WORK PLAN FOR SEEP FILTRATION SITE 4 NCBC GULFPORT MS

1/1/1998

MORRISON KNUDSEN CORPORATION

Work Plan
For
Seep Filtration at Site 4

NAVAL CONSTRUCTION BATTALION CENTER
GULFPORT, MISSISSIPPI

SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND

Contract #N62467-93-D-1106
Delivery Order #0002
Statement of Work #009

January 1998

Revision 0

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January 5, 1998

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DELIVERY ORDER #0002
STATEMENT OF WORK #009

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CLIENT ACCEPTANCE

U.S. Navy Responsible Authority — Date: 18 Feb 98

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ACRONYMS

ABB-ES	ABB Environmental Services
AHA	Activity Hazard Analysis
ASAP	as soon as possible
CBC	Construction Battalion Center
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CRZ	Contamination Reduction Zone
DFOW	Definable Feature of Work
DOT	U.S. Department of Transportation
EPA	U.S. Environmental Protection Agency
EZ	Exclusion Zone
GSHP	MK General Safety and Health Plan
gpm	gallons per minute
HCl	hydrochloric acid
HO	herbicide orange
H_2SO_4	sulphuric acid
MAC DEQ	Mississippi's Administrative Code, Department of Environmental Quality
MCL	Maximum Contaminant Level
MDEQ	Mississippi Department of Environmental Quality
MK	Morrison Knudsen Corporation
mL	milliliter
MSDS	Material safety data sheets
NCF	Naval Construction Force
NPDES	National Pollution Discharge Elimination System
OSHA	Occupational Safety and Health Administration
PeCDD	pentachloro-dibenzodioxin
PM	Project Manager
PMO	Program Management Office
POD	Plan-of-the-day
POTW	Publicly owned treatment works
PPE	Personal protective equipment
ppq	parts per quadrillion
PVC	polyvinyl chloride
RCRA	Resource Conservation and Recovery Act
ROICC	Resident Officer In-Charge of Construction
RQ	Reportable Quantities

ACRONYMS (Continued)

SDWA	Safe Drinking Water Act
SOUTHNAVFACENGCOM	Southern Division, Naval Facilities Engineering Command
SQCS	Site Quality Control Supervisor
SSHO	Site Safety and Health Officer
SSHP	Site Safety and Health Plan
SVOC	Semivolatile Organic Compounds
SZ	Support zone
TCDD	tetrachlorodibenzo-p-dioxin
UIC	Underground Injection Control

1.0
INTRODUCTION

1.1 BACKGROUND

This Work Plan has been prepared by Morrison Knudsen Corporation (MK) for Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM), under contract number N62467-93-D-1106, Delivery Order 0002, Statement of Work 009.

As shown on Figure 1-1, Construction Battalion Center (CBC) Gulfport is located in the city of Gulfport, in Harrison County, in the southeastern corner of the State of Mississippi. CBC Gulfport supports four Naval Mobile Construction Battalions and serves as the focal point for deployment of Naval Construction Force (NCF) personnel for the Atlantic Fleet battalions.

The location of Site 4 is shown in Figure 1-2. It is an inactive fill site where the club house, the golf course practice putting green, number nine green, and number one tee areas are currently located. An estimated 16,000 tons of solid waste (as currently defined by the Resource Conservation and Recovery Act (RCRA)) were disposed of at Site 4 by trench-and-fill operations from 1966 to 1972. Site records establish that other on-base areas received hazardous wastes (as currently defined by the implementing regulations of RCRA) or constituents derived from hazardous wastes during normal site operations. However, available records neither establish nor exclude the possibility that hazardous wastes or constituents derived from hazardous wastes may also have been disposed of at Site 4 during this time period by trench-and-fill operations. Ten feet of fill was reportedly placed over the site waste. A canal runs across the site from the southwest corner toward the north.

MK performed a detailed geophysical investigation at Site 4 to evaluate the subsurface anomalies [MK, 1995]. The results of geophysical investigation indicated the presence of buried metallic materials at the site.

ABB Environmental Services (ABB-ES) collected two seep samples along the east bank of the canal as part of the Phase 1 sampling effort [ABB-ES, 1997]. Laboratory analyses of the samples determined that dioxin and furans were present in the seeps and 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) was detected at 14.1 parts per quadrillion (ppq) in one of two samples. The presence of TCDD and pentachloro-dibenzodioxin (PeCDD) in the seeps indicated that herbicide orange (HO) as the potential source of dioxin and furans [ABB-ES, 1997]. However, no analyses for 2,4,5-trichlorophenoxyacetic acid and 2,4-dichlorophenoxyacetic acid, the principal components of HO, were performed.

1.2 OBJECTIVES

This Work Plan provides a brief description for constructing temporary filtration systems of the seeps. The main objective of the seep filtration is to control migration of dioxin and furans through the seeps into the canal which flows to off-site waterways.

The current plan is a temporary measure to control possible off-site migration of dioxin until ongoing site investigations are completed and a remedial action can be performed. This temporary measure has been initiated as a proactive approach by SOUTHNAVFACENGCOM on the advice of Mississippi Department of Environmental Quality (MDEQ).

1.3 SITE DESCRIPTION

The locations of two seeps along the bank of the canal are shown on Figure 1-2. The quantity of water flowing through the seeps is expected to vary with precipitation and the use of sprinklers for watering the golf course.

The condition of Seep A as observed during a site visit on November 5, 1997, is shown on Figure 1-3. The seep was below the wooden bridge and had scoured a portion of the bridge abutment. The seep was about two inches in diameter and had a continuous stream of flowing water. The flow rate was estimated at less than one-quarter of a gallon per minute (gpm).

Seep B is an area of approximately 60 x 10 feet, located near a fairway. During the site visit, the area was wet but no flow of water was observed. The configuration of Seep B is shown on Figure 1-4.

1.4 WORK PLAN ORGANIZATION

This Work Plan is organized into eight sections and four appendices. Section 2.0 provides a summary of the regulatory framework which governs the actions at the site. The responsibilities of key personnel involved with the work are presented in Section 3.0. Section 4.0 describes the work approach that will be employed at the site. Section 5.0 specifies the quality control requirements for project execution. A proposed work implementation schedule is presented in Section 7.0. A list of reference documents is provided in Section 8.0.

Additional implementation details are provided in the following appendices:

- Appendix A: The Site Safety and Health Plan (SSHP) describes safety and health requirements for performing the work
- Appendix B: Quality Control Documentation, includes Testing Plan and Log and Field Inspection Checklists required for successful implementation of the work
- Appendix C: Environmental Protection Plan, describes the methods that will be used to protect the environment
- Appendix D: Waste Management Plan, describes the methods to manage the various waste streams generated during the work

