



June 12, 2019

**BY HAND**

Mr. Gregory P. Watson, AICP  
Manager of Comprehensive Permit Programs  
Massachusetts Housing Finance Agency  
One Beacon Street  
Boston, MA 02108-3110

Re: Town of Norfolk – Abbyville Residential, LLC (PE-910 and 911)

Dear Mr. Watson:

I am Special Counsel to the Norfolk Zoning Board of Appeals. At its hearing on May 22, 2019, the Board voted to refer a question of site control to MassHousing pursuant to 760 CMR 56.04(6). Specifically, the Applicant for the above-referenced projects, Abbyville Residential, LLC (“the Applicant”) was basing its site control on two purchase and sale agreements, one of which was with Buckley & Mann, Inc., dated November 13, 2012 (excerpt attached as Exhibit A). The Applicant informed the Board that this Agreement has expired without an extension, and that therefore the Applicant does not have a legally-binding option to acquire a substantial portion of the site that is the subject of its comprehensive permit applications.

The Board respectfully requests that you make a determination pursuant to §56.04(6) whether the Applicant still has “site control,” as required under 760 CMR 56.04(1)(c).

Relatedly, the Board wishes to bring to your attention recent developments concerning environmental testing at the project site. As you know, the project site was the subject of extensive environmental remediation activities under the Massachusetts Contingency Plan (Chapter 21E), which concluded with the filing of a Response Action Outcome statement in 2001 and an Activity and Use Limitation (“AUL”) restriction affecting a portion of the site that was a disposal site for contaminated soils. The proposed project is outside the limits of this AUL area, and is not in close proximity to the areas of historic soil contamination. However, the disclosure of deficiencies with the historic response actions by the property owners (Buckley & Mann) led the Department of Environmental Protection (“DEP”) to order the termination of the AUL, “because additional response actions are necessary to support the conclusion that a condition of No Significant Risk has been achieved at the Property.” See, AUL Termination, attached hereto as Exhibit B.

Mr. Greg Watson  
June 12, 2019  
Page 2

Additional investigations performed by the Applicant's Licensed Site Professional ("LSP") this year have revealed the presence of polychlorinated byphenyls (PCBs), a particularly toxic compound, in "much higher concentrations than previously known," representing a "potential Imminent Hazard condition," and triggering reporting to the federal Environmental Protection Agency. See, Letter from Mabbett & Assoc., Inc. to DEP dated Feb. 7, 2019, p. 3 (copy attached as Exhibit C). This discovery has raised questions as to the adequacy the prior response actions that led to the 2001 RAO. The Board is pleased that the Applicant and its team are taking this matter seriously, and credit the participation of many neighbors and residents who have brought attention to these concerns.

Mabbett was employed by the Applicant, but after the contract to purchase between the Applicant and Buckley & Mann terminated on March 29, 2019, Mabbett withdrew as the LSP of record on the site. Relevant documents filed with the DEP can be found at this link: <https://eeaonline.eea.state.ma.us/EEA/fileviewer/Rtn.aspx?rtn=2-3000173>

Please contact me if you would like to discuss this matter. Thank you.

Very truly yours,

  
Daniel C. Hill

Encs.

cc: John Smolak, Esq.



**REAL ESTATE  
PURCHASE AND SALE AGREEMENT**

by and between

**BUCKLEY & MANN, INC.**  
as **SELLER**

and

**THOMAS W. DiPLACIDO, JR.**  
as **BUYER**

17 Lawrence Street  
Norfolk, MA

dated: NOVEMBER 13, 2012

From the Office of:

**THOMAS E. NANNICELLI, ESQUIRE**  
470 Washington Street, Suite 30  
Norwood, Massachusetts 02062  
(781) 551-0450

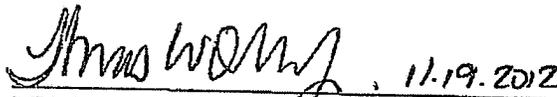
43. **NO OTHER AGREEMENTS.** SELLER hereby represents, warrants and covenants that the Premises are not and will not be the subject of any outstanding agreements with any party pursuant to which any such party may acquire any interest herein, and that there are no contracts or agreements to which SELLER is a party, including any tenancy or occupancy agreements, which affect the Premises and which will survive the closing.

44. **FACSIMILE SIGNATURES.** Facsimile signatures shall be deemed originals for all purposes of this Agreement.

In Witness Whereof, BUYER has executed this Agreement, consisting of 43 pages and 44 numbered Articles, and SELLER has caused it to be executed, sealed with the corporate seal, and delivered in its name and on its behalf by its undersigned officer, hereunto duly authorized, on the day and date first above-written.

Witness:

  
\_\_\_\_\_

 11.19.2012  
\_\_\_\_\_  
THOMAS W. DIPLACIDO, JR.,  
BUYER

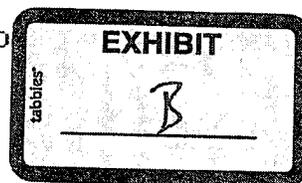
Attest:

BUCKLEY & MANN, INC., SELLER

Lois H. Mann

By: Richard D. Mann  
Richard D. Mann, its  
(Print Name)  
President  
(Title)

hereunto duly authorized



Form 1084D

Form 1084D

TERMINATION OF NOTICE OF ACTIVITY AND USE LIMITATION

M.G.L. c. 21E, § 6, 310 CMR 40.0000

Form 1084D Is Used When Additional Response Actions Are Necessary  
to Support a Permanent or Temporary Solution

Disposal Site Name: BUCKLEY & MANN, INC.  
DEP Release Tracking No.(s) 2-3000173

WHEREAS, a Notice of Activity and Use Limitation has been registered with the Land Registration Office of the Norfolk County Registry District as Document No. 893755, noted on Certificate of Title No.154753, filed in Registration Book 774, Page 153 (said Notice of Activity and Use Limitation and any amendments thereto are collectively referred to herein as "Notice");

WHEREAS, said Notice sets forth limitations on use and activities, conditions, and obligations affecting certain vacant land situated in Norfolk, Norfolk County, Massachusetts, said land being more particularly bounded and described in Exhibit A attached hereto and made a part hereof ("Property");

WHEREAS, said Notice is being terminated because additional response actions are necessary to support the conclusion that a condition of No Significant Risk has been achieved at the Property;

NOW, THEREFORE, I/We of Hingham, Plymouth County, Massachusetts, being the owner of said Property, do hereby terminate said Notice.

BUCKLEY & MANN, INC., authorizes and consents to the filing and recordation and/or registration of this Termination of Notice of Activity and Use Limitation, said Termination to become effective when recorded and/or registered with the appropriate Registry of Deeds and/or Land Registration Office.

WITNESS the execution hereof under seal this 12<sup>th</sup> day of May, 2018.

BUCKLEY & MANN, INC., by

Lois H. Mann  
Lois H. Mann, President

Stephen L. Mann  
Stephen L. Mann, Treasurer

COMMONWEALTH OF MASSACHUSETTS

Norfolk, ss

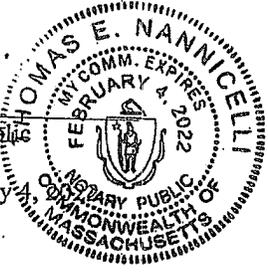
May 12, 2018

On this 12<sup>th</sup> day of May, 2018, before me, the undersigned notary public, personally appeared Lois H. Mann, proved to me through satisfactory evidence of identification, which was a driver's license, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that she had signed it voluntarily for its stated purpose as President of BUCKLEY & MANN, INC., a corporation.

The language in these forms are part of promulgated regulations and cannot be modified in any way unless so noted (by brackets [ ] ) in the form itself.

