WORK PLAN FOR ENVIRONMENTAL SITE INVESTIGATION DEFENSE FUEL SUPPORT POINT - MELVILLE TANK FARM 3 PORTSMOUTH, RHODE ISLAND

PREPARED FOR:
Defense Fuel Supply Center
Alexandria, Virginia

PREPARED BY:
GZA Remediation , Inc.
Newton Upper Falls, Massachusetts

July 1994
File No. 4-1-0102\101731

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GZA
Remediation, Inc.

Integrated Environmental Services

July 25, 1994
File No. 4-1-0102

Mrs. Joan R. Turrisi
Defense Fuel Supply Center, DFSC-FQ
Cameron Station
Alexandria, Virginia 22304-6160

Re: Work Plan For
Environmental Site Investigation
Task Order ACO-0003
Defense Fuel Support Point-Melville
Tank Farm 3 - Portsmouth, Rhode Island
Contract Number DLA600-93-C-5340

320 Needham Street
Newton Upper Falls
Massachusetts 02164
617-244-7099
FAX 617-630-6420

Dear Mrs. Turrisi:

Attached for your review is a copy of the work plan describing the proposed tasks to complete an environmental site investigation of Tank Farm 3 at the Defense Fuel Support Point-Melville Terminal located in Portsmouth, Rhode Island. The work plan, prepared at your request, also includes a cost estimate to implement the plan. Please review this work plan and feel free to call us with your comments.

If you have any questions, please do not hesitate to call.

Very truly yours,

GZA REMEDIATION, INC.

For Anthony B. Urbano, P.E.
Project Engineer

For W. Fred Lenz, P.E.
Program Manager

A Subsidiary of GZA
GeoEnvironmental
Technologies, Inc.

Randy J. Meuse, P.G.
Project Manager

ABU/JPH:rl/dac

cc: Ms. Monica Fass, DFSC-PSA
Mr. Hasan Dogrul, DFSC-FQ

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1.00 INTRODUCTION

In accordance with our executed contract, GZA Remediation, Inc. (GZA Remediation) has prepared this work plan that describes the tasks required to complete an environmental site investigation at Defense Fuel Support Point-Melville (DFSP), Tank Farm 3 located in Portsmouth, Rhode Island. The purpose of the investigation will be to define the nature and extent of contamination and to identify any threats to public health and the environment at the Tank Farm 3 site. We believe the scope of work described below represents a preliminary evaluation of the site; the findings of the investigation will be used to assess the need for further environmental studies and the scope of any such studies.

2.00 BACKGROUND INFORMATION

The following describes the site and surrounding area, the site history, and the results of previous environmental investigations performed at Tank Farm 3. This information is based on: (1) a site visit; (2) interviews with site personnel; and (3) review of available files at the Rhode Island Department of Environmental Management (RIDEM), the Naval Education Training Center (NETC), and the DFSP's-Melville Terminal.

2.10 SITE AND AREA DESCRIPTION

Tank Farm 3 is located in the southwestern portion of Portsmouth, Rhode Island, approximately 1 mile south of the DFSP's Melville Terminal. Refer to Figure 1 for a Site Locus Plan. The approximately 40-acre site is abutted by the Navy's Defense Highway to the west, undeveloped woodlands to the north and south, and a residential condominium development to the east. Other nearby features include: Tank Farm 4, located 700 feet south of the site; a naval playground and recreational campsite, located 300 feet southwest of the site; Narragansett Bay, located 100 feet northwest of the site; and the Lawton Valley Reservoir, located 2,000 feet southeast of the site. The Lawton Valley Reservoir is a surface drinking water supply for the City of Newport and the Towns of Middletown and Portsmouth. The reservoir is believed to be located hydrogeologically upgradient of the site.

Tank Farm 3 consists of five 1,176,000-gallon concrete underground storage tanks (Tanks 32 to 36) and two 2,100,000-gallon steel underground storage tanks (Tanks 69

and 70). The tanks were formerly used to store marine diesel fuel, and more recently aviation jet fuels (JP-4 and JP-5). All of the tanks are cylindrical in shape and are located approximately five feet below grade. Tanks 32 to 36 are 100 feet-in-diameter and 20 feet tall. Tanks 69 and 70 are 118 feet-in-diameter and 24 feet tall.

