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CONTRACTOR DRAWINGS & INFORMATION SUBMITTAL
NORTHNAVFACENGCOM 4335/3 (Rev 6/80)

CONTROL NO. 1A

CONTRACT NO.	DELIVERY ORDER #	ACTIVITY LOCATION
N62472-94-D-0398	0060	Naval Station Newport, Newport, RI

PROJECT TITLE
DERECKTOR SHIPYARD – BUILDING 42 SUMP PIT S42-5 INVESTIGATION OF INLET/OUTLET PIPES

FROM	DATE
Foster Wheeler Environmental Corp. - Program QCM: Mark Miller	April 6, 2000
TO	DATE
T GIBISON (2 COPIES)	April 6, 2000

1 THE CONTRACTOR SUBMITTALS LISTED BELOW ARE FORWARDED FOR YOUR REVIEW AND RECOMMENDATIONS.
(a) APPLY APPROPRIATE STAMP IMPRINT TO EACH SUBMITTAL AND INDICATE REVIEW COMMENTS, AS REQUIRED.
(b) RETAIN ONE (1) COPY OF THIS TRANSMITTAL FORM AND RETURN REMAINING COPIES WITH REVIEWED SUBMITTALS TO ROICC

2. THESE SUBMITTALS SHOULD BE RETURNED TO THIS OFFICE BY _____

3. _____

COPY TO RIDEM-P KULPA (1 COPY)

Mark Miller APRIL 6, 2000

[X] ROICC [X] NSNPT [X] USEPA
R Krivinskas (2-copies) M Griffin (1-copy) K Keckler (1-copy)

SIGNATURE AND DATE

FROM DESIGNER	DATE
TO. ROICC	DATE

1. THE SUBMITTALS LISTED BELOW HAVE BEEN REVIEWED AND ARE RETURNED, WITH ACTION TAKEN AS INDICATED

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[ ] ROICC [ ] DESIGNER

SIGNATURE AND DATE

FROM ROICC	DATE
TO CONTRACTOR	DATE

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COPY TO
[ ] ROICC [ ] OTHER

FOR COMMANDING OFFICER, NORTHERN DIVISION NAVAL FACILITIES ENGINEERING COMMAND DATE

ITEM NO.	SUBMITTAL DESCRIPTION	PREPARED/ SUBMITTED BY	APPROVED	DISAPPROVED	REMARKS
2	SD-18, Records, Work Plan and AHA for Bldg 42 Sump Pit Investigation of Inlet/Outlet Pipes and Response to Comments (R1)	Mark Miller			

FOSTER WHEELER ENVIRONMENTAL CORPORATION

April 5, 2000
File# 1284-0060-00-0152

Mr. Paul Kulpa
Office of Waste Management
Rhode Island Dept. of Environmental Management
235 Promenade Street
Providence, RI 02908

Ms. Kymberlee Keckler
United States Environmental Protection Agency, Region I
1 Congress Street
Suite 1100 (HBT)
Boston, MA 02114-2023

RE. Derecktor Shipyard, Building 42 Sump Pit S42-5 Investigation of Inlet/Outlet Pipes, Naval Station Newport, Newport, Rhode Island

Dear Mr Kulpa and Ms. Keckler

On the behalf of the US Navy, Foster Wheeler Environmental Corporation is pleased to present the Work Plan for Removal of the S42-5 Sump Pit at the Naval Station Newport (NAVSTA Newport) in Newport Rhode Island Foster Wheeler has been tasked by the US Navy with removing the S42-5 Sump Pit and associated underground piping located adjacent to Building 42 at the Derecktor Shipyard at the NAVSTA Newport facility. This letter is being submitted to satisfy the Work Plan and AHA requirements for this task The S42-5 Sump Pit Work Plan is intended to supplement the Work Plan and Health and Safety previously submitted for the Melville North Landfill. This Work Plan only addresses the additional tasks associated with the S42-5 Sump Removal Detailed information as to personnel, organization, emergency contacts and sampling procedures is contained in the Melville North Landfill Work Plan.

The S42-5 Sump Pit Removal Work Plan has been revised to incorporate comments by the Rhode Island Department of Environmental Management (RIDEM) and the United States Environmental Protection Agency (EPA). The RIDEM and EPA comments and responses have been included as an attachment to this letter. Any additional questions or comments should be directed to the NAVSTA Newport Point of Contact·

David D Dorocz
Environmental Officer
Naval Station Newport

Sincerely,

Carl Tippmann
Project Manager

cc: Tom Gibison, NORTHDIV (2 Copies)
Robert Krivinskas, NORTHDIV (2 Copies)
Melissa Griffin, NAVSTA
Jon Cary, FWENC
File

2300 LINCOLN HIGHWAY EAST, ONE OXFORD VALLEY, SUITE 200, LANGHORNE, PA 19047-1829
PHONE (215) 702-4000 FAX (215) 702-4045

Work Plan

The following is the approach Foster Wheeler Environmental Corporation (Foster Wheeler) will utilize to remove sump pit S42-5 and determine the location of the discharge points and generation points associated with the lines entering and exiting the S42-5 sump pit.

Foster Wheeler will acquire the proper dig safe clearance from the National Dig Safe Center and NAVSTA Newport Public Works Department prior to commencing any intrusive activities. All utility locations will be reviewed with site personnel and locations will be marked clearly. During activities, if any unidentified utilities are encountered the Naval Station Utility Department will be notified immediately. The current Activity Hazard Analysis (AHA) along with newly generated AHAs specific to the sump pit removal activity will be reviewed prior to the start of the project. Foster Wheeler will notify RIDEM one week prior to commencing field activities.

Activities will begin with the removal of the water currently contained within the sump pit. Water will be transferred to a 20,000 gallon temporary storage tank staged adjacent to the work area. This water has been analyzed in the past and had been given approval to be discharged to the POTW. Foster Wheeler will seek approval to continue discharging this water to the POTW.

With the water removed, excavation will begin to expose the sump pit exterior in preparation for demolition. During excavation soils will be screened for evidence of contamination. Visual, olfactory senses, and jar headspace analysis with a Flame Ionization Detector (FID) will be used for field screening. In general, jar headspace results greater than 10 ppmv will be suspected of being contaminated. Jar Headspace analysis will be conducted utilizing the following procedure:

1) Place 4 oz of soil in an 8-oz decontaminated glass jar.
2) Cover jar with aluminum foil and secure lid with 1 turn.
3) Equilibrate sample in heated environment.
4) Measure headspace by poking probe of FID through foil.

If contaminated soil is present it will be staged on 10-mil polyethylene sheeting, sampled for waste characterization, and covered. All other soil will be staged adjacent to the work area to be utilized as backfill. Staged soil will be located a minimum of 2' away from the edge of excavation. Excavation will be accomplished with a Caterpillar 215 excavator or equivalent.

When the tank has been exposed the concrete structure will be demolished using an excavator with a hydraulic hammer attachment. During the demolition the metal pumps and piping within the pit will be removed inspected for cleanliness, cleaned if necessary, and sent for metal recycling. The concrete will be broken into manageable sizes, removed and stockpiled. In the event that there is evidence that the concrete may have come in contact with contamination, concrete chip samples will be collected for waste characterization.

