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## UPCOMING COMMUNITY MEETINGS

On July 25th at 6:00 PM in the Eden Elementary School Gymnasium and on July 26th at 7:00 PM in the Lowell Elementary School Gymnasium, the Vermont Agency of Natural Resources (VT ANR) and U.S. Environmental Protection Agency (EPA) are planning to hold community meetings in Lowell and Eden to discuss the Vermont Asbestos Group (VAG) mine site and the potential for it being placed on the National Priorities List (NPL), commonly known as the Superfund List. The major purpose of this meeting is to provide the community with more information about the Superfund process and an opportunity for community members to ask questions about the process and about why Superfund listing is being pursued. Based on this input from discussions with community members and groups, we have asked EPA to ensure that during the public meeting the following are addressed:

- A description of the community involvement process throughout the entire Superfund process
- A description of the process and criteria for selecting a remedial (cleanup) action
- The potential for including local hiring during the Superfund process.
- Future use of the site after remediation

## Why Action is Necessary

- Ongoing erosion of asbestos tailing/waste rock piles is impairing downstream wetlands and streams, which are impacted with asbestos-containing sediments. Without stabilization measures, the asbestos-containing sediments will migrate further downstream.
- This impairment is a violation of the Vermont Water Quality Standards and the Federal Clean Water Act.
- Initial water quality assessments performed by ANR indicate that Hutchins Brook is impaired for about one mile downstream of the Eden

Pile, and the Burgess Branch is impaired into the wetland area just past Mine Road.



- Sediment discharged from the mine site contains asbestos, which by state and federal definition is a hazardous material.
- The ongoing release of a hazardous material violates 10 VSA 6616 (Release Prohibition)
- The site is also not in compliance with applicable regulations, including the state's Solid Waste Rules, Stormwater and Wetland Regulations.

# Why is Superfund being considered at VAG?

Investigations by both the state and federal agencies since 2005 have shown the release of asbestos containing tailing and waste rock into downstream wetlands and streams. EPA has evaluated this site through their Site Assessment Program and has determined this site is eligible for listing on the National Priorities List (NPL), commonly known as the Superfund List. A letter of concurrence from the Governor is required before EPA will propose a site to the NPL.



Given the size and complexity of this site, the state does not have sufficient resources on its own to properly characterize the site and provide an effective long-term remedy. Based on preliminary estimates developed in support of the state and federal bankruptcy claims against G-1 Holdings (successor to GAF), costs for a long-term remedy ranged between approximately \$135M to \$207M. Although there are uncertainties and limitations inherent with all cost estimates this early in the process, these estimates do provide insight into the scale of the potential remedy. All the remedy options accounted for the need to stabilize the piles by reducing and vegetating the slopes.

The ANR believes that the remedial program under Superfund is the only viable option for conducting this work. The EPA remedial program has access to technical resources to evaluate the impacts, risks, and potential remedies at a site. We recognize that it will be a challenge to obtain the necessary resources even if the site is listed on the NPL. Under the EPA remedial program, the state would be responsible for ten percent of the costs to construct the remedy and operations & maintenance costs for all constructed features. Delaying action will likely mean further downstream impairments and increased remediation and reclamation costs in the future.

The ANR will continue to meet with the local communities about potential proposal on the NPL. Additional rationale and discussion is available in the document titled, "Program Case for Pursuing Superfund Listing of the VAG Mine" dated April 23, 2010. This document is available upon request or can be downloaded at : <http://www.anr.state.vt.us/dec/wastediv/SMS/VAG.htm>

Additional information on the NPL process can be found on line at: <http://www.epa.gov/superfund/>

## What is Superfund?

Superfund is the name given to the environmental program established to address abandoned hazardous waste sites. It is also the name of the fund established by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended. The National Priorities List (NPL) is the list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories. The NPL is intended primarily to guide the EPA in determining which sites warrant further investigations, and potential action.

In Vermont, thirteen sites have been placed on the NPL including 3 abandoned copper mines.

## Frequently Asked Questions

Over the last several years, the ANR has met with the local select boards and community groups and has compiled commonly asked questions about the site and Superfund. This document is attached to this publication and can also be found online at the following web address: <http://www.anr.state.vt.us/dec/wastediv/SMS/VAG.htm>

## Summary of Investigation and Remedial Activities since 2004



In 2004, VT ANR received a citizen complaint about tailings material depositing into a wetland located one mile downstream of the mine site. Since then, the VT ANR began conducting biological and chemical assessments within the Lamoille River and Missisquoi River Watershed. These investigations indicate that the aquatic biota, water quality and streambed quality are degraded in sections of Hutchins Brook, within the Lamoille River Watershed and sections of the Burgess Branch, within the Missisquoi River Watershed.

In July 2007, the VT ANR requested the assistance of EPA to control offsite migration of asbestos mine tailings. Work began in October 2007 with the construction of berms and diversion channels. EPA and ANR will continue to work with the property owner in inspecting and maintaining these structures. As the piles erode, the sedimentation basins and storage areas behind the constructed berms eventually fill up. VAG has been dredging the material, as needed, and relocating it to an approved area onsite.