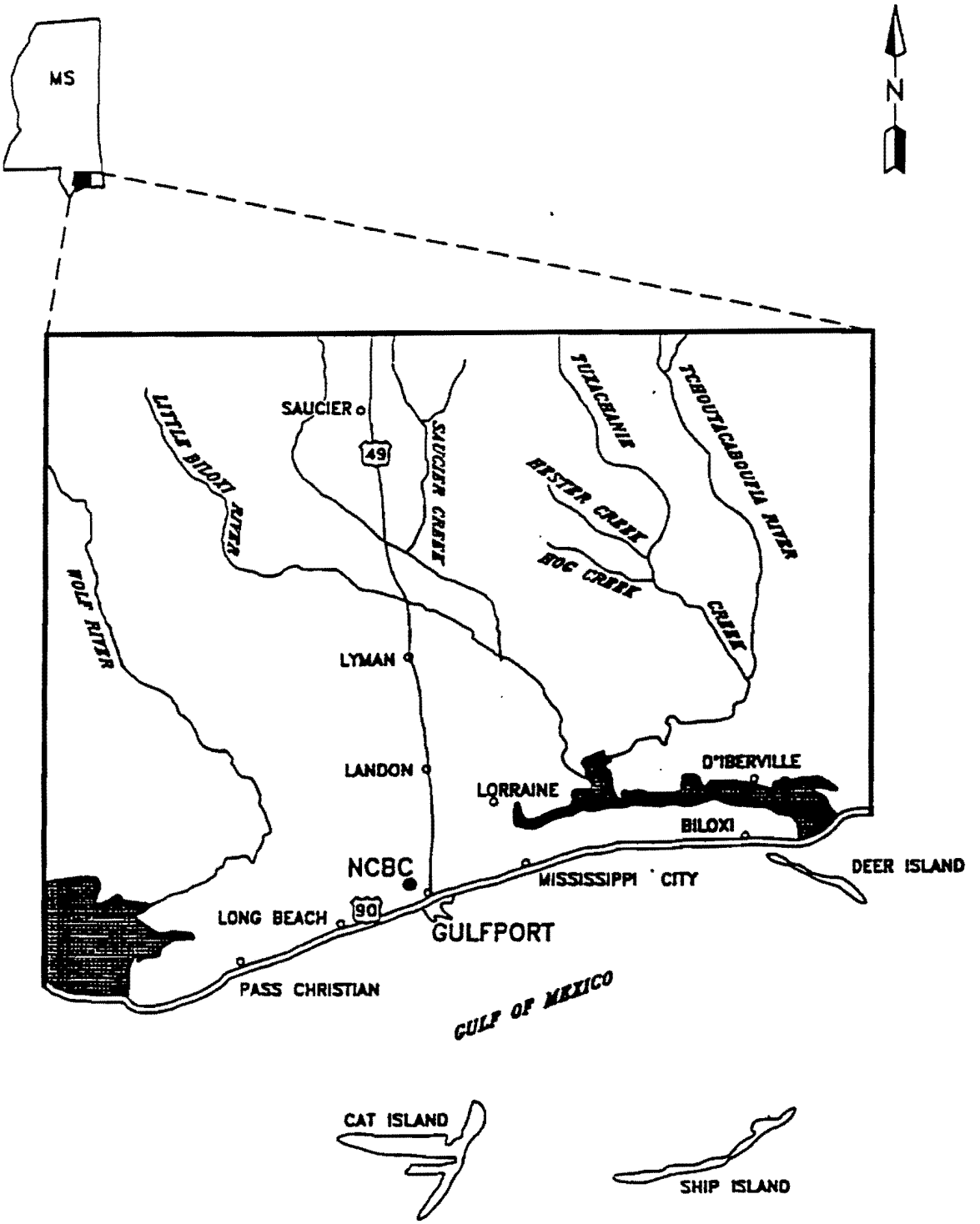

FIGURE 1-1
SITE LOCATION MAP

MORRISON KNUDSEN CORPORATION
1500 WEST 3RD STREET
CLEVELAND, OHIO 44113-1406
PHONE: (216) 523-5600 FAX: (216) 523-5201

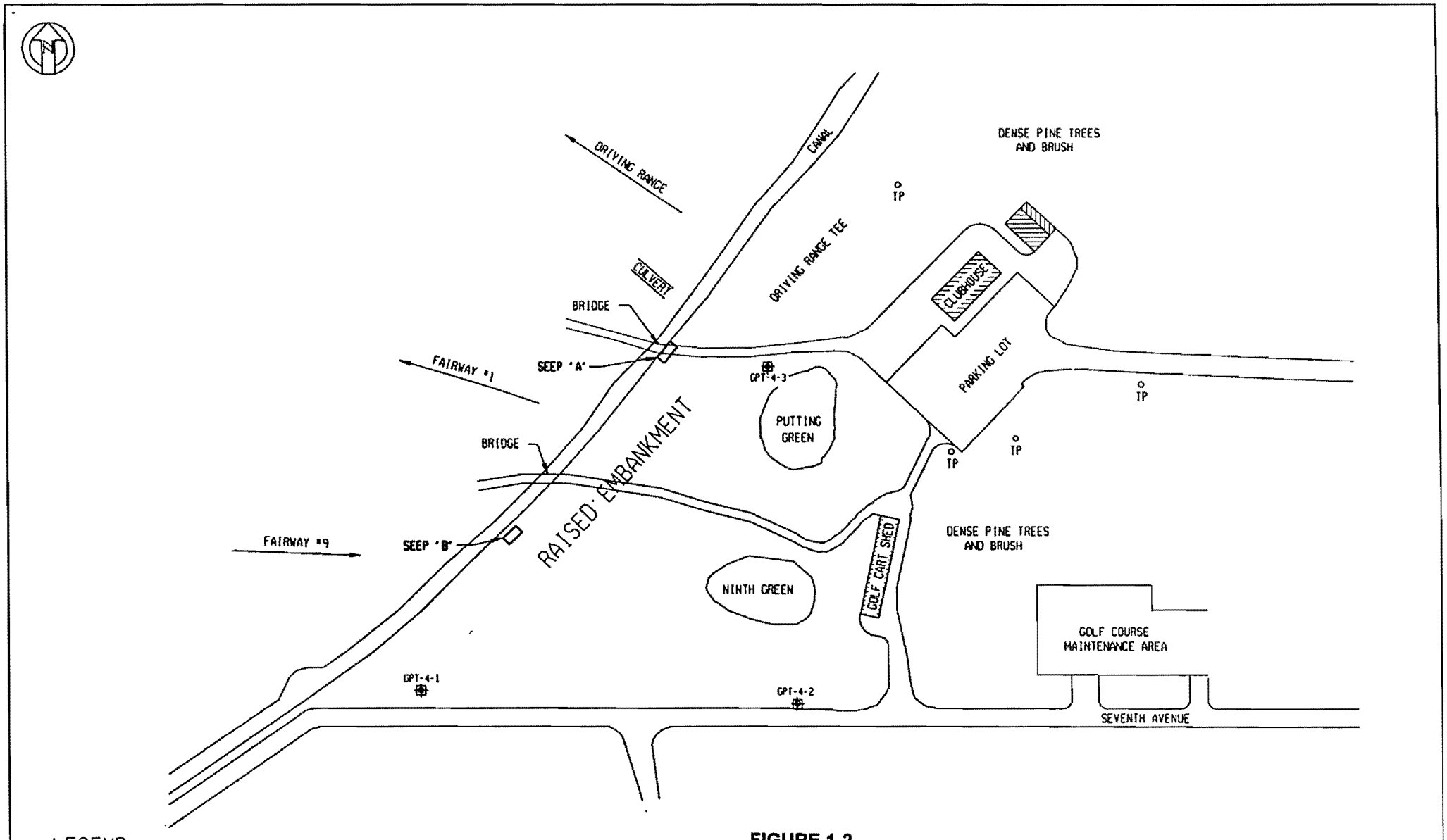

FIGURE 1-2
SEEP LOCATION MAP

MORRISON KNUDSEN CORPORATION
1500 WEST 3RD STREET
CLEVELAND, OHIO 44113-1406
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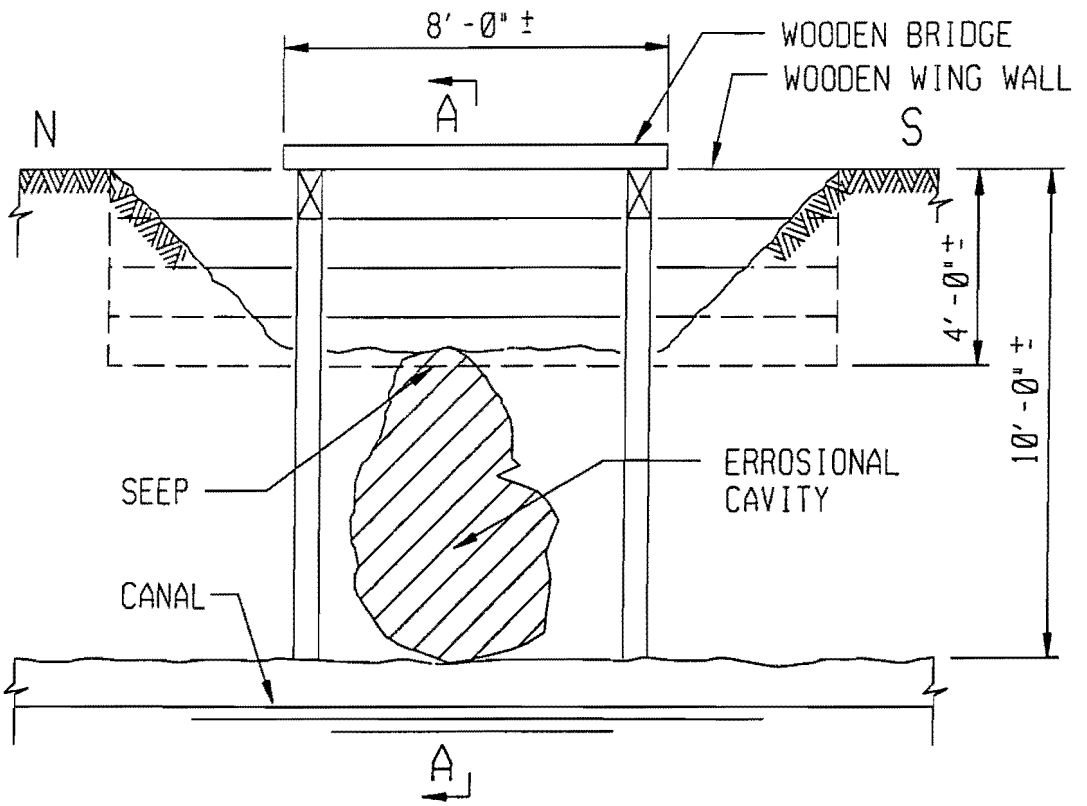
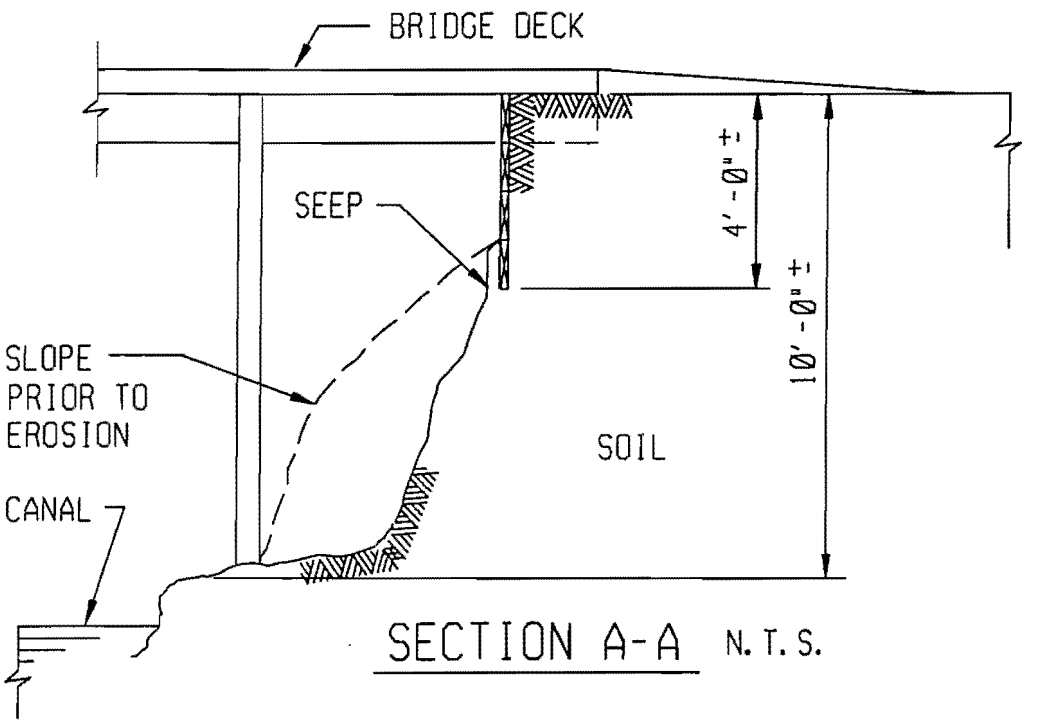


ELEVATION LOOKING EAST N.T.S.



SECTION A-A N.T.S.

FIGURE 1-3
EXISTING CONDITION - SEEP A

MORRISON KNUDSEN CORPORATION
1500 WEST 3RD STREET
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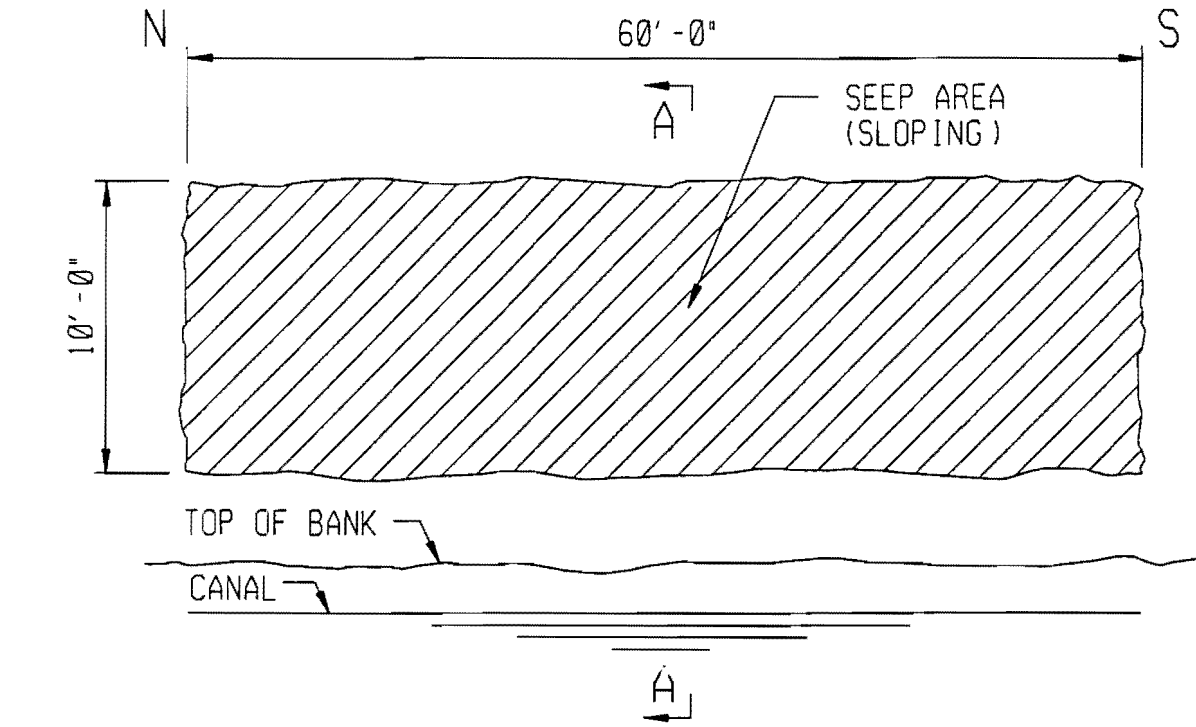

