

State of Vermont

*AGENCY OF NATURAL RESOURCES*  
**Department of Environmental Conservation**  
**Waste Management Division**  
**103 South Main Street/West Building**  
**Waterbury, VT 05671-0404**  
**(802) 241-3888**  
**FAX (802) 241-3296**

May 25, 2010

Peter Chapdelaine  
Norwich Meadows Condominium Association  
PO Box 649  
Norwich, VT 05055

**RE: Site Management Activity Completed (SMAC) Designation**  
**Site: Norwich Meadows Condominiums, Norwich, VT (SMS Site #2005-3315)**

Dear Mr. Chapdelaine:

The Sites Management Section (SMS) has received a letter detailing monitoring well closure activities at the above referenced property, which was prepared by ECS, Inc. and dated April 22, 2010. Subsurface contamination was discovered at this property during the removal of two petroleum underground storage tanks (USTs). Following review of the letter and the information contained in the site file, the SMS has made the following conclusions:

- In December, 2004, a 500-gallon #2 heating oil UST was removed at Unit #1. The tank was found to be in poor condition, with several holes noted. Photoionization detector (PID) readings up to 218 parts per million (ppm) were recorded in soils surrounding the tank. No groundwater or bedrock was encountered in the excavation, though petroleum globules were noted on the water surface in the basement sump.
- On May 10, 2005, six soil borings/monitoring wells (MW-1 through MW-6) were advanced in close proximity to the Unit #1 tank to further define the extent of petroleum contamination. Groundwater samples were collected from the six wells and the onsite drinking water supply well and sampled for volatile organic compounds (VOCs) and total petroleum hydrocarbons (TPH). Only one of the six wells (MW-1) had detections for VOCs and TPH. Naphthalene exceeded the Vermont Groundwater Enforcement Standards (VGES) in this well. Screening of the basement sump using a PID showed readings as high as 274 ppm. No elevated PID readings were recorded in the ambient air within the basement.
- In July, 2005, three additional 500-gallon #2 heating oil USTs were removed from Units 2, 8 and 9. No petroleum contamination was identified at Units 2 and 9, however, PID readings up to 272 ppm were recorded in soils at Unit 8. After the removal of approximately 3 cubic yards soil, no significant contamination remained. Soils were transported to ESMI in Loudon, NH for disposal.
- Due to the impacts to the basement sump, soil and groundwater remediation was completed at the site in June and July of 2006. Approximately 16 cubic yards of contaminated soil were removed from the area adjacent to Unit #1. A groundwater treatment system was installed at the property utilizing the basement sump as an injection point. A product recovery well was installed outside the residence a short distance from the sump. Petroleum oxidation surfactant and biosolve were run through the system and recovered via vacuum extraction. Approximately 325 gallons of contaminated water were collected during the remedial activity.

OVER→



- Samples were collected from the various monitoring points and sump from April through October, 2006. Contamination was detected only in MW-1 (injection well) and the basement sump. While the contaminant levels in the basement sump had declined to non-detectable levels during the recent monitoring event, VOC concentrations in MW-1 increased.
- On March 29, 2007, ECS collected samples from all of the onsite wells and submitted them to a lab for analysis of VOCs. No petroleum constituents were detected above the minimum laboratory detection levels.
- Unit #1 and three monitoring wells (MW-1, MW-4 and MW-5) were sampled on August 8, 2007. Samples were submitted to a lab for analysis of VOCs. 1,2-dichloroethane (1,2-DCA) was detected in the sump at a concentration slightly above the VGES. No other contaminants were detected during this monitoring event. ECS noted that emulsified product persists in the basement sump. The indoor air of the basement was screened with a PID and had readings up to 4 ppm.
- On May 13, 2008, ECS returned to the site to sample the basement sump for VOCs. The levels of DCA were found to have increased to 413 ppb. The basement of the onsite residence was screened during this event using a PID, with a maximum reading of 0.6 ppm recorded. It was speculated that the increase in 1,2 DCA could have been related to the use of household cleaning agents, paints or varnishes, though no definitive source was identified. This substance was not detected in any of the monitoring wells at the property.
- A follow-up sample was collected from the basement sump on April 1, 2009 and analyzed for VOCs. No detectable concentrations of 1,2 DCA or other compounds were recorded above the minimum laboratory detection levels.
- ECS conducted a survey of sensitive receptors as part of this investigation. Potential receptors of contamination at this property include soils, groundwater, drinking water and indoor air. The most recent screening of the indoor air spaces in Unit #1 showed no readings above background levels. Samples from the nearby drinking water supply well had no detectable levels of VOCs.
- ECS reported that as of April, 2010, all monitoring wells and the groundwater treatment system have been properly decommissioned.
- No unacceptable risk to human health or the environment is believed to be present due to any residual contamination remaining at this property in association with the former heating oil USTs.

Based on the above, the SMS is this property a Site Management Activity Completed (SMAC) designation. The SMAC designation will not release the owner(s) of the property from any past or future liability associated with the petroleum contamination at the site. It does, however, mean that the SMS is not requesting any additional work in response to the contamination discovered during the UST removal work in 2004 and 2005.

Please feel free to call myself or Ashley Desmond of the SMS at (802) 241-3888 if you have any questions.

Sincerely,



Chuck Schwer, Section Chief  
Site Management Section

c: DEC Regional Office – Springfield (submitted via e-mail)  
Alicia Flammia, ECS (submitted via e-mail)  
Sigurd Spearing, ECS (submitted via e-mail)  
Norwich Select Board (submitted via e-mail)  
Norwich Health Officer