

NOTICE

Pursuant to guidelines promulgated by the Rhode Island Department of Environmental Management, Office of Waste Management (“OWM”), a public hearing will be conducted on February 26, 2013, at 12 p.m., at 251 Exeter Road, North Kingstown, Rhode Island. This hearing will allow public participation and comment with respect to the revised application, dated April 26, 2012 of Schartner Farms-Slocum LLC, North Kingstown, RI to OWM for beneficial use determination (BUD) approval of on-site crushing of granite cuttings waste located on their property; assessor’s plat 78, lot 47 located at 251 Exeter Rd. The crushed granite will be used to construct roadways on-site and off-site.

A copy of Schartner Farms-Slocum LLC’s revised BUD application can be obtained at OWM, located at [235 Promenade Street](#), Providence, Rhode Island 02908, during normal business hours. The application is also available on RIDEM’s website. Questions may be directed to Christopher Shafer at OWM.

The public comment period will remain open for 14 days after the public hearing. Comments can be sent to OWM at the following address:

RIDEM Office of Waste Management
Attn: [Christopher Shafer](#)
Senior Environmental Scientist
235 Promenade Street
Providence, RI 02908
401-222-2797 ext. 7511
401-222-3812 (fax)

**BENEFICIAL USE DETERMINATION (BUD)
APPLICATION**

**FORMER FOREST HILLS NURSERY PROPERTY
NORTH KINGSTOWN, RHODE ISLAND**

Prepared for:

Schartner Farms-Slocum LLC

Prepared by:

Hoffman Engineering Inc.
640 Ten Rod Road
North Kingstown, Rhode Island
(401) 294-9032/Fax 294-1288



Robert L. Hoffman, P.E., President

April 26, 2012

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1.0 INTRODUCTION

Hoffman Engineering, Inc., on behalf of Schartner Farms-Slocum, LLC., the owner of North Kingstown's Assessor's Plat 78 / Lot 47, has prepared the following Beneficial Use Determination (BUD) Submittal for Source Segregated Solid Waste. A Site Locus Map is provided as Figure 1. The following provides details of the proposed reuse of this solid waste material. The BUD application is provided as Appendix 1.

2.0 PURPOSE

The purpose of this BUD application is to obtain an RIDEM variance to allow the beneficial reuse of solid waste material located on the subject Site. Specifically, the Owner is seeking permission to reprocess (crush) the granite cuttings waste previously encapsulated on the Site. This crushed material will be utilized to construct roadways on and off the subject Site.

3.0 SITE DESCRIPTION

The Site is the southwestern portion of the former Forest Hills Nurseries located at 251 Exeter Road, fronts Dry Bridge Road (its western border). This lot was previously subdivided with the remedial portion (the study site) remains as Lot 47 and the northern portion which was also purchased by Schartner Farms-Slocum, LLC and is designated as Lots 45. The remedial portion consisted of approximately 2 acres of land. Presently, the subject Site is covered with a demarcation line of pine trees and grass that was planted as part of the remedial work. An unpaved gravel temporary access road surrounds the portion of the Site. See Figure 2, which depicts the area.

4.0 BACKGROUND

The subject Site was previously an active gravel pit, a portion of which was mined to provide cover material for Hometown Properties Landfill, located adjacent to the Site across Dry Bridge Road. Previously fill material consisting of granite cuttings and polishing waste was used by Forest Hills Nurseries to backfill portions of the gravel pit. This material originated from the present or former Castellucci Stone Industries, a granite cutting operation currently/previously located at Quonset Point. This material contained Arsenic and to a lesser extent Manganese that exceeded the RIDEM Residential Direct Exposure Criteria, provided in RIDEM's, *Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases*, amended August 1996.

A Site Investigation was conducted by HEI in September 1998 to identify the extent of this material and to prepare a Remedial Action Work Plan (RAWP).

5.0 PREVIOUS REMEDIAL WORK

The remedial work was completed circa 2000, in accordance with HEI's Remedial Action Work Plan (RAWP), dated August 1999 and approved by the Rhode Island Department of Environmental Management (RIDEM) pursuant to their Remedial Approval Letter (Case #98-017), dated December 2, 1999. The purpose of this work was to minimize environmental hazards that may result from excavation at the Site, as well as to minimize the potential for direct exposure to contaminated fill material that had been brought onto the Site. The subject fill material was excavated in some areas to a point

where RIDEM's Residential Direct Exposure Criteria (1.7 mg/kg) for Arsenic was met. The excavated materials were consolidated with larger fill areas, which were subsequently covered with a geotextile material and capped with 12" of clean fill. *Note, the Arsenic Standard has since been changed to 7.0 mg/kg. None of the previous results exceeded this current standard.*

6.0 RESAMPLING OF WASTE MATERIAL

In order to determine the current levels of metals in the consolidated waste material, HEI collected four samples from shallow test pits on December 22, 2004. These samples were collected by hand excavation of the overlying loam by carefully cutting the geotextile and excavating a 4-5 foot test pit with a small backhoe. HEI then collected four representative samples designated as TP-A through TP-D. The test pits were backfilled, the geotextile was replaced, and the areas were reloamed and seeded.

The samples were then submitted to RI Analytical Laboratories, Inc. under a chain of custody for 17 different total metals analyses. The analytical results are provided in the Appendix 2 and are summarized in Table 1. Note, in order to achieve a lower detection limit for Arsenic, the samples were reanalyzed utilizing the graphite furnace analytical method. The average concentration for the Arsenic was found to be 2.1 mg/kg. The Certificate of Analyses for these reanalyses are also provided in Appendix 2.

Table 1 provides the average concentration of the results and the background concentrations of the area gravel previously determined during our Remedial Investigation in 1998. The average results for the waste material were all below the RIDEM's Direct Exposure Criteria for Residential Sites, except for Beryllium that is naturally occurring at levels that are sometimes above the RIDEM's Direct Exposure Criteria for Residential Sites, promulgated in 2004. *Note*, the Rules and Regulations for the Investigation and Remediation of Hazardous Waste Releases was further amended in November 2011 to include an updated Beryllium Residential Direct Exposure Criteria Standard of 1.5 mg/kg. Therefore, the analytical results for Beryllium shown in Table 1 are below this newly revised standard.

In November 2011, HEI simulated the crushing of large pieces of granite mixed with fines. This resulted in 5 gallons of processed material. A composite samples was then collected from the mixture to determine the resulting manganese concentration. The results, provided in Appendix 2 indicate a level of 290 mg/kg which is below the RIDEM's Residential Direct Exposure Standard of 390 mg/kg.

7.0 PROPOSED WASTE REUSE

In order to accommodate the proposed residential development of the portion of the lot containing the waste, as well as to provide a Beneficial Reuse of the Material for roadways the following is the proposed plan: *Note*, Figure 3 shows the proposed residential lots to be subdivided out of the subject lot.

