

# MEMO

To: John Field, Zoning Dept,  
Town of Weston MA

:CC George Pucci

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From:

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Date:

January 27, 2020

Arcadis Project No.:

30040054

Subject:

Arsenic and Lead Soil Sampling results -January 22, 2020 GZA  
MEMO 751 to 761 Boston Post Road, Prepared by GZA  
GeoEnvironmental Inc Norwood MA 02062

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Arcadis US (Arcadis) has reviewed the above reference document prepared for Mill Creek Residential of Norwood Massachusetts. Previous investigations had indicated a portion of the property was impacted by the use of pesticides particularly lead arsenate used in a former orchard. Upon review of the existing data Arcadis recommended additional sampling to further delineate the area impacted by former pesticide use. On December 20, 2019 GZA collected 15 additional soil samples from 0-6 inches below grade and analyzed them for arsenic and lead. The focus of the investigation was in two areas, 1) The area around several barns close to the former orchards where mixing and/or clean of pesticide application equipment may have been conducted and 2) around the perimeter of the former orchard where additional pesticides may have been sprayed or drifted during application.

For the barn area 6 soil samples were collected. All samples were below Massachusetts Department of Environmental Protection (MassDEP) standards RCS-1 for lead and arsenic except Barn-2 which has a lead concentration of 1,160 mg/kg which exceeds the RCS-1 standard of 200 mg/kg. Further analysis of this sample identified paint chips presumed to be lead containing present in the soil. GZA cited 310 CMR 40:0317(8) which exempts notification to MassDEP of "release of hazardous materials by residues in the environment ...emanating from a point of original application of the lead-based paint"

For the orchard perimeter soil samples all 15 were below the RCS1 standards for arsenic and

lead except sample East A-1, which had an arsenic concentration of 35.1mg/kg and exceeds the RCS-1 standard of 20mg/kg. As result of this exceedance a second sample was collected approximately 50 feet away at East B-1. This soil sample was also analyzed for lead and arsenic and found to be below standards.

The additional sampling indicated the arsenic and lead pesticides are primarily found in the orchard area. The presence of lead paint in the soil near the barn although exempt from notification to MassDEP will need to be properly managed to prevent future exposure to residents. The source of the lead paint was not indicated. The source of the lead paint should be verified. This will involve testing paint on the existing structures. In addition, the concentration of lead associated with sample Barn -2 may require that soil with lead paint be handled as hazardous waste. In any event, a TCLP test should be run on Barn-2 soil sample to determine if it meets the characteristics of hazardous waste,

### **Recommendations and Opinion**

The pesticide exemption mentioned in the previous reports appears to apply to the lead and arsenic pesticides and the recent lead concentration near the Barn may also be eligible for the exemption as lead paint as stated in the most recent report.

Additional testing is needed to determine the extent of lead paint in the soil and its origin. This should include lead paint samples on structures, lead samples in soil and TCLP testing.

If the developer choses to manage the lead and arsenic outside the MassDEP regulations as allowed; the potential risk to future residents to these compounds by exposure will need to be addressed.

Previous discussions with GZA indicated the manner in which the risk from these compounds was going to be managed had not been developed. A remediation plan to reduce the risk associated with these compounds should be submitted for review. Depending on the option chosen additional supporting information will be needed. Removal of the lead and arsenic soil and lead paint containing soil is the simplest most straight forward option.

The following documents should be submitted for review.

A remediation plan detailing the proposed development in the impacted areas. The plan should include but not limited to the following:

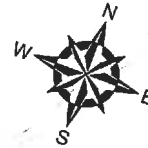
- Volume of and area of soil to be removed.
- Confirmatory sampling plan
- Schedule and sequencing of work
- Remedial Objectives.

In addition, as previously stated dust control and sequencing the work is crucial to completing this project successful.

