

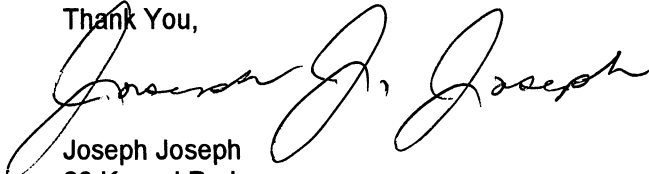
March 15, 2001
Office of the City Clerk
Margaret Drury
Mass Ave.
Cambridge, MA

2001 MAR 15 P 2:00
OFFICE OF THE CITY CLERK
CAMBRIDGE, MASSACHUSETTS

Dear Margaret:

Would you please include the attached letter to the Council agenda for the March 19, 2001 meeting.

Thank You,


Joseph Joseph
20 Kassul Park
Cambridge, MA



2001 MAR 15 P 2:00
OFFICE OF THE CITY CLERK
CAMBRIDGE, MASSACHUSETTS

March 13, 2001

Mary Ellen Stanton
United States Environmental Protection Agency
One Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

Re: Review of EPA Preliminary Assessment/Site Investigation Report
W.R. Grace Site
Cambridge, Massachusetts

Dear Ms. Stanton:

On behalf of Alewife Neighbors, Inc. (ANI), GeoInsight, Inc. (GeoInsight) reviewed the February 2001 Preliminary Assessment/Site Investigation Report (Report) prepared by Roy F. Weston, Inc. (Weston) for the United States Environmental Protection Agency (USEPA). The objective of the preliminary assessment was to evaluate suspected asbestos impacts in surface soil. The following activities were conducted as part of the preliminary assessment:

- Weston collected 52 grab soil samples from 0 to 3 inches below grade surface (bgs) for asbestos analysis by polarized light microscopy (PLM). Of the 52 soil samples, 39 samples were collected from the W.R. Grace property, 3 samples were collected near the MBTA Alewife Red Line Head House, 5 samples were collected from City of Cambridge property including Russell Field Park, and 5 samples were collected from the vicinity of the One Alewife Center building. Three samples of suspected asbestos-containing material (SACM) were collected from the W.R. Grace property. Samples were not collected from the vicinity of the "Former Ice Cream Factory" on the W.R. Grace property located on the north side of Whittemore Avenue.
- Trace (<1%) concentrations of asbestos were detected in 10 soil samples. These 10 samples were located in the Zone 2 and Zone 4 areas.
- A total of 28 of the samples collected for PLM analysis were analyzed by transmission electron microscopy (TEM). Only one soil sample (COC-01) collected from the City of Cambridge property near the intersection of Harvey Street and the Access Road was analyzed by TEM. Soil samples collected from Russell Field were not analyzed by TEM. Asbestos (mostly chrysotile) was detected in 27 of the 28 samples at concentrations ranging from 0.0002 to 0.0300% by weight. The highest asbestos concentrations detected in soil samples by TEM were to the west of the parking area (samples WRG-05 and WRG-06). Intermediate asbestos concentrations were reported in the soil samples collected from Zone 2 and the

GeoInsight, Inc.
75 Gilcrest Road, Suite 210
Londonderry, NH 03053-3564
TEL 603-434-3116
FAX 603-432-2445

GeoInsight, Inc.
319 Littleton Road, Suite 100
Westford, MA 01886
TEL 978-692-1114
FAX 978-692-1115

Post-it® Fax Note	7671	Date	3/15	# of pages	4
To	C. Joseph		From	[Signature]	
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Phone #			Phone #		
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central portion of Zone 4, and the lowest asbestos concentrations were reported in the samples collected from the southern portion of Zone 4 and Zone 5.

- Fragments of suspected asbestos-containing material (SACM) were encountered to the east of the bioremediation beds. Three samples of the SACM were collected for analysis by PLM. The SACM was identified as a concrete-like material with visible fibers; the field description of the material indicated that it was non-friable. Asbestos was reported in each sample at a concentration of 15% by volume.
- A pallet of Zonolite® attic insulation, a W.R. Grace product that is suspected to be asbestos-containing, was observed in one of the Grace buildings.
- Four personal air monitor samples were analyzed for asbestos by phase contrast microscopy (PCM). The analytical results for the PCM samples were not included in the Report. The Report indicated that one of the personal air monitor samples was analyzed by TEM because the PCM analysis indicated 0.068 fibers/cc. The text indicated that asbestos was not detected by the TEM analysis, but the TEM analytical results for this sample were not included in the Report. The Report did not include information regarding the type of air monitor or filters used, the air sampling flow rate, or the air sampling duration.
- Five separate soil samples were collected from the bioremediation beds for analysis of SVOCs, PCBs, and TPH. TPH concentrations ranged from 1,200 mg/kg to 2,040 mg/kg, PCBs (Aroclor-1254) were detected at concentrations ranging from 0.046 mg/kg to 0.26 mg/kg, and SVOCs were detected, primarily naphthalene.

