FIELD RECONAISSANCE SAMPLING
BURLINGTON HILL SITE
BURLINGTON, SKAGIT COUNTY, WASHINGTON

PREPARED BY:
U.S. EPA Region 10
Office of Environmental Assessment
1200 6th Avenue, Suite 900
OEA-095
Seattle, WA 98101-3140

March 6, 2013

Overview

The Burlington Hill site is a residential development built in close proximity to the former Asbestos-Talc Products of Washington, Inc. EPA conducted opportunistic reconnaissance sampling at four locations to determine if asbestos was present. At one of the locations sampled, asbestos was identified.

Introduction

This report presents the results of a field reconnaissance visit conducted by EPA Region 10's Office of Environmental Cleanup in coordination with the Office of Environmental Assessment. The purpose of the study was to determine if asbestos was present at a site where a former quarry now abuts a residential development.

The study described in this report is intended to provide initial characterization results to determine whether asbestos is present at the site. This initial phase was focused on locations that were easily accessed by EPA staff and does not constitute a systematic sampling of the entire subdivision. This work was conducted in the fall of 2012.

Background and Site Location

A resident who lives on Burlington Hill, in Burlington, Skagit County, Washington called EPA during the summer of 2012 to ask about the potential presence of asbestos in the subdivision where he lives. He provided documentation in support of his claim; in particular, he referenced a USGS Report (Van Gosen 2010) which identified Burlington Hill as the site of the former Asbestos-Talc Products of Washington, Inc. Van Gosen's (2010) report states:

> Although it was not specifically described as an asbestos producer, noteworthy is a quarry that operated sometime in the 1930's on Burlington Hill, overlooking the town of Burlington in Skagit County. According to Glover (1956, p. 14), "Asbestos-Talc Products of Washington, Inc., of Burlington, Skagit County, mines a somewhat fibrous soapstone-actinolite mixture that has developed in shear zones cutting greenstone. It is ground, mixed with asbestos and use [sic] for special cements."

The site is located on Burlington Hill, in Burlington, Skagit County, Washington. EPA's Andy Smith, Julie Wroble, and Lorraine Edmond visited the site on September 26, 2012, to meet with the resident, conduct a site reconnaissance, take photographs and collect samples for asbestos analysis.

Methods

In response to the resident's concern, EPA mobilized for the site visit and focused on areas that could be easily accessed. Figure 1 shows locations where field observations were made by Lorraine Edmond and samples were collected by Julie Wroble. These locations consisted of two roadcuts, the resident's property, and the former quarry. Sample locations were determined based on ease of access and the presence of exposed rock (outcrops and road cuts). Samples were collected by breaking off fragments of exposed rock with a rock hammer, and placing the fragments into a sample jar for analysis by polarized light microscopy (PLM). For more in-depth results, larger samples of rock specimens were gathered that could be photographed using a

stereomicroscope at EPA's Manchester Environmental Laboratory (MEL). The samples for PLM analysis required additional crushing at the laboratory to reduce the material to the appropriate size.

A total of 15 samples were collected. Nine of these were sent to a commercial laboratory for fast-turnaround, routine PLM analysis. PLM analysis with dispersion staining is a light microscope technique that identifies asbestos in bulk materials, such as soil. The remaining 6 samples were sent to MEL for confirmation sampling and a more complete analytical workup. Additional analyses by scanning electron microscopy (SEM), Energy Dispersive Spectroscopy (EDS) and x-ray diffraction (XRD) were performed by MEL to confirm the presence of asbestos and to provide images of any asbestos found.

Results

Field Observations

Field observations for each location are provided below. A summary of sample information is provided in Table 1.

Location 1 (48° 29.223574/122° 19.507260)

Starting at the northwest entry to the Burlington Hill development, the first samples were collected from a road cut on Hillcrest Drive, just as the road begins to climb uphill. We moved from downhill to uphill along the road cut and sampled three separate sample sites (see Table 1), but these are considered one sample location.

Burlington Hill
Project Code: SFP-043A

Analyst: Jed Januch
Equipment:
Stereomicroscope – Wild M5 with Nikon CoolPix camera
PLM – Carl Zeiss Axioskop 40 with AxioCam MRc imaging system
SEM – JEOL JSM6510LV