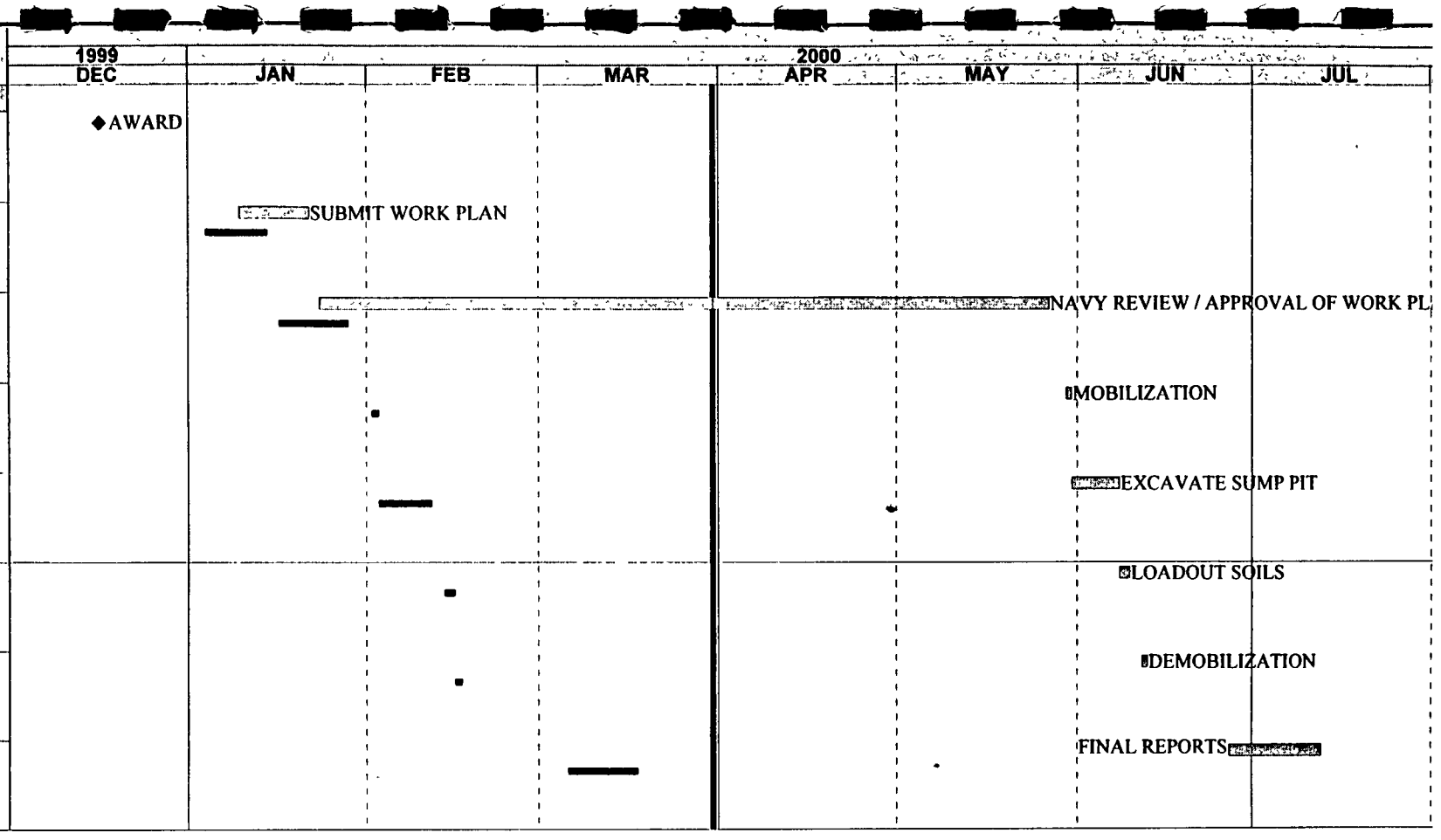
After the concrete sump has been removed, the soils next to and below the pit will be inspected. If contamination is present, excavation will continue to remove the contaminated soils. Excavation may proceed beyond the ground water elevation if a limited amount of contamination is present. Upon the completion of the removal of contaminated soils confirmatory samples will be collected from the 4 sidewalls and from the bottom of the excavation. Samples will be collected using established sample collection procedures as outlined in the Melville North Landfill Remedial Action Work Plan. Samples will be sent for laboratory analysis for VOCs (EPA SW 846 Method 5035), SVOCs (EPA Method 8270), RCRA Metals (EPA Method 6010), PCB's (EPA Method 8082), and TPH Method 8015. VOC samples will be collected at a minimum depth of 3" below the surface of the excavation.

After the sump pit has been removed, Foster Wheeler will conduct smoke tests on any lines heading toward Building 42 that were not checked by Brown & Root Environmental (SASE Investigation). Once smoke testing has been completed, each line entering or exiting the pit will be excavated. Soils will be field screened every 50 feet by jar headspace and TPH PetroFLAG analysis for contamination. Contaminated material will be segregated using the same procedure as referenced for the sump pit removal. Piping will be segregated from the soils upon removal and, dependent on construction material, sent for either metal recycling or disposal. Excavation and removal of pipe will continue until the origin or discharge point is located. In the event any pipes are determined to be active they will by plugged, if necessary. Samples will be collected at the discharge points of the lines, and biased toward areas that exhibit evidence of discoloration, elevated FID readings, positive PetroFLAG results in excess 500 mg/kg, and/or olfactory evidence. Samples will be analyzed for the same parameters as the confirmatory sampling for the sump pit excavation.

All sampled excavations will be left open until confirmatory sample results are reviewed. Excavations will be barricaded with high visibility fencing and signs will be placed to identify the open excavation hazard. Restoration will consist of placing the clean soils removed along with imported 6-inch minus backfill into the excavations. If it becomes necessary to backfill an area prior to removing suspected contaminated material, Foster Wheeler will place polyethylene sheeting into the excavation prior to backfill. Backfilled areas of potential concern will be staked. Backfill will be compacted with the excavator bucket during its placement. Areas that require seeding will be seeded and mulched. Roadway areas will have 1 ½ inch stone placed on the surface.

Upon completion of the removal activities, Foster Wheeler will prepare and submit a close out report. The report will be submitted to the Navy within 30 days of completion of the field activities. Foster Wheeler will photo-document pertinent features during the removal action and include with the Final Report.

Early Start	Early Finish	% Comp	SUMP PIT REMOVAL
17DEC99A		100	◆AWARD
10JAN00A	21JAN00A	100	SUBMIT WORK PLAN
24JAN00A	26MAY00	53	NAVY REVIEW / APPROVAL OF WORK PL
30MAY00	30MAY00	0	MOBILIZATION
31MAY00	07JUN00	0	EXCAVATE SUMP PIT
08JUN00	09JUN00	0	LOADOUT SOILS
12JUN00	12JUN00	0	DEMOBILIZATION
27JUN00	12JUL00	0	FINAL REPORTS



Start Date	17DEC99
Finish Date	12JUL00
Data Date	31MAR00
Run Date	05APR00 16 06

Early Bar
Target Bar
Progress Bar

6000 Sheet 1 of 1

DELIVERY ORDER 60

BUILDING 42-5 SUMP PIT REMOVAL

NEWPORT, RI

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ACTIVITY HAZARD ANALYSIS

Project: Sump Pit S42-5, Investigation of Inlet/Outlet Pipes
Activity: Site Preparation
Location: Naval Station Newport, Rhode Island

