04.05-12/05/95-01752

OHM Remediation
Services Corp.

REMEDIAL ACTION WORK PLAN TO PROVIDE ACCESS IMPROVEMENTS AND UTILITY CONSTRUCTION SITE 69 MCB CAMP LEJEUNE

Prepared for:

DEPARTMENT OF THE NAVY
Contract No. N62470-93-D-3032
Delivery Order 0087

Prepared by

OHM Remediation Services Corp.
Norcross, Georgia

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December 5, 1995

OHM Project No. 17849

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1.0 INTRODUCTION

This Work Plan (WP) reviews OHM Remediation Services Corp.'s (OHM) approach to implementation of the scope of work under Delivery Order No. 0087 of Navy Atlantic Division (LANTDIV) Contract N62470-93-D-3032. Several other plans have been developed for this delivery order and are to be considered as complementary components to this work plan. They include:

- Site Safety Plan (SSP)
- Environmental Protection Plan (EPP) (included herein as Section 3.0)

This RAWP identifies and describes how OHM will implement the major tasks encompassing the remedial action for Site 43 in conformance with the contract requirements. It includes the following sections:

- Section 2.0 Remedial Action Objectives
- Section 3.0 Environmental Protection Plan
- Section 4.0 Mobilization
- Section 5.0 Debris Removal
- Section 6.0 Transportation and Disposal Plan
- Section 7.0 Site Restoration
- Section 8.0 Demobilization/Final Report

1.1 SITE BACKGROUND

MCB Camp Lejeune was placed on the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), National Priorities List (NPL) effective October 4, 1989 (54 Federal Register 41015, October 4, 1989). Subsequent to this listing, the United States Environmental Protection Agency (USEPA) Region IV, the North Carolina Department of Environment, Health and Natural Resources (NCDEHNR) and the United States Department of the Navy (DoN) entered into a Federal Facilities Agreement (FFA) for MCB Camp Lejeune. The primary purpose of the FFA was to ensure that environmental impacts associated with past and present activities at MCB Camp Lejeune were thoroughly investigated and appropriate CERCLA response/Resources Conservation and Recovery Act (RCRA) corrective action alternatives were developed and implemented as necessary to protect the public health and the environment.

Site 69 is located in the southwestern area of the base and is in the southern portion of the Rifle Range area. The site is situated west of the New River Estuary and is approximately 6 acres in size.

1.2 SITE DESCRIPTION

Site 69, the Rifle Range Chemical Dump, is located west of the New River Estuary in the area of MCB Camp Lejeune know as the Rifle Range. Site 69 is a former disposal site (i.e., landfill) and is approximately 6 acres in size. Access is restricted by a 6-foot high chain link fence with a locked entrance gate. The site is heavily wooded with several species of trees including pine, sweetgum, dogwood, and oak. Within the fenced-in boundary, the forest type is mostly new growth with a predominance of pine species. Old growth forests (i.e., oak and sweetgum) dominate the land areas outside the boundaries of the site fence.

The site is located approximately 3 miles east-southeast of the intersection of Highway 17 and Route 210. The site is situated where a light-duty, unnamed roadway splits to form a "Y." For this report, this road will be referred to as the "access road."

The New River is located about 1/4 mile east of the site. Everett Creek is located about 1/2 mile south of the site. An unnamed tributary to the New River is situated about 1/4 mile north of the site. A light-duty road borders the site to the west. Both Everett Creek and the unnamed tributary drain into the New River.

Site 69 is situated at a topographic high. Most of the site within the fenced area is flat; however, the topography surrounding the site slopes gently in all directions. During the site field investigation which was conducted from January to March of 1994, portions of the site area exhibited standing/ponding water, which could indicate poor drainage.

Surface water run-off from the northern portion of the site may drain toward the unnamed tributary located to the north; however, the surrounding area is heavily wooded and consists of a dense underbrush that could inhibit off-site drainage at great distances. Surface run-off from the southeastern portion of the site reportedly drains to unnamed ditches that drain into the New River. Surface run-off from the southwestern portion of the site drains into the Everett Creek basin, which could potentially drain into Everett Creek and the New River.

1.3 SITE HISTORY

Site 69 was used as a chemical waste dump between 1950 and 1976. The waste materials were reportedly disposed in pits or trenches, 6 to 20 feet deep. Various wastes have been reportedly disposed of at the site including polychlorinated biphenyls (PCBs), fire retardants, pentachlorophenol, dichloro-diphenyltrichloroethane (4,4'-DDT),

trichloroethylene (TCE), malathion, diazinon, lindane, calcium hypochlorite, gas cylinders, high test hypochlorite (HTH), drums of "gas" [possibly training agent containing chloroacetophone (CN), chemical agent test kits for chemical warfare, and fired and unfired blank rifle cartridges (Water and Air Research (WAR) 1983].

Based on conversations with personnel from the U. S. Army Environmental Center (USAEC), formerly the U. S. Army Toxic and Hazardous Materials Agency (USATHAMA) and the U. S. Army Technical Escort Unit (TEU), there is a high probability that chemical agent training kits are also buried at the site. PCBs were reportedly sealed in cement septic tanks prior to disposal at the site. The presence of the fired and unfired rifle cartridges indicate that troop training exercises have occurred int his area (WAR, 1983).

In 1970, an explosion reportedly occurred at Site 69 during a disposal operation. Containers of 4,4'-DDT, TCE, and calcium hypochlorite were placed in a pit at the site. While the containers were being covered with earth, an explosion and fire occurred (WAR, 1983).

The site is inactive at present. Access is restricted by a chain-link fence. No known training activities are presently conducted within the fenced-in area.

2.0 REMEDIAL ACTION OBJECTIVES

In accordance with Section 121(d)(1) of CERCLA, remedial actions must attain a degree of clean-up which assures protection of human health and the environment. Remedial goals have been based on meeting an Applicable or Relevant and Appropriate Requirement (ARAR), or a site-specific risk based action level.

