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REMEDIAL WORK PLAN REVISION 1 FOR MCCOY ANNEX LANDFILL COVER NTC
ORLANDO FL
4/29/1999
BECHTEL



305-00024

APR 29 1999

Commanding Officer
Department of Navy, Southern Division
Naval Facilities Engineering Command
Attention: Barbara Nwokike
2155 Eagle Drive, P.O. Box 190010
North Charleston, SC 29419-9010

SUBJECT: Bechtel Job No. 22567
Department of Navy Contract No. N62467-93-D-0936
**DELIVERY ORDER 107, McCOY ANNEX LANDFILL COVER
REMEDIAL WORK PLAN, REVISION 1
NAVAL TRAINING CENTER, ORLANDO, FLORIDA**
File code: 5320

Dear Ms. Nwokike:

Enclosed is copy of the *Remedial Work Plan for the McCoy Annex Landfill Cover at Naval Training Center, Orlando, Florida*, Rev. 1, April 1999 for your review and approval. This submittal revises the plan that was approved by the Navy Contracting Officer on April 9, 1999. The work plan has been revised and updated to incorporate changes due to comments from the Florida Department of Environmental Protection (FDEP), EPA Region IV, and the Navy. Additionally, we have expanded the attachments to the work plan to include documents that were not available at the time the plan was first issued for approval at revision 0. We also incorporated the applicable technical requirements from the earthwork specification directly into the text of the work plan and deleted the specification as an attachment. While none of these changes resulted in any deviation from the basic interim remedial action (IRA) approach outlined in revision 0 of the work plan, collectively they affected the document to the extent we felt it best to reissue the entire plan with a new revision number.

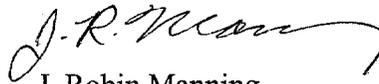
Please note that we have included in this submittal copies of the approved task-specific Safety and Health Plan Addendum and the approved Quality Control Plan Addendum. These documents do not require any review and are included only for the convenience of the recipients.

The work plan has been 3-hole punched to place in the binders you were originally provided. Also, please note that Figure 1-3 and the drawing in Attachment 3 to the work plan were not included. These had no changes, so we are requesting that the recipients of the revision 0 work plan reuse the drawings and supplied map pockets for the revision 1 work plan.

Bechtel will provide a separate response (via e-mail) to review comments provided by FDEP, EPA Region IV and the Navy.

If you have any questions about the work plan please do not hesitate to call me at (423) 220-2406.

Sincerely



J. Robin Manning
Project Engineer

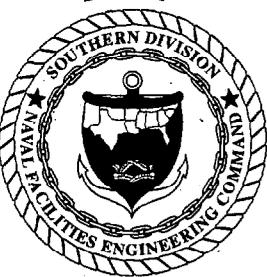
Enclosure: *Remedial Work Plan for the McCoy Annex Landfill Cover at Naval Training Center, Orlando, Florida, Rev. 1, April 1999*

- cc: Ms. Nancy Rodriguez, EPA Region IV (w/enclosure)
- cc: Mr. Dave Grabka, Florida Department of Environmental Protection (w/enclosure)
- cc: Lt. Gary Whipple, Public Work Department, NTC Orlando (w/enclosure)
- cc: Mr. Steve McCoy, NUS Tetra-Tech (w/enclosure)
- cc: Mr. Wayne Hansel, SOUTHDIV (w/enclosure)
- cc: Mr. Jerry Eggebrecht, REICC, Orlando (w/enclosure)
- cc: Mr. Mark Ady, South Florida Water Management District, Orlando (w/enclosure)

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**REMEDIATION WORK PLAN
DELIVERY ORDER NO. 107
MCCOY ANNEX LANDFILL COVER
AT
NAVAL TRAINING CENTER
McCOY ANNEX
ORLANDO, FLORIDA**



Prepared for

**DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND**

Under Contract No. N62467-93-D-0936



**APRIL 1999
REVISION 0**

Prepared by
BECHTEL ENVIRONMENTAL, INC.

**OAK RIDGE, TENNESSEE
BECHTEL JOB NO. 22567**



REMEDIAL WORK PLAN
DELIVERY ORDER NO. 107
McCoy ANNEX LANDFILL COVER
AT
NAVAL TRAINING CENTER
McCoy ANNEX
ORLANDO, FLORIDA

Prepared for
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OAK RIDGE, TENNESSEE

April 1999

REVISION 1

Bechtel Job No. 22567

Prepared:	<u>J. R. Manning</u> Bechtel Project Engineer	<u>4/29/99</u> Date
Approved:	<u>J. R. Manning for R. J. Cohose</u> Bechtel Project Manager	<u>4/29/99</u> Date
Approved:	_____ Navy Contracting Officer	_____ Date

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ATTACHMENTS

- 1 Storm Water Pollution Protection Plan
- 2 Subcontract Scope of Work for Timber Harvesting
- 3 Tetra Tech NUS, Inc. Drawing "Area Requiring Additional Soil Cover"
- 4 Sketch: "Excavation Limits for One Acre Sampling Grid Area"
- 5 Florida Natural Areas Inventory Database Query

FIGURES

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ACRONYMS AND INITIALISMS

CERCLA	Comprehensive Environmental Resource, Compensation, and Liability Act
EPA	United States Environmental Protection Agency
FDEP	Florida Department of Environmental Protection
FNAI	Florida Natural Areas Inventory
NCP	National Contingency Plan
NOI	Notice of Intent
NPDES	National Pollution Discharge Elimination System
NTC	Naval Training Center
OPT	Orlando Partnering Team
OU-2	McCoy Annex Golf Course Operable Unit 2
PAH	petroleum aromatic hydrocarbon
QCP	Quality Control Plan
QCPA	Quality Control Plan Addendum
RAC	Response Action Contractor
RI	Remedial Investigation
RWP	Remedial Work Plan
SACM	Superfund Accelerated Cleanup Model
SOUTHDIV	Naval Facilities Engineering Command Southern Division
SWPPP	Storm Water Pollution Prevention Plan
TCRAM	time-critical removal action memorandum

1.0 INTRODUCTION

Bechtel Environmental, Inc. (Bechtel) has been contracted by the Department of the Navy, Naval Facilities Engineering Command, Southern Division (SOUTHDIV), to provide remedial services as the Navy's Environmental Response Action Contractor (RAC). Under Contract Delivery Order 107 of Prime Contract N62467-93-D-0936, Bechtel has been contracted to prepare a Remedial Work Plan (RWP) to install a soil cover over the landfill located south of the McCoy Annex Golf Course, designated as Operable Unit 2 (OU-2), at the Naval Training Center (NTC) Orlando, Florida.

The remedial actions presented in the RWP involve:

- Protecting existing wetlands and drainage channels.
- Harvesting saleable trees.
- Clearing and grubbing vegetation.
- Placing a 2-ft-thick soil cover.
- Removing PAH-contaminated soil from two locations on McCoy Annex Golf Course.
- Performing site restoration.

1.1 SITE DESCRIPTION

NTC Orlando consists of 2,072 acres in Orange County, Florida, and includes four discrete facilities—Main Base, Area C, Herndon Annex, and McCoy Annex (Figure 1-1). McCoy Annex encompasses approximately 877 acres and is located approximately 8 miles south of the Main Base and west of Orlando International Airport. The McCoy Annex Landfill (OU-2) is located in the southern part of McCoy Annex. The landfill's last reported use was in 1978. The former landfill site occupies approximately 99 acres (Figure 1-2). It underlies a large part of the 9-hole golf course and most of the wooded area to the south. A cover with varied depth exists over the landfill. The landfill area to the west of the tee for Hole No. 5 and for the northern portion of the wooded area will receive the additional 2-ft soil cover addressed in this RWP (Figure 1-3).

1.2 REGULATORY SETTING

The *Remedial Investigation (RI) Report* dated January, 1999, prepared by Tetra Tech NUS, Inc., the Navy CLEAN contractor, applied the Superfund Accelerated Cleanup Model (SACM) program (EPA 1992) to focus the McCoy Annex Landfill RI and expedite remedial action. The RI utilized the United States Environmental Protection Agency (EPA) interim guidance, "Application of the CERCLA Municipal Landfill Presumptive Remedy to Military Landfills" (1996) to facilitate selecting the presumptive remedy of containment for the McCoy Annex Landfill. Landfill capping was one of several presumptive remedies for containment. This RWP describes the remedial action to place an additional 2 ft of soil cover over the southern portion of the landfill where the existing final cover material is thin. This action is being taken in advance of the Orlando Partnering team, which includes representatives from Florida Department of Environmental Protection (FDEP) and EPA Region IV, approving a final remedy for the McCoy Annex Landfill.

A Time-Critical Removal Action Memorandum (TCRAM) has been generated to document the decision to place additional soils on top the McCoy Annex Landfill where a minimal cover exists. The additional 2 ft soil cover would reduce rainfall infiltration and mobilization of contamination from the source area into the groundwater. It also eliminates risk of exposure to surface contamination.

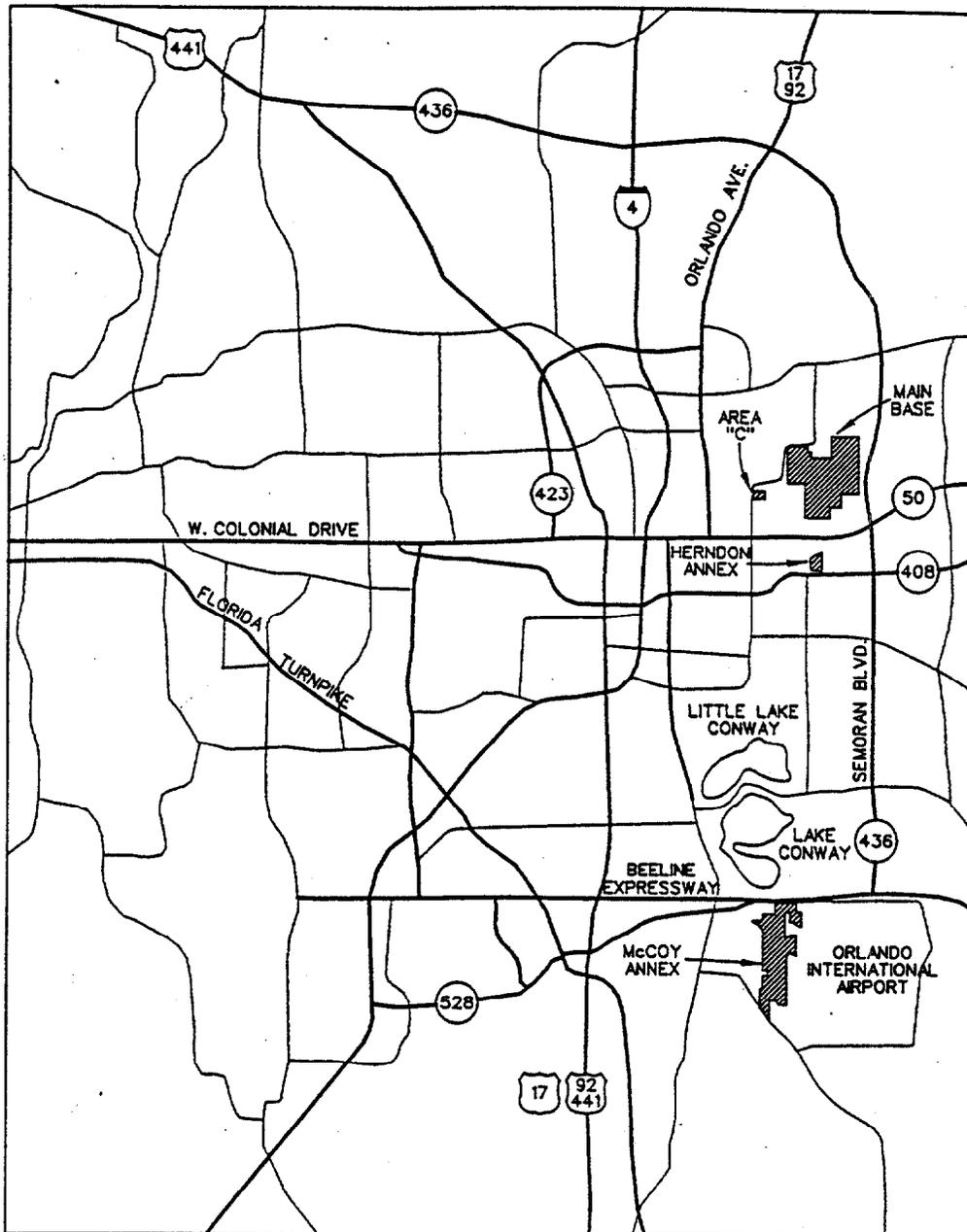
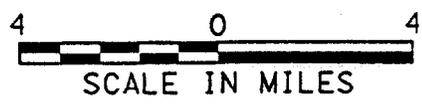
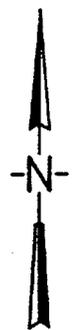


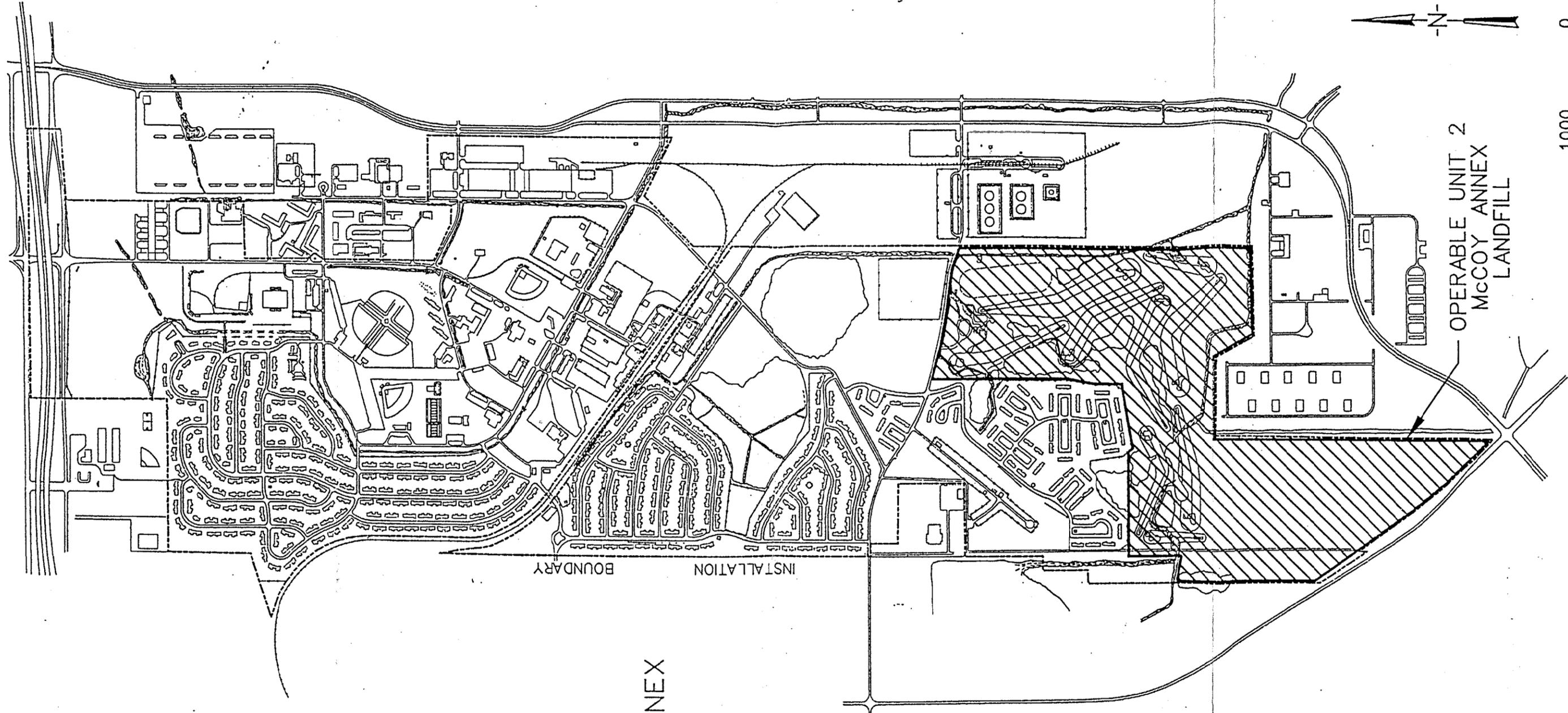
FIGURE 1-1



FACILITY LOCATIONS
McCOY ANNEX LANDFILL
REMEDIAL INVESTIGATION

NAVAL TRAINING CENTER
ORLANDO, FLORIDA

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MCCOY ANNEX

FIGURE 1-2

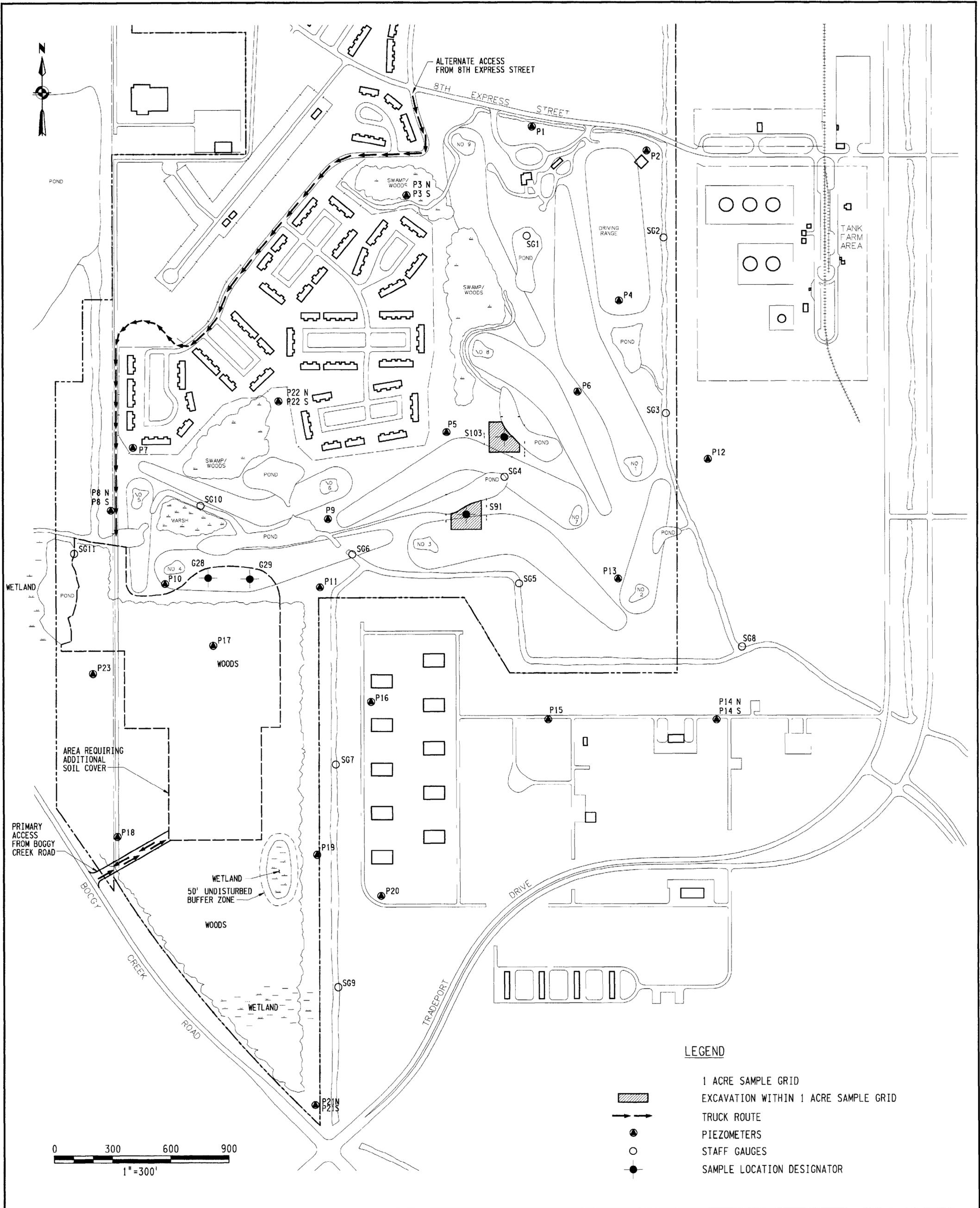


SITE LOCATION MAP
McCOY ANNEX LANDFILL
REMEDIAL INVESTIGATION

NAVAL TRAINING CENTER
ORLANDO, FLORIDA

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LEGEND

-  1 ACRE SAMPLE GRID
-  EXCAVATION WITHIN 1 ACRE SAMPLE GRID
-  TRUCK ROUTE
-  PIEZOMETERS
-  STAFF GAUGES
-  SAMPLE LOCATION DESIGNATOR

Figure 1 3
Site Activities Plan
McCoy Annex Landfill Cover

2.0 SCOPE OF WORK

2.1 INTRODUCTION

The scope of the work on the McCoy Annex includes placing a soil cover layer over portions of the former landfill site to ensure a 2-ft minimum thickness of soil cover above the waste in the landfill and removing petroleum aromatic hydrocarbon (PAH) contaminated soil from two locations on the McCoy Annex Golf Course.

