient a Condition Temp. Weather
08/29/08 1130	A	see chart ambient / bkgd readings	0	0 0	21.3	70° sunny breeze
	B		0	0	21.3	
	C		0	0	21.3	
	D		0	0	21.3	
	E		0	0	21.3	
	A		0	0	21.2	
1425	B		1	0	21.2	
	C		1	0	21.2	
	D		2	0	21.2	
	E		2.5	0	21.2	
	A		0	0	20.9	
	B		0	0	20.9	
08/29/08 0735	C	0	0	20.9	70° sunny breeze 10.2 ev bulb HNU PID HW-101 calibrated 0730 Bocharid model O2/LEL meter calibrated 041999	
	D	0	0	20.9		
	E	0	0	20.9		
	F	0	0	20.9		
	F	0	0	20.9		
	F	0	0	20.9		

**GRIFFIN INTERNATIONAL, INC.
DAILY CHECK LIST**

Job Number: 7094533
 Job Name: Cabot H2O line
 Location: Cabot VT

Date: 080609
 Sampler: TGJSL

Date / Time	Location	Comments	PID (ppm) Reading	LEL %	O2 %	Ambient a Condition Temp. Weather
080609/0900	A	See chart for locations	1	-	-	70°, sunny, breeze
	B		1	-	-	
	C		2	-	-	
	D		2	-	-	
	E		3	-	-	
	F		25	-	-	
	G		0	-	-	
0810	19	in front of Cabot Garage	100 soil 8 air	0	21.0	
0925	20	in front of town 3'-4' bsg Hall driveway soil sample	19 soil 1.5 air	-	-	
1050	20A	trench in front of Cabot Garage / town Hall driveway	none taken	0	21.1	
1100	21	3'-4' bsg in front of town hall after driveway	200 soil 19 air	0	21.3	
1130	21a	trench check	-	0	21.3	
1300	22	7' bsg in front of town hall	300 soil 28 air	0	21.6	
1310	23	1' in front of town hall soil sample	20 soil 2 air	-	-	
1345	23a	trench check	1 air	0	21.7	

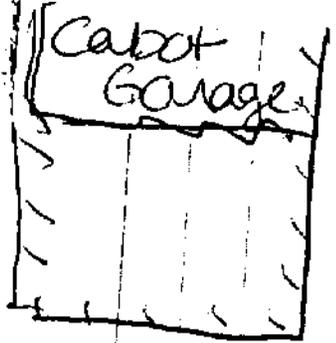
GRIFFIN INTERNATIONAL, INC.
DAILY CHECK LIST

Job Number: 79941583
Job Name: Cabot H₂O line
Location: Cabot VT

Date: 08/06/99
Sampler: TCYSZ

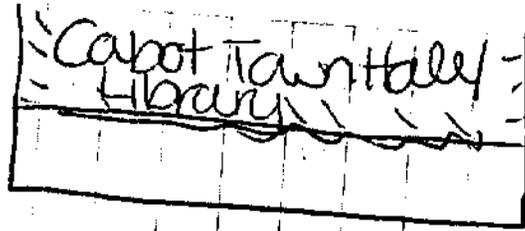
Date / Time	Location	Comments	PID (ppm) Reading	LEL %	O2 %	Ambient a Condition Temp. Weather
08/06/99 / 1300	A	see chart for locations	0.5	0	21.7	70°, sunny breeze
	B		0.5			
	C		1			
	D		2.5			
	E		1			
	F		1			
1415	trench check		2	0	21.5	
1445	trench check		3	0	21.6	
1500	trench check		5	0	21.4	

work completed in trenches, back filled to grade, air monitoring complete



power/gravel

EP
0



C

A

driveway

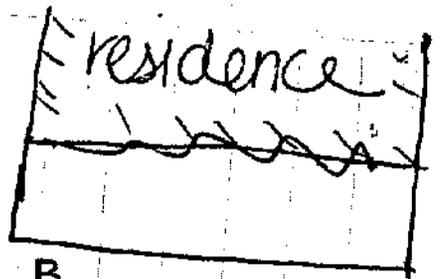
grassy

E

EP 0 Rt 215/Main St



EP 0



Z

B

grassy

EP
0

HC

32 ±

2004/503
8/4/95

21



September 17, 1999

Mr. Michael Quaid
Munson Earth Moving Corp.
20 Shunpike Road
Williston, VT 05495

**RE: Air Monitoring and Soil Screening Services
Water Line Installation, Cabot, VT**

Dear Mike,

Ms. Trina Cysz of Griffin International, Inc. (Griffin) was on-site at the above-referenced project on September 15 and 16, 1999 to perform additional air monitoring and soil screening services along a petroleum-impacted portion of water line excavation. This work was done in accordance with Griffin's proposal to Munson Earth Moving Corp. (Munson) dated July 28, 1999 and subsequently approved by Munson on July 30, 1999.

