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U.S. Army
Corps of Engineers

New England District
Concord, Massachusetts

PRE-DESIGN SUMMARY

1.5-Mile Removal Action - Phase 2

DCN: GE-050202-AAZL

JULY 2002

Site-Specific Environmental Remediation Contract
General Electric (GE)/Housatonic River Site
Pittsfield, Massachusetts

Contract No. DACW33-00-D-0006
Task Order 0005

02P-0425-1

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1.5-MILE REMOVAL ACTION—PHASE 2
SITE-SPECIFIC ENVIRONMENTAL REMEDIATION CONTRACT (SSERC)
GE/HOUSATONIC RIVER SITE
PITTSFIELD, MASSACHUSETTS

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LIST OF ACRONYMS

ARARs	applicable or relevant and appropriate regulations
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
EE/CA	engineering evaluation/cost analysis
FEMA	Federal Emergency Management Agency
GIS	Geographic Information System
HEC-RAS	USACE Hydrologic Engineering Center River Analysis System
MASSGIS	Massachusetts Geographic Information System
NJDEP	New Jersey Department of Environmental Protection
PCB	polychlorinated biphenyl
SSERC	Site-Specific Environmental Remediation Contract
USACE	U.S. Army Corps of Engineers
WESTON	Weston Solutions, Inc.

SECTION 1

INTRODUCTION

1. INTRODUCTION

1.1 PROJECT DESCRIPTION

The 1.5-Mile Removal Action for the Housatonic River in Pittsfield, MA, is being conducted under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The second phase of this removal action includes approximately 3,800 linear feet from the proposed temporary dam at Transect 92 to Transect 168 of the river. The general work activities included as part of the second phase include site preparation, surveying, water diversion, dewatering, water treatment, soil and sediment excavation, removal and consolidation/disposal, river channel restoration, and site restoration.

The Removal Action addresses polychlorinated biphenyl (PCB) contaminated riverbank soil and riverbed sediments that have been determined to exceed allowable risk levels. To accomplish excavation and removal of these materials, a temporary dam and bypass piping and pumping system will be installed to capture and convey water through the length of the Phase 2 work area. The piping will be extended as work progresses and will be moved as needed to permit access to all areas of the riverbed. Removal activities will begin at the temporary dam and will progress downstream alternating between the east and west banks. Restoration work will closely follow removal activities. Areas will be surveyed prior to and following excavation in order to quantify the volume of material removed. In general, soil and sediment will be excavated to a depth of approximately 3 to 4 feet and disposed of by category (Toxic Substance Control Act [TSCA] or Non-TSCA). After excavation and removal is completed within a particular area, the removed soil and sediment will be replaced with appropriate backfill materials. Riverbed habitat enhancement structures will be installed and the banks will be restored by re-planting and installation of bioengineered and/or “armor or retaining” type structures, as applicable. Work will proceed sequentially down the river, with each area being successively isolated, remediated, backfilled, and restored.

1.2 PURPOSE/OBJECTIVES

This Pre-Design Summary covers activities to be conducted during the second phase of the 1.5-Mile Removal Action. In accordance with Specification Section 01355 (Environmental Protection) of the contract documents, the summary must include descriptions of how the General Contractor will meet, to the extent practicable, the substantive potions of all applicable or relevant and appropriate federal and state environmental laws and regulations (ARARs) as listed in the project ARARs table.

The activities in this Pre-Design Summary include the following: (1) evaluating existing conditions, (2) collecting data, and (3) performing pre-design work necessary to define the scope required to support the basis of design report and subsequent Design documents for the project. The remedial action for in-river work within the subject reach will include stream diversion by installing a temporary dam across the river and bypass pumping of stream flows; dry excavation of river sediments; potential additional stream diversion structures to control groundwater infiltration; evaluation and protection of existing structures; excavation of bank soil; and slope stabilization using armor, bioengineered protection, or retaining structures. In addition, Weston Solutions, Inc. (WESTON$_{SM}$), formerly Roy F. Weston, Inc. will investigate the feasibility of reusing cobbles and boulders excavated in Phase 2 by performing a pilot-scale boulder/cobbler washing test. The pilot test will be performed during Phase 1 construction activities and will utilize boulders and cobbles excavated from that area. The test will help establish the feasibility of washing and reusing the boulders and cobbles, which is expected to result in cost savings for both disposal of boulders and cobbles and procuring these materials for river bed restoration.

WESTON performed a complete evaluation/identification of structures that may require underpinning/excavation support systems to allow activity within the limits of work established in the pre-design phase. Development of underpinning/excavation support concepts will be provided during the final design.

Also evaluated were potential options for “hard” (i.e., armor, retaining) structures along the riverbanks for stabilizing banks, providing erosion protection, and minimizing loss of flood storage. The engineering evaluation/cost analysis (EE/CA) currently identifies 2,500 lineal feet of concrete gravity retaining walls to be used as hard structures. This pre-design evaluation will

identify potential alternate hard structures to be evaluated in detail in later stages of the final design. The evaluation of alternate systems to the EE/CA design will include soil-nailed slopes, augured/driven piles with precast façade (lagging), stone block retaining slopes, and similar types of walls. Finally, conceptual level sketches for hard structures will be provided herein.

SECTION 2

REVIEW OF BUILDING STRUCTURES

2. REVIEW OF BUILDING STRUCTURES

2.1 INTRODUCTION

Existing structures along the riverbank within the Upper Reach of the Housatonic River between Transects 92 to 168 were visually reviewed by WESTON on 02 and 03 April 2002. The review centered on the necessity for structural support of the foundation or demolition and possible replacement of those structures, which may be impacted by the removal action. Consideration was given to the structures' existing physical condition, limitations of physical attributes (size and weight of the structure), location of the structure with reference to potential remediation method(s) identified, cost of removing/replacing the structure, temporary and long-term slope stability during/after construction, construction schedule, and professional judgments. Accordingly, eleven structures were immediately identified as potentially being impacted. The findings of the visual inspection of these 11 structures are summarized in Table 2-1. The visual inspection was limited to review of the building exteriors and in some instances structures were observed from a distance due to limited or restricted access to some properties. Refer to Attachment 1 for the locations of these structures and Attachment 2 for photographs of each of the structures.

Table 2-1

Structure Survey

Building No.	Address	Description	Existing Conditions	Potential Impact of Construction	Proposed Action
1	103 Elm Street (Laundromat)	▪ 1-1/2 story cinder block and wood frame ▪ slab-on-grade	▪ Good to excellent	Excavation of contamination may result in undermining of the foundation.	Install temporary retaining structure, if required
2	103 Elm Street (Car Wash)	▪ 2 story decorative cinder block and wood frame ▪ slab-on-grade	▪ Good to excellent	Excavation of contamination may result in undermining of the foundation.	Install temporary retaining structure, if required
3	53-59 Elm Street (Residence - apartments)	▪ 2-1/2 story brick ▪ stone and mortar foundation ▪ basement (floor elevation unknown)	▪ Good – minor cracking around windows. Evidence of potential water damage.	Excavation of contamination will likely not impact structure.	Temporarily close driveway o facilitate excavation activities.
	(Garage)	▪ 1 story decorative cinder block ▪ slab-on-grade	▪ Poor – cracks in walls at building corners extending from the foundation upward.	Excavation of contamination may result in undermining of the foundation	Demolish and replace structure, if required. Limited access and vibration concerns make use of a temporary retaining structure unlikely. It is probably more economical to replace the structure.
4	37 Elm Street (Supermarket – Harry's)	▪ 2 story brick building on concrete foundation wall ▪ No evidence of basement or crawl space	▪ Fair – cracks observed along eastern wall, likely due to foundation settlement	Excavation of contamination may result in undermining of the foundation.	Install temporary retaining structure, if required
5	50-56 Elm Street – White Building (Commercial property - 50 & 54 Precision Golf, 56 Chameleon, & 52 is an apartment)	▪ 2-1/2 story block and frame building ▪ basement (floor elevation ≈ 983.26 ft.)	▪ Good – no evidence of cracking	Excavation of contamination may require the removal of an existing wood crib wall from the side/front of the building which may result in undermining of the foundation.	Install temporary retaining structure, if required.

Table 2-1

Structure Survey
(Continued)

Building No.	Address	Description	Existing Conditions	Potential Impact of Construction	Proposed Action
6	14 High Street (Residence - private)	▪ 2-1/2 story block and frame building ▪ basement (floor elevation unknown)	▪ Good to fair – one crack observed at northeast corner. Crack is suspected to be from settlement of a small retaining wall attached to the building.	Excavation of contamination from near vertical bank may necessitate flattening of slope to achieve required stability.	Install temporary retaining structure to limit extent of excavation and to protect building, if required.
7	20 High Street (Residence - private)	▪ 1-1/2 story wood framed building ▪ basement (floor elevation unknown)	▪ Poor – significant building settlement was observed. Structure appears to be rotating towards river. Timber crib wall supporting bank has failed along edge of property.	Removal of failed crib wall to allow excavation of contamination will require the flattening of the bank or installation of a temporary retaining structure.	Installation of a temporary retaining structure between the building and the bank will be very challenging and could result in damage to the building. It is likely economically more feasible to demolish the building and either install the retaining structure or flatten the bank.
8	Deming Street (Commercial property - Waconah Welding)	▪ 3 story steel frame building ▪ concrete piers poured directly on stone foundation wall ▪ basement (floor elevation ≈ 972.75 ft.) ▪ foundation walls extend below water level	▪ Fair to good – no evidence of settlement. Building is constructed over a former tannery.	Contaminated material may be present adjacent to exterior walls.	Limit horizontal extent of excavation (5 feet ±) and limit vertical excavation depth to bearing elevation of foundation. No excavation below foundations will be permitted.
9	19-21 Dawes Avenue (Mini-market - Dawes Avenue Variety, & apartments)	▪ 4 story building with exposed concrete foundation and brick façade. ▪ basement (floor elevation ≈ 970.07 ft.) ▪ building foundation appears to be tied to bridge abutment	▪ Good – one crack, probably due to settlement.	Contaminated material may be present adjacent to exterior walls.	Limit horizontal extent of excavation (5 feet ±) and limit vertical excavation depth to bearing elevation of foundation. No excavation below foundation will be permitted.

Table 2-1

Structure Survey
(Continued)

Building No.	Address	Description	Existing Conditions	Potential Impact of Construction	Proposed Action
10	198 Appleton Avenue (Residence - apartments)	▪ 2-1/2 story timber framed building ▪ stone and mortar foundation ▪ basement (floor elevation unknown)	▪ Fair – no visible evidence of settlement	Excavation of contaminated material may impact building. However, foundation elevation should be below excavation and therefore not pose a concern.	Ensure excavation does not undermine foundation of building. If necessary, increase slope inclination in localized area during construction and accept a lower, short-term factor-of-safety against slope instability.
	(Garage)	▪ 1 story timber framed building ▪ slab-on-grade	▪ Poor – cracks visible at the northern and western corners	Excavation of contaminated material may undermine building.	Based on economic considerations, it is likely more feasible to demolish and replace the structure than attempt to protect it during excavation activities via the installation of a temporary retaining structure.
11	15 Dwight Street (Garage)	▪ 1 story wood framed building with plywood sheathing. ▪ slab-on-grade	▪ Poor – the building exterior appears to be highly weathered and possibly unfinished.	Excavation of contaminated material may undermine building.	Based on economic considerations, it is likely more feasible to demolish and replace the structure than attempt to protect it during excavation activities via the installation of a temporary retaining structure. It may be possible to complete the excavation without impacting the building depending on required extent of excavation.

Notes:

1. Existing conditions of structures was based on a visual inspection of the building exterior.
2. Construction impacts will be controlled by the limit of excavation and slope stability analysis.
3. Proposed actions will be based on the results of slope stability analyses and economic considerations.

SECTION 3

DESCRIPTION OF CRITICAL RIVERBANK AREAS

3. DESCRIPTION OF CRITICAL RIVERBANK AREAS

3.1 CONDITION OF EXISTING SLOPES

Prior to describing specific areas of the site, a number of general statements and comments are warranted with regard to the condition of the existing slopes. The following statements are based on visual observations made by WESTON at the site in April 2002.

3.1.1 Vegetative Cover

Essentially all riverbanks within the Phase 2 reach are well vegetated with a combination of young and mature trees and underbrush. The ground surface was covered with a blanket of leaves, branches, and other natural debris. Many trees were observed to be leaning towards the river, indicating possible slope movement. At the toe of slope where the banks have been eroded and are near vertical, vertical, or undercut, vegetation is sparse to non-existent.

3.1.2 Erosion and Undermining of Slope

In many areas of the site, the toe of the riverbank has been eroded from below the water level to, in some cases, up to approximately 4 feet above the water level. At the time of the site visit, the water was reportedly at or about "normal" level. As a result of erosion, many areas of the riverbank have been undermined and are currently morphing. It appears that root matrices from trees on the slopes contribute, at times significantly, to slowing and perhaps preventing further erosion and potential failure of the riverbank slope. Roots from trees that are rooted at or just above the waterline are often exposed and overhanging the river. Continued erosion of the soil will cause these trees to fall into the river, which will then expose the slope to further erosional forces.

3.1.3 Slope Failure

There are a number of failure mechanisms to describe slope failures. A rapid failure, which occurs as a result of some form of external force applied to the slope (e.g., application of a surcharge load, movement of slope material, changes in moisture conditions, or a seismic event),

may be described as instantaneous failures. A slow moving failure, which occurs over time and which may be as a result of past actions (e.g., erosion), can be described as creep failure.

The slope failures observed at the site are likely creep-type failures and are a result of shear forces generated by the moving water eroding the stabilizing soil mass at the toe of the slope. The stabilizing wedge of material at the toe of a slope is referred to as the toe buttress and, when removed, exposes the slope to potential failure, depending on slope geometry and the soil properties (see Figure 3-1). At a minimum, if the toe buttress is removed, the theoretical factor-of-safety against slope instability is reduced. While the slopes may have been stable when first constructed, the erosion of the toe of slope material has certainly reduced stability in many locations.

3.1.4 Stability Requirements

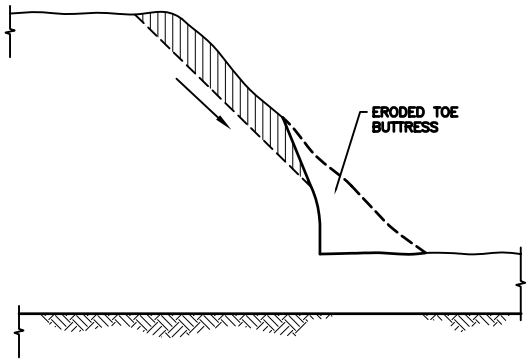
When considering slope stability, a number of cases or conditions can be evaluated. These include construction stability, short-term stability, seismic stability, and long-term stability. For each of these scenarios, the range of recommended factor-of-safety values is generally defined. Table 3-1 presents generally accepted factor-of-safety values for each of the conditions listed.

Table 3-1

Range of Factor-of-Safety Values

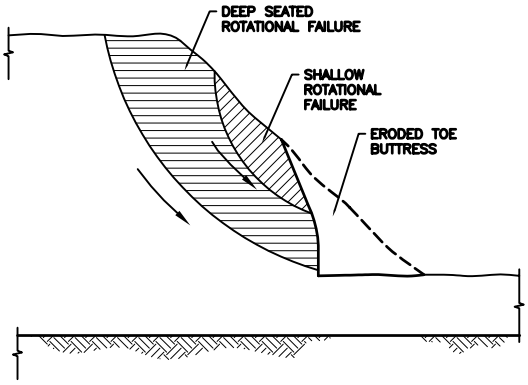
Factor-of-Safety		
Slope Stability Condition	Range	Average
Construction	1.0 to 1.3	1.15
Short-term	1.1 to 1.4	1.25
Seismic	1.0 to 1.2	1.1
Long-term	>1.5	>1.5

It is emphasized that the values presented are commonly used but site-specific circumstances may warrant decreasing or increasing the values. If not dictated by regulations or codes,



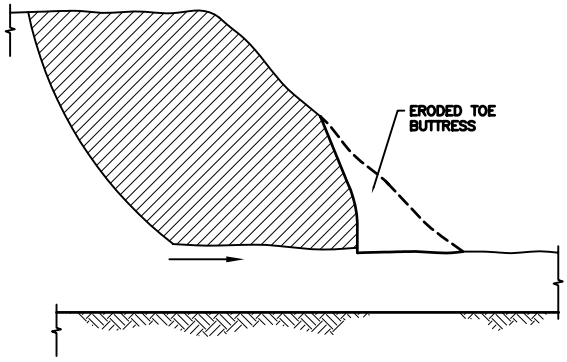
VENEER FAILURE

N.T.S.



ROTATIONAL FAILURE

N.T.S.



TRANSLATIONAL FAILURE

N.T.S.

POTENTIAL SLOPE
FAILURE MECHANISMS

WESTON SOLUTIONS

DRAFT–CONFIDENTIAL–FOIA EXEMPT

HOUSATONIC RIVER PROJECT
PITTSFIELD, MASSACHUSETTS

PHASE 2 1.5 MILE PRE-DESIGN

FIGURE 3-1

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professional judgment must be used to determine an acceptable factor-of-safety for a given situation.

3.2 LIMITS OF REMEDIATION AND EXCAVATION

The limit of remediation and limit of excavation are defined as follows:

- Limit of remediation – the limit to which contaminated material must be removed to comply with the requirements of the Action Memorandum.
- Limit of excavation – the limit to which contaminated material must be removed in order to ensure all contaminated material is removed to the limit of remediation.

While the limit of remediation is established by evaluation of analytical data, risk assessment, regulations, etc., the limit of excavation will be established based on engineering requirements and construction considerations. The limit of excavation will always be at least equal to or greater than the limit of remediation. The impact of the limit of remediation on implementation of the removal action is significant. As the limit of remediation changes, so does the need for installation of temporary retaining structures to maintain safe working conditions and to prevent damage to nearby structures.

The topographic survey (transects) that was performed in 1998 is the baseline survey defining the limit of remediation. As the river has changed due to erosion and deposition, it is not possible, by visual inspection of the riverbanks, to conclude that removal of 2 to 3 feet of material will be required to achieve remediation goals. Rather, it will be necessary to compare the baseline survey with a recent survey (2002) and analytical test results in order to determine the actual depth and limit of remediation.

Due to the changing conditions in the river, the recommendations presented in this summary should be considered preliminary. Upon receipt and review of the latest topographic survey and establishment of the limit of remediation, recommendations can be refined and presented. It should also be noted that the topographic surveys (1998 and 2002) will not reflect the actual conditions that will be encountered in the field at the time of construction, as the river course continues to evolve. Therefore, the remedial activities should be designed to provide some flexibility to accommodate changes in the shape and slope of the riverbed and banks.

3.3 REMEDIAL AREAS

Upon completion of a visual inspection of the riverbed and riverbanks, we divided the reach into a limited number of segments based on generally similar topographic conditions. Conditions that were observed included steep and high slopes, vertical cuts as a result of erosion, mudflat areas, bridge abutments, buildings, and retaining walls. An effort was made to minimize the number of segments defined during this effort to allow for a more efficient evaluation of both existing conditions and future remediation activities.

A general description of the east and west riverbanks follows. The title of each segment describes the location along that segment of the river. The description of segments begins at Transect 92, the approximate location of the proposed temporary dam and continues downstream to Transect 168, the limit of the Phase 2 work.

Transects 92 to 94 East Bank – Steeply to modestly sloping (1.1H:1V to 1.7H:1V) with tree cover. Some erosion at the toe of slope was visible and it is possible that a vertical cut is present below the water level. Most of the area beyond the top of the slope is an open field with the exception of a single-story block building and an associated utility pole.

Given the open area beyond the top of the slope, it is likely that the slope in this area can be flattened, if necessary, to accommodate the remedial design. Relocation of the utility pole may be required. The building appears to be at a sufficient distance (about 40 feet) from the top of the slope so that temporary protection of the Building 1 foundation will not likely be required; however, the need for temporary protection will be assessed further in the design. Nevertheless, the building foundation type and size should be determined. The rip-rap lining to be placed at the termination of Phase 1 can likely be continued into this area before transitioning to a wall in the next segment.

Transects 94 to 100 East Bank – Steeply sloping (1.2H:1V to 1.6H:1V) with tree cover and slabs of concrete debris on the surface. There do not appear to be signs of significant erosion in this area. It is likely the concrete slabs placed on the slope and into the river have slowed severe erosion of the slope. The slope height is between about 15 and 20 feet (El. 968 to El. 985). The Elm Street Car Wash (Building 2) is located about 50 feet from the top of the slope. A row of

young evergreen trees is located along the top of the slope as well as equipment associated with the car washing operation (vacuum cleaners and associated underground lines). Depending on the extent of removal activities, it may be necessary to support the foundation of this car wash structure during construction. After completion of slope stability calculations, it may be necessary to determine the foundation type and size. This may include reviewing design documents or construction records, by discussions with the owner and contractor, or by excavating test pits immediately adjacent to the structure.

Based on visual observations, minimal erosion and sloughing of the slope, no apparent tension cracks in the pavement near the top of slope, and trees growing near vertical, it appears that the existing slope is relatively stable. An initial step of the design will involve determining the factor-of-safety against slope failure under existing conditions. Once determined, procedures can be developed to ensure that the minimum required factor-of-safety against slope instability is achieved both during and post-construction.

Assuming the entire slope length must be remediated, equipment operating from the riverbed will clear the slope and then, starting from the top of the slope, remove debris, concrete slabs, and soil. Because of the steepness and height of the slope, the installation of a temporary earth retaining wall may be required to prevent a global slope failure and to protect the structure. The need for a temporary retaining structure will be determined upon completion of slope stability analyses. Restoration will likely require the installation of a permanent wall both for erosion protection and slope stabilization at the toe of slope.

Transects 100 to 105 East Bank – Generally less steeply sloping (1.8H:1V to 2.3H:1V) than the previous section but with a number of isolated areas that are near vertical as a result of recent filling activities. There is a narrow bench visible through part of the area. Although the bank in this area is steep, the area beyond the top of the slope is significantly flatter and is made up of a grassy area and a paved parking lot. The slope appears to be generally stable, however, the recently placed fill (yard waste, leaves, and brush) is vulnerable to erosion and could slide into the river if disturbed. There is a narrow, relatively flat bench area that can be used during remediation activities to limit encroachment into the parking lot and allow for an increase in flood storage capacity.

It is likely that stable slopes can be excavated in this area (given the open space at the top of the slope) and lined with hard armor to prevent erosion. Installation of a permanent wall may be warranted, based on economic considerations, to limit the excavation and disposal of contaminated materials.

Transects 105 to 107 East Bank – Moderately (1.4H:1V) to steeply (1H:1V) sloping area with a partial bench; wooded. The remediation of the slope will likely require the demolition of a garage that is located in close proximity to the top of the slope. This area will likely be a transition from a sloping embankment to a vertical or near vertical retaining wall approaching the Elm Street Bridge. The house (Building 3) located in this area should not be impacted; however, driveway access may be temporarily restricted.

Transects 92 to 103 West Bank – Short, near vertical drop into river (1H:1V); flat bench (2H:1V to 6H:1V); wooded. The flat area immediately adjacent to the river bank will allow for the remediation of this area with little concern for slope stability as the slope inclination can be flattened without any major impacts on adjacent property. There appears to be a vertical cut at the riverbank but the bank appears to be only 3 to 5 feet high. Remediation in this area can likely contribute to increasing storage capacity lost in other areas by creating flatter slopes.

Transects 103 to 108 West Bank – Steeply to modestly sloping (2H:1V); undercut at toe; possible collapsed stone wall at mid-slope; possible failed timber crib wall at toe of slope; possible rock outcrop; erosion scars caused by run-off from paved parking lot. The potential for slope instability in this area is of concern. The toe of the slope has been severely eroded, which has resulted in the undermining of the slope. Failure of the slope is evidenced by the rotation of concrete bollards, misalignment of a billboard, rotation of fence posts, and tension cracking of the asphalt pavement. The failure of this slope is a slow, creep failure and will continue until the toe of the slope is stabilized by placement of a buttressing fill (e.g., rip-rap or retaining wall) or the slope inclination is flattened.

The approach to remediating this area will depend greatly on the limit of remediation. Minor excavation at the toe of slope can likely be achieved with little concern for slope failure. However, the removal of significant material from the toe area may present stability problems, which may require the removal of soil from the slope, particularly towards the top of the slope

and beyond. Regardless of the methods employed to remediate the slope, the restoration of the slope will be required to prevent further movement of the slope. Because of the proximity to the Elm Street Bridge and considering the vertical face at the toe of slope, a permanent wall will likely be required.

Transects 108 to 109 East Bank – Cobble slope supporting concrete slab; concrete slab, slightly undermined; timber crib wall in fair condition supporting paved parking lot (vertical to 0.5H:1V). The crib wall is approximately 12 feet high by 60 feet long. The wall appears to be founded on a concrete slab, which in turn is underlain by a cobble covered slope. The wall is in fair condition; however, the asphalt parking lot that the wall supports is showing signs of distress. Tension cracks, a depression in the parking lot, and a slight lean/rotation of the concrete curbing at the edge of the asphalt are evidence that some movement of the entire mass that is supported by the wall has occurred. Because the toe material that supports the wall must be removed to accomplish the remediation goals, the wall and the soil mass it supports will become even more unstable. To prevent failure of the wall during construction, it will be necessary to support the wall or to remove and replace the wall. If the wall and associated backfill were in stable condition with no visible evidence of movement, support of the wall might be warranted. In addition, working at the toe of the wall may result in undermining of the wall, which could cause movement and possible failure of the wall. The risk of the wall moving and the resulting liability associated with removing any thing more than a thin veneer of material from the toe is likely very high. Considering the existing conditions, removal and replacement of the wall is likely the most technically sound approach. Removal of the wall may require installation of a temporary support wall, (e.g., soldier pile and lagging) to protect the White Building, (Building 5) during construction if access and slope stability considerations do not permit open cutting of the temporary construction slope. This operation may restrict access to the White Building parking lot.

Restoration of the area will require the installation of a permanent wall. It may be possible to construct a two-tiered wall. The lower wall would replace the existing cobble slope and would be extended to a defined elevation to prevent erosion. A small bench would then be installed on which vegetation could be planted and the second wall founded. The second wall, being above

the water level, could be constructed from materials that allow incorporation of vegetation (e.g., geoweb) or similar type wall.

Transects 109 to 114 East Bank – Steeply sloping with some vertical toe areas and areas at mid-slope near vertical due to filling of the slope; wooded. In this area, the slope is approximately 15 to 20 feet high and extremely steep (vertical to 1H:1V). Two buildings are located in close proximity to the top of slope within this area, Buildings 6 and 7. Building 6 is set back approximately 35 feet from the top of the slope and would likely be outside the area impacted by remediation activities. Building 7, on the other hand, is located within 5 to 10 feet of the top of the slope. The slope in the area of Building 7 is supported by a timber crib wall that has failed. Trees and roots are contributing significantly to the stability of the slope in this area. Flattening of the slope to a safe working cut slope would most likely impact the building. Installation of a temporary foundation support system to protect the building is not feasible given the close proximity of the building to the top of the bank and the resulting limited access for equipment. Further, the building shows signs of distress and vibrations associated with the installation of a support system would likely cause more damage to the structure. It is recommended that Building 7 be demolished to allow remediation of the slope. An anchored retaining wall may be required to support Building 7, depending on the limit of remediation and the inclination required to achieve a stable slope. A temporary wall could be installed relatively close to the building and the slope flattened in front of the wall or, alternatively, a retaining wall could be installed closer to the top of slope, limiting the volume of soil that is to be removed and maintaining the existing rear yard of Building 7.

A permanent wall will likely be required in this area. Again, a two-tiered wall could possibly be utilized, if space permits, which would allow re-vegetation of the area. Alternately, a slope could be installed which could also be vegetated with appropriate hard armor in the toe area, but this would require the acquisition of a number of properties. If a slope were desirable, soil nails could potentially be used to allow for construction of the slope to a steeper inclination than would be possible without the reinforcing elements.

Transects 108 to 124 West Bank – Steeply sloping with vertical faces at the toe of slope caused by shear forces generated by the river water and wooded. The slopes in this area are high (20 feet

[±]) and very steep (vertical to 1H:1V) near the toe. Because the slope flattens to about 1.5H:1V to 2H:1V at the top and, considering that the toe material that provided a stabilizing buttressing force has been eroded, it will likely be necessary to stabilize the upper section of the slope in this area prior to implementing remedial measures at or near the slope toe. Some areas of localized slough were observed along the slope face with erosion scars caused by discharges from stormwater pipes. Again, the limit of remediation will impact the procedures that will be proposed for the removal of contaminated material from this area and the associated restoration.

If it is necessary to stabilize part or all of the existing slope, the most feasible way to do so is with mechanical soil anchors (e.g., Chance or Manta Ray anchors). However, these anchors may refuse on obstructions within the soil mass (historically, the soil that forms the slope is fill comprised of soil and construction debris) and so require multiple attempts to install an appropriate number of anchors. Grouted anchors could more easily be installed through soil containing debris; however, access for equipment would require the construction of a number of mid-slope benches 20 to 30 feet wide. This alternative is not attractive due to the amount of over-excavation that would be required. A third option would involve flattening the slope by removing material over the entire length of the slope. This would impact the roadway and would necessitate the installation of a permanent retaining wall to support the roadway while allowing for the construction of a flatter slope. Again, this option is not desirable due to impacts to the existing infrastructure and the over-excavation of material. The limit of remediation will have a significant impact on the temporary construction measures that will be implemented in this area.

The option taken to provide for a stable slope during removal activities will dictate the restoration measure(s). It is highly likely that a wall will be required. The height of the wall may vary depending on the wall type and the inclination required to ensure a stable slope.

Transects 124 to 130 and 142 to 150 West Bank – Generally flatter with some limited areas of 1H:1V to 1.5H:1V slopes; undercut at toe in some locations; wooded. A small bench along the slope will likely facilitate the construction of a safe working cut slope and therefore negate the need to install a temporary wall or to flatten the entire slope to achieve a safe working inclination. Restoration can likely be achieved by providing a stable slope with appropriate armoring.

Excavations required to achieve safe slope inclinations will not impact any structures in this area. However, two structures (Buildings 8 and 9) within the area are set at the edge of the river. Because the structures' foundation systems are set either on rock or below the river bottom, remediation goals can likely be achieved with minimal or no impact to the integrity of the structures. Staged excavations, i.e., limited horizontal excavation along the foundation walls in conjunction with prompt backfilling of these excavations, will be required to guard against possible damage to the foundations. The vertical limit of excavation along the building foundation walls will be limited to the bearing elevation of the foundation to prevent undermining of the foundation.

Transects 114 to 122 East Bank – Vertical and undercut toe areas; moderate (2H:1V) to steep (0.8H:1V) slope; trees provide support and stability. Remediation activities can possibly be accomplished by excavating slope materials in short segments and backfilling promptly. The limit of remediation will have a significant impact on the measures that will be employed to provide a temporary stable condition throughout this area.

Restoration of the area will likely require the installation of shorter walls (5 to 8 feet) to allow for a steeper slope and therefore minimize or negate encroachment into the roadway. There are few or no flat bench areas that could be used in creating flatter slopes. The toe is highly eroded and must be restored.

Transects 122 to 128 East Bank – Vertical face leading to mudflat area leading to sloping embankment that supports roadway (1.3H:1H to 2.4H:1V). The mudflat area should allow for the creation of a stable slope during and post-construction, providing appropriate armoring or bioengineering measures are used to prevent erosion. The roadway will likely not be impacted in this area except that temporary lane closures may be required. This area may also be suitable to recover storage capacity lost in other areas if material is over-excavated.

Transects 128 to 142 East Bank – Undercut toe area; very steep sections supporting roadway (0.9H:1V to 2H:1V). Although the toe is severely eroded and the slope is steep in some areas, there is no apparent evidence of slope failure. This is likely due to the fact that the slopes are relatively short. The limit of remediation will influence the measures that will be implemented to afford removal of contaminated material. It is likely that the existing material can be cut to a

stable inclination during construction. However, it may be necessary to install short walls to enable construction of slopes with adequate long-term stability. The roadway will likely not be impacted except that temporary lane closures may be required during construction.

Transects 142 to 146 East Bank – Vertical face at toe; mudflat area leading to slope that supports roadway (5H:1V). The mudflat area may allow flattening of the slope to achieve both construction and long-term slope stability and to increase storage capacity. The roadway may be temporarily impacted during remediation activities but temporary support of the roadway is likely unnecessary.

Transects 146 to 150 East Bank – Vertical cut at toe; moderately sloping. It will be necessary to transition from a slope to a wall through this section as the river approaches the Dawes Avenue Bridge. Although the slope is moderately steep (1.6H:1V to 2.5H:1V), it is likely the roadway will not be impacted as a result of remediation activities. With the installation of a wall, it may be possible to flatten and stabilize the slope in this area. A wall is recommended in this area to provide protection for the abutment of the bridge.

Transects 150 to 156 East Bank – Short but vertical faces and steep slopes (1.0H:1V to 1.6H:1V). It is possible that the slope can be flattened somewhat without impacting major structures. Two garages may fall within the limit of work. Short walls may be required if slopes cannot be flattened to a stable inclination. The area was not accessible and could be viewed only from the Dawes Avenue Bridge.

Transects 156 to 168 East Bank – Vertical bank leading to a flat area (3H:1V to 6H:1V). The slopes in this area can be flattened to provide for stable banks. Stability of slopes during construction should not be of concern. The flat open area may be used to offset losses in storage capacity due to restoration measures implemented upstream or downstream of this area if material is over-excavated.

Transects 150 to 168 West Bank – Short, moderately steep slopes with some vertical faces due to erosion (1.H:1V to 2H:1V). The slope height varies through this area and ranges from moderately steep to vertical slopes that appear to be stable, in part due to the apparent cohesive strength afforded by the root system of the large number of trees. Although the slopes are very

steep in areas, their height is limited (10 feet ±) and so it is likely removal can be accomplished without requiring temporary support. It is probable that material may slough during removal activities and the situation will require attention.

It is likely that the slope can be flattened through most of this area. However, it may be necessary to install walls in some locations to minimize and/or eliminate encroachment into lawn areas.

3.4 ARMOR OPTIONS

Armor used to restore the riverbed and riverbanks will be divided into three broad categories: soft armor, hard armor, and hybrid armor. Soft armor is used to describe restoration techniques that will use primarily vegetative options (bio-engineering). Hard armor is used to describe techniques that will consist of natural or man-made materials comprised of hard materials such as rock, stone, concrete, and synthetic products. Hybrid armor is used to describe those options that use a combination of soft and hard armor.

Soft armor will be used to the greatest extent practicable in order to return disturbed areas to a vegetated condition. The use of soft armor will be limited to those areas that will not experience high shear forces during normal flow conditions within the river. In areas of high shear forces, hard armor will be used. In some locations, the use of a hybrid soft armor-hard armor system may be used to take advantage of specific features of both types of armoring.

Soft armor may include native grass, plants, cuttings and shrubs, natural or synthetic erosion control mats, or bio-logs. Soft armor options will be developed primarily by Woodlot Alternatives, Inc. As bio-engineered and re-vegetation measures and options are being evaluated by others, the focus of the remainder of this discussion will center on hard and hybrid armor.

The following is a partial list of materials that may be considered for use in restoration of the riverbed and riverbanks:

- Rip-rap.
- Gabion baskets.
- Reno mattresses.
- Interlocking concrete blocks.
- A-Jacks Concrete Armor Units.

- Grout-filled geotextile blankets.
- Soil nailing.
- Steel sheetpile.
- Soldier pile and lagging.
- Cast-in-place reinforced concrete walls.
- Precast concrete walls.
- Concrete crib walls.
- Bin walls.
- Cellular confinement systems.

During the design phase, a number of the examples listed will be evaluated to determine their suitability for use on this project. Consideration will be given to technical appropriateness, practicality of installation, cost, aesthetics, river biosis, river hydraulics, and the ability to incorporate or augment bio-engineering. A number of Figures depicting various wall types and slope protection options are presented in Attachment 4. These options will be initially considered in a Focus Group meeting during the Basis of Design development and only the most promising options will be carried into a detailed evaluation. Those options not considered viable after preliminary analysis and discussion will be dropped from further consideration.

In developing restoration alternatives, economic impacts should also be considered along side engineering and technical evaluations. Because of the high costs associated with disposal of contaminated materials it is desirable to minimize the volume of contaminated materials generated. However, using this, minimization of contaminated material as a basis for establishing removal limits and restoration techniques may not result in the most economical option. For example, it may be more economical to over-excavate portions of the bank thereby generating more contaminated material than necessary to achieve the specified removal goal and construct a stable slope as part of the restoration effort as opposed to minimizing the excavation of contaminated material and constructing a permanent retaining wall. These issues should be considered as the design is completed. Costs for excavation and disposal of contaminated material and for the installation of retaining structures will need to be developed to compare options based on economic considerations.

3.5 TEMPORARY SLOPE SUPPORT

A number of temporary slope support options are available that could be used at the site. These options include steel sheetpile, soldier pile and lagging, temporary steel plates, and possibly soil nailing. A brief description of each of these options follows.

Steel sheetpile—Could be used in areas of the site where the remediation activities are required in close proximity to existing structures or where remediation activities are limited to the lower section of long slopes. The sheetpile could be driven on an alignment that would minimize the volume of soil to be over-excavated during remediation while providing protection for the structure of concern. Depending on soil conditions, slope geometry, and structural loadings, it may be necessary to install tieback anchors to support the slope and structure. Due to the potential presence of debris in the fill that forms the slopes, the use of sheetpile for temporary support may be limited.

When obstructions such as large boulders or concrete rubble are encountered, it is often difficult, if not impossible, to drive sheetpile past the elevation of the obstruction. Steel tips can be installed on the ends of the sheetpile to facilitate driving, but even with these tips, driving past obstructions is difficult and, at times, impossible. In addition, vibration and noise generated by the driving operation are generally undesirable, especially in residential areas. While measures can be employed to minimize noise and vibration, often the perception of noise and vibration causes alarm to neighboring property owners. Noise and vibration will be associated with installation and removal of sheetpile. It is possible that vibrations could damage newly constructed structures; therefore, the use of steel sheetpile may be limited to those areas of the site where hard structures will not be installed.

Given that the ground water level within and for some distance beyond the slope fill in a work area would be relatively low, it is likely that a wall with an exposed face of up to approximately 15 to 20 feet could be achieved using a cantilevered wall (providing sufficient embedment depth into the underlying foundation soils can be achieved). Weep holes or some other form of dewatering may be required in order to guard against hydrostatic pressure build-up behind the wall which could lead to wall instability. As dense materials are encountered at a relatively shallow depth with respect to the river bed elevation, it is questionable if sufficient toe

embedment depth can be achieved to allow the design and installation of a cantilever wall. Rather, an anchored wall would likely be required to account for the limited embedment depth achievable. (Generally, it is assumed that steel sheetpile cannot be efficiently driven through soil with blow counts greater than about 60 blows per foot.)

Soldier pile and lagging—Could be used in locations similar to those described previously. The use of soldier pile and lagging does, however, present some different challenges to be considered. Tieback anchors may be required to support the wall, as passive resistance is gained only from the narrow face (web) of the soldier pile. Installation of the lagging must proceed concurrently with excavation activities. Vibrations may be reduced or eliminated if soldier piles are set in pre-augered holes. (The soldier piles would be set in concrete if pre-augering were required.) A rig capable of augering a 12- to 18-inch-diameter hole and the pile driving rig would have to be mobilized thereby increasing mobilization costs. Cuttings generated by pre-augering would have to be disposed of with other materials. Obstructions located throughout the fill may prevent soldier pile installation in the exact design location, thereby requiring field changes to the alignment and possible schedule delays and cost increases. However, it is likely that a cassion rig fitted with the appropriate bit(s) could auger through all but the hardest obstructions.

Temporary steel plates—Are often used to temporarily cover trench excavations in highways; could potentially be used in some locations to prevent the sloughing of short banks during and upon completion of removal activity. The plates could be set and driven into place using a trackhoe. Acting as a cantilever, they could be braced against the riverbed using steel bracing or could be secured against precast concrete deadmen, which would be set on the riverbed. This option would be useful only in areas where soil sloughing would be considered a nuisance and could not be used in locations that could result in possible collapse of a slope.

Soil nailing—Could be used in areas of the site where there is evidence of slope instability and where the required excavation is limited primarily to the toe area. A grout-bonded anchor is most suitable to resist shearing forces imparted by the slope's tendency to slide. However, access for equipment to install this type of anchor is limited; therefore, another anchor type, which can be installed given the site constraints, will be considered. A mechanical soil anchor (such as a Chance or Manta Ray anchor) that does not require grouting may be more readily installed. Use

of this type of anchor may not be ideal for the conditions, yet should provide adequate slope support.

Given the potential to encounter debris, anchor refusal at shallower than design depths is probable. As stated previously, access for a rig capable of installing grouted anchors, which can also drill through obstructions, is not feasible. Typically, a rig requires a 20- to 30-foot-wide bench on which to operate. Clearly, it is undesirable to construct such benches at this site, given the impacts to surrounding properties and the desire to minimize the over-excavation and disposal of potentially contaminated materials. With the use of mechanical anchors, which depend on either a rotational or driven action for installation rather than a drilling action, it would be necessary to install off-set anchors in locations where refusal was encountered at less than design depths.

If soil nailing is to be used at this site, it will likely be limited to stabilization of the toe areas within reach of a rig working from the riverbed to install grouted anchors, which would have limited stabilization benefit. Installation of mechanical anchors further up slope would be possible but only limited positive benefits may be realized. The use of soil nails should be investigated when the stability of the slopes is being evaluated.

SECTION 4

WATER RESOURCES PRE-DESIGN TASKS

4. WATER RESOURCES PRE-DESIGN TASKS

WESTON has completed three subtasks in preparation for performing a flood elevation analysis on the 1.5-mile Phase 2 reach. These tasks included:

1. Evaluating the calibration data that will be used in the USACE Hydrologic Engineering Center River Analysis System (HEC-RAS) software model. A rating curve (stream flow stage – discharge relationship) that was developed under Phase 1 of this project was evaluated for applicability to the HEC-RAS modeling task.

2. Evaluation was performed of stream bed, banks, and flood plain roughness coefficient for input to the HEC-RAS model. It was decided that the initial roughness coefficient values could be estimated from the extensive video documentation of the 1.5-mile reach and interviewing WESTON staff who have recently investigated the site. No additional field visits are necessary at this time.

3. An evaluation was performed of existing floodplain survey information to assess the extent and applicability of the available topographic data. Existing surveyed transect data within the channel banks was received from Hart-Crowser and evaluated. WESTON evaluated topographic data beyond the channel banks and extending to the limits of the flood plain for input to the HEC-RAS model.

4.1 HEC-RAS MODEL CALIBRATION DATA

WESTON received stage-discharge rating curves for four locations within the Housatonic River drainage basin that were developed by a subcontractor (ZZ Consulting) under Phase 1. The Pomeroy Street location is very good for estimating flow input to the HEC-RAS (water surface profile) model because it is immediately downstream of the 1.5-mile Phase 2 reach. The HEC-RAS model uses a standard-step method to solve for normal depth and, in this case, is downstream flow controlled. Therefore, of the four locations, only the Pomeroy Rating Curve was evaluated.

4.1.1 Pomeroy Rating Curve Analysis

A range of data points (45 cfs to 2,850 cfs) were collected, and it is our opinion that no additional field observations are necessary for the purposes of the HEC-RAS model of the 1.5-mile reach. A non-linear regression analysis was performed on the seven stage-discharge observations. The subcontractor's report states that because a log-log fit is biased when

transformed back into stage-flow space, an additional non-linear regression was performed to estimate flows at higher stages. This best fit approach is the reason that two separate equations were used to describe the stage-discharge relationship.

4.1.2 Review of Nonlinear Regression Analysis

The model and the equations used to generate the stage/discharge curve for East Branch Housatonic River at Pomeroy Street were appropriate for this task. The following review comments support this assessment of the rating curve analysis:

- The model was run to convergence. (in 13 iterations for normal and 16 iterations for lognormal).
- R squared is a measure of appropriate fit for the chosen equation. The R squared value was 0.99. When R squared = 1.0, all points lie exactly on the curve with no scatter. The chosen equation was, therefore, a good match for the data and the curve is likely to yield a good prediction of unknown/estimated flows.
- The graph shows the log fit of flow vs. stage because these data are better represented in lognormal scale.
- This is a standard curve to interpolate unknown values.

4.2 ROUGHNESS COEFFICIENT EVALUATION

WESTON reviewed a videotaped field view of the stream corridor from Transect 92 (immediately downstream of the dam) downstream to Transect 168 for the purposes of determining roughness coefficients for input to the HEC-RAS surface water profile model. WESTON hydrologists have developed a table of Manning's n roughness coefficients for the even numbered transects from the videotape and interviews with WESTON staff who have participated in several site visits. The estimated values for the roughness coefficients were obtained from Chow (1959) and New Jersey Department of Environmental Protection (NJDEP) (1988). Table 4-1 includes the estimated roughness coefficients and associated comments.

4.3 FLOODPLAIN SURVEY

WESTON received the existing HEC-RAS surface water profile model for the project along with a large amount of back-up data from Hart-Crowser. There is a small scale model for the EE/CA

reach and upper half-mile that contains approximately 227 transects. There is a transect approximately every 50 feet in the Phase 2 study area. The higher flood elevations at some of the transect locations exceed the topographic elevations that are included in the model input. WESTON's Geographic Information System (GIS) group has a spatial data layer containing 2-foot-interval elevation contours that extend beyond the 100-year flood plain delineation. The GIS group also has a spatial data layer of the 100-year floodplain delineation. These data were supplied by Massachusetts Geographic Information System (MASSGIS), who maintain an inventory of Federal Emergency Management Agency (FEMA) maps in GIS format that is current to July 1997. Both of the GIS layers (elevation contours and 100-year flood plain) are spatially coincident and therefore are suitable for use in this study. WESTON is currently inquiring about the vertical datum for the U.S. Army Corps of Engineers (USACE) surveyed transects to ensure an accurate match to the topographic data.

The existing HEC-RAS model will be revised during the Basis of Design phase by extending the transects beyond the regulatory 100-year flood elevation and adjusting the Manning's roughness coefficients until the existing model scenario matches this elevation to the best extent possible. The model can then be run with proposed channel modifications to simulate impacts to the existing flood elevations.

4.4 REFERENCES

NJDEP (New Jersey Department of Environmental Protection). July, 1988. *Technical Manual for Stream Encroachments.*

Chow, Ven Te. 1959. McGraw-Hill Book Company, New York, New York. *Open Channel Hydraulics.*

Table 4-1
Manning's n Values for Input to HEC-RAS

TRANS	FP	LOB	CHAN	ROB	FP	Comments
92	0.03	0.04	0.04	0.045	0.1	L FP Open Field with short grass, Steep channel banks with concrete slab erosion control, R FP Woods , brush with some fallen trees
94	0.03	0.04	0.04	0.045	0.1	L FP Open Field with short grass, Steep channel banks with concrete slab erosion control, R FP Woods , brush with some fallen trees
96	0.03	0.04	0.04	0.045	0.08	L FP Open Field with short grass, Steep channel banks with concrete slab erosion control, R FP saplings, brush, weeds
98	0.03	0.04	0.04	0.045	0.08	L FP Open Field with short grass, Steep channel banks with concrete slab erosion control, R FP saplings, brush, weeds
100	0.04	0.05	0.04	0.05	0.08	L FP Heavy brush and small diameter trees, boulders at channel edge, ROB steep, saplings brush and weeds, R FP woods and brush
102	0.04	0.05	0.04	0.05	0.08	L FP Heavy brush and small diameter trees, boulders at channel edge, ROB steep, saplings brush and weeds, R FP woods and brush
104	0.02	0.08	0.04	0.07	0.02	L FP Building and parking lot, LOB very steep, boulders at channel edge, ROB steep, brush and weeds, some trees falling into channel, R FP Parking lot
106	0.02	0.08	0.045	0.07	0.02	L FP Building and Parking lot, LOB very steep, wooded, debris in channel, ROB steep, brush and weeds, some trees falling into channel, R FP Parking lot
108	0.03	0.05	0.045	0.06	0.03	L FP Building and parking lot, LOB deteriorating stone and concrete wall, beginning of cobble reach, ROB steep, brush and weeds, some trees falling into channel, R FP street then lawns
Elm Street Bridge						
110	0.03	0.07	0.045	0.07	0.03	L FP Street and lawns, LOB very steep with brush and leaning trees, old timber retaining wall, cobble/boulder channel bottom, ROB steep, brush and weeds, some trees, R FP street then lawns
112	0.03	0.08	0.045	0.08	0.03	L FP Street and Lawns, LOB very steep, old crib wall with brush and leaning trees, cobble/boulder channel bottom, ROB steep, brush and weeds, some trees, R FP street then lawns
114	0.03	0.08	0.045	0.08	0.03	L FP Street and Lawns, LOB very steep, old crib wall with brush and leaning trees, cobble/boulder channel bottom, ROB steep, brush and weeds, some trees, R FP street then lawns
Approx. 8-inch pipe crossing						
116	0.03	0.08	0.045	0.08	0.03	L FP Street and Lawns, LOB very steep, old crib wall with brush and leaning trees, cobble/boulder channel bottom, ROB steep, brush and weeds, some trees, R FP street then lawns
118	0.03	0.08	0.045	0.08	0.03	L FP Street and lawns, LOB very steep, wooded with leaning trees, cobble/boulder channel bottom, ROB steep, brush and weeds, some trees falling into channel, R FP street then lawns

Table 4-1 (continued)
Manning's n Values for Input to HEC-RAS

TRANS	FP	LOB	CHAN	ROB	FP	Comments
120	0.03	0.08	0.045	0.08	0.03	L FP Street and lawns, LOB very steep, wooded with leaning trees, cobble/boulder channel bottom - , ROB steep, brush and weeds, lots of leaning trees, R FP street then lawns
122	0.03	0.08	0.045	0.08	0.03	L FP Street and lawns, LOB very steep, wooded with leaning trees, end of cobble reach, ROB steep, brush and weeds, wooded - leaning trees, R FP street then lawns
124	0.03	0.08	0.038	0.08	0.03	L FP Street and lawns, LOB very steep, wooded with leaning trees, earthen channel banks with some undercutting, ROB steep, wooded with brush and weeds, R FP street then lawns
126	0.03	0.08	0.038	0.08	0.03	L FP Street and lawns, LOB very steep, wooded lots of underbrush, earthen banks with some undercutting, ROB steep, wooded, R FP street then lawns
128	0.03	0.08	0.038	0.08	0.03	L FP Street and lawns, LOB very steep, wooded lots of underbrush, earthen banks with some undercutting , ROB steep, undercut slope, woods and underbrush, R FP street then lawns
130	0.03	0.08	0.038	0.08	0.03	L FP Street and lawns, LOB very steep, wooded lots of underbrush, earthen banks with some undercutting , ROB steep, woods and underbrush, R FP street then lawns
Gabions begin on ROB						
132	0.03	0.08	0.038	0.04	0.03	L FP Street and lawns, LOB very steep, thick grass on channel edge then wooded, earthen banks with some undercutting, ROB steep, woods and underbrush, R FP street, woods and lawns
134	0.03	0.08	0.038	0.04	0.035	L FP Street and lawns, LOB very steep, thick grass on channel edge then wooded, earthen banks with some undercutting, ROB steep, woods and underbrush, R FP street, woods and lawns
136	0.03	0.09	0.038	0.04	0.035	L FP Street and lawns, LOB very steep, heavy woods with increased weeds and underbrush, earthen banks with some undercutting, ROB steep, woods and underbrush, R FP street, woods and lawns
138	0.03	0.09	0.038	0.04	0.035	L FP Lawns then street, LOB very steep, heavy woods with increased weeds and underbrush, earthen banks with some undercutting, ROB steep, woods and underbrush, R FP street, woods and lawns
140	0.03	0.09	0.038	0.04	0.035	L FP Lawns (houses) then street, LOB very steep, heavy woods with increased weeds and underbrush, earthen banks with some undercutting, ROB steep, woods and underbrush, R FP street, woods and lawns
Gabions end on ROB						
142	0.03	0.05	0.038	0.04	0.035	L FP Lawns (houses) then street, LOB very steep, boulders placed along edge for erosion control then wooded, earthen banks with some undercutting, ROB Gabions placed for erosion control, R FP street, woods and lawns

Table 4-1 (continued)
Manning's n Values for Input to HEC-RAS

TRANS	FP	LOB	CHAN	ROB	FP	Comments
144	0.03	0.05	0.038	0.05	0.035	L FP Lawns (houses) then street, LOB very steep, boulders placed along edge for erosion control then wooded, earthen banks with some undercutting, ROB boulders placed along edge for erosion control, R FP street, woods and lawns
Steel fabrication workshop wall at right edge of channel						
146	0.03	0.09	0.038	0.09	0.035	L FP Street and lawn, LOB very steep, wooded lots of underbrush, earthen banks some vegetation falling into channel, ROB Steel fabrication workshop building adjacent to channel, R FP street then lawns
148	0.03	0.09	0.038	0.09	0.035	L FP Street and lawn, LOB very steep, wooded lots of underbrush, earthen banks some vegetation falling into channel, ROB steep, saplings and trees falling into channel, R FP street then lawns
150	0.03	0.09	0.038	0.09	0.035	L FP Street and lawn, LOB very steep, wooded lots of underbrush, earthen banks some vegetation falling into channel, ROB steep, Variety Store adjacent to channel, R FP street then lawns
Dawes Avenue Bridge						
152	0.04	0.09	0.038	0.09	0.04	L FP Lawns (houses) then street - more trees in lawns, LOB very steep, wooded lots of underbrush, earthen banks some vegetation falling into channel, ROB steep, saplings and trees falling into channel, R FP lawns - some trees
154	0.04	0.09	0.038	0.09	0.04	L FP Lawns/ more trees (houses) then street, LOB very steep, wooded lots of underbrush, earthen banks some vegetation falling into channel, ROB steep, saplings and trees falling into channel, R FP lawns - some trees
156	0.04	0.08	0.038	0.09	0.04	L FP Lawns/ more trees (houses) then street, LOB wooded then lawns, earthen banks some vegetation falling into channel, ROB wooded, R FP lawns - some trees
158	0.04	0.07	0.038	0.08	0.04	L FP Lawns/ more trees (houses) then street, LOB wooded then lawns, earthen banks some vegetation falling into channel, ROB wooded, R FP lawns - some trees
160	0.03	0.07	0.038	0.07	0.03	L FP Lawns/ few trees (houses) then street, LOB wooded then lawn, earthen banks some vegetation falling into channel, ROB wooded, R FP lawns - some trees
162	0.03	0.07	0.038	0.07	0.03	L FP Lawns/ few trees (houses) then street, LOB wooded, earthen banks some undercutting and vegetation falling into channel, ROB steep, saplings and trees falling into channel, R FP lawns - some trees
164	0.03	0.07	0.038	0.06	0.03	L FP Lawns/ few trees (houses) then street, LOB wooded, earthen banks some undercutting and vegetation falling into channel, ROB steep, saplings and trees falling into channel, R FP lawns - some trees

Table 4-1 (continued)
Manning's n Values for Input to HEC-RAS

TRANS	FP	LOB	CHAN	ROB	FP	Comments
166	0.03	0.07	0.038	0.06	0.03	L FP Lawns/ few trees (houses) then street, LOB wooded, earthen banks some undercutting and vegetation falling into channel, ROB steep, saplings and trees falling into channel, R FP lawns - some trees
168	0.03	0.07	0.038	0.07	0.03	L FP Lawns/ few trees (houses) then street, LOB steep, wooded, earthen banks some undercutting and vegetation falling into channel, ROB steep, saplings and trees falling into channel, R FP lawns - some trees
170	0.03	0.05	0.038	0.07	0.03	L FP Lawns/ few trees (houses) then street, LOB steep, wooded, earthen banks some undercutting and vegetation falling into channel, ROB steep, saplings and trees falling into channel, R FP wooded then lawn
172	0.03	0.05	0.038	0.05	0.03	L FP Lawns/ few trees (houses) then street, LOB wooded, earthen banks some undercutting and vegetation falling into channel, ROB steep, saplings and trees falling into channel, R FP wooded then lawn
174	0.03	0.05	0.038	0.06	0.03	L FP Lawns/ few trees (houses) then street, LOB wooded, earthen banks some undercutting and vegetation falling into channel, ROB steep, saplings and trees falling into channel, R FP wooded then lawn
176	0.03	0.06	0.038	0.06	0.03	L FP Lawns/ few trees (houses) then street, LOB wooded, earthen banks some undercutting and vegetation falling into channel, ROB steep, saplings and trees falling into channel, R FP wooded then lawn

Note:

R FP = right flood plain
L FP = left flood plain
ROB = right overbank
LOB = left overbank
CHAN = channel

SECTION 5

CONSTRUCTABILITY ANAYLSIS

5. CONSTRUCTABILITY ANALYSIS

While the design has not yet been formulated, a number of constructability issues have been identified. These issues should be addressed during design in order to minimize difficulties in implementing the remediation activities. The following issues have been identified based on design options that have been discussed and considered in anticipation of initiating design activities. This is not an exhaustive summary of constructability issues. Additional issues are likely to be identified as the design is completed.

5.1 STAGING AREAS AND ACCESS POINTS

A number of potential staging areas and access points were identified during the site visit. Only staging areas immediately adjacent to the river were considered. Staging areas will be used to store materials and equipment.

Access points will be necessary to move construction equipment, contaminated soil and sediment and restoration materials to and from the riverbed. To avoid traveling great distances in the riverbed, several access points are required. The criteria for selecting access points was as follows:

- Topographic relief that will permit the construction of an access ramp with minimal cutting and filling required.
- Locations that will minimize travel in the riverbed.
- Locations that will provide ready access to critical work areas.
- Locations that will not intrude upon or impair public roads.

Three access points were identified that will require limited earthworks to construct access ramps. The first location was in the vicinity of Transect 96 West where a flat area immediately adjacent to the river will afford construction of an access ramp with limited removal of materials required. The second location was identified at Transect 130 West Bank in an open area between two structures where a moderate slope will permit excavation of a ramp. The desired alignment and inclination of the ramp may require the construction of a temporary retaining structure. The

third location was identified at Transect 162 East Bank where, again, a relatively flat area will permit the excavation of a ramp into the river with minimal removal of materials.

Six additional access points were identified in the 2nd Phase 65% Water Diversion Design Submittal. These additional points are likely to require significant earthwork and the installation of temporary retaining structures in order to construct ramps suitable for equipment ingress and egress and to provide for slope stability. In some locations, it may also be necessary to provide temporary support for public roadways in order to accommodate access ramps.

5.2 MANAGEMENT OF WATER DIVERSION SYSTEM

Based on the concept of placing two large diameter pipes on the riverbed to covey water through the work area, methods to safely and efficiently relocate the piping must be developed in conjunction with a construction schedule that minimize the number of times the piping must be relocated. Precise planning will permit for a more efficient implementation of the remedial action.

5.3 ACCESS AREAS AND RAMPS

Construction of an adequate number of access ramps and access points to allow for efficient movement of materials and equipment into and out of the river. As discussed previously, it may be necessary to create access ramps and points using temporary retaining structures. Input from the contractor during the design will be essential to ensure that ramps and points are sited in appropriate locations.

5.4 ACCESS ROAD STABILIZATION

Due to the presence of potentially soft river sediment in certain locations, movement along the riverbed may necessitate the construction of temporary haul roads. This may be accomplished by using either crushed stone placed on top of geotextile or alternately “board roads. ” Board roads are panels of prefabricated timbers secured together to form mats.

5.5 TEMPORARY SLOPE STABILIZATION

In order to minimize the need for temporary retaining structures, excavation techniques and methods should be developed. For example, providing guidance on excavation sequencing, limiting equipment operation, use of temporary shoring.

5.6 ROCK EXCAVATION

Consideration must be given to removal of rock to allow the installation of walls. If precast wall units are to be installed, it may be necessary to remove rock from some areas in order to provide for a relatively level bearing surface.

5.7 WALL FOUNDATIONS

In relation to the installation of precast wall units, it will likely be necessary to assess the competency of the bearing material. In the case of soil, composition and density will likely be required. In the case of rock, shear strength and quality will likely be required. In order to collect the required soil and rock samples, it will be necessary to place drilling equipment on the riverbed.

5.8 MATERIALS OF CONSTRUCTION

Because access will be limited, selection of materials of construction should consider the ease with which the materials can be transported to the desired location.

5.9 CONFLICTS WITH UTILITIES

Identification, location, and possible relocation of utilities must be considered. In addition to overhead and underground utility lines within the work area, a number of pipe outfalls were observed, each of which must be incorporated into the final design.

5.10 VIBRATION AND NOISE

Vibration and noise associated with pile driving and operation of other heavy construction equipment may require restrictions on time of operations.

5.11 PREPARATION FOR POTENTIAL DAM OVERTOPPING

Securing the work area in anticipation of a large rain event and recovering following a large rain event which results in dam overtopping is a significant concern. Preparations may include the temporary placement of material (e.g., rip-rap, articulated concrete block panels, etc) to protect areas that have been excavated but not yet restored and installing necessary erosion and sediment control devices (e.g., turbidity barriers). Sequencing excavation and backfilling activities will be critical to prevent "washout" during large storm events should the dam be overtopped. Critical to preparing the site is early and accurate weather forecasting. Health and safety issues must also be addressed when considering preparation for dam overtopping and recovery following such an event. Inspection of slopes will be required prior to re-commencing work to ensure equipment and personnel are not mobilizing to an area which has become unstable as a result of the overtopping event.

SECTION 6

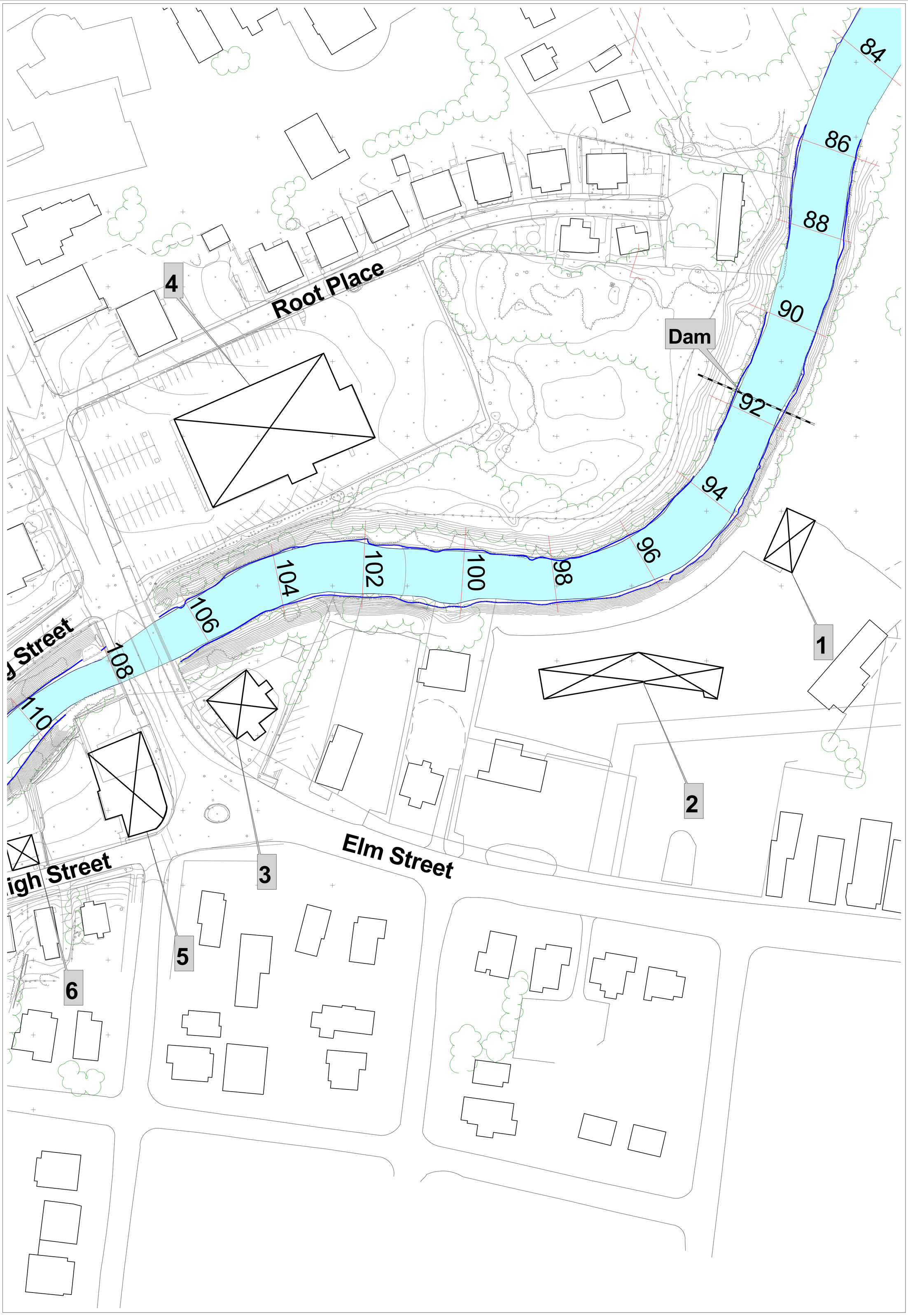
GEOTECHNICAL DATA

6. GEOTECHNICAL DATA

A compilation of geotechnical data including boring location plans, soil boring logs, and geotechnical test data is presented in Attachment 5. This information has been consolidated from several sources and presented here for reference during design activities.

ATTACHMENT 1

BUILDING LOCATIONS MAPS



LEGEND:

- Existing Building
- Roads
- Hydrology
- Transect Locations

N

WESTON SOLUTIONS

Scale in Feet

50 0 50 100 150

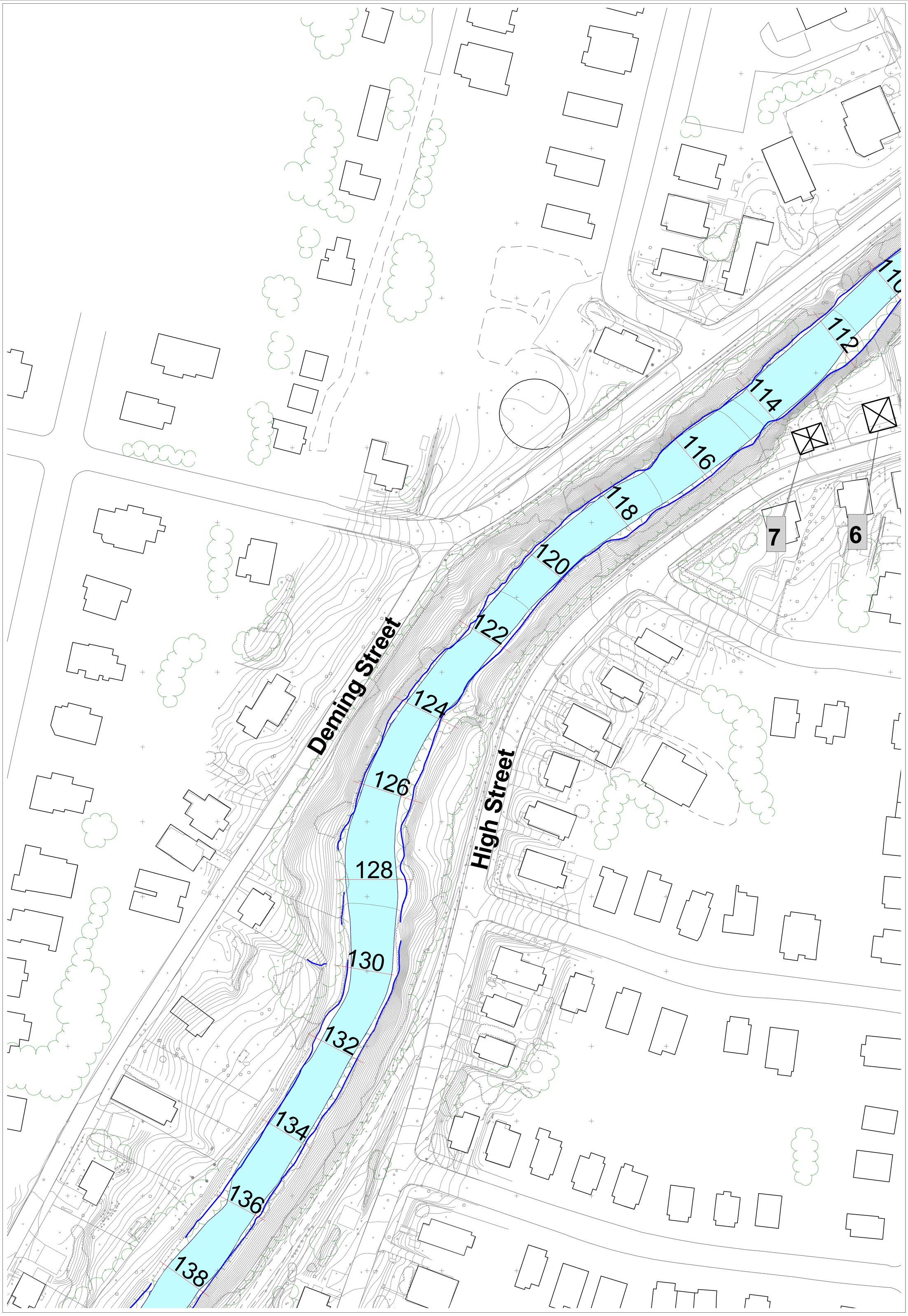
DRAFT -- CONFIDENTIAL -- FOIA EXEMPT

Housatonic River Project
Pittsfield, Massachusetts

Phase II 1.5 Mile Pre-Design
Existing Building
Structures Reviewed
Tile 1 of 3

July 19, 2002

| g:\projects\ryan\arc view data browser\phase ii buildings.apr | Tile 1-Buildings for Phase II2 | c:\ryan\documents\ee-ca\phase ii\structures\tile 1 of phase ii buildings 2.eps | 9:54 AM, 7/18/2002 |



LEGEND:

- Existing Building
- Roads
- Hydrology
- Transect Locations

N

WESTON SOLUTIONS

Scale in Feet

50 0 50 100 150

DRAFT -- CONFIDENTIAL -- FOIA EXEMPT

Housatonic River Project
Pittsfield, Massachusetts

Phase II 1.5 Mile Pre-Design
Existing Building
Structures Reviewed
Tile 2 of 3

July 19, 2002

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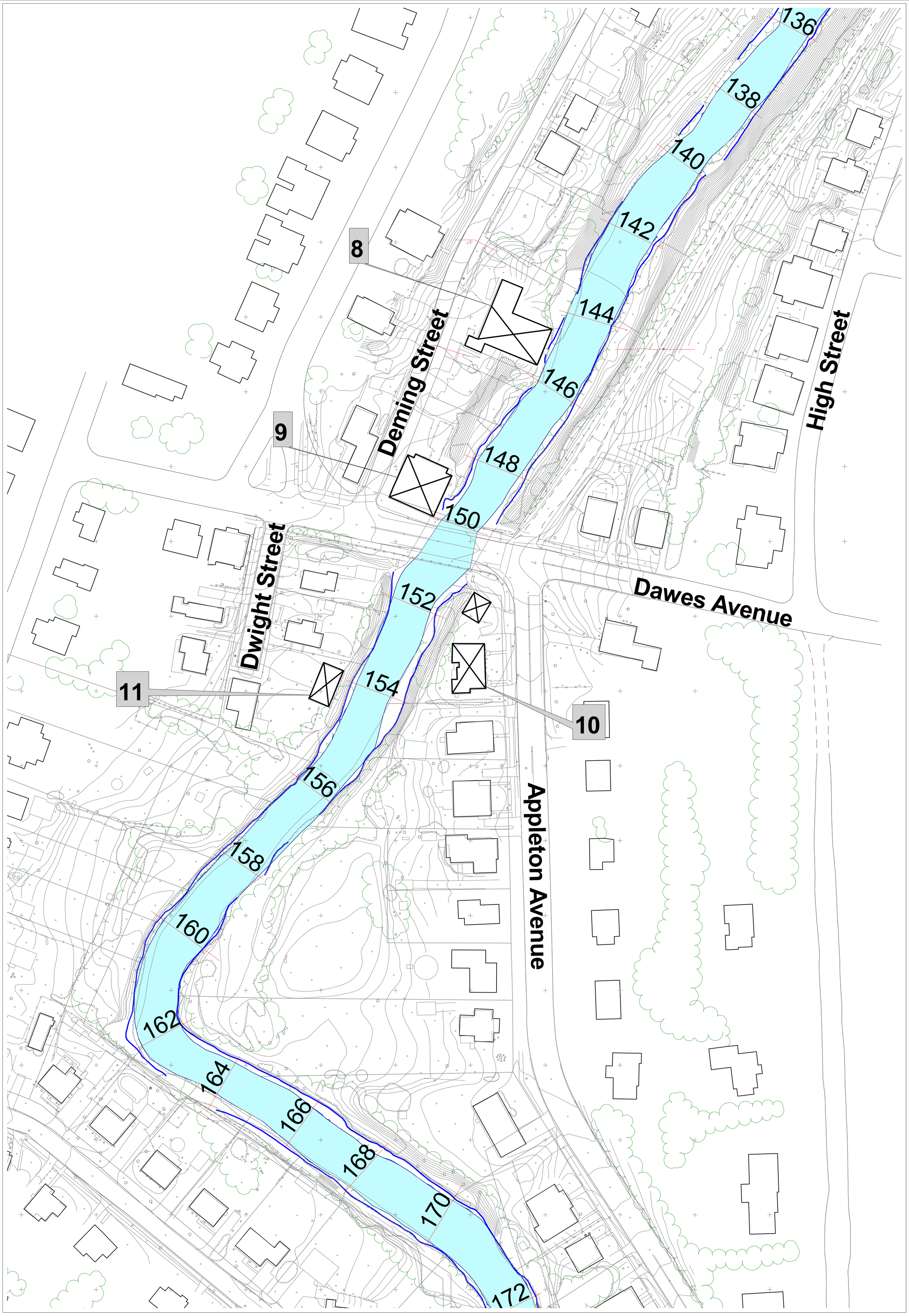

LEGEND:

- Existing Building
- Roads
- Hydrology
- Transect Locations

N

WESTON SOLUTIONS

Scale in Feet

50 0 50 100 150

DRAFT -- CONFIDENTIAL -- FOIA EXEMPT

Housatonic River Project
Pittsfield, Massachusetts

Phase II 1.5 Mile Pre-Design
Existing Building
Structures Reviewed
Tile 3 of 3

July 19, 2002

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ATTACHMENT 2

PHOTOGRAPHS OF BUILDING STRUCTURES

Building No.1 – 103 Elm Street (Laundromat)

Building No.2 – 103 Elm Street (Car Wash)

Building No. 3 – 53-59 Elm Street (Residence)

Building No. 3 – 53-59 Elm Street (Garage)

Building No.4 – 37 Elm Street (Supermarket)

Building No.4 – 37 Elm Street (Supermarket)

Building No. 5 – 50, 54 and 56 Elm Street (Commercial)

Building No.6 - 14 High Street (Residence)

Building No.6 - 14 High Street (Residence)

Building No.7 – 20 High Street (Residence)

Building No.8 – 139 Deming Street (Commercial)

Building No.8 – 139 Deming Street (Commercial)

Building No.9 – 19 Dawes Avenue (Mini-market)

Building No.9 – 19 Dawes Avenue (Mini-market)

Building No. 10 - 198 Appleton Street (Garage)

Building No. 11 - 15 Dwight Street (Garage)

ATTACHMENT 3

PHOTOGRAPHS OF RIVERBANK

1. Sta. 514+00 – looking downstream towards west bank

2. Sta. 517+00 – looking downstream towards east bank

3. Sta. 517+00 East – looking towards west bank

4. Sta. 518+00 West – looking upstream towards east bank

5. Sta. 520+00 East – looking towards west bank

6. Sta. 521+00 East – upstream face of Elm Street bridge

7. Sta. 522+00 East – looking upstream from Elm Street bridge

8. Sta. 522+00 West – looking upstream from Elm Street Bridge

9. Sta. 522+00 East - Timber Crib Wall

10. Sta. 522+00 East – Timber crib wall and foundation

11. Sta. 523+00 East – Looking upstream towards Elm Street brigde

12. Sta. 523+00 West – looking upstream towards Elm Street bridge

13. Sta. 524+00 East – Failed timber crib wall in vicinity of Building No. 6

14. Sta.525+00 East - Failed timber crib wall at Building No. 7

15. Sta. 525+00 East – looking downstream towards west bank

16. Sta. 526+00 West – eroded toe area

17. Sta. 528+00 West – looking upstream towards east bank

18. Sta. 528+00 West – looking downstream

19. Sta. 529+50 West – looking upstream towards east bank

20. Sta. 529+50 West – looking downstream towards east bank

21. Sta. 531+50 East – looking downstream towards west bank

22. Sta. 532+00 East – looking upstream towards west bank

23. Sta. 533+00 East – looking upstream

24. Sta. 537+25 East – looking downstream

25. Sta. 542+00 East – looking upstream

26. Sta. 542+00 East – looking downstream towards west bank

27. Sta 543+00 East –looking downstream at west bank from Dawes Avenue bridge

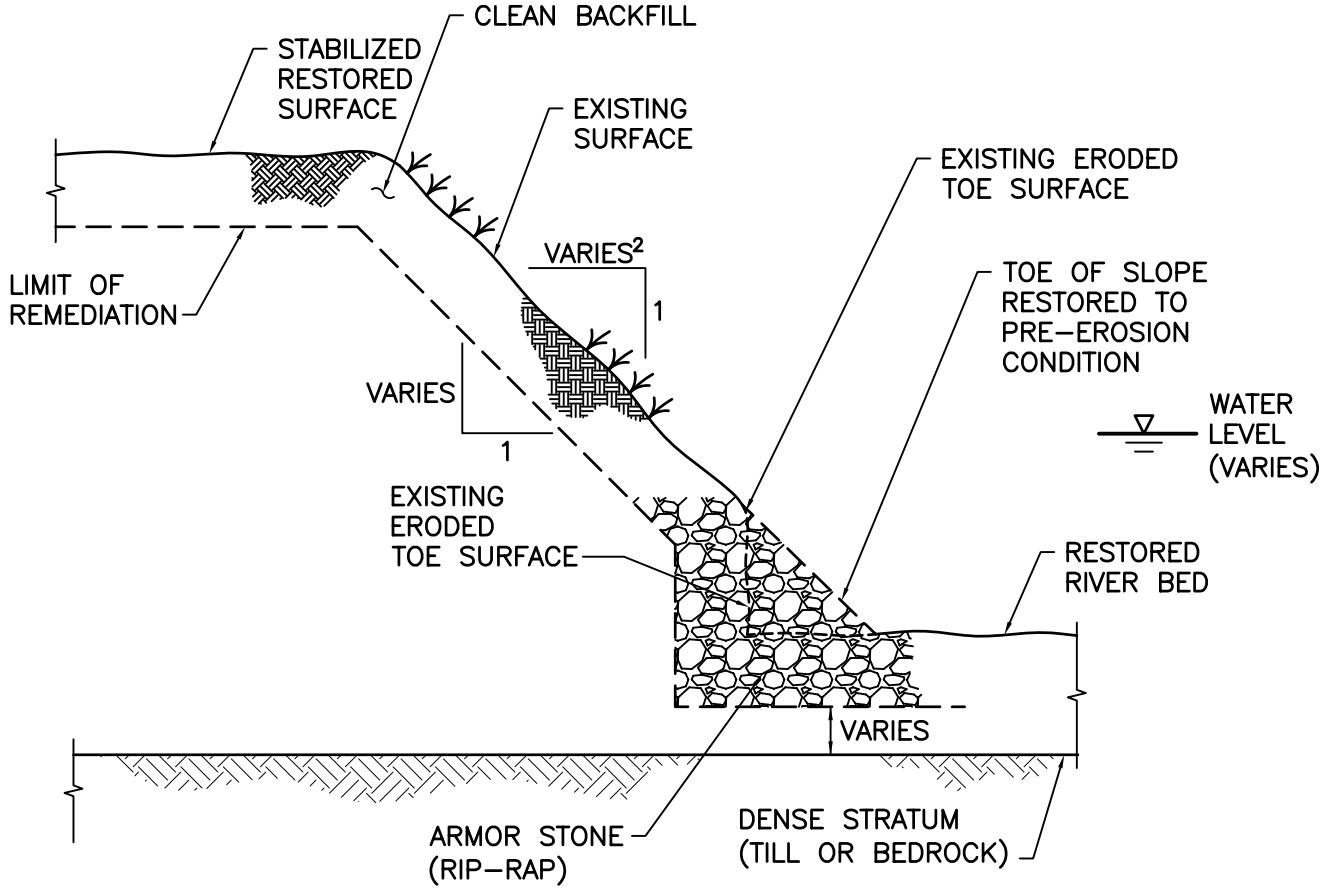
28. Sta. 543+00 East – looking downstream from Dawes Avenue bridge

29. Sta. 548+50 East – looking upstream at west bank

30. Sta. 549+50 East – looking downstream towards west bank

ATTACHMENT 4

PROPOSED WALL TYPE FIGURES



RIP-RAP TOE PROTECTION

N.T.S.

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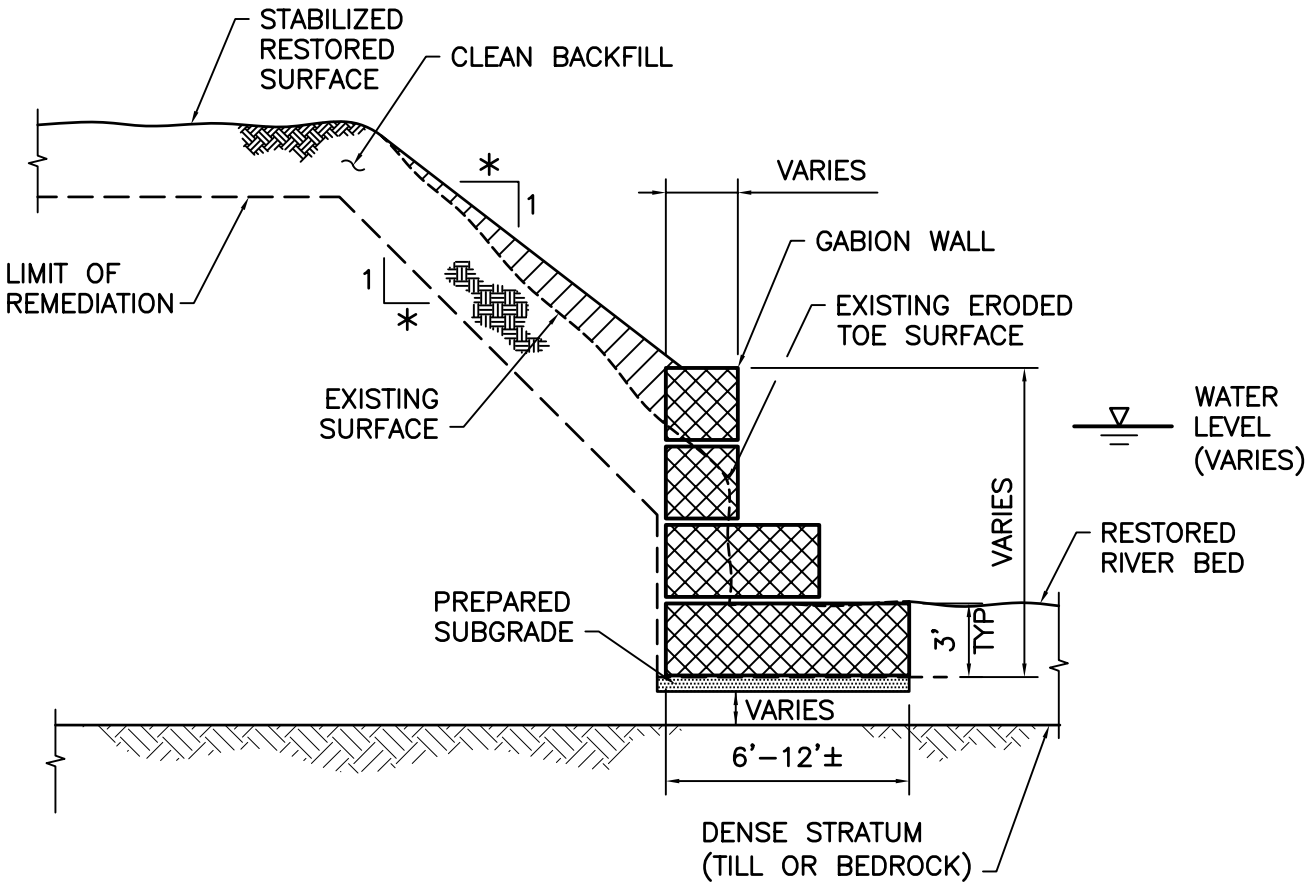
WESTON SOLUTIONS

DRAFT-CONFIDENTIAL-FOIA EXEMPT

HOUSATONIC RIVER PROJECT
PITTSFIELD, MASSACHUSETTS
PHASE 2 1.5 MILE PRE-DESIGN
FIGURE 1



GABION WALL

N.T.S.

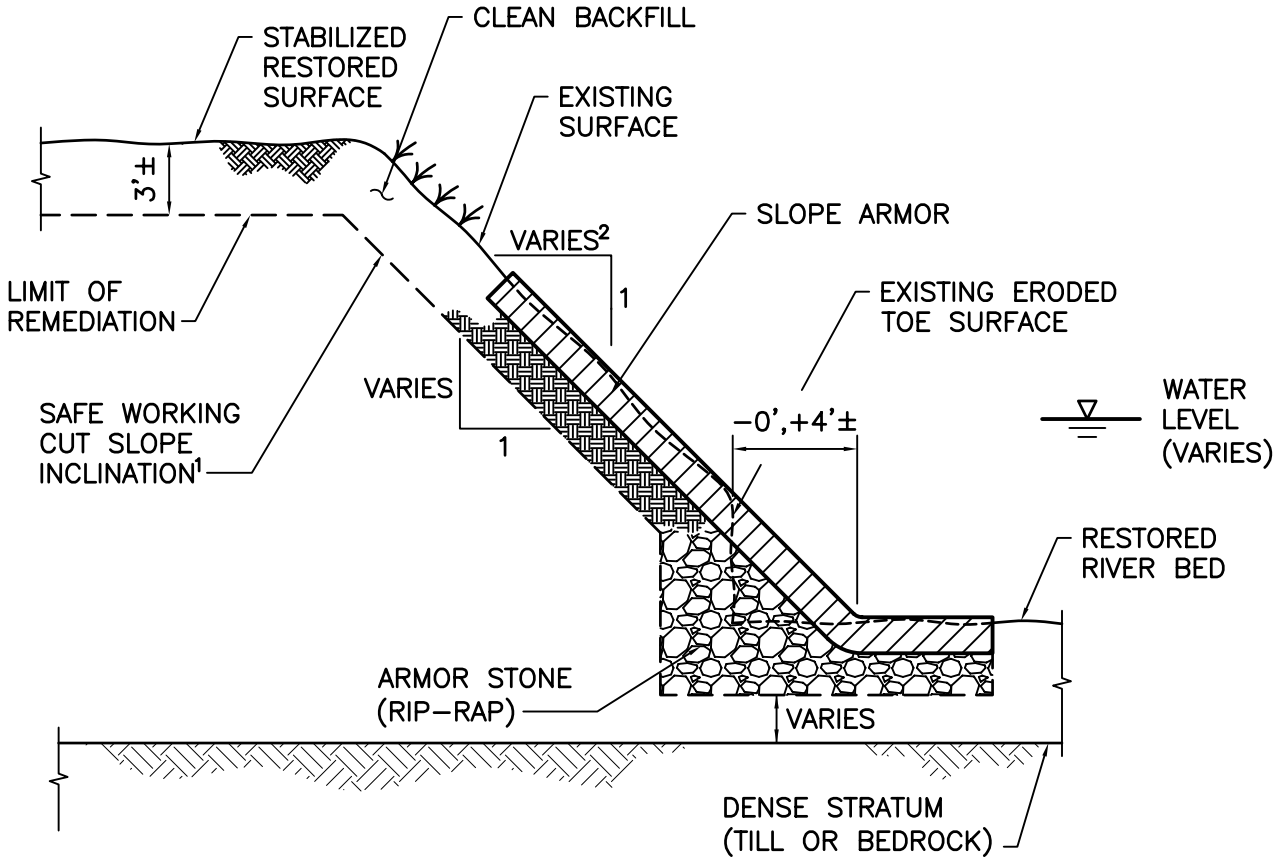
* SLOPE INCLINATION BASED UPON GEOTECHNICAL STABILITY ANALYSIS.

WESTON SOLUTIONS

DRAFT–CONFIDENTIAL–FOIA EXEMPT

HOUSATONIC RIVER PROJECT
PITTSFIELD, MASSACHUSETTS
PHASE 2 1.5 MILE PRE-DESIGN
FIGURE 2

G:\PROJECTS\20125257\pre-design\figure 2.dwg, Layout1, 07/26/2002 09:22:43 AM, GIRARDEB, 1:1



SLOPE ARMOR

N.T.S.

1.) SAFE WORKING CUT SLOPE TO BE DETERMINED BY SLOPE STABILITY ANALYSES.

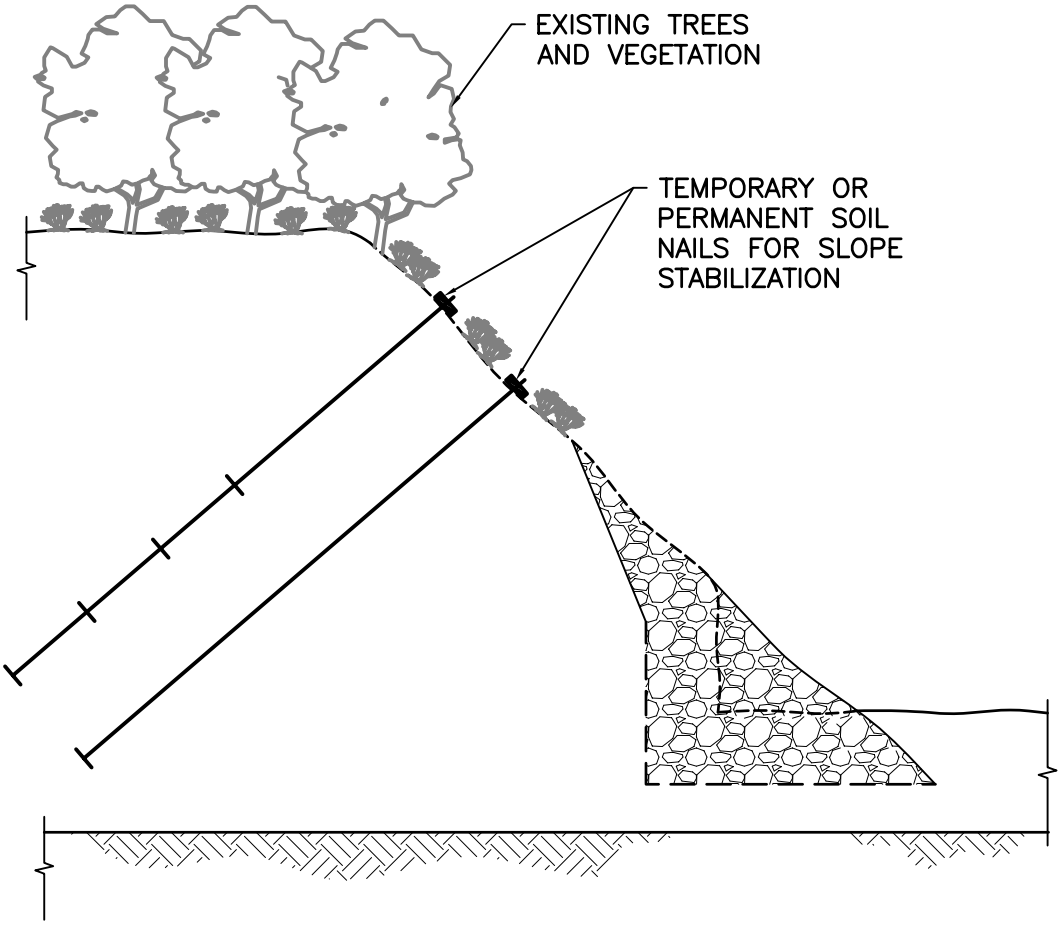
2.) INCLINATION TO BE BASED ON SLOPE STABILITY ANALYSES.

WESTON SOLUTIONS

DRAFT−CONFIDENTIAL−FOIA EXEMPT

HOUSATONIC RIVER PROJECT
PITTSFIELD, MASSACHUSETTS
PHASE 2 1.5 MILE PRE-DESIGN
FIGURE 3

G:\PROJECTS\20125257\pre-design\figure 3.dwg, Layout1, 07/26/2002 09:23:39 AM, GIRARDEB, 1:1



SOIL NAILS

N.T.S.

WESTON SOLUTIONS

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HOUSATONIC RIVER PROJECT
PITTSFIELD, MASSACHUSETTS
PHASE 2 1.5 MILE PRE-DESIGN
FIGURE 4

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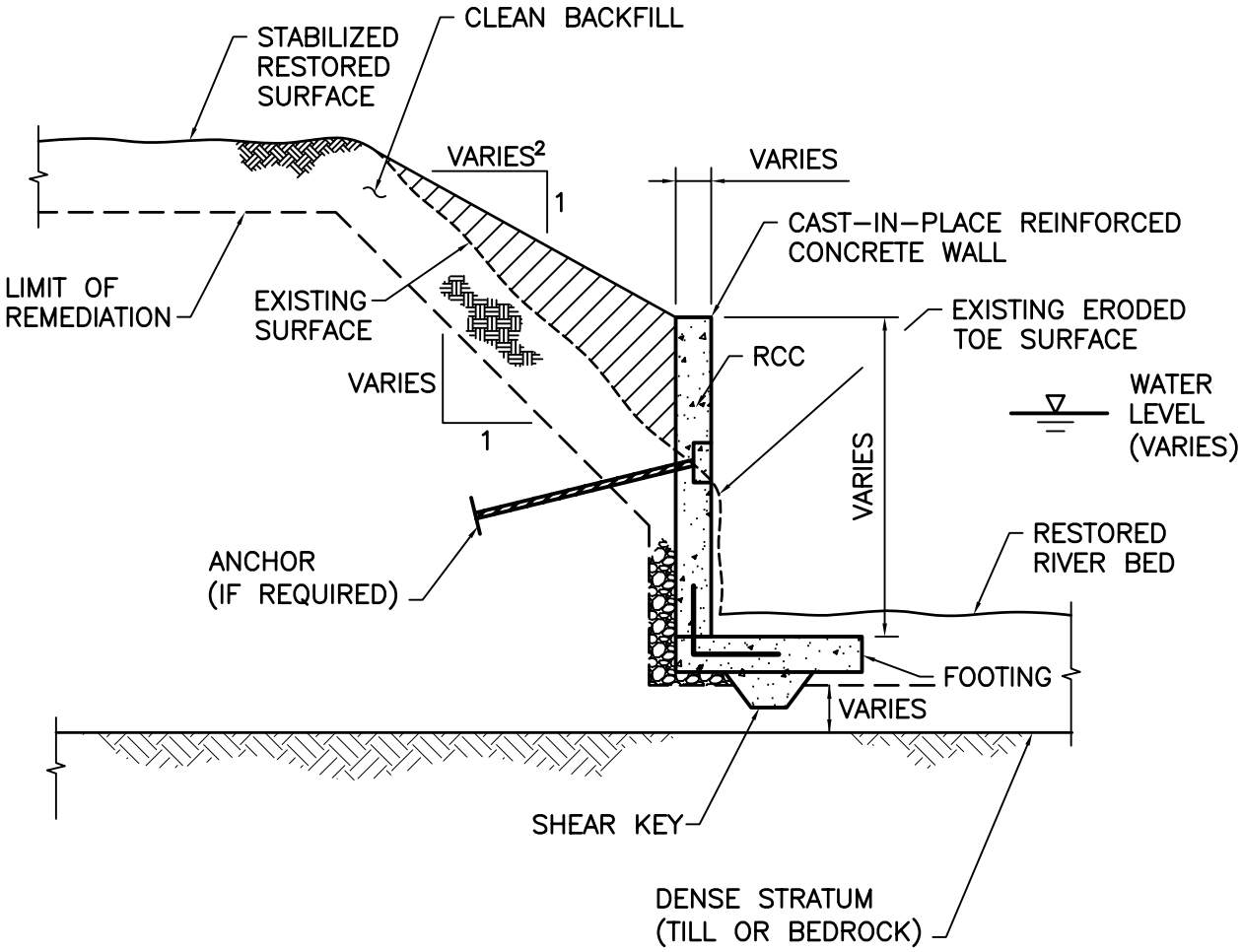

CAST-IN-PLACE CONCRETE WALL

N.T.S.

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WESTON SOLUTIONS

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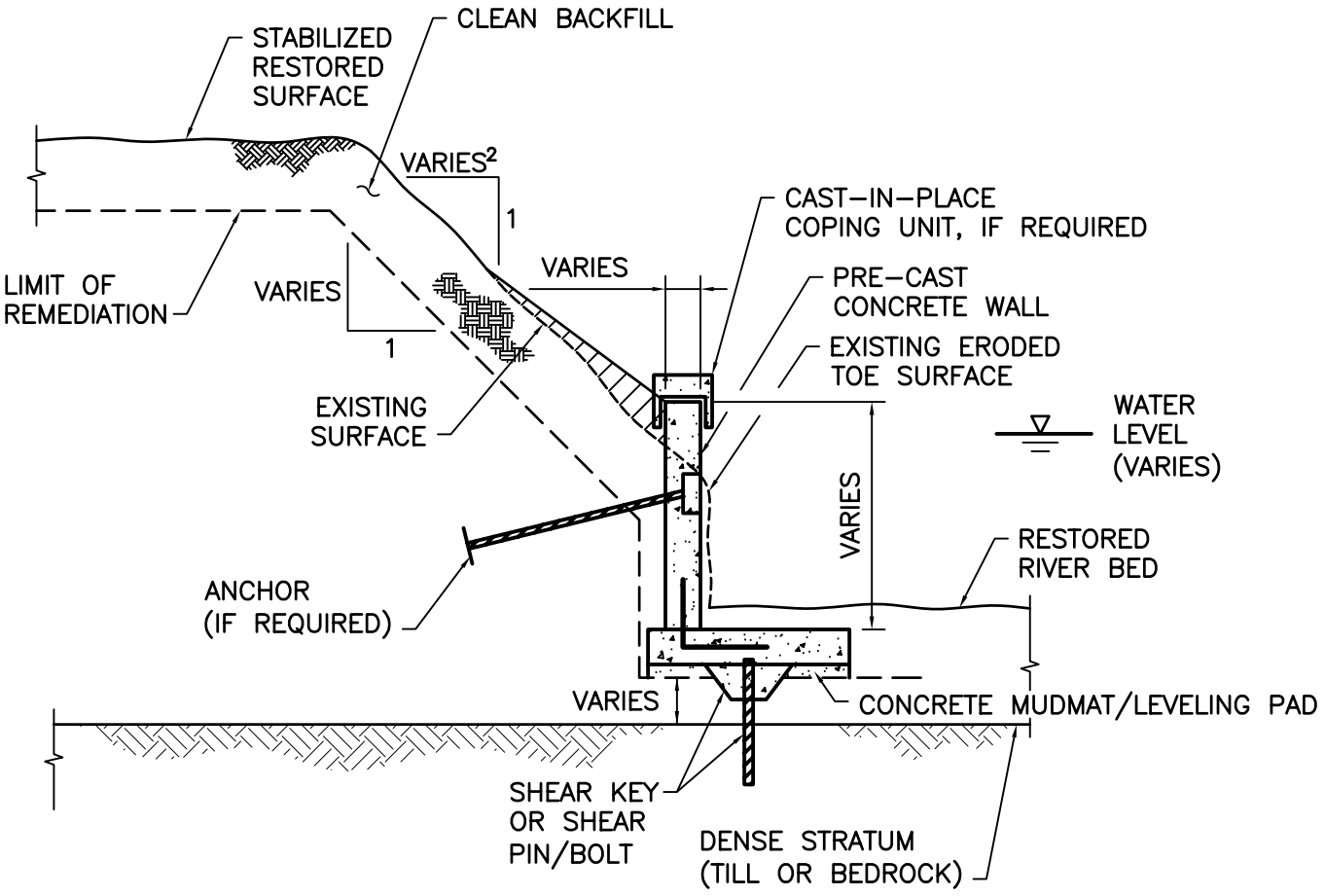
HOUSATONIC RIVER PROJECT
PITTSFIELD, MASSACHUSETTS
PHASE 2 1.5 MILE PRE-DESIGN
FIGURE 5



PRE-CAST CONCRETE WALL 1

N.T.S.

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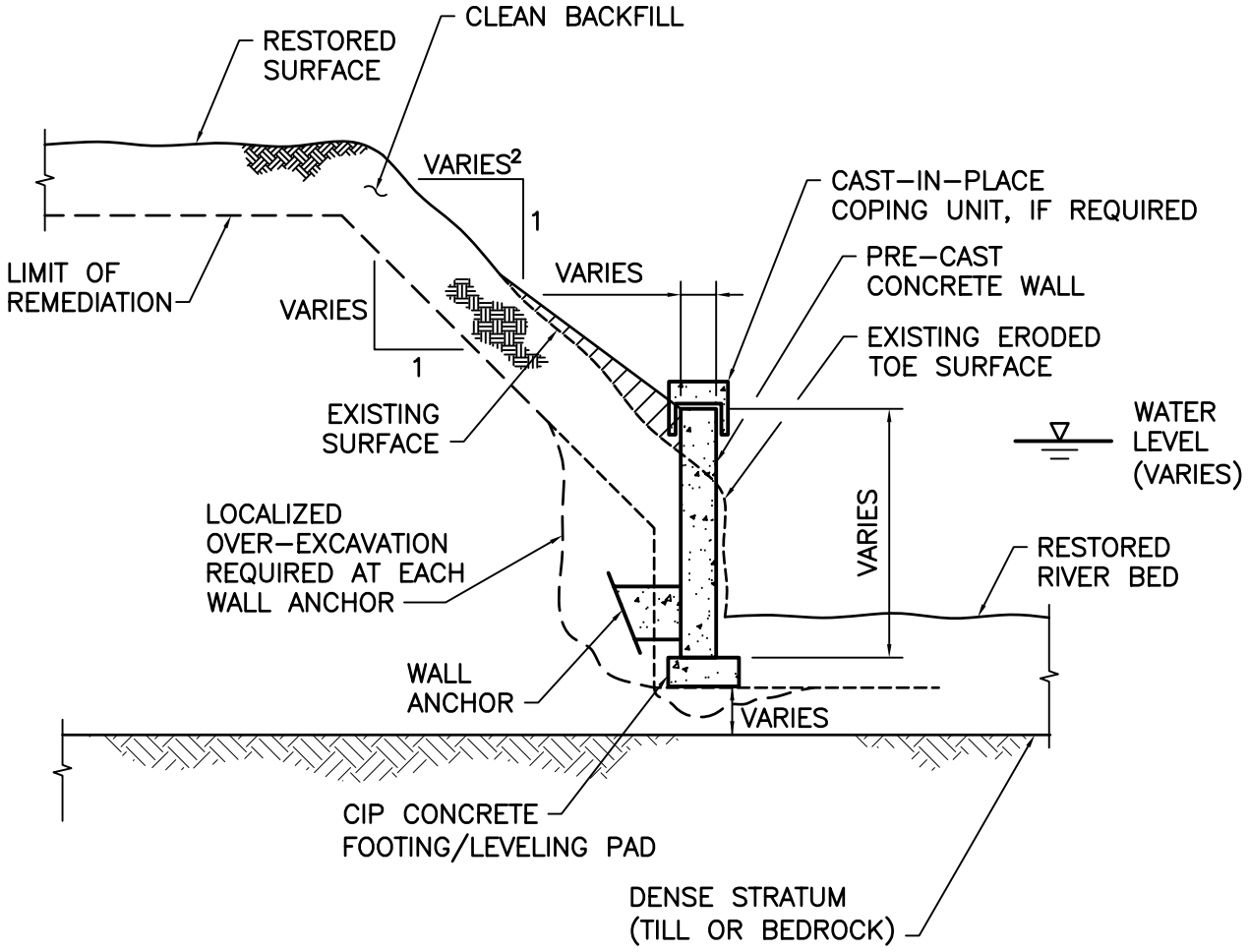
WESTON SOLUTIONS

DRAFT-CONFIDENTIAL-FOIA EXEMPT

HOUSATONIC RIVER PROJECT
PITTSFIELD, MASSACHUSETTS
PHASE 2 1.5 MILE PRE-DESIGN
FIGURE 6



PRE-CAST CONCRETE WALL 2

N.T.S.

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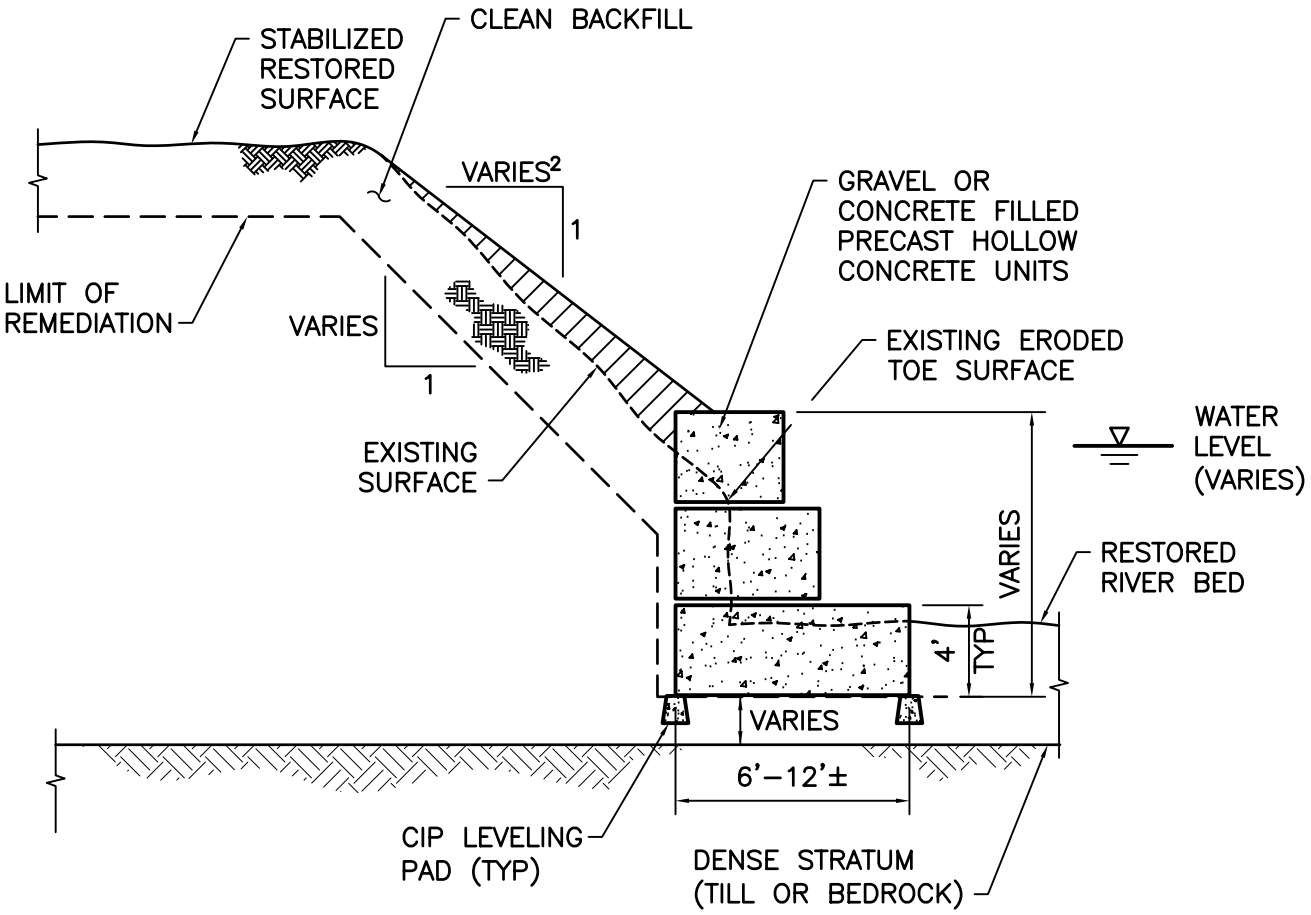
WESTON SOLUTIONS

DRAFT-CONFIDENTIAL-FOIA EXEMPT

HOUSATONIC RIVER PROJECT
PITTSFIELD, MASSACHUSETTS
PHASE 2 1.5 MILE PRE-DESIGN
FIGURE 7



HOLLOW CELL CONCRETE BIN WALL

N.T.S.

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WESTON SOLUTIONS

DRAFT–CONFIDENTIAL–FOIA EXEMPT

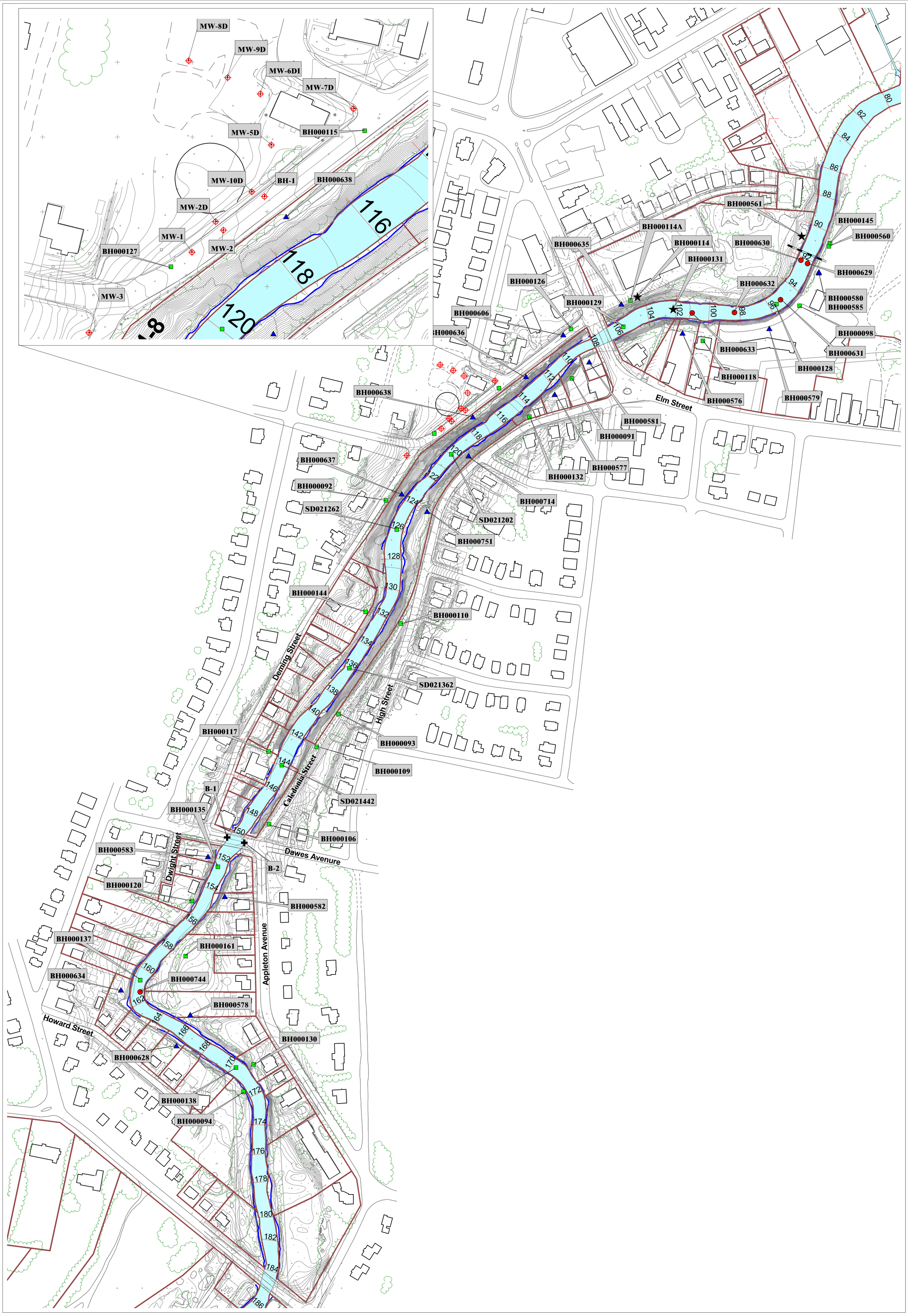
HOUSATONIC RIVER PROJECT
PITTSFIELD, MASSACHUSETTS
PHASE 2 1.5 MILE PRE-DESIGN
FIGURE 8

ATTACHMENT 5

GEOTECHNICAL DATA

GEOTECHNICAL BORING LOGS

Geotechnical Boring logs are presented in order from upstream to downstream. Refer to attached map for test boring locations.