In fall 2010, VT ANR teamed up with EPA and US Dept. of Agriculture and installed vegetative test plots at the base of the largest tailing pile. Test plots consisted of adding soil amendments to the tailings to promote and establish a persistent vegetative growth. A combination of alsike clover, perennial rye grass, tall fescue and Kentucky bluegrass were planted in the various test plots. Preliminary findings indicate successful germination.



## 2011 Activities

\*VAG is continuing to perform inspections and maintenance of the drainage and erosion control features that were originally constructed by EPA. Summary reports are submitted to the VT ANR.

\*G-I Holdings, through their Trust, will continue to conduct perimeter air monitoring. A summary report of the 2010 air monitoring results was just finalized and can be found on our website.

\*VT ANR is awaiting a response to a proposal submitted to EPA and the Department of Energy to perform a renewable feasibility study to determine the viability of renewable energy projects, such as a biomass facility or solar energy after the site, or at least portions of the site, are remediated. A copy of the proposal can be found at our website.

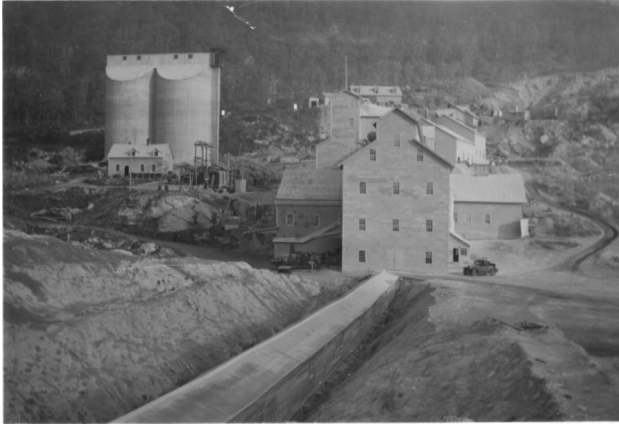


\*G-I Holdings, through their Trust, continue efforts to improve site security at the site by restricting site access.

\*ANR plans to continue with additional biomonitoring of streams and may install more vegetative test plots.

\*ANR and EPA will continue outreach to the community about potential NPL listing.

# MINE HISTORY



The Vermont Asbestos Group Mine site is an inactive asbestos mine and mill. A majority of the mining took place between 1936 and 1993, when the mine closed. Ruberoid began mining at the site in 1936. The Eden Mill closed and the new Lowell Mill opened between 1948-1950. In 1967, Ruberoid merged with General Aniline & Film (GAF). In 1975, GAF sold mine to employees, which created the Vermont Asbestos Group, which is the current owner.

The mine property is comprised of approximately 1550 acres on Belvidere Mountain within the towns of Eden and Lowell, Vermont.

Currently, the mine site consists of a network of eleven mine and mill buildings and structures and several tailing and waste rock piles containing asbestos. The two largest tailings piles are estimated at 30 million tons (Eden Pile and Lowell Pile) The aerial extent of quarry, tailings, and infrastructure of the mine is approximately 650 acres.

The asbestos ore was mined from open quarries producing 3-4% chrysotile "white" asbestos. The blasted ore then went through multiple crushers. The crushed ore was then dried in rotary kilns. The dried ore was then processed through the multi-storied mill building where the fibers were separated from the ore and packaged for shipment.

In the 1950's, this mine was the largest U.S. producer of chrysotile asbestos. Primary markets for the fiber include vehicle brake linings, shingles, siding, cement, pipe covering, fireproof suits and doors, and other products.

## ADDITIONAL INFORMATION

Agency of Natural Resources



Dept. of Environmental Conservation  
Waste Management Division  
103 South Main Street-West Bld.  
Waterbury, VT 05671-0404

The ANR has conducted a number of investigations at this mine site. These documents are available upon request or online at [www.anr.state.vt.us/dec/wastediv/SMS/VAG.htm](http://www.anr.state.vt.us/dec/wastediv/SMS/VAG.htm)

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## Geology of Belvidere Mountain



The Vermont Geological Survey has a wealth of information pertaining to the geology of Belvidere Mountain. An excerpt

from a fact sheet, "Belvidere Mountain, part of the serpentinite or ultramafic belt which extends from Newfoundland to Georgia, was the southernmost commercial deposit of chrysotile asbestos in the northern Appalachians. The serpentinite at Belvidere Mountain is part of the Belvidere Mountain Complex (Gale, 1980, 1986) a tectonic assemblage of, from top to base, serpentinite, coarse-grained amphibolites, fine-grained amphibolites, greenstone and muscovite mélange".

To learn more about the geology and to review maps and references, please go to the Vermont Geological Survey website at <http://www.anr.state.vt.us/dec/geo/bmtn.htm>