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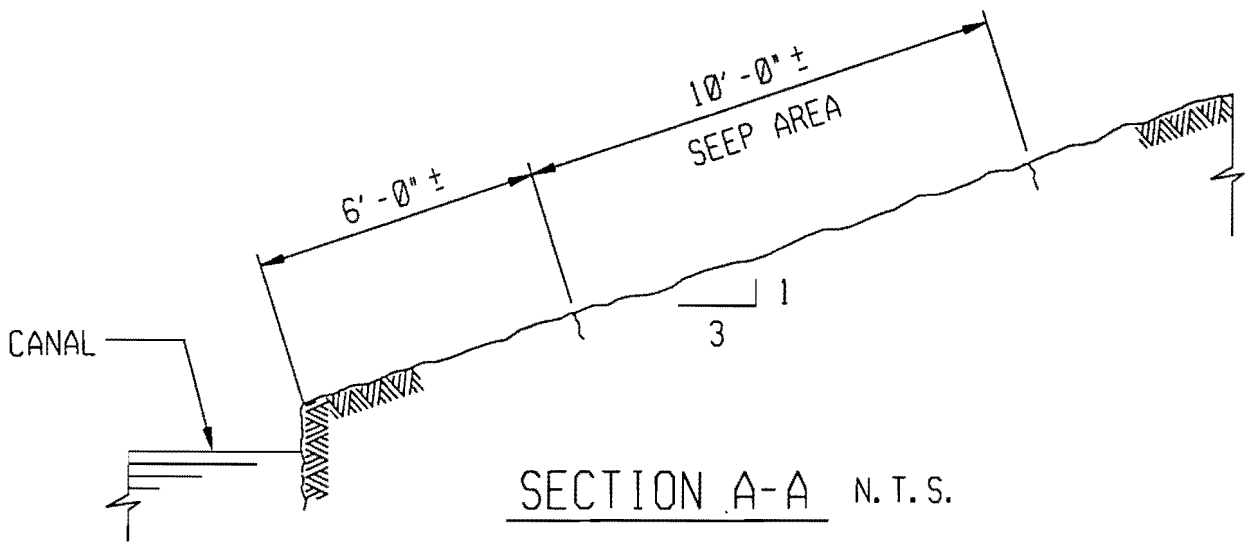

SECTION A-A N.T.S.

FIGURE 1-4
EXISTING CONDITION - SEEP B

MORRISON KNUDSEN CORPORATION
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2.0
ENVIRONMENTAL COMPLIANCE

2.1 REGULATORY COMPLIANCE

Available data established that dioxins and furans are currently present in site soils, sediments, and waters. However, site knowledge cannot prove or disprove that hazardous constituents derived from RCRA regulated hazardous wastes are present at Site 4. The measured TCDD concentration of 14.1 ppq at the site may be compared to the following information:

- Various types of industrial processes have resulted in widespread dioxin impacts to the environment. Identified sources of dioxin include not only the chlorophenol precursors of HO, but also paper bleaching and incomplete incineration [Alcock and Jones, 1996]. Also, analyses of dusts from room air and furnace filters yielded concentrations of TCDD up to 5,300 ppq and 9,200 ppq, respectively [Berry et al 1993].

- A Maximum Contaminant Level (MCL) of 30 ppq has been established for TCDD per Safe Drinking Water Act (SDWA).

- The state of Mississippi has an ambient water quality discharge criteria for TCDD at 1.0 ppq.

A regulatory review for the seep filtration work was performed. Based on available site information, the regulatory compliance requirements are discussed below.

- The materials expected to be processed during this project do not necessarily contain hazardous constituents derived from hazardous wastes, and so are not definitively regulated as either listed or characteristic hazardous wastes under Mississippi's Administrative Code, Department of Environmental Quality (MAC DEQ), 40 Codes of Federal Regulations (CFR) 261 and 262. Confirmation of this tentative classification can be made upon completion of the site characterization, and will depend upon observations of the principal components of HO as well as the concentrations of dioxins and furans in background materials.

- Regulated pesticides as defined in Mississippi's Administrative Code, Department of Agriculture and Commerce, Bureau of Plant Industry, Rules 1 through 5, are not present.

- A discharge permit for waters derived from seeps will be required under MAC DEQ's Waste Water Regulations for National Pollution Discharge Elimination System (NPDES) Permits, Underground Injection Control (UIC) Permits, State Permits, Water Quality Board Effluent Limitations and Water Quality Certifications. Prior to initiation of on-site remedial activities, either a permit must be obtained from Mississippi Department of Environmental Quality (MDEQ) or alternatively a permit waiver for this passive treatment system must be obtained.

- If required by MDEQ, analyses of effluent may be required to confirm that resultant discharges are less than MAC DEQ's Water Quality Criteria for Intrastate, Interstate, and the Coastal Waters Section III Appendix A.

- The remedial activities described in this workplan are not likely to result in any atmospheric discharges of dioxins or furans which would require either notification of

permitting under the Clean Air Act.

- Decontamination water, soils, and sediments are classifiable as non-hazardous wastes. Management on-site will be consistent with Mississippi's non-hazardous waste management standards until additional analytical is received to indicate that a hazardous waste classification is appropriate.

- Soils and aqueous wastes generated during this response will be characterized and disposed of to meet Mississippi's requirements as found in MAC DEQ Hazardous Waste Management Regulations Part 260, 261, and 262 MAC DEQ Non-hazardous Waste Management Regulations.

In addition to the above requirements, all work performed will comply with the following regulatory codes for safety and health:

- 29 CFR 1910.120, "Hazardous waste operations and emergency response"

- 29 CFR 1926, "Safety and health regulations for construction"

2.2 PERMITS, APPROVALS, AND NOTIFICATIONS

The seep filtration is intended to be a temporary solution addressing concerns of dioxin migration to the canal. Prior to commencement of construction, SOUTHNAVFACENGCOM will obtain a waiver of discharge permit requirements from MDEQ. A permit waiver has been requested from MDEQ. The permit waiver will be similar to that provided for construction of silt traps along various ditches at CBC Gulfport.

3.0
PROJECT ORGANIZATION

Table 3-1 summarizes the key parties involved with the work activities covered by this Work Plan and their responsibilities.

TABLE 3-1
PROJECT RESPONSIBILITIES

Team Member(s)	Responsibilities
SOUTHNAVFACENGCOM	Overview of project execution and coordination between MK, Gulfport site and regulatory agencies.
Navy Resident Officer in-Charge of Construction (ROICC)	SOUTHNAVFACENGCOM's on-site representative who is the liaison between Gulfport personnel and the MK Project Manager. Also acting as the Navy Technical Representative.
Program Management Office (PMO)	Overall responsibility for all cleanup measures at all sites in the Southern Division of the Naval Facilities Engineering Command under Contract No. N62467-93-D-1106. The PMO is the point of contact for SOUTHNAVFACENGCOM.
Project Manager (PM)	Overall responsibility for implementing this Work Plan and all other project activities. The Project Manager will control all on-site forces to ensure completion of project tasks. • Provides single point of contact for liaison • Coordinates the project resources to ensure compliance with the appropriate plans, procedures, and regulatory requirements • Oversees all personnel on-site and coordinates with the PMO
Project Engineer	• Responsible for development of this Work Plan and Statement of Work for Subcontractors • Evaluate Subcontractor proposals • Participates in pre-construction meetings and post-construction inspections • Responsible for developing the Completion Report

TABLE 3-1 (Continued) PROJECT RESPONSIBILITIES	
Team Member(s)	**Responsibilities**
Site Safety and Health Officer (SSHO)	Reports to the PMO. Implements and ensures compliance with the SSHP. Tracks and reports on safety-related matters. • Responsible for the control and elimination of existing and potential industrial hazards • Implements and executes personnel monitoring program to ensure proper monitoring of internal and external exposures. • Provides site-specific training to personnel, as required by the SSHP • Tracks all personnel training requirements, survey data, certifications, and records to ensure compliance with plans and regulations • Assists in developing and implementing the SSHP • Reviews and approves Subcontractor Safety and Health Plans and Programs, and conducts audits as appropriate to ensure compliance • Reviews and approves work permits for appropriate industrial hygiene and safety controls • Provides monitoring to ensure the protection of project personnel, the public, and the environment • Maintains an inventory of industrial hygiene and safety supplies as appropriate • Maintains monitoring equipment and calibration records • Stops work when necessary to ensure the safety of personnel and to prevent damage to the environment

TABLE 3-1 (Continued) PROJECT RESPONSIBILITIES	
Team Member(s)	**Responsibilities**
Site Quality Control Supervisor (SQCS)	Reports to the PMO and has primary responsibility for verifying a consistently high level of quality for the project. Implements and ensures compliance with the Quality Control Plan and other planning documents, as applicable. • Reviews and checks all documents, reports, and testing results • Reports all inspection/test results to PMO and others as required • Coordinates with procurement, engineering, and cost/schedule departments • Observes all field activities to ensure compliance with this Work Plan and completes Field Inspection Checklists • Keeps minutes of the periodic quality meetings • Performs required tests and implements the three phases of quality control: Preparatory, Initial, and Follow-up inspections • Ensures tracking and resolution of nonconformance/rework items • Stops work when work does not comply with requirements established contractually • Supervises the Quality staff, as applicable • Assists the Program Quality Manager in the submittal process • Maintains the Testing Plan and Log • Documents results of inspection and testing activities on the Contractor Quality Control Report • Ensures that sample custody requirements are maintained

4.0
PROJECT EXECUTION

4.1 WORK APPROACH

This section describes the work approach that will be employed during construction of the seep filtration systems. The work approach addresses the control of work process, work elements, and regulatory and reporting requirements associated with the work activities. The information provided in this Work Plan is a summary of the proposed work.

The following two fundamental properties of dioxin will be utilized for filtration of the seeps:

- Though dioxin is not soluble in water, it is transported in surface water through sediments. Therefore, dioxin will settle along with sediments if surface water is filtered.

- Dioxin has high affinity for carbon. If dioxin-containing water is allowed to flow through a bed of activated carbon, dioxin will be adsorbed by carbon.