LEGEND:

- Existing EPA Boring Locations
- Existing EPA Boring Locations (Approximate)
- Existing ENSR Boring Locations (Approximate)
- Existing DOT Boring Locations (Approximate)
- Phase II Bank Boring Locations
- Phase II In-River Boring Locations
- Roads
- Hydrology
- Transect Locations

N

WESTON SOLUTIONS

Scale in Feet

150 0 150 300 450

DRAFT -- CONFIDENTIAL -- FOIA EXEMPT

Housatonic River Project
Pittsfield, Massachusetts

Phase II 1.5 Mile Pre-Design Geotechnical Boring Locations

July 23, 2002

| g:\projects\ryan\arc view data browser\phase ii borings.apr | Boring Location Map for Pre Design Memo | c:\ryan\documents\ee-ca\phase ii\borings\maps\final locations\pre-design memo all borings location map4.eps | 11:59 AM, 7/25/2002 |

CLIENT : EECA1
PROJECT : HOUSATONIC RIVER
PROPERTY :
SITE/AREA : EECA

LOCATION ID : BH000145
BEGIN DATE : 07/12/00
END DATE : 07/12/00
LOGGER : I. ALVARADO

Borehole Completed In (<O>verburden <B>edrock) : O

Total Depth : 36.00 Depth to Bedrock : 0.00

Borehole Diameter #1: 6.00
Interval: 0.00 ft. to 36.00 ft. BGS
Method : HSA Fluid : WATER
Borehole Diameter #2:
Interval:
Method : Fluid :
Borehole Diameter #3:
Interval:
Method : Fluid :

Drilling Company : SEABOARD
Driller : ROB
Drill Rig Type : 4X4 TRUCK RIG

	Estimated	Surveyed
Surface Elevation :	982.000	
N. Coordinate :	0.0000	912072.2962
E. Coordinate :	0.0000	56764.7125

Well Permit.....(Y)es (N)o: N Permit # :

Hole Abandoned...(Y)es (N)o: Y
Well Installed...(Y)es (N)o: N
Well Cluster.....(Y)es (N)o: N No. of Wells : 0
Well Nest.....(Y)es (N)o: N No. of Wells : 0
Pumps Installed..(Y)es (N)o: N

	Type	Depth
Purge :		0
Sample :		0

Borehole Testing
Borehole Geophysics.....(Y)es (N)o: N
Slug Tests.....(Y)es (N)o: N
Packer Tests.....(Y)es (N)o: N
Pumping Tests.....(Y)es (N)o: N

Comments :
GEOTECH BORING MAP #11. HOLE GROUTED WITH 2 BAGS CEMENT AND 1 BAG VOLCLAY; GEOTECH SAMPLE FOR SUITE 1.

GEOLIS Sampling and Lithology Data Summary

Location ID	Sample Start Depth (feet)	Sample End Depth (feet)	Soil Sampling Method	Sample Recovered (inches)	Sampling Length (inches)	Lithology Start Depth (feet)	Lithology End Depth (feet)	Gravel %	Sand %	Silt %	Clay-%	Organic %	Sorting	Plasticity	ASTM / USCS Soil Classification	Coarse Gravel %	Medium Gravel %	Fine Gravel %	Coarse Sand %	Medium Sand %	Fine Sand %
BH000145	0.0	2.0	SPS	12	24	0.0	1.0	15	45	25	5	10	POR	NON	Silty sand w/gravel, SM	5	5	5	15	15	15
BH000145	0.0	2.0	SPS	12	24	1.0	2.0								No Sample Recovered						
BH000145	2.0	5.0	NS	0	0	2.0	5.0								Interval Not Sampled						
BH000145	5.0	7.0	SPS	8	24	5.0	5.7	20	45	25	5	5	POR	NON	Silty sand w/gravel, SM	7	6	7	15	15	15
BH000145	5.0	7.0	SPS	8	24	5.7	7.0								No Sample Recovered						
BH000145	7.0	10.5	NS	0	0	7.0	10.5								Interval Not Sampled						
BH000145	10.5	12.5	SPS	20	24	10.5	12.2		5	40	45	10	NA	HGH	Fat clay, CH						5
BH000145	10.5	12.5	SPS	20	24	12.2	12.5								No Sample Recovered						
BH000145	12.5	15.0	NS	0	0	12.5	15.0								Interval Not Sampled						
BH000145	15.0	17.0	SPS	10	24	15.0	15.8		75	20	5		POR	NON	Silty sand, SM				25	25	25
BH000145	15.0	17.0	SPS	10	24	15.8	17.0								No Sample Recovered						
BH000145	17.0	25.0	NS	0	0	17.0	25.0								Interval Not Sampled						
BH000145	25.0	27.0	SPS	12	24	25.0	26.0	5	75	15	5		POR	NON	Silty sand, SM		5		30	20	25
BH000145	25.0	27.0	SPS	12	24	26.0	27.0								No Sample Recovered						
BH000145	27.0	35.0	NS	0	0	27.0	35.0								Interval Not Sampled						
BH000145	35.0	36.0	SPS	2	12	35.0	35.2		5	80	15		NA	HGH	Elastic silt, MH						
BH000145	35.0	36.0	SPS	2	12	35.2	36.0								No Sample Recovered						

Borehole Log

Roy F. Weston, Inc.

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 36.00
SITE NAME	: EECA	LOGGER	: I. ALVARADO
BORING ID	: BH000145	DRILLING COMPANY	: SEABOARD
NORTHING	: 912072.2962 surveyed	DRILLING RIG	: 4X4 TRUCK RIG
EASTING	: 56764.7125 surveyed	DATE STARTED	: 07/12/00
ELEVATION	: 982.000 estimated	DATE COMPLETED	: 07/12/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
			50	GRY BRN Silty sand w/gravel, SM	BH000145-0-0000	NOC	MST	4 14 13 8/6	OVM 0.0	ROOTS IN SAMPLE; USED 2 & 3" SPS SAMPLER; FILL; 15% GRAVEL, 45% C-M-F SAND.
981	1			No Sample Recovered						NO RECOVERY
980	2			Interval Not Sampled						NOT SAMPLED.
979	3									
978	4									
977	5		35	GRY BRN Silty sand w/gravel, SM	BH000145-0-0000	NOC	MST	16 17 28 34/6	OVM 1.3	ROOTS & ASPHALT IN SAMPLE USED 2 & 3" SPS SAMPLER FILL; 20% GRAVEL, 45% C-M-F SAND.
976	6			No Sample Recovered						NO RECOVERY
975	7			Interval Not Sampled						NOT SAMPLED.
974	8									
973	9									
972	10									

PROJECT :	HOUSATONIC RIVER	TOTAL DEPTH :	36.00
SITE NAME :	EECA	LOGGER :	I. ALVARADO
BORING ID :	BH000145	DRILLING COMPANY :	SEABOARD
NORTHING :	912072.2962 surveyed	DRILLING RIG :	4X4 TRUCK RIG
EASTING :	56764.7125 surveyed	DATE STARTED :	07/12/00
ELEVATION :	982.000 estimated	DATE COMPLETED :	07/12/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						NOT SAMPLED.
971	11		85	OLV GRY Fat clay, CH	BH000145-0-0105	COH	WET	2 4 7 8/6	OVM 5.3	USED 2 & 3" SPS SAMPLER; 10% ORGANIC, 40% SILT.
970	12			No Sample Recovered						NO RECOVERY
				Interval Not Sampled						NOT SAMPLED.
969	13									
968	14									
967	15		40	OLV GRY Silty sand, SM	BH000145-0-0150	NOC	SAT	3 6 3 4/6	OVM 0.8	WOOD IN SAMPLE; USED 2 & 3" SPS SAMPLER; 75% C-M-F SAND.
966	16			No Sample Recovered						NO RECOVERY
965	17			Interval Not Sampled						NOT SAMPLED.
964	18									
963	19									
962	20									

Borehole Log

Roy F. Weston, Inc.

PROJECT :	HOUSATONIC RIVER	TOTAL DEPTH :	36.00
SITE NAME :	EECA	LOGGER :	I. ALVARADO
BORING ID :	BH000145	DRILLING COMPANY :	SEABOARD
NORTHING :	912072.2962 surveyed	DRILLING RIG :	4X4 TRUCK RIG
EASTING :	56764.7125 surveyed	DATE STARTED :	07/12/00
ELEVATION :	982.000 estimated	DATE COMPLETED :	07/12/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						NOT SAMPLED.
961	21									
960	22									
959	23									
958	24									
957	25		50	OLV GRY Silty sand, SM	BH000145-0-0250	NOC	SAT	3 7 5 6/6	OVM 0.4	USED 2 & 3" SPS SAMPLER; 75% C-M-F SAND.
956	26			No Sample Recovered						NO RECOVERY
955	27			Interval Not Sampled						NOT SAMPLED.
954	28									
953	29									
952	30									

Borehole Log

Roy F. Weston, Inc.

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 36.00
SITE NAME	: EECA	LOGGER	: I. ALVARADO
BORING ID	: BH000145	DRILLING COMPANY	: SEABOARD
NORTHING	: 912072.2962 surveyed	DRILLING RIG	: 4X4 TRUCK RIG
EASTING	: 56764.7125 surveyed	DATE STARTED	: 07/12/00
ELEVATION	: 982.000 estimated	DATE COMPLETED	: 07/12/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						NOT SAMPLED.
951	31									
950	32									
949	33									
948	34									
947	35		20	Elastic silt, MH	BH000145-0-0350	COH	WET	8 100/2	OVM 0.0	LT OLV GRY.
				No Sample Recovered						DRILLED TO 36' TO CONFIRM BEDROCK; AUGER REFUSAL & END OF BORING @ 36 FT; NO RECOVERY.
946	36									
945	37									
944	38									
943	39									
942	40									

WESTON
MANAGERS DESIGNERS/CONSULTANTS

Date Drilled: 2/7/02

Drilling Method: 2" Split Spoon/4-1/4" HSA & 6" Casing

Total Depth: 52"

Borehole Dia.: 6"

Static Water Level: ~13'

Ground Surface Elevation: 983.30 ft. AMSL

Site Id: GB-F

Project Number: 20125.257.103

Project Name: SSERC - Geotechnical Borings

Location: Pittsfield, Massachusetts

Logged By: J. Schmidt

Project Manager: J. Lindsay

Contractor: Seaboard Environmental

Remarks:
Headspace readings measured using a Thermo Environmental Organic Vapor Monitor - Model 580B

Depth (ft)	Water Level	Recovery (in/in)	Sample No.	Blow Count	Headspace (ppm)	Material Description	USCS Soil Type	Notes
		24/12	1	2-3	2.3	Light brown f-c SAND, little f-m quartz gravel <subrounded>, moist	SW	Fill
				10-19	NR			
		24/15	2	16-19	1.7	Light olive brown f. SAND, some silt, little f. rounded gravel, trace m-c sand, moist, cohesive, trace Fe staining around limestone gravel	SP-SM	Fill
				25-19	0.7			
5		24/0	3	16-15	NR	No recovery		Fill
				17-23	NR			
		24/12	4	30-23	1.1	Dark gray brown f-m SAND, with f-c angular gravel <includes brick and concrete>, trace silt, moist, cohesive	SW	Fill
				19-20	1.1			
		24/11	5	7-5	3.6	Dark gray to black interbeds of SILT, trace clay <rolls to quarter inch> and f. SAND, and black peat, wet	OL-OH	
				5-6	3.6		ML	
10		24/2	6	3-4	20	Dark gray to black interbeds of SILT, trace clay <rolls to quarter inch> and f. SAND, and black peat, wet, slight petroleum odor	ML	
				7-11	20		SP	
	▼	24/11	7	9-12	4.6	12.0-12.5: Dark gray to black interbeds of SILT, trace clay <rolls to quarter inch> and f. SAND, and black peat, wet, slight petroleum odor	SP	
				13-10	4.6	12.5-12.9: olive gray f. SAND, little silt, wet, with chunks of wood <oxidized black peat>, cohesive	SP-SM	
15		24/16	8	2-3	6.1	Gray f-m SAND, trace organics <chunks of wood>, saturated, loose, large chunks of wood <0.1 ft> at 15 ft	SW	
				8-5	6.1			
		24/12	9	6-9	0.5	Gray m. SAND, trace oxidized <black> wood, course SAND at 19 ft, saturated, loose	SP	
				8-4	0.5			
		24/11	10	3-5	0.4	Gray m-c SAND, little oxidized black wood, trace f. gravel at 18.9 ft, saturated, loose	SP	
				6-7	0.4			
20		24/19	11	3-5	0.2	Pale gray brown m-c SAND, trace f. gravel, saturated, loose	SP	
				6-8	0.2			
25		24/12	12	10-10	-	Interbedded <0.1-0.2 ft thick> pale gray-brown f. SAND, trace m. sand and m. pale gray-brown SAND, trace c. sand and f. gravel, saturated, loose	SP	
				13-17	-			

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Site Id: GB-F | Project Name: SSERC - Geotechnical Borings | Project Number: 20125.257.103

Depth (ft)	Water Level	Recovery	Sample No.	Blow Count	Headspace (ppm)	Material Description	UCS Soil Type	Notes
		24 / 15	13	25-27	-	Interbedded <0.1-0.5 ft thick> olive gray m-c SAND, olive gray f-m SAND, with f. quartz subrounded gravel, and olive brown or red brown SILT, trace f-m sand,	SP	
				23-19	-	saturated, loose	MH	
35		24 / 7	14	10-11	-	Pale olive brown f. SAND, with silt, trace f-m subangular gravel <mostly limestone>, saturated, soft, cohesive	SP-SM	Till
				20-26	-			
40		24 / 14	15	57-36	BKG	Pale brown limestone GRAVEL, little f. sand <mostly weathered limestone>, saturated, natural fractures ~0.2 ft apart	GW	
				54-48	BKG			
45		11 / 9	16	81-100/5"	BKG	Pale brown limestone GRAVEL, with olive brown f. sand, trace silt, cohesive, saturated, loss of water at	GW	
				-	BKG			
50		21 / 13	17	85-54	BKG	Pale brown limestone GRAVEL, with olive brown f. sand, trace silt, cohesive, saturated, gravel variably weathered and 0.4-0.5 ft in size	GW	
				42-100/3"	BKG	Loss of water below 50 ft, not possible to advance roller bit further without water circulation		
						End of Boring at 50ft		
55								
60								
65								
70								

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WESTON
MANAGERS DESIGNERS/CONSULTANTS

Date Drilled: 1/22/02 - 1/23/02

Drilling Method: 2" Split Spoon/4-1/4" HSA & 6" Casing

Total Depth: 62'

Borehole Dia.: 6"

Static Water Level: ~3.5'

Site Id: GB-G

Project Number: 20125.257.103

Ground Surface Elevation: 974.50 ft. AMSL

Project Name: SSERC - Geotechnical Borings

Location: Pittsfield, Massachusetts

Logged By: K. Taylor

Project Manager: J. Lindsay

Contractor: Seaboard Environmental

Remarks:
Headspace readings measured using a Thermo Environmental Organic Vapor Monitor - Model 580B

Depth (ft)	Water Level	Recovery (in/in)	Sample No.	Blow Count	Headspace (ppm)	Material Description	USCS Soil Type	Notes
		14/24	1	6-2	0.0	Medium brown f. SAND <90%> with trace rootlets, well sorted, trace m. sand, top 3-4" is frozen, loose, dry	SP	
				1-2	0.0			
	▽	16/24	2	1-2	0.3	Light-medium brown f. SAND <90%>, trace silt lenses that are stained <slight odor>, trace Fe staining, well sorted, soft, bottom of sample is moist	SP-SM	
				2-2	0.3			
5	▽	15/24	3	1-1	5.0	Dark brown f. SAND <80%>, little silt <10%>, trace m. sand <5%>, well sorted, soft, trace leaf-rootlets, saturated, strong odor, sheen on water, staining	SP-SM	
				1-1	5.0			
		5/24	4	1-2	0.8	Brown-black f. SAND <70%> with m. sand <20%>, trace silt and wood pieces, soft, saturated, odor, staining, sheen on water	SW	
				1-1	0.8			
		6/24	5	1-1	0.5	Dark brown-black f-m SAND <80%>, little silt <10%>, trace c. sand <8%> and f. gravel <2%>, loose, subrounded grains, staining, odor, sheen on water, saturated	SW-SM	
				3-8	0.5			
10		3/24	6	4-3	6	C. sands and subrounded f. gravel, loose, wet	SW	
				5-4	6			
		11/24	7	5-4	1.4	Olive brown m-c SAND <60%> with f. gravel <30%> and little f. sand <10%>, subrounded grains, loose, saturated	SP	
				6-4	1.4			
		NS	NS	NS	-			
15		8/24	8	5-5	1.7	Brown f-m SAND <80%>, little c. sand <15%>, trace f. gravel <5%>, subrounded grains, slightly firm, non-plastic, wet <no staining or odor>	SP	
				5-7	1.7			
		16/24	9	11-9	0.4	Olive brown f-m SAND <70%> with some c. sand <25%>, trace f. gravel <5%>, subrounded grains, slightly firm, non-plastic, moderately sorted, wet	SP	
				10-12	0.4			
		NS	NS	NS	-			
20		10/24	10	8-9	0.0	Olive brown m-c SAND <80%> with little f. gravel <15%> and trace m. gravel <5%>, subrounded grains, slightly firm, moderately sorted, wet	SP	
				10-16	0.0			
25		5/24	11	33-27	0.0	Olive brown f. SAND <85%> with little m-c sand <10%> and trace f. gravel <5%>, subrounded grains, slightly cohesive, hard, non-plastic <till>	SP	
				14-17	0.0			

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Site Id: GB-G | Project Name: SSERC - Geotechnical Borings | Project Number: 20125.257.103

Depth (ft)	Water Level	Recovery	Sample No.	Blow Count	Headspace (ppm)	Material Description	USCS Soil Type	Notes
		14/24	12	32-72	0.0	Olive brown vf SAND with silt <70%>, little m-c sand <25%> and f. gravel, trace m. gravel <5%>, subangular grains, hard, non-plastic	SW-SM	
				84-100	0.0			
35		7/11	13	56-100(5")	0.0	Olive brown vf SAND with silt <70%>, little m-c sand <25%> and f. gravel, trace m. gravel <5%>, subangular grains, hard, non-plastic, grains are not weathered	SW-SM	
				REF	0.0			
40		8/16	14	21-56	0.0	Olive brown f. SAND <60%> with silt <10%>, some m-c sand and f. gravel <25%>, trace m. gravel <5%>, hard, Fe staining around most grains, some gravel pieces slightly weathered	SW-SM	
				100(4")	0.0			
45		7/24	15	46-78	0.0	Light brown f. SAND with silt <60%>, m. sand <35%>, trace f. gravel <5%>, trace Fe staining and weathering of and around subangular grains, hard, wet	SW-SM	
				49-100	0.0	Cored interval due to extremely slow roterbit advancement, recovered a core of a boulder	GW	
55		0/2	16	100(2")	NS	Spoon refusal, cuttings have been pieces of weathered rock, but difficult to distinguish here between pieces from till and potential weathered bedrock	GW	
				REF	NS			
60						Drilling observation - slow roter bit advancement more indicative of drilling through rock or another boulder, hard drilling from 60-62' bgs End of boring		
65								
70								

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DIVERSION DAM

GEO LOGIC, INC.

EARTH EXPLORATION SERVICES
35 Commercial Drive
Wrentham, MA 02093
TEL 5083844434
FAX 5083844452

CLIENT: Roy F. Weston GTB-1
PROJECT: Housatonic River
LOCATION: Pittsfield, MA
BH000630

			CASING	SAMPLER	CORE BARREL
File #:	02121	TYPE	HW	SS	
Date Started:	5/23/02	SIZE	4"	2"	
Date Completed:	5/23/02	HAMMER	300#	140#	—
Driller:	T. Tucker	FALL	24"	30"	—
Site Rep.:	Amy Steele				

Surface Elevation:
Station:
Groundwater level readings
Date Depth
Date Depth

Depth ft	Sample No.	Depth ft	N	Rec. in	Blows/6"	Sample Description
	S-1	0.0-0.2	2		1-1-1-4	S-1 Loose medium to coarse SAND and GRAVEL, wood fragments, saturated
	S-2	2.0-2.4	5		4-4-1-1	S-2 Loose medium to coarse SAND and GRAVEL, saturated
5	S-3	4.0-4.3	3		1-2-1-2	S-3 No recovery
	S-4	6.0-6.3	3		2-2-1-1	S-4 Loose fine to medium SAND, saturated
	S-5	8.0-9.1	13		8-6-7-9	S-5 Medium dense fine to medium SAND layers, firm, saturated
10	S-6	10.0-11.4	17		8-9-8-9	S-6 Medium dense medium to coarse SAND and fine to coarse GRAVEL, coarsening down, saturated
15						
	S-7	17.0-18.9	23		7-8-15-14	S-7 Medium dense clayey SILT, gravel above and below rolls to 1/3"
20						
	S-8	22.0-26.1	49		25-21-28-100	S-8 Dense silty fine SAND matrix and coarse angular GRAVEL, TILL, rough drilling
25						
	S-9	27.0-36.2	110		25-48-62-57	S-9 Very dense TILL and weathered ROCK
30						Bottom of exploration at 29.0'
						"Penetration in inches" column should read "N-Value"

Ground Surface to _____ used _____ then _____

Proportions Used		Cohesive Consistency Blows/ft				Cohesionless Density Blows/ft		Sample Type
Trace	0 to 10%	0-2	Very Soft	9-15	Stiff	0-10	Loose	UP = Fixed Piston
Little	10 to 20%	3-4	Soft	16-30	V-Stiff	10-30	M-Dense	UT = Shelby Tube
Some	20 to 35%	5-8	M-Stiff	31+	Hard	30-50	Dense	OE = Open End Rod
And	35 to 50%					50+	V-Dense	* = 300# hammer

Notes:
1. The stratification lines represent the approximate boundary between soil types. The transition may be gradual.
2. Water level readings were made in the drill hole during or at the completion of drilling. The water level may fluctuate over time.

Remarks: NOTE: Classification performed by RF Weston site rep

GEO LOGIC, INC.

EARTH
EXPLORATION
SERVICES
35 Commercial Drive
TEL 5083844434
Wrentham, MA 02093
FAX 5083844452

CLIENT: Roy F. Weston

PROJECT: Housatonic River

LOCATION: Pittsfield, MA

GTB-2

			CASING	SAMPLER	CORE BARREL
File #:	02121	TYPE	HW	SS	
Date Started:	5/22/02	SIZE	4"	2"	
Date Completed:	5/23/02	HAMMER	300#	140#	—
Driller:	T. Tucker	FALL	24"	30"	—
Site Rep.:	Amy Steele				

Surface Elevation:
Station:
Groundwater level readings
Date Depth
Date Depth

Depth ft	Sample No.	Sample Depth ft	N	Rec. in	Blows/6"	Sample Description
	S-1	0.0			2-1-WH-WH	S-1 0-.2' Fine to coarse variegated subrounded subangular GRAVEL, saturated
						.2-2' No recovery
	S-2	2.0-2.3	4		10-2-2-2	S-2 2-2.3' Loose coarse SAND and fine subrounded subangular GRAVEL, saturated, slight sheen on spoon, medium to coarse sand in nose
						2.3-4' No recovery
5	S-3	4.0-4.3	4		2-2-2-3	S-3 4-6' No recovery
	S-4	6.0-6.8	9		5-4-5-6	S-4 6-7.2' Loose moderately brown fine SAND, micaceous, medium sand layer at 6.8', layers throughout
	S-5	8.0-10.0	24		7-9-15-19	7.2-8' No recovery S-5 Medium dense moderately brown micaceous fine to coarse SAND, some subrounded gravel
10	S-6	10.0-13.8	45		28-22-23-24	S-6 Similar to S-5, Dense subrounded subangular GRAVEL, saturated
15	S-7	16.0-18.5	30		16-18-12-10	S-7 No recovery, 1.5" diameter GRAVEL in nose, some clay, some medium sand
20	S-8	21.0-26.5	66		25-36-30-25	S-8 21-22.2' Very dense moderately gray TILL and tight silty fine SAND matrix, some fine to coarse gravel and some medium to coarse sand 22.2-23' No recovery, trace clay 23-24' Driller says chatters like on a boulder, spoon bounced
25	S-9	24.0-30.7	80		25-20-60-83	S-9 24-24.5' Weathered ROCK and silty clayey fine to medium SAND ~29' Driller says uniform rock chips, limestone
30	S-10	31.0-39.6	103		38-61-42-18	S-10 31-31.7' TILL 31.7-32' Weathered ROCK, possible limestone 32-33' No recovery

Ground Surface to _____ used _____ then _____

Proportions Used		Cohesive Consistency Blows/ft				Cohesionless Density Blows/ft		Sample Type
Trace	0 to 10%	0-2	Very Soft	9-15	Stiff	0-10	Loose	UP = Fixed Piston
Little	10 to 20%	3-4	Soft	16-30	V-Stiff	10-30	M-Dense	UT = Shelby Tube
Some	20 to 35%	5-8	M-Stiff	31+	Hard	30-50	Dense	OE = Open End Rod
And	35 to 50%					50+	V-Dense	* = 300# hammer

Notes:
1. The stratification lines represent the approximate boundary between soil types. The transition may be gradual.
2. Water level readings were made in the drill hole during or at the completion of drilling. The water level may fluctuate over time.

Remarks: NOTE: Classification performed by RF Weston site rep

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EARTH
EXPLORATION
SERVICES
35 Commercial Drive
TEL 5083844434
Wrentham, MA 02093
FAX 5083844452

CLIENT: Roy F. Weston
PROJECT: Housatonic River
LOCATION: Pittsfield, MA

GTB-2

Depth ft	Sample No.	Sample Depth ft	N	Rec. in	Blows/6"	Sample Description
	S-11	35.0			100/0"	S-11 Driller says 34.5' tough drilling - possible rock(?) to 35' Bottom of exploration at 35.0' "Penetration in inches" column should read "N-Value"
40						
45						
50						
55						
60						
65						
70						
75						

Proportions Used		Cohesive Consistency Blows/ft				Cohesionless Density Blows/ft		Sample Type
Trace	0 to 10%	0-2	Very Soft	9-15	Stiff	0-10	Loose	UP = Fixed Piston
Little	10 to 20%	3-4	Soft	16-30	V-Stiff	10-30	M-Dense	UT = Shelby Tube
Some	20 to 35%	5-8	M-Stiff	31+	Hard	30-50	Dense	OE = Open End Rod
And	35 to 50%					50+	V-Dense	* = 300# hammer

Notes:
1. The stratification lines represent the approximate boundary between soil types. The transition may be gradual.
2. Water level readings were made in the drill hole during or at the completion of drilling. The water level may fluctuate over time.

Remarks: NOTE: Classification performed by RF Weston site rep

WESTON	SOIL BORING LOG			PAGE 1 OF 2
Job Name	Housatonic River	Boring No.	GTB-3	Groundwater Level
Job No.	20125.001.096	Surface Elev.	ft.	Date Depth
Date Drilled	24 Apr 02	Boring Method	Hollow Stem Augers	Not Measured
Drilling Co.	TDS	Completion Depth	45.0 ft bgs	
Drill Foreman	Scott Lombard	Location	BH000580	
Logged By	A.C. Steele	Pittsfield, Massachusetts		

Depth (feet)	Sample No.	Sample Type*	Sample Blow Counts** (per 6 in.)	N Value**	Visual Description	% Rec	% RQD	Laboratory Tests
	1	SS	8-10-100/0	110/6"	Mod brown silty fine to medium SAND and subround to subangular GRAVEL, firm, slightly moist. GP-SP. *1 ft to 4 ft - blind drilled through rough zone.*	35		
5	2	SS	13-14-20-16	34	FILL. Mod brown silty fine to coarse SAND and GRAVEL. wood and coal frag, loose. sl. Moist. GP-SP.	35		
	3	SS	3-4-3-3	7	Same.	30		
	4	SS	6-6-7-8	13	Coarse SAND and GRAVEL. some silt. saturated. GM.	40		
10	5	SS	7-7-8-7	15	Black silty fine SAND, micaceous. sl moist. SM. Same, trace wood and rootlets. SM.	65		
15	6	SS	3-4-5-6	9	Dark brown to black silty fine SAND, sl moist no apparent bedding. SM.	90		
20	7	SS	3-4-4-5	8	Medium to dark borwn coarse SAND and GRAVEL up to 0.5-inch diam, sat. GP-SP.	65		
25	8	SS	3-3-3-5	6	Same, some silt and gravel up to 1-inch diam. GM.	85		
30	9	SS	3-3-4-6	7	Dark brown coarse SAND with gravel. sat. SP. *Driller says a little running sand.*	90		
35								

*Sample type: SS-Split Spoon, ST-Shelby Tube, RC-Rock Core, SC-Soil Core

Laboratory Tests: MC-Moisture Content, AL-Atterberg Limits, S-Sieve Analysis, SH-Sieve/Hydrometer Analysis, SG-Specific Gravity, OC - Organic Content, C-Consolidation, UU-Unconsolidated Undrained Triaxial, CU-Consolidated Undrained Triaxial, UCS-Unconfined Compressive Strength, K-Hydraulic Conductivity, BD - Bulk Density

**ASTM D-1586 Standard Penetration Test

WESTON	SOIL BORING LOG	PAGE 2 OF 2

Job Name Job No.	Housatonic River 20125.001.096	Boring No. Surface Elev.	GTB-3 ft (est.)	Groundwater Level Date Depth
Date Drilled	24 Apr 02	Boring Method	Case and wash	Not Measured
Drilling Co.	TDS	Completion Depth	45.0 ft bgs	
Drill Foreman	Scott Lombard	Location	BH000580	
Logged By	A.C. Steele	Pittsfield, Massachusetts		

Depth (feet)	Sample No.	Sample Type*	Sample Blow Counts* (per 6 in.)	N Value*	Visual Description	% Rec	% RQD	Laboratory Tests
	10	SS	10-13-14-18	27	Coarse SAND and gravel. GP-SP. *Per driller, the material is heave.*	95		
40	11	SS	3-3-6-11	9	Gravelly fine sandy silty CLAY, saturated. GC. *Per driller, the blow counts may be through heave.*	15		
45	12	SS	100/0	100/0"	End of Boring at 45 ft bgs. Spoon refusal.	0		
50								
55								
60								
65								
70								

Sample type: SS-Split Spoon, ST-Shelby Tube, RC-Rock Core, SC-Soil Core

Laboratory Tests: MC-Moisture Content, AL-Atterberg Limits, S-Sieve Analysis, SH-Sieve/Hydrometer Analysis, SG-Specific Gravity, OC - Organic Content, C-Consolidation, UU-Unconsolidated Undrained Triaxial, CU-Consolidated Undrained Triaxial, UCS-Unconfined Compressive Strength, K-Hydraulic Conductivity, BD - Bulk Density

*ASTM D-1586 Standard Penetration Test

WESTON	SOIL BORING LOG			PAGE 1 OF 2
Job Name Job No.	Housatonic River 20125.001.096	Boring No. Surface Elev.	GTB-3A ft.	Groundwater Level Date Depth
Date Drilled	13 Jun 02	Boring Method	H.S.A.	Not Measured
Drilling Co.	TDS	Completion Depth	45.0 ft bgs	
Drill Foreman	Scott Lombard	Location	BH000585	
Logged By	A.C. Steele	Pittsfield, Massachusetts		

Depth (feet)	Sample No.	Sample Type*	Sample Blow Counts** (per 6 in.)	N Value**	Visual Description	% Rec	% RQD	Laboratory Tests
5					0 ft to 10 ft, not sampled. See the log for adjacent hole GTB-3			
10	1	SS	7-6-5-22	11	Medium to coarse SAND and subangular to angular gravel, gravel to 0.2 ft diameter.	10		
	2	SS	3-5-7-8	12	Dark brown to black silty fine SAND, trace clay, trace rootlets, no vis layering, cohesive.	80		
20	3	SS	6-5-4-5	9	Medium to coarse SAND, no visible layering, saturated.	20		
25	4	SS	3-3-3-3	6	Medium to coarse SAND, layering, iron staining at 23.2 ft.	20		
30	5	SS	5-5-5-6	10	Moderate tan fine to coarse SAND, no vis layering.	45		
35	6	SS	9-13-15-18	28	Moderate tan fine to medium SAND, layer with coarse sand at 33.3	60		

*Sample type: SS-Split Spoon, ST-Shelby Tube, RC-Rock Core, SC-Soil Core

Laboratory Tests: MC-Moisture Content, AL-Atterberg Limits, S-Sieve Analysis, SH-Sieve/Hydrometer Analysis, SG-Specific Gravity, OC - Organic Content, C-Consolidation, UU-Unconsolidated Undrained Triaxial, CU-Consolidated Undrained Triaxial, UCS-Unconfined Compressive Strength, K-Hydraulic Conductivity, BD - Bulk Density

**ASTM D-1586 Standard Penetration Test

WESTON	SOIL BORING LOG			PAGE 2 OF 2
Job Name Job No.	Housatonic River 20125.001.096	Boring No. Surface Elev.	GTB-3A ft (est.)	Groundwater Level Date Depth
Date Drilled	13 Jun 02	Boring Method	H.S.A.	Not Measured
Drilling Co.	TDS	Completion Depth	45.0 ft bgs	
Drill Foreman	Scott Lombard	Location	BH000585	
Logged By	A.C. Steele	Pittsfield, Massachusetts		

Depth (feet)	Sample No.	Sample Type*	Sample Blow Counts* (per 6 in.)	N Value*	Visual Description	% Rec	% RQD	Laboratory Tests
40	7	SS	17-9-12-11	21	Mod tan, medium to coarse SAND, layered, fine gravel at base with silty clay layer below.	55		
45	8	SS	23-80-31-15	111	TILL, moderate tan fine to medium SAND and subangular GRAVEL.	70		
					End of boring at 45 feet bgs.			
50								
55								
60								
65								
70								

Sample type: SS-Split Spoon, ST-Shelby Tube, RC-Rock Core, SC-Soil Core

Laboratory Tests: MC-Moisture Content, AL-Atterberg Limits, S-Sieve Analysis, SH-Sieve/Hydrometer Analysis, SG-Specific Gravity, OC - Organic Content, C-Consolidation, UU-Unconsolidated Undrained Triaxial, CU-Consolidated Undrained Triaxial, UCS-Unconfined Compressive Strength, K-Hydraulic Conductivity, BD - Bulk Density

*ASTM D-1586 Standard Penetration Test

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WESTON	SOIL BORING LOG			PAGE 1 OF 1
Job Name Job No.	GE Pittsfield- EE/CA 10971-032-007	Boring No. Surface Elev.	BH000098 988.0 ft. (est)	Groundwater Level Date Depth
Date Drilled	13 May 99	Boring Method	HSA	Not Measured
Drilling Co.	NH Boring	Completion Depth	20.0 ft bgs	
Drill Foreman	Kenneth Smith	Location	See Figure 2.1-7	
Logged By	J. Schmidl			

Depth (feet)	Sample No.	Sample Type*	Sample Blow Counts** (per 6 in.)	N Value**	Visual Description	% Rec	% RQD	Laboratory Tests
	Sample	SS	3-6-6-8	12	Topsoil SAND, some gravel, light brown, dry			
		SS	13-12-10-7	22	SAND, some gravel, light brown, dry SILT, some sand and gravel, dark grey brown, moist	M		
5	Sample	SS	6-6-9-4	15	SAND, trace gravel, grey brown, moist	M		
		SS	14-15-50-x	65	SAND, SILT and GRAVEL, dark yellow brown, wet BOULDER			
10		SS	4-28-41-21	69	SAND, some silt and gravel, dark yellow brown, moist			
	Sample	SS	5-2-3-3	5	SAND, yellow brown, moist	L		
15	Sample	ST				M		
		SS	3-3-3-5	6	SILT and SAND, dark grey, wet			
	Sample	SS	4-5-6-7	11	SILT and SAND, dark grey brown, wet	M		
20					End of Boring at 20.0 feet bgs (Refusal not encountered)			
25								
30								
35								

*Sample type: SS-Split Spoon, ST-Shelby Tube, RC-Rock Core, SC-Soil Core

**ASTM D-1586 Standard Penetration Test

Laboratory Tests: MC-Moisture Content, AL-Atterberg Limits, S-Sieve Analysis, SH-Sieve/Hydrometer Analysis, SG-Specific Gravity, OC - Organic Content, C-Consolidation, UU-Unconsolidated Undrained Triaxial, CU-Consolidated Undrained Triaxial, UCS-Unconfined Compressive Strength, K-Hydraulic Conductivity, BD - Bulk Density

WESTON	SOIL BORING LOG	PAGE 1 OF 1

Job Name	Housatonic River	Boring No.	GTB-4	Groundwater Level	
Job No.	20125.001.096	Surface Elev.	ft.	Date	Depth
Date Drilled	05/24/02	Boring Method	Case and wash	Not Measured	
Drilling Co.	GeoLogic	Completion Depth	24.0 ft bgs		
Drill Foreman	Tim Tucker	Location	BH000631		
Logged By	A. C. Steele	Pittsfield, Massachusetts			

Depth (feet)	Sample No.	Sample Type*	Sample Blow Counts** (per 6 in.)	N Value**	Visual Description	% Rec	% RQD	Laboratory Tests
	1	SS	1-1-1-1	2	No recovery 0 ft -2 ft, gravel in nose.		0	
	2	SS	3-3-3-2	6	Mod gray medium to coarse SAND and fine GRAVEL of var lithologies, loose, sat. GP-SP.		25	
5	3	SS	2-6-6-6	12	Same. GP-SP.		35	
	4	SS	6-10-6-5	16	Same, grades to medium to coarse sand at 6.3 feet. GP-SP.		30	
	5	SS	10-13-15-11	28	Medium to coarse SAND and GRAVEL. GP-SP.		45	
10	6	SS	6-5-7-10	12	Moderate gray silty CLAY, rolls to 1/16-inch, 10% coarse sand. CL.		35	
	7	SS	9-11-37-42	48	Mod tan silty fine SAND, trace clay, matrix with coarse sand and fine gravel, wet. SW.		60	
15					*per driller, rough drilling at 17 feet.*			
	8	SS	93-75-65-75	140	TILL. Silty fine sandy matrix with coarse GRAVEL and COBBLES. GM.		50	
20								
	9	SS	103-26-26-93	52	Weathered limestone.		20	
25					End of Boring at 24 feet bgs.			
30								
35								

*Sample type: SS-Split Spoon, ST-Shelby Tube, RC-Rock Core, SC-Soil Core

Laboratory Tests: MC-Moisture Content, AL-Atterberg Limits, S-Sieve Analysis, SH-Sieve/Hydrometer Analysis, SG-Specific Gravity, OC - Organic Content, C-Consolidation, UU-Unconsolidated Undrained Triaxial, CU-Consolidated Undrained Triaxial, UCS-Unconfined Compressive Strength, K-Hydraulic Conductivity, BD - Bulk Density

**ASTM D-1586 Standard Penetration Test

CLIENT : EECA1
PROJECT : HOUSATONIC RIVER
PROPERTY :
SITE/AREA : EECA

LOCATION ID : BH000128
BEGIN DATE : 06/21/00
END DATE : 06/21/00
LOGGER : D. MORSE

Borehole Completed In (<O>verburden <B>edrock) : O

Total Depth : 15.00 Depth to Bedrock : 0.00

Borehole Diameter #1: 4.00
Interval: 0.00 ft. to 15.00 ft. BGS
Method : DAW Fluid : WATER
Borehole Diameter #2:
Interval:
Method : Fluid :
Borehole Diameter #3:
Interval:
Method : Fluid :

Drilling Company : GEOTEK ENGINEERING
Driller : GLEN PETERSON
Drill Rig Type : SIMCO EARTH PROBE 200

	Estimated	Surveyed
Surface Elevation :	968.000	
N. Coordinate :	0.0000	912011.3523
E. Coordinate :	0.0000	56710.8065

Well Permit.....(Y)es (N)o: N Permit # :

Hole Abandoned...(Y)es (N)o: Y
Well Installed...(Y)es (N)o: N
Well Cluster.....(Y)es (N)o: N No. of Wells : 0
Well Nest.....(Y)es (N)o: N No. of Wells : 0
Pumps Installed..(Y)es (N)o: N

	Type	Depth
Purge :		0
Sample :		0

Borehole Testing
Borehole Geophysics.....(Y)es (N)o: N
Slug Tests.....(Y)es (N)o: N
Packer Tests.....(Y)es (N)o: N
Pumping Tests.....(Y)es (N)o: N

Comments :
GEOTECH BORING CENTER OF RIVER TO 15 FT BELOW RIVER BED. MAP LOCATION #12, SOUTH OF T094. GEOTECH SAMPLES FOR SUITE 1; ENDED BORING DUE TO WATER OVERFLOWING UP CASING RISER.

GEOLIS Sampling and Lithology Data Summary

Location ID	Sample Start Depth (feet)	Sample End Depth (feet)	Soil Sampling Method	Sample Recovered (inches)	Sampling Length (inches)	Lithology Start Depth (feet)	Lithology End Depth (feet)	Gravel %	Sand %	Silt %	Clay %	Organic %	Sorting	Plasticity	ASTM / USCS Soil Classification	Coarse Gravel %	Medium Gravel %	Fine Gravel %	Coarse Sand %	Medium Sand %	Fine Sand %
BH000128	0.0	3.0	NS	0	0	0.0	3.0								Interval Not Sampled						
BH000128	3.0	5.0	SPS	5	24	3.0	3.4	60	35	5			POR	NON	Well-graded gravel with sand, GW	15	15	30	20	10	5
BH000128	3.0	5.0	SPS	5	24	3.4	5.0								No Sample Recovered						
BH000128	5.0	8.0	NS	0	0	5.0	8.0								Interval Not Sampled						
BH000128	8.0	10.0	SPS	10	24	8.0	8.8	20	50	20	10		POR	LOW	Silty sand w/gravel, SM	5	10	5	10	30	10
BH000128	8.0	10.0	SPS	10	24	8.8	10.0								No Sample Recovered						
BH000128	10.0	13.0	NS	0	0	10.0	13.0								Interval Not Sampled						
BH000128	13.0	15.0	SPS	8	24	13.0	13.7	30	30	30	10		NA	MOD	Silty sand w/gravel, SM	5	20	5		10	20
BH000128	13.0	15.0	SPS	8	24	13.7	15.0								No Sample Recovered						

Borehole Log — *Roy F. Weston, Inc.*

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 15.00
SITE NAME	: EBCA	LOGGER	: D. MORSE
BORING ID	: BH000128	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 912011.3523 surveyed	DRILLING RIG	: SIMCO EARTH PROBE 200
EASTING	: 56710.8065 surveyed	DATE STARTED	: 06/21/00
ELEVATION	: 968.000 estimated	DATE COMPLETED	: 06/21/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						
967	1									
966	2									
965	3		20	OLV GRY Well-graded gravel with sand, GW	BH000128-0-0030	LSE	WET	2 1 1 1/6	OVM 0.4	60% GRAVEL,35% C-M-F SAND
				No Sample Recovered	BH000128-0-0030					
964	4									
963	5			Interval Not Sampled						
962	6									
961	7									
960	8		40	OLV GRY Silty sand w/gravel, SM	BH000128-0-0080	SFT	WET	10 7 3 7/6	OVM 0.4	20% GRAVEL, 30% MED & 20% C-F SAND.
				No Sample Recovered	BH000128-0-0080					
959	9									
958	10			Interval Not Sampled						

Borehole Log *Roy F. Weston, Inc.*

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 15.00
SITE NAME	: EECA	LOGGER	: D. MORSE
BORING ID	: BH000128	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 912011.3523 surveyed	DRILLING RIG	: SIMCO EARTH PROBE 200
EASTING	: 56710.8065 surveyed	DATE STARTED	: 06/21/00
ELEVATION	: 968.000 estimated	DATE COMPLETED	: 06/21/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						
957	11									
956	12									
955	13		35	LT OLV GRY Silty sand w/gravel, SM	BH000128-0-0130		MST	26 57 30 20/6	OVM 0.4	USED 3" SPOON.
				No Sample Recovered	BH000128-0-0130					END OF BORING @ 15' DUE TO WATER OVERFLOWING UP CASING RISER.
954	14									
953	15									
952	16									
951	17									
950	18									
949	19									
948	20									

WESTON	SOIL BORING LOG	PAGE 1 OF 2

Job Name	Housatonic River	Boring No.	GTB-9	Groundwater Level	
Job No.	20125.001.096	Surface Elev.	ft.	Date	Depth
Date Drilled	04/24/02	Boring Method	Case and wash	Not Measured	
Drilling Co.	TDS	Completion Depth	44.0 ft bgs		
Drill Foreman	Scott Lombard	Location	BH000579		
Logged By	A. C. Steele	Pittsfield, Massachusetts			

Depth (feet)	Sample No.	Sample Type*	Sample Blow Counts** (per 6 in.)	N Value**	Visual Description	% Rec	% RQD	Laboratory Tests
	1	SS	14-17-20-16	37	Asphalt above FILL, brick fragments, medium-coarse SAND, trace fine sand and silt, some gravel, loose.	65		
	2	SS	17-20-13-14	33	Same, no brick.	40		
5	3	SS	5-6-8-14	14	Mod brown clayey SILT with large pieces of wood and some fine to medium sand, moist, CL.	65		
	4	SS	12-12-8-4	20	FILL, black coal and medium to coarse SAND, and subang gravel, loose, dry-moist, GP.	25		
	5	SS			Mod brown silty fine SAND, and subang GRAVEL wood frag near top, sl. Moist, GP.	50		
10	6	SS	10-10-8-8	18	FILL, same, fragments of coal and brick, GP. *Per driller, 1.5 feet of wood, wood up in cuttings.*	25		
	7	SS	7-5-7-9	12	Wood above mod dark gray fine to medium SAND with silty fine sand layers, and dark silty layers. SM.	50		
20	8	SS	3-3-4-3	7	Mod dark gray fine to medium SAND with silty fine sand layers, and dark silty clay layers. Moist-wet, firm. Odor. SM.	75		
25	9	SS	3-4-8-8	12	TILL, angular to subang GRAVEL, sandy silty clay rolls to 1/8-th inch, moist, firm. GC.	75		
30	10	SS	20-22-27-23	49	TILL, mod grey, angular to subang GRAVEL, silty clayey fine sand matrix, saturated. GC.	65		
35								

*Sample type: SS-Split Spoon, ST-Shelby Tube, RC-Rock Core, SC-Soil Core

Laboratory Tests: MC-Moisture Content, AL-Atterberg Limits, S-Sieve Analysis, SH-Sieve/Hydrometer Analysis, SG-Specific Gravity, OC - Organic Content, C-Consolidation, UU-Unconsolidated Undrained Triaxial, CU-Consolidated Undrained Triaxial, UCS-Unconfined Compressive Strength, K-Hydraulic Conductivity, BD - Bulk Density

**ASTM D-1586 Standard Penetration Test

WESTON	SOIL BORING LOG	PAGE 2 OF 2

Job Name Job No.	Housatonic River 20125.001.096	Boring No. Surface Elev.	GTB-9 ft (est.)	Groundwater Level Date	Depth
Date Drilled	24 Apr 02	Boring Method	Case and wash		
Drilling Co.	TDS	Completion Depth	44.0 ft bgs		
Drill Foreman	Scott Lombard	Location	BH000579		
Logged By	A. C. Steele	Pittsfield, Massachusetts			

Depth (feet)	Sample No.	Sample Type*	Sample Blow Counts* (per 6 in.)	N Value*	Visual Description	% Rec	% RQD	Laboratory Tests
	11	SS	15-46-45-47	91	Same. GC. Large piece of limestone at 35.9 ft - 36.6 ft.	80		
40	12	SS	7-23-41-42	64	Gravel above TILL, mod gray bronw silty fine SAND matrix and angular gravel, trace clay, stiff, firm. GC.	55		
45					End of boring at 44 ft bgs. Auger refusal.			
50								
55								
60								
65								
70								

Sample type: SS-Split Spoon, ST-Shelby Tube, RC-Rock Core, SC-Soil Core

Laboratory Tests: MC-Moisture Content, AL-Atterberg Limits, S-Sieve Analysis, SH-Sieve/Hydrometer Analysis, SG-Specific Gravity, OC - Organic Content, C-Consolidation, UU-Unconsolidated Undrained Triaxial, CU-Consolidated Undrained Triaxial, UCS-Unconfined Compressive Strength, K-Hydraulic Conductivity, BD - Bulk Density

*ASTM D-1586 Standard Penetration Test

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GEO LOGIC, INC.

EARTH
EXPLORATION
SERVICES
35 Commercial Drive
TEL 5083844434
Wrentham, MA 02093
FAX 5083844452

CLIENT: Roy F. Weston

GTB-6

PROJECT: Housatonic River

LOCATION: Pittsfield, MA

BH000632

			CASING	SAMPLER	CORE BARREL
File #:	02121	TYPE	HW	SS	
Date Started:	5/28/02	SIZE	4"	2"	
Date Completed:	5/28/02	HAMMER	300#	140#	—
Driller:	T. Tucker	FALL	24"	30"	—
Site Rep.:	Amy Steele				

Surface Elevation:
Station:
Groundwater level readings
Date Depth
Date Depth

Depth ft	Sample No.	Depth ft	N	Rec. in	Blows/6"	Sample Description
	S-1	0.0-0.6	7		2-2-5-4	S-1 Loose GRAVEL, subrounded, variable lithology, saturated
	S-2	2.0-3.3	16		6-6-10-12	S-2 2-2.3' Medium dense coarse SAND and fine GRAVEL, some medium sand, loose, saturated
5	S-3	4.0-7.6	43		18-19-24-25	2.3-2.6' Wet dense silty fine SAND matrix, some angular gravel, TILL S-3 TILL with rock on top
	S-4	6.0-16.3	123		37-76-47-52	S-4 Dry very dense TILL, firm
	S-5	8.0-16.6	103		22-50-53 -100/4"	S-5 Dry very dense fine SAND matrix, firm, TILL
10	S-6	10.0-11.9	23		7-9-14-15	S-6 Medium dense hard tan to dark gray clayey silty fine SAND, weathered rock, micaceous, TILL Cuttings black/dark gray
15	S-7	15.0			31-21-100/.2"	S-7 Very dense dark gray silty SAND matrix, TILL with angular gravel
20						Bottom of exploration at 17.0' "Penetration in inches" column should read "N-Value"
25						
30						

Ground Surface to _____ used _____ then _____

Proportions Used		Cohesive Consistency Blows/ft				Cohesionless Density Blows/ft		Sample Type
Trace	0 to 10%	0-2	Very Soft	9-15	Stiff	0-10	Loose	UP = Fixed Piston
Little	10 to 20%	3-4	Soft	16-30	V-Stiff	10-30	M-Dense	UT = Shelby Tube
Some	20 to 35%	5-8	M-Stiff	31+	Hard	30-50	Dense	OE = Open End Rod
And	35 to 50%					50+	V-Dense	* = 300# hammer

Notes:
1. The stratification lines represent the approximate boundary between soil types. The transition may be gradual.
2. Water level readings were made in the drill hole during or at the completion of drilling. The water level may fluctuate over time.

Remarks: NOTE: Classification performed by RF Weston site rep

CLIENT : EECA1
PROJECT : HOUSATONIC RIVER
PROPERTY :
SITE/AREA : EECA

LOCATION ID : BH000118
BEGIN DATE : 06/16/00
END DATE : 06/16/00
LOGGER : I. ALVARADO

Borehole Completed In (<O>verburden <B>edrock) : O

Total Depth : 27.20 Depth to Bedrock : 0.00

Borehole Diameter #1: 6.00
Interval: 0.00 ft. to 27.20 ft. BGS
Method : HSA Fluid : NONE
Borehole Diameter #2:
Interval:
Method : Fluid :
Borehole Diameter #3:
Interval:
Method : Fluid :

Drilling Company : GEOTEK ENGINEERING
Driller : CHRIS SMITH
Drill Rig Type : SIMCO 9100

	Estimated	Surveyed
Surface Elevation :	986.000	
N. Coordinate :	0.0000	911974.3726
E. Coordinate :	0.0000	56637.0861

Well Permit.....(Y)es (N)o: N Permit # :

Hole Abandoned...(Y)es (N)o: Y
Well Installed...(Y)es (N)o: N
Well Cluster.....(Y)es (N)o: N No. of Wells : 0
Well Nest.....(Y)es (N)o: N No. of Wells : 0
Pumps Installed..(Y)es (N)o: N

	Type	Depth
Purge :		0
Sample :		0

Borehole Testing
Borehole Geophysics.....(Y)es (N)o: N
Slug Tests.....(Y)es (N)o: N
Packer Tests.....(Y)es (N)o: N
Pumping Tests.....(Y)es (N)o: N

Comments :
GEOTECH BORING MAP LOCATION #13 SAMPLED FOR SUITE 1. HOLE GROUTED WITH 2 BAGS OF CEMENT AND 1 BAG VOLCLAY.

GEOLIS Sampling and Lithology Data Summary

Location ID	Sample Start Depth (feet)	Sample End Depth (feet)	Soil Sampling Method	Sample Recovered (inches)	Sampling Length (inches)	Lithology Start Depth (feet)	Lithology End Depth (feet)	Gravel %	Sand %	Silt %	Clay %	Organic %	Sorting	Plasticity	ASTM / USCS Soil Classification	Coarse Gravel %	Medium Gravel %	Fine Gravel %	Coarse Sand %	Medium Sand %	Fine Sand %
BH000118	0.0	1.0	CUT	12	12	0.0	1.0	15	15	45	20	5	POR	LOW	Sandy silt w/gravel, ML		10	5		5	10
BH000118	1.0	3.0	NS	0	0	1.0	3.0								Interval Not Sampled						
BH000118	3.0	5.0	SPS	6	24	3.0	3.5	15	15	45	20	5	MOD	LOW	Sandy silt w/gravel, ML						
BH000118	3.0	5.0	SPS	6	24	3.5	5.0								No Sample Recovered						
BH000118	5.0	8.0	NS	0	0	5.0	8.0								Interval Not Sampled						
BH000118	8.0	10.0	SPS	19	24	8.0	9.6	10	85	5			MOD	NON	Poorly-graded sand, SP		5	5	15	50	20
BH000118	8.0	10.0	SPS	19	24	9.6	10.0								No Sample Recovered						
BH000118	10.0	13.0	NS	0	0	10.0	13.0								Interval Not Sampled						
BH000118	13.0	15.0	SPS	22	24	13.0	14.8	5	5	50	40		MOD	HGH	Elastic silt, MH			5			5
BH000118	13.0	15.0	SPS	22	24	14.8	15.0								No Sample Recovered						
BH000118	15.0	18.0	NS	0	0	15.0	18.0								Interval Not Sampled						
BH000118	18.0	20.0	SPS	24	24	18.0	20.0	10	5	15	70		MOD	HGH	Fat clay w/gravel, CH		5	5			5
BH000118	20.0	27.0	NS	0	0	20.0	27.0								Interval Not Sampled						
BH000118	27.0	27.2	SPS	0	2.4	27.0	27.2								No Sample Recovered						

Borehole Log — *Roy F. Weston, Inc.*

PROJECT	HOUSATONIC RIVER	TOTAL DEPTH	27.20
SITE NAME	EECA	LOGGER	I. ALVARADO
BORING ID	BH000118	DRILLING COMPANY	GEOTEK ENGINEERING
NORTHING	911974.3726 surveyed	DRILLING RIG	SIMCO 9100
EASTING	56637.0861 surveyed	DATE STARTED	06/16/00
ELEVATION	986.000 estimated	DATE COMPLETED	06/16/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
			100	DK. YEL BRN Sandy silt w/gravel, ML		LSE	MST		OVM 0.7	NO LAB SAMPLE; AUGER CUTTINGS.
985	1			Interval Not Sampled						NOT SAMPLED.
984	2									
983	3		25	DK. YEL BRN Sandy silt w/gravel, ML	BH000118-0-0030	LSE	MST	6 5 4 4/6	OVM 0.6	USED 2 & 3" SPS SAMPLER.
				No Sample Recovered						NO RECOVERY
982	4									
981	5			Interval Not Sampled						NOT SAMPLED.
980	6									
979	7									
978	8		80	DK. YEL BRN Poorly-graded sand, SP	BH000118-0-0080	LSE	MST	3 4 5 6/6	OVM 0.0	USED 2 & 3" SPS SAMPLER. 50% MED & 35% C-F SAND.
977	9									
				No Sample Recovered						NO RECOVERY
976	10			Interval Not Sampled						NOT SAMPLED.

Borehole Log

Roy F. Weston, Inc.

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 27.20
SITE NAME	: EECA	LOGGER	: I. ALVARADO
BORING ID	: BH000118	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 911974.3726 surveyed	DRILLING RIG	: SIMCO 9100
EASTING	: 56637.0861 surveyed	DATE STARTED	: 06/16/00
ELEVATION	: 986.000 estimated	DATE COMPLETED	: 06/16/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						NOT SAMPLED.
975	11									
974	12									
973	13		90	Elastic silt, MH	BH000118-0-0130	SFT	SAT	3 3 4 7/6	OVM 0.0	USED 2 & 3" SPS SAMPLER.
972	14									
				No Sample Recovered						NO RECOVERY
971	15			Interval Not Sampled						NOT SAMPLED.
970	16									
969	17									
968	18		100	DUSKY YELLOW Fat clay w/gravel, CH	BH000118-0-0180	FRM	MST	15 16 17 24/6	OVM 0.0	USED 2 & 3" SPS SAMPLER. 10% M-F GRAVEL.
967	19									
966	20			Interval Not Sampled						NOT SAMPLED.

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 27.20
SITE NAME	: ZECA	LOGGER	: I. ALVARADO
BORING ID	: BH000118	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 911974.3726 surveyed	DRILLING RIG	: SIMCO 9100
EASTING	: 56637.0861 surveyed	DATE STARTED	: 06/16/00
ELEVATION	: 986.000 estimated	DATE COMPLETED	: 06/16/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						NOT SAMPLED.
965	21									
964	22									
963	23									
962	24									
961	25									
960	26									
959	27			No Sample Recovered				100/2		REFUSAL AT 27.2' END OF BORING; USED 2" & 3" SPS SAMPLERS
958	28									
957	29									
956	30									

GEO LOGIC, INC.

EARTH EXPLORATION SERVICES
35 Commercial Drive
Wrentham, MA 02093
TEL 5083844434
FAX 5083844452

CLIENT: Roy F. Weston

GTB-7

PROJECT: Housatonic River

LOCATION: Pittsfield, MA

BH000633

			CASING	SAMPLER	CORE BARREL
File #:	02121	TYPE	HW	SS	
Date Started:	5/29/02	SIZE	4"	2"	
Date Completed:	5/29/02	HAMMER	300#	140#	—
Driller:	T. Tucker	FALL	24"	30"	—
Site Rep.:	Amy Steele				

Surface Elevation:
Station:
Groundwater level readings
Date Depth
Date Depth

Depth ft	Sample No.	Depth ft	N	Rec. in	Blows/6"	Sample Description
	S-1	0.0-4.1	49		10-14-35-28	S-1 0-.2' Dense medium to coarse SAND and GRAVEL, variable lithology, saturated
						.2-.6' Angular GRAVEL and silty fine sandy CLAY matrix, TILL
	S-2	2.0-6.5	54		15-25-29-49	S-2 Dry very dense fine to medium TILL
	S-3	4.0			87-100/.3"	S-3 Dry very dense fine to medium TILL
5	S-4	6.0-11.8	70		20-25-45-82	S-4 Similar to S-4, TILL
						Bottom of exploration at 8.0'
10						"Penetration in inches" column should read "N-Value"
15						
20						
25						
30						

Ground Surface to _____ used _____ then _____

Proportions Used		Cohesive Consistency Blows/ft				Cohesionless Density Blows/ft		Sample Type
Trace	0 to 10%	0-2	Very Soft	9-15	Stiff	0-10	Loose	UP = Fixed Piston
Little	10 to 20%	3-4	Soft	16-30	V-Stiff	10-30	M-Dense	UT = Shelby Tube
Some	20 to 35%	5-8	M-Stiff	31+	Hard	30-50	Dense	OE = Open End Rod
And	35 to 50%					50+	V-Dense	* = 300# hammer

Notes:
1. The stratification lines represent the approximate boundary between soil types. The transition may be gradual.
2. Water level readings were made in the drill hole during or at the completion of drilling. The water level may fluctuate over time.

Remarks: NOTE: Classification performed by RF Weston site rep

WESTON	SOIL BORING LOG	PAGE 1 OF 1

Job Name Job No.	Housatonic River 20125.001.096	Boring No. Surface Elev.	GTB-8 ft.	Groundwater Level Date	Depth
Date Drilled	04/22/02	Boring Method	H.S.A.	Not Measured	
Drilling Co.	TDS	Completion Depth	26.0 ft bgs		
Drill Foreman	Scott Lombard	Location	BH000576		
Logged By	A. C. Steele	Pittsfield, Massachusetts			

Depth (feet)	Sample No.	Sample Type*	Sample Blow Counts** (per 6 in.)	N Value**	Visual Description	% Rec	% RQD	Laboratory Tests
	1	SS	5-3-3-3	6	Asphalt and sub-base above mod brown silty fine SAND, trance angular gravel, sl. Moist. SM.	65		
	2	SS	3-4-4-4	8	Same. SM.	45		
5	3	SS	10-13-11-6	24	Same, pieces of concrete 4.3 ft - 4.6 feet. SM.	65		
	4	SS	4-6-5-5	11	No recovery.	0		
	5	SS	4-4-4-3	8	Mod tan silty fine SAND, trace clay, moist-wet, at 9.5 ft saturated and color change to dark tank. SM.	90		
10	6	SS	3-4-4-3	8	Gray brown silty fine to medium SAND, micro layers, trace coarse sand. SP.	40		
15	7	SS	20-17-20-32	37	TILL. Gray brown silty f. SAND some sub-ang gravel, tr clay. GM.	70		
20	8	SS	14-25-30-39	55	Mod gray angular limestone and moist clayey silty fine SAND. WEATHERED ROCK.	35		
25					*Per driller, rig chatters at 23 feet down.*			
	9	SS	40-75/6"	75/6"	Gray limestone bedrock, gasoline odor, slight sheen.	60		
30					End of boring at 26 feet due to spoon refusal. Due to potential for contamination do not drive deeper.			
35								

*Sample type: SS-Split Spoon, ST-Shelby Tube, RC-Rock Core, SC-Soil Core

Laboratory Tests: MC-Moisture Content, AL-Atterberg Limits, S-Sieve Analysis, SH-Sieve/Hydrometer Analysis, SG-Specific Gravity, OC - Organic Content, C-Consolidation, UU-Unconsolidated Undrained Triaxial, CU-Consolidated Undrained Triaxial, UCS-Unconfined Compressive Strength, K-Hydraulic Conductivity, BD - Bulk Density

**ASTM D-1586 Standard Penetration Test

CLIENT : EECA1
PROJECT : HOUSATONIC RIVER
PROPERTY :
SITE/AREA : EECA

LOCATION ID : BH000131
BEGIN DATE : 06/22/00
END DATE : 06/22/00
LOGGER : D. MORSE

Borehole Completed In (<O>verburden <B>edrock) : B

Total Depth : 10.00 Depth to Bedrock : 3.00

Borehole Diameter #1: 4.00
Interval: 0.00 ft. to 10.00 ft. BGS
Method : DAW Fluid : WATER
Borehole Diameter #2:
Interval:
Method : Fluid :
Borehole Diameter #3:
Interval:
Method : Fluid :

Drilling Company : GEOTEK ENGINEERING
Driller : GLEN PETERSON
Drill Rig Type : SIMCO EARTH PROBE 200

	Estimated	Surveyed
Surface Elevation :	968.000	
N. Coordinate :	0.0000	912003.4062
E. Coordinate :	0.0000	56628.3309

Well Permit.....(Y)es (N)o: N Permit # :

Hole Abandoned...(Y)es (N)o: Y
Well Installed...(Y)es (N)o: N
Well Cluster.....(Y)es (N)o: N No. of Wells : 0
Well Nest.....(Y)es (N)o: N No. of Wells : 0
Pumps Installed..(Y)es (N)o: N

	Type	Depth
Purge :		0
Sample :		0

Borehole Testing
Borehole Geophysics.....(Y)es (N)o: N
Slug Tests.....(Y)es (N)o: N
Packer Tests.....(Y)es (N)o: N
Pumping Tests.....(Y)es (N)o: N

Comments :
GEOTECH BORING 20 FT BELOW RIVER BOTTOM. 100 FT DOWNSTREAM OF T100; IN RIVER NEAR MAP #13; REPLACEMENT LOCATION FOR BH000129; TD IN WEATHERED BEDROCK.

GEOLIS Sampling and Lithology Data Summary

Location ID	Sample Start Depth (feet)	Sample End Depth (feet)	Soil Sampling Method	Sample Recovered (inches)	Sampling Length (inches)	Lithology Start Depth (feet)	Lithology End Depth (feet)	Gravel %	Sand %	Silt %	Clay %	Organic %	Sorting	Plasticity	ASTM / USCS Soil Classification	Coarse Gravel %	Medium Gravel %	Fine Gravel %	Coarse Sand %	Medium Sand %	Fine Sand %
BH000131	0.0	3.0	NS	0	0	0.0	3.0								Interval Not Sampled						

Borehole Log

Roy F. Weston, Inc.

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 10.00
SITE NAME	: EECA	LOGGER	: D. MORSE
BORING ID	: BH000131	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 912003.4062 surveyed	DRILLING RIG	: SIMCO EARTH PROBE 200
EASTING	: 56628.3309 surveyed	DATE STARTED	: 06/22/00
ELEVATION	: 968.000 estimated	DATE COMPLETED	: 06/22/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						NOT SAMPLED.
967	1									
966	2									
965	3		35	DK YEL BRN Marble		WEK		69 62 40 36/6	OVM 6.7	NO LAB SAMPLE; SWITCHED TO 300 LB HAMMER; BASED ON 2" SPOON; WEATHERED MARBLE BEDROCK.
				No Sample Recovered						NO RECOVERY.
964	4									
963	5			Interval Not Sampled						NOT SAMPLED.
962	6									
961	7									
960	8		40	DK. YEL BRN Marble		WEK		9 9 8 36/6	OVM 4.5	NO LAB SAMPLE; 300 LB HAMMER; WEATHERED MARBLE BEDROCK.
				No Sample Recovered						NO RECOVERY; BORING ENDS AT 10'.
959	9									
958	10									

CLIENT : EECA1
PROJECT : HOUSATONIC RIVER
PROPERTY :
SITE/AREA : EECA

LOCATION ID : BH000114
BEGIN DATE : 06/14/00
END DATE : 06/14/00
LOGGER : I. ALVARADO

Borehole Completed In (<O>verburden <B>edrock) : O

Total Depth : 3.50 Depth to Bedrock : 0.00

Borehole Diameter #1: 6.00
Interval: 0.00 ft. to 3.50 ft. BGS
Method : HSA Fluid : NONE
Borehole Diameter #2:
Interval:
Method : Fluid :
Borehole Diameter #3:
Interval:
Method : Fluid :

Drilling Company : GEOTEK ENGINEERING
Driller : CHRIS SMITH
Drill Rig Type : SIMCO 9100

	Estimated	Surveyed
Surface Elevation :	986.000	
N. Coordinate :	0.0000	912029.2896
E. Coordinate :	0.0000	56592.9409

Well Permit.....(Y)es (N)o: N Permit # :

Hole Abandoned...(Y)es (N)o: Y
Well Installed...(Y)es (N)o: N
Well Cluster.....(Y)es (N)o: N No. of Wells : 0
Well Nest.....(Y)es (N)o: N No. of Wells : 0
Pumps Installed..(Y)es (N)o: N

	Type	Depth
Purge :		0
Sample :		0

Borehole Testing
Borehole Geophysics.....(Y)es (N)o: N
Slug Tests.....(Y)es (N)o: N
Packer Tests.....(Y)es (N)o: N
Pumping Tests.....(Y)es (N)o: N

Comments :
GEOTECH BORING SAMPLED FOR SUITE 1; HIT METAL AT 3.5 FT.
STOPPED DRILLING.

GEOLIS Sampling and Lithology Data Summary

Location ID	Sample Start Depth (feet)	Sample End Depth (feet)	Soil Sampling Method	Sample Recovered (inches)	Sampling Length (inches)	Lithology Start Depth (feet)	Lithology End Depth (feet)	Gravel %	Sand %	Silt %	Clay %	Organic %	Sorting	Plasticity	ASTM / USCS Soil Classification	Coarse Gravel %	Medium Gravel %	Fine Gravel %	Coarse Sand %	Medium Sand %	Fine Sand %
BH000114	0.0	1.0	CUT	12	12	0.0	1.0	10	80	10			MOD	NON	Poorly-graded sand with silt, SP-SM		5	5		5	75
BH000114	1.0	3.0	NS	0	0	1.0	3.0								Interval Not Sampled						
BH000114	3.0	3.5	SPS	6	6	3.0	3.5	15	75	10			POR	NON	Well-graded sand w/silt and gravel, SW-SM		10	5		15	60

Borehole Log

Roy F. Weston, Inc.

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 3.50
SITE NAME	: EECA	LOGGER	: I. ALVARADO
BORING ID	: BH000114	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 912029.2896 surveyed	DRILLING RIG	: SIMCO 9100
EASTING	: 56592.9409 surveyed	DATE STARTED	: 06/14/00
ELEVATION	: 986.000 estimated	DATE COMPLETED	: 06/14/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
			100	Poorly-graded sand with silt, SP-SM	BH000114-0-0000	LSE	MST		OVM 0.0	NO SAMPLE SENT TO LAB; USED 2 & 3" SPS SAMPLER. FILL: 75% FINE SAND;AUGER CUTTINGS.
985	1			Interval Not Sampled						NOT SAMPLED.
984	2									
983	3		100	Well-graded sand w/silt and gravel, SW-SM	BH000114-0-0030	LSE	MST	6 100/6	OVM 0.0	OBSTRUCTION AT 3.5' BGS; END OF BORING @ 3.5'; SEE BH000114A. USED 2 & 3" SPS SAMPLER; FILL
982	4									
981	5									
980	6									
979	7									
978	8									
977	9									
976	10									

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CLIENT : EECA2
PROJECT : HOUSATONIC RIVER
PROPERTY :
SITE/AREA : H2-EECA

LOCATION ID : BH000114A
BEGIN DATE : 06/26/00
END DATE : 06/26/00
LOGGER : ILIANA ALVARADO

Borehole Completed In (<O>verburden <B>edrock) : O

Total Depth : 22.80 Depth to Bedrock : 0.00

Borehole Diameter #1: 6.00
Interval: 0.00 ft. to 22.80 ft. BGS
Method : HSA Fluid : NONE
Borehole Diameter #2:
Interval:
Method : Fluid :
Borehole Diameter #3:
Interval:
Method : Fluid :

Drilling Company : GEOTEK ENGIN.
Driller : BILL WINGERTER
Drill Rig Type : SIMCO

	Estimated	Surveyed
Surface Elevation :	986.000	
N. Coordinate :	0.0000	912029.2896
E. Coordinate :	0.0000	56592.9409

Well Permit.....(Y)es (N)o: N Permit # :

Hole Abandoned...(Y)es (N)o: Y
Well Installed...(Y)es (N)o: N
Well Cluster.....(Y)es (N)o: N No. of Wells : 0
Well Nest.....(Y)es (N)o: N No. of Wells : 0
Pumps Installed..(Y)es (N)o: N

	Type	Depth
Purge :		0
Sample :		0

Borehole Testing
Borehole Geophysics.....(Y)es (N)o: N
Slug Tests.....(Y)es (N)o: N
Packer Tests.....(Y)es (N)o: N
Pumping Tests.....(Y)es (N)o: N

Comments :
GEOTECH BORING MAP #14 SAMPLED FOR SUITE 1; HARRY'S MARKET PARKING LOT; HOLE GROUTED W/0.5 BAG VOLCLAY, 1 BAG CEMENT, 2 BAG BENTONITE CHIP, 0.5 BAG COLD PATCH.

GEOLIS Sampling and Lithology Data Summary

Location ID	Sample Start Depth (feet)	Sample End Depth (feet)	Soil Sampling Method	Sample Recovered (inches)	Sampling Length (inches)	Lithology Start Depth (feet)	Lithology End Depth (feet)	Gravel %	Sand %	Silt %	Clay %	Organic %	Sorting	Plasticity	ASTM / USCS Soil Classification	Coarse Gravel %	Medium Gravel %	Fine Gravel %	Coarse Sand %	Medium Sand %	Fine Sand %
BH000114A	0.0	3.0	NS	0	0	0.0	3.0								Interval Not Sampled						
BH000114A	3.0	5.0	SPS	7	24	3.0	3.6	10	45	40	5		MOD	NON	Silty sand, SM		5	5	15	15	15
BH000114A	3.0	5.0	SPS	7	24	3.6	5.0								No Sample Recovered						
BH000114A	5.0	8.0	NS	0	0	5.0	8.0								Interval Not Sampled						
BH000114A	8.0	10.0	SPS	2	24	8.0	8.2	20	30	30	10	10	POR	LOW	Silty sand w/gravel, SM	5	5	10	10	10	10
BH000114A	8.0	10.0	SPS	2	24	8.2	10.0								No Sample Recovered						
BH000114A	10.0	13.0	NS	0	0	10.0	13.0								Interval Not Sampled						
BH000114A	13.0	15.0	SPS	24	24	13.0	14.0					100	NA	NA	Organic soil, OL/OH						
BH000114A	13.0	15.0	SPS	24	24	14.0	15.0	35	10	40	15		MOD	MOD	Gravelly elastic silt, MH	20	10	5	3	3	4
BH000114A	15.0	18.0	NS	0	0	15.0	18.0								Interval Not Sampled						
BH000114A	18.0	20.0	SPS	14	24	18.0	19.2	20	10	60	10		MOD	MOD	Gravelly elastic silt, MH	10	5	5	3	3	4
BH000114A	18.0	20.0	SPS	14	24	19.2	20.0								No Sample Recovered						
BH000114A	20.0	22.5	NS	0	0	20.0	22.5								Interval Not Sampled						
BH000114A	22.5	22.8	SPS	2	3.6	22.5	22.7	20	10	60	10		NA	MOD	Gravelly elastic silt, MH	10	5	5	[illegible]	3	4
BH000114A	22.5	22.8	SPS	2	3.6	22.7	22.8								No Sample Recovered						

Borehole Log *Roy F. Weston, Inc.*

PROJECT	HOUSATONIC RIVER	TOTAL DEPTH	22.80
SITE NAME	H2-EECA	LOGGER	ILIANA ALVARADO
BORING ID	BH000114A	DRILLING COMPANY	GEOTEK ENGIN.
NORTHING	912029.2896 surveyed	DRILLING RIG	SIMCO
EASTING	56592.9409 surveyed	DATE STARTED	06/26/00
ELEVATION	986.000 estimated	DATE COMPLETED	06/26/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						NOT SAMPLED.
985	1									
984	2									
983	3		30	BRN/GRY/LT BRN Silty sand SM	BH000114A-0-003	NOC	MST	6 4 1 2/6	OVM 1.2	USED 2 & 3" SPS SAMPLER; FILL: BRICK PIECES IN SAMPLE. 45% C-M-F SAND.
				No Sample Recovered	BH000114A-0-003					NO RECOVERY
982	4									
981	5			Interval Not Sampled						NOT SAMPLED.
980	6									
979	7									
978	8		10	OLV BLK Silty sand w/grav SM	BH000114A-0-008	NOC	MST	1 1 1 1/6	OVM 0.0	FILL: WOOD IN BASKET & SAMPLE; SLAG; 20% GRAVEL, 30% C-M-F SAND.
				No Sample Recovered	BH000114A-0-008					
977	9									
976	10			Interval Not Sampled						NOT SAMPLED

Borehole Log

Roy F. Weston, Inc.

PROJECT :	HOUSATONIC RIVER	TOTAL DEPTH :	22.80
SITE NAME :	H2-EECA	LOGGER :	ILIANA ALVARADO
BORING ID :	BH000114A	DRILLING COMPANY :	GEOTEK ENGIN.
NORTHING :	912029.2896 surveyed	DRILLING RIG :	SIMCO
EASTING :	56592.9409 surveyed	DATE STARTED :	06/26/00
ELEVATION :	986.000 estimated	DATE COMPLETED :	06/26/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						NOT SAMPLED
975	11									
974	12									
973	13		100	OLV BLK Organic soil, OL/OH	BH000114A-0-013	NA	WET	19 15 18 20/6	OVM 2.1	SAMPLE IS WOOD; USED 2 & 3" SPS SAMPLER.
972	14			MOD. OLV BRN Gravelly elastic silt, MH	BH000114A-0-013	FRM	MST		OVM 0.0	USED 2 & 3" SPS SAMPLER. 35% C-M-F GRAVEL.
971	15			Interval Not Sampled						NOT SAMPLED
970	16									
969	17									
968	18		60	MOD. OLV BRN Gravelly elastic silt, MH	BH000114A-0-018	STF	MST	13 31 35 35/6	OVM 0.0	USED 2 & 3" SPS SAMPLER.
967	19			No Sample Recovered	BH000114A-0-018					NO RECOVERY
966	20			Interval Not Sampled						NOT SAMPLED.

PROJECT :	HOUSATONIC RIVER	TOTAL DEPTH :	22.80
SITE NAME :	H2-EECA	LOGGER :	ILIANA ALVARADO
BORING ID :	BH000114A	DRILLING COMPANY :	GEOTEK ENGIN.
NORTHING :	912029.2896 surveyed	DRILLING RIG :	SIMCO
EASTING :	56592.9409 surveyed	DATE STARTED :	06/26/00
ELEVATION :	986.000 estimated	DATE COMPLETED :	06/26/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						NOT SAMPLED.
965	21									
964	22									
			66	MOD OLV BRN Gravelly elas fic silt MH	BH000114A-0-022	COH	DRY	100/4	OVM 0.0	SPS REFUSAL AT 22.5; USED 3" SPS SAMPLER. NO RECOVERY. BORING END @ 22.8'. STOPPED DRILLING BASED ON DRILL ACTION.
				No sample Recovered	BH000114A-0-022					
963	23									
962	24									
961	25									
960	26									
959	27									
958	28									
957	29									
956	30									

GEO LOGIC, INC.

EARTH
EXPLORATION
SERVICES
35 Commercial Drive
TEL 5083844434
Wrentham, MA 02093
FAX 5083844452

CLIENT: Roy F. Weston

PROJECT: Housatonic River

LOCATION: Pittsfield, MA

BH000635

GTB-5

			CASING	SAMPLER	CORE BARREL
File #:	02121	TYPE	HW	SS	
Date Started:	6/5/02	SIZE	4"	2"	
Date Completed:	6/5/02	HAMMER	300#	140#	—
Driller:	T. Tucker	FALL	24"	30"	—
Site Rep.:	Amy Steele				

Surface Elevation:
Station:
Groundwater level readings
Date Depth
Date Depth

Depth ft	Sample No.	Sample Depth ft	N	Rec. in	Blows/6"	Sample Description
	S-1	0.0-0.8	10		10-5-5-4	S-1 ASPHALT at surface No recovery
	S-2	2.0-2.5	6		3-3-3-5	S-2 Loose moderately brown silty fine SAND, no visible layering
5	S-3	4.0-4.5	6		3-3-3-3	S-3 Loose moderately gray to dark gray fine SAND and subrounded GRAVEL
	S-4	6.0-6.2	2		5-1-1-1	S-4 No recovery, GRAVEL in nose
	S-5	8.0			2-WH-WH-WH	S-5 No recovery, black fibrous gravelly slag FILL in nose (asbestos? - looks like black dog hair)
10	S-6	10.0			1-WH-1-90	S-6 Same black fibrous gravel slag FILL, driller says going through wood at 12', wood fragments up in cuttings
15	S-7	14.0-17.9	47		77-23-24-23	S-7 14-14.3' WOOD 14.3-15.3' Wet very dense moderately gray TILL and fine to medium gravelly silty fine SAND matrix
20	S-8	19.0-29.9	131		29-90-41-46	S-8 TILL
						Bottom of exploration at 21.0'
						"Penetration in inches" column should read "N-Value"
25						
30						

Ground Surface to _____ used _____ then _____

Proportions Used		Cohesive Consistency Blows/ft				Cohesionless Density Blows/ft		Sample Type
Trace	0 to 10%	0-2	Very Soft	9-15	Stiff	0-10	Loose	UP = Fixed Piston
Little	10 to 20%	3-4	Soft	16-30	V-Stiff	10-30	M-Dense	UT = Shelby Tube
Some	20 to 35%	5-8	M-Stiff	31+	Hard	30-50	Dense	OE = Open End Rod
And	35 to 50%					50+	V-Dense	* = 300# hammer

Notes:
1. The stratification lines represent the approximate boundary between soil types. The transition may be gradual.
2. Water level readings were made in the drill hole during or at the completion of drilling. The water level may fluctuate over time.

Remarks: NOTE: Classification performed by RF Weston site rep

CLIENT : EECA1
PROJECT : HOUSATONIC RIVER
PROPERTY :
SITE/AREA : EECA

LOCATION ID : BH000129
BEGIN DATE : 06/21/00
END DATE : 06/21/00
LOGGER : D. MORSE

Borehole Completed In (<O>verburden <B>edrock) : O

Total Depth : 4.75 Depth to Bedrock : 0.00

Borehole Diameter #1: 4.00
Interval: 0.00 ft. to 4.75 ft. BGS
Method : DAW Fluid :
Borehole Diameter #2:
Interval:
Method : Fluid :
Borehole Diameter #3:
Interval:
Method : Fluid :

Drilling Company : GEOTEK ENGINEERING
Driller : GLEN PETERSON
Drill Rig Type : SIMCO EARTH PROBE 200

	Estimated	Surveyed
Surface Elevation :	968.000	
N. Coordinate :	0.0000	911988.5870
E. Coordinate :	0.0000	56557.3059

Well Permit.....(Y)es (N)o: N Permit # :

Hole Abandoned...(Y)es (N)o: Y
Well Installed...(Y)es (N)o: N
Well Cluster.....(Y)es (N)o: N No. of Wells : 0
Well Nest.....(Y)es (N)o: N No. of Wells : 0
Pumps Installed..(Y)es (N)o: N

	Type	Depth
Purge :		0
Sample :		0

Borehole Testing
Borehole Geophysics.....(Y)es (N)o: N
Slug Tests.....(Y)es (N)o: N
Packer Tests.....(Y)es (N)o: N
Pumping Tests.....(Y)es (N)o: N

Comments :
GEOTECHNICAL BORING 20 FT BELOW RIVER BOTTOM, REFUSAL @ 4.75 FT BGS. MAP LOCATION #15. GEOTECH SAMPLES FOR SUITE 1.

GEOLIS Sampling and Lithology Data Summary

Location ID	Sample Start Depth (feet)	Sample End Depth (feet)	Soil Sampling Method	Sample Recovered (inches)	Sampling Length (inches)	Lithology Start Depth (feet)	Lithology End Depth (feet)	Gravel %	Sand %	Silt %	Clay %	Organic %	Sorting	Plasticity	ASTM / USCS Soil Classification	Coarse Gravel %	Medium Gravel %	Fine Gravel %	Coarse Sand %	Medium Sand %	Fine Sand %
BH000129	0.0	3.0	NS	0	0	0.0	3.0								Interval Not Sampled						
BH000129	3.0	4.8	SPS	6	24	3.0	3.5	40	30	20	10		POR	LOW	Silty gravel w/sand, GM	15	15	20		10	20
BH000129	3.0	4.8	SPS	6	24	3.5	4.8								No Sample Recovered						

Borehole Log

Roy F. Weston, Inc.

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 4.75
SITE NAME	: EECA	LOGGER	: D. MORSE
BORING ID	: BH000129	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 911988.5870 surveyed	DRILLING RIG	: SIMCO EARTH PROBE 200
EASTING	: 56557.3059 surveyed	DATE STARTED	: 06/21/00
ELEVATION	: 968.000 estimated	DATE COMPLETED	: 06/21/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						
967	1									
966	2									
965	3		25	LT OLV BRN Silty gravel w/sand, GM	BH000129-0-0030	STF	MST	28 37 120/3	OVM 0.8	
				No Sample Recovered	BH000129-0-0030					REFUSAL @ 4.75' IN TILL; BORING ABANDONED @ 4.75'
964	4									
963	5									
962	6									
961	7									
960	8									
959	9									
958	10									

ELM STREET

CLIENT : EECA1
PROJECT : HOUSATONIC RIVER
PROPERTY :
SITE/AREA : EECA

LOCATION ID : BH000126
BEGIN DATE : 06/21/00
END DATE : 06/21/00
LOGGER : I. ALVARADO

Borehole Completed In (<O>verburden <B>edrock) : B

Total Depth : 18.10 Depth to Bedrock : 14.00

Borehole Diameter #1: 6.00
Interval: 0.00 ft. to 18.00 ft. BGS
Method : HSA Fluid : NONE
Borehole Diameter #2:
Interval:
Method : Fluid :
Borehole Diameter #3:
Interval:
Method : Fluid :

Drilling Company : GEOTEK ENGINEERING
Driller : CHRIS SMITH
Drill Rig Type : SIMCO 9100

	Estimated	Surveyed
Surface Elevation :	989.000	
N. Coordinate :	0.0000	911986.6596
E. Coordinate :	0.0000	56504.8121

Well Permit.....(Y)es (N)o: N Permit # :

Hole Abandoned...(Y)es (N)o: Y
Well Installed...(Y)es (N)o: N
Well Cluster.....(Y)es (N)o: N No. of Wells : 0
Well Nest.....(Y)es (N)o: N No. of Wells : 0
Pumps Installed..(Y)es (N)o: N

	Type	Depth
Purge :		0
Sample :		0

Borehole Testing
Borehole Geophysics.....(Y)es (N)o: N
Slug Tests.....(Y)es (N)o: N
Packer Tests.....(Y)es (N)o: N
Pumping Tests.....(Y)es (N)o: N

Comments :
HOLE GROUTED WITH 1 BAG CEMENT, 1/2 BAG VOLCLAY, 3 BAGS BENTONITE CHIPS, 1/2 BAG COLD PATCH. MAP #16. GEOTECH SAMPLE FOR SUITE 1.

GEOLIS Sampling and Lithology Data Summary

Location ID	Sample Start Depth (feet)	Sample End Depth (feet)	Soil Sampling Method	Sample Recovered (inches)	Sampling Length (inches)	Lithology Start Depth (feet)	Lithology End Depth (feet)	Gravel %	Sand %	Silt %	Clay %	Organic %	Sorting	Plasticity	ASTM / USCS Soil Classification	Coarse Gravel %	Medium Gravel %	Fine Gravel %	Coarse Sand %	Medium Sand %	Fine Sand %
BH000126	0.0	1.0	NS	0	0	0.0	1.0								Interval Not Sampled						
BH000126	1.0	2.0	CUT	0	0	1.0	2.0	25	72	3			MOD	NON	Fill	5	10	10		22	50
BH000126	2.0	3.0	NS	0	0	2.0	3.0								Interval Not Sampled						
BH000126	3.0	5.0	SPS	18	24	3.0	4.5	2	10	50	38		MOD	LOW	Silt, ML			2			10
BH000126	3.0	5.0	SPS	18	24	4.5	5.0								No Sample Recovered						
BH000126	5.0	8.0	NS	0	0	5.0	8.0								Interval Not Sampled						
BH000126	8.0	10.0	SPS	22	24	8.0	9.5	2	10	50	38		MOD	LOW	Silt, ML			2			10
BH000126	8.0	10.0	SPS	22	24	9.5	10.0								No Sample Recovered						
BH000126	10.0	13.0	NS	0	0	10.0	13.0								Interval Not Sampled						
BH000126	13.0	15.0	SPS	24	24	13.0	14.0	20	10	50	20		POR	LOW	Gravelly silt, ML	5	10	5		2	8

Borehole Log

Roy F. Weston, Inc.

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 18.10
SITE NAME	: EECA	LOGGER	: I. ALVARADO
BORING ID	: BH000126	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 911986.6596 surveyed	DRILLING RIG	: SIMCO 9100
EASTING	: 56504.8121 surveyed	DATE STARTED	: 06/21/00
ELEVATION	: 989.000 estimated	DATE COMPLETED	: 06/21/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						
988	1			OLV GRY Fill	BH000126-0-0010	SFT	DRY		OVM 16.0	7" ASPHALT. SOME ASPHALT IN SAMPLE. NO LAB SAMPLE. FILL; AUGER CUTTINGS.
987	2			Interval Not Sampled						
986	3		75	MOD OLV BRN Silt, ML	BH000126-0-0030	STF	MST	6 6 5 7/6	OVM 0.3	USED 2 & 3" SAMPLER; FILL
985	4									
				No Sample Recovered	BH000126-0-0030					
984	5			Interval Not Sampled						
983	6									
982	7									
981	8		90	Silt, ML	BH000126-0-0080	STF	MST	7 8 11 13/6	OVM 0.0	
980	9									
				No Sample Recovered	BH000126-0-0080					
979	10			Interval Not Sampled						

Borehole Log — *Roy F. Weston, Inc.*

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 18.10
SITE NAME	: EECA	LOGGER	: I. ALVARADO
BORING ID	: BH000126	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 911986.6596 surveyed	DRILLING RIG	: SIMCO 9100
EASTING	: 56504.8121 surveyed	DATE STARTED	: 06/21/00
ELEVATION	: 989.000 estimated	DATE COMPLETED	: 06/21/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						
978	11									
977	12									
976	13		100	PALE YLW BRN Gravelly silt, ML	BH000126-0-0130	SFT	MST	11 17 18 21/6	OVM 0.0	3"SMPLS TAKEN. BORING END AT 14'.
975	14									
974	15									
973	16									
972	17									
971	18									
970	19									
969	20									

WESTON	SOIL BORING LOG			PAGE 1 OF 2
Job Name Job No.	Housatonic River 20125.001.096	Boring No. Surface Elev.	GTB-10 ft.	Groundwater Level Date Depth
Date Drilled	8 May 02	Boring Method	Hollow Stem Augers	Not Measured
Drilling Co.	TDS	Completion Depth	38.0 ft bgs	
Drill Foreman	Marty McNamara	Location	BH000606	
Logged By	A.C. Steele	Pittsfield, Massachusetts		

Depth (feet)	Sample No.	Sample Type*	Sample Blow Counts** (per 6 in.)	N Value**	Visual Description	% Rec	% RQD	Laboratory Tests
	1	SS	10-10-17-10	27	Asphalt and sub-base.	20		
	2	SS	4-5-7-7	12	FILL, mod tan fine to coarse SAND and GRAVEL brick fragments, dry.	60		
5	3	SS	5-3-5-6	8	FILL, mod tan medium to coarse SAND and GRAVEL loose, dry.	15		
	4	SS	14-12-15-16	27	Mod tan silty clayey fine SAND, cohesive, some fine gravel, sl. Moist.	50		
	5	SS	10-16-20-32	36	TILL, silty clayey fine SAND matrix and angular GRAVEL, cohesive, sl. Moist.	90		
10	6	SS	31-59-53-120/2	112	Same, dry.	70		
						45		
15	7	SS	29-15-27-23	42	Same, moist.			
20	8	SS	32-19-29-18	48	Angular GRAVEL, some coarse sand, trace silt, saturated.	35		
					Rig chatters.			
25	9	SS	120/1"	120/1"	Silty clayey slough with gravel fragments, sat.	0		
					Rig chatters, stops, then drills slow, no cuttings coming up.			
30	10	SS	120/3"	120/3"	TILL, mod tan silty fine to coarse SAND and GRAVEL.	100		
	11	RC (NX)			**Core 33 ft bgs-38 ft bgs** LIMESTONE, drilled at 3.4 feet/minute. Highly weathered zone at 34.4 ft to 34.8 ft with iron	100	38	
35								

Sample type: SS-Split Spoon, ST-Shelby Tube, RC-Rock Core, SC-Soil Core

Laboratory Tests: MC-Moisture Content, AL-Atterberg Limits, S-Sieve Analysis, SH-Sieve/Hydrometer Analysis, SG-Specific Gravity, OC - Organic Content, C-Consolidation, UU-Unconsolidated Undrained Triaxial, CU-Consolidated Undrained Triaxial, UCS-Unconfined Compressive Strength, K-Hydraulic Conductivity, BD - Bulk Density

**ASTM D-1586 Standard Penetration Test

WESTON	SOIL BORING LOG			PAGE 2 OF 2
Job Name Job No.	Housatonic River 20125.001.096	Boring No. Surface Elev.	GTB-10 ft (est.)	Groundwater Level Date Depth
Date Drilled		Boring Method	Hollow Stem Augers	Not Measured
Drilling Co.	TDS	Completion Depth	38.0 ft bgs	
Drill Foreman	Scott Lombard	Location	BH000606	
Logged By	A.C. Steele	Pittsfield, Massachusetts		

Depth (feet)	Sample No.	Sample Type*	Sample Blow Counts* (per 6 in.)	N Value*	Visual Description	% Rec	% RQD	Laboratory Tests
	11	RC (NX)			staining. Coarser grains and slight iron staining at 37.5 ft to 38 feet.			
40					End of boring at 38 ft bgs.			
45								
50								
55								
60								
65								
70								

Sample type: SS-Split Spoon, ST-Shelby Tube, RC-Rock Core, SC-Soil Core

Laboratory Tests: MC-Moisture Content, AL-Atterberg Limits, S-Sieve Analysis, SH-Sieve/Hydrometer Analysis, SG-Specific Gravity, OC - Organic Content, C-Consolidation, UU-Unconsolidated Undrained Triaxial, CU-Consolidated Undrained Triaxial, UCS-Unconfined Compressive Strength, K-Hydraulic Conductivity, BD - Bulk Density

*ASTM D-1586 Standard Penetration Test

GTB-8-14.xls

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WESTON	SOIL BORING LOG	PAGE 1 OF 1

Job Name	Housatonic River	Boring No.	GTB-11	Groundwater Level	
Job No.	20125.001.096	Surface Elev.	ft.	Date	Depth
Date Drilled	25 Apr 02	Boring Method	Case and wash	Not Measured	
Drilling Co.	TDS	Completion Depth	27.0 ft bgs		
Drill Foreman	Scott Lombard	Location	BH000581		
Logged By	A. C. Steele	Pittsfield, Massachusetts			

Depth (feet)	Sample No.	Sample Type*	Sample Blow Counts** (per 6 in.)	N Value**	Visual Description	% Rec	% RQD	Laboratory Tests
	1	SS	8-8-8-8	16	0-0.5 Asphalt above FILL, brick, slag, gravel, silt and fine to coarse sand, very loose, dry.	33		
	2	SS	4-3-2-2	5	FILL, brick, slag, gravel, silt and fine to coarse sand, very loose, coal in nose, sl. Moist.	20		
5	3	SS	2-1-2-1	3	No recover, catcher was in use.	0		
	4	SS	3-2-2-2	4	No recover, catcher was in use.	0		
	5	SS	2-3-8-10	11	8-8.6 Predominately gray FILL, coal and ash with gravel and fine to coarse silty SAND, firm. 8.6-9.2 Natural.	60		
10	6	SS	8-33-38-45	71	Mod brown arble COBBLES and silty fine SAND, firm, sl. Moist.	35		
15	7	SS	100/0"	100/0"	*No recovery - Per driller, rig hit something at 12 feet.*	NA		
20	8	SS	9-18-23-29	41	Mod brown silty fine SAND and GRAVEL, at base silty sandy clay, loose, sl. Moist, *Per driller, this zone is wet based on water on rods when pull them.*	15		
25	9	SS	100/6"	100/6"	Mod grey weathered rock, saturated. *Per driller, tighter as auger down.*	80		
					End of boring at 27 ft bgs. Auger refusal.			
30								
35								

Sample type: SS-Split Spoon, ST-Shelby Tube, RC-Rock Core, SC-Soil Core

Laboratory Tests: MC-Moisture Content, AL-Atterberg Limits, S-Sieve Analysis, SH-Sieve/Hydrometer Analysis, SG-Specific Gravity, OC - Organic Content, C-Consolidation, UU-Unconsolidated Undrained Triaxial, CU-Consolidated Undrained Triaxial, UCS-Unconfined Compressive Strength, K-Hydraulic Conductivity, BD - Bulk Density

**ASTM D-1586 Standard Penetration Test

WESTON	SOIL BORING LOG			PAGE 1 OF 1
Job Name Job No.	GE Pittsfield- EE/CA 10971-032-007	Boring No. Surface Elev.	BH000091 986.0 ft. (est)	Groundwater Level Date Depth
Date Drilled	10 May 99	Boring Method	HSA	Not Measured
Drilling Co.	NH Boring	Completion Depth	24.1 ft bgs	
Drill Foreman	Kenneth Smith	Location	See Figure 2.1-7	
Logged By	J. Schmidl			

Depth (feet)	Sample No.	Sample Type*	Sample Blow Counts** (per 6 in.)	N Value**	Visual Description	% Rec	% RQD	Laboratory Tests
		SS	5-7-7-6	14	6" Asphalt SAND, some gravel, brown, dry			
		SS	5-3-4-3	7	SAND, some gravel, yellow-brown, dry			
5		SS	4-5-3-1	8				
		SS	2-3-2-2	5	SAND, trace gravel, yellow-brown, wet			
	Sample	SS	3-2-wor-1	2	SAND, some silt, little gravel, white, wet	L		
10		SS	3-3-6-5	9	SAND, little gravel, trace silt, brown, moist			
	Sample	SS	3-5-6-5	11	SAND, brown, moist	L		
15		SS	4-5-4-9	9	SAND, some silt, trace gravel, olive-brown, moist			
	Sample	SS	13-21-22-33	43	SAND and GRAVEL, some silt, yellow-brown, moist	L		
		SS	12-15-28-26	43	SAND, some gravel, some silt, yellow-brown, wet			
20	Sample	SS	8-7-5-50	12	SAND and GRAVEL, some silt, little clay, wet	L		
		SS	60/3"	60/3"	SAND, some silt and clay, little gravel, yellow-brown, moist			
		SS	50/0"	50/0"	GRAVEL, some sand, little clay, wet			
25					End of Boring at 24.1 feet bgs (Split spoon and auger refusal)			
30								
35								

*Sample type: SS-Split Spoon, ST-Shelby Tube, RC-Rock Core, SC-Soil Core

**ASTM D-1586 Standard Penetration Test

Laboratory Tests: MC-Moisture Content, AL-Atterberg Limits, S-Sieve Analysis, SH-Sieve/Hydrometer Analysis, SG-Specific Gravity, OC - Organic Content, C-Consolidation, UU-Unconsolidated Undrained Triaxial, CU-Consolidated Undrained Triaxial, UCS-Unconfined Compressive Strength, K-Hydraulic Conductivity, BD - Bulk Density

GEO LOGIC, INC.

EARTH EXPLORATION SERVICES
35 Commercial Drive
TEL 5083844434
Wrentham, MA 02093
FAX 5083844452

CLIENT: Roy F. Weston
PROJECT: Housatonic River
LOCATION: Pittsfield, MA
BH000636

GTB-12,

			CASING	SAMPLER	CORE BARREL
File #:	02121	TYPE	HW	SS	
Date Started:	6/6/02	SIZE	4"	2"	
Date Completed:	6/6/02	HAMMER	300#	140#	—
Driller:	T. Tucker	FALL	24"	30"	—
Site Rep.:	Amy Steele				

Surface Elevation:
Station:
Groundwater level readings
Date Depth
Date Depth

Depth ft	Sample No.	Depth ft	N	Rec. in	Blows/6"	Sample Description
	S-1	0.0-0.4	5		2-2-3-4	S-1 Slightly moist loose black sandy SILT, some roots, topsoil
	S-2	2.0-2.9	11		6-7-4-5	S-2 Slightly moist medium dense gray/brown silty fine SAND and medium to fine GRAVEL, trace roots
5	S-3	4.0-6.1	25		7-11-14-39	S-3 4-4.1' FILL slag 4.1-5.7' Medium dense sandy fine SILT, some gravel, rootlets 5.7-5.9' LIMESTONE, ROCK
	S-4	6.0-10.3	52		30-18-34-45	S-4 6-6.8' Very dense moderately brown silty fine SAND, some angular gravel 6.8-7' LIMESTONE
	S-5	8.0-23.9	191		24-123-68-53	S-5 Weathered ROCK
10						Bottom of exploration at 10.0'
15						"Penetration in inches" column should read "N-Value"
20						
25						
30						

Ground Surface to _____ used _____ then _____

Proportions Used		Cohesive Consistency Blows/ft				Cohesionless Density Blows/ft		Sample Type
Trace	0 to 10%	0-2	Very Soft	9-15	Stiff	0-10	Loose	UP = Fixed Piston
Little	10 to 20%	3-4	Soft	16-30	V-Stiff	10-30	M-Dense	UT = Shelby Tube
Some	20 to 35%	5-8	M-Stiff	31+	Hard	30-50	Dense	OE = Open End Rod
And	35 to 50%					50+	V-Dense	* = 300# hammer

Notes:
1. The stratification lines represent the approximate boundary between soil types. The transition may be gradual.
2. Water level readings were made in the drill hole during or at the completion of drilling. The water level may fluctuate over time.

Remarks: NOTE: Classification performed by RF Weston site rep

WESTON	SOIL BORING LOG			PAGE 1 OF 1
Job Name Job No.	Housatonic River 20125.001.096	Boring No. Surface Elev.	GTB-13 ft.	Groundwater Level Date Depth
Date Drilled	04/23/02	Boring Method	Case and wash	Not Measured
Drilling Co.	TDS	Completion Depth	30.8 ft bgs	
Drill Foreman	Marty McNamara	Location	BH000577	
Logged By	A. C. Steele	Pittsfield, Massachusetts		

Depth (feet)	Sample No.	Sample Type*	Sample Blow Counts** (per 6 in.)	N Value**	Visual Description	% Rec	% RQD	Laboratory Tests
	1	SS	3-4-4-4	8	Topsoil above brown fine to medium SAND and GRAVEL, trace silt.	45		
	2	SS	5-6-30-100	36	Brown fine to medium SAND and GRAVEL with brick fragments, dry.	33		
5	3	SS	5-5-5-3	10	No recover, rock and brick in nose.	0		
	4	SS	4-4-4-4	8	Dark brown fine to medium SAND with coarse gravel and brick fragments.	25		
	5	SS	3-8-20-13	28	Light bronw fine to coarse SAND, trace fine gravel, dry.	70		
10	6	SS	12-13-13-14	26	Light brown fine SAND and SILT with coarse gravel, slightly moist..	40		
15	7	SS	13-21-38-20	59	Tan fine SAND and SILT with coarse gravel moist to wet.	55		
20	8	SS	60+/0"	60+/0"	No recovery.	0		
25	9	SS	40, 60+/6"	60+/6"	TILL, moderate tan silty fine to medium SAND and subang gravel.	80		
30	10	SS	60/6"	60/6"	No recovery, TILL in tip of shoe, tan fine SAND and angular gravel.	0		
35					End of boring at 30.8 ft, spoon refusal at 30 ft. auger refusal at 30.8 ft.			

*Sample type: SS-Split Spoon, ST-Shelby Tube, RC-Rock Core, SC-Soil Core

Laboratory Tests: MC-Moisture Content, AL-Atterberg Limits, S-Sieve Analysis, SH-Sieve/Hydrometer Analysis, SG-Specific Gravity, OC - Organic Content, C-Consolidation, UU-Unconsolidated Undrained Triaxial, CU-Consolidated Undrained Triaxial, UCS-Unconfined Compressive Strength, K-Hydraulic Conductivity, BD - Bulk Density

**ASTM D-1586 Standard Penetration Test

CLIENT : EECA1
PROJECT : HOUSATONIC RIVER
PROPERTY :
SITE/AREA : EECA

LOCATION ID : BH000132
BEGIN DATE : 06/23/00
END DATE : 06/23/00
LOGGER : I. ALVARADO

Borehole Completed In (<O>verburden <B>edrock) : O

Total Depth : 19.10 Depth to Bedrock : 0.00

Borehole Diameter #1: 6.00
Interval: 0.00 ft. to 19.10 ft. BGS
Method : HSA Fluid : NONE
Borehole Diameter #2:
Interval:
Method : Fluid :
Borehole Diameter #3:
Interval:
Method : Fluid :

Drilling Company : GEOTEK ENGINEERING
Driller : CHRIS SMITH
Drill Rig Type : SIMCO 9100

	Estimated	Surveyed
Surface Elevation :	990.000	
N. Coordinate :	0.0000	911898.4284
E. Coordinate :	0.0000	56463.2878

Well Permit.....(Y)es (N)o: N Permit # :

Hole Abandoned...(Y)es (N)o: Y
Well Installed...(Y)es (N)o: N
Well Cluster.....(Y)es (N)o: N No. of Wells : 0
Well Nest.....(Y)es (N)o: N No. of Wells : 0
Pumps Installed..(Y)es (N)o: N

	Type	Depth
Purge :		0
Sample :		0

Borehole Testing
Borehole Geophysics.....(Y)es (N)o: N
Slug Tests.....(Y)es (N)o: N
Packer Tests.....(Y)es (N)o: N
Pumping Tests.....(Y)es (N)o: N

Comments :
GEOTECHNICAL BORING, 1-1/2 MILE, AT 20 HIGH ST. GEOTECH SAMPLES FOR SUITE 1.

GEOLIS Sampling and Lithology Data Summary

Location ID	Sample Start Depth (feet)	Sample End Depth (feet)	Soil Sampling Method	Sample Recovered (inches)	Sampling Length (inches)	Lithology Start Depth (feet)	Lithology End Depth (feet)	Gravel %	Sand %	Silt %	Clay %	Organic %	Sorting	Plasticity	ASTM / USCS Soil Classification	Coarse Gravel %	Medium Gravel %	Fine Gravel %	Coarse Sand %	Medium Sand %	Fine Sand %
BH000132	0.0	1.0	CUT	12	12	0.0	1.0	5	10	70	15		NA	LOW	Silt with sand, ML						
BH000132	1.0	3.0	NS	0	0	1.0	3.0								Interval Not Sampled						
BH000132	3.0	5.0	SPS	2	24	3.0	3.2	5	15	65	15		NA	NON	Silt with sand, ML						
BH000132	3.0	5.0	SPS	2	24	3.2	5.0								No Sample Recovered						
BH000132	5.0	8.0	NS	0	0	5.0	8.0								Interval Not Sampled						
BH000132	8.0	10.0	SPS	24	24	8.0	8.3						NA	NA	Data Set Incomplete						
BH000132	8.0	10.0	SPS	24	24	8.3	10.0	40	30	20	10		POR	NA	Silty gravel w/sand, GM						
BH000132	10.0	13.0	NS	0	0	10.0	13.0								Interval Not Sampled						
BH000132	13.0	15.0	SPS	13	24	13.0	14.1	45	30	20	5		POR	NA	Silty gravel w/sand, GM	15	15	15	10	10	10
BH000132	13.0	15.0	SPS	13	24	14.1	15.0								No Sample Recovered						
BH000132	15.0	18.0	NS	0	0	15.0	18.0								Interval Not Sampled						
BH000132	18.0	19.1	SPS	12	13.2	18.0	19.0	30	15	45	10		POR	MOD	Gravelly elastic silt with sand, MH	10	10	10	5	5	5
BH000132	18.0	19.1	SPS	12	13.2	19.0	19.1								No Sample Recovered						

Borehole Log

Roy F. Weston, Inc.

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 19.10
SITE NAME	: ZECA	LOGGER	: I. ALVARADO
BORING ID	: BH000132	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 911898.4284 surveyed	DRILLING RIG	: SIMCO 9100
EASTING	: 56463.2878 surveyed	DATE STARTED	: 06/23/00
ELEVATION	: 990.000 estimated	DATE COMPLETED	: 06/23/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
			100	BRN, BLK,LT BRN Silt with sand, ML	BH000132-0-0000	NOC	MST		OVM 0.5	FILL CONTAINED BRICK,COAL ASH CINDER, ROOTS, ASPHALT. NO LAB SAMPLE; AUGER CUTTINGS.
989	1			Interval Not Sampled						NOT SAMPLED.
988	2									
987	3		10	Silt with sand, ML	BH000132-0-0030	NOC	MST	1 1 2 2/6	OVM 1.8	FILL CONTAINED BRICK,COAL SLAG; USED 2 & 3" SPS SAMPLER; FILL;BRN/BLK/WHT
				No Sample Recovered						NO RECOVERY
986	4									
985	5			Interval Not Sampled						NOT SAMPLED.
984	6									
983	7									
982	8		100	DK BRN, BLK, RED Fill		NA	NA	11 29 28 32/6	OVM 3.3	NO SOIL; COAL, BRICK PCS & SLAG PIECES; FILL
				DK YEL ORG Silty gravel w/sand, GM	BH000132-0-0083	NOC	DRY		OVM 0.4	MATERIAL IS HIGHLY WEATHERED ROCK OR FILL ALSO WHT GRAVEL; USED 2 & 3" SPS SAMPLER.
981	9									
980	10			Interval Not Sampled						NOT SAMPLED.

PROJECT :	HOUSATONIC RIVER	TOTAL DEPTH :	19.10
SITE NAME :	EECA	LOGGER :	I. ALVARADO
BORING ID :	BH000132	DRILLING COMPANY :	GEOTEK ENGINEERING
NORTHING :	911898.4284 surveyed	DRILLING RIG :	SIMCO 9100
EASTING :	36463.2878 surveyed	DATE STARTED :	06/23/00
ELEVATION :	990.000 estimated	DATE COMPLETED :	06/23/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						NOT SAMPLED.
979	11									
978	12									
977	13		55	DK YEL ORG Silty gravel w/sand, GM	BH000132-0-0130	NOC	DRY	7 20 21 29/6	OVM 0.0	MATERIAL IS HIGHLY WEATHERED ROCK OR FILL; USED 2 & 3" SPS SAMPLER.
976	14			No Sample Recovered						NO RECOVERY
975	15			Interval Not Sampled						NOT SAMPLED.
974	16									
973	17									
972	18		90	GRYOLV/WHT/DKYEL Gravelly elastic silt w/sand, MH	BH000132-0-0180	FRM	DRY	30 83 100/1	OVM 0.0	USED 2 & 3" SPS SAMPLER; 30% C-M-F GRAVEL.
971	19			GRN-OLV/WHT/DK YLORG No Sample Recovered						END OF BORING @ 19.10 FT, NO RECOVERY.
970	20									

CLIENT : EECAI
PROJECT : HOUSATONIC RIVER
PROPERTY :
SITE/AREA : EECA

LOCATION ID : EH000115
BEGIN DATE : 06/14/00
END DATE : 06/14/00
LOGGER : I. ALVARADO

Borehole Completed In (<O>verburden <B>edrock) : O

Total Depth : 21.50 Depth to Bedrock : 0.00

Borehole Diameter #1: 6.00
Interval: 0.00 ft. to 21.50 ft. BGS
Method : HSA Fluid :
Borehole Diameter #2:
Interval:
Method : Fluid :
Borehole Diameter #3:
Interval:
Method : Fluid :

Drilling Company : GEOTEK ENGINEERING
Driller : CHRIS SMITH
Drill Rig Type : SIMCO 9100

	Estimated	Surveyed
Surface Elevation :	989.000	
N. Coordinate :	0.0000	911927.0399
E. Coordinate :	0.0000	56432.5943

Well Permit.....(Y)es (N)o: N Permit # :

Hole Abandoned...(Y)es (N)o: Y
Well Installed...(Y)es (N)o: N
Well Cluster.....(Y)es (N)o: N No. of Wells : 0
Well Nest.....(Y)es (N)o: N No. of Wells : 0
Pumps Installed..(Y)es (N)o: N

	Type	Depth
Purge :		0
Sample :		0

Borehole Testing
Borehole Geophysics.....(Y)es (N)o: N
Slug Tests.....(Y)es (N)o: N
Packer Tests.....(Y)es (N)o: N
Pumping Tests.....(Y)es (N)o: N

Comments :
GEOTECH BORING MAP LOCATION #17 SAMPLED FOR SUITE 1. 1-1/2 MILE GEOTECH; TOP OF BORING.

GEOLIS Sampling and Lithology Data Summary

Location ID	Sample Start Depth (feet)	Sample End Depth (feet)	Soil Sampling Method	Sample Recovered (inches)	Sampling Length (inches)	Lithology Start Depth (feet)	Lithology End Depth (feet)	Gravel %	Sand %	Silt %	Clay %	Organic %	Sorting	Plasticity	ASTM / USCS Soil Classification	Coarse Gravel %	Medium Gravel %	Fine Gravel %	Coarse Sand %	Medium Sand %	Fine Sand %
BH000115	0.0	1.0	CUT	12	12	0.0	1.0	5	80	15			MOD	NON	Silty sand, SM			5	5	10	65
BH000115	1.0	3.0	NS	0	0	1.0	3.0								Interval Not Sampled						
BH000115	3.0	5.0	SPS	14	24	3.0	4.2	5	55	35	5		MOD	NON	Silty sand, SM			5	5	5	45
BH000115	3.0	5.0	SPS	14	24	4.2	5.0								No Sample Recovered						
BH000115	5.0	8.0	NS	0	0	5.0	8.0								Interval Not Sampled						
BH000115	8.0	10.0	SPS	13	24	8.0	9.1	10	75	15			MOD	NON	Silty sand, SM		5	5	5	5	65
BH000115	8.0	10.0	SPS	13	24	9.1	10.0								No Sample Recovered						
BH000115	10.0	13.0	NS	0	0	10.0	13.0								Interval Not Sampled						
BH000115	13.0	15.0	SPS	4	24	13.0	13.3	90	8	2			WEL	NON	Poorly-graded gravel, GP	90					8
BH000115	13.0	15.0	SPS	4	24	13.3	15.0								No Sample Recovered						
BH000115	15.0	18.0	NS	0	0	15.0	18.0								Interval Not Sampled						
BH000115	18.0	19.5	SPS	12	18	18.0	19.0	10	25	55	10		POR	LOW	Sandy silt, ML						
BH000115	18.0	19.5	SPS	12	18	19.0	19.5								No Sample Recovered						
BH000115	19.5	21.5	NS	0	0	19.5	21.4								Interval Not Sampled						
BH000115	19.5	21.5	SPS	0	24	21.4	21.5								No Sample Recovered						

Borehole Log *Roy F. Weston, Inc.*

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 21.50
SITE NAME	: EECA	LOGGER	: I. ALVARADO
BORING ID	: BH000115	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 911927.0399 surveyed	DRILLING RIG	: SIMCO 9100
EASTING	: 56432.5943 surveyed	DATE STARTED	: 06/14/00
ELEVATION	: 989.000 estimated	DATE COMPLETED	: 06/14/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
			100	DUSKY YEL BRN Silty sand, SM	BH000115-0-0000	LSE	MST		OVM 2.5	NO LAB SAMPLE: USED 2 & 3" SPS SAMPLER; FILL; 65% FINE & 15% M-C SAND.
988	1			Interval Not Sampled						NOT SAMPLED.
987	2									
986	3		60	BLK,WHT,BRN Silty sand, SM	BH000115-0-0030	LSE	MST	5 2 2 3/6	OVM 0.7	USED 2 & 3" SPS SAMPLER; FILL; 45% FINE & 10% M-C SAND.
985	4			No Sample Recovered						NO RECOVERY
984	5			Interval Not Sampled						NOT SAMPLED.
983	6									
982	7									
981	8		55	ORG BRN Silty sand, SM	BH000115-0-0080	LSE	MST	1 3 2 3/6	OVM 0.6	USED 2 & 3" SPS SAMPLER; FILL; 65% FINE & 10% M-C SAND.
980	9			No Sample Recovered						NO RECOVERY
979	10			Interval Not Sampled						NOT SAMPLED.