The tank farm area is covered with grass lawns, paved access roads and miscellaneous transfer pump and control chambers. An outdoor electrical transformer is located in the southwest portion of the site and an indoor electrical transformer is located inside the electrical control house (Structure 227). Underground petroleum distribution lines interconnect the underground storage tanks. These fuel lines are piped underground to the DFSP's Melville Terminal located one mile north of the site. Refer to Figure 2 for the location of general site features.

Ring drains are located around each of the underground storage tanks. The drains act as a groundwater underdrainage system to prevent excessive hydrostatic uplift pressures on the bottom of the tanks. The ring drains around Tanks 32 to 36 are reportedly 6 feet above the bottom of the tanks. These ring drains connect to a common 12-inch drainage pipe which discharges, via gravity, to an oil/water separator located in the northwest portion of the site. The oil/water separator's design flow rate is 250 gallons per minute, and the separator discharges to Lawton Brook, approximately 100 feet upstream of Narragansett Bay. This outfall (No. 005) is regulated by a Rhode Island NPDES permit. A 5,000-gallon underground storage tank is located adjacent to the oil/water separator which is used to store floating petroleum product that accumulates in the oil/water separator.

In general, the site topography slopes from a high of approximately 90 feet above mean sea level (msl) in the south central portion of the site to lows of approximately 40 feet msl on the west side of the site (along the Defense Highway) and to lows of approximately 15 feet msl on the northeastern side of the site (along Lawton Brook). The inferred direction of groundwater flow is anticipated to be to the west towards Narragansett Bay or to the north towards Lawton Brook.

2.20 SITE HISTORY

The U.S. Navy has owned the property since at least the 1940s. Tanks 32 to 36 were installed in the early 1940s; and, Tanks 69 and 70 were installed in 1953 and 1954 respectively. The tank farm was operated by the U.S. Navy from the 1940s to 1974. The tank farm has been controlled by the (Defense Fuel Supply Center DFSC) since 1974. Presently, the facility is operated by Management Engineering Associates under contract to DFSP.

Tanks 32 to 36 were formerly used to store marine diesel fuel and were changed over to storing jet propulsion (JP)-5 jet fuel between 1978 and 1986. Tanks 69 and 70 were

formerly used to store JP-5 fuel and were changed over to storing JP-4 fuel in 1980 and 1993, respectively. Currently, the only active tank is Tank 32.

All of the tanks were reportedly cleaned at least once (when the tank contents were changed). The dates of these tank cleanings were:

Tank	Year Cleaned
32	1978
33	1986
34	1980
35	1983
36	1983
69	1980
70	1992

In addition to tank cleanings, the tank bottoms were periodically stripped to remove bottom sediments and water. Prior to 1974, the tank bottoms were reportedly pumped to a sand filter (with steel sidewalls) that was located between Tanks 32 and 33. The filtered water was reportedly discharged to Narragansett Bay. Residual oil remaining in the sand filter was apparently burned or scraped off and removed to a dump site. Since 1974, the tank bottoms have reportedly been disposed of at off-site facilities. The sand filter, along with some of the surrounding soils, were reportedly removed from the site around 1974. About this same time, the oil/water separator (that receives groundwater from the underdrainage system) was installed at the site.

The only recorded incident of an apparent leak from the underground storage tanks involved Tank 70. During cleaning of the tank in September of 1992, Management Engineering Associates reported petroleum seepage observed in the bottom of the tank. The tank leaks were reportedly sealed and then the tank passed a tightness test performed by Tracer Research Corporation (using a tracer compound and soil gas sampling techniques). By March of 1993, DFSP obtained permission from RIDEM to re-use the tank.

According to individuals familiar with the site, the only known surficial spill in Tank Farm 3 involved Tank 35. In the early 1980s, Tank 35 was inadvertently overfilled, and JP-5 spilled onto the surface (from the vent line). Based on inventory records, it was estimated that 50,000 to 60,000 gallons of JP-5 may have been spilled to the ground. Approximately 4,000 gallons of product was recovered during this event. The approximate extent of the surficial spill, based on visual evidence of distressed vegetation, is depicted on Figure 2.

2.30 PREVIOUS ENVIRONMENTAL STUDIES

In March of 1983, Envirodyne Engineers Inc. completed a **Final Initial Assessment Study** of 18 study areas at the NETC facility, including Tank Farm 3. This study was performed for the U.S. Navy in order to identify potential threats to human health or to the environment caused by past hazardous substance storage handling or disposal practices at naval facilities. It should be noted that the study did not include any

site-specific soil or groundwater testing. Envirodyne Engineers concluded that tank bottom sludge may have been disposed in burning chambers (sand filter) at Tank Farm 3. Envirodyne recommended that additional studies be performed at nearby Tank Farm 4, and that the need for subsequent studies in Tank Farm 3 would depend on the findings at Tank Farm 4.

