



Maryland
Department of
the Environment

Larry Hogan
Governor

Boyd Rutherford
Lieutenant Governor

Ben Grumbles
Secretary

March 23, 2016

Mr. Kenneth D. Kozel
President and CEO
Shore Regional Health
219 South Washington Street
Easton MD 21601

RE: REQUEST FOR SUBSURFACE INVESTIGATION WORK PLAN
Case No. 1987-2534-KE
Chester River Hospital Center
100 Brown Street, Chestertown
Kent County, Maryland
Facility I.D. No. 3168

Dear Mr. Kozel:

The Maryland Department of the Environment's (the Department) Oil Control Program (OCP) has reviewed the case file including the *2015 Action Plan, Weekly Summary Report, March 10, 2016*. Based upon the completed activities and results, Shore Regional Health's (the Hospital) consultant recommended to suspend the surfactant injection and extraction events. The groundwater pump and treat system remains on and your consultant team is conducting monthly and quarterly monitoring of the site wells. Additionally, the Department and the Hospital are working cooperatively on drafting a settlement agreement and consent order to lay out the Hospital's responsibilities with respect to continued investigation and remediation of heating oil contamination at and from the site.

The Department previously discussed with your consultant that it was contemplating additional assessment activities in select areas of the site for the purpose of determining whether there was significant residual contamination or free phase heating oil remaining at the site. For this purpose, and to also better assess the effectiveness of the long term pump and treat remediation and the supplemental *2015 Remediation Action Plan*, the Department is requesting a work plan for additional investigation as described below.

1. **No later than April 22, 2016**, submit a detailed *Subsurface Investigation Work Plan* to evaluate the residual extent of liquid phase hydrocarbons (LPH) and residual petroleum contamination in soils and groundwater. The *Work Plan* must include the advancement of, at a minimum, six soil borings for the purpose of soil stratification logging and soil sampling, at intervals described below, to facilitate the vertical delineation of petroleum impacts. The borings must also be completed as permanent monitoring wells to facilitate continued monitoring of the locations. A map with approximate boring locations is attached. The *Work Plan* must provide a detailed schedule of field activities including dates and time frames for completing each phase of the proposed *Work Plan*.
2. To complete the vertical delineation of petroleum impacts, the soil borings, must be field screened continuously from ground surface to at least 10 feet below the top of the water table, both visually and with a photo-ionization detector (PID). If field screen results continue to reveal evidence of petroleum impacts at 10 feet below the water table, the boring must be extended until field

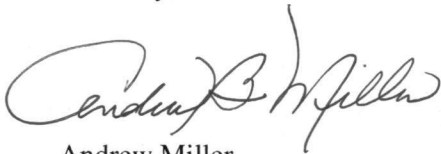
screening data indicate the absence of petroleum impacts. The water table surface will be determined by the measured depth to water in adjacent monitoring wells.

- a. All soil borings must be advanced utilizing a discrete sampler dual tube type system, or similar method, to permit the collection of continuous soil cores in loose or water saturated soil zones.
 - b. Field screening of the soil cores must be performed utilizing a consistent methodology that minimizes volatilization of soils prior to screening with a PID. The use of glass jars or sealable plastic bags to store a portion of the sample material for PID screening purposes is recommended.
 - c. Soil samples for laboratory analysis must be collected in each boring at the soil/groundwater interface and from the location exhibiting the highest PID response. If the highest PID response for a soil boring is observed at the soil/groundwater interface, only that sample will need to be submitted for that core.
 - d. All soil samples submitted for laboratory analysis must be collected and field preserved in accordance with EPA Method 5035.
3. The Department requires each boring to be completed as a permanent 4-inch diameter monitoring well for the collection of groundwater samples and continued monitoring.
- a. The wells must be installed and developed by a Maryland-licensed well driller and properly permitted.
 - b. The wells must be completed, at a minimum, with 10 feet of well screen above and below the water table surface, as measured in adjacent monitoring wells. Also, the wells must be constructed so that subsurface conditions can be adequately monitored during both pumping and non-pumping conditions. Department records indicate that the wells should be screened, on average, between approximately 20 and 50 feet below ground surface to achieve this. The *Subsurface Investigation Work Plan* must include a summary table to illustrate anticipated well construction details and the basis for the designs. At a minimum, the table must include the following information for each well location: historic high and low water depths in the nearest existing well(s); notation regarding the pumping influence from the groundwater remediation system in nearest well(s); and proposed screen intervals for each new well.
 - c. The wells must be constructed in accordance with the Department's Maryland Environmental Assessment Technology (MEAT) for Leaking Underground Storage Tanks guidance document.
 - d. All newly installed wells must be developed utilizing active surging of the wells in addition to pumping/purging, and the wells must be surveyed into the existing monitoring well network.
4. All soil and groundwater samples submitted for laboratory analysis must be analyzed for 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.
5. If measureable LPH are detected, report the presence to the OCP within two hours of discovery by calling 410-537-3442 during standard business hours, or 1-866-633-4686 after normal business hours. Reports should not be made via voice mail messages to the OCP case manager.

6. The Department will require a *Site Assessment Report* no later than 45 days following the completion of the approved *Subsurface Investigation Work Plan* activities.

