Alewife Study Group
20 Kassul Park
Cambridge, MA 02140
December 7, 2024

Brian Miller, LSP
CDW Consultants, Inc.
4 California Avenue
Framingham, MA 01701

CC:
Brad S. Nicoll, PE, MBTA
George Kober, PE, MBTA
Joe Rigney, PE – EOR Delve Underground

Dear Brian Miller:

Thank you for the deadline extension to December 8. Between the Conservation Commission hearings and the Draft RAM Plan deadlines, we have been digesting, analyzing and responding to a lot of technical information on a short clock.

We are all T-riders, especially of the Red Line as we live essentially next door to Alewife T Station. We cheer the elimination of slow zones under General Manager Philip Eng's leadership. We are eager to see a reliable, well-maintained, affordable, accessible T!

That said, this letter (one of several) from Alewife Study Group addresses two main concerns (and one nit) about the Draft RAM Plan, and makes three requests for changes to the text.

Asbestos Fibers Found in Soil at the 62 Whittemore Ave Plant
First, the Draft RAM Plan ascribes asbestos in soil at IQHQ's Whittemore Avenue site to Asbestos Containing Materials (ACM). We ask that the RAM Plan for RTN # 3-0000277 note the <u>full industrial history including the use of loose fiber asbestos</u> at the 62 Whittemore Avenue chemical plant, first called Dewey & Almy Chemical Co, purchased in 1954 by W. R. Grace.

Under the Draft RAM Plan's 4.1 Summary of RTN 3-0277, it reads:

> *"Although pilot scale brake research and manufacturing operations involving asbestos were conducted on the Subject Property in the 1930's, the source of asbestos in soil was estimated to more likely be from the demolition of former buildings."*

Upon examination of CDM's June of 2024 boring logs, none of the hits for asbestos are described as chunks or ACM, Asbestos Containing Material. Further, no aerial photos or historic site plans indicate the presence of any buildings in the Site area, nor does the site history described in §3.2 describe buildings on the Site, only north of the Site. (See below.)

> *A Historic Site Operations Plan included in a March 2006 Response Action Outcome Report by Haley and Aldrich shows historic features that were located on the Site. On the western portion of the site was a wash lagoon, 2 above ground sulfuric acid tanks, and a12,550 gallon above ground formaldehyde tank. On the central portion of the Site was an 18,000 gallon above ground naphthalene tank. A 54,000 gallon above ground fuel oil tank was located adjacent and north of the Site. An area known as the DAXAD Settling Pond was located adjacent and southwest of the Site.*

Finally, there is no significant correlation between the presence of asbestos in soil samples and the observation of construction debris in soil boring logs (asbestos was found in 13 of the 20 sampling locations where possible construction debris (concrete, brick, glass) was identified, but also in 24 of the 44 sampling locations where construction debris was *not* observed). While it is not impossible that the source of the asbestos is building demolition, this conclusion is speculative at best.

In fact, across this 27-acre site, of the hundreds of test borings taken over the years by both CDM and Haley & Aldrich, just one had ACM. All the others had asbestos fibers.

- 1998 and 2003 Haley & Aldrich Testing
    - Of the 145 test pits and 538 test borings conducted in May and December of 1998 and again in September of 2003, (See Haley & Aldrich's Draft RAM Plan 2.1 "Historic Explorations."), there were multiple hits of asbestos fibers. Zero ACM were found. Every single hit was composed of loose fiber asbestos.
- 2021 Haley & Aldrich Testing
    - In April and July of 2021, 164 soil samples were taken and tested for asbestos. (See Haley & Aldrich's Draft RAM Plan 2.2.3 "Recent Soil Quality Data.") Of those, 104 tested positive for asbestos, 103 of those samples had loose fiber asbestos. Just one had ACM.

CDM acknowledges in their Draft RAM Plan under 4.1, "Summary of RTN 3-0277" that "[t]hroughout several investigations to characterize the property, soil was found to be impacted with VOCs, SVOCs, metals, petroleum hydrocarbons, formaldehyde, cyanide and **asbestos fibers."** [Emphasis ours.]