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As a result of the recorded leak in Tank 70, the RIDEM issued a Notice of Violation (NOV) to DFSP on September 11, 1992. The NOV required groundwater monitoring well installations and soil/groundwater testing in the vicinity of the leaking tank. Groundwater Technology Inc. (GTI) under contract with DFSP installed seven monitoring wells (GT-301 to GT-307); analyzed soil and groundwater samples for benzene, toluene, ethyl benzene, and xylenes (collectively known as BTEX); analyzed a composite soil sample for volatile organic compounds (VOCs), semi-VOCs (SVOCs), metals, and polychlorinated biphenyls (PCBs); and analyzed a composite groundwater sample for SVOCs, metals and PCBs.

GTI's October 1992 progress report reported that low levels (less than 200 parts per billion [ppb]) of BTEX compounds were detected in soil samples, and that, with the exception of monitoring well GT-305, BTEX concentrations in groundwater samples were below the RIDEM's safe drinking water Maximum Contaminant Levels (MCLs). The groundwater sample from monitoring well GT-305 had a benzene concentration of 8.3 ppb (slightly above the MCL of 5 ppb for benzene).

The composite soil and groundwater sample results did not indicate elevated levels of SVOCs, PCBs, nor metals, except for chromium which was detected in the composite groundwater sample at a concentration of 62 ppb (which exceeded RIDEM's MCL of 50 ppb). However, the groundwater results were for total metals concentrations, and the results may have been influenced by suspended soil in the water sample.

Groundwater monitoring wells GT-301 through GT-308 have been gauged weekly since their installation, to determine if free-phase floating product is present in the wells. To date, no separate phase product has been detected in these wells.

Tank Farm 3 is a CERCLA listed Site, which indicates that it may be investigated under the Federal Superfund program. The US Navy, United States Environmental Protection Agency (U.S. EPA), and RIDEM signed a Federal Facilities Agreement (FFA) in March of 1992 that commits the Navy to investigating their CERCLIS sites (which includes Tank Farm 3). GZA spoke with individuals at EPA and the CERCLIS/RCRA section of RIDEM. Both agencies indicated that no CERCLIS type investigations are proposed for Tank Farm 3 in the near future, however they intend to review status reports and subsequent studies that are performed at the site.

3.00 PROPOSED ENVIRONMENTAL SITE INVESTIGATION

The following describes the specific tasks that GZA judges necessary to perform an environmental site investigation of Tank Farm 3. RIDEM will be notified at least 48 hours in advance of any excavation, well installation or repair/replacement of equipment at the facility.

3.10 SITE VISITS

Prior to performing field activities, GZA will perform a site reconnaissance to visually evaluate access restrictions and underground utility locations in the vicinity of Tank Farm 3. GZA anticipates that DFSC's Quality Surveillance Representative (QSR) will be available to assist us in this effort. GZA's project manager and project geologist will review the scope of work in consideration of access restrictions and underground utility locations.

3.20 ADDITIONAL FILE REVIEW

GZA will review available air photos, Navy operation manuals and plans to better determine the location and operational procedures of the former sand filter and the existing groundwater underdrainage system.

3.30 GROUNDWATER MONITORING WELL INSTALLATIONS

GZA proposes to install 16 monitoring wells (PW-301 to PW-316). Refer to Figure 2 for proposed well locations. Monitoring well PW-301 is proposed to be located downgradient of the former sand filter/burning pit. Monitoring well PW-314 is proposed to be located downgradient of an outdoor electrical transformer. Monitoring wells PW-309, PW-310 and PW-316 are proposed to be located downgradient of, and within, the early 1980s surficial spill area. Monitoring well PW-316 is proposed to be located downgradient of a fuel oil line. The remaining monitoring wells are proposed to be located downgradient of the underground storage tanks.