The engineered approach is to construct a horseshoe shaped earthen embankment to provide a settlement basin. The upstream side of the embankment will be filled with activated carbon to trap dioxin in the area. The filtered seep water will either overflow the earthen embankment or flow through pipes placed through the embankment.

The above filtration system is a temporary solution that will be constructed immediately to control possible dioxin migration into the canal. Due to the immediate need to control possible migration of contaminants and temporary nature of this filtration system, no analysis was performed to determine the duration before a breakthrough will occur. The effective duration prior to breakthrough will depend on a number of factors including the concentrations of dioxin and other volatile organics and the quantity of water flowing through the seeps.

Other remedial systems were considered but were not selected for this site. These remedial systems included sheet piling and a slurry wall. Some disadvantages of these systems over the filtration system are provided below.

- Effectiveness - The flow cannot be stopped entirely by installing a limited length of sheet piling or slurry wall along the canal. Seeps will most likely appear at different locations beyond the limits of the sheet pile or slurry wall.

- Additional systems - Installation of sheet piling or slurry will result in collection of ground-water behind the piling or the wall. A pump and treat system will be required to collect and dispose of the ground water.

- Compatibility with final remedial action - Sheet piling and slurry wall are relatively long-term solutions which may not be compatible with the final remedial action.

- Cost - Sheet piling and slurry wall construction will be considerably more expensive than the filtration system.

- Impact on ground water - The installation of sheet piling or slurry wall will affect ground-water level and flow at the site. Any ongoing ground-water investigations will be influenced by a barrier-type wall.

4.2 DEFINABLE FEATURES OF WORK

The general sequence of the work can be broken down into definable features of work (DFOWs). DFOWs and the Three Phases of Control will be used to maintain Quality Control over the work at the site. The DFOWs, shown below and described briefly in the following sections, are the basic elements associated with the work activities:

- Site preparatory work
- Decontamination
- Filtration systems
- Sampling and analysis
- Site restoration
- Waste management
- Regulatory compliance
- Reports

4.2.1 Site Preparatory Work

Site preparatory work is the first physical activity at the site and involves the staging of material and equipment and demarcation of work zones. Coordination, scheduling of work activities and a pre-construction conference will also be performed during the site preparation.

4.2.2 Decontamination

Field equipment will be inspected prior to use to ensure that it has been decontaminated. A temporary decontamination station will be constructed near the site to decontaminate construction and field equipment that have come into contact with surficial soil or excavated material. The exposed surfaces of the construction and field equipment will be decontaminated using high-pressure and low-volume water or steam. The decontamination liquid will be collected and sampled for laboratory analysis prior to disposal.

4.2.3 Filtration Systems

Since the location and configuration of the two seeps are different, the seeps will be constructed to meet the following additional requirements.

- Seep A is under the bridge with potential for scouring. To minimize scouring, gabions (wire baskets filled with crushed rocks) will be placed over a layer of filter fabric.

- Seep B is on the golf course fairway. To allow golf to be played through the area, the seep water will be directed to the canal using underground piping and the existing top soil and grass will be reused as part of site restoration.

As shown in Figures 4-1 and 4-2, the seep water will first encounter the activated carbon bed. Details of the filtration systems for seeps A and B are provided below.

4.2.3.1 Filtration System for Seep A

Figure 4-1 shows the filtration system for Seep A. Crushed rock will be placed and compacted in areas where the soil is soft and wet to provide a foundation for the earthen embankment. The earthen embankment will be constructed of soil imported from a clean off-site source. Soil will be compacted during placement in loose lifts of less than six inches. A one-inch diameter polyvinyl chloride (PVC) pipe will be inserted through the embankment to act as a sampling port for the seep. The PVC pipe will be screened and capped at one end and filled with granular activated carbon. Granular activated carbon will

be placed behind the embankment until the scoured area is filled Filter fabric will be placed on the granular activated carbon bed and the soil embankment. Gabions will be placed on the filter fabric to prevent erosion and scouring.

4.2.3.2 Filtration System for Seep B

Grass and top soil from the area will be sodded and stockpiled on visqueen sheeting. Nine two-inch diameter PVC pipes will be placed underground as shown in Figure 4-2. The PVC pipes will be screened and capped at one end and filled with granular activated carbon. Surficial soil will be pushed and compacted in loose lifts of less than six inches to construct an earthen embankment. A layer of granular activated carbon will be placed over the excavated area. Filter fabric will be placed on the granular activated carbon bed. The area will be restored using sodded top soil and grass that was previously removed.

4.2.4 Sampling and Analysis

As discussed in Section 4.2.2, a sample will be collected from the decontamination water and analyzed prior to disposal. Approximately, two weeks after the construction of the filtration systems, a sample will be collected from each seep and analyzed for dioxin and furans. Sampling parameters are provided in Table 4-1. In addition to the post construction sampling event, a sample will be collected from each seep on a quarterly basis and analyzed for dioxin and furans. Quarterly sampling will depend on seepage which may not occur in dry seasons.

4.2.5 Site Restoration

The construction area around Seep A will be covered with gabions to prevent further erosion of the bridge embankment. The construction area around Seep B will be restored using sodded grass previously stockpiled.

4.2.6 Waste Management

A Waste Management Plan, included as Appendix D, provides a list of wastes expected to be generated and a description of how they will be managed.

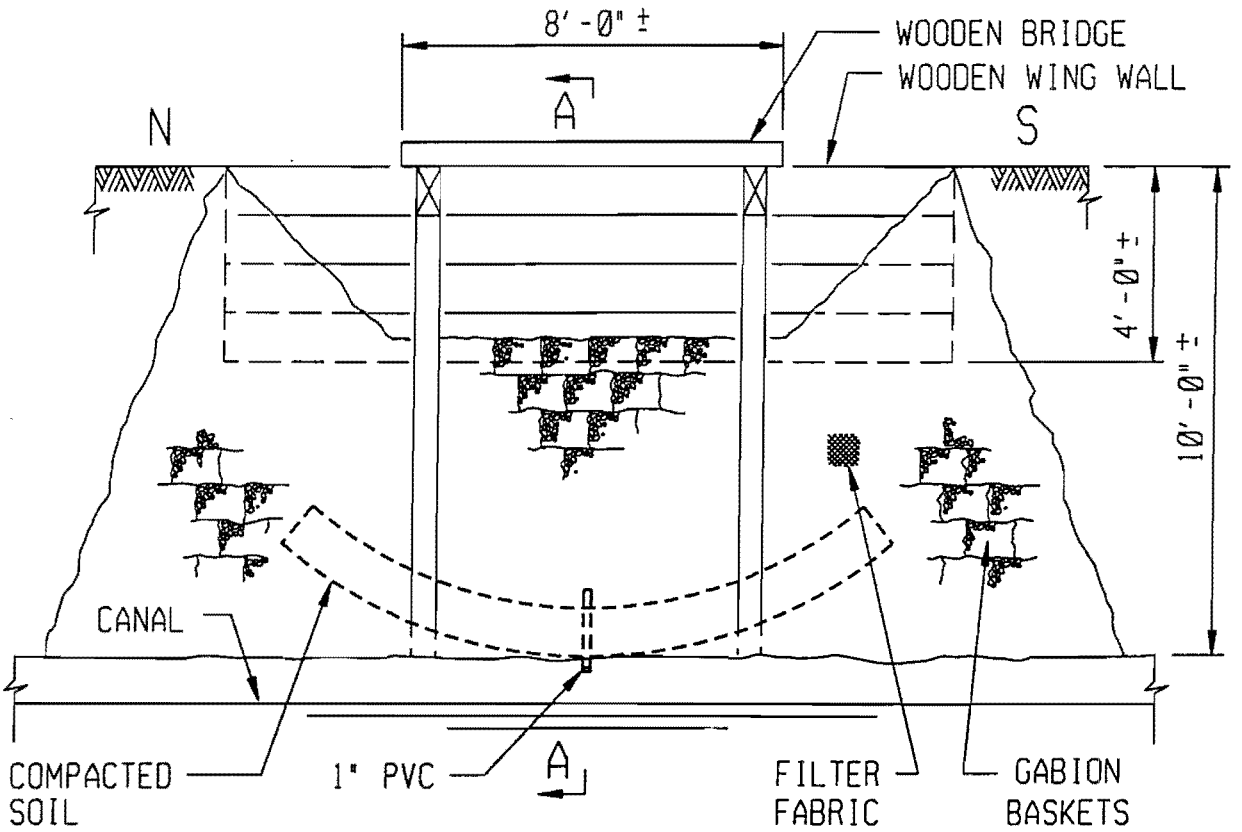
4.2.7 Regulatory Compliance

To assure compliance with federal, state and local regulations, a Quality Control checklist has been developed to verify that the applicable regulations have been addressed. The Regulatory Compliance checklist (RG-01), included in Appendix B, requires the SQCS to review other specific checklists and verify that regulatory requirements have been met prior to proceeding with a DFOW.

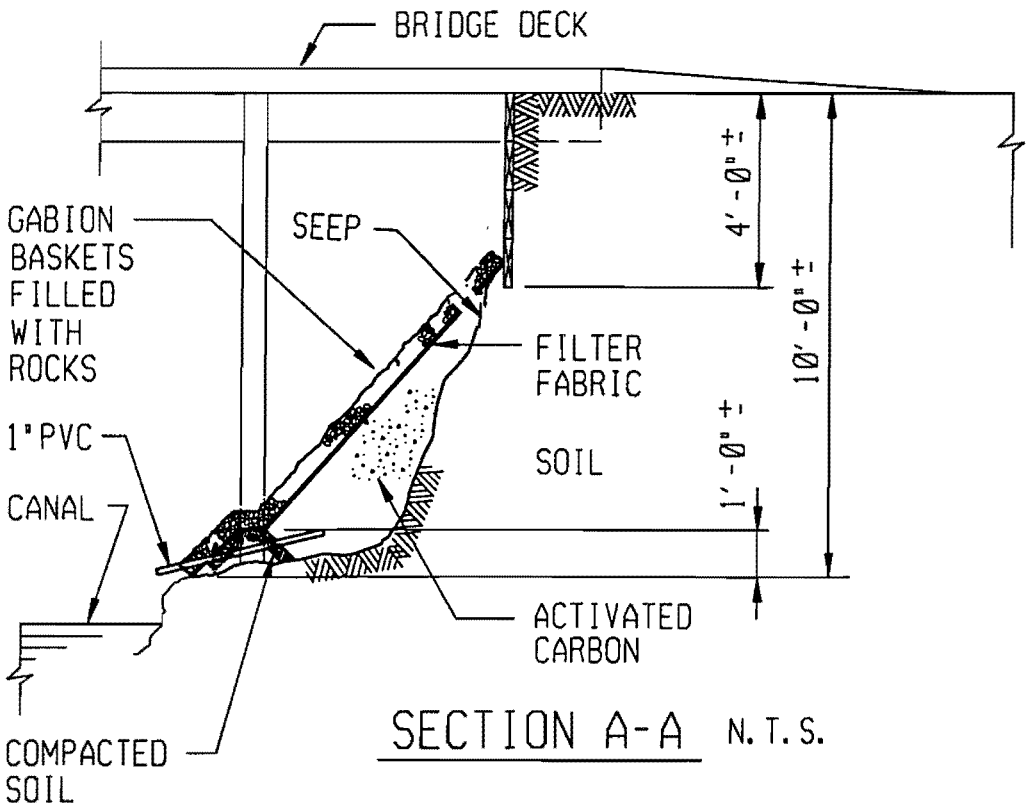
4.2.8 Reports

MK will generate and submit a Completion Report to SOUTHNAVFACENGCOM after all site activities are completed. The report will include:

- A summary of construction activities completed
- A summary of sampling and analyses activities
- A summary of wastes generated, managed and disposed
- Photographic documentation of site conditions before, during, and after work activities
- As-built record drawings
- A discussion of any deviations from the Work Plan with results
- Final acceptance of work activities by the ROICC
- Project conclusions



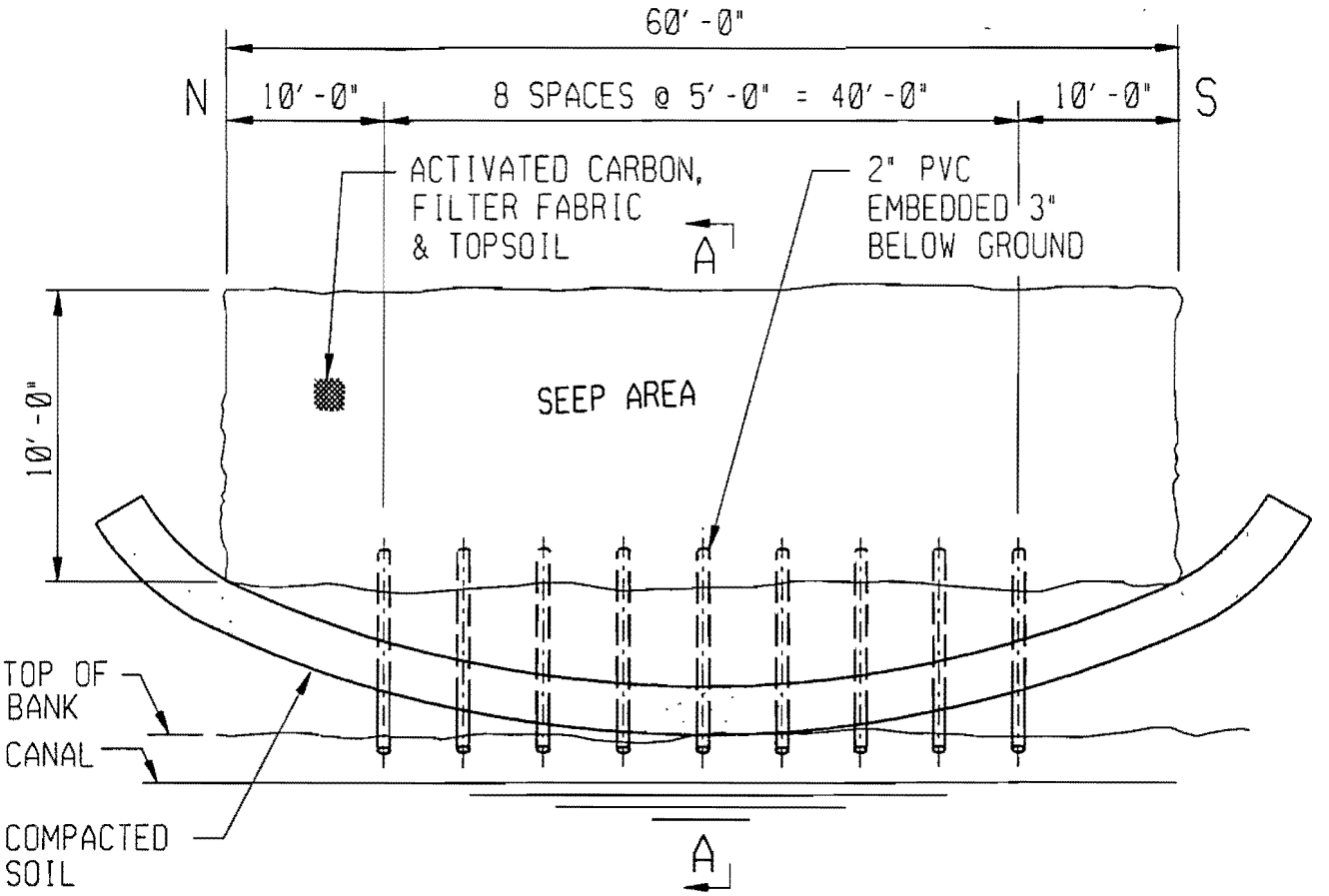
ELEVATION LOOKING EAST N.T.S.



SECTION A-A N.T.S.

FIGURE 4-1
FILTRATION SYSTEM - SEEP A

MORRISON KNUDSEN CORPORATION
1500 WEST 3RD STREET
CLEVELAND, OHIO 44113-1406
PHONE: (216) 523-5600 FAX: (216) 523-5201



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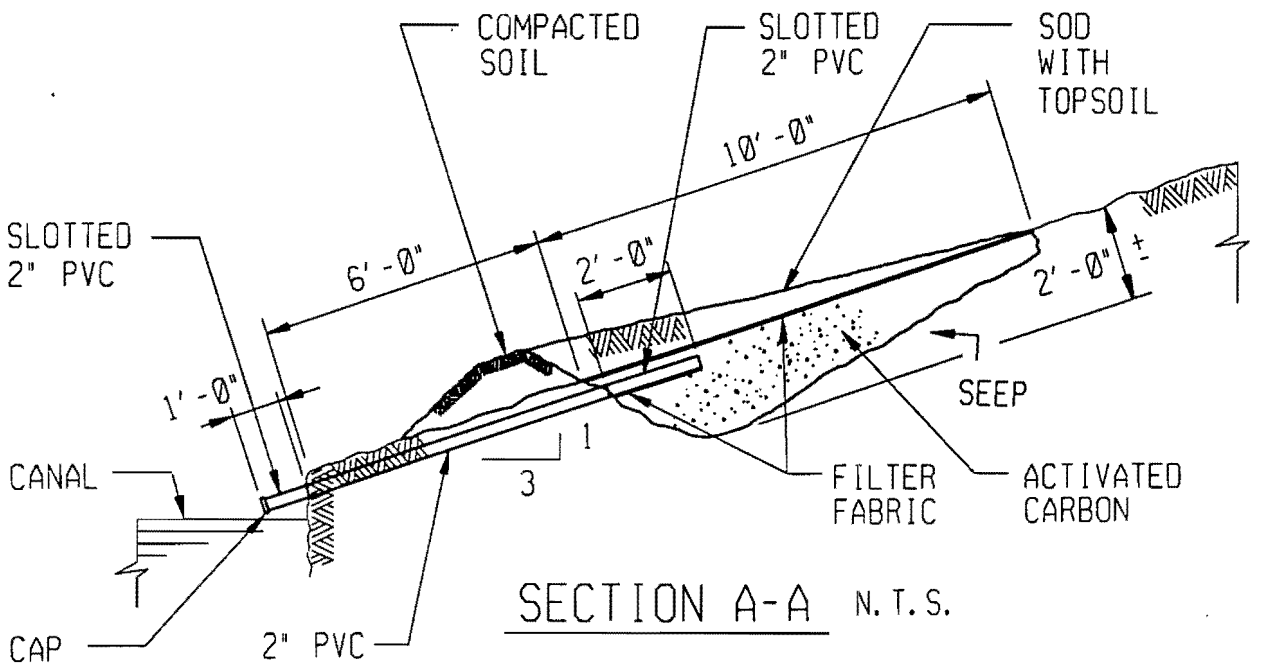


SECTION A-A N.T.S.

FIGURE 4-2
FILTRATION SYSTEM - SEEP B

MORRISON KNUDSEN CORPORATION
1500 WEST 3RD STREET
CLEVELAND, OHIO 44113-1406
PHONE: (216) 523-5600 FAX: (216) 523-5201

TABLE 4-1
SAMPLING PARAMETERS

Analyte	Analytical Method	Sample Container	Preservation	Holding Time	Estimated Quantity
Decontamination Water					
Volatile Organics	SW-846 8260	2 40-mL, glass vials	HCl to pH<2, Ice to 4°C	14 days	1
Dioxin/furans	SW-846 8290	2 1-liter amber glass jars	Ice to 4°C	Extract in 7 days	1
Pesticides	SW-846 8081	2 1-liter amber glass jars	Ice to 4°C	Extract in 7 days	1
Herbicides	SW-846 8151	2 1-liter amber glass jars	Ice to 4°C	Extract in 7 days	1
Semivolatile Organic Compounds (SVOC)	SW-846 8270	2 1-liter amber glass jars	Ice to 4°C	Extract in 7 days	1
RCRA Metals	6010[1], 7470A	1 500-mL plastic (metals)	H_2SO_4 to pH<2, Ice to 4°C	180 days	1
		1 500-mL plastic (mercury)	H_2SO_4 to pH<2, Ice to 4°C	28 days	1
Ignitability	1010	1 1-liter plastic	None	ASAP[2]	1
Corrosivity-pH	9040B	1 1-liter plastic	Ice to 4°C	ASAP[2]	1
Sulfide Reactivity	SW-846 Methods: Volume C, Section 7.3.4.1	1 1-liter plastic	Ice to 4°C	7 days	1
Cyanide Reactivity	SW-846 Methods: Volume C, Section 7.3.3.2	1 1-liter plastic	Ice to 4°C	14 days	1
Seep Water					
Dioxin/furans	SW-846 8290	2 1-liter amber glass jars	Ice to 4°C	Extract in 7 days	2
Trip Blank with Decontamination Samples					
Volatile Organics	SW-846 8260	2 40-mL, glass vials	HCl to pH<2, Ice to 4°C	14 days	1

Note:
1. Graphite furnace may be used to meet reporting limits for metals, if necessary.
2. "ASAP" indicates that the sample must be analyzed as soon as possible.

5.0
QUALITY CONTROL

5.1 QUALITY CONTROL REQUIREMENTS

The Quality Control requirements, specified in this section, are to be used in conjunction with the requirements of the Delivery Order Execution Quality Control Plan previously approved by SOUTHNAVFACENGCOM [MK, 1996a].

5.2 INSPECTION SYSTEM

MK will use the DFOWs and the Three Phases of Control to ensure that work activities at the site achieve and maintain a consistently high level of quality.