5/21/14 (Effective 6/20/14)

*Thomas Nannicelli*  
Thomas E. Nannicelli, Notary Public



My Commission Expires: February 4,

Upon recording, return to:

(Name and Address of Owner)

EXHIBIT A

DESCRIPTION OF LAND CONTAINING AREAS SUBJECT TO AUL

REFERENCE: CERTIFICATE OF TITLE NO. 154753, BOOK 774. PAGE 153

That certain parcel of land situated in the Town of Norfolk, in the County of Norfolk and the Commonwealth of Massachusetts, bounded and described as follows:

Southeasterly sixteen hundred eighty-five and 47/100 (1685.47) feet, and

Southwesterly sixty-five and 48/100 (65.48) feet by Lawrence Street;

Northwesterly by Old Lawrence Street, two hundred eleven and 43/100 (211.43) feet;

Southerly by land now or formerly of Thomas E. Buckley et al being in part by the end of Old Lawrence Street, two hundred fifteen and 60/100 (215.60) feet;

Easterly by land now or formerly of Thomas E. Buckley et al, seventy-four (74.00) feet;

Southwesterly one hundred seven and 67/100 (107.67) feet, and

Easterly three hundred thirty-seven and 85/100 (337.85) feet by land now or formerly of Paul Revell et al;

Southerly by land now or formerly of R. Gregory Lewallen et al, fifty-nine and 58/100 (59.58) feet;

Southeasterly by said land now or formerly of R. Gregory Lewallen et al and by land now or formerly of Horace Roy et al, four hundred fifty-five and 97/100 (455.97) feet;

Northeasterly by said land now or formerly of Horace Roy et al, two hundred twenty-two and 75/100 (222.75) feet;

Southerly by Lawrence Street, three hundred thirty and 76/100 (330.76) feet;

Southerly again ninety (90.00) feet, and

Southwesterly three hundred eighty-eight (388.00) feet, by land now or formerly of Barbara L. Pidgeon et al;

Westerly fourteen hundred seventy-five and 10/100 (1475.10) feet; and

Southwesterly three hundred ninety and 40/100 (390.40) feet by land now or formerly of S. M. Lorusso & Sons, Inc.;

Northerly by said land now or formerly of S. M. Lorusso & Sons, Inc., being in part by a line in Mill River, about five hundred twenty-eight (528) feet;

Southwesterly, Westerly and Northwesterly by the middle line of Mill River;

Northwesterly by land now or formerly James Foley et al being in part by a line in Mill River, about two hundred forty-two (242) feet;

Northerly by land now or formerly of James Foley et al, eleven hundred fourteen and  $\frac{75}{100}$  (1114.75) feet;

Northeasterly by land now or formerly of Robert T. Harrison et al, four hundred seventy-two and  $\frac{46}{100}$  (472.46) feet;

Northerly by said land now or formerly of Robert T. Harrison et al and by land now or formerly Wayne G. Bredvik et al, two hundred twenty-six and  $\frac{77}{100}$  (226.77) feet;

Northeasterly by lands of sundry adjoining owners, twenty-two hundred fifty-three and  $\frac{63}{100}$  (2253.63) feet.

EXHIBIT A-1

DESCRIPTION OF AREA SUBJECT TO AUL

That certain portion of a parcel of land, said parcel situated in the Town of Norfolk, in the County of Norfolk and the Commonwealth of Massachusetts, and Certificate of Title No. 154753, Book 774, Page 153, said portion being shown as the "AUL Area" on Exhibit A-2 and Exhibit A-3, and being more particularly bounded and described as follows:

The beginning point for said parcel is located N 38°37'24" W, three hundred nine and 50/100 (309.50) feet from the point of curvature in the northwesterly sideline of Lawrence Street, said curve having a radius of eight hundred fifty and 00/100 (850.00) feet; thence

Southwesterly two hundred seventy-five and 00/100 (275.00) feet;

Southeasterly fifty and 00/100 (50.00) feet;

Southwesterly three hundred four and 47/100 (304.47) feet;

Southeasterly forty-five and 00/100 (45.00) feet;

Southeasterly sixty-three and 43/100 (63.43) feet;

Southwesterly five hundred fifty-eight and 59/100 (558.59) feet;

Northerly one hundred forty-one and 30/100 (141.30) feet;

Northeasterly four hundred eleven and 59/100 (411.59) feet;

Northerly three hundred forty and 18/100 (340.18) feet;

Northeasterly two hundred ninety-one and 87/100 (291.87) feet;

Southeasterly one hundred eighty and 00/100 (180.00) feet.

EXHIBIT A-2  
BUCKLEY & MANN INC.  
ACTIVITY AND USE LIMITATION  
AUGUST 2001

EXHIBIT A-2

I CERTIFY THAT THIS PLAN SHOWS THE CORRECTNESS OF THE LINES THAT RUN THE BOUNDARIES OF CERTAIN PARCELS, AND THE LINES OF STREETS AND HIGHWAYS ARE SHOWN AS THEY EXIST OR AS THEY SHOULD BE SHOWN AS THEY ARE TO BE SHOWN, AND THAT NO LINES ARE SHOWN WHICH ARE NOT SHOWN AS THEY ARE SHOWN.

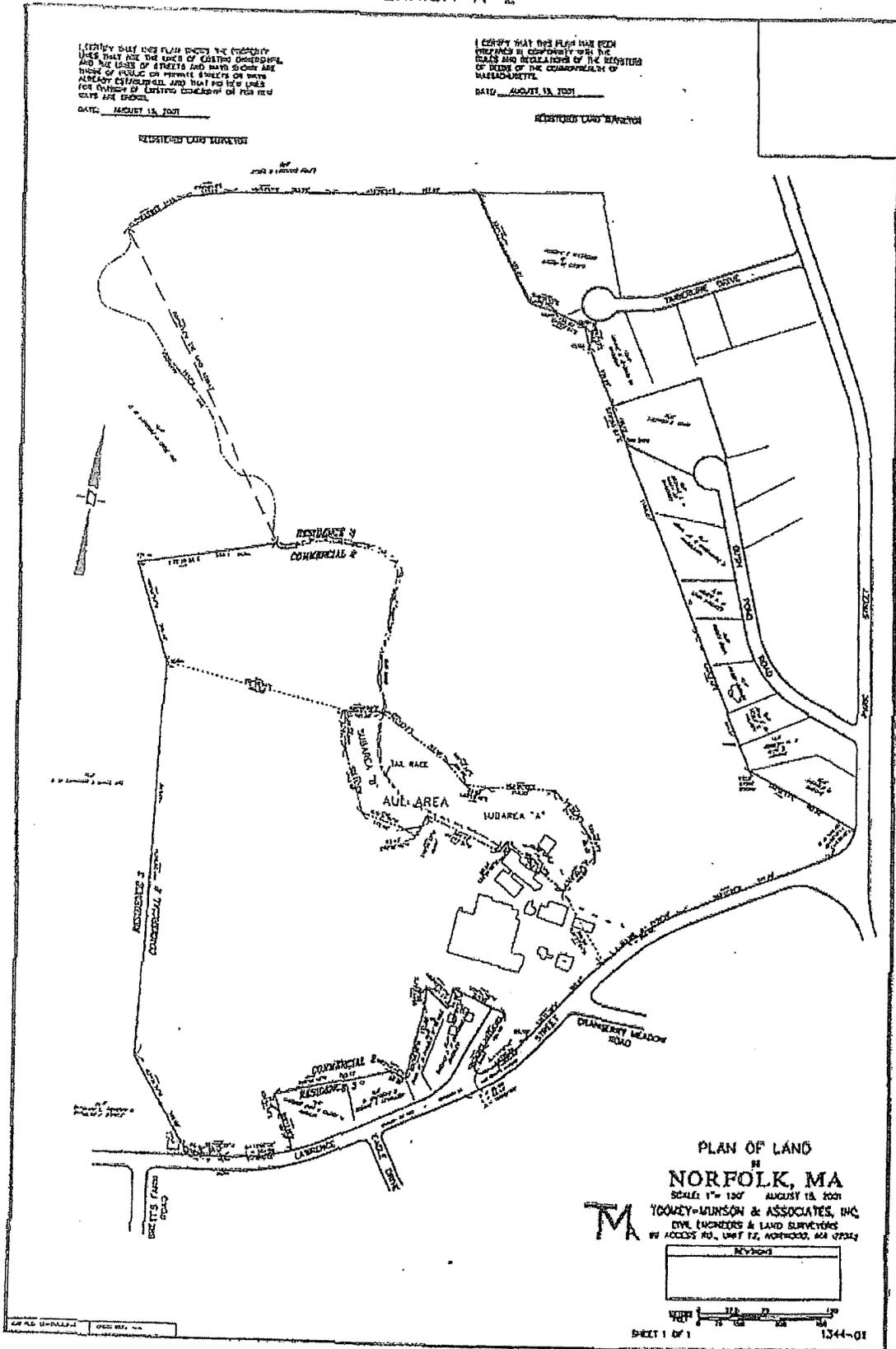
DATE: AUGUST 18, 2001

I CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE BOARD OF REGISTRY OF THE COMMONWEALTH OF MASSACHUSETTS.