The remedial objective for this specific action at Site 69 is to treat contaminated groundwater. In order to evaluate potential treatment techniques, access road improvements and electrical power must be made available to the site. This Work Plan addresses the access road improvements and power supply, both temporary and permanent to effect the Pilot Test Program for groundwater treatment.

3.0 ENVIRONMENTAL PROTECTION PLAN

This Environmental Protection Plan (EPP) has been prepared in accordance with standard OHM policies and procedures. The EPP provides specific information relating to the scope of work under Delivery Order No. 0087 Utility Service for Treatability Study, Site 69. The plan will provide site-specific information for:

- Land resources management
- Water resources management
- Air and noise pollution control
- Non-compliance/corrective action
- Post-evacuation cleanup

The control of environmental pollution will consider air, water and land impacts, as well as noise and solid waste management.

The land resources within the property of MCB Camp Lejeune, but outside the limits of permanent work, will be preserved in their condition or restored to a condition after completion of construction that does not detract from the appearance of the area. As much as is practical, construction activities will be limited to areas defined by the plans and specifications.

3.1 HISTORICAL AND ARCHAEOLOGICAL FINDS

Although the presence of historical artifacts is not anticipated, if a historical artifact is encountered during field operations, OHM will stop work and notify the NTR. The NTR will be responsible for contracting federal, state, and local authorities to determine if the site may contain other important historical artifacts, and whether this site qualifies for possible placement on the National Registrar of Historical Places. Field operations will not resume until the NTR issues a written authorization to proceed.

3.2 TEMPORARY CONSTRUCTION ROADS

The construction of all temporary construction roads in and around the project site will be performed in a manner as to minimize the impact to the natural environment. Water will be used for dust control, as necessary. It is not expected that any new construction roads will be necessary for this delivery order.

3.3 PROTECTION OF TREES AND SHRUBS

Prudent steps will be taken to protect trees and shrubs outside of the work zone as necessary. Those trees and shrubs within the work zone will be removed by OHM. All trees and shrubs removed as a result of the construction activities will be cut into manageable pieces and moved from the project site so as not to interfere with operations. Precautions will be taken to minimize the construction activities' impact on existing vegetation and will include but not be limited to:

- Utilization of existing or temporary construction roads only
- Closely supervised equipment operators with an emphasis placed on preservation of vegetation in non-work areas
- Proper guidance of heavy equipment and truck operators by site personnel to minimize damage to adjacent vegetation not directly affected by construction activities
- Utilization of equipment appropriately designed and sized for precise excavation

3.4 RESTORATION

Upon completion of the field construction activities, disturbed areas will be seeded. Prior to seeding and fertilization, lime will be applied as a soil amendment as needed for pH adjustment at a rate of approximately 40 pounds per acre.

Any trees or other landscape features damaged by equipment will be restored if practical by trimming of damaged limbs and application of tree dressing. Damaged trees which cannot be restored will be felled, limbed and left on-site. Soil will be placed and compacted around any root systems exposed during excavation activities.

3.5 WATER RESOURCES PROTECTION

An unnamed creek and the New River are located near Site 69 and could possibly be impacted by construction activities if proper sediment and erosion protection measures are not taken. To protect against damage, stormwater surface run-off leaving the site will be controlled by temporary erosion/sediment control techniques such as berms, silt fencing

and grading. The area of bare soil exposed at any one time by construction activities will be held at a minimum.

3.5.1 Erosion Sediment Control

Prior to disturbance of native vegetation and soils, temporary erosion/sediment control will be established on the down gradient side of each excavation. Control techniques to be utilized will involve silt fencing.

Silt fencing will be installed with the fabric a minimum of 6 inches below grade and extending 36 inches above grade and fastened to posts no more than 6 feet apart. The posts will be installed with a minimum of 24 inches below grade and extend a minimum of 36 inches above grade. Fabric will be attached to the upslope side of the posts using 1-inch staples or tie wires. Silt fences will be inspected after every rain and daily during extended rain fall. Accumulated sediment will be removed before the depth reaches 12 inches.

3.5.2 Spill Control

Measures will be taken to prevent chemicals, fuels, oils, greases, bituminous materials and contaminated materials from entering streams, rivers or lakes. Adsorbents will be available to solidify any leaks outside containment and any soil contaminated with fuel spills will be immediately removed and placed into appropriate containers and sampled to determine proper disposition.

3.6 DUST AND AIR POLLUTION CONTROL

3.6.1 Air and Noise Monitoring

Personnel and ambient air monitoring will be conducted as necessary in order to determine airborne dust and contaminant levels. Ambient air monitoring will be conducted at working locations and on occasion at the perimeter of the project site. This ensures that respiratory protection is adequate to protect personnel against the contaminants that are encountered as well as ensuring that harmful levels of airborne contaminants are not leaving the site.

OHM will only perform operations of heavy equipment during daylight hours to minimize the impact of noise pollution on off-site personnel. Noise exposure to off-site residents or personnel is expected to be minimal. Hearing protection will still be implemented if necessary as specified in the SSP.

3.6.2 Particulate Emission Controls

Specific measures to be taken to minimize particle emissions for major activities during site construction include the following:

Movement of Equipment

- Water traffic areas as required to minimize dust emissions
- Designate equipment traffic patterns to minimize travel distance and vehicular dust emissions
- Limit vehicle speed to minimize dust emissions

3.6.3 Burning

No burning will be performed on-site. In the event of an unexpected fire on-site, work will stop immediately and the MCB Camp Lejeune fire department will be notified.

3.7 CLEANUP

All equipment will be decontaminated prior to demobilizing from the site. Decontamination will consist of scraping and pressure-washing to remove visible soil and debris from tires and undercarriage of vehicles and heavy equipment. Decontamination fluids will be containerized and samples procured and analyzed prior to disposal.

The site will then be turned over to the MCB.