At each phase -- Preparatory, Initial and Follow-Up -- quality control verification activities may be supplemented by the performance of detailed inspections of a particular activity. Field Inspection Checklists, included in Appendix B, will be used to assure a thorough verification of the work process. When utilized, the completed Field Inspection Checklist is attached to the combined *Contractor Production Report/ Contractor Quality Control Report (Form 01400-1),* which is completed on a daily basis

5.3 TESTING PLAN AND LOG

A Testing Plan and Log has been prepared and is included in Appendix B of this Work Plan. The Testing Plan and Log delineates the required tests and inspections applicable to a definable feature, as well as the inspection checklist or governing standard to be used in the performance of the inspection. The Testing Plan and Log will be utilized in the field to record the status of sampling and inspections performed. The SQCS will attach a copy of the updated Testing Plan and Log to the last daily Contractor Quality Control Report of each week.

5.4 REQUIRED QUALITY CONTROL DOCUMENTATION

Table 5-1 cross references each DFOW as it relates to applicable Field Inspection Checklists and Activity Hazard Analysis (AHA). Field Inspection Checklists that are to be completed to support the work activities are included in Appendix B.

5.5 FINAL SITE INSPECTION

Following substantial completion of installation and construction activities, a final inspection will be performed by the ROICC and MK SQCS. If any work item is not in compliance with this Work Plan, a punch list will be generated by the MK SQCS. All punch list items will be corrected to the requirements of the Work Plan. Upon acceptance of the work activities, a Certificate of Satisfactory Completion will be signed by all parties involved in the final inspection. A typical certificate of satisfactory completion is included in Appendix B.

TABLE 5-1
DFOW CROSS REFERENCE

DFOW	Work Plan Section	Activity Hazard Analysis (Appendix A)	Field Inspection Checklist(s) (Appendix B)
Site Preparatory Work	4.2.1	1 of 6	SP-01
Decontamination	4.2.2	2 of 6	DE-01
Filtration Systems	4.2.3	3 of 6	FS-01
Sampling and Analysis	4.2.4	4 of 6	SA-01
Site Restoration	4.2.5	5 of 6	SR-01
Waste Management	4.2.6	6 of 6	WM-01
Regulatory Compliance	4.2.7	N/A	RG-01
Reports	4.2.8	N/A	N/A

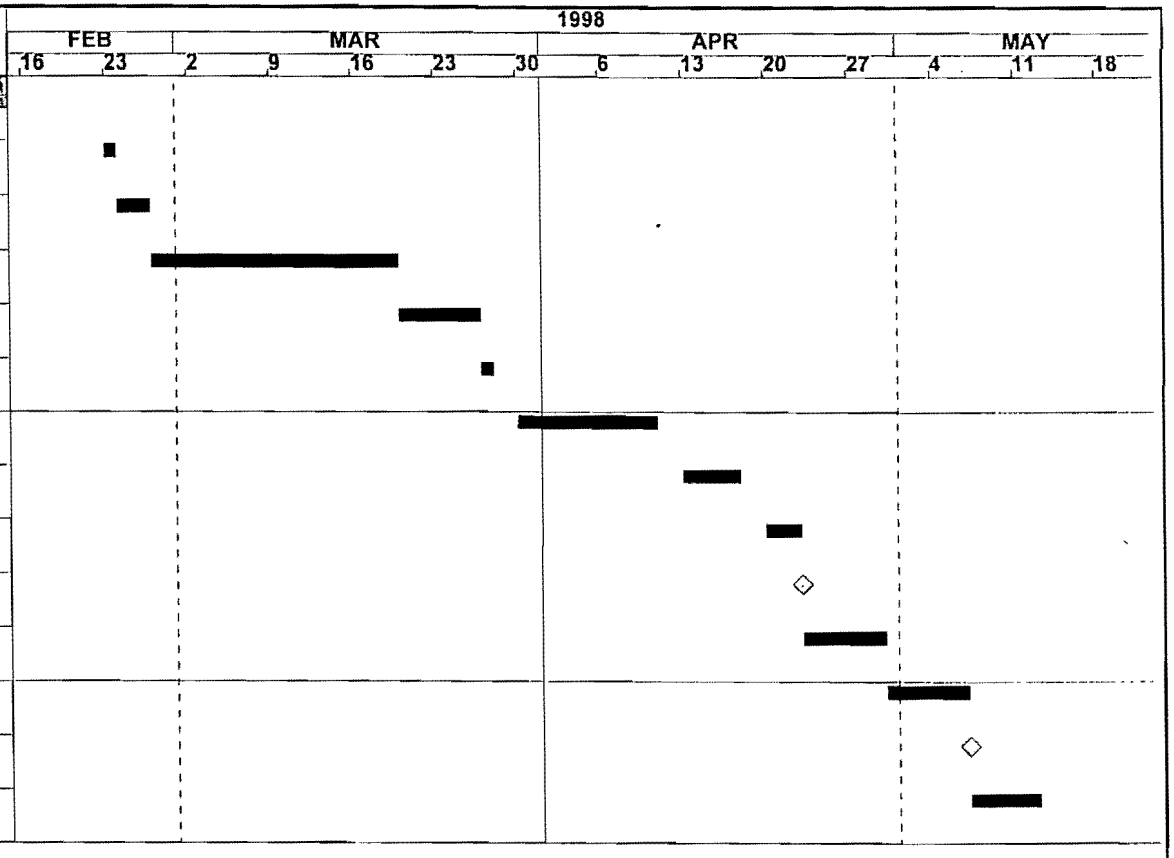
Note:
N/A = Not applicable

6.0
SCHEDULE

The work will be performed in accordance with the schedule shown in the following page. Tentative milestones are listed below:

Permit Waiver from MDEQ	02/17/98
Pre-construction Meeting	02/23/98
Mobilization and Field Work Start	02/24/98
Demobilization	03/27/98

Activity ID	Activity Description	Orig Dur	%	Early Start	Early Finish
DO#0002 CBC GULFPORT, MISSISSIPPI					
SOW#009, Phase 30					
DD3010	Preconstruction Meeting	1	0	23FEB98	23FEB98
DD3013	Mobilization	3	0	24FEB98	26FEB98
DD3016	Remedial Construction	15	0	27FEB98	19MAR98
DD3019	Site Restoration	5	0	20MAR98	26MAR98
DD3022	Demobilization	1	0	27MAR98	27MAR98
DD3090	Prepare Completion Report Draft/Iss.Peer Review	10	0	30MAR98	10APR98
DD3091	Completion Report Draft Peer Review	5	0	13APR98	17APR98
DD3092	Completion Report Draft Incorp. Peer Comments	3	0	20APR98	22APR98
DD3093	Completion Report Draft Issue to PMO	0	0		22APR98
DD3094	Completion Report Draft PMO Comments Received	5	0	23APR98	29APR98
DD3095	Completion Report Draft PMO Comments Incorp.	5	0	30APR98	06MAY98
DD3096	Completion Rep. Draft to PMO for Iss.to SOUTHDIV	0	0		06MAY98
DD3097	Completion Report Draft Issue to SOUTHDIV	4	0	07MAY98	12MAY98



Project Start 01OCT97
Project Finish 12MAY98
Data Date 22DEC97
Plot Date 23DEC97

Early Bar
Progress Bar
Critical Activity

4324.GLP3

SOUTHDIV ERAC PROGRAM - WO# 4324
CBC GULFPORT, MISSISSIPPI
DO#0002, SOW#009, SITE 4

Sheet 1 of 1

MORRISON KNUDSEN CORPORATION

Date	Revision	Checked	Approved

7.0
REFERENCES

MK, August 1995. *Geophysical Investigation of Sites 1, 4 and 5 at the Naval Construction Battalion Center (NCBC) Gulfport, Mississippi.* [MK, 1995]

ABB-ES, October 1997. *Phase 1 Summary Report for Onsite and Offsite Delineation Activities, Naval Construction Battalion Center (NCBC) Gulfport, Mississippi.* [ABB-ES, 1997]

Alcock, R. E. and Jones, K. C., 1996, *Dioxins in the Environment: a Review of Trend Data, Environmental Science and Technology 30, 3133-3143.* [Alcock and Jones, 1996]

Berry, R. M., Luthe, C. E. and Voss, R. H., 1993, *Ubiquitous Nature of Dioxins: a Comparison of the Dioxins Content of Common Everyday Materials with That of Pulps and Papers, Environmental Science and Technology 27, 1164-1168.* [Berry et al, 1993]

MK, 1996. *Delivery Order Execution Quality Control Plan.* [MK, 1996a]

MK, 1996. *MK General Safety and Health Plan.* [MK, 1996b]

U.S. Army Corps of Engineers', September 1996. *Safety and Health Requirements Manual, EM 385-1-1.* [ACOE,1996]

APPENDIX A

SITE SAFETY AND HEALTH PLAN

APPROVAL: William Simpanen **Date:** Jan 5 1998

MK PMO Health and Safety Manager

APPENDIX A
SITE SAFETY AND HEALTH PLAN

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1.0 INTRODUCTION

This Site Safety and Health Plan (SSHP) describes safety and health requirements for construction of temporary seep filtration at two locations at Site 4. This SSHP, together with the MK General Safety and Health Plan (GSHP) [MK, 1996b] is consistent with requirements of the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Site Regulations, 29 CFR 1910.120 and 29 CFR 1926.65 along with the U.S. Army Corps of Engineers' *Safety and Health Requirements Manual* EM 385-1-1 dated September 1996 [ACOE,1996]. This SSHP is applicable to all personnel who enter into work areas described in this SSHP and who are under MK or MK's Subcontractors' control.

1.1 CONTAMINANT CHARACTERISTICS

Previous laboratory analysis of seep samples determined that dioxin and furans were present in extremely low concentrations. Also, the presence of TCDD and PeCDD in the seeps indicated that HO as the potential source of dioxin and furans. Again, the concentrations were extremely low. MSDSs or other data sheets for potential contaminants will be available for review and use at the project site. Refer to Table A-1 for a summary on potential contaminants.

2.0 SAFETY AND HEALTH HAZARDS SUMMARY

Walking and working surfaces will be monitored for fall and slip hazards, and approved barriers and signs will be placed for pedestrian and vehicle safety. Heavy equipment will be inspected on a daily basis prior to use. Level D Personal Protective Equipment (PPE) is anticipated for the majority of the tasks with an upgrade to Modified Level D for decontamination and when potentially contaminated soil and groundwater is handled. Excavation activities are minimal. A review of the excavation area indicates no utility lines are expected to be encountered.

2.1 ACTIVITY HAZARDS ANALYSIS (AHA)

AHA's have been prepared for each anticipated task in accordance with EM 385-1-1, September 1996 [ACOE, 1996]. AHA's are in the form of worksheets contained in Attachment A of this Appendix. Each site activity will be reviewed by field supervision, namely the MK SSHO, MK Site Project Manager (PM), Subcontractor Job Supervisors(s)/SSHO and affected personnel prior to starting work, to determine if the prepared AHA adequately addresses the planned activity. If the prepared AHA requires revision or a new task is identified, additional AHA worksheets will be prepared as needed by the MK SSHO. The AHA worksheet will be redlined or a new AHA worksheet will be field prepared by the MK SSHO before the activity takes place. The Plan-Of-the-Day or Pre-Entry Briefing meeting is utilized to review the AHA and is conducted with all affected workers by the Subcontractor Job Supervisor.

