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UNIVERSE TECHNOLOGIES, INC.
Engineering and Scientific Solutions

FINAL PROJECT CLOSE-OUT REPORT

**Excavation, Transportation and Disposal Services at
Installation Restoration Site 09—Old Fire Fighting
Training Area**

**Naval Station Newport
Newport, Rhode Island**

3709

PREPARED FOR:

Naval Facilities Engineering Command
Engineering Field Activity, Northeast Division
10 Industrial Highway SE
Lester, PA 19113-2090
Contract No: N62472-01-D-8060-0007

PREPARED BY:

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December 2005

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UNIVERSE TECHNOLOGIES, INC.
Engineering and Scientific Solutions

*Client Retention is Our
Highest Priority and
Ultimate Goal*

December 8, 2005

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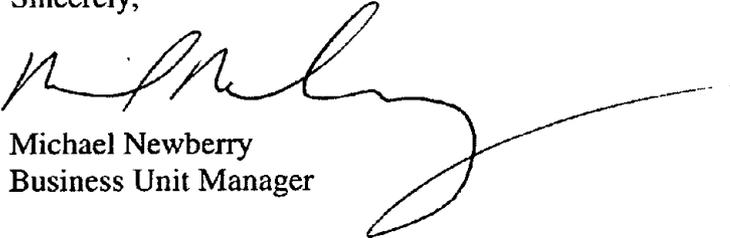
Subject: Final Project Close-Out Report
Excavation, Transportation and Disposal Services At Installation Restoration Site
09 Old Fire Fighting Training Center, Naval Station Newport, Newport, RI
Contract No: N62472-01-D-8060-0007

Dear Mr. Krivanskas:

Attached is the Final Project Close-Out Report for the subject project.

UNITEC appreciates this opportunity to support the Navy on this project. Should you have any questions, concerning this or any other matter, please contact us at 301-695-0982, extension 227.

Sincerely,


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1.0 INTRODUCTION

This Project Close-Out Report is specified in the UNITEC, Inc., Work Plan, as amended, for Contract Number N62472-01-D-0806-0007, Excavation, Transportation, and Disposal Services at Installation Restoration Site 09—Old Fire Fighting Training Area (OFFTA), Naval Station Newport, Newport, Rhode Island.

The Project Close-Out Report contains items required by the Statement of Work (SOW) that document the work performed. These items are:

- A statement that the work was conducted in accordance with the Work Plan, with any exceptions noted (Section 2.0).
- A summary of the volume and type of material shipped and disposed of by disposal facility location (Section 6.0).
- Analytical procedures for stockpiled materials (Section 7.0).
- Copies of the manifests, bills of lading, weight slips, and treatment/disposal certifications (mailed separately).

In addition to the above-required items, brief summaries of the project background, site description, and removal and disposal process are presented in Sections 3.0, 4.0, and 5.0, respectively.

The Work Plan of 29 April 2004 (revised 10 June 2004 and 20 August 2004) describes in detail the manner in which materials were removed from the mounds and the materials staged, tested and transported for off-site disposal.

Under the SOW, three mounds of soil, fill and debris at the OFFTA were excavated and removed from the site. The removal areas were graded and seeded to the base grade elevation that is present across the remaining portions of the site. Some of the excavation areas are adjacent to Narragansett Bay; therefore, the SOW required that erosion controls be designed, constructed and maintained in accordance with Rhode Island Coastal Management Council requirements.

Removal of the mounds was required to achieve the Preliminary Remediation Goals (PRGs) for this site and to allow access to contaminated soils beneath the excavated mounds that will undergo remediation in the future.

2.0 STATEMENT THAT WORK WAS PERFORMED IN ACCORDANCE WITH THE WORK PLAN

Work was performed in accordance with the UNITEC Work Plan with two exceptions. First, asbestos transite piping was encountered and properly disposed. Second, geotextile fabric was not installed at the former Central Mound because a concrete pad with adjoining asphalt was found at the surface. Both of these exceptions are further described in Section 5.0. There was no hazardous waste encountered during the soil removal. The soil and debris removal and site restoration were performed between September 7, 2004 and June 2005.

3.0 BACKGROUND

The OFFTA was used as a fire training ground between 1940 and 1972. In 1972, the training area was demolished. In 1974, three mounds of soil, believed to be soil and demolition debris from the razing of fire training structures and buildings, were formed and compacted in-place at the OFFTA site. One to two feet of topsoil was believed added to the site and from 1974 through 1998, the OFFTA was used as a recreation area. In its 22 years as a recreation area, the site was used for baseball, picnicking, youth day camps, and child day care.

During the fire fighting training exercises, fuel oils were ignited in various structures on the site, including open burn pits. A "Christmas tree" aboveground nozzle array was used to fire small buildings that simulated shipboard compartments. The fires were then extinguished by sailors. The structures that occupied the site included an administration building, hose house, two simulated carrier compartments, a smothering pit, a separator pit, a foam pit, other simulated shipboard structures, suction pumps, and oil storage tanks.