Prior to the placement of soil cover, the area will be cleared and grubbed and sediment control devices installed. Soil will be trucked to the site from the NTC Main Base by the Environmental Detachment, Charleston, SC and by the firm responsible for the re-development of the Main Base Golf Course. The soil will be placed in lifts until a 2-ft layer of soil cover is constructed over the landfill area. Additional soil to complete the cover will be obtained from an offsite borrow source, as needed. Turf will be established atop the soil cover to stabilize the cover from erosion.

Soil contaminated with PAHs will be removed from the areas designated by Tetra Tech NUS, Inc. sampling location S91, north of the fairway for Hole No. 3, and S103, north of the fairway for Hole No. 7. Sediment control barriers will be in-place prior to soil removal. The size of each removal area will be approximately 0.6 acre. The excavated soil will be incorporated into the landfill soil cover. The excavations will be backfilled with clean soil from an offsite borrow source and reseeded.

2.2 EROSION AND SEDIMENT CONTROL

Prior to the start of the intrusive remedial activities or placement of the soil cover, temporary sediment control barriers will be erected to prevent sediment runoff into adjacent wetlands, drainage channels, or ponds. Sediment control barriers are defined in the Storm Water Pollution Protection Plan (SWPPP) and include haybales, silt fencing, berms, etc. The SWPPP is included as Attachment 1. Sediment control barriers will be maintained until final stabilization of those portions of the site up-gradient of the sediment control barriers. Sediment control barriers will be removed after final stabilization. Sediment barriers adjacent to wetland areas will be set 50 ft out from their delineated boundary to establish a buffer zone. No personnel or equipment will intrude on this buffer zone. Tetra Tech NUS, Inc. has surveyed and established the wetland boundaries.

Erosion and sediment controls will be installed in accordance with the SWPPP. Materials used for temporary sediment barriers may include straw, hay, or pine needle bales and geotextile filter fabric. Filter fabric will be a material made expressly for the purpose of sediment control such as Exxon GTF 101S silt screen.

2.3 TREE HARVESTING

The merchantable trees growing over the landfill will be cut and sold as timber by a subcontractor with the proceeds returned to the Navy's Forestry Department at SOUTHDIV. A Subcontract Scope of Work has been prepared specifying the methods and procedures for the harvesting of trees. A copy is provided in Attachment 2. Only those trees in the footprint of the landfill soil cover and the perimeter staging area will be removed. No trees would be removed from the wetland areas.

2.4 CLEARING AND GRUBBING

Non-merchantable trees, limbs and shrubs will be cleared from the landfill area receiving the soil cover plus a perimeter staging area. Included in the Subcontract Scope of Work for the timber harvesting are the methods and procedures for the clearing. A copy is provided in Attachment 2. Figure 2 in the Subcontract Scope of Work provides delineation for the area to be cleared. Bechtel labor will grub the tree roots from the area cleared by the subcontractor. Cleared and grubbed material will be disposed of by either chipping the material and spreading it in the adjacent wooded area or removing the material and disposing of it in a licensed local landfill. Chipped material left onsite will be spread in such a manner as to allow natural decomposition. There will be no burning of vegetative debris or other material.

Grasses comprise the vegetative cover at location S91 and S103. These grasses will be cut prior to excavation and mixed with the excavated soil.

If grubbing operations expose buried wastes such as drums, transformers, or sludge, any such area will be cordoned off immediately and intrusive work at that location halted. The Navy will be notified of the presence of potentially hazardous wastes. Any characterization of such materials will be done at the Navy's direction. Subsequent to the characterization of the waste and review of its associated risk with the Orlando Partnering Team (OPT), Bechtel will either cover the waste with 2 ft of fill or develop a plan for the removal and offsite disposal of the suspect waste. No suspect waste will be covered with fill without the concurrence of FDEP, EPA Region IV, and the Navy. Removal of waste may be performed by Bechtel or other Navy contractors.

2.5 LANDFILL SOIL COVER

A soil cover will be placed on the portion of the landfill designated by Tetra Tech NUS, Inc as requiring additional soil cover. This area is approximately 25 acres. Tetra Tech NUS, Inc produced a drawing, "Area Requiring Additional Soil Cover, McCoy Annex Landfill, Remedial Investigation," showing the results of sampling for the depth of existing cover over the waste and delineating the boundaries for the additional soil cover. The drawing is included as Attachment 3. The northern boundary of the soil cover will be an irregular shape and field determined by Tetra Tech NUS. The placement of cover on the northern perimeter of the site will be coordinated with the golf course operator. Grid sample locations G28 and G29 will be covered with 2 ft of soil.

The soil cover will require 81,000 yd³ of material to place a 2-ft cover over the 25 acres. The material will come from several sources. The source for the majority of the material will be from NTC Main Base, from the excavation at Study Area 40 and the Main Base golf course. Both of these sources contain low levels of arsenic contamination. Approximately 6,000 yd³ (~9,000 tons) of soil will be trucked from Study Area 40 by the Environmental Detachment, Charleston, SC and up to 73,000 yd³ (~109,500 tons) can be trucked from the Main Base golf course by the City of Orlando's developer to McCoy Annex. In the event additional material is brought from the Main Base golf course to accommodate the Property Transfer Agreement between the City of Orlando and the United States Government, the soil cover area and/or thickness will be increased at the direction of the Navy. Bechtel will excavate approximately 2,000 yd³ (~3,000 tons) of material from the excavations at sample location S91 and S103 to place in the soil cover.

Bechtel will procure an offsite borrow source of certified clean soil to supplement any deficiency in soil quantity for the cover. Cover material from an offsite borrow source will be cohesive or cohesionless

native (i.e., not recycled) material, free of contamination, muck, stumps, root, brush, or vegetative matter. No rocks larger than 3 in. in diameter will be allowed. Confirmation sampling of the landfill soil cover will be performed by SOUTHDIV to confirm that the soil contaminant levels remaining do not exceed acceptable FDEP risk-based management goals for a recreational area.

The soil placement operations will be coordinated with the McCoy Annex golf course operator. Trucks delivering soil will dump the soil near its final location. The soil will then be spread with dozers, maintaining shallow soil lifts (6 to 9 in.) to allow the tracks of the equipment and truck traffic to compact the soil. Grade stakes will be set on approximately 100-ft centers through the area requiring the additional soil cover. Each grade stake will be marked 2 ft above the ground, indicating the top of fill mark. Grade stakes will be removed as the fill is placed to finish grade. No civil survey work is planned. Dust and sediment runoff control measures will be maintained during all soil placement operations.

Piezometers located within the area requiring additional soil cover will be protected from damage and extended above the soil cover.

Access for trucks delivering soil cover material will be established from the west of the landfill site, off Boggy Creek Road. A temporary driveway will be installed in accordance with standard driveway connection details of the local jurisdictional authority for temporary connections. An alternative access route from the north through the McCoy Annex housing area will be used until construction of the Boggy Creek Road entrance is complete. Drainage culverts will be installed at truck access locations where necessary to maintain drainage ways. These access routes are depicted on the "Site Activities Plan" Figure 1-3.

The temporary driveway from Boggy Creek Road to the site will be surfaced with No. 57 coarse aggregate meeting the requirements of Section 901 of the Florida Department of Transportation's *Standard Specifications for Road and Bridge Construction*, latest edition. The aggregate will be "tailgated" onto the temporary access road surface to provide a uniform, all-weather surface. Minimum uncompacted thickness for the aggregate surfaces will be 4 in. After the initial placement, the aggregate will be compacted by making at least one pass over all areas with the dozer tracks.

2.6 S91 AND S103 PAH REMOVAL

Soil contaminated with PAHs will be removed from the areas designated by Tetra Tech NUS, Inc. sampling location S91, north of the fairway for Hole No. 3 and S103, north of the fairway for Hole No.7. These locations are shown on Tetra Tech NUS, Inc drawing "Area Requiring Additional Soil Cover, McCoy Annex Landfill, Remedial Investigation" in Attachment 3. Location designators S91 and S103 represent center points of a 1-acre grid area. Analytic sample results from these two grid areas have shown elevated PAH contamination in the soil. Brown and Root Environmental presented the sample results in their *Remedial Investigation Technical Memorandum for Operable Unit 2, McCoy Annex Landfill*, dated March 1998. Direction was received from the Navy to remove the PAH-contaminated soil from the grid areas, place the soil in the soil cover over the landfill, and backfill the excavated area with 2 ft of fill.

Each 1-acre grid area is 208.7 ft². Brown and Root Environmental divided the 1-acre grid area into quarters for remedial investigation sampling purposes. A sample was taken from the center of each quarter as well as the center of the 1-acre grid area. The sample was composited and the result represents the entire 1-acre grid area. For the purposes of determining the limit of excavation for remediation, the

perimeter of the excavation area will be determined by coming in from the outside perimeter of the 1-acre grid midway to the center of the quarter grid section. The dimension of the excavated area will be 156.5 ft² centered on the center of the one grid area with the same orientation as the grid. The center and the four corner points will be field-located by Tetra Tach NUS, based on the surveyed coordinates of the original grid. The size of the excavation will be limited wherever a pond is encountered. A sketch showing the size of the excavation is provided in Attachment 4. Grade stakes will be used throughout the excavation area to control the depth of cut and fill. The excavation will be dug 1 ft deep. The excavation will be backfilled with a 2-ft thickness of certified clean fill procured from an offsite borrow source. Backfill material will be placed in lifts and compacted with equipment tracks. No confirmation sampling or civil survey is planned.

2.7 FINAL GRADING AND SITE RESTORATION

After the minimum 2-ft soil cover has been placed, the cover will be final-graded to provide a smooth, uniform surface that promotes gravity drainage. Depressions and ponding will be minimized. Care will be taken to maintain the required 2-ft minimum cover. The finished surface shall be free of trash and debris.

Site restoration work will include seeding, fertilizing and mulching all disturbed areas. Seed type will be coordinated with the McCoy Annex Golf Course operator to get a compatible seed with the existing turf. Sod may be used for disturbed areas that are part of the fairway. Application rate for seed and fertilizer will be 10 pounds per 1,000 ft². There will be no maintenance of the turf area.

3.0 REMEDIATION ACTIVITIES

3.1 MOBILIZATION

Once notice to proceed has been given to Bechtel by SOUTHDIV, Bechtel will mobilize a work force, support equipment, material, and subcontractors necessary to commence and sustain construction activities as required.

During mobilization, additional activities being performed include administration of subcontractors, orientation of site workers, material receipt, and implementation of the Quality Control Preparatory phase.

Before beginning intrusive activities, Bechtel will coordinate with the golf course manager, obtain any necessary excavation permits, and notify Sunshine [1 (800) 432-4770]. Utilities or other potential underground interferences will be identified by reviewing existing drawings, Navy field surveys, and/or the use of handheld pipe and cable locating equipment, whichever is deemed most appropriate. Identified and suspect interferences (including overhead power lines) will be marked before intrusive work begins.

3.1.1 Pre-Construction Meeting

Before the physical work begins, a preconstruction meeting will be held with the Resident Officer in Charge of Construction (ROICC) which may include the SOUTHDIV and golf course operations manager. This meeting will discuss execution of the work, site access, staging areas, transportation haul routes, and contact personnel for fire, environmental, safety and health, security, and waste management.

3.1.2 Temporary Facilities

A field office is not planned. Temporary office space will be sought from the closed quarters. A construction vehicle (van) will be used for some office space as well as equipment/instrument storage. A cellular phone will be used for communication.

Temporary parking and laydown areas for vehicles, equipment, and material will be coordinated with the golf course operations manager. An attempt will be made to minimize construction operations impact to the golf course operations.

The Navy will provide a source of portable water. A hookup for use of potable water for environmental controls, safety and health, and miscellaneous usage will be coordinated with the golf course operations manager.

3.1.3 Site Controls

Personnel protective equipment for construction workers and the general public will be the same as for an uncontaminated construction site (i.e., hardhats, boots, gloves eyeglasses, etc.). Physical barriers and/or caution tape will be erected at the entrance to the construction areas to prevent inadvertent entry.

3.1.4 Natural Resources

The Florida Natural Areas Inventory (FNAI) documents the presence of a Gopher Tortoise burrow, located during a 1992 survey, on the extreme eastern perimeter of the project area. Attachment 5 provides a copy of the correspondence and a map from FNAI. Due to the limited accuracy of FNAI's map in establishing a precise location, Tetra Tech NUS will perform a walk-over survey of the areas to be disturbed with the purpose of locating any active Gopher Tortoise burrows. If active burrows are located in the planned landfill cover area, Bechtel will either leave a 50-ft undisturbed perimeter around the burrow or relocate the tortoise. Relocating a Gopher Tortoise would require compliance with the substantive permitting requirements of the Florida Game and Freshwater Fish Commission.

3.1.5 Permits

Site work is being conducted under the authority of CERCLA, and consistent with the provisions of the National Contingency Plan (NCP) found in 40 CFR 300. No permits are required to be obtained for removal action activities conducted onsite, as the term "onsite" is defined in the NCP. However, any substantive provisions that would otherwise be required by the terms and conditions of an applicable permit must be implemented during field activities.

In order to comply with the substantive requirements of potentially applicable permit conditions, Bechtel is identifying federal, state, and local permits that might apply to work at the site. Where such permits are identified, the information required by the permit application is provided to the permitting authority, along with a written request for the permitting authority to identify, in a timely manner, any substantive permit conditions that should be implemented onsite.

For example, the USEPA requires a National Pollution Discharge Elimination System (NPDES) permit for "storm water discharges associated with industrial activity," pursuant to 40 CFR 122. Construction activities that disturb greater than 5 acres of land and have point source discharges to waters of the United States are defined as an "industrial activity." To meet the substantive provisions of this required

permit, a Notice of Intent (NOI) will be submitted to EPA Region IV along with a cover letter explaining the NOI submitted as a CERCLA "permitting equivalency" package. A SWPPP, as required by the NOI, will be prepared to satisfy the substantive requirements of this Clean Water Act provision.

4.0 WASTE MANAGEMENT

General waste management practices used by Bechtel on this project will be as defined in the *Environmental Response Action Contract Waste Management Plan*. There are several waste management activities that are anticipated during this remedial action, including disposal of:

- Construction and equipment maintenance debris
- Personal protective equipment
- Other non-hazardous solid wastes.

4.1 WASTE MINIMIZATION

Construction activities at this site will be controlled to minimize the amount of materials that must eventually be disposed. Waste minimization is an important goal and will be implemented during all site operations. These practices will include:

- Limiting extraneous materials taken into work areas
- Cleaning of equipment used to support onsite activities
- Use of consumable items that can be compacted or otherwise volume reduced.

4.2 WASTE DISPOSAL

All construction debris and solid waste generated as a result of construction activities is expected to be non-contaminated and will be properly disposed offsite as sanitary waste.

5.0 QUALITY CONTROL

The Quality Control Plan (QCP) and the Quality Control Plan Addendum (QCPA) prepared for the work associated with Delivery Order No. 107, for McCoy Annex landfill cover at NTC Orlando, Florida, describes the quality control activities that will be implemented. Both documents will be used to ensure that the requirements of the Bechtel and Navy RAC Program associated with this RWP are met.

6.0 SAFETY AND HEALTH

A Program Safety and Health Plan defines the policies for the Navy RAC Project. A Site Safety and Health Plan (SSHP) has been prepared for each of the Navy RAC bases. Addendum No. 57 to the SSHP will be provided to the Navy under separate cover, defining task-specific requirements for the McCoy Annex landfill cover remedial activities.

7.0 PROJECT MANAGEMENT

As the Environmental RAC for the Navy, Bechtel provides management of the McCoy Annex landfill cover remedial activities, which include all activities necessary to implement fieldwork delineated in the RWP. Typically, these activities include the development and procurement of subcontract services; the development, implementation, and overview of plans; the collection and review of data; quality control

submittals; technical guidance to onsite personnel; report preparation; cost management; and schedule control.

ATTACHMENT 1
STORM WATER POLLUTION PREVENTION PLAN

THIS FORM REPLACES PREVIOUS FORM 3510-6 (8-98)
See Reverse for Instructions

Form Approved. OMB No. 2040-0188

NPDES
FORM



United States Environmental Protection Agency
Washington, DC 20460

Notice of Intent (NOI) for Storm Water Discharges Associated with
CONSTRUCTION ACTIVITY Under a NPDES General Permit

Submission of this Notice of Intent constitutes notice that the party identified in Section I of this form intends to be authorized by a NPDES permit issued for storm water discharges associated with construction activity in the State/Indian Country Land identified in Section II of this form. Submission of this Notice of Intent also constitutes notice that the party identified in Section I of this form meets the eligibility requirements in Part I.B. of the general permit (including those related to protection of endangered species determined through the procedures in Addendum A of the general permit), understands that continued authorization to discharge is contingent on maintaining permit eligibility, and that implementation of the Storm Water Pollution Prevention Plan required under Part IV of the general permit will begin at the time the permittee commences work on the construction project identified in Section II below. IN ORDER TO OBTAIN AUTHORIZATION, ALL INFORMATION REQUESTED MUST BE INCLUDED ON THIS FORM. SEE INSTRUCTIONS ON BACK OF FORM.

I. Owner/Operator (Applicant) Information

Point of Contact: Lt. G. Whipple

Name: Commanding Officer - NTC Phone: 407-646-4735
Address: 1350 Grace Hopper Avenue Status of Owner/Operator: F
City: Orlando State: FL Zip Code: 32813-8405

II. Project/Site Information

Is the facility located on Indian Country Lands?

Yes No

Project Name: NTC McCoy Annex Landfill
Project Address/Location: 3850 Eighth Street
City: Orlando State: FL Zip Code: 32837
Latitude: 28|25|10 Longitude: 81|20|44 County: Orange

Has the Storm Water Pollution Prevention Plan (SWPPP) been prepared? Yes No

Optional: Address of location of SWPPP for viewing Address in Section I above Address in Section II above Other address (if known) below:

SWPPP Address: 151 Lafayette Drive Phone: 423-220-2534
City: Oak Ridge State: TN Zip Code: 37831-0350

Name of Receiving Water: Lake Gillooly

04|19|99
Month Day Year

01|30|2000
Month Day Year

Estimated Construction Start Date Estimated Completion Date

Estimate of area to be disturbed (to nearest acre): 30

Estimate of Likelihood of Discharge (choose only one):

1. Unlikely 3. Once per week 5. Continual
2. Once per month 4. Once per day

Based on instruction provided in Addendum A of the permit, are there any listed endangered or threatened species, or designated critical habitat in the project area?