MAJOR STEPS	POTENTIAL HAZARDS	PROTECTIVE MEASURES/CONTROLS
1. Install temporary security fencing (Hazards and controls 1, 2, 5, 8 - 13 apply)	1. Back Injuries resulting from manual materials handling	1. Site personnel will be instructed on proper lifting techniques, mechanical devices should be used to reduce manual handling of materials, team lifting should be utilized if mechanical devices are not available.
2 Identify underground utilities in work area (Hazards and controls 1 - 13 apply)	2. Slips/Trips/Falls	2. Maintain work areas safe and orderly; unloading areas should be on even terrain; mark and repair if possible tripping hazards.
3. Establish work zones (Hazards and controls 1 – 3, 5, 8, and 13 apply)	3. Vehicular Traffic while moving and setting up equipment	3. Spotters will be used when backing up trucks and heavy equipment and moving equipment.
4. Establish temporary staging area (Hazards and controls 1 - 8, 10 -12 apply)	4. Overhead Hazards	4. Personnel will be required to wear hard hats that meet ANSI Standard Z89.1. All ground personnel will stay clear of suspended loads. All equipment will be provided with guards, canopies or grills to protect the operator from falling or flying objects. All overhead hazards will be identified prior to commencing work operations.
5. Establish decontamination area (Hazards and controls 1 – 3, 5, 6, 8, 10 - 12 apply)	5 Dropped Objects	5. Steel toe boots meeting ANSI Standard Z41 will be worn during all site activities.
	6. Noise	6. Hearing protection will be worn with a noise reduction rating capable of maintaining personal exposure below 85 dBA (ear muffs or plugs); SHSO will determine the need for hearing protection; all equipment will be equipped with manufacturer's required mufflers.
	7. Heavy Equipment Operation	7 Equipment will have seat belts; operators shall wear seat belts when operating equipment; do not operate equipment on grades which exceed manufacturer's recommendations; equipment will have guards, canopies or grills to protect from flying objects; ground personnel will stay clear of all suspended loads; spill and absorbent materials will be readily available; drip pans, polyethylene sheeting or other means will be used for secondary containment; ground personnel will stay out of the swing radius; eye contact with operators will be made before approaching equipment; equipment will not be approached on blind sides; all equipment will be equipped with backup alarms.
	8. Pinch/Cut/Smash	8. Use hand tools properly and wear appropriate protective equipment, cut resistant work gloves will be worn when dealing with sharp objects; all hand and power tools will be maintained in safe condition; guards will be kept in place while using hand and power tools.
	9. Underground and Overhead Utilities	9 All underground and overhead utilities will be identified prior to equipment operations; equipment will be equipped with GFCI; all equipment will stay a minimum of 15 feet from energized electrical lines (50 kV). This distance will increase .4 inches for each 1 kV above 50 kV.
	10. Temperature Extremes	10 Drink plenty of fluids; train personnel of signs/symptoms of heat stress; monitor air temperatures when extreme weather conditions are present; stay in visual and verbal contact with your buddy; and use Temperature Extremes program EHS 4-6.
	11. Hand and Power Tools	11 Daily inspections will be performed; remove broken or damaged tools from service; use the tool for its intended purpose; and use in accordance with manufacturers instructions.
	12 Eye Injuries	12 Safety glasses meeting ANSI Standard Z87 will be worn.

Project: Sump Pit S42-5, Investigation of Inlet/Outlet Pipes
Activity: Site Preparation
Location: Naval Station Newport, Rhode Island

MAJOR STEPS	POTENTIAL HAZARDS	PROTECTIVE MEASURES/CONTROLS
	13. Electrocution	13. Electrical work will be conducted by a licensed electrician; electric sources will be locked out/tagged out and verified prior to work being conducted in accordance with EHS 6-4; equipment will be equipped with GFCI. All equipment will stay a minimum of 15 feet from energized electrical lines (50 kV). This distance will increase .4 inches for each 1 kV above 50 kV.

EQUIPMENT USED	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
1 Hand and Power Tools 2 Level D PPE 3. Heavy Equipment	1. Hand and power tools will be inspected to ensure they are serviceable prior to each days use. 2. PPE, including respirators, will be inspected before and after each use. 3. Initial inspection of heavy equipment will be performed upon arriving on-site 4 Heavy equipment will be inspected daily, prior to each days use.	1. Personnel have read and comply with HASP. 2. Personnel will receive site specific training. 3. Only qualified operators can operate heavy equipment or vehicles. 4. Personnel will have knowledge of proper use of hand and power tools. 5 5. At least 2 individuals on-site will have current CPR and first aid training.

ACTIVITY HAZARD ANALYSIS

Project: Sump Pit S42-5, Investigation of Inlet/Outlet Pipes
Activity: Sump Pit Removal Activities
Location Naval Station Newport, Rhode Island

MAJOR STEPS	POTENTIAL HAZARDS	PROTECTIVE MEASURES/CONTROLS
1. Remove water currently in sump pit (Hazards and controls 1, 2, 5 – 10 apply)	1. Back Injuries resulting from manual materials handling	1. Site personnel will be instructed on proper lifting techniques; mechanical devices should be used to reduce manual handling of materials; team lifting should be utilized if mechanical devices are not available.
2. Excavate soil covering and surrounding sump pit (Hazards and controls 1 – 14, 16, 17 apply)	2. Slips/Trips/Falls	2 Maintain work areas safe and orderly; unloading areas should be on even terrain; mark and repair if possible tripping hazards.
3 Demolish concrete structure using an excavator with a hydraulic hammer attachment (Hazards and controls 1 – 11, 13, 14 apply)	3. Vehicular Traffic while excavating and moving equipment	3 Spotters will be used when backing up trucks and heavy equipment and moving equipment.
4. Remove metal pumps and piping from pit and clean if necessary (Hazards and controls 1 - 12 apply)	4. Overhead Hazards	4. Personnel will be required to wear hard hats that meet ANSI Standard Z89.1. All ground personnel will stay clear of suspended loads and equipment swing areas. All equipment will be provided with guards, canopies or grills to protect the operator from falling or flying objects. All overhead hazards will be identified prior to commencing work operations.
5. Break concrete into manageable sizes and remove (Hazards and controls 1 – 11, 13, 14 apply)	5. Dropped Objects	5. Steel toe boots meeting ANSI Standard Z41 will be worn during all site activities.
6. Stockpile concrete for sampling and disposal (Hazards and controls 1 – 11, 13, 14 apply)	6. Noise	6. Hearing protection will be worn with a noise reduction rating capable of maintaining personal exposure below 85 dBA (ear muffs or plugs); SHSO will determine the need for hearing protection; all equipment will be equipped with manufacturer's required mufflers.
7. Inspect soils from bottom and sides of excavation (Hazards and controls 1 – 11, 14 - 16 apply)	7. Pinch/Cut/Smash	7. Use hand tools properly and wear appropriate protective equipment, cut resistant work gloves will be worn when dealing with sharp objects; all hand and power tools will be maintained in safe condition; guards will be kept in place while using hand and power tools.
8. Excavate contaminated soils if necessary (Hazards and controls 3, 4, 6, 8, 10, 11, 13, 14 apply)	8. Temperature Extremes	8 Drink plenty of fluids, train personnel of signs/symptoms of heat/cold stress; monitor air temperatures when extreme weather conditions are present; stay in visual and verbal contact with your buddy; and use Temperature Extremes program EHS 4-6.
9 Collect post excavation samples (Hazards and controls 1 – 11, 14 - 16 apply)	9. Hand and Power Tool Use	9. Daily inspections will be performed; remove broken or damaged tools from service; use the tool for its intended purpose; and use in accordance with manufacturers instructions.
	10. Eye Injuries	10. Safety glasses meeting ANSI Standard Z87 will be worn. Plastic face shields will be worn during pressure washer operations.
	11. Heavy Equipment Operation	11. Equipment will have seat belts; operators shall wear seat belts when operating equipment; do not operate equipment on grades which exceed manufacturer's recommendations; equipment will have guards, canopies or grills to protect from flying objects; ground personnel will stay clear of all suspended loads; spill and absorbent materials will be readily available; drip pans, polyethylene sheeting or other means will be used for secondary containment; ground personnel will stay out of the swing radius; eye contact with operators will be made before approaching equipment; equipment will not be approached on blind sides; all equipment will be equipped with backup alarms.
	12. Pressure Washer Use	12 Use face shield and safety glasses or goggles; stay out of the splash/steam radius; do not direct stream at anyone; use shielding as necessary; personnel will be trained on the proper operation of pressure washer, pressure washer wand will be equipped with a dead man's switch. Minimal temperature and pressure setting will be used during operation.
	13. Electrocution	13. Electrical work will be conducted by a licensed electrician; electric sources will be locked out/tagged out and verified prior to work being conducted in accordance with EHS 6-4, equipment will be equipped with GFCI. All equipment will stay a minimum of 15 feet from energized electrical lines (50 kV) This distance will increase .4 inches for each 1 kV above 50 kV All equipment will be bonded/grounded to prevent potential for

Project: Sump Pit S42-5, Investigation of Inlet/Outlet Pipes
Activity Sump Pit Removal Activities

