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DEPARTMENT OF HEALTH
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September 23, 2008

Sal Badalamenti
Remedial Project Manager
Eastern New York Remediation Section
USEPA
290 Broadway, 20th Floor
New York, NY 10007-1866

RE: **Mohonk Road Industrial Plant**
High Falls (H), Ulster County
Site # 356023
Letter Health Consultation

Dear Mr. Badalamenti:

In July of 2008, the United States Environmental Protection Agency (USEPA) submitted to the New York State Departments of Environmental Conservation and Health a Post-Decision Proposed Plan to amend the March 2000 Record of Decision (ROD) for the Mohonk Road Industrial Plant in the hamlet of High Falls, Ulster County. This letter is a summary of NYSDOH's public health evaluation of the actions taken since the ROD to determine whether the proposed amendment is protective of public health.

Site Background:

The Mohonk Road Industrial Plant Site (MRIP) is in the hamlet of High Falls, Ulster County, and is about seven miles north-northwest of the Village of New Paltz. High Falls is in two townships; Marbletown and Rosendale. The Site includes the property at 186 Mohonk Road and all surrounding properties that have been impacted by the contaminated groundwater plume. Residents and businesses within the areas are now obtaining their potable water from the High Falls Water District, a publicly-operated water supply system. The MRIP property originally consisted of about 14.5 acres of mostly undeveloped land, with a 43,000 square-foot single story building in its southern corner. About 6.9 acres of the northern undeveloped portion of the site was conveyed by the Kithkin Corporation, on August 15, 2005, to the High Falls Water District. This northern portion of the property is now the location of the High Falls Water District's drinking water treatment plant.

The site-related groundwater plume extends approximately 4,000 feet downgradient from the MRIP property, and had adversely impacted at least 75 residential and commercial private water supply wells. As defined in the 2000 ROD the "near-field plume" refers to the portion of the groundwater plume with total volatile organic compounds (VOCs)

concentrations greater than 1,000 micrograms per liter (mcg/L), while the "far-field plume" refers to the component of the groundwater plume between 10 and 1,000 mcg/L total VOCs. The entire near-field plume is currently within the estimated capture zone of the existing groundwater pumping and treatment system.

The Site first came to the attention of state and local authorities in April 1994, when a resident near the MRIP property contacted the Ulster County Health Department (UCHD) regarding the quality of her drinking water. The resident's well was sampled in April 1994 by UCHD, and the sample was found to contain levels of VOCs above federal and/or New York State (NYS) maximum contaminant levels (MCLs) for public drinking water. Subsequent sampling performed by UCHD identified 70 other homes or businesses downgradient of the Site with VOCs above MCLs. As an interim remedial measure (IRM) to address immediate health concerns, New York State Department of Environmental Conservation (NYSDEC) installed point-of-entry treatment (POET) systems at homes or businesses whose potable water supply exceeded the NYS MCLs of 5 mcg/L for individual VOCs. These systems included particulate filters, granular activated carbon (GAC) for VOC removal, and ultraviolet (UV) oxidation for disinfection. Monitoring of private wells on the perimeter of the plume was instituted to ensure that impacts to previously unaffected private water supplies downgradient of the Site would be addressed. As a result of the on-going monitoring program, five additional homes and businesses were supplied with POET systems. In 1994, NYSDEC placed the Site on the NYS Registry of Inactive Hazardous Waste Disposal Sites, because site-related contamination posed a significant threat to public health and the environment.

NYSDEC initiated a remedial investigation (RI) in 1997 to further characterize the nature and extent of groundwater contamination. The dissolved-phase groundwater VOC plume was found to extend approximately 4000 feet north-northeast from the MRIP property; and downgradient private water supplies, as well as groundwater in the bedrock aquifer beneath the MRIP property exhibited VOC concentrations above USEPA Removal Action Levels, federal and NYS MCLs.