The monitoring wells will be installed by GZA Drilling, Inc. of Brockton, Massachusetts utilizing a truck-mounted drill rig using hollow-stem augers. When hollow-stem auger drilling refusal is encountered (presumably bedrock), the borings will continue to be advanced through the bedrock using a 5-foot-long NX-type core barrel. Each well will be developed to remove drilling water that enters the formation and to restore the natural permeability of the surrounding formation. Well development will continue until the water removed is visually sand free. The well development will be performed by either manual bailing, or if the volume of development water is large, by using a small-diameter submersible pump. The pump

will be decontaminated between each boring. In addition, in order to prevent cross contamination, the drilling tools will be cleaned between each monitoring well location. A GZA geologist or engineer will be present during drilling in order to classify soil conditions, oversee well installations, develop the wells, and prepare boring/well installation logs.

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Soil cuttings generated during drilling will be field-screened for total VOCs with a Flame Ionization Detector (FID). Composite soil samples exhibiting FID readings of greater than 10 parts per million (ppm), will be placed in labelled 55-gallon drums. Soil cuttings with FID readings of less than 10 ppm will be left in the immediate vicinity of the well. Well development water from borings which have elevated soil FID readings (greater 10 ppm) will also be placed in labelled 55-gallon drums. Well development water from borings which have soil FID readings of less than 10 ppm will be discharged onto the ground surface in the immediate proximity of the wells.

A groundwater monitoring well will be installed within each completed boring and will be constructed of 2-inch-diameter polyvinyl chloride (PVC) wellscreen and solid riser pipe. The 20-slot (0.020-inch slots) wellscreen will be set to span both above and below the water table. Well depths are anticipated to be approximately 25-feet deep. Filter sand will be backfilled around the wellscreen and a 12-inch-thick bentonite seal will be placed around the solid riser pipe, immediately above the filter sand. A cement grout will be placed around the remaining solid PVC riser pipe up to grade. The integrity of each well will be maintained at the surface with a flush-mounted curb box, cemented in place within a 2-foot by 2-foot by 4-inch-thick concrete pad.

3.40 SOIL SAMPLING AND ANALYSIS

Soil samples will be obtained during the drilling of the monitoring wells. The soil samples will be obtained at 5-foot intervals with a split-spoon sampler using standard penetration test techniques. The soil samples will be collected in clean glass jars and will be kept cool during shipment to GZA's Environmental Chemistry Laboratory (ECL) located in Newton, Massachusetts.

Soil samples will be screened in the field for total VOCs using a portable FID. One soil sample from each monitoring location, with the highest FID reading collected above the water table, will be submitted for laboratory analysis and analyzed for VOCs using EPA Method 8260, for total volatile petroleum hydrocarbons using modified EPA Method 8015, and for total petroleum hydrocarbons using modified EPA Method 8100 (TPH-GC). In addition, the surficial soil sample (0- to 2-foot depth) collected from the boring in the vicinity of the outdoor electrical transformer (PW-314) will be analyzed for PCBs using EPA Method 8080.

3.50 GROUNDWATER SAMPLING AND ANALYSIS

Following development of each groundwater monitoring well, groundwater samples will be obtained. Groundwater samples will also be obtained from six existing groundwater monitoring wells. The samples will be collected using dedicated plastic disposable bailers. Three times the initial standing volume of groundwater in the six existing wells will be evacuated prior to sampling. The water samples from each well will be collected in acid preserved 40-ml glass vials with Teflon Septa, and in unpreserved 1-liter dark amber glass jars. Water samples will be placed in an ice-filled cooler and delivered to GZA's ECL for subsequent analysis.

All groundwater samples will be analyzed for VOCs using EPA Method 8260, for total volatile petroleum hydrocarbons using modified EPA Method 8015, and for total petroleum hydrocarbons using modified EPA Method 8100 (TPH-GC). In addition, the groundwater sample collected from monitoring well PW-314 will also be analyzed for PCBs using EPA Method 8080.

3.60 SURFACE WATER SAMPLING AND ANALYSIS

Three surface water samples (SW-1, SW-2 and SW-3) will be collected from Lawton Brook at the approximate locations shown on Figure 2. SW-1 will be obtained upstream of Tank Farm 3, SW-2 will be obtained mid-stream, and SW-3 will be obtained downstream. The surface water samples will be analyzed for VOCs using EPA Method 8260, for total volatile petroleum hydrocarbons using modified EPA Method 8015, and for total petroleum hydrocarbons using modified EPA Method 8100 (TPH-GC).