DATE: AUGUST 18, 2001

REGISTERED LAND SURVEYOR

REGISTERED LAND SURVEYOR



PLAN OF LAND  
IN  
NORFOLK, MA  
SCALE: 1" = 100' AUGUST 18, 2001

TM  
TOOMEY-MINSON & ASSOCIATES, INC.  
CIVIL ENGINEERS & LAND SURVEYORS  
85 ACCESS RD., UNIT 12, NORFOLK, MA 01904

NO.	REVISION

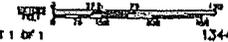


EXHIBIT A-3  
BUCKLEY & MANN INC.  
ACTIVITY AND USE LIMITATION  
AUGUST 2001



EXHIBIT B  
BUCKLEY & MANN INC.  
ACTIVITY AND USE LIMITATION  
AUGUST 2001



## EXHIBIT C

### ACTIVITY AND USE LIMITATION OPINION

In accordance with the requirements of 310 CMR 40.1074, this Licensed Site Professional Opinion has been prepared to support a Notice of Activity and Use Limitation (AUL) for the property located north of Bush Pond, on a portion of the Buckley & Mann, Inc., (B&M) property at 17 Lawrence Street, Norfolk, MA 02056. As of the date of the Activity and Use Limitation (AUL) Opinion, the area subject to the AUL and southwest of the Tail Race is zoned Commercial 2 and the area northeast of the Tail Race (a manmade brook parallel to the Mill River) is zoned Residential 3 under the Town of Norfolk Bylaws. The area west of the Tail Race is also within the Town of Norfolk Wetland Protection District Number 5. The area subject to the AUL is unpaved, and has no buildings.

#### Site History

B&M manufactured textile products at its facility northwest of the junction of Park and Lawrence Streets in Norfolk for over 90 years, ending in 1994.

B&M operated a Carbonizer process through the 1940s to reclaim wool from used garments. The raw material was conveyed through acid vapor to char the cotton threads on the seams, zippers, buttons, etc., and facilitate separation of the wool. The wool was neutralized, rinsed, and reused. Solid residue consisting of fiber and fasteners was discarded in a landfill on the northeast side of the Tail Race. The Carbonizer business declined after the 1940s and the facility was demolished in 1965. Coal ash, building demolition debris and discarded textile machinery from on-site operations was also discarded in the landfill.

B&M operated a dyehouse until 1986. The dyehouse discharged approximately 40,000 gallons per week of wastewater to Lagoons #1 and #2, southwest of the Tail Race, for settling and facultative biological treatment. The effluent from these shallow lagoons percolated into the ground adjacent to the Tail Race.

The Mill River and the parallel Tail Race (on the B&M property) drain the surface runoff from the surrounding low hills. The B&M landfill area and the Lagoons #1 and #2 are in the bottom of the Mill River valley, near the Tail Race and the River, where groundwater discharges to the surface water.

At the request of the Massachusetts Division of Water Pollution Control, Department of Environmental Protection (DEP), an initial site assessment was completed in 1986 by Camp Dresser & McKee Inc. (CDM). The report concluded that groundwater contamination was limited to a shallow zone immediately under Lagoons #1 and #2 and under the adjacent 30 foot wide earthen bank separating the Lagoons from the Tail Race. The contamination was primarily indicated by non-chemical-specific oxygen demand from dyehouse wastewater. Soil in the former landfill area was found to contain metals,

originating from textile fiber and scrap equipment, and Polycyclic Aromatic Hydrocarbons (PAH) from coal ash and Carbonized spoils.

In 1992, B&M applied for and received a Waiver from direct Bureau of Waste Site Cleanup, Department of Environmental Protection (DEP), oversight under the Massachusetts Contingency Plan (MCP). The site identification number is 3-0173.

*[Note: The MCP is the Commonwealth of Massachusetts's code of regulations for the notification, assessment and cleanup of disposal sites where a release of oil and/or hazardous materials has occurred.]* Under the 1993 revisions to the MCP, the site was classified Tier II, non-priority.

In October-November 1995, CDM completed a comprehensive site assessment program for the site. The 23 machine-dug test pits and 5 hand-dug test pits showed a mix of soil, coal ash, building demolition debris, buttons, and discarded textile machinery in the landfill area. None of the soil samples failed a TCLP test for hazardous waste characteristic. No Volatile Organic Compounds (VOC) were detected in the landfill areas, and the trace concentration of a few VOCs found in the former dyehouse wastewater treatment Lagoons were well below MCP No Significant Risk Criteria. Soil from several test pits in the landfill area exceeded the MCP Method 1 S-1 or S-2 standards for chromium, lead, and PAH compounds. Soil samples from the bottoms of Lagoons #1 and #2 contained naphthalene and methylnaphthalene at concentrations slightly greater than the Method 1 S-1 and S-2 standards. *[Note: The "MCP Method 1 Cleanup Standards", published in the MCP, refer to numerical standards for chemical contaminants in soil and groundwater. The soil standards are broken into three soil categories: S-1, S-2 and S-3. The S-1 Soil Standards are the most strict, or lowest, numerical values, derived to be protective of a residential exposure scenario by considering a receptor's incidental ingestion and dermal contact exposures to soil while gardening and playing. The S-2 and S-3 numerical standards are less strict and therefore higher, based on passive recreational and construction-related exposure scenarios, respectively.]*

In December 1997, B&M filed a Remedial Action Alternatives (Phase III) Report and a Release Abatement Measure (RAM) Plan with the DEP. The RAM plan called for on-site consolidation of contaminated soils, considering that:

- The presence of contaminated soils had not adversely impacted groundwater quality.
- The concentrations of metals and PAH compounds in soil slightly exceeded MCP Method 1 S-1 and S-2 limits in a few locations, with the exception of the immediate vicinity of Test Pit 10 in the landfill area. The Plan called for the Test Pit 10 material to be selectively excavated for off site disposal.
- The concentrations of metals and PAH compounds were far below MCP Upper Concentration Limits.
- The depth of the fill material in the landfill extended below the groundwater table and excavation for complete removal would have disrupted wetlands.

- The cost to consolidate the material on-site with a three foot cover of clean soil would be significantly less the excavation for off site landfill disposal or reuse as daily cover on an off site commercial landfill.
- An Activity and Use Limitation in the landfill area at B&M would be needed even if the bulk of the soil was disposed of off site, because the full depth of the material might not be recovered.

The work proposed under the RAM plan was completed in 1998 and 1999. The entire landfill area, estimated at 4,550 cubic yards, was excavated and inspected to visually verify there were no buried oil and or hazardous materials, other than the Carbonizer residue, coal ash and building demolition debris. Timbers, discarded textile machinery and oversized demolition debris was removed from the landfill for off site disposal as part of future improvements to other portions of the B&M property. Approximately 500 cubic yards of contaminated soil from near the former wastewater Lagoons #1 and #2 were moved to the landfill consolidation area. This entire area was then covered with geotextile and three feet of clean sand cover, and then stabilized with compost, lime fertilizer and hydroseed. Contaminated soil (315 tons) from near Test Pit 10 was removed from the site and disposed of in an off site, commercial landfill.

Concentrations of the target pollutants (PAH compounds, chromium, and lead) were less than the MCP Method 1 S-1 Standards in soil samples collected at the completion of work from remediated areas outside of the landfill consolidation area.

Soil and groundwater samples from the former dyehouse wastewater Lagoons #1 and #2 were collected and analyzed in October 2000. A second set of groundwater samples was collected and analyzed in December 2000. The groundwater samples were collected from shallow test pits to obtain water directly in contact with the residual contaminants in the soil. The October 2000 data showed that 1,1-biphenyl was present at concentrations slightly above MCP Method 1 S-1/GW-1 in three of four soil samples (1.6 to 2.6 mg/kg, compared to the 1 mg/kg Standard). Also, methylnaphthalene was present at a concentration slightly above MCP Method 1 GW-1 in one of four turbid, unfiltered groundwater samples (16 ug/L, compared to the 1 mg/kg Standard). *[Note: GW-1 Standards are for groundwater which may be used for human consumption.]* In the December 2000 tests, the groundwater samples were treated with alum to enhance settling of suspended solids and remove turbidity. The analytical results showed that the soluble 1,1-biphenyl, naphthalene, and/or methylnaphthalene concentrations were well below MCP Method 1 Standards. CDM used the data to establish MCP Method 2 Standards for these compounds, and showed that that residual concentrations pose No Significant Risk.