Soils were screened in periodic intervals along the trench for the presence of volatile organic compounds (VOCs) with an HNu portable photoionization detector (PID) equipped with a 10.2 eV bulb. Headspace measurements were completed in accordance with the Griffin Jar/Polyethylene Bag Headspace Screening Protocol, which conforms to state and industry standards. The PID was calibrated daily to an isobutylene standard. The soils were also inspected for visual and olfactory evidence of petroleum impact.

VOC headspace readings along the span of trench (in the vicinity of the Cabot Garage, Cabot Town Hall, and the Cabot Hardware Store) ranged from zero parts per million (ppm) to 300 ppm. Petroleum impacted soils (with PID readings greater than 10 ppm) were encountered at depths ranging from approximately 2'-6' below surface grade (bsg) (the base of the excavation). Groundwater was encountered at approximately 5'-6.5' bsg. A petroleum sheen was observed on groundwater in the trench in the vicinity of the Cabot Garage building and in front of the Cabot Town Hall.

In accordance with the Vermont Department of Environmental Conservation (VTDEC) "Agency Guidelines for Petroleum Contaminated Soil and Debris," (August 1996), soils with PID readings greater than 20 ppm were determined to be impacted and were removed from the excavation. These soils were transported off-site to the former Cabot Landfill (previously approved by the VTDEC) for stockpiling under direction and

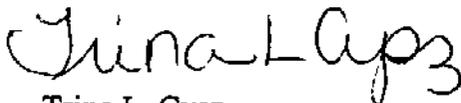
coordination of others. Soils with PID readings less than 1 ppm were either backfilled on-site or removed for off-site soil stockpiling under Munson coordination. Approximately 147 cubic yards of petroleum-impacted soils were removed from the work area in August 1999 and stockpiled at the Cabot Landfill location. An additional approximately 112 cubic yards of gasoline-impacted soils were removed and transported to this approved off-site location on September 15 and 16, 1999.

Griffin also performed air-monitoring services for Munson personnel along the impacted portions of the water line excavation. The air space within the trench was monitored periodically for VOC levels, and to determine the flammability of and oxygen levels of ambient air in and at the work area. Oxygen levels and the lower explosive limit (LEL) were measured with a Bacharach Model O₂/LEL meter. VOCs were measured with a PID.

VOC readings in the trench ranged from zero ppm (September 15 & 16, 1999) to 90 ppm (September 15, 1999). The Munson Health and Safety Plan (HASP) action level of 100 ppm of VOCs, which triggers an upgrade to Level C protection, was not exceeded during the work activities. However, an electric blower was introduced into the work area as an engineering control to reduce VOC levels in the workspace. After instituting the engineering control, VOC levels were noted to decrease. LEL levels did not exceed their HASP specified limits during the activities. A low oxygen level reading (18.9% oxygen) was detected in the work area on September 16, 1999. An electric blower was introduced again into the work area to increase oxygen levels. This engineering control was noted to successfully increase oxygen levels in the work area to remain within safe limits.

Please find a copy of the enclosed air monitoring logs, which are provided for your Health and Safety records. If you have any further questions, please do not hesitate to contact me.