Yes No

I have satisfied permit eligibility with regard to protection of endangered species through the indicated section of Part I.B.3.a.(2) of the permit (check one or more boxes):

(a) (b) (c) (d)

III. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print Name: PAUL TOMCZAK Date: 04/07/99

Signature: [Handwritten Signature]

STORM WATER POLLUTION PREVENTION PLAN
FOR
NAVAL TRAINING CENTER ORLANDO
MCCOY ANNEX LANDFILL

Prepared for:
Department of the Navy, Southern Division
Naval Facilities Engineering Command

Prepared by:
Bechtel Environmental, Inc.
151 Lafayette Drive
Oak Ridge, Tennessee 37830

Contract No. N62467-93-D-0936
Job No. 22567

April 1999

Revision 0

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ACRONYMS

Bechtel	Bechtel Environmental, Inc.
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EPA	United States Environmental Protection Agency
FAC	Florida Administrative Code
NOI	Notice of Intent
NPDES	National Pollution Discharge Elimination System
NTC	Naval Training Center
OU 2	Operable Unit No.2
RAC	Navy Environmental Response Action Contractor
SCTL	State of Florida Soil Cleanup Target Levels
SOUTHDIV	U.S. Department of Navy, Southern Division, Naval Facilities Engineering Command
SWPPP	Storm Water Pollution Prevention Plan

UNITS OF MEASURE

ft	foot
in.	inch

1.0 INTRODUCTION

The U.S. Environmental Protection Agency (EPA) requires a National Pollution Discharge Elimination System (NPDES) permit for "storm water discharges associated with industrial activity", pursuant to 40 CFR 122. Construction activities that disturb greater than 5 acres of land and have point source discharges to waters of the United States are defined as an "industrial activity." To obtain the required permit, a Notice of Intent (NOI) may be submitted to EPA. Although Naval Training Center (NTC) Orlando is not required to obtain an NPDES permit for the McCoy Annex Landfill scope of work, [pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) 121(e) permit exemption for response actions], the substantive requirement in the NOI to have a Storm Water Pollution Prevention Plan (SWPPP) in place will be met by implementation of this document.

This document constitutes the SWPPP for the McCoy Annex Landfill at NTC Orlando, Florida for the scope of work described below to be performed by Bechtel Environmental, Inc. (Bechtel). This SWPPP was prepared in accordance with good engineering practices. The Plan identifies potential sources of pollution reasonably expected to affect the quality of storm water discharges from the construction sites. In addition, the Plan describes and ensures the implementation of practices which will be used to reduce the pollutants in storm water discharges associated with industrial activity at the construction site and to assure compliance with the terms and conditions of the permit. Standard permit conditions are listed in Appendix A of this document. Also attached to this plan in Appendix B are the Contractor's Certification Statement and Storm Water control inspection forms. Attachment C contains a site map of the areas addressed in the Plan.

The U.S. Department of Navy, Southern Division, Naval Facilities Engineering Command (SOUTHDIV) is conducting environmental remediation and restoration programs at NTC Orlando, Florida. Bechtel, the Navy Environmental Response Action Contractor (RAC), is performing remedial actions under the direction of SOUTHDIV as part of prime contract N62467-93-D-0936. The work will be performed under the Installation Restoration Program as directed by Delivery Order 0107 dated September 3, 1998. This removal action addresses the excavation of two small areas on the McCoy Golf Course which exceed the State of Florida Soil Cleanup Target Levels (SCTLs) for residential use and placing a 2 ft soil cover on a portion of the McCoy Annex Landfill (a former landfill site last used for waste disposal in 1978). The additional 2 ft soil cover would reduce rainfall infiltration and mobilization of contamination from the source area into the groundwater. It also eliminates the risk of exposure to surface contamination.

1.1 SITE DESCRIPTION

Project Name and Location:

NTC McCoy Annex Landfill, 3850 Eighth Street, Orlando, Fl., 32837
Landfill Soil Cover: Latitude: 28° 25' 10" Longitude: 81° 20' 44"

Owner Name and Address:

U.S. Department of the Navy, Naval Training Center Orlando, Florida
Attn: Commanding Officer
1350 Grace Hopper Avenue
Orlando, FL 32813-8405

The NTC is scheduled to be turned over from NTC Orlando command to SOUTHDIV at the end of April 1999. SOUTHDIV will be maintaining the property until an ownership transfer to the City of Orlando takes place. After May 1, 1999, responsibility for and implementation of the SWPPP will rest with SOUTHDIV.

1.2 PROJECT DESCRIPTION

McCoy Annex encompasses approximately 877 acres and is one of four discrete facilities comprising the NTC in Orlando. The McCoy Annex is located immediately west of the Orlando International Airport. The McCoy Annex landfill, also identified as Operable Unit No.2 (OU-2), is located in the southern part of the McCoy Annex and last used in 1978. The former landfill site occupies approximately 99 acres. It underlies a large part of the 9-hole golf course and most of the wooded area to the south. A cover with varied depth exists over the landfill. The landfill area to the west of the Tee for Hole No. 5 and the northern portion of the wooded area will receive an additional 2 ft of soil cover. The soil cover will be placed on approximately 25 acres of the landfill. Contaminated soil will be removed from two areas on the golf course, each approximately 0.6 acres. These areas will be backfilled with a minimum 2-ft depth soil cover. The locations of the soil cover area and contaminated soil removal areas are shown on Figure 1 in Appendix C.

1.2.1 McCoy Annex Landfill Soil Cover

A 2-ft soil cover will be placed on approximately 25 acres of the 99-acre McCoy Annex Landfill. A Remedial Investigation by the Navy CLEAN contractor has identified on a drawing and delineated at the site the portion of the landfill requiring the additional soil cover to ensure a 2-ft minimum cover thickness exists throughout. A wetland survey by the Navy CLEAN contractor was also performed to delineate the wetlands in the project area. The wetlands will be protected from construction activities with a 50-ft undisturbed buffer zone and sediment control barriers. Before the soil cover is placed, sediment control barriers will be installed on the down gradient drainage paths, and an area of approximately 30 acres will be harvested of merchantable trees, then cleared and grubbed of remaining trees and vegetation. The cleared area is slightly larger than the 2-ft soil cover area, allowing for a perimeter access and staging area. Soil for the cover material will be trucked in from offsite locations by other Government contractors. Truck haul routes are shown on Figure 1, Appendix C. The soil will be compacted in place and grass turf established on the soil cover surface.

1.2.2 Golf Course Contaminated Soil Removal Areas – McCoy Annex

Two contaminated areas, approximately 0.6 acres each, have been identified by SOUTHDIV for removal. The locations are north of the fairway for Hole No. 3 and north of the fairway for Hole No. 7 on the NTC McCoy Annex Golf Course. Minimal clearing will be required. Both areas abut surface water drainage ponds. Sediment control barriers will be installed along the edge of the pond that adjoins the excavation area. The area excavation will stop at the pond interface. Material will be removed to a depth of 1 ft from each of the areas and clean fill will be trucked in from offsite, placed, and compacted to a depth of 24 in. over the areas excavated. A grass turf will be established on the fill material.

1.3 RUNOFF COEFFICIENT

1.3.1 McCoy Annex Landfill Soil Cover

The McCoy Annex Landfill soil cover and clearing encompasses an area of approximately 30 acres. The area is relatively flat, and is presently vegetated by forest with low underbrush and grasses. The existing soils are generally silty sand. Slopes at the sites are typically flatter than 2 percent with scattered waste piles from dumping vegetative debris. A runoff coefficient, C, of 0.15 is appropriate for the existing conditions.

Thirty acres of the site are to be cleared as part of the site preparation, with approximately 25 acres covered as part of the landfill remedial action. While the soil cover will raise the ground elevation slightly (up to several feet), the soil cover will be of uniform thickness and generally follow the existing grades. No contouring of the soil cover to facilitate drainage beyond the natural contour is planned; however, some fill will be added to minimize having any ponded areas after placement of the cover. The soil cover material is

a sandy and silty sand material from a nearby borrow source and will be seeded after the soil cover is brought to final grade. Future use of the site is unclear—the site may be used for a recreational field, extension of the golf course, or be allowed to return to natural growth. Upon completion of the landfill soil cover, a runoff coefficient, C, of 0.25 is appropriate for the site. Existing drainage patterns at the site are described below and will not be significantly altered by the described work.

1.3.2 Contaminated Soil Removal Areas

The two areas (north of fairway for Hole No. 3 and north of fairway for Hole No. 7) are each about 0.6 acres in size. The area north of fairway for Hole No. 3 is in the "rough area", and is silty sand soils vegetated with grass. Slopes vary from flat to about 5:1 (H:V), with drainage flowing to the pond along the north side of the area. Existing and future runoff coefficient, C, are about 0.25.

The area north of fairway for Hole No. 7 is in an area of trees, brush, and grass. The slope in the area varies from nearly flat to about 4:1, and soil in the area is silty sand. Following remediation, grass will be planted in the area. Slopes will be the same as at present. A runoff coefficient, C, of 0.25 is appropriate for conditions both before and after remediation. All drainage from the site flows to the pond at the northeastern edge of the site.

1.4 SITE MAP AND DRAINAGE PATTERNS

A site map with drainage patterns for the southern portion of McCoy Annex is shown on Figure 1 in Appendix C. The landfill soil cover area and the two contaminated soil removal areas are shown on the figure. The following description of the site topography and surface water hydrology is taken from the *Remedial Investigation Report* dated January 1999, prepared by Tetra Tech NUS, Inc.

The land surface across most of the McCoy Annex is generally flat with a few small isolated depressions. The surface elevation across the site is approximately 90 ft above sea level, with a gentle downward slope to the east.

Surface water drainage at the McCoy Annex is controlled by a series of drainage canals, ditches, and ponds located in and around the McCoy Annex. Well-defined drainage canals are located along the eastern and portions of the southern and western boundaries (see Figure 1, Appendix C). The drainage canal along the southern boundary interconnects with the golf course ponds and a canal located along the eastern boundary of the southern portion of the site. A poorly defined drainage ditch is also located along the southern boundary, parallel to Boggy Creek Road.

Surface water runoff from the golf course area is to the southeast through a series of ponds, interconnected bodies of water, and low lying marshy areas where water tends to pond during rainfall and is directed to the two canals that eventually merge near the southeast corner of the complex. Water from the canals eventually flows to a storm water drainage ditch located in the median of Tradeport Drive. Runoff from the western portion of the golf course is directed to the canal locate along the southern portion of the annex. This canal flows south and eventually drains into Lake Gillooly located east of the intersection of Boggy Creek Road and Tradeport Drive. Surface water runoff along the southern boundary of the site also flows into this lake.

Drainage within the southern portion of the site adjacent to the planned additional soil cover area is poorly defined, with few apparent water pathways.

2.0 STORM WATER MANAGEMENT AND POLLUTION CONTROLS

2.1 EROSION AND SEDIMENT CONTROLS

Grading and spreading of soil cover at the McCoy Annex Landfill and the areas on the golf course will create a potential for erosion, most prominent when the final grade is achieved and before the placement of sod or seed. All controls shall be consistent with the requirements set forth in the State Water Policy of Florida [Florida Administrative Code (FAC), Chapter 62-40], the guidelines contained in the *Florida Development Manual: A Guide to Sound Land and Water Management* (FDEP 1988), and any subsequent revisions. Erosion at these sites will be mitigated through implementation of the following temporary and permanent erosion and sediment controls:

- **Silt Fence:** Prefabricated commercial silt fence will be installed at appropriate boundaries of the project area to reduce runoff velocity and effect deposition of the transported sediment load. Silt fence will be used for erosion control until the construction area has been permanently stabilized with turf.
- **Straw Bale Dike:** Straw bale dikes may be installed along appropriate limits of the project area to reduce runoff velocity and to effect deposition of the transported sediment load.
- **Jute:** Jute or soil stabilization and improved slope stability will be placed as required on high erosion potential slopes. Blankets will lap over onto adjacent areas beyond the toe of the slope to prevent scour at the slope base.
- **Turf Establishment:** Turf establishment will be with sod or seed/fertilizer/mulch. The type of grass used will be coordinated with the golf course operator to ensure compatibility with existing grasses. Sod may be used on disturbed areas that are part of the fairway or on erosion areas. Application rate for seed and fertilizer will be 10 pounds per 1,000 ft².
- **Perimeter Controls:** Perimeter controls for the sites will be installed where shown on Figure 1, Appendix C before the beginning of soil cover installation. Perimeter controls will be actively maintained until final stabilization of those portions of the site upward of the perimeter control. Temporary perimeter controls will be removed after final stabilization.

2.2 STORM WATER MANAGEMENT

Storm water management controls shall be consistent with the requirements set forth in the State Water Policy of Florida (FAC Chapter 62-40) and the guidelines contained in the *Florida Development Manual: A Guide to Sound Land and Water Management* (FDEP 1988).

Where field engineering judgement dictates, storm water management practices may include storm water detention structures (including wet ponds); flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff onsite; and sequential systems (which combine several practices). Pursuant to the requirements of FAC Section 62-40.432, the storm water management system shall be designed to remove at least 80 percent of the average annual load of pollutants which cause or contribute to violations of water quality standards.

Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel for the purpose of providing a non-erosive velocity flow from the structure to a water course so the natural physical and biological characteristics and functions are maintained and protected (e.g., no significant changes in the hydrological regime of the receiving water). Equalization of the predevelopment and post-development storm water peak discharge rate and volume shall be a goal in the design of the post-development storm water management system.

2.3 WASTE DISPOSAL

All non-hazardous waste materials (construction debris) will be disposed at a designated off-base disposal site. No hazardous wastes are expected to be generated from the excavation of contaminated soils from fairways for Hole No. 3 and 7 or placement of the soil covers.

Offsite vehicle tracking of sediments and the generation of dust shall be minimized.

Proper application rates and methods for the use of fertilizers will be implemented to ensure the seed/sod placed at the site takes hold. Nutrients will be applied only at rates necessary to establish and maintain vegetation so discharges will not cause or contribute to violations of State surface or groundwater quality standards. The standards of practice in the turf industry for application of fertilizer will be adhered to.

No toxic substances are anticipated to be required at the job site. Any toxic substances, as well as all hazardous materials (hydraulic fluids, oils and fuels for heavy equipment, etc.) will be limited and such materials will be properly stored and disposed.

The Storm Water Pollution Prevention Plan must be amended to reflect any change applicable to protecting surface water resources in sediment and erosion site plans or site permits. Where Bechtel determines the SWPPP requires modification (for the duration of field activities), Bechtel will do so and provide copies to NTC and SOUTHDIV. After Bechtel demobilization from the site, required changes to the SWPPP will be made by SOUTHDIV.

2.4 MAINTENANCE

Erosion and sediment controls can become ineffective if they are damaged or not properly maintained. Maintenance of controls is a major part of an effective erosion and sediment control plan. The Work Plan provides for the installation of effective storm water controls during field construction activities. In conjunction with the inspection checklists (discussed below), storm water controls will be promptly repaired when necessary to ensure that such measures are kept in good and effective operating condition. After final stabilization of the site, remaining storm water controls necessary to prevent degradation of surface waters will be maintained for 3 years. Inspection reports will document repairs to storm water controls. Bechtel will perform this function while onsite at NTC Orlando, then will turn over responsibility for maintenance and inspections to the Navy.

2.5 INSPECTIONS

Qualified personnel shall inspect the following:

- All points of discharge into waters of the United States
- Area of discharge to a municipal separate storm sewer system
- All disturbed areas of the construction site not yet finally stabilized
- Areas used for storage of materials exposed to precipitation
- Structural control measures
- Locations where vehicles enter or exit the site

Inspections will occur at least once every 7 calendar days and within 24 hours of the end of a storm of 0.25 in. or greater. Where sites have been finally stabilized; such inspection shall be conducted at least once every month. At the conclusion of field activities, Navy base personnel will be responsible for inspections of storm water controls and mitigation measures.

Disturbed areas and areas used for storage of materials exposed to precipitation will be inspected for evidence of, or the potential for, pollutants entering the storm water system. The storm water management

system and erosion and sediment control measures identified will be observed to ensure they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in meeting the performance standards set forth in State Water Policy (FAC Chapter 62-40). Locations where vehicles enter or exit the site shall be inspected for evidence of sediment being tracked offsite.

Based on the results of the inspection, the site description identified in the plan and on pre-construction drawings will be revised as appropriate, but in no case later than 7 calendar days following the inspection. Such modifications shall provide for timely implementation of any changes to the plan within 7 calendar days following the inspection. Changes may be documented in Part 3 of the Inspection and Maintenance Form shown in Appendix B.

A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the Storm Water Pollution Prevention Plan, and actions taken in accordance with the permit shall be made and retained as part of the storm water pollution prevention plan for at least 3 years from the date the site is finally stabilized. Such reports shall identify any incidents of non-compliance. Where a report does not identify any incidents of non-compliance, the report shall contain a certification the facility is in compliance with the storm water pollution prevention plan and this permit. The report shall be signed in accordance with Part VII.G of the Standard Permit Conditions attached in Appendix A to this plan.

2.6 NON-STORM WATER DISCHARGES

Except for flows from fire fighting activities, sources of non-storm water combined with storm water discharges associated with construction activity must be identified in the plan. To date, based on knowledge and information from site investigations performed by other governmental contractors, there are no non-storm water discharges associated with any of the work areas addressed by this plan.

3.0 RETENTION OF RECORDS

The permittee (NTC Orlando and SOUTHDIV) will retain copies of Storm water Pollution Prevention Plans and all reports required by this permit, and records of all data used to complete the Notice of Intent to be covered by this permit, for a period of at least three years from the date the site is finally stabilized. Bechtel will provide all records, including inspection reports, prepared during the implementation of field activities.

The permittee (NTC Orlando and SOUTHDIV) shall retain a copy of the Storm water Pollution Prevention Plan at NTC Orlando from the date of project initiation to the date of final stabilization.

Correspondence

Except for the submittal of NOIs and NOTs (Notice of Intent and Notice of Termination), all written correspondence directed to the U.S. Environmental Protection Agency concerning discharges in the State of Florida, and subject to coverage under this permit, including the submittal of individual permit applications, shall be sent to the address listed below:

U.S. EPA, Region 4
Surface Water Permits Section
Water Management Division
Atlanta Federal Center
61 Forsyth St., SW
Atlanta, GA 30303

REFERENCES

- EPA (U.S. Environmental Protection Agency), 1998. National Discharge Elimination System (NPDES) General Permit for Storm water Discharges from Construction Activities. 63FR15621.
- FDEP (Florida Department of Environmental Protection), 1988. *Florida Development Manual: A Guide to Sound Land and Water Management*.
- Tetra Tech NUS, Inc., 1999. *Remedial Investigation Report, Operable Unit 2, McCoy Anney Landfill, Naval Training Center Orlando, Florida*. Comprehensive Long-Term Environmental Action Navy (CLEAN) Contract.

APPENDIX A
STANDARD PERMIT CONDITIONS

APPENDIX A

Standard Permit Conditions 63 FR 15621, March 31, 1998

A. Duty To Comply

1. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the CWA and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

2. Penalties for Violations of Permit Conditions.

a. Criminal. (1) Negligent Violations. The CWA provides any person who negligently violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than 1 year, or both.

