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13 July 2015
File No. 40814-004

U. S. Environmental Protection Agency
5 Post Office Square, Suite 100
Boston, Massachusetts 02109

Attention: Ms. Ruthann Sherman
Senior Enforcement Counsel

Subject: Public Water Supply Connections and Supply Well Decommissioning
14, 18, and 20 Charleston Avenue
10 and 12 Boston Avenue
Londonderry, New Hampshire

Ladies and Gentlemen:

Haley & Aldrich, Inc. (Haley & Aldrich), on behalf of the Cannons Sites Group, has prepared this proposal to connect the private properties located at 14, 18, and 20 Charleston Avenue and 10 and 12 Boston Avenue in Londonderry, New Hampshire, to public water and initiate supply well decommissioning and characterization. This proposal is being submitted in response to your e-mail dated 8 July 2015.

The Cannons Sites Group has voluntarily decided to perform the work described at the 2 July 2015 meeting with the U. S. Environmental Protection Agency (EPA) and the New Hampshire Department of Environmental Services (NHDES) and further described below. While we do not believe that agency approval for this work is required, we acknowledge, as requested, that the work will be performed in conformity with the Cannons Engineering Corporation Consent Decree and will be subject to all of the terms of the Consent Decree, including but not limited to approval of work provisions, access, and oversight reimbursement provisions. Although we would certainly hope and expect to work cooperatively with EPA going forward, we do need to note that this offer and agreement is limited to the work described in this letter. The Cannons Sites Group members reserve all of their rights, including without limitation the right to invoke the dispute resolution provisions of the Consent Decree, with respect to any additional work that EPA may identify in an Explanation of Significant Differences or elsewhere.

Below are the seven items requested by EPA and our response to each item. Our responses are as complete as possible within the 7-day response time required by EPA. The schedule of each activity will need to be updated based upon the availability of contractors to perform the work.

1. *A summary of the work to be performed.*

The Cannons Sites Group will, in summary, perform the following activities:

- A. Meet with the owners of the five properties to arrange for connection of each property to public water provided by the Pennichuck Corporation (Pennichuck). These meetings will include discussions of access, schedule, disconnection of the existing private supply wells, and maintaining the wells for further investigations and groundwater sampling.
- B. Arrange for contractors (Pennichuck, excavators, plumbers, electricians, utility contractors, etc., as needed) and permits necessary to complete the connection of private properties to the Pennichuck water supply line consistent with routine water supply connection practices.
- C. Arrange for contractors to remove the pumps and electrical connections from the existing private water supply wells and secure each well with locking mechanisms.
- D. Arrange for a contractor to perform a well inspection of the type recommended by the NHDES in advance of water line installation work and well decommissioning. (http://des.nh.gov/organization/divisions/water/dwgb/well_testing/wells.htm)
- E. Arrange for contractors to perform additional downhole geophysical investigations (detailed below).
- F. Sample the private water supply wells of the properties located at 8 and 22 Charleston Avenue and 5, 6, and 8 Boston Avenue three- and six-months after the connections have been completed at the 14, 18, and 20 Charleston Avenue and 10 and 12 Boston Avenue properties. Sampling is detailed below.

2. *Proposal and schedule for contacting the homeowners and requesting access for these water connections;*

Ian Phillips of Haley & Aldrich will contact the owners of each of the properties located at 14, 18, and 20 Charleston Avenue and 10 and 12 Boston Avenue. Contact will be made initially by telephone and then in person. Telephone contact will begin on Monday, 13 July, 2015. In-person visits will begin as soon as they can be arranged. The Cannons Sites Group would appreciate it if EPA or DES could provide contact information for each property owner. In addition, the owners will be more likely to cooperate if either the EPA or NHDES participates with Haley & Aldrich in contacting the owners.

The objectives of the meetings with the owners will be to secure permission to: connect each property to public water; disconnect the existing private wells from private use; and access the disconnected wells to support the well inspection, groundwater sampling and future bedrock investigations.

3. *Proposal and schedule for contracting with Pennichuck for the work;*

Initial contact with Pennichuck has been made already to determine schedule and available connection services. When additional information is known about the connection schedule and scope of services to be provided by Pennichuck, Haley & Aldrich will inform EPA and NHDES. It is our intent to complete the connections to public water as expeditiously as possible.

4. *Proposal and schedule for obtaining a road opening permit with the Town, if necessary;*

Contact with the town of Londonderry with regards to road openings will be made following discussions with Pennichuck. Pennichuck typically obtains this permit. When additional information is known about the schedule for obtaining the road opening permit (or other required permits) from the town of Londonderry, Haley & Aldrich will inform EPA and NHDES.

The Cannons Sites Group assumes that, if requested, EPA and NHDES will support Haley & Aldrich in obtaining governmental approvals regarding the water supply connections.