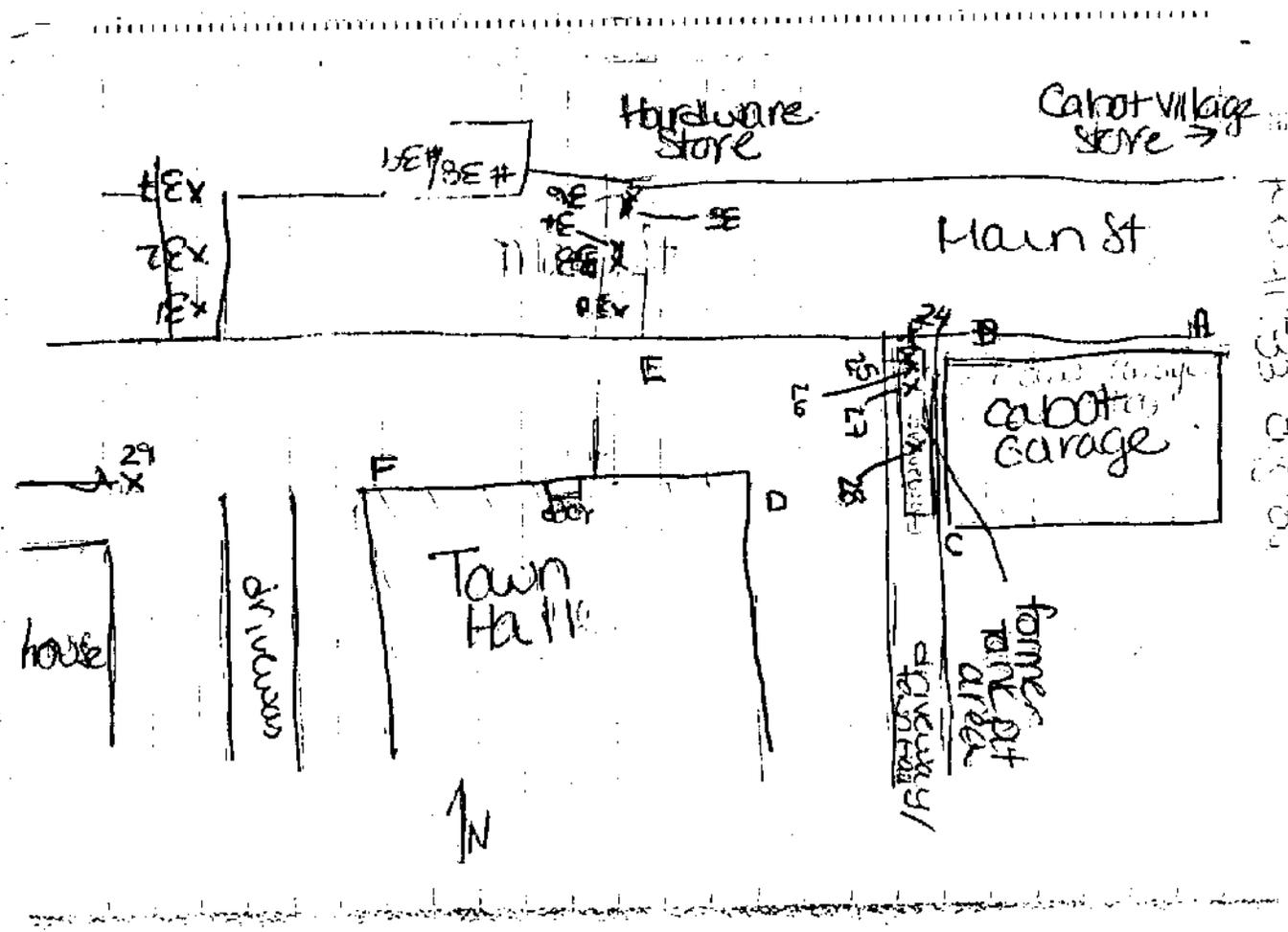
Sincerely,



Trina L. Cysz
Environmental Scientist

Encl.

cc: File
Carl Crawford, Otter Creek Engineering



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GRIFFIN INTERNATIONAL, INC.
DAILY CHECK LIST

Job Number: 70941583
Job Name: Cabot Hotline
Location: Cabot VT

Date: 9/15/99
Sampler: TCC

Date/Time	Location	Comments	PID (ppm) Reading	LEL %	O2 %	Ambient a Condition Temp. Weather
0730	A B C D	biggd air readings prior to work start	0	N/A	N/A	cloudy, wet (raining) 65.5°
0745	#24 soil	2' bsg	150 ppm	N/A	N/A	
0800	air	along driveway b/t Cabot	1.5	20.8	0	
0810	air	Garage and Town Hall	3	21	0	
0825	air	↓	3	21	0	
0845	soil #25,	4.5' bsg	300	-	-	
0900	air		45	20.9	0	
0915	air		90	-	-	
		Instituted engineering control - blower in trench workers out of trench	0	-	-	
0915	A		2	-	-	
	B		0	-	-	
	C		0	-	-	
	D		5	20.9	0	
0940	air	- checking after instituting eng. control	15	20.3	1	
1015	air					

GRIFFIN INTERNATIONAL, INC.
DAILY CHECK LIST

Job Number: 79941583
Job Name: Calbot H2O Line
Location: Calbot

Date: 9/15/99
Sampler: T Cyl 2

Date / Time	Location	Comments	PID (ppm) Reading	LEL %	O2 %	Ambient a Condition Temp. Weather
9/15/99 / 1045	air		25	-	-	P sunny to cloudy ~70°
1055	air		30	-	-	
	A		0	-	-	
	B		5	-	-	
	C		0	-	-	
	D		0	-	-	
added another fan to ventilate trench						
1115	#26	6' bsg, soil	50	-	-	
1120	air	next to Calbot garage	10	0	21.3	
1330	#27	soil, 5' bsg, fill material from former UST area	1	-	-	
1345	air	next to Calbot garage	0	-1	21.5	
1358	#28	5' bsg, soil, next to Calbot garage, fill material from former UST area	0	-	-	
	E		0	-	-	
1400	A		0	-	-	
	B	background	0	-	-	
	C	ambient readings	0	-	-	
	D		0	-	-	
1405	#29	in front of 3000A manhole	1	-	-	