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 21.50
SITE NAME	: EECA	LOGGER	: I. ALVARADO
BORING ID	: BH000115	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 911927.0399 surveyed	DRILLING RIG	: SIMCO 9100
EASTING	: 56432.5943 surveyed	DATE STARTED	: 06/14/00
ELEVATION	: 989.000 estimated	DATE COMPLETED	: 06/14/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						NOT SAMPLED.
978	11									
977	12									
976	13		15	DK. YEL ORG Well-graded gravel, GW	BH000115-0-0130	LSE	MST	6 7 9 7/6	OVM 0.0	USED 2 & 3" SPS SAMPLER; LOW RECOVERY GRAVEL/ COBBLES;80% COARSE GRAVEL
				No Sample Recovered						NO RECOVERY
975	14									
974	15			Interval Not Sampled						NOT SAMPLED.
973	16									
972	17									
971	18		66	ORG, BLK, GRY Sandy silt, ML	BH000115-0-0180	SFT	WET	24 42 48/6	OVM 92.0	SAMPLE ONLY DRIVEN 1.5' DUE TO CABLE PROBLEMS
970	19			No Sample Recovered						NO RECOVERY
				Interval Not Sampled						NOT SAMPLED.
969	20									

Borehole Log

Roy F. Weston, Inc.

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 21.50
SITE NAME	: EECA	LOGGER	: I. ALVARADO
BORING ID	: BH000115	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 911927.0399 surveyed	DRILLING RIG	: SIMCO 9100
EASTING	: 56432.5943 surveyed	DATE STARTED	: 06/14/00
ELEVATION	: 989.000 estimated	DATE COMPLETED	: 06/14/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						NOT SAMPLED.
968	21									
				No Sample Recovered	BH000115-0-0215			100/6		NO RECOVERY; SPLIT-SPOON REFUSAL & END OF BORING AT 21.5'.
967	22									
966	23									
965	24									
964	25									
963	26									
962	27									
961	28									
960	29									
959	30									

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GEO LOGIC, INC.

EARTH
EXPLORATION
SERVICES
35 Commercial Drive
TEL 5083844434
Wrentham, MA 02093
FAX 5083844452

CLIENT: Roy F. Weston
PROJECT: Housatonic River
LOCATION: Pittsfield, MA
BH000638

GTB-14

			CASING	SAMPLER	CORE BARREL
File #:	02121	TYPE	HW	SS	
Date Started:	6/11/02	SIZE	4"	2"	
Date Completed:	6/11/02	HAMMER	300#	140#	—
Driller:	T. Tucker	FALL	24"	30"	—
Site Rep.:	Amy Steele				

Surface Elevation:
Station:
Groundwater level readings
Date Depth
Date Depth

Depth ft	Sample No.	Depth ft	N	Rec. in	Blows/6"	Sample Description
	S-1	0.0-0.3	3		1-1-2-1	S-1 TOPSOIL above FILL and dry loose brown silty SAND
	S-2	2.0-2.4	5		1-1-4-4	S-2 Dry loose brown silty SAND and FILL, coal, brick
5	S-3	4.0-4.4	5		8-3-2-2	S-3 No recovery, chunk of brick stuck in nose
	S-4	6.0-6.4	5		5-2-3-3	S-4 No recovery
	S-5	8.0-8.6	7		3-4-3-2	S-5 Slightly moist loose moderately brown/tan clayey silty SAND and silty sandy CLAY, some gravel, firm
10	S-6	10.0-11.2	14		4-7-7-16	S-6 No recovery, 1.5" diameter subrounded QUARTZITE in nose
15	S-7	14.0			4-100/5"	S-7 Aged weathered ROCK and slightly moist very dense gray clayey SILT, TILL
						BEDROCK @ 15'
						Bottom of exploration at 16.0'
						"Penetration in inches" column should read "N-Value"
20						
25						
30						

Ground Surface to _____ used _____ then _____

Proportions Used		Cohesive Consistency Blows/ft				Cohesionless Density Blows/ft		Sample Type
Trace	0 to 10%	0-2	Very Soft	9-15	Stiff	0-10	Loose	UP = Fixed Piston
Little	10 to 20%	3-4	Soft	16-30	V-Stiff	10-30	M-Dense	UT = Shelby Tube
Some	20 to 35%	5-8	M-Stiff	31+	Hard	30-50	Dense	OE = Open End Rod
And	35 to 50%					50+	V-Dense	* = 300# hammer

Notes:
1. The stratification lines represent the approximate boundary between soil types. The transition may be gradual.
2. Water level readings were made in the drill hole during or at the completion of drilling. The water level may fluctuate over time.

Remarks: NOTE: Classification performed by RF Weston site rep

GEO LOGIC, INC.

EARTH
EXPLORATION
SERVICES
35 Commercial Drive
TEL 5083844434
Wrentham, MA 02093
FAX 5083844452

CLIENT: Roy F. Weston

GTB-15

PROJECT: Housatonic River

LOCATION: Pittsfield, MA

BH000714

			CASING	SAMPLER	CORE BARREL
File #:	02121	TYPE	HW	SS	
Date Started:	6/13/02	SIZE	4"	2"	
Date Completed:	6/13/02	HAMMER	300#	140#	—
Driller:	T. Tucker	FALL	24"	30"	—
Site Rep.:	Amy Steele				

Surface Elevation:
Station:
Groundwater level readings
Date Depth
Date Depth

Depth ft	Sample No.	Depth ft	N	Rec. in	Blows/6"	Sample Description
	S-1	0.0-0.8	10		4-4-6-7	S-1 Slightly moist to dry loose moderately brown fine sandy SILT, trace clay, trace gravel, large roots
	S-2	2.0-3.7	20		6-7-13-7	S-2 Dry medium dense hard to medium tan fine to medium SAND, trace silt, trace rootlets, organic gravel at base
5	S-3	4.0-4.6	7		5-4-3-15	S-3 Dry loose moderately brown/orange fine to coarse silty SAND, 10% angular ground, 0.3" slag, roots, FILL
	S-4	6.0-8.2	26		16-10-16-47	S-4 Some highly variable dry slag and weathered dry material
	S-5	8.0-15.1	85		19-42-43-26	S-5 Dry to slightly moist very dense moderately brown to orange silty fine to coarse SAND and subangular GRAVEL, some weathered rock
10	S-6	10.0-19.9	119		28-46-73-100	S-6 Weathered ROCK Spoon refusal
						Bottom of exploration at 12.0'
15						"Penetration in inches" column should read "N-Value"
20						
25						
30						

Ground Surface to _____ used _____ then _____

Proportions Used		Cohesive Consistency Blows/ft				Cohesionless Density Blows/ft		Sample Type
Trace	0 to 10%	0-2	Very Soft	9-15	Stiff	0-10	Loose	UP = Fixed Piston
Little	10 to 20%	3-4	Soft	16-30	V-Stiff	10-30	M-Dense	UT = Shelby Tube
Some	20 to 35%	5-8	M-Stiff	31+	Hard	30-50	Dense	OE = Open End Rod
And	35 to 50%					50+	V-Dense	* = 300# hammer

Notes:
1. The stratification lines represent the approximate boundary between soil types. The transition may be gradual.
2. Water level readings were made in the drill hole during or at the completion of drilling. The water level may fluctuate over time.

Remarks: NOTE: Classification performed by RF Weston site rep

Boring Log

Project Number:	000895-009
Client:	Berkshire Gas
Site Location	Deming Street Pittsfield, MA

ENSR INTERNATIONAL
2 Technology Park Drive
Westford, Massachusetts
(978) 589-3000

Use			
Boring Number	MW-2D		
Sheet	1	of	1
Surface Elevation (ft-msl)			
Equipment	Hollow Stem Auger		
Inside Diameter	4 1/4"		
Outside Diameter	8"		

Project Manager	Bob Cataldo	Field Technician	O. Racicot	Date Started	08/06/2001
Drilling Contractor	ADS	Driller	Justin	Date Completed	08/06/2001

Well Data

Well Depth 31.5 feet
Screen Depth 26.5 to 31.5 feet
Screen length 5 feet
Water Depth 26 feet

Depth	Sample Depth	Sample Number	Blow Counts (24") 0-6	6-12	12-18	18-24	Pen (in)	Rec (in)	Sorting	Moisture	PID (ppm)	Field Identification	Description
1–5												Dark brown topsoil and SAND	Roadbox/cement 2" PVC Riser from 0 to 26 feet
6–9			4	2	2	2	24"	3"	poor	dry	0.0	Dark brown medium to coarse SAND	Native fill 1 to 20 feet
11			3	4	4	7	24"	9"	poor	moist	0.1	Brown fine SAND, some silt, some pebbles	
12												Light to white rock	
13–14												Brown to brown-grey SAND, some pebbles	
16			24	22	20	19	24"	8"	poor	moist	0.0	Brown coarse GRAVEL, some fractured rock	
18–19												Brown-grey medium SAND	
21	20-21'	MW-2D	8	50			12"	9"	poor	dry	0.1	Reddish weathered rock high mica content, some intermixed clays and quartz veins Auger refusal @ 22 feet	Bentonite Seal from 20 to 25.5 feet
26–31												Groundwater encountered @ 26' BEDROCK Air Rotary Hammer from 22 to 32 feet	Groundwater level Quartz sand from 25.5 to 31.5 feet Screened interval from 26.5 to 31.5 feet Bottom of well @ 31.5 feet
36												F Fine, M Medium, C Coarse	

Fill Mat | Tube | Fill Mat | Depth

Project Number	000895-009	ENSR INTERNATIONAL	**Boring Log**
Client	Berkshire Gas	2 Technology Park Drive Westford, Massachusetts (978) 589-3000	Use
Site Location	Deming Street Pittsfield, MA		Boring Number: MW-5D Sheet: 1 of 1 Surface Elevation (ft-msl)
Project Manager: Bob Cataldo	Field Technician: O. Raccioti	Date Started: 08/07/2001	Equipment: Hollow Stem Auger
Drilling Contractor: ADS	Driller: Justin	Date Completed: 08/07/2001	Inside Diameter: 4 1/4" Outside Diameter: 8"

Well Data

Well Depth: 41 feet 8 inches
Screen Depth: 35.8 to 41.8 feet
Screen length: 6 feet
Water Depth: 16 feet

Depth	Sample Depth	Sample Number	Blow Counts (24") 0-6	6-12	12-18	18-24	Pen (in)	Rec (in)	Sorting	Moisture	PID (ppm)	Field Identification	Description
1–4												Brown to dark brown fine SAND (topsoil)	Roadbox/cement 2" PVC Riser from 0 to 35'8"
5–6			4	1	2	3	24"	20"	poor to mod	moist	0.0	Some debris at top. Brown fine SAND, some intermittent pebbles and coarse sands	Native fill 0 to 23 feet
7–9												Brown fine SAND	
10–11			5	7	9	14	24"	22"	mod	moist	0.0	Brown to light brown fine SAND and SILT, some intermixed pebbles, slight non-petroleum odor	
12–14												Brown fine SAND	
15–16	15-16'	MW-5D	16	14	24	42	24"	21"	poor	moist wet	0.0	Brown light brown fine SAND and SILT, some intermixed pebbles Groundwater encountered @ 16 feet	Groundwater level
17												Weathered fine grained white BEDROCK	
18–24												Suspected weathered BEDROCK	Bentonite pellets from 23 to 32 feet
25												White weathered BEDROCK	
26			27	50									
27–31												Auger refusal @ 32 feet	
32–35													Bentonite gel coat from 32 to 35 feet
36–41												Air Rotary Hammer from 32 to 42 feet F: Fine, M: Medium, C: Coarse	Quartz sand Screened interval from 36.8 to 41.8 feet Bottom of well @ 41 feet, 8 inches
42													

Fill Mat. | Tube | Fill Mat. | Depth

Boring Log

Project Number	000895-009	Use	
Client	Berkshire Gas	Boring Number	MW-6DI
		Sheet	1 of 1
Site Location	Deming Street, Pittsfield, MA	Surface Elevation (ft-asl)	
		Equipment	Hollow Stem Auger
		Inside Diameter	4 1/4"
		Outside Diameter	8"
Project Manager	Bob Cataldo	Field Technician	D. Tomka
Drilling Contractor	ADS	Driller	
Date Started	06/27/2001	Date Completed	06/28/2001

ENSR INTERNATIONAL
2 Technology Park Drive
Westford, Massachusetts
(978) 589-3000

Well Data

Well Depth: 32.5 feet
Screen Depth: 22.5 to 32.5 feet
Screen length: 10 feet
Water Depth: 14.85 feet

Depth	Sample Depth	Sample Number	Blow Counts (24") 0-6	6-12	12-18	18-24	Pen (in)	Rec (in)	Sorting	Moisture	PID (ppm)	Field Identification	Description
1–6												Dark brown medium to fine SAND, some rock (fill) No odors or staining	Roadbox cement; 2" PVC Riser from 0 to 22.5 feet; Native fill 1 to 14 feet
7–12												Brown silty fine SAND (fill) No odors or staining	
13–14			9	13	15	21	24	12		moist		Brown silty fine SAND, rock dust, rock No sample collected due to proximity to MW-6	Groundwater level
15–19												Brown silty fine SAND Naphtha odor	Bentonite Seal from 14 to 19 feet; Quartz sand from 19 to 32.5 feet
20–21			7	9	13	26	24	3	poor	wet		Rock fragements w/ silty fine SAND (brown, white medium sand, black stained sand) Slight odor and sheen on sample	
22–24												Fractured rock. 8" to 10" fracture exists at ~ 23 feet Encounter competent rock at 25 feet No odors from spoils or borehole	Screened interval from 22.5 to 32.5 feet
25–27												Strong odor, NAPL coating borehole on water surface ~26 to 27 feet. Believe fracture exists ~26 feet where NAPL was observed in a pocket. No odor leaving property	
28–32							60	48				Observe 10"-11" fracture at 29 feet. NAPL came up from fracture, then clean rock dust. No impact observed in rock below ~29 feet. Recover 4 feet of 5 foot core. Top is very fractured, missing bottom foot. RQD = 49%	Bottom of well @ 32.5 feet
33–36												Bottom of boring	

F: Fine, M: Medium, C: Coarse

Fill Mat. | Tube | Fill Mat. | Depth

Boring Log

Project Number	000895-009	Use	
Client	Berkshire Gas	Boring Number	MW-7D
Site Location	Deming Street, Pittsfield, MA	Sheet	1 of 1
		Surface Elevation (ft-asl)	
		Equipment	Hollow Stem Auger
		Inside Diameter	4 1/4"
		Outside Diameter	8"

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2 Technology Park Drive
Westford, Massachusetts
(978) 589-3000

Project Manager	Bob Cataldo	Field Technician	D. Tomka	Date Started	06/28/2001
Drilling Contractor	ADS	Driller		Date Completed	06/28/2001

Well Data

Well Depth: 27 feet
Screen Depth: 21.75 to 26.75 feet
Screen length: 5 feet
Water Depth: 15.02 feet

Depth	Sample Depth	Sample Number	Blow Counts (24") 0-6	6-12	12-18	18-24	Pen (in)	Rec (in)	Sorting	Moisture	PID (ppm)	Field Identification	Description	Fill Mat.	Tube	Fill Mat.	Depth
1												0-0.5 feet concrete sidewalk 0.5 to 5 feet topsoil- dark brown medium SAND and GRAVEL No odor or staining	Roadbox/cement 2" PVC Riser from 0 to 21.75 feet				1
2																	2
3																	3
4																	4
5																	5
6			1	1	2	2				Dry		Dark brown medium to fine SAND, trace gravel No odor or staining	Native fill 1 to 14 feet				6
7																	7
8																	8
9																	9
10												Light brown silty SAND, some gravel Broken quartz with rock dust No odors or staining					10
11																	11
12																	12
13																	13
14																	14
15													Groundwater level				15
16			2	10	12	12				moist wet		Light brown - tan silty SAND, gravel, rock chips. Wet @ 16 feet; No odor or stains	Bentonite Seal from 14 to 20 feet				16
17																	17
18							60	41				Encounter competent rock, drive spoon, very little recovery Rock dust with some brown silty SAND. Begin core, difficulty coring 20 to 21 feet. Remove rods to find core up jammed. Clear and resume, no apparent fractures RQD = 68%					18
19																	19
20																	20
21													Quartz sand from 20 to 27 feet				21
22																	22
23							60	27				Competent rock, but many small fractures exist as evidenced by numerous iron veins and areas that cleave easily, displaying moist silt and clay at the cleave interface No apparent impacts. RQD = 45%	Screened interval from 21.75 to 26.75 feet				23
24																	24
25																	25
26												Bottom of boring @ 27 feet	Bottom of well @ 27 feet				26
27																	27
28																	28
29																	29
30																	30
31																	31
32																	32
33																	33
34																	34
35																	35
36												F: Fine, M: Medium, C: Coarse					36

Project Number: 000895-009	ENSR INTERNATIONAL	**Boring Log**	
Client: Berkshire Gas	2 Technology Park Drive Westford, Massachusetts (978) 589-3000	*Use:* Monitoring Well *Boring Number:* MW-8D *Sheet:* 1 of 1 *Surface Elevation (ft-asl):*	***Well Data***
Site Location: Deming Street Pittsfield, MA		*Equipment:* Hollow Stem Auger	Well Depth: 26 feet Screen Depth: 21 to 26 feet
Project Manager: Bob Cataldo	*Field Technician:* O. Racicot	*Date Started:* ######## *Inside Diameter:* 4 1/4"	Screen length: 5 feet
Drilling Contractor: ADS	*Driller:* Rodney	*Date Completed:* ######## *Outside Diameter:* 8"	Water Depth: 20 feet

Depth	Sample Depth	Sample Number	Blow Counts (24") 0-6	6-12	12-18	18-24	Pen (in)	Rec (in)	Sorting	Moisture	PID (ppm)	Field Identification	Description	Fill Mat	Tube	Fill Mat	Depth
1													Roadbox/cement				1
2													2" Schedule 40 PVC Riser from one foot to 21 feet				2
3												Brown medium to fine SAND	Cement/bentonite grout from 3 feet to 17 feet				3
4			3	3	13	13	24	12	mod	moist	0.0	Light brown medium SAND					4
5												Brown fine SAND					5
6			3	5	6	6	24	14	well	moist	0.0	Grey fine SAND					6
7																	7
8			8	9	9	13	24	2	well	moist	0.0	Brown meduim SAND					8
9																	9
10			11	20	13	20	24	16	well	moist	0.0	Grey fine SAND, with intermittent white weathered rock					10
11																	11
12			25	20	19	19	24	16	well	moist	0.0	Grey fine SAND					12
13																	13
14												No sample					14
15																	15
16	15-17	MW-8D	20	29	38	34	24	18	well	moist	0.0	Brown to grey fine SAND					16
17													Bentonite seal from 17 to 19 feet				17
18												No sample					18
19													Quartz filter sand from 19 to 26 feet				19
20			60				6	3	well	moist	0.0	Fine-grained grey bedrock	Groundwater encountered @ 20 feet		▼		20
21													20-slot schedule 40 PVC screen from 21 to 26 feet				21
22												No sample					22
23																	23
24												Air rotary Cuttings and spray from 26 feet have heavy odor and a slight sheen					24
25																	25
26												Bottom of boring @ 26 feet	Well set @ 26 feet				26
27																	27
28																	28
29																	29
30																	30
31																	31
32																	32
33																	33
34																	34
35																	35
36																	36
37																	37
38																	38
39																	39
40																	40
41																	41
42																	42
43																	43
44												F: Fine; M: Medium; C: Coarse					44

Boring Log

Project Number	000895-009		
Client	Berkshire Gas		
Site Location	Deming Street Pittsfield, MA	ENSR INTERNATIONAL 2 Technology Park Drive Westford, Massachusetts (978) 589-3000	
Use			
Boring Number	MW-9D		
Sheet	1 of 1		
Surface Elevation (ft-asl)			
Equipment	Hollow Stem Auger		
Inside Diameter	4 1/4"		
Outside Diameter	8"		
Project Manager	Bob Cataldo	Field Technician	Q. Racicot
Date Started	08/07/2001		
Drilling Contractor	ADS	Driller	Justin
Date Completed	08/08/2001		

Well Data

Well Depth: 44 feet
Screen Depth: 39 to 44 feet
Screen length: 5 feet
Water Depth: 16 feet

Depth	Sample Depth	Sample Number	Blow Counts (24") 0-6	6-12	12-18	18-24	Pen (in)	Rec (in)	Sorting	Moisture	FID (ppm)	Field Identification
1–5												Dark brown medium SAND, slight odor
6			3	8	6	5	24"	20"	poor	moist	0.0	Brown-grey fine SAND, some silt, some odor
8–9												Brown fine SAND
11			7	11	16	21	24"	22"	well	moist	0.8	Brown-grey fine silty SAND Some rock fragements Some odor @ 11.5 feet
13–14												Brown silty SAND
16			20	22	27	37	24"	3"	well	wet	0.0	Brown find silty SAND some odor
18–19												Brown silty SAND
21	21.5	MW-9D	27	21	18	21	24"	19"	well	wet	15.4	Brown find silty SAND and PEBBLES Black odorous layer @ 21.5 feet, some rock fragment
22			16	15			5"	8"	mod	wet	1.3	Brown medium SAND and rock fragments
24–27												Brittle fractured ROCK Auger refusal @ 28 feet
28–32												Air Rotary Drill Competent ROCK at 33 feet
33–43												Competent ROCK Air Rotary Hammer from 28 to 44 feet
44												F Fine, M Medium, C Coarse

Description

Roadbox/cement

2" PVC Riser from 0 to 39 feet

Native fill 0 to 31 feet

Groundwater level

Bentonite pellets from 23 to 32 feet

Bentonite seal from 31 to 38 feet

Quartz sand

Screened interval
from 39 to 44 feet

Bottom of well @ 41 feet, 3 inches

Fill Mat. | Tube | Fill Mat. | Depth

Project Number	000895-009	ENSR INTERNATIONAL	**Boring Log**
Client	Berkshire Gas	2 Technology Park Drive Westford, Massachusetts (978) 589-3000	Use
Site Location	Dentang Street Pittsfield, MA		Boring Number: MW-10D Sheet: 1 of 1 Surface Elevation (ft-asl)
Project Manager: Bob Cataldo	Field Technician: O. Racicot	Date Started: 08/06/2001	Equipment: Hollow Stem Auger Inside Diameter: 4 1/4" Outside Diameter: 8"
Drilling Contractor: ADS	Driller: Justin	Date Completed: 08/07/2001	

Well Data

Well Depth: 30 feet
Screen Depth: 25 to 30 feet
Screen length: 5 feet
Water Depth: 23 feet

Depth	Sample Depth	Sample Number	Blow Counts (24") 0-6	6-12	12-18	18-24	Pen (in)	Rec (in)	Sorting	Moisture	PID (ppm)	Field Identification	Description
1												Brown medium SAND (top soil) Brick pieces	Roadbox/cement 2" PVC Riser from 0 to 25 feet
2													
3													
4													
5													
6			4	5	4	4	24"	8"	poor	dry	0.0	Brown medium SAND, some gravel	Native fill 0 to 19 feet
7													
8													
9													
10													
11			3	4	10	10	24"	18"	mod	dry	4.3	Brown fine SAND, some pebbles, slightly charred odor Grey streaks	
12													
13												Light brown medium SAND and GRAVEL	
14													
15												Brown-orange fine SAND, some clay, odor	
16	15-17'	MW-10D	6	42	50		18"	13"	poor	moist	4.0	White to brown weathered BEDROCK No recovery	
17													
18												Brown fine to medium SAND, some pebbles Strong odor (weathered bedrock)	
19													
20												Auger refusal @ 20 feet Air Rotary Drill	
21													Bentonite Seal from 19 to 23 feet
22												BEDROCK	
23												Groundwater encountered @ 23 feet	Groundwater level
24													Quartz sand from 23 to 30 feet
25													
26													
27												BEDROCK	Quartz sand from 23 to 30 feet
28													
29													Screened interval from 25 to 30 feet
30												Air Rotary Hammer from 20 to 30 feet	Bottom of well @ 31.5 feet
31													
32													
33													
34													
35													
36												F Fine, M Medium C Coarse	

Fill Mat. | Tube | Fil Mat. | Depth

CLIENT : EECA1
PROJECT : HOUSATONIC RIVER
PROPERTY :
SITE/AREA : EECA

LOCATION ID : BH000127
BEGIN DATE : 06/21/00
END DATE : 06/21/00
LOGGER : I. ALVARADO

Borehole Completed In (<O>verburden <B>edrock) : B

Total Depth : 17.80 Depth to Bedrock : 17.50

Borehole Diameter #1: 6.00
Interval: 0.00 ft. to 17.50 ft. BGS
Method : HSA Fluid : NONE
Borehole Diameter #2:
Interval:
Method : Fluid :
Borehole Diameter #3:
Interval:
Method : Fluid :

Drilling Company : GEOTEK ENGINEERING
Driller : CHRIS SMITH
Drill Rig Type : SIMCO 9100

	Estimated	Surveyed
Surface Elevation :	995.000	
N. Coordinate :	0.0000	911881.5937
E. Coordinate :	0.0000	56367.7898

Well Permit.....(Y)es (N)o: N Permit # :

Hole Abandoned...(Y)es (N)o: Y
Well Installed...(Y)es (N)o: N
Well Cluster.....(Y)es (N)o: N No. of Wells : 0
Well Nest.....(Y)es (N)o: N No. of Wells : 0
Pumps Installed..(Y)es (N)o: N

	Type	Depth
Purge :		0
Sample :		0

Borehole Testing
Borehole Geophysics.....(Y)es (N)o: N
Slug Tests.....(Y)es (N)o: N
Packer Tests.....(Y)es (N)o: N
Pumping Tests.....(Y)es (N)o: N

Comments :
GEOTECH BORING SAMPLED FOR SUITE 1; HOLE GROUTED WITH 1 BAG CEMENT, 1/2 BAG VOLCLAY, 2 BAGS BENTONITE CHIPS, AND 1/2 BAG COLD PATCH; MAP LOCATION #19.

GEOLIS Sampling and Lithology Data Summary

Location ID	Sample Start Depth (feet)	Sample End Depth (feet)	Soil Sampling Method	Sample Recovered (inches)	Sampling Length (inches)	Lithology Start Depth (feet)	Lithology End Depth (feet)	Gravel %	Sand %	Silt %	Clay %	Organic %	Sorting	Plasticity	ASTM / USCS Soil Classification	Coarse Gravel %	Medium Gravel %	Fine Gravel %	Coarse Sand %	Medium Sand %	Fine Sand %
BH000127	0.0	0.3	NS	0	0	0.0	0.3								Interval Not Sampled						
BH000127	0.3	1.0	CUT	0	0	0.3	1.0	5	45	50			MOD	LOW	Silty sand, SM						
BH000127	1.0	3.0	NS	0	0	1.0	3.0								Interval Not Sampled						
BH000127	3.0	5.0	SPS	22	24	3.0	4.8	20	20	50	10		POR	NON	Sandy silt w/gravel, ML	5	10	5	5	10	5
BH000127	3.0	5.0	SPS	22	24	4.8	5.0								No Sample Recovered						
BH000127	5.0	8.0	NS	0	0	5.0	8.0								Interval Not Sampled						
BH000127	8.0	10.0	SPS	24	24	8.0	10.0	5	10	65	20		MOD	LOW	Silt with sand, ML		5		5	5	
BH000127	10.0	13.0	NS	0	0	10.0	13.0								Interval Not Sampled						
BH000127	13.0	15.0	SPS	0	24	13.0	15.0	5	10	65	20		MOD	LOW	Silt with sand, ML		5		5	5	
BH000127	15.0	17.5	NS	0	0	15.0	17.5								Interval Not Sampled						

Borehole Log

Roy F. Weston, Inc.

PROJECT :	HOUSATONIC RIVER	TOTAL DEPTH :	17.80
SITE NAME :	EECA	LOGGER :	I. ALVARADO
BORING ID :	BH000127	DRILLING COMPANY :	GEOTEK ENGINEERING
NORTHING :	911881.5937 surveyed	DRILLING RIG :	SIMCO 9100
EASTING :	56367.7898 surveyed	DATE STARTED :	06/21/00
ELEVATION :	995.000 estimated	DATE COMPLETED :	06/21/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						4" OF ASPHALT. SAMPLE NOT SENT TO LAB.
				OLV BLK Silty sand, SM	BH000127-0-0003	NOC	MST		OVM 0.9	USED 2 & 3" SPS SAMPLER; FILL; AUGER CUTTINGS.
994	1			Interval Not Sampled						
993	2									
992	3		90	BRN/LYBRN/RED Sandy silt w/gravel, ML	BH000127-0-0030	NOC	MST	4 5 6 4/6	OVM 0.0	USED 2 & 3" SPS SAMPLER; FILL
991	4									
				No Sample Recovered	BH000127-0-0030					
990	5			Interval Not Sampled						
989	6									
988	7									
987	8		100	MOD YLW BRN Silt with sand, ML	BH000127-0-0080		MST	3 3 3 5/6	OVM 0.0	USED 2 & 3" SPS SAMPLER; FILL
986	9									
985	10			Interval Not Sampled						

Borehole Log — *Roy F. Weston, Inc.*

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 17.80
SITE NAME	: EECA	LOGGER	: I. ALVARADO
BORING ID	: BH000127	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 911881.5937 surveyed	DRILLING RIG	: SIMCO 9100
EASTING	: 56367.7898 surveyed	DATE STARTED	: 06/21/00
ELEVATION	: 995.000 estimated	DATE COMPLETED	: 06/21/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						
984	11									
983	12									
982	13			MOD YLW BRN Silt with sand, ML	BH000127-0-0130		MST	4 5 8 4/6	OVM 0.0	USED 2 & 3" SPS SAMPLER; FILL
981	14									
980	15			Interval Not Sampled						
979	16									
978	17									
			100	WHT Marble	BH000127-0-0175			100/4	OVM 0.0	MARBLE ROCK; POSS. COBBLE OR BEDROCK; BEDROCK NOT CONFIRMED; TD @ 17.8'.
977	18									
976	19									
975	20									

WESTON
MANAGERS DESIGNERS/CONSULTANTS

Date Drilled: 06/02/99 – 06/02/99

Logged By: S. Campbell | Project Manager:

Contractor: NH Boring

Drilling Method: Case and Wash/Rotary Core Barrel

Total Depth: 9.00' | Completed Depth: 9.00'

Site Id: SD021202 | Project Number:

Borehole Dia.: 4.00in | Static Water Level (bgs):

Project Name: EECA

Blank Casing:
type: dia: 0.00in fm: 0.0' to: 9.00'

Location: Pittsfield, MA

Ground Elev.: 0.00' | Datum: Not Surveyed

Screens:
type: size: dia: fm: to:

Remarks: Driller: G. Tremaley
Rig Type: Barge-mounted Tripod Rig
Hammer Weight: 140 lbs; Fall: 30"

Annular Fill:
type: fm: to:
type: fm: to:
type: fm: to:

Soil Boring
(No Well Installed)

Depth (ft)	Water Level	Recovery	Sample No	Blow Count	Vapor	Material Description	Notes
			0000 0-2			SAND: vf-f-SAND, gravel: H2-SD021202-0-0000.	
						Same as above. H2-SD021202-0-0005	
1						BEDROCK.	
2			0020 2-9			SANDSTONE; Light brown Medium SANDSTONE, CaCO3 Cement.	
3							
4							
5							

Site Id: S0021202 | Project Name: EECA | Project Number:

Depth (ft)	Soil Boring (No Well Installed)	Water Level	Recovery	Sample No	Blow Count	Vapor	Material Description	Notes
							BEDROCK	
							SANDSTONE: Light brown medium SANDSTONE. CACO3 Cement.	
7								
8								
9							BOTTOM OF BORING	
10								
11								
12								
13								
14								

GEO LOGIC, INC.

EARTH
EXPLORATION
SERVICES
35 Commercial Drive
TEL 5083844434
Wrentham, MA 02093
FAX 5083844452

CLIENT: Roy F. Weston

GTB-16

PROJECT: Housatonic River

LOCATION: Pittsfield. MA

BH000637

			CASING	SAMPLER	CORE BARREL
File #:	02121	TYPE	HW	SS	
Date Started:	6/10/02	SIZE	4"	2"	
Date Completed:	6/10/02	HAMMER	300#	140#	—
Driller:	T. Tucker	FALL	24"	30"	—
Site Rep.:	Amy Steele				

Surface Elevation:
Station:
Groundwater level readings
Date Depth
Date Depth

Depth ft	Sample No.	Depth ft	N	Rec. in	Blows/6"	Sample Description
	S-1	0.0-0.5	6		1-2-4-4	S-1 Loose black silty fine SAND and leaf DEBRIS (wood, roots) and 1.5" layer dry to slightly moist moderately tan medium SAND at .7'
	S-2	2.0-3.5	18		10-7-11-5	S-2 Medium dense GRAVEL at top and moderately brown silty fine SAND, trace roots
5	S-3	4.0-8.2	50		13-20-30-43	S-3 Dry very dense moderately brown silty clayey SAND and GRAVEL, TILL
	S-4	6.0-14.6	103		106-43-60-40	S-4 Weathered LIMESTONE
10						Bottom of exploration at 8.0'
						"Penetration in inches" column should read "N-Value"
15						
20						
25						
30						

Ground Surface to _____ used _____ then _____

Proportions Used		Cohesive Consistency Blows/ft				Cohesionless Density Blows/ft		Sample Type
Trace	0 to 10%	0-2	Very Soft	9-15	Stiff	0-10	Loose	UP = Fixed Piston
Little	10 to 20%	3-4	Soft	16-30	V-Stiff	10-30	M-Dense	UT = Shelby Tube
Some	20 to 35%	5-8	M-Stiff	31+	Hard	30-50	Dense	OE = Open End Rod
And	35 to 50%					50+	V-Dense	* = 300# hammer

Notes:
1. The stratification lines represent the approximate boundary between soil types. The transition may be gradual.
2. Water level readings were made in the drill hole during or at the completion of drilling. The water level may fluctuate over time.

Remarks: NOTE: Classification performed by RF Weston site rep

GEO LOGIC, INC.

EARTH EXPLORATION SERVICES
35 Commercial Drive
TEL 5083844434
Wrentham, MA 02093
FAX 5083844452

CLIENT: Roy F. Weston
PROJECT: Housatonic River
LOCATION: Pittsfield, MA
BH000751

GTB-17

			CASING	SAMPLER	CORE BARREL
File #:	02121	TYPE	HW	SS	
Date Started:	6/13/02	SIZE	4"	2"	
Date Completed:	6/13/02	HAMMER	300#	140#	—
Driller:	T. Tucker	FALL	24"	30"	—
Site Rep.:	Amy Steele				

Surface Elevation:
Station:
Groundwater level readings
Date Depth
Date Depth

Depth ft	Sample No.	Depth ft	N	Rec. in	Blows/6"	Sample Description
	S-1	0.0-1.0	12		9-9-3-3	S-1 0-0.3' TOPSOIL, medium dense dark brown fine sandy silty CLAY 0.3'-1.0' Medium SAND
	S-2	2.0-2.5	6		3-3-3-3	S-2 2-2.8' Slightly moist loose silty fine SAND and sandy SILT, FILL chunk concrete
5	S-3	4.0-5.8	22		7-7-15-22	S-3 4'-5.3' Medium dense moderately brown silty medium fine to coarse SAND
	S-4	6.0			12-43-102/5"	S-4 6'-6.8' Weathered ROCK
						Bottom of exploration at 8.0'
10						"Penetration in inches" column should read "N-Value"
15						
20						
25						
30						

Ground Surface to _____ used _____ then _____

Proportions Used		Cohesive Consistency Blows/ft				Cohesionless Density Blows/ft		Sample Type
Trace	0 to 10%	0-2	Very Soft	9-15	Stiff	0-10	Loose	UP = Fixed Piston
Little	10 to 20%	3-4	Soft	16-30	V-Stiff	10-30	M-Dense	UT = Shelby Tube
Some	20 to 35%	5-8	M-Stiff	31+	Hard	30-50	Dense	OE = Open End Rod
And	35 to 50%					50+	V-Dense	* = 300# hammer

Notes:
1. The stratification lines represent the approximate boundary between soil types. The transition may be gradual.
2. Water level readings were made in the drill hole during or at the completion of drilling. The water level may fluctuate over time.

Remarks: NOTE: Classification performed by RF Weston site rep

WESTON	SOIL BORING LOG			PAGE 1 OF 1
Job Name Job No.	GE Pittsfield- EE/CA 10971-032-007	Boring No. Surface Elev.	BH000092 992.0 ft. (est)	Groundwater Level Date Depth
Date Drilled	11 May 99	Boring Method	HSA	Not Measured
Drilling Co.	NH Boring	Completion Depth	16.0 ft bgs	
Drill Foreman	Kenneth Smith	Location	See Figure 2.1-7	
Logged By	J. Schmidt			

Depth (feet)	Sample No.	Sample Type*	Sample Blow Counts** (per 6 in.)	N Value**	Visual Description	% Rec	% RQD	Laboratory Tests
		SS	24-9-6-8	15	6" Asphalt			
		SS	3-4-6-6	10	SAND, little gravel, trace silt, dark brown, dry			
5	Sample	SS	5-15-16-14	31	SAND, little gravel and silt, moist	H		
		SS	10-10-13-14	23	SAND , some silt, little gravel and clay, brown, moist			
	Sample	ST			(Poor recovery, gravel in tube)	L		
10	Sample	SS	8-10-21-26	31	SILT, some sand, clay and gravel, olive brown, moist SAND, some silt, little gravel and clay, brown, moist	M		
		SS	70/5"	70/5"				
15	Sample	SS	23-50/2"	50/2"	SAND, some gravel, trace silt, yellow-brown, moist	L		
					End of Boring at 14.7 feet bgs (Split spoon refusal)			
20								
25								
30								
35								

*Sample type:
SS-Split Spoon
ST-Shelby Tube
RC-Rock Core
SC-Soil Core

**ASTM D-1586 Standard Penetration Test

Laboratory Tests:
MC-Moisture Content
AL-Atterberg Limits
S-Sieve Analysis
SH-Sieve/Hydrometer Analysis
SG-Specific Gravity
OC - Organic Content
C-Consolidation
UU-Unconsolidated Undrained Triaxial
CU-Consolidated Undrained Triaxial
UCS-Unconfined Compressive Strength
K-Hydraulic Conductivity
BD - Bulk Density

WESTON
MANAGERS DESIGNERS/CONSULTANTS

Date Drilled: 06/02/99 - 06/02/99

Logged By: S. Barris | Project Manager:

Contractor: NH Boring

Drilling Method: Case and Wash/Rotary Core Barrel

Total Depth: 7.00' | Completed Depth: 7.00'

Site Id: SD021262 | Project Number:

Borehole Dia.: 4.00in | Static Water Level (bgs):

Project Name: EECA

Location: Pittsfield, MA

Blank Casing:
type: dia: 0.00in fm: 0.0' to: 7.00'

Ground Elev.: 0.00' | Datum: Not Surveyed

Screens:
type: size: dia: fm: to:

Remarks: Driller: G. Trembley
Rig Type: Barge-mounted Tripod Rig
Hammer Weight: 140 lbs: Fall: 30"

Annular Fill:
type: fm: to:
type: fm: to:
type: fm: to:

Soil Boring
(No Well Installed)

Depth (ft)	Water Level	Recovery	Sample No.	Blow Count	Vapor	Material Description	Notes
			0000 0-2	6 8 10 10		SAND: m-c-SAND: H2-SD021262-0-0000.	
1							
2			0020 2-3.5	27 17 99 R/3"		SILT: SILT, sand, gravel: H2-SD021262-0-0020	
3						BEDROCK.	
			0040 5.5-7				
4						SANDSTONE: Light brown medium-SANDSTONE, CACO3 Cement.	
5							

Site Id: SD021262 | Project Name: EECA | Project Number:

Depth (ft)	Soil Boring (No test executed)	Water Level	Recovery	Sample No.	Blow Count	Vapor	Material Description	Notes
							BEDROCK	
							SANDSTONE: Light brown medium-SANDSTONE, CACO3 Cement.	
7							BOTTOM OF BORING	
8								
9								
10								
11								
12								
13								
14								

CLIENT : EECA1
PROJECT : HOUSATONIC RIVER
PROPERTY :
SITE/AREA : EECA

LOCATION ID : BH000144
BEGIN DATE : 07/11/00
END DATE : 07/11/00
LOGGER : P. MCNABB

Borehole Completed In (<O>verburden <B>edrock) : O

Total Depth : 10.50 Depth to Bedrock : 0.00

Borehole Diameter #1: 6.00
Interval: 0.00 ft. to 10.50 ft. BGS
Method : HSA Fluid : NONE
Borehole Diameter #2:
Interval:
Method : Fluid :
Borehole Diameter #3:
Interval:
Method : Fluid :

Drilling Company : GEOTEK ENGINEERING
Driller : JOE BELL
Drill Rig Type : SIMCO-TRUCK MOUNTED

	Estimated	Surveyed
Surface Elevation :	977.000	
N. Coordinate :	0.0000	911698.5711
E. Coordinate :	0.0000	56297.6629

Well Permit.....(Y)es (N)o: N Permit # :

Hole Abandoned...(Y)es (N)o: Y
Well Installed...(Y)es (N)o: N
Well Cluster.....(Y)es (N)o: N No. of Wells : 0
Well Nest.....(Y)es (N)o: N No. of Wells : 0
Pumps Installed..(Y)es (N)o: N

	Type	Depth
Purge :		0
Sample :		0

Borehole Testing
Borehole Geophysics.....(Y)es (N)o: N
Slug Tests.....(Y)es (N)o: N
Packer Tests.....(Y)es (N)o: N
Pumping Tests.....(Y)es (N)o: N

Comments :
GEOTECH BORING-95 DEMMING ST. - MAP (FIG 4-2) PROPOSED #21. HOLE GROUTED WITH 1 BAG CEMENT, 1/2 BAG VOLCLAY, AND 1 BAG BENTONITE CHIPS. GEOTECH SAMPLE FOR SUITE 1.

GEOLIS Sampling and Lithology Data Summary

Location ID	Sample Start Depth (feet)	Sample End Depth (feet)	Soil Sampling Method	Sample Recovered (inches)	Sampling Length (inches)	Lithology Start Depth (feet)	Lithology End Depth (feet)	Gravel %	Sand %	Silt %	Clay %	Organic %	Sorting	Plasticity	ASTM / USCS Soil Classification	Coarse Gravel %	Medium Gravel %	Fine Gravel %	Coarse Sand %	Medium Sand %	Fine Sand %
BH000144	0.0	2.0	CUT	24	24	0.0	2.0		50	30		20	WEL	NON	Silty sand, SM					20	30
BH000144	2.0	3.0	NS	0	0	2.0	3.0								Interval Not Sampled						
BH000144	3.0	5.0	SPS	20	24	3.0	4.7	5		70	25		NA	LOW	Silt, ML						
BH000144	3.0	5.0	SPS	20	24	4.7	5.0								No Sample Recovered						
BH000144	5.0	8.0	NS	0	0	5.0	8.0								Interval Not Sampled						
BH000144	8.0	10.0	SPS	17	24	8.0	9.4	70	20	10			MOD	NA	Poorly-graded gravel with silt and sand, GP-G	70				10	10
BH000144	8.0	10.0	SPS	17	24	9.4	10.0								No Sample Recovered						
BH000144	10.0	10.5	SPS	6	6	10.0	10.5								No Sample Recovered						

Borehole Log

Roy F. Weston, Inc.

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 10.50
SITE NAME	: EECA	LOGGER	: P. MCNABB
BORING ID	: BH000144	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 911698.5711 surveyed	DRILLING RIG	: SIMCO-TRUCK MOUNTED
EASTING	: 56297.6629 surveyed	DATE STARTED	: 07/11/00
ELEVATION	: 977.000 estimated	DATE COMPLETED	: 07/11/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
			100	DUSKY YEL BRN Silty sand, SM	BH000144-0-0000	NOC	DRY		OVM 0.0	ROOTS IN SAMPLE; AUGER CUTTINGS; 50% F-M SAND.
976	1									
975	2			Interval Not Sampled						NOT SAMPLED.
974	3		85	GRY BRN Silt, ML	BH000144-0-0030	STF	MST	7 4 3 7/6	OVM 0.4	USED 2 & 3" SPS SAMPLER; 25% CLAY.
973	4									
				No Sample Recovered						NO RECOVERY
972	5			Interval Not Sampled						NOT SAMPLED.
971	6									
970	7									
969	8		70	GRY BRN Poorly-graded gravel with silt and sand, GP	BH000144-0-0080	NOC	WET	3 12 23 20/6	OVM 0.4	WATER @ 9'; BOTTOM 12" ROCKS; USED 2 & 3" SPS SAMPLER;70% COARSE GRAVEL
968	9									
				No Sample Recovered						NO RECOVERY
967	10		100	PALE BRN No Sample Recovered	BH000144-0-0100			52 100/6	OVM 0.0	AUGER REFUSAL @ 10.5; APPEARS TO BE WEATHERED BEDROCK; END OF BORING; BEDROCK NOT CONFIRMED.

Borehole Log

Roy F. Weston, Inc.

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 10.50
SITE NAME	: EECA	LOGGER	: P. MCNABB
BORING ID	: BH000144	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 911698.5711 surveyed	DRILLING RIG	: SIMCO-TRUCK MOUNTED
EASTING	: 56297.6629 surveyed	DATE STARTED	: 07/11/00
ELEVATION	: 977.000 estimated	DATE COMPLETED	: 07/11/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				PALE BRN No Sample Recovered	BH000144-0-0100			52 100/6	OVM 0.0	AUGER REFUSAL @ 10.5; APPEARS TO BE WEATHERED BEDROCK; END OF BORING; BEDROCK NOT CONFIRMED.
966	11									
965	12									
964	13									
963	14									
962	15									
961	16									
960	17									
959	18									
958	19									
957	20									

CLIENT : EECA1
PROJECT : HOUSATONIC RIVER
PROPERTY :
SITE/AREA : EECA

LOCATION ID : BH000110
BEGIN DATE : 06/13/00
END DATE : 06/13/00
LOGGER : I. ALVARADO

Borehole Completed In (<C>verburden <B>edrock) : O

Total Depth : 18.60 Depth to Bedrock : 0.00

Borehole Diameter #1: 6.00
Interval: 0.00 ft. to 18.60 ft. BGS
Method : HSA Fluid : NONE
Borehole Diameter #2:
Interval:
Method : Fluid :
Borehole Diameter #3:
Interval:
Method : Fluid :

Drilling Company : GEOTEK ENGINEERING
Driller : CHRIS SMITH
Drill Rig Type : SIMCO 9100

	Estimated	Surveyed
Surface Elevation :	986.000	
N. Coordinate :	0.0000	911691.0216
E. Coordinate :	0.0000	56334.0833

Well Permit.....(Y)es (N)o: N Permit # :

Hole Abandoned...(Y)es (N)o: Y
Well Installed...(Y)es (N)o: N
Well Cluster.....(Y)es (N)o: N No. of Wells : 0
Well Nest.....(Y)es (N)o: N No. of Wells : 0
Pumps Installed..(Y)es (N)o: N

	Type	Depth
Purge :		0
Sample :		0

Borehole Testing
Borehole Geophysics.....(Y)es (N)o: N
Slug Tests.....(Y)es (N)o: N
Packer Tests.....(Y)es (N)o: N
Pumping Tests.....(Y)es (N)o: N

Comments :
GEOTECH BORING MAP LOCATION #22 ANALYZED FOR SUITE 1; HOLE GROUTED W/3 BAGS BENTONITE CHIPS, 1 BAG VOLCLAY. SPLIT-SPOON REFUSAL @ 18.6 IN ROCK; PROBABLE COBBLE, BEDROCK NOT CONFIRM

GEOLIS Sampling and Lithology Data Summary

Location ID	Sample Start Depth (feet)	Sample End Depth (feet)	Soil Sampling Method	Sample Recovered (inches)	Sampling Length (inches)	Lithology Start Depth (feet)	Lithology End Depth (feet)	Gravel %	Sand %	Silt %	Clay %	Organic %	Sorting	Plasticity	ASTM / USCS Soil Classification	Coarse Gravel %	Medium Gravel %	Fine Gravel %	Coarse Sand %	Medium Sand %	Fine Sand %
BH000110	0.0	1.0	CUT	0	0	0.0	1.0	5	5	50	40		MOD	LOW	Silt, ML		5				5
BH000110	1.0	3.0	NS	0	0	1.0	3.0								Interval Not Sampled						
BH000110	3.0	5.0	SPS	10	24	3.0	3.8	20	20	30	30		POR	LOW	Sandy silt w/gravel, ML	5	10	5	5	5	10
BH000110	3.0	5.0	SPS	10	24	3.8	5.0								No Sample Recovered						
BH000110	5.0	8.0	NS	0	0	5.0	8.0								Interval Not Sampled						
BH000110	8.0	10.0	SPS	2	24	8.0	8.2	15	25	30	30		POR	LOW	Sandy silt w/gravel, ML	5	5	5	5	10	10
BH000110	8.0	10.0	SPS	2	24	8.2	10.0								No Sample Recovered						
BH000110	10.0	13.0	NS	0	0	10.0	13.0								Interval Not Sampled						
BH000110	13.0	15.0	CUT	10	24	13.0	13.8	15	25	30	30		MOD	LOW	Sandy silt w/gravel, ML		5	10		10	15
BH000110	13.0	15.0	CUT	10	24	13.8	15.0								No Sample Recovered						
BH000110	15.0	18.0	NS	0	0	15.0	18.0								Interval Not Sampled						
BH000110	18.0	18.6	SPS	4	7.2	18.0	18.6								No Sample Recovered						

Borehole Log — *Roy F. Weston, Inc.*

PROJECT	HOUSATONIC RIVER	TOTAL DEPTH	18.60
SITE NAME	EECA	LOGGER	I. ALVARADO
BORING ID	BH000110	DRILLING COMPANY	GEOTEK ENGINEERING
NORTHING	911691.0216 surveyed	DRILLING RIG	SIMCO 9100
EASTING	56334.0833 surveyed	DATE STARTED	06/13/00
ELEVATION	986.000 estimated	DATE COMPLETED	06/13/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				DK. YEL BRN Silt, ML	BH000110-0-0000	SFT	MST		OVM 11.0	USED 2 & 3" SPS SAMPLER; FILL
985	1			Interval Not Sampled						NOT SAMPLED.
984	2									
983	3		40	DK. YEL BRN Sandy silt w/gravel, ML	BH000110-0-0030		MST	20 9 6 3/6	OVM 3.6	ROOTS IN SAMPLE. COBBLE IN 3" SPOON; USED 2 & 3" SPS SAMPLER; FILL
982	4			No Sample Recovered						NO RECOVERY
981	5			Interval Not Sampled						NOT SAMPLED.
980	6									
979	7									
978	8		10	DK. YEL BRN Sandy silt w/gravel, ML	BH000110-0-0080		MST	6 11 11 10/6	OVM 1.4	USED 2 & 3" SPS SAMPLER; FILL
				No Sample Recovered						NO RECOVERY
977	9									
976	10			Interval Not Sampled						NOT SAMPLED.

Borehole Log — *Roy F. Weston, Inc.*

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 18.60
SITE NAME	: EECA	LOGGER	: I. ALVARADO
BORING ID	: BH000110	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 911691.0216 surveyed	DRILLING RIG	: SIMCO 9100
EASTING	: 56334.0833 surveyed	DATE STARTED	: 06/13/00
ELEVATION	: 986.000 estimated	DATE COMPLETED	: 06/13/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						NOT SAMPLED.
975	11									
974	12									
973	13		40	DK. YEL BRN Sandy silt w/gravel, ML	BH000110-0-0130	FRM	MST	12 16 18 36/6	OVM 258	USED 2 & 3" SPS SAMPLER.
				No Sample Recovered						NO RECOVERY
972	14									
971	15			Interval Not Sampled						NOT SAMPLED.
970	16									
969	17									
968	18		50	No Sample Recovered	BH000110-0-0180			26 100/1	OVM 2.0	LOW RECOVERY; POSSIBLE COBBLE; BEDROCK NOT CONFIRMED; SPLIT-SPOON REFUSAL @ 18.6' BORING END
967	19									
966	20									

WESTON
MANAGERS DESIGNERS/CONSULTANTS

Site Id: SD021362	Project Number:
Project Name: EECA	
Location: Pittsfield, MA	
Ground Elev.: 0.00'	Datum: Not Surveyed

Remarks: Driller: G. Trembley
Rig Type: Barge-mounted Tripod Rig
Hammer Weight: 140 lbs; Fall: 30"

Date Drilled: 06/03/99 - 06/03/99
Logged By: S. Bonis | Project Manager:
Contractor: NH Boring
Drilling Method: Case and Wash/Rotary Core Barrel
Total Depth: 5.50' | Completed Depth: 5.50'
Borehole Dia.: 4.00in | Static Water Level (bgs):
Blank Casing:
type: dia: 0.00in fm: 0.0' to: 5.50'
Screens:
type: size: dia: fm: to:
Annular Fill:
type: fm: to:
type: fm: to:
type: fm: to:

Soil Boring
(No Well installed)

Depth (ft)	Water Level	Recovery	Sample No.	Blow Count	Vapor	Material Description	Notes
			0000 0-0.5	51 R/5		SAND; m-c-SAND, gravel: H2-SD021362-0-0000.	
1						BEDROCK.	
			0015 1.5-5.5			SANDSTONE: Very Fine SANDSTONE/SILTSTONE, CACO3 CEMENT.	
2							
3							
4							
5							
						BOTTOM OF BORING	

WESTON	SOIL BORING LOG			PAGE 1 OF 1
Job Name Job No.	GE Pittsfield- EE/CA 10971-032-007	Boring No. Surface Elev.	BH000093 982.0 ft. (est)	Groundwater Level Date Depth
Date Drilled	11 May 99	Boring Method	HSA	Not Measured
Drilling Co.	NH Boring	Completion Depth	15.3 ft bgs	
Drill Foreman	Kenneth Smith	Location	See Figure 2.1-7	
Logged By	J. Schmidl			

Depth (feet)	Sample No.	Sample Type*	Sample Blow Counts** (per 6 in.)	N Value**	Visual Description	% Rec	% RQD	Laboratory Tests
		SS	27-21-22-16	43	6" Asphalt SAND, some gravel, olive brown, moist			
	Sample	SS	11-13-7-5	20	SAND and SILT, some gravel, little clay, pale brown, moist	M		
5		SS	8-9-11-15	20	SAND and GRAVEL, some silt, little clay, pale brown to olive gray, moist	M		
	Sample	SS	7-10-11-10	21	SAND and GRAVEL, some silt, little clay, dark olive brown, moist			
	Sample	SS	10-17-14-15	31	SAND, some gravel and clay, little silt, dark olive brown, moist	H		
10		SS	13-12-14-17	26	SAND and CLAY, some gravel and silt, dark olive gray, moist			
		SS	14-15-21-36	36	SAND and CLAY, some gravel and silt, dark olive gray, moist			
15		SS	15-50-x-x		SAND and CLAY, some gravel and silt, dark olive gray			
					End of Boring at 14.7 feet bgs (Spoon refusal at 14.7 ft, auger refusal at 15.3 ft bgs)			
20								
25								
30								
35								

*Sample type: SS-Split Spoon, ST-Shelby Tube, RC-Rock Core, SC-Soil Core

**ASTM D-1586 Standard Penetration Test

Laboratory Tests: MC-Moisture Content, AL-Atterberg Limits, S-Sieve Analysis, SH-Sieve/Hydrometer Analysis, SG-Specific Gravity, OC - Organic Content, C-Consolidation, UU-Unconsolidated Undrained Triaxial, CU-Consolidated Undrained Triaxial, UCS-Unconfined Compressive Strength, K-Hydraulic Conductivity, BD - Bulk Density

CLIENT : EECA1
PROJECT : HOUSATONIC RIVER
PROPERTY :
SITE/AREA : EECA

LOCATION ID : BH000109
BEGIN DATE : 06/13/00
END DATE : 06/13/00
LOGGER : I. ALVARADO

Borehole Completed In (<O>verburden <B>edrock) : O

Total Depth : 19.10 Depth to Bedrock : 0.00

Borehole Diameter #1: 6.00
Interval: 0.00 ft. to 19.10 ft. BGS
Method : HSA Fluid : NONE
Borehole Diameter #2:
Interval:
Method : Fluid :
Borehole Diameter #3:
Interval:
Method : Fluid :

Drilling Company : GEOTEK ENGINEERING
Driller : CHRIS SMITH
Drill Rig Type : SIMCO 9100

	Estimated	Surveyed
Surface Elevation :	980.000	
N. Coordinate :	0.0000	911567.5318
E. Coordinate :	0.0000	56249.8187

Well Permit.....(Y)es (N)o: N Permit # :

Hole Abandoned...(Y)es (N)o: Y
Well Installed...(Y)es (N)o: N
Well Cluster.....(Y)es (N)o: N No. of Wells : 0
Well Nest.....(Y)es (N)o: N No. of Wells : 0
Pumps Installed..(Y)es (N)o: N

	Type	Depth
Purge :		0
Sample :		0

Borehole Testing
Borehole Geophysics.....(Y)es (N)o: N
Slug Tests.....(Y)es (N)o: N
Packer Tests.....(Y)es (N)o: N
Pumping Tests.....(Y)es (N)o: N

Comments :
SS REFUSAL @ 19.1' HOLE GROUTED WITH 1 BAG CEMENT, 1/2 BAG VOLCLAY & WATER, 2 ADDITIONAL BAGS OF BENTONITE CHIPS PLACED IN HOLE. MAP #23. GEOTECH SAMPLES ANALYZED FOR SUITE 1.

GEOLIS Sampling and Lithology Data Summary

Location ID	Sample Start Depth (feet)	Sample End Depth (feet)	Soil Sampling Method	Sample Recovered (inches)	Sampling Length (inches)	Lithology Start Depth (feet)	Lithology End Depth (feet)	Gravel %	Sand %	Silt %	Clay %	Organic %	Sorting	Plasticity	ASTM / USCS Soil Classification	Coarse Gravel %	Medium Gravel %	Fine Gravel %	Coarse Sand %	Medium Sand %	Fine Sand %
BH000109	0.0	1.0	SPS	0	0	0.0	1.0	5	15	60	20		MOD	LOW	Silt with sand, ML		5			5	10
BH000109	1.0	3.0	NS	0	0	1.0	3.0								Interval Not Sampled						
BH000109	3.0	4.6	SPS	11	19.2	3.0	3.9	5	15	30	50		MOD	LOW	Lean clay with sand, CL		5			5	10
BH000109	3.0	4.6	SPS	11	19.2	3.9	4.6								No Sample Recovered						
BH000109	4.6	8.0	NS	0	0	4.6	8.0								Interval Not Sampled						
BH000109	8.0	10.0	SPS	10	24	8.0	8.8	10	15	25	50		POR	MOD	Lean clay with sand, CL		5	5			15
BH000109	8.0	10.0	SPS	10	24	8.8	10.0								No Sample Recovered						
BH000109	10.0	13.0	NS	0	0	10.0	13.0								Interval Not Sampled						
BH000109	13.0	15.0	SPS	12	24	13.0	14.0	10	15	25	50		POR	LOW	Lean clay with sand, CL		5	5	5	5	5
BH000109	13.0	15.0	SPS	12	24	14.0	15.0								No Sample Recovered						
BH000109	15.0	19.0	NS	0	0	15.0	19.0								Interval Not Sampled						
BH000109	19.0	19.1	SPS	1	1.2	19.0	19.1								No Sample Recovered						

Borehole Log

Roy F. Weston, Inc.

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 19.10
SITE NAME	: ZECA	LOGGER	: I. ALVARADO
BORING ID	: BH000109	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 911567.5318 surveyed	DRILLING RIG	: SIMCO 9100
EASTING	: 56249.8187 surveyed	DATE STARTED	: 06/13/00
ELEVATION	: 980.000 estimated	DATE COMPLETED	: 06/13/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				DK. YEL BRN Silt with sand, ML	BH000109-0-0000	STF	MST		OVM 59.0	ROOTS IN SAMPLE; ANALYTIC SAMPLE NOT SENT TO LAB; USED 2 & 3" SPS SAMPLER; FILL
979	1			Interval Not Sampled						NOT SAMPLED
978	2									
977	3		56	DK. YEL BRN Lean clay with sand, CL	BH000109-0-0030	STF	MST	3 5 9 100/1	OVM 5.1	USED 2 & 3" SPS SAMPLER; FILL
976	4			No Sample Recovered						NO RECOVERY
				Interval Not Sampled						NOT SAMPLED
975	5									
974	6									
973	7									
972	8		40	DK. YEL BRN Lean clay with sand, CL	BH000109-0-0080	SFT	WET	3 2 3 5/6	OVM 0.5	USED 2 & 3" SPS SAMPLER; FILL
971	9			No Sample Recovered						NO RECOVERY
970	10			Interval Not Sampled						NOT SAMPLED

Borehole Log — *Roy F. Weston, Inc.*

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 19.10
SITE NAME	: EECA	LOGGER	: I. ALVARADO
BORING ID	: BH000109	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 911567.5318 surveyed	DRILLING RIG	: SIMCO 9100
EASTING	: 56249.8187 surveyed	DATE STARTED	: 06/13/00
ELEVATION	: 980.000 estimated	DATE COMPLETED	: 06/13/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						NOT SAMPLED
969	11									
968	12									
967	13		50	DK. YEL BRN lean clay with sand, CL	BH000109-0-0130	FRM	MST	8 8 18 20/6	OVM 0.4	USED 2 & 3" SPS SAMPLER; FILL
966	14			No Sample Recovered						NO RECOVERY
965	15			Interval Not Sampled						NOT SAMPLED
964	16									
963	17									
962	18									
961	19		100	No Sample Recovered	BH000109-0-0190			100/1		1" OF ROCK IN SPOON, POSS COBBLE OR BEDROCK; BEDROCK NOT CONFIRMED; EOB @ 19.1'.
960	20									

WESTON
MANAGERS DESIGNERS/CONSULTANTS

Date Drilled: 06/03/99 - 06/03/99

Logged By: S. Bonis | Project Manager:

Contractor: NH Boring

Drilling Method: Case and Wash/Rotary Core Barrel

Total Depth: 10.00' | Completed Depth: 10.00'

Borehole Dia.: 4.00in | Static Water Level (bgs):

Site Id: SD021442 | Project Number:

Project Name: EECA

Location: Pittsfield, MA

Blank Casing:
type: dia: 0.00in fm: 0.0' to: 10.00'

Ground Elev.: 0.00' | Datum: Not Surveyed

Screens:
type: size: dia: fm: to:

Remarks: Driller: G. Trembley
Rig Type: Barge-mounted Tripod Rig
Hammer Weight: 140 lbs; Fall: 30"

Annular Fill:
type: fm: to:
type: fm: to:
type: fm: to:

Soil Boring
(No Well Installed)

Depth (ft)	Water Level	Recovery	Sample No.	Blow Count	Vapor	Material Description	Notes
			0000 0-2	4 5 25 46		SAND: m-c-SAND, gravel, heavy petroleum staining; H2-SD021442-0-0000.	
1							
2			0020 2-4	21 35 33 99		SAND: m-c-SAND, gravel; H2-SD021442-0-0020.	
3							
4			0040 4-10			BEDROCK.	
5						SANDSTONE: medium-SANDSTONE, CaCO3 cement.	

Site Id: SD021442 | Project Name: EECA | Project Number:

Soil Boring
(No Well Installed)

Depth (ft)	Water Level	Recovery	Sample No	Blow Count	Vapor	Material Description	Notes
						BEDROCK	
						SANDSTONE: medium-SANDSTONE, CACO3 CEMENT.	
7							
8							
9							
10						BOTTOM OF BORING	
11							
12							
13							
14							

CLIENT : EECA1
PROJECT : HOUSATONIC RIVER
PROPERTY :
SITE/AREA : EECA

LOCATION ID : BH000106
BEGIN DATE : 06/02/00
END DATE : 06/02/00
LOGGER : MORSE/ALVARADO

Borehole Completed In (<O>verburden <B>edrock) : O

Total Depth : 16.00 Depth to Bedrock : 0.00

Borehole Diameter #1: 6.00
Interval: 0.00 ft. to 16.00 ft. BGS
Method : HSA Fluid : WATER
Borehole Diameter #2:
Interval:
Method : Fluid :
Borehole Diameter #3:
Interval:
Method : Fluid :

Drilling Company : GEOTEK ENGINEERING
Driller : CHRIS SMITH
Drill Rig Type : SIMCO 9100

	Estimated	Surveyed
Surface Elevation :	979.000	
N. Coordinate :	0.0000	911489.9073
E. Coordinate :	0.0000	56202.1303

Well Permit.....(Y)es (N)o: N Permit # :

Hole Abandoned...(Y)es (N)o: Y
Well Installed...(Y)es (N)o: N
Well Cluster.....(Y)es (N)o: N No. of Wells : 0
Well Nest.....(Y)es (N)o: N No. of Wells : 0
Pumps Installed..(Y)es (N)o: N

	Type	Depth
Purge :		0
Sample :		0

Borehole Testing
Borehole Geophysics.....(Y)es (N)o: N
Slug Tests.....(Y)es (N)o: N
Packer Tests.....(Y)es (N)o: N
Pumping Tests.....(Y)es (N)o: N

Comments :
GEOTECH.BORING 1-1/2 MI. MAP LOCA #25. CALEDONIA ST NEAR INTERSEC. DAWES AVE-NEAR DAWES AVE BRDGE. ANALYZED FOR GEO-TECH SUITE 1.

GEOLIS Sampling and Lithology Data Summary

Location ID	Sample Start Depth (feet)	Sample End Depth (feet)	Soil Sampling Method	Sample Recovered (inches)	Sampling Length (inches)	Lithology Start Depth (feet)	Lithology End Depth (feet)	Gravel %	Sand %	Silt %	Clay %	Organic %	Sorting	Plasticity	ASTM / USCS Soil Classification	Coarse Gravel %	Medium Gravel %	Fine Gravel %	Coarse Sand %	Medium Sand %	Fine Sand %
BH000106	0.0	3.0	CUT	36	36	0.0	3.0								Fill						
BH000106	3.0	5.0	SPS	12	24	3.0	4.0	5	30	55	10		POR	NON	Sandy silt, ML				2	4	25
BH000106	3.0	5.0	SPS	12	24	4.0	5.0								No Sample Recovered						
BH000106	5.0	8.0	NS	0	0	5.0	8.0								Interval Not Sampled						
BH000106	8.0	10.0	SPS	12	24	8.0	9.0	40	20	35	5		NA	LOW	Silty gravel w/sand, GM					5	15
BH000106	8.0	10.0	SPS	12	24	9.0	10.0								No Sample Recovered						
BH000106	10.0	13.0	NS	0	0	10.0	13.0								Interval Not Sampled						
BH000106	13.0	15.0	SPS	12	24	13.0	14.0	25	30	40	5		POR	NA	Silty sand w/gravel, SM	15	5	5			
BH000106	13.0	15.0	SPS	12	24	14.0	15.0								No Sample Recovered						

Borehole Log

Roy F. Weston, Inc.

PROJECT :	HOUSATONIC RIVER	TOTAL DEPTH :	16.00
SITE NAME :	EECA	LOGGER :	MORSE/ALVARADO
BORING ID :	BH000106	DRILLING COMPANY :	GEOTEK ENGINEERING
NORTHING :	911489.9073 surveyed	DRILLING RIG :	SIMCO 9100
EASTING :	56202.1303 surveyed	DATE STARTED :	06/02/00
ELEVATION :	979.000 estimated	DATE COMPLETED :	06/02/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
			100	Fill						1" ASPHALT; 2" STONE BEDDING; ROAD BASE MATERIAL 0-1' COLLECTED - NOT ANALYZED; FILL.
978	1									
977	2									
976	3		50	MOD. OLV BRN Sandy silt, ML	BH000106-0-0030	LSE	DRY	10 9 9 6/6	OVM 1.2	FIRST 1' COLLECTED; FILL 25% FINE 3% MED & 2% COARSE SAND.
975	4			No Sample Recovered	BH000106-0-0030					
974	5			Interval Not Sampled						
973	6									
972	7									
971	8		50	L. OLV GRY Silty gravel w/sand, GM	BH000106-0-0080	FRM	MST	13 35 27 37/6	OVM 0.8	AT 11' BGS DRILLING TIGHTENED UP. 40% GRAVEL, 15% FINE & 5% MED SAND.
970	9			No Sample Recovered	BH000106-0-0080					NO RECOVERY
969	10			Interval Not Sampled						NOT SAMPLED.

Borehole Log

Roy F. Weston, Inc.

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 16.00
SITE NAME	: EECA	LOGGER	: MORSE/ALVARADO
BORING ID	: BH000106	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 911489.9073 surveyed	DRILLING RIG	: SIMCO 9100
EASTING	: 55202.1303 surveyed	DATE STARTED	: 06/02/00
ELEVATION	: 979.000 estimated	DATE COMPLETED	: 06/02/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						NOT SAMPLED.
968	11									
967	12									
966	13		50	LT OLV GRY Silty sand w/gravel, SM	BH000106-0-0130	STF	MST	30 48 38 40/6	OVM 0.1	13.4-13.6 COBBLE; END OF BORING; 25% C-F GRAVEL, 30% C-F SAND.
965	14			No Sample Recovered	BH000106-0-0130					NO RECOVERY. BORING ENDS @ 15'.
964	15									
963	16									
962	17									
961	18									
960	19									
959	20									

CLIENT : EECA1
PROJECT : HOUSATONIC RIVER
PROPERTY :
SITE/AREA : EECA

LOCATION ID : BH000117
BEGIN DATE : 06/15/00
END DATE : 06/15/00
LOGGER : I. ALVARADO

Borehole Completed In (<O>verburden <B>edrock) : B

Total Depth : 17.20 Depth to Bedrock : 17.20

Borehole Diameter #1: 6.00
Interval: 0.00 ft. to 17.20 ft. BGS
Method : HSA Fluid :
Borehole Diameter #2:
Interval:
Method : Fluid :
Borehole Diameter #3:
Interval:
Method : Fluid :

Drilling Company : GEOTEK ENGINEERING
Driller : CHRIS SMITH
Drill Rig Type : SIMCO 9100

	Estimated	Surveyed
Surface Elevation :	982.000	
N. Coordinate :	0.0000	911562.7108
E. Coordinate :	0.0000	56201.6193

Well Permit.....(Y)es (N)o: N Permit # :

Hole Abandoned...(Y)es (N)o: Y
Well Installed...(Y)es (N)o: N
Well Cluster.....(Y)es (N)o: N No. of Wells : 0
Well Nest.....(Y)es (N)o: N No. of Wells : 0
Pumps Installed..(Y)es (N)o: N

	Type	Depth
Purge :		0
Sample :		0

Borehole Testing
Borehole Geophysics.....(Y)es (N)o: N
Slug Tests.....(Y)es (N)o: N
Packer Tests.....(Y)es (N)o: N
Pumping Tests.....(Y)es (N)o: N

Comments :
GEOTECH BORING MAP LOCATION #24 SAMPLED FOR SUITE 1. HOLE ABANDONED; 1 BAG CEMENT, 1 BAG VOLCLAY, APPROX 45 GALLONS OF GROUT, 1 BAG VOLCLAY ADDED ON TOP.

GEOLIS Sampling and Lithology Data Summary

Location ID	Sample Start Depth (feet)	Sample End Depth (feet)	Soil Sampling Method	Sample Recovered (inches)	Sampling Length (inches)	Lithology Start Depth (feet)	Lithology End Depth (feet)	Gravel %	Sand %	Silt %	Clay %	Organic %	Sorting	Plasticity	ASTM / USCS Soil Classification	Coarse Gravel %	Medium Gravel %	Fine Gravel %	Coarse Sand %	Medium Sand %	Fine Sand %
BH000117	0.0	1.0	CUT	12	12	0.0	1.0		10	70	10	10	MOD	LOW	Silt, ML						
BH000117	1.0	3.0	NS	0	0	1.0	3.0								Interval Not Sampled						
BH000117	3.0	4.8	SPS	18	21.6	3.0	4.5	5	10	65	10	10	POR	LOW	Silt with sand, ML			5		5	5
BH000117	3.0	4.8	SPS	18	21.6	4.5	4.8								No Sample Recovered						
BH000117	4.8	8.0	NS	0	0	4.8	8.0								Interval Not Sampled						
BH000117	8.0	10.0	SPS	22	24	8.0	9.8	5	20	60	15		MOD	MOD	Elastic silt w/sand, MH			5		5	15
BH000117	8.0	10.0	SPS	22	24	9.8	10.0								No Sample Recovered						
BH000117	10.0	13.0	NS	0	0	10.0	13.0								Interval Not Sampled						
BH000117	13.0	15.0	SPS	20	24	13.0	14.7	10	20	55	15		MOD	MOD	Sandy elastic silt, MH	5		5	5	5	10
BH000117	13.0	15.0	SPS	20	24	14.7	15.0								No Sample Recovered						
BH000117	15.0	17.0	NS	0	0	15.0	17.0								Interval Not Sampled						
BH000117	17.0	17.2	SPS	2	2.4	17.0	17.2								No Sample Recovered						

Borehole Log — *Roy F. Weston, Inc.*

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 17.20
SITE NAME	: EECA	LOGGER	: I. ALVARADO
BORING ID	: BH000117	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 911562.7108 surveyed	DRILLING RIG	: SIMCO 9100
EASTING	: 56201.6193 surveyed	DATE STARTED	: 06/15/00
ELEVATION	: 982.000 estimated	DATE COMPLETED	: 06/15/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
			100	GREEN BLK Silt, ML	BH000117-0-0000	SFT	MST		OVM 1.2	ROOT IN SAMPLE; NO SAMPLE COLLECTED USED 2 & 3" SPS SAMPLER; FILL; AUGER CUTTINGS
981	1			Interval Not Sampled						NOT SAMPLED.
980	2									
979	3		83	GREEN BLK Silt with sand, ML	BH000117-0-0030	SFT	MST	4 2 5 100/6	OVM 0.3	USED 2 & 3" SPS SAMPLER; FILL
978	4									
				No Sample Recovered						NO RECOVERY
				Interval Not Sampled						NOT SAMPLED.
977	5									
976	6									
975	7									
974	8		90	BRN LT BRN Elastic silt w/sand, MH	BH000117-0-0080	SFT	MST	2 2 2 3/6	OVM 0.1	USED 2 & 3" SPS SAMPLER; FILL
973	9									
				No Sample Recovered						NO RECOVERY
972	10			Interval Not Sampled						NOT SAMPLED.

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Borehole Log *Roy F. Weston, Inc.*

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 17.20
SITE NAME	: EECA	LOGGER	: I. ALVARADO
BORING ID	: BH000117	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 911562.7108 surveyed	DRILLING RIG	: SIMCO 9100
EASTING	: 56201.6193 surveyed	DATE STARTED	: 06/15/00
ELEVATION	: 982.000 estimated	DATE COMPLETED	: 06/15/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						NOT SAMPLED.
971	11									
970	12									
969	13		85	BRN GRY DK BRN Sandy elastic silt, MH	BH000117-0-0130	SFT	MST	7 30 56 100/2	OVM 0.1	USED 2 & 3" SPS SAMPLER; FILL
968	14									
				No Sample Recovered						NO RECOVERY
967	15			Interval Not Sampled						NOT SAMPLED.
966	16									
965	17		100	No Sample Recovered	BH000117-0-0170			100/2	OVM 0.2	ROCK FRAGMENTS ONLY; USED 2 & 3" SPS SAMPLERS; END OF BORING @ 17.2'.
964	18									
963	19									
962	20									

DAWES AVENUE

WESTON	SOIL BORING LOG			PAGE 1 OF 2
Job Name Job No.	Housatonic River 20125.001.096	Boring No. Surface Elev.	GTB-19 ft.	Groundwater Level Date Depth
Date Drilled	26 Apr 02	Boring Method	Case and wash	Not Measured
Drilling Co.	TDS	Completion Depth	37.0 ft bgs	
Drill Foreman	Scott Lombard	Location	BH000583	
Logged By	K. Hill	Pittsfield, Massachusetts		

Depth (feet)	Sample No.	Sample Type*	Sample Blow Counts** (per 6 in.)	N Value**	Visual Description	% Rec	% RQD	Laboratory Tests
	1	SS	63-6-5-10	11	Topsoil above FILL, dark brown gravel, coal, wood, and some rootlets.	55		
	2	SS	14-14-8-4	22	Dark greyish brown coarse sand. large gravel.	15		
5	3	SS	4-1-1-1	2	Dark brown coarse sand, gravel.	50		
	4	SS	3-2-3-2	5	No recovery.	0		
	5	SS	14-20-17-16	37	Dark brown medium to fine SAND to silty fine SAND, some gravel pieces.	55		
10	6	SS	24-38-26-32	64	Dark brown medium to fine SAND, some gravel, moist.	60		
15	7	SS	33-47-41-40	88	Light gray fine SAND, micaceous, bedding, some gravel.	70		
20	8	SS	45-60/5"	60/5"	TILL, light gray fine SAND, some gravel, dry.	40		
25	9	SS	75/6"	75/6"	TILL, same.	100		
30	10	SS	75/6"	75/6"	Weathered rock, dry. *Per driller, wet at about 33 ft bgs.*	60		
35								

Sample Type: SS-Split Spoon, ST-Shelby Tube, RC-Rock Core, SC-Soil Core

Laboratory Tests: MC-Moisture Content, AL-Atterberg Limits, S-Sieve Analysis, SH-Sieve/Hydrometer Analysis, SG-Specific Gravity, OC - Organic Content, C-Consolidation, UU-Unconsolidated Undrained Triaxial, CU-Consolidated Undrained Triaxial, UCS-Unconfined Compressive Strength, K-Hydraulic Conductivity, BD - Bulk Density

**ASTM D-1586 Standard Penetration Test

WESTON	SOIL BORING LOG	PAGE 2 OF 2

Job Name Job No.	Housatonic River 20125.001.096	Boring No. Surface Elev.	GTB-19 ft (est.)	Groundwater Level Date	Depth
Date Drilled	26 Apr 02	Boring Method	Case and wash		
Drilling Co.	TDS	Completion Depth	37.0 ft bgs		
Drill Foreman	Scott Lombard	Location	BH000583		
Logged By	K. Hill	Pittsfield, Massachusetts			

Depth (feet)	Sample No.	Sample Type*	Sample Blow Counts* (per 6 in.)	N Value*	Visual Description	% Rec	% RQD	Laboratory Tests
					Per driller near auger refusal at 35, so continue to auger rather than push spoon.			
					End of boring at 37.0 ft bgs. Auger refusal.			
40								
45								
50								
55								
60								
65								
70								

Sample type: SS-Split Spoon, ST-Shelby Tube, RC-Rock Core, SC-Soil Core

Laboratory Tests: MC-Moisture Content, AL-Atterberg Limits, S-Sieve Analysis, SH-Sieve/Hydrometer Analysis, SG-Specific Gravity, OC - Organic Content, C-Consolidation, UU-Unconsolidated Undrained Triaxial, CU-Consolidated Undrained Triaxial, UCS-Unconfined Compressive Strength, K-Hydraulic Conductivity, BD - Bulk Density

*ASTM D-1586 Standard Penetration Test

GTB-15-21.xls

Print Date: 07/22/2002 12:52 PM

CLIENT : EECA1
PROJECT : HOUSATONIC RIVER
PROPERTY :
SITE/AREA : EECA

LOCATION ID : BH000135
BEGIN DATE : 06/27/00
END DATE : 06/27/00
LOGGER : I. ZAPISEK

Borehole Completed In (<O>verburden <B>edrock) : O

Total Depth : 8.90 Depth to Bedrock : 0.00

Borehole Diameter #1: 4.00
Interval: 0.00 ft. to 8.90 ft. BGS
Method : DAW Fluid : WATER
Borehole Diameter #2:
Interval:
Method : Fluid :
Borehole Diameter #3:
Interval:
Method : Fluid :

Drilling Company : GEOTEK ENGINEERING
Driller : GLEN PETERSON
Drill Rig Type : BARGE & TRIPOD

	Estimated	Surveyed
Surface Elevation :	964.000	
N. Coordinate :	0.0000	911447.2487
E. Coordinate :	0.0000	56150.7944

Well Permit.....(Y)es (N)o: N Permit # :

Hole Abandoned...(Y)es (N)o: Y
Well Installed...(Y)es (N)o: N
Well Cluster.....(Y)es (N)o: N No. of Wells : 0
Well Nest.....(Y)es (N)o: N No. of Wells : 0
Pumps Installed..(Y)es (N)o: N

	Type	Depth
Purge :		0
Sample :		0

Borehole Testing
Borehole Geophysics.....(Y)es (N)o: N
Slug Tests.....(Y)es (N)o: N
Packer Tests.....(Y)es (N)o: N
Pumping Tests.....(Y)es (N)o: N

Comments :
GEOTECH. BORING, DOWNSTREAM OF DAVIS AVE. BRIDGE, ABOVE TRANSECT T152. PROPOSED DEPTH-20 FT, ACTUAL-8.9 (SPLIT-SPOON REFUSAL) ANALYZED FOR GEOTECH SUITE 1.

GEOLIS Sampling and Lithology Data Summary

Location ID	Sample Start Depth (feet)	Sample End Depth (feet)	Soil Sampling Method	Sample Recovered (inches)	Sampling Length (inches)	Lithology Start Depth (feet)	Lithology End Depth (feet)	Gravel %	Sand %	Silt %	Clay %	Organic %	Sorting	Plasticity	ASTM / USCS Soil Classification	Coarse Gravel %	Medium Gravel %	Fine Gravel %	Coarse Sand %	Medium Sand %	Fine Sand %
BH000135	0.0	3.0	NS	0	0	0.0	3.0								Interval Not Sampled						
BH000135	3.0	5.0	SPS	16	24	3.0	4.3	15	10	70	5		NA	NA	Silt with gravel, ML	20	10	10		5	5
BH000135	3.0	5.0	SPS	16	24	4.3	5.0								No Sample Recovered						
BH000135	5.0	8.0	NS	0	0	5.0	8.0								Interval Not Sampled						
BH000135	8.0	8.9	SPS	11	10.8	8.0	8.9	15	70	15			MOD	NON	Silty sand w/gravel, SM						

Borehole Log

Roy F. Weston, Inc.

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 8.90
SITE NAME	: EECA	LOGGER	: I. ZAPISEK
BORING ID	: BH000135	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 911447.2487 surveyed	DRILLING RIG	: BARGE & TRIPOD
EASTING	: 56150.7944 surveyed	DATE STARTED	: 06/27/00
ELEVATION	: 964.000 estimated	DATE COMPLETED	: 06/27/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						NOT SAMPLED.
963	1									
962	2									
961	3		65	Lt. OLV GRY Silt with gravel, ML	BH000135-0-0030	FRM	MST	45 58 68 120/6	OVM 0.0	USED 2 & 3" SPS SAMPLER; LOOKS LIKE GLACIAL TILL.
960	4			No Sample Recovered						NO RECOVERY
959	5			Interval Not Sampled						NOT SAMPLED.
958	6									
957	7									
956	8		100	DK YEL ORG Silty sand w/gravel, SM	BH000135-0-0080	SFT	DRY	90 175/5	OVM 0.2	REFUSAL @ 8.9 BORING ENDS LOOKS LIKE WEATHERED BEDROCK OR SANDSTONE.
955	9									
954	10									

WESTON	SOIL BORING LOG	PAGE 1 OF 1

Job Name Job No.	Housatonic River 20125.001.096	Boring No. Surface Elev.	GTB-18 ft.	Groundwater Level Date	Depth
Date Drilled	25 Apr 02	Boring Method	Case and wash	Not Measured	
Drilling Co.	TDS	Completion Depth	27.0 ft bgs		
Drill Foreman	Scott Lombard	Location			
Logged By	A. C. Steele	Pittsfield, Massachusetts			

Depth (feet)	Sample No.	Sample Type*	Sample Blow Counts** (per 6 in.)	N Value**	Visual Description	% Rec	% RQD	Laboratory Tests
	1	SS	6-4-3-1	7	Topsoil above FILL, coal and ash, loose, dry.	45		
	2	SS	2-2-2-1	4	No recovery.	0		
5	3	SS	1-2-4-14	6	FILL, coal and ash, loose to firm, dry.	15		
	4	SS	6-10-10-4	20	Silty fine sand and rock. *Rig chatters going down.*	25		
10	5	SS	4-8-6-10	14	Mod brown micaceous silty fine SAND, trace angular gravel, trace rootlets.	65		
	6	SS	4-8-29-16	37	Same, weathered rock at base.	40		
15	7	SS	45-60/0"	60/0"	No recover, rock in nose of spoon.	0		
20	8	SS	28-19-15-14	34	TILL, Light brown silty fine SAND and angular gravel.	20		
25	9	SS	35-60/0	60/0"	Rock and weathered rock. *Per Driller, rig chatters and jumps.*	60		
30					End of boring at 27 feet bgs. Auger refusal.			
35								

*Sample type: SS-Split Spoon, ST-Shelby Tube, RC-Rock Core, SC-Soil Core

Laboratory Tests: MC-Moisture Content, AL-Atterberg Limits, S-Sieve Analysis, SH-Sieve/Hydrometer Analysis, SG-Specific Gravity, OC - Organic Content, C-Consolidation, UU-Unconsolidated Undrained Triaxial, CU-Consolidated Undrained Triaxial, UCS-Unconfined Compressive Strength, K-Hydraulic Conductivity, BD - Bulk Density

**ASTM D-1586 Standard Penetration Test

CLIENT : EECA1
PROJECT : HOUSATONIC RIVER
PROPERTY :
SITE/AREA : EECA

LOCATION ID : BH000120
BEGIN DATE : 06/20/00
END DATE : 06/20/00
LOGGER : I. ALVARADO

Borehole Completed In (<O>verburden <B>edrock) : O

Total Depth : 30.00 Depth to Bedrock : 0.00

Borehole Diameter #1: 6.00
Interval: 0.00 ft. to 30.00 ft. BGS
Method : HSA Fluid : NONE
Borehole Diameter #2:
Interval:
Method : Fluid :
Borehole Diameter #3:
Interval:
Method : Fluid :

Drilling Company : GEOTEK ENGINEERING
Driller : CHRIS SMITH
Drill Rig Type : SIMCO 9100

	Estimated	Surveyed
Surface Elevation :	969.000	
N. Coordinate :	0.0000	911412.9958
E. Coordinate :	0.0000	56124.7302

Well Permit.....(Y)es (N)o: N Permit # :

Hole Abandoned...(Y)es (N)o: Y
Well Installed...(Y)es (N)o: N
Well Cluster.....(Y)es (N)o: N No. of Wells : 0
Well Nest.....(Y)es (N)o: N No. of Wells : 0
Pumps Installed..(Y)es (N)o: N

	Type	Depth
Purge :		0
Sample :		0

Borehole Testing
Borehole Geophysics.....(Y)es (N)o: N
Slug Tests.....(Y)es (N)o: N
Packer Tests.....(Y)es (N)o: N
Pumping Tests.....(Y)es (N)o: N

Comments :
MAP #27 - GEOTECHNICAL BORING 1-1/2 MILE. LOCATION @ END OF DWIGHT ST. HOLE GROUTED WITH 1 BAG CEMENT/ 1/2 BAG VOLCLAY, 1 BAG CHIPS. GEOTECH SAMPLES FOR SUITE 1.

GEOLIS Sampling and Lithology Data Summary

Location ID	Sample Start Depth (feet)	Sample End Depth (feet)	Soil Sampling Method	Sample Recovered (inches)	Sampling Length (inches)	Lithology Start Depth (feet)	Lithology End Depth (feet)	Gravel %	Sand %	Silt %	Clay %	Organic %	Sorting	Plasticity	ASTM / USCS Soil Classification	Coarse Gravel %	Medium Gravel %	Fine Gravel %	Coarse Sand %	Medium Sand %	Fine Sand %
BH000120	0.0	1.0	CUT	0	0	0.0	1.0	5	15	70		10	MOD	LOW	Silt with sand, ML						
BH000120	1.0	3.0	NS	0	0	1.0	3.0								Interval Not Sampled						
BH000120	3.0	3.5	SPS	6	24	3.0	3.5	10	15	65		10	MOD	LOW	Silt with sand, ML			5		5	10
BH000120	3.5	5.0	SPS	0	0	3.5	5.0								No Sample Recovered						
BH000120	5.0	8.0	NS	0	0	5.0	8.0								Interval Not Sampled						
BH000120	8.0	10.0	SPS	24	24	8.0	9.8		50	50			WEL	NON	Silty sand, SM						50
BH000120	8.0	10.0	SPS	24	24	9.8	10.0		10	50	40		WEL	MOD	Elastic silt, MH						10
BH000120	10.0	13.0	NS	96	120	10.0	13.0								Interval Not Sampled						
BH000120	13.0	15.0	SPS	24	24	13.0	15.0		10	60	30		MOD	MOD	Elastic silt, MH						10
BH000120	15.0	18.0	NS	0	0	15.0	18.0								Interval Not Sampled						
BH000120	18.0	20.0	SPS	18	24	18.0	19.5		10	60	30		MOD	MOD	Elastic silt, MH						10
BH000120	18.0	20.0	SPS	18	24	19.5	20.0								No Sample Recovered						
BH000120	20.0	28.0	NS	0	0	20.0	28.0								Interval Not Sampled						
BH000120	28.0	30.0	SPS	24	24	28.0	30.0	15	15	55	15		MOD	MOD	Sandy elastic silt with gravel, MH						

Borehole Log

Roy F. Weston, Inc.

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 30.00
SITE NAME	: EBCA	LOGGER	: I. ALVARADO
BORING ID	: BH000120	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 911412.9958 surveyed	DRILLING RIG	: SIMCO 9100
EASTING	: 56124.7302 surveyed	DATE STARTED	: 06/20/00
ELEVATION	: 969.000 estimated	DATE COMPLETED	: 06/20/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				OLIVE/BLACK Silt with sand, ML	BH000120-0-0000	LSE	WET		OVM 0.4	NO LAB SAMPLE; AUGER CUTTINGS.
968	1			Interval Not Sampled						
967	2									
966	3		25	DK YLW BROWN Silt with sand, ML	BH000120-0-0030		MST	4 5 3 4/6	OVM 0.4	3" SMPLES TAKEN. WOOD IN SAMPLE.
				No Sample Recovered						
965	4									
964	5			Interval Not Sampled						
963	6									
962	7									
961	8		100	MOD YLW ORANGE Silty sand , SM	BH000120-0-0080	LSE	WET	2 3 4 30/6	OVM 0.0	
960	9									
				Elastic silt, MH	BH000120-0-0098	FRM	MST		OVM 0.0	3" SAMPLE TAKEN. DK YEL BRN 50% SILT.
959	10		80	Interval Not Sampled						

Borehole Log

Roy F. Weston, Inc.

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 30.00
SITE NAME	: EECA	LOGGER	: I. ALVARADO
BORING ID	: BH000120	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 911412.9958 surveyed	DRILLING RIG	: SIMCO 9100
EASTING	: 56124.7302 surveyed	DATE STARTED	: 06/20/00
ELEVATION	: 969.000 estimated	DATE COMPLETED	: 06/20/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled				2 2 3 30/6		
958	11									
957	12									
956	13		100	MOD/OLV/BRN Elastic silt, MH	BH000120-0-0130	FRM	MST	24 30 40 46/6	OVM 0.0	3" SAMPLE TAKEN.
955	14									
954	15			Interval Not Sampled						
953	16									
952	17									
951	18		75	MOD OLV/BRN Elastic silt, MH	BH000120-0-0180	FRM	WET	3 23 28 62/6	OVM 0.0	USED 2 & 3" SPS SAMPLER;
950	19									
				No Sample Recovered						
949	20			Interval Not Sampled						NOT SAMPLED.

Borehole Log

Roy F. Weston, Inc.

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 30.00
SITE NAME	: EECA	LOGGER	: I. ALVARADO
BORING ID	: BH000120	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 911412.9958 surveyed	DRILLING RIG	: SIMCO 9100
EASTING	: 56124.7302 surveyed	DATE STARTED	: 06/20/00
ELEVATION	: 969.000 estimated	DATE COMPLETED	: 06/20/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						NOT SAMPLED.
948	21									
947	22									
946	23									
945	24									
944	25									
943	26									
942	27									
941	28		100	DUSKY YLW Sandy elastic silt with gravel, MH	BH000120-0-0280	FRM		47 54 57 70/6	OVM 0.0	3" SMPLS TAKEN. BORING ENDS @ 30'.
940	29									
939	30									

CLIENT : EECA1
PROJECT : HOUSATONIC RIVER
PROPERTY :
SITE/AREA : EECA

LOCATION ID : BH000161
BEGIN DATE : 07/13/00
END DATE : 07/13/00
LOGGER : I. ALVARADO

Borehole Completed In (<O>verburden <B>edrock) : B

Total Depth : 18.50 Depth to Bedrock : 18.40

Borehole Diameter #1: 6.00
Interval: 0.00 ft. to 18.50 ft. BGS
Method : HSA Fluid : NONE
Borehole Diameter #2:
Interval:
Method : Fluid :
Borehole Diameter #3:
Interval:
Method : Fluid :

Drilling Company : GEOTEK ENGINEERING
Driller : JOE BELL
Drill Rig Type : SIMCO 9100

	Estimated	Surveyed
Surface Elevation :	969.000	
N. Coordinate :	0.0000	911357.6001
E. Coordinate :	0.0000	56118.4870

Well Permit.....(Y)es (N)o: N Permit # :

Hole Abandoned...(Y)es (N)o: Y
Well Installed...(Y)es (N)o: N
Well Cluster.....(Y)es (N)o: N No. of Wells : 0
Well Nest.....(Y)es (N)o: N No. of Wells : 0
Pumps Installed..(Y)es (N)o: N

	Type	Depth
Purge :		0
Sample :		0

Borehole Testing
Borehole Geophysics.....(Y)es (N)o: N
Slug Tests.....(Y)es (N)o: N
Packer Tests.....(Y)es (N)o: N
Pumping Tests.....(Y)es (N)o: N

Comments :
GEOTECH BORING, MAP #28. HOLE GROUTED WITH 1 BAG CEMENT, 1/2 BAG VOLCLAY, 2 BAGS BENTONITE CHIPS. GEOTECH SAMPLES FOR SUITE 1.

GEOLIS Sampling and Lithology Data Summary

Location ID	Sample Start Depth (feet)	Sample End Depth (feet)	Soil Sampling Method	Sample Recovered (inches)	Sampling Length (inches)	Lithology Start Depth (feet)	Lithology End Depth (feet)	Gravel %	Sand %	Silt %	Clay %	Organic %	Sorting	Plasticity	ASTM / USCS Soil Classification	Coarse Gravel %	Medium Gravel %	Fine Gravel %	Coarse Sand %	Medium Sand %	Fine Sand %
BH000161	0.0	1.0	CUT	12	12	0.0	1.0		60	40			MOD	NA	Silty sand, SM						60
BH000161	1.0	3.0	NS	0	0	1.0	3.0								Interval Not Sampled						
BH000161	3.0	5.0	SPS	2	24	3.0	3.2		60	40			MOD	NA	Silty sand, SM						60
BH000161	3.0	5.0	SPS	2	24	3.2	5.0								No Sample Recovered						
BH000161	5.0	8.0	NS	0	0	5.0	8.0								Interval Not Sampled						
BH000161	8.0	10.0	SPS	8	24	8.0	8.7	30	45	25			POR	NA	Silty sand w/gravel, SM	10	10	10	15	15	15
BH000161	8.0	10.0	SPS	8	24	8.7	10.0								No Sample Recovered						
BH000161	10.0	13.0	NS	0	0	10.0	13.0								Interval Not Sampled						
BH000161	13.0	15.0	SPS	2	24	13.0	13.2	20	55	25			POR	NA	Silty sand w/gravel, SM	10	5	5		10	45
BH000161	13.0	15.0	SPS	2	24	13.2	15.0								No Sample Recovered						
BH000161	15.0	17.0	SPS	24	24	15.0	16.0	50	40	10			POR	NA	Well-graded gravel with silt and sand, GW-GM	15	20	15	15	10	15
BH000161	15.0	17.0	SPS	24	24	16.0	17.0	15	35	45	5		NA	NON	Silty sand w/gravel, SM	5		10	5		30
BH000161	17.0	18.5	NS	0	0	17.0	18.5								Interval Not Sampled						
BH000161	18.5	20.5	SPS	23	24	18.5	20.4	10	25	55	10		NA	LOW	Sandy silt, ML						
BH000161	18.5	20.5	SPS	23	24	20.4	20.5								No Sample Recovered						

Borehole Log

Roy F. Weston, Inc.

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 18.50
SITE NAME	: EECA	LOGGER	: I. ALVARADO
BORING ID	: BH000161	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 911357.6001 surveyed	DRILLING RIG	: SIMCO 9100
EASTING	: 56118.4870 surveyed	DATE STARTED	: 07/13/00
ELEVATION	: 969.000 estimated	DATE COMPLETED	: 07/13/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
			100	MOD OLV BRN Silty sand, SM	BH000161-0-0000	NOC	DRY		OVM 1.5	USED 2 & 3" SPS SAMPLER; FILL; AUGER CUTTINGS; 60% FINE SAND.
968	1			Interval Not Sampled						NOT SAMPLED
967	2									
966	3		10	Silty sand, SM	BH000161-0-0030	NOC	DRY	2 4 4 5/6	OVM 0.0	GEOTEXTILE IN SAMPLE; USED 2 & 3" SPS SAMPLER; FILL; SAME AS ABOVE;
				No Sample Recovered						NO RECOVERY
965	4									
964	5			Interval Not Sampled						NOT SAMPLED
963	6									
962	7									
961	8		35	MOD YEL BRN Silty sand w/gravel, SM	BH000161-0-0080	NOC	SAT	14 6 4 4/6	OVM 0.0	USED 2 & 3" SPS SAMPLER; 30% GRAVEL,45% C-M-F SAND
				No Sample Recovered						NO RECOVERY
960	9									
959	10			Interval Not Sampled						NOT SAMPLED

PROJECT :	HOUSATONIC RIVER	TOTAL DEPTH :	18.50
SITE NAME :	EECA	LOGGER :	I. ALVARADO
BORING ID :	BH000161	DRILLING COMPANY :	GEOTEK ENGINEERING
NORTHING :	911357.6001 surveyed	DRILLING RIG :	SIMCO 9100
EASTING :	56118.4870 surveyed	DATE STARTED :	07/13/00
ELEVATION :	969.000 estimated	DATE COMPLETED :	07/13/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						NOT SAMPLED
958	11									
957	12									
956	13		10	Silty sand w/gravel, SM No Sample Recovered	BH000161-0-0130	NOC	SAT	14 11 8 28/6	OVM 0.0	USED 2 & 3" SPS SAMPLER; 20% GRAVEL, 55% F-M SAND.
955	14									
954	15		100	Well-graded gravel with silt and sand, GW-GM	BH000161-0-0150	NOC	SAT	38 40 45 53/6	OVM 0.0	GRAV. VARIOUS COLORS; USED 2 & 3" SPS SAMPLER; 50% C-M-F GRAVEL.
953	16			OLV BRN Silty sand w/gravel, SM	BH000161-0-0160	NOC	WET		OVM 0.0	USED 2 & 3" SPS SAMPLER; 15% F-C GRAVEL.
952	17			Interval Not Sampled						NOT SAMPLED
951	18									
950	19		95	DK YEL ORG Sandy silt, ML	BH000161-0-0185	NOC	MST	39 70 90 120/6	OVM 0.0	LAST 1" WAS ROCK;
949	20									

Borehole Log

Roy F. Weston, Inc.

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 18.50
SITE NAME	: EECA	LOGGER	: I. ALVARADO
BORING ID	: BH000161	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 911357.6001 surveyed	DRILLING RIG	: SIMCO 9100
EASTING	: 56118.4870 surveyed	DATE STARTED	: 07/13/00
ELEVATION	: 969.000 estimated	DATE COMPLETED	: 07/13/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				DK YEL ORG Sandy silt, ML	BH000161-0-0185	WOC	MST	39 70 90 120/6	OVM 0.0	LAST 1" WAS ROCK;
				No Sample Recovered						END OF BORING @ 20.5', POSS BEDROCK, NOT CONFIRM
948	21									
947	22									
946	23									
945	24									
944	25									
943	26									
942	27									
941	28									
940	29									
939	30									

CLIENT : EECA2
PROJECT : HOUSATONIC RIVER
PROPERTY :
SITE/AREA : H2-EECA

LOCATION ID : BH000137
BEGIN DATE : 06/28/00
END DATE : 06/28/00
LOGGER : DAVE MORSE

Borehole Completed In (<O>verburden <B>edrock) : O

Total Depth : 20.00 Depth to Bedrock : 0.00

Borehole Diameter #1: 4.00
Interval: 0.00 ft. to 20.00 ft. BGS
Method : DAW Fluid : WATER
Borehole Diameter #2:
Interval:
Method : Fluid :
Borehole Diameter #3:
Interval:
Method : Fluid :

Drilling Company : GEOTEK DRILLING
Driller : GLEN PETERSON
Drill Rig Type : TRIPOD MOUNTED - WASH/DRIVE

	Estimated	Surveyed
Surface Elevation :	959.000	
N. Coordinate :	0.0000	911333.5481
E. Coordinate :	0.0000	56072.8874

Well Permit.....(Y)es (N)o: N Permit # :

Hole Abandoned...(Y)es (N)o: Y
Well Installed...(Y)es (N)o: N
Well Cluster.....(Y)es (N)o: N No. of Wells : 0
Well Nest.....(Y)es (N)o: N No. of Wells : 0
Pumps Installed..(Y)es (N)o: N

	Type	Depth
Purge :		0
Sample :		0

Borehole Testing
Borehole Geophysics.....(Y)es (N)o: N
Slug Tests.....(Y)es (N)o: N
Packer Tests.....(Y)es (N)o: N
Pumping Tests.....(Y)es (N)o: N

Comments :
GEOTECH BORING LOCATION #29 SAMPLED FOR SUITE 1;BETWEEN T160 & T162; CENTER OF RIVER 20' BGS.

GEOLIS Sampling and Lithology Data Summary

Location ID	Sample Start Depth (feet)	Sample End Depth (feet)	Soil Sampling Method	Sample Recovered (inches)	Sampling Length (inches)	Lithology Start Depth (feet)	Lithology End Depth (feet)	Gravel %	Sand %	Silt %	Clay %	Organic %	Sorting	Plasticity	ASTM / USCS Soil Classification	Coarse Gravel %	Medium Gravel %	Fine Gravel %	Coarse Sand %	Medium Sand %	Fine Sand %
BH000137	0.0	3.0	NS	0	0	0.0	3.0								Interval Not Sampled						
BH000137	3.0	5.0	SPS	5	24	3.0	3.4	40	40	20			POR	NON	Silty sand w/gravel, SM	15	15	10	20	15	5
BH000137	3.0	5.0	SPS	5	24	3.4	5.0								No Sample Recovered						
BH000137	5.0	8.0	NS	0	0	5.0	8.0								Interval Not Sampled						
BH000137	8.0	10.0	SPS	4	24	8.0	8.3	20	80				POR	NON	Well-graded sand with gravel, SW	10	5	5	30	40	10
BH000137	8.0	10.0	SPS	4	24	8.3	10.0								No Sample Recovered						
BH000137	10.0	13.0	NS	0	0	10.0	13.0								Interval Not Sampled						
BH000137	13.0	15.0	SPS	11	24	13.0	13.9	25	45	30			POR	NON	Silty sand w/gravel, SM	10	10	5	20	15	10
BH000137	13.0	15.0	SPS	11	24	13.9	15.0								No Sample Recovered						
BH000137	15.0	18.0	NS	0	0	15.0	18.0								Interval Not Sampled						
BH000137	18.0	20.0	SPS	22	24	18.0	19.8	50	10	40			POR	LOW	Silty gravel, GM	35	10	5		3	7
BH000137	18.0	20.0	SPS	22	24	19.8	20.0								No Sample Recovered						

Borehole Log

Roy F. Weston, Inc.

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 20.00
SITE NAME	: H2-EECA	LOGGER	: DAVE MORSE
BORING ID	: BH000137	DRILLING COMPANY	: GEOTEK DRILLING
NORTHING	: 911333.5481 surveyed	DRILLING RIG	: TRIPOD MOUNTED - WASH/DRIVE
EASTING	: 56072.8874 surveyed	DATE STARTED	: 06/28/00
ELEVATION	: 959.000 estimated	DATE COMPLETED	: 06/28/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						NOT SAMPLED.
958	1									
957	2									
956	3		20	LT. OLV GRY Silty sand w/gravel, SM	BH000137-0-0030	LSE	WET	14 12 8	PID 0.8	40% C-M-F GRAVEL; 40% C-M-F SAND.
				No Sample Recovered	BH000137-0-0030			5/6		NO RECOVERY
955	4									
954	5			Interval Not Sampled						NOT SAMPLED.
953	6									
952	7									
951	8		15	LT. OLV GRY Well-graded sand with gravel, SW	BH000137-0-0080	LSE	WET	12 6 4	PID 0.8	20% GRAVEL, 80% SAND.
				No Sample Recovered	BH000137-0-0080			1/6		NO RECOVERY
950	9									
949	10			Interval Not Sampled						NOT SAMPLED.

Borehole Log — *Roy F. Weston, Inc.*

PROJECT	HOUSATONIC RIVER	TOTAL DEPTH	20.00
SITE NAME	H2-EECA	LOGGER	DAVE MORSE
BORING ID	BH000137	DRILLING COMPANY	GEOTEK DRILLING
NORTHING	911333.5481 surveyed	DRILLING RIG	TRIPOD MOUNTED - WASH/DRIVE
EASTING	56072.8874 surveyed	DATE STARTED	06/28/00
ELEVATION	959.000 estimated	DATE COMPLETED	06/28/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						NOT SAMPLED.
948	11									
947	12									
946	13		45	LT. OLV GRY Silty sand w/gravel, SM	BH000137-0-0130	COH	WET	24 9 29 44/6	PID 0.8	BOTTOM 0.2 FT LOOKS LIKE WEATHERED BEDROCK OR COBBLE
945	14			No Sample Recovered	BH000137-0-0130					NO RECOVERY
944	15			Interval Not Sampled						NOT SAMPLED.
943	16									
942	17									
941	18		90	Silty gravel, GM	BH000137-0-0180	FRM	WET	107 52 34 41/6	PID 0.4	TILL: 50% C-M-F GRAVEL; 40% SILT.
940	19									
939	20			No Sample Recovered	BH000137-0-0180					NO RECOVERY; BORING END @ 20'.

GEO LOGIC, INC.

EARTH
EXPLORATION
SERVICES
35 Commercial Drive
TEL 5083844434
Wrentham, MA 02093
FAX 5083844452

CLIENT: Roy F. Weston GTB-20

PROJECT: Housatonic River

LOCATION: Pittsfield, MA

BH000634

			CASING	SAMPLER	CORE BARREL
File #:	02121	TYPE	HW	SS	
Date Started:	6/3/02	SIZE	4"	2"	
Date Completed:	6/3/02	HAMMER	300#	140#	—
Driller:	T. Tucker	FALL	24"	30"	—
Site Rep.:	Amy Steele				

Surface Elevation:
Station:
Groundwater level readings
Date Depth
Date Depth

Depth ft	Sample No.	Depth ft	N	Rec. in	Blows/6"	Sample Description
	S-1	0.0-0.8	9		4-4-5-5	S-1 Moist loose dark brown silty fine to coarse SAND and GRAVEL, FILL, brick fragments, rootlets
	S-2	2.0-3.0	12		5-7-5-3	S-2 Dry medium dense gray ASH and brown silty CLAY, FILL
5	S-3	4.0-4.3	4		3-1-3-2	S-3 Slightly moist loose silty SAND and angular GRAVEL, coal, FILL
	S-4	6.0-6.6	7		4-3-4-3	S-4 Slightly moist loose moderately brown silty fine SAND, no visible bedding
	S-5	8.0-8.8	9		5-6-3-3	S-5 Moist loose moderately brown silty fine SAND, clayey layer
10	S-6	10.0-10.7	8		4-4-4-9	S-6 Loose moderately brown to gray silty fine SAND, layers visible
15	S-7	15.0-16.7	20		17-10-10-9	S-7 Medium dense medium to coarse SAND and medium to coarse GRAVEL, subrounded, saturated
20	S-8	20.0-23.7	44		21-23-21-21	S-8 Dense fine to coarse SAND, saturated, no visible layer Driller says 3" diameter rock (subrounded) clogging pipe
25	S-9	25.0-28.7	44		18-23-21-27	S-9 No recovery Driller says at 28' became tougher - thinks is till
30	S-10	30.0-32.1	25		12-11-14-30	S-10 Medium dense moderately brown SAND and GRAVEL, TILL, saturated
						Bottom of exploration at 32.0'
						"Penetration in inches" column should read "N-Value"

Ground Surface to _____ used _____ then _____

Proportions Used		Cohesive Consistency Blows/ft				Cohesionless Density Blows/ft		Sample Type
Trace	0 to 10%	0-2	Very Soft	9-15	Stiff	0-10	Loose	UP = Fixed Piston
Little	10 to 20%	3-4	Soft	16-30	V-Stiff	10-30	M-Dense	UT = Shelby Tube
Some	20 to 35%	5-8	M-Stiff	31+	Hard	30-50	Dense	OE = Open End Rod
And	35 to 50%					50+	V-Dense	* = 300# hammer

Notes:
1. The stratification lines represent the approximate boundary between soil types. The transition may be gradual.
2. Water level readings were made in the drill hole during or at the completion of drilling. The water level may fluctuate over time.

Remarks: NOTE: Classification performed by RF Weston site rep

GEO LOGIC, INC.

EARTH EXPLORATION SERVICES
35 Commercial Drive
TEL 5083844434
Wrentham, MA 02093
FAX 5083844452

CLIENT: Roy F. Weston
PROJECT: Housatonic River
LOCATION: Pittsfield, MA
BH000744

GTB-22

			CASING	SAMPLER	CORE BARREL
File #:	02121	TYPE	HW	SS	
Date Started:	6/17/02	SIZE	4"	2"	
Date Completed:	6/17/02	HAMMER	300#	140#	—
Driller:	T. Tucker	FALL	24"	30"	—
Site Rep.:	Amy Steele				

Surface Elevation:
Station:
Groundwater level readings
Date Depth
Date Depth

Depth ft	Sample No.	Depth ft	N	Rec. in	Blows/6"	Sample Description
	S-1	0.0-0.2	2		1-1-1-1	S-1 No recovery
	S-2	2.0-2.3	4		1-2-2-3	S-2 No recovery
5	S-3	4.0-6.3	28		13-13-15-16	S-3 Medium dense medium to coarse SAND and GRAVEL, FILL, ash, glass, brick
	S-4	6.0-6.8	10		3-4-6-7	S-4 Medium dense medium to coarse SAND and GRAVEL
	S-5	8.0-13.0	60		18-24-36-48	S-5 No recovery
10	S-6	10.0			62-120/3"	S-6 No recovery
						Bottom of exploration at 10.8'
						"Penetration in inches" column should read "N-Value"
15						
20						
25						
30						

Ground Surface to _____ used _____ then _____

Proportions Used		Cohesive Consistency Blows/ft				Cohesionless Density Blows/ft		Sample Type
Trace	0 to 10%	0-2	Very Soft	9-15	Stiff	0-10	Loose	UP = Fixed Piston
Little	10 to 20%	3-4	Soft	16-30	V-Stiff	10-30	M-Dense	UT = Shelby Tube
Some	20 to 35%	5-8	M-Stiff	31+	Hard	30-50	Dense	OE = Open End Rod
And	35 to 50%					50+	V-Dense	* = 300# hammer

Notes:
1. The stratification lines represent the approximate boundary between soil types. The transition may be gradual.
2. Water level readings were made in the drill hole during or at the completion of drilling. The water level may fluctuate over time.

Remarks: NOTE: Classification performed by RF Weston site rep

WESTON	SOIL BORING LOG	PAGE 1 OF 1

Job Name Job No.	Housatonic River 20125.001.096	Boring No. Surface Elev.	GTB-21 ft.	Groundwater Level Date Depth
Date Drilled	05/23/02	Boring Method	Case and wash	Not Measured
Drilling Co.	TDS	Completion Depth	31.0 ft bgs	
Drill Foreman	Scott Lombard	Location	BH000578	
Logged By	J. Schmidl, PG	Pittsfield, Massachusetts		

Depth (feet)	Sample No.	Sample Type*	Sample Blow Counts** (per 6 in.)	N Value**	Visual Description	% Rec	% RQD	Laboratory Tests
	1	SS	3-6-6-4	12	Pale yellow brown fine SAND, trace silt, loose, fine beds, loose, moist.	65		
	2	SS	4-3-3-3	6	Brown fine SAND, finely bedded, loose, very moist to wet.	50		
5	3	SS	3-2-3-3	5	No recovery.	0		
	4	SS	2-3-3-4	6	Brown fine SAND, loose, no apparent bedding, saturated.	35		
10	5	SS	2-2-2-7	4	Gray fine to coarse SAND, bedded, trace wood, iron staining, saturated.	45		
	6	SS	10-17-25-14	42	Gray brown fine to coarse SAND, little marble fine to coarse gravel, cobble at 11.0 to 11.3, trace silt, loose, saturated.	65		
15	7	SS	3-4-8-24	12	15.0-15.5 Same.	40		
20					15.5-15.8 Olive brown fine SAND and SILT, trace clay (rolls to 1/8-inch), cohesive, saturated.	50		
	8	SS	14-14-17-31	31	Olive bronw fine SAND and SILT, little gravel, trace clay, cohesive, dense.			
25	9	SS	22-36-42-37/5	78	25.0-25.2 same, wet, sharp basal contact.	60		
30					25.2-26.4 Yellow brown higly weathered marble containing coarser grains and gray vein fillings, dense, saturated.			
	10	SS	40-60/3"	60/3"	Yellow brown weathered marble, cohesive, dense, contains a layer with coarser crystals, saturated.	90		
35					End of boring at 31 ft bgs.			

