SUBSURFACE INVESTIGATION AND VOLUME ESTIMATE TOWER HILL INDUSTRIAL PARK JOHNSTON, RHODE ISLAND

PREPARED FOR:
Rhode Island Resource Recovery Corporation
Johnston, Rhode Island

PREPARED BY:
GZA GeoEnvironmental, Inc.
Providence, Rhode Island

August, 2001
File No. 32421.00

GZA
GeoEnvironmental, Inc.

Engineers and Scientists

August 28, 2001
File No. 32421.00

Ms. Sherry Giarrusso-Mulhearn, Executive Director
Rhode Island Resource Recovery Corporation
65 Shun Pike
Johnston, Rhode Island 02919

Re: Subsurface Investigation and Volume Estimate
Tower Hill Industrial Park Property
Shun Pike
Johnston, Rhode Island

140 Broadway
Providence
Rhode Island 02903
401-421-4140
FAX 401-751-8613
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Dear Ms. Giarrusso-Mulhearn:

In accordance with your recent request GZA GeoEnvironmental, Inc. (GZA), is pleased to submit this brief letter detailing the findings of our subsurface investigation conducted at the above referenced property. The primary objective of our services was to determine the strata of the existing site soils. Per your request volume calculations were not performed for this site.

SUBSURFACE CONDITIONS

GZA conducted twenty-eight test pit explorations on the Tower Hill property between July 20 and 30, 2001. The test pits were excavated by RIRRC personnel and were logged by a GZA field engineer. The test pit excavations ceased when refusal on boulders or bedrock was encountered. Ground water was not encountered in any test pit excavation on the site.

Generally, the subsurface profile consisted of up to 6 inches of dark brown, silty fine sand (topsoil). The topsoil was underlain by up to 10 feet of light brown/tan to orange silty sand and gravel. Large quantities of boulders and out-croppings of bedrock were observed throughout the site. Test pits 24 and 25 contained 3 inches of topsoil underlain by 2.5 to 3.0 feet of Sand and Gravel before encountering large boulders. The attached Exploration Location Plan shows test pit locations. The test pit exploration logs containing detailed soil descriptions are also attached as Appendix A.

Bag samples of the soil were obtained from test pits TP-4, TP-7, TP-9, TP-19, TP-24, TP-28 for gradation testing. The sand and gravel found on the Tower Hill property has a silt content that ranges between 12.8% and 30.6%. Test pit 24 contained 12.8% silt. The Rhode Island State Specification requires that no more than 8 percent of the soil by weight pass through a number 200 sieve.

The gradation test results for the samples indicate that the soil contains significantly more silt than is required by the State Specification for Gravel Borrow material. With the exception of

the percent passing the number 200 sieve the gradation test results were in conformance with the requirements for Gravel Borrow. The gradation test results are attached as Appendix B.

COMMENTS

Due to the findings of the subsurface investigation and the high degree of difficulty encountered with traversing the site, the exploration was terminated. Therefore no explorations were performed on the Northeast portion of the site. The high silt content of the soil encountered at the site renders the soil unsuitable as gravel borrow material. Therefore, a site volume estimate was not performed. These findings are based on widely spaced excavations and should be considered accurate only to the degree implied by the methods used. Additionally, only 66% of the site lies outside wetland buffer areas.

We trust this report meets your current needs. If you need additional information or if you have any questions please do not hesitate to contact Russell Morgan or myself at 421-4140.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

for David Capacchione
Civil Engineer

for Phil Virgadamo, P.E.
Project Reviewer

Russell J. Morgan, P.E.
Associate Principal

MMB/RJM:vmb

Attachments: Figure 1 - Exploration Location Plan
Appendix A - Test Pit Logs
Appendix B - Gradation Test Data

Cc: Bill Anderson, RIRRC (1 copy)

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