1. Removal of the overlying loam for reuse.

2. Off-site disposal of the geotextile fabric. The previously planted pines will be excavated and reused.
3. Excavation and on-site crushing (processing) of the granite cuttings material for reuse for the construction of on-site and off-site roadways. Note, Figure 3 shows the area to be cut and filled to level the existing sloped lots for redevelopment. It is proposed to overcut the areas by at least 3 feet below the bottom of the foundation.
4. The processed materials will be utilized on and off the Site for roadways. As outlined in the detailed application (see Appendix 1) testing for the Manganese, the contaminant of concern will be conducted at a frequency of no less than one sample per 500 cubic yards.
5. Once the material to be reprocessed (up to 9000 cubic yards) is excavated; the remaining material will be recovered with a minimum of 2 feet of clean on-site soils. The remaining area of material (not excavated) will then be depicted on a Site survey and recorded as an Environmental Land Usage Restriction (ELUR) on the lots.
6. The excavated material will be crushed on-Site utilizing a portable crusher. The resulting material will be utilized for on- and off-Site roadways. At a minimum, the material will be utilized as the roadway base material. It is also the intent to utilize it as the final roadway itself rather than asphalt pavement. This request (variance) is being sought from the North Kingstown Planning Department. The applicant will notify the RIDEM's Office of Waste Management of the decision of the North Kingstown Planning Department as soon as it is rendered.

8.0 RIDEM REVIEW OF VARIANCE

Upon the RIDEM's approval of this application, a public hearing notice will be posted in the local newspaper and will ultimately be held to obtain public comment for this application. This notice will also be provided to the North Kingstown municipal offices.

TABLE

TABLE 1
Former Forest Hills
Resampling of
Encapsulated Waste
December 2004

samples taken 12/22/04	TP-A	TP-B	TP-C	TP-D	AVERAGE	Background data 4/29/98	RIDEM Residential * Direct Exposure Criteria (mg/kg)
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)			
Hexavalent Chromium	<3.5	<3.5	<3.7	<3.8	<3.63	NT	390
Aluminum	NT	NT	NT	NT	NT	3170	NS
Antimony	<10	<10	<10	<10	<10	<99.0	10
Arsenic	1.8	1.6	2.5	2.4	2.1	1.33	7
Boron	NT	NT	NT	NT	NT	<9.90	NS
Barium	15	23	28	52	29.5	13.9	5500
Beryllium	0.59	0.73	0.63	0.32	0.57	0.59	0.4
Cadmium	<0.28	<0.26	<0.29	<0.32	<0.29	1.29	39
Calcium	NT	NT	NT	NT	NT	1190	NS
Chromium	7	26	30	89	38	14.8	1400
Cobalt	NT	NT	NT	NT	NT	3.96	NS
Copper	4.2	17	23	79	30.8	13.9	3100
Iron	NT	NT	NT	NT	NT	12500	NS
Lead	5.8	7.9	14	12	9.93	6.93	150
Magnesium	NT	NT	NT	NT	NT	1030	NS
Manganese	95	260	260	470	271	148	390
Mercury	<0.25	<0.25	<0.25	<0.25	<0.25	NT	23
Molybdenum	NT	NT	NT	NT	NT	<2.48	NS
Nickel	4.5	13	17	45	19.9	10.90	1000
Potassium	NT	NT	NT	NT	NT	980	NS
Selenium	<11	<10	<12	<32	<16.25	<9.90	390
Silicon	NT	NT	NT	NT	NT	500	NS
Silver	<1.7	<3.1	<2.9	<6.3	<3.50	<0.99	200
Sodium	NT	NT	NT	NT	NT	<148	NS
Thallium	<5.7	<5.1	<5.9	<6.3	<5.75	<0.10	5.5
Tin	NT	NT	NT	NT	NT	6.93	NS
Titanium	NT	NT	NT	NT	NT	280	NS
Vanadium	11	12	15	14	13	7.42	550
Zinc	28	45	40	37	37.5	24.8	6000

*Rules and Regulations for the Investigation and Remediation of Hazardous
Material Releases, amended February 2004