*Sample type: SS-Split Spoon, ST-Shelby Tube, RC-Rock Core, SC-Soil Core

Laboratory Tests: MC-Moisture Content, AL-Atterberg Limits, S-Sieve Analysis, SH-Sieve/Hydrometer Analysis, SG-Specific Gravity, OC - Organic Content, C-Consolidation, UU-Unconsolidated Undrained Triaxial, CU-Consolidated Undrained Triaxial, UCS-Unconfined Compressive Strength, K-Hydraulic Conductivity, BD - Bulk Density

**ASTM D-1586 Standard Penetration Test

WESTON	SOIL BORING LOG	PAGE 1 OF 2

Job Name Job No.	Housatonic River 20125.001.096	Boring No. Surface Elev.	GTB-23 ft.	Groundwater Level Date	Depth
Date Drilled	06/10/02	Boring Method	H.S.A.	Not Measured	
Drilling Co.	TDS	Completion Depth	41.0 ft bgs		
Drill Foreman	Marty McNamara	Location	BH000628		
Logged By	A. C. Steele	Pittsfield, Massachusetts			

Depth (feet)	Sample No.	Sample Type*	Sample Blow Counts** (per 6 in.)	N Value**	Visual Description	% Rec	% RQD	Laboratory Tests
	1	SS	3-3-4-3	7	Topsoil, slightly moist.	10		
	2	SS	3-2-2-3	4	Brown silty fine to medium SAND, some gravel, dry.	5		
5	3	SS	5-2-2-3	4	Mod brown silty fine to medium SAND, some subround gravel, layering, dry.	60		
	4	SS	4-4-3-3	7	Same.	40		
	5	SS	4-7-4-4	11	Same, wood fragments, slightly moist.	40		
10	6	SS	7-9-5-6	14	Same, some angular gravel, no wood fragments.	35		
15	7	SS	11-9-9-7	18	Mod brown silty medium to coarse SAND, and angular limestone GRAVEL	10		
20	8	SS	8-6-3-5	9	Same, mostly coarse SAND and GRAVEL, wet.	30		
25	9	SS	4-7-18-11	25	Varigated angular to rounded GRAVEL and and medium to coarse SAND, loose, saturated.	10		
30	10	SS	3-5-3-4	8	Varigated angular to rounded GRAVEL and and coarse SAND, loose, saturated.	20		
35	11		18-22-37-32	59	Same.	40		

*Sample type: SS-Split Spoon, ST-Shelby Tube, RC-Rock Core, SC-Soil Core

Laboratory Tests: MC-Moisture Content, AL-Atterberg Limits, S-Sieve Analysis, SH-Sieve/Hydrometer Analysis, SG-Specific Gravity, OC - Organic Content, C-Consolidation, UU-Unconsolidated Undrained Triaxial, CU-Consolidated Undrained Triaxial, UCS-Unconfined Compressive Strength, K-Hydraulic Conductivity, BD - Bulk Density

**ASTM D-1586 Standard Penetration Test

WESTON	SOIL BORING LOG		PAGE 2 OF 2
Job Name Job No.	Housatonic River 20125.001.096	Boring No. Surface Elev.	GTB-23 ft (est.)
Date Drilled	10 Jun 02	Boring Method	H.S.A.
Drilling Co.	TDS	Completion Depth	41.0 ft bgs
Drill Foreman	Marty McNamara	Location	BH000628
Logged By	A. C. Steele	Pittsfield, Massachusetts	

Groundwater Level	
Date	Depth

Depth (feet)	Sample No.	Sample Type*	Sample Blow Counts* (per 6 in.)	N Value*	Visual Description	% Rec	% RQD	Laboratory Tests
40	12	SS	69-100/4"	100/4"	*Per driller, change at 38 feet bgs.* TILL, mod gray GRAVEL in silty sand matrix.	66		
					End of boring at 41 ft bgs.			
45								
55								
60								
65								
70								

Sample type: SS-Split Spoon, ST-Shelby Tube, RC-Rock Core, SC-Soil Core

Laboratory Tests: MC-Moisture Content, AL-Atterberg Limits, S-Sieve Analysis, SH-Sieve/Hydrometer Analysis, SG-Specific Gravity, OC - Organic Content, C-Consolidation, UU-Unconsolidated Undrained Triaxial, CU-Consolidated Undrained Triaxial, UCS-Unconfined Compressive Strength, K-Hydraulic Conductivity, BD - Bulk Density

*ASTM D-1586 Standard Penetration Test

GTB-22-23-3A.xls

Print Date: 07/22/2002 12:52 PM

CLIENT : EECA2
PROJECT : HOUSATONIC RIVER
PROPERTY :
SITE/AREA : H2-EECA

LOCATION ID : BH000138
BEGIN DATE : 07/06/00
END DATE : 07/06/00
LOGGER : DAVE MORSE

Borehole Completed In (<O>verburden <B>edrock) : O

Total Depth : 20.00 Depth to Bedrock : 0.00

Borehole Diameter #1: 4.00
Interval: 0.00 ft. to 20.00 ft. BGS
Method : DAW Fluid : WATER
Borehole Diameter #2:
Interval:
Method : Fluid :
Borehole Diameter #3:
Interval:
Method : Fluid :

Drilling Company : GEOTEK
Driller : GLEN PETERSON
Drill Rig Type : TRIPOD WASH&DRIVE

	Estimated	Surveyed
Surface Elevation :	958.000	
N. Coordinate :	0.0000	911245.9881
E. Coordinate :	0.0000	56168.9988

Well Permit.....(Y)es (N)o: N Permit # :

Hole Abandoned...(Y)es (N)o: Y
Well Installed...(Y)es (N)o: N
Well Cluster.....(Y)es (N)o: N No. of Wells : 0
Well Nest.....(Y)es (N)o: N No. of Wells : 0
Pumps Installed..(Y)es (N)o: N

	Type	Depth
Purge :		0
Sample :		0

Borehole Testing
Borehole Geophysics.....(Y)es (N)o: N
Slug Tests.....(Y)es (N)o: N
Packer Tests.....(Y)es (N)o: N
Pumping Tests.....(Y)es (N)o: N

Comments :
GEOTECH BORING; MAP LOCATION #31; APROX. 15' DOWNSTREAM OF T-170 CENTER OF RIVER CHANNEL; SAMPLES ANALYZED FOR SUITE 1.

GEOLIS Sampling and Lithology Data Summary

Location ID	Sample Start Depth (feet)	Sample End Depth (feet)	Soil Sampling Method	Sample Recovered (inches)	Sampling Length (inches)	Lithology Start Depth (feet)	Lithology End Depth (feet)	Gravel %	Sand %	Silt %	Clay %	Organic %	Sorting	Plasticity	ASTM / USCS Soil Classification	Coarse Gravel %	Medium Gravel %	Fine Gravel %	Coarse Sand %	Medium Sand %	Fine Sand %
BH000138	0.0	3.0	NS	0	0	0.0	3.0								Interval Not Sampled						
BH000138	3.0	5.0	SPS	12	24	3.0	4.0	35	20	35	10		POR	LOW	Silty gravel w/sand, GM	10	15	10	10	5	5
BH000138	3.0	5.0	SPS	12	24	4.0	5.0								No Sample Recovered						
BH000138	5.0	8.0	NS	0	0	5.0	8.0								Interval Not Sampled						
BH000138	8.0	10.0	SPS	10	24	8.0	8.8	25	10	50	15		POR	MOD	Gravelly elastic silt, MH		10	15			10
BH000138	8.0	10.0	SPS	10	24	8.8	10.0								No Sample Recovered						
BH000138	10.0	13.0	NS	0	0	10.0	13.0								Interval Not Sampled						
BH000138	13.0	15.0	SPS	11	24	13.0	13.9	25	10	50	15		POR	MOD	Gravelly elastic silt, MH		10	15			10
BH000138	13.0	15.0	SPS	11	24	13.9	15.0								No Sample Recovered						
BH000138	15.0	18.0	NS	0	0	15.0	18.0								Interval Not Sampled						
BH000138	18.0	20.0	SPS	8	24	18.0	18.7	25	10	50	15		POR	MOD	Gravelly elastic silt, MH		10	15			10
BH000138	18.0	20.0	SPS	8	24	18.7	20.0								No Sample Recovered						

Borehole Log

Roy F. Weston, Inc.

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 20.00
SITE NAME	: H2-EECA	LOGGER	: DAVE MORSE
BORING ID	: BH000138	DRILLING COMPANY	: GEOTEK
NORTHING	: 911245.9881 surveyed	DRILLING RIG	: TRIPOD WASH&DRIVE
EASTING	: 56168.9988 surveyed	DATE STARTED	: 07/06/00
ELEVATION	: 958.000 estimated	DATE COMPLETED	: 07/06/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						NOT SAMPLED.
957	1									
956	2									
955	3		50	OLV GRY Silty gravel w/sand, GM	BH000138-0-0030	MOC	MST	8 8 13 10/6	OVM 0.8	TILL; OBSERVED @ 3.7'; USED 3" SPOON & 300 LB HAMMER.
954	4			No Sample Recovered	BH000138-0-0030					NO RECOVERY
953	5			Interval Not Sampled						NOT SAMPLED.
952	6									
951	7									
950	8		40	OLV GRY Gravelly elastic silt, MH	BH000138-0-0080	FRM	MST	20 45 73 47/6	OVM 0.4	25% GRAVEL, 50% SILT.
				No Sample Recovered	BH000138-0-0080					NO RECOVERY
949	9									
948	10			Interval Not Sampled						NOT SAMPLED.

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Borehole Log — *Roy F. Weston, Inc.*

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 20.00
SITE NAME	: H2-EECA	LOGGER	: [illegible] E MORSE
BORING ID	: BH000138	DRILLING COMPANY	: GEOTEK
NORTHING	: 911245.9881 surveyed	DRILLING RIG	: TRIPOD WASH&DRIVE
EASTING	: 56168.9988 surveyed	DATE STARTED	: 07/06/00
ELEVATION	: 958.000 estimated	DATE COMPLETED	: 07/06/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						NOT SAMPLED.
947	11									
946	12									
945	13		45	OLV GRY Gravelly elastic silt, MH	BH000138-0-0130	FRM	MST	30 36 45 54/6	OVM 0.4	SAME AS ABOVE 8-10' BGS.
944	14			No Sample Recovered	BH000138-0-0130					NO RECOVERY
943	15			Interval Not Sampled						NOT SAMPLED.
942	16									
941	17									
940	18		35	OLV GRY Gravelly elastic silt, MH	BH000138-0-0180	STF	MST	34 64 77 122/6	OVM 0.4	TILL
				No Sample Recovered	BH000138-0-0180					NO RECOVERY; BORING END @ 20'.
939	19									
938	20									

CLIENT : EECA1
PROJECT : HOUSATONIC RIVER
PROPERTY :
SITE/AREA : EECA

LOCATION ID : BH000130
BEGIN DATE : 06/22/00
END DATE : 06/22/00
LOGGER : I. ALVARADO

Borehole Completed In (<O>verburden <B>edrock) : O

Total Depth : 30.00 Depth to Bedrock : 0.00

Borehole Diameter #1: 6.00
Interval: 0.00 ft. to 30.00 ft. BGS
Method : HSA Fluid : NONE
Borehole Diameter #2:
Interval:
Method : Fluid :
Borehole Diameter #3:
Interval:
Method : Fluid :

Drilling Company : GEOTEK ENGINEERING
Driller : CHRIS SMITH
Drill Rig Type : SIMCO 9100

	Estimated	Surveyed
Surface Elevation :	974.000	
N. Coordinate :	0.0000	911249.1875
E. Coordinate :	0.0000	56186.5561

Well Permit.....(Y)es (N)o: N Permit # :

Hole Abandoned...(Y)es (N)o: Y
Well Installed...(Y)es (N)o: N
Well Cluster.....(Y)es (N)o: N No. of Wells : 0
Well Nest.....(Y)es (N)o: N No. of Wells : 0
Pumps Installed..(Y)es (N)o: N

	Type	Depth
Purge :		0
Sample :		0

Borehole Testing
Borehole Geophysics.....(Y)es (N)o: N
Slug Tests.....(Y)es (N)o: N
Packer Tests.....(Y)es (N)o: N
Pumping Tests.....(Y)es (N)o: N

Comments :
MAP #30. GEOTECH BORING 1-1/2 MILE. GEOTECH SAMPLES ANALYZED FOR SUITE 1.

GEOLIS Sampling and Lithology Data Summary

Location ID	Sample Start Depth (feet)	Sample End Depth (feet)	Soil Sampling Method	Sample Recovered (inches)	Sampling Length (inches)	Lithology Start Depth (feet)	Lithology End Depth (feet)	Gravel %	Sand %	Silt %	Clay %	Organic %	Sorting	Plasticity	ASTM / USCS Soil Classification	Coarse Gravel %	Medium Gravel %	Fine Gravel %	Coarse Sand %	Medium Sand %	Fine Sand %
BH000130	0.0	1.0	CUT	12	12	0.0	1.0	5	5	70	15	5	NA	LOW	Silt, ML						
BH000130	1.0	3.0	NS	0	0	1.0	3.0								Interval Not Sampled						
BH000130	3.0	5.0	SPS	12	24	3.0	4.0	10	10	60	15	5	POR	LOW	Silt with sand, ML	3	3	4			
BH000130	3.0	5.0	SPS	12	24	4.0	5.0								No Sample Recovered						
BH000130	5.0	8.0	NS	0	0	5.0	8.0								Interval Not Sampled						
BH000130	8.0	10.0	SPS	14	24	8.0	9.2	10	20	55	10	5	POR	LOW	Sandy silt, ML						
BH000130	8.0	10.0	SPS	14	24	9.2	10.0								No Sample Recovered						
BH000130	10.0	13.0	NS	0	0	10.0	13.0								Interval Not Sampled						
BH000130	13.0	15.0	SPS	24	24	13.0	15.0		50	50			WEL	NON	Silty sand, SM						50
BH000130	15.0	18.5	NS	0	0	15.0	18.5								Interval Not Sampled						
BH000130	18.5	20.5	SPS	24	24	18.5	20.5		5	50	45		NA	MOD	Elastic silt, MH					2	3
BH000130	20.5	28.0	NS	0	0	20.5	28.0								Interval Not Sampled						
BH000130	28.0	30.0	SPS	19	24	28.0	29.6	10	10	50	30		NA	MOD	Elastic silt w/sand, MH			10			10
BH000130	28.0	30.0	SPS	19	24	29.6	30.0								No Sample Recovered						

Borehole Log

Roy F. Weston, Inc.

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 30.00
SITE NAME	: EECA	LOGGER	: I. ALVARADO
BORING ID	: BH000130	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 911249.1875 surveyed	DRILLING RIG	: SIMCO 9100
EASTING	: 56186.5561 surveyed	DATE STARTED	: 06/22/00
ELEVATION	: 974.000 estimated	DATE COMPLETED	: 06/22/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
			100	DK. YEL BRN Silt, ML	BH000130-0-0000	SFT	MST		OVM 5.2	USED 2 & 3" SPS SAMPLER; FILL; AUGER CUTTINGS.
973	1			Interval Not Sampled						NOT SAMPLED
972	2									
971	3		50	BRN,GRY,LTBRN, ORG Silt with sand, ML	BH000130-0-0030	SFT	MST	4 5 6 6/6	OVM 6.2	USED 2 & 3" SPS SAMPLER; FILL
970	4			No Sample Recovered						NO RECOVERY
969	5			Interval Not Sampled						NOT SAMPLED.
968	6									
967	7									
966	8		60	BRN,BLK, GRY,WHT Sandy silt, ML	BH000130-0-0080	LSE	MST	2 2 3 4/6	OVM 0.4	USED 2 & 3" SPS SAMPLER; FILL; WOOD PIECES
965	9			No Sample Recovered						NO RECOVERY
964	10			Interval Not Sampled						NOT SAMPLED.

PROJECT	: HOUSATONIC RIVER	TOTAL DEPTH	: 30.00
SITE NAME	: EECA	LOGGER	: I. ALVARADO
BORING ID	: BH000130	DRILLING COMPANY	: GEOTEK ENGINEERING
NORTHING	: 911249.1875 surveyed	DRILLING RIG	: SIMCO 9100
EASTING	: 56186.5561 surveyed	DATE STARTED	: 06/22/00
ELEVATION	: 974.000 estimated	DATE COMPLETED	: 06/22/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				Interval Not Sampled						NOT SAMPLED.
963	11									
962	12									
961	13		100	MOD. YEL BRN Silty sand, SM	BH000130-0-0130	NOC	SAT	2 3 3 5/6	OVM 0.0	GROUNDWATER @ 14'; USED 2 & 3" SPS SAMPLER; 50% FINE SAND.
960	14									
959	15			Interval Not Sampled						NOT SAMPLED.
958	16									
957	17									
956	18									
			100	LT. OLV GRY Elastic silt, MH	BH000130-0-0185	FRM	MST	8 11 20 22/6	OVM 0.0	USED 2 & 3" SPS SAMPLER
955	19									
954	20									

Borehole Log

Roy F. Weston, Inc.

PROJECT :	HOUSATONIC RIVER	TOTAL DEPTH :	30.00
SITE NAME :	EECA	LOGGER :	I. ALVARADO
BORING ID :	BH000130	DRILLING COMPANY :	GEOTEK ENGINEERING
NORTHING :	911249.1875 surveyed	DRILLING RIG :	SIMCO 9100
EASTING :	56186.5551 surveyed	DATE STARTED :	06/22/00
ELEVATION :	974.000 estimated	DATE COMPLETED :	06/22/00

ELEVATION	DEPTH	MATERIAL	% RECOVERY	COLOR & CLASSIFICATION	SAMPLE ID	STRENGTH	MOISTURE	BLOW COUNT	INSTRUMENT READING	COMMENTS
				LT. OLV GRY Elastic silt, MH	BH000130-0-0185	FRM	MST	8 11 20 22/6	OVM 0.0	USED 2 & 3" SPS SAMPLER
				Interval Not Sampled						NOT SAMPLED.
953	21									
952	22									
951	23									
950	24									
949	25									
948	26									
947	27									
946	28		80	LT. OLV GRY Elastic silt w/sand, MH	BH000130-0-0280	STF	MST	12 20 36 42/6	OVM 0.0	USED 2 & 3" SPS SAMPLER
945	29									
				No Sample Recovered						NO RECOVERY; BORING ENDS @ 30'.
944	30									

WESTON	SOIL BORING LOG			PAGE 1 OF 1
Job Name Job No.	GE Pittsfield- EE/CA 10971-032-007	Boring No. Surface Elev.	BH000094 968.0 ft. (est)	Groundwater Level Date Depth
Date Drilled	11 May 99	Boring Method		Not Measured
Drilling Co.	NH Boring	Completion Depth	19.5 ft bgs	
Drill Foreman	Kenneth Smith	Location	See Figure 2.1-7	
Logged By	J. Schmidl			

Depth (feet)	Sample No.	Sample Type*	Sample Blow Counts** (per 6 in.)	N Value**	Visual Description	% Rec	% RQD	Laboratory Tests
		SS	9-12-7-8	19	SAND, some gravel, trace silt, brown, dry (Black staining at 1 ft)			
		SS	5-6-3-3	9	SAND, some gravel, white, dry (coal ash) SAND, yellow-brown, moist			
5	Sample	SS	2-2-3-3	5	SAND, moist	H		
		SS	3-3-3-4	7	SAND, brown, moist SAND, some silt, brown, moist			
	Sample	SS	1-2-3-2	5	SAND, little silt, brown, wet	H		
10		SS	1-wor-1-wor	1	SAND, trace silt and organics, dark gray, wet			
	Sample	SS	1-1-2-3	3	SAND, trace silt and organics, brown, wet	H		
15		SS	6-19-21-26	40	SILT and CLAY, some gravel, trace sand, olive-brown, moist SAND, trace gravel, dark olive gray, wet			
		SS	27-29-34-41	63	SILT and CLAY, some gravel, trace sand, olive-brown, moist			
		SS	22-50/2"	50/2"	SILT and CLAY, some gravel, little sand, moist			
20					End of Boring at 19.5 feet bgs (Spoon refusal at 18.7 ft, auger refusal at 19.5 ft bgs)			
25								
30								
35								

*Sample type: SS-Split Spoon, ST-Shelby Tube, RC-Rock Core, SC-Soil Core

**ASTM D-1586 Standard Penetration Test

Laboratory Tests: MC-Moisture Content, AL-Atterberg Limits, S-Sieve Analysis, SH-Sieve/Hydrometer Analysis, SG-Specific Gravity, OC - Organic Content, C-Consolidation, UU-Unconsolidated Undrained Triaxial, CU-Consolidated Undrained Triaxial, UCS-Unconfined Compressive Strength, K-Hydraulic Conductivity, BD - Bulk Density

GEOTECHNICAL LABORATORY DATA

PRE-DESIGN DATA

LABORATORY TESTING DATA SHEET

Project Name: HOUSATONIC RIVER PROJECT
PITTSFIELD, MA.
Project No.: L16350
Project Engineer: D. SCHULZE
Assigned By: K. SPITTLER
Rev'd by: MCM/DAS
Chain Of Custody: 2724
Lab Batch No.: 02-10
Date Received: 6/11/02

Sample ID	Depth ft.	Lab No.	Identification Tests: Water Content %	LL %	PL %	Sieve -200 %	Hyd -2μ %	Organic %	G_s	Bulk Density (pcf)	Density: γ_d MAX (pcf) W_{opt} (%)	Perme-ability cm/sec	Strength Tests: Torvane or Type Test	$\bar{\sigma}_c$ psf	Failure Criteria	$\sigma_1 - \sigma_3$ or τ psf	Strain %	Consol. $\frac{\Delta e}{1 + e_0}$	Laboratory Log and Soil Description
H2-BH000629-0-0060		GT22	25.8			27													Brown Silty sand (SM)
H2-BH000629-0-0210		GT23	11.1			38	9												Brown Silty, clayey sand (SC-SM)
H2-BH000585-0-0130		GT24	73.0	92	59	84	12												Brown Organic silt (OH)
H2-BH000585-0-0330		GT25	22.9			14													Brown Silty sand (SM)
H2-BH000585-0-0380		GT26	24.3			60	12												Brown Lean clay with sand (CL)
H2-BH000631-0-0040		GT27	12.4			8													Brown well graded sand with silt and gravel (SW-SM)
H2-BH000631-0-0100		GT28	14.8	16	13	59													Brown Sandy silt (SM)
H2-BH000576-0-0020		GT29	15.3			33													Brown Silty, clayey sand with gravel (SC-SM)
H2-BH000581-0-0005		GT30	7.9			15		1.2											Brown Silty sand with gravel (SM)
H2-BH000581-0-0020		GT31	15.1			20		2.6											Brown Silty sand with gravel (SM)
H2-BH000581-0-0080		GT32	22.0			37													Brown Silty, clayey sand (SC-SM)
H2-BH000581-0-0200		GT33	4.5			18													Brown Silty gravel with sand (GM)

LABORATORY TESTING DATA SHEET

Project Name: HOUSATONIC RIVER PROJECT
PITTSFIELD, MA.
Project No: LI6350 — Assigned By: K. SPITTLER
Project Engineer: D. SCHULZE — Rev'd by: MCM/DAS

Chain Of Custody: 2724
Lab Batch No.: 02-11
Date Received: 6/11/02

Sample ID.	Depth ft.	Lab No.	Identification Tests: Water Content %	LL %	PL %	Sieve -200 %	Hyd -2μ %	Organic %	G_s	Bulk Density (pcf)	Density: γ_d MAX (pcf) W_{opt} (%)	Perme-ability cm/sec	Strength Tests: Torvane or Type Test	$\bar{\sigma}_c$ psf	Failure Criteria	$\sigma_1 - \sigma_3$ or τ psf	Strain %	Consol.: $\frac{\Delta e}{1 + e_0}$	Laboratory Log and Soil Description
H2-BH000577-0-0080		GT34	10.8			17													Brown Silty sand with gravel (SM)
H2-BH000577-0-0250		GT35	12.4			24													Brown Silty, clayey sand with gravel (SC-SM)
H2-BH000582-0-0040		GT36	25.4			23		7.1											Grey-Brown Silty, clayey sand with gravel (SC-SM)
H2-BH000582-0-0060		GT37	6.7			13		0.9											Brown Silty sand with gravel (SM)
H2-BH000582-0-0080		GT38	55.6			45													Brown Clayey sand (SC)
H2-BH000583-0-0040		GT39	16.6			24		2.5											Brown silty clayey sand (SC-SM)
H2-BH000583-0-0100		GT40	9.3			53													Brown Sandy silt with gravel (ML)
H2-BH000583-0-0250		GT41	34.4			67		0.8											Grey-Brown Sandy lean clay (CL)
H2-BH000578-0-0020		GT42	12.1			16													Brown Silty sand (SM)
H2-BH000578-0-0100		GT43	21.4			12													Brown Silty sand with gravel (SM)
H2-BH000578-0-0200		GT44	10.6			44													Brown Silty , clayey sand with gravel (SC-SM)

LABORATORY TESTING DATA SHEET

Project Name: HOUSATONIC RIVER PROJECT
PITTSFIELD, MA.
Project No.: 1.16350
Project Engineer: D. SCHULZE
Assigned By: K. SPITTLER
Rev'd by: MCM/DAS
Chain Of Custody: 2746
Lab Batch No.: 02-12
Date Received: 7/9/02

Sample ID	Depth ft.	Lab No.	Identification Tests: Water Content %	LL %	PL %	Sieve -200 %	Hyd -2μ %	Organic %	G_s	Bulk Density (pcf)	Density: γ_d MAX (pcf) W_{opt} (%)	Perme-ability cm/sec	Strength Tests: Torvane or Type Test	$\bar{\sigma}_c$ psf	Failure Criteria	$\sigma_1 - \sigma_3$ or τ psf	Strain %	Consol. $\frac{C_c}{1+e_0}$	Laboratory Log and Soil Description
112-BH000633-0-0040		GT45	12.1	21	16	40	9		2.75										Brown Silty, clayey sand with gravel (SC-SM)
112-BH000606-0-0020		GT46	9.9			28	5												Brown Silty sand (SM)
112-BH000606-0-0060		GT47	11.9	17	15	57	12												Brown Sandy silt (ML)
112-BH000636-0-0040		GT48	13.5			40	10												Brown Silty, clayey sand (SC-SM)
112-BH000636-0-0060		GT49	9.8			29	4												Brown Silty sand with gravel (SM)
112-BH000638-0-0080		GT50	25.5	29	22	43	7		2.67										Brown Silty, clayey sand (SC-SM)
112-BH000638-0-0020		GT51	11.0			14													Brown Silty gravel with sand (GM)
112-BH000715-0-0000		GT52	34.3			36	3		2.51										Brown Silty, clayey sand (SC-SM) Note:Organic Matter in sample
112-BH000714-0-0020		GT53	9.5			23	4		2.69										Brown Silty, clayey gravel with sand (GC-GM)
112-BH000715-0-0060		GT54	9.5			24	3												Brown Silty sand with gravel (SM)
112-BH000751-0-0040		GT55	21.9			29	6		2.65										Brown Silty, clayey sand (SC-SM)
112-BH000630-0-0100		GT56	14.5			11													Brown Poorly-graded sand with silt and gravel (SP-SM)
112-BH000630-0-0170		GT57	24.4			73	12												Grey-Brown silty clay with sand (CL-ML)

LABORATORY TESTING DATA SHEET

Project Name: HOUSATONIC RIVER PROJECT
PITTSFIELD, MA

Project No.: L16350 — Assigned By: K. SPITTLER — Chain Of Custody: 2746

Project Engineer: D. SCHULZE — Rev'd by: MCM/DAS — Lab Batch No.: 02-12 — Date Received: 7/9/02

Sample ID	Depth ft.	Lab No.	Identification Tests: Water Content %	LL %	PL %	Sieve -200 %	Hyd -2μ %	Organic %	G_s	Bulk Density (pcf)	Density: γ_d MAX (pcf) / W_{opt} (%)	Perme-ability cm/sec	Strength Tests: Torvane or Type Test	$\bar{\sigma}_c$ psf	Failure Criteria	$\sigma_1 - \sigma_3$ or τ psf	Strain %	Consol. $\frac{\Delta e}{1 + e_0}$	Laboratory Log and Soil Description
QA-BH000580-0-0040		GT58	12.0			24	3		2.66										Brown Silty, clayey sand with gravel (SC-SM)
QA-BH000579-0-0150		GT59	29.8			30	3		2.60										Brown Silty sand (SM) Note: Organic Matter in sample

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labform1.xls

LABORATORY TESTING DATA SHEET

Project Name: HOUSATONIC RIVER PROJECT
PITTSFIELD, MA.
Project No.: L16350
Project Engineer: D. SCHULZE
Assigned By: K. SPITTLER
Rev'd by: MCM/DAS
Chain Of Custody: 2726
Lab Batch No.: 02-13
Date Received: 7/9/02

Sample ID	Depth ft.	Lab No.	Identification Tests: Water Content %	LL %	PL %	Sieve -200 %	Hyd -2μ %	Organic %	G_s	Bulk Density (pcf)	Density: γ_d MAX (pcf) W_{opt} (%)	Permeability cm/sec	Strength Tests: Torvane or Type Test	$\bar{\sigma}_c$ psf	Failure Criteria	$\sigma_1 - \sigma_3$ or τ psf	Strain %	Consol. $\frac{\Delta e}{1 + e_0}$	Laboratory Log and Soil Description
H2-BH000630-0-0020		GT60	10.7			5													Brown Well graded sand with silt and gravel (SW-SM)
H2-BH000635-0-0140		GT61	12.6			60													Grey Sandy silty clay (CL-ML)
H2-BH000579-0-0040		GT62	18.0			34	4												Brown silty, clayey sand (SC-SM)
H2-BH000579-0-0300		GT63	14.6			46													Grey-Brown Silty, clayey sand with gravel (SC-SM)
H2-BH000606-0-0080		GT64	13.3			53	12												Brown Sandy silty clay (CL-ML)
H2-BH000606-0-0140		GT65	12.2			32		1.7											Brown Silty, clayey gravel with sand (GC-GM)

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labform1.xls

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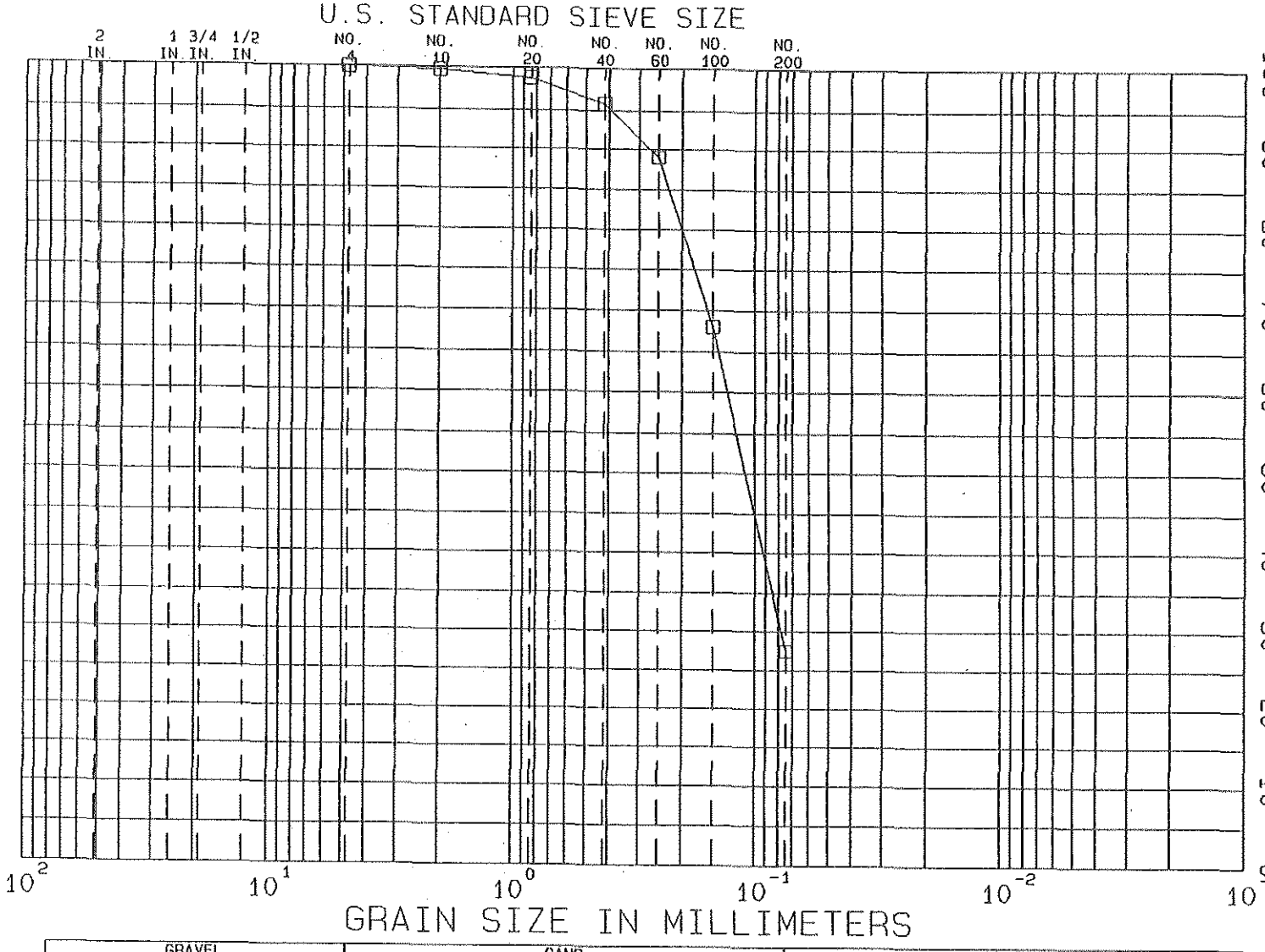
ENGINEERS AND SCIENTISTS

HOUSATONIC RIVER PROJECT

GRADATION TESTS

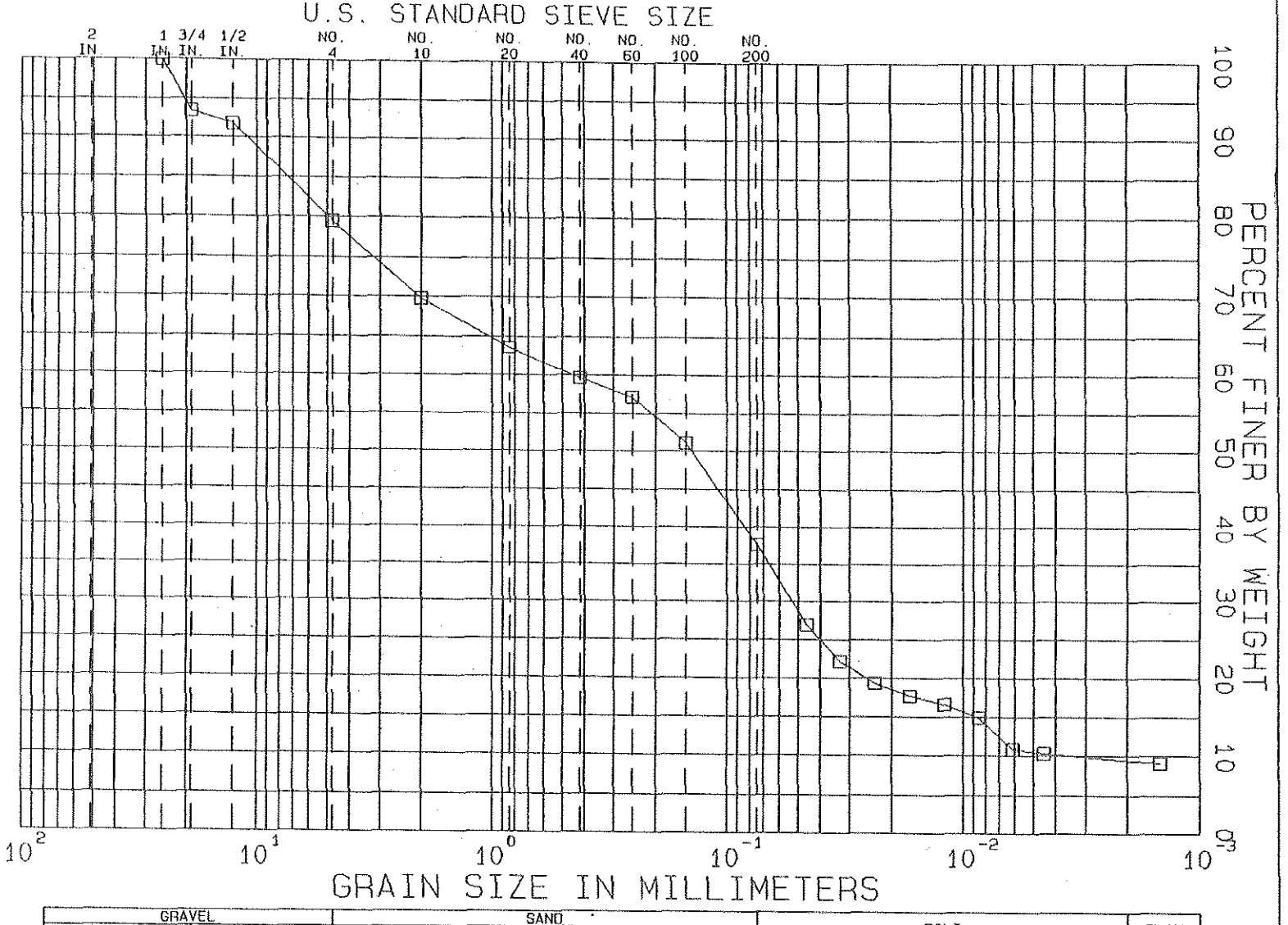
BORING NO.
SAMPLE
DEPTH
TECH. MST
REVIEWER DAS

TEST SERIES
NO. 22
DATE June 02
FILE L16350



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-22	SAMPLE ID H2-BH000629-0-0060	Brown Silty sand (SM)



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-23	SAMPLE ID H2-BH000629-0-0210	Brown Silty, clayey sand (SC-SM)

HOUSATONIC RIVER PROJECT

GRADATION TESTS

BORING NO.
SAMPLE
DEPTH
TECH MST
REVIEWER DAS

TEST SERIES
NO. 23
DATE June 02

FILE L16350

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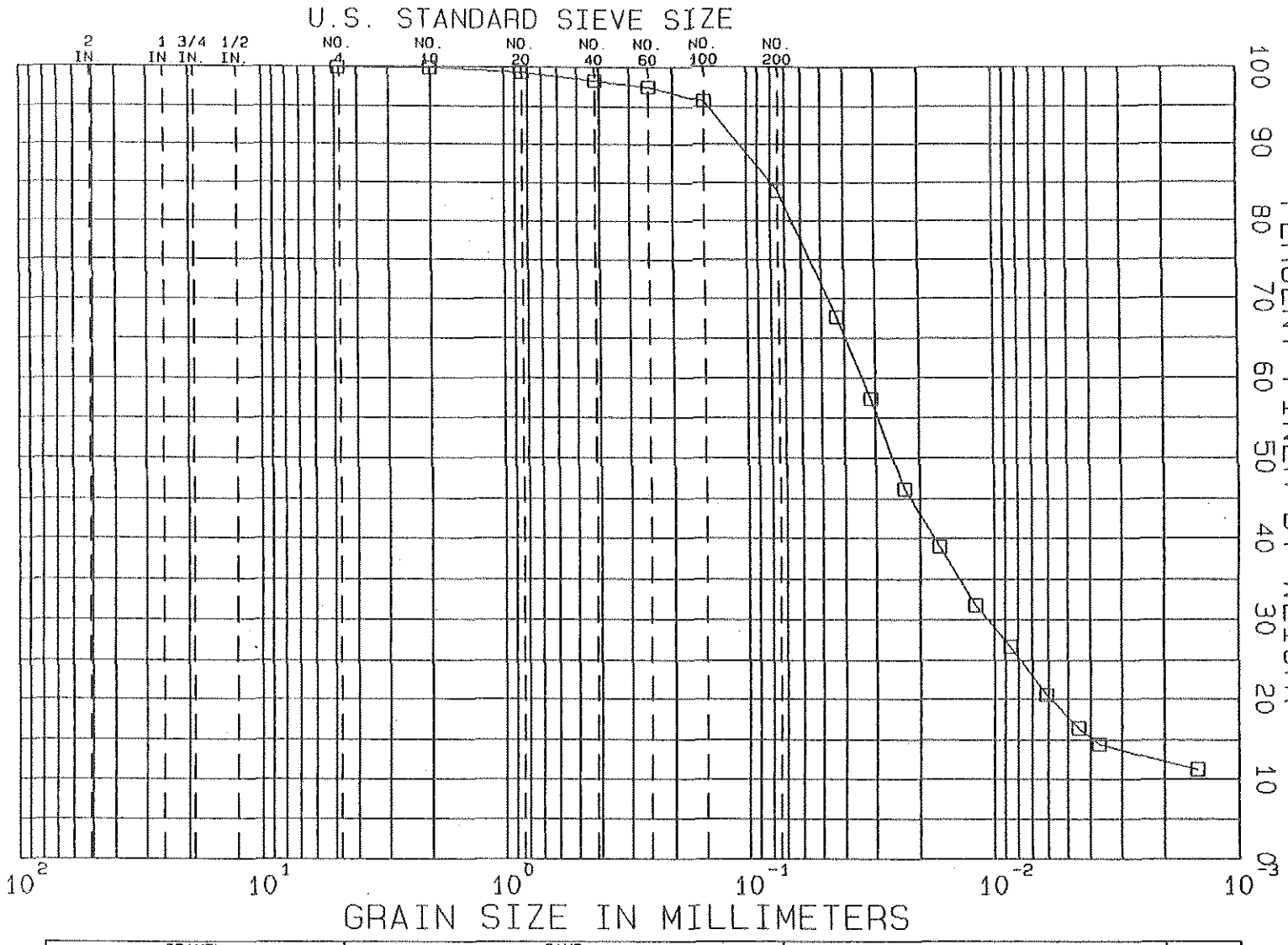
ENGINEERS AND SCIENTISTS



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-24	SAMPLE ID H2-BH000585-0-0130	Brown Organic silt (OH)

HOUSATONIC RIVER PROJECT

GRADATION TESTS

BORING NO.
SAMPLE
DEPTH
TECH. MST
REVIEWER DAS

TEST SERIES NO. 24
DATE June 02
FILE L16350

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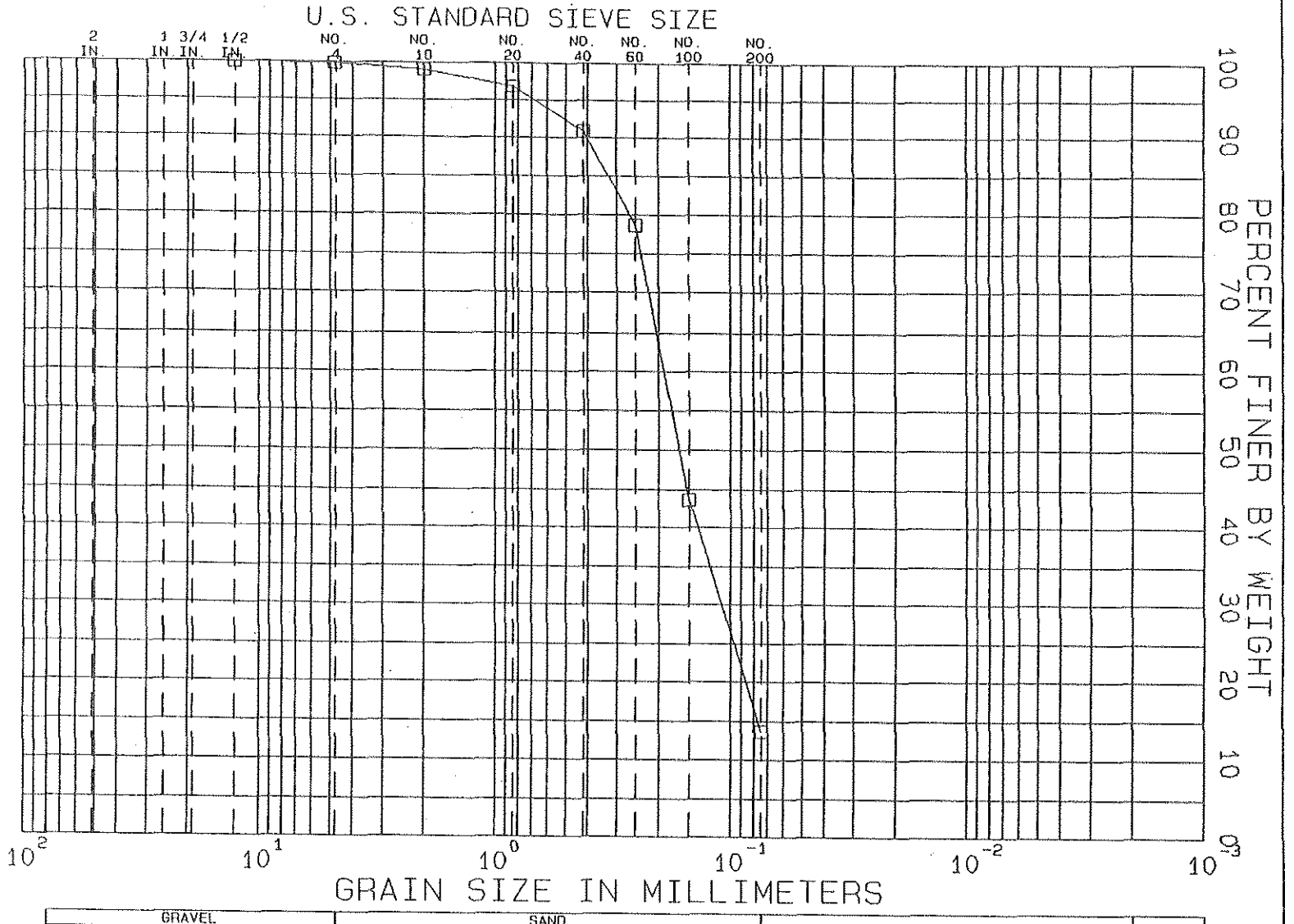

GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-25	SAMPLE ID H2-BH000585-0-0330	Brown Silty sand (SM)

HOUSATONIC RIVER PROJECT

GRADATION TESTS

BORING NO.
SAMPLE
DEPTH
TECH MST
REVIEWER DAS

TEST SERIES
NO. 25
DATE June 02
FILE L16350

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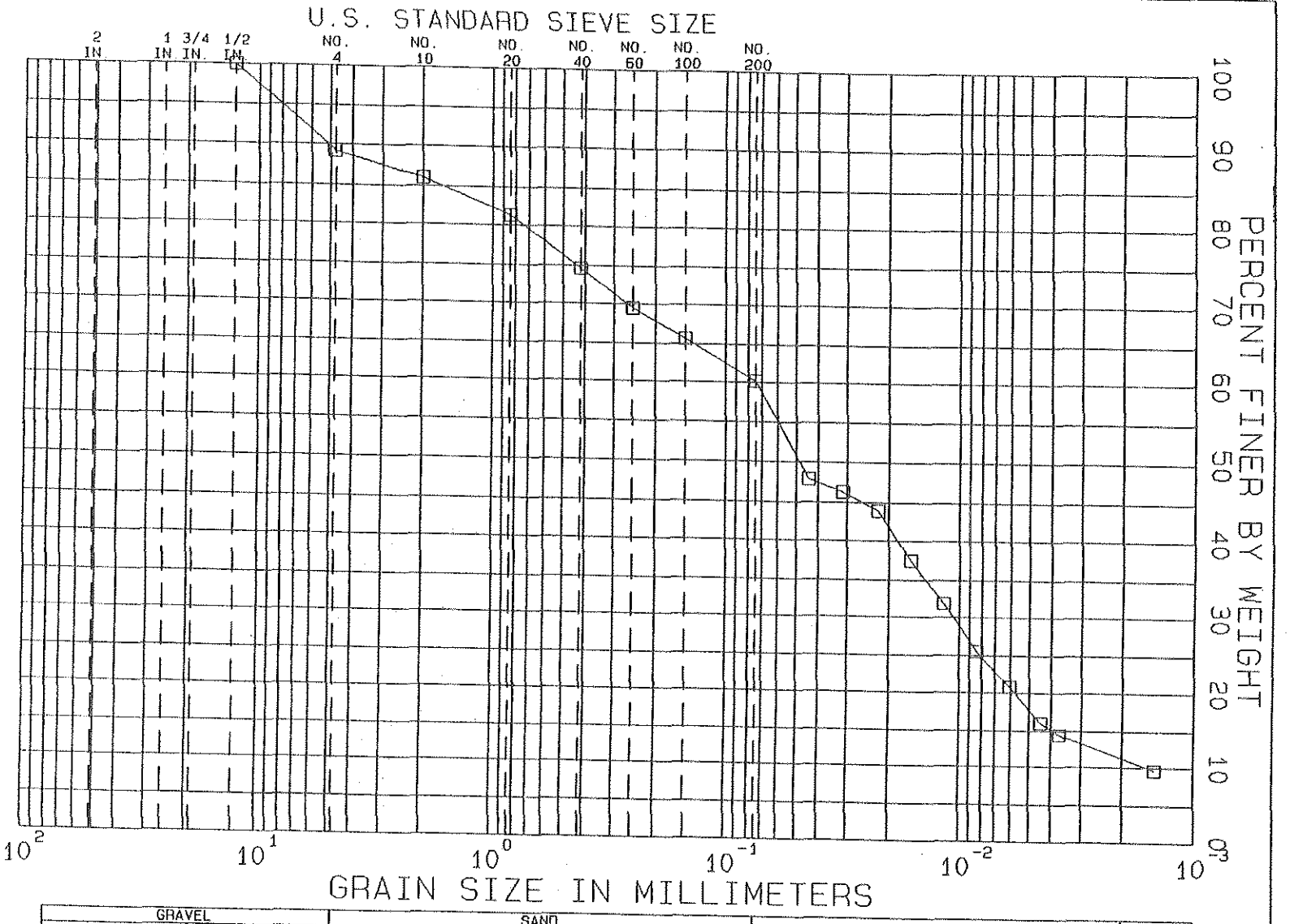


GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-26	SAMPLE ID H2-BH000585-0-0380	Brown lean clay with sand (CL)

HOUSATONIC RIVER PROJECT

GRADATION TESTS

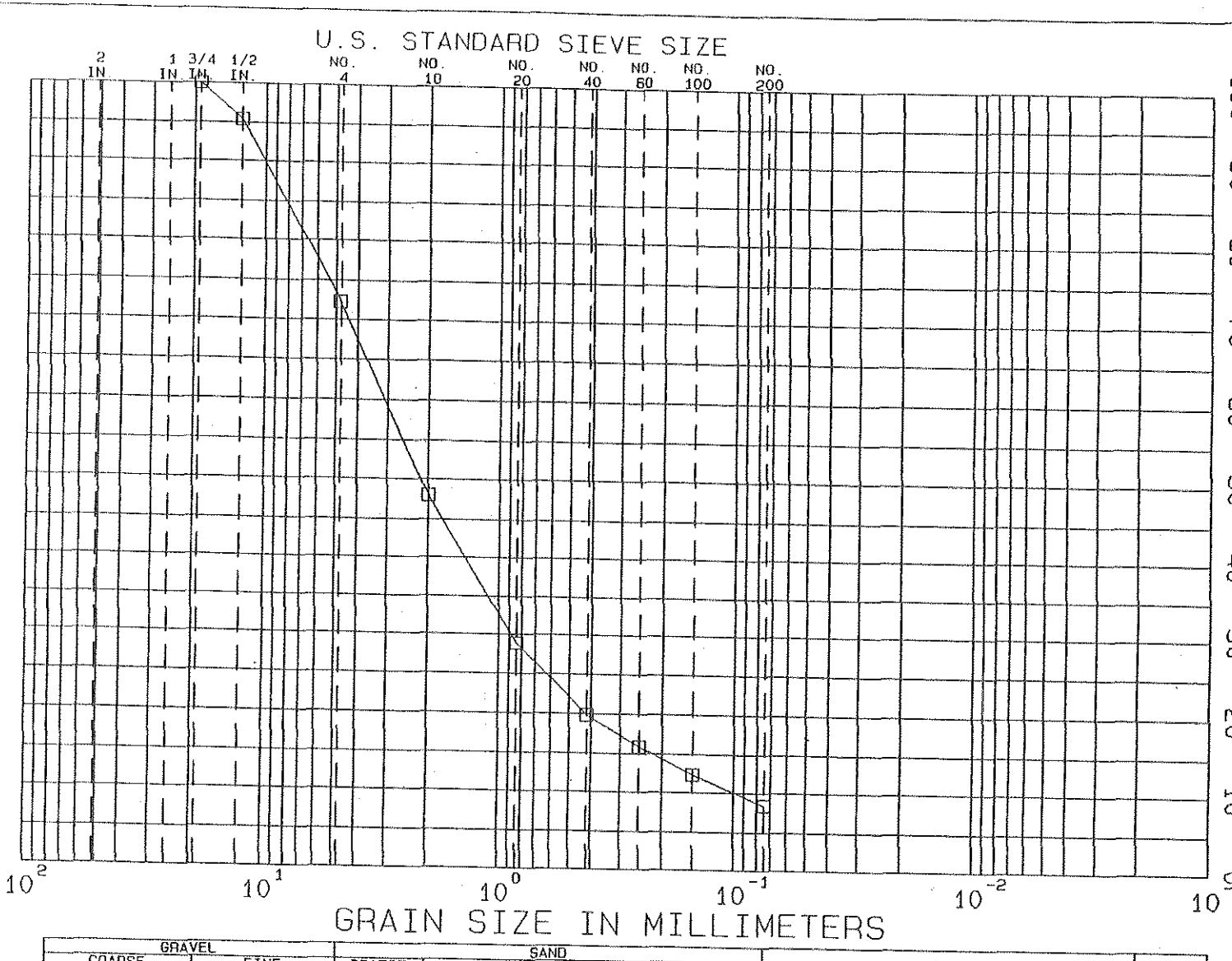
BORING NO.
SAMPLE
DEPTH
TECH MST
REVIEWER DAS

TEST SERIES
NO. 26
DATE June 02

FILE L16350

APPENDIX E-9

S.3



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-27	SAMPLE ID H2-BH000631-0-0040	Brown Well graded sand with silt and gravel (SW-SM)

HOUSATONIC RIVER PROJECT

GRADATION TESTS

BORING NO.
SAMPLE
DEPTH
TECH. MST
REVIEWER DAS

TEST SERIES NO. 27
DATE June 02

FILE L16350

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APPENDIX E-9

GZA GEOENVIRONMENTAL, INC.
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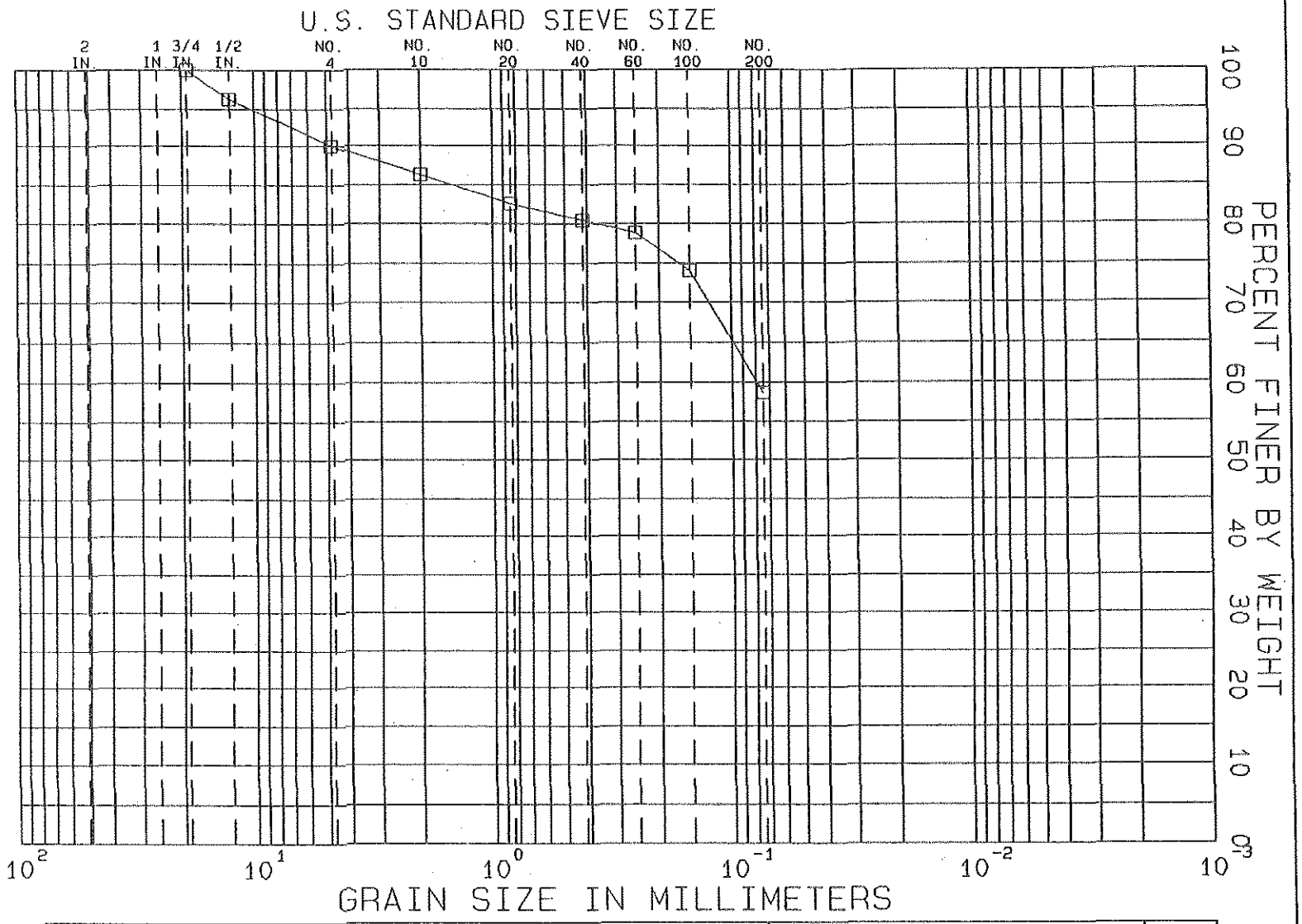


GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-28	SAMPLE ID H2-BH000631-0-0100	Brown Sandy silt (ML)

HOUSATONIC RIVER PROJECT

GRADATION TESTS

BORING NO.
SAMPLE
DEPTH
TECH. MST
REVIEWER DAS

TEST SERIES
NO. 28
DATE June 02
FILE L16350

APPENDIX E-9

S.3

GZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS

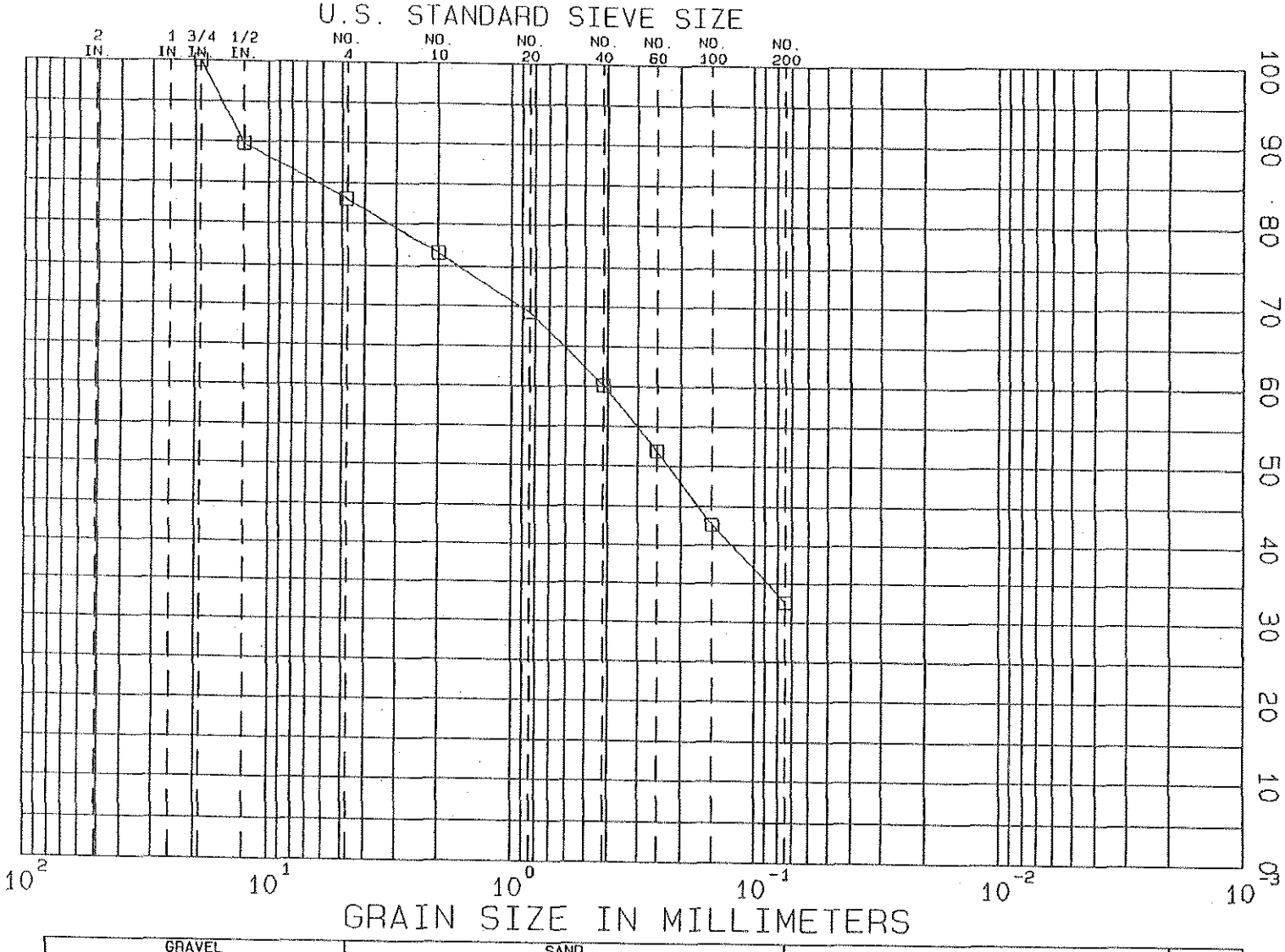
HOUSATONIC RIVER PROJECT

GRADATION TESTS

BORING NO.
SAMPLE
DEPTH
TECH MST
REVIEWER DAS

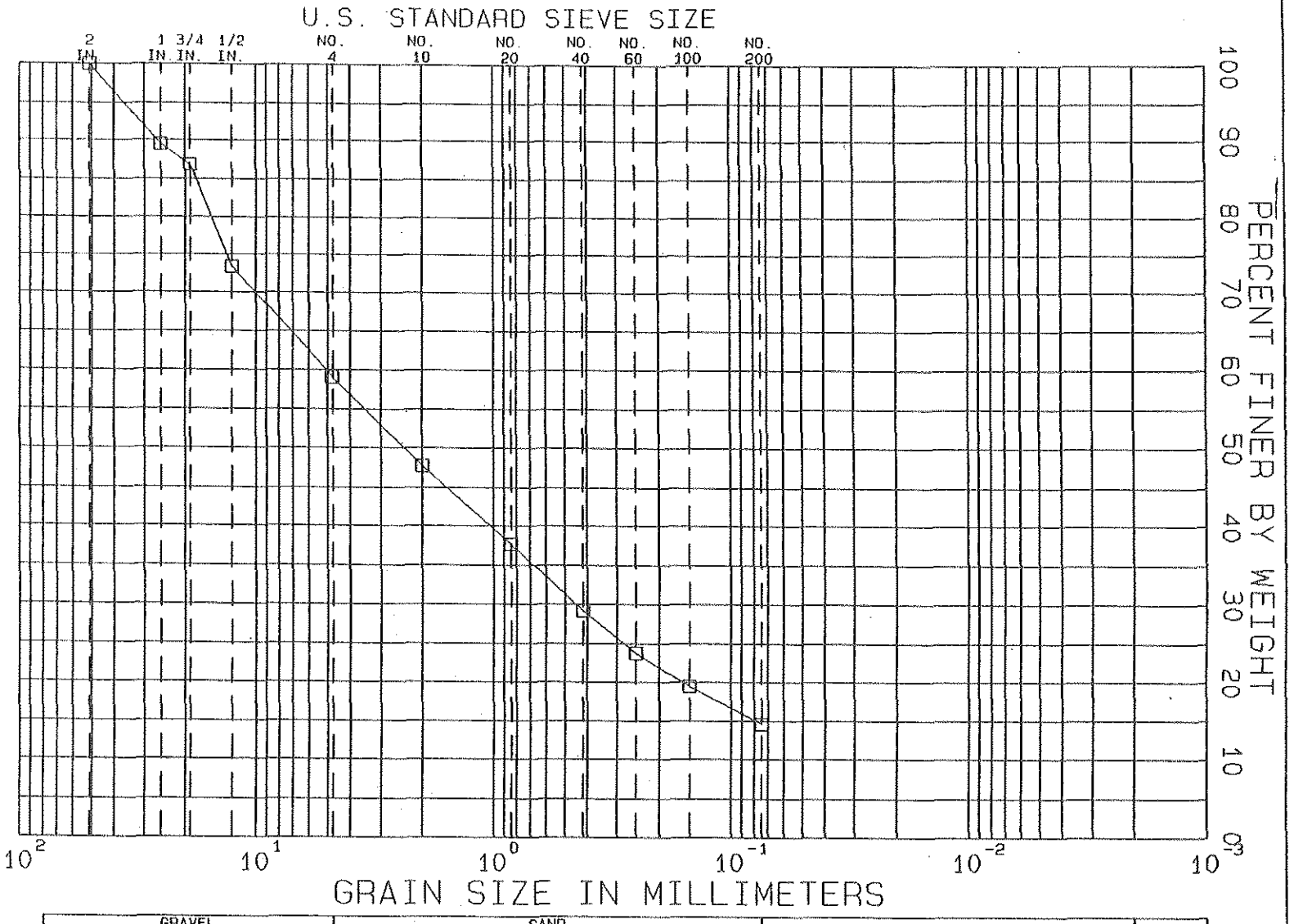
TEST SERIES NO. 29
DATE June 02

FILE L16350



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-29	SAMPLE ID H2-BH000576-0-0020	Brown Silty, clayey sand with gravel (SC-SM)



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-30	SAMPLE ID H2-BH000581-0-0005	Brown Silty sand with gravel (SM)

HOUSATONIC RIVER PROJECT

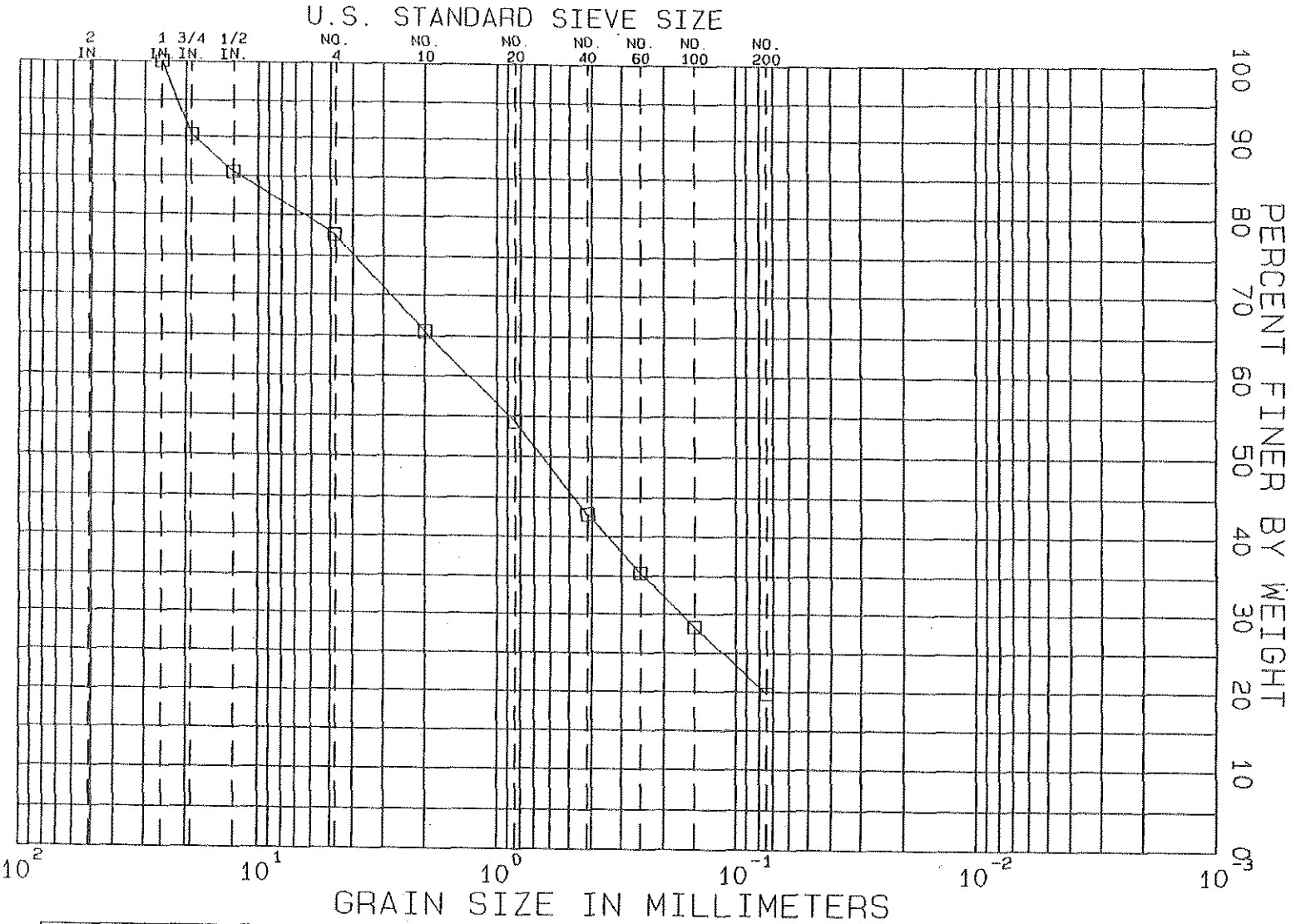
GRADATION TESTS

BORING NO.
SAMPLE
DEPTH
TECH MST
REVIEWER DAS

TEST SERIES
NO. 30
DATE June 02

FILE L16350

GZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-31	SAMPLE ID H2-BH000581-0-0020	Brown Silty sand with gravel (SM)

HOUSATONIC RIVER PROJECT

GRADATION TESTS

BORING NO.
SAMPLE
DEPTH
TECH. MST
REVIEWER DAS

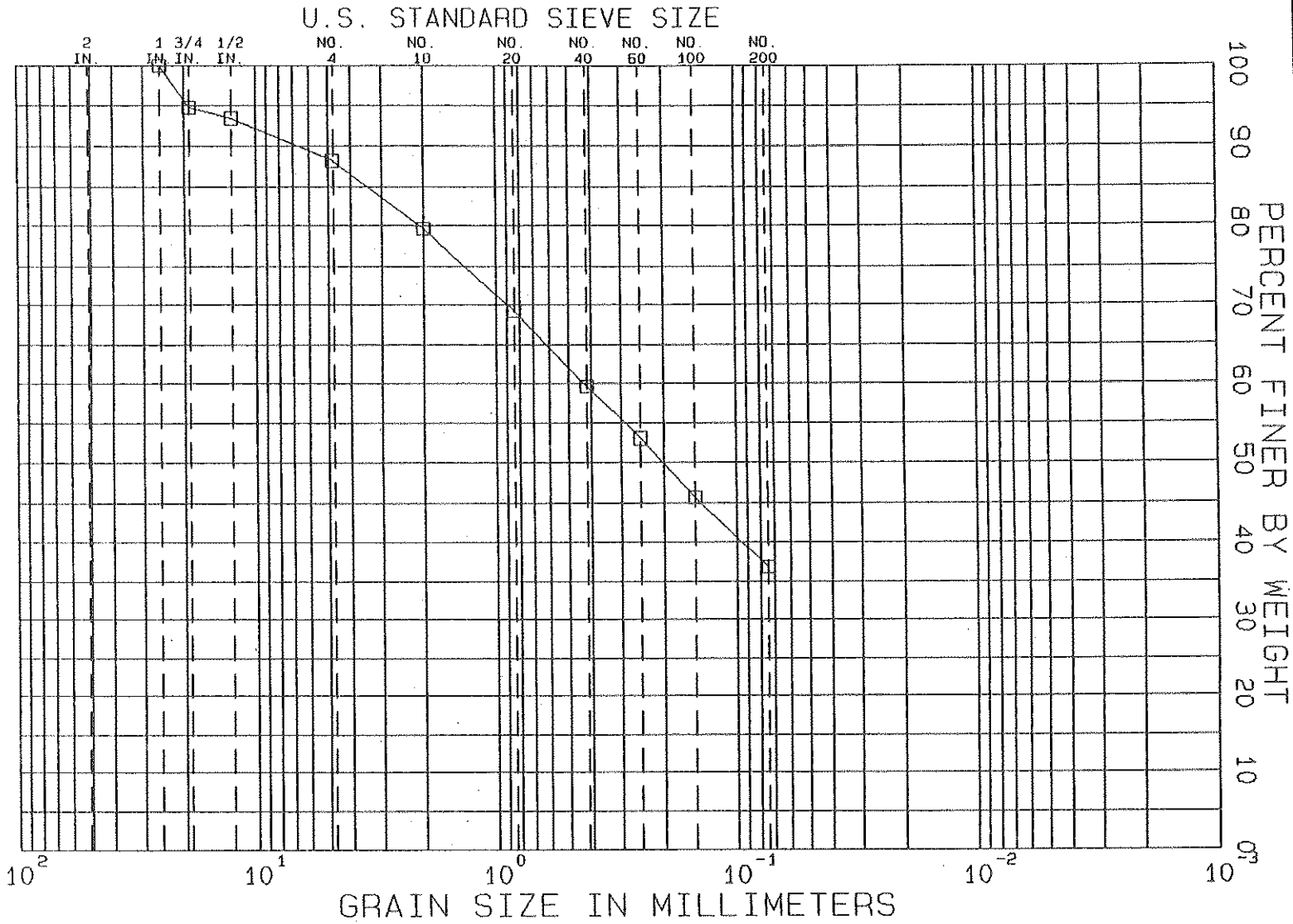
TEST SERIES NO. 31
DATE June 02
FILE L16350

SZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS

APPENDIX E-9

S.3

GZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-32	SAMPLE ID H2-BH0005B1-0-0080	Brown Silty, clayey sand (SC-SM)

HOUSATONIC RIVER PROJECT

GRADATION TESTS

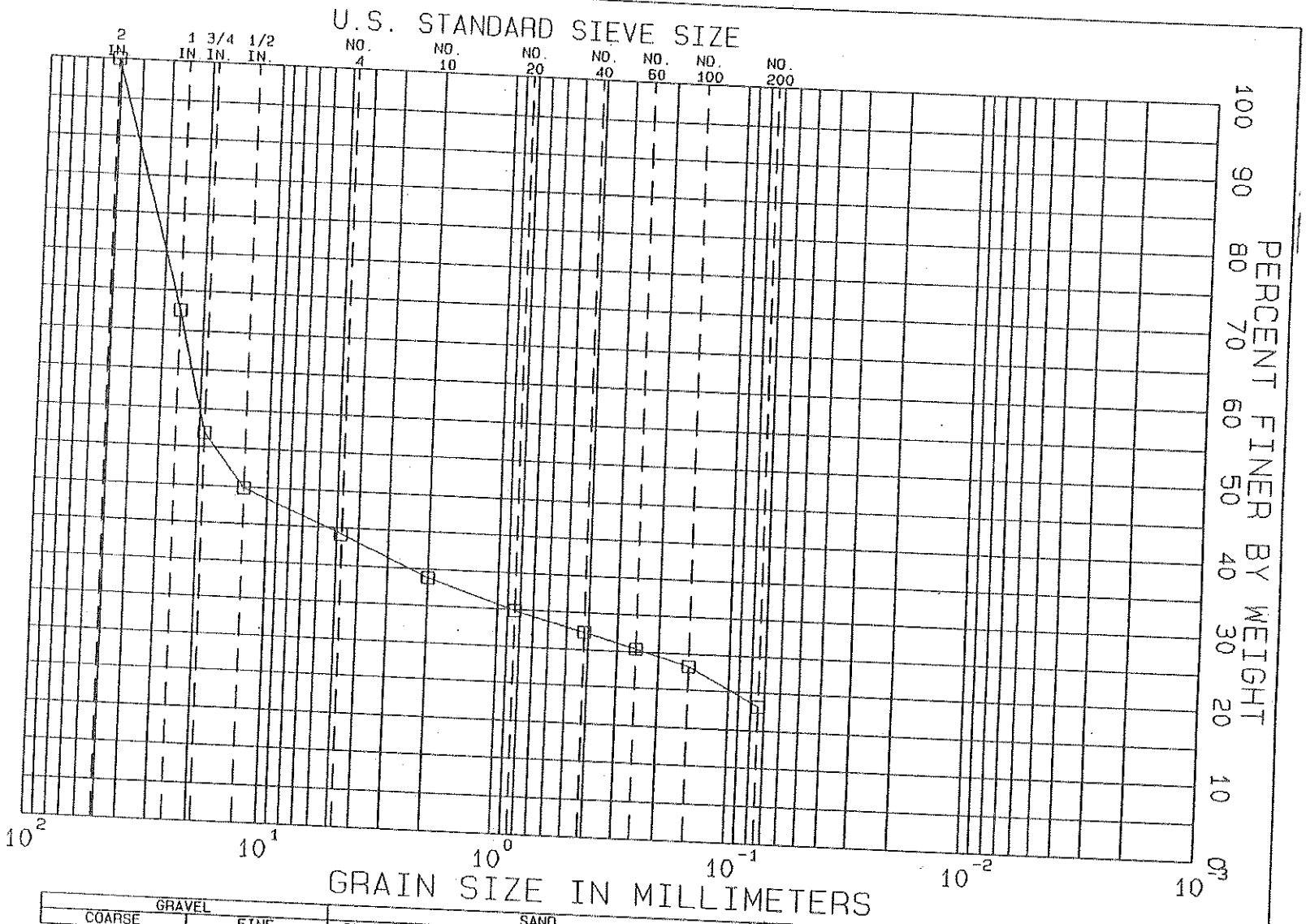
BORING NO.
SAMPLE
DEPTH
TECH. MST
REVIEWER DAS

TEST SERIES
NO. 32
DATE June 02

FILE L16350

APPENDIX E-9

S.3



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-33	SAMPLE ID H2-BH0005B1-0-0200	Brown Silty gravel with sand (GM)

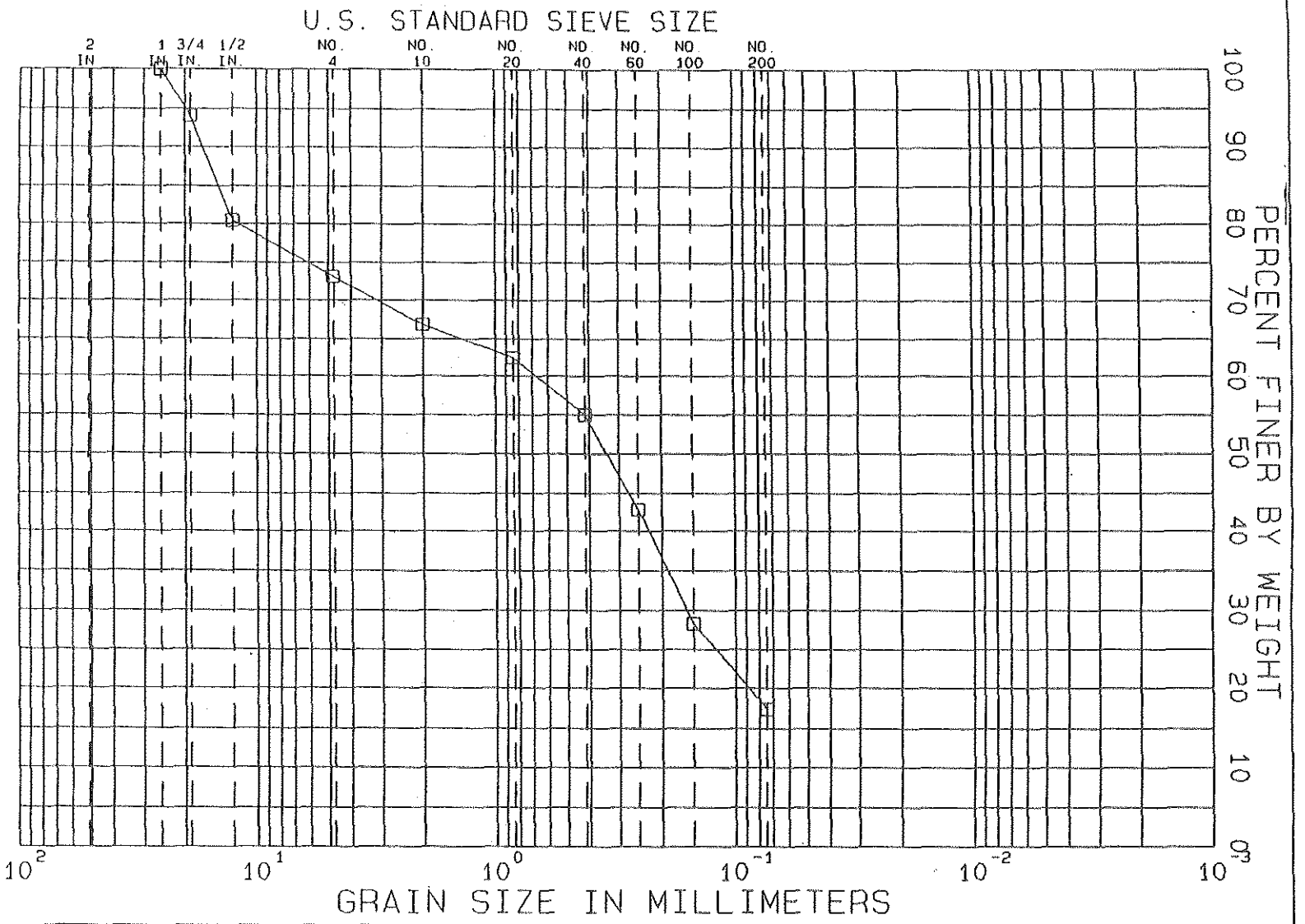
HOUSATONIC RIVER PROJECT

GRADATION TESTS

BORING NO.
SAMPLE
DEPTH
TECH. MST
REVIEWER DAS

TEST SERIES NO. 33
DATE June 02
FILE L16350

GZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-34	SAMPLE ID H2-BH000577-0-0080	Brown Silty sand with gravel (SM)

HOUSATONIC RIVER PROJECT

GRADATION TESTS

BORING NO
SAMPLE
DEPTH
TECH MST
REVIEWER GAS

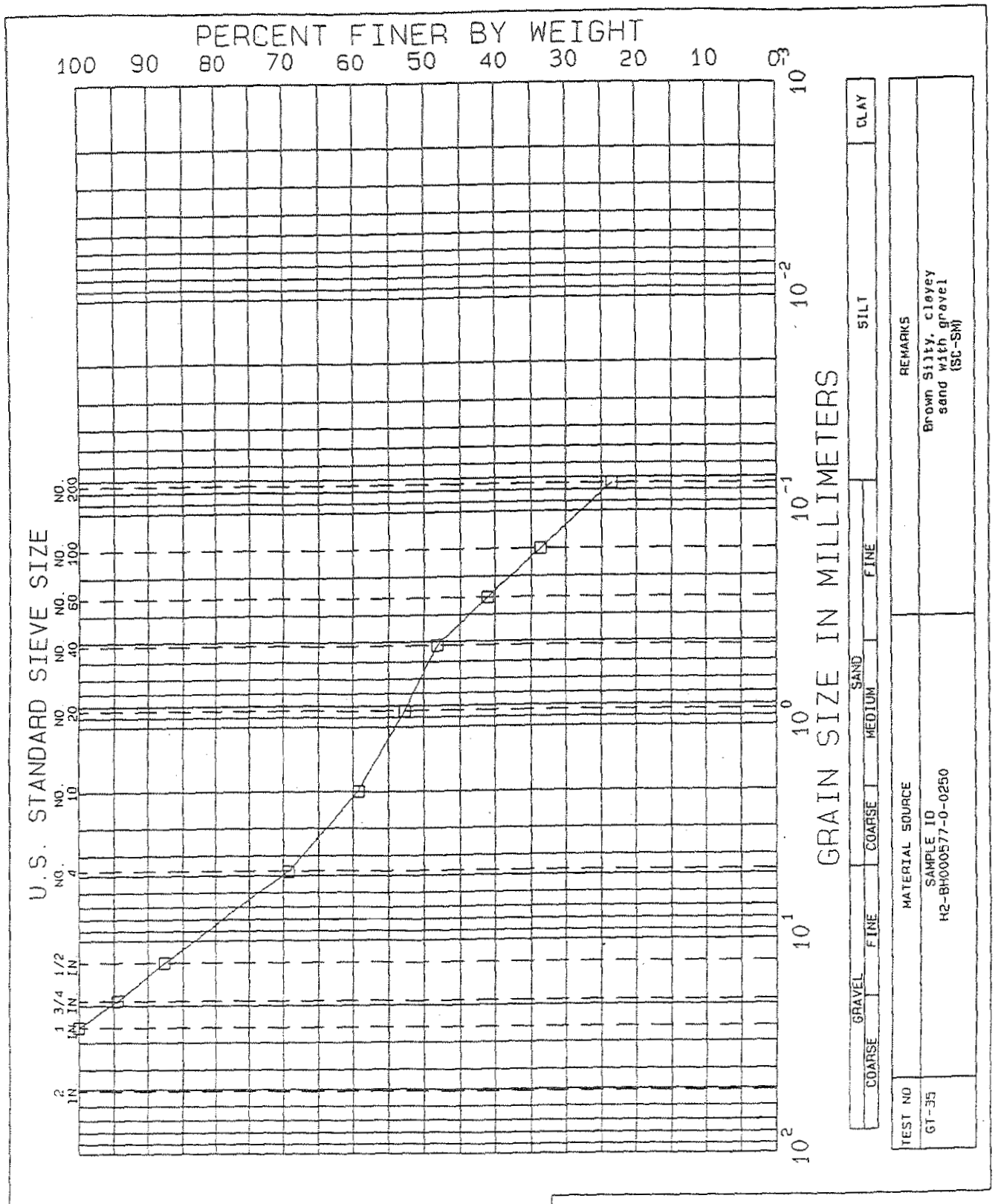
TEST SERIES
NO. 34
DATE June 02

FILE L16350

GZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS

APPENDIX E-9

S 3



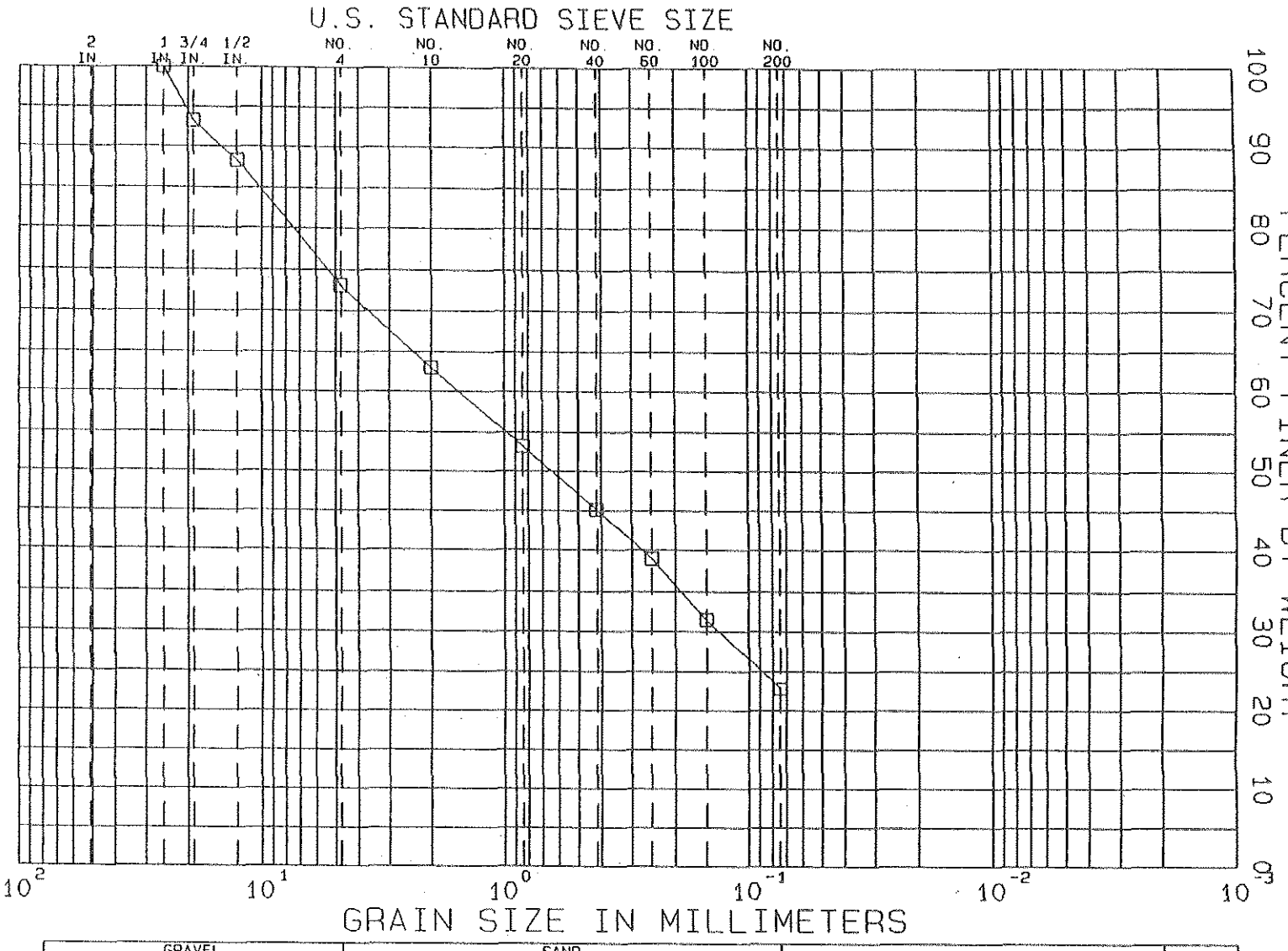
HOUSATONIC RIVER PROJECT

GRADATION TESTS

BORING NO
SAMPLE
DEPTH
TECH MST
REVIEWER DAS

TEST SERIES
NO 35
DATE June 02

FILE L16350



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO	MATERIAL SOURCE	REMARKS
GT-36	SAMPLE ID H2-BH000582-0-0040	Grey-Brown Silty, clayey sand with gravel (SC-SM)

HOUSATONIC RIVER PROJECT

GRADATION TESTS

BORING NO
SAMPLE
DEPTH
TECH MST
REVIEWER DAS

TEST SERIES
NO. 36
DATE June 02
FILE L16350

GZA GEOENVIRONMENTAL, INC
ENGINEERS AND SCIENTISTS

APPENDIX E-9

S 3

GZA GEOENVIRONMENTAL, INC.
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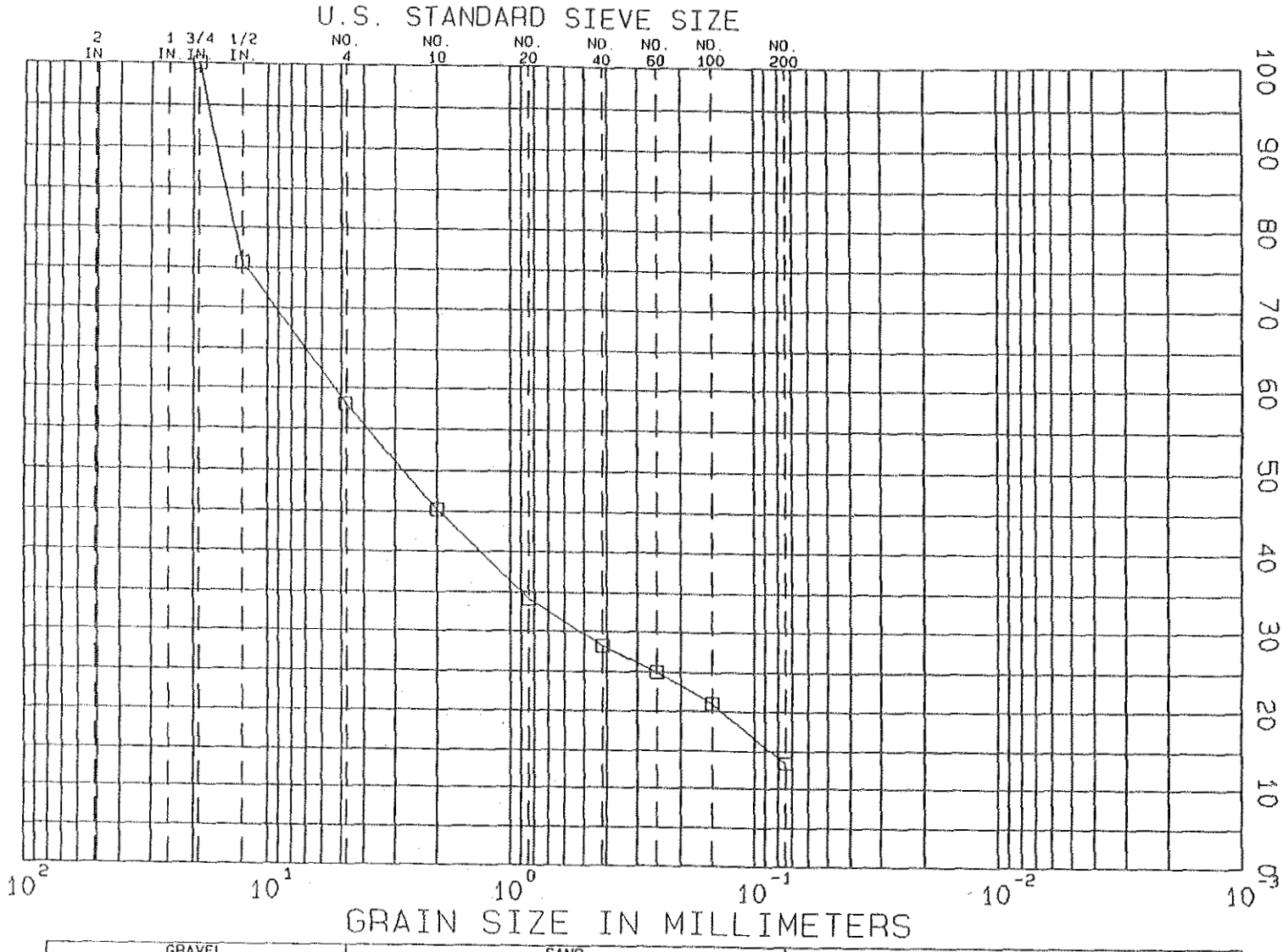


GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO	MATERIAL SOURCE	REMARKS
GT-37	SAMPLE ID H2-BH000582-0-0060	Brown Silty sand with gravel (SM)

HOUSATONIC RIVER PROJECT

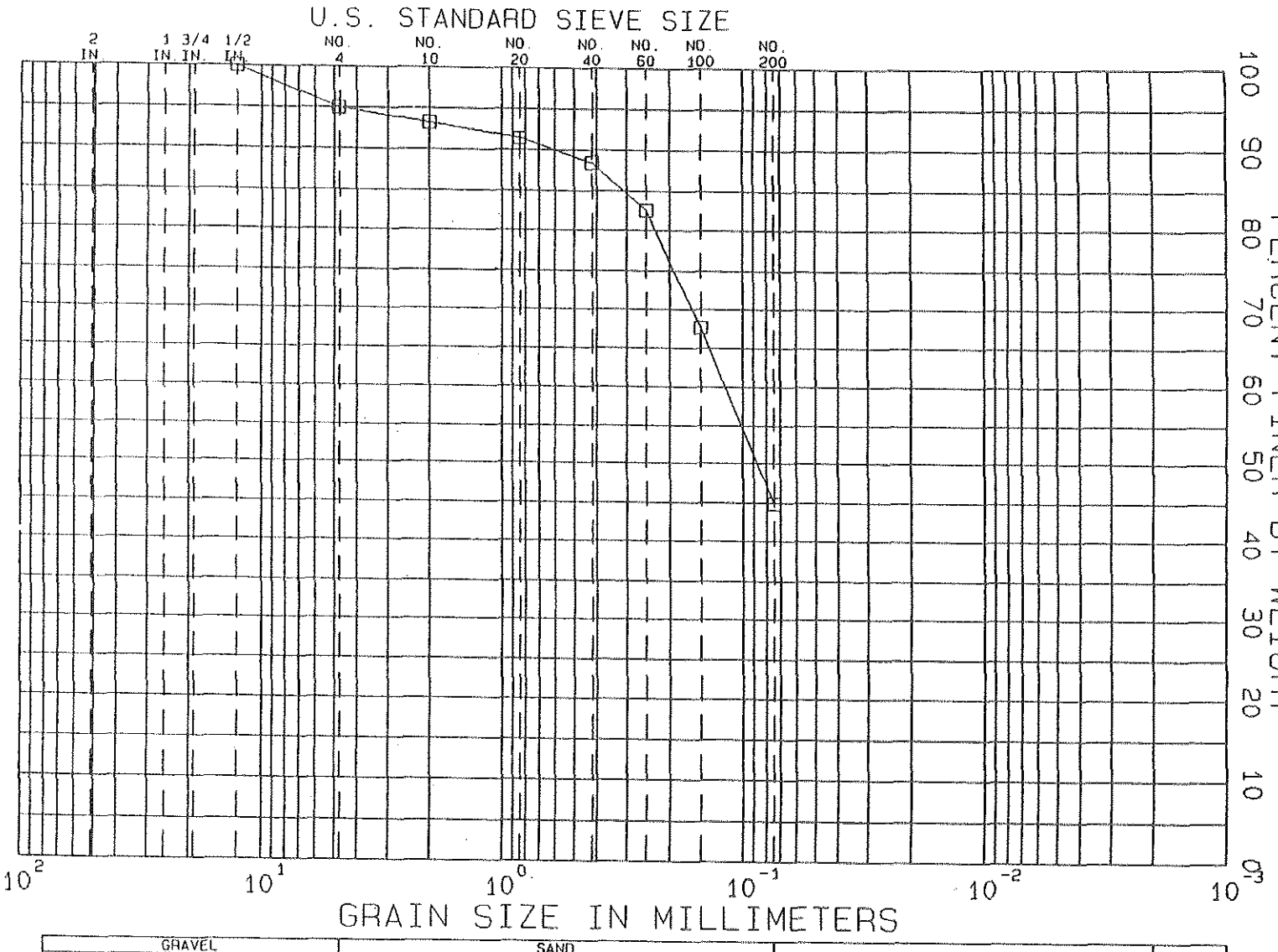
GRADATION TESTS

BORING NO
SAMPLE
DEPTH
TECH MST
REVIEWER DAS

TEST SERIES
NO. 37
DATE June 02

FILE L16350

APPENDIX E-6



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO	MATERIAL SOURCE	REMARKS
GT-38	SAMPLE ID H2-BH000582-0-0080	Brown Clayey sand (SC)

HOUSATONIC RIVER PROJECT

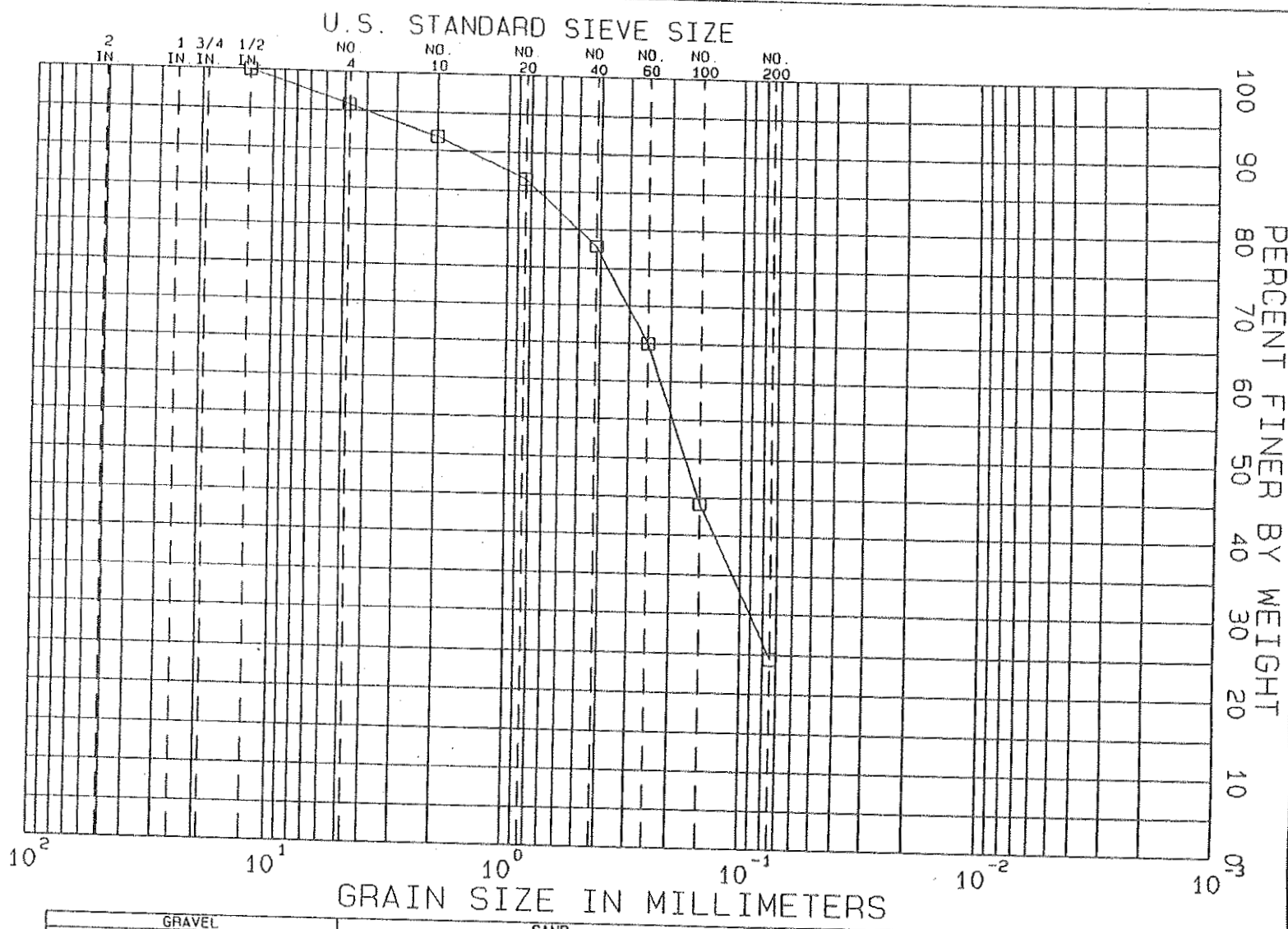
GRADATION TESTS

BORING NO
SAMPLE
DEPTH
TECH MST
REVIEWER DAS

TEST SERIES
NO. 38
DATE June 02
FILE L16350

GZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS

S 3



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO	MATERIAL SOURCE	REMARKS
GT-39	SAMPLE ID H2-BH000583-0-0040	Brown silty, clayey sand (SC-SM)

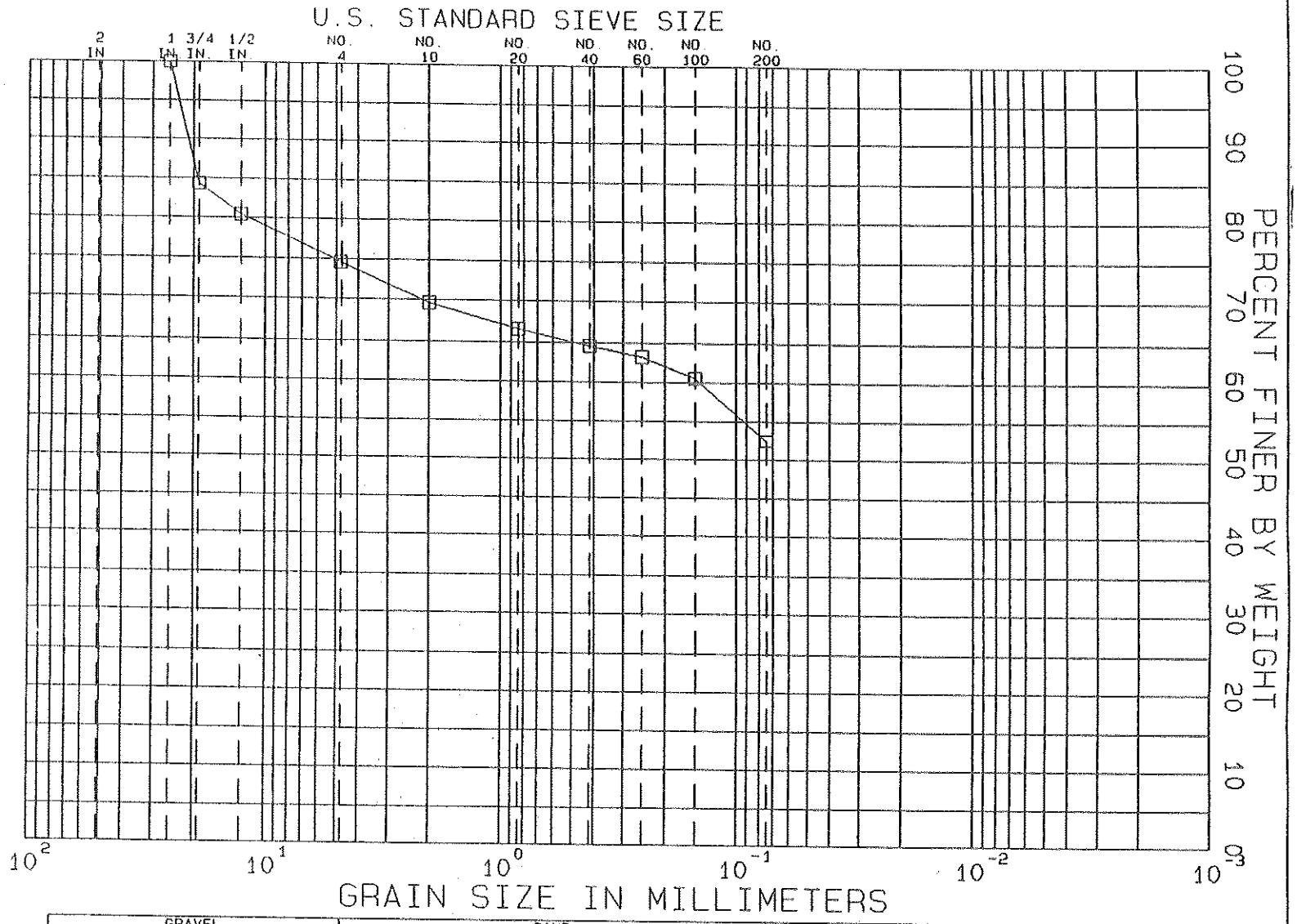
HOUSATONIC RIVER PROJECT

GRADATION TESTS

BORING NO
SAMPLE
DEPTH
TECH MST
REVIEWER DAS

TEST SERIES NO 39
DATE June 02
FILE L16350

GZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-40	SAMPLE ID H2-BH000583-0-0100	Brown Sandy silt with gravel (ML)

HOUSATONIC RIVER PROJECT

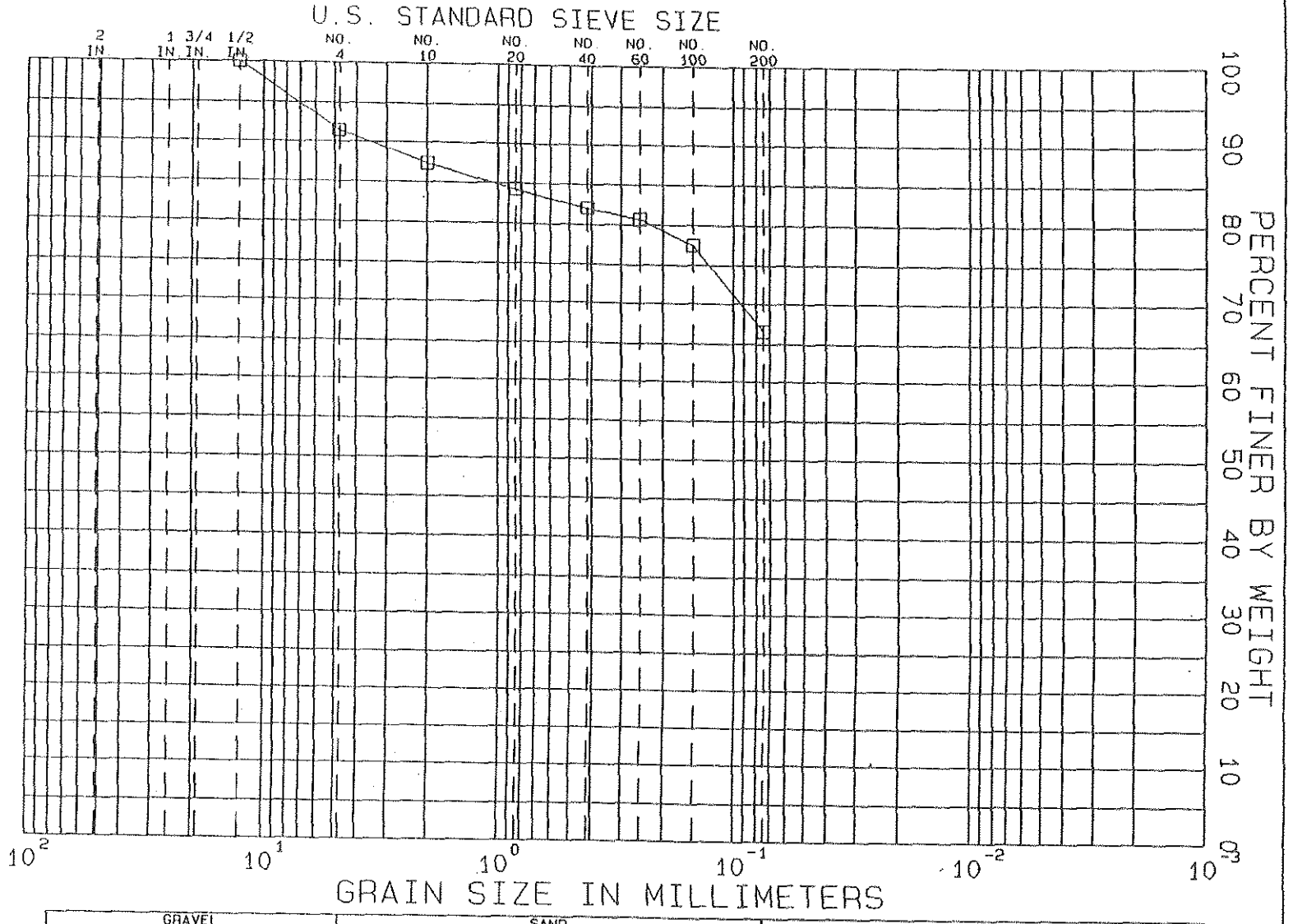
GRADATION TESTS

BORING NO
SAMPLE
DEPTH
TECH MSI
REVIEWER DAS

TEST SERIES NO 40
DATE June 02
FILE L16350

DEPENCIY E-8

S 3



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO	MATERIAL SOURCE	REMARKS
GT-41	SAMPLE ID H2-BH000583-0-0250	Grey-Brown Sandy lean clay (CL)

HOUSATONIC RIVER PROJECT

GRADATION TESTS

BORING NO
SAMPLE
DEPTH
TECH MST
REVIEWER DAS

TEST SERIES NO 41
DATE June 32
FILE L16350

GZA GEOENVIRONMENTAL, INC.
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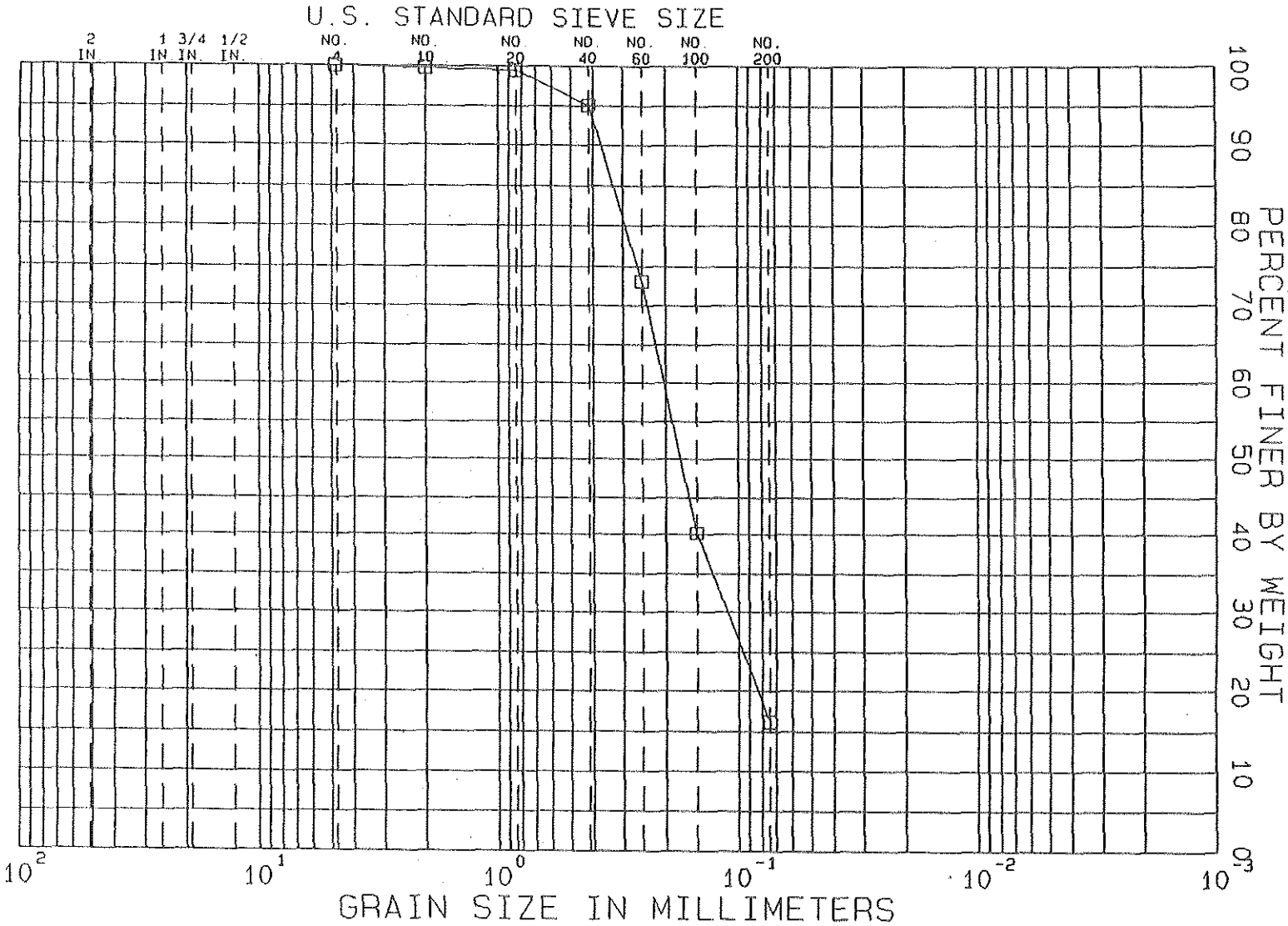


GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO	MATERIAL SOURCE	REMARKS
GT-42	SAMPLE ID H2-BH000578-0-0020	Brown Silty sand (SM)

HOUSATONIC RIVER PROJECT

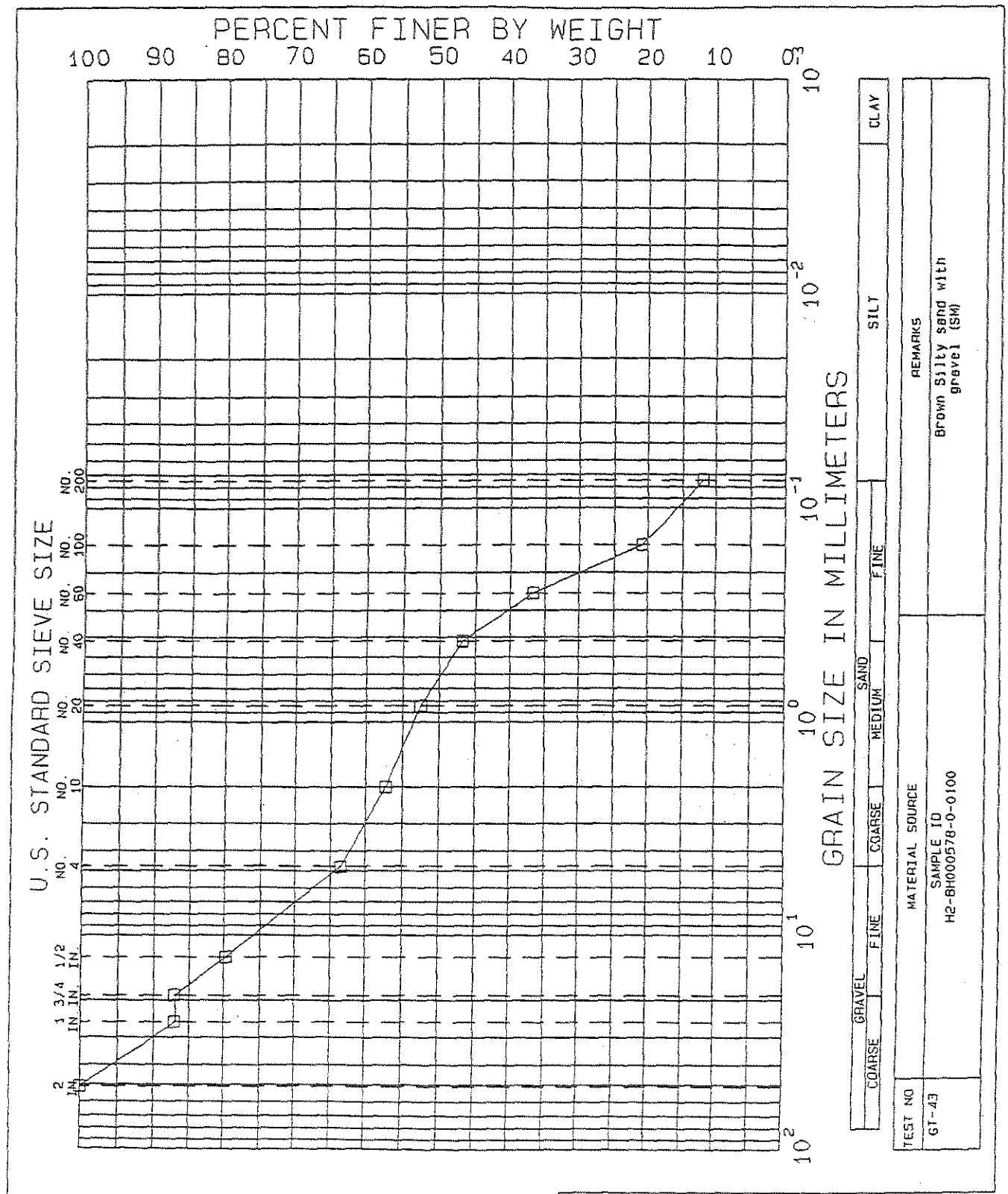
GRADATION TESTS

SOBING NO
SAMPLE
DEPTH
TECH MST
REVIEWER DAS

TEST SERIES NO. 42
DATE June 02
FILE L16350

APPENDIX E-9

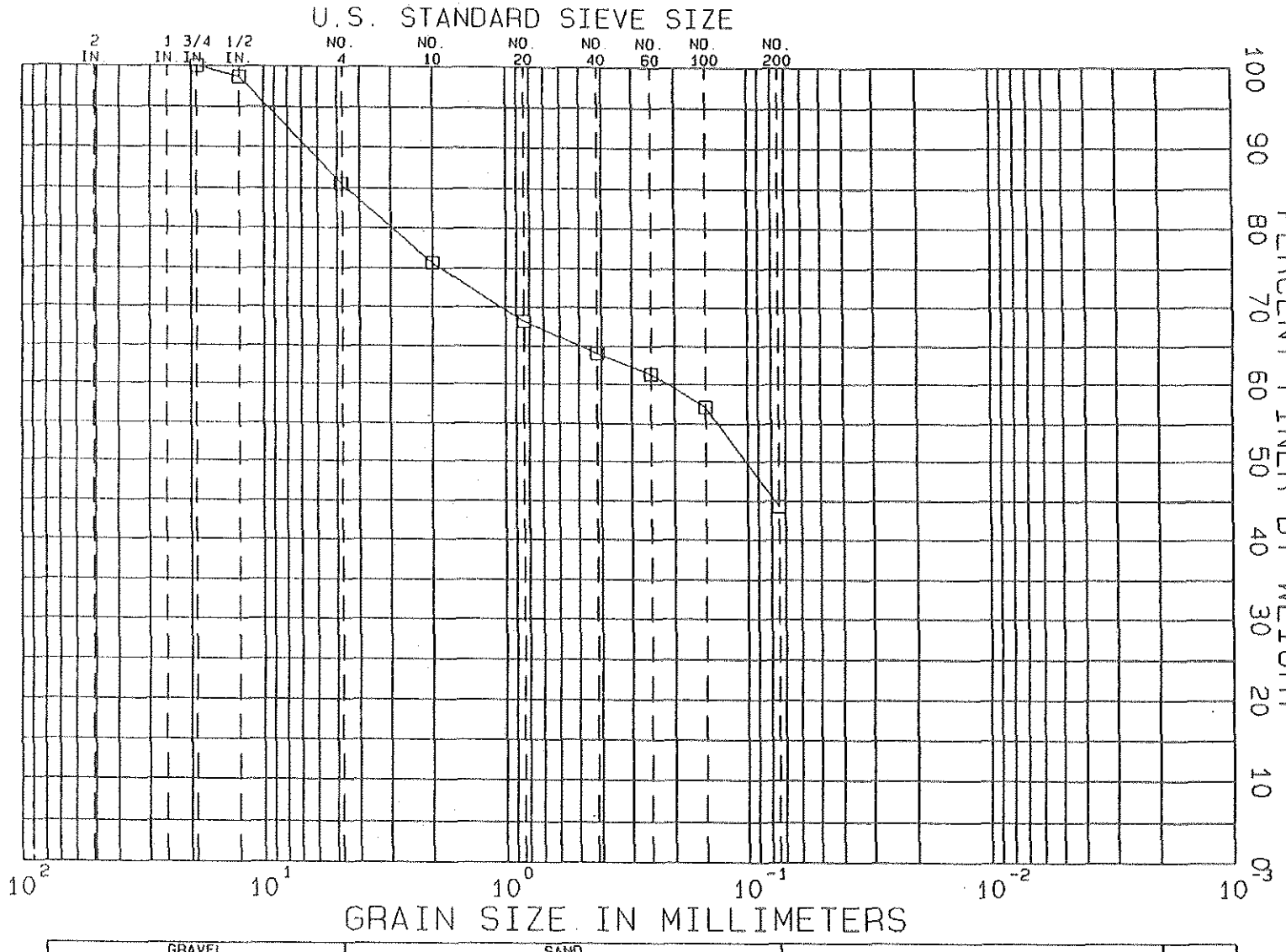
S 3



HOUSATONIC RIVER PROJECT

GRADATION TESTS

BORING NO		TEST SERIES	
SAMPLE		NO	43
DEPTH		DATE	June 02
TECH	MST		
REVIEWER	DAS	FILE	L16350



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO	MATERIAL SOURCE	REMARKS
GT-44	SAMPLE ID H2-BH000578-0-0200	Brown Silty, clayey sand with gravel (SC)

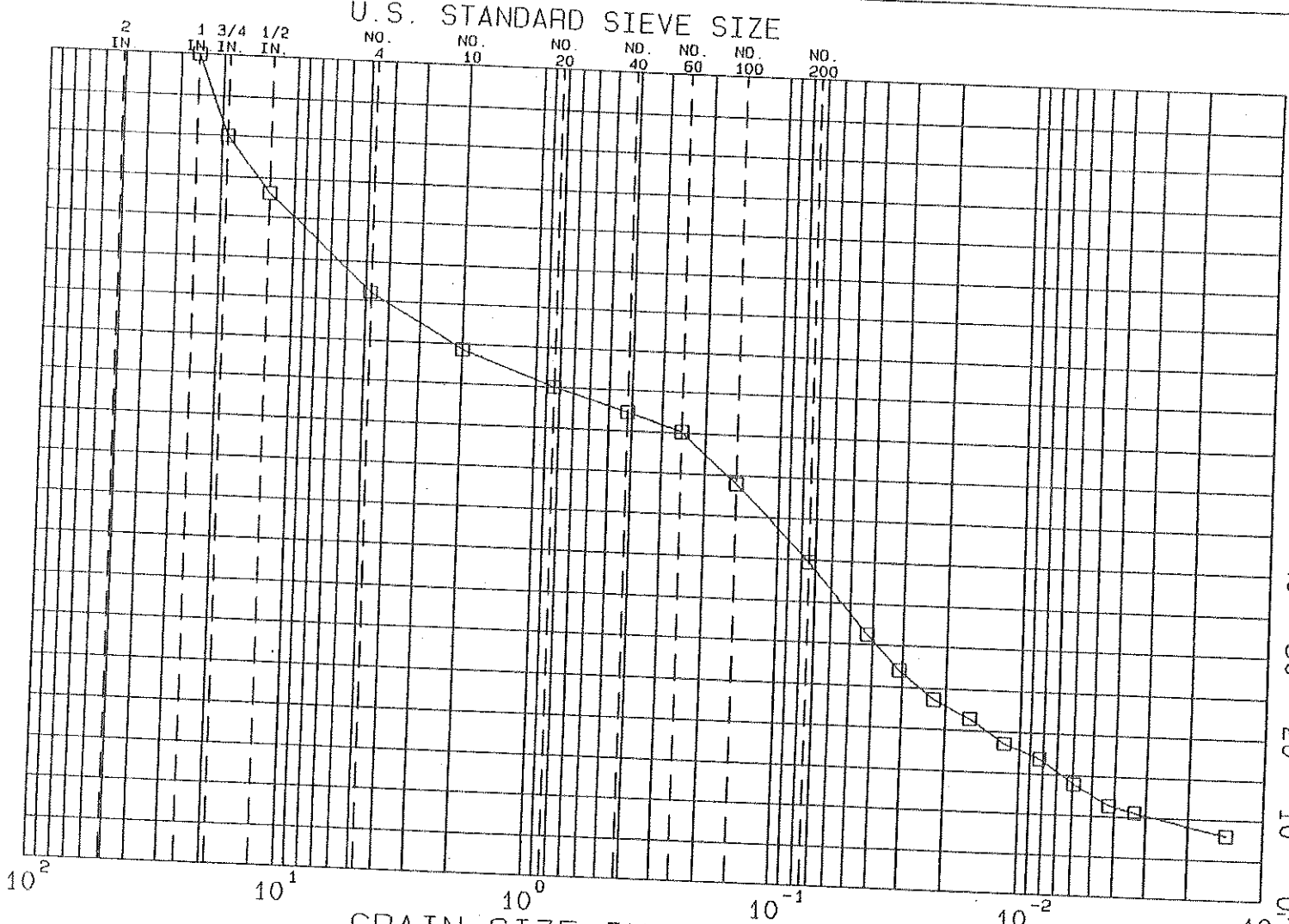
HOUSATONIC RIVER PROJECT

GRADATION TESTS

BORING NO
SAMPLE
DEPTH
TECH MST
REVIEWER DAS

TEST SERIES
NO 44
DATE June 02
FILE L16350

GZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-45	SAMPLE ID H2-BH000633-0-0040	Brown Silty, clayey sand with gravel (SC-SM)

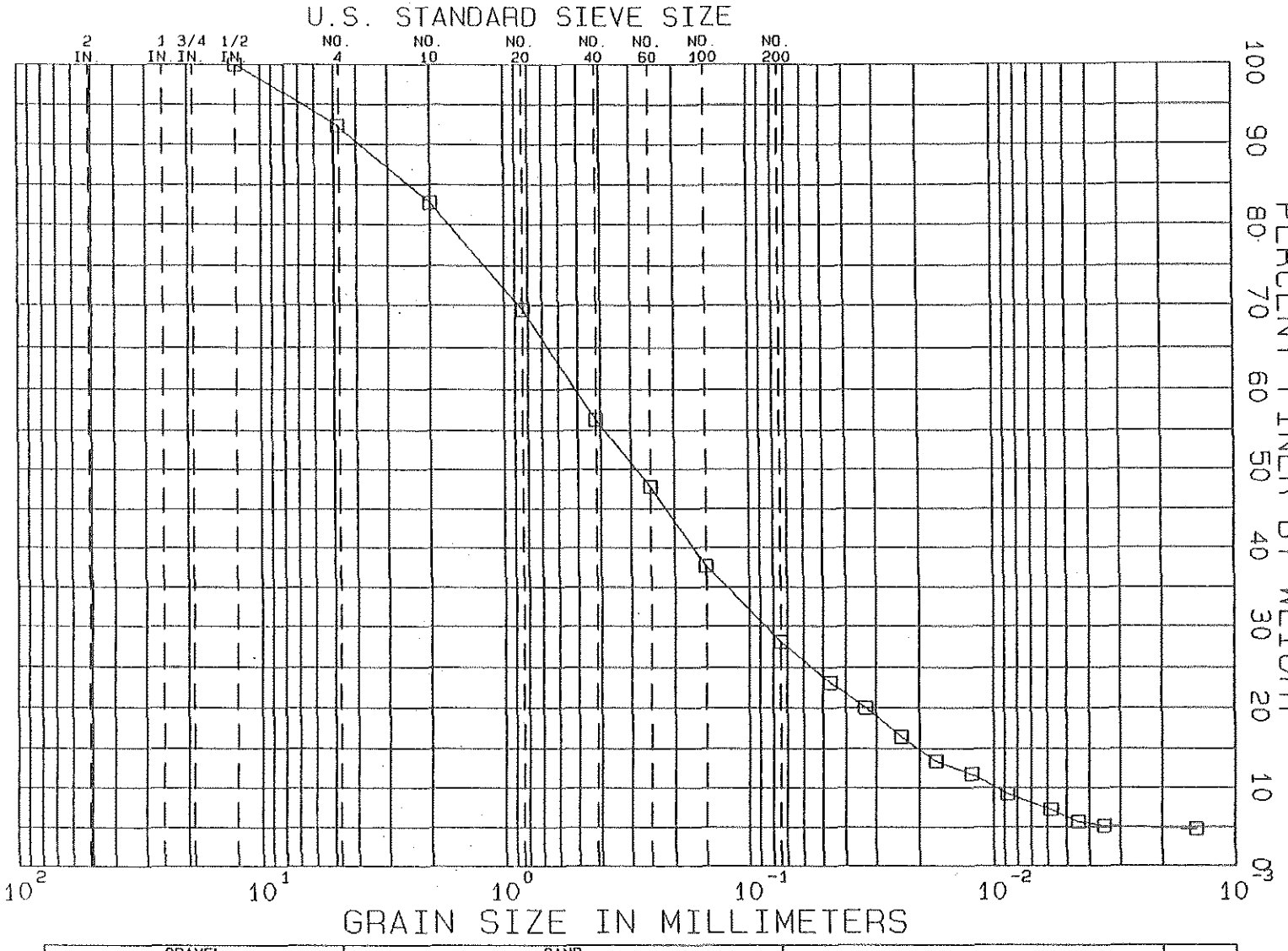
HOUSATONIC RIVER PROJECT

GRADATION TESTS

BORING NO.
SAMPLE
DEPTH
TECH MST
REVIEWER DAS

TEST SERIES NO. 45
DATE July 02
FILE L16350

GZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-46	SAMPLE ID H2-BH000606-0-0020	Brown Silty sand (SM)

HOUSATONIC RIVER PROJECT

GRADATION TESTS

BORING NO.
SAMPLE
DEPTH
TECH. MST
REVIEWER DAS

TEST SERIES NO. 46
DATE July 02
FILE L16350

GZA GEOENVIRONMENTAL, INC.
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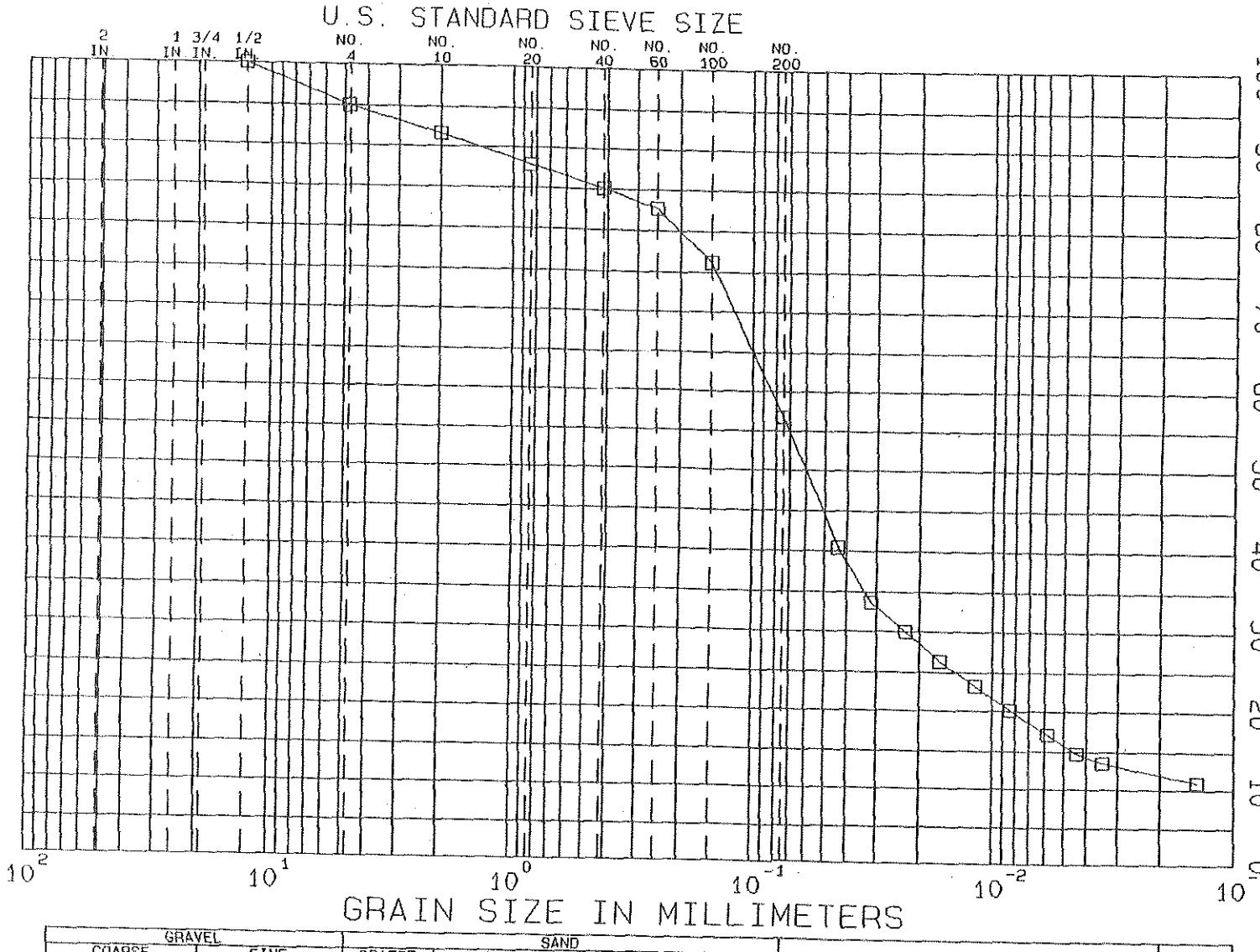


GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-47	SAMPLE ID H2-BH000606-0-0060	Brown Sandy silt (ML)

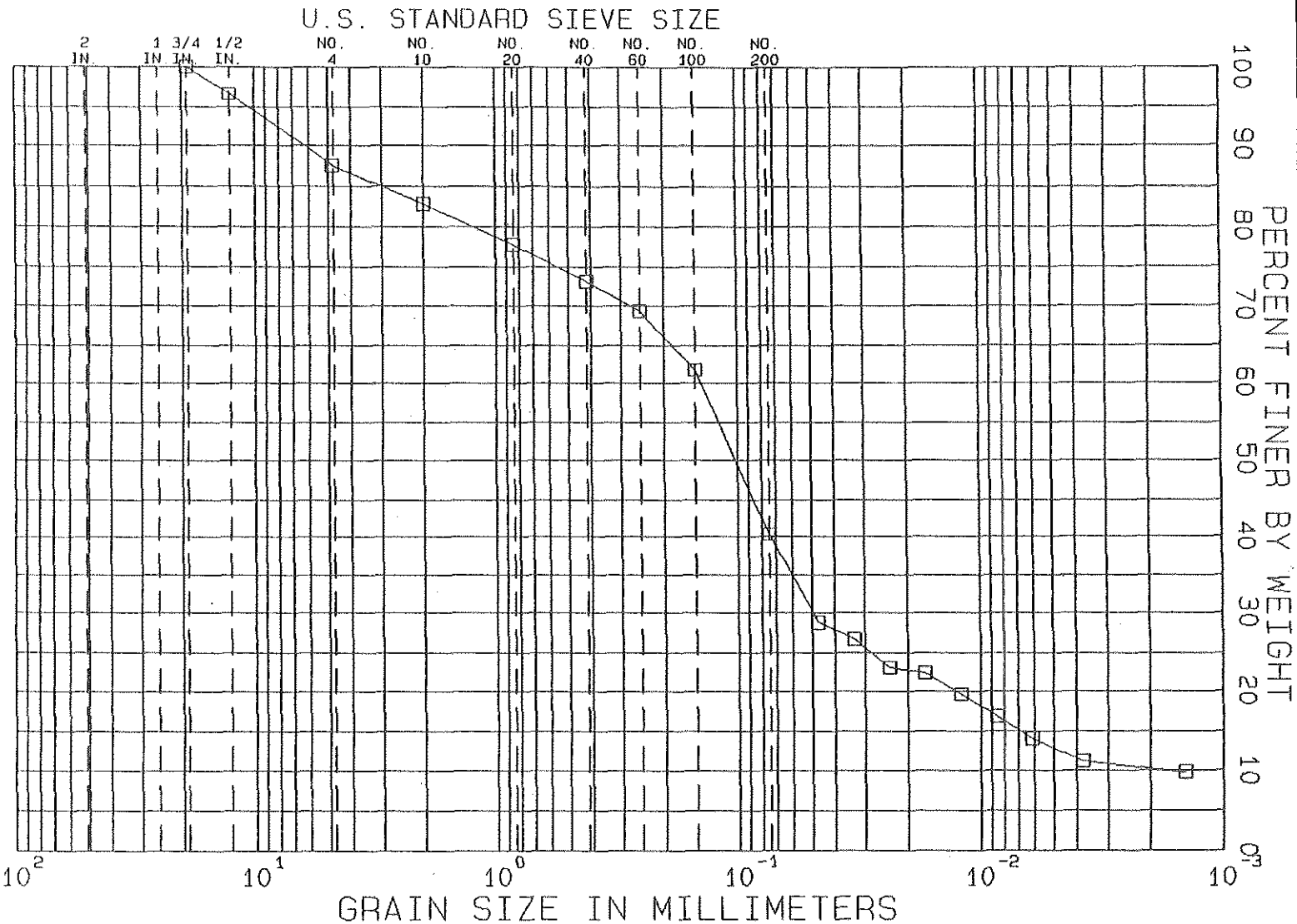
HOUSATONIC RIVER PROJECT

GRADATION TESTS

BORING NO.
SAMPLE
DEPTH
TECH. MST
REVIEWER DAS

TEST SERIES NO. 47
DATE July 02
FILE L16350

APPENDIX E-9



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-48	SAMPLE ID H2-BH000636-0-0040	Brown Silty, clayey sand (SC-SM)

HOUSATONIC RIVER PROJECT

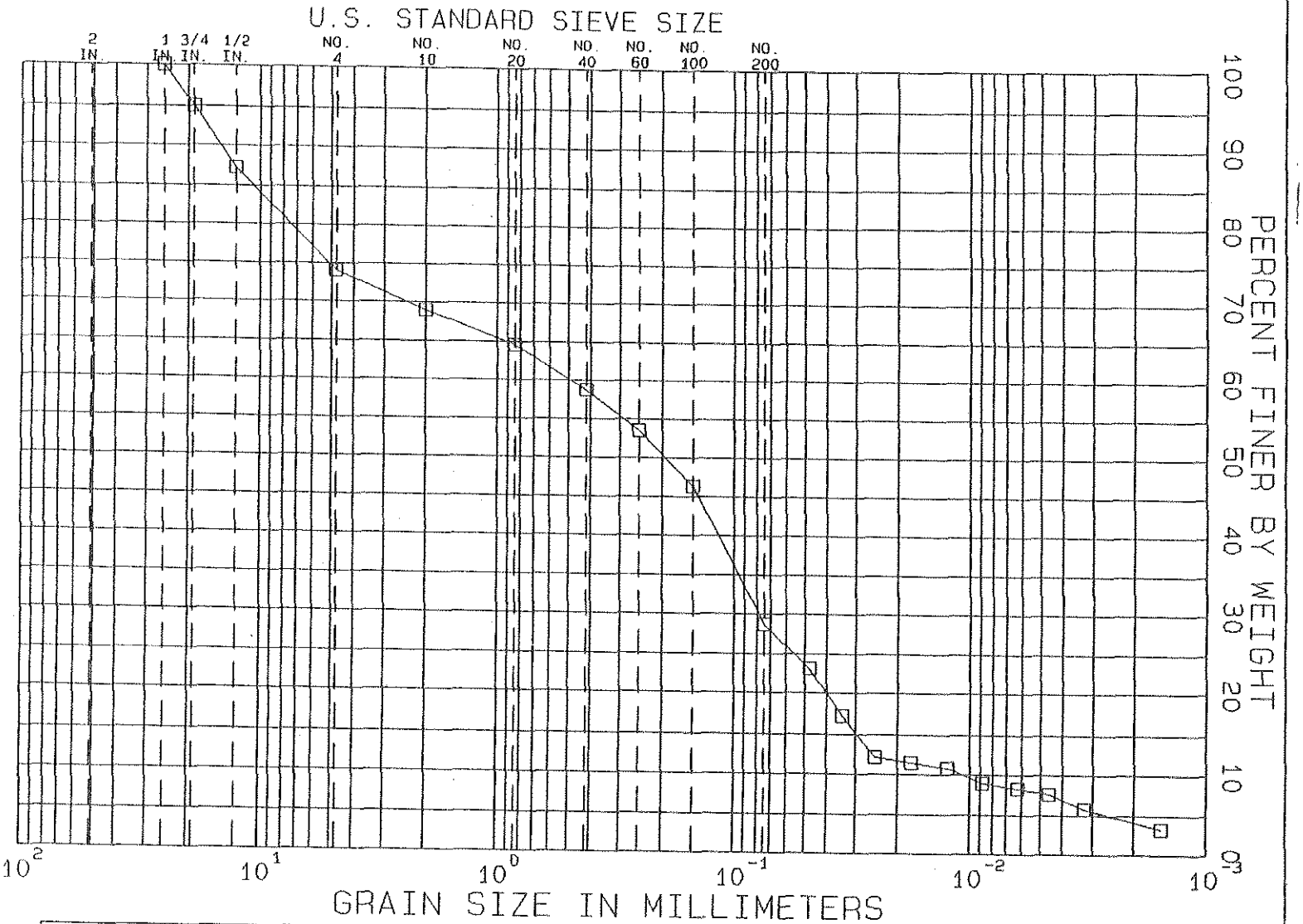
GRADATION TESTS

BORING NO.
SAMPLE
DEPTH
TECH. MST
REVIEWER DAS

TEST SERIES NO. 48
DATE July 02
FILE L16350

GZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS

GZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-49	SAMPLE ID H2-BH000636-0-0060	Brown Silty sand with gravel (SM)

HOUSATONIC RIVER PROJECT

GRADATION TESTS

BORING NO.
SAMPLE
DEPTH
TECH. MST
REVIEWER DAS

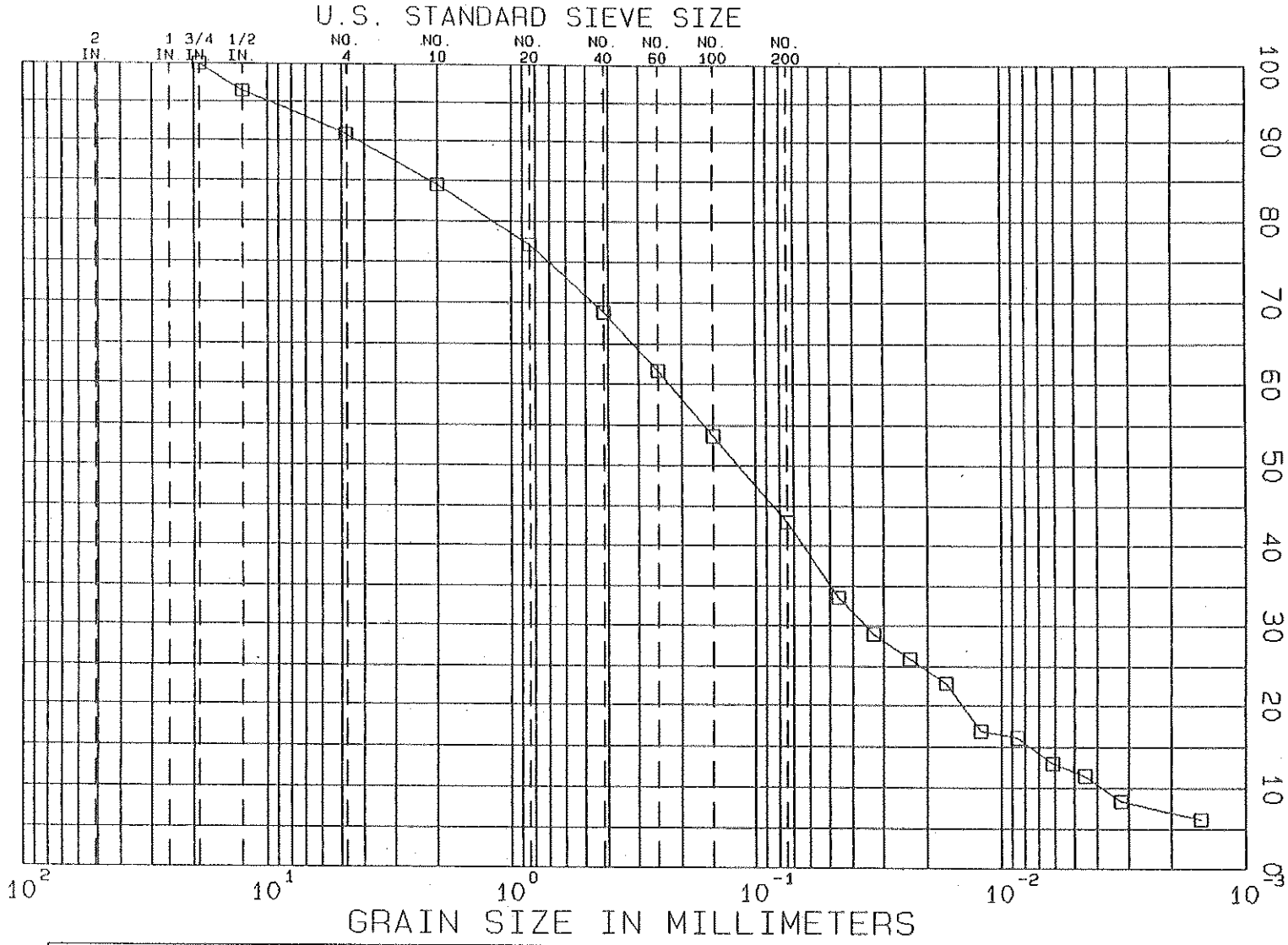
TEST SERIES NO. 49
DATE July 02

FILE L16350

APPENDIX E-9

S.3

GZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

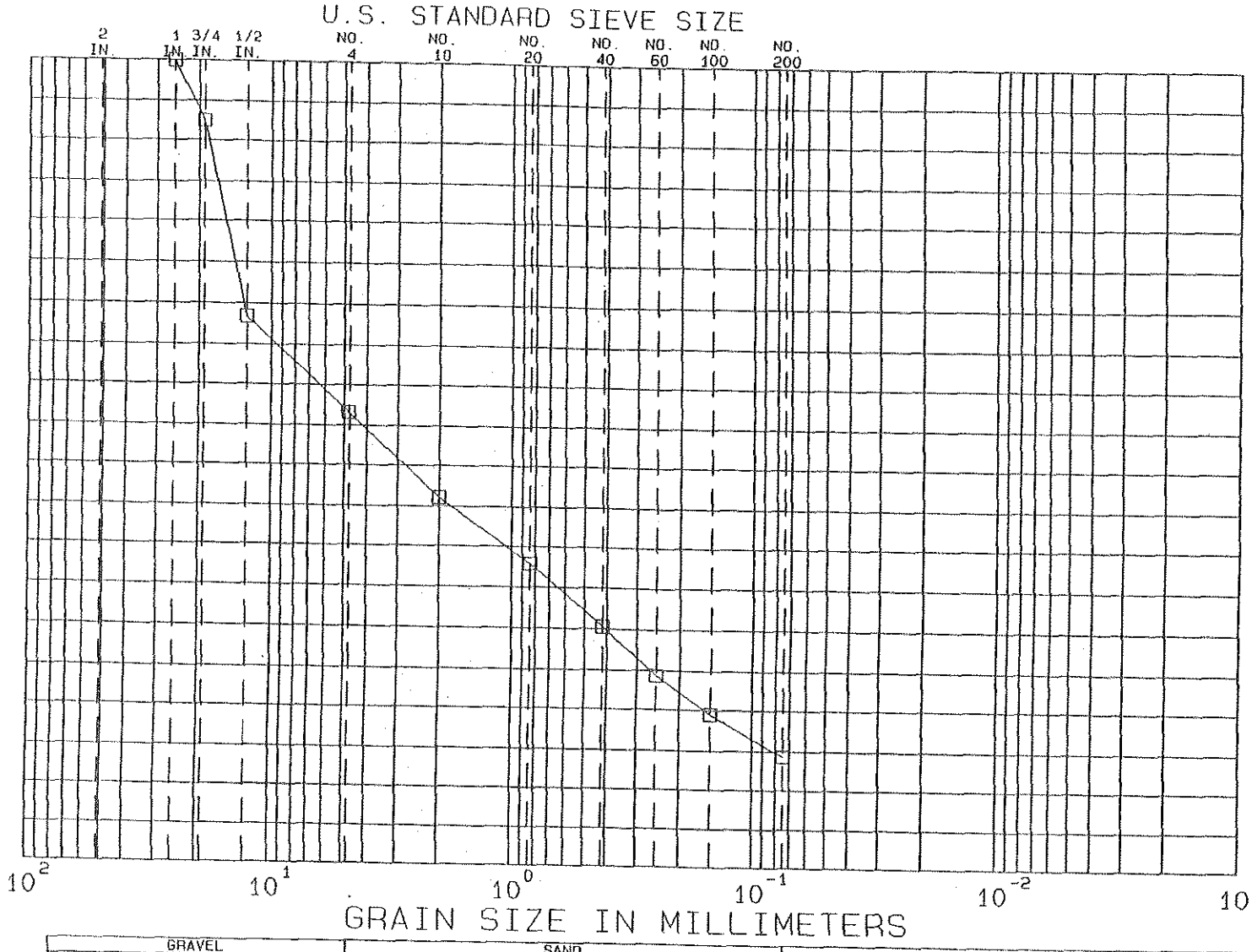
TEST NO.	MATERIAL SOURCE	REMARKS
GT-50	SAMPLE ID H2-BH000638-0-0080	Brown Silty, clayey sand (SC-SM)

HOUSATONIC RIVER PROJECT

GRADATION TESTS

BORING NO.
SAMPLE
DEPTH
TECH. MST
REVIEWER DAS

TEST SERIES NO. 50
DATE July 02
FILE L16350



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-51	SAMPLE ID H2-BH000638-0-0020	Brown Silty gravel with sand (GP-GM)

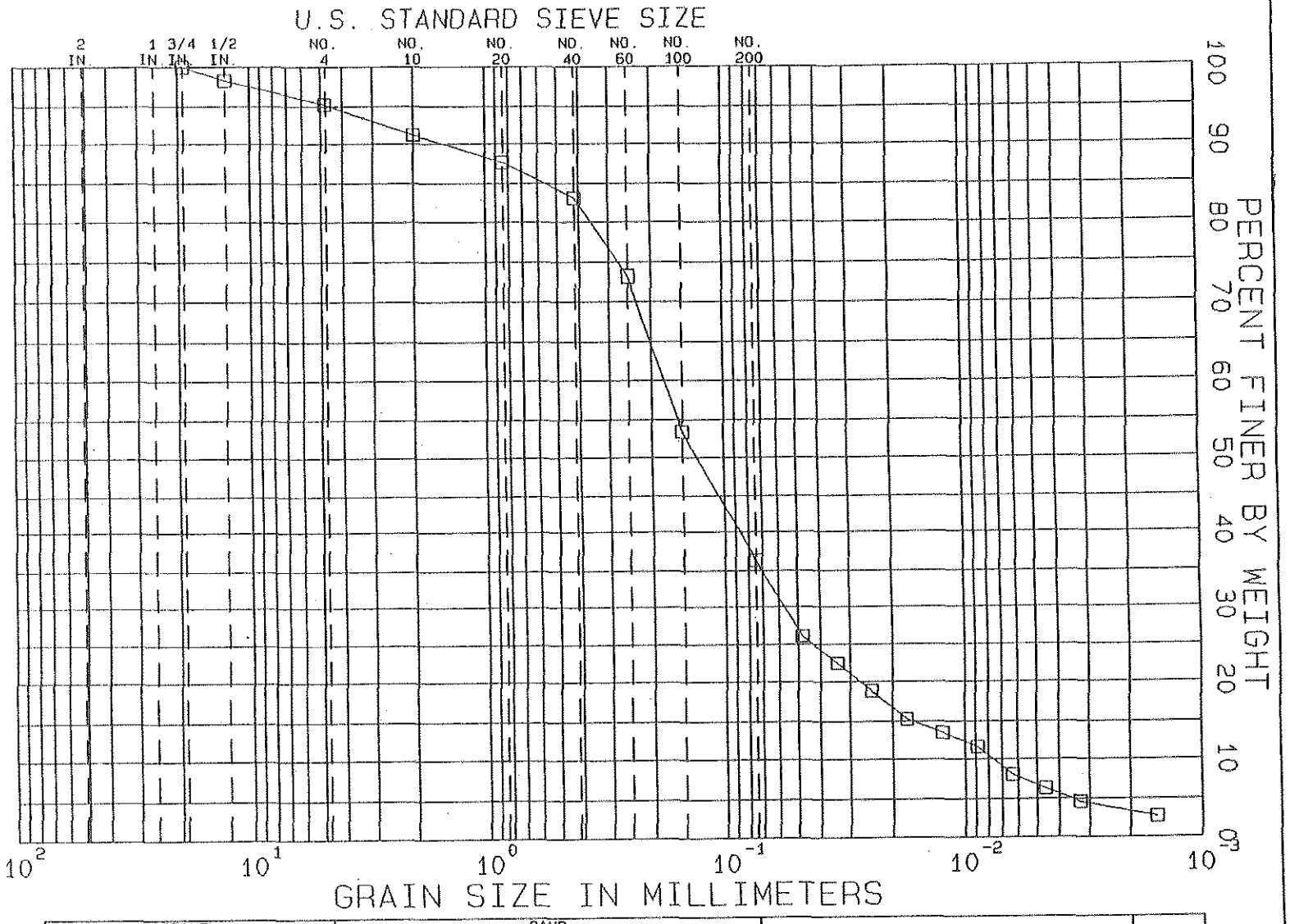
HOUSATONIC RIVER PROJECT

GRADATION TESTS

BORING NO.
SAMPLE
DEPTH
TECH. MST
REVIEWER DAS

TEST SERIES NO. 54
DATE July 02
FILE L16350

GZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO	MATERIAL SOURCE	REMARKS
GT-52	SAMPLE ID H2-BH000715-0-0000	Brown Silty, clayey sand (SC-SM) Note: Organics in Samp.

HOUSATONIC RIVER PROJECT

GRADATION TESTS

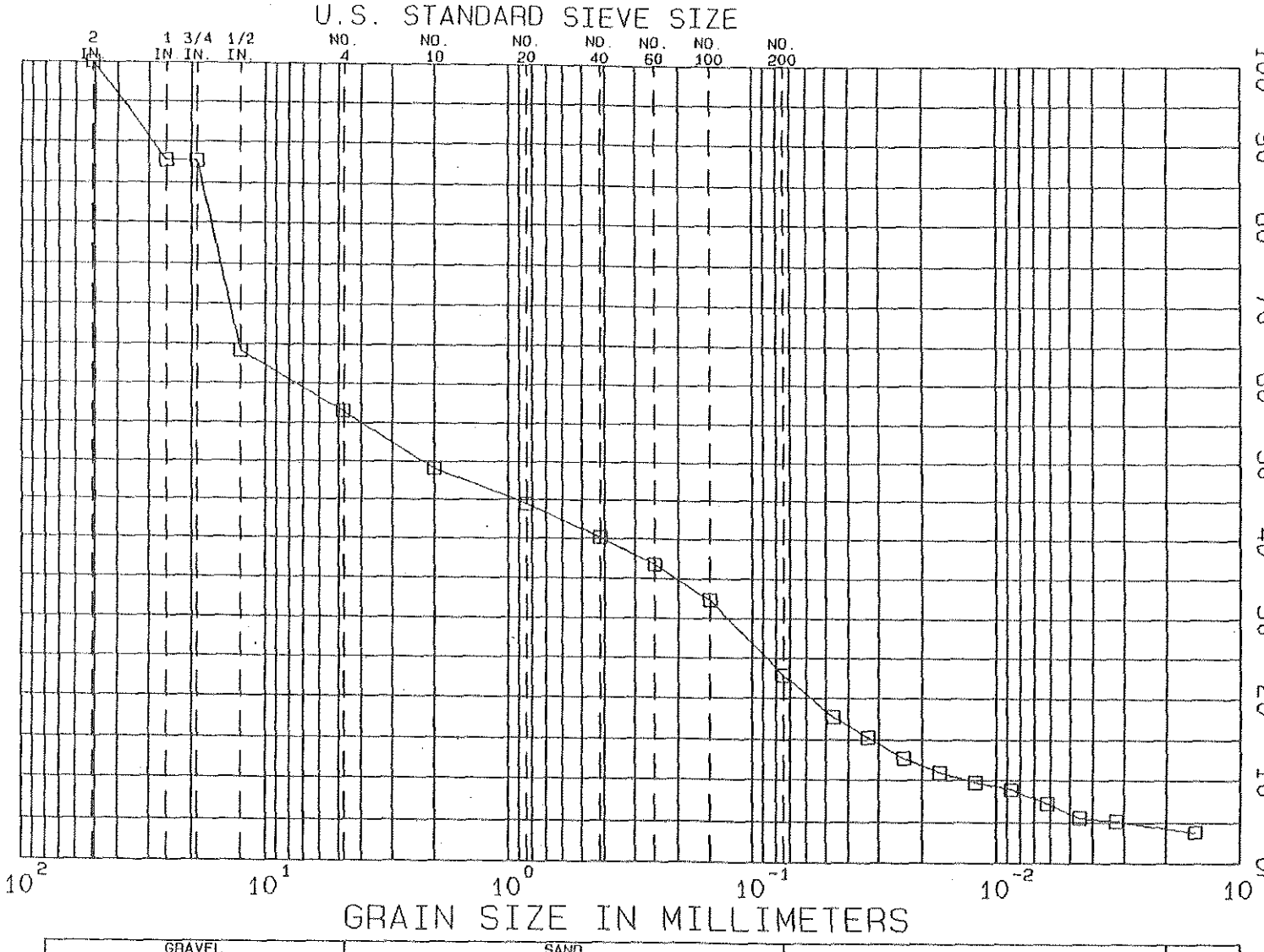
BORING NO
SAMPLE
DEPTH
TECH MST
REVIEWER DAS

TEST SERIES NO. 52
DATE July 02
FILE L16350

GZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS

APPENDIX E-9

S.3



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-53	SAMPLE ID H2-BH000714-0-0020	Brown Silty, clayey gravel with sand (GC-GM)

HOUSATONIC RIVER PROJECT

GRADATION TESTS

BORING NO.
SAMPLE
DEPTH
TECH. MST
REVIEWER DAS

TEST SERIES NO. 53
DATE July 02

FILE L16350

GZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS

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ENGINEERS AND SCIENTISTS

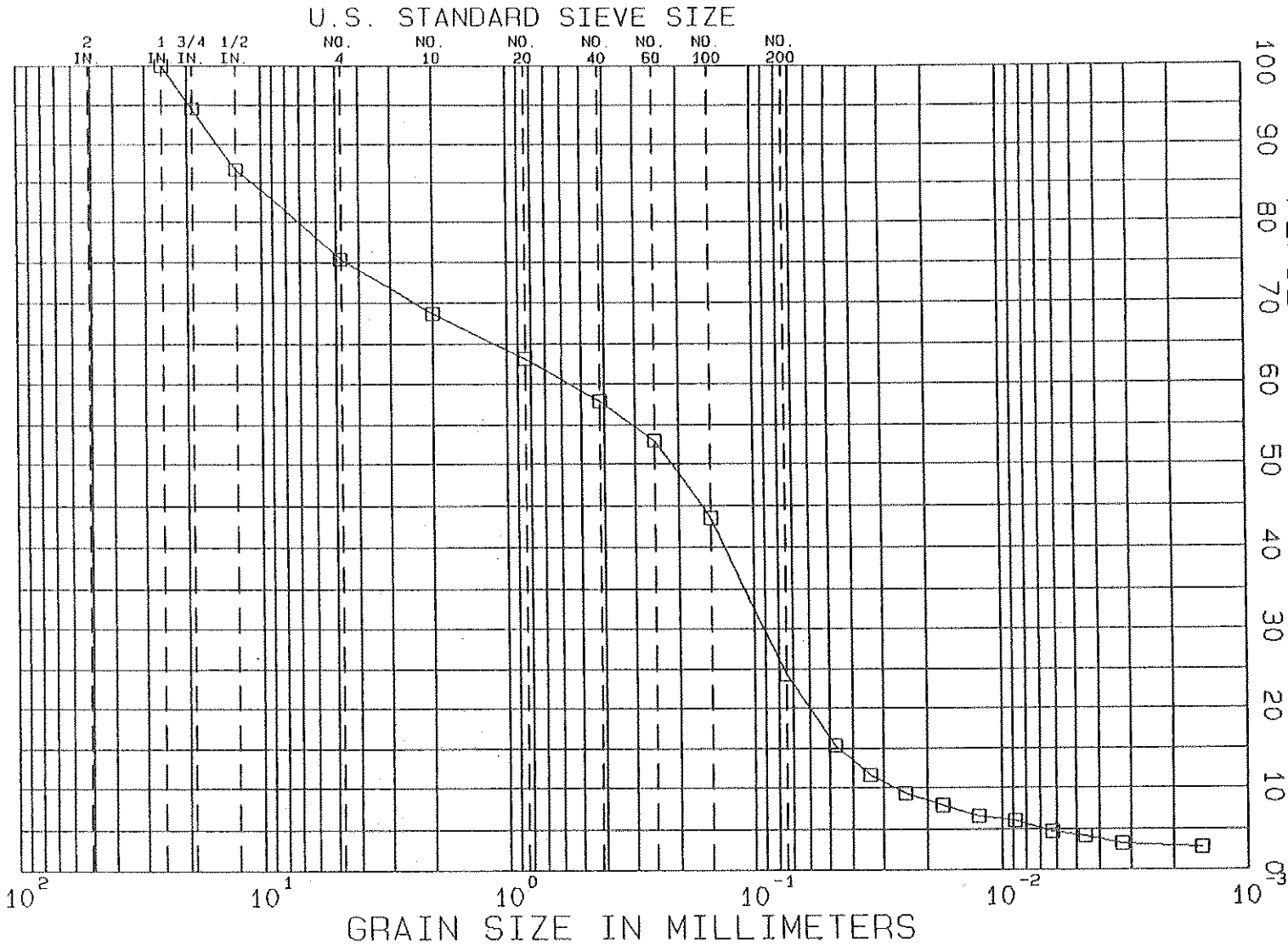
HOUSATONIC RIVER PROJECT

GRADATION TESTS

BORING NO.
SAMPLE
DEPTH
TECH MST
REVIEWER DAS

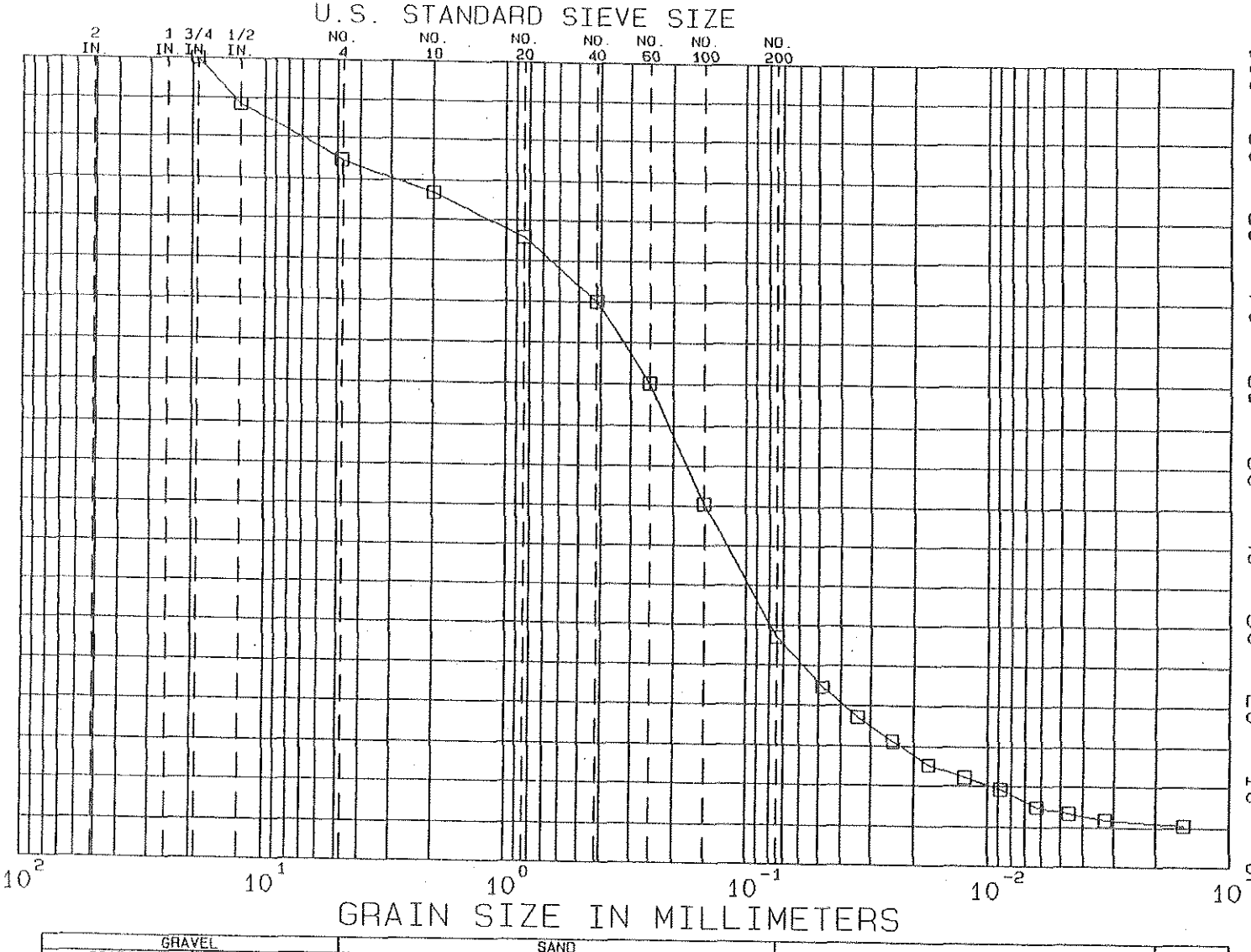
TEST SERIES
NO. 54
DATE July 02

FILE L16350



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-54	SAMPLE ID H2-BH000714-0-0060	Brown Silty sand with gravel (SM)



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-55	SAMPLE ID H2-BH000751-0-0040	Brown Silty, clayey sand (SC-SM)

HOUSATONIC RIVER PROJECT

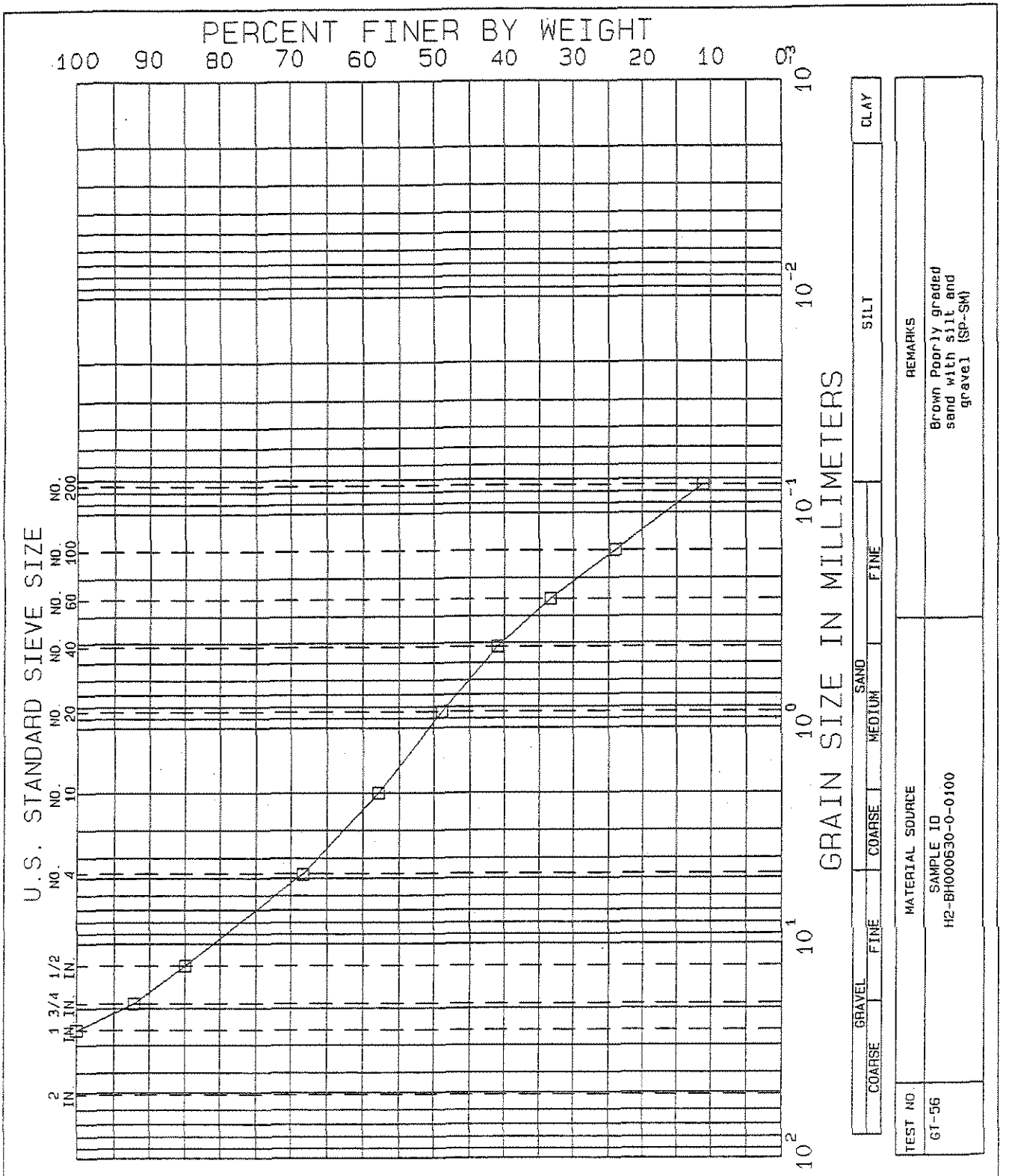
GRADATION TESTS

BORING NO.
SAMPLE
DEPTH
TECH. MST
REVIEWER DAS

TEST SERIES
NO. 55
DATE July 02
FILE L16350

GZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS

APPENDIX E-8



HOUSATONIC RIVER PROJECT

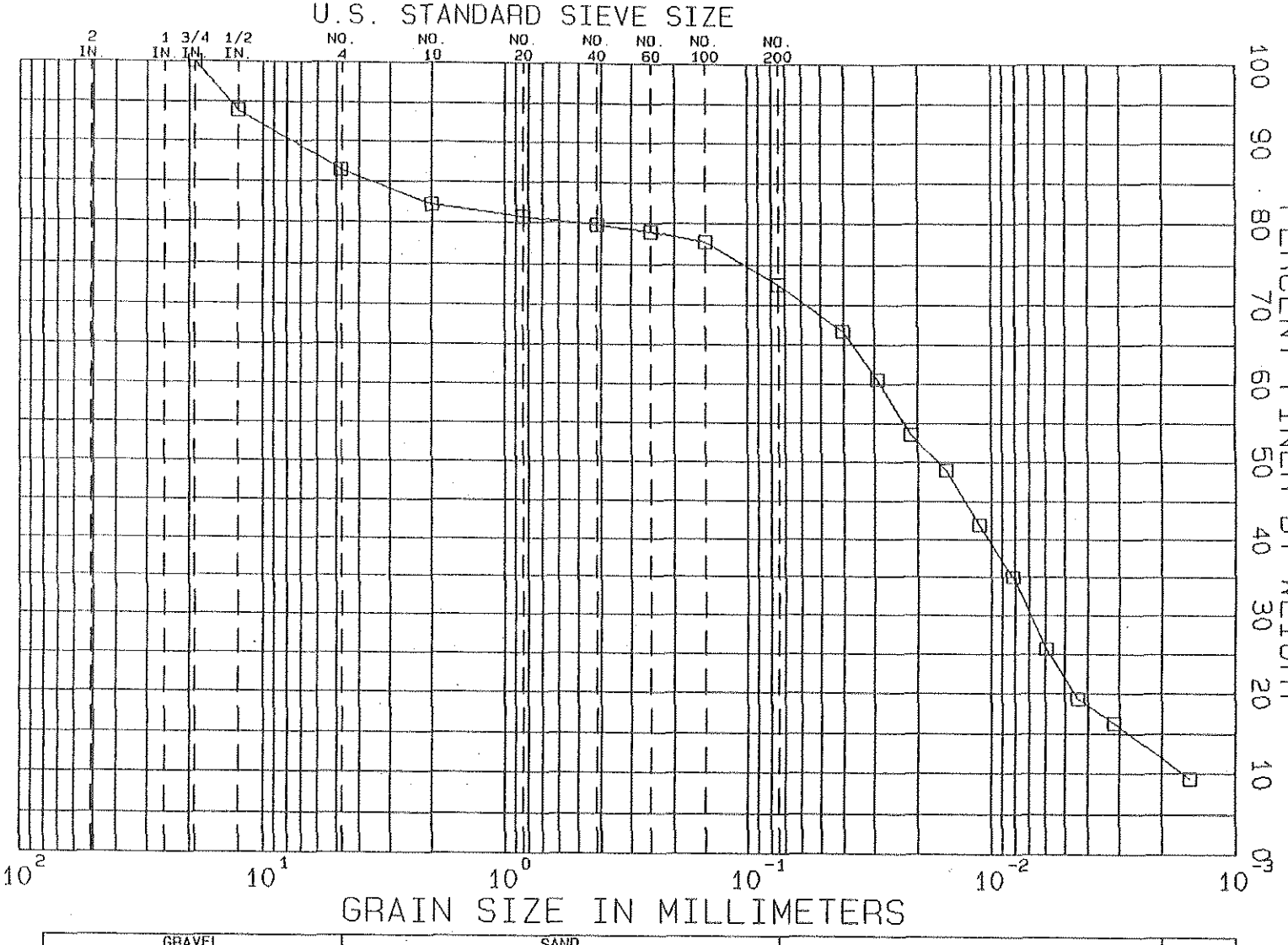
GRADATION TESTS

BORING NO
SAMPLE
DEPTH
TECH. MST
REVIEWER DAS

TEST SERIES
NO. 56
DATE July 02

FILE L16350

GZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-57	SAMPLE ID H2-BH000630-0-0170	Grey-Brown Silty clay with sand (CL-ML)

HOUSATONIC RIVER PROJECT

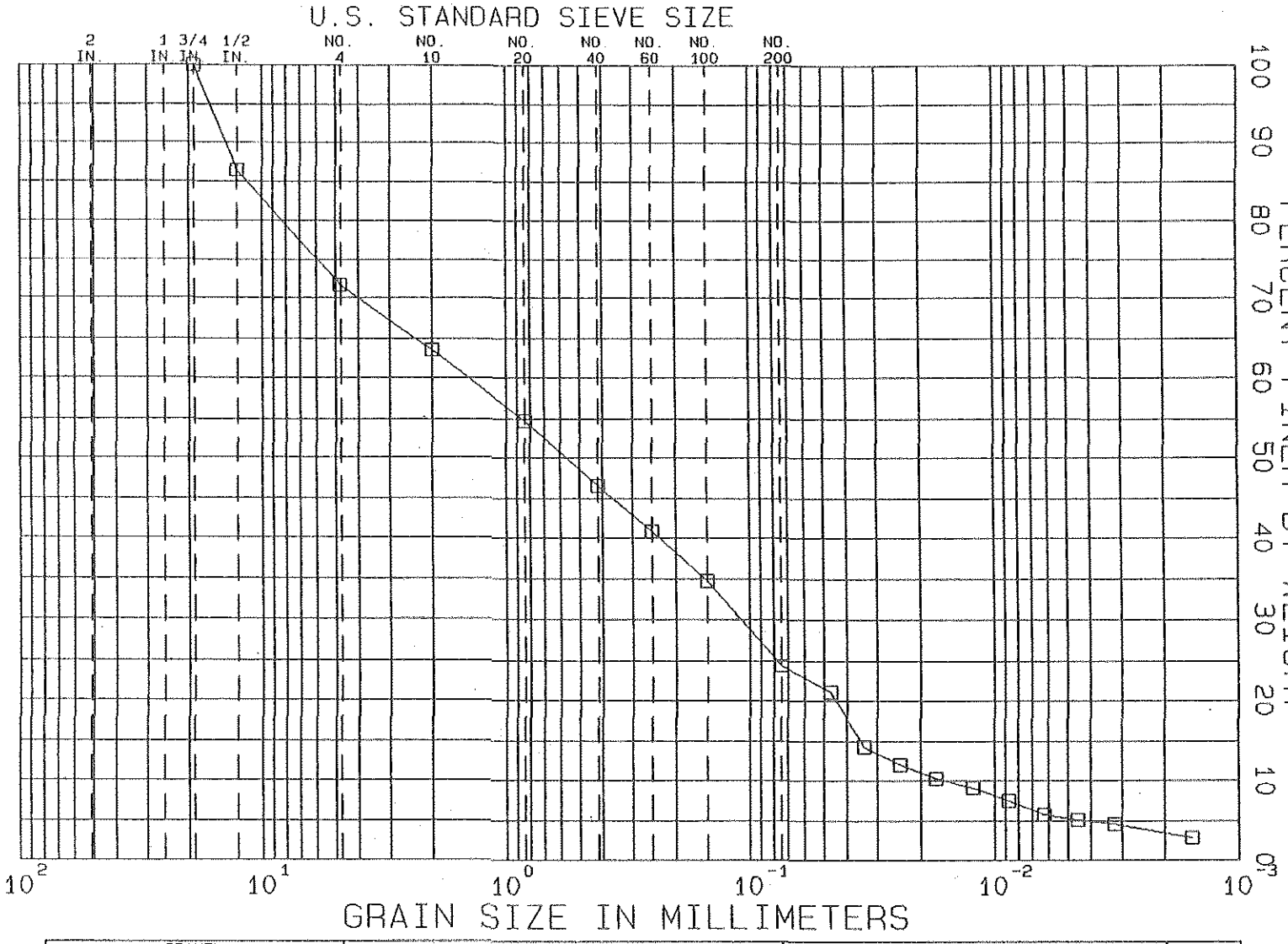
GRADATION TESTS

BORING NO.
SAMPLE
DEPTH
TECH MST
REVIEWER DAS

TEST SERIES NO. 57
DATE July 02
FILE L16350

APPENDIX E-9

S.3



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-58	SAMPLE ID QA-BH000580-0-0040	Brown Silty clayey sand with gravel (SC-SM)

HOUSATONIC RIVER PROJECT

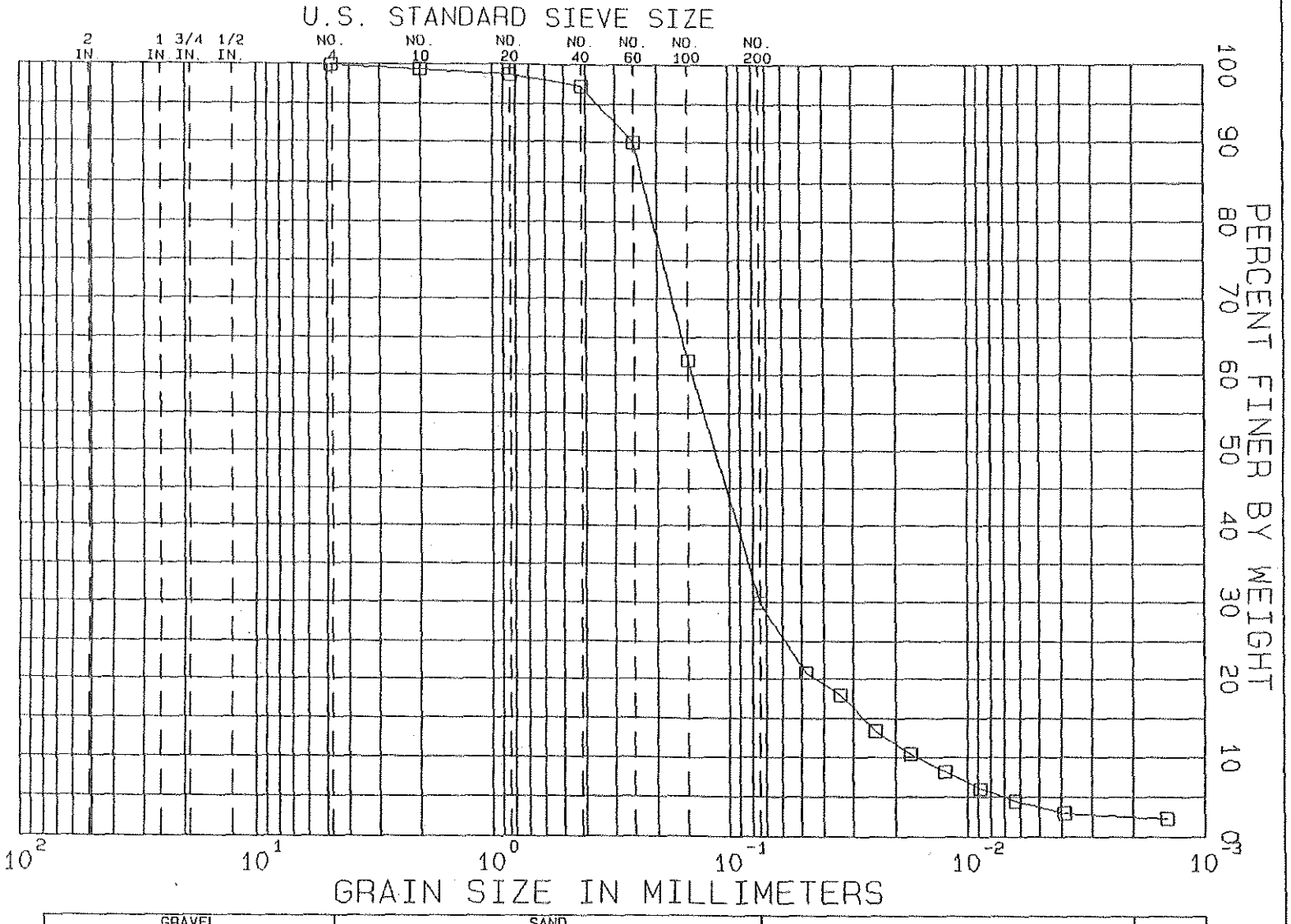
GRADATION TESTS

BORING NO.
SAMPLE
DEPTH
TECH. MST
REVIEWER DAS

TEST SERIES
NO. 58
DATE July 02
FILE L16350

GZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS

APPENDIX E-9



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-59	SAMPLE ID GA-BH000579-0-0150	Brown Silty sand (SM) Note: Organics in Samp.

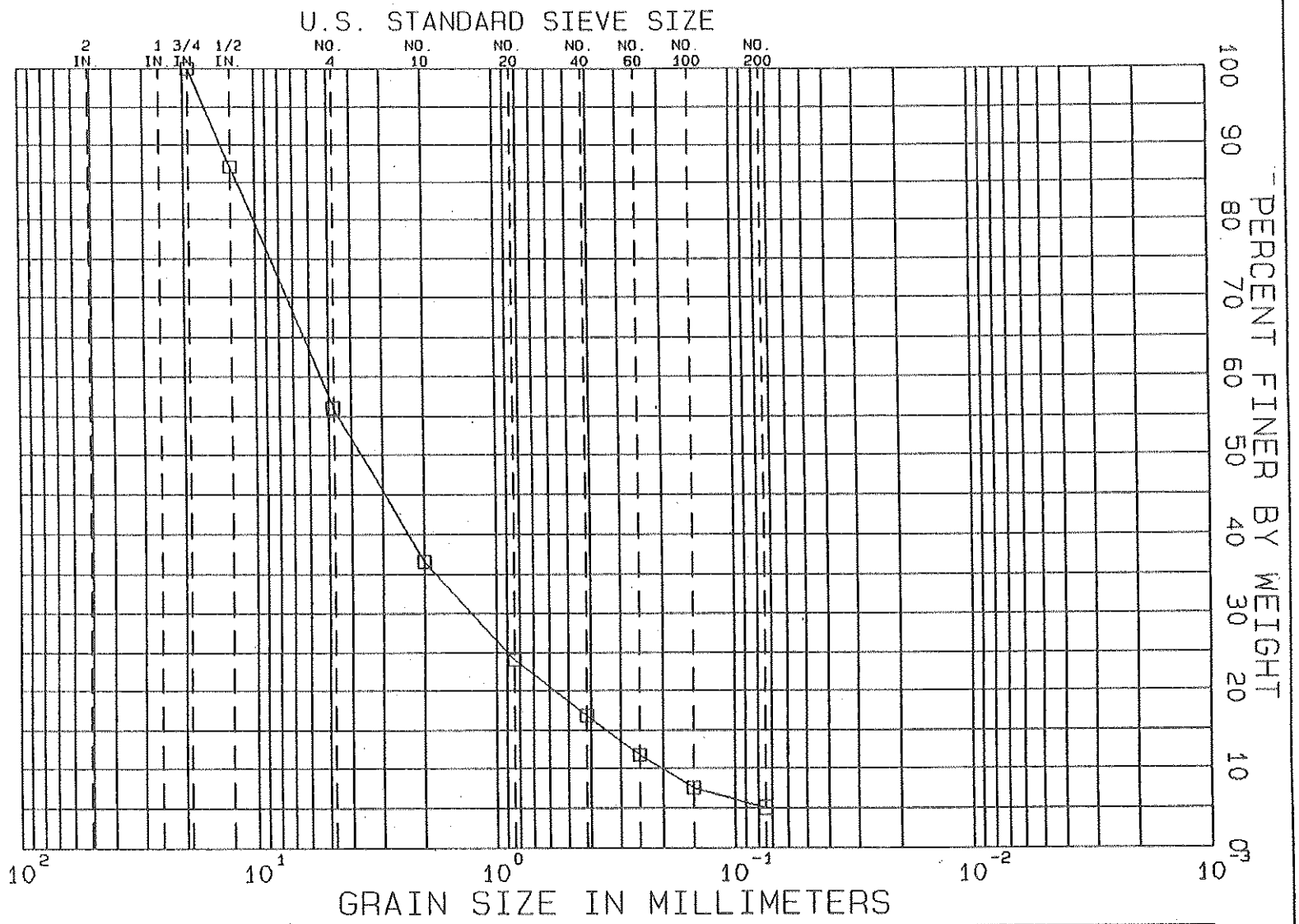
HOUSATONIC RIVER PROJECT

GRADATION TESTS

BORING NO.
SAMPLE
DEPTH
TECH MST
REVIEWER DAS

TEST SERIES NO. 59
DATE July 02
FILE L16360

GZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-60	SAMPLE ID H2-BH000630-0-0020	Brown Well graded sand with silt and gravel (SW-SM)

HOUSATONIC RIVER PROJECT

GRADATION TESTS

BORING NO.
SAMPLE
DEPTH
TECH MST
REVIEWER DAS

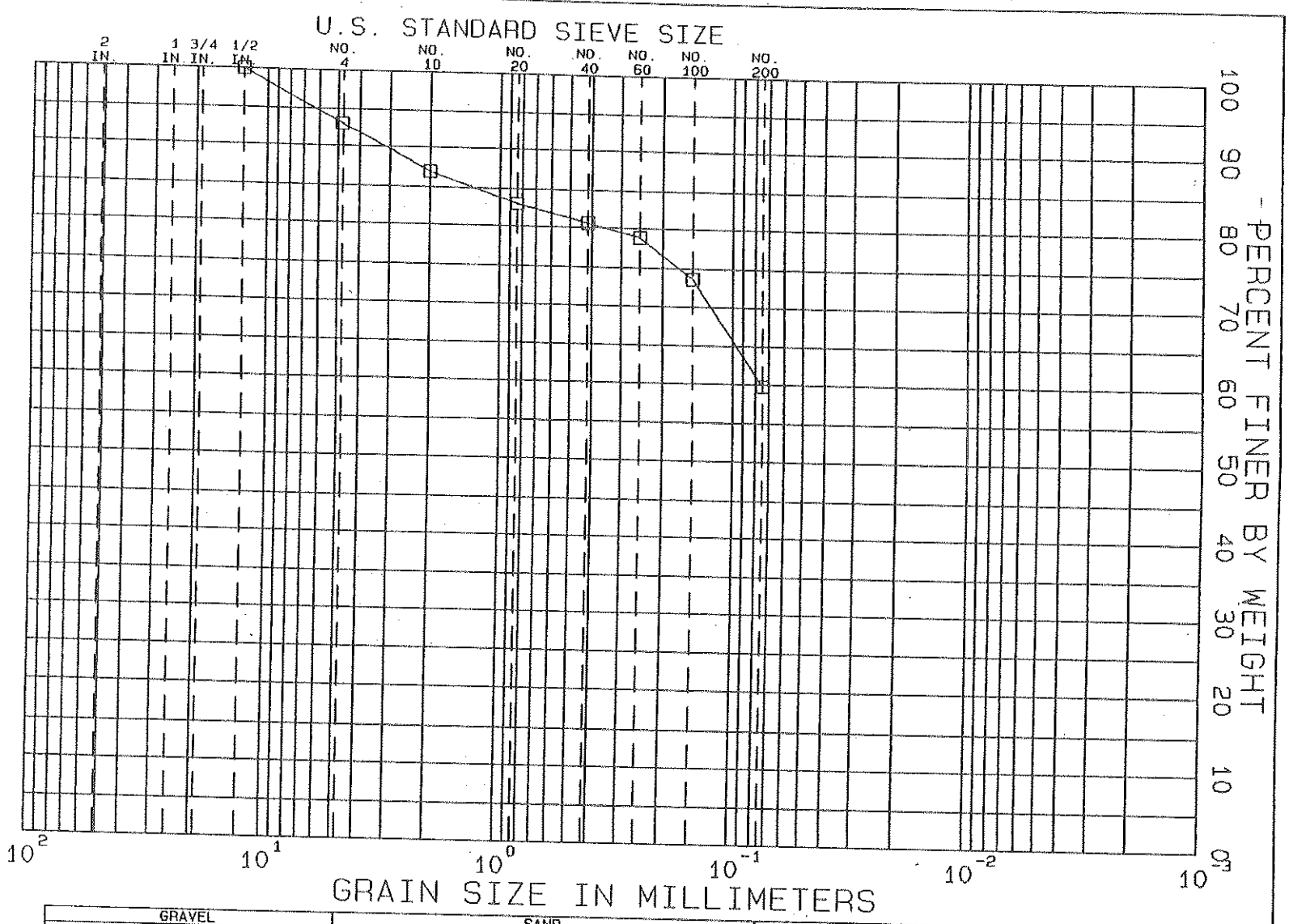
TEST SERIES NO. 60
DATE July 02
FILE L16350

GZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS

APPENDIX E-9

S.3

GZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-61	SAMPLE ID H2-BH000635-0-0140	Grey Sandy silty clay (CL-ML)

HOUSATONIC RIVER PROJECT

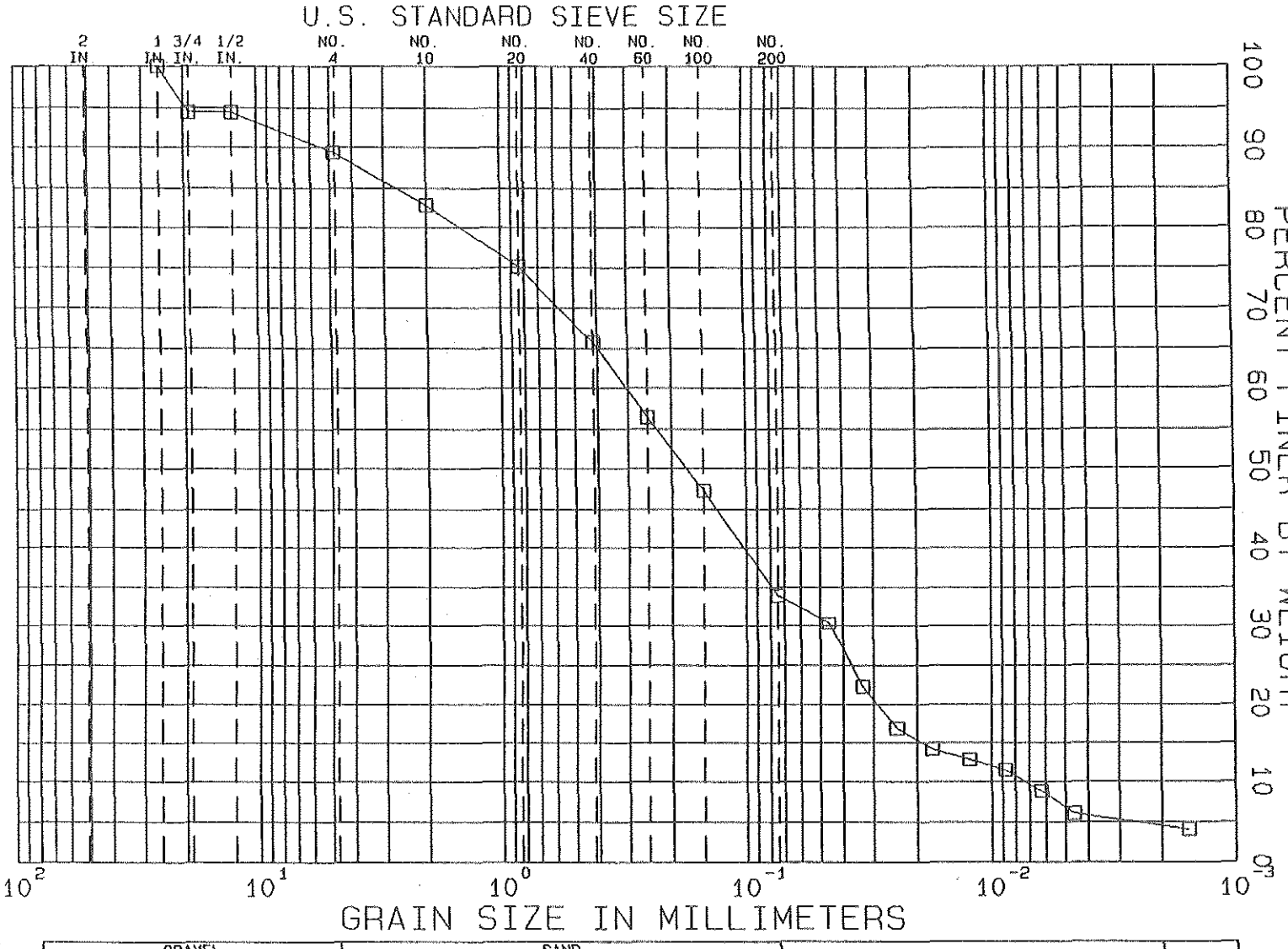
GRADATION TESTS

BORING NO.
SAMPLE
DEPTH
TECH MST
REVIEWER DAS

TEST SERIES NO. 61
DATE July 02
FILE L16350

APPENDIX E-9

S.3



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-62	SAMPLE ID H2-BH000579-0-0040	Brown Silty, clayey sand (SC-SM)

HOUSATONIC RIVER PROJECT

GRADATION TESTS

BORING NO.
SAMPLE
DEPTH
TECH MST
REVIEWER DAS

TEST SERIES NO. 62
DATE July 02
FILE L16350

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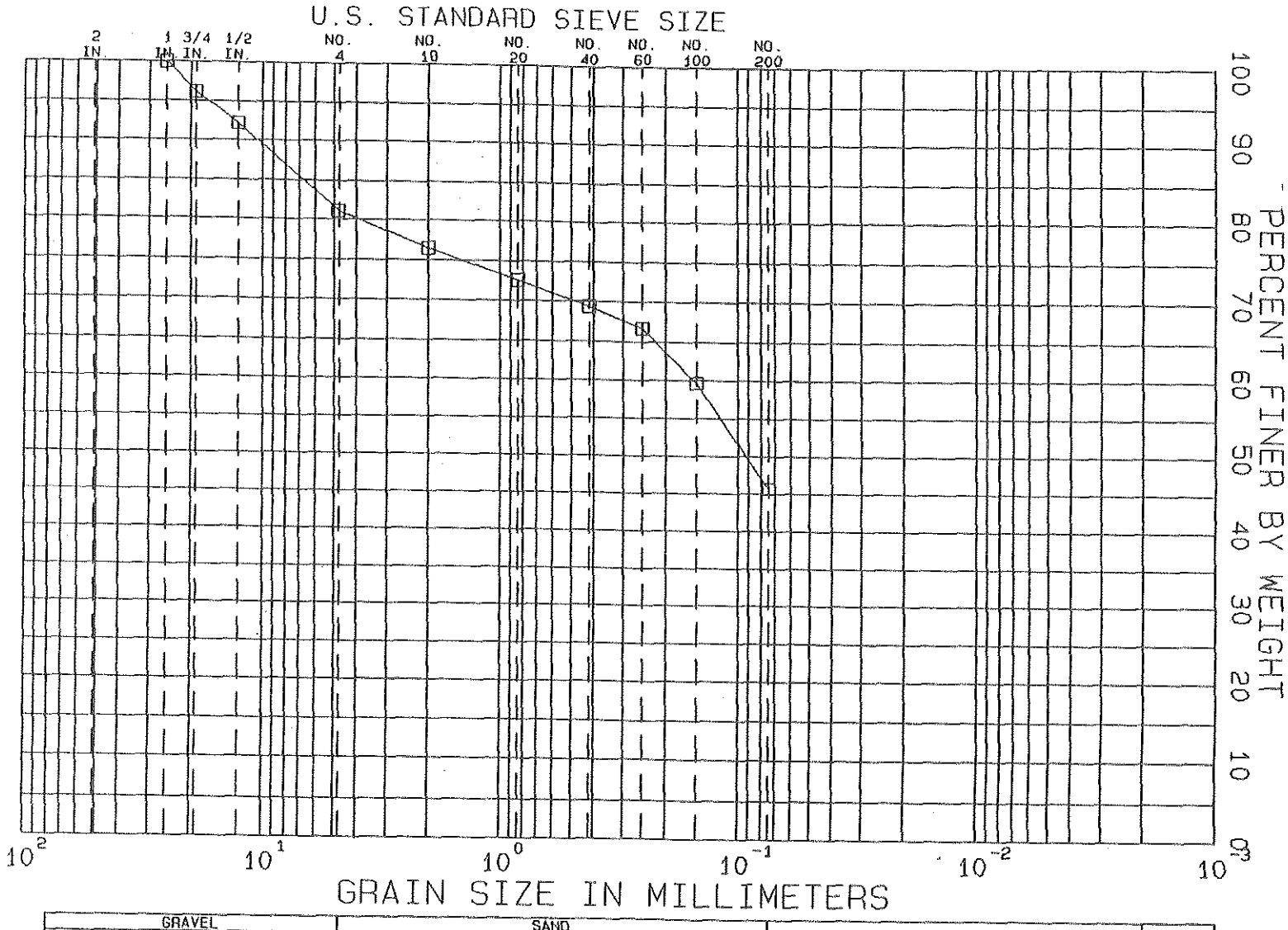


GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-63	SAMPLE ID H2-BH000579-0-0300	Grey-Brown Silty, clayey sand with gravel (SC-SM)

HOUSATONIC RIVER PROJECT

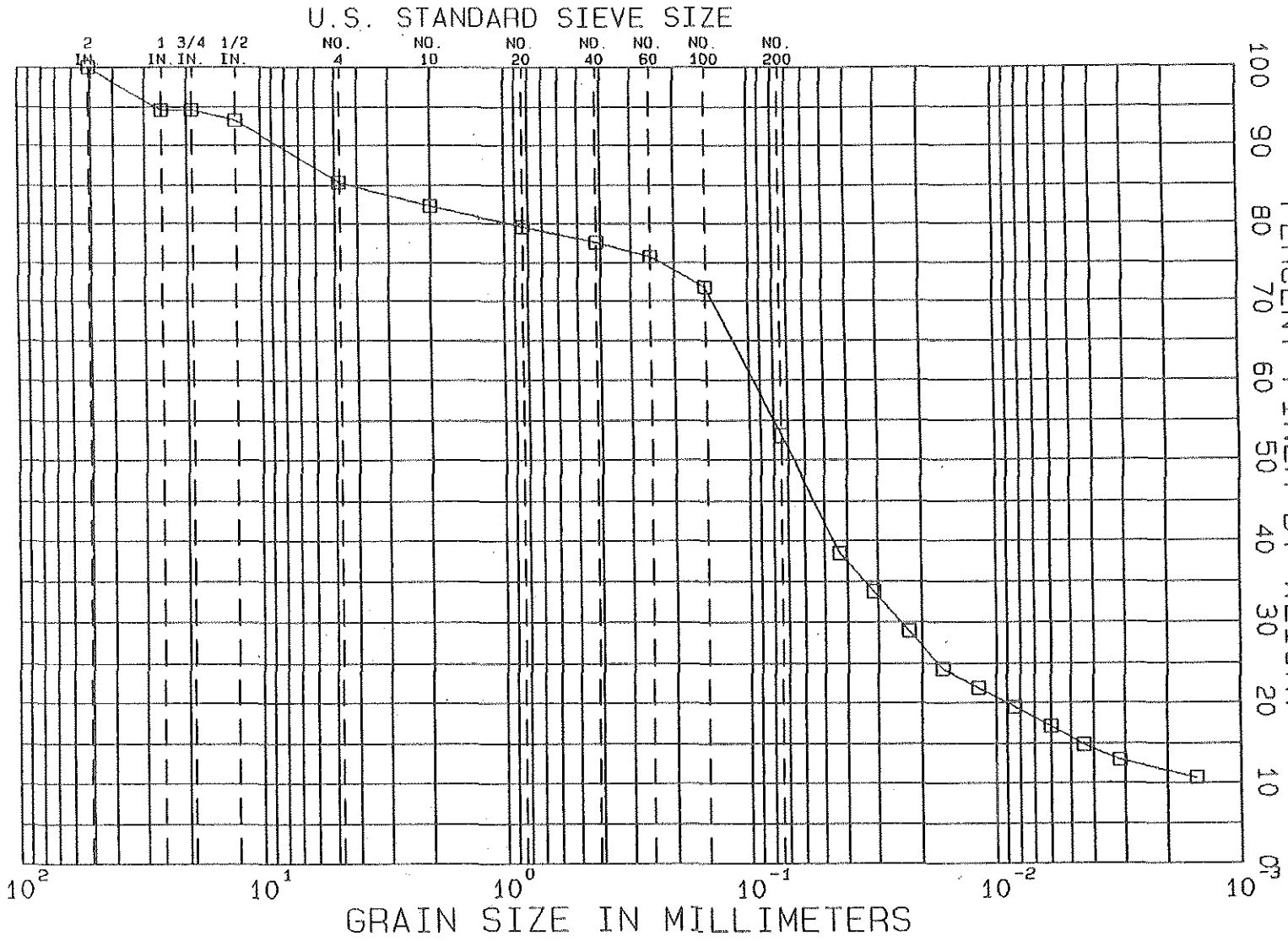
GRADATION TESTS

BORING NO.
SAMPLE
DEPTH
TECH. MST
REVIEWER DAS

TEST SERIES NO. 63
DATE July 02
FILE L16350

APPENDIX E-9

S 3



GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO	MATERIAL SOURCE	REMARKS
GT-64	SAMPLE ID H2-BH000606-0-0060	Brown Sandy, silty clay (CL-ML)

HOUSATONIC RIVER PROJECT

GRADATION TESTS

BORING NO.
SAMPLE
DEPTH
TECH. MST
REVIEWER DAS

TEST SERIES
NO. 64
DATE July 02

FILE L16350

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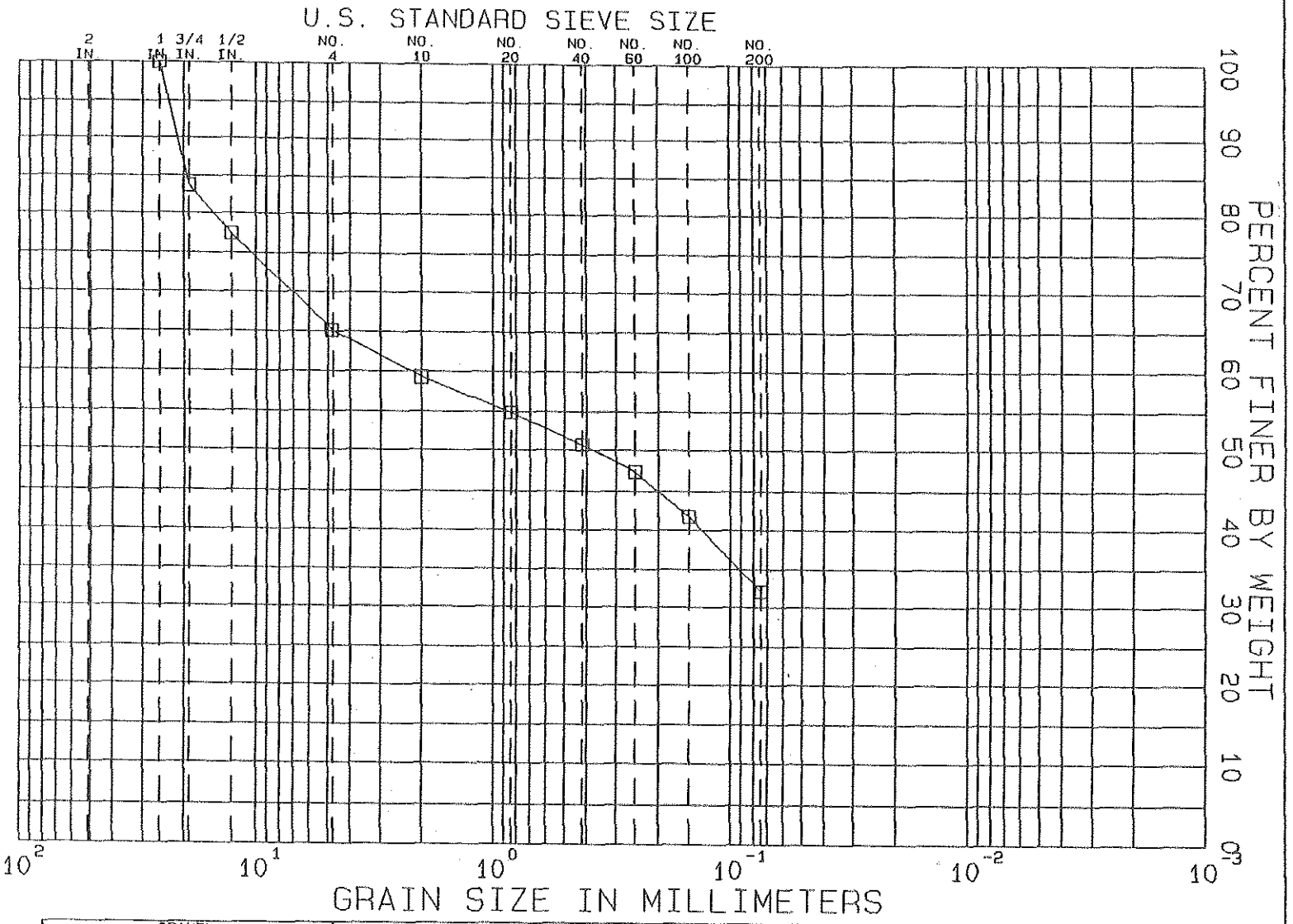

GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

TEST NO.	MATERIAL SOURCE	REMARKS
GT-65	SAMPLE ID H2-BH000606-0-0140	Brown Silty, clayey gravel with sand (GC-GM)

HOUSATONIC RIVER PROJECT

GRADATION TESTS

BORING NO.
SAMPLE
DEPTH
TECH. MST
REVIEWER DAS

TEST SERIES
NO. 65
DATE July 02
FILE L16350

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GRADATION ANALYSIS

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JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : June 02
TEST SERIES : 22
TEST NO. : GT-22
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000629-0-0060

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

LAB NO 6T-22

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
4	4.7600	100.0
10	2.0000	99.8
20	0.8400	98.8
40	0.4200	95.8
60	0.2500	89.0
100	0.1490	68.0
200	0.0740	27.4

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GRADATION ANALYSIS

==========

JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : June 02
TEST SERIES : 23
TEST NO. : GT-23
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000629-0-0210

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

LAB 6T-23

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
1 in.	25.4000	100.0
3/4 in.	19.1000	93.3
1/2 in.	12.7000	91.8
4	4.7600	79.5
10	2.0000	69.8
20	0.8400	63.5
40	0.4200	59.6
60	0.2500	57.1
100	0.1490	51.1
200	0.0740	37.6
	0.0457	26.8
	0.0331	22.2
	0.0237	19.3
	0.0169	17.6
	0.0120	16.5
	0.0085	14.8
	0.0061	10.8
	0.0045	10.2
	0.0015	9.1

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GRADATION ANALYSIS

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JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : June 02
TEST SERIES : 24
TEST NO. : GT-24
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000585-0-0130

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

CAB GT-24

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
4	4.7600	99.9
10	2.0000	99.8
20	0.8400	99.4
40	0.4200	98.3
60	0.2500	97.4
100	0.1490	95.6
200	0.0740	83.9
	0.0433	67.6
	0.0316	57.4
	0.0230	46.1
	0.0166	38.9
	0.0119	31.8
	0.0085	26.6
	0.0061	20.5
	0.0045	16.4
	0.0037	14.3
	0.0015	11.3

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GRADATION ANALYSIS

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JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : June 02
TEST SERIES : 25
TEST NO. : GT-25
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000585-0-0330

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
1/2 in.	12.7000	100.0
4	4.7600	99.9
10	2.0000	99.0
20	0.8400	96.8
40	0.4200	90.8
60	0.2500	78.7
100	0.1490	43.7
200	0.0740	13.6

LAB GT-25

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GRADATION ANALYSIS

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JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : June 02
TEST SERIES : 26
TEST NO. : GT-26
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000585-0-0380

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

LAB 6T-26

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
1/2 in.	12.7000	100.0
4	4.7600	89.2
10	2.0000	86.1
20	0.8400	81.3
40	0.4200	74.6
60	0.2500	69.4
100	0.1490	65.6
200	0.0740	60.1
	0.0441	47.9
	0.0314	46.3
	0.0223	43.9
	0.0162	37.5
	0.0117	31.9
	0.0084	25.5
	0.0060	20.8
	0.0045	16.0
	0.0037	14.4
	0.0015	9.6

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GRADATION ANALYSIS

JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : June 02
TEST SERIES : 27
TEST NO. : GT-27
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000631-0-0040

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
3/4 in.	19.1000	100.0
1/2 in.	12.7000	95.3
4	4.7600	72.3
10	2.0000	48.0
20	0.8400	28.8
40	0.4200	19.9
60	0.2500	15.9
100	0.1490	12.3
200	0.0740	8.4
	0.0441	47.9
	0.0314	46.3
	0.0223	43.9
	0.0162	37.5
	0.0117	31.9
	0.0084	25.5
	0.0060	20.8
	0.0045	16.0
	0.0037	14.4
	0.0015	9.6

LAB 6T-27

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GRADATION ANALYSIS

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JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : June 02
TEST SERIES : 28
TEST NO. : GT-28
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000631-0-0100

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

LAB 6T-28

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
3/4 in.	19.1000	100.0
1/2 in.	12.7000	96.2
4	4.7600	90.0
10	2.0000	86.3
20	0.8400	82.5
40	0.4200	80.4
60	0.2500	78.8
100	0.1490	74.0
200	0.0740	58.7
	0.0441	47.9
	0.0314	46.3
	0.0223	43.9
	0.0162	37.5
	0.0117	31.9
	0.0084	25.5
	0.0060	20.8
	0.0045	16.0
	0.0037	14.4
	0.0015	9.6

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GRADATION ANALYSIS

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JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : June 02
TEST SERIES : 29
TEST NO. : GT-29
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000576-0-0020

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

LAB GT-29

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
3/4 in.	19.1000	100.0
1/2 in.	12.7000	89.7
4	4.7600	83.0
10	2.0000	76.6
20	0.8400	69.2
40	0.4200	60.2
60	0.2500	51.9
100	0.1490	42.7
200	0.0740	32.6

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GRADATION ANALYSIS

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JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : June 02
TEST SERIES : 30
TEST NO. : GT-30
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000581-0-0005

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

LAB GT-30

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
2 in.	50.8000	100.0
1 in.	25.4000	89.5
3/4 in.	19.1000	86.9
1/2 in.	12.7000	73.3
4	4.7600	59.0
10	2.0000	47.7
20	0.8400	37.6
40	0.4200	29.2
60	0.2500	23.8
100	0.1490	19.4
200	0.0740	14.5

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GRADATION ANALYSIS

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JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : June 02
TEST SERIES : 31
TEST NO. : GT-31
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000581-0-0020

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

LAB 6T-31

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
1 in.	25.4000	100.0
3/4 in.	19.1000	90.3
1/2 in.	12.7000	85.5
4	4.7600	77.7
10	2.0000	65.5
20	0.8400	54.2
40	0.4200	42.8
60	0.2500	35.4
100	0.1490	28.3
200	0.0740	19.8

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GRADATION ANALYSIS

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JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : June 02
TEST SERIES : 32
TEST NO. : GT-32
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000581-0-0080

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
1 in.	25.4000	100.0
3/4 in.	19.1000	94.7
1/2 in.	12.7000	93.3
4	4.7600	88.3
10	2.0000	79.7
20	0.8400	69.2
40	0.4200	59.7
60	0.2500	53.0
100	0.1490	45.6
200	0.0740	36.8

LAB CT-32

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GRADATION ANALYSIS

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JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : June 02
TEST SERIES : 33
TEST NO. : GT-33
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000581-0-0200

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

LAB 6T-33

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
2 in.	50.8000	100.0
1 in.	25.4000	67.5
3/4 in.	19.1000	51.9
1/2 in.	12.7000	44.8
4	4.7600	39.1
10	2.0000	33.7
20	0.8400	29.9
40	0.4200	27.3
60	0.2500	25.4
100	0.1490	23.2
200	0.0740	18.1

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GRADATION ANALYSIS

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JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : June 02
TEST SERIES : 34
TEST NO. : GT-34
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000577-0-0080

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

LAB GT-34

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
1 in.	25.4000	100.0
3/4 in.	19.1000	94.0
1/2 in.	12.7000	80.4
4	4.7600	73.1
10	2.0000	66.8
20	0.8400	62.4
40	0.4200	54.9
60	0.2500	42.9
100	0.1490	28.3
200	0.0740	17.3

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GRADATION ANALYSIS

==========

JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : June 02
TEST SERIES : 35
TEST NO. : GT-35
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000577-0-0250

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

LAB GT-35

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
1 in.	25.4000	100.0
3/4 in.	19.1000	94.4
1/2 in.	12.7000	87.6
4	4.7600	69.2
10	2.0000	59.3
20	0.8400	52.7
40	0.4200	48.2
60	0.2500	41.1
100	0.1490	33.6
200	0.0740	23.5

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GRADATION ANALYSIS

==========

JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : June 02
TEST SERIES : 36
TEST NO. : GT-36
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000582-0-0040

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

LAB 6T-36

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
1 in.	25.4000	100.0
3/4 in.	19.1000	93.2
1/2 in.	12.7000	88.2
4	4.7600	73.1
10	2.0000	63.0
20	0.8400	53.2
40	0.4200	45.1
60	0.2500	39.0
100	0.1490	31.4
200	0.0740	22.7

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GRADATION ANALYSIS

==========

JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : June 02
TEST SERIES : 37
TEST NO. : GT-37
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000582-0-0060

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
3/4 in.	19.1000	100.0
1/2 in.	12.7000	75.6
4	4.7600	58.1
10	2.0000	45.2
20	0.8400	34.2
40	0.4200	28.2
60	0.2500	25.0
100	0.1490	20.9
200	0.0740	13.3

LAB 6T-37

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GRADATION ANALYSIS

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JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : June 02
TEST SERIES : 38
TEST NO. : GT-38
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID H2-BH000582-0-0080

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
1/2 in.	12.7000	100.0
4	4.7600	94.9
10	2.0000	93.3
20	0.8400	91.4
40	0.4200	88.4
60	0.2500	82.5
100	0.1490	67.6
200	0.0740	44.8

LAB 6T-38

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GRADATION ANALYSIS

==========

JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : June 02
TEST SERIES : 39
TEST NO. : GT-39
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000583-0-0040

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
1/2 in.	12.7000	100.0
4	4.7600	95.8
10	2.0000	91.9
20	0.8400	86.6
40	0.4200	77.8
60	0.2500	65.0
100	0.1490	44.1
200	0.0740	24.4

LABGT-39

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GRADATION ANALYSIS

JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : June 02
TEST SERIES : 40
TEST NO. : GT-40
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000583-0-0100

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

LAB 6T-40

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
1 in.	25.4000	100.0
3/4 in.	19.1000	84.3
1/2 in.	12.7000	80.5
4	4.7600	74.5
10	2.0000	69.6
20	0.8400	66.6
40	0.4200	64.5
60	0.2500	63.2
100	0.1490	60.6
200	0.0740	52.5

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GRADATION ANALYSIS

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JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : June 02
TEST SERIES : 41
TEST NO. : GT-41
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000583-0-0250

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
1/2 in.	12.7000	100.0
4	4.7600	91.5
10	2.0000	87.3
20	0.8400	84.2
40	0.4200	82.1
60	0.2500	80.6
100	0.1490	77.5
200	0.0740	66.5

LAB 6T-41

GZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS

GRADATION ANALYSIS

==========

JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : June 02
TEST SERIES : 42
TEST NO. : GT-42
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000578-0-0020

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

LAB GT-42

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
4	4.7600	100.0
10	2.0000	99.8
20	0.8400	99.5
40	0.4200	95.1
60	0.2500	73.1
100	0.1490	40.1
200	0.0740	16.1

GZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS

GRADATION ANALYSIS

==========

JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : June 02
TEST SERIES : 43
TEST NO. : GT-43
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000578-0-0100

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
2 in.	50.8000	100.0
1 in.	25.4000	87.0
3/4 in.	19.1000	87.0
1/2 in.	12.7000	79.7
4	4.7600	63.5
10	2.0000	57.2
20	0.8400	52.6
40	0.4200	46.8
60	0.2500	36.7
100	0.1490	20.8
200	0.0740	11.8

LAB GT-43

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GRADATION ANALYSIS

==========

JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : June 02
TEST SERIES : 44
TEST NO. : GT-44
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000578-0-0200

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
3/4 in.	19.1000	100.0
1/2 in.	12.7000	98.7
4	4.7600	85.5
10	2.0000	75.7
20	0.8400	68.2
40	0.4200	64.1
60	0.2500	61.3
100	0.1490	57.1
200	0.0740	44.2

LAB 6T-44

GZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS

GRADATION ANALYSIS

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JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : July 02
TEST SERIES : 45
TEST NO. : GT-45
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000633-0-0040

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
1 in.	25.4000	100.0
3/4 in.	19.1000	90.0
1/2 in.	12.7000	83.0
4	4.7600	71.1
10	2.0000	64.2
20	0.8400	60.1
40	0.4200	57.2
60	0.2500	55.1
100	0.1490	48.9
200	0.0740	39.7
	0.0424	31.2
	0.0310	27.0
	0.0224	23.6
	0.0160	21.5
	0.0116	18.5
	0.0083	16.9
	0.0059	13.9
	0.0042	11.4
	0.0033	10.5
	0.0014	8.0

LAB NO 6T-45

GZA GEOENVIRONMENTAL, INC.
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GRADATION ANALYSIS

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JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : July 02
TEST SERIES : 46
TEST NO. : GT-46
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000606-0-0020

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

LAB 6T-46

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
1/2 in.	12.7000	100.0
4	4.7600	92.3
10	2.0000	82.6
20	0.8400	69.5
40	0.4200	56.3
60	0.2500	47.8
100	0.1490	37.6
200	0.0740	28.0
	0.0463	23.1
	0.0332	20.0
	0.0239	16.4
	0.0171	13.3
	0.0122	11.8
	0.0087	9.2
	0.0058	7.2
	0.0045	5.6
	0.0035	5.1
	0.0014	4.6

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GRADATION ANALYSIS

==========

JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : July 02
TEST SERIES : 47
TEST NO. : GT-47
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000606-0-0060

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

LAB 6T-47

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
1/2 in.	12.7000	100.0
4	4.7600	94.9
10	2.0000	91.6
20	0.8400	87.9
40	0.4200	85.1
60	0.2500	82.6
100	0.1490	76.1
200	0.0740	56.7
	0.0435	40.4
	0.0318	33.6
	0.0229	30.0
	0.0164	26.3
	0.0118	23.2
	0.0084	20.2
	0.0058	17.1
	0.0044	14.7
	0.0034	13.5
	0.0014	11.0

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GRADATION ANALYSIS

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JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : July 02
TEST SERIES : 48
TEST NO. : GT-48
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000636-0-0040

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

LAB GT-48

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
3/4 in.	19.1000	100.0
1/2 in.	12.7000	96.6
4	4.7600	87.5
10	2.0000	82.9
20	0.8400	77.7
40	0.4200	73.1
60	0.2500	69.4
100	0.1490	61.7
200	0.0740	40.3
	0.0468	28.7
	0.0333	26.6
	0.0239	23.1
	0.0169	22.4
	0.0121	19.6
	0.0086	16.8
	0.0061	14.0
	0.0038	11.2
	0.0014	9.8

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GRADATION ANALYSIS

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JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : July 02
TEST SERIES : 49
TEST NO. : GT-49
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000636-0-0060

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
1 in.	25.4000	100.0
3/4 in.	19.1000	95.0
1/2 in.	12.7000	87.2
4	4.7600	74.1
10	2.0000	68.9
20	0.8400	64.6
40	0.4200	58.7
60	0.2500	53.5
100	0.1490	46.3
200	0.0740	28.7
	0.0475	23.0
	0.0344	17.3
	0.0247	12.1
	0.0175	11.5
	0.0124	10.9
	0.0088	9.0
	0.0063	8.3
	0.0046	7.7
	0.0033	5.8
	0.0015	3.2

LAB 6T-49

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GRADATION ANALYSIS

==========

JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : July 02
TEST SERIES : 50
TEST NO. : GT-50
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000638-0-0080

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

LAB 6T-50

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
3/4 in.	19.1000	100.0
1/2 in.	12.7000	96.5
4	4.7600	90.9
10	2.0000	84.5
20	0.8400	77.0
40	0.4200	68.9
60	0.2500	61.6
100	0.1490	53.6
200	0.0740	43.0
	0.0458	33.5
	0.0329	29.0
	0.0235	25.9
	0.0168	22.9
	0.0121	16.8
	0.0086	16.0
	0.0061	13.0
	0.0045	11.4
	0.0032	8.4
	0.0015	6.1

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GRADATION ANALYSIS

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JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : July 02
TEST SERIES : 51
TEST NO. : GT-51
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000638-0-0020

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
1 in.	25.4000	100.0
3/4 in.	19.1000	92.5
1/2 in.	12.7000	68.4
4	4.7600	56.6
10	2.0000	46.0
20	0.8400	37.9
40	0.4200	30.3
60	0.2500	24.3
100	0.1490	19.5
200	0.0740	14.3

LAB 6T-51

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GRADATION ANALYSIS

==========

JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : July 02
TEST SERIES : 52
TEST NO. : GT-52
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000715-0-0000

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

LAB 6T-52

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
3/4 in.	19.1000	100.0
1/2 in.	12.7000	98.3
4	4.7600	95.2
10	2.0000	91.2
20	0.8400	87.6
40	0.4200	83.1
60	0.2500	73.1
100	0.1490	53.4
200	0.0740	36.3
	0.0480	26.0
	0.0342	22.4
	0.0244	18.8
	0.0175	15.2
	0.0124	13.4
	0.0088	11.6
	0.0063	8.1
	0.0046	6.3
	0.0033	4.5
	0.0015	2.7

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GRADATION ANALYSIS

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JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : July 02
TEST SERIES : 53
TEST NO. : GT-53
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000714-0-0020

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

LAB 6T-53

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
2 in.	50.8000	100.0
1 in.	25.4000	87.7
3/4 in.	19.1000	87.7
1/2 in.	12.7000	64.2
4	4.7600	56.4
10	2.0000	49.1
20	0.8400	44.4
40	0.4200	40.1
60	0.2500	36.7
100	0.1490	32.3
200	0.0740	22.8
	0.0464	17.8
	0.0333	15.2
	0.0239	12.7
	0.0171	11.0
	0.0121	9.7
	0.0086	8.9
	0.0062	7.2
	0.0045	5.5
	0.0032	5.1
	0.0015	3.8

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GRADATION ANALYSIS

JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : July 02
TEST SERIES : 54
TEST NO. : GT-54
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000714-0-0060

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
1 in.	25.4000	100.0
3/4 in.	19.1000	94.5
1/2 in.	12.7000	86.7
4	4.7600	75.4
10	2.0000	68.7
20	0.8400	63.1
40	0.4200	57.9
60	0.2500	53.0
100	0.1490	43.4
200	0.0740	24.2
	0.0475	15.4
	0.0342	11.6
	0.0245	9.3
	0.0174	7.9
	0.0124	6.5
	0.0088	6.1
	0.0063	4.7
	0.0046	4.2
	0.0032	3.3
	0.0015	2.8

LAB GT-54

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GRADATION ANALYSIS

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JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : July 02
TEST SERIES : 55
TEST NO. : GT-55
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000751-0-0040

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
3/4 in.	19.1000	100.0
1/2 in.	12.7000	94.2
4	4.7600	87.3
10	2.0000	83.4
20	0.8400	77.9
40	0.4200	70.0
60	0.2500	60.0
100	0.1490	45.2
200	0.0740	28.5
	0.0479	22.2
	0.0343	18.5
	0.0244	15.6
	0.0175	12.6
	0.0124	11.1
	0.0088	9.6
	0.0063	7.4
	0.0046	6.7
	0.0032	5.9
	0.0015	5.2

LAB 6T-55

GZA GEOENVIRONMENTAL, INC.
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GRADATION ANALYSIS

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JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : July 02
TEST SERIES : 56
TEST NO. : GT-56
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000630-0-0100