GRIFFIN INTERNATIONAL, INC.
DAILY CHECK LIST

Job Number: 49941583
Job Name: Carrot Home
Location: Carrot VT

Date: 9/16/99
Sampler: TLC

Date/Time	Location	Comments	PID (ppm) Reading	LEL %	O2 %	Ambient a Condition Temp. Weather
091619 10735	C	ambient air	0	-	-	60°, wet, rainy
	D	bkgd	↓	-	-	
	E			-	-	
	F			-	-	
0745	#30 soil	≈ 3' bsg		70	-	
0750	#31 soil	≈ 5' bsg, clayey / silt layer	4	-	-	
0815	#32 soil	≈ 6' bsg silty/clay layer, stained soils	100	-	-	
0840	air	- in trench in front of town hall → hardware store	-	+	18.9%	
		ALARM- Low O2 - institute engineering controls - install blower				
0850	recheck	air space	1	0	21.0	
0855	air		-	0	21.1	
1000	#34	3.5' bsg, centerline of road, bt town hall hardware store	30	-	-	
1010	#35	≈ 5' bsg soil + trench bit town hall hardware store	80	-	-	

GRIFFIN INTERNATIONAL, INC.
DAILY CHECK LIST

Job Number: 79941583
Job Name: Cabot ITO Line
Location: Cabot VT

Date: 9/16/99
Sampler: T. Gysz

Date/Time	Location	Comments	PID (ppm) Reading	LEL %	O2 %	Ambient a Condition Temp. Weather
9/16/99 / 1020	#36	≈ 6' bsg, beneath sample #35 same location, silty clay layer	250	-	-	60°, wet, rainy
1050	air in trench adj to hardware store		4	0	21.0	
1051	#37	≈ 5' bsg, silty/clay layer adj to vacant house / apt house	0	-	-	
1105	#38	≈ 4.5' bsg fill/topsoil layer adjacent to hardware store	1	-	-	
1115	#39	6' bsg beneath sample #38, silty clay layer	250	-	-	

end of air monitoring activities
trench backfilled



State of Vermont

Department of Fish and Wildlife
Department of Forests, Parks and Recreation
Department of Environmental Conservation
State Geologist
RELAY SERVICE FOR THE HEARING IMPAIRED
1-800-253-0191 TDD>Voice
1-800-253-0195 Voice>TDD

AGENCY OF NATURAL RESOURCES
Department of Environmental Conservation
Waste Management Division
103 South Main Street/West Office
Waterbury, Vermont 05671-0404
(802) 241-3877
FAX (802) 241-3296
gerold.noyes@anr.state.vt.us

June 2, 1999

MICHAEL COOKSON
CABOT GARAGE
CABOT VERMONT 05647

RE: Petroleum Contamination at Cabot Garage, SMS Site #90-0624
Cabot, Vermont

Dear Mr. Cookson:

This letter is to follow up our earlier telephone conversation today. I spoke with my supervisor about your concerns. The main purpose of a site investigation is to determine the extent of contamination and the potential for impact to sensitive receptors such indoor air quality (gas vapors in basements, etc.), utility corridors, and environmental receptors such as water supply wells, streams, etc.

In the case of the Cabot Garage, the main risk right now is the risk to construction workers and to the waterline itself. These two issues can be dealt with in the course of the waterline construction. The Waste Management Division (or an environmental consultant) will be present during construction at this location and will use the opportunity to document the extent of subsurface contamination present, as best as possible.

For now, no site investigation prior to the waterline construction is required. Once construction is complete we can evaluate the extent of contamination found, the risk to potential receptors, and whether additional site work and/or long term monitoring is needed.

Please call me at (802) 241-3877 if you have any questions.

Sincerely,

Gerold Noyes
Environmental Engineer
Sites Management Section

D:\MyFiles\project files, active\Cabot Garage\Cabot Garage-L2.wpd



TRANSMITTAL

Date: 14-Oct-99

FROM: Trina Cysz

- Via: US Mail
 Priority US Mail
 Standard Overnight
 Priority Overnight
 Fax
 email
 Delivery

- UPS
 Fed Ex

TO:

Gerold Noyes
Name: VT ANR/DEC, Waste Management Division
Company: 103 South Main Street, West Bldg
Address: Waterbury, VT 05671-0404
City, State: Waterbury, VT Zip: 05671-0404
Phone: 802-241-3886 Fax: 802-241-3296

<u>Item</u>	<u>Description</u>	<u>GI Proj. No.</u>
1	Cabot Water Line letter reports	79941583

Total Pages: including cover

ADDITIONAL MESSAGE:

Gerold,
Here are copies of the Cabot Water Line job reports for your file, as per your request.
Please call me if you have any other questions.

Thanks,
Trina
Trina Cysz