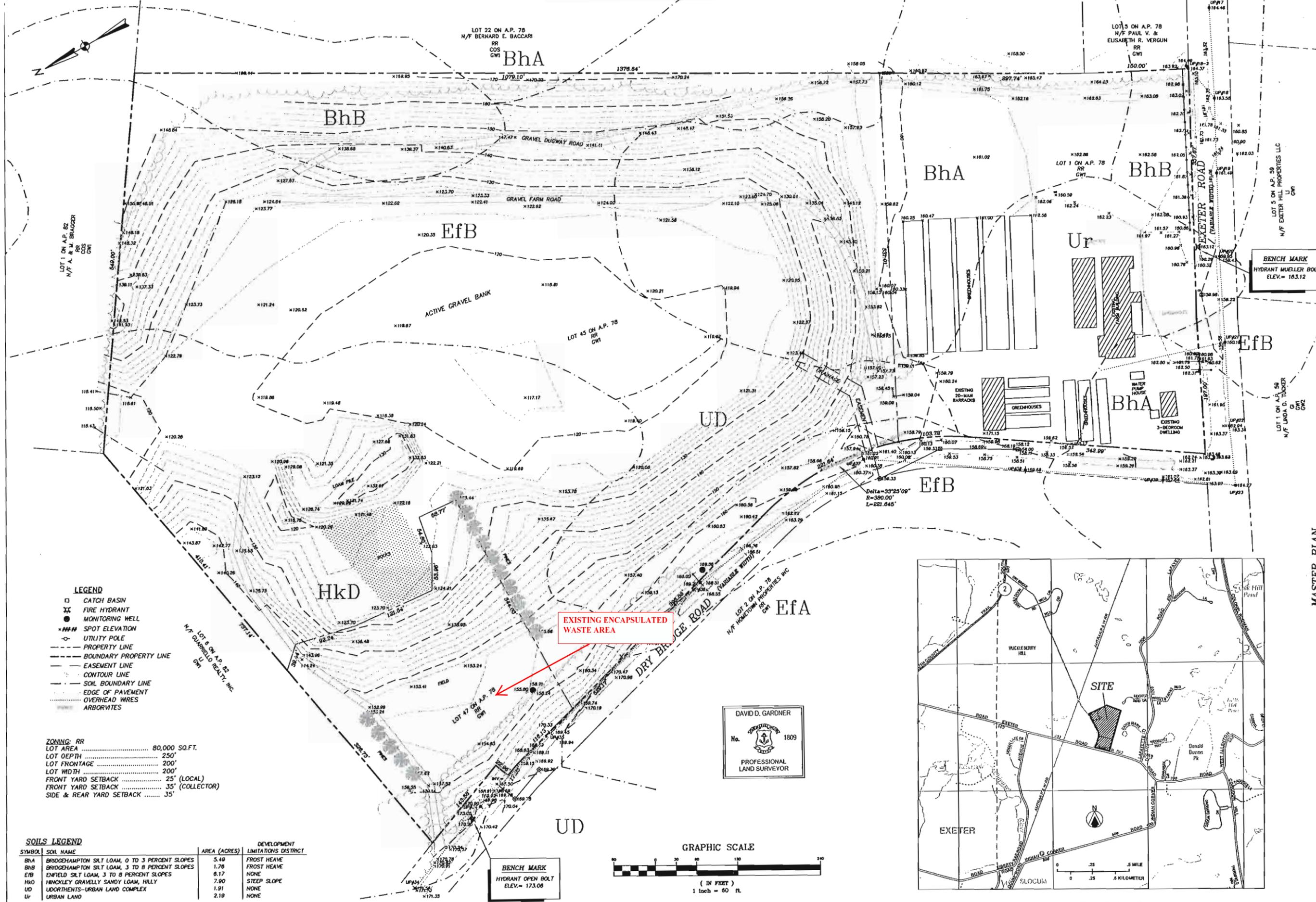
NS- no standard

NT- not tested

Exceeds RIDEM Residential Direct Exposure Criteria

Samples for Arsenic reanalyzed by Graphite Furnace to achieve lower detection limits (COA 0501-00026)

FIGURES



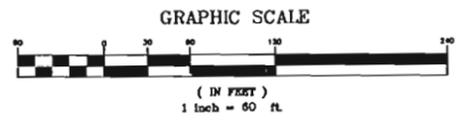
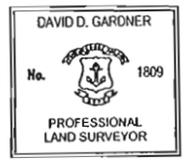
- LEGEND**
- CATCH BASIN
 - ⊗ FIRE HYDRANT
 - ⊙ MONITORING WELL
 - SPOT ELEVATION
 - UTILITY POLE
 - PROPERTY LINE
 - - - BOUNDARY PROPERTY LINE
 - - - EASEMENT LINE
 - - - CONTOUR LINE
 - - - SOIL BOUNDARY LINE
 - - - EDGE OF PAVEMENT
 - - - OVERHEAD WIRES
 - - - ARBORVITES

ZONING: RR
 LOT AREA 80,000 SQ.FT.
 LOT DEPTH 250'
 LOT FRONTAGE 200'
 LOT WIDTH 200'
 FRONT YARD SETBACK 25' (LOCAL)
 FRONT YARD SETBACK 35' (COLLECTOR)
 SIDE & REAR YARD SETBACK 35'

SOILS LEGEND

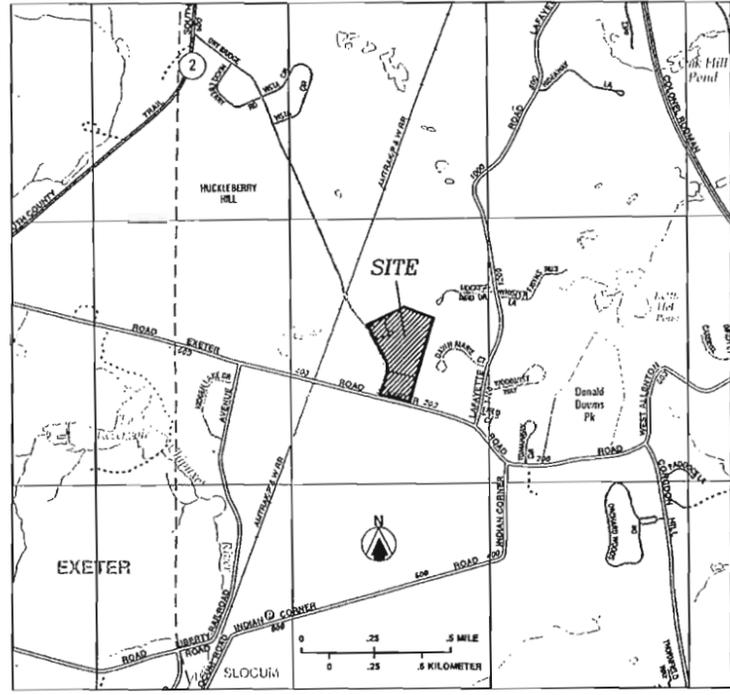
SYMBOL	SOIL NAME	AREA (ACRES)	DEVELOPMENT LIMITATIONS DISTRICT
BhA	BRIDGEHAMPTON SILT LOAM, 0 TO 3 PERCENT SLOPES	5.49	FROST HEAVE
BhB	BRIDGEHAMPTON SILT LOAM, 3 TO 8 PERCENT SLOPES	1.78	FROST HEAVE
EfB	ENFIELD SILT LOAM, 3 TO 8 PERCENT SLOPES	6.17	NONE
HkD	HUNCKLEY GRAVELLY SANDY LOAM, HILLY	7.90	STEEP SLOPE
UD	UDORIENTALS-URBAN LAND COMPLEX	1.91	NONE
Ur	URBAN LAND	2.19	NONE

TOTAL PARCEL AREA = 1,142,239 SQ.FT. OR 26.222 ACRES



BENCH MARK
 HYDRANT OPEN BOLT
 ELEV. = 173.08

BENCH MARK
 HYDRANT MUELLER BOLT
 ELEV. = 163.12



LOCATION MAP

DAVID D. GARDNER & ASSOCIATES, INC.
 200 METRO CENTER BOULEVARD
 WARWICK, RHODE ISLAND 02886
 (401) 738-3200 / FAX: (401) 739-4740

ENGINEERS • SURVEYORS • PLANNERS

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MASTER PLAN
 EXISTING FEATURES MAP
 DRY BRIDGE FARM
 DRY BRIDGE ROAD & EXETER ROAD
 NORTH KINGSTOWN, RI
 A.P. 78 - LOTS 1, 45 & 47
 FOR
 RICHARD SCHARTNER