(2) Knowing Violations. The CWA provides any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than 3 years, or both.

(3) Knowing Endangerment. The CWA provides any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act and who knows at the time he is placing another person in imminent danger of death or serious bodily injury is subject to a fine of not more than \$250,000, or by imprisonment for not more than 15 years, or both.

(4) False Statement. The CWA provides any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the Act or who knowingly falsifies, tampers with, or renders inaccurate, any monitoring device or method required to be maintained under the Act,

shall upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment for not more than 2 years, or by both. If a conviction is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or by both. (See Section 309.c.4 of the Clean Water Act).

b. Civil Penalties--The CWA provides any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed \$25,000 per day for each violation.

c. Administrative Penalties--The CWA provides any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty, as follows:

(1) Class I penalty. Not to exceed \$10,000 per violation nor shall the maximum amount exceed \$25,000.

(2) Class II penalty. Not to exceed \$10,000 per day for each day during which the violation continues nor shall the maximum amount exceed \$125,000.

B. Continuation of the Expired General Permit

This permit expires at midnight 5 years from April 3, 1998. If this general permit is not reissued prior to its expiration date, all facilities desiring to retain continued coverage shall submit another NOI form prior to the expiration of this permit. This submittal shall also satisfy the notification requirement to be covered under the reissued permit. Facilities have not obtained coverage under this permit by the expiration date of this permit cannot become authorized to discharge under the continued permit.

The authorization to discharge under the continued previous general permit, issued on September 25, 1992 (57 FR 44412), expires 90 days from April 3, 1998.

C. Need To Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action to claim it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. Duty To Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

E. Duty To Provide Information

The permittee shall furnish within a reasonable time to the Director; an authorized representative of the Director; a State or local agency approving sediment and erosion plans, grading plans, or storm water management plans; or in the case of a storm water discharge associated with industrial activity which discharges through a municipal separate storm sewer system with an NPDES permit, to the municipal operator of the system, any information which is requested to determine compliance with this permit or other information.

F. Other Information

When the permittee becomes aware he or she failed to submit any relevant facts or submitted incorrect information in the Notice of Intent or in any other report to the Director, he or she shall promptly submit such facts or information.

G. Signatory Requirements

All Notices of Intent, storm water pollution prevention plans, reports, certifications or information either submitted to the Director or the operator of a large or medium municipal separate storm sewer system, or required by this permit to be maintained by the permittee, shall be signed as follows:

1. All Notices of Intent shall be signed as follows:

a. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (1) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or (2) the manager of one or more manufacturing, production or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25,000,000 (in second-quarter 1980 dollars) if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

c. For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes (1) the chief executive officer of the agency, or (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

2. All reports required by the permit and other information requested by the Director or authorized representative of the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described above and submitted to the Director.

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

c. Changes to authorization. If an authorization under paragraph II.B.3. is no longer accurate because a different operator has responsibility for the overall operation of the construction site, a new notice of intent satisfying the requirements of paragraph II.B. must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

d. Certification. Any person signing documents under paragraph VI.G shall make the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

H. Penalties for Falsification of Reports

Section 309(c)(4) of the Clean Water Act provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained

under this permit, including reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or by both.

I. Penalties for Falsification of Monitoring Systems

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

J. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under section 311 of the CWA or section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA).

K. Property Rights

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

L. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

M. Transfers

Coverage under this permit is not transferable to any person except after notice to the Director. The Director may require termination of permit coverage by the current permittee in accordance with Part IX of this permit; and the subsequent submission a Notice of Intent to receive coverage under the permit by the new applicant in accordance with Part II of this permit.

N. Requiring an Individual Permit or an Alternative General Permit

1. The Director may require any person authorized by this permit to apply for and/or obtain either an individual NPDES permit or an alternative NPDES general permit. Any interested person may petition the Director to take action under this paragraph. Where the Director requires a discharger authorized to discharge under this permit to apply for an individual NPDES permit, the Director shall notify the discharger in writing that a permit application is required. This notification shall include a brief statement of the reasons for this decision, an application form, a statement setting a deadline for the discharger to file the application, and a statement that on the effective date of issuance or denial of the individual NPDES permit or the alternative general permit as it applies to the individual permittee, coverage under this general permit shall automatically terminate. Applications shall be submitted to the appropriate Regional Office indicated in Part V.C of this permit. The Director may grant additional time to submit the application upon request of the applicant. If a discharger fails to submit in a timely manner an individual NPDES permit application as required by the Director under this paragraph, then the applicability of this permit to the individual NPDES permittee is automatically terminated at the end of the day specified by the Director for application submittal.

2. Any discharger authorized by this permit may request to be excluded from the coverage of this permit by applying for an individual permit. In such cases, the permittee shall submit an individual application in accordance with the requirements of 40 CFR 122.26(c)(1)(ii), with reasons supporting the request, to the Director at the address for the appropriate Regional Office indicated in Part V.C of this permit. The request may be granted by issuance of any individual permit or an alternative general permit if the reasons cited by the permittee are adequate to support the request.

3. When an individual NPDES permit is issued to a discharger otherwise subject to this permit, or the discharger is authorized to discharge under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is automatically terminated on the effective date of the individual permit or the date of authorization of coverage under the alternative general permit, whichever the case may be. When an individual

NPDES permit is denied to an owner or operator otherwise subject to this permit, or the owner or operator is denied for coverage under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is automatically terminated on the date of such denial, unless otherwise specified by the Director.

O. State/Environmental Laws

1. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by section 510 of the Act.

2. No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

P. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of storm water pollution prevention plans. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions of the permit.

Q. Inspection and Entry

The permittee shall allow the Director or an authorized representative of EPA, the State, or, in the case of a construction site which discharges through a municipal separate storm sewer, an authorized representative of the municipal operator or the separate storm sewer receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;

2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment); and

4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameter at any location on the site.

R. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

S. Planned Changes

The permittee shall amend the pollution prevention plan as soon as possible identifying any planned physical alterations or additions to the permitted facility.

T. Twenty-Four Hour Reporting

(1) the permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause: the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

U. Bypass

(1) Definitions.

(i) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.

(ii) Severe property damage means substantial physical damage to property which causes them to become inoperable or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

(2) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs S(3) and S(4).

(3) Notice.

(i) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

(ii) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph R. of this section (24-hour notice).

(4) Prohibition of bypass.

(i) Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:

(A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgement to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(C) the permittee submitted notices as required under paragraph S(3) of this section.

(ii) The Director may approve an anticipated bypass after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph S(4)(i) of this section.

Part VIII. Reopener Clause

A. If there is evidence indicating potential or realized impacts on water quality due to any storm water discharge associated with industrial activity covered by this permit, the discharger may be required to obtain individual permit or an alternative general permit in accordance with Part I.C of this permit or the permit may be modified to include different limitations and/or requirements.

B. Permit modification or revocation will be conducted according to 40 CFR 122.62, 122.63, 122.64 and 124.5.

C. This permit may be modified, or alternatively, revoked and reissued, to comply with any applicable provisions of the Phase II storm water regulations once they are issued.

Part IX. Termination of Coverage

A. Notice of Termination. Where a site has been finally stabilized and all storm water discharges from construction sites that are authorized by this permit are eliminated (see Part IX.A.5. for the definition of eliminated), or where the operator of all storm water discharges at a facility changes, the operator of the facility may submit a Notice of Termination that is signed in accordance with Part VII.G of this permit within 14 days of final stabilization of the site. The Notice of Termination shall include the following information:

1. The mailing address, and location of the construction site for which the notification is submitted. Where a mailing address for the site is not available, the location can be described in terms of the latitude and longitude of the approximate center of the facility to the nearest 15 seconds, or the section, township and range to the nearest quarter section;

2. The name, address, and telephone number of the operator seeking termination of permit coverage;

3. The NPDES permit number for the storm water discharge identified by this Notice of Termination;

4. An identification of whether the storm water discharges associated with industrial activity have been eliminated or the operator of the discharges has changed; and

5. The following certification signed in accordance with Part VII.G (signatory requirements) of this permit:

I certify under penalty of law that all storm water discharges associated with industrial activity from the identified facility that are authorized by a NPDES general permit have otherwise been eliminated or that I am no longer the operator of the facility or construction site. I understand that by submitting this notice of termination, that I am no longer authorized to discharge storm water associated with industrial activity by the general permit, and that discharging pollutants in storm water associated with industrial activity to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by a NPDES permit. I also understand that the submittal of this notice of termination does not release an operator from liability for any violations of this permit or the Clean Water Act.

For the purposes of this certification, elimination of storm water discharges associated with construction activity means that all disturbed soils at the identified facility have been finally stabilized and temporary erosion and sediment control measures have been removed or will be removed at an appropriate time, or that all storm water discharges associated with construction activities from the identified site that are authorized by a NPDES general permit have otherwise been eliminated.

B. Where to Submit. Currently, applicants may use the NOT form published in the September 29, 1995 Federal Register (60 FR 51265). The final version of the NOT form proposed in the June 2, 1997 Federal Register (62 FR 29785) shall be used when published in the Federal Register. All Notices of Termination are to be sent, using the form provided by the Director (or a photocopy thereof), to the following address: Storm Water Notice of Termination (4203), 401 M Street, SW, Washington, DC 20460.

C. Additional Notification. A copy of the Notice of Termination shall be sent to the State agency which issued the State storm water or environmental resource permit for the site and, if the storm water management system discharges to a municipal separate storm sewer system within Broward, Dade, Duval, Escambia, Hillsborough, Lee, Leon, Manatee, Orange, Palm Beach, Pasco, Pinellas, Polk, Sarasota or Seminole Counties, to the owner of that system. Included within these counties, the Florida Department of Transportation (FDOT), incorporated municipalities, and chapter 298 Special Districts also shall be notified where they own or operate a municipal separate storm sewer system receiving storm water discharges associated with construction activity covered by this permit.

APPENDIX B

Forms:

1. Contractors Certification
2. Inspection and Maintenance Form

CONTRACTOR'S CERTIFICATION

I certify under penalty of law that I understand the terms and conditions of the general National Pollution Discharge Elimination System (NPDES) permit that authorizes the stormwater discharges associated with construction activity from the construction site identified as part of this construction certification.

Signature
Commanding Officer (or designee)
NTC Orlando, Florida

Date

Signature
Bechtel Environmental, Inc.
Navy Response Action Contractor

Title/Date

STORM WATER POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE FORM (PART 1 OF 3)

TO BE COMPLETED EVERY 7 DAYS DURING CONSTRUCTION
AND WITHIN 24 HOURS OF A RAINFALL EVENT OF 0.25 INCHES OR MORE -
COMPLETE MONTHLY AFTER CONSTRUCTION

INSPECTOR: _____ DATE: _____

INSPECTOR'S TITLE: _____

DAYS SINCE LAST RAINFALL: _____ AMOUNT OF LAST RAINFALL: _____ INCHES

STABILIZATION MEASURES

AREA	DATE SINCE LAST DISTURBED	STABILIZED (YES/NO)	STABILIZED WITH	CONDITION

STABILIZATION REQUIRED:

TO BE PERFORMED BY: _____

ON OR BEFORE: _____

STORMWATER POLLUTION PREVENTION PLAN
INSPECTION AND MAINTENANCE REPORT FORM (PART 2 OF 3)

INSPECTOR: _____ DATE: _____

Indicate the condition of the following sediment and erosion control measures. Where damage or need for maintenance is identified, indicate the specific location and the required action.

SILT FENCE:

STRAW BALE DIKES:

EROSION CONTROL/REVEGATION MATTING:

TURF:

STORMWATER POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT FORM (PART 3 OF 3)

CHANGES REQUIRED TO THE POLLUTION PREVENTION PLAN:

REASON FOR CHANGES:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system or those persons directly responsible for gathering the information, the information submitted is, the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for known violations.

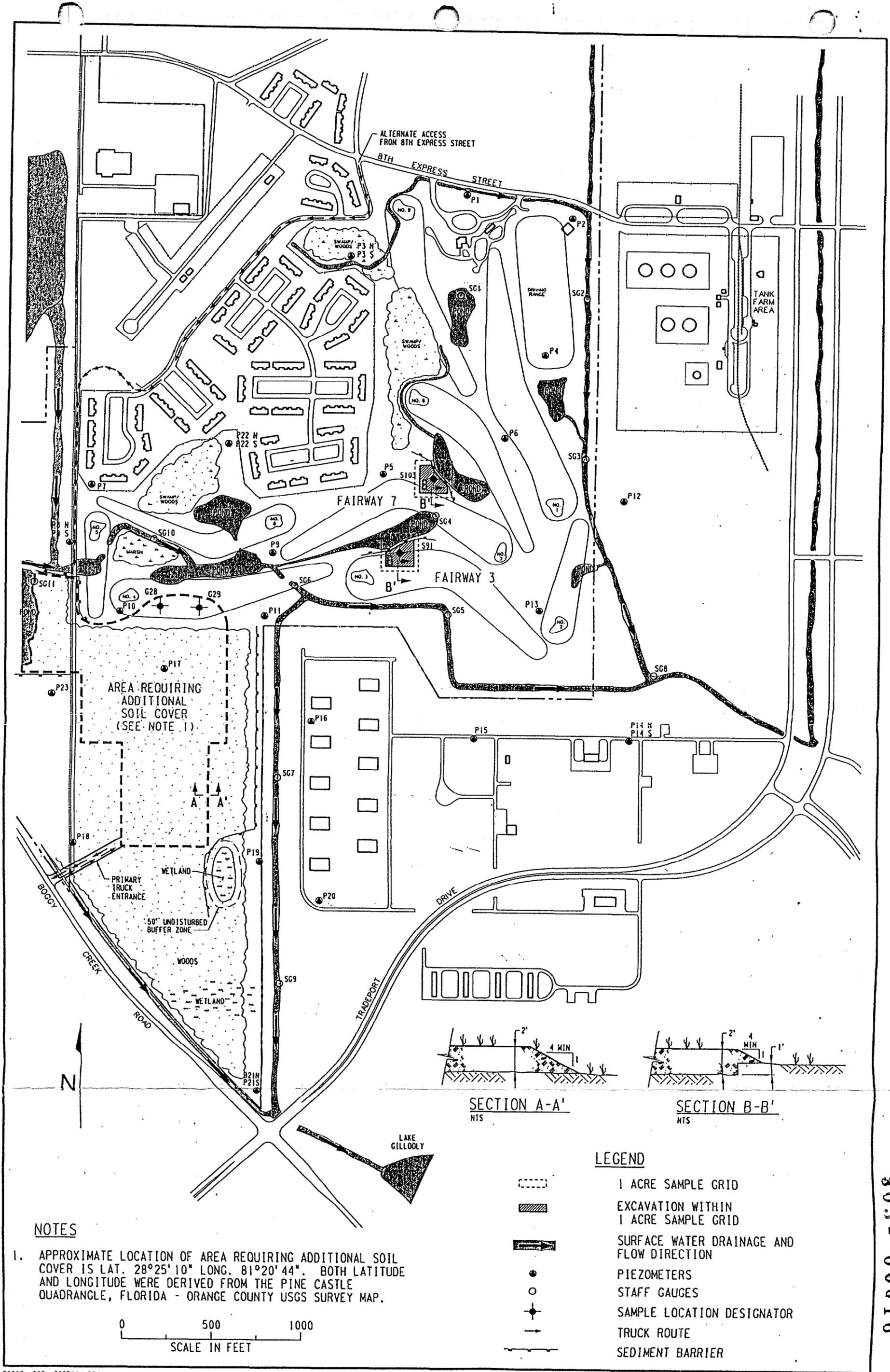
SIGNATURE: _____

TITLE: _____

DATE: _____

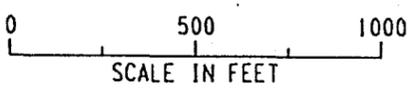
APPENDIX C

**MCCOY ANNEX LANDFILL
SITE MAP
AND
DRAINAGE PATTERNS**



NOTES

- APPROXIMATE LOCATION OF AREA REQUIRING ADDITIONAL SOIL COVER IS LAT. 28°25'10" LONG. 81°20'44". BOTH LATITUDE AND LONGITUDE WERE DERIVED FROM THE PINE CASTLE QUADRANGLE, FLORIDA - ORANGE COUNTY USGS SURVEY MAP.



SECTION A-A'
NTS

SECTION B-B'
NTS

LEGEND

- 1 ACRE SAMPLE GRID
- EXCAVATION WITHIN 1 ACRE SAMPLE GRID
- SURFACE WATER DRAINAGE AND FLOW DIRECTION
- PIEZOMETERS
- STAFF GAUGES
- SAMPLE LOCATION DESIGNATOR
- TRUCK ROUTE
- SEDIMENT BARRIER

Figure 1
Site Map and Drainage Pattern

Attachment 2.

**SUBCONTRACT SCOPE OF WORK
FOR
TIMBER HARVESTING**

DEPARTMENT OF THE NAVY

SOUTHERN DIVISION

SCOPE OF WORK

FOR

TIMBER HARVESTING AND CLEARING

AT

NAVAL TRAINING CENTER, MCCOY ANNEX

ORLANDO, FLORIDA

1	3/25/99	Revised Fig. 1, added Fig. 2 and text for Areas A and B	WEH	VSA	JRM	JRM	
0	10/29/98	Issued for Use	WEH	REH	JRM	JRM	
REV	DATE	REASON FOR REVISION	BY	Check	EGS	PE	
		Timber Harvesting and Clearing at NTC, McCoy Annex, Orlando, Florida	JOB NO. 22567				
			Scope of Work 305-SW841-001				REV. 1-
			Page 1 of 10				

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**SCOPE OF WORK
FOR
TIMBER HARVESTING AND CLEARING
AT NTC MCCOY ANNEX
ORLANDO, FLORIDA**

1.0 GENERAL REQUIREMENTS

The work consists of harvesting trees and clearing small trees, brush, and vegetation from approximately 30 acres of wooded area shown on Figure 1. The wooded area is known as the McCoy Annex Landfill and is located on the southern end of McCoy Annex. The wooded area was reportedly used as a landfill by the Air Force and Navy from about 1960 to 1972. The landfill exists beneath the wooded area and extends northward beneath the golf course.

The wooded area has been divided into Area A and Area B. Figure 2 provides details of Areas A and B. Timber shall be harvested from both areas as well as clearing the non-merchantable timber, dead and down trees, brush, and vegetative debris. Due to the wetlands adjacent to Area B, restrictions exist on the amount of harvesting and clearing done in the area. Bechtel will delineate Area B for the purpose of harvesting and clearing before the Subcontractor begins work in the area. The Subcontractor shall obtain permits and provide access and haul routes necessary to complete the work.

Work may begin at any time after Bechtel provides notice to proceed. All operations must proceed in an orderly manner that lends itself to daily inspection by Bechtel. The completion and final acceptance of the work performed will be jointly inspected by Bechtel and the Subcontractor's representative.

The wooded area may be viewed at the bidder's discretion. Prospective bidders are expected to visit the site and satisfy themselves as to type and volume of timber to be cut, the logging conditions, and the extent of clearing to be done. The harvest/clearing area boundaries are marked with yellow ribbons on stakes approximately 6 ft above the ground. Marked boundary stakes are not to be disturbed.

2.0 TIMBER HARVESTING

2.1 QUANTITIES

All merchantable trees within the area boundaries shall be cut and all merchantable portions removed. Minimum merchantable tree size is two 5-ft 3-in. bolts to a 3.5-in. top diameter measured inside the bark (dib).

The timber is to be sold on a per-ton basis. Additional small amounts of timber (salvage) may become available during the term of the subcontract and shall be cut and removed by the Subcontractor and shall be paid for at subcontract bid rates.