Complete details of the assessment and remediation work are included in the "Class A-3 Response Action Outcome and Release Abatement Measure Completion Report" prepared by CDM for B&M and submitted to the DEP in August 2001.

Reason for Activity and Use Limitation

A Method 1 Risk Characterization was conducted to evaluate the risk posed by contamination remaining in the soil at the site in the landfill area. Using the Method 1 approach, concentration of lead, chromium and PAH compounds remaining in the soil were compared to the MCP Method 1 Soil Standards to determine if the site poses a risk for current and future activities and uses.

The Method 1 Risk Characterization concluded that the landfill portion of the property, north and east of the Tail Race, poses No Significant Risk to health, safety, public welfare or the environment provided that the lead, chromium and PAH contaminated soil in the land fill remains isolated under the three foot protective cover. To ensure that uncontrolled exposure to the contaminated soil does not occur, and that a condition of No Significant Risk is maintained for future activities and uses, an AUL is require to restrict certain activities and uses of this portion of the property. The portion is shown as AUL Subarea A on Exhibit A-2, Exhibit A-3 (enlarged plan of the AUL area in Exhibit A-2) and Exhibit B (sketch plan).

The Method 1 and Method 2 Risk Characterization concluded the former dyehouse Lagoons #1 and #2 portion of the property, south and west of the Tail Race, poses No Significant Risk to health, safety, public welfare or the environment. Concentrations of PAH compounds and chromium were less than the Method 1 and Method 2 Risk Characterization for S-1 soils, but exceeded local background concentrations. B&M has established an AUL for Lagoons #1 and #2 to require that future excavation in the Lagoons be conducted with restrictions on the management of the excavated soils. This portion of the property is shown as AUL Subarea B on Exhibit A-2, Exhibit A-3 (enlarged plan of the AUL area in Exhibit A-2) and Exhibit B (sketch plan).

Permitted Site Activities and Uses

A. Former landfill area east of the Tail Race, Subarea A.

- i) Passive and active recreational activities including, but not necessarily limited to, activity on the grassed area for children, sitting on benches or sitting or lying on the ground surface;
- ii) Maintenance of grassed areas, planting and seeding up to a depth of three feet below ground surface, installation of fencing with intrusion limited to driving of posts;
- iii) Utility maintenance work either not involving soil excavation and removal, or involving soil excavation to a depth of no greater than three feet below ground surface;
- iv) Emergency utility repair work, lasting no longer than eight consecutive hours and involving the excavation of no more than twenty (20) cubic yards of soil from depths

of greater than three feet below ground surface. Such excavated soil must be returned to depth in its entirety at the conclusion of the repair work. The protective barrier layer, which includes a woven geotextile and three feet of overlying soils, must be replaced with a protective barrier layer of like and comparable construction, materials and specifications immediately following completion of the repair work. If soil removal from the site is to occur or the activity will occur for a duration greater than eight consecutive hours and/or more than twenty (20) cubic yards of soil from depths greater than three feet below ground surface are to be excavated, a Health and Safety Plan to address potential exposures and a Soil Management Plan must be developed;

(v) Non-invasive activities and uses which do not disturb or compromise the structural integrity of the protective barrier layer and the underlying contaminated soils; and

(vi) Such other activities or uses not listed above, but which as given in written or oral opinion by an LSP, shall present no greater risk of harm to health, safety, public welfare, or the environment than the activities and uses set forth in this paragraph.

B. Former wastewater treatment lagoons west of the Tail Race, Subarea B.

(i) Passive recreational activities including, but not necessarily limited to, walking and bird watching;

(ii) Use of the lagoons as stormwater runoff storage ponds;

(iii) Utility maintenance lasting no longer than eight consecutive hours and involving the excavation of no more than twenty (20) cubic yards of soil. Such excavated soil must be returned to the lagoon at the conclusion of the repair work. If soil removal from the site is to occur or the activity will occur for a duration greater than eight consecutive hours and/or more than twenty (20) cubic yards of soil are to be excavated, a Soil Management Plan must be developed; and

(iv) Such other activities or uses not listed above, but which as given in written or oral opinion by an LSP, shall present no greater risk of harm to health, safety, public welfare, or the environment than the activities and uses set forth in this paragraph.

Prohibited or Restricted Site Activities and Uses

A. Former landfill area east of the Tail Race, Subarea A.

(i) Excavation of soils at a depth of greater than three feet below ground surface, except as described in 1A (iv) above. Such non-emergency invasive subsurface activities, which may be part of utility repair or maintenance, or construction, cannot be performed without the involvement of an LSP, and must be conducted in accordance with the Massachusetts Contingency Plan and applicable DEP policies appropriate to the protection of human health and the environment.

(ii) Any activities and uses which may cause physical, chemical, or structural damage to the protective barrier layer in the designated AUL area, except those conducted in accordance with Obligation (i) of this Notice of AUL.

(iii) Any activities otherwise prohibited by Zoning, Bylaws, other regulatory programs, or deed restriction, unless permitted by the appropriate governmental body.

B. Former wastewater treatment lagoons west of the Tail Race, Subarea B.

(i) Excavation of soil, except as described in 1B (iii) above. Such non-emergency invasive subsurface activities, which may be part of utility repair or maintenance, or construction, cannot be performed without the involvement of an LSP, and must be conducted in accordance with the Massachusetts Contingency Plan and applicable DEP policies appropriate to the protection of human health and the environment.

ii) Any activities otherwise prohibited by Zoning, Bylaws, other regulatory programs, or deed restriction, unless permitted by the appropriate governmental body.

Obligations and Conditions Set Forth in the AUL Opinion

A. Former landfill area east of the Tail Race, Subarea A.

i) The performance of any activities including, but not limited to, excavation which could cause the removal, damage, and/or disturbance of the protective barrier layer and/or contaminated soil located beneath it without the prior development and implementation of a Health and Safety Plan and a Soil Management, as described in paragraph C (ii) below.

ii) The integrity of the protective barrier layer within the designated AUL area must be maintained and inspected on at least an annual basis to verify its ability to effectively prevent exposure(s) to underlying contaminated soil via dermal contact, ingestion, and/or inhalation; and

(iii) The contaminated soil must remain beneath the protective barrier within the designated AUL to prevent exposures via dermal contact, ingestion, and/or inhalation.

B. Former wastewater treatment lagoons west of the Tail Race, Subarea B

i) The performance of any activities including, but not limited to, excavation which could cause the removal, damage, and/or disturbance of the soil located in the lagoons without the prior development and implementation of a Soil Management Plan, as described in paragraph C (ii) below.

C. Former landfill area east of the Tail Race, Subarea A and former wastewater treatment lagoons west of the Tail Race, Subarea B

i) The Property Owner will be solely responsible for compliance with this Notice of Activity and Use Limitation and the restrictions imposed herein.

ii) Prior to the performance of any non-emergency intrusive subsurface activities within the AUL area including, but not limited to, excavation which may damage the structural integrity of the protective barrier layer in Subarea A, a written Health and Safety Plan and a written Soil Management Plan must be implemented in accordance with the following guidelines:

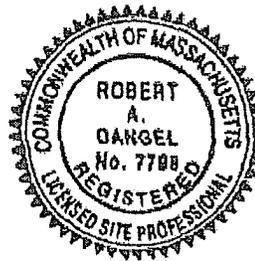
(a) The Health and Safety Plan must be prepared by a Certified Industrial Hygienist or other qualified professional familiar with worker health and safety procedures and requirements. The level of personal protection and engineering controls, dust mitigation measures and perimeter monitoring needed to prevent exposures to contaminated soils at depths beneath the protective barrier layer must be specified.

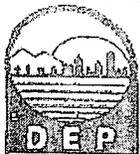
(b) The Soil Management Plan should be prepared by an LSP and must describe soil excavation, handling, storage, transport and disposal procedures, and must include a description of the engineering controls and air monitoring procedures needed to protect off-site receptors from exposures to fugitive dust and particulates and exposures to contaminated soil via dermal contact.