5. *Proposal and schedule for pulling of the pumps from these five residential wells and performing geophysical logging of the wells for bedrock fracture information;*

At each property, the work will be performed in the following order: (1) perform a well inspection in accordance with NHDES recommendations; (2) connect the residence to public water; (3) decommission the water supply well; and (4) complete downhole geophysics.

Haley & Aldrich has contacted water well drillers in New Hampshire to obtain the procedure and schedule for the removal of the pumps and the disconnection of electrical service from each of the private water supply wells. The water well driller selected will also provide the locking mechanism for each of the private wells. When additional information is known about the procedures and schedule for disconnecting the private water supply wells, Haley & Aldrich will inform EPA and NHDES. Disconnection will not occur until after the private properties have been connected to public water.

Little is known about the construction or condition of the private water supply wells located at 14, 18, and 20 Charleston Avenue and 10 and 12 Boston Avenue. Based on information available at the Londonderry Town offices, well permit applications were submitted and approved for the three Charleston Ave properties, but information was not available for the two Boston Avenue properties. The following information was available on the well permits:

<u>Address</u>	<u>Permit No</u>	<u>Permit Date</u>	<u>Well Depth (ft bgs)</u>	<u>Depth to Water (ft bgs)</u>	<u>Yield</u>
14 Charleston	25-82	May 1982	245	20	3-4 gpm
14 Charleston	58-84	April 1984	495	35	6 gpm for 0.5 hr
18 Charleston	24-82	May 1982	100	20	20 gpm
20 Charleston	85-80	Nov 1980	260 or 360	Not listed	5 gpm

Before constructing each public water supply line and disconnecting each private supply well, Haley & Aldrich and the contractor will perform a well inspection as described by NHDES. The inspection will include physical measurements such as the overall well depth, depth of the pump, and depth to groundwater and the collection of samples for water quality testing including 1, 4-dioxane. Sample locations for water quality testing will be prior to any water treatment systems.

Haley & Aldrich will contract with a geophysical consulting firm to perform down-hole geophysics in a manner consistent with the bedrock down-hole geophysical work performed in 2014 at the Tinkham's Garage site. The geophysical investigation will include:

- i. Poly-electric probe measuring normal formation resistivity, single-point resistance, spontaneous potential, fluid temperature, fluid resistivity, and natural gamma, to identify changes in rock type and potential fractures or joints in the borehole sidewalls;
- ii. Caliper probe to measure borehole diameter (zones of greater diameter may reflect preferential erosion along fracture zones);
- iii. Acoustic televiewer (ATV) probe to identify depth, strike azimuth, and dip orientation and angle of fractures; and
- iv. Heat-pulse flowmeter (HPFM) probe to identify vertical flow within the borehole, and depths of groundwater inflow and outflow under ambient and stressed (pumping) conditions.

In order to allow any sediment that may be stirred up in the private wells during pump removal to settle, the geophysical work will be completed one week after the pumps and wiring have been removed from the private wells.

6. *Proposal and schedule for leaving the former residential wells in place with locking mechanisms to allow future use of these wells for bedrock investigations and/or monitoring of groundwater; and*

As discussed in items (2) and (5) above, the private wells will be locked and maintained to support future bedrock investigations and/or monitoring of groundwater. It is premature to provide additional proposals and schedule at this time.

7. *Proposal and schedule for continued monitoring of the remaining residential wells in the impacted area.*

Currently the impacted area is limited to the five identified wells. However, based on proximity, the private water supply wells at the properties located at 8 and 22 Charleston Avenue and 5, 6, and 8 Boston Avenue will be sampled three- and six-months after the connections have been completed at the 14, 18, and 20 Charleston Avenue and 10 and 12 Boston Avenue properties. The tap water at the properties located at 8 and 22 Charleston Avenue and 5, 6, and 8 Boston Avenue will be sampled and tested for water quality parameters including 1, 4-dioxane. Sample locations for water quality testing will be prior to any water treatment systems. The need for

additional sampling of these private water supply wells will be considered as part of investigation scopes developed in the future.

Sample collection is subject to access from the property owners. Haley & Aldrich will make reasonable efforts to obtain access and the samples. The Cannons Sites Group assumes that, if requested, EPA and NHDES will support Haley & Aldrich in obtaining access to these private wells.

We have attempted to be responsive to EPA's 8 July 2015 requests. However, many of the details with regards to procedures and schedule cannot be ascertained until discussions with the owners and the contractors have begun. Regardless, this proactive, voluntary work, including water supply connection construction and well inspection, involves routine activities that should not require significant review. The Group appreciates both the EPA's and the NHDES's support to implement these tasks as soon as practical.

Sincerely yours,
HALEY & ALDRICH, INC.



Ian M. Phillips, LSP
Vice President

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