4.0 SITE PREPARATION AND MOBILIZATION

Prior to mobilization, OHM will arrange a pre-construction meeting at MCB Camp Lejeune with LANTDIV and other responsible parties. The purpose of this meeting will be to:

- Confirm roles and responsibilities of key personnel and flow of communication for project execution
- Review the project schedule, sequence of tasks and key milestones
- Identify and discuss Base-specific issues relative to the upcoming mobilization and construction activities
- Obtain the necessary security clearances for operations personnel
- Obtain photographs of the sites for pre-construction documentation of existing site conditions

OHM will submit the qualifications and licenses of the subcontractor performing permanent power line construction. The qualifications of other subcontractors including small and disadvantaged businesses proposed to perform work at the site will also be submitted. Additionally, other material/product submittals jointly identified as necessary will be submitted.

OHM will mobilize personnel and equipment from its Southern Region offices, including Clermont, Florida; Covington, Georgia; and Gallatin, Tennessee offices. Prior to beginning work on site, a training meeting will be conducted to brief all site personnel on the Site-Specific Health and Safety Plan, construction drawings, and other relevant site-specific plans. Site hazards and conditions will be discussed and all personnel will acknowledge their understanding and compliance with the plan by signing an approved acceptance form.

Project mobilization and site setup will consist of the following main activities:

- **Temporary Facilities Installation** - OHM will utilize its office trailer already located at Lot 203 as an administrative area and command center.
- **Erosion and Sedimentation Control** - OHM will establish controls to prevent erosion and sedimentation through the use of sediment fencing and diversion berms. The Environmental Protection Plan included with this RAWP provides details on environmental controls.

- **Site Security** - All persons entering the site will be required to sign in and out daily. OHM reserves the right to deny access to any individual not showing proper identification.

- **Health and Safety Zones** - The site will be segregated into work areas on the basis of degree of hazard and PPE requirements. OHM health and safety personnel will provide continuous site air monitoring and will adjust work zone boundaries as appropriate.

5.0 *ACCESS IMPROVEMENTS*

Access to Site 69 is by a series of dirt trails from the Stone Bay Rifle Range. Specifically, approximately 1/2 mile from N. C. Highway 210 on Stone Bay Range Road, turn right onto Red Trail. Proceed on Red Trail approximately 3/4 mile to TLZ Owl Road. Turn left on TLZ Owl Road and proceed approximately 3/4 mile to a "Y" with a gate across the fork. Proceed left through the gate approximately 1/2 mile to the treatability study site.

At the existing y intersection between the site access road and TLZ Owl Road, the roadway has been severely eroded due to inadequate drainage. An 18-inch corrugated metal pipe culvert (40 feet in length) will be installed beneath the TLZ Owl Road to channel surface water flow to the south side of the roadway (Figure 1). Drainage ditches will be reshaped on both sides of the roadway to enhance flow away from the roadway intersection. ABC stone will be employed for erosion protection as conditions dictate.

The entire access route will be graded and reshaped with a center crown in the roadway. Drainage ditches and/or slopes along each side of the roadway will be cleaned and reshaped to enhance surface water flows. Where conditions dictate, ABC stone will be employed to provide a firm roadway base or as erosion protection in ditches.

6.0 POWER SUPPLY

Power supply for this project will include both provision of temporary power for the treatability study and provision of permanent power for both the treatability study and for the remedial effort to be conducted at the site.

6.1 TEMPORARY POWER

Temporary power for the supply of electricity to the in-well aeration treatability study will be provided by a diesel generator set. This generator unit will supply sufficient kilowattage to provide 115 percent of the full load requirements of the treatability study equipment. Primary generator output will be 460 to 480 volts, 3 phases, 60 cycles. A fuel tank of sufficient size for 168 hours run time will also be provided. The temporary tank will be surrounded by a berm capable to containing at least 110 percent of the volume of the tank.

Power requirements for the treatability study are listed below. Secondary transformers and a power distribution panelboard will be installed to provide service for the wellhead equipment. All enclosures will be suitable for outdoor service, NEMA 3R or equal.

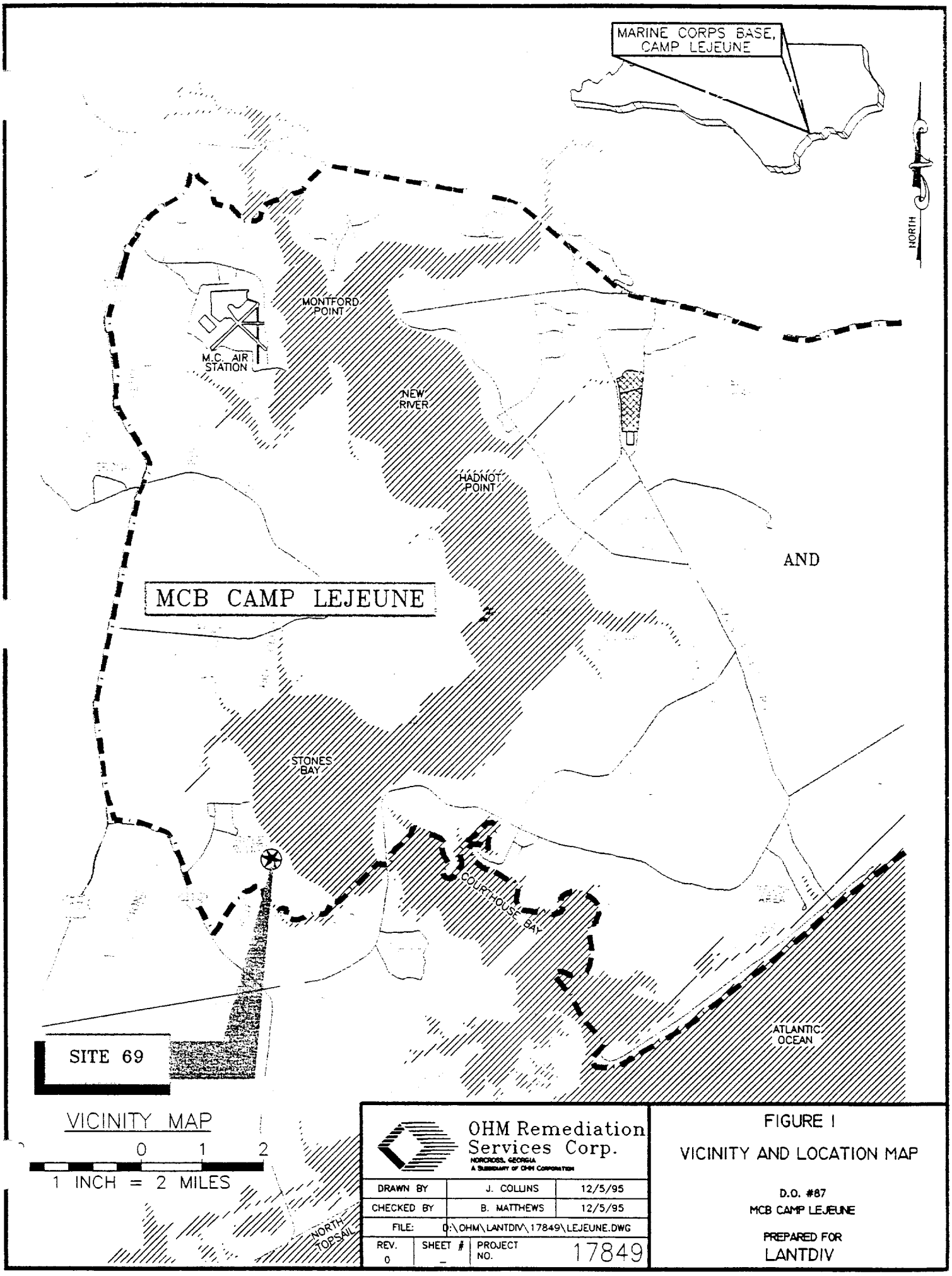
Quantity	Description	Power Requirements		
2	Blower Motors	360/208V	8/14 amps	3Ø
2	Pump Motors	115V	6.3 amps	1Ø
1	Compressor Motor	230V	2.5 amps	1Ø
4	Double Plugs with Ground Fault Protection	115V	2-15 amp circuits	1Ø