The Site was added to the National Priorities List (NPL) on January 19, 1999. In March 1999, NYSDEC released a feasibility study (FS) which evaluated cleanup alternatives for the entire Site. The Record of Decision (ROD) was issued by the USEPA in March 2000. The major components of the selected remedy documented in the ROD are: construction of a new public water treatment plant and distribution systems to serve the proposed water service area in High Falls; extraction of groundwater on and off the MRIP property (near-field and far-field), with treatment via air stripping and GAC; and excavation of approximately 500 cubic yards of contaminated soils on the MRIP property with off-site disposal.

The construction of the water treatment plant and water distribution system called for in the ROD began in the fall of 2005 and was completed in the fall of 2007. The water treatment plant and accompanying water tower occupy approximately seven acres of land on the MRIP property. The system is connected to the pressurized Catskill Aqueduct, which is part of the New York City reservoir system. Concurrently, the POET systems were removed as connection of homes and businesses within the water district were completed.

An ordinance within the High Falls Water District prohibits residents from establishing or maintaining a source of drinking and domestic water separate from the public water supply, yet allows existing separate water sources to be used for purposes other than drinking and domestic use.

A groundwater extraction and treatment system was installed within the near-field plume and has been operating 24 hours a day since May 2000. Groundwater monitoring near the former septic tank has shown reductions of total VOC concentrations. Site-wide groundwater data have shown that groundwater quality has improved over the last several years. Total VOCs in the source area were approximately 7500 mcg/L in 1999. December 2007 sampling data indicates an appreciable decrease of total VOCs has occurred in the source area to approximately 2200 mcg/L. Mid-plume data also suggests a downward trend from approximately 250 mcg/L total VOCs in 1999 to approximately 50 mcg/L of total VOCs in December 2007. In addition, contaminant concentrations within the far-field plume have shown a decrease in total VOCs over the same time period, with 13 of 21 wells non-detect at 0.5 mcg/L in December 2007. The remaining wells range between 1 and 111 mcg/L of total VOCs.

In December 1999, while constructing the groundwater treatment system, USEPA excavated approximately 2000 tons of contaminated soil, paint waste and debris and disposed of off-site. Analytical results for post-excavation soil samples indicated that soil cleanup objectives were met in the areas where excavation occurred.

USEPA Proposal to Amend the Record of Decision:

The primary objective of this Proposed Plan is to present an Amendment to the 2000 ROD. The 2000 ROD called for a separate extraction and treatment system to address the far-field plume. With the construction of the public water supply and current contaminant trends and water quality parameters indicating that monitored natural attenuation (MNA) in conjunction with the currently active remedies are expected to be adequate in remediating the far-field plume without a far-field pump and treat system. In addition, recent increases in the extraction rates for the near-field groundwater extraction and treatment system also provides support for MNA as an effective remedial alternative for the far-field plume. As a result, EPA has decided to re-evaluate the active groundwater extraction and treatment remedy for the far-field plume specified in the ROD, leading to a Post-Decision Proposed Plan.

Public Health Assessments and Consultations:

The New York State Department of Health and the Agency for Toxic Substance and Disease Registry prepared a Health Consultation (HC) in 1997, a Public Health Assessment (PHA) in March 2005 and a Health Consultation for 1,4-dioxane in Private Drinking Water in June 2005 to evaluate the potential health risks from contaminants of concern associated with the Mohonk Road Industrial Plant Site. An evaluation of available, relevant information indicated that the Mohonk Road Industrial Plant site was a public health hazard in the past because of exposures to chlorinated VOCs and 1,4-dioxane in private drinking water wells. These exposures were addressed by installation of GAC filters (chlorinated VOCs) and/or

provision of bottled water (1,4-dioxane). The PHA and HC recommendations included: continued monitoring and treatment of private drinking water supply wells contaminated with chlorinated VOCs; continued provision of bottled water to residents whose well levels of 1,4-dioxane are in excess of the NYSDOH drinking water standard of 50 mcg/L; continued monitoring of groundwater; provision of a permanent, alternate supply of drinking water to dissociate people from the contaminated water on a long-term basis; and notification of all owner of properties with underlying groundwater contamination. In addition, the 2005 PHA recommended that the potential for soil vapor intrusion be evaluated.