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
1 in.	25.4000	100.0
3/4 in.	19.1000	92.1
1/2 in.	12.7000	84.9
4	4.7600	68.3
10	2.0000	57.9
20	0.8400	48.8
40	0.4200	40.9
60	0.2500	33.4
100	0.1490	24.1
200	0.0740	11.1

LAB. GT-56

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GRADATION ANALYSIS

==========

JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : July 02
TEST SERIES : 57
TEST NO. : GT-57
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000630-0-0170

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

LAB 6T-57

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
3/4 in.	19.1000	100.0
1/2 in.	12.7000	93.9
4	4.7600	86.4
10	2.0000	82.2
20	0.8400	80.6
40	0.4200	79.7
60	0.2500	78.9
100	0.1490	77.7
200	0.0740	72.6
	0.0404	66.7
	0.0294	60.5
	0.0214	53.6
	0.0154	48.9
	0.0112	41.9
	0.0081	34.9
	0.0059	25.6
	0.0044	19.4
	0.0031	16.3
	0.0015	9.3

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GRADATION ANALYSIS

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JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : July 02
TEST SERIES : 58
TEST NO. : GT-58
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
QA-BH000580-0-0040

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
3/4 in.	19.1000	100.0
1/2 in.	12.7000	86.4
4	4.7600	71.6
10	2.0000	63.4
20	0.8400	54.7
40	0.4200	46.6
60	0.2500	40.8
100	0.1490	34.7
200	0.0740	24.4
	0.0467	21.1
	0.0341	14.3
	0.0243	12.0
	0.0173	10.3
	0.0123	9.1
	0.0087	7.4
	0.0062	5.7
	0.0045	5.1
	0.0032	4.6
	0.0015	2.9

LAB 6T-58

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GRADATION ANALYSIS

==========

JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : July 02
TEST SERIES : 59
TEST NO. : GT-59
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
QA-BH000579-0-0150

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

LAB 6T-59

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
4	4.7600	99.9
10	2.0000	99.4
20	0.8400	98.7
40	0.4200	97.3
60	0.2500	90.1
100	0.1490	61.8
200	0.0740	29.9
	0.0477	20.8
	0.0341	17.8
	0.0244	13.4
	0.0174	10.4
	0.0124	8.2
	0.0088	5.9
	0.0063	4.5
	0.0039	3.0
	0.0014	2.2

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GRADATION ANALYSIS

==========

JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : July 02
TEST SERIES : 60
TEST NO. : GT-60
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000630-0-0020

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
3/4 in.	19.1000	100.0
1/2 in.	12.7000	87.0
4	4.7600	56.0
10	2.0000	36.6
20	0.8400	23.9
40	0.4200	16.8
60	0.2500	11.8
100	0.1490	7.5
200	0.0740	5.0

LAB 6T-60

GZA GEOENVIRONMENTAL, INC.
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GRADATION ANALYSIS

==========

JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : July 02
TEST SERIES : 61
TEST NO. : GT-61
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000635-0-0140

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
1/2 in.	12.7000	100.0
4	4.7600	93.0
10	2.0000	87.0
20	0.8400	82.9
40	0.4200	80.5
60	0.2500	78.8
100	0.1490	73.6
200	0.0740	59.8

LAB 6T-61

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GRADATION ANALYSIS

==========

JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : July 02
TEST SERIES : 62
TEST NO. : GT-62
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000579-0-0040

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
1 in.	25.4000	100.0
3/4 in.	19.1000	94.4
1/2 in.	12.7000	94.4
4	4.7600	89.4
10	2.0000	82.9
20	0.8400	75.0
40	0.4200	65.7
60	0.2500	56.5
100	0.1490	47.3
200	0.0740	33.9
	0.0459	30.3
	0.0335	22.3
	0.0242	16.9
	0.0173	14.2
	0.0123	12.8
	0.0087	11.5
	0.0062	8.8
	0.0046	6.1
	0.0016	4.0

LAB 6T-62

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GRADATION ANALYSIS

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JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : July 02
TEST SERIES : 63
TEST NO. : GT-63
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000579-0-0300

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
1 in.	25.4000	100.0
3/4 in.	19.1000	96.1
1/2 in.	12.7000	92.2
4	4.7600	81.1
10	2.0000	76.4
20	0.8400	72.5
40	0.4200	69.3
60	0.2500	66.7
100	0.1490	59.6
200	0.0740	45.7

LAB GT-63

GZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS

GRADATION ANALYSIS

==========

JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : July 02
TEST SERIES : 64
TEST NO. : GT-64
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000606-0-0080

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

LAB GT-64

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
2 in.	50.8000	100.0
1 in.	25.4000	94.6
3/4 in.	19.1000	94.6
1/2 in.	12.7000	93.2
4	4.7600	85.3
10	2.0000	82.3
20	0.8400	79.6
40	0.4200	77.6
60	0.2500	75.8
100	0.1490	71.7
200	0.0740	53.0
	0.0433	38.4
	0.0314	33.7
	0.0227	29.0
	0.0164	24.2
	0.0117	21.9
	0.0084	19.5
	0.0060	17.1
	0.0044	14.8
	0.0031	13.0
	0.0015	10.6

GZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS

GRADATION ANALYSIS

==========

JOB NUMBER : L16350
PROJECT : HOUSATONIC RIVER PROJECT

DATE : July 02
TEST SERIES : 65
TEST NO. : GT-65
TEST TYPE : Wash Sieve
TECHNICIAN : MST
REVIEWER : DAS

----------SAMPLE DATA----------

Location: SAMPLE ID
H2-BH000606-0-0140

Boring No.
Sample No.
Depth :

Water content: 0.000

==========TEST RESULTS==========

U.S.Standard Sieve No.	Particle diameter in mm.	Total Sample Percent Finer by Weight
1 in.	25.4000	100.0
3/4 in.	19.1000	83.7
1/2 in.	12.7000	77.4
4	4.7600	65.1
10	2.0000	59.3
20	0.8400	54.8
40	0.4200	50.7
60	0.2500	47.4
100	0.1490	41.7
200	0.0740	32.0

LAB GT-65

GZA GEOENVIRONMENTAL, INC.
ENGINEERS AND SCIENTISTS

EE/CA SEDIMENT DATA

Table C-1

Sediment Geotechnical Data

Transect ID					
Location ID	BH000135	BH000135	BH000138	BH000138	BH000138
Field Sample ID	H2-BH000135-0-0030	H2-BH000135-0-0080	H2-BH000138-0-0130	H2-BH000138-0-0180	H2-BH000138-0-0030
Date Collected	06/27/2000	06/27/2000	07/06/2000	07/06/2000	07/06/2000
Depth	3.0-4.3	8.0-8.9	13.0-13.4	18.0-18.7	3.0-4.0
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	**NON-PLASTIC (5)**	**21 (5)**	**22 (5)**	**22 (5)**	**NON-PLASTIC (5)**
PLASTICITY LIMIT (%)	**NON-PLASTIC (5)**	**15 (5)**	**16 (5)**	**16 (5)**	**NON-PLASTIC (5)**
GRAIN SIZE					
D-50 Calculation (mm)	**1.4351 (5)**	**.0339 (5)**	**.1070 (5)**	**.0746 (5)**	**3.3542 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**88.4 (5)**
SIZE (05) 019.0 MM (%finer)	**98.2 (5)**	**100 (5)**	**100 (5)**	**93.9 (5)**	**86 (5)**
SIZE (06) 012.7 MM (%finer)	**94.2 (5)**	**99.2 (5)**	**96.4 (5)**	**89.2 (5)**	**80.2 (5)**
SIZE (07) 009.5 MM (%finer)	NA	NA	NA	NA	NA
SIZE (08) 004.75 MM (%finer)	**85.8 (5)**	**91.6 (5)**	**77.2 (5)**	**77 (5)**	**56.7 (5)**
SIZE (09) 002.0 MM (%finer)	**58.4 (5)**	**85.3 (5)**	**70.7 (5)**	**70.8 (5)**	**43.5 (5)**
SIZE (10) 850.0 UM (%finer)	**41.3 (5)**	**82.5 (5)**	**65.4 (5)**	**66.5 (5)**	**34.2 (5)**
SIZE (11) 425.0 UM (%finer)	**32.2 (5)**	**80.7 (5)**	**61.6 (5)**	**63.8 (5)**	**25 (5)**
SIZE (12) 250.0 UM (%finer)	**26.3 (5)**	**79.3 (5)**	**59.4 (5)**	**62.1 (5)**	**19.7 (5)**
SIZE (13) 180.0 UM (%finer)	NA	NA	NA	NA	NA
SIZE (14) 150.0 UM (%finer)	**22 (5)**	**76.9 (5)**	**55.9 (5)**	**59.4 (5)**	**16.4 (5)**
SIZE (15) 075.0 UM (%finer)	**17 (5)**	**67.8 (5)**	**45.6 (5)**	**50.3 (5)**	**11.7 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**10 (5)**	**56.3 (5)**	**37.9 (5)**	**31.9 (5)**	**11.7 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**9.3 (5)**	**51.5 (5)**	**33.5 (5)**	**29.7 (5)**	**10 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**8.1 (5)**	**44.7 (5)**	**31.2 (5)**	**26.7 (5)**	**8.5 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**8.1 (5)**	**40 (5)**	**26.8 (5)**	**22.3 (5)**	**7.5 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**6.8 (5)**	**34.6 (5)**	**25.1 (5)**	**17.8 (5)**	**5.6 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**6.2 (5)**	**28.5 (5)**	**21.2 (5)**	**15.6 (5)**	**5 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**5.6 (5)**	**23 (5)**	**19 (5)**	**13.4 (5)**	**4.7 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**4.4 (5)**	**16.9 (5)**	**16.2 (5)**	**10.4 (5)**	**3.8 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**4.4 (5)**	**16.9 (5)**	**12.3 (5)**	**7.4 (5)**	**3.1 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**3.1 (5)**	**10.2 (5)**	**8.9 (5)**	**3 (5)**	**2.5 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**5.6 (5)**	**23.0 (5)**	**19.0 (5)**	**13.4 (5)**	**4.7 (5)**
GRAVEL (%)	**14.2 (5)**	**8.4 (5)**	**22.8 (5)**	**23.0 (5)**	**43.3 (5)**
SAND (%)	**68.8 (5)**	**23.8 (5)**	**31.6 (5)**	**26.7 (5)**	**45.0 (5)**
SILT (%)	**11.4 (5)**	**44.8 (5)**	**26.6 (5)**	**36.9 (5)**	**7.0 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	**14.2 (5)**	**14.3 (5)**	**10.5 (5)**	**10.8 (5)**	**13.4 (5)**
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	**0.5 (5)**	**0.2 (5)**	**0.5 (5)**	**0.4 (5)**	**0.5 (5)**
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	**2.79 (5)**	**2.85 (5)**	**2.83 (5)**	**2.83 (5)**	**2.71 (5)**

QC Level: 5 - Completeness Check

Table C-1

Sediment Geotechnical Data

Transect ID					
Location ID	BH000138	BH000139	BH000139	BH000139	BH000139
Field Sample ID	H2-BH000138-0-0080	H2-BH000139-0-0130	H2-BH000139-0-0180	H2-BH000139-0-0030	H2-BH000139-0-0080
Date Collected	07/06/2000	07/06/2000	07/06/2000	07/06/2000	07/06/2000
Depth	8.0-8.8	13.0-13.7	18.0-19.0	3.0-3.3	8.0-8.2
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	**21 (5)**	**20 (5)**	**NON-PLASTIC (5)**	NA	**NON-PLASTIC (5)**
PLASTICITY LIMIT (%)	**15 (5)**	**19 (5)**	**NON-PLASTIC (5)**	NA	**NON-PLASTIC (5)**
GRAIN SIZE					
D-50 Calculation (mm)	**.1773 (5)**	**.4758 (5)**	**3.8956 (5)**	**4.1960 (5)**	**1.7543 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (5)**	**95.4 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**96.9 (5)**	**94.8 (5)**	**81.8 (5)**	**93.7 (5)**	**97.8 (5)**
SIZE (06) 012.7 MM (%finer)	**92.5 (5)**	**90.2 (5)**	**73.8 (5)**	**81 (5)**	**90.6 (5)**
SIZE (07) 009.5 MM (%finer)	NA	NA	NA	NA	NA
SIZE (08) 004.75 MM (%finer)	**75 (5)**	**75.2 (5)**	**53.2 (5)**	**52.8 (5)**	**65.7 (5)**
SIZE (09) 002.0 MM (%finer)	**68.9 (5)**	**64.8 (5)**	**42.9 (5)**	**38.9 (5)**	**52.5 (5)**
SIZE (10) 850.0 UM (%finer)	**63.4 (5)**	**58.1 (5)**	**35.6 (5)**	**29.2 (5)**	**40.8 (5)**
SIZE (11) 425.0 UM (%finer)	**57.3 (5)**	**48.9 (5)**	**29.8 (5)**	**22.3 (5)**	**28.8 (5)**
SIZE (12) 250.0 UM (%finer)	**53.2 (5)**	**43.2 (5)**	**26.9 (5)**	**18.1 (5)**	**19.1 (5)**
SIZE (13) 180.0 UM (%finer)	NA	NA	NA	NA	NA
SIZE (14) 150.0 UM (%finer)	**48.8 (5)**	**38.2 (5)**	**23.8 (5)**	**13.5 (5)**	**12.8 (5)**
SIZE (15) 075.0 UM (%finer)	**37.3 (5)**	**26.2 (5)**	**15.5 (5)**	**7.1 (5)**	**7.9 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**32.7 (5)**	**26.2 (5)**	**11.4 (5)**	**6.1 (5)**	**7.9 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**29.2 (5)**	**21.5 (5)**	**9.8 (5)**	**4.6 (5)**	**5.8 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**26.2 (5)**	**18 (5)**	**7.6 (5)**	**3.8 (5)**	**4.5 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**24.2 (5)**	**15 (5)**	**6.3 (5)**	**3.8 (5)**	**3.2 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**22.2 (5)**	**12 (5)**	**4.7 (5)**	**3 (5)**	**2.9 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**19.1 (5)**	**10.3 (5)**	**3.8 (5)**	**2.3 (5)**	**2.3 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**17.1 (5)**	**8.6 (5)**	**3.5 (5)**	**1.9 (5)**	**1.9 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**14.6 (5)**	**6 (5)**	**2.5 (5)**	**1.5 (5)**	**1.3 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**11.1 (5)**	**3.4 (5)**	**2.2 (5)**	**1.1 (5)**	**0.6 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**9.1 (5)**	**2.1 (5)**	**1.3 (5)**	**0.4 (5)**	**0.3 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**17.1 (5)**	**8.6 (5)**	**3.5 (5)**	**1.9 (5)**	**1.9 (5)**
GRAVEL (%)	**25.0 (5)**	**24.8 (5)**	**46.8 (5)**	**47.2 (5)**	**34.3 (5)**
SAND (%)	**37.7 (5)**	**49.0 (5)**	**37.7 (5)**	**45.7 (5)**	**57.8 (5)**
SILT (%)	**20.2 (5)**	**17.6 (5)**	**12.0 (5)**	**5.2 (5)**	**6.0 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	**10.7 (5)**	**20 (5)**	**9.7 (5)**	**16.5 (5)**	**14.3 (5)**
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	**0.5 (5)**	**0.3 (5)**	**0.4 (5)**	**1.1 (5)**	**0.3 (5)**
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	**2.77 (5)**	**2.8 (5)**	**2.85 (5)**	**2.73 (5)**	**2.77 (5)**

QC Level: 5 - Completeness Check

Table C-1

Sediment Geotechnical Data

Transect ID					
Location ID	BH000140	BH000140	BH000140	BH000149	BH000149
Field Sample ID	H2-BH000140-0-0130	H2-BH000140-0-0030	H2-BH000140-0-0080	H2-BH000149-0-0130	H2-BH000149-0-0180
Date Collected	07/11/2000	07/07/2000	07/07/2000	07/12/2000	07/12/2000
Depth	13.0-14.2	3.0-3.5	8.0-8.6	13.0-15.0	18.0-20.0
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	**13 (5)**	**17 (5)**	**13 (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**
PLASTICITY LIMIT (%)	**12 (5)**	**16 (5)**	**13 (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**
GRAIN SIZE					
D-50 Calculation (mm)	**3.7734 (5)**	**.8016 (5)**	**3.5051 (5)**	**.0773 (5)**	**.0592 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**97.2 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**88.7 (5)**	**91.4 (5)**	**97.4 (5)**	**100 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**79.3 (5)**	**81.3 (5)**	**87.8 (5)**	**100 (5)**	**100 (5)**
SIZE (07) 009.5 MM (%finer)	NA	NA	NA	NA	NA
SIZE (08) 004.75 MM (%finer)	**53.8 (5)**	**68.2 (5)**	**56.7 (5)**	**100 (5)**	**100 (5)**
SIZE (09) 002.0 MM (%finer)	**43.1 (5)**	**59.7 (5)**	**41.9 (5)**	**100 (5)**	**100 (5)**
SIZE (10) 850.0 UM (%finer)	**35.7 (5)**	**50.9 (5)**	**33.5 (5)**	**100 (5)**	**100 (5)**
SIZE (11) 425.0 UM (%finer)	**31.1 (5)**	**43 (5)**	**28.5 (5)**	**99.7 (5)**	**100 (5)**
SIZE (12) 250.0 UM (%finer)	**27.4 (5)**	**37.9 (5)**	**24.5 (5)**	**97.3 (5)**	**99 (5)**
SIZE (13) 180.0 UM (%finer)	NA	NA	NA	NA	NA
SIZE (14) 150.0 UM (%finer)	**23.2 (5)**	**33.9 (5)**	**20.3 (5)**	**81 (5)**	**92.2 (5)**
SIZE (15) 075.0 UM (%finer)	**17.2 (5)**	**25 (5)**	**15.2 (5)**	**49 (5)**	**77.1 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**11 (5)**	**17.8 (5)**	**10.5 (5)**	**19.1 (5)**	**32.5 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**10.6 (5)**	**12.6 (5)**	**9 (5)**	**14.3 (5)**	**23.6 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**10.1 (5)**	**11.1 (5)**	**8.3 (5)**	**9.6 (5)**	**20.7 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**7 (5)**	**8.2 (5)**	**7.5 (5)**	**6.4 (5)**	**14 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**6.2 (5)**	**6.7 (5)**	**6 (5)**	**5.6 (5)**	**8.9 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**4.8 (5)**	**5.2 (5)**	**3.8 (5)**	**4 (5)**	**6.6 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**3.5 (5)**	**3.7 (5)**	**3 (5)**	**2.4 (5)**	**4.4 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**2.6 (5)**	**3 (5)**	**2.3 (5)**	**1.6 (5)**	**3 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**2.6 (5)**	**3 (5)**	**2.3 (5)**	**1.6 (5)**	**3 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**2.2 (5)**	**1.5 (5)**	**0.8 (5)**	**0.8 (5)**	**1.5 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**3.5 (5)**	**3.7 (5)**	**3.0 (5)**	**2.4 (5)**	**4.4 (5)**
GRAVEL (%)	**46.2 (5)**	**31.8 (5)**	**43.3 (5)**	**.0 (5)**	**.0 (5)**
SAND (%)	**36.6 (5)**	**43.2 (5)**	**41.5 (5)**	**51.0 (5)**	**22.9 (5)**
SILT (%)	**13.7 (5)**	**21.3 (5)**	**12.2 (5)**	**46.6 (5)**	**72.7 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	**11.2 (5)**	**14.6 (5)**	**8.6 (5)**	**28.5 (5)**	**32.4 (5)**
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	**0.2 (5)**	**0.7 (5)**	**0.3 (5)**	**0.5 (5)**	**0.4 (5)**
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	**2.78 (5)**	**2.84 (5)**	**2.71 (5)**	**2.77 (5)**	**2.79 (5)**

QC Level: 5 - Completeness Check

Table C-1

Sediment Geotechnical Data

Transect ID					
Location ID	BH000149	BH000149	BH000162	BH000162	BH000162
Field Sample ID	H2-BH000149-0-0030	H2-BH000149-0-0080	H2-BH000162-0-0130	H2-BH000162-0-0180	H2-BH000162-0-0030
Date Collected	07/12/2000	07/12/2000	07/13/2000	07/13/2000	07/13/2000
Depth	3.0-5.0	8.0-10.0	13.0-14.6	18.0-19.1	3.0-3.3
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**
PLASTICITY LIMIT (%)	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**
GRAIN SIZE					
D-50 Calculation (mm)	**1.4250 (5)**	**.0655 (5)**	**.2352 (5)**	**.0394 (5)**	**1.9759 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**96.8 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**95.4 (5)**	**100 (5)**	**98.5 (5)**	**100 (5)**	**93.8 (5)**
SIZE (06) 012.7 MM (%finer)	**87.7 (5)**	**99.1 (5)**	**98.5 (5)**	**100 (5)**	**82.4 (5)**
SIZE (07) 009.5 MM (%finer)	NA	NA	NA	NA	NA
SIZE (08) 004.75 MM (%finer)	**65.8 (5)**	**93.9 (5)**	**92.9 (5)**	**99.4 (5)**	**61 (5)**
SIZE (09) 002.0 MM (%finer)	**57.1 (5)**	**93.8 (5)**	**90.9 (5)**	**98.6 (5)**	**50.3 (5)**
SIZE (10) 850.0 UM (%finer)	**42.9 (5)**	**93.7 (5)**	**86.1 (5)**	**97.2 (5)**	**36 (5)**
SIZE (11) 425.0 UM (%finer)	**29.7 (5)**	**93.7 (5)**	**71.4 (5)**	**93.7 (5)**	**19.1 (5)**
SIZE (12) 250.0 UM (%finer)	**21.9 (5)**	**92.8 (5)**	**52.5 (5)**	**90.7 (5)**	**10.9 (5)**
SIZE (13) 180.0 UM (%finer)	NA	NA	NA	NA	NA
SIZE (14) 150.0 UM (%finer)	**16.9 (5)**	**86.8 (5)**	**35.6 (5)**	**75.4 (5)**	**6.8 (5)**
SIZE (15) 075.0 UM (%finer)	**12.2 (5)**	**62.9 (5)**	**23.8 (5)**	**60.2 (5)**	**3.8 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**9.1 (5)**	**27.6 (5)**	**23.8 (5)**	**60.2 (5)**	**3.8 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**6.8 (5)**	**18.9 (5)**	**23.8 (5)**	**47.4 (5)**	**3.4 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**5.7 (5)**	**12.6 (5)**	**21.5 (5)**	**41.7 (5)**	**2.8 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**4.5 (5)**	**9.5 (5)**	**16.8 (5)**	**33.5 (5)**	**2.2 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**3.4 (5)**	**7.1 (5)**	**12.8 (5)**	**26.2 (5)**	**1.5 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**2.3 (5)**	**4.7 (5)**	**9.4 (5)**	**20.5 (5)**	**1.2 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**1.1 (5)**	**3.2 (5)**	**7.4 (5)**	**14.7 (5)**	**0.9 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**1.1 (5)**	**2.4 (5)**	**4.7 (5)**	**13.9 (5)**	**0.9 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**1.1 (5)**	**2.4 (5)**	**4.7 (5)**	**13.9 (5)**	**0.6 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**0.6 (5)**	**0.8 (5)**	**3.4 (5)**	**6.5 (5)**	**0.3 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**1.1 (5)**	**3.2 (5)**	**7.4 (5)**	**14.7 (5)**	**.9 (5)**
GRAVEL (%)	**34.2 (5)**	**6.1 (5)**	**7.1 (5)**	**.6 (5)**	**39.0 (5)**
SAND (%)	**53.6 (5)**	**31.0 (5)**	**69.1 (5)**	**39.2 (5)**	**57.2 (5)**
SILT (%)	**11.1 (5)**	**59.7 (5)**	**16.4 (5)**	**45.5 (5)**	**2.9 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	**12.7 (5)**	**24.5 (5)**	**22.8 (5)**	**26.7 (5)**	**15.5 (5)**
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	**0.5 (5)**	**0.2 (5)**	**0.9 (5)**	**0.7 (5)**	**0.4 (5)**
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	**2.71 (5)**	**2.77 (5)**	**2.78 (5)**	**2.8 (5)**	**2.74 (5)**

QC Level: 5 - Completeness Check

Table C-1

Sediment Geotechnical Data

Transect ID					
Location ID	BH000162	SE001273	SE001273	SE001291	SE001330
Field Sample ID	H2-BH000162-0-0080	H2-SE001273-0-0000	H2-SE001273-1-0000	H2-SE001291-0-0015	H2-SE001330-0-0000
Date Collected	07/13/2000	05/17/2000	05/17/2000	06/01/2000	06/09/2000
Depth	8.0-8.8	0.0-0.2	0.0-0.2	1.5-2.0	0.0-0.0
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	**NON-PLASTIC (5)**	NA	NA	NA	NA
PLASTICITY LIMIT (%)	**NON-PLASTIC (5)**	NA	NA	NA	NA
GRAIN SIZE					
D-50 Calculation (mm)	**.3442 (5)**	**.0896 (11)**	**.0821 (11)**	**6.7193 (5)**	**.0391 (11)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (11)**	**100 (11)**	**100 (5)**	**100 (11)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (11)**	**100 (11)**	**100 (5)**	**100 (11)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (11)**	**100 (11)**	**100 (5)**	**100 (11)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (11)**	**100 (11)**	**97.3 (5)**	**100 (11)**
SIZE (05) 019.0 MM (%finer)	**100 (5)**	**100 (11)**	**100 (11)**	**92.8 (5)**	**100 (11)**
SIZE (06) 012.7 MM (%finer)	**99.3 (5)**	NA	NA	**74.6 (5)**	**100 (11)**
SIZE (07) 009.5 MM (%finer)	NA	**100 (11)**	**100 (11)**	NA	NA
SIZE (08) 004.75 MM (%finer)	**92.3 (5)**	**100 (11)**	**100 (11)**	**41.9 (5)**	**100 (11)**
SIZE (09) 002.0 MM (%finer)	**88.8 (5)**	**99.7 (11)**	**99.9 (11)**	**26.6 (5)**	**100 (11)**
SIZE (10) 850.0 UM (%finer)	**80.2 (5)**	**95.4 (11)**	**95.4 (11)**	**17.4 (5)**	**99.9 (11)**
SIZE (11) 425.0 UM (%finer)	**59.7 (5)**	**91.8 (11)**	**92.7 (11)**	**12.5 (5)**	**99.8 (11)**
SIZE (12) 250.0 UM (%finer)	**38.7 (5)**	**83.5 (11)**	**85.1 (11)**	**10.3 (5)**	**99.6 (11)**
SIZE (13) 180.0 UM (%finer)	NA	**72.5 (11)**	**75 (11)**	NA	NA
SIZE (14) 150.0 UM (%finer)	**26.2 (5)**	**65.3 (11)**	**68.3 (11)**	**8.5 (5)**	**98.9 (11)**
SIZE (15) 075.0 UM (%finer)	**16.1 (5)**	**46.3 (11)**	**48.1 (11)**	**6.4 (5)**	**91.6 (11)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**16.1 (5)**	NA	NA	**5.3 (5)**	**64.1 (11)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**12.8 (5)**	**22.8 (11)**	**30.7 (11)**	**4.1 (5)**	**47 (11)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**10.8 (5)**	**17.3 (11)**	**24.3 (11)**	**3.8 (5)**	**36.3 (11)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**8.8 (5)**	NA	NA	**3.4 (5)**	**28.9 (11)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**7.4 (5)**	**13.6 (11)**	**17.8 (11)**	**2.6 (5)**	**25.6 (11)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**5.4 (5)**	**8 (11)**	**11.4 (11)**	**1.9 (5)**	**18.2 (11)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**3.4 (5)**	**6.2 (11)**	**7.1 (11)**	**1.1 (5)**	**13.9 (11)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**3.4 (5)**	NA	NA	**0.8 (5)**	**10.7 (11)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**2 (5)**	**3.1 (11)**	**5.7 (11)**	**0.8 (5)**	**10.7 (11)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**0.7 (5)**	**2.2 (11)**	**2.5 (11)**	**0.4 (5)**	**5.3 (11)**
GRAIN SIZE CLASS					
CLAY (%)	**3.4 (5)**	**6.2 (11)**	**7.1 (11)**	**1.1 (5)**	**13.9 (11)**
GRAVEL (%)	**7.7 (5)**	**.0 (11)**	**.0 (11)**	**58.1 (5)**	**.0 (11)**
SAND (%)	**76.2 (5)**	**53.7 (11)**	**51.9 (11)**	**35.5 (5)**	**8.4 (11)**
SILT (%)	**12.7 (5)**	**40.1 (11)**	**41.0 (11)**	**5.3 (5)**	**77.7 (11)**
INORGANICS					
PERCENT WATER CONTENT (%)	**18.2 (5)**	NA	NA	NA	NA
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	**1.1 (5)**	NA	NA	NA	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	**2.75 (5)**	NA	NA	NA	NA

QC Level: 5 - Completeness Check

Table C-1

Sediment Geotechnical Data

Transect ID					
Location ID	SE001331	SE001332	SE001333	SE001336	SE001337
Field Sample ID	H2-SE001331-0-0000	H2-SE001332-0-0000	H2-SE001333-0-0000	H2-SE001336-0-0000	H2-SE001337-0-0000
Date Collected	06/09/2000	06/12/2000	06/12/2000	06/12/2000	06/16/2000
Depth	0.0-0.0	0.0-0.0	0.0-0.0	0.0-0.0	0.0-0.0
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA
GRAIN SIZE					
D-50 Calculation (mm)	**.0886 (11)**	**.0608 (11)**	**.1684 (11)**	**.1244 (11)**	**.0513 (11)**
SIZE (01) 075.0 MM (%finer)	**100 (11)**	**100 (11)**	**100 (11)**	**100 (11)**	**100 (11)**
SIZE (02) 050.0 MM (%finer)	**100 (11)**	**100 (11)**	**100 (11)**	**100 (11)**	**100 (11)**
SIZE (03) 037.5 MM (%finer)	**100 (11)**	**100 (11)**	**100 (11)**	**100 (11)**	**100 (11)**
SIZE (04) 025.0 MM (%finer)	**100 (11)**	**100 (11)**	**100 (11)**	**100 (11)**	**100 (11)**
SIZE (05) 019.0 MM (%finer)	**100 (11)**	**100 (11)**	**100 (11)**	**100 (11)**	**100 (11)**
SIZE (06) 012.7 MM (%finer)	**100 (11)**	**100 (11)**	**100 (11)**	**100 (11)**	**100 (11)**
SIZE (07) 009.5 MM (%finer)	NA	NA	NA	NA	NA
SIZE (08) 004.75 MM (%finer)	**99.7 (11)**	**100 (11)**	**100 (11)**	**100 (11)**	**100 (11)**
SIZE (09) 002.0 MM (%finer)	**99.6 (11)**	**100 (11)**	**100 (11)**	**100 (11)**	**99.8 (11)**
SIZE (10) 850.0 UM (%finer)	**99.6 (11)**	**99.9 (11)**	**99.9 (11)**	**100 (11)**	**99.2 (11)**
SIZE (11) 425.0 UM (%finer)	**99.5 (11)**	**99.7 (11)**	**99.2 (11)**	**99.8 (11)**	**97.5 (11)**
SIZE (12) 250.0 UM (%finer)	**98.7 (11)**	**99 (11)**	**91.3 (11)**	**95.6 (11)**	**96.8 (11)**
SIZE (13) 180.0 UM (%finer)	NA	NA	NA	NA	NA
SIZE (14) 150.0 UM (%finer)	**85.3 (11)**	**96.5 (11)**	**40.7 (11)**	**59.6 (11)**	**89.9 (11)**
SIZE (15) 075.0 UM (%finer)	**42.2 (11)**	**79.4 (11)**	**11.2 (11)**	**31.5 (11)**	**71.7 (11)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**17.2 (11)**	**25.6 (11)**	**6.2 (11)**	**10.3 (11)**	**47.9 (11)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**14.2 (11)**	**21.5 (11)**	**4.7 (11)**	**8.5 (11)**	**41 (11)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**10.3 (11)**	**18.2 (11)**	**3.9 (11)**	**6.6 (11)**	**35.6 (11)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**8.2 (11)**	**14.8 (11)**	**3.1 (11)**	**5.6 (11)**	**29.4 (11)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**6.5 (11)**	**12.1 (11)**	**3.1 (11)**	**5.6 (11)**	**24.7 (11)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**5.6 (11)**	**10.1 (11)**	**2.3 (11)**	**4.7 (11)**	**19.3 (11)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**4.3 (11)**	**8.1 (11)**	**1.6 (11)**	**3.3 (11)**	**18.6 (11)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**3.4 (11)**	**6.1 (11)**	**1.2 (11)**	**2.8 (11)**	**18.6 (11)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**3.4 (11)**	**6.1 (11)**	**1.2 (11)**	**2.8 (11)**	**18.6 (11)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**2.2 (11)**	**2.7 (11)**	**0.8 (11)**	**1.4 (11)**	**9.3 (11)**
GRAIN SIZE CLASS					
CLAY (%)	**4.3 (11)**	**8.1 (11)**	**1.6 (11)**	**3.3 (11)**	**18.6 (11)**
GRAVEL (%)	**.3 (11)**	**.0 (11)**	**.0 (11)**	**.0 (11)**	**.0 (11)**
SAND (%)	**57.5 (11)**	**20.6 (11)**	**88.8 (11)**	**68.5 (11)**	**28.3 (11)**
SILT (%)	**37.9 (11)**	**71.3 (11)**	**9.6 (11)**	**28.2 (11)**	**53.1 (11)**
INORGANICS					
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA

QC Level: 5 - Completeness Check

Table C-1

Sediment Geotechnical Data

Transect ID					
Location ID	SE001338	SE001338	SE001338	SE001338	SE001338
Field Sample ID	H2-SE001338-0-0030	H2-SE001338-0-0035	H2-SE001338-0-0040	H2-SE001338-0-0045	H2-SE001338-0-0050
Date Collected	06/28/2000	06/28/2000	06/28/2000	06/28/2000	06/28/2000
Depth	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA
GRAIN SIZE					
D-50 Calculation (mm)	**12.5290 (5)**	**2.6358 (5)**	**2.2973 (5)**	**.4014 (5)**	**.3807 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**59.3 (5)**	**100 (5)**	**84.8 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**56.7 (5)**	**95.8 (5)**	**82.8 (5)**	**100 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**50.4 (5)**	**84.5 (5)**	**79.6 (5)**	**100 (5)**	**97.3 (5)**
SIZE (07) 009.5 MM (%finer)	NA	NA	NA	NA	NA
SIZE (08) 004.75 MM (%finer)	**31.8 (5)**	**63.3 (5)**	**63.2 (5)**	**93.4 (5)**	**95.7 (5)**
SIZE (09) 002.0 MM (%finer)	**20.7 (5)**	**46 (5)**	**48.4 (5)**	**79.3 (5)**	**88.9 (5)**
SIZE (10) 850.0 UM (%finer)	**13.4 (5)**	**33.4 (5)**	**38.4 (5)**	**67.2 (5)**	**82.5 (5)**
SIZE (11) 425.0 UM (%finer)	**8.6 (5)**	**23 (5)**	**28 (5)**	**53.1 (5)**	**60.4 (5)**
SIZE (12) 250.0 UM (%finer)	**4.6 (5)**	**12 (5)**	**15.6 (5)**	**30.1 (5)**	**19.3 (5)**
SIZE (13) 180.0 UM (%finer)	NA	NA	NA	NA	NA
SIZE (14) 150.0 UM (%finer)	**2.2 (5)**	**6.2 (5)**	**9.9 (5)**	**19.2 (5)**	**9.1 (5)**
SIZE (15) 075.0 UM (%finer)	**0.7 (5)**	**2.8 (5)**	**5.1 (5)**	**10.7 (5)**	**3.3 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**0.7 (5)**	**2.3 (5)**	**3.5 (5)**	**4.5 (5)**	**2.8 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**0.7 (5)**	**2.1 (5)**	**2.9 (5)**	**3.5 (5)**	**2.8 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**0.7 (5)**	**1 (5)**	**2.3 (5)**	**3 (5)**	**2.8 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**0.6 (5)**	**0.8 (5)**	**1.7 (5)**	**2.5 (5)**	**2.2 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**0.4 (5)**	**0.8 (5)**	**1.4 (5)**	**2 (5)**	**2.2 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**0.4 (5)**	**0.5 (5)**	**1.2 (5)**	**1.5 (5)**	**1.7 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**0.3 (5)**	**0.5 (5)**	**0.9 (5)**	**1 (5)**	**1.7 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**0.3 (5)**	**0.5 (5)**	**0.6 (5)**	**1 (5)**	**1.1 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**0.3 (5)**	**0.5 (5)**	**0.6 (5)**	**1 (5)**	**1.1 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**0.1 (5)**	**0.3 (5)**	**0.3 (5)**	**0.5 (5)**	**0.6 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**.3 (5)**	**.5 (5)**	**.9 (5)**	**1.0 (5)**	**1.7 (5)**
GRAVEL (%)	**68.2 (5)**	**36.7 (5)**	**36.8 (5)**	**6.6 (5)**	**4.3 (5)**
SAND (%)	**31.1 (5)**	**60.5 (5)**	**58.1 (5)**	**82.7 (5)**	**92.4 (5)**
SILT (%)	**.4 (5)**	**2.3 (5)**	**4.2 (5)**	**9.7 (5)**	**1.6 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA

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Table C-1

Sediment Geotechnical Data

Transect ID					
Location ID	SE001338	SE001339	SE001339	SE001339	SE001339
Field Sample ID	H2-SE001338-0-0055	H2-SE001339-0-0030	H2-SE001339-0-0035	H2-SE001339-0-0040	H2-SE001339-0-0045
Date Collected	06/28/2000	06/29/2000	06/29/2000	06/29/2000	06/29/2000
Depth	5.5-6.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA
GRAIN SIZE					
D-50 Calculation (mm)	**1.1687 (5)**	**2.3087 (5)**	**3.8646 (5)**	**4.3340 (5)**	**1.6103 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**80.4 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**91.8 (5)**	**92.5 (5)**	**93.1 (5)**	**76.7 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**88.3 (5)**	**89.4 (5)**	**86.2 (5)**	**67.3 (5)**	**94.8 (5)**
SIZE (07) 009.5 MM (%finer)	NA	NA	NA	NA	NA
SIZE (08) 004.75 MM (%finer)	**68 (5)**	**58.7 (5)**	**56.6 (5)**	**51.8 (5)**	**85.7 (5)**
SIZE (09) 002.0 MM (%finer)	**56 (5)**	**48.9 (5)**	**36.1 (5)**	**39.9 (5)**	**58.2 (5)**
SIZE (10) 850.0 UM (%finer)	**47.7 (5)**	**38.8 (5)**	**18 (5)**	**29 (5)**	**34 (5)**
SIZE (11) 425.0 UM (%finer)	**35.4 (5)**	**29.6 (5)**	**9 (5)**	**21.6 (5)**	**22.2 (5)**
SIZE (12) 250.0 UM (%finer)	**18.1 (5)**	**21.7 (5)**	**4.6 (5)**	**13.8 (5)**	**13 (5)**
SIZE (13) 180.0 UM (%finer)	NA	NA	NA	NA	NA
SIZE (14) 150.0 UM (%finer)	**11.9 (5)**	**14.7 (5)**	**2.6 (5)**	**8 (5)**	**6.8 (5)**
SIZE (15) 075.0 UM (%finer)	**6.7 (5)**	**8.7 (5)**	**1.3 (5)**	**4.3 (5)**	**3 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**3.7 (5)**	**4.1 (5)**	**1.3 (5)**	**4.3 (5)**	**3 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**3.3 (5)**	**3 (5)**	**1.3 (5)**	**4.3 (5)**	**3 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**2.9 (5)**	**2.5 (5)**	**1.3 (5)**	**4.3 (5)**	**3 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**2.5 (5)**	**1.9 (5)**	**1.3 (5)**	**4.3 (5)**	**3 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**2.1 (5)**	**1.7 (5)**	**1.3 (5)**	**4.3 (5)**	**3 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**1.6 (5)**	**1.4 (5)**	**1.3 (5)**	**4.3 (5)**	**2.6 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**1.2 (5)**	**1.4 (5)**	**1.3 (5)**	**3.5 (5)**	**2.2 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**0.8 (5)**	**1.1 (5)**	**1.3 (5)**	**3.2 (5)**	**1.8 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**0.8 (5)**	**1.1 (5)**	**0.8 (5)**	**2.5 (5)**	**0.9 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**0.4 (5)**	**0.6 (5)**	**0.3 (5)**	**1.8 (5)**	**0.4 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**1.2 (5)**	**1.4 (5)**	**1.3 (5)**	**3.5 (5)**	**2.2 (5)**
GRAVEL (%)	**32.0 (5)**	**41.3 (5)**	**43.4 (5)**	**48.2 (5)**	**14.3 (5)**
SAND (%)	**61.3 (5)**	**50.0 (5)**	**55.3 (5)**	**47.5 (5)**	**82.7 (5)**
SILT (%)	**5.5 (5)**	**7.3 (5)**	**.0 (5)**	**.8 (5)**	**.8 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA

QC Level: 5 - Completeness Check

Table C-1

Sediment Geotechnical Data

Transect ID					
Location ID	SE001339	SE001339	SE001340	SE001340	SE001340
Field Sample ID	H2-SE001339-0-0050	H2-SE001339-0-0055	H2-SE001340-0-0030	H2-SE001340-0-0035	H2-SE001340-0-0040
Date Collected	06/29/2000	06/29/2000	06/29/2000	06/29/2000	06/29/2000
Depth	5.0-5.5	5.5-6.0	3.0-3.5	3.5-4.0	4.0-4.5
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA
GRAIN SIZE					
D-50 Calculation (mm)	**4.1569 (5)**	**2.8827 (5)**	**4.4839 (5)**	**7.8184 (5)**	**.7188 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**87.6 (5)**	**75.8 (5)**	**81 (5)**	**82.7 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**84.2 (5)**	**70.4 (5)**	**65.7 (5)**	**77.7 (5)**	**96.9 (5)**
SIZE (06) 012.7 MM (%finer)	**76.2 (5)**	**67.1 (5)**	**63.6 (5)**	**71 (5)**	**94.3 (5)**
SIZE (07) 009.5 MM (%finer)	NA	NA	NA	NA	NA
SIZE (08) 004.75 MM (%finer)	**53.3 (5)**	**55.5 (5)**	**53.6 (5)**	**36.8 (5)**	**69.3 (5)**
SIZE (09) 002.0 MM (%finer)	**38 (5)**	**47.4 (5)**	**16.4 (5)**	**24.1 (5)**	**64.7 (5)**
SIZE (10) 850.0 UM (%finer)	**28.2 (5)**	**40.9 (5)**	**5.4 (5)**	**13.7 (5)**	**57.9 (5)**
SIZE (11) 425.0 UM (%finer)	**22.7 (5)**	**36.8 (5)**	**2.7 (5)**	**7.4 (5)**	**32.3 (5)**
SIZE (12) 250.0 UM (%finer)	**18 (5)**	**33.4 (5)**	**1.7 (5)**	**4.3 (5)**	**11.8 (5)**
SIZE (13) 180.0 UM (%finer)	NA	NA	NA	NA	NA
SIZE (14) 150.0 UM (%finer)	**13.9 (5)**	**28.6 (5)**	**1.1 (5)**	**2.3 (5)**	**5.3 (5)**
SIZE (15) 075.0 UM (%finer)	**8.5 (5)**	**17.1 (5)**	**0.6 (5)**	**0.4 (5)**	**2 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**8.5 (5)**	**11.8 (5)**	**0.6 (5)**	**0.4 (5)**	**2 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**6.6 (5)**	**9.3 (5)**	**0.6 (5)**	**0.4 (5)**	**2 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**5.7 (5)**	**7.9 (5)**	**0.6 (5)**	**0.4 (5)**	**2 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**5.4 (5)**	**7.2 (5)**	**0.6 (5)**	**0.4 (5)**	**2 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**4.9 (5)**	**6.5 (5)**	**0.6 (5)**	**0.4 (5)**	**2 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**4.3 (5)**	**6.1 (5)**	**0.6 (5)**	**0.4 (5)**	**2 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**3.7 (5)**	**5.4 (5)**	**0.3 (5)**	**0.4 (5)**	**2 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**3.7 (5)**	**5.4 (5)**	**0.3 (5)**	**0.2 (5)**	**1.5 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**3.2 (5)**	**4.7 (5)**	**0.3 (5)**	**0.2 (5)**	**1.5 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**2 (5)**	**3.6 (5)**	**0.0 (5)**	**0.0 (5)**	**0.8 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**3.7 (5)**	**5.4 (5)**	**.3 (5)**	**.4 (5)**	**2.0 (5)**
GRAVEL (%)	**46.7 (5)**	**44.5 (5)**	**46.4 (5)**	**63.2 (5)**	**30.7 (5)**
SAND (%)	**44.8 (5)**	**38.4 (5)**	**53.0 (5)**	**36.4 (5)**	**67.3 (5)**
SILT (%)	**4.8 (5)**	**11.7 (5)**	**.3 (5)**	**.0 (5)**	**.0 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA

QC Level: 5 - Completeness Check

Table C-1

Sediment Geotechnical Data

Transect ID					
Location ID	SE001340	SE001340	SE001340	SE001341	SE001341
Field Sample ID	H2-SE001340-0-0045	H2-SE001340-0-0050	H2-SE001340-0-0055	H2-SE001341-0-0030	H2-SE001341-0-0035
Date Collected	06/29/2000	06/29/2000	06/29/2000	06/29/2000	06/29/2000
Depth	4.5-5.0	5.0-5.5	5.5-6.0	3.0-3.5	3.5-4.0
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA
GRAIN SIZE					
D-50 Calculation (mm)	**.2592 (5)**	**.1095 (5)**	**.1132 (5)**	**7.8137 (5)**	**6.0088 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**92.2 (5)**	**100 (5)**	**100 (5)**	**86.3 (5)**	**84.1 (5)**
SIZE (05) 019.0 MM (%finer)	**90.2 (5)**	**100 (5)**	**96.8 (5)**	**71.2 (5)**	**66.7 (5)**
SIZE (06) 012.7 MM (%finer)	**84.6 (5)**	**95 (5)**	**94.9 (5)**	**62.6 (5)**	**60.1 (5)**
SIZE (07) 009.5 MM (%finer)	NA	NA	NA	NA	NA
SIZE (08) 004.75 MM (%finer)	**60.2 (5)**	**73.3 (5)**	**80.8 (5)**	**42.1 (5)**	**48.1 (5)**
SIZE (09) 002.0 MM (%finer)	**56.3 (5)**	**66.9 (5)**	**78 (5)**	**31.6 (5)**	**37.1 (5)**
SIZE (10) 850.0 UM (%finer)	**54 (5)**	**64 (5)**	**75.9 (5)**	**24.2 (5)**	**30.4 (5)**
SIZE (11) 425.0 UM (%finer)	**51.8 (5)**	**62.2 (5)**	**74.1 (5)**	**18.3 (5)**	**24.5 (5)**
SIZE (12) 250.0 UM (%finer)	**49.9 (5)**	**60.7 (5)**	**72.5 (5)**	**13.1 (5)**	**19.7 (5)**
SIZE (13) 180.0 UM (%finer)	NA	NA	NA	NA	NA
SIZE (14) 150.0 UM (%finer)	**45.6 (5)**	**56.8 (5)**	**65.4 (5)**	**9.1 (5)**	**15.9 (5)**
SIZE (15) 075.0 UM (%finer)	**29 (5)**	**44.2 (5)**	**34 (5)**	**5.2 (5)**	**9.9 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**29 (5)**	**28 (5)**	**21.9 (5)**	**5.2 (5)**	**8.3 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**21.7 (5)**	**23.4 (5)**	**18.3 (5)**	**5.2 (5)**	**7.7 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**18 (5)**	**20.1 (5)**	**14.6 (5)**	**4.5 (5)**	**7.7 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**15.6 (5)**	**17.3 (5)**	**12.8 (5)**	**4.3 (5)**	**5.8 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**11.8 (5)**	**14.9 (5)**	**9.7 (5)**	**4 (5)**	**5.5 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**10.4 (5)**	**12.6 (5)**	**6.7 (5)**	**3.8 (5)**	**5.2 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**8 (5)**	**9.8 (5)**	**4.9 (5)**	**3.3 (5)**	**4.3 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**5.7 (5)**	**7.9 (5)**	**3.7 (5)**	**3.3 (5)**	**4 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**5.7 (5)**	**7.9 (5)**	**3.7 (5)**	**3 (5)**	**4 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**2.8 (5)**	**5.1 (5)**	**1.8 (5)**	**2 (5)**	**2.8 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**8.0 (5)**	**9.8 (5)**	**4.9 (5)**	**3.3 (5)**	**4.3 (5)**
GRAVEL (%)	**39.8 (5)**	**26.7 (5)**	**19.2 (5)**	**57.9 (5)**	**51.9 (5)**
SAND (%)	**31.2 (5)**	**29.1 (5)**	**46.8 (5)**	**36.9 (5)**	**38.2 (5)**
SILT (%)	**21.0 (5)**	**34.4 (5)**	**29.1 (5)**	**1.9 (5)**	**5.6 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA

QC Level: 5 - Completeness Check

Table C-1

Sediment Geotechnical Data

Transect ID					
Location ID	SE001341	SE001341	SE001341	SE001341	SE001342
Field Sample ID	H2-SE001341-0-0040	H2-SE001341-0-0045	H2-SE001341-0-0050	H2-SE001341-0-0055	H2-SE001342-0-0030
Date Collected	06/30/2000	06/30/2000	06/29/2000	06/29/2000	07/05/2000
Depth	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	3.0-3.5
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA
GRAIN SIZE					
D-50 Calculation (mm)	**6.4237 (5)**	**5.9651 (5)**	**6.9504 (5)**	**2.1128 (5)**	**18.7375 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**64.7 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**64.7 (5)**
SIZE (04) 025.0 MM (%finer)	**85.4 (5)**	**90.5 (5)**	**79.1 (5)**	**85.7 (5)**	**50.4 (5)**
SIZE (05) 019.0 MM (%finer)	**70.3 (5)**	**81.3 (5)**	**71.9 (5)**	**81.4 (5)**	**50.4 (5)**
SIZE (06) 012.7 MM (%finer)	**66.5 (5)**	**69.4 (5)**	**66.2 (5)**	**77.4 (5)**	**40.8 (5)**
SIZE (07) 009.5 MM (%finer)	NA	NA	NA	NA	NA
SIZE (08) 004.75 MM (%finer)	**45.6 (5)**	**46.5 (5)**	**43.8 (5)**	**68.7 (5)**	**22.1 (5)**
SIZE (09) 002.0 MM (%finer)	**34.8 (5)**	**34.1 (5)**	**30.6 (5)**	**49.2 (5)**	**12.9 (5)**
SIZE (10) 850.0 UM (%finer)	**27.8 (5)**	**26.6 (5)**	**22 (5)**	**38.1 (5)**	**7.9 (5)**
SIZE (11) 425.0 UM (%finer)	**22.4 (5)**	**21.7 (5)**	**15.8 (5)**	**30 (5)**	**5.5 (5)**
SIZE (12) 250.0 UM (%finer)	**18 (5)**	**18.5 (5)**	**11.7 (5)**	**24.2 (5)**	**4 (5)**
SIZE (13) 180.0 UM (%finer)	NA	NA	NA	NA	NA
SIZE (14) 150.0 UM (%finer)	**14.7 (5)**	**15.5 (5)**	**8.3 (5)**	**20 (5)**	**2.5 (5)**
SIZE (15) 075.0 UM (%finer)	**9.3 (5)**	**9.7 (5)**	**4.6 (5)**	**13.6 (5)**	**1.1 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**9.3 (5)**	**9.7 (5)**	**4.6 (5)**	**13.6 (5)**	**1.1 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**8.1 (5)**	**9.7 (5)**	**4.6 (5)**	**13.6 (5)**	**1.1 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**6.8 (5)**	**8 (5)**	**4.6 (5)**	**11.7 (5)**	**1 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**6.5 (5)**	**7.1 (5)**	**4.2 (5)**	**10 (5)**	**0.9 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**6 (5)**	**6.8 (5)**	**4 (5)**	**8.8 (5)**	**0.9 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**5.7 (5)**	**5.6 (5)**	**3.8 (5)**	**7.6 (5)**	**0.6 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**5.5 (5)**	**5.6 (5)**	**3.4 (5)**	**7.2 (5)**	**0.6 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**4.7 (5)**	**5 (5)**	**3.2 (5)**	**6.8 (5)**	**0.6 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**4.4 (5)**	**4.7 (5)**	**3.2 (5)**	**5.2 (5)**	**0.6 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**3.4 (5)**	**3.9 (5)**	**2.6 (5)**	**2.8 (5)**	**0.4 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**5.5 (5)**	**5.6 (5)**	**3.4 (5)**	**7.2 (5)**	**.6 (5)**
GRAVEL (%)	**54.4 (5)**	**53.5 (5)**	**56.2 (5)**	**31.3 (5)**	**77.9 (5)**
SAND (%)	**36.3 (5)**	**36.8 (5)**	**39.2 (5)**	**55.1 (5)**	**21.0 (5)**
SILT (%)	**3.8 (5)**	**4.1 (5)**	**1.2 (5)**	**6.4 (5)**	**.5 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA

QC Level: 5 - Completeness Check

Table C-1

Sediment Geotechnical Data

Transect ID					
Location ID	SE001342	SE001342	SE001342	SE001342	SE001342
Field Sample ID	H2-SE001342-0-0035	H2-SE001342-0-0040	H2-SE001342-0-0045	H2-SE001342-0-0050	H2-SE001342-0-0055
Date Collected	07/05/2000	07/05/2000	07/05/2000	07/05/2000	07/05/2000
Depth	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA
GRAIN SIZE					
D-50 Calculation (mm)	**1.1619 (5)**	**3.0425 (5)**	**1.6584 (5)**	**1.5232 (5)**	**11.6523 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**93.1 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**59.6 (5)**
SIZE (05) 019.0 MM (%finer)	**93.1 (5)**	**94.3 (5)**	**96.4 (5)**	**100 (5)**	**55 (5)**
SIZE (06) 012.7 MM (%finer)	**88.7 (5)**	**84.9 (5)**	**92.2 (5)**	**94.8 (5)**	**51.7 (5)**
SIZE (07) 009.5 MM (%finer)	NA	NA	NA	NA	NA
SIZE (08) 004.75 MM (%finer)	**75.9 (5)**	**59.5 (5)**	**67.4 (5)**	**71.6 (5)**	**38.8 (5)**
SIZE (09) 002.0 MM (%finer)	**62.9 (5)**	**44.2 (5)**	**53 (5)**	**56.8 (5)**	**31.9 (5)**
SIZE (10) 850.0 UM (%finer)	**45.2 (5)**	**31.3 (5)**	**42.9 (5)**	**40.4 (5)**	**25.3 (5)**
SIZE (11) 425.0 UM (%finer)	**29.7 (5)**	**23 (5)**	**33 (5)**	**27.5 (5)**	**19.3 (5)**
SIZE (12) 250.0 UM (%finer)	**18.8 (5)**	**18.9 (5)**	**24 (5)**	**18.6 (5)**	**15 (5)**
SIZE (13) 180.0 UM (%finer)	NA	NA	NA	NA	NA
SIZE (14) 150.0 UM (%finer)	**11.1 (5)**	**14.8 (5)**	**14.3 (5)**	**12.2 (5)**	**11.9 (5)**
SIZE (15) 075.0 UM (%finer)	**4.1 (5)**	**9.4 (5)**	**5.6 (5)**	**6.2 (5)**	**7.4 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**2.5 (5)**	**9.4 (5)**	**3.6 (5)**	**5.1 (5)**	**5.1 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**2 (5)**	**5.9 (5)**	**2.6 (5)**	**3.2 (5)**	**4.1 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**2 (5)**	**5.3 (5)**	**2.3 (5)**	**2.8 (5)**	**3.1 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**2 (5)**	**4 (5)**	**1.3 (5)**	**1.8 (5)**	**2.3 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**1.6 (5)**	**3 (5)**	**0.6 (5)**	**1.8 (5)**	**2 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**1.6 (5)**	**2.6 (5)**	**0.6 (5)**	**0.9 (5)**	**1.5 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**1.2 (5)**	**1.7 (5)**	**0.6 (5)**	**0.9 (5)**	**1 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**1.2 (5)**	**1.7 (5)**	**0.6 (5)**	**0.9 (5)**	**1 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**1.2 (5)**	**1.7 (5)**	**0.6 (5)**	**0.9 (5)**	**1 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**0.8 (5)**	**1.3 (5)**	**0.3 (5)**	**0.5 (5)**	**0.5 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**1.2 (5)**	**1.7 (5)**	**.6 (5)**	**.9 (5)**	**1.0 (5)**
GRAVEL (%)	**24.1 (5)**	**40.5 (5)**	**32.6 (5)**	**28.4 (5)**	**61.2 (5)**
SAND (%)	**71.8 (5)**	**50.1 (5)**	**61.8 (5)**	**65.4 (5)**	**31.4 (5)**
SILT (%)	**2.9 (5)**	**7.7 (5)**	**5.0 (5)**	**5.3 (5)**	**6.4 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA

QC Level: 5 - Completeness Check

Table C-1

Sediment Geotechnical Data

Transect ID					
Location ID	SE001343	SE001343	SE001343	SE001343	SE001343
Field Sample ID	H2-SE001343-0-0030	H2-SE001343-0-0035	H2-SE001343-0-0040	H2-SE001343-0-0045	H2-SE001343-0-0050
Date Collected	07/05/2000	07/05/2000	07/05/2000	07/05/2000	07/05/2000
Depth	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA
GRAIN SIZE					
D-50 Calculation (mm)	**5.6964 (5)**	**6.1073 (5)**	**2.1463 (5)**	**.9764 (5)**	**1.3404 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**72.6 (5)**	**66.4 (5)**	**94.9 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**68.3 (5)**	**66.4 (5)**	**94.9 (5)**	**100 (5)**	**96.6 (5)**
SIZE (06) 012.7 MM (%finer)	**61.1 (5)**	**60.2 (5)**	**82.6 (5)**	**99.2 (5)**	**95.1 (5)**
SIZE (07) 009.5 MM (%finer)	NA	NA	NA	NA	NA
SIZE (08) 004.75 MM (%finer)	**48.5 (5)**	**47.9 (5)**	**67.8 (5)**	**95.4 (5)**	**75.2 (5)**
SIZE (09) 002.0 MM (%finer)	**42.5 (5)**	**35.8 (5)**	**49 (5)**	**75.1 (5)**	**61.3 (5)**
SIZE (10) 850.0 UM (%finer)	**37.4 (5)**	**25.3 (5)**	**30.5 (5)**	**46.9 (5)**	**41.6 (5)**
SIZE (11) 425.0 UM (%finer)	**27.1 (5)**	**17.6 (5)**	**18 (5)**	**22.1 (5)**	**24.7 (5)**
SIZE (12) 250.0 UM (%finer)	**18 (5)**	**13.5 (5)**	**13.1 (5)**	**14.1 (5)**	**18.1 (5)**
SIZE (13) 180.0 UM (%finer)	NA	NA	NA	NA	NA
SIZE (14) 150.0 UM (%finer)	**10 (5)**	**10.2 (5)**	**9.6 (5)**	**9.1 (5)**	**13.1 (5)**
SIZE (15) 075.0 UM (%finer)	**3.7 (5)**	**6.2 (5)**	**5.6 (5)**	**3.7 (5)**	**7.6 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**2.7 (5)**	**5.3 (5)**	**4.5 (5)**	**2.1 (5)**	**6.1 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**2.7 (5)**	**3.5 (5)**	**3.6 (5)**	**1.6 (5)**	**4.8 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**2.7 (5)**	**2.8 (5)**	**2.7 (5)**	**1 (5)**	**3.2 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**1 (5)**	**2.1 (5)**	**2.1 (5)**	**1 (5)**	**2.8 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**0.5 (5)**	**1.4 (5)**	**2.1 (5)**	**1 (5)**	**1.6 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**0.5 (5)**	**1.1 (5)**	**1.2 (5)**	**1 (5)**	**1.6 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**0.5 (5)**	**1.1 (5)**	**1.2 (5)**	**1 (5)**	**0.8 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**0.5 (5)**	**1.1 (5)**	**1.2 (5)**	**1 (5)**	**0.8 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**0.5 (5)**	**1.1 (5)**	**1.2 (5)**	**1 (5)**	**0.8 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**0.2 (5)**	**0.7 (5)**	**0.6 (5)**	**0.5 (5)**	**0.4 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**.5 (5)**	**1.1 (5)**	**1.2 (5)**	**1.0 (5)**	**.8 (5)**
GRAVEL (%)	**51.5 (5)**	**52.1 (5)**	**32.2 (5)**	**4.6 (5)**	**24.8 (5)**
SAND (%)	**44.8 (5)**	**41.7 (5)**	**62.2 (5)**	**91.7 (5)**	**67.6 (5)**
SILT (%)	**3.2 (5)**	**5.1 (5)**	**4.4 (5)**	**2.7 (5)**	**6.8 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA

QC Level: 5 - Completeness Check

Table C-1

Sediment Geotechnical Data

Transect ID					
Location ID	SE001343	SE001344	SE001344	SE001344	SE001344
Field Sample ID	H2-SE001343-0-0055	H2-SE001344-0-0030	H2-SE001344-0-0035	H2-SE001344-0-0040	H2-SE001344-0-0045
Date Collected	07/05/2000	07/05/2000	07/05/2000	07/05/2000	07/05/2000
Depth	5.5-6.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA
GRAIN SIZE					
D-50 Calculation (mm)	**2.1674 (5)**	**2.6471 (5)**	**.8357 (5)**	**5.5849 (5)**	**2.0437 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**79.8 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**79.8 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**94.2 (5)**	**92.2 (5)**	**100 (5)**	**79.8 (5)**	**92.5 (5)**
SIZE (05) 019.0 MM (%finer)	**84.1 (5)**	**80.4 (5)**	**93.5 (5)**	**76.2 (5)**	**91.6 (5)**
SIZE (06) 012.7 MM (%finer)	**78 (5)**	**72.7 (5)**	**90 (5)**	**69.6 (5)**	**82 (5)**
SIZE (07) 009.5 MM (%finer)	NA	NA	NA	NA	NA
SIZE (08) 004.75 MM (%finer)	**60.8 (5)**	**59.1 (5)**	**79.2 (5)**	**47.7 (5)**	**62.4 (5)**
SIZE (09) 002.0 MM (%finer)	**49.3 (5)**	**47.2 (5)**	**72 (5)**	**36.1 (5)**	**49.8 (5)**
SIZE (10) 850.0 UM (%finer)	**35.5 (5)**	**33.3 (5)**	**50.9 (5)**	**25.5 (5)**	**35.6 (5)**
SIZE (11) 425.0 UM (%finer)	**24.3 (5)**	**16.2 (5)**	**24.1 (5)**	**16.1 (5)**	**23.8 (5)**
SIZE (12) 250.0 UM (%finer)	**19.6 (5)**	**9.2 (5)**	**14.7 (5)**	**12.1 (5)**	**17.9 (5)**
SIZE (13) 180.0 UM (%finer)	NA	NA	NA	NA	NA
SIZE (14) 150.0 UM (%finer)	**15.7 (5)**	**5.7 (5)**	**10.2 (5)**	**9.5 (5)**	**13.4 (5)**
SIZE (15) 075.0 UM (%finer)	**10.2 (5)**	**2.5 (5)**	**5.2 (5)**	**5.8 (5)**	**7.8 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**7.3 (5)**	**1.9 (5)**	**3.4 (5)**	**3.6 (5)**	**5.3 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**5.5 (5)**	**1.6 (5)**	**2.6 (5)**	**3.3 (5)**	**4.3 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**4.4 (5)**	**1.2 (5)**	**1.7 (5)**	**2.7 (5)**	**3.3 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**3.3 (5)**	**0.9 (5)**	**1.3 (5)**	**2.4 (5)**	**2.6 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**2.6 (5)**	**0.9 (5)**	**1.3 (5)**	**2.1 (5)**	**2 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**1.8 (5)**	**0.6 (5)**	**0.9 (5)**	**1.5 (5)**	**1.6 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**1.5 (5)**	**0.6 (5)**	**0.9 (5)**	**1.2 (5)**	**1.3 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**1.5 (5)**	**0.6 (5)**	**0.9 (5)**	**0.6 (5)**	**0.7 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**1.5 (5)**	**0.6 (5)**	**0.9 (5)**	**0.6 (5)**	**0.7 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**0.7 (5)**	**0.3 (5)**	**0.4 (5)**	**0.3 (5)**	**0.3 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**1.5 (5)**	**.6 (5)**	**.9 (5)**	**1.2 (5)**	**1.3 (5)**
GRAVEL (%)	**39.2 (5)**	**40.9 (5)**	**20.8 (5)**	**52.3 (5)**	**37.6 (5)**
SAND (%)	**50.6 (5)**	**56.6 (5)**	**74.0 (5)**	**41.9 (5)**	**54.6 (5)**
SILT (%)	**8.7 (5)**	**1.9 (5)**	**4.3 (5)**	**4.6 (5)**	**6.5 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA

QC Level: 5 - Completeness Check

Table C-1

Sediment Geotechnical Data

Transect ID					
Location ID	SE001344	SE001344	SE001345	SE001348	SE001348
Field Sample ID	H2-SE001344-0-0050	H2-SE001344-0-0055	H2-SE001345-0-0040	H2-SE001348-0-0030	H2-SE001348-0-0035
Date Collected	07/05/2000	07/05/2000	07/07/2000	07/07/2000	07/07/2000
Depth	5.0-5.5	5.5-6.0	4.0-4.5	3.0-3.5	3.5-4.0
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA
GRAIN SIZE					
D-50 Calculation (mm)	**8.6471 (5)**	**2.4318 (5)**	**1.9655 (5)**	**1.7351 (5)**	**2.0172 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**71.6 (5)**	**93.7 (5)**	**71.7 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**64.6 (5)**	**88.1 (5)**	**69.3 (5)**	**100 (5)**	**93.7 (5)**
SIZE (06) 012.7 MM (%finer)	**57.8 (5)**	**78.2 (5)**	**68 (5)**	**99.4 (5)**	**87.2 (5)**
SIZE (07) 009.5 MM (%finer)	NA	NA	NA	NA	NA
SIZE (08) 004.75 MM (%finer)	**42.5 (5)**	**60.2 (5)**	**57.9 (5)**	**94.2 (5)**	**65.9 (5)**
SIZE (09) 002.0 MM (%finer)	**31 (5)**	**48.1 (5)**	**50.3 (5)**	**59.1 (5)**	**49.9 (5)**
SIZE (10) 850.0 UM (%finer)	**23.4 (5)**	**36.4 (5)**	**40.3 (5)**	**19.6 (5)**	**34.8 (5)**
SIZE (11) 425.0 UM (%finer)	**17 (5)**	**25.7 (5)**	**26.8 (5)**	**1.6 (5)**	**13.5 (5)**
SIZE (12) 250.0 UM (%finer)	**13.8 (5)**	**20.9 (5)**	**16.9 (5)**	**1.4 (5)**	**4.9 (5)**
SIZE (13) 180.0 UM (%finer)	NA	NA	NA	NA	NA
SIZE (14) 150.0 UM (%finer)	**11.3 (5)**	**17.2 (5)**	**11.3 (5)**	**1.4 (5)**	**2.2 (5)**
SIZE (15) 075.0 UM (%finer)	**7.5 (5)**	**11.4 (5)**	**8.2 (5)**	**1.3 (5)**	**0.9 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**5.9 (5)**	**8.7 (5)**	**6.2 (5)**	**1.3 (5)**	**0.9 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**5.3 (5)**	**6.3 (5)**	**5.3 (5)**	**1.3 (5)**	**0.9 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**4.1 (5)**	**5.3 (5)**	**4.8 (5)**	**1.3 (5)**	**0.9 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**3 (5)**	**4 (5)**	**3.8 (5)**	**1.3 (5)**	**0.9 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**2.7 (5)**	**3 (5)**	**3.4 (5)**	**1.3 (5)**	**0.9 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**2.4 (5)**	**2.7 (5)**	**2.4 (5)**	**1.3 (5)**	**0.8 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**1.8 (5)**	**1.7 (5)**	**1.9 (5)**	**1.1 (5)**	**0.8 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**1.2 (5)**	**1.7 (5)**	**1 (5)**	**1.1 (5)**	**0.8 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**1.2 (5)**	**1.7 (5)**	**1 (5)**	**1.1 (5)**	**0.8 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**0.3 (5)**	**1 (5)**	**0.5 (5)**	**0.6 (5)**	**0.4 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**1.8 (5)**	**1.7 (5)**	**1.9 (5)**	**1.1 (5)**	**.8 (5)**
GRAVEL (%)	**57.5 (5)**	**39.8 (5)**	**42.1 (5)**	**5.8 (5)**	**34.1 (5)**
SAND (%)	**35.0 (5)**	**48.8 (5)**	**49.7 (5)**	**92.9 (5)**	**65.0 (5)**
SILT (%)	**5.7 (5)**	**9.7 (5)**	**6.3 (5)**	**.2 (5)**	**.1 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA

QC Level: 5 - Completeness Check

Table C-1

Sediment Geotechnical Data

Transect ID					
Location ID	SE001348	SE001348	SE001348	SE001349	SE001349
Field Sample ID	H2-SE001348-0-0040	H2-SE001348-0-0045	H2-SE001348-0-0050	H2-SE001349-0-0030	H2-SE001349-0-0035
Date Collected	07/07/2000	07/07/2000	07/07/2000	07/07/2000	07/07/2000
Depth	4.0-4.5	4.5-5.0	5.0-5.5	3.0-3.5	3.5-4.0
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA
GRAIN SIZE					
D-50 Calculation (mm)	**2.8814 (5)**	**1.5505 (5)**	**1.6054 (5)**	**.3037 (5)**	**.7662 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**87.9 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**87.9 (5)**	**97.3 (5)**	**94.9 (5)**	**96.6 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**79.9 (5)**	**94.9 (5)**	**92.9 (5)**	**89 (5)**	**100 (5)**
SIZE (07) 009.5 MM (%finer)	NA	NA	NA	NA	NA
SIZE (08) 004.75 MM (%finer)	**60.6 (5)**	**76.3 (5)**	**75.3 (5)**	**80.5 (5)**	**93.2 (5)**
SIZE (09) 002.0 MM (%finer)	**45 (5)**	**58.6 (5)**	**57 (5)**	**73.8 (5)**	**83.5 (5)**
SIZE (10) 850.0 UM (%finer)	**24.8 (5)**	**36.6 (5)**	**36.6 (5)**	**64.8 (5)**	**55.6 (5)**
SIZE (11) 425.0 UM (%finer)	**11.6 (5)**	**15.9 (5)**	**17.1 (5)**	**56.1 (5)**	**27.2 (5)**
SIZE (12) 250.0 UM (%finer)	**5.5 (5)**	**6.8 (5)**	**11.3 (5)**	**47.3 (5)**	**13.4 (5)**
SIZE (13) 180.0 UM (%finer)	NA	NA	NA	NA	NA
SIZE (14) 150.0 UM (%finer)	**2.8 (5)**	**4 (5)**	**9.3 (5)**	**34 (5)**	**5.4 (5)**
SIZE (15) 075.0 UM (%finer)	**1.4 (5)**	**2.3 (5)**	**7.1 (5)**	**16.2 (5)**	**2.4 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**1.4 (5)**	**2.3 (5)**	**7.1 (5)**	**11.5 (5)**	**2.4 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**1.3 (5)**	**2.1 (5)**	**5.6 (5)**	**8.7 (5)**	**2.4 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**1.3 (5)**	**1.7 (5)**	**5 (5)**	**8.1 (5)**	**2.4 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**1.3 (5)**	**1.4 (5)**	**3.9 (5)**	**6.3 (5)**	**2.4 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**1.3 (5)**	**1 (5)**	**3.9 (5)**	**5.8 (5)**	**2.4 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**1 (5)**	**1 (5)**	**3.4 (5)**	**4.6 (5)**	**1.4 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**1 (5)**	**0.7 (5)**	**2.8 (5)**	**4 (5)**	**1 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**0.7 (5)**	**0.7 (5)**	**2.2 (5)**	**2.9 (5)**	**1 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**0.7 (5)**	**0.7 (5)**	**2.2 (5)**	**2.9 (5)**	**1 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**0.3 (5)**	**0.3 (5)**	**1.1 (5)**	**1.7 (5)**	**0.5 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**1.0 (5)**	**.7 (5)**	**2.8 (5)**	**4.0 (5)**	**1.0 (5)**
GRAVEL (%)	**39.4 (5)**	**23.7 (5)**	**24.7 (5)**	**19.5 (5)**	**6.8 (5)**
SAND (%)	**59.2 (5)**	**74.0 (5)**	**68.2 (5)**	**64.3 (5)**	**90.8 (5)**
SILT (%)	**.4 (5)**	**1.6 (5)**	**4.3 (5)**	**12.2 (5)**	**1.4 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA

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Table C-1

Sediment Geotechnical Data

Transect ID					
Location ID	SE001349	SE001349	SE001350	SE001350	SE001350
Field Sample ID	H2-SE001349-0-0040	H2-SE001349-0-0045	H2-SE001350-0-0030	H2-SE001350-0-0035	H2-SE001350-0-0040
Date Collected	07/07/2000	07/07/2000	07/10/2000	07/10/2000	07/10/2000
Depth	4.0-4.5	4.5-5.0	3.0-3.5	3.5-4.0	4.0-4.5
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA
GRAIN SIZE					
D-50 Calculation (mm)	**.3779 (5)**	**.2171 (5)**	**.1055 (5)**	**.1619 (5)**	**.0860 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (07) 009.5 MM (%finer)	NA	NA	NA	NA	NA
SIZE (08) 004.75 MM (%finer)	**98.4 (5)**	**99.7 (5)**	**100 (5)**	**100 (5)**	**99.1 (5)**
SIZE (09) 002.0 MM (%finer)	**93.8 (5)**	**99.1 (5)**	**100 (5)**	**99.3 (5)**	**98.9 (5)**
SIZE (10) 850.0 UM (%finer)	**83.5 (5)**	**95.6 (5)**	**99.7 (5)**	**94.4 (5)**	**98.8 (5)**
SIZE (11) 425.0 UM (%finer)	**58.1 (5)**	**81.8 (5)**	**99.3 (5)**	**89.2 (5)**	**98.4 (5)**
SIZE (12) 250.0 UM (%finer)	**28 (5)**	**59.3 (5)**	**96.1 (5)**	**76 (5)**	**92.7 (5)**
SIZE (13) 180.0 UM (%finer)	NA	NA	NA	NA	NA
SIZE (14) 150.0 UM (%finer)	**11.4 (5)**	**31 (5)**	**69 (5)**	**46.5 (5)**	**69.7 (5)**
SIZE (15) 075.0 UM (%finer)	**4.1 (5)**	**9.4 (5)**	**37 (5)**	**21.1 (5)**	**46.6 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**3.4 (5)**	**6.5 (5)**	**13.7 (5)**	**21.1 (5)**	**17.1 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**3.4 (5)**	**4.3 (5)**	**12.6 (5)**	**15.7 (5)**	**14.4 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**2.8 (5)**	**3.6 (5)**	**10.3 (5)**	**12.8 (5)**	**11.7 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**2.2 (5)**	**2.9 (5)**	**9.2 (5)**	**10.8 (5)**	**9.9 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**2.2 (5)**	**2.9 (5)**	**8 (5)**	**9.8 (5)**	**8.1 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**1.7 (5)**	**2.2 (5)**	**6.9 (5)**	**7.9 (5)**	**7.2 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**1.7 (5)**	**1.4 (5)**	**4.6 (5)**	**4.9 (5)**	**4.5 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**1.1 (5)**	**1.4 (5)**	**2.3 (5)**	**3 (5)**	**1.8 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**1.1 (5)**	**1.4 (5)**	**2.3 (5)**	**3 (5)**	**1.8 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**0.6 (5)**	**0.7 (5)**	**1.1 (5)**	**2 (5)**	**0.9 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**1.7 (5)**	**1.4 (5)**	**4.6 (5)**	**4.9 (5)**	**4.5 (5)**
GRAVEL (%)	**1.6 (5)**	**.3 (5)**	**.0 (5)**	**.0 (5)**	**.9 (5)**
SAND (%)	**94.3 (5)**	**90.3 (5)**	**63.0 (5)**	**78.9 (5)**	**52.5 (5)**
SILT (%)	**2.4 (5)**	**8.0 (5)**	**32.4 (5)**	**16.2 (5)**	**42.1 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA

QC Level: 5 - Completeness Check

Table C-1

Sediment Geotechnical Data

Transect ID					
Location ID	SE001350	SE001351	SE001351	SE001351	SE001351
Field Sample ID	H2-SE001350-0-0045	H2-SE001351-0-0030	H2-SE001351-0-0035	H2-SE001351-0-0040	H2-SE001351-0-0045
Date Collected	07/10/2000	07/10/2000	07/10/2000	07/10/2000	07/10/2000
Depth	4.5-5.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA
GRAIN SIZE					
D-50 Calculation (mm)	**.3876 (5)**	**.1503 (5)**	**.1657 (5)**	**.1145 (5)**	**.1425 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**99.4 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (07) 009.5 MM (%finer)	NA	NA	NA	NA	NA
SIZE (08) 004.75 MM (%finer)	**96.2 (5)**	**99.7 (5)**	**99.9 (5)**	**100 (5)**	**99.7 (5)**
SIZE (09) 002.0 MM (%finer)	**93.9 (5)**	**99.7 (5)**	**99.9 (5)**	**100 (5)**	**99.1 (5)**
SIZE (10) 850.0 UM (%finer)	**81.6 (5)**	**99.2 (5)**	**99.2 (5)**	**99.3 (5)**	**97.5 (5)**
SIZE (11) 425.0 UM (%finer)	**55.6 (5)**	**97.3 (5)**	**95.4 (5)**	**96.3 (5)**	**89.2 (5)**
SIZE (12) 250.0 UM (%finer)	**29.4 (5)**	**85.1 (5)**	**78 (5)**	**88.2 (5)**	**78 (5)**
SIZE (13) 180.0 UM (%finer)	NA	NA	NA	NA	NA
SIZE (14) 150.0 UM (%finer)	**15 (5)**	**49.9 (5)**	**44.8 (5)**	**63.4 (5)**	**52.7 (5)**
SIZE (15) 075.0 UM (%finer)	**8.4 (5)**	**19.3 (5)**	**17.9 (5)**	**35.1 (5)**	**25.8 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**5.8 (5)**	**14.1 (5)**	**14.4 (5)**	**20 (5)**	**16.6 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**5.2 (5)**	**10.6 (5)**	**12.6 (5)**	**17.5 (5)**	**14.5 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**4.5 (5)**	**9.4 (5)**	**10.8 (5)**	**13.8 (5)**	**12.4 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**4.5 (5)**	**8.2 (5)**	**9 (5)**	**11.3 (5)**	**10.4 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**3.9 (5)**	**7.1 (5)**	**7.2 (5)**	**10 (5)**	**9.3 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**3.2 (5)**	**4.7 (5)**	**5.4 (5)**	**7.5 (5)**	**7.3 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**1.9 (5)**	**3.5 (5)**	**3.6 (5)**	**3.8 (5)**	**4.1 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**1.3 (5)**	**2.4 (5)**	**3.6 (5)**	**2.5 (5)**	**4.1 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**1.3 (5)**	**2.4 (5)**	**3.6 (5)**	**2.5 (5)**	**4.1 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**0.6 (5)**	**1.2 (5)**	**1.8 (5)**	**1.3 (5)**	**1 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**1.9 (5)**	**3.5 (5)**	**3.6 (5)**	**3.8 (5)**	**4.1 (5)**
GRAVEL (%)	**3.8 (5)**	**.3 (5)**	**.1 (5)**	**.0 (5)**	**.3 (5)**
SAND (%)	**87.8 (5)**	**80.4 (5)**	**82.0 (5)**	**64.9 (5)**	**73.9 (5)**
SILT (%)	**6.5 (5)**	**15.8 (5)**	**14.3 (5)**	**31.3 (5)**	**21.7 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA

QC Level: 5 - Completeness Check

Table C-1

Sediment Geotechnical Data

Transect ID					
Location ID	SE001353	SE001353	SE001353	SE001353	SE001354
Field Sample ID	H2-SE001353-0-0030	H2-SE001353-0-0035	H2-SE001353-0-0040	H2-SE001353-0-0045	H2-SE001354-0-0030
Date Collected	07/11/2000	07/11/2000	07/11/2000	07/11/2000	07/11/2000
Depth	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	3.0-3.5
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA
GRAIN SIZE					
D-50 Calculation (mm)	**1.0162 (5)**	**1.9792 (5)**	**.5607 (5)**	**1.0313 (5)**	**.4146 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**100 (5)**	**98.4 (5)**	**100 (5)**	**98.8 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**99.4 (5)**	**95.8 (5)**	**98.5 (5)**	**88.9 (5)**	**99.4 (5)**
SIZE (07) 009.5 MM (%finer)	NA	NA	NA	NA	NA
SIZE (08) 004.75 MM (%finer)	**88.9 (5)**	**73.9 (5)**	**91.8 (5)**	**81 (5)**	**91.8 (5)**
SIZE (09) 002.0 MM (%finer)	**71.9 (5)**	**50.3 (5)**	**87.9 (5)**	**65.5 (5)**	**83.4 (5)**
SIZE (10) 850.0 UM (%finer)	**46.3 (5)**	**33.7 (5)**	**77.3 (5)**	**47.1 (5)**	**71.2 (5)**
SIZE (11) 425.0 UM (%finer)	**22.6 (5)**	**10.3 (5)**	**37.2 (5)**	**27 (5)**	**51 (5)**
SIZE (12) 250.0 UM (%finer)	**11.9 (5)**	**3.1 (5)**	**7.9 (5)**	**5.8 (5)**	**34.1 (5)**
SIZE (13) 180.0 UM (%finer)	NA	NA	NA	NA	NA
SIZE (14) 150.0 UM (%finer)	**7.4 (5)**	**1.7 (5)**	**3.5 (5)**	**2.7 (5)**	**21.8 (5)**
SIZE (15) 075.0 UM (%finer)	**4.1 (5)**	**1.1 (5)**	**2.1 (5)**	**1.6 (5)**	**12 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**3.3 (5)**	**1.1 (5)**	**2.1 (5)**	**1.6 (5)**	**8.6 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**2.8 (5)**	**1 (5)**	**2.1 (5)**	**1.6 (5)**	**7.6 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**2.3 (5)**	**1 (5)**	**2.1 (5)**	**1.6 (5)**	**6.7 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**2.3 (5)**	**1 (5)**	**2.1 (5)**	**1.6 (5)**	**5.7 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**1.9 (5)**	**1 (5)**	**2.1 (5)**	**1.6 (5)**	**4.8 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**1.9 (5)**	**1 (5)**	**2.1 (5)**	**1.6 (5)**	**3.8 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**1.4 (5)**	**0.7 (5)**	**1.9 (5)**	**1.5 (5)**	**2.9 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**0.9 (5)**	**0.7 (5)**	**1.2 (5)**	**1 (5)**	**1.9 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**0.9 (5)**	**0.7 (5)**	**1.2 (5)**	**1 (5)**	**1.9 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**0.5 (5)**	**0.3 (5)**	**0.6 (5)**	**0.5 (5)**	**1 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**1.4 (5)**	**.7 (5)**	**1.9 (5)**	**1.5 (5)**	**2.9 (5)**
GRAVEL (%)	**11.1 (5)**	**26.1 (5)**	**8.2 (5)**	**19.0 (5)**	**8.2 (5)**
SAND (%)	**84.8 (5)**	**72.8 (5)**	**89.7 (5)**	**79.4 (5)**	**79.8 (5)**
SILT (%)	**2.7 (5)**	**.4 (5)**	**.2 (5)**	**.1 (5)**	**9.1 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA

QC Level: 5 - Completeness Check

Table C-1

Sediment Geotechnical Data

Transect ID					
Location ID	SE001354	SE001354	SE001354	SE001354	SE001355
Field Sample ID	H2-SE001354-0-0035	H2-SE001354-0-0040	H2-SE001354-0-0045	H2-SE001354-0-0050	H2-SE001355-0-0030
Date Collected	07/11/2000	07/11/2000	07/11/2000	07/11/2000	07/11/2000
Depth	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	3.0-3.5
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA
GRAIN SIZE					
D-50 Calculation (mm)	**2.2483 (5)**	**1.3753 (5)**	**.7312 (5)**	**.3405 (5)**	**5.0783 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (5)**	**96.8 (5)**	**100 (5)**	**95.4 (5)**
SIZE (05) 019.0 MM (%finer)	**94.3 (5)**	**100 (5)**	**96.8 (5)**	**100 (5)**	**93.1 (5)**
SIZE (06) 012.7 MM (%finer)	**90 (5)**	**97.7 (5)**	**96.8 (5)**	**97.8 (5)**	**82.5 (5)**
SIZE (07) 009.5 MM (%finer)	NA	NA	NA	NA	NA
SIZE (08) 004.75 MM (%finer)	**76.2 (5)**	**88.6 (5)**	**94 (5)**	**94.7 (5)**	**48.6 (5)**
SIZE (09) 002.0 MM (%finer)	**47.4 (5)**	**67.6 (5)**	**87.9 (5)**	**90.7 (5)**	**27.6 (5)**
SIZE (10) 850.0 UM (%finer)	**14.6 (5)**	**35.2 (5)**	**60.2 (5)**	**79.5 (5)**	**17.8 (5)**
SIZE (11) 425.0 UM (%finer)	**4.1 (5)**	**9 (5)**	**23.7 (5)**	**55.6 (5)**	**12.5 (5)**
SIZE (12) 250.0 UM (%finer)	**1.8 (5)**	**3.1 (5)**	**11.2 (5)**	**44 (5)**	**9.4 (5)**
SIZE (13) 180.0 UM (%finer)	NA	NA	NA	NA	NA
SIZE (14) 150.0 UM (%finer)	**1.3 (5)**	**1.8 (5)**	**6.8 (5)**	**33.6 (5)**	**6.4 (5)**
SIZE (15) 075.0 UM (%finer)	**1.1 (5)**	**1.1 (5)**	**2.3 (5)**	**23.7 (5)**	**3 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**1.1 (5)**	**1.1 (5)**	**2.3 (5)**	**13.4 (5)**	**2.7 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**1.1 (5)**	**1.1 (5)**	**2.3 (5)**	**12.1 (5)**	**1.3 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**1.1 (5)**	**1.1 (5)**	**2.3 (5)**	**10.9 (5)**	**1.3 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**1.1 (5)**	**1.1 (5)**	**2.3 (5)**	**9.7 (5)**	**1.3 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**1.1 (5)**	**1.1 (5)**	**2 (5)**	**7.3 (5)**	**1 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**1.1 (5)**	**0.7 (5)**	**1.4 (5)**	**4.9 (5)**	**0.7 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**0.7 (5)**	**0.7 (5)**	**1.4 (5)**	**3.6 (5)**	**0.7 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**0.7 (5)**	**0.7 (5)**	**1.4 (5)**	**2.4 (5)**	**0.7 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**0.7 (5)**	**0.7 (5)**	**1.4 (5)**	**2.4 (5)**	**0.7 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**0.4 (5)**	**0.4 (5)**	**0.7 (5)**	**1.2 (5)**	**0.3 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**.7 (5)**	**.7 (5)**	**1.4 (5)**	**3.6 (5)**	**.7 (5)**
GRAVEL (%)	**23.8 (5)**	**11.4 (5)**	**6.0 (5)**	**5.3 (5)**	**51.4 (5)**
SAND (%)	**75.1 (5)**	**87.5 (5)**	**91.7 (5)**	**71.0 (5)**	**45.6 (5)**
SILT (%)	**.4 (5)**	**.4 (5)**	**.9 (5)**	**20.1 (5)**	**2.3 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA

QC Level: 5 - Completeness Check

Table C-1

Sediment Geotechnical Data

Transect ID					
Location ID	SE001355	SE001355	SE001356	SE001356	SE001356
Field Sample ID	H2-SE001355-0-0035	H2-SE001355-0-0045	H2-SE001356-0-0030	H2-SE001356-0-0035	H2-SE001356-0-0040
Date Collected	07/11/2000	07/11/2000	07/12/2000	07/12/2000	07/12/2000
Depth	3.5-4.0	4.5-5.0	3.0-3.5	3.5-4.0	4.0-4.5
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA
GRAIN SIZE					
D-50 Calculation (mm)	**4.7000 (5)**	**.1500 (5)**	**.1443 (5)**	**.2186 (5)**	**.2089 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**71.7 (5)**	**87.9 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**71.7 (5)**	**83.3 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**68 (5)**	**79.1 (5)**	**99.4 (5)**	**100 (5)**	**100 (5)**
SIZE (07) 009.5 MM (%finer)	NA	NA	NA	NA	NA
SIZE (08) 004.75 MM (%finer)	**50.3 (5)**	**68.1 (5)**	**97.7 (5)**	**97 (5)**	**97.9 (5)**
SIZE (09) 002.0 MM (%finer)	**33.8 (5)**	**64 (5)**	**96.8 (5)**	**95.6 (5)**	**97 (5)**
SIZE (10) 850.0 UM (%finer)	**24.6 (5)**	**59.8 (5)**	**95.6 (5)**	**92.3 (5)**	**94.5 (5)**
SIZE (11) 425.0 UM (%finer)	**19.9 (5)**	**56.2 (5)**	**91.6 (5)**	**80.3 (5)**	**85.8 (5)**
SIZE (12) 250.0 UM (%finer)	**16.1 (5)**	**53.7 (5)**	**81.1 (5)**	**58.5 (5)**	**66.5 (5)**
SIZE (13) 180.0 UM (%finer)	NA	NA	NA	NA	NA
SIZE (14) 150.0 UM (%finer)	**11.7 (5)**	**50 (5)**	**52.2 (5)**	**31.4 (5)**	**26.4 (5)**
SIZE (15) 075.0 UM (%finer)	**6.6 (5)**	**41.1 (5)**	**23.1 (5)**	**16.2 (5)**	**9.2 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**5.8 (5)**	**22.3 (5)**	**13.4 (5)**	**11.3 (5)**	**7.7 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**4 (5)**	**17.4 (5)**	**9.9 (5)**	**9.4 (5)**	**4.8 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**2.9 (5)**	**13.8 (5)**	**7.6 (5)**	**7.5 (5)**	**4.2 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**2.2 (5)**	**11.7 (5)**	**7 (5)**	**6.9 (5)**	**4.2 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**1.8 (5)**	**10.3 (5)**	**6.4 (5)**	**5.6 (5)**	**3 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**1.5 (5)**	**10.3 (5)**	**4.1 (5)**	**5 (5)**	**2.4 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**1.1 (5)**	**8.2 (5)**	**2.9 (5)**	**3.1 (5)**	**1.8 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**0.7 (5)**	**5.7 (5)**	**2.3 (5)**	**1.9 (5)**	**1.2 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**0.7 (5)**	**5.7 (5)**	**2.3 (5)**	**1.9 (5)**	**1.2 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**0.4 (5)**	**3.2 (5)**	**0.6 (5)**	**0.6 (5)**	**0.6 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**1.1 (5)**	**8.2 (5)**	**2.9 (5)**	**3.1 (5)**	**1.8 (5)**
GRAVEL (%)	**49.7 (5)**	**31.9 (5)**	**2.3 (5)**	**3.0 (5)**	**2.1 (5)**
SAND (%)	**43.7 (5)**	**27.0 (5)**	**74.6 (5)**	**80.8 (5)**	**88.7 (5)**
SILT (%)	**5.5 (5)**	**32.9 (5)**	**20.2 (5)**	**13.1 (5)**	**7.4 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA

QC Level: 5 - Completeness Check

Table C-1

Sediment Geotechnical Data

Transect ID					
Location ID	SE001356	SE001356	SE001357	SE001357	SE001357
Field Sample ID	H2-SE001356-0-0045	H2-SE001356-0-0050	H2-SE001357-0-0030	H2-SE001357-0-0035	H2-SE001357-0-0040
Date Collected	07/12/2000	07/12/2000	07/12/2000	07/12/2000	07/12/2000
Depth	4.5-5.0	5.0-5.5	3.0-3.5	3.5-4.0	4.0-4.5
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA
GRAIN SIZE					
D-50 Calculation (mm)	**.1901 (5)**	**.1629 (5)**	**.1660 (5)**	**.2231 (5)**	**.4717 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**99.3 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (07) 009.5 MM (%finer)	NA	NA	NA	NA	NA
SIZE (08) 004.75 MM (%finer)	**96.7 (5)**	**100 (5)**	**100 (5)**	**99.5 (5)**	**97.8 (5)**
SIZE (09) 002.0 MM (%finer)	**96.1 (5)**	**99.6 (5)**	**100 (5)**	**97.8 (5)**	**90.9 (5)**
SIZE (10) 850.0 UM (%finer)	**93.7 (5)**	**98.9 (5)**	**99.7 (5)**	**90.5 (5)**	**81.6 (5)**
SIZE (11) 425.0 UM (%finer)	**87.2 (5)**	**93 (5)**	**95.3 (5)**	**76.4 (5)**	**46.1 (5)**
SIZE (12) 250.0 UM (%finer)	**70.2 (5)**	**71 (5)**	**79.3 (5)**	**58.7 (5)**	**15 (5)**
SIZE (13) 180.0 UM (%finer)	NA	NA	NA	NA	NA
SIZE (14) 150.0 UM (%finer)	**36.5 (5)**	**46.9 (5)**	**44.4 (5)**	**26.4 (5)**	**6.7 (5)**
SIZE (15) 075.0 UM (%finer)	**19.8 (5)**	**33.9 (5)**	**16.5 (5)**	**10.8 (5)**	**4 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**16.1 (5)**	**25.6 (5)**	**14.6 (5)**	**8 (5)**	**4 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**13.8 (5)**	**22.1 (5)**	**9.3 (5)**	**5.8 (5)**	**3.5 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**12.6 (5)**	**18.6 (5)**	**9.3 (5)**	**5.1 (5)**	**3.5 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**11.5 (5)**	**17.4 (5)**	**8 (5)**	**4.4 (5)**	**2.9 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**10.3 (5)**	**14 (5)**	**6.6 (5)**	**3.6 (5)**	**2.9 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**8 (5)**	**11.6 (5)**	**5.3 (5)**	**2.9 (5)**	**2.3 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**5.7 (5)**	**8.1 (5)**	**4 (5)**	**2.2 (5)**	**1.7 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**4.6 (5)**	**5.8 (5)**	**2.7 (5)**	**1.5 (5)**	**1.2 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**4.6 (5)**	**5.8 (5)**	**2.7 (5)**	**1.5 (5)**	**1.2 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**2.3 (5)**	**3.5 (5)**	**1.3 (5)**	**0.7 (5)**	**0.6 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**5.7 (5)**	**8.1 (5)**	**4.0 (5)**	**2.2 (5)**	**1.7 (5)**
GRAVEL (%)	**3.3 (5)**	**.0 (5)**	**.0 (5)**	**.5 (5)**	**2.2 (5)**
SAND (%)	**76.9 (5)**	**66.1 (5)**	**83.5 (5)**	**88.7 (5)**	**93.8 (5)**
SILT (%)	**14.1 (5)**	**25.8 (5)**	**12.5 (5)**	**8.6 (5)**	**2.3 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA

QC Level: 5 - Completeness Check

Table C-1

Sediment Geotechnical Data

Transect ID					
Location ID	SE001357	SE001358	SE001358	SE001358	SE001359
Field Sample ID	H2-SE001357-0-0045	H2-SE001358-0-0030	H2-SE001358-0-0035	H2-SE001358-0-0040	H2-SE001359-0-0030
Date Collected	07/12/2000	07/12/2000	07/12/2000	07/12/2000	07/12/2000
Depth	4.5-5.0	3.0-3.5	3.5-4.0	4.0-4.5	3.0-3.5
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA
GRAIN SIZE					
D-50 Calculation (mm)	**.3491 (5)**	**.1804 (5)**	**.3783 (5)**	**.6820 (5)**	**.0657 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**100 (5)**	**100 (5)**	**96.4 (5)**	**98.3 (5)**	**100 (5)**
SIZE (07) 009.5 MM (%finer)	NA	NA	NA	NA	NA
SIZE (08) 004.75 MM (%finer)	**99.8 (5)**	**99.8 (5)**	**88.2 (5)**	**81.3 (5)**	**100 (5)**
SIZE (09) 002.0 MM (%finer)	**99.3 (5)**	**99.6 (5)**	**79.3 (5)**	**70.5 (5)**	**100 (5)**
SIZE (10) 850.0 UM (%finer)	**97.4 (5)**	**99.2 (5)**	**69.8 (5)**	**56.6 (5)**	**100 (5)**
SIZE (11) 425.0 UM (%finer)	**73.6 (5)**	**92.3 (5)**	**55.6 (5)**	**39.9 (5)**	**99.5 (5)**
SIZE (12) 250.0 UM (%finer)	**19.2 (5)**	**69.5 (5)**	**34.6 (5)**	**21.9 (5)**	**98.7 (5)**
SIZE (13) 180.0 UM (%finer)	NA	NA	NA	NA	NA
SIZE (14) 150.0 UM (%finer)	**5 (5)**	**41.5 (5)**	**19.2 (5)**	**11 (5)**	**90.2 (5)**
SIZE (15) 075.0 UM (%finer)	**2.7 (5)**	**19.6 (5)**	**9.3 (5)**	**5.3 (5)**	**64.5 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**2.7 (5)**	**9.8 (5)**	**5.7 (5)**	**3.5 (5)**	**23.9 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**2.7 (5)**	**7.5 (5)**	**4.4 (5)**	**2.7 (5)**	**20.6 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**2.7 (5)**	**6 (5)**	**4 (5)**	**2.3 (5)**	**15.7 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**2.7 (5)**	**5.3 (5)**	**3.1 (5)**	**1.9 (5)**	**13.2 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**2.7 (5)**	**5.3 (5)**	**2.2 (5)**	**1.9 (5)**	**11.5 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**2 (5)**	**3 (5)**	**1.3 (5)**	**0.8 (5)**	**8.2 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**1.4 (5)**	**1.5 (5)**	**1.3 (5)**	**0.8 (5)**	**5.8 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**1.4 (5)**	**1.5 (5)**	**0.9 (5)**	**0.8 (5)**	**3.3 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**1.4 (5)**	**1.5 (5)**	**0.9 (5)**	**0.8 (5)**	**3.3 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**0.7 (5)**	**0.8 (5)**	**0.4 (5)**	**0.4 (5)**	**0.8 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**1.4 (5)**	**1.5 (5)**	**1.3 (5)**	**.8 (5)**	**5.8 (5)**
GRAVEL (%)	**.2 (5)**	**.2 (5)**	**11.8 (5)**	**18.7 (5)**	**.0 (5)**
SAND (%)	**97.1 (5)**	**80.2 (5)**	**78.9 (5)**	**76.0 (5)**	**35.5 (5)**
SILT (%)	**1.3 (5)**	**18.1 (5)**	**8.0 (5)**	**4.5 (5)**	**58.7 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA

QC Level: 5 - Completeness Check

Table C-1

Sediment Geotechnical Data

Transect ID					
Location ID	SE001359	SE001359	SE001359	SE001359	SE001360
Field Sample ID	H2-SE001359-0-0035	H2-SE001359-0-0040	H2-SE001359-0-0045	H2-SE001359-0-0050	H2-SE001360-0-0030
Date Collected	07/12/2000	07/12/2000	07/12/2000	07/12/2000	07/12/2000
Depth	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	3.0-3.5
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA
GRAIN SIZE					
D-50 Calculation (mm)	**.0566 (5)**	**.0698 (5)**	**.0649 (5)**	**.6519 (5)**	**7.8985 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**88.7 (5)**
SIZE (05) 019.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**82.9 (5)**
SIZE (06) 012.7 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**99.2 (5)**	**68.3 (5)**
SIZE (07) 009.5 MM (%finer)	NA	NA	NA	NA	NA
SIZE (08) 004.75 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**88.9 (5)**	**38 (5)**
SIZE (09) 002.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**75.5 (5)**	**24.2 (5)**
SIZE (10) 850.0 UM (%finer)	**99.9 (5)**	**99.9 (5)**	**99.9 (5)**	**55.5 (5)**	**14.9 (5)**
SIZE (11) 425.0 UM (%finer)	**99.5 (5)**	**99.5 (5)**	**99.3 (5)**	**43.7 (5)**	**11.2 (5)**
SIZE (12) 250.0 UM (%finer)	**97 (5)**	**98.1 (5)**	**96.2 (5)**	**29.3 (5)**	**9 (5)**
SIZE (13) 180.0 UM (%finer)	NA	NA	NA	NA	NA
SIZE (14) 150.0 UM (%finer)	**88.5 (5)**	**85.2 (5)**	**87.2 (5)**	**17.9 (5)**	**6.2 (5)**
SIZE (15) 075.0 UM (%finer)	**73.3 (5)**	**55.6 (5)**	**63.3 (5)**	**10.2 (5)**	**3.2 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**40.3 (5)**	**27.7 (5)**	**28.9 (5)**	**7.7 (5)**	**3.2 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**30.9 (5)**	**22.7 (5)**	**23.5 (5)**	**5.5 (5)**	**3.2 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**25.3 (5)**	**17.8 (5)**	**18.8 (5)**	**5 (5)**	**2.7 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**20.6 (5)**	**14.9 (5)**	**15.5 (5)**	**4.1 (5)**	**2.7 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**17.8 (5)**	**12.1 (5)**	**14.9 (5)**	**3.2 (5)**	**2.3 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**14.1 (5)**	**10.7 (5)**	**10.1 (5)**	**2.7 (5)**	**1.8 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**10.3 (5)**	**8.5 (5)**	**6 (5)**	**2.3 (5)**	**0.9 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**6.6 (5)**	**6.4 (5)**	**5.4 (5)**	**1.4 (5)**	**0.9 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**6.6 (5)**	**6.4 (5)**	**5.4 (5)**	**1.4 (5)**	**0.9 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**1.9 (5)**	**2.1 (5)**	**1.3 (5)**	**0.5 (5)**	**0.5 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**10.3 (5)**	**8.5 (5)**	**6.0 (5)**	**2.3 (5)**	**.9 (5)**
GRAVEL (%)	**.0 (5)**	**.0 (5)**	**.0 (5)**	**11.1 (5)**	**62.0 (5)**
SAND (%)	**26.7 (5)**	**44.4 (5)**	**36.7 (5)**	**78.7 (5)**	**34.8 (5)**
SILT (%)	**63.0 (5)**	**47.1 (5)**	**57.3 (5)**	**7.9 (5)**	**2.3 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA

QC Level: 5 - Completeness Check

Table C-1

Sediment Geotechnical Data

Transect ID					
Location ID	SE001360	SE001360	SE001360	SE001360	SE001360
Field Sample ID	H2-SE001360-0-0035	H2-SE001360-0-0040	H2-SE001360-0-0045	H2-SE001360-0-0050	H2-SE001360-0-0055
Date Collected	07/12/2000	07/12/2000	07/12/2000	07/12/2000	07/12/2000
Depth	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA
GRAIN SIZE					
D-50 Calculation (mm)	**1.8250 (5)**	**3.4026 (5)**	**3.1245 (5)**	**3.3158 (5)**	**2.8794 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**97.6 (5)**	**100 (5)**	**100 (5)**	**97 (5)**	**93.8 (5)**
SIZE (06) 012.7 MM (%finer)	**92.3 (5)**	**90.1 (5)**	**92 (5)**	**88.4 (5)**	**86.2 (5)**
SIZE (07) 009.5 MM (%finer)	NA	NA	NA	NA	NA
SIZE (08) 004.75 MM (%finer)	**72.1 (5)**	**62.2 (5)**	**64.6 (5)**	**60.9 (5)**	**63.4 (5)**
SIZE (09) 002.0 MM (%finer)	**53.5 (5)**	**37.3 (5)**	**39.9 (5)**	**40 (5)**	**43.7 (5)**
SIZE (10) 850.0 UM (%finer)	**30.5 (5)**	**19.5 (5)**	**22.7 (5)**	**22 (5)**	**25.1 (5)**
SIZE (11) 425.0 UM (%finer)	**16.2 (5)**	**11.4 (5)**	**15.8 (5)**	**15.4 (5)**	**17.6 (5)**
SIZE (12) 250.0 UM (%finer)	**11.3 (5)**	**8.1 (5)**	**12.6 (5)**	**11.6 (5)**	**13.8 (5)**
SIZE (13) 180.0 UM (%finer)	NA	NA	NA	NA	NA
SIZE (14) 150.0 UM (%finer)	**8.2 (5)**	**6 (5)**	**10 (5)**	**8.5 (5)**	**10.9 (5)**
SIZE (15) 075.0 UM (%finer)	**5.4 (5)**	**4.3 (5)**	**7.3 (5)**	**5.5 (5)**	**7.8 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**5.1 (5)**	**4.2 (5)**	**5.5 (5)**	**4.3 (5)**	**6.1 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**4.5 (5)**	**3.7 (5)**	**5.2 (5)**	**4.3 (5)**	**5.3 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**3.9 (5)**	**3.7 (5)**	**4.5 (5)**	**3.8 (5)**	**4.5 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**3.4 (5)**	**3.2 (5)**	**3.8 (5)**	**3.2 (5)**	**3.7 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**2.8 (5)**	**2.1 (5)**	**2.8 (5)**	**2.1 (5)**	**2.4 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**2.3 (5)**	**1.1 (5)**	**2.1 (5)**	**2.1 (5)**	**2.4 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**1.1 (5)**	**1.1 (5)**	**1.4 (5)**	**1.6 (5)**	**2.4 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**1.1 (5)**	**1.1 (5)**	**1.4 (5)**	**1.6 (5)**	**1.6 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**1.1 (5)**	**1.1 (5)**	**1.4 (5)**	**1.6 (5)**	**1.6 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**0.6 (5)**	**0.5 (5)**	**0.7 (5)**	**0.5 (5)**	**0.8 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**1.1 (5)**	**1.1 (5)**	**1.4 (5)**	**1.6 (5)**	**2.4 (5)**
GRAVEL (%)	**27.9 (5)**	**37.8 (5)**	**35.4 (5)**	**39.1 (5)**	**36.6 (5)**
SAND (%)	**66.7 (5)**	**57.9 (5)**	**57.3 (5)**	**55.4 (5)**	**55.6 (5)**
SILT (%)	**4.3 (5)**	**3.2 (5)**	**5.9 (5)**	**3.9 (5)**	**5.4 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA

QC Level: 5 - Completeness Check

Table C-1

Sediment Geotechnical Data

Transect ID					
Location ID	SE001361	SE001361	SE001361	SE001361	SE001362
Field Sample ID	H2-SE001361-0-0030	H2-SE001361-0-0035	H2-SE001361-0-0040	H2-SE001361-0-0045	H2-SE001362-0-0030
Date Collected	07/13/2000	07/13/2000	07/13/2000	07/13/2000	07/13/2000
Depth	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	3.0-3.5
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA
GRAIN SIZE					
D-50 Calculation (mm)	**.1254 (5)**	**.1448 (5)**	**.7060 (5)**	**.6808 (5)**	**.3319 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**100 (5)**	**100 (5)**	**99.1 (5)**	**100 (5)**	**97.4 (5)**
SIZE (07) 009.5 MM (%finer)	NA	NA	NA	NA	NA
SIZE (08) 004.75 MM (%finer)	**100 (5)**	**99.5 (5)**	**97.4 (5)**	**98.8 (5)**	**94.7 (5)**
SIZE (09) 002.0 MM (%finer)	**99.8 (5)**	**98.6 (5)**	**94.2 (5)**	**95.6 (5)**	**91.6 (5)**
SIZE (10) 850.0 UM (%finer)	**98.7 (5)**	**94.8 (5)**	**66.6 (5)**	**69.9 (5)**	**81.3 (5)**
SIZE (11) 425.0 UM (%finer)	**97 (5)**	**87.8 (5)**	**17.6 (5)**	**19.9 (5)**	**61.7 (5)**
SIZE (12) 250.0 UM (%finer)	**88.5 (5)**	**75.8 (5)**	**7 (5)**	**6.5 (5)**	**39.7 (5)**
SIZE (13) 180.0 UM (%finer)	NA	NA	NA	NA	NA
SIZE (14) 150.0 UM (%finer)	**62.9 (5)**	**52.4 (5)**	**4.3 (5)**	**3.3 (5)**	**17.9 (5)**
SIZE (15) 075.0 UM (%finer)	**23.5 (5)**	**17.8 (5)**	**2.5 (5)**	**1.8 (5)**	**6.8 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**19.2 (5)**	**15.3 (5)**	**2.5 (5)**	**1.8 (5)**	**5.2 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**16 (5)**	**13.7 (5)**	**2.5 (5)**	**1.8 (5)**	**4.2 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**14.4 (5)**	**12.2 (5)**	**2.5 (5)**	**1.8 (5)**	**4.2 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**12.8 (5)**	**10.7 (5)**	**2.5 (5)**	**1.8 (5)**	**4.2 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**11.2 (5)**	**9.2 (5)**	**2.4 (5)**	**1.8 (5)**	**3.1 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**9.6 (5)**	**7.6 (5)**	**1.9 (5)**	**1.5 (5)**	**3.1 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**6.4 (5)**	**4.6 (5)**	**1.4 (5)**	**1 (5)**	**3.1 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**4.8 (5)**	**3.1 (5)**	**1 (5)**	**1 (5)**	**2.1 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**4.8 (5)**	**3.1 (5)**	**1 (5)**	**1 (5)**	**2.1 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**1.6 (5)**	**1.5 (5)**	**0.5 (5)**	**0.5 (5)**	**1 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**6.4 (5)**	**4.6 (5)**	**1.4 (5)**	**1.0 (5)**	**3.1 (5)**
GRAVEL (%)	**.0 (5)**	**.5 (5)**	**2.6 (5)**	**1.2 (5)**	**5.3 (5)**
SAND (%)	**76.5 (5)**	**81.7 (5)**	**94.9 (5)**	**97.0 (5)**	**87.9 (5)**
SILT (%)	**17.1 (5)**	**13.2 (5)**	**1.1 (5)**	**.8 (5)**	**3.7 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA

QC Level: 5 - Completeness Check

Table C-1

Sediment Geotechnical Data

Transect ID					
Location ID	SE001362	SE001362	SE001362	SE001362	SE001363
Field Sample ID	H2-SE001362-0-0035	H2-SE001362-0-0040	H2-SE001362-0-0045	H2-SE001362-0-0050	H2-SE001363-0-0030
Date Collected	07/13/2000	07/13/2000	07/13/2000	07/13/2000	07/13/2000
Depth	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	3.0-3.5
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA
GRAIN SIZE					
D-50 Calculation (mm)	**.1786 (5)**	**.6762 (5)**	**.3601 (5)**	**.1590 (5)**	**.5813 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**100 (5)**	**97.6 (5)**	**98.2 (5)**	**100 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**100 (5)**	**97.3 (5)**	**97.4 (5)**	**100 (5)**	**97.2 (5)**
SIZE (07) 009.5 MM (%finer)	NA	NA	NA	NA	NA
SIZE (08) 004.75 MM (%finer)	**99.8 (5)**	**90.8 (5)**	**93.1 (5)**	**99.8 (5)**	**92.3 (5)**
SIZE (09) 002.0 MM (%finer)	**99.8 (5)**	**82.4 (5)**	**88.8 (5)**	**99.1 (5)**	**83.8 (5)**
SIZE (10) 850.0 UM (%finer)	**97.5 (5)**	**60.1 (5)**	**78.3 (5)**	**95.5 (5)**	**68.4 (5)**
SIZE (11) 425.0 UM (%finer)	**89.2 (5)**	**35.4 (5)**	**56.3 (5)**	**92.4 (5)**	**39.3 (5)**
SIZE (12) 250.0 UM (%finer)	**69 (5)**	**20.1 (5)**	**39.3 (5)**	**86.2 (5)**	**21.4 (5)**
SIZE (13) 180.0 UM (%finer)	NA	NA	NA	NA	NA
SIZE (14) 150.0 UM (%finer)	**42.4 (5)**	**9.7 (5)**	**20.1 (5)**	**46.4 (5)**	**11 (5)**
SIZE (15) 075.0 UM (%finer)	**21.8 (5)**	**4.5 (5)**	**6.4 (5)**	**16.7 (5)**	**4.4 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**21.8 (5)**	**4.5 (5)**	**6.4 (5)**	**11.3 (5)**	**4.4 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**17.2 (5)**	**4.4 (5)**	**6.4 (5)**	**9.4 (5)**	**4.4 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**15.3 (5)**	**4.4 (5)**	**5.6 (5)**	**7.6 (5)**	**4.4 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**13.4 (5)**	**4.4 (5)**	**5 (5)**	**5.7 (5)**	**3.8 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**11.4 (5)**	**3.5 (5)**	**4.4 (5)**	**3.8 (5)**	**3.8 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**9.5 (5)**	**3.5 (5)**	**3.1 (5)**	**3.8 (5)**	**3.3 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**9.5 (5)**	**2.7 (5)**	**2.5 (5)**	**3.8 (5)**	**2.7 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**5.7 (5)**	**1.8 (5)**	**1.9 (5)**	**3.8 (5)**	**2.2 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**5.7 (5)**	**1.8 (5)**	**1.9 (5)**	**3.8 (5)**	**2.2 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**1.9 (5)**	**0.9 (5)**	**1.3 (5)**	**1.9 (5)**	**1.6 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**9.5 (5)**	**2.7 (5)**	**2.5 (5)**	**3.8 (5)**	**2.7 (5)**
GRAVEL (%)	**.2 (5)**	**9.2 (5)**	**6.9 (5)**	**.2 (5)**	**7.7 (5)**
SAND (%)	**78.0 (5)**	**86.3 (5)**	**86.7 (5)**	**83.1 (5)**	**87.9 (5)**
SILT (%)	**12.3 (5)**	**1.8 (5)**	**3.9 (5)**	**12.9 (5)**	**1.7 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA

QC Level: 5 - Completeness Check

Table C-1

Sediment Geotechnical Data

Transect ID					
Location ID	SE001363	SE001364	SE001364	SE001364	SE001364
Field Sample ID	H2-SE001363-0-0035	H2-SE001364-0-0030	H2-SE001364-0-0035	H2-SE001364-0-0040	H2-SE001364-0-0045
Date Collected	07/13/2000	07/13/2000	07/13/2000	07/13/2000	07/13/2000
Depth	3.5-4.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA
GRAIN SIZE					
D-50 Calculation (mm)	**.6058 (5)**	**3.5605 (5)**	**3.5252 (5)**	**3.0117 (5)**	**.1121 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**96.5 (5)**	**100 (5)**	**94.5 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**100 (5)**	**93.2 (5)**	**100 (5)**	**93.2 (5)**	**97.2 (5)**
SIZE (06) 012.7 MM (%finer)	**100 (5)**	**86.2 (5)**	**87.5 (5)**	**89.2 (5)**	**94.2 (5)**
SIZE (07) 009.5 MM (%finer)	NA	NA	NA	NA	NA
SIZE (08) 004.75 MM (%finer)	**90.1 (5)**	**59.3 (5)**	**60.6 (5)**	**62.2 (5)**	**86 (5)**
SIZE (09) 002.0 MM (%finer)	**84.5 (5)**	**37.8 (5)**	**36.8 (5)**	**42.9 (5)**	**80.5 (5)**
SIZE (10) 850.0 UM (%finer)	**68.5 (5)**	**19.4 (5)**	**16.8 (5)**	**27.6 (5)**	**73.4 (5)**
SIZE (11) 425.0 UM (%finer)	**36.3 (5)**	**11.2 (5)**	**9.2 (5)**	**16.9 (5)**	**68.6 (5)**
SIZE (12) 250.0 UM (%finer)	**19.1 (5)**	**6.6 (5)**	**5.2 (5)**	**12.1 (5)**	**64.9 (5)**
SIZE (13) 180.0 UM (%finer)	NA	NA	NA	NA	NA
SIZE (14) 150.0 UM (%finer)	**11.7 (5)**	**3.3 (5)**	**3 (5)**	**9.5 (5)**	**59.4 (5)**
SIZE (15) 075.0 UM (%finer)	**6.1 (5)**	**1.5 (5)**	**1.9 (5)**	**5.3 (5)**	**40.8 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**6.1 (5)**	**1.5 (5)**	**1.9 (5)**	**5.3 (5)**	**31.6 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**6.1 (5)**	**1.5 (5)**	**1.9 (5)**	**5.3 (5)**	**26.9 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**6.1 (5)**	**1.5 (5)**	**1.9 (5)**	**4.7 (5)**	**21.1 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**6.1 (5)**	**1.5 (5)**	**1.8 (5)**	**4.3 (5)**	**16.4 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**5.9 (5)**	**1.5 (5)**	**1.4 (5)**	**3.6 (5)**	**12.9 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**5.1 (5)**	**1.5 (5)**	**1.1 (5)**	**3.2 (5)**	**10.5 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**4.2 (5)**	**1.2 (5)**	**1.1 (5)**	**2.8 (5)**	**8.2 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**3.4 (5)**	**0.8 (5)**	**0.7 (5)**	**2.4 (5)**	**8.2 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**3.4 (5)**	**0.8 (5)**	**0.7 (5)**	**2.4 (5)**	**8.2 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**1.7 (5)**	**0.4 (5)**	**0.4 (5)**	**1.6 (5)**	**7 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**4.2 (5)**	**1.2 (5)**	**1.1 (5)**	**2.8 (5)**	**8.2 (5)**
GRAVEL (%)	**9.9 (5)**	**40.7 (5)**	**39.4 (5)**	**37.8 (5)**	**14.0 (5)**
SAND (%)	**84.0 (5)**	**57.8 (5)**	**58.7 (5)**	**56.9 (5)**	**45.2 (5)**
SILT (%)	**1.9 (5)**	**.3 (5)**	**.8 (5)**	**2.5 (5)**	**32.6 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA

QC Level: 5 - Completeness Check

Table C-1

Sediment Geotechnical Data

Transect ID	T152	T152	T152	T154	T154
Location ID	SD021521	SD021522	SD021523	SD021541	SD021542
Field Sample ID	H2-SD021521-0-0020	H2-SD021522-0-0020	H2-SD021523-0-0020	H2-SD021541-0-0020	H2-SD021542-0-0020
Date Collected	07/19/2000	07/19/2000	07/19/2000	07/19/2000	07/19/2000
Depth	2.0-3.0	2.0-3.0	2.0-3.0	2.0-3.0	2.0-2.5
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA
GRAIN SIZE					
D-50 Calculation (mm)	**3.3241 (5)**	**2.0846 (5)**	**3.1336 (5)**	**2.3182 (5)**	**3.0593 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**93.2 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**100 (5)**	**96 (5)**	**100 (5)**	**90.9 (5)**	**89 (5)**
SIZE (06) 012.7 MM (%finer)	**88.2 (5)**	**89.3 (5)**	**97.8 (5)**	**78.2 (5)**	**84.2 (5)**
SIZE (07) 009.5 MM (%finer)	NA	NA	NA	NA	NA
SIZE (08) 004.75 MM (%finer)	**58.4 (5)**	**62.6 (5)**	**57.7 (5)**	**60.7 (5)**	**58.3 (5)**
SIZE (09) 002.0 MM (%finer)	**42.2 (5)**	**49.6 (5)**	**44.6 (5)**	**48.6 (5)**	**44.8 (5)**
SIZE (10) 850.0 UM (%finer)	**29.6 (5)**	**37.5 (5)**	**35.6 (5)**	**41.8 (5)**	**34.3 (5)**
SIZE (11) 425.0 UM (%finer)	**20.9 (5)**	**25.3 (5)**	**28.2 (5)**	**36.5 (5)**	**21.8 (5)**
SIZE (12) 250.0 UM (%finer)	**15.8 (5)**	**16.3 (5)**	**21.4 (5)**	**32.3 (5)**	**13.6 (5)**
SIZE (13) 180.0 UM (%finer)	NA	NA	NA	NA	NA
SIZE (14) 150.0 UM (%finer)	**12.6 (5)**	**10.8 (5)**	**14.4 (5)**	**28.5 (5)**	**9.1 (5)**
SIZE (15) 075.0 UM (%finer)	**8.8 (5)**	**6.4 (5)**	**7.3 (5)**	**20.6 (5)**	**5.7 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**7.1 (5)**	**4.7 (5)**	**4.7 (5)**	**14.2 (5)**	**4.3 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**6 (5)**	**3.9 (5)**	**4 (5)**	**12.3 (5)**	**4 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**6 (5)**	**3.1 (5)**	**3.4 (5)**	**9.7 (5)**	**2.8 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**4.2 (5)**	**2.8 (5)**	**2.7 (5)**	**9 (5)**	**2.3 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**3.2 (5)**	**2 (5)**	**2.0 (5)**	**7.5 (5)**	**1.7 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**2.8 (5)**	**1.2 (5)**	**1.3 (5)**	**6 (5)**	**1.1 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**2.5 (5)**	**1.2 (5)**	**1.3 (5)**	**4.8 (5)**	**1.1 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**1.8 (5)**	**0.8 (5)**	**0.7 (5)**	**3.4 (5)**	**0.9 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**1.8 (5)**	**0.8 (5)**	**0.7 (5)**	**3.4 (5)**	**0.9 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**1.4 (5)**	**0.4 (5)**	**0.3 (5)**	**1.5 (5)**	**0.3 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**2.5 (5)**	**1.2 (5)**	**1.3 (5)**	**4.8 (5)**	**1.1 (5)**
GRAVEL (%)	**41.6 (5)**	**37.4 (5)**	**42.3 (5)**	**39.3 (5)**	**41.7 (5)**
SAND (%)	**49.6 (5)**	**56.2 (5)**	**50.4 (5)**	**40.1 (5)**	**52.6 (5)**
SILT (%)	**6.3 (5)**	**5.2 (5)**	**6.0 (5)**	**15.8 (5)**	**4.6 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA

QC Level: 5 - Completeness Check

Table C-1

Sediment Geotechnical Data

Transect ID	T154	T156
Location ID	SD021543	SD021561
Field Sample ID	H2-SD021543-0-0020	H2-SD021561-0-0020
Date Collected	07/19/2000	07/20/2000
Depth	2.0-2.5	2.0-2.5
Source	EPA_COE	EPA_COE
Analyte		
ATTERBERG LIMITS		
LIQUIDITY LIMIT (%)	NA	NA
PLASTICITY LIMIT (%)	NA	NA
GRAIN SIZE		
D-50 Calculation (mm)	**1.3867 (5)**	**1.8843 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**98.7 (5)**	**89.4 (5)**
SIZE (06) 012.7 MM (%finer)	**96.2 (5)**	**78.5 (5)**
SIZE (07) 009.5 MM (%finer)	NA	NA
SIZE (08) 004.75 MM (%finer)	**70.2 (5)**	**63.3 (5)**
SIZE (09) 002.0 MM (%finer)	**56.4 (5)**	**51.6 (5)**
SIZE (10) 850.0 UM (%finer)	**44.4 (5)**	**35.7 (5)**
SIZE (11) 425.0 UM (%finer)	**32.1 (5)**	**16.8 (5)**
SIZE (12) 250.0 UM (%finer)	**20.4 (5)**	**8.2 (5)**
SIZE (13) 180.0 UM (%finer)	NA	NA
SIZE (14) 150.0 UM (%finer)	**12.2 (5)**	**4.9 (5)**
SIZE (15) 075.0 UM (%finer)	**7 (5)**	**2.9 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**3.7 (5)**	**1.7 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**3.3 (5)**	**1.7 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**2.9 (5)**	**1.7 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**2 (5)**	**1.7 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**1.6 (5)**	**1.2 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**1.6 (5)**	**1.2 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**0.8 (5)**	**0.9 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**0.8 (5)**	**0.6 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**0.8 (5)**	**0.6 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**0.4 (5)**	**0.3 (5)**
GRAIN SIZE CLASS		
CLAY (%)	**.8 (5)**	**.9 (5)**
GRAVEL (%)	**29.8 (5)**	**36.7 (5)**
SAND (%)	**63.2 (5)**	**60.4 (5)**
SILT (%)	**6.2 (5)**	**2.0 (5)**
INORGANICS		
PERCENT WATER CONTENT (%)	NA	NA
ORGANIC CONTENT		
PERCENT ORGANIC CONTENT (%)	NA	NA
SPECIFIC GRAVITY		
SPECIFIC GRAVITY ()	NA	NA

QC Level: 5 - Completeness Check

EE/CA RIVERBANK DATA

Table C-2

Riverbank Geotechnical Data

Transect ID					
Location ID	BH000104	BH000104	BH000104	BH000104	BH000104
Field Sample ID	H2-BH000104-0-0130	H2-BH000104-0-0230	H2-BH000104-0-0030	H2-BH000104-0-0330	H2-BH000104-0-0080
Date Collected	05/31/2000	06/01/2000	05/31/2000	06/01/2000	05/31/2000
Depth	13.0-14.6	23.0-23.4	3.0-4.0	33.0-34.1	8.0-9.0
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	**NON-PLASTIC (5)**	NA	**NON-PLASTIC (5)**	**22 (5)**	**34 (5)**
PLASTICITY LIMIT (%)	**NON-PLASTIC (5)**	NA	**NON-PLASTIC (5)**	**15 (5)**	**32 (5)**
GRAIN SIZE					
D-50 Calculation (mm)	**.1953 (5)**	**1.0800 (5)**	**.6204 (5)**	**.0526 (5)**	**.0657 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**69.5 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**100 (5)**	**69.5 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**100 (5)**	**69.5 (5)**	**95.2 (5)**	**97.4 (5)**	**99.2 (5)**
SIZE (08) 004.75 MM (%finer)	**100 (5)**	**57.5 (5)**	**78.2 (5)**	**92.1 (5)**	**94.9 (5)**
SIZE (09) 002.0 MM (%finer)	**100 (5)**	**53.2 (5)**	**66.4 (5)**	**87.4 (5)**	**94.3 (5)**
SIZE (10) 850.0 UM (%finer)	**99.7 (5)**	**49.2 (5)**	**54.7 (5)**	**82.9 (5)**	**93.1 (5)**
SIZE (11) 425.0 UM (%finer)	**97.3 (5)**	**47 (5)**	**46 (5)**	**79.4 (5)**	**92.2 (5)**
SIZE (12) 250.0 UM (%finer)	**69.8 (5)**	**44.9 (5)**	**40.6 (5)**	**77.1 (5)**	**90.6 (5)**
SIZE (14) 150.0 UM (%finer)	**33.6 (5)**	**42.1 (5)**	**36 (5)**	**73.7 (5)**	**81.9 (5)**
SIZE (15) 075.0 UM (%finer)	**18.1 (5)**	**37.1 (5)**	**32.1 (5)**	**64.2 (5)**	**62 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**15 (5)**	**27.8 (5)**	**32.1 (5)**	**47.7 (5)**	**28.3 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**11.5 (5)**	**25.1 (5)**	**26.2 (5)**	**43.5 (5)**	**24.1 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**10.4 (5)**	**22 (5)**	**22.5 (5)**	**38.1 (5)**	**22 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**8.1 (5)**	**19.3 (5)**	**20 (5)**	**34.6 (5)**	**18.8 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**6.9 (5)**	**15.7 (5)**	**18.7 (5)**	**30.4 (5)**	**15.7 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**3.5 (5)**	**12.1 (5)**	**17.5 (5)**	**26.8 (5)**	**12.6 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**2.3 (5)**	**8.5 (5)**	**13.7 (5)**	**22.6 (5)**	**8.4 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**2.3 (5)**	**8.5 (5)**	**13.7 (5)**	**22.6 (5)**	**8.4 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**2.3 (5)**	**4.9 (5)**	**5 (5)**	**16.1 (5)**	**4.2 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**1.2 (5)**	**2.2 (5)**	**2.5 (5)**	**11.9 (5)**	**3.1 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**2.3 (5)**	**8.5 (5)**	**13.7 (5)**	**22.6 (5)**	**8.4 (5)**
GRAVEL (%)	**.0 (5)**	**42.5 (5)**	**21.8 (5)**	**7.9 (5)**	**5.1 (5)**
SAND (%)	**81.9 (5)**	**20.4 (5)**	**46.1 (5)**	**27.9 (5)**	**32.9 (5)**
SILT (%)	**15.8 (5)**	**28.6 (5)**	**18.4 (5)**	**41.6 (5)**	**53.6 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	**51.8 (5)**	**19.5 (5)**	**47 (5)**	**13.1 (5)**	**40.7 (5)**
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	**3.9 (5)**	NA	**5.8 (5)**	**1.3 (5)**	**4 (5)**
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	**2.64 (5)**	**2.69 (5)**	**2.47 (5)**	**2.82 (5)**	**2.64 (5)**

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID					
Location ID	BH000105	BH000105	BH000105	BH000105	BH000105
Field Sample ID	H2-BH000105-0-0130	H2-BH000105-0-0230	H2-BH000105-0-0030	H2-BH000105-0-0330	H2-BH000105-0-0080
Date Collected	06/01/2000	06/01/2000	06/01/2000	06/01/2000	06/01/2000
Depth	13.0-14.0	23.0-24.9	3.0-3.9	33.0-34.5	8.0-10.0
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	**30 (5)**	**NON-PLASTIC (5)**	NA	**NON-PLASTIC (5)**	**56 (5)**
PLASTICITY LIMIT (%)	**30 (5)**	**NON-PLASTIC (5)**	NA	**NON-PLASTIC (5)**	**44 (5)**
GRAIN SIZE					
D-50 Calculation (mm)	**.2110 (5)**	**.2476 (5)**	**.3164 (5)**	**.3519 (5)**	**.0400 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**100 (5)**	**97.5 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**100 (5)**	**97.5 (5)**	**97.6 (5)**	**99.2 (5)**	**100 (5)**
SIZE (08) 004.75 MM (%finer)	**96.5 (5)**	**95.2 (5)**	**88 (5)**	**95.8 (5)**	**99.5 (5)**
SIZE (09) 002.0 MM (%finer)	**94.2 (5)**	**92.8 (5)**	**77.6 (5)**	**87.7 (5)**	**99.1 (5)**
SIZE (10) 850.0 UM (%finer)	**88.2 (5)**	**88.7 (5)**	**66.7 (5)**	**75.5 (5)**	**98.9 (5)**
SIZE (11) 425.0 UM (%finer)	**75.6 (5)**	**76 (5)**	**55.4 (5)**	**58.4 (5)**	**98.1 (5)**
SIZE (12) 250.0 UM (%finer)	**58 (5)**	**50.7 (5)**	**46.7 (5)**	**38.3 (5)**	**97.1 (5)**
SIZE (14) 150.0 UM (%finer)	**37.5 (5)**	**21.3 (5)**	**35.6 (5)**	**16.3 (5)**	**93.6 (5)**
SIZE (15) 075.0 UM (%finer)	**23.7 (5)**	**4.9 (5)**	**24.4 (5)**	**5.3 (5)**	**80.8 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**18.7 (5)**	**3.7 (5)**	**18.4 (5)**	**4.2 (5)**	**56.9 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**16.5 (5)**	**2.5 (5)**	**16.9 (5)**	**3.6 (5)**	**47.7 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**13.2 (5)**	**2.5 (5)**	**14 (5)**	**3.6 (5)**	**38.4 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**11 (5)**	**2.5 (5)**	**11.8 (5)**	**3.6 (5)**	**33.1 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**9.9 (5)**	**2.5 (5)**	**11 (5)**	**3 (5)**	**26.5 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**6.6 (5)**	**1.9 (5)**	**8.8 (5)**	**1.8 (5)**	**21.2 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**5.5 (5)**	**1.2 (5)**	**6.6 (5)**	**1.2 (5)**	**15.9 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**2.2 (5)**	**1.2 (5)**	**6.6 (5)**	**1.2 (5)**	**7.9 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**2.2 (5)**	**1.2 (5)**	**3.7 (5)**	**1.2 (5)**	**7.9 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**1.1 (5)**	**0.6 (5)**	**2.2 (5)**	**0.6 (5)**	**5.3 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**5.5 (5)**	**1.2 (5)**	**6.6 (5)**	**1.2 (5)**	**15.9 (5)**
GRAVEL (%)	**3.5 (5)**	**4.8 (5)**	**12.0 (5)**	**4.2 (5)**	**.5 (5)**
SAND (%)	**72.8 (5)**	**90.3 (5)**	**63.6 (5)**	**90.5 (5)**	**18.7 (5)**
SILT (%)	**18.2 (5)**	**3.7 (5)**	**17.8 (5)**	**4.1 (5)**	**64.9 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	**39.7 (5)**	**22 (5)**	**19.6 (5)**	**19.2 (5)**	**68.5 (5)**
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	**3.9 (5)**	**1.3 (5)**	NA	**0.9 (5)**	**8.6 (5)**
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	**2.66 (5)**	**2.8 (5)**	**2.65 (5)**	**2.77 (5)**	**2.48 (5)**

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID					
Location ID	BH000106	BH000106	BH000106	BH000107	BH000107
Field Sample ID	H2-BH000106-0-0130	H2-BH000106-0-0030	H2-BH000106-0-0080	H2-BH000107-0-0130	H2-BH000107-0-0180
Date Collected	06/02/2000	06/02/2000	06/02/2000	06/05/2000	06/05/2000
Depth	13.0-14.0	3.0-4.0	8.0-9.0	13.0-14.0	18.0-19.0
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	**22 (5)**	**NON-PLASTIC (5)**	**20 (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**
PLASTICITY LIMIT (%)	**16 (5)**	**NON-PLASTIC (5)**	**15 (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**
GRAIN SIZE					
D-50 Calculation (mm)	**.1352 (5)**	**.1470 (5)**	**3.8533 (5)**	**.6611 (5)**	**.6476 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**83.6 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**83.6 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**88 (5)**	**100 (5)**	**62.5 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**83.6 (5)**	**100 (5)**	**62.5 (5)**	**100 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**79.2 (5)**	**94.5 (5)**	**60.1 (5)**	**98.4 (5)**	**97.2 (5)**
SIZE (08) 004.75 MM (%finer)	**68.4 (5)**	**81.6 (5)**	**51.5 (5)**	**81.4 (5)**	**86.4 (5)**
SIZE (09) 002.0 MM (%finer)	**64.1 (5)**	**76.4 (5)**	**46.9 (5)**	**68.7 (5)**	**76.7 (5)**
SIZE (10) 850.0 UM (%finer)	**59.7 (5)**	**69.6 (5)**	**43.9 (5)**	**56 (5)**	**61 (5)**
SIZE (11) 425.0 UM (%finer)	**56.4 (5)**	**62.7 (5)**	**42 (5)**	**42.5 (5)**	**37.9 (5)**
SIZE (12) 250.0 UM (%finer)	**54 (5)**	**57.4 (5)**	**41.7 (5)**	**33.7 (5)**	**20.8 (5)**
SIZE (14) 150.0 UM (%finer)	**51.3 (5)**	**50.5 (5)**	**39.1 (5)**	**27.1 (5)**	**11.2 (5)**
SIZE (15) 075.0 UM (%finer)	**44.7 (5)**	**37.8 (5)**	**34.2 (5)**	**20.3 (5)**	**7.5 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**44.7 (5)**	**25.7 (5)**	**24.1 (5)**	**16.4 (5)**	**5.5 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**34.4 (5)**	**21.4 (5)**	**20.9 (5)**	**13.7 (5)**	**5 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**31.1 (5)**	**17.8 (5)**	**19.1 (5)**	**12.1 (5)**	**4.5 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**28.2 (5)**	**16.4 (5)**	**16.6 (5)**	**9.9 (5)**	**3 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**24.9 (5)**	**13.6 (5)**	**14.8 (5)**	**8.2 (5)**	**2.5 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**22 (5)**	**11.4 (5)**	**12.6 (5)**	**6 (5)**	**1.5 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**19.1 (5)**	**8.6 (5)**	**11.2 (5)**	**3.8 (5)**	**1 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**16.7 (5)**	**5.7 (5)**	**11.2 (5)**	**2.7 (5)**	**1 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**12.9 (5)**	**5.7 (5)**	**8.6 (5)**	**2.7 (5)**	**1 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**9.6 (5)**	**3.6 (5)**	**6.1 (5)**	**2.2 (5)**	**0.5 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**19.1 (5)**	**8.6 (5)**	**11.2 (5)**	**3.8 (5)**	**1.0 (5)**
GRAVEL (%)	**31.6 (5)**	**18.4 (5)**	**48.5 (5)**	**18.6 (5)**	**13.6 (5)**
SAND (%)	**23.7 (5)**	**43.8 (5)**	**17.3 (5)**	**61.1 (5)**	**78.9 (5)**
SILT (%)	**25.6 (5)**	**29.2 (5)**	**23.0 (5)**	**16.5 (5)**	**6.5 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	**9.5 (5)**	**14 (5)**	**11.2 (5)**	**17.7 (5)**	**18.1 (5)**
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	**0.7 (5)**	**1.8 (5)**	**1.1 (5)**	**2 (5)**	**1 (5)**
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	**2.82 (5)**	**2.72 (5)**	**2.81 (5)**	**2.74 (5)**	**2.71 (5)**

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID					
Location ID	BH000107	BH000107	BH000107	BH000107	BH000108
Field Sample ID	H2-BH000107-0-0280	H2-BH000107-0-0030	H2-BH000107-0-0320	H2-BH000107-0-0080	H2-BH000108-0-0130
Date Collected	06/05/2000	06/05/2000	06/05/2000	06/05/2000	06/06/2000
Depth	28.0-29.0	3.0-4.0	32.0-32.3	8.0-8.5	13.0-14.0
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	**NON-PLASTIC (5)**	**23 (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**17 (5)**
PLASTICITY LIMIT (%)	**NON-PLASTIC (5)**	**23 (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**17 (5)**
GRAIN SIZE					
D-50 Calculation (mm)	**.7800 (5)**	**.1814 (5)**	**1.8293 (5)**	**.2016 (5)**	**2.9535 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**97.6 (5)**	**100 (5)**	**97.7 (5)**	**100 (5)**	**98 (5)**
SIZE (05) 019.0 MM (%finer)	**95.8 (5)**	**100 (5)**	**90.9 (5)**	**100 (5)**	**97.2 (5)**
SIZE (06) 012.7 MM (%finer)	**92.9 (5)**	**100 (5)**	**82.6 (5)**	**100 (5)**	**89.5 (5)**
SIZE (08) 004.75 MM (%finer)	**80.1 (5)**	**99.6 (5)**	**64.3 (5)**	**99.7 (5)**	**63 (5)**
SIZE (09) 002.0 MM (%finer)	**69.8 (5)**	**99.3 (5)**	**51.9 (5)**	**99.6 (5)**	**43.1 (5)**
SIZE (10) 850.0 UM (%finer)	**54 (5)**	**99.1 (5)**	**39.1 (5)**	**99.4 (5)**	**25.8 (5)**
SIZE (11) 425.0 UM (%finer)	**29.7 (5)**	**96.1 (5)**	**24.7 (5)**	**93.1 (5)**	**14.3 (5)**
SIZE (12) 250.0 UM (%finer)	**19.5 (5)**	**73.2 (5)**	**18 (5)**	**65.6 (5)**	**10.3 (5)**
SIZE (14) 150.0 UM (%finer)	**13.7 (5)**	**39.4 (5)**	**13.3 (5)**	**33.4 (5)**	**7.6 (5)**
SIZE (15) 075.0 UM (%finer)	**9.1 (5)**	**15.7 (5)**	**7.9 (5)**	**14.1 (5)**	**4.8 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**6.7 (5)**	**11.3 (5)**	**5.1 (5)**	**9.8 (5)**	**3.8 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**6.3 (5)**	**9.1 (5)**	**4.4 (5)**	**8.9 (5)**	**3.1 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**4.9 (5)**	**6.8 (5)**	**3.7 (5)**	**7.1 (5)**	**2.4 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**4 (5)**	**6.1 (5)**	**2.7 (5)**	**6.2 (5)**	**2.1 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**3.1 (5)**	**4.5 (5)**	**2.4 (5)**	**5.3 (5)**	**2.1 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**1.8 (5)**	**3 (5)**	**1 (5)**	**2.7 (5)**	**1.7 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**0.9 (5)**	**2.3 (5)**	**0.7 (5)**	**1.8 (5)**	**1.4 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**0.9 (5)**	**1.5 (5)**	**0.7 (5)**	**1.8 (5)**	**0.7 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**0.9 (5)**	**1.5 (5)**	**0.7 (5)**	**1.8 (5)**	**0.7 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**0.4 (5)**	**0.8 (5)**	**0.3 (5)**	**0.9 (5)**	**0.3 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**.9 (5)**	**2.3 (5)**	**.7 (5)**	**1.8 (5)**	**1.4 (5)**
GRAVEL (%)	**19.9 (5)**	**.4 (5)**	**35.7 (5)**	**.3 (5)**	**37.0 (5)**
SAND (%)	**71.0 (5)**	**83.9 (5)**	**56.4 (5)**	**85.6 (5)**	**58.2 (5)**
SILT (%)	**8.2 (5)**	**13.4 (5)**	**7.2 (5)**	**12.3 (5)**	**3.4 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	**15.6 (5)**	**14.2 (5)**	**13.4 (5)**	**28.6 (5)**	**10.7 (5)**
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	**0.4 (5)**	**1.2 (5)**	**0.4 (5)**	**1.3 (5)**	**0.6 (5)**
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	**2.69 (5)**	**2.73 (5)**	**2.77 (5)**	**2.75 (5)**	**2.74 (5)**

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID					
Location ID	BH000108	BH000108	BH000108	BH000108	BH000109
Field Sample ID	H2-BH000108-0-0230	H2-BH000108-0-0030	H2-BH000108-0-0330	H2-BH000108-0-0080	H2-BH000109-0-0130
Date Collected	06/06/2000	06/06/2000	06/06/2000	06/06/2000	06/13/2000
Depth	23.0-24.0	3.0-4.2	33.0-33.5	8.0-8.5	13.0-14.0
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	**14 (5)**	**NON-PLASTIC (5)**	**15 (5)**	**19 (5)**	**22 (5)**
PLASTICITY LIMIT (%)	**14 (5)**	**NON-PLASTIC (5)**	**15 (5)**	**19 (5)**	**15 (5)**
GRAIN SIZE					
D-50 Calculation (mm)	**.6955 (5)**	**.0731 (5)**	**3.9155 (5)**	**10.1642 (5)**	**.1402 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**88.8 (5)**	**100 (5)**	**93.1 (5)**	**81.9 (5)**	**97 (5)**
SIZE (05) 019.0 MM (%finer)	**84 (5)**	**100 (5)**	**88.3 (5)**	**74.4 (5)**	**92.5 (5)**
SIZE (06) 012.7 MM (%finer)	**76.1 (5)**	**99.5 (5)**	**76.6 (5)**	**57.4 (5)**	**90 (5)**
SIZE (08) 004.75 MM (%finer)	**63 (5)**	**98.1 (5)**	**54.4 (5)**	**34.2 (5)**	**71.2 (5)**
SIZE (09) 002.0 MM (%finer)	**56.3 (5)**	**98 (5)**	**39.9 (5)**	**29.1 (5)**	**66.3 (5)**
SIZE (10) 850.0 UM (%finer)	**51.2 (5)**	**97.5 (5)**	**27.9 (5)**	**26.4 (5)**	**62.3 (5)**
SIZE (11) 425.0 UM (%finer)	**47.9 (5)**	**96.2 (5)**	**17.6 (5)**	**24.5 (5)**	**57.7 (5)**
SIZE (12) 250.0 UM (%finer)	**45.6 (5)**	**89.9 (5)**	**8.9 (5)**	**21.4 (5)**	**55.1 (5)**
SIZE (14) 150.0 UM (%finer)	**42.4 (5)**	**71.6 (5)**	**5.8 (5)**	**14.7 (5)**	**50.3 (5)**
SIZE (15) 075.0 UM (%finer)	**34.1 (5)**	**52.3 (5)**	**3.9 (5)**	**7.2 (5)**	**48 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**22.6 (5)**	**21.6 (5)**	**3.5 (5)**	**5.4 (5)**	**48 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**17.4 (5)**	**18.1 (5)**	**3.3 (5)**	**3.6 (5)**	**38.8 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**13.9 (5)**	**15.5 (5)**	**3 (5)**	**3.2 (5)**	**35.1 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**11.5 (5)**	**13.8 (5)**	**2.6 (5)**	**2.9 (5)**	**31.9 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**9.5 (5)**	**12.1 (5)**	**2.3 (5)**	**2.5 (5)**	**28.6 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**7.1 (5)**	**8.6 (5)**	**2.1 (5)**	**1.8 (5)**	**25.3 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**5.9 (5)**	**5.2 (5)**	**1.6 (5)**	**1.4 (5)**	**22.1 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**5.1 (5)**	**4.3 (5)**	**1.2 (5)**	**1.1 (5)**	**19.2 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**5.1 (5)**	**4.3 (5)**	**1.2 (5)**	**1.1 (5)**	**14.7 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**4 (5)**	**2.6 (5)**	**0.7 (5)**	**0.7 (5)**	**10.6 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**5.9 (5)**	**5.2 (5)**	**1.6 (5)**	**1.4 (5)**	**22.1 (5)**
GRAVEL (%)	**37.0 (5)**	**1.9 (5)**	**45.6 (5)**	**65.8 (5)**	**28.8 (5)**
SAND (%)	**28.9 (5)**	**45.8 (5)**	**50.5 (5)**	**27.0 (5)**	**23.2 (5)**
SILT (%)	**28.2 (5)**	**47.1 (5)**	**2.3 (5)**	**5.8 (5)**	**25.9 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	**12 (5)**	**23.7 (5)**	**7.9 (5)**	**16.3 (5)**	**12 (5)**
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	**0.5 (5)**	**2 (5)**	**0.3 (5)**	**1.2 (5)**	**1.6 (5)**
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	**2.83 (5)**	**2.67 (5)**	**2.72 (5)**	**2.69 (5)**	**2.81 (5)**

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID					
Location ID	BH000109	BH000109	BH000109	BH000110	BH000110
Field Sample ID	H2-BH000109-0-0190	H2-BH000109-0-0030	H2-BH000109-0-0080	H2-BH000110-0-0130	H2-BH000110-0-0180
Date Collected	06/13/2000	06/13/2000	06/13/2000	06/13/2000	06/13/2000
Depth	19.0-19.1	3.0-3.9	8.0-8.8	13.0-13.8	18.0-18.6
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	NA	**25 (5)**	**27 (5)**	**24 (5)**	**21 (5)**
PLASTICITY LIMIT (%)	NA	**17 (5)**	**19 (5)**	**15 (5)**	**16 (5)**
GRAIN SIZE					
D-50 Calculation (mm)	**1.3808 (5)**	**.1475 (5)**	**.7764 (5)**	**.0404 (5)**	**7.4774 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**96.9 (5)**	**100 (5)**	**100 (5)**	**69.3 (5)**
SIZE (05) 019.0 MM (%finer)	**100 (5)**	**96.9 (5)**	**94.9 (5)**	**98.8 (5)**	**67.8 (5)**
SIZE (06) 012.7 MM (%finer)	**93.6 (5)**	**91.3 (5)**	**88.4 (5)**	**96.5 (5)**	**59 (5)**
SIZE (08) 004.75 MM (%finer)	**63.6 (5)**	**74.2 (5)**	**65.8 (5)**	**85.7 (5)**	**45.3 (5)**
SIZE (09) 002.0 MM (%finer)	**52.8 (5)**	**67.4 (5)**	**58.1 (5)**	**80.1 (5)**	**39.9 (5)**
SIZE (10) 850.0 UM (%finer)	**47.6 (5)**	**61.6 (5)**	**50.9 (5)**	**75.6 (5)**	**36.4 (5)**
SIZE (11) 425.0 UM (%finer)	**45.1 (5)**	**56.6 (5)**	**45.7 (5)**	**72.3 (5)**	**33.5 (5)**
SIZE (12) 250.0 UM (%finer)	**43.5 (5)**	**53.6 (5)**	**42.7 (5)**	**70.1 (5)**	**31.3 (5)**
SIZE (14) 150.0 UM (%finer)	**40.2 (5)**	**50.2 (5)**	**39.8 (5)**	**67.2 (5)**	**28.4 (5)**
SIZE (15) 075.0 UM (%finer)	**23.8 (5)**	**44.3 (5)**	**34.1 (5)**	**59.3 (5)**	**23.8 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**17 (5)**	**44.3 (5)**	**26.3 (5)**	**59.3 (5)**	**16.9 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**14.7 (5)**	**31.6 (5)**	**23.4 (5)**	**46.3 (5)**	**15.2 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**11.6 (5)**	**28.1 (5)**	**20.1 (5)**	**41.9 (5)**	**13.5 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**10.1 (5)**	**24.9 (5)**	**18.1 (5)**	**36.9 (5)**	**12.1 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**9.3 (5)**	**21.8 (5)**	**15.6 (5)**	**33 (5)**	**10.5 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**8.5 (5)**	**19 (5)**	**13.5 (5)**	**29.6 (5)**	**9.1 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**7.7 (5)**	**17 (5)**	**11.5 (5)**	**26.1 (5)**	**7.8 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**5.4 (5)**	**14.2 (5)**	**11.5 (5)**	**22.2 (5)**	**6.4 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**5.4 (5)**	**10.7 (5)**	**8.6 (5)**	**18.2 (5)**	**6.4 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**3.1 (5)**	**7.5 (5)**	**6.6 (5)**	**12.8 (5)**	**4.7 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**7.7 (5)**	**17.0 (5)**	**11.5 (5)**	**26.1 (5)**	**7.8 (5)**
GRAVEL (%)	**36.4 (5)**	**25.8 (5)**	**34.2 (5)**	**14.3 (5)**	**54.7 (5)**
SAND (%)	**39.8 (5)**	**29.9 (5)**	**31.7 (5)**	**26.4 (5)**	**21.5 (5)**
SILT (%)	**16.1 (5)**	**27.3 (5)**	**22.6 (5)**	**33.2 (5)**	**16.0 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	**1.2 (5)**	**14.6 (5)**	**17.2 (5)**	**9.1 (5)**	**13.7 (5)**
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	NA	**2 (5)**	**2.1 (5)**	**0.6 (5)**	**0.6 (5)**
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	**2.84 (5)**	**2.77 (5)**	**2.8 (5)**	**2.82 (5)**	**2.77 (5)**

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID					
Location ID	BH000110	BH000110	BH000112	BH000112	BH000112
Field Sample ID	H2-BH000110-0-0030	H2-BH000110-0-0080	H2-BH000112-0-0130	H2-BH000112-0-0180	H2-BH000112-0-0030
Date Collected	06/13/2000	06/13/2000	06/15/2000	06/15/2000	06/14/2000
Depth	3.0-3.8	8.0-8.2	13.0-13.7	18.0-19.5	3.0-3.4
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	**20 (5)**	**23 (5)**	**15 (5)**	**19 (5)**	NA
PLASTICITY LIMIT (%)	**20 (5)**	**15 (5)**	**14 (5)**	**14 (5)**	NA
GRAIN SIZE					
D-50 Calculation (mm)	**1.5345 (5)**	**.0935 (5)**	**.1265 (5)**	**.0700 (5)**	**.9122 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**75.7 (5)**	**95.3 (5)**	**96.9 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**72.8 (5)**	**90.9 (5)**	**92.9 (5)**	**98.4 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**70.5 (5)**	**88.9 (5)**	**87.6 (5)**	**94.5 (5)**	**93 (5)**
SIZE (08) 004.75 MM (%finer)	**55.9 (5)**	**72.5 (5)**	**72.5 (5)**	**87.6 (5)**	**67.2 (5)**
SIZE (09) 002.0 MM (%finer)	**51.7 (5)**	**67.9 (5)**	**66.4 (5)**	**82.9 (5)**	**57 (5)**
SIZE (10) 850.0 UM (%finer)	**47.5 (5)**	**63.6 (5)**	**62.1 (5)**	**79.3 (5)**	**49.6 (5)**
SIZE (11) 425.0 UM (%finer)	**43.9 (5)**	**60.7 (5)**	**59 (5)**	**76.9 (5)**	**34.3 (5)**
SIZE (12) 250.0 UM (%finer)	**41 (5)**	**58.4 (5)**	**56.8 (5)**	**74.7 (5)**	**19.8 (5)**
SIZE (14) 150.0 UM (%finer)	**36.7 (5)**	**55.2 (5)**	**52.7 (5)**	**68.2 (5)**	**11.5 (5)**
SIZE (15) 075.0 UM (%finer)	**29.7 (5)**	**48.3 (5)**	**44.1 (5)**	**53 (5)**	**5.5 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**19.9 (5)**	**48.3 (5)**	**30 (5)**	**37.4 (5)**	**4.7 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**17.5 (5)**	**36.8 (5)**	**24.6 (5)**	**36.1 (5)**	**3.5 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**15 (5)**	**32.5 (5)**	**20.5 (5)**	**29.5 (5)**	**3.5 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**12.9 (5)**	**29.4 (5)**	**18.4 (5)**	**25.6 (5)**	**2.9 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**10.8 (5)**	**26 (5)**	**15.7 (5)**	**20.3 (5)**	**2.9 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**9.4 (5)**	**22.9 (5)**	**12.3 (5)**	**20.3 (5)**	**2.3 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**8 (5)**	**20.5 (5)**	**10.9 (5)**	**17 (5)**	**1.8 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**5.9 (5)**	**17.4 (5)**	**8.9 (5)**	**15.1 (5)**	**1.8 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**5.9 (5)**	**13.6 (5)**	**8.9 (5)**	**15.1 (5)**	**1.8 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**3.8 (5)**	**8.9 (5)**	**6.8 (5)**	**11.1 (5)**	**1.2 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**8.0 (5)**	**20.5 (5)**	**10.9 (5)**	**17.0 (5)**	**1.8 (5)**
GRAVEL (%)	**44.1 (5)**	**27.5 (5)**	**27.5 (5)**	**12.4 (5)**	**32.8 (5)**
SAND (%)	**26.2 (5)**	**24.2 (5)**	**28.4 (5)**	**34.6 (5)**	**61.7 (5)**
SILT (%)	**21.7 (5)**	**27.8 (5)**	**33.2 (5)**	**36.0 (5)**	**3.7 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	**15 (5)**	**14.4 (5)**	**13.5 (5)**	**9.5 (5)**	**16.7 (5)**
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	**1.1 (5)**	**1.1 (5)**	**0.4 (5)**	**0.9 (5)**	**0.5 (5)**
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	**2.68 (5)**	**2.78 (5)**	**2.55 (5)**	**2.83 (5)**	NA

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID					
Location ID	BH000112	BH000114A	BH000114A	BH000114A	BH000114A
Field Sample ID	H2-BH000112-0-0080	H2-BH000114A-0-0130	H2-BH000114A-0-0140	H2-BH000114A-0-0180	H2-BH000114A-0-0225
Date Collected	06/15/2000	06/26/2000	06/26/2000	06/26/2000	06/26/2000
Depth	8.0-9.0	13.0-14.0	14.0-15.0	18.0-19.2	22.5-22.7
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	**NON-PLASTIC (5)**	NA	**19 (5)**	**20 (5)**	NA
PLASTICITY LIMIT (%)	**NON-PLASTIC (5)**	NA	**16 (5)**	**15 (5)**	NA
GRAIN SIZE					
D-50 Calculation (mm)	**.1533 (5)**	**.1989 (5)**	**2.0753 (5)**	**.1027 (5)**	**10.1116 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (5)**	**86.8 (5)**	**91.3 (5)**	**69.6 (5)**
SIZE (05) 019.0 MM (%finer)	**100 (5)**	**100 (5)**	**74.5 (5)**	**83.7 (5)**	**57 (5)**
SIZE (06) 012.7 MM (%finer)	**99.4 (5)**	**100 (5)**	**69 (5)**	**81.3 (5)**	**52.8 (5)**
SIZE (08) 004.75 MM (%finer)	**96.4 (5)**	**90.6 (5)**	**57.1 (5)**	**70.8 (5)**	**44.2 (5)**
SIZE (09) 002.0 MM (%finer)	**93.3 (5)**	**76.9 (5)**	**49.8 (5)**	**64.4 (5)**	**36.3 (5)**
SIZE (10) 850.0 UM (%finer)	**89.4 (5)**	**64.9 (5)**	**46.6 (5)**	**61.1 (5)**	**31 (5)**
SIZE (11) 425.0 UM (%finer)	**83.3 (5)**	**56.9 (5)**	**44.7 (5)**	**59.2 (5)**	**28.7 (5)**
SIZE (12) 250.0 UM (%finer)	**73.6 (5)**	**52.4 (5)**	**43.5 (5)**	**57.8 (5)**	**27.6 (5)**
SIZE (14) 150.0 UM (%finer)	**49.2 (5)**	**47.7 (5)**	**41.5 (5)**	**55.3 (5)**	**26.1 (5)**
SIZE (15) 075.0 UM (%finer)	**25.3 (5)**	**39.3 (5)**	**36.7 (5)**	**46.9 (5)**	**21.3 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**9.8 (5)**	**28.6 (5)**	**23.7 (5)**	**33.4 (5)**	**15.1 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**7.7 (5)**	**25.2 (5)**	**20.8 (5)**	**29.9 (5)**	**13.1 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**6.3 (5)**	**21.9 (5)**	**18 (5)**	**25.7 (5)**	**11.1 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**5.6 (5)**	**20.2 (5)**	**15.2 (5)**	**22.2 (5)**	**10.1 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**4.2 (5)**	**15.1 (5)**	**12.8 (5)**	**18.8 (5)**	**8.6 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**3.5 (5)**	**13.5 (5)**	**10.4 (5)**	**15.3 (5)**	**7.1 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**2.8 (5)**	**10.1 (5)**	**8.8 (5)**	**13.2 (5)**	**6.1 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**2.1 (5)**	**8.4 (5)**	**7.6 (5)**	**11.8 (5)**	**5 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**2.1 (5)**	**8.4 (5)**	**7.6 (5)**	**11.8 (5)**	**5 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**1.4 (5)**	**5 (5)**	**5.6 (5)**	**7.6 (5)**	**3.5 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**2.8 (5)**	**10.1 (5)**	**8.8 (5)**	**13.2 (5)**	**6.1 (5)**
GRAVEL (%)	**3.6 (5)**	**9.4 (5)**	**42.9 (5)**	**29.2 (5)**	**55.8 (5)**
SAND (%)	**71.1 (5)**	**51.3 (5)**	**20.4 (5)**	**23.9 (5)**	**22.9 (5)**
SILT (%)	**22.5 (5)**	**29.2 (5)**	**27.9 (5)**	**33.7 (5)**	**15.2 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	**25.6 (5)**	**61.9 (5)**	**9.2 (5)**	**9.5 (5)**	**4.6 (5)**
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	**0.3 (5)**	**12.9 (5)**	**0.6 (5)**	**0.5 (5)**	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	**2.62 (5)**	**2.41 (5)**	**2.55 (5)**	**2.73 (5)**	**2.83 (5)**

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID					
Location ID	BH000114A	BH000114A	BH000115	BH000115	BH000115
Field Sample ID	H2-BH000114A-0-0030	H2-BH000114A-0-0080	H2-BH000115-0-0130	H2-BH000115-0-0180	H2-BH000115-0-0030
Date Collected	06/26/2000	06/26/2000	06/14/2000	06/14/2000	06/14/2000
Depth	3.0-3.6	8.0-8.1	13.0-13.3	18.0-18.5	3.0-4.2
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	**NON-PLASTIC (5)**	NA	NA	**20 (5)**	**NON-PLASTIC (5)**
PLASTICITY LIMIT (%)	**NON-PLASTIC (5)**	NA	NA	**20 (5)**	**NON-PLASTIC (5)**
GRAIN SIZE					
D-50 Calculation (mm)	**.2234 (5)**	**4.2000 (5)**	**26.3193 (5)**	**3.5145 (5)**	**.2517 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**89.8 (5)**	**100 (5)**	**44.1 (5)**	**83.5 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**84.2 (5)**	**90.1 (5)**	**36.2 (5)**	**79.1 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**80.1 (5)**	**75.2 (5)**	**33.4 (5)**	**70.9 (5)**	**98.4 (5)**
SIZE (08) 004.75 MM (%finer)	**70.8 (5)**	**52.4 (5)**	**25.8 (5)**	**53.1 (5)**	**90 (5)**
SIZE (09) 002.0 MM (%finer)	**66.1 (5)**	**40.4 (5)**	**22.3 (5)**	**46.2 (5)**	**82.9 (5)**
SIZE (10) 850.0 UM (%finer)	**61.6 (5)**	**31.2 (5)**	**19.4 (5)**	**41.5 (5)**	**72.7 (5)**
SIZE (11) 425.0 UM (%finer)	**57 (5)**	**25.2 (5)**	**17.2 (5)**	**38.2 (5)**	**60.3 (5)**
SIZE (12) 250.0 UM (%finer)	**52.1 (5)**	**21.4 (5)**	**15.4 (5)**	**35.6 (5)**	**49.9 (5)**
SIZE (14) 150.0 UM (%finer)	**44.2 (5)**	**18 (5)**	**13.4 (5)**	**32.4 (5)**	**39.5 (5)**
SIZE (15) 075.0 UM (%finer)	**30.7 (5)**	**13.9 (5)**	**9.7 (5)**	**27.3 (5)**	**30.3 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**17.6 (5)**	**13.9 (5)**	**6.6 (5)**	**16.7 (5)**	**23.2 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**16.3 (5)**	**11.8 (5)**	**5.5 (5)**	**13.8 (5)**	**20.3 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**10.8 (5)**	**9.4 (5)**	**4.7 (5)**	**11.2 (5)**	**19.3 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**8.8 (5)**	**7.9 (5)**	**4.1 (5)**	**8.7 (5)**	**16.4 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**8.1 (5)**	**6.3 (5)**	**3.8 (5)**	**7.4 (5)**	**14.5 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**6.8 (5)**	**4.7 (5)**	**3 (5)**	**5.5 (5)**	**12.6 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**4.7 (5)**	**4.7 (5)**	**2.8 (5)**	**3.5 (5)**	**11.6 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**3.4 (5)**	**3.9 (5)**	**2.1 (5)**	**3.2 (5)**	**6.8 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**3.4 (5)**	**3.9 (5)**	**2.1 (5)**	**3.2 (5)**	**6.8 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**2.7 (5)**	**2.4 (5)**	**1.7 (5)**	**1.9 (5)**	**2.9 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**4.7 (5)**	**4.7 (5)**	**2.8 (5)**	**3.5 (5)**	**11.6 (5)**
GRAVEL (%)	**29.2 (5)**	**47.6 (5)**	**74.2 (5)**	**46.9 (5)**	**10.0 (5)**
SAND (%)	**40.1 (5)**	**38.5 (5)**	**16.1 (5)**	**25.8 (5)**	**59.7 (5)**
SILT (%)	**26.0 (5)**	**9.2 (5)**	**6.9 (5)**	**23.8 (5)**	**18.7 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	**20.2 (5)**	**25.6 (5)**	**13 (5)**	**17.7 (5)**	**24.9 (5)**
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	**0.5 (5)**	**11 (5)**	NA	**1.2 (5)**	**5.6 (5)**
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	**2.75 (5)**	**2.43 (5)**	**2.76 (5)**	**2.7 (5)**	**2.64 (5)**

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID					
Location ID	BH000115	BH000116	BH000116	BH000116	BH000116
Field Sample ID	H2-BH000115-0-0080	H2-BH000116-0-0130	H2-BH000116-0-0180	H2-BH000116-0-0280	H2-BH000116-0-0030
Date Collected	06/14/2000	06/15/2000	06/15/2000	06/15/2000	06/15/2000
Depth	8.0-9.1	13.0-14.0	18.0-19.5	28.0-29.7	3.0-3.2
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**
PLASTICITY LIMIT (%)	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**
GRAIN SIZE					
D-50 Calculation (mm)	**.1796 (5)**	**.8173 (5)**	**.7486 (5)**	**1.6396 (5)**	**1.5272 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**91 (5)**
SIZE (05) 019.0 MM (%finer)	**97.9 (5)**	**100 (5)**	**97.6 (5)**	**98.9 (5)**	**86.2 (5)**
SIZE (06) 012.7 MM (%finer)	**96.3 (5)**	**98.8 (5)**	**95.6 (5)**	**91.5 (5)**	**81.5 (5)**
SIZE (08) 004.75 MM (%finer)	**87.9 (5)**	**88.1 (5)**	**87.5 (5)**	**73.6 (5)**	**62.5 (5)**
SIZE (09) 002.0 MM (%finer)	**83 (5)**	**75.8 (5)**	**73.8 (5)**	**56.3 (5)**	**53.7 (5)**
SIZE (10) 850.0 UM (%finer)	**75.3 (5)**	**51.8 (5)**	**56.3 (5)**	**36.2 (5)**	**44.7 (5)**
SIZE (11) 425.0 UM (%finer)	**68.7 (5)**	**28.4 (5)**	**29.9 (5)**	**25.2 (5)**	**35.5 (5)**
SIZE (12) 250.0 UM (%finer)	**61.2 (5)**	**17 (5)**	**15.4 (5)**	**19.4 (5)**	**29.4 (5)**
SIZE (14) 150.0 UM (%finer)	**45.3 (5)**	**11.3 (5)**	**9.4 (5)**	**14.5 (5)**	**24 (5)**
SIZE (15) 075.0 UM (%finer)	**25.9 (5)**	**6.5 (5)**	**5.8 (5)**	**9.1 (5)**	**17.9 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**12.2 (5)**	**5.9 (5)**	**4.4 (5)**	**5.9 (5)**	**14 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**8.7 (5)**	**4.7 (5)**	**3.7 (5)**	**5.4 (5)**	**11.2 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**7 (5)**	**4.7 (5)**	**2.9 (5)**	**4.8 (5)**	**10.7 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**6.1 (5)**	**4.1 (5)**	**2.2 (5)**	**3.8 (5)**	**10.1 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**5.2 (5)**	**3.5 (5)**	**1.5 (5)**	**3.2 (5)**	**8.4 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**3.9 (5)**	**2.9 (5)**	**0.7 (5)**	**2.1 (5)**	**7.3 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**3.5 (5)**	**2.9 (5)**	**0.7 (5)**	**1.6 (5)**	**5.6 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**3 (5)**	**2.4 (5)**	**0.7 (5)**	**1.6 (5)**	**5 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**3 (5)**	**2.4 (5)**	**0.7 (5)**	**1.1 (5)**	**5 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**1.7 (5)**	**1.2 (5)**	**0 (5)**	**0.5 (5)**	**2.8 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**3.5 (5)**	**2.9 (5)**	**.7 (5)**	**1.6 (5)**	**5.6 (5)**
GRAVEL (%)	**12.1 (5)**	**11.9 (5)**	**12.5 (5)**	**26.4 (5)**	**37.5 (5)**
SAND (%)	**62.0 (5)**	**81.6 (5)**	**81.7 (5)**	**64.5 (5)**	**44.6 (5)**
SILT (%)	**22.4 (5)**	**3.6 (5)**	**5.1 (5)**	**7.5 (5)**	**12.3 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	**8.6 (5)**	**25.2 (5)**	**19.7 (5)**	**11.8 (5)**	**11.5 (5)**
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	**0.4 (5)**	**1.6 (5)**	**0.7 (5)**	**0.8 (5)**	**4 (5)**
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	**2.83 (5)**	**2.65 (5)**	**2.74 (5)**	**2.77 (5)**	**2.64 (5)**

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID					
Location ID	BH000116	BH000117	BH000117	BH000117	BH000117
Field Sample ID	H2-BH000116-0-0080	H2-BH000117-0-0130	H2-BH000117-0-0170	H2-BH000117-0-0030	H2-BH000117-0-0080
Date Collected	06/15/2000	06/15/2000	06/15/2000	06/15/2000	06/15/2000
Depth	8.0-8.2	13.0-14.7	17.0-17.2	3.0-4.5	8.0-9.8
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	**42 (5)**	**23 (5)**	NA	**NON-PLASTIC (5)**	**21 (5)**
PLASTICITY LIMIT (%)	**38 (5)**	**16 (5)**	NA	**NON-PLASTIC (5)**	**19 (5)**
GRAIN SIZE					
D-50 Calculation (mm)	**.5604 (5)**	**1.7043 (5)**	**8.3002 (5)**	**1.1154 (5)**	**.1804 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**92.4 (5)**	**73.2 (5)**	**77.8 (5)**	**100 (5)**	**98.2 (5)**
SIZE (05) 019.0 MM (%finer)	**90.3 (5)**	**72.3 (5)**	**69.4 (5)**	**100 (5)**	**98.2 (5)**
SIZE (06) 012.7 MM (%finer)	**84.1 (5)**	**67.9 (5)**	**64.5 (5)**	**96.2 (5)**	**95.6 (5)**
SIZE (08) 004.75 MM (%finer)	**71.6 (5)**	**55.7 (5)**	**38.3 (5)**	**75.5 (5)**	**82.2 (5)**
SIZE (09) 002.0 MM (%finer)	**64.8 (5)**	**50.9 (5)**	**34.1 (5)**	**61 (5)**	**75.1 (5)**
SIZE (10) 850.0 UM (%finer)	**56.2 (5)**	**47.4 (5)**	**29.4 (5)**	**46.7 (5)**	**67.5 (5)**
SIZE (11) 425.0 UM (%finer)	**47.1 (5)**	**44.9 (5)**	**26.4 (5)**	**35.9 (5)**	**59.4 (5)**
SIZE (12) 250.0 UM (%finer)	**40.5 (5)**	**43.4 (5)**	**24.2 (5)**	**30.3 (5)**	**53.9 (5)**
SIZE (14) 150.0 UM (%finer)	**34.1 (5)**	**41.7 (5)**	**21.8 (5)**	**24.2 (5)**	**48.3 (5)**
SIZE (15) 075.0 UM (%finer)	**27.2 (5)**	**38.4 (5)**	**16.7 (5)**	**18.8 (5)**	**37.4 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**21.6 (5)**	**25 (5)**	**12.7 (5)**	**14.2 (5)**	**28 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**18.9 (5)**	**22.6 (5)**	**11.3 (5)**	**12.1 (5)**	**24.3 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**18 (5)**	**20.6 (5)**	**9.5 (5)**	**11.4 (5)**	**21.9 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**15.3 (5)**	**19.4 (5)**	**7.8 (5)**	**10 (5)**	**18.9 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**11.7 (5)**	**17 (5)**	**7.1 (5)**	**8.5 (5)**	**16.4 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**9 (5)**	**15.3 (5)**	**6 (5)**	**6.4 (5)**	**14.6 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**7.2 (5)**	**13.3 (5)**	**4.9 (5)**	**5.7 (5)**	**12.2 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**4.5 (5)**	**11.3 (5)**	**4.2 (5)**	**5 (5)**	**9.7 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**4.5 (5)**	**11.3 (5)**	**4.2 (5)**	**5 (5)**	**9.7 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**2.7 (5)**	**6.9 (5)**	**2.5 (5)**	**1.4 (5)**	**4.9 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**7.2 (5)**	**13.3 (5)**	**4.9 (5)**	**5.7 (5)**	**12.2 (5)**
GRAVEL (%)	**28.4 (5)**	**44.3 (5)**	**61.7 (5)**	**24.5 (5)**	**17.8 (5)**
SAND (%)	**44.4 (5)**	**17.3 (5)**	**21.6 (5)**	**56.7 (5)**	**44.8 (5)**
SILT (%)	**20.0 (5)**	**25.1 (5)**	**11.8 (5)**	**13.1 (5)**	**25.2 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	**51.1 (5)**	**11.2 (5)**	**4.8 (5)**	**17.6 (5)**	**16.5 (5)**
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	**7.6 (5)**	**2.9 (5)**	NA	**12.1 (5)**	**3.6 (5)**
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	**2.5 (5)**	**2.74 (5)**	**2.77 (5)**	**2.38 (5)**	**2.71 (5)**

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID					
Location ID	BH000118	BH000118	BH000118	BH000118	BH000118
Field Sample ID	H2-BH000118-0-0130	H2-BH000118-0-0180	H2-BH000118-0-0030	H2-BH000118-0-0033	H2-BH000118-0-0080
Date Collected	06/16/2000	06/16/2000	06/16/2000	06/16/2000	06/16/2000
Depth	13.0-14.8	18.0-20.0	3.0-3.3	3.3-3.6	8.0-9.6
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	**19 (5)**	**16 (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**18 (5)**
PLASTICITY LIMIT (%)	**14 (5)**	**14 (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**18 (5)**
GRAIN SIZE					
D-50 Calculation (mm)	**.0489 (5)**	**.0881 (5)**	**.8041 (5)**	**.1467 (5)**	**.4834 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**99 (5)**	**100 (5)**	**94 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**97.1 (5)**	**96.5 (5)**	**100 (5)**	**92.4 (5)**	**99.2 (5)**
SIZE (06) 012.7 MM (%finer)	**90.9 (5)**	**93.8 (5)**	**98.3 (5)**	**92 (5)**	**96.8 (5)**
SIZE (08) 004.75 MM (%finer)	**79.6 (5)**	**75.5 (5)**	**80.9 (5)**	**81.8 (5)**	**80.6 (5)**
SIZE (09) 002.0 MM (%finer)	**74.6 (5)**	**70.5 (5)**	**64.2 (5)**	**76.6 (5)**	**71 (5)**
SIZE (10) 850.0 UM (%finer)	**70.6 (5)**	**67 (5)**	**51.2 (5)**	**70.4 (5)**	**61.3 (5)**
SIZE (11) 425.0 UM (%finer)	**68 (5)**	**65.1 (5)**	**40.1 (5)**	**63.7 (5)**	**48.2 (5)**
SIZE (12) 250.0 UM (%finer)	**66.1 (5)**	**63.5 (5)**	**33.1 (5)**	**57.5 (5)**	**32.5 (5)**
SIZE (14) 150.0 UM (%finer)	**62.5 (5)**	**59.9 (5)**	**27.5 (5)**	**50.5 (5)**	**18.3 (5)**
SIZE (15) 075.0 UM (%finer)	**50.1 (5)**	**47.9 (5)**	**20.4 (5)**	**39 (5)**	**11.2 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**50.1 (5)**	**26.9 (5)**	**14.6 (5)**	**28.4 (5)**	**8.9 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**27.7 (5)**	**24.7 (5)**	**13.9 (5)**	**25.2 (5)**	**8.9 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**24.2 (5)**	**20.7 (5)**	**11.8 (5)**	**22.1 (5)**	**8.2 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**20.8 (5)**	**19.1 (5)**	**11.1 (5)**	**18.9 (5)**	**5.9 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**18.2 (5)**	**16.8 (5)**	**9.7 (5)**	**15.8 (5)**	**5.2 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**16.4 (5)**	**14 (5)**	**8.3 (5)**	**13.4 (5)**	**3.7 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**14.5 (5)**	**11.8 (5)**	**6.9 (5)**	**12.6 (5)**	**3.7 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**12.1 (5)**	**11.2 (5)**	**5.5 (5)**	**11 (5)**	**3 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**12.1 (5)**	**11.2 (5)**	**5.5 (5)**	**11 (5)**	**3 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**6.1 (5)**	**6.7 (5)**	**3.5 (5)**	**6.3 (5)**	**0.7 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**14.5 (5)**	**11.8 (5)**	**6.9 (5)**	**12.6 (5)**	**3.7 (5)**
GRAVEL (%)	**20.4 (5)**	**24.5 (5)**	**19.1 (5)**	**18.2 (5)**	**19.4 (5)**
SAND (%)	**29.5 (5)**	**27.6 (5)**	**60.5 (5)**	**42.8 (5)**	**69.4 (5)**
SILT (%)	**35.6 (5)**	**36.1 (5)**	**13.5 (5)**	**26.4 (5)**	**7.5 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	**15.2 (5)**	**11.2 (5)**	**10.1 (5)**	**14.8 (5)**	**7.2 (5)**
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	**0.9 (5)**	**1.3 (5)**	**2.7 (5)**	**2 (5)**	**1.2 (5)**
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	**2.77 (5)**	**2.8 (5)**	**2.7 (5)**	**2.7 (5)**	**2.79 (5)**

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID					
Location ID	BH000119	BH000119	BH000119	BH000119	BH000119
Field Sample ID	H2-BH000119-0-0130	H2-BH000119-0-0170	H2-BH000119-0-0270	H2-BH000119-0-0030	H2-BH000119-0-0080
Date Collected	06/20/2000	06/20/2000	06/20/2000	06/20/2000	06/20/2000
Depth	13.0-14.5	17.0-18.3	27.0-27.5	3.0-3.8	8.0-10.0
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**16 (5)**	**29 (5)**	**NON-PLASTIC (5)**
PLASTICITY LIMIT (%)	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**15 (5)**	**26 (5)**	**NON-PLASTIC (5)**
GRAIN SIZE					
D-50 Calculation (mm)	**6.2717 (5)**	**2.8594 (5)**	**3.3750 (5)**	**.1669 (5)**	**.1567 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**95.3 (5)**	**92.6 (5)**	**95.5 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**86.9 (5)**	**82.8 (5)**	**91.8 (5)**	**100 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**70.7 (5)**	**74.3 (5)**	**81.6 (5)**	**98.1 (5)**	**98 (5)**
SIZE (08) 004.75 MM (%finer)	**45.1 (5)**	**56.6 (5)**	**57.1 (5)**	**85.5 (5)**	**96.6 (5)**
SIZE (09) 002.0 MM (%finer)	**35.1 (5)**	**47 (5)**	**42.9 (5)**	**81.9 (5)**	**96 (5)**
SIZE (10) 850.0 UM (%finer)	**27.7 (5)**	**38.7 (5)**	**33.7 (5)**	**78 (5)**	**95.4 (5)**
SIZE (11) 425.0 UM (%finer)	**23.2 (5)**	**34.2 (5)**	**29.1 (5)**	**72 (5)**	**91.8 (5)**
SIZE (12) 250.0 UM (%finer)	**18.7 (5)**	**31.3 (5)**	**26.8 (5)**	**63.3 (5)**	**75.2 (5)**
SIZE (14) 150.0 UM (%finer)	**14.5 (5)**	**27.7 (5)**	**24.3 (5)**	**47.3 (5)**	**48.2 (5)**
SIZE (15) 075.0 UM (%finer)	**8.8 (5)**	**19.9 (5)**	**18.4 (5)**	**30.3 (5)**	**22.8 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**5.3 (5)**	**9.4 (5)**	**12.9 (5)**	**22.7 (5)**	**19.6 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**3.6 (5)**	**7.6 (5)**	**9.6 (5)**	**19.4 (5)**	**12.1 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**2.9 (5)**	**6.1 (5)**	**8.1 (5)**	**16.2 (5)**	**10.2 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**2.1 (5)**	**5.8 (5)**	**7.2 (5)**	**14 (5)**	**8.4 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**1.4 (5)**	**4.3 (5)**	**7.2 (5)**	**11.9 (5)**	**6.5 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**1.1 (5)**	**4 (5)**	**5.7 (5)**	**8.6 (5)**	**5.6 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**1.1 (5)**	**2.9 (5)**	**4.3 (5)**	**7.6 (5)**	**3.7 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**0.7 (5)**	**2.5 (5)**	**3.4 (5)**	**5.4 (5)**	**2.8 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**0.7 (5)**	**2.5 (5)**	**3.4 (5)**	**5.4 (5)**	**2.8 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**0.4 (5)**	**1.8 (5)**	**2.4 (5)**	**3.2 (5)**	**1.9 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**1.1 (5)**	**2.9 (5)**	**4.3 (5)**	**7.6 (5)**	**3.7 (5)**
GRAVEL (%)	**54.9 (5)**	**43.4 (5)**	**42.9 (5)**	**14.5 (5)**	**3.4 (5)**
SAND (%)	**36.3 (5)**	**36.7 (5)**	**38.7 (5)**	**55.2 (5)**	**73.8 (5)**
SILT (%)	**7.7 (5)**	**17.0 (5)**	**14.1 (5)**	**22.7 (5)**	**19.1 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	**11.7 (5)**	**7.8 (5)**	**11.9 (5)**	**18.8 (5)**	**31.1 (5)**
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	**0.5 (5)**	**0.3 (5)**	**0.4 (5)**	**3.5 (5)**	**1.3 (5)**
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	**2.74 (5)**	**2.77 (5)**	**2.77 (5)**	**2.62 (5)**	**2.65 (5)**

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID					
Location ID	BH000120	BH000120	BH000120	BH000120	BH000120
Field Sample ID	H2-BH000120-0-0130	H2-BH000120-0-0180	H2-BH000120-0-0280	H2-BH000120-0-0030	H2-BH000120-0-0080
Date Collected	06/20/2000	06/20/2000	06/20/2000	06/20/2000	06/20/2000
Depth	13.0-15.0	18.0-19.5	28.0-30.0	3.0-3.5	8.0-9.8
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	**18 (5)**	**16 (5)**	**16 (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**
PLASTICITY LIMIT (%)	**15 (5)**	**15 (5)**	**13 (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**
GRAIN SIZE					
D-50 Calculation (mm)	**.0614 (5)**	**.0949 (5)**	**.0987 (5)**	**.3466 (5)**	**.1537 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**98.5 (5)**	**93.9 (5)**	**96.4 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**95.1 (5)**	**90 (5)**	**88.9 (5)**	**97.8 (5)**	**99.2 (5)**
SIZE (06) 012.7 MM (%finer)	**93.7 (5)**	**84.7 (5)**	**86 (5)**	**95.4 (5)**	**96.7 (5)**
SIZE (08) 004.75 MM (%finer)	**90.3 (5)**	**74.8 (5)**	**76.9 (5)**	**87.5 (5)**	**94.1 (5)**
SIZE (09) 002.0 MM (%finer)	**85.9 (5)**	**69.1 (5)**	**71.9 (5)**	**77.8 (5)**	**93.4 (5)**
SIZE (10) 850.0 UM (%finer)	**82.5 (5)**	**65.7 (5)**	**68.1 (5)**	**66.3 (5)**	**90.9 (5)**
SIZE (11) 425.0 UM (%finer)	**80.7 (5)**	**63.5 (5)**	**65.5 (5)**	**53.9 (5)**	**86.6 (5)**
SIZE (12) 250.0 UM (%finer)	**79.4 (5)**	**61.8 (5)**	**63.6 (5)**	**45.2 (5)**	**73.3 (5)**
SIZE (14) 150.0 UM (%finer)	**76.9 (5)**	**58.6 (5)**	**60.2 (5)**	**35.3 (5)**	**49.1 (5)**
SIZE (15) 075.0 UM (%finer)	**64.4 (5)**	**46.9 (5)**	**45.3 (5)**	**23.6 (5)**	**19.6 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**36.8 (5)**	**26.8 (5)**	**24.5 (5)**	**17.9 (5)**	**14.4 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**27.8 (5)**	**17 (5)**	**18.2 (5)**	**13.8 (5)**	**10.5 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**24.8 (5)**	**13.7 (5)**	**16.1 (5)**	**11.4 (5)**	**7.7 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**19.5 (5)**	**11.1 (5)**	**12.6 (5)**	**9.8 (5)**	**5.7 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**17.3 (5)**	**9.2 (5)**	**10.5 (5)**	**7.3 (5)**	**4.8 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**14.3 (5)**	**7.2 (5)**	**8.4 (5)**	**6.5 (5)**	**4.8 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**12 (5)**	**5.9 (5)**	**7.7 (5)**	**5.7 (5)**	**3.8 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**9.8 (5)**	**5.2 (5)**	**5.6 (5)**	**4.1 (5)**	**2.9 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**9.8 (5)**	**5.2 (5)**	**5.6 (5)**	**4.1 (5)**	**2.9 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**6.8 (5)**	**4.6 (5)**	**4.2 (5)**	**2.4 (5)**	**1 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**12.0 (5)**	**5.9 (5)**	**7.7 (5)**	**5.7 (5)**	**3.8 (5)**
GRAVEL (%)	**9.7 (5)**	**25.2 (5)**	**23.1 (5)**	**12.5 (5)**	**5.9 (5)**
SAND (%)	**25.9 (5)**	**27.9 (5)**	**31.6 (5)**	**63.9 (5)**	**74.5 (5)**
SILT (%)	**52.4 (5)**	**41.0 (5)**	**37.6 (5)**	**17.9 (5)**	**15.8 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	**12.6 (5)**	**17.5 (5)**	**16.9 (5)**	**13.3 (5)**	**32.4 (5)**
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	**0.4 (5)**	**0.4 (5)**	**0.5 (5)**	**2 (5)**	**1.2 (5)**
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	**2.78 (5)**	**2.77 (5)**	**2.77 (5)**	**2.67 (5)**	**2.67 (5)**

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID					
Location ID	BH000120	BH000124	BH000124	BH000124	BH000124
Field Sample ID	H2-BH000120-0-0098	H2-BH000124-0-0130	H2-BH000124-0-0180	H2-BH000124-0-0030	H2-BH000124-0-0080
Date Collected	06/20/2000	06/20/2000	06/20/2000	06/20/2000	06/20/2000
Depth	9.8-10.0	13.0-15.0	18.0-20.0	3.0-3.2	8.0-10.0
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	**20 (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	NA	**NON-PLASTIC (5)**
PLASTICITY LIMIT (%)	**16 (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	NA	**NON-PLASTIC (5)**
GRAIN SIZE					
D-50 Calculation (mm)	**.0648 (5)**	**5.4140 (5)**	**8.1878 (5)**	**7.3128 (5)**	**1.3270 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**70.6 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**100 (5)**	**95.6 (5)**	**88.5 (5)**	**70.6 (5)**	**99.1 (5)**
SIZE (06) 012.7 MM (%finer)	**96.6 (5)**	**91.7 (5)**	**73.1 (5)**	**70.6 (5)**	**94.8 (5)**
SIZE (08) 004.75 MM (%finer)	**89.6 (5)**	**46.2 (5)**	**32.4 (5)**	**40.2 (5)**	**73.7 (5)**
SIZE (09) 002.0 MM (%finer)	**86.4 (5)**	**36.7 (5)**	**24.3 (5)**	**37 (5)**	**57.9 (5)**
SIZE (10) 850.0 UM (%finer)	**83 (5)**	**27.5 (5)**	**18.7 (5)**	**34.8 (5)**	**44.4 (5)**
SIZE (11) 425.0 UM (%finer)	**80.1 (5)**	**19 (5)**	**13.7 (5)**	**31.8 (5)**	**31.8 (5)**
SIZE (12) 250.0 UM (%finer)	**78 (5)**	**14.5 (5)**	**10.9 (5)**	**29.9 (5)**	**25 (5)**
SIZE (14) 150.0 UM (%finer)	**74 (5)**	**10.9 (5)**	**8 (5)**	**27.8 (5)**	**19.3 (5)**
SIZE (15) 075.0 UM (%finer)	**59.6 (5)**	**7.6 (5)**	**5.5 (5)**	**24.7 (5)**	**11.8 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**35.2 (5)**	**5.4 (5)**	**4.5 (5)**	**17.9 (5)**	**7.5 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**27.6 (5)**	**4.8 (5)**	**3.4 (5)**	**13.9 (5)**	**5.9 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**23.8 (5)**	**3.9 (5)**	**2.8 (5)**	**11 (5)**	**4.3 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**20 (5)**	**3.3 (5)**	**2.5 (5)**	**8.1 (5)**	**3.8 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**18.1 (5)**	**2.4 (5)**	**2.1 (5)**	**6.9 (5)**	**3.2 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**14.3 (5)**	**1.5 (5)**	**1.7 (5)**	**5.8 (5)**	**1.6 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**13.3 (5)**	**1.2 (5)**	**1.5 (5)**	**4 (5)**	**1.6 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**10.5 (5)**	**0.6 (5)**	**0.8 (5)**	**2.3 (5)**	**1.1 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**10.5 (5)**	**0.6 (5)**	**0.8 (5)**	**2.3 (5)**	**1.1 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**7.6 (5)**	**0.3 (5)**	**0.4 (5)**	**1.7 (5)**	**0.5 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**13.3 (5)**	**1.2 (5)**	**1.5 (5)**	**4.0 (5)**	**1.6 (5)**
GRAVEL (%)	**10.4 (5)**	**53.8 (5)**	**67.6 (5)**	**59.8 (5)**	**26.3 (5)**
SAND (%)	**30.0 (5)**	**38.6 (5)**	**26.9 (5)**	**15.5 (5)**	**61.9 (5)**
SILT (%)	**46.3 (5)**	**6.4 (5)**	**4.0 (5)**	**20.7 (5)**	**10.2 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	**11.4 (5)**	**12.8 (5)**	**11.4 (5)**	**94.3 (5)**	**14 (5)**
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	**0.6 (5)**	**0.1 (5)**	**0.5 (5)**	**3.6 (5)**	**0.1 (5)**
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	**2.8 (5)**	**2.76 (5)**	**2.8 (5)**	**2.52 (5)**	**2.75 (5)**

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID					
Location ID	BH000125	BH000125	BH000125	BH000125	BH000126
Field Sample ID	H2-BH000125-0-0130	H2-BH000125-0-0180	H2-BH000125-0-0030	H2-BH000125-0-0080	H2-BH000126-0-0130
Date Collected	06/20/2000	06/20/2000	06/20/2000	06/20/2000	06/21/2000
Depth	13.0-13.4	18.0-18.5	3.0-4.1	8.0-9.3	13.0-14.0
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	**21 (5)**	**20 (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**17 (5)**
PLASTICITY LIMIT (%)	**21 (5)**	**14 (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**17 (5)**
GRAIN SIZE					
D-50 Calculation (mm)	**3.2794 (5)**	**.2850 (5)**	**2.0814 (5)**	**.6528 (5)**	**.2062 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**94.8 (5)**	**96.6 (5)**	**100 (5)**	**100 (5)**	**80.7 (5)**
SIZE (05) 019.0 MM (%finer)	**90.2 (5)**	**94.5 (5)**	**92.8 (5)**	**98.9 (5)**	**77.6 (5)**
SIZE (06) 012.7 MM (%finer)	**83.1 (5)**	**87.8 (5)**	**83.7 (5)**	**97.8 (5)**	**74.8 (5)**
SIZE (08) 004.75 MM (%finer)	**60 (5)**	**71.5 (5)**	**66.4 (5)**	**89.6 (5)**	**66.6 (5)**
SIZE (09) 002.0 MM (%finer)	**41.3 (5)**	**59.4 (5)**	**49.5 (5)**	**80.8 (5)**	**61.5 (5)**
SIZE (10) 850.0 UM (%finer)	**26.6 (5)**	**53.3 (5)**	**34.8 (5)**	**63.5 (5)**	**57.4 (5)**
SIZE (11) 425.0 UM (%finer)	**19.3 (5)**	**50.8 (5)**	**20.8 (5)**	**34.4 (5)**	**54.5 (5)**
SIZE (12) 250.0 UM (%finer)	**16.6 (5)**	**49.8 (5)**	**12.7 (5)**	**15.1 (5)**	**52.1 (5)**
SIZE (14) 150.0 UM (%finer)	**14.5 (5)**	**47.6 (5)**	**8.2 (5)**	**9.1 (5)**	**47.3 (5)**
SIZE (15) 075.0 UM (%finer)	**11.6 (5)**	**40.6 (5)**	**5.2 (5)**	**6.3 (5)**	**35.5 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**8.3 (5)**	**29.8 (5)**	**4.1 (5)**	**4.2 (5)**	**23.2 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**7.7 (5)**	**27.8 (5)**	**3.4 (5)**	**3.6 (5)**	**18.5 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**6.1 (5)**	**25.2 (5)**	**2.8 (5)**	**3.6 (5)**	**16 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**5 (5)**	**21.2 (5)**	**2.2 (5)**	**3 (5)**	**13.4 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**4.4 (5)**	**17.9 (5)**	**1.9 (5)**	**2.4 (5)**	**11.8 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**3.9 (5)**	**14.6 (5)**	**1.6 (5)**	**1.8 (5)**	**9.8 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**2.8 (5)**	**11.3 (5)**	**0.9 (5)**	**1.8 (5)**	**8.2 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**1.7 (5)**	**11.3 (5)**	**0.6 (5)**	**1.8 (5)**	**8.2 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**1.7 (5)**	**6.6 (5)**	**0.6 (5)**	**1.2 (5)**	**6.2 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**1.1 (5)**	**3.3 (5)**	**0.3 (5)**	**0.6 (5)**	**4.6 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**2.8 (5)**	**11.3 (5)**	**.9 (5)**	**1.8 (5)**	**8.2 (5)**
GRAVEL (%)	**40.0 (5)**	**28.5 (5)**	**33.6 (5)**	**10.4 (5)**	**33.4 (5)**
SAND (%)	**48.4 (5)**	**30.9 (5)**	**61.2 (5)**	**83.3 (5)**	**31.1 (5)**
SILT (%)	**8.8 (5)**	**29.3 (5)**	**4.3 (5)**	**4.5 (5)**	**27.3 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	**12.9 (5)**	**16.3 (5)**	**15.6 (5)**	**20.9 (5)**	**11.2 (5)**
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	**0.5 (5)**	**0.2 (5)**	**0.5 (5)**	**0.5 (5)**	**0.6 (5)**
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	**2.79 (5)**	**2.85 (5)**	**2.73 (5)**	**2.81 (5)**	**2.79 (5)**

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID					
Location ID	BH000126	BH000126	BH000126	BH000127	BH000127
Field Sample ID	H2-BH000126-0-0140	H2-BH000126-0-0030	H2-BH000126-0-0080	H2-BH000127-0-0130	H2-BH000127-0-0175
Date Collected	06/21/2000	06/21/2000	06/21/2000	06/21/2000	06/21/2000
Depth	14.0-15.0	3.0-4.5	8.0-9.5	13.0-13.0	17.5-17.8
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	**19 (5)**	**20 (5)**	**19 (5)**	**24 (5)**	NA
PLASTICITY LIMIT (%)	**18 (5)**	**16 (5)**	**17 (5)**	**19 (5)**	NA
GRAIN SIZE					
D-50 Calculation (mm)	**5.5099 (5)**	**.1029 (5)**	**.0735 (5)**	**.0592 (5)**	**.6238 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**85.2 (5)**	**100 (5)**	**95.9 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**82.4 (5)**	**100 (5)**	**95.9 (5)**	**96.9 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**62.3 (5)**	**96.9 (5)**	**94.3 (5)**	**94 (5)**	**76.4 (5)**
SIZE (08) 004.75 MM (%finer)	**48.7 (5)**	**88.9 (5)**	**85.5 (5)**	**83.9 (5)**	**70.1 (5)**
SIZE (09) 002.0 MM (%finer)	**42.1 (5)**	**81.2 (5)**	**82.3 (5)**	**79.5 (5)**	**65.5 (5)**
SIZE (10) 850.0 UM (%finer)	**36.8 (5)**	**73.8 (5)**	**77.4 (5)**	**75.2 (5)**	**56.6 (5)**
SIZE (11) 425.0 UM (%finer)	**33 (5)**	**68.3 (5)**	**73.4 (5)**	**72.4 (5)**	**44.2 (5)**
SIZE (12) 250.0 UM (%finer)	**30.4 (5)**	**64 (5)**	**70.3 (5)**	**70.4 (5)**	**36.4 (5)**
SIZE (14) 150.0 UM (%finer)	**27 (5)**	**58.1 (5)**	**65.3 (5)**	**67.5 (5)**	**30.4 (5)**
SIZE (15) 075.0 UM (%finer)	**19.7 (5)**	**45.2 (5)**	**51 (5)**	**59.1 (5)**	**23.8 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**9.7 (5)**	**34.5 (5)**	**33.4 (5)**	**44.1 (5)**	**16.3 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**8.1 (5)**	**31.4 (5)**	**27.5 (5)**	**39.6 (5)**	**14.7 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**6.6 (5)**	**26.4 (5)**	**23 (5)**	**35.8 (5)**	**12.6 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**5 (5)**	**22.6 (5)**	**20.8 (5)**	**32 (5)**	**10.5 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**4.4 (5)**	**19.5 (5)**	**18.6 (5)**	**28.9 (5)**	**7.9 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**3.7 (5)**	**17 (5)**	**15.6 (5)**	**24.3 (5)**	**6.8 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**3.1 (5)**	**14.4 (5)**	**13.4 (5)**	**20.5 (5)**	**5.8 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**3.1 (5)**	**14.4 (5)**	**13.4 (5)**	**17.5 (5)**	**4.7 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**1.9 (5)**	**10 (5)**	**8.9 (5)**	**17.5 (5)**	**4.7 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**1.6 (5)**	**6.3 (5)**	**7.4 (5)**	**12.9 (5)**	**3.7 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**3.1 (5)**	**14.4 (5)**	**13.4 (5)**	**20.5 (5)**	**5.8 (5)**
GRAVEL (%)	**51.3 (5)**	**11.1 (5)**	**14.5 (5)**	**16.1 (5)**	**29.9 (5)**
SAND (%)	**29.0 (5)**	**43.7 (5)**	**34.5 (5)**	**24.8 (5)**	**46.3 (5)**
SILT (%)	**16.6 (5)**	**30.8 (5)**	**37.6 (5)**	**38.6 (5)**	**18.0 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	**9.1 (5)**	**13.9 (5)**	**13.1 (5)**	**15.8 (5)**	**1.8 (5)**
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	**0.5 (5)**	**1.1 (5)**	**0.9 (5)**	**0.6 (5)**	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	**2.76 (5)**	**2.78 (5)**	**2.77 (5)**	**2.85 (5)**	**2.73 (5)**

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID					
Location ID	BH000127	BH000127	BH000128	BH000128	BH000128
Field Sample ID	H2-BH000127-0-0030	H2-BH000127-0-0080	H2-BH000128-0-0130	H2-BH000128-0-0030	H2-BH000128-0-0080
Date Collected	06/21/2000	06/21/2000	06/21/2000	06/21/2000	06/21/2000
Depth	3.0-4.8	8.0-10.0	13.0-13.7	3.0-3.4	8.0-8.8
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	**NON-PLASTIC (5)**	**17 (5)**	**NON-PLASTIC (5)**	NA	**25 (5)**
PLASTICITY LIMIT (%)	**NON-PLASTIC (5)**	**16 (5)**	**NON-PLASTIC (5)**	NA	**19 (5)**
GRAIN SIZE					
D-50 Calculation (mm)	**2.6962 (5)**	**.0741 (5)**	**1.2559 (5)**	**4.5285 (5)**	**1.1375 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**84.4 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**84.4 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**79.7 (5)**	**92 (5)**	**89 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**76.9 (5)**	**88.6 (5)**	**85 (5)**	**86 (5)**	**95.6 (5)**
SIZE (06) 012.7 MM (%finer)	**70 (5)**	**87.2 (5)**	**77.3 (5)**	**76 (5)**	**89.2 (5)**
SIZE (08) 004.75 MM (%finer)	**55.9 (5)**	**80.2 (5)**	**60.6 (5)**	**51.2 (5)**	**71 (5)**
SIZE (09) 002.0 MM (%finer)	**48 (5)**	**76.6 (5)**	**53.3 (5)**	**36.3 (5)**	**62.3 (5)**
SIZE (10) 850.0 UM (%finer)	**41.6 (5)**	**72.2 (5)**	**48.2 (5)**	**26.4 (5)**	**45.9 (5)**
SIZE (11) 425.0 UM (%finer)	**35.6 (5)**	**68.2 (5)**	**44.4 (5)**	**18.9 (5)**	**40.8 (5)**
SIZE (12) 250.0 UM (%finer)	**31.2 (5)**	**65.1 (5)**	**41.2 (5)**	**13.9 (5)**	**38.2 (5)**
SIZE (14) 150.0 UM (%finer)	**26.8 (5)**	**60.6 (5)**	**35.5 (5)**	**11.1 (5)**	**34.8 (5)**
SIZE (15) 075.0 UM (%finer)	**19.9 (5)**	**50.7 (5)**	**24.6 (5)**	**7.6 (5)**	**33 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**12.3 (5)**	**30.6 (5)**	**11.8 (5)**	**4.4 (5)**	**31.6 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**9.9 (5)**	**27.3 (5)**	**10.3 (5)**	**3.2 (5)**	**28.4 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**8.2 (5)**	**22.9 (5)**	**8.1 (5)**	**2.5 (5)**	**25.1 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**7 (5)**	**19.7 (5)**	**7 (5)**	**2.5 (5)**	**22.6 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**4.5 (5)**	**17.5 (5)**	**5.9 (5)**	**2.5 (5)**	**18.7 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**4.1 (5)**	**14.8 (5)**	**4.4 (5)**	**1.9 (5)**	**16.8 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**3.7 (5)**	**12 (5)**	**3.7 (5)**	**1.3 (5)**	**12.2 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**2.5 (5)**	**10.4 (5)**	**3.3 (5)**	**1.3 (5)**	**7.1 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**2.5 (5)**	**10.4 (5)**	**3.3 (5)**	**1.3 (5)**	**7.1 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**2.1 (5)**	**7.6 (5)**	**2.6 (5)**	**0.6 (5)**	**5.2 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**3.7 (5)**	**12.0 (5)**	**3.7 (5)**	**1.3 (5)**	**12.2 (5)**
GRAVEL (%)	**44.1 (5)**	**19.8 (5)**	**39.4 (5)**	**48.8 (5)**	**29.0 (5)**
SAND (%)	**36.0 (5)**	**29.5 (5)**	**36.0 (5)**	**43.6 (5)**	**38.0 (5)**
SILT (%)	**16.2 (5)**	**38.7 (5)**	**20.9 (5)**	**6.3 (5)**	**20.8 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	**10.4 (5)**	**13.3 (5)**	**13.1 (5)**	**17.8 (5)**	**18.3 (5)**
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	**1.8 (5)**	**0.6 (5)**	**0.5 (5)**	**0.4 (5)**	**0.3 (5)**
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	**2.75 (5)**	**2.82 (5)**	**2.83 (5)**	**2.75 (5)**	**2.78 (5)**

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID					
Location ID	BH000129	BH000130	BH000130	BH000130	BH000130
Field Sample ID	H2-BH000129-0-0030	H2-BH000130-0-0130	H2-BH000130-0-0185	H2-BH000130-0-0280	H2-BH000130-0-0030
Date Collected	06/21/2000	06/22/2000	06/22/2000	06/22/2000	06/22/2000
Depth	3.0-3.5	13.0-15.0	18.5-20.5	28.0-29.6	3.0-4.0
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	NA	**NON-PLASTIC (5)**	**22 (5)**	**21 (5)**	**23 (5)**
PLASTICITY LIMIT (%)	NA	**NON-PLASTIC (5)**	**16 (5)**	**14 (5)**	**20 (5)**
GRAIN SIZE					
D-50 Calculation (mm)	**.0720 (5)**	**.1109 (5)**	**.0656 (5)**	**.0898 (5)**	**.3167 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**88.7 (5)**	**100 (5)**	**96.9 (5)**	**92.8 (5)**	**92.7 (5)**
SIZE (05) 019.0 MM (%finer)	**88.7 (5)**	**97.8 (5)**	**94.1 (5)**	**92.8 (5)**	**88 (5)**
SIZE (06) 012.7 MM (%finer)	**88.7 (5)**	**97.3 (5)**	**91.6 (5)**	**86.8 (5)**	**82.9 (5)**
SIZE (08) 004.75 MM (%finer)	**77.4 (5)**	**97.1 (5)**	**83.8 (5)**	**75.6 (5)**	**71.3 (5)**
SIZE (09) 002.0 MM (%finer)	**73.2 (5)**	**97 (5)**	**79.9 (5)**	**68.2 (5)**	**64.3 (5)**
SIZE (10) 850.0 UM (%finer)	**69.4 (5)**	**96.7 (5)**	**75.4 (5)**	**63.5 (5)**	**57.9 (5)**
SIZE (11) 425.0 UM (%finer)	**66.9 (5)**	**96.2 (5)**	**72.5 (5)**	**60.9 (5)**	**52.6 (5)**
SIZE (12) 250.0 UM (%finer)	**65 (5)**	**92.3 (5)**	**70.4 (5)**	**59.1 (5)**	**48.4 (5)**
SIZE (14) 150.0 UM (%finer)	**62.1 (5)**	**66.3 (5)**	**67.1 (5)**	**56.5 (5)**	**43.4 (5)**
SIZE (15) 075.0 UM (%finer)	**52.9 (5)**	**35 (5)**	**56.5 (5)**	**48.4 (5)**	**34.7 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**28.1 (5)**	**14.1 (5)**	**38.6 (5)**	**31.4 (5)**	**26.7 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**25.5 (5)**	**10.6 (5)**	**32.3 (5)**	**28.2 (5)**	**22.4 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**21.7 (5)**	**8.8 (5)**	**28.2 (5)**	**25 (5)**	**18.8 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**17.9 (5)**	**6.2 (5)**	**25 (5)**	**21.8 (5)**	**16.6 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**15.3 (5)**	**5.3 (5)**	**21.9 (5)**	**18.5 (5)**	**14.4 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**14 (5)**	**3.5 (5)**	**19.8 (5)**	**16.1 (5)**	**12.3 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**10.8 (5)**	**2.6 (5)**	**16.7 (5)**	**14.5 (5)**	**8.7 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**7.7 (5)**	**1.8 (5)**	**12.5 (5)**	**11.3 (5)**	**7.9 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**7.7 (5)**	**1.8 (5)**	**12.5 (5)**	**11.3 (5)**	**7.9 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**6.4 (5)**	**0.9 (5)**	**10.4 (5)**	**8.9 (5)**	**5.1 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**10.8 (5)**	**2.6 (5)**	**16.7 (5)**	**14.5 (5)**	**8.7 (5)**
GRAVEL (%)	**22.6 (5)**	**2.9 (5)**	**16.2 (5)**	**24.4 (5)**	**28.7 (5)**
SAND (%)	**24.5 (5)**	**62.1 (5)**	**27.3 (5)**	**27.2 (5)**	**36.6 (5)**
SILT (%)	**42.1 (5)**	**32.4 (5)**	**39.8 (5)**	**33.9 (5)**	**26.0 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	**10.5 (5)**	**39.3 (5)**	**13 (5)**	**8.6 (5)**	**17.1 (5)**
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	**0.4 (5)**	**1.3 (5)**	**0.4 (5)**	**0.7 (5)**	**1.5 (5)**
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	**2.78 (5)**	**2.68 (5)**	**2.86 (5)**	**2.8 (5)**	**2.7 (5)**

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID					
Location ID	BH000130	BH000132	BH000132	BH000132	BH000132
Field Sample ID	H2-BH000130-0-0080	H2-BH000132-0-0130	H2-BH000132-0-0180	H2-BH000132-0-0030	H2-BH000132-0-0080
Date Collected	06/22/2000	06/23/2000	06/23/2000	06/23/2000	06/23/2000
Depth	8.0-9.2	13.0-14.1	18.0-19.0	3.0-3.2	8.0-8.3
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	**33 (5)**	**NON-PLASTIC (5)**	NA	**NON-PLASTIC (5)**	NA
PLASTICITY LIMIT (%)	**33 (5)**	**NON-PLASTIC (5)**	NA	**NON-PLASTIC (5)**	NA
GRAIN SIZE					
D-50 Calculation (mm)	**.4502 (5)**	**5.8780 (5)**	**3.7536 (5)**	**1.9599 (5)**	**28.7709 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**97.6 (5)**	**77.5 (5)**	**100 (5)**	**100 (5)**	**28.4 (5)**
SIZE (05) 019.0 MM (%finer)	**94.3 (5)**	**72.2 (5)**	**77.5 (5)**	**91.1 (5)**	**15.1 (5)**
SIZE (06) 012.7 MM (%finer)	**92.5 (5)**	**62.7 (5)**	**71.1 (5)**	**75.7 (5)**	**10.3 (5)**
SIZE (08) 004.75 MM (%finer)	**80.7 (5)**	**47.9 (5)**	**52.5 (5)**	**59.7 (5)**	**7.9 (5)**
SIZE (09) 002.0 MM (%finer)	**74.3 (5)**	**41.8 (5)**	**45.6 (5)**	**50.3 (5)**	**6.6 (5)**
SIZE (10) 850.0 UM (%finer)	**64.3 (5)**	**36.7 (5)**	**40.8 (5)**	**41.7 (5)**	**5.8 (5)**
SIZE (11) 425.0 UM (%finer)	**49.1 (5)**	**32.9 (5)**	**35.7 (5)**	**34.5 (5)**	**5.1 (5)**
SIZE (12) 250.0 UM (%finer)	**39.9 (5)**	**30.3 (5)**	**31.8 (5)**	**28.7 (5)**	**4 (5)**
SIZE (14) 150.0 UM (%finer)	**31.9 (5)**	**27.1 (5)**	**28.4 (5)**	**23.4 (5)**	**2.9 (5)**
SIZE (15) 075.0 UM (%finer)	**23.8 (5)**	**21 (5)**	**23.5 (5)**	**18.5 (5)**	**1.9 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**18.5 (5)**	**13.5 (5)**	**19.2 (5)**	**14.8 (5)**	**1.6 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**14.5 (5)**	**10.3 (5)**	**18 (5)**	**14.8 (5)**	**1.2 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**11.2 (5)**	**8.1 (5)**	**15.8 (5)**	**13.1 (5)**	**1.2 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**10.4 (5)**	**6.7 (5)**	**14.1 (5)**	**11.5 (5)**	**1.1 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**9.6 (5)**	**5.8 (5)**	**13 (5)**	**10.7 (5)**	**0.9 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**8 (5)**	**5.4 (5)**	**11.8 (5)**	**9.9 (5)**	**0.9 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**6.4 (5)**	**4 (5)**	**9.6 (5)**	**8.2 (5)**	**0.7 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**3.2 (5)**	**2.7 (5)**	**7.3 (5)**	**4.9 (5)**	**0.7 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**3.2 (5)**	**2.7 (5)**	**7.3 (5)**	**4.9 (5)**	**0.7 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**1.6 (5)**	**1.8 (5)**	**6.2 (5)**	**2.5 (5)**	**0.5 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**6.4 (5)**	**4.0 (5)**	**9.6 (5)**	**8.2 (5)**	**.7 (5)**
GRAVEL (%)	**19.3 (5)**	**52.1 (5)**	**47.5 (5)**	**40.3 (5)**	**92.1 (5)**
SAND (%)	**56.9 (5)**	**26.9 (5)**	**29.0 (5)**	**41.2 (5)**	**6.0 (5)**
SILT (%)	**17.4 (5)**	**17.0 (5)**	**13.9 (5)**	**10.3 (5)**	**1.2 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	**27 (5)**	**8.9 (5)**	**9.2 (5)**	**19.7 (5)**	**9.3 (5)**
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	**6.2 (5)**	**0.2 (5)**	**0.4 (5)**	**6.7 (5)**	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	**2.58 (5)**	**2.7 (5)**	**2.76 (5)**	**2.57 (5)**	NA

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID					
Location ID	BH000132	BH000133	BH000133	BH000133	BH000133
Field Sample ID	H2-BH000132-0-0083	H2-BH000133-0-0130	H2-BH000133-0-0180	H2-BH000133-0-0220	H2-BH000133-0-0030
Date Collected	06/23/2000	06/27/2000	06/27/2000	06/27/2000	06/27/2000
Depth	8.3-10.0	13.0-14.3	18.0-20.0	22.0-23.5	3.0-3.2
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**
PLASTICITY LIMIT (%)	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**
GRAIN SIZE					
D-50 Calculation (mm)	**3.9681 (5)**	NA	**.7972 (5)**	**.1981 (5)**	NA
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**89.3 (5)**	**100 (5)**	**100 (5)**	**96.8 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**82.8 (5)**	**100 (5)**	**100 (5)**	**93.9 (5)**	**97 (5)**
SIZE (06) 012.7 MM (%finer)	**70.9 (5)**	**99 (5)**	**99.5 (5)**	**90 (5)**	**92.2 (5)**
SIZE (08) 004.75 MM (%finer)	**52.9 (5)**	**88.7 (5)**	**94.7 (5)**	**80.8 (5)**	**77.1 (5)**
SIZE (09) 002.0 MM (%finer)	**42.7 (5)**	**72.7 (5)**	**75.2 (5)**	**73.1 (5)**	**66.2 (5)**
SIZE (10) 850.0 UM (%finer)	**35.9 (5)**	**50.4 (5)**	**52.4 (5)**	**70.2 (5)**	**52.6 (5)**
SIZE (11) 425.0 UM (%finer)	**32 (5)**	**27.5 (5)**	**33.1 (5)**	**68.3 (5)**	**40.8 (5)**
SIZE (12) 250.0 UM (%finer)	**29.5 (5)**	**13.5 (5)**	**18.7 (5)**	**59.6 (5)**	**32.2 (5)**
SIZE (14) 150.0 UM (%finer)	**26.7 (5)**	**6 (5)**	**9.8 (5)**	**41.1 (5)**	**23.2 (5)**
SIZE (15) 075.0 UM (%finer)	**21.7 (5)**	**2.6 (5)**	**5.2 (5)**	**16.8 (5)**	**13.3 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**16.1 (5)**	**2.6 (5)**	**5.2 (5)**	**5.4 (5)**	**13.3 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**13.9 (5)**	**2.2 (5)**	**5.2 (5)**	**4.9 (5)**	**11.8 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**11.7 (5)**	**2.2 (5)**	**3.9 (5)**	**3.3 (5)**	**10.6 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**9.5 (5)**	**2.2 (5)**	**3.5 (5)**	**2.7 (5)**	**9.4 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**7.8 (5)**	**1.1 (5)**	**2.2 (5)**	**2.2 (5)**	**8.3 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**7.2 (5)**	**0.6 (5)**	**2.2 (5)**	**1.6 (5)**	**7.1 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**5.6 (5)**	**0.6 (5)**	**1.7 (5)**	**1.6 (5)**	**5.9 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**4.5 (5)**	**0.6 (5)**	**1.3 (5)**	**1.1 (5)**	**3.5 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**4.5 (5)**	**0.6 (5)**	**1.3 (5)**	**1.1 (5)**	**3.5 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**3.9 (5)**	**0 (5)**	**0.4 (5)**	**0.5 (5)**	**2.4 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**5.6 (5)**	NA	**1.7 (5)**	**1.6 (5)**	NA
GRAVEL (%)	**47.1 (5)**	NA	**5.3 (5)**	**19.2 (5)**	NA
SAND (%)	**31.2 (5)**	NA	**89.5 (5)**	**64.0 (5)**	NA
SILT (%)	**16.1 (5)**	NA	**3.5 (5)**	**15.2 (5)**	NA
INORGANICS					
PERCENT WATER CONTENT (%)	**5 (5)**	**20.8 (5)**	**24.8 (5)**	**10.8 (5)**	**23.3 (5)**
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	**0.2 (5)**	**0.2 (5)**	**0.4 (5)**	**0.3 (5)**	**8.1 (5)**
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	**2.76 (5)**	**2.72 (5)**	**2.78 (5)**	**2.8 (5)**	**2.64 (5)**

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID					
Location ID	BH000133	BH000133	BH000134	BH000134	BH000134
Field Sample ID	H2-BH000133-0-0330	H2-BH000133-0-0080	H2-BH000134-0-0130	H2-BH000134-0-0180	H2-BH000134-0-0225
Date Collected	06/27/2000	06/27/2000	06/28/2000	06/28/2000	06/28/2000
Depth	33.0-35.0	8.0-9.4	13.0-15.0	18.0-19.7	22.5-23.2
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	**16 (5)**	**NON-PLASTIC (5)**	**19 (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**
PLASTICITY LIMIT (%)	**16 (5)**	**NON-PLASTIC (5)**	**19 (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**
GRAIN SIZE					
D-50 Calculation (mm)	**.1464 (5)**	NA	NA	NA	NA
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**94.5 (5)**	**100 (5)**	**77.1 (5)**	**88.3 (5)**	**94.8 (5)**
SIZE (05) 019.0 MM (%finer)	**94.5 (5)**	**100 (5)**	**67.2 (5)**	**76.7 (5)**	**82.1 (5)**
SIZE (06) 012.7 MM (%finer)	**91.6 (5)**	**100 (5)**	**61.1 (5)**	**65.5 (5)**	**75.4 (5)**
SIZE (08) 004.75 MM (%finer)	**79.5 (5)**	**100 (5)**	**49.1 (5)**	**47.4 (5)**	**54.9 (5)**
SIZE (09) 002.0 MM (%finer)	**68.9 (5)**	**100 (5)**	**42.2 (5)**	**39.4 (5)**	**48.3 (5)**
SIZE (10) 850.0 UM (%finer)	**64.4 (5)**	**99.2 (5)**	**37.9 (5)**	**33.7 (5)**	**42.1 (5)**
SIZE (11) 425.0 UM (%finer)	**61.7 (5)**	**97.2 (5)**	**34.1 (5)**	**28.4 (5)**	**35.3 (5)**
SIZE (12) 250.0 UM (%finer)	**59.2 (5)**	**83.3 (5)**	**30.9 (5)**	**24.2 (5)**	**29.5 (5)**
SIZE (14) 150.0 UM (%finer)	**51.6 (5)**	**38.3 (5)**	**27.1 (5)**	**19.1 (5)**	**23.6 (5)**
SIZE (15) 075.0 UM (%finer)	**18.2 (5)**	**13.3 (5)**	**20.4 (5)**	**11.6 (5)**	**17.6 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**3.2 (5)**	**10.4 (5)**	**14.5 (5)**	**8.9 (5)**	**15.5 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**2.1 (5)**	**7.8 (5)**	**13 (5)**	**8.3 (5)**	**14.7 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**1.6 (5)**	**7.8 (5)**	**11 (5)**	**6.9 (5)**	**13 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**1.1 (5)**	**6.5 (5)**	**9 (5)**	**6 (5)**	**11.4 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**1.1 (5)**	**5.2 (5)**	**6 (5)**	**4.8 (5)**	**9.8 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**1.1 (5)**	**3.9 (5)**	**5 (5)**	**3.9 (5)**	**8.1 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**1.1 (5)**	**3.9 (5)**	**4.5 (5)**	**3.6 (5)**	**6.5 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**1.1 (5)**	**2.6 (5)**	**3 (5)**	**3 (5)**	**4.9 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**1.1 (5)**	**2.6 (5)**	**3 (5)**	**3 (5)**	**4.9 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**0.5 (5)**	**1.3 (5)**	**2 (5)**	**1.8 (5)**	**3.3 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**1.1 (5)**	NA	NA	NA	NA
GRAVEL (%)	**20.5 (5)**	NA	NA	NA	NA
SAND (%)	**61.3 (5)**	NA	NA	NA	NA
SILT (%)	**17.1 (5)**	NA	NA	NA	NA
INORGANICS					
PERCENT WATER CONTENT (%)	**13.1 (5)**	**31.8 (5)**	**8.2 (5)**	**9.9 (5)**	**10.6 (5)**
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	**0.3 (5)**	**0.4 (5)**	**0.3 (5)**	**0.3 (5)**	**0.3 (5)**
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	**2.81 (5)**	**2.72 (5)**	**2.75 (5)**	**2.75 (5)**	**2.68 (5)**

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID						
Location ID	BH000134	BH000134	BH000136	BH000136	BH000136	BH000136
Field Sample ID	H2-BH000134-0-0030	H2-BH000134-0-0080	H2-BH000136-0-0130	H2-BH000136-0-0140	H2-BH000136-0-0030	H2-BH000136-0-0080
Date Collected	06/27/2000	06/28/2000	06/29/2000	06/29/2000	06/29/2000	06/29/2000
Depth	3.0-4.0	8.0-8.8	13.0-14.0	14.0-15.0	3.0-3.4	8.0-8.7
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte						
ATTERBERG LIMITS						
LIQUIDITY LIMIT (%)	**21 (5)**	**18 (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**
PLASTICITY LIMIT (%)	**21 (5)**	**18 (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**
GRAIN SIZE						
D-50 Calculation (mm)	NA	NA	NA	NA	**.1639 (5)**	**.3264 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**87.6 (5)**	**77.2 (5)**	**100 (5)**	**97 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**86.4 (5)**	**71.6 (5)**	**100 (5)**	**95.7 (5)**	**100 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**79.2 (5)**	**64.6 (5)**	**100 (5)**	**92.1 (5)**	**100 (5)**	**100 (5)**
SIZE (08) 004.75 MM (%finer)	**66.7 (5)**	**52.8 (5)**	**99.8 (5)**	**75.2 (5)**	**100 (5)**	**99 (5)**
SIZE (09) 002.0 MM (%finer)	**59.6 (5)**	**45.3 (5)**	**97.6 (5)**	**68.6 (5)**	**97 (5)**	**97.2 (5)**
SIZE (10) 850.0 UM (%finer)	**51.3 (5)**	**40.5 (5)**	**91.2 (5)**	**63.6 (5)**	**94.2 (5)**	**91 (5)**
SIZE (11) 425.0 UM (%finer)	**43.6 (5)**	**36.4 (5)**	**77.3 (5)**	**59.3 (5)**	**90.6 (5)**	**70 (5)**
SIZE (12) 250.0 UM (%finer)	**37.8 (5)**	**33.5 (5)**	**56.5 (5)**	**56.1 (5)**	**76.6 (5)**	**34.5 (5)**
SIZE (14) 150.0 UM (%finer)	**32.2 (5)**	**30 (5)**	**33.8 (5)**	**51.4 (5)**	**45.7 (5)**	**9.4 (5)**
SIZE (15) 075.0 UM (%finer)	**23.7 (5)**	**21.9 (5)**	**20.4 (5)**	**37 (5)**	**14.7 (5)**	**0.8 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**18.2 (5)**	**16.1 (5)**	**8.9 (5)**	**23.9 (5)**	**14.7 (5)**	**0.8 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**15.4 (5)**	**14 (5)**	**7.6 (5)**	**19.9 (5)**	**11.2 (5)**	**0.8 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**12.6 (5)**	**11.2 (5)**	**7.6 (5)**	**15.9 (5)**	**8.8 (5)**	**0.8 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**11.2 (5)**	**9.9 (5)**	**6.3 (5)**	**12.6 (5)**	**5.6 (5)**	**0.8 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**9.1 (5)**	**7.4 (5)**	**6.3 (5)**	**10.6 (5)**	**4.8 (5)**	**0.8 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**7 (5)**	**5.8 (5)**	**5.1 (5)**	**8.6 (5)**	**3.2 (5)**	**0.8 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**5.6 (5)**	**5 (5)**	**3.8 (5)**	**6.6 (5)**	**2.4 (5)**	**0.8 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**4.2 (5)**	**4.1 (5)**	**2.5 (5)**	**5.3 (5)**	**1.6 (5)**	**0.8 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**4.2 (5)**	**4.1 (5)**	**2.5 (5)**	**5.3 (5)**	**1.6 (5)**	**0.8 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**2.1 (5)**	**2.5 (5)**	**1.3 (5)**	**3.3 (5)**	**0.8 (5)**	**0.0 (5)**
GRAIN SIZE CLASS						
CLAY (%)	NA	NA	NA	NA	**2.4 (5)**	**.8 (5)**
GRAVEL (%)	NA	NA	NA	NA	**.0 (5)**	**1.0 (5)**
SAND (%)	NA	NA	NA	NA	**85.3 (5)**	**98.2 (5)**
SILT (%)	NA	NA	NA	NA	**12.3 (5)**	**.0 (5)**
INORGANICS						
PERCENT WATER CONTENT (%)	**8.6 (5)**	**6.1 (5)**	**27.8 (5)**	**11.2 (5)**	**23.4 (5)**	**39.1 (5)**
ORGANIC CONTENT						
PERCENT ORGANIC CONTENT (%)	**0.7 (5)**	**0.8 (5)**	**0.4 (5)**	**0.3 (5)**	**2.1 (5)**	**1.8 (5)**
SPECIFIC GRAVITY						
SPECIFIC GRAVITY ()	**2.78 (5)**	**2.79 (5)**	**2.68 (5)**	**2.75 (5)**	**2.67 (5)**	**2.66 (5)**

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID						
Location ID	BH000137	BH000137	BH000137	BH000137	BH000141	BH000141
Field Sample ID	H2-BH000137-0-0130	H2-BH000137-0-0180	H2-BH000137-0-0030	H2-BH000137-0-0080	H2-BH000141-0-0100	H2-BH000141-0-0150
Date Collected	06/28/2000	06/28/2000	06/28/2000	06/28/2000	07/10/2000	07/10/2000
Depth	13.0-15.0	18.0-20.0	3.0-3.5	8.0-10.0	10.0-11.5	15.0-16.4
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte						
ATTERBERG LIMITS						
LIQUIDITY LIMIT (%)	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**27 (5)**	**NON-PLASTIC (5)**
PLASTICITY LIMIT (%)	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**27 (5)**	**NON-PLASTIC (5)**
GRAIN SIZE						
D-50 Calculation (mm)	**2.9489 (5)**	**.4543 (5)**	**.9390 (5)**	**1.7856 (5)**	**.1009 (5)**	**.6842 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**89.1 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**96.1 (5)**	**83.1 (5)**	**100 (5)**	**98.2 (5)**	**100 (5)**	**97.6 (5)**
SIZE (06) 012.7 MM (%finer)	**81.8 (5)**	**76.2 (5)**	**93 (5)**	**95.4 (5)**	**100 (5)**	**96.3 (5)**
SIZE (08) 004.75 MM (%finer)	**59.3 (5)**	**63.3 (5)**	**82 (5)**	**74.6 (5)**	**100 (5)**	**81.5 (5)**
SIZE (09) 002.0 MM (%finer)	**45.1 (5)**	**56.8 (5)**	**64.3 (5)**	**53.3 (5)**	**100 (5)**	**69.3 (5)**
SIZE (10) 850.0 UM (%finer)	**38 (5)**	**52.7 (5)**	**48.8 (5)**	**35.6 (5)**	**99.7 (5)**	**55.5 (5)**
SIZE (11) 425.0 UM (%finer)	**33.9 (5)**	**49.8 (5)**	**34.3 (5)**	**24.9 (5)**	**98.8 (5)**	**41.4 (5)**
SIZE (12) 250.0 UM (%finer)	**30.6 (5)**	**47.2 (5)**	**21.4 (5)**	**19 (5)**	**93.8 (5)**	**28.1 (5)**
SIZE (14) 150.0 UM (%finer)	**26.2 (5)**	**42.9 (5)**	**10 (5)**	**14.1 (5)**	**72.4 (5)**	**19 (5)**
SIZE (15) 075.0 UM (%finer)	**15.9 (5)**	**28.1 (5)**	**3.4 (5)**	**8.8 (5)**	**38.2 (5)**	**11.6 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**11.7 (5)**	**16.3 (5)**	**1.5 (5)**	**7.4 (5)**	**20.7 (5)**	**9.1 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**8.8 (5)**	**11.8 (5)**	**1.2 (5)**	**5.7 (5)**	**16.2 (5)**	**7.5 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**7.3 (5)**	**9 (5)**	**1.2 (5)**	**4.7 (5)**	**14.8 (5)**	**6.6 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**5.1 (5)**	**6.9 (5)**	**0.8 (5)**	**3.7 (5)**	**11.8 (5)**	**5 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**3.7 (5)**	**5.7 (5)**	**0.8 (5)**	**3 (5)**	**8.9 (5)**	**4.1 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**2.6 (5)**	**4.1 (5)**	**0.8 (5)**	**2.4 (5)**	**7.4 (5)**	**2.5 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**2.2 (5)**	**3.3 (5)**	**0.8 (5)**	**1.7 (5)**	**4.4 (5)**	**1.7 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**1.5 (5)**	**2.9 (5)**	**0.8 (5)**	**1.3 (5)**	**3 (5)**	**1.7 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**1.5 (5)**	**2.9 (5)**	**0.8 (5)**	**1.3 (5)**	**3 (5)**	**1.7 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**0.7 (5)**	**1.6 (5)**	**0.4 (5)**	**0.7 (5)**	**1.5 (5)**	**0.8 (5)**
GRAIN SIZE CLASS						
CLAY (%)	**2.2 (5)**	**3.3 (5)**	**.8 (5)**	**1.7 (5)**	**4.4 (5)**	**1.7 (5)**
GRAVEL (%)	**40.7 (5)**	**36.7 (5)**	**18.0 (5)**	**25.4 (5)**	**.0 (5)**	**18.5 (5)**
SAND (%)	**43.4 (5)**	**35.2 (5)**	**78.6 (5)**	**65.8 (5)**	**61.8 (5)**	**69.9 (5)**
SILT (%)	**13.7 (5)**	**24.8 (5)**	**2.6 (5)**	**7.1 (5)**	**33.8 (5)**	**9.9 (5)**
INORGANICS						
PERCENT WATER CONTENT (%)	**10.3 (5)**	**12.6 (5)**	**19.4 (5)**	**13.3 (5)**	**31 (5)**	**25.7 (5)**
ORGANIC CONTENT						
PERCENT ORGANIC CONTENT (%)	**0.1 (5)**	**0.4 (5)**	**0.4 (5)**	**0.8 (5)**	**2.7 (5)**	**1 (5)**
SPECIFIC GRAVITY						
SPECIFIC GRAVITY ()	**2.85 (5)**	**2.84 (5)**	**2.76 (5)**	**2.75 (5)**	**2.65 (5)**	**2.73 (5)**