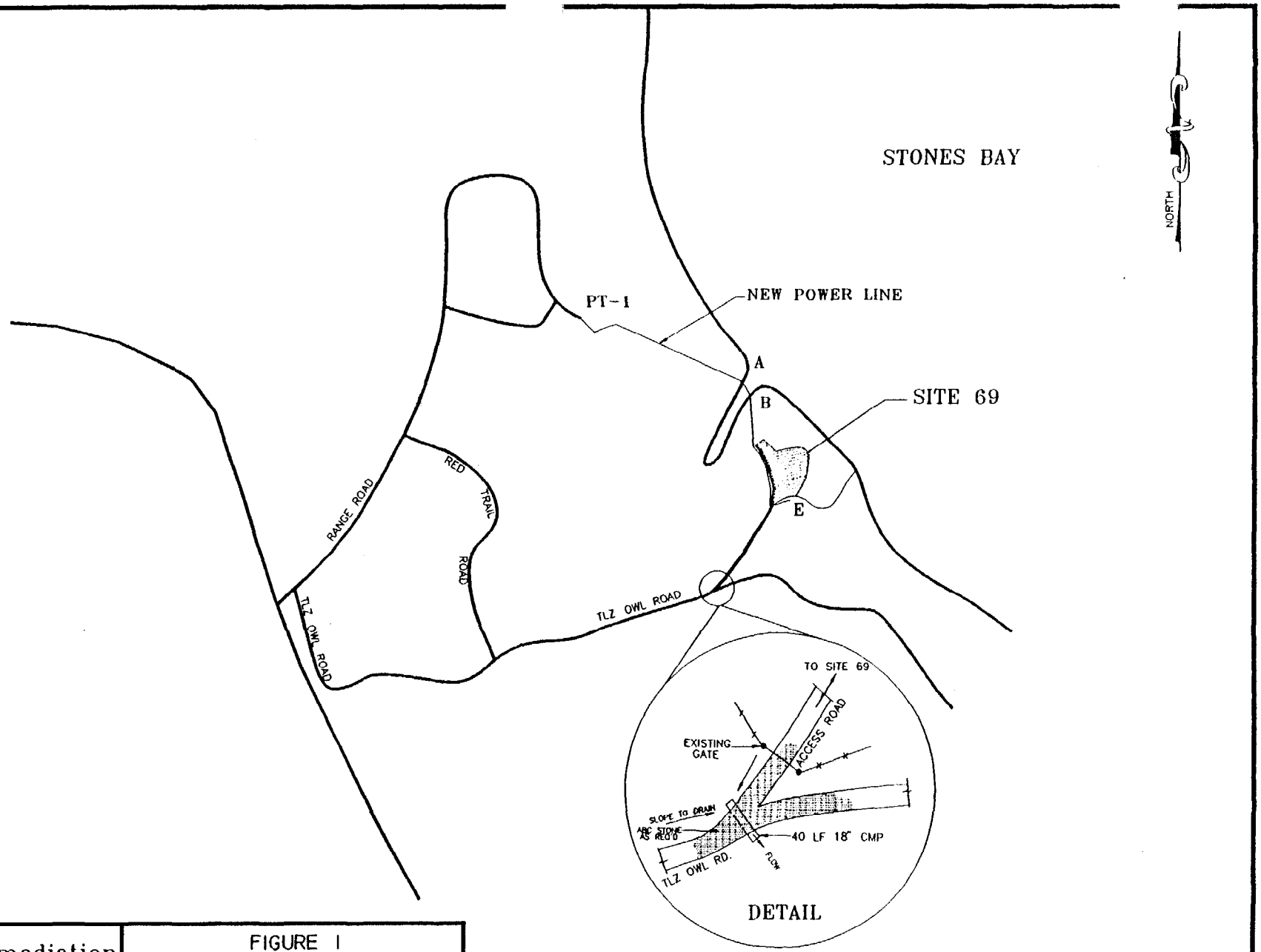
6.2 PERMANENT POWER

The source of power to be extended to the chemical dump is the Rifle Range approximately 1-1/2 miles away. Primary voltage of the existing circuit, 12.47 Kva, will be supplied by routing shown in Figure 2. Surveyors will establish the centerline and edges of the right-of-way at 100-foot intervals.

