



U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION II

Emergency and Remedial Response Division
Program Support Branch/Technical Support Section
290 Broadway, 18th Floor
New York, New York 10007-1866
212 -637-3666

MEMORANDUM

TO: Carol Stein, RPM

FROM: Robert M. Alvey, P.G.

DATE: January 16, 2014

RE: Status of Vertical Profile Boring Installation
Northrop/Grumman-Navy Bethpage

Based on our discussions last week, I contacted Brian Caldwell, Ensafe – the contractor for Navy, regarding a courtesy visit to the drilling locations where Vertical Profile Borings are being conducted as per the work plans submitted to NYSDEC. Brian provided the names and cell phone numbers for the field geologists and locations where the work was being done.

Overall, I was able to get to two active drill sites yesterday. VPB 142 was already complete, VPB 144 completed the boring just as I got there, and VPB 146 is making good progress. Extend my thanks to Brian Caldwell for the field contact numbers. Everyone was courteous and it was a good means of getting a handle of the current progress. There was also a brief consensus that the lithology is a more complex and heterogeneous than any of the textbooks! I have a small sample of the “clay” the actual material recovered from a split spoon sample from VPB 144 at 888-890 fbgs. Some other samples from split spoons were reported to exhibit “microlayers” and might be of interest.

On January 15, I visited the location for VPB 144 and met with Mike Zobel, the field leader at the rig. Delta Drilling has the contract for the current work and I am familiar with their experience. This location is in the parking lot associated with the Bethpage Business Park off



Hicksville Rd, technically called Sunbeam Avenue. Two other employees with Ensafé were also at the site. Based on the location within a “business park”, there would logically be no cause for complaints by residential neighbors.



The drilling and sampling at VPB 144 has been completed, and the driller was initiating pulling the drill rods. Final depth was 890 feet below ground surface (bgs). A geophysical gamma log was collected and the site field and sampling data is being processed to recommend screen intervals for the monitoring well installations. The geologists discussed initial encounter of Raritan Clay at roughly 863 feet bgs, but there appeared to be a small, sandy layer beneath the initial interface. The geologists collect representative jar samples and provided a courtesy sample

specimen collected from a split spoon sampler 888-890 fbs. I asked as a courtesy, would they consider saving additional split spoon jar or bag samples that could be shared for scientific purposes. Also, I suggested they inquire if the actual electronic logs from the geophysical logging unit could be preserved (rather than providing only the drawn seismic log figures.)

Mike advised that the drilling for the “Corona” boring (VPB 142) has also been completed. We briefly discussed the “comprehensive” groundwater sampling round from 2013. I suggested that consideration be made of the results from the comprehensive in addition to the VBP data if it is applicable in the decisions for selecting locations for the new monitoring wells.



The next site visited was VPB 146 adjacent to 4099 Meadow Lane. Valerie Thayer is the field geologist for Ensafe. Delta Drilling is the drilling contractor. This is a residential area. Drilling and sampling are in progress. This area has required temporary fencing to protect the area, and I suggested that a “fact sheet” (which is available for handout to interested parties) be laminated and mounted to the fencing so that people would have a number readily available to call to discuss concerns. Valerie has been on other site locations for the project the past year and apparently was involved with the completed VPBs 137,138 and 139.



The drilling contractor brought in additional equipment which helped to quickly move materials so there was minimal blocking of the streets. The targeted depth is to obtain confirmation that the Raritan clay layer is encountered. The driller and geologist were aware of the depths from previous drilling and expressed a rough estimate of 1100 feet bgs. Valerie showed me some of the bag samples she has collected from cuttings and described the method/procedure she has done to obtain the samples. This appeared a logical and well thought out protocol and I suggested she consider writing the steps as a “SOP” as a guideline. I also suggested considering sharing samples with me for scientific use and that the USGS might be interested.



At both sites I mentioned that USGS had previously been contracted by EPA to obtain a full geophysical suite of logs for one of the VPBs. Although we currently have no funding available, the USGS might be interested in soil samples collected from a lithological aspect.