DATE	REVISIONS

DATE ISSUED: 10/14/11
 SCALE: 1"=60'
 DESIGNED BY: M.T.C.
 DRAWN BY: M.T.C.
 JOB NO.: 10-063
 DWG NO.: 10063PA1

REDUCED SCALE



HEI

HOFFMAN ENGINEERING, INC.
640 Ten Rod Rd.
North Kingstown, RI 02852

SITE PLAN

**FORMER FOREST HILLS NURSERY
PROPERTY**

DRY BRIDGE ROAD
North Kingstown, Rhode Island

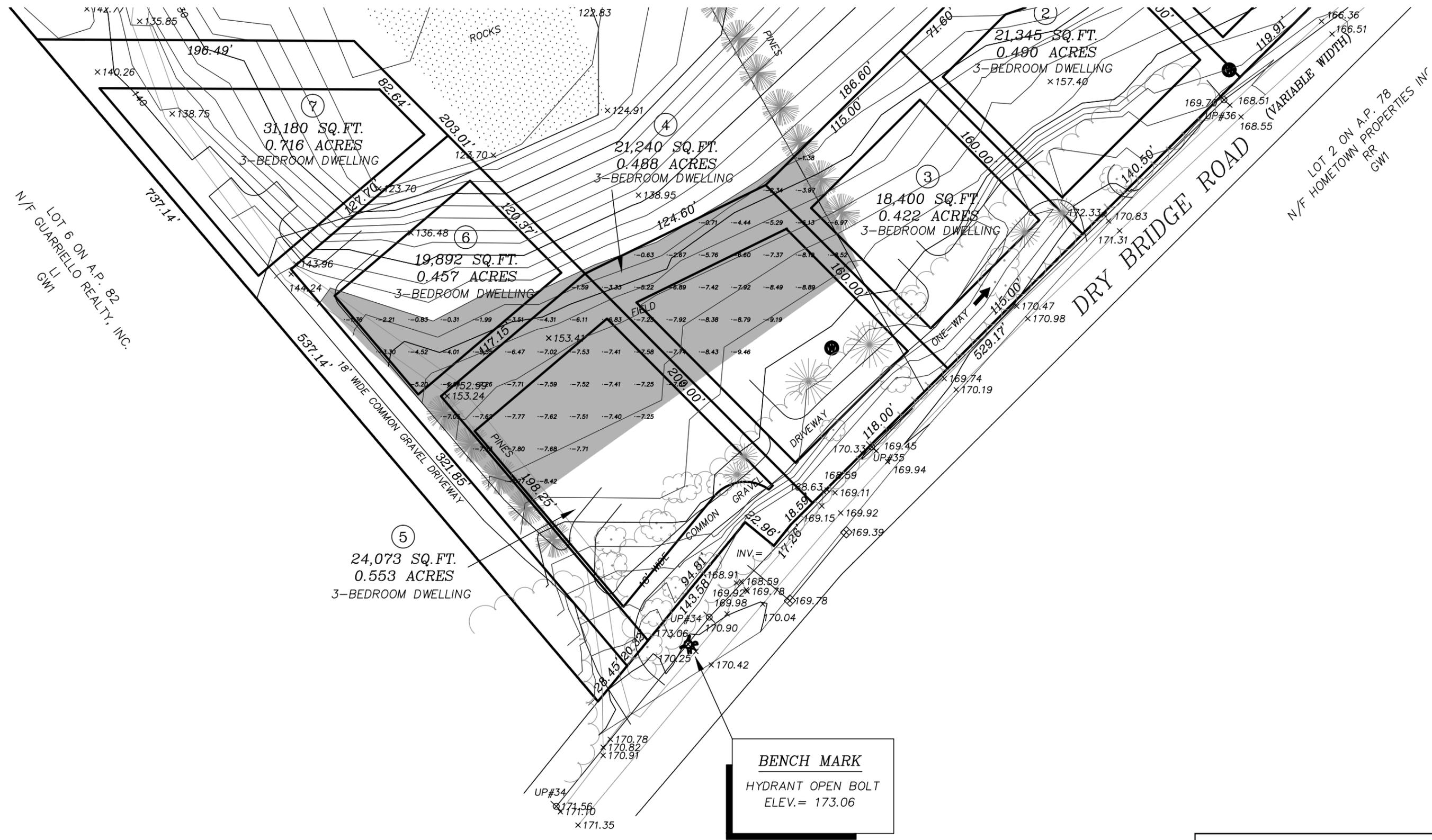


Date: 4-10-2012
By: MMA

Base Map: GoogleEarth
North Kingstown, RI
NTS

± Site Boundaries

FIGURE 2



BENCH MARK
HYDRANT OPEN BOLT
ELEV. = 173.06

**FIGURE 3
PROPOSED CUT AREAS
AND SUBDIVISION PLAN**

APPENDICES

APPENDIX 1
Beneficial Use Determination (BUD) Application

1. How will any environmental hazards associated with the proposed recycling of solid waste be minimized or eliminated?

The material to be crushed and utilized for roadways on and off the Site. Based on analytical testing conducted on trial samples, it is not anticipated to exceed any of the RIDEM Residential Direct Exposure Standards. As such, this material will pose no hazard.

2. To what degree will the recycled solid waste material be analogous to commonly used raw materials and how will the use of this material result in a viable and beneficial substitution of a discarded material for a commercial product or raw material?

The material to be processed contains aesthetically pleasing pieces of granite which will make excellent and attractive roadways. This material will preferably replace the asphalt roadways pending local approval. Asphalt roadways typically contribute to excess runoff and reflective heat. If the material is not approved to be utilized as the final top of the roadways, in either case, the material will be utilized to build the sub-base, and graded aggregate base of the roadways.

3. How will the proposed recycling and reuse of the solid waste in question protect the natural resources of the State? In addition to discussing how and to what extent the reuse of the solid waste in question will conserve the limited and finite capacity of the State's solid waste landfills, your response must also address why the proposed use of the recycled solid waste will not present a threat to public health or the State's groundwater, surface water, air, or other environmental resources.

The material to be processed has been extensively tested and does not have contaminants exceeding the RIDEM Residential Direct Exposure Standards and the trace contaminants (e.g. metals) are naturally occurring in native soils. The material has been shown not to be leachable and as such, does not pose a threat to the surface and/or groundwater of the State. The material will be kept moist during processing to prevent airborne dust and once placed, will be compacted and the potential for dust or erosion will be minimal. By reutilizing this material on the Site, or other off-Site roadways, it will eliminate the need for utilizing valuable landfill capacity.

4. To what extent is there a guaranteed end market for the recycled solid waste material to be produced?

The processed material will be utilized for the roadways on the subject site and excess material will only be processed if there are definitive end users (e.g. similar roadways on other sites).

5. Why will the proposed recycling and reuse of solid waste not degrade the environment?

The material to be processed does not contain organics, putrescible wastes, volatile compounds, or other deleterious materials which if processed could impact the environment. The subject material is an inert inorganic material.

6. Identify and discuss the controls (e.g. environmental, engineering, institutional...etc.) that will be used to properly and safely recycle and reuse the solid waste. This discussion should include, but not be limited to, information regarding the following:

The material to be processed is already located on the subject site and will not be excavated until it is ready to be immediately processed. The process will consist of a crusher to pulverize the granite and stones down to 2 inch minus*. The material will be excavated with an excavator, placed in a dump truck, and transported to a central location on the site where it will be placed in the crusher. Once crushed, the processed material will be placed in lifts on the roadways. During the crushing process, the material will be kept moist to prevent dust. The open face of the excavation will be fenced with caution fence, as needed, to prevent accidents. In the unlikely event that wood or any other deleterious material is found within the excavation, this material will be segregated out and be properly disposed of off the site.

