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April 18, 2016

Maryland Department of the Environment
Oil Control Program
1800 Washington Blvd.
Baltimore, MD 21230-1708

Attn: Mr. Andrew Miller
Remediation Division Chief

Re: Chester River Hospital Center
Request for Subsurface Investigation Work Plan
Project No: 14004.00

Dear Mr. Miller:

As requested, this serves to satisfy the Maryland Department of the Environment (MDE's) March 23, 2016 letter and to provide the necessary "Subsurface Investigation Work Plan". To reconfirm, this is an amendment/add-on to the 2015 Action Plan, weekly summary reports, and the ongoing monthly and quarterly sampling and reporting. Pursuant to ongoing commitments associated with these existing plans and documents, the groundwater pump and treat system remains on and Chester River Hospital Center (CRHC) continues to work with MDE on the drafting of a settlement agreement and consent agreement that outlines CRHC's responsibilities with respect to continued investigation and remediation of the heating oil contamination at and from the site.

As confirmed in our March 30, 2016 letter, we agree that in previous meetings MDE discussed additional assessment activities in selected areas of the site for determining whether there was "significant residual contamination or free phase heating oil remaining at the site." The following; therefore, supplements the 2015 Remediation Action Plan and provides the specific scope of work for additional investigation which will allow MDE to better assess the effectiveness of the long-term pump and treat system which has been the focus of cleanup efforts for these many years.

Work Plan:

Using the MDE Site Map which identified approximate locations for six (6) new soil boring and monitoring wells, we have requested and received a proposal from Earth Data Incorporated. The purpose of this work is to complete soil stratification logging and soil sampling, and to facilitate vertical delineation of potential petroleum residuals. This will provide the information necessary for CRHC and the MDE to evaluate the possible residual extent of liquid phase hydrocarbons (LPH) and residual petroleum contamination in soils and groundwater. Earth Data's plan as submitted also provides for the conversion of these borings into permanent monitoring wells to facilitate continued monitoring at these locations.

In order to provide for this necessary work, Earth Data will:

1. Obtain all required drilling permits.
2. Coordinate existing underground utility location and marking with CRHC personnel.
3. Mobilize to the site with a Mobile B-61 truck-mounted drilling rig and support equipment.

4. Saw-cut the asphalt at each drilling location and hand-clear each location to a minimum depth of three feet (3') before starting any coring or drilling operations.
5. Collect continuously-cored soil samples at each of the six (6) locations to the total estimated depth for each new monitoring well as follows:
 - a. MW-51-- 65 feet
 - b. MW-52-- 55 feet
 - c. MW-53-- 56 feet
 - d. MW-54-- 51 feet
 - e. MW-55-- 48 feet
 - f. MW-56-- 46 feet
6. Describe and field-screen the soil borings as further detailed below.
7. Collect, label, and ship soil samples to the laboratory for analysis as further described below.
8. Upon completion of the soil boring, ream the hole using six and one quarter inch (6 ¼") I.D. hollow-stem augers to total depth.
9. Install a four inch (4") diameter monitoring well in each reamed hole to include:
 - a. Schedule forty (40) flush-thread PVC well casing
 - b. Twenty feet (20') of schedule forty (40) flush-thread PVC well screen.
 - c. Filter pack to five feet (5') above the top of the well screen.
 - d. Hole plug in the annular space from five feet (5') above the top of the well screen to ground surface.
10. Containerize drill cuttings for disposal by others as further described below.
11. Fully develop each well by means of a combination of active surging, pumping and purging as further described below.
12. Contain all water generated during the drilling operations for on-site disposal into the Town of Chestertown's sanitary sewer system. (Earth Data will obtain the necessary authorizations from the Town.)
13. Collect, label, and ship water samples to the laboratory for analysis as further described below.
14. Furnish and install a locking test plug and flush-mount protective casing at each new well.
15. Pour a concrete pad at each well to match the other existing monitoring wells at the site.
16. Demobilize from the site.
17. Provide H&B Solutions with a copy of all permit applications, permits, field reports, driller's logs, completion reports, and other relevant field data which will be used to provide the necessary reporting to the MDE of the completed work effort.