6.2.1 Clearing and Grubbing

The width of the cleared right-of-way will be 40 feet in all areas except at the waterway crossing where steel cross-arms will be employed and the cleared right-of-way increased to 50 feet.


MARINE CORPS BASE, CAMP LEJEUNE
NORTH
MONTFORD POINT
M.C. AIR STATION
NEW RIVER
HADNOT POINT
AND
MCB CAMP LEJEUNE
STONES BAY
COURTHOUSE BAY
ATLANTIC OCEAN
SITE 69
VICINITY MAP
0 1 2
1 INCH = 2 MILES
NORTH TOPSAIL
OHM Remediation Services Corp.
NORCROSS, GEORGIA
A SUBSIDIARY OF OHM CORPORATION
DRAWN BY J. COLLINS 12/5/95
CHECKED BY B. MATTHEWS 12/5/95
FILE: D:\OHM\LANTDIV\17849\LEJEUNE.DWG
REV. 0
SHEET # -
PROJECT NO. 17849
FIGURE 1
VICINITY AND LOCATION MAP
D.O. #87
MCB CAMP LEJEUNE
PREPARED FOR
LANTDIV



OHM Remediation Services Corp.
NORCROSS, GEORGIA
A SUBSIDIARY OF OHM CORPORATION

DRAWN BY	J. COLLINS	12/5/95
CHECKED BY	J. DUNN	
FILE:	SITE1.DWG	
REV. 0	SHEET # –	PROJECT NO. 17849

FIGURE 1
SITE MAP
SITE 69
MARINE CORPS BASE CAMP LEJEUNE

NOT TO SCALE

C:\OHM\LEJEUNE\16487\PHASE\SITE1.DWG

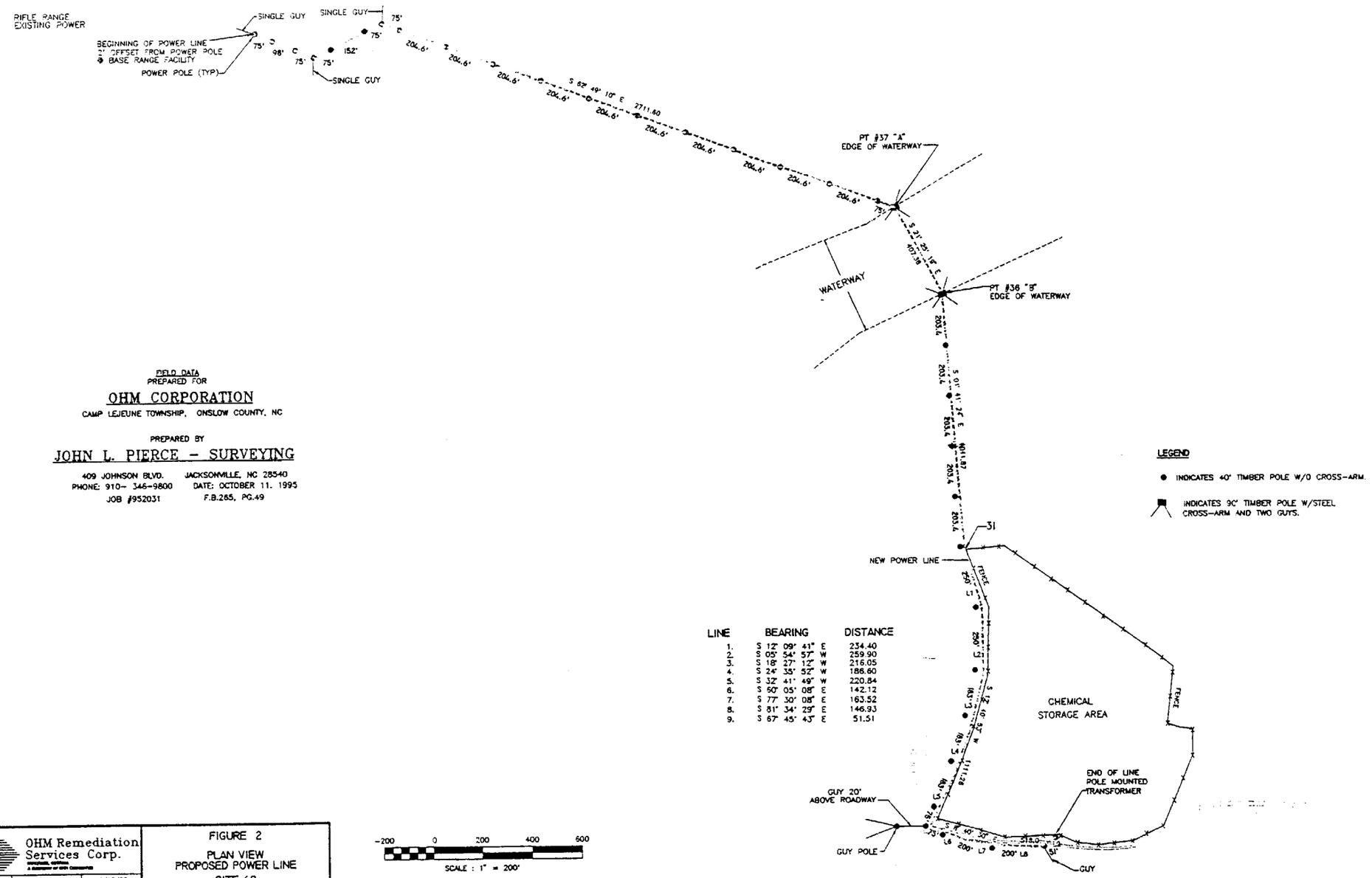
All merchantable timber will be harvested by the MCB Camp Lejeune Forestry Department. Immediately upon completion of harvesting activities, clearing and grubbing operations will commence. All remaining trees and brush will be removed. All stumps will be cut to a height not to exceed 10 inches to permit passage of maintenance bush hogging equipment.