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID						
Location ID	BH000141	BH000141	BH000141	BH000142	BH000142	BH000142
Field Sample ID	H2-BH000141-0-0250	H2-BH000141-0-0310	H2-BH000141-0-0050	H2-BH000142-0-0100	H2-BH000142-0-0150	H2-BH000142-0-0250
Date Collected	07/10/2000	07/10/2000	07/10/2000	07/11/2000	07/11/2000	07/11/2000
Depth	25.0-26.8	31.0-32.0	5.0-6.7	10.0-11.2	15.0-16.0	25.0-26.7
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte						
ATTERBERG LIMITS						
LIQUIDITY LIMIT (%)	**34 (5)**	NA	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**
PLASTICITY LIMIT (%)	**33 (5)**	NA	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**
GRAIN SIZE						
D-50 Calculation (mm)	**.0452 (5)**	**.2963 (5)**	**.2942 (5)**	**.1820 (5)**	**.7851 (5)**	**.4979 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (5)**	**97.6 (5)**	**76 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**100 (5)**	**100 (5)**	**94.3 (5)**	**76 (5)**	**96.6 (5)**	**99.2 (5)**
SIZE (06) 012.7 MM (%finer)	**100 (5)**	**100 (5)**	**90.3 (5)**	**76 (5)**	**79.5 (5)**	**94.9 (5)**
SIZE (08) 004.75 MM (%finer)	**100 (5)**	**99.5 (5)**	**78.9 (5)**	**75 (5)**	**66.6 (5)**	**93.1 (5)**
SIZE (09) 002.0 MM (%finer)	**99.9 (5)**	**94.9 (5)**	**71 (5)**	**74.8 (5)**	**60.5 (5)**	**83.7 (5)**
SIZE (10) 850.0 UM (%finer)	**99.6 (5)**	**83 (5)**	**64.1 (5)**	**74.2 (5)**	**52.2 (5)**	**64.5 (5)**
SIZE (11) 425.0 UM (%finer)	**99.2 (5)**	**66.1 (5)**	**56.8 (5)**	**73.5 (5)**	**37.8 (5)**	**47 (5)**
SIZE (12) 250.0 UM (%finer)	**97.8 (5)**	**44.2 (5)**	**47.7 (5)**	**68.1 (5)**	**24.7 (5)**	**36.5 (5)**
SIZE (14) 150.0 UM (%finer)	**90.2 (5)**	**22.7 (5)**	**34.9 (5)**	**41.5 (5)**	**16.2 (5)**	**25.2 (5)**
SIZE (15) 075.0 UM (%finer)	**69.8 (5)**	**11.3 (5)**	**21 (5)**	**18.2 (5)**	**10.9 (5)**	**17 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**56.8 (5)**	**6.5 (5)**	**14.8 (5)**	**10.5 (5)**	**4.8 (5)**	**11.2 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**35.5 (5)**	**4.4 (5)**	**11.5 (5)**	**6.9 (5)**	**3.9 (5)**	**9.2 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**28.4 (5)**	**4.4 (5)**	**9 (5)**	**6 (5)**	**3.1 (5)**	**7.7 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**23.7 (5)**	**3.3 (5)**	**8.2 (5)**	**5 (5)**	**2.6 (5)**	**5.6 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**18.9 (5)**	**2.2 (5)**	**7.4 (5)**	**4.1 (5)**	**2.2 (5)**	**4.1 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**16.6 (5)**	**2.2 (5)**	**4.1 (5)**	**3.2 (5)**	**1.7 (5)**	**3.6 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**11.8 (5)**	**2.2 (5)**	**3.3 (5)**	**1.8 (5)**	**0.9 (5)**	**1.5 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**7.1 (5)**	**2.2 (5)**	**2.5 (5)**	**0.9 (5)**	**0.9 (5)**	**1 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**7.1 (5)**	**2.2 (5)**	**2.5 (5)**	**0.9 (5)**	**0.9 (5)**	**1 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**2.4 (5)**	**1.1 (5)**	**1.6 (5)**	**0.5 (5)**	**0.4 (5)**	**0.5 (5)**
GRAIN SIZE CLASS						
CLAY (%)	**11.8 (5)**	**2.2 (5)**	**3.3 (5)**	**1.8 (5)**	**.9 (5)**	**1.5 (5)**
GRAVEL (%)	**.0 (5)**	**.5 (5)**	**21.1 (5)**	**25.0 (5)**	**33.4 (5)**	**6.9 (5)**
SAND (%)	**30.2 (5)**	**88.2 (5)**	**57.9 (5)**	**56.8 (5)**	**55.7 (5)**	**76.1 (5)**
SILT (%)	**58.0 (5)**	**9.1 (5)**	**17.7 (5)**	**16.4 (5)**	**10.0 (5)**	**15.5 (5)**
INORGANICS						
PERCENT WATER CONTENT (%)	**66.5 (5)**	**22.4 (5)**	**12 (5)**	**21.9 (5)**	**37.9 (5)**	**18.6 (5)**
ORGANIC CONTENT						
PERCENT ORGANIC CONTENT (%)	**6.4 (5)**	**0.5 (5)**	**3.5 (5)**	**1.1 (5)**	**1.5 (5)**	**0.4 (5)**
SPECIFIC GRAVITY						
SPECIFIC GRAVITY ()	**2.6 (5)**	**2.75 (5)**	**2.62 (5)**	**2.7 (5)**	**2.66 (5)**	**2.77 (5)**

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID						
Location ID	BH000142	BH000142	BH000143	BH000143	BH000143	BH000143
Field Sample ID	H2-BH000142-0-0350	H2-BH000142-0-0050	H2-BH000143-0-0100	H2-BH000143-0-0150	H2-BH000143-0-0250	H2-BH000143-0-0350
Date Collected	07/11/2000	07/11/2000	07/11/2000	07/11/2000	07/11/2000	07/11/2000
Depth	35.0-37.0	5.0-5.3	10.0-11.7	15.0-15.9	25.0-26.6	35.0-36.6
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte						
ATTERBERG LIMITS						
LIQUIDITY LIMIT (%)	**NON-PLASTIC (5)**	NA	**NON-PLASTIC (5)**	NA	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**
PLASTICITY LIMIT (%)	**NON-PLASTIC (5)**	NA	**NON-PLASTIC (5)**	NA	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**
GRAIN SIZE						
D-50 Calculation (mm)	**.5053 (5)**	**.3441 (5)**	**.1432 (5)**	**2.9509 (5)**	**.4731 (5)**	**.3495 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**97.7 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**89.2 (5)**	**97.7 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**100 (5)**	**86.9 (5)**	**100 (5)**	**77.8 (5)**	**94.5 (5)**	**99.1 (5)**
SIZE (08) 004.75 MM (%finer)	**99.8 (5)**	**84.2 (5)**	**100 (5)**	**57 (5)**	**81.9 (5)**	**93.8 (5)**
SIZE (09) 002.0 MM (%finer)	**95.1 (5)**	**74.6 (5)**	**99.4 (5)**	**46.3 (5)**	**75.1 (5)**	**89.9 (5)**
SIZE (10) 850.0 UM (%finer)	**74.9 (5)**	**64.2 (5)**	**97.6 (5)**	**37.5 (5)**	**64.1 (5)**	**82.1 (5)**
SIZE (11) 425.0 UM (%finer)	**44.2 (5)**	**53.7 (5)**	**96.2 (5)**	**26.6 (5)**	**48.2 (5)**	**62.6 (5)**
SIZE (12) 250.0 UM (%finer)	**20 (5)**	**45.7 (5)**	**86.8 (5)**	**17.1 (5)**	**32.5 (5)**	**33.4 (5)**
SIZE (14) 150.0 UM (%finer)	**8.1 (5)**	**37.4 (5)**	**52.9 (5)**	**11.4 (5)**	**18.3 (5)**	**11.7 (5)**
SIZE (15) 075.0 UM (%finer)	**4.8 (5)**	**28.4 (5)**	**20.8 (5)**	**7.4 (5)**	**8.8 (5)**	**4.8 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**2.2 (5)**	**17.9 (5)**	**20.8 (5)**	**6.4 (5)**	**8.8 (5)**	**3.6 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**1.7 (5)**	**15 (5)**	**15.6 (5)**	**5.2 (5)**	**7.8 (5)**	**3 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**1.7 (5)**	**14.3 (5)**	**12.7 (5)**	**4.4 (5)**	**6.6 (5)**	**3 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**1.1 (5)**	**11.4 (5)**	**11.7 (5)**	**4 (5)**	**5 (5)**	**2.4 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**1.1 (5)**	**9.3 (5)**	**8.8 (5)**	**2.8 (5)**	**4.4 (5)**	**2.4 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**1.1 (5)**	**7.2 (5)**	**6.8 (5)**	**2 (5)**	**3.3 (5)**	**1.8 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**1.1 (5)**	**4.3 (5)**	**4.9 (5)**	**1.6 (5)**	**2.8 (5)**	**1.8 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**1.1 (5)**	**2.9 (5)**	**4.9 (5)**	**1.6 (5)**	**1.7 (5)**	**1.8 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**1.1 (5)**	**2.9 (5)**	**2.9 (5)**	**1.6 (5)**	**1.7 (5)**	**1.2 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**0.6 (5)**	**2.1 (5)**	**1 (5)**	**1.2 (5)**	**0.6 (5)**	**0.6 (5)**
GRAIN SIZE CLASS						
CLAY (%)	**1.1 (5)**	**4.3 (5)**	**4.9 (5)**	**1.6 (5)**	**2.8 (5)**	**1.8 (5)**
GRAVEL (%)	**.2 (5)**	**15.8 (5)**	**.0 (5)**	**43.0 (5)**	**18.1 (5)**	**6.2 (5)**
SAND (%)	**95.0 (5)**	**55.8 (5)**	**79.2 (5)**	**49.6 (5)**	**73.1 (5)**	**89.0 (5)**
SILT (%)	**3.7 (5)**	**24.1 (5)**	**15.9 (5)**	**5.8 (5)**	**6.0 (5)**	**3.0 (5)**
INORGANICS						
PERCENT WATER CONTENT (%)	**25 (5)**	**16.5 (5)**	**22.9 (5)**	**16.9 (5)**	**17.3 (5)**	**20.7 (5)**
ORGANIC CONTENT						
PERCENT ORGANIC CONTENT (%)	**0.3 (5)**	**0.7 (5)**	**1.1 (5)**	**0.4 (5)**	**0.7 (5)**	**0.3 (5)**
SPECIFIC GRAVITY						
SPECIFIC GRAVITY ()	**2.77 (5)**	**2.68 (5)**	**2.67 (5)**	**2.71 (5)**	**2.71 (5)**	**2.76 (5)**

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID						
Location ID	BH000143	BH000143	BH000144	BH000144	BH000144	BH000145
Field Sample ID	H2-BH000143-0-0370	H2-BH000143-0-0050	H2-BH000144-0-0100	H2-BH000144-0-0030	H2-BH000144-0-0080	H2-BH000145-0-0105
Date Collected	07/11/2000	07/11/2000	07/11/2000	07/11/2000	07/11/2000	07/12/2000
Depth	37.0-37.5	5.0-5.7	10.0-10.5	3.0-4.7	8.0-9.4	10.5-12.2
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte						
ATTERBERG LIMITS						
LIQUIDITY LIMIT (%)	**18 (5)**	**NON-PLASTIC (5)**	NA	**29 (5)**	NA	**63 (5)**
PLASTICITY LIMIT (%)	**18 (5)**	**NON-PLASTIC (5)**	NA	**18 (5)**	NA	**57 (5)**
GRAIN SIZE						
D-50 Calculation (mm)	**.1137 (5)**	**1.3748 (5)**	**2.5500 (5)**	**.0717 (5)**	**9.3763 (5)**	**.0399 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**89.8 (5)**	**100 (5)**	**89.3 (5)**	**100 (5)**	**81.1 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**89.8 (5)**	**95.3 (5)**	**84.7 (5)**	**98.3 (5)**	**71 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**83.7 (5)**	**85.1 (5)**	**75.7 (5)**	**91.6 (5)**	**57.4 (5)**	**100 (5)**
SIZE (08) 004.75 MM (%finer)	**79 (5)**	**66.1 (5)**	**53.6 (5)**	**81.6 (5)**	**39.7 (5)**	**100 (5)**
SIZE (09) 002.0 MM (%finer)	**74.8 (5)**	**55.6 (5)**	**49.1 (5)**	**76.4 (5)**	**33.5 (5)**	**100 (5)**
SIZE (10) 850.0 UM (%finer)	**71.5 (5)**	**45.3 (5)**	**44.8 (5)**	**71.2 (5)**	**28.6 (5)**	**99.9 (5)**
SIZE (11) 425.0 UM (%finer)	**68.9 (5)**	**36.1 (5)**	**42.2 (5)**	**67.1 (5)**	**25.3 (5)**	**99.6 (5)**
SIZE (12) 250.0 UM (%finer)	**64.9 (5)**	**29.9 (5)**	**40.4 (5)**	**63.9 (5)**	**22.6 (5)**	**98.8 (5)**
SIZE (14) 150.0 UM (%finer)	**60.2 (5)**	**24.3 (5)**	**38 (5)**	**59.2 (5)**	**18.6 (5)**	**96 (5)**
SIZE (15) 075.0 UM (%finer)	**39.1 (5)**	**16.9 (5)**	**28.8 (5)**	**51.5 (5)**	**13 (5)**	**87.3 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**34.2 (5)**	**16.9 (5)**	**14.8 (5)**	**39.5 (5)**	**9.1 (5)**	**61.2 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**28.4 (5)**	**14.2 (5)**	**13.4 (5)**	**34.9 (5)**	**7.7 (5)**	**46.4 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**23.6 (5)**	**12.4 (5)**	**11.1 (5)**	**31.9 (5)**	**6.6 (5)**	**31.7 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**21.7 (5)**	**10.6 (5)**	**6.7 (5)**	**27.3 (5)**	**6.3 (5)**	**31.7 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**17.4 (5)**	**9.7 (5)**	**5.2 (5)**	**25.8 (5)**	**5.6 (5)**	**31.7 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**14 (5)**	**8.4 (5)**	**3.7 (5)**	**22 (5)**	**4.9 (5)**	**22.2 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**11.1 (5)**	**7.1 (5)**	**3 (5)**	**18.2 (5)**	**3.8 (5)**	**16.9 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**11.1 (5)**	**7.1 (5)**	**1.5 (5)**	**15.9 (5)**	**3.1 (5)**	**12.7 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**6.7 (5)**	**4.4 (5)**	**1.5 (5)**	**15.9 (5)**	**3.1 (5)**	**12.7 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**5.3 (5)**	**3.5 (5)**	**0.7 (5)**	**11.4 (5)**	**2.4 (5)**	**6.3 (5)**
GRAIN SIZE CLASS						
CLAY (%)	**11.1 (5)**	**7.1 (5)**	**3.0 (5)**	**18.2 (5)**	**3.8 (5)**	**16.9 (5)**
GRAVEL (%)	**21.0 (5)**	**33.9 (5)**	**46.4 (5)**	**18.4 (5)**	**60.3 (5)**	**.0 (5)**
SAND (%)	**39.9 (5)**	**49.2 (5)**	**24.8 (5)**	**30.1 (5)**	**26.7 (5)**	**12.7 (5)**
SILT (%)	**28.0 (5)**	**9.8 (5)**	**25.8 (5)**	**33.3 (5)**	**9.2 (5)**	**70.4 (5)**
INORGANICS						
PERCENT WATER CONTENT (%)	**18.5 (5)**	**20.9 (5)**	**9.7 (5)**	**17.8 (5)**	**18.6 (5)**	**57.1 (5)**
ORGANIC CONTENT						
PERCENT ORGANIC CONTENT (%)	**0.6 (5)**	**3.7 (5)**	**0.6 (5)**	**1.6 (5)**	**2 (5)**	**9.7 (5)**
SPECIFIC GRAVITY						
SPECIFIC GRAVITY ()	**2.8 (5)**	**2.62 (5)**	**2.8 (5)**	**2.82 (5)**	**2.77 (5)**	**2.58 (5)**

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID						
Location ID	BH000145	BH000145	BH000145	BH000145	BH000146	BH000146
Field Sample ID	H2-BH000145-0-0150	H2-BH000145-0-0250	H2-BH000145-0-0350	H2-BH000145-0-0050	H2-BH000146-0-0100	H2-BH000146-0-0102
Date Collected	07/12/2000	07/12/2000	07/12/2000	07/12/2000	07/12/2000	07/12/2000
Depth	15.0-15.8	25.0-26.0	35.0-35.2	5.0-5.7	10.0-10.2	10.2-10.4
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte						
ATTERBERG LIMITS						
LIQUIDITY LIMIT (%)	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**14 (5)**	NA	NA	NA
PLASTICITY LIMIT (%)	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**14 (5)**	NA	NA	NA
GRAIN SIZE						
D-50 Calculation (mm)	**.4242 (5)**	**.5358 (5)**	**.0737 (5)**	**2.9864 (5)**	**.1335 (5)**	**.3208 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**100 (5)**	**99.1 (5)**	**97.1 (5)**	**87.2 (5)**	**100 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**100 (5)**	**97.9 (5)**	**95.5 (5)**	**80.6 (5)**	**100 (5)**	**85.3 (5)**
SIZE (08) 004.75 MM (%finer)	**99.8 (5)**	**90.8 (5)**	**86.6 (5)**	**55.9 (5)**	**100 (5)**	**74.6 (5)**
SIZE (09) 002.0 MM (%finer)	**99.2 (5)**	**80.1 (5)**	**83.2 (5)**	**46.7 (5)**	**100 (5)**	**71.4 (5)**
SIZE (10) 850.0 UM (%finer)	**89.5 (5)**	**65.6 (5)**	**79.7 (5)**	**36.9 (5)**	**99.7 (5)**	**69 (5)**
SIZE (11) 425.0 UM (%finer)	**50.1 (5)**	**44.5 (5)**	**76.5 (5)**	**28.4 (5)**	**97.7 (5)**	**62.8 (5)**
SIZE (12) 250.0 UM (%finer)	**29.2 (5)**	**27.8 (5)**	**73.9 (5)**	**23.6 (5)**	**82.2 (5)**	**41.3 (5)**
SIZE (14) 150.0 UM (%finer)	**17.4 (5)**	**16.2 (5)**	**68.9 (5)**	**19.5 (5)**	**55.4 (5)**	**21.8 (5)**
SIZE (15) 075.0 UM (%finer)	**10.1 (5)**	**9.7 (5)**	**50.9 (5)**	**15.8 (5)**	**30.9 (5)**	**12.1 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**10.1 (5)**	**6.9 (5)**	**32.8 (5)**	**11.5 (5)**	**17.3 (5)**	**8.3 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**4.6 (5)**	**5.7 (5)**	**28.7 (5)**	**9.2 (5)**	**14.4 (5)**	**7.3 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**4.6 (5)**	**5 (5)**	**24.6 (5)**	**7.4 (5)**	**11.5 (5)**	**5.2 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**3.8 (5)**	**3.8 (5)**	**22.5 (5)**	**6.4 (5)**	**9.6 (5)**	**5.2 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**3.1 (5)**	**2.5 (5)**	**20.5 (5)**	**5.5 (5)**	**7.7 (5)**	**4.2 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**3.1 (5)**	**2.5 (5)**	**18.4 (5)**	**4.1 (5)**	**5.8 (5)**	**3.1 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**2.3 (5)**	**1.9 (5)**	**16.4 (5)**	**2.8 (5)**	**3.8 (5)**	**2.1 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**1.5 (5)**	**1.3 (5)**	**12.3 (5)**	**2.3 (5)**	**2.9 (5)**	**2.1 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**1.5 (5)**	**1.3 (5)**	**12.3 (5)**	**2.3 (5)**	**2.9 (5)**	**2.1 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**0.8 (5)**	**0.6 (5)**	**8.2 (5)**	**1.4 (5)**	**1.9 (5)**	**1 (5)**
GRAIN SIZE CLASS						
CLAY (%)	**2.3 (5)**	**1.9 (5)**	**16.4 (5)**	**2.8 (5)**	**3.8 (5)**	**2.1 (5)**
GRAVEL (%)	**.2 (5)**	**9.2 (5)**	**13.4 (5)**	**44.1 (5)**	**.0 (5)**	**25.4 (5)**
SAND (%)	**89.7 (5)**	**81.1 (5)**	**35.7 (5)**	**40.1 (5)**	**69.1 (5)**	**62.5 (5)**
SILT (%)	**7.8 (5)**	**7.8 (5)**	**34.5 (5)**	**13.0 (5)**	**27.1 (5)**	**10.0 (5)**
INORGANICS						
PERCENT WATER CONTENT (%)	**24 (5)**	**16.9 (5)**	**12.2 (5)**	**7.7 (5)**	**25.6 (5)**	**32.1 (5)**
ORGANIC CONTENT						
PERCENT ORGANIC CONTENT (%)	**0.8 (5)**	**0.6 (5)**	**0.4 (5)**	**4.2 (5)**	NA	NA
SPECIFIC GRAVITY						
SPECIFIC GRAVITY ()	**2.67 (5)**	**2.68 (5)**	**2.89 (5)**	**2.6 (5)**	**2.65 (5)**	NA

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID						
Location ID	BH000146	BH000146	BH000146	BH000147	BH000147	BH000147
Field Sample ID	H2-BH000146-0-0104	H2-BH000146-0-0150	H2-BH000146-0-0050	H2-BH000147-0-0130	H2-BH000147-0-0245	H2-BH000147-0-0030
Date Collected	07/12/2000	07/12/2000	07/12/2000	07/12/2000	07/12/2000	07/12/2000
Depth	10.4-10.8	15.0-15.3	5.0-6.6	13.0-15.0	24.5-26.5	3.0-5.0
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte						
ATTERBERG LIMITS						
LIQUIDITY LIMIT (%)	**30 (5)**	NA	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**26 (5)**
PLASTICITY LIMIT (%)	**18 (5)**	NA	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**25 (5)**
GRAIN SIZE						
D-50 Calculation (mm)	**.1500 (5)**	**12.1610 (5)**	**.1336 (5)**	**1.4475 (5)**	**.4123 (5)**	**.1327 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**64.9 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**89.4 (5)**	**58 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**82.2 (5)**	**50.8 (5)**	**100 (5)**	**93.5 (5)**	**99.1 (5)**	**100 (5)**
SIZE (08) 004.75 MM (%finer)	**73.8 (5)**	**39 (5)**	**100 (5)**	**72.7 (5)**	**95.4 (5)**	**99.4 (5)**
SIZE (09) 002.0 MM (%finer)	**72.3 (5)**	**30.4 (5)**	**100 (5)**	**54.9 (5)**	**90.7 (5)**	**98.8 (5)**
SIZE (10) 850.0 UM (%finer)	**68.3 (5)**	**25.1 (5)**	**99.9 (5)**	**44.7 (5)**	**78.5 (5)**	**97.8 (5)**
SIZE (11) 425.0 UM (%finer)	**63.8 (5)**	**22 (5)**	**98.2 (5)**	**32 (5)**	**51.7 (5)**	**94.7 (5)**
SIZE (12) 250.0 UM (%finer)	**58.8 (5)**	**19.6 (5)**	**86.8 (5)**	**21.7 (5)**	**28.2 (5)**	**84 (5)**
SIZE (14) 150.0 UM (%finer)	**50 (5)**	**16.3 (5)**	**55.3 (5)**	**13.9 (5)**	**16.4 (5)**	**55.3 (5)**
SIZE (15) 075.0 UM (%finer)	**37.1 (5)**	**13.3 (5)**	**31 (5)**	**8.7 (5)**	**9.6 (5)**	**32.3 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**22.5 (5)**	**8.4 (5)**	**14.7 (5)**	**6.4 (5)**	**5.9 (5)**	**20.1 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**19 (5)**	**7 (5)**	**10.5 (5)**	**4.5 (5)**	**5.3 (5)**	**15.3 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**15.4 (5)**	**5.6 (5)**	**7.7 (5)**	**3.8 (5)**	**4.6 (5)**	**13.2 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**11.9 (5)**	**5.2 (5)**	**6.3 (5)**	**2.6 (5)**	**4 (5)**	**11.8 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**10.1 (5)**	**4.2 (5)**	**4.9 (5)**	**1.9 (5)**	**3.3 (5)**	**9.7 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**7.7 (5)**	**3.5 (5)**	**3.5 (5)**	**1.5 (5)**	**2.6 (5)**	**7.6 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**6.5 (5)**	**2.3 (5)**	**3.5 (5)**	**1.1 (5)**	**2 (5)**	**4.9 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**5.3 (5)**	**2.1 (5)**	**1.4 (5)**	**0.8 (5)**	**1.3 (5)**	**3.5 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**5.3 (5)**	**2.1 (5)**	**1.4 (5)**	**0.8 (5)**	**1.3 (5)**	**3.5 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**4.2 (5)**	**0.9 (5)**	**0.7 (5)**	**0.4 (5)**	**0.7 (5)**	**1.4 (5)**
GRAIN SIZE CLASS						
CLAY (%)	**6.5 (5)**	**2.3 (5)**	**3.5 (5)**	**1.1 (5)**	**2.0 (5)**	**4.9 (5)**
GRAVEL (%)	**26.2 (5)**	**61.0 (5)**	**.0 (5)**	**27.3 (5)**	**4.6 (5)**	**.6 (5)**
SAND (%)	**36.7 (5)**	**25.7 (5)**	**69.0 (5)**	**64.0 (5)**	**85.8 (5)**	**67.1 (5)**
SILT (%)	**30.6 (5)**	**11.0 (5)**	**27.5 (5)**	**7.6 (5)**	**7.6 (5)**	**27.4 (5)**
INORGANICS						
PERCENT WATER CONTENT (%)	**18.6 (5)**	**13.6 (5)**	**27.3 (5)**	**13.4 (5)**	**21 (5)**	**28.8 (5)**
ORGANIC CONTENT						
PERCENT ORGANIC CONTENT (%)	**1 (5)**	**0.7 (5)**	**1.1 (5)**	**0.3 (5)**	**0.4 (5)**	**1.7 (5)**
SPECIFIC GRAVITY						
SPECIFIC GRAVITY ()	**2.75 (5)**	**2.73 (5)**	**2.69 (5)**	**2.8 (5)**	**2.76 (5)**	**2.68 (5)**

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID						
Location ID	BH000147	BH000147	BH000147	BH000148	BH000148	BH000148
Field Sample ID	H2-BH000147-0-0300	H2-BH000147-0-0310	H2-BH000147-0-0080	H2-BH000148-0-0130	H2-BH000148-0-0030	H2-BH000148-0-0080
Date Collected	07/12/2000	07/12/2000	07/12/2000	07/11/2000	07/11/2000	07/11/2000
Depth	30.0-31.0	31.0-32.0	8.0-10.0	13.0-13.2	3.0-4.4	8.0-8.3
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte						
ATTERBERG LIMITS						
LIQUIDITY LIMIT (%)	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**23 (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**
PLASTICITY LIMIT (%)	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**22 (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**
GRAIN SIZE						
D-50 Calculation (mm)	**.3766 (5)**	**.0501 (5)**	**.6188 (5)**	**.1677 (5)**	**26.1570 (5)**	**.1806 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (5)**	**97.1 (5)**	**100 (5)**	**44.9 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**100 (5)**	**100 (5)**	**97.1 (5)**	**98.7 (5)**	**41.4 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**100 (5)**	**100 (5)**	**94.8 (5)**	**97.2 (5)**	**40.4 (5)**	**100 (5)**
SIZE (08) 004.75 MM (%finer)	**99.4 (5)**	**97.2 (5)**	**82.1 (5)**	**95.2 (5)**	**26 (5)**	**97.5 (5)**
SIZE (09) 002.0 MM (%finer)	**97.3 (5)**	**96.1 (5)**	**72.7 (5)**	**92.6 (5)**	**21.7 (5)**	**94.2 (5)**
SIZE (10) 850.0 UM (%finer)	**87.3 (5)**	**93.7 (5)**	**57.4 (5)**	**90.8 (5)**	**19.2 (5)**	**90.3 (5)**
SIZE (11) 425.0 UM (%finer)	**56.8 (5)**	**89.2 (5)**	**43.8 (5)**	**88.5 (5)**	**17.2 (5)**	**86.4 (5)**
SIZE (12) 250.0 UM (%finer)	**32.2 (5)**	**86.2 (5)**	**35.3 (5)**	**77.4 (5)**	**15.4 (5)**	**70 (5)**
SIZE (14) 150.0 UM (%finer)	**21.3 (5)**	**83.1 (5)**	**23.5 (5)**	**44.1 (5)**	**11.8 (5)**	**41.2 (5)**
SIZE (15) 075.0 UM (%finer)	**12.9 (5)**	**69.7 (5)**	**14.1 (5)**	**14.9 (5)**	**7.9 (5)**	**17.5 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**7.2 (5)**	**49.1 (5)**	**7.8 (5)**	**14.9 (5)**	**7.9 (5)**	**17.5 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**5.1 (5)**	**37 (5)**	**7.2 (5)**	**12.5 (5)**	**7.9 (5)**	**17.5 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**4.3 (5)**	**28.7 (5)**	**5.4 (5)**	**9.6 (5)**	**6.3 (5)**	**14.3 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**3.6 (5)**	**21.2 (5)**	**4.2 (5)**	**8.8 (5)**	**5.4 (5)**	**12.2 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**2.9 (5)**	**18.1 (5)**	**3 (5)**	**7.4 (5)**	**4.7 (5)**	**10.2 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**2.2 (5)**	**13.6 (5)**	**2.4 (5)**	**5.9 (5)**	**4.3 (5)**	**7.1 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**1.4 (5)**	**8.3 (5)**	**1.8 (5)**	**5.2 (5)**	**3.4 (5)**	**5.1 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**1.4 (5)**	**5.3 (5)**	**1.2 (5)**	**3.7 (5)**	**3.4 (5)**	**5.1 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**1.4 (5)**	**5.3 (5)**	**1.2 (5)**	**3.7 (5)**	**2.7 (5)**	**3.1 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**0.7 (5)**	**3 (5)**	**0.6 (5)**	**1.5 (5)**	**2.3 (5)**	**1 (5)**
GRAIN SIZE CLASS						
CLAY (%)	**1.4 (5)**	**8.3 (5)**	**1.8 (5)**	**5.2 (5)**	**3.4 (5)**	**5.1 (5)**
GRAVEL (%)	**.6 (5)**	**2.8 (5)**	**17.9 (5)**	**4.8 (5)**	**74.0 (5)**	**2.5 (5)**
SAND (%)	**86.5 (5)**	**27.5 (5)**	**68.0 (5)**	**80.3 (5)**	**18.1 (5)**	**80.0 (5)**
SILT (%)	**11.5 (5)**	**61.4 (5)**	**12.3 (5)**	**9.7 (5)**	**4.5 (5)**	**12.4 (5)**
INORGANICS						
PERCENT WATER CONTENT (%)	**20.8 (5)**	**20.4 (5)**	**22.5 (5)**	**13.5 (5)**	**28.1 (5)**	**31.6 (5)**
ORGANIC CONTENT						
PERCENT ORGANIC CONTENT (%)	**0.2 (5)**	**0.6 (5)**	**1 (5)**	**2.1 (5)**	**0.7 (5)**	**3.9 (5)**
SPECIFIC GRAVITY						
SPECIFIC GRAVITY ()	**2.74 (5)**	**2.74 (5)**	**2.69 (5)**	**2.67 (5)**	NA	**2.66 (5)**

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID						
Location ID	BH000161	BH000161	BH000161	BH000161	BH000161	BH000161
Field Sample ID	H2-BH000161-0-0130	H2-BH000161-0-0150	H2-BH000161-0-0160	H2-BH000161-0-0185	H2-BH000161-0-0030	H2-BH000161-0-0080
Date Collected	07/13/2000	07/13/2000	07/13/2000	07/13/2000	07/13/2000	07/13/2000
Depth	13.0-13.2	15.0-16.0	16.0-17.0	18.5-20.5	3.0-3.2	8.0-8.7
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte						
ATTERBERG LIMITS						
LIQUIDITY LIMIT (%)	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**
PLASTICITY LIMIT (%)	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**	**NON-PLASTIC (5)**
GRAIN SIZE						
D-50 Calculation (mm)	**.6117 (5)**	**5.8718 (5)**	**.3000 (5)**	**.1207 (5)**	**.2208 (5)**	**7.6248 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**80.7 (5)**	**80.6 (5)**	**77.7 (5)**	**94.1 (5)**	**100 (5)**	**82 (5)**
SIZE (05) 019.0 MM (%finer)	**78.1 (5)**	**70.6 (5)**	**73.3 (5)**	**91.8 (5)**	**100 (5)**	**74.5 (5)**
SIZE (06) 012.7 MM (%finer)	**75.9 (5)**	**64 (5)**	**71.3 (5)**	**91.8 (5)**	**100 (5)**	**64.3 (5)**
SIZE (08) 004.75 MM (%finer)	**67.3 (5)**	**47.7 (5)**	**62.8 (5)**	**85.3 (5)**	**98.3 (5)**	**41.9 (5)**
SIZE (09) 002.0 MM (%finer)	**59.7 (5)**	**38.2 (5)**	**57.8 (5)**	**82.1 (5)**	**96.6 (5)**	**30.9 (5)**
SIZE (10) 850.0 UM (%finer)	**53.7 (5)**	**31.4 (5)**	**54.6 (5)**	**78.5 (5)**	**92.4 (5)**	**24.1 (5)**
SIZE (11) 425.0 UM (%finer)	**47.1 (5)**	**26.4 (5)**	**52 (5)**	**75.5 (5)**	**77.9 (5)**	**20.4 (5)**
SIZE (12) 250.0 UM (%finer)	**39.5 (5)**	**22.8 (5)**	**49.2 (5)**	**72.4 (5)**	**56.4 (5)**	**18.2 (5)**
SIZE (14) 150.0 UM (%finer)	**30.1 (5)**	**18.1 (5)**	**43.4 (5)**	**63 (5)**	**34.5 (5)**	**14.1 (5)**
SIZE (15) 075.0 UM (%finer)	**17 (5)**	**11.5 (5)**	**24 (5)**	**29.7 (5)**	**19.7 (5)**	**6.6 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**13.2 (5)**	**11.5 (5)**	**18.2 (5)**	**21.3 (5)**	**19.7 (5)**	**5.4 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**12.3 (5)**	**7.5 (5)**	**14.1 (5)**	**15.2 (5)**	**16.6 (5)**	**4.9 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**10.2 (5)**	**5.6 (5)**	**10 (5)**	**11.2 (5)**	**14.6 (5)**	**3.8 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**8.1 (5)**	**3.7 (5)**	**8.3 (5)**	**9.1 (5)**	**12.6 (5)**	**3.3 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**5.9 (5)**	**3.4 (5)**	**6.9 (5)**	**6.6 (5)**	**10.6 (5)**	**2.7 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**5.1 (5)**	**3 (5)**	**5.8 (5)**	**5.6 (5)**	**9.1 (5)**	**2.2 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**3.8 (5)**	**2.2 (5)**	**4.8 (5)**	**5.1 (5)**	**7.1 (5)**	**1.9 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**3 (5)**	**1.9 (5)**	**3.8 (5)**	**4.1 (5)**	**6.5 (5)**	**1.6 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**3 (5)**	**1.9 (5)**	**3.8 (5)**	**4.1 (5)**	**6.5 (5)**	**1.6 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**2.5 (5)**	**1.1 (5)**	**3.1 (5)**	**3.5 (5)**	**3.5 (5)**	**0.8 (5)**
GRAIN SIZE CLASS						
CLAY (%)	**3.8 (5)**	**2.2 (5)**	**4.8 (5)**	**5.1 (5)**	**7.1 (5)**	**1.9 (5)**
GRAVEL (%)	**32.7 (5)**	**52.3 (5)**	**37.2 (5)**	**14.7 (5)**	**1.7 (5)**	**58.1 (5)**
SAND (%)	**50.3 (5)**	**36.2 (5)**	**38.8 (5)**	**55.6 (5)**	**78.6 (5)**	**35.3 (5)**
SILT (%)	**13.2 (5)**	**9.3 (5)**	**19.2 (5)**	**24.6 (5)**	**12.6 (5)**	**4.7 (5)**
INORGANICS						
PERCENT WATER CONTENT (%)	**18.4 (5)**	**12.9 (5)**	**15.6 (5)**	**16.6 (5)**	**11.6 (5)**	**19.8 (5)**
ORGANIC CONTENT						
PERCENT ORGANIC CONTENT (%)	**0.7 (5)**	**0.2 (5)**	**0.3 (5)**	**0.2 (5)**	**1.2 (5)**	**0.9 (5)**
SPECIFIC GRAVITY						
SPECIFIC GRAVITY ()	**2.77 (5)**	**2.78 (5)**	**2.85 (5)**	**2.8 (5)**	**2.74 (5)**	**2.76 (5)**

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID	T066	T082	T090	T090	T092	T092
Location ID	RB010662	RB010822	RB010902	RB010903	RB010922	RB010923
Field Sample ID	H2-RB010662-0-0030	H2-RB010822-0-0030	H2-RB010902-0-0040	H2-RB010903-0-0020	H2-RB010922-0-0040	H2-RB010923-0-0020
Date Collected	06/13/2000	06/14/2000	06/21/2000	06/20/2000	06/20/2000	06/20/2000
Depth	3.0-3.5	3.0-3.5	4.0-4.5	2.0-2.5	4.0-4.5	2.0-2.5
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte						
ATTERBERG LIMITS						
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA	NA
GRAIN SIZE						
D-50 Calculation (mm)	**.6319 (5)**	**.0378 (5)**	**.3062 (5)**	**.1902 (5)**	**.1431 (5)**	**.0723 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**98.8 (5)**	**100 (5)**	**100 (5)**	**99.7 (5)**	**100 (5)**	**100 (5)**
SIZE (08) 004.75 MM (%finer)	**82 (5)**	**100 (5)**	**97.2 (5)**	**99.2 (5)**	**99.6 (5)**	**100 (5)**
SIZE (09) 002.0 MM (%finer)	**65 (5)**	**100 (5)**	**95.1 (5)**	**97 (5)**	**99.3 (5)**	**99.6 (5)**
SIZE (10) 850.0 UM (%finer)	**53.9 (5)**	**100 (5)**	**91.1 (5)**	**92.9 (5)**	**98.8 (5)**	**98.1 (5)**
SIZE (11) 425.0 UM (%finer)	**46.3 (5)**	**99.5 (5)**	**76 (5)**	**81.5 (5)**	**95.8 (5)**	**96.2 (5)**
SIZE (12) 250.0 UM (%finer)	**39.1 (5)**	**99.3 (5)**	**37.7 (5)**	**61 (5)**	**79.1 (5)**	**92.8 (5)**
SIZE (14) 150.0 UM (%finer)	**27.1 (5)**	**98 (5)**	**21.4 (5)**	**42.6 (5)**	**51.6 (5)**	**78.4 (5)**
SIZE (15) 075.0 UM (%finer)	**11.9 (5)**	**93 (5)**	**13.8 (5)**	**22.7 (5)**	**34.1 (5)**	**53.8 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**9.7 (5)**	**66.8 (5)**	**11.1 (5)**	**15.2 (5)**	**20.8 (5)**	**16.7 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**7.6 (5)**	**48.8 (5)**	**8.6 (5)**	**11.7 (5)**	**16.9 (5)**	**13.1 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**6.2 (5)**	**38.5 (5)**	**7.4 (5)**	**8.8 (5)**	**15.4 (5)**	**10.7 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**5.5 (5)**	**30.8 (5)**	**6.1 (5)**	**8.2 (5)**	**12.3 (5)**	**8.4 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**5.5 (5)**	**24.4 (5)**	**5.5 (5)**	**7 (5)**	**10.8 (5)**	**7.2 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**4.8 (5)**	**18 (5)**	**4.3 (5)**	**5.9 (5)**	**7.7 (5)**	**6 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**3.5 (5)**	**15.4 (5)**	**3.1 (5)**	**4.1 (5)**	**6.2 (5)**	**3.6 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**2.8 (5)**	**9 (5)**	**2.9 (5)**	**2.9 (5)**	**5.4 (5)**	**2.4 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**2.8 (5)**	**9 (5)**	**2.9 (5)**	**2.9 (5)**	**5.4 (5)**	**2.4 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**1.4 (5)**	**3.9 (5)**	**1.8 (5)**	**1.2 (5)**	**3.1 (5)**	**1.2 (5)**
GRAIN SIZE CLASS						
CLAY (%)	**3.5 (5)**	**15.4 (5)**	**3.1 (5)**	**4.1 (5)**	**6.2 (5)**	**3.6 (5)**
GRAVEL (%)	**18.0 (5)**	**.0 (5)**	**2.8 (5)**	**.8 (5)**	**.4 (5)**	**.0 (5)**
SAND (%)	**70.1 (5)**	**7.0 (5)**	**83.4 (5)**	**76.5 (5)**	**65.5 (5)**	**46.2 (5)**
SILT (%)	**8.4 (5)**	**77.6 (5)**	**10.7 (5)**	**18.6 (5)**	**27.9 (5)**	**50.2 (5)**
INORGANICS						
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA	NA
ORGANIC CONTENT						
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA	NA
SPECIFIC GRAVITY						
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA	NA

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID	T094	T094	T096	T096	T098	T100
Location ID	RB010941	RB010942	RB010962	RB010963	RB010981	RB011001
Field Sample ID	H2-RB010941-0-0010	H2-RB010942-0-0040	H2-RB010962-0-0040	H2-RB010963-0-0010	H2-RB010981-0-0000	H2-RB011001-0-0010
Date Collected	06/20/2000	06/20/2000	06/19/2000	06/19/2000	06/19/2000	06/19/2000
Depth	1.0-1.5	4.0-4.5	4.0-4.5	1.0-1.5	0.0-0.5	1.0-1.5
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte						
ATTERBERG LIMITS						
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA	NA
GRAIN SIZE						
D-50 Calculation (mm)	**.0575 (5)**	**.1955 (5)**	**.2951 (5)**	**.1862 (5)**	**.1576 (5)**	**.1420 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (08) 004.75 MM (%finer)	**100 (5)**	**99.8 (5)**	**99.2 (5)**	**100 (5)**	**99 (5)**	**100 (5)**
SIZE (09) 002.0 MM (%finer)	**99.8 (5)**	**97.6 (5)**	**98.3 (5)**	**99.4 (5)**	**98.8 (5)**	**100 (5)**
SIZE (10) 850.0 UM (%finer)	**99.7 (5)**	**90.8 (5)**	**91.3 (5)**	**97.2 (5)**	**97.9 (5)**	**99.6 (5)**
SIZE (11) 425.0 UM (%finer)	**99.4 (5)**	**78.3 (5)**	**71.9 (5)**	**85.2 (5)**	**93.5 (5)**	**98.4 (5)**
SIZE (12) 250.0 UM (%finer)	**98.4 (5)**	**63.9 (5)**	**42.4 (5)**	**69.2 (5)**	**82.9 (5)**	**87.1 (5)**
SIZE (14) 150.0 UM (%finer)	**92.2 (5)**	**38.4 (5)**	**19.7 (5)**	**39.1 (5)**	**47.3 (5)**	**52.9 (5)**
SIZE (15) 075.0 UM (%finer)	**76.1 (5)**	**13.2 (5)**	**8.6 (5)**	**15.8 (5)**	**28.9 (5)**	**25.7 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**37.4 (5)**	**13.2 (5)**	**8.6 (5)**	**15.8 (5)**	**25.8 (5)**	**20.8 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**29.4 (5)**	**9.8 (5)**	**7.2 (5)**	**11.6 (5)**	**20.9 (5)**	**16.5 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**22.7 (5)**	**8.4 (5)**	**6.4 (5)**	**10.3 (5)**	**16 (5)**	**12.9 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**19.4 (5)**	**7 (5)**	**5.7 (5)**	**9 (5)**	**14.8 (5)**	**10.8 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**16 (5)**	**5.6 (5)**	**5 (5)**	**6.4 (5)**	**12.3 (5)**	**9.3 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**12.7 (5)**	**4.2 (5)**	**4.3 (5)**	**5.1 (5)**	**11.1 (5)**	**7.9 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**8.7 (5)**	**3.5 (5)**	**3.6 (5)**	**3.9 (5)**	**8.6 (5)**	**6.5 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**7.4 (5)**	**2.8 (5)**	**2.9 (5)**	**2.6 (5)**	**4.9 (5)**	**3.6 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**7.4 (5)**	**2.8 (5)**	**2.9 (5)**	**2.6 (5)**	**4.9 (5)**	**3.6 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**2.7 (5)**	**1.4 (5)**	**1.4 (5)**	**1.3 (5)**	**2.5 (5)**	**1.4 (5)**
GRAIN SIZE CLASS						
CLAY (%)	**8.7 (5)**	**3.5 (5)**	**3.6 (5)**	**3.9 (5)**	**8.6 (5)**	**6.5 (5)**
GRAVEL (%)	**.0 (5)**	**.2 (5)**	**.8 (5)**	**.0 (5)**	**1.0 (5)**	**.0 (5)**
SAND (%)	**23.9 (5)**	**86.6 (5)**	**90.6 (5)**	**84.2 (5)**	**70.1 (5)**	**74.3 (5)**
SILT (%)	**67.4 (5)**	**9.7 (5)**	**5.0 (5)**	**11.9 (5)**	**20.3 (5)**	**19.2 (5)**
INORGANICS						
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA	NA
ORGANIC CONTENT						
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA	NA
SPECIFIC GRAVITY						
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA	NA

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID	T100	T102	T102	T104	T104	T106
Location ID	RB011002	RB011022	RB011022	RB011041	RB011042	RB021061
Field Sample ID	H2-RB011002-0-0040	H2-RB011022-0-0000	H2-RB011022-0-0040	H2-RB011041-0-0000	H2-RB011042-0-0040	H2-RB021061-0-0000
Date Collected	06/19/2000	06/16/2000	06/16/2000	06/16/2000	06/16/2000	06/15/2000
Depth	4.0-4.5	0.0-0.5	4.0-4.5	0.0-0.5	4.0-4.5	0.0-0.5
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte						
ATTERBERG LIMITS						
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA	NA
GRAIN SIZE						
D-50 Calculation (mm)	**.0611 (5)**	**.0748 (5)**	**.1323 (5)**	**.1988 (5)**	**.0587 (5)**	**4.3733 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**95.9 (5)**	**100 (5)**	**90.9 (5)**
SIZE (05) 019.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**88.2 (5)**	**100 (5)**	**80.8 (5)**
SIZE (06) 012.7 MM (%finer)	**97.4 (5)**	**100 (5)**	**100 (5)**	**83.1 (5)**	**98.4 (5)**	**68.6 (5)**
SIZE (08) 004.75 MM (%finer)	**96.2 (5)**	**100 (5)**	**98.4 (5)**	**70 (5)**	**92.2 (5)**	**51 (5)**
SIZE (09) 002.0 MM (%finer)	**96 (5)**	**100 (5)**	**97.5 (5)**	**67.3 (5)**	**89 (5)**	**43.7 (5)**
SIZE (10) 850.0 UM (%finer)	**95.2 (5)**	**100 (5)**	**96.4 (5)**	**63.2 (5)**	**84.1 (5)**	**36.6 (5)**
SIZE (11) 425.0 UM (%finer)	**93.4 (5)**	**99.3 (5)**	**93.9 (5)**	**58.6 (5)**	**79.4 (5)**	**31.5 (5)**
SIZE (12) 250.0 UM (%finer)	**88.6 (5)**	**95.1 (5)**	**84.1 (5)**	**54.4 (5)**	**75.3 (5)**	**27.9 (5)**
SIZE (14) 150.0 UM (%finer)	**76.5 (5)**	**74.1 (5)**	**56.6 (5)**	**45.8 (5)**	**68.6 (5)**	**23.2 (5)**
SIZE (15) 075.0 UM (%finer)	**58.1 (5)**	**50.2 (5)**	**28.7 (5)**	**37.7 (5)**	**60.8 (5)**	**16.9 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**43 (5)**	**28.7 (5)**	**23.3 (5)**	**24 (5)**	**43.6 (5)**	**12.2 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**36 (5)**	**22.9 (5)**	**18 (5)**	**20.7 (5)**	**40.6 (5)**	**10.6 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**29.1 (5)**	**17.2 (5)**	**15.3 (5)**	**14.1 (5)**	**37.6 (5)**	**9 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**23.6 (5)**	**13.9 (5)**	**11.7 (5)**	**14.1 (5)**	**31.6 (5)**	**8 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**19.4 (5)**	**12.3 (5)**	**9.9 (5)**	**11.6 (5)**	**25.6 (5)**	**6.4 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**15.3 (5)**	**9.8 (5)**	**8.1 (5)**	**9.1 (5)**	**22.6 (5)**	**5.3 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**11.1 (5)**	**8.2 (5)**	**6.3 (5)**	**7.5 (5)**	**19.5 (5)**	**3.7 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**6.9 (5)**	**4.9 (5)**	**4.5 (5)**	**5.8 (5)**	**19.5 (5)**	**2.7 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**6.9 (5)**	**4.9 (5)**	**4.5 (5)**	**5.8 (5)**	**19.5 (5)**	**2.7 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**2.8 (5)**	**3.3 (5)**	**2.7 (5)**	**3.3 (5)**	**15 (5)**	**1.6 (5)**
GRAIN SIZE CLASS						
CLAY (%)	**11.1 (5)**	**8.2 (5)**	**6.3 (5)**	**7.5 (5)**	**19.5 (5)**	**3.7 (5)**
GRAVEL (%)	**3.8 (5)**	**.0 (5)**	**1.6 (5)**	**30.0 (5)**	**7.8 (5)**	**49.0 (5)**
SAND (%)	**38.1 (5)**	**49.8 (5)**	**69.7 (5)**	**32.3 (5)**	**31.4 (5)**	**34.1 (5)**
SILT (%)	**47.0 (5)**	**42.0 (5)**	**22.4 (5)**	**30.2 (5)**	**41.3 (5)**	**13.2 (5)**
INORGANICS						
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA	NA
ORGANIC CONTENT						
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA	NA
SPECIFIC GRAVITY						
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA	NA

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Table C-2

Riverbank Geotechnical Data

Transect ID	T106	T122	T124	T126	T144	T148
Location ID	RB021063	RB021222	RB021245	RB021265	RB021445	RB021485
Field Sample ID	H2-RB021063-0-0000	H2-RB021222-0-0040	H2-RB021245-0-0030	H2-RB021265-0-0030	H2-RB021445-0-0030	H2-RB021485-0-0040
Date Collected	06/15/2000	06/13/2000	06/02/2000	06/05/2000	06/01/2000	05/31/2000
Depth	0.0-0.5	4.0-4.5	3.0-3.5	3.0-3.5	3.0-3.5	4.0-4.5
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte						
ATTERBERG LIMITS						
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA	NA
GRAIN SIZE						
D-50 Calculation (mm)	**.0840 (5)**	**.8271 (5)**	**.4005 (5)**	**.2952 (5)**	**.2071 (5)**	**.2238 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**83 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**81.1 (5)**	**96.6 (5)**	**95 (5)**
SIZE (06) 012.7 MM (%finer)	**100 (5)**	**97.8 (5)**	**98 (5)**	**79.5 (5)**	**94.7 (5)**	**87.2 (5)**
SIZE (08) 004.75 MM (%finer)	**100 (5)**	**82.3 (5)**	**94.4 (5)**	**73.8 (5)**	**85.5 (5)**	**68.2 (5)**
SIZE (09) 002.0 MM (%finer)	**100 (5)**	**65.3 (5)**	**88.6 (5)**	**71 (5)**	**81.4 (5)**	**63.1 (5)**
SIZE (10) 850.0 UM (%finer)	**100 (5)**	**50.7 (5)**	**67.9 (5)**	**67.9 (5)**	**77 (5)**	**60.9 (5)**
SIZE (11) 425.0 UM (%finer)	**99.7 (5)**	**37.7 (5)**	**52 (5)**	**59.2 (5)**	**71.7 (5)**	**58.5 (5)**
SIZE (12) 250.0 UM (%finer)	**96.9 (5)**	**29.5 (5)**	**37.7 (5)**	**46.8 (5)**	**58.5 (5)**	**53.7 (5)**
SIZE (14) 150.0 UM (%finer)	**79.3 (5)**	**22.6 (5)**	**27.1 (5)**	**32.8 (5)**	**38.7 (5)**	**39.6 (5)**
SIZE (15) 075.0 UM (%finer)	**46 (5)**	**14 (5)**	**18.2 (5)**	**20.5 (5)**	**22.1 (5)**	**25.1 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**23.3 (5)**	**11.5 (5)**	**13.3 (5)**	**13.4 (5)**	**14 (5)**	**15 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**16.4 (5)**	**9 (5)**	**11.9 (5)**	**11.3 (5)**	**11.4 (5)**	**12.8 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**13.7 (5)**	**7.7 (5)**	**10 (5)**	**9.1 (5)**	**9.4 (5)**	**11.5 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**11 (5)**	**7 (5)**	**8 (5)**	**8.1 (5)**	**8.7 (5)**	**9.8 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**11 (5)**	**5.8 (5)**	**6.6 (5)**	**6.5 (5)**	**7.4 (5)**	**8.6 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**8.2 (5)**	**5.1 (5)**	**5.3 (5)**	**5.4 (5)**	**5.4 (5)**	**7.7 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**8.2 (5)**	**3.8 (5)**	**4 (5)**	**3.8 (5)**	**4 (5)**	**6 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**5.5 (5)**	**3.2 (5)**	**3.3 (5)**	**3.2 (5)**	**3.3 (5)**	**4.3 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**5.5 (5)**	**3.2 (5)**	**3.3 (5)**	**3.2 (5)**	**3.3 (5)**	**4.3 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**4.1 (5)**	**1.9 (5)**	**1.3 (5)**	**1.1 (5)**	**2 (5)**	**2.6 (5)**
GRAIN SIZE CLASS						
CLAY (%)	**8.2 (5)**	**3.8 (5)**	**4.0 (5)**	**3.8 (5)**	**4.0 (5)**	**6.0 (5)**
GRAVEL (%)	**.0 (5)**	**17.7 (5)**	**5.6 (5)**	**26.2 (5)**	**14.5 (5)**	**31.8 (5)**
SAND (%)	**54.0 (5)**	**68.3 (5)**	**76.2 (5)**	**53.3 (5)**	**63.4 (5)**	**43.1 (5)**
SILT (%)	**37.8 (5)**	**10.2 (5)**	**14.2 (5)**	**16.7 (5)**	**18.1 (5)**	**19.1 (5)**
INORGANICS						
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA	NA
ORGANIC CONTENT						
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA	NA
SPECIFIC GRAVITY						
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA	NA

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID	T190	T192	T192	T194	T194	T196
Location ID	RB021902	RB021925	RB021926	RB021945	RB021945	RB021965
Field Sample ID	H2-RB021902-0-0040	H2-RB021925-0-0040	H2-RB021926-0-0010	H2-RB021945-0-0040	H2-RB021945-0-0050	H2-RB021965-0-0030
Date Collected	05/30/2000	06/15/2000	06/15/2000	06/15/2000	06/15/2000	05/31/2000
Depth	4.0-4.5	4.0-4.5	1.0-1.5	4.0-4.5	5.0-5.5	3.0-3.5
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte						
ATTERBERG LIMITS						
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA	NA
GRAIN SIZE						
D-50 Calculation (mm)	**.2773 (5)**	**.3189 (5)**	**.2065 (5)**	**.1004 (5)**	**.1157 (5)**	**.1649 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**81.3 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**100 (5)**	**81.3 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**100 (5)**	**81.3 (5)**	**100 (5)**	**98.8 (5)**	**100 (5)**	**100 (5)**
SIZE (08) 004.75 MM (%finer)	**99 (5)**	**74.8 (5)**	**82 (5)**	**94.6 (5)**	**93 (5)**	**100 (5)**
SIZE (09) 002.0 MM (%finer)	**97.1 (5)**	**71.7 (5)**	**79.2 (5)**	**91.3 (5)**	**90.5 (5)**	**99.7 (5)**
SIZE (10) 850.0 UM (%finer)	**95 (5)**	**66.8 (5)**	**74.8 (5)**	**87.4 (5)**	**85.9 (5)**	**98.6 (5)**
SIZE (11) 425.0 UM (%finer)	**77.6 (5)**	**58 (5)**	**68.4 (5)**	**82.2 (5)**	**79.6 (5)**	**93.3 (5)**
SIZE (12) 250.0 UM (%finer)	**44.9 (5)**	**44.8 (5)**	**57 (5)**	**74.8 (5)**	**70.5 (5)**	**75.2 (5)**
SIZE (14) 150.0 UM (%finer)	**20.7 (5)**	**28.9 (5)**	**40.9 (5)**	**63.1 (5)**	**57.5 (5)**	**45.6 (5)**
SIZE (15) 075.0 UM (%finer)	**8.9 (5)**	**15.4 (5)**	**26.9 (5)**	**43.3 (5)**	**41.1 (5)**	**25.1 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**8.9 (5)**	**11.6 (5)**	**19.2 (5)**	**26.1 (5)**	**27 (5)**	**18.8 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**8.9 (5)**	**8.7 (5)**	**15.7 (5)**	**16.7 (5)**	**20.3 (5)**	**16.1 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**8.9 (5)**	**7.9 (5)**	**13.1 (5)**	**15.7 (5)**	**15.5 (5)**	**12.5 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**7.4 (5)**	**7.2 (5)**	**10.5 (5)**	**12.6 (5)**	**13.5 (5)**	**9.8 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**6.3 (5)**	**6.5 (5)**	**10.5 (5)**	**10.5 (5)**	**11.6 (5)**	**8.9 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**5.3 (5)**	**4.3 (5)**	**8.7 (5)**	**7.3 (5)**	**8.7 (5)**	**7.2 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**2.1 (5)**	**3.6 (5)**	**6.1 (5)**	**6.3 (5)**	**6.8 (5)**	**5.4 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**2.1 (5)**	**2.9 (5)**	**4.4 (5)**	**4.2 (5)**	**5.8 (5)**	**3.6 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**2.1 (5)**	**2.9 (5)**	**4.4 (5)**	**4.2 (5)**	**5.8 (5)**	**3.6 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**1.1 (5)**	**1.4 (5)**	**3.5 (5)**	**2.1 (5)**	**3.9 (5)**	**2.7 (5)**
GRAIN SIZE CLASS						
CLAY (%)	**2.1 (5)**	**3.6 (5)**	**6.1 (5)**	**6.3 (5)**	**6.8 (5)**	**5.4 (5)**
GRAVEL (%)	**1.0 (5)**	**25.2 (5)**	**18.0 (5)**	**5.4 (5)**	**7.0 (5)**	**.0 (5)**
SAND (%)	**90.1 (5)**	**59.4 (5)**	**55.1 (5)**	**51.3 (5)**	**51.9 (5)**	**74.9 (5)**
SILT (%)	**6.8 (5)**	**11.8 (5)**	**20.8 (5)**	**37.0 (5)**	**34.3 (5)**	**19.7 (5)**
INORGANICS						
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA	NA
ORGANIC CONTENT						
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA	NA
SPECIFIC GRAVITY						
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA	NA

QC Levels: 5 - Completeness Check

Table C-2

Riverbank Geotechnical Data

Transect ID	T196	T198	T202	T202	T208
Location ID	RB021965	RB021982	RB022022	RB022025	RB022085
Field Sample ID	H2-RB021965-0-0040	H2-RB021982-0-0040	H2-RB022022-0-0030	H2-RB022025-0-0040	H2-RB022085-0-0030
Date Collected	05/31/2000	05/26/2000	05/26/2000	05/31/2000	05/03/2000
Depth	4.0-4.5	4.0-4.5	3.0-3.5	4.0-4.5	3.0-3.5
Source	EPA_COE	EPA_COE	EPA_COE	EPA_COE	EPA_COE
Analyte					
ATTERBERG LIMITS					
LIQUIDITY LIMIT (%)	NA	NA	NA	NA	NA
PLASTICITY LIMIT (%)	NA	NA	NA	NA	NA
GRAIN SIZE					
D-50 Calculation (mm)	**.1056 (5)**	**.1401 (5)**	**1.2695 (5)**	**.1486 (5)**	**.1169 (5)**
SIZE (01) 075.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (02) 050.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (03) 037.5 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (04) 025.0 MM (%finer)	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**	**100 (5)**
SIZE (05) 019.0 MM (%finer)	**100 (5)**	**100 (5)**	**97 (5)**	**100 (5)**	**100 (5)**
SIZE (06) 012.7 MM (%finer)	**100 (5)**	**95.8 (5)**	**89.4 (5)**	**100 (5)**	**100 (5)**
SIZE (08) 004.75 MM (%finer)	**99.4 (5)**	**87 (5)**	**72.1 (5)**	**100 (5)**	**100 (5)**
SIZE (09) 002.0 MM (%finer)	**95.6 (5)**	**82.3 (5)**	**60.1 (5)**	**97.6 (5)**	**100 (5)**
SIZE (10) 850.0 UM (%finer)	**86.3 (5)**	**78.6 (5)**	**44.2 (5)**	**90.4 (5)**	**99.8 (5)**
SIZE (11) 425.0 UM (%finer)	**79.7 (5)**	**73.5 (5)**	**28.8 (5)**	**80.2 (5)**	**98.3 (5)**
SIZE (12) 250.0 UM (%finer)	**74.2 (5)**	**66.1 (5)**	**19.8 (5)**	**73 (5)**	**89.2 (5)**
SIZE (14) 150.0 UM (%finer)	**61.3 (5)**	**52.5 (5)**	**14.7 (5)**	**50.5 (5)**	**63.1 (5)**
SIZE (15) 075.0 UM (%finer)	**42.2 (5)**	**33.6 (5)**	**9.6 (5)**	**23 (5)**	**33.4 (5)**
SIZE HYDRO (16) ~49.0 UM (%finer)	**29.5 (5)**	**24.8 (5)**	**7.6 (5)**	**15.6 (5)**	**18 (5)**
SIZE HYDRO (17) ~37.0 UM (%finer)	**23.2 (5)**	**20 (5)**	**6.3 (5)**	**11.5 (5)**	**15 (5)**
SIZE HYDRO (18) ~23.0 UM (%finer)	**20 (5)**	**15.2 (5)**	**4.6 (5)**	**9.9 (5)**	**12 (5)**
SIZE HYDRO (19) ~18.0 UM (%finer)	**16 (5)**	**12.8 (5)**	**4.2 (5)**	**8.2 (5)**	**11 (5)**
SIZE HYDRO (20) ~13.0 UM (%finer)	**13.6 (5)**	**11.2 (5)**	**3.4 (5)**	**7.4 (5)**	**9 (5)**
SIZE HYDRO (21) ~09.0 UM (%finer)	**9.6 (5)**	**8 (5)**	**2.5 (5)**	**5.8 (5)**	**6 (5)**
SIZE HYDRO (22) ~07.0 UM (%finer)	**8 (5)**	**6.4 (5)**	**2.5 (5)**	**4.9 (5)**	**4 (5)**
SIZE HYDRO (23) ~04.0 UM (%finer)	**6.4 (5)**	**4 (5)**	**1.3 (5)**	**2.5 (5)**	**3 (5)**
SIZE HYDRO (24) ~03.0 UM (%finer)	**6.4 (5)**	**4 (5)**	**1.3 (5)**	**2.5 (5)**	**3 (5)**
SIZE HYDRO (25) ~01.4 UM (%finer)	**2.4 (5)**	**1.6 (5)**	**0.8 (5)**	**0.8 (5)**	**2 (5)**
GRAIN SIZE CLASS					
CLAY (%)	**8.0 (5)**	**6.4 (5)**	**2.5 (5)**	**4.9 (5)**	**4.0 (5)**
GRAVEL (%)	**.6 (5)**	**13.0 (5)**	**27.9 (5)**	**.0 (5)**	**.0 (5)**
SAND (%)	**57.2 (5)**	**53.4 (5)**	**62.5 (5)**	**77.0 (5)**	**66.6 (5)**
SILT (%)	**34.2 (5)**	**27.2 (5)**	**7.1 (5)**	**18.1 (5)**	**29.4 (5)**
INORGANICS					
PERCENT WATER CONTENT (%)	NA	NA	NA	NA	NA
ORGANIC CONTENT					
PERCENT ORGANIC CONTENT (%)	NA	NA	NA	NA	NA
SPECIFIC GRAVITY					
SPECIFIC GRAVITY ()	NA	NA	NA	NA	NA

QC Levels: 5 - Completeness Check

ATTACHMENT 6

AQUATIC HABITAT RESTORATION ASSESSMENT MEMO BY WOODLOT ALTERNATIVES

Memo

To: Tony Delano and Joel Lindsay (Weston Solutions, Inc.)

From: Bill Stack and John Lortie (Woodlot Alternatives, Inc.)

Date: May 8, 2002 (rev. July 8, 2002)

Re: **Aquatic Habitat Restoration Assessment; Phase II of the 1 ½-Mile Reach, GE/Housatonic River Site, Pittsfield, Massachusetts**

We completed our field assessment of the existing aquatic habitat structures within Phase II of the 1 ½-Mile Reach of the Housatonic River during the week of April 15, 2002. The primary objective of this assessment was to help refine the scope of work needed to develop specifications and plans for the upcoming design process by identifying potential design elements. Specifically, we assessed (1) existing habitat structures such as large woody debris and how it could be replaced utilizing various boulder configurations and/or rock structures; (2) enhancement opportunities within each habitat type that would help achieve the Habitat Restoration Objectives; and (3) general restoration design concerns such as constructability and stability of existing and proposed habitat restoration structures.

Our assessment included detailed mapping of the existing aquatic habitat structures (e.g., boulders, logs, man-made structures), river flow patterns, scour and deposition areas, and channel morphology. We created a data form to collect this information for each habitat type and used the maps developed in the general assessment of riparian and aquatic habitat of the 1 ½-Mile Reach (Woodlot, 2000) as a base map to include the additional details of this survey. A copy of the field form is shown in Appendix A and copies of the completed data sheets have been mailed to you separately. During our assessment, the river flows were between 100 and 150 cfs as measured at the USGS Coltsville station. These flows were relatively high for the low flow period (i.e., summer low flows are between 30 and 60 cfs), but provided the majority of the information needed to assess aquatic habitat.[1]

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[1] The assessment was conducted at this time of year due to project scheduling and due to the fact that spring runoff was low and not likely to be lower.

Summarized below are the results of our field assessment and potential design implications.

- Generally, we were able to measure or assess most of the habitat features within this reach; however, because river flows were relatively high for this type of low-flow assessment, there were some habitats that were too deep to measure (e.g., maximum pool depths).

  We anticipate that once the 2002 riverbed topographic map has been completed it will provide these needed aquatic habitat bathymetric details, which will be used later to help design aquatic habitat enhancement structures.

- There are eight riffles within Phase II. These riffles exist because of complex arrangements of various sized boulders and cobbles, deposition surfaces, pocket pools, and slopes, which may be difficult to re-create after these bed surfaces are removed for remediation. If a relatively homogenous armor layer will be used to replace these complexes (as in Phase I), then riffle habitat values and functions are likely to be degraded (e.g., decreased cover and turbulence).

  Through the design process we may want to create a riffle typical – this will need to be discussed during the design focus group meetings.

- Because of differences in gradient and channel cross-sections, hydraulic parameters such as maximum shear stress are likely to be different within each of the sub-reaches in Phase II (e.g., "cobble reach" compared to the reach downstream of Dawes Bridge).

  Hydraulic design parameters will be different in each of the sub-reaches. This will likely result in different riverbed armor sizes for these sub-reaches. Separate boulder stability analyses will need to be conducted within these different sub-reach types. Also, water surface elevations of various flood events will need to be determined for each of the sub-reaches as well. Thus, we may have different values for a given design parameter depending on sub-reach or river station. This may add some complexity to typical restoration details that use, for example, water surface elevations for depicting planting zones. Methods to minimize the need for additional typical details and to maintain design clarity will need to be addressed in the design focus group meetings.

- Some of the gabion baskets installed along Deming Street are being undermined along the bank toe, and these baskets are starting to slump. Also areas adjacent to these baskets that have utilized coir logs with red osier dogwood plantings need maintenance: shrub cover is low and coir logs are degrading.

  To enhance long-term bank stability and improve riparian cover some riverbank stabilization measures are needed and will need to be incorporated into the design process.

- Bedrock influences the geomorphic characteristics of aquatic habitat in Phase II, particularly in the "cobble reach". For example, some of the pools may have been partially created by bedrock outcrops, such as an outcrop that causes a downstream plunge pool. The extent of bedrock at some of these sites could not be fully assessed because the bedrock was covered by cobbles and boulders, or the water was too deep and limited visibility.

  The location and extent of bedrock is a critical element in designing replacement structures or selecting enhancement measures. There are four to five habitats that appear to be affected by bedrock. Bedrock extent may be inferred in some areas by assessing local geotechnical borings, but the actual extent is not likely to be known until construction work begins (i.e., sediment and water removed). This will need to be addressed in design focus group meetings. Also, some additional field assessments may be needed at these sites to review bedrock effects at shallower water depths (i.e., low flow, 30 – 40 cfs).

- Some habitats have been created, or are affected hydraulically, by man-made structures (e.g., outfalls, sewer line, concrete footings, riprap) or by natural elements such as large boulders (4-ft diameter).

  As noted above, these features are important to the replacement design and specifications. How these structures are handled and remediated will affect the design details; this will need to be addressed in the design focus group meetings.

- Habitat structures are likely to include single-wing rock deflectors, vortex rock weirs, and boulder and boulder clusters.

  When compared to the Phase I design there will be at least one new, additional detail (i.e. cross-section and plan view of the vortex rock weir) needed for the Phase II design. There will be more boulders and boulder clusters in Phase II than Phase I because this reach is longer and they are a dominant habitat element for hiding cove in this reach. Also, larger boulders (3 to 4 ft) will be needed to replace habitat functions of woody debris in deep-water areas such as areas upstream of Elm Street Bridge. Because of the higher anticipated shear stresses in Phase II, some of the deflectors and wing deflectors will need to be keyed into the bank, which may result in edits to previous design details.

Aquatic Habitat Field Form

SSERC Pre-Design Phase II; Housatonic River, Pittsfield, MA

Observers: _____ Date _____ Flow @ Coltsville _____

NSO _____ Habitat Type _____ Habitat # _____ Station: _____

Length (ft) _____ Avg Wetted Width (ft) _____ Avg Water Depth (ft) _____

Height from existing water surface to high water/veg. line (ft) _____

Morphology:

Dominant substrate (%): SC_____ S_____ G_____ C_____ B_____ BK_____

In-stream cover (%): D_____ T_____ UB_____ OV_____ AV_____

S_____ W_____ TR_____

Pool Cause: Plunge Impound Deflect Underflow Fluvial Trib Other

ΔH=

Sketch (Plan and x-sec):

Restoration Enhancement Potential:

ATTACHMENT 7

RIVERBANK RESTORATION – PRELIMINARY SCREENING ANALYSIS MEMO BY WOODLOT ALTERNATIVES

Memo

To: Tony Delano and Joel Lindsay (Weston Solutions, Inc.)

From: Bill Stack and John Lortie (Woodlot Alternatives, Inc.)

Date: June 6, 2002 (rev. July 8, 2002)

Re: **Riverbank Restoration – Preliminary Screening Analysis; Phase II of the 1 ½-Mile Reach, GE/Housatonic River Site, Pittsfield, Massachusetts**

We completed our preliminary screening analysis to assess the potential riverbank restoration measures that will be needed to stabilize the riverbanks in the Phase II of the 1 ½-Mile Reach. This screening analysis consisted of reviewing the 73 river channel cross-sections provided by Weston and incorporating design criteria assumptions (e.g., results of geotechnical slope stability assessment) to determine potential riverbank restoration measures. Similar to the Phase I design process, we classified the riverbank restoration measures into three general groups: *revegetation, bioengineering, and hard structures (e.g., retaining walls).* This memo provides the results of this screening analysis and also highlights potential design implications for the upcoming Phase II design proposal.

The intent of this preliminary screening analysis is to more accurately assess the level of effort that will be needed during the design process by (1) identifying riverbank stations where specific restoration measures are expected to occur (e.g., revegetation), and (2) highlighting stations that are still relatively unknown or could be changed (e.g., switching from bioengineering to revegetation measures) and require more detailed design efforts (e.g., additional cross-sections, design focus group meetings) to optimize the restoration design for both ecological and economic objectives.

As you know, the determination of the specific riverbank restoration method is dependent on design criteria, such as the limit-of-excavation, geotechnical slope stability assessment, riverbank armor grades, and top-of-bank armor elevation. Though we have a general understanding of what these criteria may be, they are still relatively unknown. These criteria and the final

restoration riverbank design are typically determined through an iterative process during the design and, for restoration, also incorporate other secondary factors such as habitat restoration objectives, flood storage capacity, costs, aesthetics, or constructability. Therefore, we made some assumptions about these criteria based on our current understanding so that this preliminary screening analysis could be conducted. These assumptions are listed below.

- **Channel Cross-sections.** Weston (T. Delano) provided 73 draft river channel cross-sections (river stations 514+00 through 553+50) and a spreadsheet that tabulated riverbank geometries (e.g., slope length, bank heights). These cross-sections had two different years plotted on them: 1998 (CENAE) and 2002 (Weston). For our assessment, we assumed 2002 was the more accurate one to use.

- **Limit-of-excavation (LOE).** We assumed the limit-of-excavation along the top of the riverbank followed the boundaries that were previously delineated in the EE/CA. [Note: At some locations, as noted in the attached table, the 2002 cross-sections ended prior to reaching the EE/CA LOE – the upper portion of the cross-section was missing. In these instances we extended the immediate grade up to the EE/CA boundary to estimate the missing portion of the cross-section.]

- **Top-of-bank armor elevation.** As in the Phase I design, we assumed the top-of-bank armor elevation was equal to the water surface elevation of the 1.5-year flood event. The HEC-RAS model results for the 1.5-year flood event were utilized and were provided by Weston (B. Bolt).

- **Slope stability analysis.** Because this analysis has not been completed for Phase II, we discussed the slope stability of the existing riverbank soils in this reach with the geotechnical staff at Weston (B. Mackie and A. Harpur). We decided that the results of the slope stability assessment for Phase I was the best information available and could be used for this initial screening process for Phase II.

- **Gabion baskets along Deming Street.** The rock filled baskets installed along the west riverbank from approximately station 534+00 through 538+50 were assumed to be complete with no further action to be taken as part of the restoration design scope for Phase II. These portions of the cross-sections were not assessed.

As noted, we classified riverbank restoration measures for some cross-sections as unknown. This was because their slope configurations were borderline between restoration measures (e.g., revegetation or bioengineering) and could go either way depending on the final design criteria selected. Also, some additional secondary design factors, which will affect the restoration design, will need to be discussed and evaluated during design focus group meetings in order to determine the riverbank restoration design. These factors include how existing stabilization

elements will be restored or treated during the remediation process (e.g., Caledonia Street road fill near Dawes Avenue Bridge, existing rock wall retaining structures, or removal of buildings); where proposed riverbank hard structures begin and end; and what type of hard structure designs are utilized and how they may tie into proposed revegetation or bioengineering measures that may be upstream or downstream of these structures.

The potential riverbank restoration measures determined for both the east and west banks are shown on the attached table and figure. Specific results and design implications are summarized below:

- **Potential Riverbank Restoration for the East Bank**: Linear distance (# of cross-sections affected)

  Expected (65%):
  Revegetation: 1000 ft (20 cross-sections)
  Bioengineering: 0 ft
  Hard structures: 1350 ft (27 cross-sections)

  Unknown (35%):
  Revegetation or Bioengineering?: 850 ft (17 cross-sections)
  Bioengineering or Hard structures?: 450 ft (9 cross-sections)

For the east bank, there are 26 cross-sections that will still need to be assessed during the design process for Phase II. Additional cross-sections will also be needed to determine the specific transition location for the stabilization measures (e.g., bioengineering to revegetation). There are approximately 12 transition riverbank stabilization areas.

- **Potential Riverbank Restoration for the West Bank**: Linear distance (# of cross-sections affected)

  Expected (75%):
  Revegetation: 1000 ft (20 cross-sections)
  Bioengineering: 0 ft
  Hard structures: 1250 ft (25 cross-sections)
  No action – gabions: 500 ft (10 cross-sections)

  Unknown (25%):
  Revegetation or Bioengineering?: 150 ft (3 cross-sections)
  Revegetation or Hard structure?: 200 ft (4 cross-sections)

Bioengineering or Hard structure?: 550 ft (11 cross-sections)

For the west bank, there are 18 cross-sections that will still need to be assessed during the design process for Phase II. Additional cross-sections will also be needed to determine the specific transition location for the stabilization measures (e.g., bioengineering to revegetation). There are approximately 12 transition riverbank stabilization areas.

- **Approximate hard structure locations**. We estimated hard structure locations based on this screen analysis and the slope stability assessment results from Phase I. There is likely to be a relatively high percentage of hard structures in Phase II.

Adjust design scope for Phase II to incorporate design analysis for the restoration slope above hard structures (i.e., analysis to determine revegetation or bioengineering measures). Also, suggest that Weston geotechnical staff review the approximate locations for these hard structures.

- **Potential LOE reductions**. Existing LOE (based on the EE/CA) may be reduced in some locations along the east bank (547+00 to 553+50).

This will depend on the top-of-armor elevation, results of the geotechnical slope stability assessment, and results of soil remediation boundaries.

- **Cross-section edits**. In some locations, the 2002 river channel cross-section does not have the same LOE as the EE/CA. Generally, the 2002 elevation is lower than that shown in the EE/CA. We observed this difference on the following cross-sections: *west bank* (523+50 through 528+50; 530+00 through 531+00) and *east bank* (527+00 through 528+00). Also, cross-sections for the design will need to show the LOE.

Adjust design scope to incorporate these edits.

- **Design issues for Phase II meetings.** The following issues will affect riverbank restoration designs and will need to be discussed during design meetings: (1) existing rock wall/riprap along west bank (538+50 through 540+50) to be removed or left in place; (2) foundations/bridge issues along west bank (541+50 through 542+50); and (3) Caledonia Street road fill above the restoration slope may affect design on east bank (541+00 through 542+50).

Add to meeting agenda during design process. May want to adjust design scope to include a ½-day site visit during a design meeting.

Please call if you have questions or comments.

Preliminary Assessment of Bank Restoration Options along West Bank

7/8/02
Tony Delano/Bill Stack

Station	Slope Lengths (H)	Top Bank Elev.	Length	Mid Bank Elev.	Length	Bottom Bank	Overall Slope: Slope Height in Feet	Overall Slope: Average Slope, H/V	Overall Slope: Slope Length	Upper: H/V	Upper: Slope Length	Lower: H/V	Lower: Slope Length	Proposed Restoration Method	Comments
514+ 00	48	981				971	10	4.80	49.03					Revegetation	
515+ 00	32	980	20	972	12	970	10	3.20		2.50	21.54	6.00	12.17	Revegetation	
516+ 00	27	980				971	9	3.00	28.46					Revegetation	
517+ 00	32	982	7	980	25	970	12	2.67		3.50	7.28	2.50	26.93	Revegetation	
518+ 00	25	983	3	980	22	971	12	2.08		1.00	4.24	2.44	23.77	Revegetation	LOE may need to be extended by 2 ft
519+ 00	37	982				971	11	3.36	38.60					Revegetation	
520+ 00	40	991				971	20	2.00	44.72					Bioeng/Hard ?	More analysis needed. Likely to be hard structure due to bank height. Transition area.
521+ 00	39	990				972	18	2.17	42.95					Bioeng/Hard ?	More analysis needed. Likely to be hard structure due to bank height
521+ 50	35.5	990				972	18	1.97	39.80					Hard	
522+ 00									0.00					Hard	Bridge
522+ 50	37.5	989	19	978	18.5	972	17	2.21		1.73	21.95	3.08	19.45	Hard	
523+ 00	31.5	988				969.5	18.5	1.70	36.53					Hard	
523+ 50	20	987	13.5	978.5	6.5	971	16	1.25		1.59	15.95	0.87	9.92	Hard	LOE off: 2002 different than EE/CA.
524+ 00	19	983	12.5	973.5	6.5	971	12	1.58		1.32	15.70	2.60	6.96	Bioeng/Hard ?	The 2002 cross-section does not extend up to the EE/CA LOE boundary. More analysis needed, will depend on geotechnical stability assessment. Likely to be hard structure.
524+ 50	35.5	985.5	15.5	974	20	970	15.5	2.29		1.35	19.30	5.00	20.40	Hard	The 2002 cross-section does not extend up to the EE/CA LOE boundary.
525+ 00	20	986.5	13	979.5	7	969.5	17	1.18		1.86	14.76	0.70	12.21	Hard	The 2002 cross-section does not extend up to the EE/CA LOE boundary.
525+ 50	36	985.5	22.5	972.5	13.5	970.5	15	2.40		1.73	25.99	6.75	13.65	Bioeng/Hard ?	The 2002 cross-section does not extend up to the EE/CA LOE boundary. More analysis needed, will depend on geotechnical stability assessment. Likely to be hard structure.
526+ 00	22.5	986.5	16	976.5	6.5	971	15.5	1.45		1.60	18.87	1.18	8.51	Hard	The 2002 cross-section does not extend up to the EE/CA LOE boundary.
526+ 50	19.5	988	10	983	9.5	973.5	14.5	1.34		2.00	11.18	1.00	13.44	Hard	The 2002 cross-section does not extend up to the EE/CA LOE boundary.
527+ 00	25.5	988	19	974.5	6.5	968	20	1.28		1.41	23.31	1.00	9.19	Hard	The 2002 cross-section does not extend up to the EE/CA LOE boundary.

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Station	Slope Lengths (H)	Top Bank Elev.	Length	Mid Bank Elev.	Length	Bottom Bank	Overall Slope: Slope Height in Feet	Overall Slope: Average Slope, H/V	Overall Slope: Slope Length	Upper: H/V	Upper: Slope Length	Lower: H/V	Lower: Slope Length	Proposed Restoration Method	Comments
527+ 50	22	988.5				970	18.5	1.19	28.74					Hard	The 2002 cross-section does not extend up to the EE/CA LOE boundary.
528+ 00	32.5	989	19.5	976.5	13	967	22	1.48		1.56	23.16	1.37	16.10	Hard	The 2002 cross-section does not extend up to the EE/CA LOE boundary.
528+ 50	33	990	20	977.5	13	967.5	22.5	1.47		1.60	23.58	1.30	16.40	Hard	The 2002 cross-section does not extend up to the EE/CA LOE boundary.
529+ 00	51	994.5	45	972	6	967	27.5	1.85		2.00	50.31	1.20	7.81	Bioeng/Hard ?	More analysis needed, will depend on geotechnical stability assessment. Transition area.
529+ 50	36	983	20	977.5	16	968	15	2.40		3.64	20.74	1.68	18.61	Bioeng/Reveg ?	More analysis needed, will depend on geotechnical stability assessment.
530+ 00	40	991.5	28	976	12	966.5	25	1.60		1.81	32.00	1.26	15.31	Bioeng/Hard ?	The 2002 cross-section does not extend up to the EE/CA LOE boundary. More analysis needed, will depend on geotechnical stability assessment. Likely to be hard structure due to bank height
530+ 50	34.5	990	31	971	3.5	967	23	1.50		1.63	36.36	0.88	5.32	Bioeng/Hard ?	The 2002 cross-section does not extend up to the EE/CA LOE boundary. More analysis needed, will depend on geotechnical stability assessment. Likely to be hard structure due to bank height
531+ 00	39	991	26.5	976.5	12.5	966	25	1.56		1.83	30.21	1.19	16.32	Bioeng/Hard ?	The 2002 cross-section does not extend up to the EE/CA LOE boundary. More analysis needed, will depend on geotechnical stability assessment. Likely to be hard structure due to bank height. Transition area.
531+ 50	34	987	20	978	14	968.5	18.5	1.84		2.22	21.93	1.47	16.92	Bioeng/Reveg ?	More analysis needed, will depend on geotechnical stability assessment.
532+ 00	30	974	17	967.5	13	966	8	3.75		2.62	18.20	8.67	13.09	Revegetation	
532+ 50	30.5	977.5	11	975.5	19.5	967.5	10	3.05		5.50	11.18	2.44	21.08	Revegetation	
533+ 00	37.5	980	15	976	22.5	970	10	3.75		3.75	15.52	3.75	23.29	Revegetation	
533+ 50	23	974	10	970	13	967.5	6.5	3.54		2.50	10.77	5.20	13.24	Revegetation	Transition area.
534+ 00	25	976.5	19	969	6	965.5	11	2.27		2.53	20.43	1.71	6.95	No Action	Existing gabion walls
534+ 50	25	976.5				965	11.5	2.17	27.52					No Action	Existing gabion walls
535+ 00	25	977	19	969	6	965	12	2.08		2.38	20.62	1.50	7.21	No Action	Existing gabion walls
535+ 50	16.5	975	10	972	6.5	967	8	2.06		3.33	10.44	1.30	8.20	No Action	Existing gabion walls
536+ 00	21.5	974	12.5	970	9	965	9	2.39		3.13	13.12	1.80	10.30	No Action	Existing gabion walls
536+ 50	15.5	973				965.5	7.5	2.07	17.22					No Action	Existing gabion walls
537+ 00	16	973				965	8	2.00	17.89					No Action	Existing gabion walls

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Station	Slope Lengths (H)	Top Bank Elev.	Length	Mid Bank Elev.	Length	Bottom Bank	Overall Slope: Slope Height in Feet	Overall Slope: Average Slope, H/V	Overall Slope: Slope Length	Upper: H/V	Upper: Slope Length	Lower: H/V	Lower: Slope Length	Proposed Restoration Method	Comments
537+ 50	22	973.5	15.5	970	6.5	964	9.5	2.32		4.43	15.89	1.08	8.85	No Action	Existing gabion walls
538+ 00	22	973	16	970	6	963	10	2.20		5.33	16.28	0.86	9.22	No Action	Existing gabion walls
538+ 50	23	974	16.5	970.5	6.5	966	8	2.88		4.71	16.87	1.44	7.91	No Action	Existing gabion walls. Transition area.
539+ 00	29	981	19.5	971	9.5	963.5	17.5	1.66		1.95	21.91	1.27	12.10	Hard	Existing rock wall/riprap. Leave in?
539+ 50	16.5	977	13.5	968.5	3	965.5	11.5	1.43		1.59	15.95	1.00	4.24	Hard	Existing rock wall/riprap. Leave in?
540+ 00	19	973	16	968.5	3	962.5	10.5	1.81		3.56	16.62	0.50	6.71	Hard	Existing rock wall/riprap. Leave in?
540+ 50	12.5	973.5	9.5	970.5	3	963	10.5	1.19		3.17	9.96	0.40	8.08	Hard	Existing foundation
541+ 00	45	980	42	968	3	964.5	15.5	2.90		3.50	43.68	0.86	4.61	Revegetation	
541+ 50	36	979.5	16.5	968.5	19.5	965.5	14	2.57		1.50	19.83	6.50	19.73	Reveg/Hard?	Add fill to reduce slope. Design discussion/site visit needed. Foundations and bridge issues. Short bank height
542+ 00	29	977	16	968.5	13	966	11	2.64		1.88	18.12	5.20	13.24	Reveg/Hard?	Add fill to reduce slope. Design discussion/site visit needed. Foundations and bridge issues. Short bank height
542+ 50	25.5	976.5	16	967.5	9.5	966.5	10	2.55		1.78	18.36	9.50	9.55	Hard	Foundations and bridge issues.
543+ 00	6.5	970.5				962.5	8	0.81	10.31					Hard	
543+ 50														Hard	
544+ 00	19.5	972.5				962	10.5	1.86	22.15					Reveg/Hard?	More analysis needed. Short bank height. Add fill at toe may be able to make revegetation
544+ 50	13.5	971	6.5	968	7	963	8	1.69		2.17	7.16	1.40	8.60	Reveg/Hard?	More analysis needed. Short bank height. Existing foundation issue
545+ 00	6	969				963	6	1.00	8.49					Revegetation	
545+ 50	13	969	9.5	965.5	3.5	962.5	6.5	2.00		2.71	10.12	1.17	4.61	Revegetation	
546+ 00	16	968.5	9.5	967.5	6.5	963	5.5	2.91		9.50	9.55	1.44	7.91	Revegetation	
546+ 50	15	968				964	4	3.75	15.52					Revegetation	
547+ 00	9.5	968	6.5	966	3	963.5	4.5	2.11		3.25	6.80	1.20	3.91	Revegetation	

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Station	Slope Lengths (H)	Top Bank Elev.	Length	Mid Bank Elev.	Length	Bottom Bank	Overall Slope: Slope Height in Feet	Overall Slope: Average Slope, H/V	Overall Slope: Slope Length	Upper: H/V	Upper: Slope Length	Lower: H/V	Lower: Slope Length	Proposed Restoration Method	Comments
547+ 50	16.5	967				960.5	6.5	2.54	17.73					Revegetation	
548+ 00	9	966				963	3	3.00	9.49					Revegetation	
548+ 50	6	966.5				963	3.5	1.71	6.95					Revegetation	
549+ 00	23	968	7	962.5	16	959	9	2.56		1.27	8.90	4.57	16.38	Reveg/Bioeng?	More analysis needed. Depends on geotechnical stability assessment and LOE. Short bank height. Transition area.
549+ 50	9.5	968				963.5	4.5	2.11	10.51					Hard	90 degree bend. Likely to be hard structure. 2002 cross-section does not appear to be accurate.
550+ 00	3.5	973				964	9	0.39	9.66					Hard	
550+ 50	6.5	973.5				965.5	8	0.81	10.31					Hard	
551+ 00	6.5	974	3.5	966	3	963.5	10.5	0.62		0.44	8.73	1.20	3.91	Hard	
551+ 50	12.5	974.5	6	973	6.5	962	12.5	1.00		4.00	6.18	0.59	12.78	Hard	
552+ 00	13	974	6.5	970.5	6.5	963	11	1.18		1.86	7.38	0.87	9.92	Hard/Bioeng?	More analysis needed. Method depends on armor height. Add fill may reduce to bioengineering. Short bank heights. Transition area
552+ 50	9.5	972				964	8	1.19	12.42					Hard/Bioeng?	More analysis needed. Method depends on armor height. Add fill may reduce to bioengineering. Short bank heights
553+ 00	13	970	6.5	968	6.5	961	9	1.44		3.25	6.80	0.93	9.55	Hard/Bioeng?	More analysis needed. Method depends on armor height. Add fill may reduce to bioengineering. Short bank heights
553+ 50	19	968	9.5	967	9.5	959.5	8.5	2.24		9.50	9.55	1.27	12.10	Revegetation	Transition area.

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							Overall Slope			Upper		Lower			
Station	Slope Lengths (H)	Top Bank	Upper Slope Length (H)	Mid Point	Lower Slope Length (H)	Bottom Bank	Slope Height in Feet	Average Slope, H/V	Slope Length	H/V	Slope Length	H/V	Slope Length	Proposed Restoration Method	Comments
514+ 00	17	984	13	975	4	971	13	1.31	21.47	1.44	15.81	1.00	5.66	Hard	Transitition area: soil lifts and retaining wall
515+ 00	16	985	11	975	5	972	13	1.23	20.70	1.10	14.87	1.67	5.83	Hard	
516+ 00	22	987				971	16	1.38	27.20					Hard	
517+ 00	23	990				971	19	1.21	29.83					Hard	
518+ 00	27	988	23	975	4	971	17	1.59		1.77	26.42	1.00	5.66	Hard	
519+ 00	32	986	14	983	18	972	14	2.29		4.67	14.32	1.64	21.10	Hard	
520+ 00	28	986				971	15	1.87	31.76					Hard/Bioeng?	More analysis needed. Likely to be hard structure due to bank height
521+ 00	30	988				971	17	1.76	34.48					Hard/Bioeng?	More analysis needed. Likely to be hard structure due to bank height
521+ 50	26	989				971	18	1.44	31.62					Hard	
522+ 00														Hard	Elm St. Bridge
522+ 50	6	989.5	3	979	3	973	16.5	0.36		0.29	10.92	0.50	6.71	Hard	
523+ 00	13	988	6.5	985	6.5	972	16	0.81		2.17	7.16	0.50	14.53	Hard	
523+ 50	19	984.5	9.5	976	9.5	971.5	13	1.46		1.12	12.75	2.11	10.51	Hard	
524+ 00	19.5	984	13	978	6.5	971	13	1.50		2.17	14.32	0.93	9.55	Hard	
524+ 50	19	984	12.5	972.5	6.5	970.5	13.5	1.41		1.09	16.99	3.25	6.80	Hard	
525+ 00	33	984	6	976	27	968	16	2.06		0.75	10.00	3.38	28.16	Hard	
525+ 50	16.5	985	6.5	978	10	971.5	13.5	1.22		0.93	9.55	1.54	11.93	Hard	
526+ 00	26	986.5	12	979.5	14	971.5	15	1.73		1.71	13.89	1.75	16.12	Hard	
526+ 50	29	986.5				968	18.5	1.57	34.40					Hard	
527+ 00	28.5	986				967	19	1.50	34.25					Hard	The 2002 cross-section does not extend up to the EE/CA LOE boundary.

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Station	Slope Lengths (H)	Top Bank	Upper Slope Length (H)	Mid Point	Lower Slope Length (H)	Bottom Bank	Overall Slope: Slope Height in Feet	Overall Slope: Average Slope, H/V	Overall Slope: Slope Length	Upper: H/V	Upper: Slope Length	Lower: H/V	Lower: Slope Length	Proposed Restoration Method	Comments
527+ 50	29.5	985	24	972	5.5	967.5	17.5	1.69		1.85	27.29	1.22	7.11	Bioeng/Hard ?	The 2002 cross-section does not extend up to the EE/CA LOE boundary. More analysis needed, will depend on geotechnical stability assessment.
528+ 00	32	984.5				967	17.5	1.83	36.47					Bioeng/Reveg ?	The 2002 cross-section does not extend up to the EE/CA LOE boundary. More analysis needed, will depend on geotechnical stability assessment. Transition area.
528+ 50	31.5	985				968	17	1.85	35.79					Bioeng/Reveg ?	The 2002 cross-section does not extend up to the EE/CA LOE boundary. More analysis needed, will depend on geotechnical stability assessment.
529+ 00	33	984	9.5	979.5	23.5	966	18	1.83		2.11	10.51	1.74	27.10	Bioeng/Reveg ?	More analysis needed, will depend on geotechnical stability assessment.
529+ 50	51	992	35	976.5	16	967	25	2.04		2.26	38.28	1.68	18.61	Bioeng/Reveg ?	More analysis needed, will depend on geotechnical stability assessment. Transition area.
530+ 00	29.5	982	22.5	974.5	7	969.5	12.5	2.36		3.00	23.72	1.40	8.60	Reveg	
530+ 50	20	978.5				970	8.5	2.35	21.73					Reveg	
531+ 00	19.5	976				966.5	9.5	2.05	21.69					Reveg	
531+ 50	9.5	975				968	7	1.36	11.80					Reveg	
532+ 00	13	975				965	10	1.30	16.40					Reveg	
532+ 50	47	984				966.5	17.5	2.69	50.15					Reveg/Bioeng?	More analysis needed. Possible revegetation. Transition area with hard structure.
533+ 00	44	987	34	977.5	10	966	21	2.10		3.58	35.30	0.87	15.24	Hard	
533+ 50	36	988	26	981	10	969.5	18.5	1.95		3.71	26.93	0.87	15.24	Hard	
534+ 00	38	988	31.5	971.5	6.5	965	23	1.65		1.91	35.56	1.00	9.19	Hard	
534+ 50	38	987	32	971	6	964.5	22.5	1.69		2.00	35.78	0.92	8.85	Hard	
535+ 00	38	987.5	31.5	972	6.5	965	22.5	1.69		2.03	35.11	0.93	9.55	Hard/Bioeng?	More analysis needed, will depend on geotechnical stability assessment.
535+ 50	41.5	984				964.5	19.5	2.13	45.85					Hard/Bioeng?	More analysis needed, will depend on geotechnical stability assessment.
536+ 00	41	984.5				963	21.5	1.91	46.30					Hard/Bioeng?	More analysis needed, will depend on geotechnical stability assessment.

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536+ 50	32.5	983	29.5	968.5	3	966	17	1.91		2.03	32.87	1.20	3.91	Hard/Bioeng?	More analysis needed, will depend on geotechnical stability assessment.
537+ 00	32.5	983				965.5	17.5	1.86	36.91					Hard/Bioeng?	More analysis needed, will depend on geotechnical stability assessment.
537+ 50	32	983.5	13	980	19	965.5	18	1.78		3.71	13.46	1.31	23.90	Hard	
538+ 00	32	983.5	13	980	19	965.5	18	1.78		3.71	13.46	1.31	23.90	Hard	
538+ 50	22.5	981	13	973.5	9.5	966.5	14.5	1.55		1.73	15.01	1.36	11.80	Hard	Transitition area
539+ 00	35	979.5	16	970.5	19	963	16.5	2.12		1.78	18.36	2.53	20.43	Bioeng/Reveg ?	More analysis needed, will depend on geotechnical stability assessment.
539+ 50	29.5	980	16.5	969	13	967	13	2.27		1.50	19.83	6.50	13.15	Bioeng/Reveg ?	More analysis needed, will depend on geotechnical stability assessment.
540+ 00	32.5	978	16	969	16.5	966	12	2.71		1.78	18.36	5.50	16.77	Bioeng/Reveg ?	More analysis needed, will depend on geotechnical stability assessment.
540+ 50	31.5	977.5	16	968	15.5	965	12.5	2.52		1.68	18.61	5.17	15.79	Bioeng/Reveg ?	More analysis needed, will depend on geotechnical stability assessment.
541+ 00	30	977				962.5	14.5	2.07	33.32					Bioeng/Reveg ?	More analysis needed, will depend on geotechnical stability assessment.
541+ 50	29.5	977	13	974	16.5	964	13	2.27		4.33	13.34	1.65	19.29	Bioeng/Reveg ?	More analysis needed, will depend on geotechnical stability assessment.
542+ 00	33	977				964	13	2.54	35.47					Bioeng/Reveg ?	More analysis needed, will depend on geotechnical stability assessment.
542+ 50	19	975.5	13	969	6	964	11.5	1.65		2.00	14.53	1.20	7.81	Bioeng/Reveg ?	More analysis needed, will depend on geotechnical stability assessment. Transition area.
543+ 00	3	966.5				963	3.5	0.86	4.61					Hard	
543+ 50	13	976	10	971	3	963	13	1.00		2.00	11.18	0.38	8.54	Hard	
544+ 00	19.5	973				963.5	9.5	2.05	21.69					Hard/Bioeng?	The 2002 cross-section does not extend up to the EE/CA LOE boundary. Foundation issues. Transition area.
544+ 50	20	974	13	968	7	963	11	1.82		2.17	14.32	1.40	8.60	Bioeng/Reveg ?	More analysis needed, will depend on geotechnical stability assessment. Foundation issues.
545+ 00	23	972.5	16.5	966	6.5	962	10.5	2.19		2.54	17.73	1.63	7.63	Revegetation	
545+ 50	16.5	972				962	10	1.65	19.29					Revegetation	

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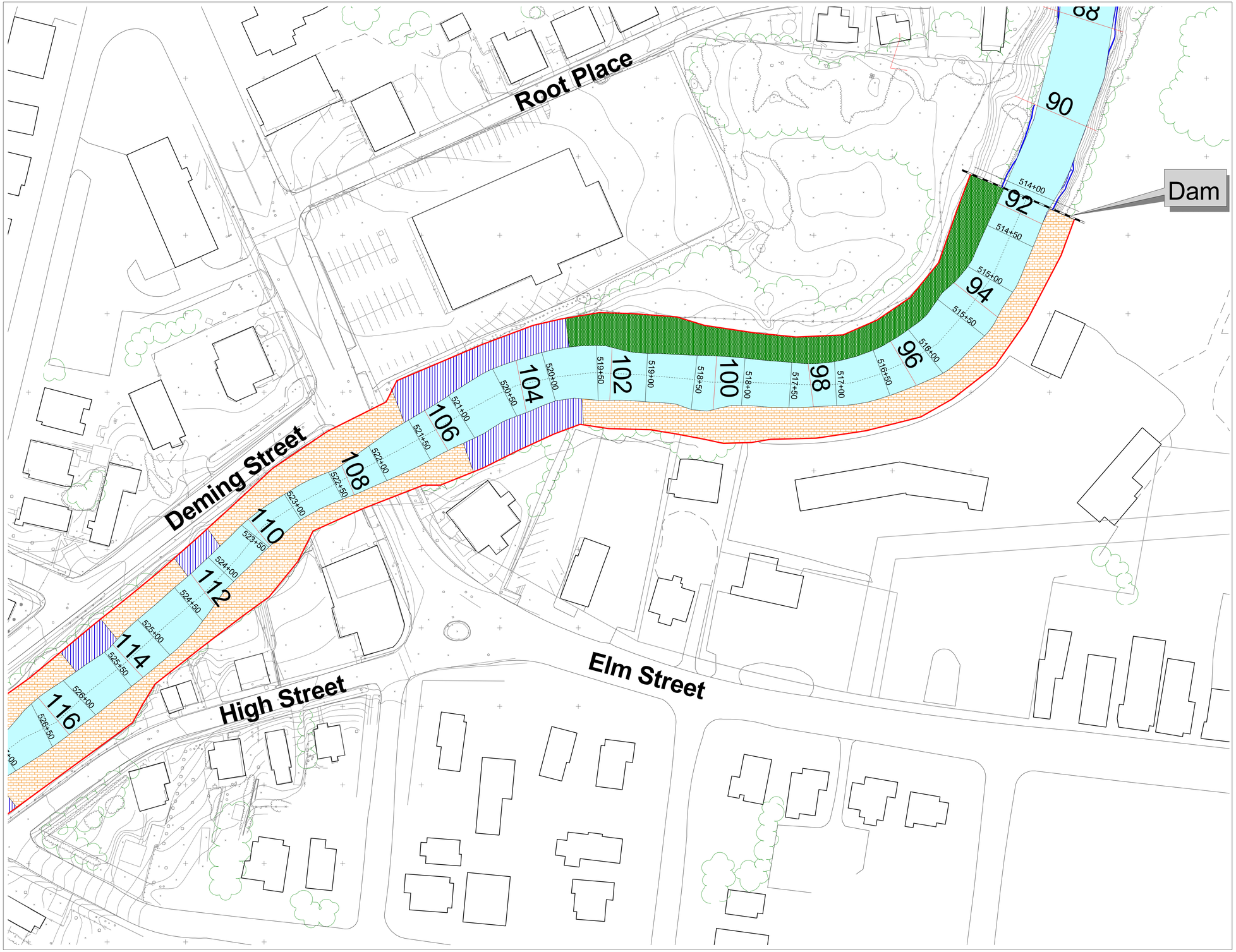
Station	Slope Lengths (H)	Top Bank	Upper Slope Length (H)	Mid Point	Lower Slope Length (H)	Bottom Bank	Overall Slope: Slope Height in Feet	Overall Slope: Average Slope, H/V	Overall Slope: Slope Length	Upper: H/V	Upper: Slope Length	Lower: H/V	Lower: Slope Length	Proposed Restoration Method	Comments
546+ 00	13	969	6.5	967.5	6.5	963	6	2.17		4.33	6.67	1.44	7.91	Revegetation	
546+ 50	12.5	968	9.5	965	3	961.5	6.5	1.92		3.17	9.96	0.86	4.61	Revegetation	
547+ 00	20	969	13	968	7	961	8	2.50		13.00	13.04	1.00	9.90	Revegetation	LOE extends outside the top of bank at many stations through 553+50. In order for revegetation to be applicable at this station through 553+50, the LOE needs to be on the floodplain approximately 5 ft from top of bank.
547+ 50	6.5	968				961.5	6.5	1.00	9.19					Revegetation	
548+ 00	16	967.5	9.5	966	6.5	962.5	5	3.20		6.33	9.62	1.86	7.38	Revegetation	
548+ 50	16.5	967.5	10	966	6.5	962	5.5	3.00		6.67	10.11	1.63	7.63	Revegetation	
549+ 00	22	966.5	16	964	6	961.5	5	4.40		6.40	16.19	2.40	6.50	Revegetation	
549+ 50	26	967	23	965	3	962.5	4.5	5.78		11.50	23.09	1.20	3.91	Revegetation	
550+ 00	16	966				960.5	5.5	2.91	16.92					Revegetation	
550+ 50	13	967.5	10	965	3	962.5	5	2.60		4.00	10.31	1.20	3.91	Revegetation	
551+ 00	10	966.5	7	964.5	3	961.5	5	2.00		3.50	7.28	1.00	4.24	Revegetation	
551+ 50	6.5	967	3.5	966.5	3	962.5	4.5	1.44		7.00	3.54	0.75	5.00	Revegetation	
552+ 00	23	972	19.5	965.5	3.5	961.5	10.5	2.19		3.00	20.55	0.88	5.32	Revegetation	
552+ 50	19	973	16	966.5	3	962.5	10.5	1.81		2.46	17.27	0.75	5.00	Reveg/Bioeng?	More analysis needed, will depend on geotechnical stability assessment.
553+ 00	23	973.5	16.5	967	6.5	960.5	13	1.77		2.54	17.73	1.00	9.19	Reveg/Bioeng?	More analysis needed, will depend on geotechnical stability assessment.
553+ 50	29	973.5	22.5	965	6.5	960.5	13	2.23		2.65	24.05	1.44	7.91	Reveg/Bioeng?	More analysis needed, will depend on geotechnical stability assessment.

WOODLOT ALTERNATIVES, INC.



LEGEND:

Restoration Types

- Bioengineering/Revegetation
- Hard
- Revegetation
- Revegetation/Hard
- Bioengineering/Hard

- Hydrology
- Limit of work
- Roads
- Transect Locations
- 514+00 Stations
- Centerline
- Gabions (Existing Restored Area)

WESTON SOLUTIONS

N

Scale in Feet

50 0 50 100 150

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FOIA EXEMPT

Housatonic River Project
Pittsfield, Massachusetts

Phase II 1.5 Mile Pre-Design Memo
Proposed Restoration Areas
Tile 1 of 3

July 17, 2002

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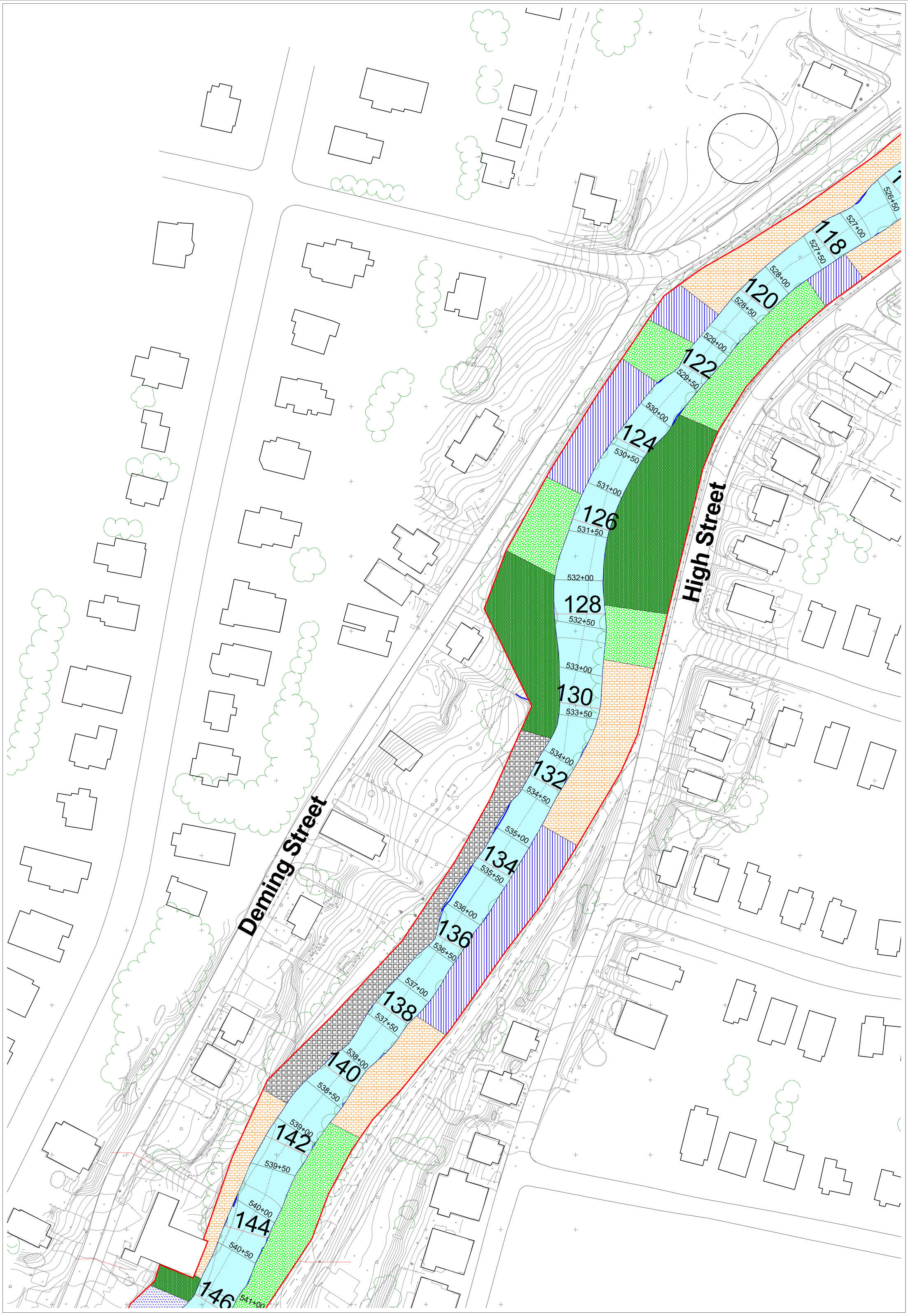

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Phase II 1.5 Mile Pre-Design Memo
Proposed Restoration Areas
Tile 2 of 3

July 17, 2002

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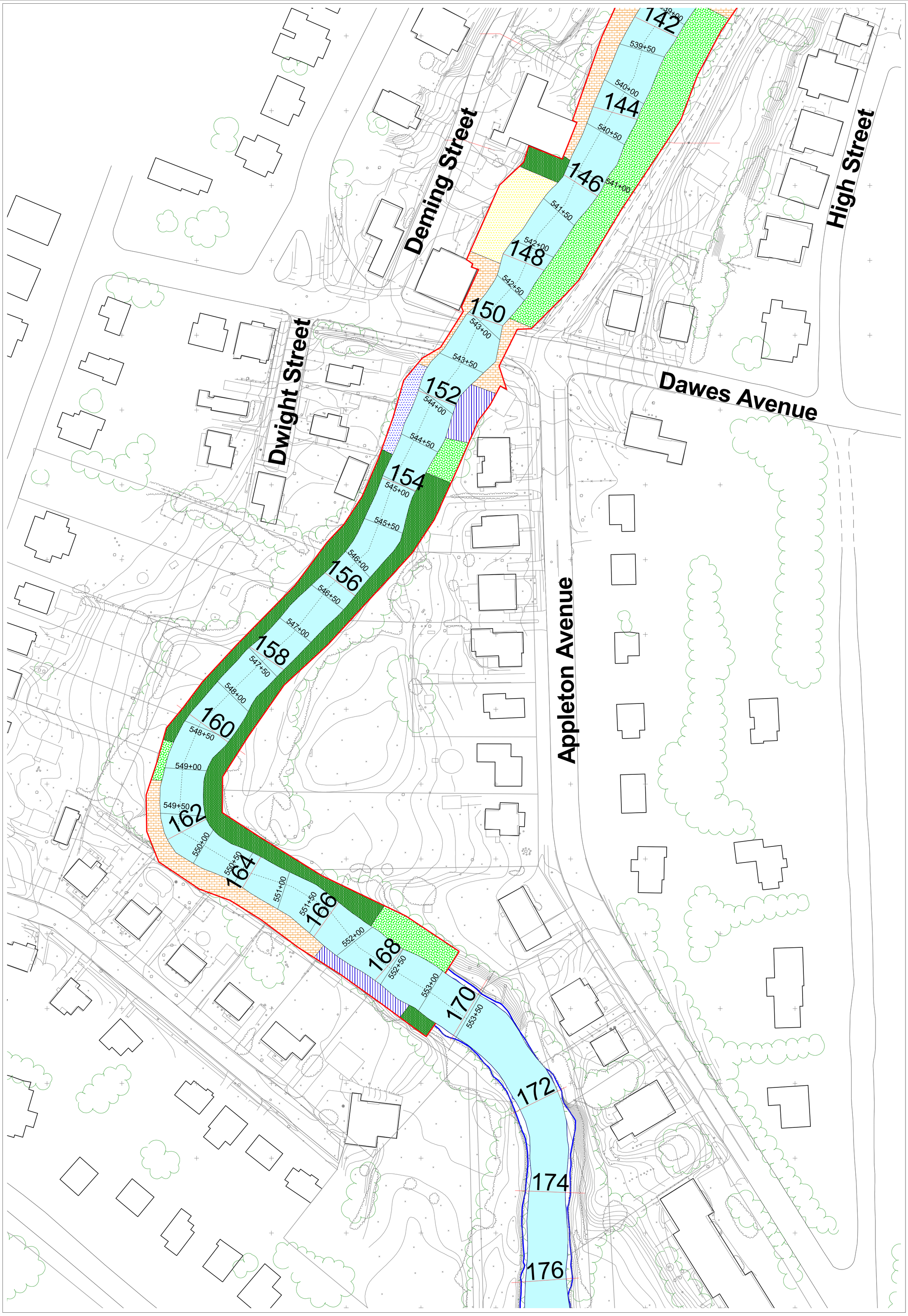

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Tile 3 of 3

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