3.70 ELEVATION SURVEY

An arbitrary datum elevation survey will be performed in order to establish: (1) the top of PVC casing elevation of each newly installed monitoring well along with ground surface elevation; (2) the bottom elevation of the underground storage tanks; (3) the bottom invert elevation of the underground underdrainage utility lines (at accessible manhole locations); and (4) the surface water elevation in Lawton Brook at locations SW-1, SW-2 and SW-3. The elevation survey will be performed relative to a common on-site datum. The location of these features will be determined by taping distances from on-site features.

3.80 WATER LEVEL/PRODUCT THICKNESS MEASUREMENTS

After one month of well stabilization, GZA will obtain groundwater level measurements from the monitoring wells. This information, in conjunction with the elevation survey data, will be used to construct a groundwater contour plan of the

area. In addition, each of the wells will be checked for the presence floating petroleum product using an electronically operated oil/water interface probe.

3.90 REPORT PREPARATION

GZA will provide a final report documenting that assessment activities have been performed in accordance with this work plan, as approved by DFSC. This report will include all analytical results; boring logs with field observations; and figures showing the approximate location of monitoring wells and observed contaminant distribution.

4.00 QUALITY ASSURANCE/QUALITY CONTROL PLAN

A laboratory prepared trip blank water sample will be included in each cooler which is delivered to the laboratory. The trip blanks will be analyzed for VOCs using EPA Method 8260. The trip blanks will be used to evaluate if cross contamination occurred during sample shipment. In addition, a blind duplicate water sample and a blind duplicate soil sample will be prepared in order to evaluate the accuracy of the analytical laboratory. The blind duplicates will also be analyzed for VOCs using EPA Method 8260, as well as for, TPH-GC and for total volatile petroleum hydrocarbons. Analytical data will be validated internally at GZA's ECL by a lab supervisor or manager.

5.00 HEALTH AND SAFETY PLAN

To promote the safety of field personnel, a health and safety plan (HASP) for assessment activities along with a site-specific health and safety form is attached as Appendix A. Field work will be performed in Level D personnel protection using standard work clothes and work boots. Steel toe boots, hardhats, safety glasses, and hearing protection will be required during drilling. If contamination is encountered, then protective clothing, such as tyvek suit, and gloves may be necessary. Smoking will not be allowed at the work site.

Ambient air readings will be obtained during drilling using an H-NU photoionization detector (PID) equipped with a 10.2 electron-volt (eV) lamp and with an Lower Exposure Limit (LEL) meter. If the Level D action levels outlined in the site specific health and safety form are exceeded, then Level C personnel protection equipment (full face respirator) shall be utilized. If Level C action levels are exceeded, then work will stop, personnel will be withdrawn from the work area, and the health and safety plan will be reevaluated.

A portable phone will be used at the site. The directions to the nearest hospital are attached to Appendix A.

6.00 PROJECT SCHEDULE

Based on anticipated approval of the work plan by DFSC within 30 days of submittal and GZA's anticipated schedule to complete the tasks described herein, we will endeavor to meet the following schedule:

Task	Completion Date[1]
1. Site Visits	September 6
2. Additional File Review	September 6
3. Groundwater Monitoring Wells	September 12
4. Soil Sampling and Analysis	October 17
5. Groundwater Sampling and Analysis	October 17
6. Surface Water Sampling and Analysis	October 17
7. Elevation Survey	October 17
8. Water Level/Product Thickness	October 17
9. Report Preparation	November 18

Note: 1. Assumes work plan approval by May 31, 1994.