In conformance with the MDE's specific requirements in regards to the above referenced Work Plan, we have stipulated to all contractors identified to perform the work that they must adhere to the implementation plan and set of assumptions as identified below.

1. The work to survey the wells into the existing monitoring well network will be performed by Davis, Bowen & Friedel, Inc. (DBF). DBF will field locate the new wells and leave markers for Earth Data's use.
2. Earth Data will collect, label, and ship soil and water samples to Phase Separation Science. Tests to be performed will be those specified by MDE to include full-suite volatile organic compounds (VOCs), including fuel oxygenates and naphthalene, using EPA Method 8260 and for total petroleum hydrocarbons diesel range organics (TPH-DRO) using EPA Method 8015B. (Once this work has been completed, results assessed,

- and report provided to the MDE; these new wells will be added to the existing suite of wells onsite and become part of the monthly and quarterly sampling currently required.)
3. All driller's logs, field reports, well permit applications, completion reports, etc., will be provided to H&B Solutions. We will include this data as part of the report to be submitted to the MDE at the conclusion of the Work Plan.
 4. An Earth Data geologist will be present onsite to describe and field-screen the collection of continuous core samples at each site. Soil samples will be collected from ground surface to the proposed total depth for each well.
 5. All continuous soil samples will be collected using a discrete Macro-core sampling device. Small diameter hollow-stem augers can be advanced in conjunction with the macro-core sampling tool to permit the collection of continuous soil cores in loose or water-saturated soil zones.
 6. All samples will be screened visually and with a photo-ionization detector (PID) using consistent methodology to minimize volatilizing prior to screening with the PID.
 7. Soil samples for laboratory analysis will be collected in each boring at the soil/groundwater interface and from the location exhibiting the highest PID response. Samples collected for analysis will be field preserved in accordance with EPA Method 5035.
 8. Earth Data will transfer all drill cuttings into fifty-five (55) gallon drums. The drums will be sealed and BrightFields will assist with sampling, transport, and disposal of approximately thirty (30) fifty-five (55) gallon drums containing DRO impacting soil cuttings which will be generated during monitoring well and installation activities by Earth Data. Specifically:
 - a. BrightFields will mobilize to the Site to collect one (1) composite soil sample from the fifty-five (55) gallon drums containing soil cuttings. The composite soil sample will be submitted to Test America Laboratories located in Edison, New Jersey, for Toxicity Characteristics Leaching Procedure (TCLP) Metal, TCLP Volatile Organic Compounds (VOCs), and Polychlorinated Biphenyls (PCBs) analysis. Laboratory analysis is required by the disposal facility to evaluate whether the soil is classified as hazardous.
 - b. BrightFields will coordinate the waste removal, transport, and disposal of the fifty-five (55) gallon drums at an approved disposal facility.
 9. All water generated during the project (well development, additional pumping, decon water, etc.) will be contained in 500 gallon poly tanks to be provided by Earth Data and staged at the site. It is assumed that the Town of Chestertown will allow disposal of all water into their sanitary sewer system after being pumped through a portable granular activated carbon (GAC) unit, to be provided by Earth Data. (Being coordinated by Earth Data.) Off-site water disposal, if required, will be the responsibility of BrightFields.
 10. Earth Data will construct all monitoring wells in accordance with MDE's Maryland Environmental Assessment Technology (MEAT) for Leaking Underground Storage Tanks guidance document.
 11. The new wells will be developed utilizing active surging and additional pumping/purging as required. Wells will be developed until reasonably clear.
 12. The area around each well will be secured by CRHC (cones, marking tape, etc.) such that Earth Data personnel will have adequate working space for truck-mounted drilling rig and support equipment.
 13. Earth Data, BrightFields, and DBF will coordinate all on-site activities with H&B Solutions.
 14. If liquid-phase hydrocarbons (LPH) are detected, Earth Data will immediately notify H&B Solutions and the MDE-OCP as required. Within two (2) hours of discovery H&B

Solutions will call MDE at 410.537.3442 and report the findings. H&B Solutions will immediately develop the appropriate response and coordinate same with MDE.