*** Note, some of the material will be crushed to 8"minus to 2"plus to be utilized for rip-rap of drainage swales.**

- a. The quantity of solid waste material to be received and recycled, and the maximum quantity of solid waste material to be stored at the site at any one time;

The maximum quantity to be processed is 9,000 cubic yards. The material which is ultimately not processed will be degraded to provide a uniform slope and covered, if exposed. The cover will consist of a minimum of a demarcation barrier, as well as a minimum of 12 inches of clean fill placed on top of it. Alternatively, 24 inches of clean fill will be placed over the top of it. The area of the Site in which unprocessed waste remains will be denoted on a Site survey plan(s) and an Environmental Land Usage Recorded on the property deed.

- b. The maximum quantity of solid waste material to be stored at the site at any one time;

This is not applicable to the site.

- c. The source of the solid waste, including the name and address of the generator:

The material is owned by the applicant and is located on the subject site.

- d. A detailed narrative and schematic diagram of the production, manufacturing, and/or residue process by which the waste material is produced;

See previous Site Investigation Report and Remedial Action Work Plan prepared by Hoffman Engineering, Inc. in 2005.

- e. The expected consistency of the waste material;

Prior to processing, the material consists of a mixture of gravel, sand, lime, and large pieces of granite. The granite ranges in size from 6 inches square by 1 inch thick to 4 foot square slabs. Once processed, the material will be a uniformed blend of material 1 inch minus in size. As previously discussed a small portion of the material will be crushed to 8"minus to 2"plus to be utilized for rip-rap of drainage swales.

- f. How the generator has minimized the quantity and toxicity of the waste material;

Through the processing and blending of the material, the end product will not exceed the RIDEM Residential Direct Exposure Standards. Only the quantity of materials to be processed will be excavated.

- g. Adequate and regular inspection of the waste material upon receipt;

Not applicable.

- h. Adequate site controls relating to the storage, handling and processing of the waste material, including the extent to which the recycled solid waste material will be handled to minimize loss;

Only the material to be immediately processed will be excavated.

- i. Adequate controls for handling and disposing of any residual solid wastes, including the location of final disposal for any residual solid wastes;

Any deleterious materials will be segregated and transported to Central Landfill as solid waste. Note, none is anticipated to be present.

- j. Appropriate odor, sediment, stormwater (runoff), and erosion control measures, etc.

These items are not applicable for this waste; however, as previously discussed dust control measures will be implemented.

7. Explain why the proposed recycling of solid waste is not simply an alternate method of disposal. The Director may require information regarding the estimated value of the solid waste material both before and after it is recycled.

The material must be moved to allow development of the site. The reuse of the material for roadways is a suitable reuse of the material and is not in reality a methodology for its disposal.

8. What degree of processing has the solid waste material undergone and degree of further processing is required, if any? The applicant must demonstrate that any mixing of different types of material improves the usefulness of the recycled solid waste material.

The material in its current state was previously mixed during the remedial actions completed in 2000. The processing of the material (the crushing of the granite) is necessary to make it a viable end product.

9. Where the project in question includes the reuse of any soil impacted by known or suspected contamination, or the use of any recycled solid waste as a “manufactured soil product” (i.e.: solid waste that is or has been altered or rendered into a material with soil type properties), the applicant must demonstrate the use of these materials at the location in question:

- a. Is compliant with the Residential Direct Exposure Criteria for soils listed in Rule 8.02 of the *Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases*;

A composite sample consisting of a minimum of ten aliquots will be collected and analyzed on a minimum frequency of one sample per 500 cubic yards. This sample will be analyzed for Total Manganese to ensure compliance with the RIDEM Residential Direct Exposure Criteria.

- b. Is compliant with the Compost Quality and Distribution Standards listed in Rule 8.8.00 (Compost Product Requirements and Distribution) of the Solid Waste Regulations; and

The material will meet these standards by virtue of meeting the RIDEM Residential Direct exposure Standards.

- c. Will not result in degradation of the environment.

As previously stated, the material is not leachable and all analytes will be below RIDEMs Direct Exposure Standards.

10. Whenever the proposed end use for a recycled product involves land application, the applicant shall address the need for applicable engineering standards and controls in accordance with the Solid Waste Regulations (e.g. final cover systems, leachate collection and removal systems, and gas control and recovery systems) to provide for the safe land application end use of BUD materials. End uses involving land application shall be presumed to be low utility uses subject to heightened scrutiny as to whether the use constitutes beneficial reuse or is simply an alternative means of disposal.

See previous discussion above regarding beneficial reuse.

11. Provide a characterization plan that includes protocols for sample collection and analyses designed to provide a representative characterization of the waste material. The characterization plan shall address:

- a. How the samples will be collected (i.e. locations, times, frequency per volume, etc.).

See previous Site Investigation Report and Revised Remedial Action Work Plan. Compliance sampling will be conducted as follows: a composite sample consisting of a minimum of ten aliquots will be collected and analyzed on a minimum frequency of one sample per 500 cubic yards. This sample will be analyzed for Total Manganese via EPA Method 200.7.

- b. The types of samples to be collected (i.e. discrete, grab, composite, etc.).

A composite sample consisting of a minimum of ten aliquots will be collected and analyzed on a minimum frequency of one sample per 500 cubic yards. This sample will be analyzed for Total Manganese to ensure compliance with the RIDEM Residential Direct Exposure Criteria.

- c. How substances in the solid waste will be identified.

The Manganese will be analyzed in the laboratory.

- d. The physical and chemical analyses to be performed (i.e. size, density, percent solids, liquid content, pH, reactivity, leachability [TCLP test], etc.).

A composite sample consisting of a minimum of ten aliquots will be collected and analyzed on a minimum frequency of one sample per 500 cubic yards. This sample will be analyzed for Total Manganese to ensure compliance with the RIDEM Residential Direct Exposure Criteria.

- e. Analysis for biological properties of the waste (i.e. pathogens).

Not applicable.

- f. The variability of the substances present in the solid waste.

See previous Site Investigation Report.

- g. The number of samples required (grab and/or composite) to be collected and analyzed in order to adequately determine the physical, chemical, and biological properties of the waste.

A composite sample consisting of a minimum of ten aliquots will be collected and analyzed on a minimum frequency of one sample per 500 cubic yards. This sample will be analyzed for Total Manganese to ensure compliance with the RIDEM Residential Direct Exposure Criteria.

- h. The human health and ecological risks associated with the proposed reuse of the solid waste in the proposed manner and location.

Not applicable.