(c) On-site workers must be informed of the presence of contaminated soil and also informed of the requirements of the Health and Safety Plan and the Soil Management Plan. Copies of both plans must be available on-site during the course of any work which may disturb the protective barrier layer and/or the soil beneath it in the AUL area.

  
Robert A. Dangel, Licensed Site Professional

August 17, 2001  
Date





Massachusetts Department of Environmental Protection  
Bureau of Waste Site Cleanup

BWSC-114

ACTIVITY & USE LIMITATION (AUL) OPINION FORM

Pursuant to 310 CMR 40.1070 - 40.1084 (Subpart J)

Release Tracking  
Number

3 - 173

COMPLETE THIS FORM AND ATTACH AS AN EXHIBIT TO THE AUL DOCUMENT TO BE RECORDED AND/OR REGISTERED WITH THE REGISTRY OF DEEDS AND/OR LAND REGISTRATION OFFICE.

A. LOCATION OF DISPOSAL SITE AND PROPERTY SUBJECT TO AUL:

Disposal Site Name: Buckley & Mann, Inc.  
 Street: 17 Lawrence Street Location Aul: Bush Pond  
 City/Town: Norfolk ZIP Code: 02056-0000  
 Address of property subject to AUL, if different than above. Street: \_\_\_\_\_  
 City/Town: \_\_\_\_\_ ZIP Code: \_\_\_\_\_

B. THIS FORM IS BEING USED TO: (check one)

- Provide the LSP Opinion for a Notice of Activity and Use Limitation, pursuant to 310 CMR 40.1074 (complete all sections of this form).
- Provide the LSP Opinion for an Amended Notice of Activity and Use Limitation, pursuant to 310 CMR 40.1081(4) (complete all sections of this form).
- Provide the LSP Opinion for a Termination of a Notice of Activity and Use Limitation, pursuant to 310 CMR 40.1083(3) (complete all sections of this form).
- Provide the LSP Opinion for a Grant of Environmental Restriction, pursuant to 310 CMR 40.1071, (complete all sections of this form).
- Provide the LSP Opinion for an Amendment of Environmental Restriction, pursuant to 310 CMR 40.1081(3) (complete all sections of this form).
- Provide the LSP Opinion for a Release of Environmental Restriction, pursuant to 310 CMR 40.1083(2) (complete all sections of this form).

C. LSP OPINION:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this submittal, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and (iii) the provisions of 309 CMR 4.03(5), to the best of my knowledge, information and belief,

- > If Section B indicates that a Notice of Activity and Use Limitation is being registered and/or recorded, the Activity and Use Limitation that is the subject of this submittal (i) is being provided in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 310 CMR 40.1074(1)(b);
- > If Section B indicates that an Amended Notice of Activity and Use Limitation is being registered and/or recorded, the Activity and Use Limitation that is the subject of this submittal (i) is being provided in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 310 CMR 40.1080(1) and 40.1081(1);
- > If Section B indicates that a Termination of a Notice of Activity and Use Limitation is being registered and/or recorded, the Activity and Use Limitation that is the subject of this submittal (i) is being provided in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 310 CMR 40.1083(3)(a);
- > If Section B indicates that a Grant of Environmental Restriction is being registered and/or recorded, the Activity and Use Limitation that is the subject of this submittal (i) is being provided in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 310 CMR 40.1071(1)(b);
- > If Section B indicates that an Amendment to a Grant of Environmental Restriction is being registered and/or recorded, the Activity and Use Limitation that is the subject of this submittal (i) is being provided in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 310 CMR 40.1080(1) and 40.1081(1);
- > If Section B indicates that a Release of Grant of Environmental Restriction is being registered and/or recorded, the Activity and Use Limitation that is the subject of this submittal (i) is being provided in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 310 CMR 40.1083(3)(a).

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

- Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

SECTION C IS CONTINUED ON THE NEXT PAGE.



Massachusetts Department of Environmental Protection  
Bureau of Waste Site Cleanup

BWSC-114

ACTIVITY & USE LIMITATION (AUL) OPINION FORM

Release Tracking  
Number

3 - 0173

Pursuant to 310 CMR 40.1070 - 40.1084 (Subpart J)

C. LSP OPINION: (continued)

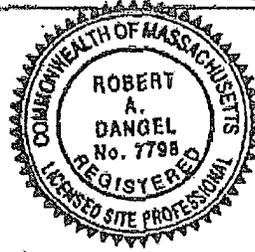
LSP Name: Robert A. Dangel LSP #: 7798 Stamp:

Telephone 617-452-6267 Ext.:

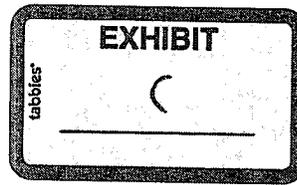
FAX: 617-452-8267

LSP Signature: *Robert A. Dangel*

Date: August 17, 2001



YOU MUST COMPLETE ALL RELEVANT SECTIONS OF THIS  
FORM OR DEP MAY FIND THE DOCUMENT TO BE INCOMPLETE.



**TO:** Thomas Nannicelli, Esq. (Nannicelli Law Office)  
**FROM:** Stephen Vetere, PE, LSP, LEP (Mabbett & Associates)  
**DATE:** February 7, 2019  
**SUBJECT:** Carbonizer Area Sampling Data  
Former Buckley & Mann  
17 Lawrence Street  
Norfolk, Massachusetts  
RTN 2-3000173

Mabbett & Associates, Inc. (Mabbett®) has prepared this memorandum to summarize sampling activities and analytical data results of environmental samples collected on January 18, 2019 from the Former Buckley & Mann Site (the Site) located at 17 Lawrence Street in Norfolk, Massachusetts. This objective of this memorandum is to evaluate the sampling data collected from the Carbonizer Area within the context of the Massachusetts Contingency Plan (MCP) and the Environmental Protection Agency's (EPA's) Toxic Substances Control Act (TSCA), and provide conclusions with respect to regulatory notifications made necessary by these findings.

#### MCP STATUS OF THE SITE

The Site is currently in Phase II of the Comprehensive Response Action process outlined in the MCP (310 CMR 40.0830) after retraction of the Class A-3 Response Action Outcome (RAO), now referred to as a Permanent Solution, on May 14, 2018. A Notice of Audit Findings/Notice of Noncompliance (NOAF/NON) received from the Massachusetts Department of Environmental Protection (MassDEP) on November 17, 2017 identified several violations that could not be remedied within the 180-day deadline provided by MassDEP, which compelled Buckley & Mann to terminate the Notice of Activity and Use Limitation (AUL), retract the Permanent Solution, submit a Tier Classification Extension request, and submit a Notice of Delay.

Comprehensive Response Actions are being performed under a Public Involvement Plan (PIP) initiated by members of the community through submittal of a petition on May 23, 2018, shortly after retraction of the Permanent Solution (the Site was designated as a PIP site on June 12, 2018). A Draft Phase II Scope of Work was submitted for public comment through the PIP process on September 4, 2018. Public comments were received on September 24, 2018 after the 20-day comment period expired. Responses to public comments were provided on January 11, 2019 along with a Final Phase II Scope of Work. Concurrent with the submittal of the Final Phase II Scope of Work on January 11, 2019, Mabbett provided MassDEP with a Notification of Initial Field Activities related to the implementation of Comprehensive Response Actions, as required by 310 CMR 40.0560(6). Phase II field investigations were initiated on January 18, 2019.

#### CARBONIZER AREA HISTORY

The January 18, 2019 sampling activities were performed exclusively within the former Carbonizer Area, which reportedly was in use from the early 1900s until the 1940s, and has been unused and abandoned since that time. The Carbonizer Area, as discussed herein, is comprised of the main Carbonizer Trench, an auxiliary trench running to the northeast of the main Carbonizer Trench, and the Carbonizer Lagoon. The carbonizer process was used to facilitate the separation of fasteners from wool products so that they could be reused/recycled. Wastewater generated by the carbonizer process was reportedly conveyed from the Carbonizer Building

through the Carbonizer Trench toward and into the Carbonizer Lagoon. The historical function of the auxiliary trench is not known.