Location: Naval Station Newport, Rhode Island

MAJOR STEPS	POTENTIAL HAZARDS	PROTECTIVE MEASURES/CONTROLS
		explosion
	14. Excavation	14. All underground utilities will be identified and dig safe numbers will be called prior to excavation activities; any excavation four feet and deeper will be monitored for oxygen, combustible gases, and toxic atmospheres prior to personnel entry. Foster Wheeler and USACE excavation procedures will be followed; excavated areas will be barricaded to prevent field personnel from falling into the open area; protective systems (sloping, benching or shoring) to prevent trench/excavation cave-in will be affected in excavations greater than five feet in depth, or if deemed necessary by a competent person; all trenching/excavation will be in accordance with the provisions of 29 CFR 1926 Subpart P; smoking or open flames will not be allowed near work areas, if open flames must be used, procedures outlined in the SHSP for hot work will be followed.
	15. Confined Space Entry	15 All confined space entry activities will be performed in accordance with 29 CFR 1910.146 and Foster Wheeler Environmental procedure EHS 6-2. Additional requirements for confined space entries can be found in the AHA for Confined Space Entries.
	16. Fire and Explosion	16. Confined spaces will be monitored (top/middle/bottom of the space) for oxygen and combustible concentrations to ensure that the potential for a fire does not exist; refer to the attached table for acceptable oxygen and LEL concentrations; All equipment used will be non-sparking, All electrical equipment brought into confined spaces will be intrinsically safe; All electrical equipment located outside of the space (i.e. blowers) shall be grounded. 10 lb. ABC type fire extinguisher will be located adjacent to work area

EQUIPMENT USED	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
1 Hand and Power Tools 2. Heavy Equipment 3. PPE 4 Pressure Washer 5. Air Monitoring Equipment	1. Hand and power tools will be inspected to ensure they are serviceable prior to each days use. 2. PPE, including respirators, will be inspected before and after each use. 3. Heavy equipment will be inspected daily 4 Pressure washer will be inspected daily 5. Air monitoring equipment will be pre- and post calibrated in accordance with manufacturer's recommendations	1. Personnel have read and comply with HASP. 2. Personnel will receive site specific training 3. Only qualified operators can operate heavy equipment or vehicles. 4. Personnel have knowledge of proper use of hand and power tools 5. At least 2 individuals on-site will have current CPR and first aid training. 6. Personnel will be trained in the proper use of the pressure washer 7. Qualified individuals will use air monitoring equipment

ACTIVITY HAZARD ANALYSIS

Project: Sump Pit S42-5, Investigation of Inlet/Outlet Pipes
Activity: Investigation of Inlet/Outlet Pipes
Location: Naval Station Newport, Rhode Island

MAJOR STEPS	POTENTIAL HAZARDS	PROTECTIVE MEASURES/CONTROLS
1. Excavate soil to expose pipes entering or exiting the pit (Hazards and controls 1 – 13 apply)	1. Back Injuries resulting from manual materials handling	1. Site personnel will be instructed on proper lifting techniques, mechanical devices should be used to reduce manual handling of materials; team lifting should be utilized if mechanical devices are not available.
2. Stockpile soil (Hazards and controls 1 – 11, 13 apply)	2. Slips/Trips/Falls	2. Maintain work areas safe and orderly; unloading areas should be on even terrain; mark and repair if possible tripping hazards.
3. Remove piping (Hazards and controls 1 – 11 apply)	3. Vehicular Traffic while excavating and moving equipment	3 Spotters will be used when backing up trucks and heavy equipment and moving equipment.
4 Collect post excavation samples (Hazards and controls 1 – 11, 13 apply)	4 Overhead Hazards	4. Personnel will be required to wear hard hats that meet ANSI Standard Z89 1. All ground personnel will stay clear of suspended loads. All equipment will be provided with guards, canopies or grills to protect the operator from falling or flying objects. All overhead hazards will be identified prior to commencing work operations.
	5 Dropped Objects	5 Steel toe boots meeting ANSI Standard Z41 will be worn during all site activities.
	6 Noise	6. Hearing protection will be worn with a noise reduction rating capable of maintaining personal exposure below 85 dBA (ear muffs or plugs); SHSO will determine the need for hearing protection; all equipment will be equipped with manufacturer's required mufflers.
	7. Pinch/Cut/Smash	7 Use hand tools properly and wear appropriate protective equipment, cut resistant work gloves will be worn when dealing with sharp objects; all hand and power tools will be maintained in safe condition; guards will be kept in place while using hand and power tools.
	8. Temperature Extremes	8. Drink plenty of fluids; train personnel of signs/symptoms of heat/cold stress; monitor air temperatures when extreme weather conditions are present; stay in visual and verbal contact with your buddy; and use Temperature Extremes program EHS 4-6.
	9. Hand and Power Tool Use	9. Daily inspections will be performed; remove broken or damaged tools from service; use the tool for its intended purpose; and use in accordance with manufacturers instructions.
	10. Eye Injuries	10. Safety glasses meeting ANSI Standard Z87 will be worn.
	11. Heavy Equipment Operation	11 Equipment will have seat belts; operators shall wear seat belts when operating equipment; do not operate equipment on grades which exceed manufacturer's recommendations; equipment will have guards, canopies or grills to protect from flying objects; ground personnel will stay clear of all suspended loads; spill and absorbent materials will be readily available; drip pans, polyethylene sheeting or other means will be used for secondary containment; ground personnel will stay out of the swing radius; eye contact with operators will be made before approaching equipment; equipment will not be approached on blind sides; all equipment will be equipped with backup alarms.
	12. Electrocution	12. Electrical work will be conducted by a licensed electrician; electric sources will be locked out/tagged out and verified prior to work being conducted in accordance with EHS 6-4; equipment will be equipped with GFCI. All equipment will stay a minimum of 15 feet from energized electrical lines (50 kV). This distance will increase .4 inches for each 1 kV above 50 kV All equipment will be bonded/grounded to prevent potential for explosion
	13. Excavation	13 All underground utilities will be identified and dig safe numbers will be logged; any excavation four feet and deeper will be monitored for oxygen, combustible gases, and toxic atmospheres prior to personnel entry. Foster Wheeler and USACE excavation procedures will be followed; excavated areas will be barricaded to prevent field personnel from falling into the open area, protective systems (sloping, benching or shoring) to prevent trench/excavation cave-in will be affected in excavations greater than five feet in depth, or if deemed necessary by a competent person; all trenching/excavation will be in accordance with the provisions of 29 CFR 1926 Subpart P, smoking or open flames will not be allowed near work areas, if open

Project: Sump Pit S42-5, Investigation of Inlet/Outlet Pipes
Activity: Investigation of Inlet/Outlet Pipes

Location Naval Station Newport, Rhode Island

MAJOR STEPS	POTENTIAL HAZARDS	PROTECTIVE MEASURES/CONTROLS
		flames must be used, procedures outlined in the SHSP for hot work will be followed

EQUIPMENT USED	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
1 Hand and Power Tools 2. Heavy Equipment 3 PPE 4. Air Monitoring Equipment	1. Hand and power tools will be inspected to ensure they are serviceable prior to each days use. 2. PPE, including respirators, will be inspected before and after each use. 3. Heavy equipment will be inspected daily 4. Air monitoring will be pre- and post calibrated in accordance with manufacturer's recommendations	1 Personnel have read and comply with HASP. 2 Personnel will receive site specific training. 3. Only qualified operators can operate heavy equipment or vehicles. 4. Personnel have knowledge of proper use of hand and power tools. 5. At least 2 individuals on-site will have current CPR and first aid training 6. Qualified personnel will use air monitoring equipment

ACTIVITY HAZARD ANALYSIS

Project: Sump Pit S42-5, Investigation of Inlet/Outlet Pipes
Activity: Site Restoration
Location: Naval Station Newport, Rhode Island