15. All work will be performed in PPE Level D, and Earth Data will provide all required PPE for its personnel.
16. All wells will be constructed with four inch (4") diameter, Schedule forty (40) PVC, flush-thread well casing and screen.
17. Each well will be constructed with twenty feet (20') of well screen; ten feet (10') of well screen above and below the water table surface as measured in adjacent monitoring wells. A summary table to illustrate anticipated well construction details and basis for the design is included below.

New Well I.D.	Closest Existing Well I.D.	Historic High Water Level (ft.)	Historic Low Water Level (ft.)	Average Depth to Water (ft.)	March 2016 Depth to Water (ft.)	Proposed Well Total Depth (ft.)	Proposed Screen Interval (ft.)	Estimated Pumping Influence
MW-51	MW-5	49.18	55.05	52.12	50.73	65	40' to 60'	Low
MW-52	MW-42	36.68	43.21	39.95	39.36	55	30' to 50'	Low
MW-53	MW-43	37.44	43.64	40.54	41.09	56	31' to 51'	Low-Mod.
MW-54	MW-41	33.04	40.39	36.72	36.44	51	26' to 46'	Low
MW-55	MW-45	30.66	36.03	33.35	33.02	48	23' to 43'	Low
MW-56	MW-20	29.24	35.58	32.41	31.62	46	21' to 41'	Low

18. All monitoring wells will be completed with a flush-mount protective casing and concrete pad, similar to the other existing wells at the site.
19. The order in which the wells are drilled will be coordinated with the maintenance staff at CRHC in order to minimize impacts to traffic flow, pedestrian areas, and on-site parking.
20. Based on March, 2016 water level data provided by EBA Engineering, the approximate construction features of the six (6) wells will be as follows:

New Well I.D.	Closest Existing Well I.D.	March 2016 Water Level (ft.)	Proposed Total Depth (ft.)	Proposed Screen Interval (ft.)
MW-51	MW-5	50.73	65	40' to 60'
MW-52	MW-42	39.36	55	30' to 50'
MW-53	MW-43	41.09	56	31' to 51'
MW-54	MW-41	36.44	51	26' to 46'
MW-55	MW-45	33.02	48	23' to 43'
MW-56	MW-20	31.62	46	21' to 41'

21. Each well will be constructed with an approximate five foot (5') sump below the deepest set well screen to accept sediment accumulation during normal well operation and maintenance.
22. In consideration of the site logistical challenges associated with drilling MW-51 (closest existing well is MW-5) in the courtyard, MDE has indicated different drilling methods/techniques can be used. Earth Data proposes to continuously core and construct a two inch (2") diameter monitoring well at this location. All other wells will be four inch (4") diameter as originally specified.

To construct MW-51 Earth Data will:

- a. Coordinate site access requirements with H & B Solutions.
- b. Remove one eight foot (8') section of privacy fence located on the east side of the courtyard to facilitate rig access in coordination with CRHC staff.
- c. Coordinate with CRHC electricians/maintenance staff for the temporary relocation of certain electrical equipment installed on and in the vicinity of the privacy fence.
- d. Coordinate with a private utility locating company to mark the area in the vicinity of the proposed location for MW-51.
 - i. Note: This is a very important aspect of the work for overall project safety. There is a buried fuel tank and other underground utilities in the vicinity of the proposed location for MW-51 in the hospital courtyard.
- e. If required, trim selected tree branches in the courtyard as necessary to facilitate rig placement and operation.
 - i. Earth Data will consult with H&B Solutions and/or others as directed prior to trimming any tree branches.
- f. Mobilize to the site with a track-mounted combination direct-push/hollow stem auger rig and support equipment.
- g. Collect continuously-cored soil samples to a total depth of approximately sixty-five feet (65').
- h. Describe and field-screen the soil borings as previously detailed.
- i. Collect, label, and ship soil samples to the laboratory for analysis as previously described.
- j. Upon completion of the soil boring, ream the hole using four and one quarter inch (4 ¼") I.D. hollow-stem augers to total depth.
- k. Install a two inch (2") diameter monitoring well to include:
 - i. Schedule forty (40) flush-thread PVC well casing
 - ii. Twenty feet (20') of schedule forty (40) flush-thread PVC well screen.
 - iii. Filter pack to five feet (5') above the top of the well screen.
 - iv. Hole plug in the annular space from five feet (5') above the top of the well screen to ground surface.
- l. Containerize drill cuttings for disposal by others.
- m. Fully develop the well by means of a combination of active surging, pumping, and purging as previously described.
- n. With the Town's approval, contain all water generated for on-site disposal into the Town of Chestertown's sanitary sewer system as previously described.
- o. Collect, label, and ship water samples to the laboratory for analysis.
- p. Furnish and install a locking test plug and flush-mount protective casing.
- q. Pour a concrete pad.
- r. Demobilize the drilling rig from the courtyard area.
- s. Restore the site and privacy fence.
- t. Coordinate re-installation of the electrical equipment previously removed to facilitate mobilization.
- u. Provide H&B Solutions with a copy of all permit applications, permits, field reports, driller's logs, completion reports, and other relevant field data.

During construction (estimated two days) Earth Data proposes to leave its flatbed truck parked at the site, backed-up to the courtyard privacy fence. This will allow for timely

demobilization of equipment upon drilling completion. The fence gap will be marked with caution tape and "Do Not Enter" signage at night.

Implementation Schedule:

Task	Due Date
Obtain MDE approval of the Work Plan	May 2, 2016
CRHC Authorizes Contractors to Proceed	May 4, 2016
Earth Data Obtains MDE Drilling Permits	May 11, 2016
DBF Field Locates New Wells	May 11, 2016
Earth Data Completes Field Work/Drilling of New Wells	June 8, 2016
BrightFields Disposes of all Drilling Material	June 8, 2016
DBF Locates New Wells into Existing Network	June 13, 2016
Demobilization, Laboratory Testing, and Initiation of Summary Report	June 14, 2016
H&B to Submit Site Assessment Report to MDE	August 1, 2016

Monitoring and Reporting:

Consistent with your March 23, 2016 letter we will provide you with a Site Assessment Report no later than forty-five (45) days following the completion of all approved "Subsurface Investigation Work Plan" activities. However, we propose similar to what we did for the 2015 Action Plan, that weekly reports will be prepared which provide the status of the activities for the week. This will include the location and area where work is being conducted, activities completed, monitoring dates, sample results, and other pertinent information to the weeks efforts. These weekly reports will be used in turn to create the Site Assessment report referenced above, which will include a summary of findings and recommendations as well as next steps.

We look forward to your review and approval of the work plan so that we can initiate the scope outlined above and complete the effort consistent with the above referenced schedule.