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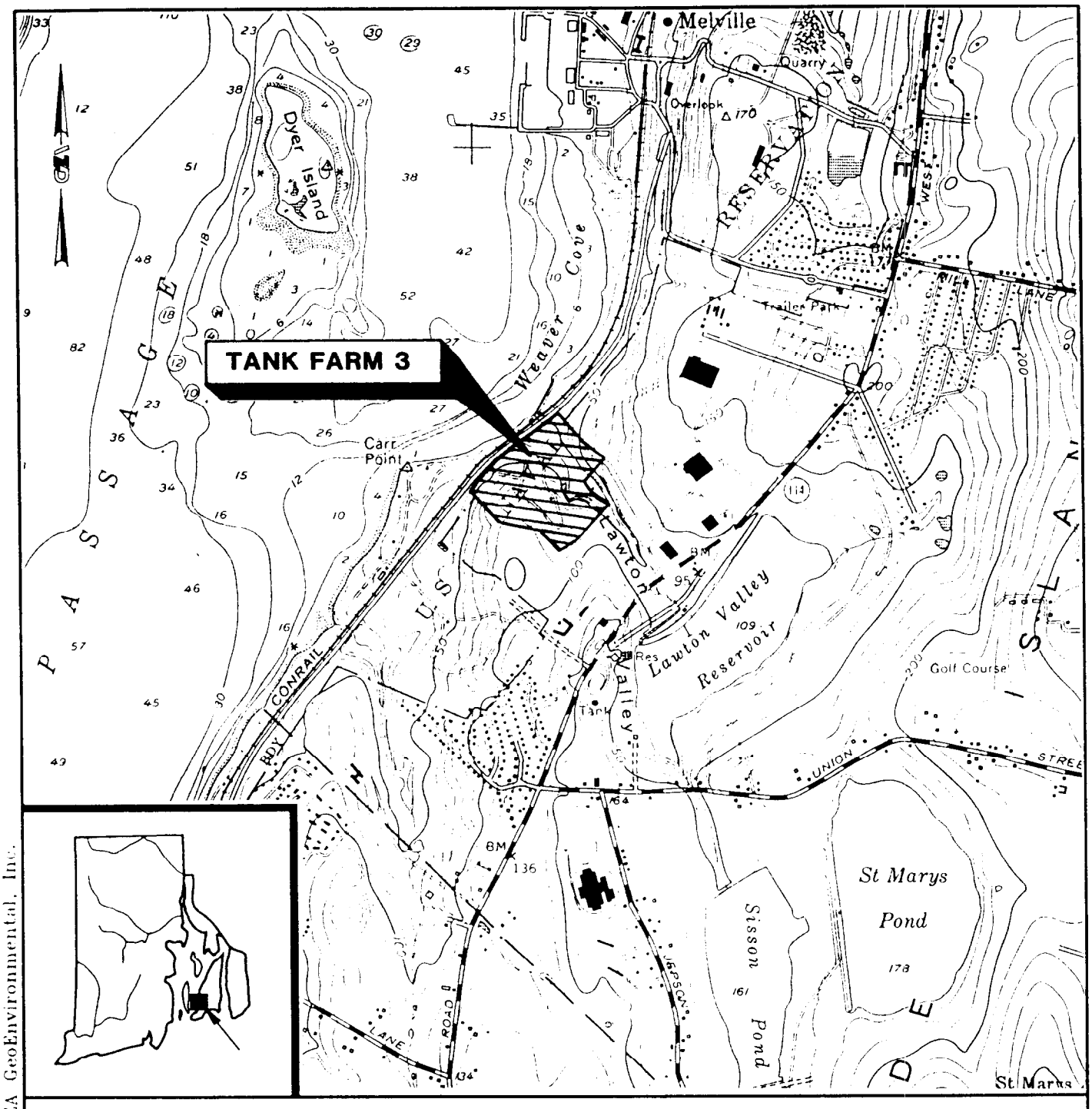
FIGURES



FROM USGS PRUDENCE ISLAND, RI QUADRANGLE MAP

APPROXIMATE SCALE IN FEET

0' 1000' 2000' 4000'

GZA

DEFENSE FUEL SUPPLY CENTER

PORTSMOUTH, RHODE ISLAND

LOCUS PLAN

MAY 1994

FIGURE NO. 1

File No. 31288.3

APPENDIX A

SITE SPECIFIC HEALTH AND SAFETY FORM AND NEWPORT HOSPITAL ROUTE MAP

GZA Site Specific Information and Checklist Form

Important! This is not a stand alone document. Form must be accompanied on-site by the GZA Site H&S Handbook!!

Site Name and Address: DFSP - Tank Farm 3 - Portsmouth, RI Job #: 31288.3

Estimated Start Date: Spring 1994 Completion/Expiration Date: Summer 1994

Site Description: Approximately 40 acre tank farm storing approximately 10 million gallons of jet fuel in seven underground storage tanks, subsurface fuel lines, and surface structures.

Nature of Field Work (List all tasks): Soil borings, monitoring well installations, soil, groundwater and surface water sampling and site survey.

Emergency Response Information and Phone Numbers

Hospital #: 911 Ambulance #: 911 Fire #: 911 Police #: 911

Hospital Name & Address: Newport Hospital, 11 Friendship Street
Newport, RI 846-6400

Directions, Diagram, or Map of Route to Nearest Hospital Attached: [X] Yes [ ] No (if no, do not proceed)

Other Emergency Contact: Phone #:

Location of Nearest Phone: Car Phone DFSP office at main terminal

Air Monitoring Instruments and Action Levels:
Organic Vapor Detector (hnu, OVM, OVA) - Breathing Zone Readings:

0 to 25 units: Remain in Level D. Use colorimetric tubes or other chemical specific device to verify low PEL contaminant levels (Benzene, Vinyl Chloride, etc.) where applicable.