MAJOR STEPS	POTENTIAL HAZARDS	PROTECTIVE MEASURES/CONTROLS
1 Backfill excavation (Hazards and controls 1 – 12 apply)	1. Back Injuries resulting from manual materials handling	1. Site personnel will be instructed on proper lifting techniques, mechanical devices should be used to reduce manual handling of materials; team lifting should be utilized if mechanical devices are not available.
2 Compact soil using excavator bucket (Hazards and controls 2, 3, 4, 6, 8, 10 - 12 apply)	2. Slips/Trips/Falls	2. Maintain work areas safe and orderly; unloading areas should be on even terrain; mark and repair if possible tripping hazards.
3 Place top soil (Hazards and controls 2, 3, 4, 6, 8, 11 apply)	3 Vehicular Traffic while excavating, backfilling and moving equipment	3. Spotters will be used when backing up trucks and heavy equipment and moving equipment.
4 Reseed area (Hazards and controls 1 - 11 apply)	4. Overhead Hazards	4 Personnel will be required to wear hard hats that meet ANSI Standard Z89.1. All ground personnel will stay clear of suspended loads and equipment swing areas All equipment will be provided with guards, canopies or grills to protect the operator from falling or flying objects. All overhead hazards will be identified prior to commencing work operations.
5. Place stone on roadway areas (Hazards and controls 1 - 11 apply)	5. Dropped Objects	5. Steel toe boots meeting ANSI Standard Z41 will be worn during all site activities.
	6. Noise	6. Hearing protection will be worn with a noise reduction rating capable of maintaining personal exposure below 85 dBA (ear muffs or plugs); SHSO will determine the need for hearing protection; all equipment will be equipped with manufacturer's required mufflers.
	7. Pinch/Cut/Smash	7. Use hand tools properly and wear appropriate protective equipment, cut resistant work gloves will be worn when dealing with sharp objects; all hand and power tools will be maintained in safe condition; guards will be kept in place while using hand and power tools
	8. Temperature Extremes	8 Drink plenty of fluids, train personnel of signs/symptoms of heat/cold stress; monitor air temperatures when extreme weather conditions are present; stay in visual and verbal contact with your buddy; and use Temperature Extremes program EHS 4-6.
	9. Hand and Power Tools	9. Daily inspections will be performed, remove broken or damaged tools from service; use the tool for its intended purpose; and use in accordance with manufacturers instructions.
	10. Eye Injuries	10. Safety glasses meeting ANSI Standard Z87 will be worn.
	11 . Heavy Equipment Operation	11. Equipment will have seat belts; operators shall wear seat belts when operating equipment; do not operate equipment on grades which exceed manufacturer's recommendations; equipment will have guards, canopies or grills to protect from flying objects; ground personnel will stay clear of all suspended loads; spill and absorbent materials will be readily available; drip pans, polyethylene sheeting or other means will be used for secondary containment, ground personnel will stay out of the swing radius; eye contact with operators will be made before approaching equipment; equipment will not be approached on blind sides; all equipment will be equipped with backup alarms.
	12. Excavation	12. All underground utilities will be identified and dig safe numbers will be called prior to excavation activities; any excavation four feet and deeper will be monitored for oxygen, combustible gases, and toxic atmospheres prior to personnel entry. Foster Wheeler and USACE excavation procedures will be followed; excavated areas will be barricaded to prevent field personnel from falling into the open area; protective systems (sloping, benching or shoring) to prevent trench/excavation cave-in will be affected in excavations greater than five feet in depth, or if deemed necessary by a competent person; all trenching/excavation will be in accordance with the provisions of 29 CFR 1926 Subpart P; smoking or open flames will not be allowed near work areas, if open flames must be used, procedures outlined in the SHSP for hot work will be followed.

Project: Sump Pit S42-5, Investigation of Inlet/Outlet Pipes
Activity: Site Restoration

Location: Naval Station Newport, Rhode Island

MAJOR STEPS	POTENTIAL HAZARDS	PROTECTIVE MEASURES/CONTROLS
EQUIPMENT USED	**INSPECTION REQUIREMENTS**	**TRAINING REQUIREMENTS**
1. Hand and Power Tools 2. Heavy Equipment 3. Level D PPE	1. Hand and power tools will be inspected to ensure they are serviceable prior to each days use. 2. PPE will be inspected before and after each use 3 Heavy equipment will be inspected daily	1. Personnel have read and comply with HASP. 2. Personnel will receive site specific training 3. Only qualified operators can operate heavy equipment or vehicles. 4. Personnel have knowledge of proper use of hand and power tools. 5. At least 2 individuals on-site will have current CPR and first aid training.

ACTIVITY HAZARD ANALYSIS

Project: Sump Pit S42-5, Investigation of Inlet/Outlet Pipes
Activity: Heavy Equipment Decontamination
Location: Naval Station Newport, Rhode Island

MAJOR STEPS	POTENTIAL HAZARDS	PROTECTIVE MEASURES/CONTROLS
1. Pressure wash heavy equipment (Hazards and controls 1 - 10 apply)	1. Back Injuries	1. Site personnel will be instructed on proper lifting techniques; mechanical devices should be used to reduce manual handling of materials; team lifting should be utilized if mechanical devices are not available
	2 Slips/Trips/Falls	2. Maintain work areas safe and orderly; unloading areas should be on even terrain; mark and repair if possible tripping hazards.
	3. Struck By	3 Personnel will be required to wear hard hats that meet ANSI Standard Z89.1.
	4 Dropped Objects	4 Steel toe boots meeting ANSI Standard Z41 will be worn during all site activities.
	5. Chemical Hazards	5 Practice chemical avoidance; follow good personal hygiene practices; see attached table for PPE requirements.
	6 Pressure Washer Use/Burns/Struck By	6 Use face shield and safety glasses or goggles; stay out of the splash/steam radius; do not direct stream at anyone; use shielding as necessary; personnel will be trained on the proper operation of pressure washer, pressure washer wand will be equipped with a dead man's switch. Minimal temperature and pressure will be used on pressure washer. Personnel will use insulated boots and gloves. Personnel will not 'hold' items to be pressure washed with their hands, feet or between their knees.
	7 Pinch/Cut/Smash	7. Use hand tools properly and wear appropriate protective equipment, cut resistant work gloves will be worn when dealing with sharp objects; all hand and power tools will be maintained in safe condition; guards will be kept in place while using hand and power tools.
	8. Temperature Extremes	8 Drink plenty of fluids, train personnel of signs/symptoms of heat/cold stress; monitor air temperatures when extreme weather conditions are present; stay in visual and verbal contact with your buddy; and use Temperature Extremes program EHS 4-6.
	9 Hand and Power Tools	9 Daily inspections will be performed; remove broken or damaged tools from service; use the tool for its intended purpose; and use in accordance with manufacturers instructions.
	10. Eye Injuries	10 Safety glasses meeting ANSI Standard Z87 will be worn.

EQUIPMENT USED	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
1. Hand and Power Tools 2 Heavy Equipment 3. PPE 4. Pressure Washer	1. Initial inspection of heavy equipment will be performed upon arriving on-site 2. Pressure washers will be inspected daily, prior to each days use 3 Hand and power tools will be inspected to ensure they are serviceable prior to each days use. 4 PPE, including respirators, will be inspected before and after each use.	1. Personnel have read and comply with HASP. 2. Personnel will receive site specific training. 3. Only qualified operators can operate heavy equipment or vehicles. 4 Personnel have knowledge of proper use of hand and power tools. 5 At least 2 individuals on-site will have current CPR and first aid training.

TABLE 6-1
PERSONAL PROTECTIVE EQUIPMENT SELECTION

TASK	HEAD	EYES/FACE	FEET	HANDS	BODY	HEARING	RESPIRATORY
Site Preparation							
Install temporary security fencing	HH	SG	STB	LWG	WC	EP as needed	Level D
Identify underground utilities in work area							
Establish work zones	HH	SG	STB	LWG	WC	EP as needed	Level D
Establish temporary staging area	HH	SG	STB	LWG	WC	EP as needed	Level D
Establish decontamination area	HH	SG	STB	LWG	WC	EP as needed	Level D
Sump Pit Removal Activities							
Remove water currently in pit	HH	SG	STB	LWG	WC	EP	Level D
Excavate soil covering and surrounding sump pit	HH	SG	STB	LWG	WC, tyvek	EP	Level D
Demolish concrete structure using and excavator with a hydraulic hammer attachment	HH	SG	STB	LWG	WC	EP	Level D
Remove metal pumps and piping from pit and clean if necessary	HH	SG	STB	LWG	WC, tyvek	EP as needed	Level D