Based upon GeoInsight's review of the Report, we provide the following comments:

- Weston collected grab soil samples from 0 to 3 inches bgs for asbestos analysis, and trace asbestos was detected in soil samples collected from zones 2 and 4. However, in most of the samples collected from Zones 2 and 4 by H&A in which asbestos was previously detected, asbestos was detected in the S-2 soil samples, which were collected from 0.5 to 4 feet bgs. The Weston soil samples were not collected at sufficient depths to evaluate the asbestos detected in the H&A samples.
- It does not appear that soil samples were collected below the root structures in the upper soil horizon, except for the five samples collected near the One Alewife Center building. It is our understanding that sampling protocols agreed to for the preliminary assessment included collecting soil samples from below the root mat.
- A comparison of the PLM and TEM analytical results indicate that the PLM method yielded false negative results (i.e., asbestos was confirmed to be present using the TEM method in samples that were not identified as containing asbestos via PLM).
- Soil samples collected from Russell Field were analyzed for asbestos using only the PLM methodology; the samples were not analyzed by TEM. Because of the PLM false negatives and the potential for direct contact with surficial soil is much greater at Russell Field, soil samples that were collected from Russell Field for analysis of asbestos by PLM methodology should be analyzed by TEM to evaluate asbestos in this area.
- The preliminary investigation did not characterize historical fill, located below the surficial

soil. Previous investigations defined surficial soil as 0 to 6 inches bgs, as opposed to 0 to 3 inches bgs in this investigation. Therefore, it is difficult to compare previous data collected from surficial soil samples with the sampling results obtained during this investigation.

- The preliminary assessment did not evaluate the presence of asbestos in soil located greater than 3 inches bgs. The results of historical sampling indicated the presence of asbestos in subsurface soil at the property. The Report did not indicate why subsurface soil was not evaluated in the preliminary assessment. The presence of asbestos in subsurface soil may represent a potential health risk if this soil is disturbed or exposed in the future.
- The three SACM samples contained 15% asbestos (chrysotile) and were located in Zone 4. Suspected asbestos-containing material had not been previously identified during characterization activities at the Site. The observations made during EPA's Preliminary Assessment indicate the need for a more comprehensive survey of the Site for SACM located at the ground surface. In addition, a management plan should be developed for handling and disposing of this material.
- The asbestos analyses in Table 1, which appear to be the TEM results, are reported in "% by weight," instead of % by volume, as historical asbestos analyses for this site have been reported. It is therefore difficult to compare EPA's results to historical data. Asbestos is usually reported as fibers per volume (% volume), rather than mass per volume because conversion factors range widely to convert asbestos fibers to mass. Asbestos (mostly chrysotile) was detected in 96% of the TEM samples at concentrations less than 1%. However, since the results are presented in % by weight, the asbestos % by volume may be different. The laboratory results should be corrected or the original TEM analytical data should be reviewed to make a direct comparison to the % by volume analyses.
- The specific weather conditions (e.g. wind speed, wind direction) on the sampling dates were not included in the report, and therefore it is difficult to evaluate the results of the personal air monitor sampling. In addition, soil moisture content of the soil samples was not recorded.
- The results of the TEM analyses indicate that asbestos was consistently detected in surficial soil at the Site. The primary route for exposure to asbestos is through inhalation. The Report does not provide a discussion of how the TEM data for surficial soil were evaluated with regard to possible exposure via inhalation. It is our understanding that, based upon current risk assessment data, the unit risk for residential and sensitive population exposure to asbestos is very low and any amount of asbestos fibers present an unacceptable risk to residential receptors and children. Ambient air monitoring may be required to better characterize the potential mobility of asbestos identified in surface soil.
- Although Page 4 of the Removal Preliminary Assessment indicated that asbestos concentrations at the W.R. Grace property ranged up to 12%, a split soil sample (AB-6, 6'-8' bgs) collected by GeoInsight in May 1998 contained asbestos at a concentration of 20%.
- The soil sample descriptions from Weston seem to consistently indicate more gravel in the soil samples than the soil sample descriptions completed by the analytical laboratory.
- In the Asbestos Bulk Sample Analysis Table, sample SACM-01 is mislabeled as WRG-01.
- The EPA Press Release indicates a maximum asbestos concentration of 0.02% by weight; the actual maximum asbestos concentration is 0.03% by weight (sample WRG-06).



- The Description of Sampling Conducted section in the Report (page 4) indicates that the samples collected from the W.R. Grace property were labeled WRG-01 through WRG-38. The actual samples collected from the W.R. Grace property were WRG-01 through WRG-39.

SUMMARY

Asbestos was consistently detected in shallow soil samples collected from the W.R. Grace property by TEM methodology and asbestos was detected by TEM in soil samples in which asbestos was not detected by PLM. Because of the false negatives in the PLM analysis, the presence or absence of asbestos in Russell Field soil samples cannot be evaluated since the soil samples collected from Russell Field were analyzed only by PLM. Due to the low unit risk for residential and sensitive populations, any amount of asbestos fibers at Russell Field or in surficial soil near the residences may present an unacceptable risk. The Report did not include an evaluation of the implications or risk from asbestos consistently detected in surficial soil samples.

If you have any questions on the information summarized in this letter, please do not hesitate to contact either of us at (978) 692-1114.

Very truly yours,

Kevin D. Trainer, C.P.G.
Senior Project Geologist

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Michael J. Webster, P.G., L.S.P.
Senior Associate

cc: Gretchen von Grossmann, ANI
John Bolduc, City of Cambridge
William Beck, Haley & Aldrich
Jack Miano, Massachusetts Department of Environmental Protection
Ira Leighton, Acting Regional Administrator, USEPA

2001 MAR 15 P 2:01
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Consent Communication #10

A communication was received from Joseph Joseph, regarding review of EPA Preliminary Assessment/Site Investigation Report for W.R. Grace Site.

In City Council March 19, 2001

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