Sincerely,

H&B Solutions, LLC

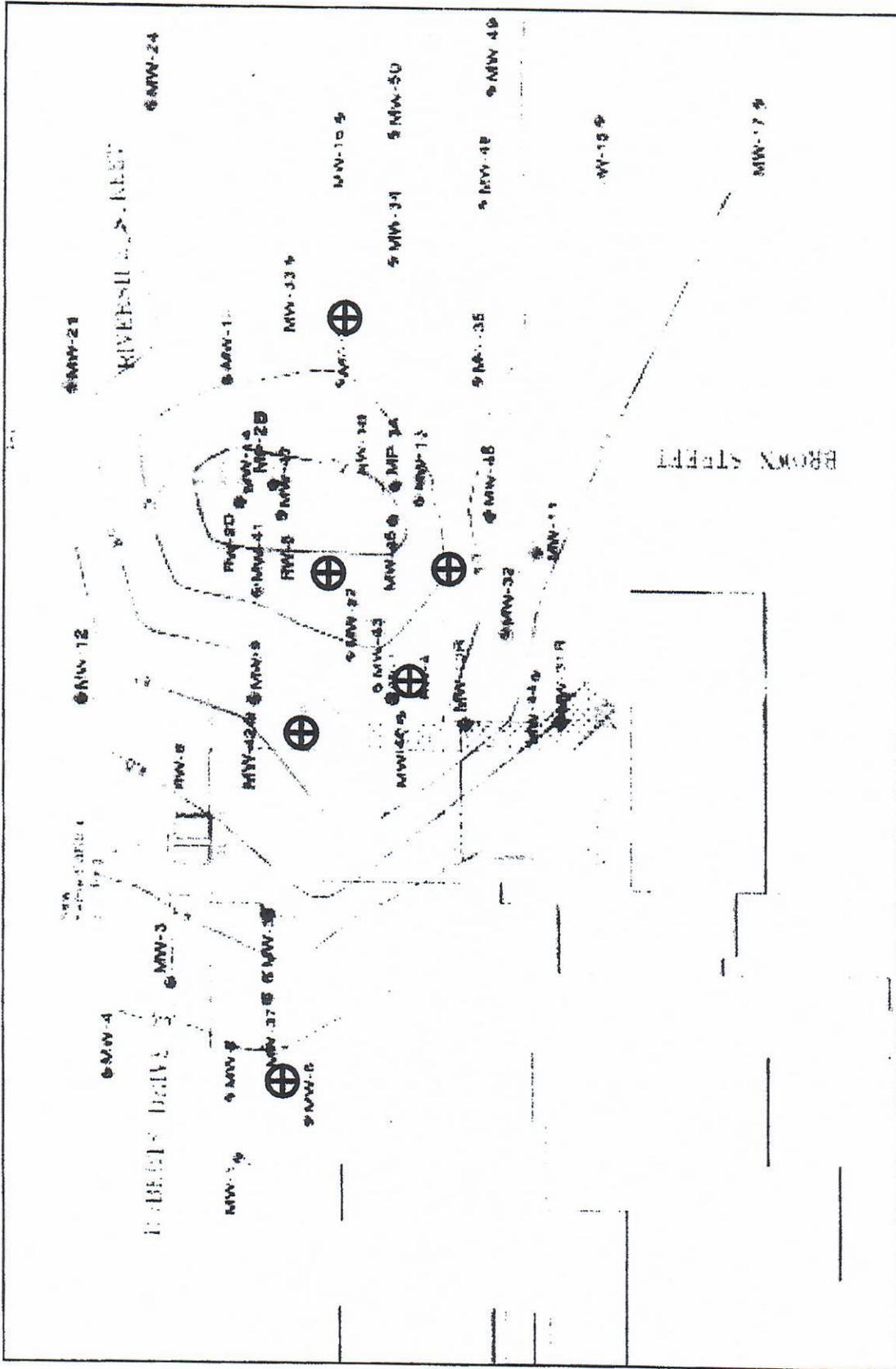


Dane S. Bauer
Member

Enclosure

Cc: Mayor Chris Cerino (Town of Chestertown) w/enclosure
Mr. Bill Ingersoll (Town of Chestertown) w/enclosure
Mr. Bob Sipes (Town of Chestertown) w/enclosure
Mr. Michael Forlini, Esq. (Funk & Bolton, PA) w/enclosure
Mr. John Beskid (Kent County Health Department) w/enclosure
Mr. James Sines (EBA Engineering, Inc.) w/enclosure
Mr. Michael Powell, Esq. (Gordon-Feinblatt, LLC) w/enclosure
Mr. Horacio Tablada (MDE) w/enclosure
Ms. Virginia Kearney (MDE) w/enclosure

Dr. Ching-Tzone Tien, Ph.D., PE (MDE) w/enclosure
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Ms. Hilary Miller (MDE) w/enclosure
Ms. Susan Bull (MDE) w/enclosure
Mr. Christopher Ralston (MDE) w/enclosure
Mr. Kenneth Kozel (SRH) w/enclosure



⊕ Approximate location of soil boring / monitoring well