TASK	HEAD	EYES/FACE	FEET	HANDS	BODY	HEARING	RESPIRATORY
Break concrete into manageable pieces and remove	HH	SG	STB	LWG	WC	EP	Level D
Stockpile concrete for sampling and disposal	HH	SG	STB	LWG	WC	EP as needed	Level D
Inspect soils from bottom and sides of excavation	HH	SG	STB	Sur	WC	EP as needed	Level D
Excavate visibly contaminated soil if necessary	HH	SG	STB	Sur	WC, tyvek	EP as needed	Level D
Collect post excavation soil samples	HH	SG	STB	Sur	WC, tyvek as needed	EP as needed	Level D
Heavy equipment and sump equipment decontamination	HH	SG, PFS	STB, overboots	Nit	WC, Poly	EP as needed	Level D
Investigation of Inlet/Outlet Pipes							
Excavate soil to expose pipes entering or exiting the pit	HH	SG	STB	LWG	WC	EP	Level D
Stockpile soil	HH	SG	STB	LWG	WC	EP as needed	Level D
Remove piping	HH	SG	STB	LWG	WC	EP as needed	Level D
Collect post excavation samples	HH	SG	STB	Sur	WC	EP as needed	Level D

TASK	HEAD	EYES/FACE	FEET	HANDS	BODY	HEARING	RESPIRATORY
Site Restoration							
Backfill excavation areas	HH	SG	STB	LWG	WC	EP	Level D
Compact soil using excavator bucket	HH	SG	STB	LWG	WC	EP	Level D
Place top soil	HH	SG	STB	LWG	WC	EP as needed	Level D
Reseed areas	HH	SG	STB	LWG	WC	EP as needed	Level D
Place stone on roadway areas	HH	SG	STB	LWG	WC	EP as needed	Level D

Legend:
HH = Hard Hat
WC = Work Clothes
EP = Ear Plugs
SG = Safety Glasses
STB = Steel Toe Boots
PFS = Plastic Face Shield
LWG = Leather Work Gloves
Poly = Polyethylene coated tyvek

Real-Time Air Monitoring Action Levels

AIR MONITORING INSTRUMENT	MONITORING LOCATION	ACTION LEVEL	SITE ACTION	REASON
PID	Breathing Zone	<25 ppm	No respiratory protection; Continue work	VOCs and SVOCs are not expected to be encountered
PID	Breathing Zone	25-250 ppm	Upgrade to Level C respiratory protection; Initiate vapor suppression control efforts	Potential exposure to VOCs and SVOCs
PID	Breathing Zone	>250 ppm	Upgrade to Level B respiratory protection	High potential for exposure to VOCs and SVOCs
Combustible Gas Indicator	Breathing Zone in excavation	LEL < 10%	Investigate possible causes, use caution during procedures	Low risk
Combustible Gas Indicator	Breathing Zone in excavation	LEL > 10%	Stop work; withdraw from work area	Potential for ignition of vapors
Oxygen Meter	Breathing Zone in excavation	< 19.5%	Stop work; withdraw from work area; notify PHSM	Low oxygen - IDLH
Oxygen Meter	Breathing Zone in excavation	> 22%	Stop work; withdraw from work area; notify PHSM	Oxygen enriched atmosphere; explosion hazard

Response to RIDEM Comments on
Derecktor Shipyard
Building S42-5 Sump Pit Investigation/Removal

1. ***General Comment***

The Plan should stipulate that the removal actions will be photo documented and/or video taped. Key aspects of the project to be documented in this manner include the following: site conditions prior to removal action, condition of concrete vaults, pipes or other structures prior to removal, visible evidence of contamination observed during the action, confirmatory sampling, and site close out. In addition, the Office requests a copy of all photographs, video tapes and field notes taken during the removal actions. These items should be submitted to the Office at the end of the removal action.

Response:

Foster Wheeler will photo-document pertinent features during the removal action.

2. ***General Comment***

The Plan should include a section that discusses regulatory notification of field activities. The notification should, at a minimum, include the following: overall project schedule, weekly schedule of up coming field activities, and notification procedures for cancellation of field activities or changes in the project schedule. The DEM requires a seven day notice prior to the start of activities and when possible a twenty-four hour notification for the cancellation of field activities. Note, the Office considers project start up, condition of structures prior to demolition, confirmatory sampling and project closure as key aspects of the project.

Response:

Foster Wheeler will provided a schedule for the anticipated project dates, and will verbally notify RIDEM one week prior to field activities commencing.

3. ***General Comment***

The Plan calls for the removal of the concrete structure followed by the removal of all pipes entering and leaving said structure. The function of the structure is not known. Furthermore, it is not known whether the structure is part of a system that

is currently active. Accordingly, there is the potential that disruption of this system will have undesirable consequences. In order to avoid creating an unwanted problem at the site, the Navy previously agreed to track the system and determine its function prior to the removal of any of its components. That is, the soil above the piping will be removed and the piping and structure will be left in place. Once the function of the system is known, it can then be safely removed. This will require no additional work, (soil above the pipes will have to be excavated in order to remove the pipes) and it will avoid unnecessary complications. Furthermore, previous investigations indicated that certain pipes that are part of this structure might originate from locations to the east, that is, in the vicinity of Buildings 1-6. These pipes may be associated, with storm water runoff control measures or other functions. Removal of these pipes may ultimately necessitate their replacement. Tracking of the pipes, as opposed to immediate removal, will avoid this unnecessary expense. Therefore, as previously agreed, the Plan should call for the tracking of the pipes, and determination of the function of the structure prior to the removal of any of its components

Response:

As per the teleconference on 3/23/00, Foster Wheeler will remove pipes in a single operation concurrently with trench excavation. In the event any pipes are determined to be active they will by plugged if necessary.

4. ***General Comment***

The Plan should stipulate that confirmatory samples will be collected from areas of, or former areas of, contamination. That is, areas that exhibit evidence of discoloration, elevated FID readings, olfactory evidence, etc. or areas that formerly exhibited evidence of contamination. In regards to the latter, at the confirmatory phase of the excavation, the site will appear homogenous, in that there will be no field evidence of contamination. Therefore, confirmatory samples should be collected from those areas that previously exhibited discoloration, elevated FID readings, etc..

Response:

Foster Wheeler will bias confirmation sampling to areas that exhibit evidence of discoloration, elevated FID readings,and/or olfactory evidence.

5. ***General Comment***

Consistent with actions taken at other sites the Plan should call for the collection of confirmatory samples along the pipe runs. This is necessary, as there could have

been historic releases associated with the pipe runs. Sampling should be collected every fifty feet and be biased towards areas of contamination

Response:

Foster Wheeler will collect samples for jar headspace analysis and Petroflag (tph) analysis. Sampling will be conducted every 50 feet or in areas of suspected contamination.

6. ***General Comment***

This section of the Plan indicates that confirmatory samples will be collected from the excavation. Confirmatory samples for VOCs should be collected at a minimum of 3-6 inches below the depth of the excavation.

Response:

Foster Wheeler will collect samples for VOC analysis at a minimum depth of 3" below the base of the excavation.

7. ***General Comment***

The Plan lists the various test methods to be employed at the site. Please include TPH analysis in this list. Please be advised that the test method must be capable of detecting the full range of petroleum hydrocarbons, and this may necessitate the use of two different test methods.

Response:

Foster Wheeler will collect confirmation samples using TPH Method 8015 for GRO and DRO.

8. ***General Comment***

The Plan does not provide details concerning sampling collection and preservation. It is assumed that standard practices, i.e. dedicated sampling devices, preservation with ice, use of thermometers in handling and shipping coolers, etc will be employed during this endeavor. In order to avoid potential confusion concerning this aspect of the project the Office recommends that these procedures be incorporated into the Work Plan.

Response:

Foster Wheeler will collect and preserve samples using standard procedures. Foster Wheeler will use the sample collection and preservation procedures outlined in Melville North Remedial Action Work plan.

9. ***General Comment***

The Plan states that a FID will be used as part of the field screening procedures. Field screening with a FID will entail the use of jar headspace analysis. This analysis will be performed in a heated container which has been allowed time to come into equilibrium. Samples collected for headspace analysis will not be sent to the lab for additional analysis. In order to avoid potential confusion in the field, these requirements should be specified in the Work Plan.

Response:

Foster Wheeler will conduct jar headspace by ½ filling an 8 oz jar with soil and covering the jar with aluminum foil. The jar will have the lid secured by 1 turn. The sample will be allowed to equilibrate in a heated environment. If the weather is cold, the jars will be heated inside a vehicle. The headspace will be measured by poking the probe of the FID through the aluminum foil.