- i. Verification that the sampling and analytical methods used have identified all constituents present in the waste, and a detailed written report describing the concentration and distribution of all substances which may be contained in the waste material.

See previous Site Investigation Report and Remedial Action Work Plan.

- 12. Any person involved in the storage, handling, processing or use of solid waste for beneficial reuse shall be required to provide financial assurance that:

- a. The project approved in the BUD will be completed; and/or
- b. Any unused solid waste/beneficial reuse material will be properly removed and disposed of upon completion of the project or if project operations cease for any reason.

This is not applicable since the material is already present on the site.

- 13. Additional information, as required, at the discretion of the Department.

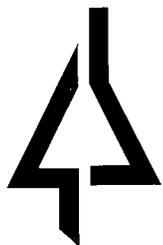
Not applicable.

14. Certify that the applicant, the facility(ies) where the solid waste is processed for reuse and the facility(ies) where the processed material is to be used are not the subject of any actual or potential statutory or regulatory environmental violations (state or federal), or, if actual or potential violations exist, that the processing of the waste or its use as part of a final settlement or remedy approved by DEM.

Mr. Richard Schartner, as representative of the Owner of the property and waste, certifies that over the 11 years he/his family has owned the site, no release of hazardous materials has occurred and that no violations exist for the property.

Richard Schartner ^{mma}
Schartner Farms-Slocum LLC Representative

4/26/2012
Date



R.I. Analytical

Specialists in Environmental Services

CERTIFICATE OF ANALYSIS

Hoffman Engineering, Inc.
Attn: Mr. Robert Hoffman
640 Ten Rod Road
North Kingstown, RI 02852

Date Received: 12/22/2004
Date Reported: 12/30/2004
P.O. #:
Work Order # 0412-19467

DESCRIPTION: FORMER FOREST HILL NURSERY DRY BRIDGE ROAD - NORTH KINGSTOWN

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory with the attached results.

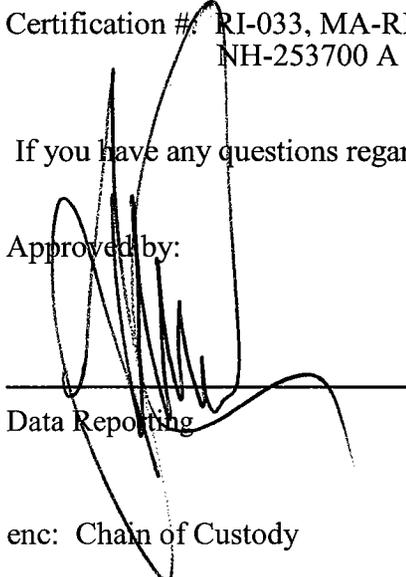
Reference: All parameters were analyzed by U.S. EPA approved methodologies and all NELAC requirements were met. The specific methodologies are listed in the methods column of the Certificate Of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.

Certification #: RI-033, MA-RI015, CT-PH-0508, ME-RI015
NH-253700 A & B, USDA S-41844, NY-11726

If you have any questions regarding this work, or if we may be of further assistance, please contact us.

Approved by:



Data Reporting

enc: Chain of Custody

R.I. Analytical Laboratories, Inc.
CERTIFICATE OF ANALYSIS

Hoffman Engineering, Inc.
 Date Received: 12/22/2004
 Work Order #: 0412-19467

Approved by: _____

Data Reporting

Sample # 001

SAMPLE DESCRIPTION: TP-A

SAMPLE TYPE: COMPOSITE

SAMPLE DATE/TIME: 12/18/2004

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
HEXAVALENT CHROMIUM	<3.5	3.5	mg/kg dry	SW-846 3060A	12/22/2004	EC
TRIVALENT CHROMIUM	7.0	1.7	mg/kg dry	CALCULATION	12/30/2004	SM
TOTAL METALS						
ANTIMONY	<10	10	mg/kg dry	SW-846 6010	12/29/2004	JNB
ARSENIC	<5.7	5.7	mg/kg dry	SW-846 6010	12/29/2004	JNB
BARIUM	15	1.1	mg/kg dry	SW-846 6010	12/28/2004	JNB
BERYLLIUM	0.59	0.06	mg/kg dry	SW-846 6010	12/28/2004	JNB
CADMIUM	<0.28	0.28	mg/kg dry	SW-846 6010	12/29/2004	JNB
CHROMIUM	7.0	1.7	mg/kg dry	SW-846 6010	12/28/2004	JNB
COPPER	4.2	2.8	mg/kg dry	SW-846 6010	12/28/2004	JNB
LEAD	5.8	2.3	mg/kg dry	SW-846 6010	12/28/2004	JNB
MANGANESE	95	1.1	mg/kg dry	SW-846 6010	12/28/2004	JNB
MERCURY	<0.25	0.25	mg/kg dry	SW-846 7471A	12/26/2004	KSL
NICKEL	4.5	1.1	mg/kg dry	SW-846 6010	12/28/2004	JNB
SELENIUM	<11	11	mg/kg dry	SW-846 6010	12/29/2004	JNB
SILVER	<1.7	1.7	mg/kg dry	SW-846 6010	12/28/2004	JNB
THALLIUM	<5.7	5.7	mg/kg dry	SW-846 6010	12/29/2004	JNB
VANADIUM	11	1.1	mg/kg dry	SW-846 6010	12/28/2004	JNB
ZINC	28	1.1	mg/kg dry	SW-846 6010	12/29/2004	JNB

Hexavalent Chromium - Increased detection limit due to highly colored sample which interfered with test methodology.