<u>Why does it matter, ACM or Asbestos Fibers</u>?

Why does it matter whether the asbestos contamination is from loose fibers and/or from ACM? ACM in soil is often visibly recognizable, whereas loose fibers intimately mixed with soil are generally not, even at high concentrations. The assumption that all asbestos at the site is present as ACM might therefore lead to incautious handling of potentially contaminated soil based on its appearance. Years or decades from now, should the undeveloped land become subject to new development, it will be important for all relevant stakeholders including but not limited to the property owner, neighbors and officials at various agencies including the Department of Environmental Protection (DEP), the city of Cambridge, and others to treat the remaining asbestos-contaminated soil appropriately.

While it is very likely true that some buildings at the Whittemore address used ACM in their buildings and some of those ACM-containing buildings were demolished, the data does not support the hypothesis that the source of all the asbestos hits in soil are exclusively or even mostly ACM from demolished plant buildings. Again, all but one hit are from loose fiber asbestos.

Requested Action #1
Suggested changes in red

> Please generally change “Asbestos Containing Materials” and “ACM” to “asbestos fibers and/or ACM” wherever they appear in the RAM Plan.

Industrial History

We now know quite a bit about the industrial history of RTN # 3-0000277 from a wide variety of sources including but not limited to, workmen’s compensation claims and depositions related to asbestosis, Moody’s financial reports, and a series of patents issued to the 62 Whittemore Avenue, Cambridge plant. From those records, it is clear that manufacturing brake linings using asbestos occurred at the 62 Whittemore plant.

And yet the Draft RAM Plan 3.2, “Site History” describes asbestos as “reportedly used”

> *Dewey and Almy manufactured rubber products. The Dix Lumber Company operated on the southern portion of the property at that time.*
> *Asbestos was reportedly used by Dewey and Almy as part of pilot scale brake research operations in the 1930’s with pilot scale manufacturing operations. [Emphasis ours.]*

Perhaps the most direct evidence of asbestos fibers (aside from all the asbestos fibers found in the soil) used in manufacturing at the 62 Whittemore Avenue plant comes from a 1934 report to the Division of Occupational Hygiene Department of Labor and Industries. The author, Hervey Elkins, (Harvard Class of 1928), then a recent graduate of the Harvard School of Public Health, visited the Cambridge site twice on November 27, 1934, and again on December 11, 1934. In Elkins’ report to the Director of the Division of Occupational Hygiene Department of Labor and Industries, Manfred Bowditch, Elkins made the following observations:

“Certain *brake linings,* especially those for heavy work, are made from asbestos to which carbon black and other substances may be added and rubber latex. The various materials are mixed in a paper beating machine, spread on a wire screen and the water sucked out, then pressed in a hydraulic press, cured and brought to the proper thickness with a *sanding machine.”* [Emphasis ours.]

At the time of Elkins’ visit he noted that while he was unable to witness the process, the “operation is well ventilated, but the method of feeding the paper beater was said to be *dusty and needs improvement.”* [Emphasis ours.]

[Source: Page 3, Document #1 “Notes on visit to Dewey & Almy Chemical Co., on November 27, 1934 and December 11, 1934 and to the Multibestos Company, Walpole, on November 28, 1934.”]

The pace of manufacturing at the Whittemore Avenue facility required regular purging of the processing equipment. On certain days of the month, “Dewey’s,” as neighbors called the plant, would blow a whistle to alert the neighborhood they were preparing to clear the pipes. Older neighbors remember this phenomenon as so intrusive that those living nearby had to shut their windows to prevent dust from settling in their homes.