2.2 VOLUME REPORTING PROCEDURES

Volumes harvested each week, the accumulative volumes harvested to date, and a copy of a certified consumer weight ticket for each load shall be reported to Bechtel on a weekly basis. Weight tickets shall show subcontract number; truck record card number; species (i.e., pine, hardwood); gross, tare, and net.

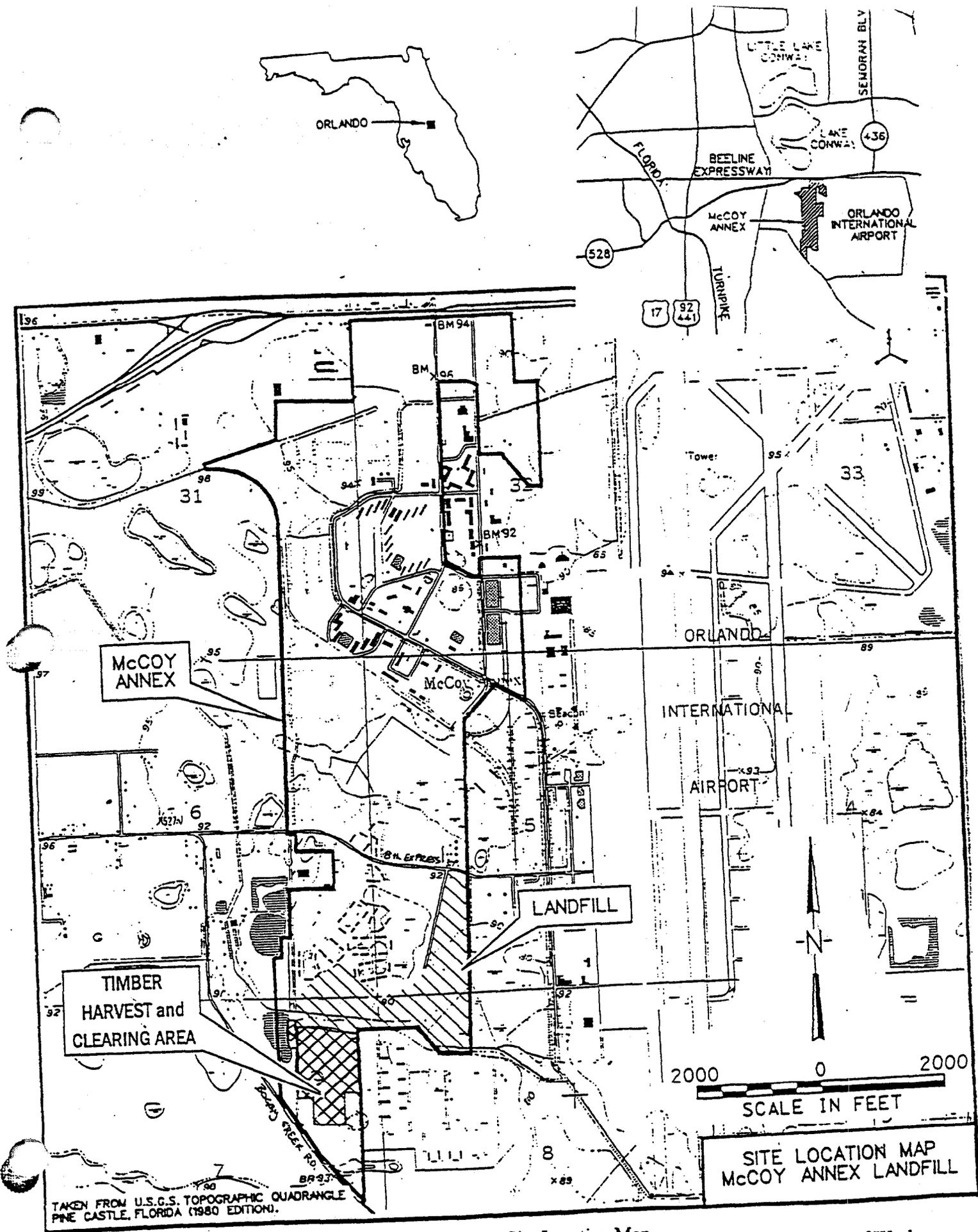
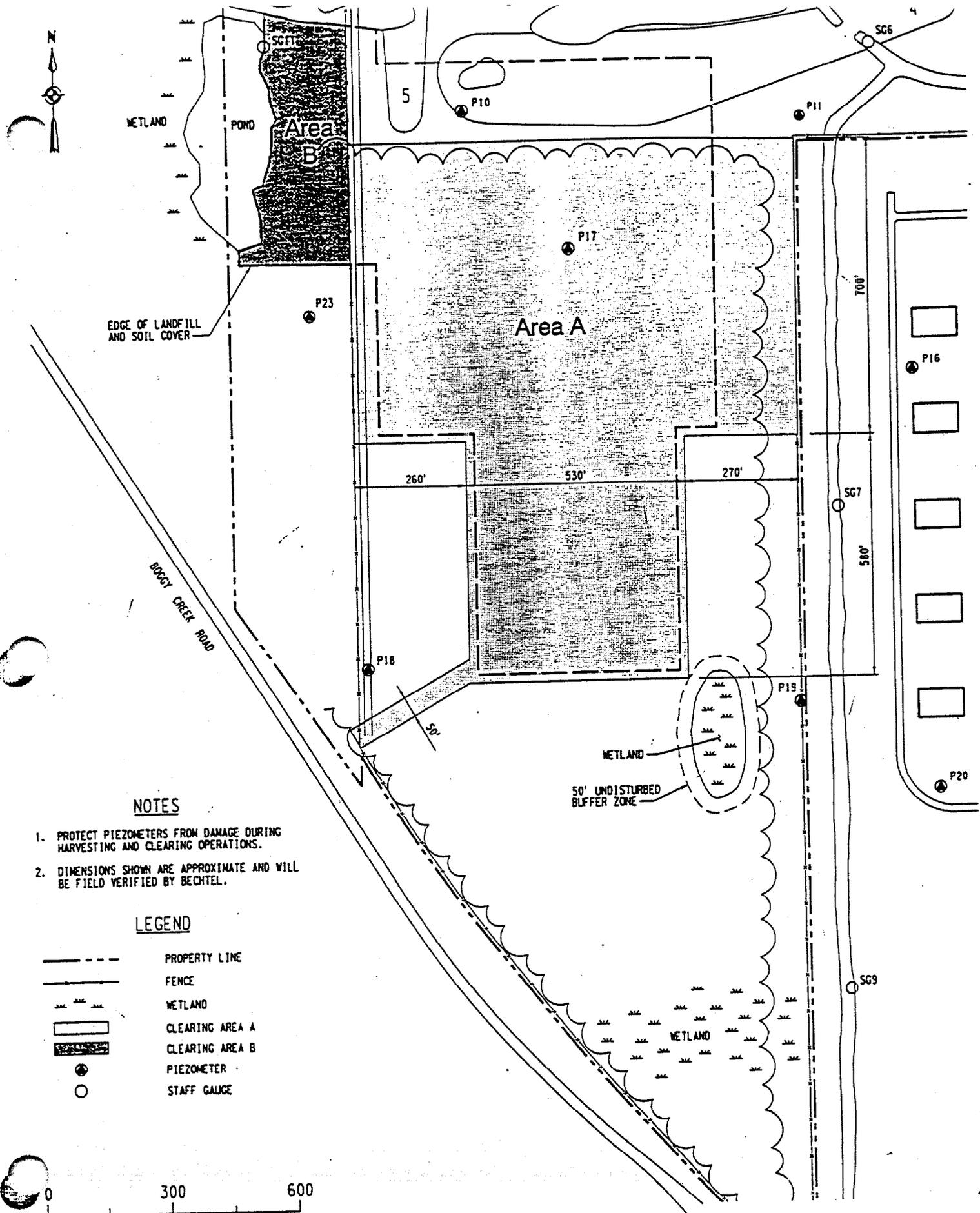


Figure 1 Site Location Map

Scope of Work
 22567-305-SC841-001
 Rev. 1



NOTES

1. PROTECT PIEZOMETERS FROM DAMAGE DURING HARVESTING AND CLEARING OPERATIONS.
2. DIMENSIONS SHOWN ARE APPROXIMATE AND WILL BE FIELD VERIFIED BY BECHTEL.

LEGEND

	PROPERTY LINE
	FENCE
	WETLAND
	CLEARING AREA A
	CLEARING AREA B
	PIEZOMETER
	STAFF GAUGE

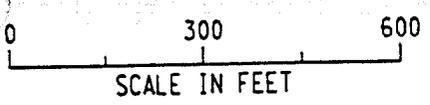


Figure 2 Details of Areas A and B

Scope of Work
 22567-305-SC841-001
 Rev. 1

weights; driver, date; and time. In the event a weight ticket is lost, the net weight assigned for each lost ticket will be the highest weight for any load removed from the harvest area. The value assigned to this weight will be equal to the value of the subcontract sale item.

Truck record cards will be issued to the driver of each loaded truck, before leaving the harvest area, at a point agreeable to Bechtel and the Subcontractor.

2.3 CUTTING AND UTILIZATION

Stumps shall be as low as possible, and no higher than 6 in. above the ground on the high side of the stump, except stumps larger than 16 in. in diameter shall be no higher than 12 in. on the high side. Subcontractor shall utilize all trees to a 3.5-in. top diameter measured inside the bark. All trees within the boundary area shall be felled, and all merchantable portions fully utilized. Logging operation shall be conducted to prevent intrusion through the landfill cover material. Trees shall be felled away from buildings and facilities, fences, overhead lines, maintained areas, roads, uncut strips, ditches, and streams and in a direction that will result in the least damage to trees outside the boundary area and to property. Subcontractor shall report to Bechtel trees that constitute a risk to property if felled, and shall request assistance. The volume of merchantable material from designated trees uncut or from designated trees cut or tops, chunks, long butts, trees broken or split by felling or otherwise that are not used will be determined by tree estimate, scaling, or measurement. The Subcontractor will be billed in accordance with the terms of the subcontract, unless the leaving of such material is justified as may be determined by Bechtel.

2.3.1 Log Loading Decks and Skidding

Loading decks shall be at locations approved in advance by Bechtel. Cutting and stockpiling quantities of wood for later removal will not be permitted without prior Bechtel approval. Tree-length skidding and hauling is not prohibited; however, felled trees shall be limbed prior to skidding, and no skidding shall be done on any maintained road or pavement. In any case, neither skidding nor loading will be permitted where the landfill cap material has been breached due to the Subcontractor's logging operation.

2.3.2 Slash Disposal

No tops shall be left leaning against or hanging upon residual trees. All logging debris shall be removed from roads, firebreaks, ditches and ditch banks, railroad right-of-ways, powerline right-of-ways, marsh land, and maintained areas as it occurs. Logging debris is defined as non-merchantable materials such as tops and limbs resulting from routine harvesting operations, but does not include tree leaves, twigs, pine cones, dead limbs, and other such material not resulting from current harvesting operations. Logging debris shall be either removed from the harvest area and disposed offsite or chipped and left in piles within the harvest area. Piles of logging debris that may accumulate on loading decks or around limbing gates shall be disposed in the same manner as logging debris from the harvesting area.

2.3.3 Uncut Merchantable Timber

Failure to cut merchantable timber from the boundary area is likely to cause substantial silvicultural or other damage to the Government. It will be difficult if not impossible to determine the amount of such damage; therefore, the Subcontractor shall pay as fixed, agreed, and liquidated damages for each merchantable tree left uncut at the rate of \$3.00 per tree.

2.3.4 High Stumps

Unless there is a reason acceptable to Bechtel, Subcontractor shall pay as fixed, agreed, and liquidated damages for each high stump at the rate of \$2.00 per stump.

2.4 HAUL ROUTE

The Subcontractor shall propose for Bechtel approval the removal route for all timber. The Subcontractor is responsible to construct and maintain the removal haul road. This may include setting culverts and placing stone for roadbed material, as well as obtaining permits for state or county road entrance.

2.5 DAMAGE TO PROPERTY AND TO TIMBER OUTSIDE THE BOUNDARY AREA

The harvesting of trees under this scope shall be accomplished in a manner that will minimize damage to the landfill cover, the existing golf course, and timber outside the boundary area. The Subcontractor is responsible to repair any damage to the golf course and landfill cover and return them to their pre-logging condition at no cost to Bechtel nor the Government. Unnecessary damage to or negligent or willful cutting of trees and other timber outside the boundary area is likely to cause substantial silvicultural or other damage to the Government. It will be difficult if not impossible to determine the amount of such damage; therefore, the Subcontractor shall pay as fixed, agreed, and liquidated damages an amount equivalent to and in addition to the subcontract sale rate (double stumping), plus \$5.00 per inch of diameter outside the bark (across the stump if cut, or at 4.5 ft above the ground line if uncut). If such trees are less than merchantable size, they shall be paid for at the rate of \$5.00 per inch of diameter (ground line measurements). If such timber is of a species or size or is of a quality different from designated timber, Bechtel will request the Officer in Charge to establish payment rates in accordance with standard Government methods. If designated by the Officer in Charge, the Subcontractor shall remove such damaged or cut timber from Government property.

3.0 CLEARING

3.1 CUTTING

Clearing shall consist of removing and disposing of non-merchantable trees, dead limbs, and shrubs and mowing grass inside the boundary area. Trees and shrubs shall be cut to no more than 2-in high, measured on the side adjacent to the highest ground. Grass within the work area shall be mowed to a maximum height of 2-in.

3.2 PROTECTION AND RESTORATION

The Subcontractor shall clear within the boundary area. The Subcontractor shall protect all trees, shrubs, or plants which are not specified for removal and shall be responsible for restoring any unauthorized removal or damage to trees, shrubs, or plants at no additional cost to Bechtel nor the Government.

3.3 DISPOSAL

All removed trees, limbs, and shrubs shall be cut and either chipped to reduced size and stockpiled within the boundary area at locations acceptable to Bechtel or removed from the site. No burning or burying of cleared materials or debris will be permitted. Grass clippings may be left to lay where they were cut.

All aboveground cleared materials removed from the site shall be hauled and disposed of at a licensed local sanitary landfill acceptable to Bechtel.

4.0 ENVIRONMENTAL REQUIREMENTS

4.1 SANITATION

All grounds within and adjacent to the boundary area shall be maintained in a clean and sanitary condition. Rubbish generated as a result of the work shall be removed from the site and disposed of in a satisfactory manner. Operations shall be conducted so as not to pollute any watercourse.

4.2 PROTECTION OF STREAM AND STREAMSIDE AREAS

All operations, including the construction of roads and other facilities, shall be conducted in a manner to minimize damage to stream courses, marsh, ditches, wetlands, drainage structures, terraces, and streamside. Logs shall not be hauled, skidded, or yarded in or across any stream course or ditch without prior approval of Bechtel. Stream courses and drainage ditches shall be kept clear of logs, chunks, and debris resulting from operations under this subcontract.

4.3 PREVENTION AND CONTROL OF SOIL DAMAGE

Excessively wet soil is subject to serious damage from logging and clearing operations. The Subcontractor shall exercise all reasonable precautions to prevent excessive soil damage that may cause serious erosion, compaction, exposure to the landfill, or rutting problems. Interruptions of logging and clearing operations due to wet conditions may become necessary from time to time during the subcontract period; Bechtel will notify the Subcontractor when these conditions exist. The Subcontractor will not be compensated by Bechtel nor the Government for work stoppages to prevent excessive soil damage.

5.0 TEMPORARY FACILITIES, REPAIRS, AND CLEAN UP

5.1 TEMPORARY FACILITIES

The construction of temporary structures, roads, or other improvements necessary for the harvesting of the timber and clearing will be permitted provided that the plans, locations, and arrangements for the construction and subsequent removal of such facilities are approved in advance by Bechtel and the Subcontractor has obtained the necessary regulatory agency permits.

5.2 REPAIRS OR REPLACEMENT OF DAMAGED IMPROVEMENTS

Existing roads, bridges, culverts, terraces, drainage structures, fences, utility lines, runway lights, buildings and other facilities damaged beyond normal wear and tear by operations of the Subcontractor shall be repaired and/or replaced as directed, without cost to Bechtel or the Government. Repaired or replaced items shall be in a condition as good as that existing before work began. Existing roads used by the Subcontractor shall at all times be maintained and kept passable and clear for official traffic. The Subcontractor shall, at all times, keep paved roadways clean of soil and debris from the Subcontractor's operation.

5.3 CLEAN UP

When temporary structures or other improvements are moved to another location or are abandoned, the Subcontractor shall dispose of all abandoned structures and debris and shall clean up the site. Upon completion of the work, the Subcontractor shall remove its plant, tools, materials, and other articles from the property.

6.0 UNSCHEDULED INTERRUPTIONS

Interruptions due to military activity or inclement weather may occur during the subcontract period. If interruptions do occur, additional time may be granted to the purchaser, but is not guaranteed. The amount of additional time granted, if any, shall be determined by Bechtel. The Subcontractor shall notify Bechtel when harvesting and clearing operations will begin. Harvesting and clearing shall continue without delay or interruption until complete unless cessations in work have been approved by Bechtel in advance.

7.0 ITEMS NOT COVERED UNDER THIS SCOPE

The following activities are not included in this scope of work:

- Civil survey
- Designation of underground utilities
- Designation of wetlands

TRUCK RECORD CARD

(Timber Sales)

Card to be filled out by Gate Guard

CARD NUMBER:

CONTRACT NUMBER

TRUCK NUMBER

DATE	TIME
OUT	OUT

PRODUCT

PINE TREES

HARDWOOD TREES

DESTINATION

CHECKED OUT BY

DRIVER: DO NOT DESTROY OR MISPLACE THIS CARD.
RETURN TO GATE GUARD WHEN TRUCK LEAVES STATION.

TRUCK RECORD CARD

(Timber Sales)

Card to be filled out by Gate Guard

CARD NUMBER:

CONTRACT NUMBER

TRUCK NUMBER

DATE	TIME
OUT	OUT

PRODUCT

PINE TREES

HARDWOOD TREES

DESTINATION

CHECKED OUT BY

DRIVER: DO NOT DESTROY OR MISPLACE THIS CARD.
RETURN TO GATE GUARD WHEN TRUCK LEAVES STATION.

ATTACHMENT 3

TETRA TECH NUS, INC.