R.I. Analytical Laboratories, Inc.
CERTIFICATE OF ANALYSIS

Hoffman Engineering, Inc.
 Date Received: 12/22/2004
 Work Order #: 0412-19467

Approved by: _____

Data Reporting

Sample # 002

SAMPLE DESCRIPTION: TP-B

SAMPLE TYPE: COMPOSITE

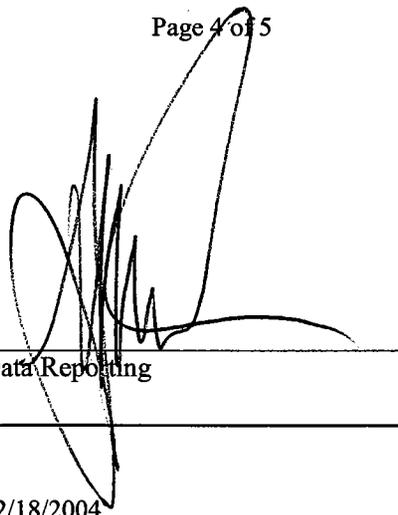
SAMPLE DATE/TIME: 12/18/2004

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
HEXAVALENT CHROMIUM	<3.5	3.5	mg/kg dry	SW-846 3060A	12/22/2004	EC
TRIVALENT CHROMIUM	26	1.5	mg/kg dry	CALCULATION	12/30/2004	SM
TOTAL METALS						
ANTIMONY	<10	10	mg/kg dry	SW-846 6010	12/29/2004	JNB
ARSENIC	<5.1	5.1	mg/kg dry	SW-846 6010	12/29/2004	JNB
BARIUM	23	1.0	mg/kg dry	SW-846 6010	12/28/2004	JNB
BERYLLIUM	0.73	0.05	mg/kg dry	SW-846 6010	12/28/2004	JNB
CADMIUM	<0.26	0.26	mg/kg dry	SW-846 6010	12/29/2004	JNB
CHROMIUM	26	1.5	mg/kg dry	SW-846 6010	12/28/2004	JNB
COPPER	17	2.6	mg/kg dry	SW-846 6010	12/28/2004	JNB
LEAD	7.9	2.0	mg/kg dry	SW-846 6010	12/28/2004	JNB
MANGANESE	260	1.0	mg/kg dry	SW-846 6010	12/29/2004	JNB
MERCURY	<0.25	0.25	mg/kg dry	SW-846 7471A	12/26/2004	KSL
NICKEL	13	1.0	mg/kg dry	SW-846 6010	12/28/2004	JNB
SELENIUM	<10	10	mg/kg dry	SW-846 6010	12/29/2004	JNB
SILVER	<3.1	3.1	mg/kg dry	SW-846 6010	12/28/2004	JNB
THALLIUM	<5.1	5.1	mg/kg dry	SW-846 6010	12/29/2004	JNB
VANADIUM	12	1.0	mg/kg dry	SW-846 6010	12/28/2004	JNB
ZINC	45	1.0	mg/kg dry	SW-846 6010	12/29/2004	JNB

Hexavalent Chromium - Increased detection limit due to highly colored sample which interfered with test methodology.

R.I. Analytical Laboratories, Inc.
CERTIFICATE OF ANALYSIS

Hoffman Engineering, Inc.
 Date Received: 12/22/2004
 Work Order #: 0412-19467

Approved by: 
 Data Reporting

Sample # 003

SAMPLE DESCRIPTION: TP-C

SAMPLE TYPE: COMPOSITE

SAMPLE DATE/TIME: 12/18/2004

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
HEXAVALENT CHROMIUM	<3.7	3.7	mg/kg dry	SW-846 3060A	12/22/2004	EC
TRIVALENT CHROMIUM	30	1.8	mg/kg dry	CALCULATION	12/30/2004	SM
TOTAL METALS						
ANTIMONY	<10	10	mg/kg dry	SW-846 6010	12/29/2004	JNB
ARSENIC	<5.9	5.9	mg/kg dry	SW-846 6010	12/28/2004	JNB
BARIUM	28	1.2	mg/kg dry	SW-846 6010	12/28/2004	JNB
BERYLLIUM	0.63	0.06	mg/kg dry	SW-846 6010	12/28/2004	JNB
CADMIUM	<0.29	0.29	mg/kg dry	SW-846 6010	12/29/2004	JNB
CHROMIUM	30	1.8	mg/kg dry	SW-846 6010	12/28/2004	JNB
COPPER	23	2.9	mg/kg dry	SW-846 6010	12/28/2004	JNB
LEAD	14	2.4	mg/kg dry	SW-846 6010	12/28/2004	JNB
MANGANESE	260	1.2	mg/kg dry	SW-846 6010	12/29/2004	JNB
MERCURY	<0.25	0.25	mg/kg dry	SW-846 7471A	12/26/2004	KSL
NICKEL	17	1.2	mg/kg dry	SW-846 6010	12/28/2004	JNB
SELENIUM	<12	12	mg/kg dry	SW-846 6010	12/29/2004	JNB
SILVER	<2.9	2.9	mg/kg dry	SW-846 6010	12/28/2004	JNB
THALLIUM	<5.9	5.9	mg/kg dry	SW-846 6010	12/29/2004	JNB
VANADIUM	15	1.2	mg/kg dry	SW-846 6010	12/28/2004	JNB
ZINC	40	1.2	mg/kg dry	SW-846 6010	12/29/2004	JNB

Hexavalent Chromium - Increased detection limit due to highly colored sample which interfered with test methodology.

R.I. Analytical Laboratories, Inc.
CERTIFICATE OF ANALYSIS

Hoffman Engineering, Inc.
 Date Received: 12/22/2004
 Work Order #: 0412-19467

Approved by: _____

Data Reporting

Sample # 004

SAMPLE DESCRIPTION: TP-D

SAMPLE TYPE: COMPOSITE

SAMPLE DATE/TIME: 12/18/2004

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
HEXAVALENT CHROMIUM	<3.8	3.8	mg/kg dry	SW-846 3060A	12/22/2004	EC
TRIVALENT CHROMIUM	89	1.9	mg/kg dry	CALCULATION	12/30/2004	SM
TOTAL METALS						
ANTIMONY	<10	10	mg/kg dry	SW-846 6010	12/29/2004	JNB
ARSENIC	<6.3	6.3	mg/kg dry	SW-846 6010	12/29/2004	JNB
BARIUM	52	1.3	mg/kg dry	SW-846 6010	12/28/2004	JNB
BERYLLIUM	0.32	0.06	mg/kg dry	SW-846 6010	12/28/2004	JNB
CADMIUM	<0.32	0.32	mg/kg dry	SW-846 6010	12/29/2004	JNB
CHROMIUM	89	1.9	mg/kg dry	SW-846 6010	12/28/2004	JNB
COPPER	79	3.2	mg/kg dry	SW-846 6010	12/28/2004	JNB
LEAD	12	2.5	mg/kg dry	SW-846 6010	12/28/2004	JNB
MANGANESE	470	1.3	mg/kg dry	SW-846 6010	12/28/2004	JNB
MERCURY	<0.25	0.25	mg/kg dry	SW-846 7471A	12/26/2004	KSL
NICKEL	45	1.3	mg/kg dry	SW-846 6010	12/28/2004	JNB
SELENIUM	<32	32	mg/kg dry	SW-846 6010	12/29/2004	JNB
SILVER	<6.3	6.3	mg/kg dry	SW-846 6010	12/28/2004	JNB
THALLIUM	<6.3	6.3	mg/kg dry	SW-846 6010	12/29/2004	JNB
VANADIUM	14	1.3	mg/kg dry	SW-846 6010	12/28/2004	JNB
ZINC	37	1.3	mg/kg dry	SW-846 6010	12/29/2004	JNB

Hexavalent Chromium - Increased detection limit due to highly colored sample which interfered with test methodology.

CHAIN OF CUSTODY RECORD

R.I. Analytical Laboratories, Inc.

