

March 14, 1996

Mr. Matt Moran  
Hazardous Materials Management Division  
Vermont Department of Environmental Conservation  
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Re: Former Pratt Farm in Barre Town, Vermont  
DEC Project #95-1758 (SEI No. 94-554)

Dear Matt:

On behalf of Barre Town, Vermont, Stone Environmental, Inc. (SEI) is requesting Site Management Activity Completed (SMAC) status for the Vermont Department of Environmental Conservation (DEC), Hazardous Materials Management Division (HMMD) Site #95-1758, also known as the former Pratt Farm. Soil sample screenings with a photoionization detector (PID) and laboratory results of soil samples collected in November 1995 showed no detectable levels of volatile organic compounds (VOCs) or total petroleum hydrocarbons (TPH). Following is a brief summary of events at the site and a discussion of the field and laboratory results of soil samples collected.

**SUMMARY**

In January 1995 SEI performed a Level I Environmental Site Assessment of the former Pratt Farm at the end of Bolster Road in Barre Town, Vermont, which included the removal of two 350-gallon underground storage tanks. The tanks were used for farm equipment at the Pratt dairy farm which shut down in 1982. According to sources familiar with the farm, the tanks were decommissioned and emptied during the same year the farm closed. During tank excavation on January 17, 1995, SEI observed holes in the tanks, the largest about the size of a dime, and stained soils beneath a tank attached to a pump labeled "diesel". Tank sludge was pumped from both tanks and removed by Pollution Solutions of Williston, Vermont. Both tanks were removed from the site and disposed of by Pollution Solutions. No groundwater was encountered during tank excavation and soil contamination appeared to be localized beneath one tank.

Approximately 20 cubic yards of soils were removed from the excavation and polyencapsulated with polyethylene sheeting on site. Soil screening with a MiniRac® PID utilizing a 10.6 eV lamp, showed volatile organic readings of the excavated soils ranging from 3.1 to 24.9 ppm. The stockpiled soils

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were completely polyencapsulated until June 23, 1995, when they were landfarmed in accordance with DEC landfarming guidelines. The soils were mixed with approximately seven cubic yards of horse manure and a berm was created around the pile from native soils to prevent surface runoff. The soils were spread to a thickness of not more than 6 inches to facilitate aeration. A site detail map is provided at the end of this letter.

Soil samples for laboratory analysis were conducted immediately following landfarming in June 1995 and again in November 1995. Following is a description of sampling methods and discussion of the results.

## RESULTS

Immediately following the manure application on June 23, 1995, a total of five soil samples were collected from the pile. Two composite samples were taken from 10 locations each from the pile which was spread to a thickness of 6 inches. These samples were labeled *0-6" Southern Half* and *0-6" Northern Half*. One composite sample was taken from five locations in native soil 12 to 18 inches beneath the soil pile and labeled *12-18" Beneath Pile*. Two additional samples were taken from non-contaminant background locations, one south and upgradient of the soils pile (*Background - Upgradient S*), and one north and downgradient of the soils pile (*Background - Downgradient N*). All samples were analyzed for total petroleum hydrocarbons (TPH) by Method 418.1. According to Green Mountain Laboratories (formerly MicroAssays of Vermont), this method may have detected non-petroleum organic matter from the manure in the soil samples unrelated to the petroleum contaminated soils. Results of 25.6 and 18.1 ppm TPH in the presumably uncontaminated background samples, seem to indicate that organic matter may have lead to inaccurately high TPH readings in all samples. The cow manure may have added to TPH levels found in the composite samples obtained from the soil pile.

With the approval of Matt Moran, the second round of samples collected in November 1995 were analyzed for TPH using a gas chromatograph/mass spectrometer (GC/MS) method which minimizes interference caused by natural organic matter. The minimum detection limit by this method is slightly higher than that of Method 418.1 (2.5 ppm compared to 1.0 ppm). The sampling method was identical to the method used to collect the June samples. Soil samples collected from the soil pile were labeled *N. Inside Berm* and *S. Inside Berm*. Background samples collected from outside the bermed area were labeled *N. Out of Berm* and *S. Out of Berm*. North and south were abbreviated in the sample names. All results by this method were non-detect for TPH. This is consistent with PID screenings of the sampled soils which showed no significant readings on any of the samples evaluated. There were no detections of TPH found in any of the samples.