25 to 100 units: Withdraw from work area, and proceed to Level C protection for re-entry, or discontinue operation.

> 100 units: Secure operations, withdraw from work area, and discontinue work at that location until contaminants can be evaluated, and detailed H & S plan implemented.

Combustible Gas Indicator CGI/LEL Meter (if required) - Readings Near Vapor Source:

- < 10% LEL: Continue to monitor with caution. Eliminate all ignition sources.
- 10% to 20% LEL: Begin vapor control measures (i.e. foam, sand, polyethylene film, portable blower etc.)
- > 25% LEL: Explosion hazard, withdraw from area.

Have Necessary Utility Notifications for Subsurface Work Been Made? [X] Yes* [ ] Not Applicable

If yes, specify clearance dates, clearance I.D. #, and other relevant information:

*utility clearance will be completed 72 hours prior to field program

Subcontractor Identification Company Name:	Type:(driller,etc.)	Contractor notified of H&S responsibilities in writing:
1. GZA Drilling	driller	[X] Yes [ ] No (if no, do not proceed)
2.		[ ] Yes [ ] No (if no, do not proceed)

(x = Applies, or required item(s) available. NA = Not Applicable.)

PHYSICAL HAZARDS
[ ]Confined Space Entry (prohibited without permit)
[X]Construction Hazards, Drill Rigs, Backhoes, etc.
[ ]Drums and Buried Drums
[X]Fire and Explosion
[X]Heat and/or Cold Stress
[X]Moving Vehicles, Traffic Safety
[X]Noise
[X]Overhead Utilities and Hazards
[ ]Pedestrian Traffic
[ ]Test Pit Excavations
[X]Underground Utilities and Hazards
[ ]Water Hazards and Boat Sampling
[ ]Others:_____

CHEMICAL HAZARDS
[ ]Asbestos
[X]BTEX Compounds
[ ]Chlorinated Organic Compounds
[ ]Chromium Compounds
[ ]Cutting Oils
[X]Fuel Oil
[X]Gasoline
[ ]Herbicides
[ ]Hydrogen Sulfide
[ ]Lead Paint
[ ]Metal Compounds
[ ]Methane
[ ]Pesticides
[X]Petroleum Hydrocarbons (PHC)
[ ]Polychlorinated Biphenyl (PCB)
[ ]Polycyclic Aromatic Hydrocarbons (PAH)
[ ]Tetraethyl & Tetramethyl Lead
[X]Volatile Organic Compounds (VOC)
[ ]Waste Oil
[ ]Others:_____

BIOLOGICAL HAZARDS
[ ]Insects
[ ]Lyme Disease
[ ]Medical Wastes and Bloodborne Diseases
[ ]Poisonous Plants
[ ]Rats, Snakes and Other Vermin
[ ]Wastewater and Sewage
[ ]Others:_____

HAZARD COMMUNICATION
[ ]All containers properly labeled
[ ]MSDS/workplace notebook available

ACCIDENTS
[X]First aid kits and/or facilities available
[X]GZA Incident Investigation Forms available

PERSONAL PROTECTIVE EQUIPMENT
[X]Respirator Type: full face
[X]Resp-Cartridge Type: GMC-H
[X]Hearing Protection
[X]Hardhat
[ ]Outer Gloves Type:_____
[ ]Inner Gloves Type:_____
[X]Steel toed boots/shoes
[ ]Coveralls Type:_____
[ ]Outer Boots Type:_____
[X]Eye Protection
[ ]Others:_____

MONITORING EQUIPMENT
[X]PID Type: HNu
Lamp Energy: 10.2 eV
[ ]FID Type:_____
[ ]Cal gas and equipment type:_____
[X]LEL/O_2 Meter
[ ]Others:_____

OTHER EQUIPMENT & GEAR
[ ]Caution Tape
[ ]Traffic Cones or Stanchions
[ ]Warning Signs or Placards
[ ]Decon Buckets, Brushes, Detergent, Towels and Plastic Bags
[X]Others: First Aid Kit

Project Personnel and Sign-off (Refer to section 4.2.8 of the GZA Site H&S Handbook):