2.2 UTILITIES LOCATES AND EXCAVATION SAFETY

Management of the excavation safety program for this project will be established during mobilization, communicated to all affected parties at the pre-construction meeting, and managed by the MK SSHO using guidelines established in MK Program Procedure PHSP 05.1. An excavation and trenching permit will be completed. No utility locates are necessary for this project.

2.3 GENERAL MOTOR VEHICLE, HAND AND POWER EQUIPMENT SAFETY

Refer to GSHP Section 2.5.8.

2.4 TRAFFIC AND WORK SITE CONTROL SAFETY

Approved barricades and signs will be placed around work areas in accordance with GSHP Section 2.5 9. Special attention to insuring worker, pedestrian and vehicle safety around work areas will be emphasized.

3.0 RESPONSIBILITIES AND AUTHORITIES SUMMARY

Ultimately, responsibility for the safety and health lies with the individual. All personnel must be cognizant of the hazards and the methods of reducing the risk of injury and illness. All personnel will comply with the rules and procedures set forth in this plan and will make project management aware of any conditions which may jeopardize the welfare of project workers and/or the general public. The specific personnel names and telephone numbers of responsible persons are presented in Table A-2 including directions to the nearest medical facility. Figure A-1 is the map to the nearest medical facility. Refer to the GSHP, Section 3.0, for a summary on responsibilities and authorities. Planned MK field staffing includes a PM, a SQCS, and a SSHO.

4.0 SAFETY TRAINING AND MEETING REQUIREMENTS SUMMARY

All regulatory and project specific training and meetings for this project are summarized in Table A-3.

5.0 MEDICAL PROGRAM SURVEILLANCE PROGRAM REQUIREMENTS

All project personnel who work within the exclusion zone for more than three days per month, or are required to use respiratory protection regardless of the time within the exclusion zone, will participate in a medical surveillance program in accordance with OSHA, 29 CFR 1910.120(f) and 29 CFR 1926.65(f). Requirements for this job include certification of current medical exam (physician's written opinion) and respirator-use clearance. Copies of these form(s) will be maintained on-site by the MK SSHO.

6.0 PERSONAL PROTECTIVE EQUIPMENT

Refer to Table 4 in the GSHP document for the definition of the basic levels (Level B, C, Modified D, and D) of PPE. Table A-4 in this document lists the minimum PPE level required for each task or operation. The MK SSHO is empowered with the authority to authorize the modification PPE levels based on professional judgement. Hearing protection devices will be used where necessary during heavy equipment operation. Safety vests will be worn by personnel working in the near vicinity of heavy equipment and/or traffic areas.

7.0 MONITORING AND SAMPLING

No air monitoring or sampling is anticipated for this project.

8.0 GENERAL SAFETY RULES AND PROCEDURES

Operations will be conducted in a safe manner consistent with the policies and procedures outlined in this SSHP. The number of personnel will be restricted to the minimum necessary to complete the required work as an administrative control to limit personnel exposures to potential site chemical and physical agents. All

project and subcontractor personnel assigned to this project are responsible for following this SSHP and its approved modifications, for using safe practices, and for wearing the PPE specified by the MK SSHO. Project personnel will report hazards and unsafe conditions and practices to the MK SSHO. All federal, state and local occupational health and safety regulations must be complied by project personnel. Violations of project procedures may include disciplinary measures up to and including termination.

8.1 RULES AND PROCEDURES

Refer to GSHP Section 8.2. Based on anticipated fire loading, only one 20-lb multi-purpose dry chemical fire extinguisher is necessary at the work site.

9.0 SITE CONTROL MEASURES

Prior to the commencement of field activities, Work Zones will be established by MK's Subcontractor with the approval of the MK SSHO as necessary to meet operational and safety objectives. These work zones will be depicted on Work Zone Maps that are field prepared by the Subcontractor to be posted by the Subcontractor Job Supervisor/SSHO near the entrance to the work area. In addition to the zones, these maps should show where applicable the following: assembly points; evacuation routes; location of first aid equipment, fire extinguisher, eye wash and spill containment equipment; and emergency communications equipment. One copy of the work zone maps and all revisions will be delivered to the MK SSHO for approval. After approval, a copy of the maps will be retained in Attachment B of the field master copy of this plan. Posted with the Work Zone Map will be the list of emergency phone numbers.

9.1 WORK ZONE CONTROLS

Before site operations begin, the Support Zone (SZ) MK site office and Subcontractor offices will be identified with signs. MK's Subcontractor will post signs at entrances to the Contamination Reduction Zone (CRZ) or the Exclusion Zone (EZ) stating the following or "equivalent":

HAZARDOUS AREA KEEP OUT
DANGER
AUTHORIZED PERSONNEL ONLY

Included with the above sign, the Subcontractor will post signs at the entrance to the CRZ and/or EZ before operations begin, stating:

NO SMOKING, DRINKING OR EATING BEYOND THIS POINT

MK's Subcontractor will control pedestrian traffic using traffic-type barricades such as cones, plastic fencing, and caution tape where necessary. Emphasis will also be placed on safeguarding unprotected floor opening and general housekeeping in the work area.

10.0 PERSONNEL AND EQUIPMENT DECONTAMINATION AND HYGIENE PROCEDURES

10.1 GENERAL

All personnel, clothing and equipment leaving an EZ, either contaminated or potentially contaminated, will be inspected and, if necessary, decontaminated to remove any potentially harmful substances that may have

adhered to them. Some equipment/clothing may be disposed of rather than decontaminated. In this case, the used PPE and/or equipment (e.g. disposable sampling equipment) will be stored in properly marked, plastic-lined 55-gallon drums or equivalent container in the CRZ.

10.2 PERSONNEL DECONTAMINATION

Personnel decontamination (decon) stations will be established in the CRZ. The decon stations will consist of the following, as appropriate:

- Equipment drop to include used respirator receptacle.
- Boot wash station (a tub of water and detergent (Alconox®)) with brushes for cleaning, and another tub of water for rinsing.
- Outer glove wash station when reusable (similar to boot wash station or the same station).
- Sampling equipment wash station (similar to boot wash station or the same station).
- Disposable clothing drop. All contaminated or potentially contaminated disposable clothing will be placed into labeled 6-mil plastic bags within a 55-gallon drum or equivalent container for disposal.

Note: Where applicable, ergonomic attributes will be built into the individual decontamination station(s) This includes handrails for leaning against during scrubbing and rinsing and portable chairs for sitting in while removing PPE.

10.3 EMERGENCY PERSONNEL DECONTAMINATION

Based on the type of emergency that is postulated, the following types of response actions are anticipated for personnel emergencies within the EZ.

- **Critical Triage Condition (life threatening)** - complete emergency evacuation or extrication from the EZ to CRZ where emergency medical treatment and stabilization will be attempted until arrival of first responding medical unit, or, emergency medical first aid treatment and stabilization, will be completed in the EZ until arrival of first responding medical unit. In either case, gross decontamination will be completed to the extent possible by removal of PPE, wiping patient down to remove contamination and/or wrapping patient to prevent spread of contamination.

- **Marginal Triage Condition (non-life-threatening)** - a patient will be evacuated from the EZ and treated in the CRZ, followed by decontamination and patient preparation for transport to an emergency medical facility. Decontamination could occur first, followed by medical treatment in selected scenarios.

10.4 EQUIPMENT DECONTAMINATION

All equipment and tools used in the EZ will be inspected for contamination prior to removal from the site. Any equipment and tools with visible contamination will be cleaned prior to removal from the site at the personnel decontamination stations or equivalent facility. If necessary, a high-pressure low-volume water and detergent solution will be used for contaminated equipment, followed by a high-pressure water rinse if necessary. Steam cleaning is an acceptable alternative and will be used at the MK PM's discretion. All water used during decontamination will be contained and collected for disposal by the Subcontractor.

10.5 DECONTAMINATION WASH WATER

Equipment and personnel decontamination areas will be designed to allow for collection of all wash and rinse waters into 55-gallon drums or a larger temporary storage container. Regardless of the container used, it will be labeled for OSHA hazard communication purposes.

10.6 PERSONAL HYGIENE AND SANITATION

Personnel exiting the CRZ are required to thoroughly wash their hands and face prior to eating, drinking, smoking, or using toilet facilities. A hand and face washing facility, including toilet facilities, will be identified for personnel use. Lunchroom facilities, for use by all personnel, will be identified by MK.

11.0 ON-SITE FIRST AID AND EQUIPMENT

At a minimum, a 16-unit first aid kit and eyewash will be maintained by MK in their office. MK's Subcontractor will maintain a first aid kit and eyewash at their office and work site. The location of the first aid equipment will be communicated to project personnel as part of the site-specific and pre-entry brief training. Included with the first aid kit will be a CPR Pocket Mask and a biohazard control kit (used to clean up incidents involving body fluids).

11.1 REPORT OF FIRST AID CASES

All first aid cases, accidents and incidents including equipment damage incidents will be promptly reported to the MK SSHO. Refer to GSHP Section 11.2 for additional guidance on reporting requirements. The incident reporting requirement is revised such that a Navy CSIR Form, available from the MK SOUTHNAVFACENGCOM Health and Safety Manager, will be used to document all OSHA recordables, significant first aid cases and equipment damage greater than $1,000.00.

12.0 EMERGENCY RESPONSE PLAN AND CONTINGENCY PROCEDURES

12.1 GENERAL

This section describes a contingency plan to be implemented in the event of injuries, illnesses, accidents, and fires. The contingency plan provides guidelines for the proper response to emergency situations, but the actual response will depend on the situation. In the event of an emergency, the MK SSHO, MK Site PM, Subcontractor SSHO and/or Subcontractor Job Supervisors/SSHO will direct all personnel to take appropriate action which could include any or all of the following:

- Evacuate all personnel involved to a safe place of refuge.
- Notify emergency services: **BASE FIRE DEPT AT 601-871-2333 OR 911**
- Initiate emergency response action.

12.2 PRE-EMERGENCY PLANNING

During mobilization activities for this project, the MK PM and the MK SQCS/SSHO will review the MK Program Procedure PHSP 02.1 and execute the steps necessary to assure effective emergency response requirements and resources are established for this project.

12.3 INITIAL REPORTING AND MANAGEMENT OF INCIDENTS

All emergencies will be promptly reported to the Base Fire Dept at 601-871-2333 or 911and to the MK SSHO. The MK SSHO will assure that the Navy designated authority is notified promptly and will direct initial emergency response actions until the arrival of the emergency response unit. The following contains the initial response actions to be taken by MK personnel and subcontractors at the work site for the type of incident incurred.