The results of the June and November 1995 sampling events are shown below:

Total Petroleum Hydrocarbons (TPH) Former Pratt Farm in Barre Town, Vermont		
June 23, 1995:		
Sample	Minimum Detection Limit in mg/kg (ppm)	TPH in mg/kg (ppm)
Background-Upgradient N	1.0	25.6
Background-Downgradient S	1.0	18.1
0 - 6 " Southern Half	1.0	2,629.5
0 - 6 " Northern Half	1.0	2,068.8
12 - 18 " Beneath Pile	1.0	29.4
November 12, 1995:		
Sample	Minimum Detection Limit in mg/kg (ppm)	TPH in mg/kg (ppm)
N. Out of Berm	2.5	ND
S. Out of Berm	2.5	ND
N. Inside Berm	2.5	ND
S. Inside Berm	2.5	ND
Inside Berm (Deep)	2.5	ND
Notes: mg/kg = milligrams/kilogram ND = None Detected Samples analyzed by Green Mountain Laboratories, Inc. (formerly known as MicroAssays of Vermont)		

### CONDITIONS FOR SITE CLOSURE

Based on the findings of this investigation, SEI is requesting that this site be considered for closure pursuant to the SMAC Classification Procedure Guidelines, dated December 13, 1993, having met the following conditions outlined in Chapter 5:

1. The source, nature, and extent of contamination is as follows: the source of the contamination was found to be from the two 350-gallon underground storage tanks used to service farm equipment at the former Pratt dairy farm. Contamination is believed to be petroleum based hydrocarbons, primarily diesel gasoline. The extent of the contamination was delineated below the tanks and completely removed for landfarming.

2. Laboratory analysis and PID screening of the excavated (or landfarmed) soils collected from the excavated soils indicate that levels of VOCs have dropped below detection limits, suggesting that no further remedial action is required at the site.
3. As VOC levels have dropped below detection limits, no post-remedial monitoring is necessary. Any residual contamination below detection limits which remains on site does not pose a risk to human health and will be further mitigated by natural mechanisms of aeration, as well as grass and weed growth on the remaining soils.
4. No groundwater was encountered during excavation and no groundwater contamination is believed to have occurred due to the localized nature of the soil contamination directly beneath the tanks. Soil contaminant guideline levels for diesel gas contamination have been met.
5. As samples collected from the remediated soil pile contained no detectable levels of TPH contaminants and the laboratory minimum detection levels are below those considered to present a possible risk to human health or the environment, the remediated soils pile should not pose an unacceptable risk to human health or the environment in the future.
6. The site is not subject to regulation under the Resource Conservation and Recovery Act (RCRA).
7. The site is not subject to regulation under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).
8. This letter is considered to be SEI's request on behalf of the Town of Barre for SMAC status.
9. & 10. These items will be completed following the response of the HMMD SMS to the request of this letter.
11. Potential receptors on-site are minimal. The land is currently unused and there are no wells on the property. A spring runs near the former barn area and the Jail Branch of the Winooski River is downgradient from the site. However, the distance from the pile to the river make it an unlikely receptor. An upgradient, adjacent property has a bedrock well.

#### SUMMARY AND RECOMMENDATIONS

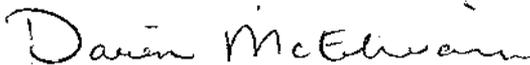
Laboratory analysis and soil sample screening show no detectable levels of VOCs remaining in the soils indicating that the pile has been successfully remediated. The site is currently low use and the soils do not pose an unacceptable risk to humans or the environment. Natural weed and grass growth on the soil pile during last years growing season indicate that any trace contaminant levels below detection limits which may remain in the soil will be best mitigated naturally. SEI requests that no

further remedial activities be performed at the site and that no further monitoring be required.

As part of site closure, SEI will remove the poyencapsulating material from the pile. As the pile has already been spread and native weeds and grasses have started to grow on the pile, SEI does not expect any additional spreading of the soils to be necessary.