The Carbonizer Lagoon was a “facultative pond” used to treat organic material contained in the wastewater stream. The facultative pond facilitated the settling of suspended solids, which provided a substrate for the colonization of aerobic, anaerobic, and facultative bacteria that were capable of stabilizing the organics so that they were converted into less harmful byproducts. Treated water that accumulated in the pond would seep into the groundwater below the lagoon, and solids would be left behind. The solids left behind after settling would accumulate and require periodic removal to provide sufficient space for the continued treatment of water. The review of historical drawings from the Site suggest that Carbonizer Lagoon solids were periodically dredged to the perimeter of the lagoon to build up the exterior berm of the lagoon or moved to the center of the lagoon area to form an “island”.

Historical sampling of environmental media in the Carbonizer Lagoon by Camp Dresser & McKee (CDM) identified chromium, lead, and total petroleum hydrocarbons (TPH) above the Method 1 human health risk assessment standards in effect at the time (Table 1). In 1986, CDM collected two soil samples from the Carbonizer Lagoon for laboratory analysis of Resource Conservation and Recovery Act (RCRA) 8 metals plus zinc. One of the samples contained lead and chromium above the Method 1 S-1/GW-1/GW-3 risk assessment standard. In 1992, CDM collected an additional soil sample from the Carbonizer Lagoon and a soil sample from the Carbonizer Trench. The sample collected from the Carbonizer Trench contained TPH above its Method 1 S-1/GW-1/GW-3 risk assessment standard. CDM did not collect any samples from the auxiliary trench.

Polychlorinated biphenyls (PCBs) were detected in the soil sample collected by CDM from the Carbonizer Lagoon in 1992, but at a concentration below the Method 1 risk assessment standard of 1.0 mg/kg. A September 15, 1992 memorandum from MassDEP documenting the waiver review for the Buckley & Mann Site recommended groundwater sampling for the presence of PCBs in MW-6 due to the detection of PCBs in soil (Attachment A), however Mabbett has not encountered evidence that this sampling was ever performed.

The approximate locations of CDM’s historical samples from the Carbonizer Area are shown on Figure 1. As depicted on this figure, the extent of investigation was limited to the southern portion of the lagoon. In the 2001 Class A-3 Response Action Outcome (RAO) Statement, CDM recommended no remediation in the Carbonizer Area since the exposure point concentration for lead, chromium, and TPH (calculated using the arithmetic mean of the detected concentrations) was below the Method 1 risk assessment standard in effect at the time, and the Carbonizer Area was excluded from the limits of the Activity and Use Limitation (AUL).

In 2018, after receipt of the NOAF/NON from MassDEP, additional sampling of the Carbonizer Area was performed to support a Stage I Environmental Risk Screening. The MassDEP NOAF/NON identified the failure to perform an environmental risk characterization as a deficiency of the 2001 Class A-3 RAO. In March and April 2018, a total of 26 samples were collected from the Carbonizer Lagoon and 14 samples were collected from the Carbonizer Trench. Each sample was analyzed for the presence of MCP 14 metals. A subset of these samples were also analyzed for the presence of extractable petroleum hydrocarbons (EPH) and polycyclic aromatic hydrocarbons (PAHs), and approximately half of these samples were speciated to determine the fraction of chromium that was present in the environment as hexavalent chromium. The analytical results of these samples indicated that antimony, cadmium, chromium, lead, zinc, and C11-C22 aromatics were present in at least one sample above Method 1 S-1/GW-1/GW-3 risk assessment standards.

### **JANUARY 18, 2019 SAMPLING ACTIVITIES**

The objectives of the January 18, 2019 investigations were to obtain additional data to delineate the horizontal extent of known metals, EPH, and PAH contamination in the Carbonizer Area; to verify the absence of volatile

organic compounds (VOCs) in environmental media; to collect data that will assist with the evaluation of ecological risks; and to verify the absence of PCBs above MCP reportable concentrations. Twelve soil and sediment samples were collected from a depth of 0- to 1-foot below ground surface and submitted for laboratory analysis of MCP metals (minus mercury) and hexavalent chromium. A subset of these samples was also submitted for laboratory analysis of EPH, PAHs, VOCs, PCBs, total organic carbon (TOC), oxidation-reduction potential (ORP), and pH. Samples were delivered via courier to ConTest Analytical Laboratory in East Longmeadow, Massachusetts on January 18, 2019. Sample log sheets for each of these shallow soil borings are provided in Attachment B.

### **INTERPRETATION OF ANALYTICAL RESULTS**

A summary of analytical results for the 12 samples (and one field duplicate sample) is provided in Table 2. Sample locations are shown on Figure 2. Laboratory data reports are provided in Attachment C. As shown, the detected concentration of antimony, arsenic, chromium, lead, and zinc in at least one sample exceeded the Reportable Concentration for Category S-1 Soil (RCS-1), which is applicable to the Site because it is located within a Zone II for a public water supply. The concentration of C19-C36 aliphatics and PCBs (Aroclor 1268) detected in sample CLSS-13 exceeded RCS-1 soil standards. The PCB Aroclor 1268 was also detected above RCS-1 in the soil samples collected from CLSS-14, CLSS-15, CLSS-18, CLSS-19, CLSS-20, and CLSS-21. There were no VOCs or PAHs detected above RCS-1 in any of the samples.

The detection of metals and EPH above RCS-1 is consistent with historical data collected from the Carbonizer Area. The metals present and concentration levels reported are generally consistent with those detected during the 2018 investigations. The absence of VOCs and PAHs in these samples provides further evidence that these constituents do not likely pose significant risk from exposure to environmental media in the Carbonizer Area.

However, the concentration of PCBs detected in sample CLSS-13 (310 mg/kg) is much higher than previously known, represents a potential Imminent Hazard condition under the MCP, and warrants notification of EPA under TSCA. CLSS-13 was a sample of discarded textile scraps that was collected from the northern berm of the Carbonizer Lagoon, adjacent to the Mill River. This textile scrap material was observed by Mabbett personnel throughout this berm and in other portions of the lagoon. Mabbett submitted a sample of this textile material for laboratory analysis to determine its composition and evaluate whether it was a hazardous material. The extent of this material is not known at this time, but it should be noted that several other areas of discarded textile material were noted within the lagoon during sampling activities.

After obtaining the analytical results for CLSS-13, Mabbett took several steps to verify the accuracy of the measurement. Mabbett requested that Con-Test reevaluate the calculations and interpretations made by the laboratory analyst to quantify the concentration of PCBs, and re-analyze the sample for the presence of PCBs utilizing the TSCA-approved analytical procedure (Soxhlet extraction). These measures were taken to ensure that the measurement was not a result of human error and that it is reproducible in the laboratory setting. The re-extraction and re-analysis of this sample resulted in the measurement of 220 mg/kg of Aroclor 1268, confirming the original measurement and verifying the elevated PCB content of the textile material.

### **MCP REPORTING CONDITIONS AND IMMINENT HAZARD EVALUATION**

The concentrations of metals and EPH detected above RCS-1 are consistent with historical observations and known conditions, therefore they do not represent a new reporting condition. However, the concentrations of PCBs detected in soil samples collected from the Carbonizer Area exceed RCS-1 and represent a new 120-day reporting condition. The release of PCBs to soil must be reported to MassDEP by the property owner within 120 days of obtaining knowledge of this condition (310 CMR 40.0315[1]).

The concentrations of PCBs, metals, and EPH detected in CLSS-13, considering the location and depth of the

sample, may represent a potential Imminent Hazard condition subject to a 2-hour notification to MassDEP. To assess whether elevated concentrations of soil constituents, particularly PCBs, actually pose an Imminent Hazard, Mabbett performed a human health imminent hazard evaluation (IHE) consistent with 310 CMR 40.0950 of the MCP. According to the MCP, the focus of an IHE is on actual or likely exposures to human and environmental receptors under current site conditions and uses for an appropriate short period of time (typically 5 years), applying soil constituent concentrations present at the ground surface or within 12 inches of the ground surface. The IHE calculations assess exposure to the maximum detected concentration of each constituent that exceeded its reportable concentration, as shown on Table 2.

The IHE focused on a trespasser scenario, which is the only “actual or likely” exposure scenario under current site conditions. Trespassers are assumed exposed to soil for 4 hours per day, 60 days per year for one year (condensed over a 30-week period) or for a 5-year exposure period. The receptor is assumed to be exposed through soil ingestion, soil dermal contact, and inhalation of soil particles entrained in air. Because exposure is outdoors and there are no structures in the subject area, potential volatilization pathways (applicable to PCBs only) were not assessed.