DRAWING

“AREA REQUIRING ADDITIONAL SOIL COVER

McCOY ANNEX LANDFILL

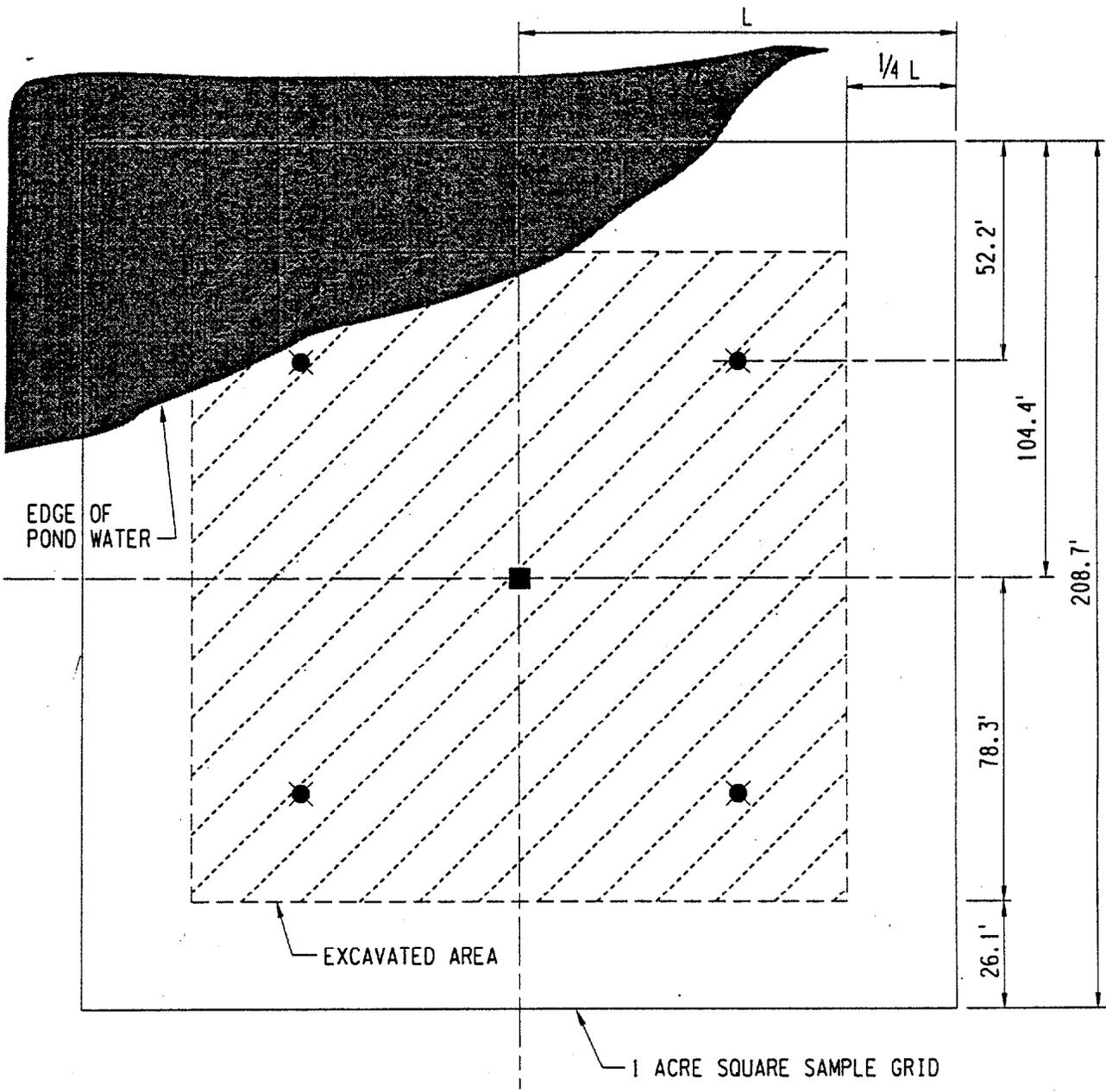
REMEDIAL INVESTIGATION”

AREA REQUIRING ADDITIONAL SOIL COVER

**PLEASE INSERT THE DRAWING AND PLASTIC MAP POCKET
FROM THE REV. 0 WORK PLAN ISSUED APRIL 1, 1999**

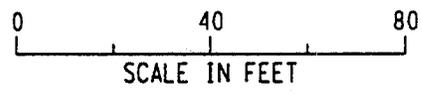
ATTACHMENT 4

**SKETCH:
"ONE-ACRE SAMPLE GRID AREA
McCOY ANNEX"**



LEGEND

- ★ SAMPLE LOCATION
- CENTER STAKE GRID DESIGNATOR & SAMPLE LOCATION



NOTE: TYPICAL FOR SAMPLE LOCATIONS S91 AND S103

a:\22567\305\305f002.dgn
01 APR 1999

Sketch
Excavation Limits for One Acre Sample Grid Area
McCoy Annex Landfill

ATTACHMENT 5

**FLORIDA NATURAL AREAS INVENTORY
DATABASE QUERY**

4/20/99

FLORIDA NATURAL AREAS INVENTORY

1018 Thomasville Road, Suite 200-C · Tallahassee, Florida 32303 · (850) 224-8207 · FAX (850) 681-9364 · www.fnai.org

April 16, 1999

Mr. Bill Hevrdeys
Bechtel Environmental, Inc.
P.O. Box 350
Oak Ridge, TN 37831-0350

Dear Bill:

Thank you for your request for information from the Florida Natural Areas Inventory (FNAI). Your data request, received on April 13, 1999, specified a site on the Naval Training Center, Orlando, in Orange County.

A search of our maps and database indicates that currently we have one Element Occurrence Records mapped within one mile of the study area (see enclosed map and table). Note that the map legend indicates the precision of the element occurrence location, defined as second (within about 300 feet), minute (within about one mile), or general (within about 5 miles).

FNAI strongly suggests that a site specific survey be conducted to determine the current presence or absence of rare, threatened, or endangered species. Surveys should be conducted by individuals familiar with Florida's flora and fauna. For your convenience, a summary of the elements recorded for Orange County is enclosed.

The database maintained by the Florida Natural Areas Inventory is the single most comprehensive source of information available on the locations of rare species and other significant ecological resources. However, the data are not always based on comprehensive or site specific field surveys. Therefore, this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys.

Information provided by this database may not be published without prior written notification to the Florida Natural Areas Inventory, and FNAI must be credited as an information source in these publications. FNAI data may not be resold for profit.

Thank you for your use of FNAI services. A copy of the invoice is enclosed for your information; the original will be mailed to your accounts payable department. If I can be of further assistance, please give me a call at (850) 224-8207.

Sincerely,



Jonathan Oetting
Conservation Information Coordinator

encl

FNAI ELEMENT OCCURRENCE RECORDS ON OR NEAR SITE

EOCODE	SCIENTIFIC NAME	COMMON NAME	LAST OBSERVED	GLOBAL RANK	STATE RANK	FEDERAL STATUS	STATE STATUS
<u>ANIMALS</u>							
ARAAF01030*730*FL	GOPHERUS POLYPHEMUS	GOPHER TORTOISE	1992-01-20	G3	S3	N	LS

4/16/99



Florida Natural Areas Inventory

1018 Thomasville 200-C
Tallahassee, F. 303
(850) 224-8207

Naval Training Center, Orlando - Project Site (boundaries are approximate)

LEGEND

Element Occurrences:

Precision:
sec min gen

- ▲ ■ Animals
- △ □ Plants
- ▲ ■ Natural Communities
- ▲ ■ Other

Managed Areas:

- Federal
- ▨ State
- ▩ Local
- ▧ Private
- ▤ Aquatic Preserves

Land Acquisition Projects:

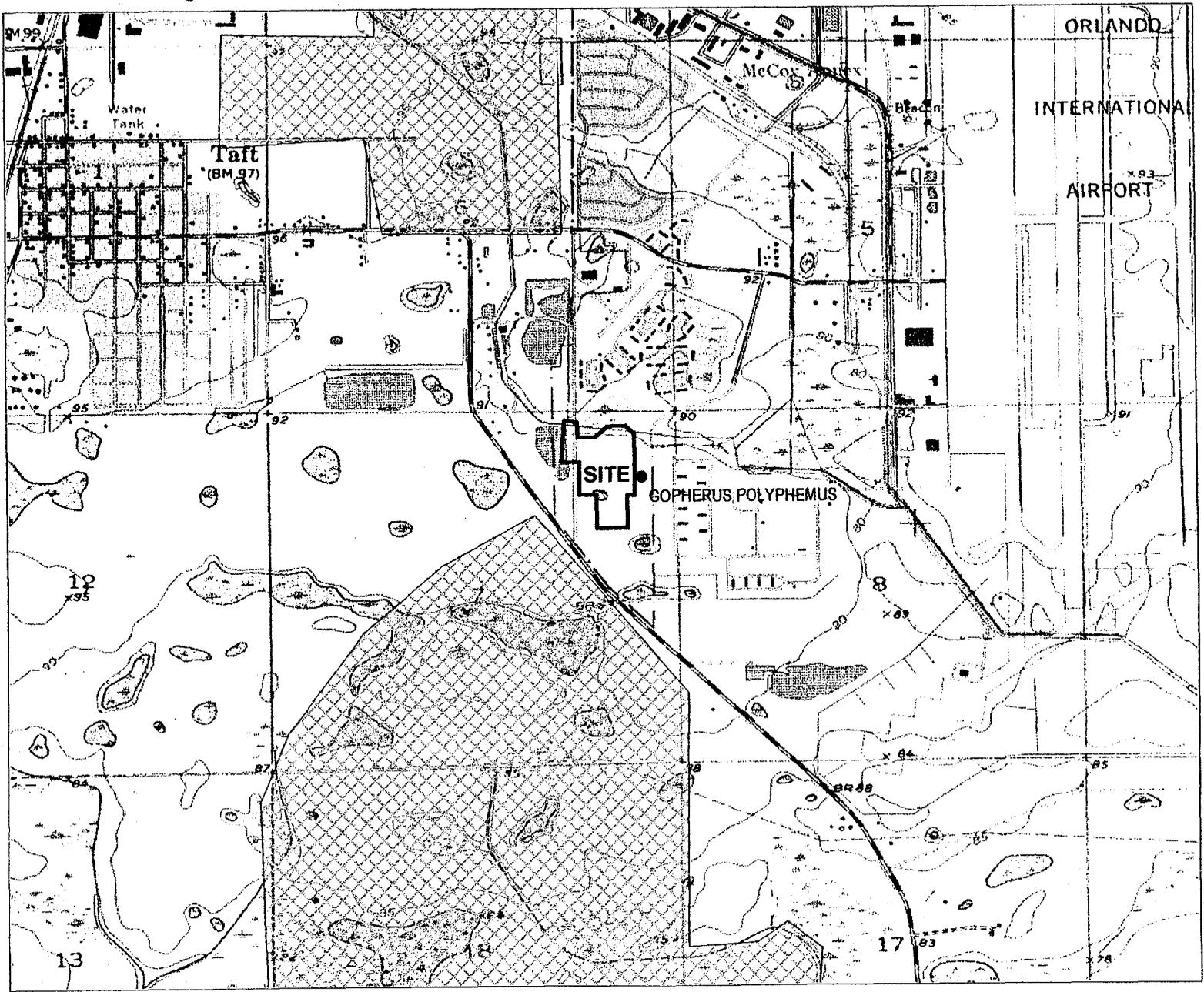
- ▨ Save Our Rivers
- ▧ CARL 98

Non-managed Areas:

- ▨ Potential Natural Areas
- ▩ Areas of Conservation Interest

⚡ County boundaries

Background Coverage:
USGS 1:24,000
Quadrangles



Prepared by J. Oetting
15 April 1999
Data Source: FNAI 2/99

Scale: distance between red section lines = approximately 1 mile

FLORIDA NATURAL AREAS INVENTORY

1018 Thomasville Road, Suite 200-C, Tallahassee, FL 32303 (850) 224-8207 Page 1

April, 1998

Orange County Summary Rare Species and Natural Communities

Scientific Name	Common Name	Global Rank*	State Rank*	Federal Status*	State Status*	Occurrence Status†
FISH						
<i>Ameiurus brunneus</i>	snail bullhead	G4	S3	N	N	C
<i>Cyprinodon variegatus hubbsi</i>	Lake Eustis pupfish	G5T2Q	S2	N	LS	C
AMPHIBIANS						
<i>Notophthalmus perstriatus</i>	striped newt	G2G3	S2S3	N	N	C
<i>Rana capito</i>	gopher frog	G4	S3	N	LS	C
REPTILES						
<i>Alligator mississippiensis</i>	American alligator	G5	S4	T(S/A)	LS	C
<i>Crotalus adamanteus</i>	eastern diamondback rattlesnake	G5	S3	N	N	C
<i>Drymarchon corais couperi</i>	eastern indigo snake	G4T3	S3	LT	LT	C
<i>Gopherus polyphemus</i>	gopher tortoise	G3	S3	N	LS	C
<i>Neoseps reynoldsi</i>	sand skink	G2	S2	LT	LT	C
<i>Pituophis melanoleucus mugitus</i>	Florida pine snake	G5T3?	S3	N	LS	P
<i>Sceloporus woodi</i>	Florida scrub lizard	G3	S3	N	N	C
<i>Stilosoma extenuatum</i>	short-tailed snake	G3	S3	N	LT	C
BIRDS						
<i>Accipiter cooperii</i>	Cooper's hawk	G4	S3?	N	N	P
<i>Aimophila aestivalis</i>	Bachman's sparrow	G3	S3	N	N	P
<i>Ajaia ajaja</i>	roseate spoonbill	G5	S2S3	N	LS	P
<i>Aphelocoma coerulescens</i>	Florida scrub-jay	G3	S3	LT	LT	C
<i>Aramus guarana</i>	limpkin	G5	S3	N	LS	C
<i>Ardea alba</i>	great egret	G5	S4	N	N	C
<i>Buteo brachyurus</i>	short-tailed hawk	G4?	S3	N	N	P
<i>Egretta caerulea</i>	little blue heron	G5	S4	N	LS	C
<i>Egretta thula</i>	snowy egret	G5	S4	N	LS	C
<i>Egretta tricolor</i>	tricolored heron	G5	S4	N	LS	C
<i>Elanoides forficatus</i>	swallow-tailed kite	G4	S2S3	N	N	P
<i>Eudocimus albus</i>	white ibis	G5	S4	N	LS	C
<i>Falco columbarius</i>	merlin	G5	SU	N	N	P
<i>Falco peregrinus</i>	peregrine falcon	G4	S2	LE	LE	P
<i>Falco sparverius paulus</i>	southeastern American kestrel	G5T3T4	S3?	N	LT	P
<i>Grus canadensis pratensis</i>	Florida sandhill crane	G5T2T3	S2S3	N	LT	C
<i>Haliaeetus leucocephalus</i>	bald eagle	G4	S3	LT	LT	C
<i>Ixobrychus exilis</i>	least bittern	G5	S4	N	N	P
<i>Laterallus jamaicensis</i>	black rail	G4	S3?	N	N	P
<i>Mycteria americana</i>	wood stork	G4	S2	LE	LE	C
<i>Nyctanassa violacea</i>	yellow-crowned night-heron	G5	S3?	N	N	C
<i>Nycticorax nycticorax</i>	black-crowned night-heron	G5	S3?	N	N	P
<i>Pandion haliaetus</i>	osprey	G5	S3S4	N	LS**	P
<i>Picoides borealis</i>	red-cockaded woodpecker	G3	S2	LE	LT	C
<i>Picoides villosus</i>	hairy woodpecker	G5	S3?	N	N	P
<i>Plegadis falcinellus</i>	glossy ibis	G5	S2	N	N	P
<i>Speotyto cunicularia floridana</i>	Florida burrowing owl	G4T3	S3	N	LS	P
<i>Sterna anillarum</i>	least tern	G4	S3	N	LT	P

MAMMALS

FLORIDA NATURAL AREAS INVENTORY

1018 Thomasville Road, Suite 200-C, Tallahassee, FL 32303 (850) 224-8207 Page 2

April, 1998

Orange County Summary Rare Species and Natural Communities

Scientific Name	Common Name	Global Rank*	State Rank*	Federal Status*	State Status*	Occurrence Status†
<i>Corynorhinus rafinesquii</i>	Rafinesque's big-eared bat	G3	S3?	N	N	P
<i>Lasiurus cinereus</i>	hoary bat	G5	SU	N	N	C
<i>Mustela frenata peninsulae</i>	Florida long-tailed weasel	G5T3	S3?	N	N	C
<i>Neofiber alleni</i>	round-tailed muskrat	G3	S3	N	N	P
<i>Podomys floridanus</i>	Florida mouse	G3	S3	N	LS	C
<i>Sciurus niger shermani</i>	Sherman's fox squirrel	G5T2	S2	N	LS	C
<i>Sorex longirostris longirostris</i>	southeastern shrew	G5T5	S4	N	N	P
<i>Ursus americanus floridanus</i>	Florida black bear	G5T2	S2	C	LT**	C
INVERTEBRATES						
<i>Aphaestracon monas</i>	Wekiwa hydrobe	G1	S1	N	N	C
<i>Cincinnatia wekiwae</i>	Wekiwa siltsnail	G1	S1	N	N	C
<i>Procambarus acherontis</i>	Orlando cave crayfish	G1	S1	N	N	C
<i>Troglocambarus sp 1</i>	Orlando spider cave crayfish	G1	S?	N	N	C
VASCULAR PLANTS						
<i>Asclepias curtissii</i>	Curtiss' milkweed	G3	S3	N	LE	C
<i>Bonania grandiflora</i>	Florida bonamia	G3	S3	LT	LE	C
<i>Calamintha ashei</i>	Ashe's savory	G3	S3	N	LT	R
<i>Centrosema arenicola</i>	sand butterfly pea	G2	S2	N	N	C
<i>Cheiroglossa palmata</i>	hand fern	G4	S2	N	LE	C
<i>Clitoria fragrans</i>	pigeon-wing	G3	S3	LT	LE	C
<i>Coelorachis tuberculosa</i>	piedmont jointgrass	G3	S3	N	N	C
<i>Conradina grandiflora</i>	large-flowered rosemary	G3	S3	N	LE	R
<i>Deeringothamnus pulchellus</i>	beautiful pawpaw	G1	S1	LE	LE	C
<i>Eriogonum longifolium</i> var <i>gnaphalifolium</i>	scrub buckwheat	G4T3	S3	LT	LE	C
<i>Glandularia tampensis</i>	Tampa vervain	G1	S1	N	LE	C
<i>Helianthus debilis ssp tardiflorus</i>	beach sunflower	G5T3	S3	N	N	C
<i>Ilex opaca var arenicola</i>	scrub holly	G5T3	S3	N	N	C
<i>Illicium parviflorum</i>	star anise	G1G2	S1	N	LE	C
<i>Lechea cernua</i>	nodding pinweed	G3	S3	N	LT	C
<i>Lindera subcoriacea</i>	bog spicebush	G2	S1	N	LE	R
<i>Lupinus westianus var aridorum</i>	scrub lupine	G2T1	S1	LE	LE	C
<i>Matelea floridana</i>	Florida spiny-pod	G2	S2	N	LE	C
<i>Monotropa hypopithys</i>	pinemap	G5	S1	N	LE	C
<i>Nemastylis floridana</i>	fall-flowering ixia	G2	S2	N	LE	C
<i>Nolina atopocarpa</i>	Florida beargrass	G3	S3	N	LT	C
<i>Nolina brittoniana</i>	Britton's beargrass	G2	S2	LE	LE	C
<i>Paronychia chartacea ssp chartacea</i>	paper-like nailwort	G3T3	S3	LT	LE	C
<i>Peperomia humilis</i>	terrestrial peperomia	G5	S2	N	LE	R
<i>Persea humilis</i>	scrub bay	G3	S3	N	N	C
<i>Platanthera integra</i>	yellow fringeless orchid	G4	S3S4	N	LE	C
<i>Polygala lewtonii</i>	Lewton's polygala	G2	S2	LE	LE	C
<i>Polygonella myriophylla</i>	Small's jointweed	G3	S3	LE	LE	C
<i>Prunus geniculata</i>	scrub plum	G2G3	S2S3	LE	LE	C
<i>Pteroglossaspis ecristata</i>	wild coco	G2G3	S2	N	LT	C
<i>Rhynchospora decurrens</i>	decurrent beakrush	G3G4	S2	N	N	C
<i>Salix floridana</i>	Florida willow	G2	S2	N	LE	C
<i>Stylisma abdita</i>	scrub stylisma	G2G3	S2S3	N	LE	C

FLORIDA NATURAL AREAS INVENTORY

1018 Thomasville Road, Suite 200-C, Tallahassee, FL 32303 (850) 224-8207 Page 3

April, 1998

Orange County Summary Rare Species and Natural Communities

Scientific Name	Common Name	Global Rank*	State Rank*	Federal Status*	State Status*	Occurrence Status†
<i>Warea amplexifolia</i>	clasping warca	G1	S1	LE	LE	C
<i>Zephyranthes simpsonii</i>	rain lily	G2G3	S2S3	N	LT	C
<u>NATURAL COMMUNITIES</u>						
Aquatic Cave		G3	S2	N	N	C
Blackwater Stream		G4	S2	N	N	C
Depression Marsh		G4?	S3	N	N	C
Floodplain Swamp		G?	S4?	N	N	C
Hydric Hammock		G?	S4?	N	N	C
Mesic Flatwoods		G?	S4	N	N	C
Sandhill		G2G3	S2	N	N	C
Scrubby Flatwoods		G3	S3	N	N	C
Scrub		G2	S2	N	N	C
Slough		G4	S4?	N	N	C
Spring-run Stream		G2	S2	N	N	C
Wet Flatwoods		G?	S4?	N	N	C
<u>OTHER</u>						
Bird rookery				N	N	C
Geological feature				N	N	C

* See attached *FNAI Rank Explanations* sheet for definitions of Global and State Ranks, and State and Federal Status

** See attached *FNAI Rank Explanations* sheet, *Special Animal Listings - State and Federal Status* section

† COUNTY OCCURRENCE STATUS

Vertebrates and Invertebrates:

C = (Confirmed) Occurrence status derived from a documented record in the FNAI data base.