If you have any questions, please contact the case manager Ms. Susan Bull, at 410-537-3499 (email: susan.bull@Maryland.gov), or me at 410-537-3389 (email: andrew.miller@maryland.gov).

Sincerely,

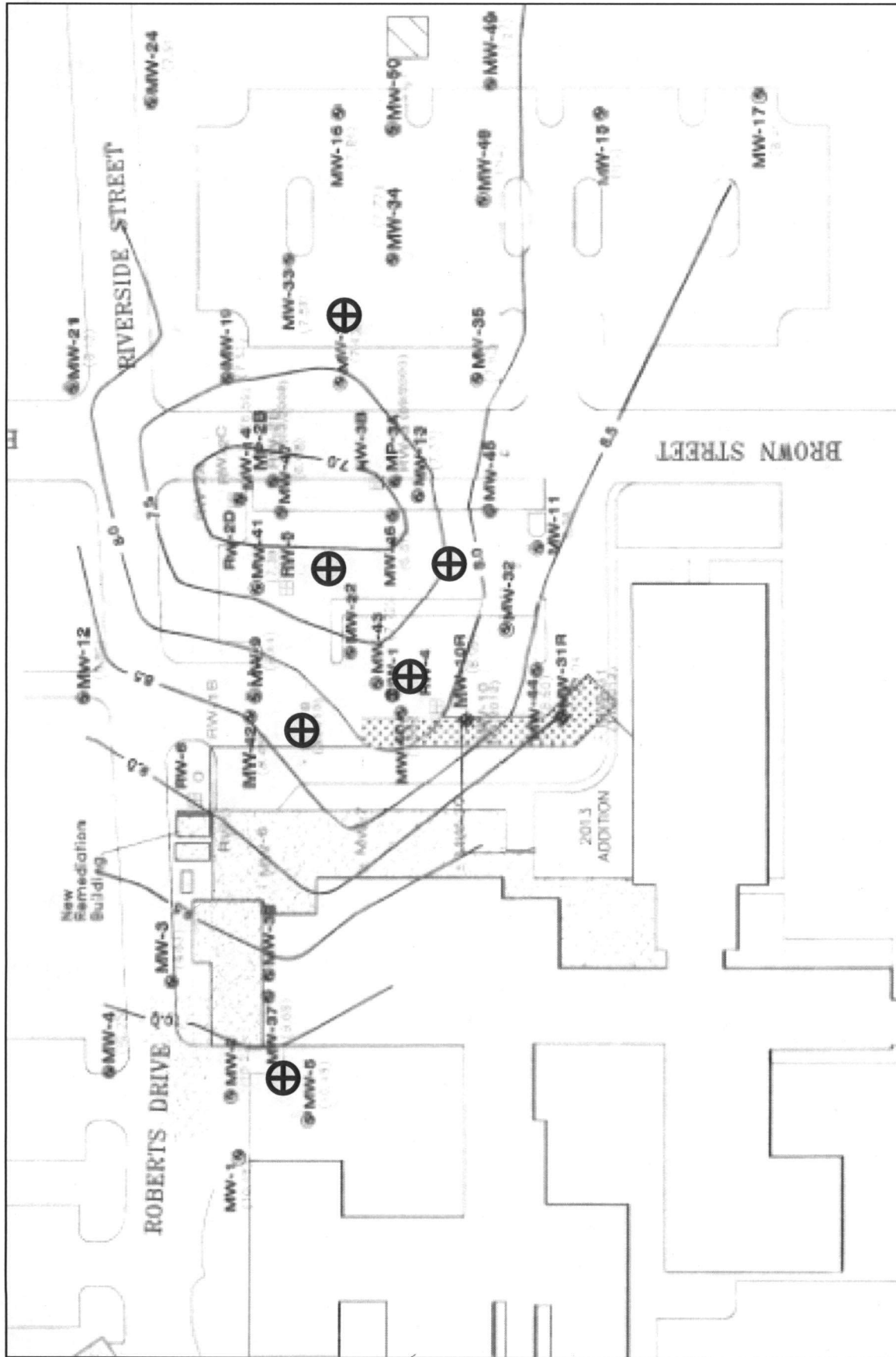


Andrew Miller
Remediation Division Chief
Oil Control Program

Enclosure – Well Location Map

cc: Mayor Chris Cerino (Town of Chestertown)
Mr. Bill Ingersoll (Town of Chestertown)
Mr. Bob Sipes (Town of Chestertown)
Mr. Michael Forlini, Esquire (Funk & Bolton, PA)
Mr. John Beskid (Kent County Health Dept.)
Mr. Dane Bauer (H&B Solutions, LLC)
Mr. James Sines (EBA Engineering, Inc.)
Mr. Michael Powell, Esquire (Gordon-Feinblatt, LLC)
Mr. Horacio Tablada
Ms. Virginia Kearney
Dr. Ching-Tzone Tien, Ph. D, P.E.
Mr. Michael Eisner
Mr. Saeid Kasraei
Mr. John Grace
Ms. Priscilla Carroll, Esquire
Ms. Hilary Miller
Mr. Andrew B. Miller
Ms. Susan Bull

SRB/srb



⊕ Approximate location of soil boring / monitoring well