Site Safety Officer: Mark Dalpe
(Required on all sites)

Project Manager: Tony Urbano

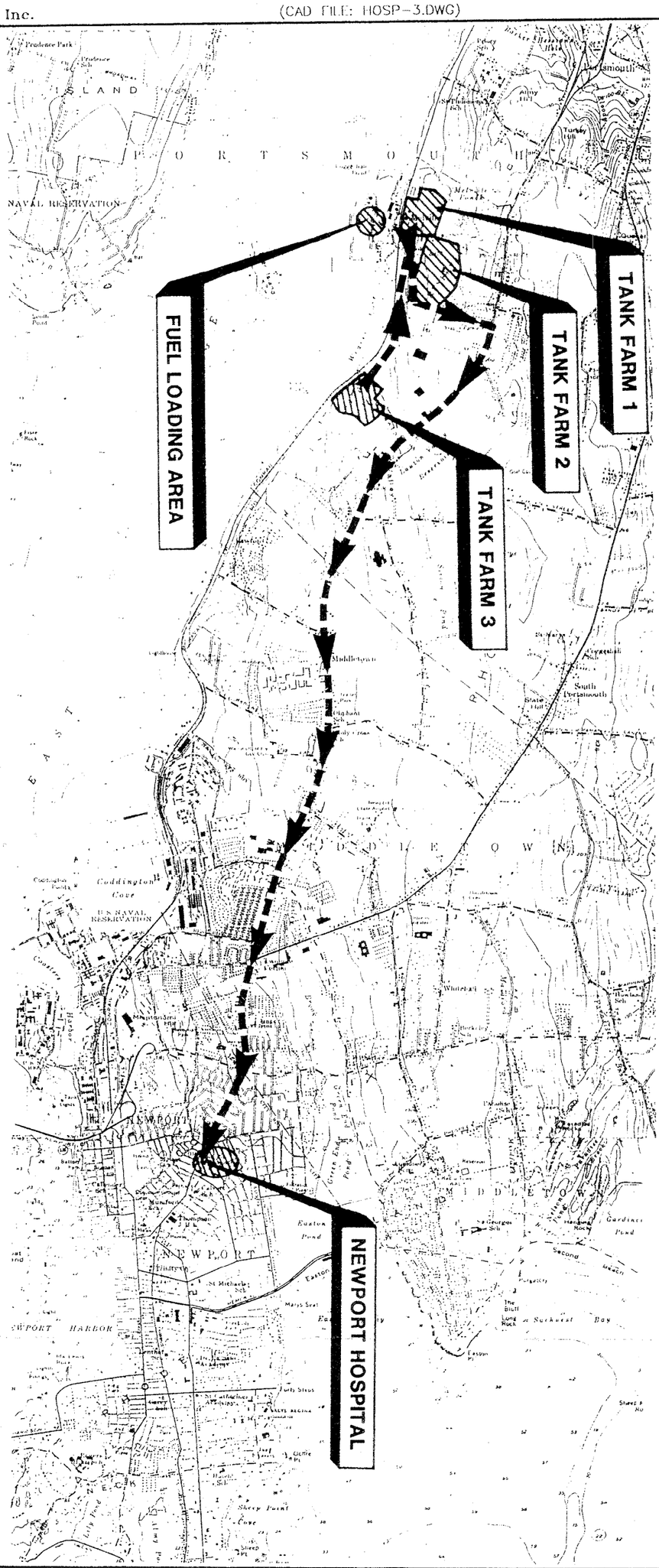
AIC or PIC: John Hartley

RHSC (or designee): Kelly Archer

Attach additional sheets for comments:

(Revised 11/6/92)

(CAD FILE: HOSP-3.DWG)



NOTE:

1. THE BASE MAP WAS DEVELOPED FROM PRUDENCE ISLAND AND NEWPORT USGS MAPS. ORIGINAL SCALE 1"=2000'.

DEFENSE FUEL SUPPLY CENTER

PORTSMOUTH, RHODE ISLAND

NEWPORT HOSPITAL ROUTE MAP

PROJECT No. 31288.3

FIGURE No. A

REV. No.	DESCRIPTION	BY	DATE

SCALE IN FEET

0' 2000' 4000' 8000'

PROJ. MGR. ABU
CHECKED BY: ABU
REVIEWED BY: JPH

DRAWN BY: BAW
SCALE: 1"=4000'
DATE: MAY 1994

GZA GeoEnvironmental, Inc.