P = (Potential) Occurrence status derived from a reported occurrence for the county, or the occurrence lies within the published range of the taxon.

N = (Nesting) For sea turtles only; occurrence status derived from documented nesting occurrences.

Plants, Natural Communities, and Other:

C = (Confirmed) Occurrence status derived from a documented record in the FNAI data base or from a herbarium specimen.

R = (Reported) Occurrence status derived from published reports.

RANK EXPLANATIONS

for FNAI Global Rank, FNAI State Rank, Federal Status, and State Status

The Nature Conservancy and the Natural Heritage Program Network (of which FNAI is a part) define an **element** as any exemplary or rare component of the natural environment, such as a species, natural community, bird rookery, spring, sinkhole, cave, or other ecological feature. An **element occurrence (EO)** is a single extant habitat that sustains or otherwise contributes to the survival of a population or a distinct, self-sustaining example of a particular element.

Using a ranking system developed by The Nature Conservancy and the Natural Heritage Program Network, the Florida Natural Areas Inventory assigns two ranks to each element. The global rank is based on an element's worldwide status; the state rank is based on the status of the element in Florida. Element ranks are based on many factors, the most important ones being estimated number of Element occurrences, estimated abundance (number of individuals for species; area for natural communities), range, estimated adequately protected EOs, relative threat of destruction, and ecological fragility.

Federal and State status information is from the U.S. Fish and Wildlife Service; and the Florida Game and Freshwater Fish Commission (animals), and the Florida Department of Agriculture and Consumer Services (plants), respectively.

FNAI GLOBAL RANK DEFINITIONS

- G1** = Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- G2** = Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- G3** = Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction of other factors.
- G4** = apparently secure globally (may be rare in parts of range)
- G5** = demonstrably secure globally
- GH** = of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker)
- GX** = believed to be extinct throughout range
- XC** = extirpated from the wild but still known from captivity or cultivation
- G#?** = tentative rank (e.g., G2?)
- G#G#** = range of rank; insufficient data to assign specific global rank (e.g., G2G3)
- G#T#** = rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1)
- G#Q** = rank of questionable species - ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q)
- G#T#Q** = same as above, but validity as subspecies or variety is questioned.
- GU** = due to lack of information, no rank or range can be assigned (e.g., GUT2).
- G?** = not yet ranked (temporary)

FNAI STATE RANK DEFINITIONS

- S1** = Critically imperiled in Florida because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- S2** = Imperiled in Florida because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- S3** = Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction of other factors.
- S4** = apparently secure in Florida (may be rare in parts of range)
- S5** = demonstrably secure in Florida

FNAI STATE RANK DEFINITIONS (cont.)

- SH** = of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker)

ADDENDUM 61
TO THE
SITE SAFETY AND HEALTH PLAN
FOR
SOIL EXCAVATION AND DISPOSAL
AT THE
NAVAL TRAINING CENTER ORLANDO, FLORIDA
DELIVERY ORDER NO. 0107

Prepared for
DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
Under Contract No. N62467-93-D-0936

Prepared by
BECHTEL ENVIRONMENTAL, INC.
OAK RIDGE, TENNESSEE

February 1999

Revision 0

Bechtel Job No. 22567

Approved:	<u><i>Merrin D Atwood</i></u>	<u>2/25/99</u>
	Certified Industrial Hygienist	Date
Approved:	<u><i>A. Whore</i></u>	<u>2/25/99</u>
	Project Manager	Date
Approved:	<u><i>[Signature]</i></u>	<u>4/9/99</u>
	Navy Contracting Officer	Date

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ACRONYMS AND INITIALISMS

ANSI	American National Standards Institute
BEI	Bechtel Environmental, Inc.
CFR	Code of Federal Regulations
CO	Commanding Officer
EPA	U.S. Environmental Protection Agency
FID	flame ionization detector
LEL	lower explosion limit
NIOSH	National Institute for Occupational Safety and Health
NTC	Naval Training Center
OEW	ordnance and explosive waste
OSHA	Occupational Safety and Health Administration
PEL	permissible exposure limit
PPE	personal protection equipment
PSHP	project safety and health plan
S&H	safety and health
SCBA	self-contained breathing apparatus
SHM	safety and health manager
SOP	standard operating procedure
SSHP	site safety and health plan
SSHR /	site safety and health representative
TSSHP	task-specific safety and health plan

UNITS OF MEASURE

bls	below land surface
ft	foot
gal	gallon
in.	inch
mg/m ³	milligrams per cubic meter
ppm	parts per million

1.0 GENERAL INFORMATION

This Task-Specific Safety and Health Plan (TSSHP) addresses safety and health issues related to the harvesting of trees, spreading of low level arsenic-contaminated soil as cover at the McCoy Annex Landfill in Orlando, Florida. The arsenic-contaminated soil will be removed from the Main Base golf course at the Naval Training Center (NTC) Orlando and transported to the McCoy Annex Landfill by others. In addition to these task-specific requirements, general requirements are given in the Naval Remedial Action Contract (Navy RAC) Program Safety and Health Plan (SSHP) for the Navy RAC bases, the safety and health standard operating procedures (Navy RAC SOPs) for the Navy RAC program, and other work controlling documents such as hazardous work permits (HWPs). The TSSHP has been developed in compliance with the requirements of 29 CFR 1910.120(b) and 29 CFR 1926.65(b) and other applicable OSHA standards.

The TSSHP is issued under controlled distribution. A TSSHP may be revised during the annual review process or at any time it is apparent that there has been a change in site conditions or scope of work. In addition, the Bechtel Environmental, Inc. (BEI) Safety and Health Manager (SHM) and/or the Navy Contracting Officer (CO) reserves the right to require changes to the TSSHP and operations as necessary to ensure the safety and health of persons on or near the site. Minor changes, as required, are typically done through the Field Change Notices/Requests found in the Program Safety and Health Plan (PSHP).

All site personnel shall be familiar with the information and requirements contained in the TSSHP. Levels of protection may be up- or down-graded by the Site Safety and Health Representative (SSHR) based on actual site conditions and air sampling results.

1.1 SITE HISTORIES AND DESCRIPTIONS

The history of NTC Orlando dates to the inception of the Orlando Municipal Airport prior to 1940. In August 1940, the municipal airport was taken over by the Army Air Corps. Shortly thereafter, the construction program for Orlando Air Base began, culminating in its official opening on December 1, 1940. During the following two years, the Army Air Corps acquired additional property and auxiliary landing fields were built in the surrounding area. The Army Air Corps conducted operations at the Main Base and Area "C" from 1940 to 1947.

In 1947, the U.S. Air Force assumed command of Orlando Air Base and renamed it the Orlando Air Force Base (OAFB). The base was deactivated on October 28, 1949, and remained on standby status until January 1, 1951, when it was reactivated as an Aviation Engineers training site. Other Air Force units arrived, and the Military Air Transport Services [MATS, later Military Airlift Command (MAC)] assumed full jurisdiction of the base in 1953.

The Navy began moving its Training Device Center from Port Washington, New York to OAFB on September 15, 1965, and finished the move in June 1967. In 1968 the Air Force ceased operations at OAFB, Area "C," and Herndon Annex. The property was commissioned as the Naval Training Center, Orlando on July 1, 1968.

The history of McCoy Annex dates to 1941 with the construction of Orlando Municipal Airport No. 2 in Pinecastle, Florida. Prior to construction of the new airport, the property was undeveloped swampland. In 1942, the city leased the Pinecastle property to the Army Air Corps, which acquired additional lands and constructed Pinecastle Army Air Field. The field was ready for operation in April 1943. At the end of World War II, the base was deactivated and the property was returned to the city. During the Korean

conflict, the base was reopened. On August 5, 1959, the Capehart Housing project, a large construction program consisting of 668 family quarters for officers and airmen, was begun. In 1973, the Navy acquired title to part of the property and changed the name to McCoy Annex.

McCoy Annex was acquired to serve as a community support annex to the NTC. The majority of the property, including runways, aircraft hangars, and maintenance facilities previously used by the Air Force, was never acquired by the Navy. That unacquired property is currently owned and operated by the Orlando International Airport.

McCoy Annex Landfill is located at the southern end of McCoy Annex. The western portion of the landfill was reportedly used by the Air Force and the Navy from about 1960 to 1972, while the eastern portion was used from 1972 until about 1978. The area was converted to a golf course in 1981. The northern part of the property is currently being used as a golf course and is expected to remain a golf course for the foreseeable future.

1.2 IDENTIFICATION

Site Names: McCoy Annex Landfill and Naval Training Center (NTC) Orlando
Site Location: NTC Orlando, Orlando, Florida
Client: Department of the Navy Southern Division Naval Facilities Engineering Command (SOUTHDIVNAVFACENGCOM)
Owner: U.S. Department of the Navy
Status: Active – Golf course and landfill

Regulatory Status: Federal Government

- a. USEPA: RCRA regulations, including but not limited to 40 CFR Part 50
- b. DOT: Department of Transportation regulations, including but not limited to 49 CFR 172.700
- c. OSHA: - 29 CFR 1910, 1926, and State OSHA-specific chemical hazard substance standards
- 29 CFR 1926.1118 Arsenic
- d. Other: A Federal Facilities Agreement is in place for this site. The Site Management Plan for NTC Orlando includes a Remedial Action/Feasibility Study (RI/FS) report submitted for approval by EPA Region IV, and the Florida Department of Environmental Protection.

1.3 DESCRIPTION OF ACTIVITIES

The following general categories of work are covered by this plan:

- Harvesting of saleable trees (no root removal); general clearing and grubbing
- Placement of cover over landfill using 2 ft of soils removed from NTC Main Base golf course

Table 1-1 provides the task activities and their descriptions

**Table 1-1
Site Activities**

Activity	Description
1	Mobilization to the site
2	Identification of utilities and interferences
3	Tree harvesting; (no root removal) clearing and grubbing
4	Spreading of low level arsenic-contaminated soil
5	Site restoration (only as needed)
6	Demobilization from site

The following is a brief description of the activities enumerated in Table 1-1.

1. Mobilization to the site. Bechtel will mobilize a work force, support equipment, and materials necessary to complete the work. Initial mobilization involves securing an equipment staging area, establishing lay down and decontamination areas, and initiating clearing of tank excavation areas.
2. Identifying utilities and excavation interferences. Bechtel will verify harvesting of saleable trees. The area will then be visually inspected to document evidence of possible obstructions
3. Tree harvesting; clearing and grubbing. Bechtel and its subcontractor will provide a work force, equipment, and materials necessary to harvest saleable trees and clear, remove, and chip heavy vegetation in the areas where work will be performed. **SAW CHAPS MUST BE WORN WHEN OPERATING CHAIN SAWS.**
4. Spreading of contaminated soil. The low-level arsenic-contaminated soil from the Main Base golf course will be transported by others and will be spread as cover over the southern portion of the McCoy Annex landfill by Bechtel subcontractor personnel.
5. Site restoration. All areas will be restored, if necessary, prior to demobilization.
6. Demobilizing the site. All equipment, materials, and personnel will be demobilized from the site.

2.0 HAZARD ANALYSIS

2.1 CHEMICAL HAZARD

The known or suspected chemical hazard identified is arsenic. Analytical data confirms that there is low-level residual arsenic in the soils to be excavated at NTC Orlando.

Chemical hazards for the tasks defined in this TSSHP include:

- Carcinogen
- Systemic poison
- Contact exposure
- Ingestion exposure
- Inhalation exposure
- Nephrotoxin

The chemical hazard for the work is low. Table 2-1 indicates the chemical of concern and concentrations found in the soils. Table 2-2 shows the exposure limits; symptoms, harmful effects, and routes of exposure; and methods for detection for the contaminants of concern.

**Table 2-1
 Chemical of Concern in Soils**

Contaminant	Concentration (mg/kg; ppm)
Arsenic	< 0.50 – 60.2

The SSHR will implement an air monitoring program, as needed, to confirm chemical hazards are not present. If monitoring results indicated airborne concentrations which exceed exposure limits in Table 2-2 or the action levels established in Table 6-1, engineering controls, appropriate work practices, and personal protective equipment will be implemented to reduce exposure.

**Table 2-2
 Chemical Hazard Information**

Chemical	Exposure Limits (mg/m ³)	Harmful Effects	Symptoms	Sampling Media	Routes of Exposure	
Arsenic	AL	0.005	Liver, kidneys,	Ulceration of nasal	MCEF/	Ingestion, inhalation, contact
	PEL	0.010	skin, lungs,	septum, dermatitis,	Filter	
	STEL	NA	lymphatic system	GI disturbances,		
	TLV	0.010		respiratory irritation		
	IDLH	5.0				

2.2 BIOLOGICAL HAZARDS

Biological hazards for the tasks defined in this TSSHP include bites from insects such as mosquitoes, spiders, and ticks.

2.3 RADIATION HAZARD

Radiation hazard for the tasks defined in this TSSHP include UV sunlight.

2.4 PHYSICAL AND GENERAL SAFETY HAZARDS

Physical and general safety hazards for the tasks defined in this TSSHP include:

- Flying particles, electrical shocks, or other injury from hand tools (power tools)
- Injury from the use of heavy equipment for spreading soils
- Eye or other injury from the use of high-pressure water
- Electrical shock from contact with electrical connections
- Electrical shock or other injury from overhead or underground utilities
- Cuts or other injury from pinch points
- General slips, trips, or falls.
- Heat exposure

- Noise exposure
- Strains and sprains

3.0 MEDICAL SURVEILLANCE

Medical surveillance requirements are found in Section 6.0 of the PSHP. No special testing is required for this activity. Workers outside the regulated area with **no potential for exposure** are exempted from the medical surveillance program. Exceptions are determined on a case-by-case basis by the SHM.

4.0 TRAINING

Project training requirements are contained Sections 9, 10, and 11 of the PSHP. Before starting work, each worker assigned to perform tasks under this TSSHP will receive an initial safety and health orientation training from the SSHR. Workers outside the regulated areas **with no potential for exposure** are exempt from the HAZWOPER training program. This exemption is determined on a case-by-case basis by the SHM.

5.0 SITE CONTROLS

Program requirements for site controls are specified in Section 4.0 of the PSHP and the Navy RAC SOP 2.1.40, "Site Control." General site control requirements for NTC Orlando are specified in Section 4 of the PSHP.

6.0 AIR MONITORING AND SAMPLING

Table 2-2 provides occupational exposure limits that will be used as airborne chemical action levels during work activities. Upgrading/downgrading of PPE and implementation of engineering controls will be based upon results of data generated by real time monitoring.

6.1 PERSONAL AIR SAMPLING

The primary purpose of personal sampling is to assess employee's actual/potential exposure. It is anticipated that arsenic concentrations will be less than 3 ppm in the soil to be spread as cover material. Therefore, personal sampling is not planned for this task. However, if real-time monitoring indicates dust levels sufficient to result in worker exposure greater than the action level presented in Table 2-2, personal sampling will be implemented along with dust suppression measures. Personal samples will be collected on a minimum of 25 percent of the affected personnel, or two employees, whichever is greater. Sampling will be conducted for the worker(s) with the highest expected exposure. The will be collected in the employees breathing zone using personal sampling pumps and appropriate collection media following NIOSH or OSHA methodology for the contaminant(s) of concern. Sampling pumps will be calibrated before and after use.

6.2 REAL TIME AIR MONITORING

In the work area the potential for fugitive dust generation exists. Monitoring with a MiniRam will be performed to determine the need for implementation of dust suppression methods.

7.0 PERSONAL PROTECTIVE EQUIPMENT

Program requirements for components of Level D and construction attire protection are specified in Sections 8.0, 9.0, and 10.0 of the PSHP.

The SSHR will specify the PPE requirements in daily toolbox meetings. Due to the levels of contamination, it is anticipated that most work will be in construction attire and/or Level D. Table 7-1 shows the activity, expected hazard, levels of protection, and possible upgrades in the level of protection. Respirator cartridges will be specified by the SSHR. Table 7-1 also lists S&H and SOP references for specific hazards.

**Table 7-1
 Levels of Personal Protective Equipment, Hazards, and References**

Activity	A	B	C	D	E	F	G	H	I	J	K	L	Level	Possible
1	X	X		X						X			C.A.	NA
2	X	X								X			C.A.	NA
3	X	X		X						X			C.A.	D
4	X			X	X		X	X	X	X			C.A.	D
5	X			X	X		X	X	X	X			C.A.	D
6	X	X		X						X			C.A.	NA

Key	Hazard	S&H Document/SOP Reference
A	Physical Injury Hazard	S&H SOP 2.1.17A, 1.2.40A
B	Overhead Underground Utility Hazard	S&H SOP 2.1.40B, 2.1.40C
C	Fire/Explosion Hazard	S&H SOP 2.1.24A
D	Noise Hazard	S&H SOP 2.1.21
E	Contact with Contaminated Soil Hazard	S&H, SOP 2.1.60A, 2.1.60B, 2.1.70
F	Contact with Contaminated Water Hazard	S&H, SOP 2.1.60A, 2.1.60B, 2.1.70
G	Inhalation Hazard	S&H, SOP 2.1.15B, 2.1.30H, 2.1.65D, 2.1.80
H	Ingestion Hazard	S&H, SOP 2.1.15B, 2.1.110
I	Skin Contact Hazard	S&H, SOP 2.1.70A
J	Heat/Cold Stress Hazard	S&H, SOP 2.1.60C
K	Vandalism Hazard	S&H, SOP 2.1.40, 2.1.15A
L	Ordnance and Explosive Waste	Bechtel PP 8001

Equipment for Level D, and construction attire (C.A.) personal protection is as follows:

- Level D Protection
 - Hard hat
 - Sturdy leather work boots
 - Nitrile or vinyl inner gloves
 - Neoprene or rubber boots
 - Safety glasses
 - Hearing protection, as required

- Cotton or leather work gloves
- Chemical safety goggles or faceshield (must be worn for groundwater sampling, pressure washing, decontamination of equipment and well pumping if splash hazard is present)
- Disposable protective clothing (Tyvek™ or polycoated Tyvek/Saranex, if splash hazard or contact hazard is present)
- Construction Attire
 - Hard hat
 - Safety glasses
 - Sturdy leather work boots
 - Sleeved shirt
 - Long pants
 - Hearing protection, as required
 - Cotton or leather gloves
- * Rubber overboots shall be worn in areas where contaminants are present

All personal protective equipment used during the course of these field activities must meet the following and any other applicable OSHA standards:

<u>Type of Protection</u>	<u>Regulation</u>	<u>Source</u>
Eye and Face	29 CFR 1910.133	ANSI Z87.1 Latest edition
/Respiratory	29 CFR 1901.134	ANSI Z88.1 Latest edition
Head	29 CFR 1910.135	ANSI Z89.1 Latest edition
Foot	29 CFR 1910.136	ANSI Z41.1 Latest edition

The above-designated levels of protection will be upgraded or downgraded by the SSHR based on site conditions and air monitoring results.

