

# Environmental Neighborhood Awareness Committee of Tiverton

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January 2, 2004

Mr. Jeffrey Crawford  
Principal Environmental Scientist  
Office of Waste Management  
Rhode Island Department of Environmental Management  
235 Promenade Street  
Providence, RI 02908-5767

RE: ENACT Comments-Site Investigation Reports  
Bay Street Suspected Fill Area  
RIDEM Case No. 2002-065a  
Tiverton, RI

Dear Mr. Crawford:

ENACT herein submits the following comments regarding the "Site Investigation Report for the Bay Street Suspected Fill Area" by VHB Inc. dated October 31, 2003 and the Risk Assessment by Environ International dated August 2003.

The SIR recommends no further investigation on properties 0303, 0305, 0306, 0309, 0310, 0312, 0313, 0511, 0511A, 0516, 0519, 0802, 0803, 0804, 0805, 0810A, 0811, 0812, 0815, 1501, 1505, 1507, 1508, 1509, 1510, 1511, 1606, 1606B, 1609, 2102, 2103, 2104, and 2202. The SIR data shows that for each of these lots there is information in the boring log or test results that the lot contains fill likely attributable to MGP waste. Therefore the preliminary information gathered in this SIR should be used on each property to determine the nature, extent and risk posed by the fill on each lot. Since we consider the Risk Assessment premature, comments specific to the Risk Assessment are omitted.

## Soil Concerns

Our review concludes that additional testing in the form of a Phase II Site Investigation is necessary to meet the RIDEM performance standard stated in the Remediation Regulations Section 7.01: "The Site Investigation must determine the nature and extent of the contaminated site and the actual and potential impacts of the release".

Further, it has come to our attention that VHB, on behalf of NEGC is investigating and reporting results from some of the properties on an individual basis. Counter to what is stated in the SIR "Introduction" for these lots, the RIDEM approved "Work Plan" does not include or contemplate this approach of preparing separate SIRs as within the approved scope of services.

If the purpose of the separate reporting for these lots was to enable a determination in the "Remedial Alternatives" sections of the reports that based upon "multiple potential related to the suspected fill", VHB has concluded that "no further actions on the part of NEGC should be conducted" then it follows that for each of all other lots tested VHB should be able to conclude: 1) which

contaminants are diagnostic of the fill, thereby determining “the nature” of the “fill”, 2) whether any lot tested contains “fill”, 3) the origin of the “fill”, 4) the dimensions (“extent”) of the fill and 5) whether further investigative actions are necessary. The SIR under review fails to “determine” the nature and extent by leaving these conclusions vague or out altogether, therefore the performance standard for a SIR is not met, in fact, not a single boring log uses the term “fill” as a stratum description more than 90% left blank. While the text of the SIR discusses fill, the SIR contains no maps of the filled area based upon the results, and the title of the SIR implies that “fill” may or may not be present, when in fact the data and text of the report clearly shows that this land has been subject to filling. The use of “suspected” in the title of the SIR implies that the performance standard to “determine the nature and extent” is not met. We propose that the additional investigation meets the performance standard and allows for removal of the word “suspected” from the title.

Based upon results of the SIR, the fill material is characterized by SVOCs, Priority Pollutant Metals, Naphthalene and Cyanide. The presence of Cyanide is a marker for MGP waste, and most of the boring logs reveal indications of non-weathered and weathered purifier waste, and ash and slag at depths usually less than 8 feet below ground surface. Lots not showing measurable Cyanide concentrations or other compounds or features diagnostic of the fill (e.g. 0301, 0301A, 0301C, 0301D) are good indicators of background conditions not containing MGP waste. The separate reports covering lots 1704, 1703, 1704A, 0815A, 1605 all indicate the presence of cyanide; therefore these lots are likely impacted by MGP waste and must be subject to additional investigation.

The presence of multiple sources of contamination on a lot should not relieve a potentially responsible party from determining the nature and extent of its own potential release, and determining the need for cleanup.

Review of the boring logs and data reveal areas of particular concern are along Judson Street, Bay Street, State Avenue, and near the intersection of Chace Street and Bottom Street.