- A Soil Management Plan which will include but not limited to the following:
  1. A dust control plan requiring real time monitoring during all soil disturbance both in the impacted soil area and outside the impacted area.
  2. A Health and Safety plan prepared by a Certified Industrial Hygienist
  3. An excavation plan for the movement and placement or removal of all impacted soil
  4. Surveyed plan of the impacted soil
  5. Engineering controls to prevent off tracking of impacted soil.
  6. A Surveyed plan showing all areas where impacted soil will be capped with a barrier. If that option is chosen.
  
- Once the impacted soil has been removed or placed under a barrier a risk assessment for the remaining impacted soil following the MCP risk assessment protocol should be prepared.
  
- In the event the developer elects to leave concentrations of lead and arsenic that require restrictions, a notification of the site conditions should be made to all tenants for the property. Depending on the level of arsenic and lead remaining on site a best practice for reducing exposure should be made available to occupants.
  
- Additional plans that need to be developed for construction include:
  - Traffic Plan and schedule-for total volume of soil to be removed and number of trucks per day and traffic route.
  - Demolition Hazardous Material Survey/

## Attachments

GZA Figure SK-1 dated January 22, 2020



2,693,022± SQ. FT.  
61.82± ACRES

RECORD LOCATION OF STREAM

RECORD LOCATION OF STREAM



APPROXIMATE AREA OF ORCHARD

19 ARSENIC CONCENTRATION 0-6"  
100 LEAD CONCENTRATION 0-6"

---●--- APPROXIMATE SAMPLING TRANSECT AND  
SAMPLE LOCATION, DECEMBER 20 AND 26, 2019

■ INDICATES TEST PIT PERFORMED BY W.C. ROWE OF  
WESTON, MA ON APRIL 22, 2019 AND OBSERVED BY GZA  
PERSONNEL

○ TP-3  
○ NRG-1 APPROXIMATE LOCATION OF SOIL SAMPLES COLLECTED BY  
NORFOLK RAM GROUP LLC ON OCTOBER 2, 2013 (NOTE 3)

**GENERAL NOTES:**

1. BASE MAP DEVELOPED FROM ELECTRONIC DRAWING FILE "19040 -GRADING & DRAINAGE PLAN.DWG" PROVIDED BY HOWARD STEIN HUDSON, ENTITLED: "GRADING AND DRAINAGE PLAN", SHEET C3.00 AND TRANSMITTED TO GZA ON OCTOBER 11, 2019. GZA DID NOT PERFORM SURVEY TO CONFIRM THE ACCURACY OF THE FEATURES SHOWN IN THE PLAN PROVIDED.
2. THE LOCATIONS AND ELEVATION FEATURES OF TP-3 SHOWN WERE DETERMINED BY SURVEY BY FELDMAN SURVEYORS. THE LOCATIONS OF THE REST OF THE TEST PITS SHOWN (TP-4 TO TP-6) WERE DETERMINED BY LINE OF SIGHT AND/OR TAPED MEASUREMENTS AND SHOULD ONLY BE CONSIDERED ACCURATE TO THE DEGREE IMPLIED BY THE METHOD USED.
3. NORFOLK RAM GROUP LLC SAMPLE LOCATIONS APPROXIMATED BASED ON FIGURES PROVIDED BY NORFOLK RAM GROUP'S LIMITED SUBSURFACE INVESTIGATION REPORT, DATED NOVEMBER 22, 2013, AND SHOULD ONLY BE CONSIDERED ACCURATE TO THE DEGREE IMPLIED BY THE METHOD USED.



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<b>PROPOSED DEVELOPMENT - MODERA WESTON</b> 751-761 BOSTON POST ROAD WESTON, MASSACHUSETTS			
<b>DECEMBER 2019 LIMITED ENVIRONMENTAL SAMPLING SKETCH WITH HISTORIC SAMPLES AND PROPOSED FEATURES</b>			
PREPARED BY:	GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: WESTON BPR LLC
PROJ MGR:	MJO	REVIEWED BY: DEL	CHECKED BY: DEL
DESIGNED BY:	MJO	DRAWN BY: MJO/DEL	SCALE: 1" = 60 FEET
DATE:	01-22-2020	PROJECT NO: 01.0174087.10	REVISION NO.
			<b>SK-1</b>

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