8.0 HURRICANE AND/OR DESTRUCTIVE WEATHER RESPONSE

Hurricanes and/or destructive weather procedures are specified in Attachment B for the Navy RAC bases PSHP.

9.0 SPILL PREVENTION AND CONTROL

Spill control procedures are specified in Attachment C of the Navy RAC Bases PSHP.

10.0 ORDNANCE AND EXPLOSIVE WASTE

Based on previous activities and the information provided by the Navy, it is not anticipated that ordnance and explosive wastes (OEW) will be encountered during the activities planned for these locations.

In the unlikely event that OEW is encountered during excavation in these areas, the protocol established in Bechtel's Navy RAC SOP for OEW will be implemented.

11.0 EMERGENCY RESPONSE

Emergency response and notification procedures are specified in Attachment A of the SSHP. From the site, call 911 for police, rescue, fire department, or ambulance. All telephone numbers have been verified and the site contamination and copies of the TSSHP have been provided and explained to the respondents of the listed phone numbers (Table 11-1).

11.1 HOSPITAL ROUTES

Personnel injured on the job site shall receive first aid and be assessed as to the severity of the injury. Below is a guideline to determine what actions should be taken. As a general guideline, an employee who requests to see a doctor shall be provided the option to see the company doctor. Should management believe an injured employee should see a doctor, the employee shall be transported to the company doctor. Should an employee refuse to see the company doctor, any exemption must be approved by the SHM. **AT NO TIME SHALL AN INJURED EMPLOYEE BE ALLOWED TRANSPORT HIMSELF/HERSELF TO THE DOCTOR/HOSPITAL WITHOUT A MEMBER OF MANAGEMENT PRESENT. THIS REQUIREMENT ALSO APPLIES TO FOLLOW-UP VISITS.**

11.2 ONLY FIRST AID REQUIRED

If first aid is all that is required, the first aid trained individual will determine whether the injured worker shall be seen by Bechtel's occupational physician. Should this occur, a non-manual employee will accompany the injured employee to the doctor. Should these types of injuries occur after normal working hours, the employee will be transported to the emergency room listed above for any significant first aid treatment.

11.3 EMERGENCY ROOM VISIT REQUIRED

Should the injury be severe enough to require a visit to the emergency room (profuse bleeding, fracture of a major bone, etc) 911 shall be called. **AT NO TIME SHALL THE INJURED EMPLOYEE BE TRANSPORTED TO THE EMERGENCY ROOM BY BECHTEL EMPLOYEES UNLESS THERE IS NO OPTION.**

11.4 HOSPITAL ROUTES

A description of routes to the hospitals listed Table 11-1 will be provided and posted onsite by the SSHR during site mobilization. The SSHR will also confirm and post all local emergency contact telephone numbers.

Table 11-1
Emergency Telephone Numbers for NTC Orlando

EMERGENCY SERVICES

POLICE DEPARTMENT	911
RESCUE SERVICE	911
BASE SECURITY	(407) 646-4444
BASE FIRE DEPARTMENT	(407) 646-4333
NAVAL HOSPITAL INFORMATION.....	(407) 643-2456
ORLANDO REGIONAL MEDICAL CENTER	(407) 841-5210

EMERGENCY CONTACTS

PROJECT S&H MANAGER (Mervin Atwood)	(423) 220-2344 (office)
	(435) 481-0144 (home)
PROJECT MANAGER (Robert Cohose)	(423) 220-2492
PROJECT SUPERINTENDENT (Bill Hevrdeys).....	(423) 220-2534
PROJECT ENGINEER (Robin Manning)	(423) 220-2406
NAVY ROICC (Jerry Eggebrecht)	(407) 381-8924

OTHER CONTACTS

FLORIDA POISON CONTROL CENTER.....	(800) 282-3171
ORLANDO POISON CONTROL CENTER.....	(407) 841-5222
.....	(800) 282-3171
NATIONAL RESPONSE CENTER.....	(800) 424-8802
REGIONAL USEPA EMERGENCY RESPONSE	(800) 414-8802
CHEMICAL REFERRAL CENTER	(800) 262-8200

HOSPITAL ROUTES

A description of routes to the hospitals listed above will be provided and posted onsite by the SSHR during site mobilization. The SSHR will also confirm and post local emergency contact telephone numbers.

ADDENDUM
TO THE
QUALITY CONTROL PROGRAM PLAN
FOR
McCOY ANNEX LANDFILL COVER
NAVAL TRAINING CENTER ORLANDO, FLORIDA

DELIVERY ORDER 0107

Prepared for
DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND

Under Contract No. N62467-93-D-0936

Prepared by
BECHTEL ENVIRONMENTAL, INC.
OAK RIDGE, TENNESSEE

APRIL 1999

Revision 0

Bechtel Job No. 22567

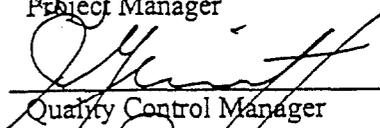
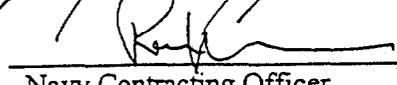
Approved:		<u>4-5-99</u>
	Project Manager	Date
Approved:		<u>4-5-99</u>
	Quality Control Manager	Date
Approved:		<u>4/9/99</u>
	Navy Contracting Officer	Date

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ATTACHMENTS

Number	Title
1	Inspection Schedule Log
2	Field Inspection Report Form
3	Testing Plan and Log
4	Submittal Register

INTRODUCTION

The purpose of this Quality Control Plan Addendum (QCPA) is to define those activities necessary to provide adequate confidence that the remediation of the landfill cover and excavation of two PAH-contaminated sites at the Naval Training Center, McCoy Annex, Orlando, Florida, have been satisfied under Delivery Order (DO) 0107.

SCOPE OF WORK

The QCPA addresses site-specific QC requirements for this task and is used to provide additional information to the program requirements presented in the Quality Control Plan (QCP). Both the QCP and the QCPA will be used to direct QC activities for this task. Bechtel will fulfill its responsibility for QC by conducting audits/surveillances, inspections of direct-hire employees and subcontractors at various points during remedial activities, as required, and reserves the right to accept or reject items and installations in accordance with the method specified in Section IX of this document. It is the responsibility of subcontractors to meet the technical and quality requirements of the plans, specifications, and drawings applicable to their scope of work. It is also the responsibility of each subcontractor to comply with the requirements of this QCPA and support quality verifications (inspections, surveillances, etc.) performed by the QC manager or designee.

Site-specific inspection activities will be conducted for the definable features of work listed below. A listing of these inspections is presented in the Inspection Schedule Log (Attachment 1). For optional work, any inspections or tests that may be required will be developed on an "as needed" basis without revision to this QCPA.

Definable Features of Work

- EROSION AND SEDIMENT CONTROL
- Tree Harvesting and Clearing
- Landfill Soil Cover
- Excavation of PAH-Contaminated Soil
- Site Restoration
- ~~General Management~~



SECTION 1 - APPOINTMENT LETTER

April 5, 1999

Mr. Jerry A. Grissett
Bechtel Environmental, Inc.
151 Lafayette Drive, P.O. Box 350
Oak Ridge, TN 37831-0350

Dear Mr. Grissett:

Pursuant to Section 6.7.1(b) of the Quality Control Requirements contained within the Naval Facilities Engineering Command, Southern Division, Contract No. N62467-93-D-0936, please be advised that you have been appointed as Quality Control Manager for the environmental remediation action project for Delivery Order No. 0107 of the landfill cover at the McCoy Annex, Naval Training Center Orlando, Florida. You have full responsibility and authority for implementation of the quality control program, including stop work authority in accordance with the Quality Control Program Plan.

Since the Quality Assurance Department maintains a reporting relationship independent of that for project personnel, you will report directly to me and coordinate project activities with the Project Manager.

Should you have any questions, please feel free to contact me.

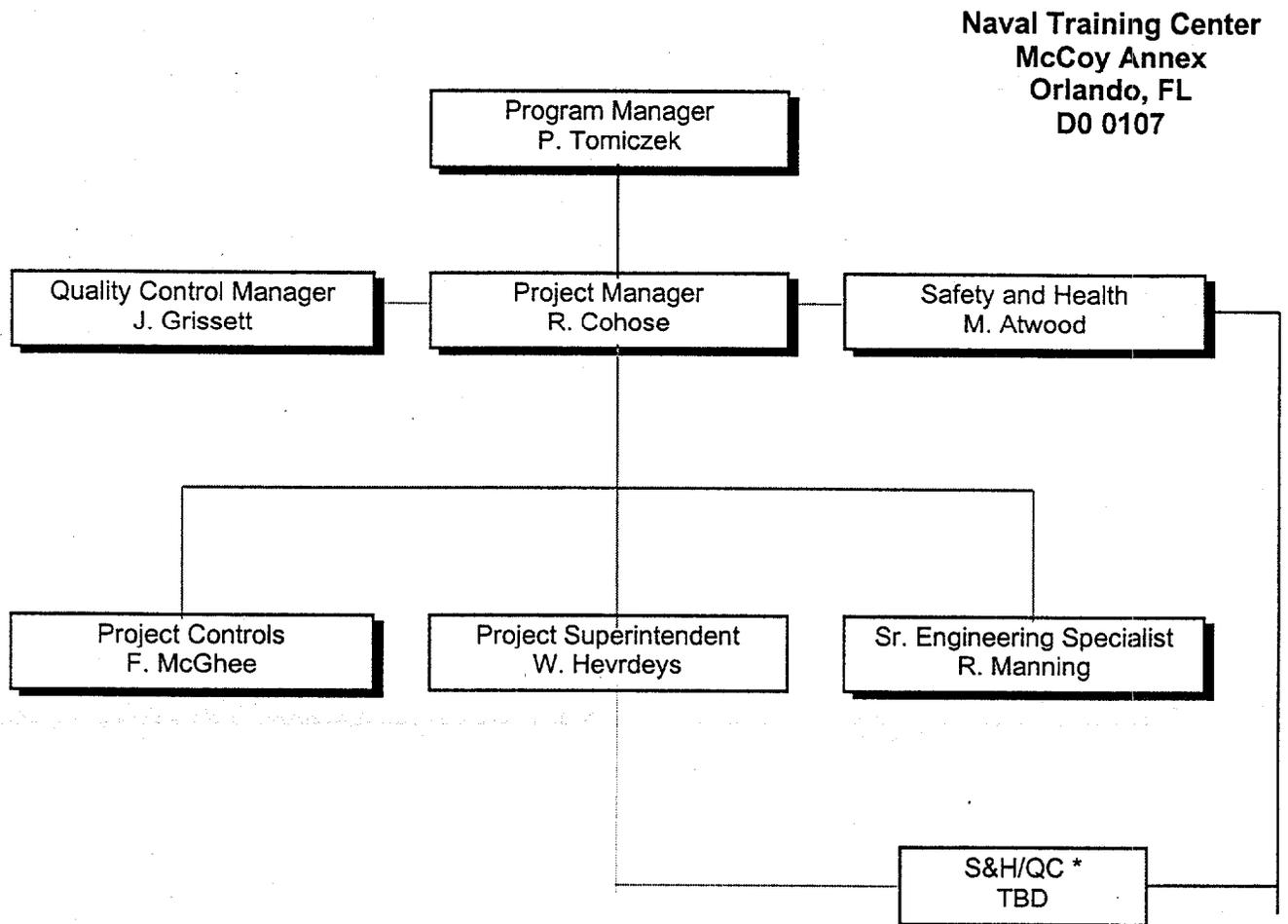
Sincerely,

Donald T. Krisha
BEI Manager of Quality Control

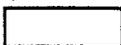
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SECTION II - ORGANIZATIONAL CHART

Figure 2-1
Project Organization



Legend

 Onsite

 Oak Ridge Office

* QC function only. Report to Quality Control Manager.

SECTION III - NAMES AND QUALIFICATIONS

Professional Profile

Name: Jerry Grissett

Job Title: QA Supervisor

Proposed Project Title: Field QC Manager

Years Experience with Proposing Firm: 16

Years Experience with Other Firm: 8

Education (Degrees, year, specialization): BA, 1976, Political Science

Active Registration:
(Year First Registered and Discipline)

1992, Lead Auditor, ASME NQA-1
1982, Auditor, ANSI N45.2.23

Health and Safety Training:
(Course(s) and Date(s))

Safety Supervisory Training, 1990
CPR First-Aid Training, 1991

Experience and Qualifications:

Jerry Grissett has more than 19 years' experience on engineering, construction, and environmental remediation projects including 15 years in QA/QC. He currently directs the QA/QC programs of environmental restoration and remedial action projects that include tasks involved in the proposed projects.

In his position as QA Supervisor in Bechtel's Oak Ridge office, Mr. Grissett develops and implements QA programs for several environmental restoration projects simultaneously. His responsibilities include conducting/directing field surveillances/inspections of Bechtel and subcontractor activities for waste packaging, decommissioning, sampling, analysis, and other remedial actions. Mr. Grissett also conducts home-office and jobsite audits, approves laboratory QA/QC plans, and leads laboratory audits to ensure their satisfactory compliance with approved plans/procedures.

He has written numerous quality plans on remedial action and remedial investigation. Most recently, Mr. Grissett received DOE approval of a QA plan he developed for compliance with ASME NQA-1, DOE

5700.6C, and EPA QAMS 005/80. This plan directs the investigation and remediation of a former Manhattan Project research laboratory site that contains a buried uranium reactor bioshield, gasoline storage/dispensing tanks, septic drain systems, and waste from support facilities such as a lead foundry, dormitories/cafeteria, and a metallurgical lab.

In the last few years, Mr. Grissett has performed QA/QC surveillances/audits for FUSRAP (C3, p. 155), and the ORNL RI/FS project, which involves nearly all aspects of contamination control, remedial investigation, and remedial action, including groundwater monitoring, excavation of contaminated sediments and soils, and transport of wastes. He has performed audits on the USACE projects (C1, p.151), which have involved neutralization, chemical stabilization, transportation and disposal of contaminated materials, groundwater monitoring, pumping and treating contaminated groundwater, and chemical decomposition and solidification.

Previously, Mr. Grissett developed and enforced the ASME NQA-1 quality program for the decontamination and decommissioning of a nuclear fuels production facility in California. He was responsible for assuring that project plans, technical documents, procedures, and jobsite activities provided for compliance with federal and state regulations. Before coming to Bechtel in 1982, Mr. Grissett worked two years for Public Service of Indiana as an Electrical QA Engineer. From 1972 to 1980, Mr. Grissett held positions in construction, engineering, and QC with Brown and Root Construction on its Brunswick and South Texas projects.

- **Maintaining internal and external communications:** Mr. Grissett conducts monthly QA management review meetings for his environmental projects, which involve project management and staff, to communicate on QA actions and trends. In addition, he summarizes QA activities for monthly project reports; which are in turn summarized in the monthly office report submitted by the Oak Ridge office QA Manager to Bechtel's corporate QA Department.
- **Applying quality assurance to individual tasks:** Mr. Grissett's job duties consist of supervising project QA implementation. He regularly reports trends in QA, tracks corrective action, performs QA audits, and develops project QA programs and procedures. In addition, Mr. Grissett has received training in continuous improvement principles from the QA department's TQM coach and applies these principles to his daily tasks.
- **Resolving problems:** Some corrective actions are taken during the audit process; those that cannot be resolved immediately are tracked through a corrective action/nonconformance report. Mr. Grissett or his representative(s) approve resolutions and verify that corrective actions have been made.
- **Planning and scheduling:** Each monthly report contains an audit and surveillance schedule developed by Mr. Grissett or his representative(s). This schedule reflects project QA activities from 3 months to 1 year in advance.
- **Cost estimating and cost control:** Mr. Grissett is responsible for monitoring budget and jobhours for project QA activities.

- **Budgeting and accounting:** Mr. Grissett is also responsible for developing and forecasting costs and jobhours for project QA activities.
- **Coordinating technical reports and submittals:** Mr. Grissett has written numerous QA project procedures and plans, as well as supervising his staff in developing project deliverables relating to QA. He also reviews and approves procedures and plans for other project departments (Engineering, H&S, Procurement, etc.).
- **Managing multiple projects concurrently:** Mr. Grissett serves as QA Supervisor for several projects simultaneously.
- **Working with consultants and subcontractors:** As project QA supervisor, Mr. Grissett audits the work of consultants and subcontractors to ensure that they adhere to project requirements.

List of Technical Documents:

Quality Assurance Program Plan for the Palos Park Site
Quality Assurance Plan for the UC-Davis LEHR Site
Quality Assurance Program Plan for the Sorrento Valley Associates Site
QA/QC Procedures [over 100]
Has reviewed/approved more than 50 engineering design specifications
Reviews/approves project procedures for all disciplines as well as all project planning documents

SECTION IV - DUTIES, RESPONSIBILITIES, AND AUTHORITIES OF QC PERSONNEL

The duties, responsibilities, and authorities of the assigned QC personnel for tasks associated with DO 0107 are described in detail in Section IV of the QCP.

SECTION V - OUTSIDE ORGANIZATIONS

Outside organizations may be employed by Bechtel, as required by the scope of work, to provide specific services. These outside organizations for this DO may include but are not limited to:

- Tree Harvesting and Clearing Subcontractor
- Labor Service Subcontractor
- Soil Material Supply and Delivery
- Sod and Seeding Subcontractor

SECTION VI - SUBMITTALS

Submittals and reporting requirements for this DO's tasks are specified in Attachment 4 of this QCPA. The QC manager is responsible for the completion and submission of all required QC submittals as specified in the QCP.

SECTION VII - INSPECTION SYSTEM

Inspections will be conducted according to Section VII of the QCP. Inspections to be conducted for tasks associated with this DO are listed in the Inspection Schedule Log (Attachment 1) and the Field Inspection Report (Attachment 2). Dates for QC inspections will be provided at the jobsite during preconstruction and construction meetings.

SECTION VIII - TESTING

No construction testing is anticipated; however, a blank Testing Plan Log is included as Attachment 3 as a field aid if needed later. Additional requirements associated with testing, such as calibration, audits, subcontractor submittals, and data review, are addressed in the QCP.

SECTION IX - REWORK PROCEDURES

Rework procedures and associated requirements are addressed in Section IX of the QCP.

SECTION X - DOCUMENTATION

Refer to Section X of the QCP for QC documentation requirements for tasks associated with this DO.

SECTION XI - CERTIFICATIONS

Certification requirements are addressed in Section XI of the QCP.

SECTION XII - PROGRESS SCHEDULE

Scheduling will be performed by Bechtel and will be presented at the preconstruction meeting.

ATTACHMENT 1
Inspection Schedule Log

Inspection Phase and Schedule												
DO Reference	Cklt No.	Definable Feature of Work/ Required Inspections	Preparatory			Initial			Follow-up			Remarks
			Schedule	Actual	By	Schedule	Actual	By	Schedule	Actual	By	
		Preparatory										
	05	Preparatory Phase Completion										
		Workmanship										
		Erosion and Sediment Control										
		Tree Harvesting										
		Clearing and Grubbing										
		Landfill Soil Cover										
		PAH Removal										
		Site Restoration										