In November 1989, the U.S. EPA placed the entire NAVSTA Newport on the National Priorities List (NPL). It was determined that the soils and the debris in all three mounds exceeded project action limits (Residential Direct Exposure Criteria) that are the basis for PRGs. The Navy committed to remove the soils and debris that exceeded project action limits.

4.0 SITE DESCRIPTION

Naval Station Newport (NAVSTA) is located in Newport, RI. The OFFTA is located at the northern section of Coasters Harbor Island. Figures 1, 2, and 3 are maps of the region, the island, and the site.

Bridge 669 and Bridge 668 connect Coastal Harbors Island to the Newport mainland. Bridge 669 is located approximately one half mile north of Gate 1 at NAVSTA. The OFFTA site occupies approximately 5.5 acres. The surface of the site is grass and trees with a temporary gravel parking area located in the central section of the site.

Three mounds of soil and debris were created on the OFFTA site. The remainder of the site slopes gently from a high elevation of 11 feet mean sea level (MSL) at the southern end of the site, towards the top of the shoreline bank at approximately 8 feet MSL. The Central Mound was 20 feet high, steeply sloped with a volume of approximately 9,000 cubic yards (CY). Mound

No. 1 was located next to the west shore of the north end of the island and was 4 to 6 feet high with a volume of approximately 1,100 CY. Mound No. 2 located between the Central Mound and Mound No. 1 was nine feet high with an approximate volume of 5,000 CY. The west and northwest sides of Mound Nos. 1 and 2 were eroded by wave action.

The site is underlain by layers of fill consisting of construction debris and sand and gravel; silty sand and gravel; sand and gravel; peat; silt; and glacial till consisting of silt sand and gravel. Overburden depths range from 6 to 27 feet below the 8-foot elevation.

The main contaminants of concern are petroleum compounds, combustion by-products, and metals. The fuel-based contaminants include polynuclear aromatic hydrocarbons (PAHs) and total petroleum hydrocarbons (TPHs). The metal concentrations that exceed the site PRGs are arsenic, beryllium, lead, and manganese.

5.0 SUMMARY OF THE REMOVAL, DISPOSAL, AND RESTORATION PROCESS

Prior to the start of excavation and staging, all trees in and around the mounds were removed. Existing fence around the playground was removed. The fence that bisected both mounds 1 and 2 was also removed. The soil was excavated from the mounds and placed in 500 CY stockpiles. There were a total of 27 soil stockpiles. There were three stockpiles for Mound 1, 10 stockpiles for Mound 2, and 14 stockpiles for Mound 3. The stockpiles were covered with wind and water-resistant tarpaulins (see Section 7.0 below). All stockpiles were sampled and analyzed following the work plan. Methanol was used as a preservative for samples requiring Volatile Organic Compound (VOC) analyses. Preserving soil samples for VOC analyses in methanol is recommended by the Environmental Protection Agency (EPA) because samples exhibit concentrations that were up to an order of magnitude higher than that obtained by the currently used method, reference EPA/600/R-92/128 publication, Preparation of Soil Sampling Protocols: Sampling Technologies, and Strategies, July 1992, p. 5-14. The samples were analyzed by the laboratory in five days. The Navy received and approved the analytical results.

The stockpiles were monitored rigorously to ensure that the material from each pile had been properly sampled and approved for off-site transport. A set of stockpile management plan drawings were used to record the exact status and location of each 500 CY stockpile. The Stockpile Management Plans are presented in Appendix B. The stockpiles were labeled according to the nomenclature in the Work Plan (page 12, Section 2.7, Stockpile Management). The stockpiles were loaded into trucks and weighed on-site.

Appendix C shows the Soil Erosion and Sedimentation Plan. About 600 linear feet of jersey barriers were installed from the western tip of the site to just past mound 2 and were left in place after demobilizing. Hay bales and silt fences were installed from the western most tip of the OFFTA to a point just east of the central mound. Hay bales were continued to Building 144. Additionally, twenty (20) feet width of geotextile fabric was placed along the 600 feet of Jersey barriers adjacent to the shore. Stone pieces 6 to 12 inches in width were placed on top of the geotextile fabric. Approximately 500 cubic yards of stone were used for the shoreline protection.

The ground was leveled to preexisting conditions as a repair to any ruts that result from the heavy vehicles moving the rock.

The soil was transported to a certified weigh station (Pond View Recycling, Inc., East Providence, RI), where it was weighed again and dumped. Pond View Recycling then separated the tree limbs and other debris as required by their contract with the Central Landfill at Johnston, Rhode Island. The soil was mixed with additional fine materials such as mulched wood from the former mounds as well as other sources of fine materials to fulfill their landfill requirements for cover material. The composite soil was then re-loaded, transported to the Central Landfill (Rhode Island Resource Recovery Corporation, Johnston, RI), and disposed. The concrete debris portion of the excavated materials was transported to Mello Construction, Inc., Middletown, RI for recycling and reuse. Scrap metal was transported and unloaded at Mid-City Scrap Iron & Salvage Co., Inc., Westport, MA for disposition.