10. ***General Comment***

This section of the Plan lists the various test methods to be employed at the site. Please be advised that samples should be preserved in the field using EPA SW 846 Method 5035 (field preservations with methanol and sodium bisulfate).

Response:

Foster Wheeler will use EPA SW 846 Method 5035 for VOC analysis.

11. ***General Comment***

The Plan states that excavations will not proceed beyond the water table. The Plan should stipulate that if contamination is observed in the water table, a test pit will be dug to ascertain the extent of contamination. The Office recommends removing any limited contamination in the saturated zone during this removal action. This will avoid the unnecessary time and expense of backfilling the area with clean fill, submitting an additional

Work Plan for saturated zone contamination, remobolizing, and completing the removal action.

Response:

Foster Wheeler may conduct limited removal below the water table. The work plan will be revised to incorporate this change.

12. General Comment

The Plan states that excavations will not proceed beyond the water table. The Plan should stipulate that prior to backfilling, polyethylene will be laid down in these areas and any other areas not addressed during this removal action. The area will also be staked, surveyed or other wise recorded so that the remedial action can be completed at a latter date.

Response:

If it becomes necessary to backfill an area prior to completely removing suspected contaminated material, Foster Wheeler will place polyethylene sheeting into the excavation prior to backfill. Backfilled areas of concern will be staked.

13. General Comment

During the previous investigation conducted at the site the function of the pipes entering the concrete structure from the general direction of Building 42 was not determined. Therefore, the Plan should call for the use of dye test or other measures to ascertain their function prior to removal.

Response:

Foster Wheeler will conduct smoke tests on any lines that were not checked by Brown & Root (SASE Investigation) heading towards Building 42.

14. General Comment

The Plan states that stained or discolored concrete will be segregated into separate stockpiles. Please be advised that the concrete structure contain soil and other debris. The Work Plan does not call for the removal of this soil or the cleaning of the interior of the structure prior to demolition

Therefore, it will not be possible to ascertain whether staining is present. This will necessitate that all of this concrete will have to be placed into the contaminated concrete stockpile and tested.

Response:

In the event that there is evidence that the concrete may have come in contact with contamination, concrete chip samples will be collected for waste characterization.

15. General Comment

The Plan notes that stained concrete will under go waste characterization analysis. The nature of this analysis has not been specified in the Work Plan, that is whether wipe samples, chip samples, etc. will be collected, and whether samples will undergo analysis similar to those specified for contaminated soils Please modify the Work Plan to state that chip samples will be collected from the concrete, depth of chip will reflect depth of staining, and said samples will undergo analysis similar to that specified for contaminated soils.

Response:

Foster Wheeler will collect chip samples from concrete. Chip samples will be analyzed for the same waste characterization methods as soil samples. This change will be made to the work plan.

16. General Comment

The Plan should stipulate that a Close Out Report will be submitted once the removal action is completed

Response:

Foster Wheeler will submit a close out report at the end of construction activities.

Response to EPA Comments on
Derecktor Shipyard
Building S42-5 Sump Pit Investigation/Removal

1) *The Work Plan and AHA for the Building 42 Sump Pit Investigation refers to a HASP in the AHA. In order to thoroughly review the Work Plan from a health and safety standpoint, the Site Specific Health and Safety Plan should be attached to the submittal.*

Response : As discussed on the March 23, 2000 teleconference, this task is primarily a constructfon demolition project. As such much of the information typically provided in environmental work plans has been omitted. HASP will not need to be submitted for review.

2) *No specific information is contained in this Work Plan that details the contractor's plans to properly slope, shield, or shore the excavation to appropriately protect any workers entering the excavation for the purpose of collection of soil samples. Information pertaining to the location of the water removal equipment and the spoils pile should also be included. The competent person must be aware of the effect of surcharged loads on the excavation*

Response: These requirements are only applicable for trenching where personnel will be entering the excavation. It is Foster Wheeler's intention not to enter the excavation but to sample remotely using the excavator bucket. In the event entry is required, Foster Wheeler will use the Foster Wheeler procedure EHS 6-3 to ensure compliance with 29 CFR 1926 for trench excavation.

3) *There is no information within this work plan that indicates the depth required for this excavation. According to 29 C.F.R. Part 1926, all protective systems used in excavations more than 20 feet deep must be approved by a Professional Engineer. There is an indication that should the trench be deeper than 4 feet, air monitoring will be conducted. The expected depth of the excavation must be included in the Work Plan.*

Response : The anticipated maximum depth of the excavations is 15 ' below ground surface.

4) *OSHA regulations pertaining to excavations and other hazardous atmosphere work clearly define the role of the "competent person." Reference to the competent person is found in the Activity Hazard Analysis. There is also reference to a site health and safety officer. Foster Wheeler's Site Specific Health*

and Safety Plan or Activity Hazard Analysis should include a list of the individuals serving in the Competent Person and Health and Safety Officer roles.

Response: Reference response to Comment 2 above.

5) *OSHA regulations pertaining to excavations where the potential for a hazardous atmosphere exists require emergency rescue equipment to be readily available. There is no indication in the Work Plan or Activity Hazard Analysis that this equipment will be made available.*

Response: Reference response to Comment 2 above.

6) *Information pertaining to local emergency response units should be referenced in the work plan. This information should include the address, emergency phone number, and directions to the local hospital in case of emergency.*

Response: This information is contained in the Melville North Landfill Work Plan. In addition, Foster Wheeler has the emergency information posted at the Derecktor Shipyard Site trailer (Gould Island Site), and copies of this information will be distributed to the site workers.

7) *In accordance with the OSHA requirements for excavations, 29 C.F.R. § 1926.651, daily inspections of the excavation are to be conducted by a competent person There are no provisions in the enclosed work plan or Activity Hazard Analysis that include this requirement.*

Response: Reference response to Comment 2 above.

8) *The contaminants expected to be found on this work site should be indicated in the Work Plan. This information is pertinent for the selection of the appropriate personal protective equipment and respiratory protection. The Real-Time Air Monitoring Levels using the PID may not be applicable for certain organic compounds. Without specific information concerning contaminants, workers may not be protected sufficiently*

Response: There have not been any contaminants identified to date associated with the S42-5 Sump Pit. In the event contaminants are discovered the AHAs will be reevaluated accordingly.

Specific Comments

Page	Comment
p. 1, ¶2	*The text states that "Foster Wheeler will acquire the proper dig safe clearance prior to commencing any intrusive activities." The text should clearly define "dig safe clearance" and include the issuing agency for the clearance.* Response: The Work Plan has been revised to reflect that Foster Wheeler will obtain dig safe clearance from the National Dig Safe Center and from NAVSTA Newport Public Works Department.

Page	Comment
p. 1, ¶2	*The text states that "All utility locations will be reviewed with site personnel and locations will be marked clearly." The contractor should include the names, addresses and telephone numbers for utilities supplying the Naval Station Shipyard. Before the start of work, the utilities supplying the shipyard should be contacted to verify the locations of the underground services in the vicinity of the excavation Addresses and phone numbers for the utilities should be included in the Site Specific Health and Safety Plan.* Response: Utility markouts will be coordinated with the National Dig Safe Center and NAVSTA Newport Public Works Department.

Page	Comment
p. 1, ¶4	*The text states that "During excavation soils will be screened for evidence of contamination." A clear definition of evidence of contamination should be included with the text of this work plan The text should clearly indicate the measured concentration field screening that will be used to indicate whether the soil is contaminated.* Response : Evidence of contamination will include visual staining, elevated jar headspace readings, and olfactory evidence. In general, jar headspace results greater than 10 ppmv will be suspected of being contaminated.

Page	Comment
p. 1-2, ¶4	*The text states that "All other soil will be staged adjacent to the work area to be utilized as backfill." In order to establish a limit to the surcharged load to contribute to the weight of the excavation, the spoils pile must be at least two feet from the edge of the excavation. The contractor should*

use information pertaining to the soil type, number of recent excavations, effects of freezing and thawing, and co-located trenches to assist in determining the safe distance from the excavation. Specific information pertaining to the distance of the spoils pile from the excavation should be included in the document.