Sincerely yours,

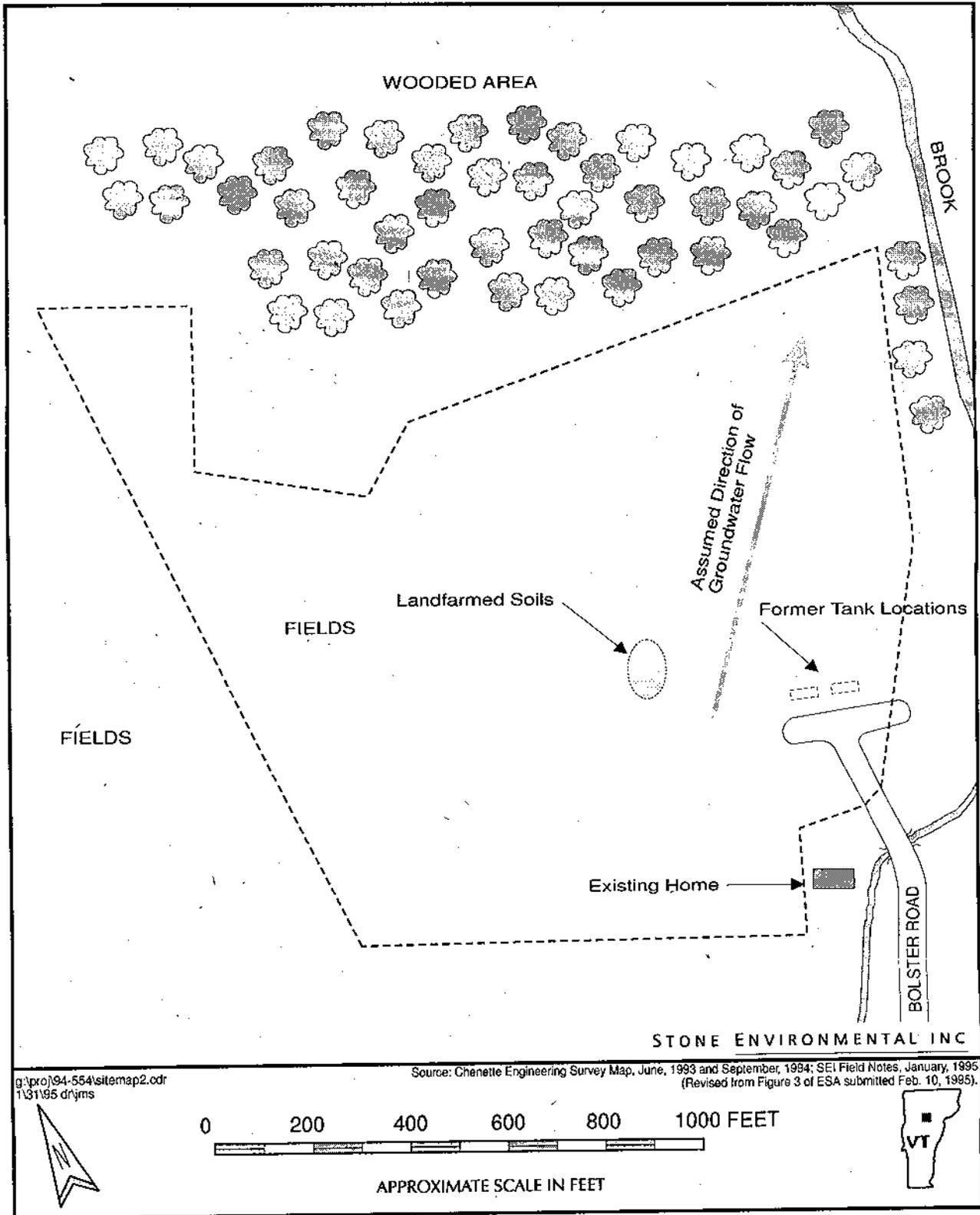
STONE ENVIRONMENTAL INC



Darien McElwain  
Staff Engineer

CC: Mr. Carl Rodgers, Town Manager, Barre Town

enc:



**SITE DETAIL MAP**  
Former Pratt Farm, Barre Town, Vermont