Years later, on September 17, 1996, Bradley Dewey, Jr., was deposed. Dewey, Jr. was the son of Dewey and Almy’s cofounder and president Bradley Dewey. Dewey, Jr. was also a chemical engineer with a PhD from MIT who worked at Dewey & Almy for a number of years. He stated in his 1996 deposition that he “knew that Dewey and Almy had been in the brake lining business” and that “brake linings included asbestos.” [Source: Pages 24 & 27, Document #2, “Testimony of Bradley Dewey, Jr., 1996”.] In that same deposition on page 26, Dewey, Jr. identified photographs of the Dewey and Almy facility at 62 Whittemore Ave with a *fleet* of Multibestos Motorized Brake Service Institute vans in the parking lot of the Whittemore facility.

Dewey & Almy had acquired and operated the Multibestos Plant in Walpole, Massachusetts from 1930 to 1935. [See Document #3, “Moody’s Manual of Investments, 1937”.]

In fact, the facility at 62 Whittemore Avenue, Cambridge and Walpole’s Multibestos site (known formally as the Blackburn and Union Privileges Superfund Site - Cerclis #MAD 9082191363) were the subject of special attention by the Department of Labor and Industries Division of Occupation Hygiene due to a high incidence of asbestosis complaints in multiple person workman’s compensation claims and related legal actions.

“At times witness would be in contact with *asbestos dust* for half a day – *that would be when he would bag it up and bring it to Cambridge.”* [Emphasis ours.]

[Source: Page 6, Document #4. “Report of Member of Industrial Accident Board. Workmen’s Compensation Act, John L. Lightbody, employee of Multibestos Company, June 26, 1934.”]

Relevant Patents

The patent record also supports that the plant at 62 Whittemore Avenue used asbestos fibers in their manufacturing processes and worked to improve their methods. At least six patents were assigned to Dewey and Almy Chemical Company’s North Cambridge plant at 62 Whittemore Avenue including:

- “Rubber Bonded Asbestos and Method of Making”

February 21, 1933, Patent #1,898,985

- “Method of Dispersing Asbestos and Resulting Product”

May 9, 1933, Patent #1,907,616

- “Manufacture of Rubber Bonded Asbestos

May 9, 1933, Patent #1,907,617

- “Treatment of Asbestos with Latex and Product Thereof”

May 9, 1933, Patent #1,907,634

- “Rubber-Bonded Asbestos Product and Method of Making”

April 24, 1934, Patent #1,956,053

- “Battery Separator”

April 25, 1951, #2,687,447

Interestingly, that last patent mentioned was granted in 1951, nearly 20 years after the first patent.

[Source: Documents #5-10]

Requested action #2:

Suggested changes in red - Under 3.2, “Site History”

Dewey and Almy manufactured rubber products. Asbestos was used by Dewey and Almy as part of pilot scale brake research operations in the 1930’s with pilot scale manufacturing operations. The Dix Lumber Company operated on the southern portion of the property at that time.

Requested action #3:

Suggested changes in red - Under 3.1, “Site Description and Proposed Project”

“The overall Disposal Site and Site Property is an approximate 24-acre property”

Please change 24-acre to “27-acre property.”

Thank you for the opportunity to comment.

Sincerely,

On behalf of the Alewife Study Group,

David Bass, ScD, CHMM (retired)
Lisa Birk

Supporting documents #1-10 attached

1. “Notes on visit to Dewey & Almy Chemical Co., on November 27, 1934 and December 11, 1934 and to the Multibestos Company, Walpole, on November 28, 1934.”

2. “Testimony of Bradley Dewey, Jr., 1996”

3. “Moody’s Manual of Investments, 1937”

4. “Report of Member of Industrial Accident Board. Workmen’s Compensation Act, John L. Lightbody, employee of Multibestos Company, June 26, 1934.”

5. “Rubber Bonded Asbestos and Method of Making”
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6. “Method of Dispersing Asbestos and Resulting Product”
May 9, 1933, Patent #1,907,616

7. “Manufacture of Rubber Bonded Asbestos
May 9, 1933, Patent #1,907,617

8. “Treatment of Asbestos with Latex and Product Thereof”
May 9, 1933, Patent #1,907,634

9. “Rubber-Bonded Asbestos Product and Method of Making”
April 24, 1934, Patent #1,956,053

10. “Battery Separator”
April 25, 1951, #2,687,447