Both carcinogenic and non-carcinogenic endpoints were assessed, as appropriate for the chemical. Toxicity values adopted by MassDEP were applied, as were conventional risk characterization equations. The applied non-carcinogenic oral toxicity value for PCBs (RfD) is that for Aroclor 1254 and the non-carcinogenic inhalation toxicity value applied for PCBs is extrapolated from the Aroclor 1254 RfD. Toxicity values specifically for Aroclor 1268 (the type detected) do not exist. The results of the IHE calculations are shown in the following table.

**IMMINENT HAZARD EVALUATION RESULTS**

Receptor Group	Non-Carcinogenic Hazard Index	Percent of HI from PCBs	Excess Lifetime Cancer Risk	Percent of Risk from PCBs
Trespasser (11-12 years of age)	4.1	90%	3.0 x 10 <sup>-6</sup>	97%
Trespasser (11-16 years of age)	2.1	90%	1.4 x 10 <sup>-5</sup>	97%
Maximum Acceptable Value	1 or 10		1 x 10 <sup>-5</sup>	

The maximum acceptable non-carcinogenic hazard index (HI) for an imminent hazard is discussed in 310 CMR 40.0955(2)(c), which states:

*“The conditions at the disposal site pose an Imminent Hazard based upon the potential for non-cancer health effects if, for the oil and/or hazardous material evaluated and for each receptor, the non-cancer risk calculated is greater than a non-cancer risk limit of:*

- 1. A Hazard Index (or equivalent ratio of exposure) equal to **one** for oil or hazardous materials that have the potential to cause serious effects (including but not limited to lethal, developmental, or neurological effects) following short-term exposures, for example lead or cyanide; and,*
- 2. A Hazard Index equal to **ten** for all other oil or hazardous materials.”*

As described in the U.S. EPA’s Integrated Risk Information System (IRIS), the non-carcinogenic toxicity endpoint for PCBs’ oral RfD is based on impacts to the immune, dermal, and ocular effects [Ocular exudate, inflamed and prominent Meibomian glands, distorted growth of finger and toe nails; decreased antibody (IgG and IgM) response to sheep erythrocytes]. As described in IRIS, these endpoints do not appear to meet the bar of “serious effects (including but not limited to lethal, developmental, or neurological effects) following short-term exposures”, so it is judged that an HI of 10 is applicable for defining an imminent hazard for exposure to PCBs. This is consistent with MassDEP’s short forms. Lead, however, is assessed against a maximum acceptable HI of 1

for an Imminent Hazard; none of the total HIs for lead exceed an HI of 1. Therefore, the HIs calculated for all receptor/age groups do not indicate the presence of an Imminent Hazard.

The 1-year excess lifetime cancer risk for trespassers of ages 11-12 is below  $1 \times 10^{-5}$  and does not indicate the presence of an Imminent Hazard. However, the 5-year excess lifetime cancer risk for trespassers of ages 11-16 is  $1.4 \times 10^{-5}$ , which is above the maximum acceptable excess lifetime cancer risk of  $1 \times 10^{-5}$ . Therefore, the cancer risk calculated for trespassers of ages 11-16 indicates the potential presence of an Imminent Hazard.

#### EPA NOTIFICATION REQUIREMENTS

The textile material containing this concentration of PCBs meets the definition of PCB remediation waste established by EPA in 40 CFR 761.3. This regulation defines PCB remediation waste as:

*“...waste containing PCBs as a result of a spill, release, or other unauthorized disposal, at the following concentrations: Materials disposed of prior to April 18, 1978, that are currently at concentrations  $\geq 50$  ppm PCBs, regardless of the concentration of the original spill...”*

40 CFR 761.61 establishes the requirements for the cleanup and off-site disposal of PCB remediation waste. Cleanup of PCB remediation waste is typically performed under the regulatory authority and oversight of EPA. Although there are no specific time frames established for the notification of EPA, typically the owner of the property where the PCB remediation waste is located is required to notify EPA at least 30 days prior to commencing cleanup activities. In most cases, the PCB site characterization and cleanup plan must be reviewed and approved by EPA prior to performing cleanup. In EPA's New England region, the agency responsible for the oversight of PCB cleanups in Massachusetts, the time frame for the review and approval of cleanup and off-site disposal plans is typically 60 to 90 days.

#### CONCLUSIONS

Mabbett developed a Phase II Scope of Work to fulfill the requirements of the MCP and move the site toward achievement of a Permanent Solution. The Phase II Scope of Work included extensive investigation in the Carbonizer Area, which had not been adequately characterized by CDM in their 2001 Class A-3 RAO submittal. During review of historical data, Mabbett observed that low concentrations of PCBs had been detected in soil samples collected in 1992 from the Carbonizer Lagoon, but that the sampling performed did not include the entire extent of the lagoon. Therefore, Mabbett included analysis of environmental samples for the presence of PCBs to verify their absence.

The concentrations of PCBs detected in soil samples collected from the Carbonizer Area exceeded the applicable MCP reportable concentration (RCS-1). The detection of PCBs above reportable concentrations is a new release condition and requires that the property owner notify MassDEP of this release within 120 days of obtaining knowledge.

It is Mabbett's opinion that the concentration of PCBs detected in the sample of textile material collected from CLSS-13 represents a potential Imminent Hazard condition under the MCP. Assuming that the property owner reaches this same opinion, it is their obligation to report this condition to MassDEP within 2 hours of obtaining this knowledge (310 CMR 40.0170[1] and 40.0311[7]). MassDEP will assign a new Release Tracking Number (RTN) to the potential Imminent Hazard Condition, and the party reporting this release to MassDEP will be responsible to propose an Immediate Response Action (IRA) Plan to address the release. This RTN will need to be closed with a Permanent Solution or merged with the existing RTN. Should the property owner decide not to report this condition to MassDEP, please advise me as soon as possible so that I can take appropriate measures to comply with MCP requirements.

The detection of PCBs at a concentration greater than 50 mg/kg in the sample collected from CLSS-13 renders this material a TSCA PCB remediation waste, triggering notification and cleanup requirements under TSCA. Under this program, EPA mandates a very prescriptive approach to site characterization and cleanup that is typically more rigorous than the requirements of the MCP. As mentioned above, EPA must review and approve cleanup plans. A Completion Report is required at the conclusion of cleanup activities to document closure in accordance with TSCA requirements.

Additional subsurface investigation of the Carbonizer Lagoon was performed on February 1, 2019. The objective of this supplementary investigation was to determine the vertical extent of contamination in the lagoon and to install a new monitoring well to evaluate whether contaminants have migrated into groundwater. The analytical data collected during this investigation will be available for review on February 11, 2019. At that time, a better understanding of the vertical extent of contamination will be obtained, however any delineation of the complete horizontal and vertical extent of PCB contamination will require substantial additional investigation.

Please do not hesitate to contact me if you would like to discuss the information provided in this memo.

Very truly yours,

**MABBETT & ASSOCIATES, INC.**

By:



Stephen Vetere, PE, LSP, LEP  
Director, Site Assessment and Remediation  
[vetere@mabbett.com](mailto:vetere@mabbett.com)  
Tel. (781) 275-6050 ext. 312

Enclosures: Table 1 – 1986-1992 Soil Analytical Results  
Table 2 – January 18, 2019 Analytical Results  
  
Figure 1 – 1986-1992 Sampling Locations  
Figure 2 – January 18, 2019 Sampling Locations  
  
Attachment A – MassDEP September 15, 1992 Memo  
Attachment B – Solid Phase Sampling Logs  
Attachment C – Laboratory Data Reports

## **TABLES**

Table 1  
 1986-1992 Soil Analytical Results  
 Former Buckley and Mann Site  
 Norfolk, Massachusetts  
 RTN 2-3000173