41 Illinois Avenue
Warwick, RI 02888
Tel: 800-937-2580
Fax: 401-738-1970

131 Coolidge St, Bldg. 2
Hudson, MA 01749
Tel: 888-228-3334
Fax: 978-568-0078

Date Collected	Time Collected	Field Sample Identification	Grab or Composite	# of Containers & Type ¹	Preservation Code ^P	Matrix Code ^M	ICP Metal Scan ^K	Antimony	As	Barium	Beryllium	Cadmium	Chromium	Hexavalent Chromium	Copper	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
12/18/07		TP-A	C	16 NP S		S	X																
12/18/07		TP-B	C	16 NP S		S	X																
12/18/07		TP-C	C	16 NP S		S	X																
12/18/07		TP-D	C	16 NP S		S	X																

Client Information
 Company Name: Hoffman Engineering
 Address: 640 Ten Rod Road
 City / State / Zip: North Kingstown, RI 02852
 Telephone: 294-9023 Fax: 294-1288
 Contact Person: Mr. Robert Hoffman

Project Information
 Project Name: *Farmer*
 Project Number: *Forrest Hills Nursery D77 Bridge Rd N Kingstown*
 Report To: *Bob Hoffman* Phone:
 Sampled by: *Bob Hoffman*
 Quote No:
 Email address:

Relinquished By	Date	Time	Received By	Date	Time
<i>Spurge</i>	12/22/07		<i>Julie C. EDL</i>	12-22-07	0730

Turn Around Time
 Normal EMAIL Report
 Rush 5 Business days. Possible surcharge
 Rush _____ (business days)

Lab Use Only
 Sample Pick Up Only
 RIAL sampled; attach field hours
 Shipped on ice
 Workorder No. *01010101*

Printer Comments
 Circle if applicable: GW-1, GW-2, GW-3, S-1, S-2, S-3 MCP Data Enhancement QC Package? Yes No
 Must meet the RIDEM Residential Direct Exposure Standards for all detection limits
 * Metals taken from attached sheet. *01010101*

Container Types: P=Poly, G=Glass, AG=Amber Glass, V=Vial, St=Sterile
Preservation Codes: NP=None, N=HNO₃, H=HCl, S=H₂SO₄, SH=NaOH, SB=NaHSO₄, M=MeOH, T=Na₂S₂O₃, Z=ZnOAc, I=Ice
Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, Sl=Sludge, A=Air, B=Bulk/Solid, O=



CERTIFICATE OF ANALYSIS

Hoffman Engineering, Inc.
Attn: Mr. Robert Hoffman
640 Ten Rod Road
Unit #3
North Kingstown, RI 02852

Date Received: 11/4/11
Date Reported: 11/8/11
P.O. #:
Work Order #: 1111-21843

DESCRIPTION: FOREST HILL PROPERTY

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory with the attached results.

Reference: All parameters were analyzed by U.S. EPA approved methodologies.
The specific methodologies are listed in the methods column of the Certificate Of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.
The Certificate of Analytsis shall not be reproduced except in full, without written approval of R.I. Analytical.
Results relate only to samples submitted to the laboratory for analysis.
Test results are not blank corrected.

Certification #: RI-033, MA-RI015, CT-PH-0508, ME-RI015
NH-253700 A & B, USDA S-41844

This Certificate represents all data associated with the referenced work order and is paginated for completeness. The complete Certificate includes one attachment; the original Chain of Custody.

If you have any questions regarding this work, or if we may be of further assistance, please contact our customer service department.

Approved by:

Sharon Baker
MIS / Data Reporting Manager

enc: Chain of Custody

R.I. Analytical Laboratories, Inc.**CERTIFICATE OF ANALYSIS**

Hoffman Engineering, Inc.
Date Received: 11/4/11
Work Order #: 1111-21843

FOREST HILL PROPERTY

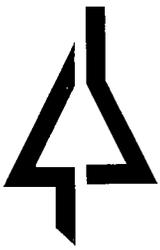
Sample # 001

SAMPLE DESCRIPTION: PROPOSED ROAD BASE

SAMPLE TYPE: COMPOSITE

SAMPLE DATE/TIME: 11/04/2011

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
Total Metals						
Manganese	290	0.69	mg/kg dry	SW-846 6010	11/8/11	PJC
Moisture	11		%	SM2540 G.	11/8/11	PJC



R.I. Analytical

Specialists in Environmental Services

CERTIFICATE OF ANALYSIS

Hoffman Engineering, Inc.
Attn: Mr. Robert Hoffman
640 Ten Rod Road
North Kingstown, RI 02852

Date Received: 01/03/2005
Date Reported: 01/06/2005
P.O. #:
Work Order # 0501-00026

DESCRIPTION: FORMER FOREST HILL NURSERY DRY BRIDGE ROAD - NORTH KINGSTOWN

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory with the attached results.

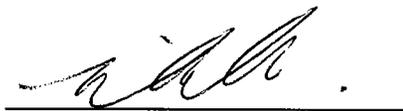
Reference: All parameters were analyzed by U.S. EPA approved methodologies and all NELAC requirements were met. The specific methodologies are listed in the methods column of the Certificate Of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.

Certification #: RI-033, MA-RI015, CT-PH-0508, ME-RI015
NH-253700 A & B, USDA S-41844, NY-11726

If you have any questions regarding this work, or if we may be of further assistance, please contact us.

Approved by:



Data Reporting

enc: Chain of Custody

R.I. Analytical Laboratories, Inc.
CERTIFICATE OF ANALYSIS

Hoffman Engineering, Inc.
 Date Received: 01/03/2005
 Work Order #: 0501-00026

Approved by: 
 Data Reporting

Sample # 001

SAMPLE DESCRIPTION: TP-A

SAMPLE TYPE: COMPOSITE

SAMPLE DATE/TIME: 12/18/2004

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
TOTAL METALS						
ARSENIC	1.8	0.28	mg/kg dry	EPA 200.9	01/06/2005	KSL

Sample # 002

SAMPLE DESCRIPTION: TP-B

SAMPLE TYPE: COMPOSITE

SAMPLE DATE/TIME: 12/18/2004

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
TOTAL METALS						
ARSENIC	1.6	0.27	mg/kg dry	EPA 200.9	01/06/2005	KSL

Sample # 003

SAMPLE DESCRIPTION: TP-C

SAMPLE TYPE: COMPOSITE

SAMPLE DATE/TIME: 12/18/2004

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
TOTAL METALS						
ARSENIC	2.5	0.29	mg/kg dry	EPA 200.9	01/06/2005	KSL

Sample # 004

SAMPLE DESCRIPTION: TP-D

SAMPLE TYPE: COMPOSITE

SAMPLE DATE/TIME: 12/18/2004

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
TOTAL METALS						
ARSENIC	2.4	0.31	mg/kg dry	EPA 200.9	01/06/2005	KSL