Asbestos was encountered during the project. The material was asbestos transite piping about one inch thick. Most piping was in good shape and some piping was broken. The length of the pipes varied from approximately 6 inches to 3 feet in length. A licensed Rhode Island asbestos supervisor in full personal protective equipment collected the piping material using wet methods and placed the asbestos piping into double layered asbestos labeled bags. The wetted asbestos material in double layered asbestos bags was then placed into fiber drums for transport. The soil was not sampled for asbestos. A three inch layer of soil below the asbestos was removed along with the asbestos transite piping. This was done to ensure that all the asbestos was removed. A sample pump was worn by the asbestos supervisor and two air samples were collected. One was an excursion limit sample (30 minutes) and the other was a personal sample. Results were below the Permissible Exposure Limit (PEL) of 0.1 fiber/cubic centimeter. The Navy was notified of the asbestos planned actions and the removal work. The asbestos material was sent to A&L Salvage, Inc., Lisbon, Ohio for disposal.

The site was graded for the proper sub-grade elevation (one foot below the base grade elevation except at the Central Mound location). The geotextile fabric was then installed at Site 09 where former Mounds 1 and 2 were located. Geotextile fabric was not installed and the site was not graded to one foot below the base grade elevation at the former Central Mound site because of a concrete pad with adjoining asphalt was encountered at the surface. The asphalt appeared to have been a former parking area. The concrete pad appeared to be a former floor to a building. A small area that was within the central mound and not covered with asphalt or concrete was excavated to 1 foot below grade.



Concrete pad and adjoining asphalt after top soil was placed to meet the grade of the pad.

About 1625 CY of clean backfill was obtained from H. Lacerda Jr., Landscaping & Construction, LLC, Middletown, RI. The clean backfill was certified clean based on soil analysis that was performed as required by the work plan. Then, 1650 CY of topsoil from the same vendor was spread over the entire site and compacted to a thickness of four inches. The mound areas were then reseeded. The existing parking lot was resurfaced with 360 CY of gravel. The playground area next to building 144 was re-fenced. About 700 feet of new fence was installed along Taylor Drive. The site was fully restored and a grass groundcover was established. The site was watered daily.

6.0 SUMMARY OF THE VOLUME OF MATERIAL SHIPPED AND DISPOSED OF BY FACILITY LOCATION

Only RCRA Subtitle D (municipal and industrial waste), scrap metal debris, concrete debris, and asbestos were found at Site 09. No hazardous or toxic wastes classified under RCRA Subtitle C were discovered during the removal action. The table below presents the type of material, volume and the relevant disposal/recycling facility for each type of material removed. The Contractor used five (5) separate recycling/disposal facilities during the period of project performance. There were 22,839.39 tons of non-hazardous soil taken to Pondview Recycling, Inc. where additional fine materials were mixed with the soil and then sent to the Central Landfill as described in Section 5.0 above. The total amounts of removed material, the type of material, and the corresponding disposal or recycling facilities appear in the following table:

REMOVED MATERIAL	VOLUME OF MATERIAL	FACILITY LOCATION/DESTINATION	
RCRA Subtitle D Soils	22,839.39 Tons	Pondview Recycling, Inc. East Providence, RI	Rhode Island Resource Recovery Corporation— Central Landfill Johnston, RI
Concrete Debris	2,522.76 Tons	Mello Construction, Inc. Middletown, RI	
Scrap Metal	24.4 Tons	Mid-City Scrap Iron & Salvage, Inc. Westport., MA	
Asbestos	5 CY	A & L Salvage, Inc. Lisbon, OH	

7.0 ANALYTICAL PROCEDURES FOR CHARACTERIZATION OF STOCKPILED MATERIALS

One (1) eight-point composite sample was taken from each 500 CY stockpile. The composite sample was collected by visually dividing each stockpile into quadrants. Each sub-sample of the composite sample was taken from soils visually similar to the majority of the soil within that quadrant. If no one type of soil clearly dominated the volume of that quadrant, then the sub-samples were collected from soils of apparent maximum contamination. All eight representative sub-samples from the four quadrants of each stockpile were then consolidated and mixed to form a single composite sample. The samples were transported to ESS Laboratory, 185 Frances Avenue, Cranston, RI. The laboratory analysis included Volatile Organic Compounds (VOC), Total Petroleum Hydrocarbons (TPH), Polychlorinated Biphenyls (PCB), and Toxicity Characteristics Leaching Procedure (TCLP) Metals. All required sample preservation and chain-of-custody requirements were strictly observed. Laboratory analysis found no hazardous or toxic wastes classified under RCRA Subtitle C in the excavated material. A copy of the electronic analytical results is provided in Appendix D.