Specific pole locations, as indicated on Figure 2, will be surveyed and marked in preparation for the pole setting operations.

6.2.2 Power Line Construction

During the previous tree harvesting and site clearing activities, the power line construction subcontractor, Coastal Distribution, Inc., will be preparing to initiate construction of approximately 5,625 feet of overhead power line. The completed system will include 33 new 40-foot power poles spaced as indicated on Figure 2. The 400-foot waterway crossing will employ 90-foot high poles with steel cross-arms at each end to maintain an 80-foot clearance above the water at mid-span. Wire will be aluminum alloy conductor, bare (AAAC) sized at No. 2 per conductor (3 required) to supply a minimum of 275 amperes (the total anticipated future loading). Three 50 Kva pole mounted transformer will be provided to supply the treatability project with 480 volts, 3-phase, 60 cycle power.

Upon activation of the permanent overhead power supply system, the temporary diesel generator set and portable fuel tank will be demobilized.



FIELD DATA
PREPARED FOR

OHM CORPORATION

CAMP LEJEUNE TOWNSHIP, ONSLOW COUNTY, NC

PREPARED BY

JOHN L. PIERCE - SURVEYING

409 JOHNSON BLVD. JACKSONVILLE, NC 28540
PHONE: 910- 346-9800 DATE: OCTOBER 11, 1995
JOB #952031 F.B.285, PG.49

LEGEND

● INDICATES 40' TIMBER POLE W/O CROSS-ARM.

INDICATES 30' TIMBER POLE W/STEEL CROSS-ARM AND TWO GUYS.

LINE	BEARING	DISTANCE
1.	S 12° 09' 41" E	234.40
2.	S 05° 54' 57" W	259.90
3.	S 18° 27' 12" W	216.05
4.	S 24° 35' 52" W	186.60
5.	S 32° 41' 49" W	220.84
6.	S 60° 05' 08" E	142.12
7.	S 77° 30' 08" E	163.52
8.	S 81° 34' 29" E	146.93
9.	S 67° 45' 43" E	51.51

-200 0 200 400 600
SCALE : 1" = 200'

OHM Remediation Services Corp.

DRAWN BY	J. COLLINS	10/12/95
CHECKED BY	J. DUNN	10/12/95
FILE:	POLE3.DWG	
REV. 1	SHEET # 1	PROJECT NO. 17849

FIGURE 2
PLAN VIEW
PROPOSED POWER LINE
SITE 69

MARINE CORPS BASE CAMP LEJEUNE

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7.0 SITE RESTORATION

7.1 GRADING

Any areas which have been disturbed by power line construction activities will be regraded to meet existing contours of unaffected adjacent areas. Depressions resulting from stump or debris removal will be filled as required using Base borrow material.

7.2 SEEDING

Grass seed matching existing vegetation will be placed at the rate of 5 pounds per 1,000 square feet over topsoil areas. Fertilizer, Type I, Class 2, 10-10-10 analysis will be applied at the rate of 25 pounds per 1,000 square feet. Mulch and water will be applied as required to obtain an acceptable stand of grass.

8.0 DEMOBILIZATION AND FINAL REPORT

All equipment and personnel will be demobilized from the project site. A Contractor Close-out Report will be completed and submitted for review and comment.

OHM SITE SAFETY PLAN

PROJECT NAME: MCB Camp Lejeune PROJECT NUMBER: 17849

LOCATION: Camp Lejeune, NC DATE: October 18,1995

I. SCOPE OF WORK

The work will consist of improving the access road, and power supply. The entire access road will be graded and reshaped with a center crown in the roadway. A culvert will be placed beneath the TLZ Owl Road. The drainage ditches and/or slopes along the roadway will be cleaned and reshaped to enhance surface water flows. ABC stone will be used to provide a firm roadway base where conditions dictate. The right-of-way for the power lines will be cleared and grubbed. The following task will be completed:

Task 1 Mobilization and site preparation
Task 2 Grade and reshape road, drainage ditches
Task 3 Place culvert
Task 4 Place erosion/sediment control
Task 5 Reseed area
Task 6 Clear and grub right-of-way
Task 7 Clean equipment
Task 8 Demobilization

II. ORGANIZATION AND AUTHORITIES

The Project Supervisor is responsible for the safe implementation of field activities and is ultimately responsible for site safety. The Regional Health and Safety Manager is responsible for providing guidance to the Site Safety Officer (SSO) and Project Supervisor on the implementation of the site safety plan. The SSO is responsible for implementing the site safety plan on-site and enforces the plan by performing routine site inspections. The SSO has the authority to immediately shut down site operations where unsafe conditions or practices are observed and takes the lead during site emergencies. Site personnel are responsible for following the requirements of this plan and the directions of the SSO. OHM subcontractors may either develop and implement their own site safety plan or comply with the OHM site safety plan. The following personnel are designated to perform these job functions.

Project Manager: James Dunn

Site Supervisor Randy Smith

Site Safety Officer: Steve Grant

Health and Safety Manager: Mark Wilson (404) 734-8086

Related Personnel:Steve Diller, Hank Noultski,Jim Letson, Arron Gran

Subcontractors:

III. HAZARD EVALUATION

CHEMICAL HAZARDS

The site will not present any hazardous chemical hazard since we will be working on clean fill.

PHYSICAL HAZARDS (Heat/Cold Stress, Noise, Fire, and Explosion)

Heat stress; Manual lifting/back strain, Noise, Heavy equipment, Vehicle traffic

TASK SPECIFIC HAZARDS

Task 1: Mobilization/Site Preparation
Hazards: Material handling, manual lifting; Slips, trips, falls;

Control Measures: Practice safe material handling, manual lifting techniques; Ensure personnel are constantly aware of terrain and footing;

Task 2: Grade and reshape road, drainage ditches
Hazards: Material handling, manual lifting; vehicle traffic, heavy equipment operations

Control Measures: Practice safe material handling, manual lifting techniques; Ensure personnel are constantly aware of terrain and footing; vehicles must be operated in a safe and legal manner, safety belts must be worn, do not exceed the safe driving limits posted or for the driving conditions, Heavy equipment shall have fully functioning safety devices, Maintain 15-foot buffer between heavy equipment and overhead electrical utilities, Do not carry personnel or lift anyone with equipment, Personnel approaching heavy equipment will make eye contact and signal the operator to cease activity Institute traffic control measures and ground personnel wear high visibility vests when working around moving equipment and vehicles.