Soil Vapor Intrusion Potential:

In February 2005, USEPA initiated an investigation to determine if subsurface contamination originating from the MRIP property may put residents at risk via soil vapor intrusion. Permanent sub-slab soil vapor sampling ports were installed in 34 residential and 9 non-residential locations, with soil vapor samples collected and analyzed for VOCs. The sampling determined that the concentrations of VOCs at all residential locations were below the USEPA health-based screening level of less than 5 mcg/m^3 of TCE in sub-slab vapor. Therefore, no further evaluation and/or actions were deemed necessary to evaluate the soil vapor intrusion pathway. However, sub-slab soil vapor samples collected from the on-site building ranged from non-detect (ND) to 8593 micrograms per cubic meter (mcg/m^3) and indoor air samples ranged from 1 to 7 mcg/m^3 for TCE. These results indicated the need to install a vapor mitigation system.

In early 2007, six sub-slab depressurization systems (SSDS) were installed in the subsurface layer beneath the on-site building's concrete floor. A SSDS is a vapor mitigation system that uses a fan-powered vent and piping to draw air from beneath the slab to the atmosphere. These mitigation systems are currently operating as designed.

Conclusion:

NYSDOH and ATSDR conclude that actions taken to date have reduced exposures to site related contaminants. Removal of grossly contaminated source material, continued operation of the extraction and treatment system, construction and operation of a new public water supply providing an alternative water supply to those with impacted or threatened private supply wells, and construction of a sub-slab depressurization system at the on-site facility in conjunction with on going groundwater monitoring and institutional controls indicate that the potential for exposures to site contaminants is no longer likely. Based on this information, the current classification for the site is no apparent public health hazard for ingestion of groundwater. Additionally, since residential and non-residential structures within the near and far-field plumes have been evaluated for soil vapor intrusion with proper mitigation as needed, the current classification for the site is no apparent public health hazard for vapor intrusion.

The USEPA recommended that monitored natural attenuation for the far-field plume provides the best balance among the remedial alternatives. USEPA believes that the preferred alternative will be protective of human health and the environment, will comply

with the RAOs, and will be cost-effective. Based upon all of the above, the NYSDOH concurs that the amended remedy is protective of public health.

Public Health Action Plan:

The public health action plan (PHAP) for the Mohonk Road Industrial Plant site describes actions to be taken by ATSDR, NYSDOH, USEPA or the NYSDEC (the agencies) following completion of this consultation. The purpose of the PHAP is to ensure that this health consultation not only identifies public health hazards, but provides a plan of action designed to mitigate and/or prevent adverse human health effects resulting from present and/or future exposures to hazardous substances at or near the Site. The public health actions to be implemented by ATSDR, NYSDOH, USEPA or NYSDEC are as follows:

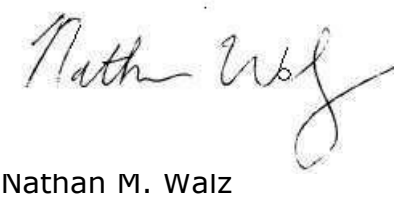
1. The agencies will review groundwater monitoring data from Site wells to verify that contaminated groundwater is not migrating from the Site.

2. Continued operation and maintenance of the mitigation measures.

3. ATSDR and NYSDOH will provide a follow-up to this health consultation as needed, outlining the actions completed and those in progress. Any follow-up reports will be placed in document repositories that contain copies of this health consultation and will be provided to persons who request them.

If you have any questions, please call me at (518) 402-7880.

Sincerely,



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