



State of Vermont

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August 4, 2003

DONALD LORINOVICH
MONTPELIER SCHOOL DISTRICT
58 BARRE STREET
MONTPELIER, VERMONT 05602

RE: Site Management Activity Completed, Main Street Middle School, SMS Site #2000-2804
Montpelier, Vermont

Dear Mr. Lorinovich:

The Sites Management Section (SMS) has reviewed the July 30, 2003, letter report titled, "*Soil Stockpile Monitoring Report, Main Street School, Montpelier, Vermont*" prepared by The Johnson Company for work conducted at the above referenced site. The SMS has also reviewed information contained in the site file. With this information, the SMS can now make the following conclusions:

- During the May 2000 removal of one 10,000 gallon fuel oil underground storage tank (UST), holes in the UST, water in the UST, and contaminated soil were observed. Volatile organic compounds (VOCs) were measured by a photoionization detector (PID). PID readings of the soils at the UST ranged up to 4.1 parts per million (ppm). The soil was observed to be native sands and backfill consisting of ash, coal clinkers, and brick fragments. Groundwater was encountered at a depth of 8' and had a sheen on it. 10 yds³ of contaminated soils were excavated and transported to the Montpelier Stump Dump for treatment via stockpiling and natural attenuation. Two soil samples from the tank pit were analyzed via EPA Method 8260 and no detectable VOCs were found. A sample of the groundwater in the tank pit found 13 mg/l of Total Petroleum Hydrocarbons (TPH). There is no Vermont Groundwater Enforcement Standard (VGES) for TPH. Additional investigation was required by the SMS.
- On October 19, 4 groundwater monitor wells were installed in order to evaluate potential contamination related to the UST. Fine and medium sand and silt were observed from grade to approximately 11' below the ground surface. A silty clay layer was found from 11' to the bottom of the soil borings (15' to 16'). Maximum PID readings of 10-12 ppm were noted in soil samples from MW-3 at 10 to 15' and down-gradient of the UST location.
- On October 24, MW-1 to -4 were sampled for VOCs by EPA 8260 and TPH by EPA 8015DRO. MTBE was found at 2.2 µg/L in MW-2; no other petroleum VOCs were detected in this or the

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other monitor wells. The VGES for MTBE is 40 $\mu\text{g/L}$. TPH was noted at 0.41 mg/L in MW-4. No further groundwater sampling was required.

- Site management consisted of only of soil stockpile sampling. Five soil samples were screened annually by PID in May from 2000 until 2003. The average soil VOC concentration in May 2000 was 15.5 ppm; this declined each year until it reached 0.1 ppm in the May 2003 average. Two soil samples were collected for laboratory analysis for VOCs and TPH. TPH was found at 11.2 and 20.8 mg/kg, which is below the Vermont guideline of 200 mg/kg for residential soils. Naphthalene at 79.0 and 74.3 $\mu\text{g/kg}$ was the only VOC detected in the two soil samples.

Vermont does not have soil standards for VOCs. In its *Agency Guidelines for Petroleum Contaminated Soil and Debris* soil thin spreading is permitted once VOC levels are below the equivalent drinking water standard based on $\mu\text{g/kg}$ being numerically equivalent to $\mu\text{g/L}$. The measured naphthalene levels are higher than equivalent drinking water standard, however they are well below the EPA Region III Risk Based Concentration of 1,600 mg/kg for residential soils. Recognizing the current use of the property where the soils are located, the relatively small stockpile size, and the demonstrated decline in soil contaminant levels over four consecutive screening dates, the SMS agrees with the Johnson Company recommendation to thin spread the soils and to grant Site Management Activity Complete status to the Main Street School site.

- Groundwater flow was shown to be toward the west and away from the school building. The basements of the two nearest residences, a nearby sewer manhole, and the school were screened via PID for VOCs. No VOCs were detected. The school and area buildings are served by municipal water, which is not at risk from contamination. The North Branch of the Winooski River, 400' down gradient, is the nearest potentially at-risk surface water. No evidence was found of soil staining or petroleum sheens along the river bank. No other at-risk sensitive receptors were identified. No unacceptable risk to human health and the environment is present due to any residual contamination remaining in the ground from the removed UST.
- The four groundwater monitoring wells were properly closed to eliminate possible conduits for contaminant migration into the subsurface. This closure involved removal of the protective well cover, removal of the well casing, filling the wells with a grout material to prevent fluid migration into the boreholes, and finishing to the surrounding grade.

Based on the above, the SMS is assigning this site a Site Management Activity Completed (SMAC) designation. This SMAC designation does not release the Montpelier School District, of any past or future liability associated with the petroleum contamination onsite. It does, however, mean that the SMS is not requesting any additional work in response to the May 2000 UST closure.

The 10 yd^3 soil stockpile may be disposed of by thin spreading at its current location at the Montpelier

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stump dump. Removal from this location is **not** permitted. Please feel free to call with any questions.

Sincerely,



George Desch, P.E.
Chief, Sites Management Section

CC: Montpelier Selectboard
Montpelier Health Officer
DEC Regional Office (via electronic mail)
Adam Robtoy, The Johnson Company (via electronic mail)

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