Response : Foster Wheeler will place staged soil a minimum of 2' away from the edge of the excavation.

Page	Comment
p. 4	*Site Preparation, Activity Hazard Analysis: Item 3 of the Protective Measures/Controls list should include appropriate information pertaining to the garments suitable for employees serving as "spotters." The "spotters" shall be provided with warning vests or other suitable garments marked with or made of reflective or high-visibility material. Information pertaining to the protective clothing has not been included in this document, but may be referenced in the Site Specific Health and Safety Plan, which has not been included for review.*

Response : Reference response to General Comment 1 above.

Page	Comment
p 4	*Site Preparation, Activity Hazard Analysis: Item 3 of the Protective Measures/Controls list should include appropriate information pertaining to the equipment being "equipped with backup alarms." This information is included in Item 7 but also applies to the Potential Hazards (Item 3) "Vehicular Traffic while moving and setting up equipment "*

Response : Reference response to General Comment 1 above.

Page	Comment
p. 4	*Site Preparation, Activity Hazard Analysis: Item 6 of the Protective Measures/Controls list. There is no reference to the applicable OSHA standards pertaining to Occupational Exposure to noise. The text states: "The Site Health and Safety Officer will determine the need for hearing protection." Further indication should be provided including the type of monitoring the SHSO will perform and the level of protection that will be selected. Appropriate OSHA standards to reference for occupational exposure to noise include 29 C.F.R. §§ 1926.52 and 1910.95.*

Response : Reference response to General Comment 1 above.

Page	Comment
p. 4	*Site Preparation, Activity Hazard Analysis: Item 7 of the Protective Measures/Controls list. There is no indication of training for the motor vehicle and material handling equipment operators. OSHA has specific regulations that pertain to operation of powered industrial trucks. Foster Wheeler should include training information in the Site Health and Safety Plan. Construction standards pertaining to operation of vehicles are contained in Subpart O of 29 C.F.R. Part 1926. Training requirements for Powered Industrial Trucks are defined in 29 C.F.R. §§ 1910.178 and 1926.602.* Response : Reference response to General Comment 1 above.

Page	Comment
p. 4	*Site Preparation, Activity Hazard Analysis: Item 10 of the Protective Measures/Controls list. Reference to a temperature extremes program "EHS 4-6" is found in this item. This document has not been provided for review.* Response : Reference response to General Comment 1 above.

Page	Comment
p. 5	*Site Preparation, Activity Hazard Analysis: Item 13 of the Protective Measures/Controls list. Reference to a lock-out/tag-out program is found in Item 13. This program, EHS 6-4, should be included in the Site Health and Safety Program The Foster Wheeler lock-out/tag-out program must, at a minimum, comply with applicable OSHA requirements.* Response : Reference response to General Comment 1 above.

Page	Comment
p. 5	*Site Preparation, Training Requirements: Item 1 indicates that personnel should have read and comply with the HASP. The HASP has not been included for review. The employees on this work site should also have completed OSHA Hazardous Waste training in accordance with 29 C.F.R. § 1926.65. There is also no indication found in the reviewed document that workers are participating in a Medical Monitoring program approving their use of the assigned personal protective equipment (respirators)* Response : Reference response to General Comment 1 above.

Page	Comment
p. 6	*Sump Pit Removal Activities, Protective Measures/Controls, Item 6: There is no reference to the applicable OSHA standards pertaining to Occupational Exposure to noise. The text states: "The SHSO will determine the need for hearing protection." Further indication should be provided including the type of monitoring the SHSO will perform and the level of protection that will be selected. Appropriate OSHA standards to reference for occupational exposure to noise include 29 C.F.R. §§1926.52 and 1910.95.* Response : Reference response to General Comment 1 above.

Page	Comment
p. 6	*Sump Pit Removal Activities, Protective Measures/Controls: Reference to a temperature extremes program "EHS 4-6" is found in Item 8. This document has not been provided for review.* Response : Reference response to General Comment 1 above.

Page	Comment
p. 6	*Sump Pit Removal Activities, Protective Measures/Controls, Item 11: There is no indication of training for the motor vehicle and material handling equipment operators. OSHA has specific regulations that pertain to operation of powered industrial trucks. Foster Wheeler should include training information in the Site Health and Safety Plan. Construction standards pertaining to operation of vehicles are contained in Subpart O of 29 CFR Part 1926. Training requirements for Powered Industrial Trucks are defined in 29 C.F.R §§1910.178 and 1926.602.* Response : Reference response to General Comment 1 above.

Page	Comment
p. 6	*Sump Pit Removal Activities, Protective Measures/Controls: Reference to a lock-out/tag-out program is found in Item 13. This program, EHS 6-4, should be included in the Site Health and Safety Program. The Foster Wheeler lock-out/tag-out program must, at a minimum, comply with applicable OSHA requirements.* Response : Reference response to General Comment 1 above.

Page	Comment
p 7	*Sump Pit Removal Activities, Protective Measures/Controls, Item 14: Reference to Foster Wheeler and USACE excavation procedures is found*

in Item 14. These excavation procedures have not been submitted. This Item also contains a reference to the Site Health and Safety Plan for hot work. This material was not provided. Please refer to the cover letter pertaining to the definition of the role of the "competent person" and the requirement for daily inspections.

Response : Reference response to General Comment 1 above.

Page	Comment
p. 7	*Sump Pit Removal Activities, Protective Measures/Controls: Reference to a Foster Wheeler Environmental procedure EHS 6-2 that applies to confined space entry is found in Item 15. This program has not been submitted for review. There is also a statement that "Additional requirements for confined space entries can be found in the AHA for Confined Space Entries." There is no AHA provided pertaining to confined space entries*

Response : Reference response to General Comment 1 above.

Page	Comment
p. 7	*Sump Pit Removal Activities, Protective Measures/Controls, Item 16: The text states: Confined spaces will be monitored (top/middle/bottom of the space) for oxygen and combustible concentrations" The text should be corrected to state: Confined spaces will be monitored (top/middle/bottom of the space) for oxygen and combustible gas concentrations".*

Response : Reference response to General Comment 1 above.

Page	Comment
p. 7	*Sump Pit Removal Activities, Training Requirements: Refer to the comments for the Training Requirements for the Site Preparation AHA Additionally, a description of the qualifications of the individual performing the air monitoring should be included with the Activity Hazard Analysis.*

Response : Reference response to General Comment 1 above.

Page	Comment
pp. 8 & 9	*Investigation of Inlet/Outlet Pipes: Please refer to comments pertaining to the Sump Pit Removal Activities and Site Preparation.*

Response : Reference response to General Comment 1 above.

Page	Comment
pp. 10 & 11	*Site Restoration: Please refer to comments pertaining to the Sump Pit Removal Activities and Site Preparation.*
	Response : Reference response to General Comment 1 above.

Page	Comment
p. 12	*Heavy Equipment Decontamination, Protective Measures/Controls, Item 5: The term "chemical avoidance" should be more clearly defined. For example, "Workers are required to use appropriate personal protective equipment and appropriate techniques to eliminate the likelihood of direct contact with chemicals."*
	Response : Reference response to General Comment 1 above.

Page	Comment
p. 12	*Heavy Equipment Decontamination, Protective Measures/Controls, Item 8: Reference to a Temperature Extremes program EHS 4-6 is included in this item. This document was not submitted for review.*
	Response : Reference response to General Comment 1 above.

Page	Comment
p. 12	*Heavy Equipment Decontamination, Training Requirements: All comments pertaining to the Training Requirements of the other activities apply to the Training Requirements in this section of the document.*
	Response : Reference response to General Comment 1 above.

Page	Comment
p. 13,	*Personal protective may be required while identifying utilities in the work area.*
Table 6-1	*The table should be corrected to indicate that items may be required as needed.*
	Response : Reference response to General Comment 1 above.

Page	Comment
p. 16	*Real-Time Air Monitoring Action Levels: Refer to cover letter pertaining to the provision of a list of reasonably anticipated contaminants that may be encountered on this site. This list may have an effect on the action level*

when monitoring with the photoionization detector. This table should also be updated to include the name and phone number of the PHSM-Project Health and Safety Manager.

Response : Reference response to General Comment 1 above.