Task 3: Place culvert
Hazards: Material handling, manual lifting; vehicle traffic, heavy equipment operations

Control Measures: Practice safe material handling, manual lifting techniques; Ensure personnel are constantly aware of terrain and

safety belts must be worn, do not exceed the safe driving limits posted or for the driving conditions, Heavy equipment shall have fully functioning safety devices, Maintain 15-foot buffer between heavy equipment and overhead electrical utilities, Do not carry personnel or lift anyone with equipment, Personnel approaching heavy equipment will make eye contact and signal the operator to cease activity Institute traffic control measures and ground personnel wear high visibility vests when working around moving equipment and vehicles.

Task 4: Place erosion/sediment control
Hazards: Material handling, manual lifting; vehicle traffic, heavy equipment operations

Control Measures: Practice safe material handling, manual lifting techniques; Ensure personnel are constantly aware of terrain and footing; vehicles must be operated in a safe and legal manner, safety belts must be worn, do not exceed the safe driving limits posted or for the driving conditions, Heavy equipment shall have fully functioning safety devices, Maintain 15-foot buffer between heavy equipment and overhead electrical utilities, Do not carry personnel or lift anyone with equipment, Personnel approaching heavy equipment will make eye contact and signal the operator to cease activity Institute traffic control measures and ground personnel wear high visibility vests when working around moving equipment and vehicles.

Task 5: Reseed area
Hazards: Material Handling; Slip, trip, fall; Heavy equipment operation;

Control Measures: Practice safe material handling, manual lifting techniques; Ensure personnel are constantly aware of terrain and footing; vehicles must be operated in a safe and legal manner, safety belts must be worn, do not exceed the safe driving limits posted or for the driving conditions, Heavy equipment shall have fully functioning safety devices, Maintain 15-foot buffer between heavy equipment and overhead electrical utilities, Do not carry personnel or lift anyone with equipment, Personnel approaching heavy equipment will make eye contact and signal the operator to cease activity Institute traffic control measures and ground personnel wear high visibility vests when loading trucks

Task 6: Clear and Grub right-of-way

Hazards: Material handling, manual lifting; vehicle traffic, heavy equipment operations, chain saws

Control Measures: Practice safe material handling, manual lifting techniques; Ensure personnel are constantly aware of terrain and footing; vehicles must be operated in a safe and legal manner, safety belts must be worn, do not exceed the safe driving limits

posted or for the driving conditions, Heavy equipment shall have fully functioning safety devices, Maintain 15-foot buffer between heavy equipment and overhead electrical utilities, Do not carry personnel or lift anyone with equipment, Personnel approaching heavy equipment will make eye contact and signal the operator to cease activity Institute traffic control measures and ground personnel wear high visibility vests when working around moving equipment and vehicles. Chainsaw operators must wear chainsaw chaps and full face shield, Follow the manufacturer's operating and safety procedures, Have chainsaw operator training, Keep personnel away from falling trees, Follow OHM SOP for Solvents and Flammable Liquids No. 39,

Task 7: Clean equipment
Hazards: Operation of high pressure washer; Splash; Slip, trip,fall; Material handling, manual lifting

Control Measures: Follow OHM SOP for operation of high pressure washer; Wear specified level of protection with splash shield; Ensure employees aware of footing; Practice safe material handling and manual lifting procedures

Task 8: Demobilization
Hazards: Material handling; Slips, trips, and falls; Manual lifting hazards; Inhalation and dermal hazards when decontaminating equipment; and hazards associated with operation of high pressure washer

Control Measures: Institute safe lifting and material handling practices; Ensuring personnel awareness of footing; Heavy equipment operation awareness

IV. SITE CONTROL

WORK ZONES

Site operations will be segregated in two work zones: a Construction Zone (CZ); and a Support Zone (SZ) where site support facilities are located. The boundary of the CZ/SZ will be marked with warning signs or barrier tape and access control points will be designated to restrict access to authorized personnel. A site map depicting these work zones will be developed during site mobilization and posted. The Buddy System will be implemented on-site for those tasks performed in the CZ.

SITE COMMUNICATIONS

On-site communications will be established between site work zones and will consist of verbal communications, line of sight observations, or two-way radios. Off-site communications will be established in the support zone to summon off-site emergency

services and will consist of either on-site cellular telephones or identifying the location of the nearest telephone to the site.

SAFE OPERATING PROCEDURES

OHM Health and Safety procedures apply to OHM's hazardous waste and emergency response operations. These procedures are contained in OHM's Health and Safety Procedures Manual that is reviewed with and provided to site supervisors during OSHA Supervisors Training. Questions on the applications of these procedures to site operations should be directed to the Regional Health and Safety Manager. Project-specific procedures are attached to this plan.

V. PERSONAL PROTECTIVE EQUIPMENT

The following Levels of Protection are designated for each task performed in site work zones, based on the hazards posed by each task. Modifications of these Levels of Protection are provided for those tasks with specific personal protective equipment requirements. **An upgrade/downgrade in the designated Level of Protection may only be instituted for those tasks' where more than one level of protection is specified (i.e., Mod D/C) and only after air monitoring results justify the upgrade/downgrade, based on the action levels listed in this plan. For those tasks where more than one level of protection are specified (i.e., Mod D/C) the first level of protection (Mod D) is the initial level of protection required for the task, with the second level (Level C)being either the downgrade or upgrade level of protection.**

NO CHANGES TO THE DESIGNATED LEVEL OF PROTECTION BELOW SHALL BE MADE FOR THOSE TASKS WHERE ONLY ONE LEVEL OF PROTECTION IS SPECIFIED WITHOUT AN AMENDMENT TO THIS PLAN AND THE APPROVAL OF THE REGIONAL HEALTH AND SAFETY MANAGER/DIRECTOR.