MCP METHOD 1 STANDARDS	LOCATION		SS-5		SS-5A		Sample #2		Sample #3	
	S-1/GW-1	S-1/GW-3	May-86	May-86	May-86	May-86	May-92	May-92	May-92	May-92
RCRA 8 Metals (mg/kg)	Carbonizer Lagoon									
	Trench									
Arsenic	20	20	4.7	2.7	1.7	12				
Barium	1000	1000	NA	NA	46	140				
Cadmium	70	70	18	2.9	4.4	18				
Chromium	100	100	450	62	73	2 U				
Lead	200	200	670	88	130	74				
Mercury	20	20	NA	NA	0.86	0.46				
Selenium	400	400	0.97	0.44	1 U	1 U				
Silver	100	100	5.7	1 U	2 U	2 U				
Zinc	1000	1000	920	260	NA	NA				
<b>Total Petroleum Hydrocarbons (mg/kg)</b>										
TPH	1000	1000	NA	NA	860	1300				
<b>Polychlorinated Biphenyls (mg/kg)</b>										
Aroclor 1221	1	1	NA	NA	0.048 U	0.048 U				
Aroclor 1232	1	1	NA	NA	0.048 U	0.048 U				
Aroclor 1242/1016	1	1	NA	NA	0.048 U	0.048 U				
Aroclor 1248	1	1	NA	NA	0.048 U	0.048 U				
Aroclor 1254	1	1	NA	NA	0.29	0.048 U				
Aroclor 1260	1	1	NA	NA	0.39	0.048 U				

Notes:

1. mg/kg = milligrams per kilogram
2. bold type = detected constituents
3. shaded cells = MCP standard exceeded
4. U = not detected above laboratory limits
5. NA = not analyzed for this constituent





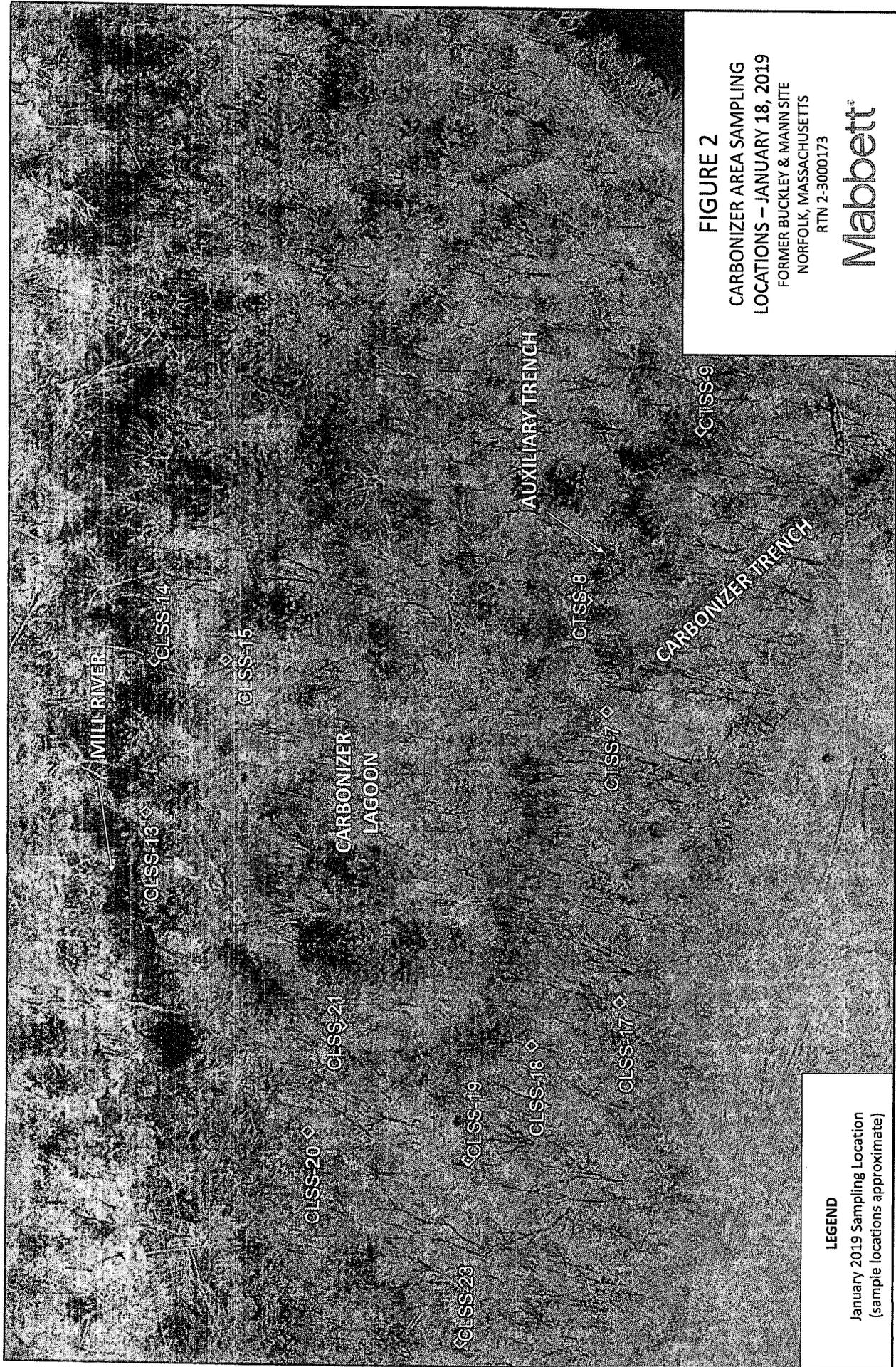
Table 2  
 Summary of January 18, 2019 Analytical Results  
 Former Buckley Mann  
 Norfolk, Massachusetts  
 RTN 2-3000173  
 Page 3 of 3

SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH	QC IDENTIFIER	RCS-1	UCL	CLASS-15-0001	CLASS-14-0001	CLASS-13-0001	CLASS-12-0001	CLASS-10-0001	CLASS-21-0001	CLASS-23-0001	CLASS-07-0003	CLASS-04-0003	CLASS-09-0001	
						1/18/2019	1/18/2019	1/18/2019	1/18/2019	1/18/2019	1/18/2019	1/18/2019	1/18/2019	1/18/2019	1/18/2019	
						0-1 foot										
PARAMETER																
PARAMETER																
PAHs by SW-846 8270D (mg/kg dry)																
FLUORENE	1000					ND (L.7)	ND (0.42)	ND (0.51)	ND (L.0)	ND (0.56)	NT	ND (0.99)	ND (0.98)	ND (L.9)	ND (L.4)	
INDENYL(1,2,3-CO)PYRENE	3000					0.31	0.10	ND (0.13)	ND (0.24)	ND (0.13)	NT	ND (0.23)	ND (0.23)	ND (0.45)	ND (0.57)	
2-METHYLNAPHTHALENE	0.7					ND (L.7)	ND (0.42)	ND (0.51)	ND (L.0)	ND (0.56)	NT	ND (L.0)	ND (0.98)	ND (L.9)	ND (L.4)	
NAPHTHALENE	1.0					ND (L.7)	ND (0.42)	ND (0.51)	ND (L.0)	ND (0.56)	NT	ND (L.0)	ND (0.98)	ND (L.9)	ND (L.4)	
PHENANTHRENE	10					0.36	0.095	ND (0.034)	0.12	0.051	NT	ND (0.065)	ND (0.065)	0.14	ND (0.16)	
PYRENE	1000					ND (L.7)	ND (0.42)	ND (0.51)	ND (L.0)	ND (0.56)	NT	ND (0.99)	ND (0.98)	ND (L.9)	ND (L.4)	
(Open Kohn Method (mg/kg))																
TOTAL ORGANIC CARBON						NT	NT	NT	NT	NT	210000	NT	80000	NT	NT	
5M2580 A (mv)						260	210	480	130	160	120	140	22	28	96	74
OXIDATION/REDUCTION POTENTIAL																
5M-846 5045C (pH Units)						3.7	4.2	4.5	5.0	5.4	6.6	5.7	7.2	6.8	6.7	6.8
PH																
5M 2546G (% Wt)						44.7	71.2	58.1	28.5	52.8	16.9	65.0	15.0	15.2	15.5	12.4
% Solids																

NOTES:  
 1. RCS-1 = Reportable Concentration for Category 5-1 Soil  
 2. UCL = Upper Concentration Limit  
 3. ND = Not detected above the lab reporting limits shown in parenthesis.  
 4. NT = Not tested.  
 5. " " = No RCS-1 Standard or UCL available  
 6. Shaded values exceed RCS-1.

## FIGURES





**FIGURE 2**  
**CARBONIZER AREA SAMPLING**  
**LOCATIONS – JANUARY 18, 2019**  
 FORMER BUCKLEY & MANN SITE  
 NORFOLK, MASSACHUSETTS  
 RTN 2-3000173  
**Mabbett®**

**LEGEND**  
 January 2019 Sampling Location  
 (sample locations approximate)