Comparison of the U.S. Coast and Geodetic Survey 1885 topographic map with the 1938-39 U.S. Geological Survey topographic map shows that the boundary of the filled area lies from above the state line east to bottom street, then runs south following Bottom street to a stream (on Block 41 and 181) that empties into Mount Hope Bay immediately north of Borden’s Wharf. The land area east of the Old Colony/NY/NH/Conrail up to this southward running line is likely a filled area. The eastern limit of the fill is supported by the SIR data in that no cyanide was detected in samples from Block 3 lots 1, 1A, 1C and 1D (the “playground” Block 3 lot 2 falls in a transitional area, and includes fill, since some cyanide was detected in soil).

In addition to Phase II testing on lots between Bottom Street, Bay Street, Judson Street and State Avenue, soil and groundwater on Block 41 and Block 181 lots should be tested to establish the southernmost fill limit and impact to groundwater.

The topographic comparison using 1885, 1938/39 and 1985 contours, indicates that most of the filling likely took place before 1939 – which is also the date of the first air photo reviewed in the SIR.

## **Groundwater Concerns**

Attempting to draw conclusions regarding groundwater quality on a 36-acre study area with four one-inch diameter monitor wells sampled only once is far from industry standard practice. Concerns with groundwater quality based upon the program presented in the SIR include failure to detect the contaminant zone, failure to determine the full extent of the contaminated zone and failure to detect the maximum concentration (only one round of samples was collected). There are two main sources of

concern with the groundwater testing program: 1) the number of wells does not account for subsurface variability (aquifer properties, water quality, geochemistry) spatially (physically, chemically), and 2) temporal variability in the physical and chemical aspects of groundwater cannot be determined from only a single data set.

Several more groundwater monitoring points subject to a Groundwater Monitoring Program (DEM-GW-01-92, Section 12.02) are necessary to evaluate groundwater quality across the filled area, especially since this aquifer is categorized as GA. Significantly more groundwater investigation is necessary near MW-4, given the results and field notes collected by EA Engineering. We suggest an investigation designed specifically to this area is warranted.

## Surface Water Concerns

Whereas local surface water accepts runoff from the filled area, and because the contaminants are non-volatile, sediment needs to be tested in the stream channels to look for contaminants and calculate human health and environmental risk. Although the SIR does not contain a conceptual model for the site, it should include both human and environmental exposures. Sediment at the outfall to the Sakonnet River should also be tested for contaminants associated with the fill. Freshwater and marine risk levels are often more stringent than human health risk levels.

## General Questions/Concerns

Since each individual lot represents a unique exposure scenario, risk assessment using all testing results should evaluate the lots individually, and on a site-wide basis.

Additional testing is necessary where some of the testing is left out, including SVOCs and mercury on some of the properties, especially if the lack of testing creates a data gap.

What is the purpose of the h2o2 test described on log 2105-1; why was it used here and not elsewhere?

Laboratory results for any waste soil removed from the Bay Street sewer project should be included in the SIR and risk assessment since they reflect ground conditions in the site area. A detailed discussion of this work and maps showing where the work took place should be included.

The executive summary states “It is VHB’s opinion that investigation of additional properties to determine if suspected fill material is present will not significantly change the findings of the SIR with regard to the nature of the impacts” Given that the fill was dumped in no orderly fashion, and no map showing source and extent of the fill is included with the SIR, what/where is the scientific basis for this?

The SIR was prepared as a tool to investigate if there was “suspected” fill in the area of concern. Sampling points were located without the benefit of any preexisting data. Results indicate that fill exists on many properties and beneath roadways. Rather than jumping to risk assessment, it seems prudent to investigate any lot further where physical or analytical evidence of the fill was detected. Many of the boring logs indicate fill but with no testing, or testing at a single elevation with no complete profile of concentration with depth. Each lot must now be looked at individually, or a comprehensive scope of work must be developed that will answer the question of nature and extent and provide the risk assessor with a complete data set.

In conclusion, ENACT wants additional testing because these Site Investigation Reports prove to us that conclusions can not be drawn at this time which affect the health and safety of our neighborhood.

We look to your office and the agency as a whole as our “protection agency” in this situation and to stand by your commitment to preserve our environment and protect the natural systems upon which our lives depend.

We look forward to hearing from you in the near future as to the progress of these investigations.

Sincerely,

Gail Corvello, President – ENACT

Cc: Donald L. Carcieri, Governor  
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