All tasks will be performed in Level D. Cleaning the equipment with a pressure washer will require a face shield.

Personal protective equipment requirements for the above designated Levels of Protection is as follows:

LEVEL D

Boots: Steel Toe/Shank Boots

Head/Face Protection: Hard Hat

Eye Protection: Safety Glasses with side shields

VI. DECONTAMINATION PROCEDURES

Decontamination procedures are not necessary on this site.

VII. AIR MONITORING

Instrument: Miniram Particulate Monitor
Task 2,3,4,5,6
Monitored/Frequency: Perform at start up and periodic during all tasks
Action Levels/Required Actions: >1 mg/m^3 apply dust supression agent; > 5 mg/m^3 stop operations and allow dust to settle

VIII. EMERGENCY RESPONSE PLAN

PRE-EMERGENCY PLANNING

Before starting site operations, the SSO will implement emergency procedures that include: identifying the location and route to emergency medical services; establishing site communications; designating emergency warning signal and evacuation routes; inventorying emergency equipment; and communicating emergency procedures to personnel.

PERSONNEL ROLES, LINES OF AUTHORITY AND COMMUNICATION

The SSO takes the lead during site emergencies until off-site emergency responders arrive on-site. In cases of major emergencies, OHM personnel will evacuate the site, contact local emergency responders, and rely on them to handle the emergency. Minor emergencies that are controllable on-site with emergency equipment located at the site will be addressed by OHM personnel with the approval of the SSO.

EMERGENCY RECOGNITION AND PREVENTION

The SSO will conduct an initial site safety briefing to review the requirements of the site safety plan with site personnel. This briefing will include discussions on the recognition, prevention and control of emergencies anticipated on-site. Daily safety meetings will be held to emphasize emergency prevention and control measures.

SAFE DISTANCE AND PLACES OF REFUGE

The on-site assembly point will be located in the SZ where site personnel are accounted for and emergency services are contacted. The SSO will evaluate the emergency situation based on the hazards posed to site personnel remaining at the on-site assembly point, then determine the need and location of further off-site evacuation and assembly points.

SITE SECURITY AND CONTROL

Access to the site will be controlled by the SSO until local emergency responders arrive. The SSO will then relinquish site security/control to the authorized emergency response organization.

EVACUATION ROUTES AND PROCEDURES

The emergency evacuation signal will be one long blast with an air horn. Evacuation routes will be designated that direct evacuation from the EZ in an upwind direction. In cases of uncontrollable emergencies such as fire, explosion, or toxic vapor release, a site evacuation shall be implemented as follows:

- Sound the emergency warning signal.
- Stop work activities and evacuate the EZ in an upwind direction.
- Assemble in the SZ and account for personnel. Dispatch a response team equipped with appropriate PPE (minimum Level B protection) and rescue unaccounted personnel.
- Contact off-site emergency response services.

EMERGENCY DECONTAMINATION PROCEDURES

Personnel will be decontaminated to the extent feasible (gross decon or deluge shower) but life saving and first aid procedures take priority over personnel decontamination efforts. Standard personnel decontamination procedures apply for those injuries deemed non-life threatening by the SSO.

EMERGENCY MEDICAL TREATMENT AND FIRST AID

In the absence of reasonably accessible medical services, an SSO trained in first aid by the American Red Cross or the equivalent will be available on-site to render first aid. An industrial first aid kit available on-site, with its contents approved by OHM's consulting physician. The contents of the first aid kit will be checked by the SSO weekly, with expendable items replaced when used.

EMERGENCY ACTIONS

If actual or suspected serious injury occurs on-site implement the following emergency actions:

- Remove the exposed/injured person(s) from immediate danger.
- Render first aid if necessary. Decontaminate injured after critical first-aid has been administered.

- Obtain paramedic services or ambulance transport to local hospital. This procedure shall be followed even if there is no visible injury.

- Other personnel in the work area shall be evacuated and assembled at the SZ until the SSO determines that it is safe to resume work.

RESPONSE FOLLOW-UP

The SSO must complete an incident investigation form for site emergencies within 24 hours of the incident and submit/fax it to their Division Manager. Incidents involving potential Lost Time Accident (LTA) injuries, overexposure incidents, or emergencies causing site evacuations must be reported within 24 hours after incident occurrence to:

Angelo Liberatore
Regional Health and Safety Manager
Phone: 404/729-3900 (work)
404/476-0112 (home)
Fax: 404/729-3905

The SSO will identify the cause(s) of the incident and take action to prevent reoccurrence. The SSO will also evaluate the effectiveness of the site's emergency response procedures and institute corrective actions when warranted.

EMERGENCY EQUIPMENT ON-SITE

The following emergency equipment are located on-site:

- Fire Extinguishers @ OHM Vehicle
- Industrial First Aid Kit @ OHM Vehicle
- Portable Eye wash/Shower @ OHM Vehicle

EMERGENCY CONTACTS

The following emergency contacts will be identified during project mobilization and conspicuously posted in the SZ.

	Name	Phone Number
Hospital:	_____	_____
Fire Dept.:	_____	_____

Police Dept.: _____ _____

Location and Route to Hospital: _____

_____

_____

_____

_____

IX. SITE SAFETY PLAN CERTIFICATIONS

This Site Safety Plan has been approved by Mark Witmer CIH on 10/23/91

The following site personnel acknowledge reading and understanding the contents of this Site Safety Plan:

	Name	Signature
Project Supervisor:	Randy Smith	
Site Safety Officer:	Steve Grant	
Site Personnel:		

ATTACHMENTS: OHM Hazard Communication Program
Material Safety Data Sheets (MSDS)
Incident Investigation Form
Project-Specific Health and Safety Procedures