- **Incident Type: Accident involving vehicles and mobile equipment, process equipment, and structures.**

1. Notify the **BASE FIRE DEPT AT 601-871-2333 OR 911**, include the following information:
   A. Name and phone number of person calling;
   B. Location of incident;
   C. Type of incident;
   D. Is anyone injured or trapped?
   E. Potential material release or spill conditions.
2. MK SSHO, MK Site PM or Subcontractor Job Supervisor(s)/SSHO designates one person to meet the emergency response units at the nearest road where the units will be approaching.
3. MK SSHO, MK Site PM or Subcontractor Job Supervisor(s)/SSHO assumes initial command of the situation and directs personnel to do one of the following either separately or concurrently:
   A. Emergency shutdown of process equipment or mobile equipment -- evacuate the work zone or immediate area to a safe place of refuge and meet the incoming response units and provide all available information.
   B. If fire is present -- initiate initial fire attack and knockdown using available fire extinguishing equipment followed by evacuating the work zone or immediate area.

- **Incident Type: Preparation for adverse weather condition including high winds, tornados, heavy rains, severe lightning.**

1. MK SSHO, MK Site PM or Subcontractor Job Supervisor(s)/SSHO will direct personnel to shutdown operations, secure loose materials, and park and secure mobile equipment. Personnel will remain in vehicles on-site, meet in designated Assembly Point, or be released from the site.
2. MK SSHO, MK Site PM or Subcontractor Job Supervisor(s)/SSHO will complete accountability and obtain information from local weather service in support of the decision to resume operations or take other action.
4. MK SSHO, MK PM or Subcontractor Job Supervisor(s)/SSHO will inspect all offices, trailers, mobile equipment, and work sites for damage or downed power lines.

- **Incident Type: Medical and Rescue Emergencies.**

1. Notify the **BASE FIRE DEPT AT 601-871-2333 OR 911,** include the following information:
   A. Name and phone number of person calling;
   B. Location of incident;
   C. Type of incident;
   D. Person(s) injured or trapped and exposed to hazardous material.
2. MK SSHO, MK PM or Subcontractor Job Supervisor(s)/SSHO designates one person to meet the emergency response units at the nearest road where the units will be approaching.

3. MK SSHO, MK PM or Subcontractor Job Supervisor(s)/SSHO assumes initial command of the situation and completes or directs personnel to do one or both of the following:
   A. Emergency shutdown of process equipment or mobile equipment and any other necessary action to mitigate or control the incident.
   B. Initiate emergency first aid actions until arrival of emergency units.

13.0 LOGS, REPORTS AND RECORD KEEPING

13.1 SAFETY AND HEALTH LOGBOOK

MK SSHO will maintain safety and health logbook in accordance with GSHP Section 13.1 including use of GSHP Figure 3 for daily recording. The MK SSHO may disregard the use of the GSHP Figure 3 Daily Report if the pertinent information is recorded in the logbook.

13.2 REPORTS

A weekly site safety and health inspection report will be prepared by the MK SSHO in accordance with GSHP Section 13.2 and using Figure 4 from the GSHP for weekly reports.

13.3 FIELD MASTER COPY OF SSHP

The MK SSHO will maintain a field master copy of this Appendix A SSHP in accordance with the GSHP Section 13.3 and red-line where necessary.

13.4 RECORD KEEPING

Refer to GSHP Section 13.4. The MK SSHO will receive copies of all records for injuries and illnesses of Subcontractors incidental to the work, including copies of the Worker's Compensation First Report of Injury. These records will be maintained on the Subcontractors OSHA 200 Log. Per the Subcontract General Conditions 13(c), the Subcontractor will provide a monthly project safety review form and attach with it a copy of OSHA 200 Log specific to this project. The MK SSHO will insure that information on Subcontractor exposure hours is provided to the MK SOUTHNAVFACENGCOM Health and Safety Manager on a monthly basis. A record of all first aid treatments not otherwise recordable will be maintained and furnished to MK or the Navy's designated authority upon request.

13.5 SAFETY AND HEALTH PROJECT COMPLETION REPORT

The MK SSHO will complete a safety and health project completion report at the conclusion of the field work in accordance with the GSHP Section 13.5.

14.0 ON-SITE WORK PLAN

This SSHP is Appendix A to the Work Plan.

15.0 COMMUNICATIONS PROCEDURES

Telephones will be selected as the primary choice of emergency communication and are installed on-site. If determined to be necessary, the MK SSHO will test all communication systems prior to commencing work for confirmation of emergency communication capability.

16.0 SPILL CONTAINMENT PLAN

16.1 GENERAL

The only spill and release accident scenarios credible to this operation are loss of containment of rinsates from decontamination activities and spills of sampled groundwater. These types of spills can be generally classified as incidental, but will still require fast response to mitigate and clean-up the spill. In the event of a spill or release, the MK SSHO, MK PM and/or Subcontractor Job Supervisors/SSHO will direct all personnel to take appropriate action which could include one or all of the following:

- Initiate spill response action.
- Notify the **BASE FIRE DEPT AT 601-871-2333 OR 911.**
- Evacuate the work zone to a safe place of refuge.

16.2 PREPLANNING FOR SPILL CONTROL

Field operations will be reviewed for release potential during Plan-of-the-Day meetings. During mobilization activities for this project, the MK PM, SSHO, and the SQCS will review the MK Program Procedure PHSP 03.1 and execute the steps necessary to assure effective spill response planning requirements and resources are established for this project.

16.3 SPILL AND FIRE CONTROL MATERIALS AND EQUIPMENT

The Subcontractor will have a spill clean-up container with porous or absorbent barriers available for use. Drums and containers used during a clean-up will be appropriate for the hazardous substances they are meant to contain, and will meet the regulations promulgated by DOT, 49 CFR Parts 171-179, OSHA 29 CFR 1910.120, and EPA 40 CFR 262. Drums and containers will be inspected for defects and their integrity assured prior to being filled with any hazardous or special waste substance.

A spill of material will be contained with porous or absorbent barriers. Absorbent materials can take several configurations (pillows, sheets, booms, loose chips, particle beads, and fibers) that may be set in place, or scattered by hand. Preferred sorbents are inert, nonreactive clay minerals (neutralizing agents may be added), or specific formulations which provide automatic neutralization or vapor control.

16.4 INITIAL REPORTING AND MANAGEMENT OF INCIDENTS

All spill emergencies initially classified above an Incidental Release as defined below will be promptly reported to the **BASE FIRE DEPT AT 601-871-2333 OR 911.**

Incidental Release - a release of hazardous material where the substance can be absorbed, neutralized, or otherwise controlled at the time of release by employees in the immediate release area, or by maintenance personnel. In addition, the quantity of released material does not exceed EPA Reportable Quantities (RQs).

Note: it is anticipated that none of the collected waste or decontamination water will contain and be present in any quantities that which if spilled, could exceed an EPA RQs.

The MK SSHO, the MK Site PM and the Subcontractor Job Supervisor(s)/SSHO are responsible for directing initial emergency response actions until the arrival of the FIRE DEPARTMENT. The following contains the initial response actions to be taken by MK personnel and subcontractors at the work site for spill and release emergencies.

Spill Response Actions:

1. Classify spill as Incidental or an Emergency.
2. If Incidental (as defined above): a) notify immediate supervisor; b) assess hazard potential, and establish precautions and PPE requirements; c) begin clean-up of spill.
3. If Emergency, initiate response action in accordance with the following steps:

   A. Quickly assess probability of safely stopping spill. If physical, chemical, or biological health hazards exist, immediate evacuate the area to a safe distance upwind and upgrade from the spill.

   B. Notify the **BASE EMERGENCY RESPONSE** and provide the following information:
      1. Name and phone number of person calling;
      2. Location of incident;
      3. Type of incident;
      4. Is anyone injured or trapped?
      5. Estimated volume of material released.

   C. MK SSHO, MK PM or Subcontractor Job Supervisor(s)/SSHO designates one person to meet the emergency response units at the nearest road where the units will be approaching.

   D. MK SSHO, MK PM or Subcontractor Job Supervisor(s)/SSHO assumes initial command of the situation and directs personnel to do one of the following:

      a. Emergency shutdown of process equipment or mobile equipment, evacuate the work zone or immediate area to a safe place of refuge and meet the incoming response units and provide all available information.

      b. Initiate initial spill response using available spill response equipment only for small emergency spill events where personnel are trained to mitigate. Evacuate the work zone or immediate area if there are any health threats or risks to personnel.

      c. MK's PM will immediately notify the Navy's Designated Authority and the MK PMO. The Navy's Designated Authority is the ROICC assigned to this project.

17.0 CONFINED SPACES

No confined space entry is anticipated for this project.

TABLE A-1
POTENTIAL CONTAMINANTS

Potential Contaminants	Description	LEL (%)	Ionization Potential (eV)	Exposure Limits	Signs and Symptoms	First Aid
Dioxin and Furans	Insoluble residues in groundwater thought to be from the herbicide orange. Reported in very low concentrations.	N/A	N/A	None established. Lowest feasible concentration.	Irritant to eyes and skin, allergic dermatitis, chloracne, GI distress. Potential human carcinogen.	Irrigate eyes immediately with water. Soap wash skin promptly. Seek medical attention immediately.
TCDD	Colorless to white, crystalline solid.	N/A	N/A	Lowest feasible concentration.	Irritant to eyes and skin, allergic dermatitis, chloracne, GI distress. Potential human carcinogen.	Irrigate eyes immediately with water. Soap wash skin promptly. Seek medical attention immediately.
PeCDD	Colorless to white, crystalline solid.	N/A	N/A	Lowest feasible concentration.	Irritant to eyes and skin, allergic dermatitis, chloracne, GI distress. Potential human carcinogen.	Irrigate eyes immediately with water. Soap wash skin promptly. Seek medical attention immediately.

TABLE A-2
PERSONNEL NAMES AND TELEPHONE NUMBERS

Contact	Person or Agency	Telephone Number
Emergency Response	**Base Fire Dept**	**911 emergency** 601-871-2333
Law Enforcement	Base Security	601-871-2222
Ambulance Service	Contract Ambulance Service	**911 emergency** 601-871-2333
Robert Hlavacek	MK Program Manager	(803) 554-9367
Scott Newman	MK Senior Project Manager	(803) 554-9369
Marty Wilson	MK Field Operations Manager	(803) 554-6003
To be determined	MK Site Project Manager	Office:
To be determined	MK Site Quality Control Supervisor	Office:
To be determined	MK Site Safety and Health Officer	Office:
Han Maung	MK Project Engineer	Office: (216) 523-3422 1-800-334-3081
William Piispanen	MK Health and Safety Program Manager	(208) 386-5930
Art Conrad	SOUTHNAVFACENGCOM Remedial Project Manager	(803) 743-0520
Gordon Crane	Environmental Programs Manager	(601) 871-2485
Poison Control Center	National Poison Control Center	(800) 492-2414
CHEMTREC	Chemical Spill or Leak Emergencies	(800) 424-9300
National Response Center	National Response Center	(800) 424-8802
USEPA RCRA/CERCLA Hotline	USEPA	(800) 424-9346
Hospital	Gulfport Memorial Hospital	(601) 863-1441

Directions to **Gulfport Memorial Hospital** 4500 13th Street, Gulfport, MS 39501
Phone: 601-863-1441
1. From Main Gate, travel south on Broad Avenue approximately 3/8 of mile,
2. Hospital Medical Center located on the left-hand side of the road.

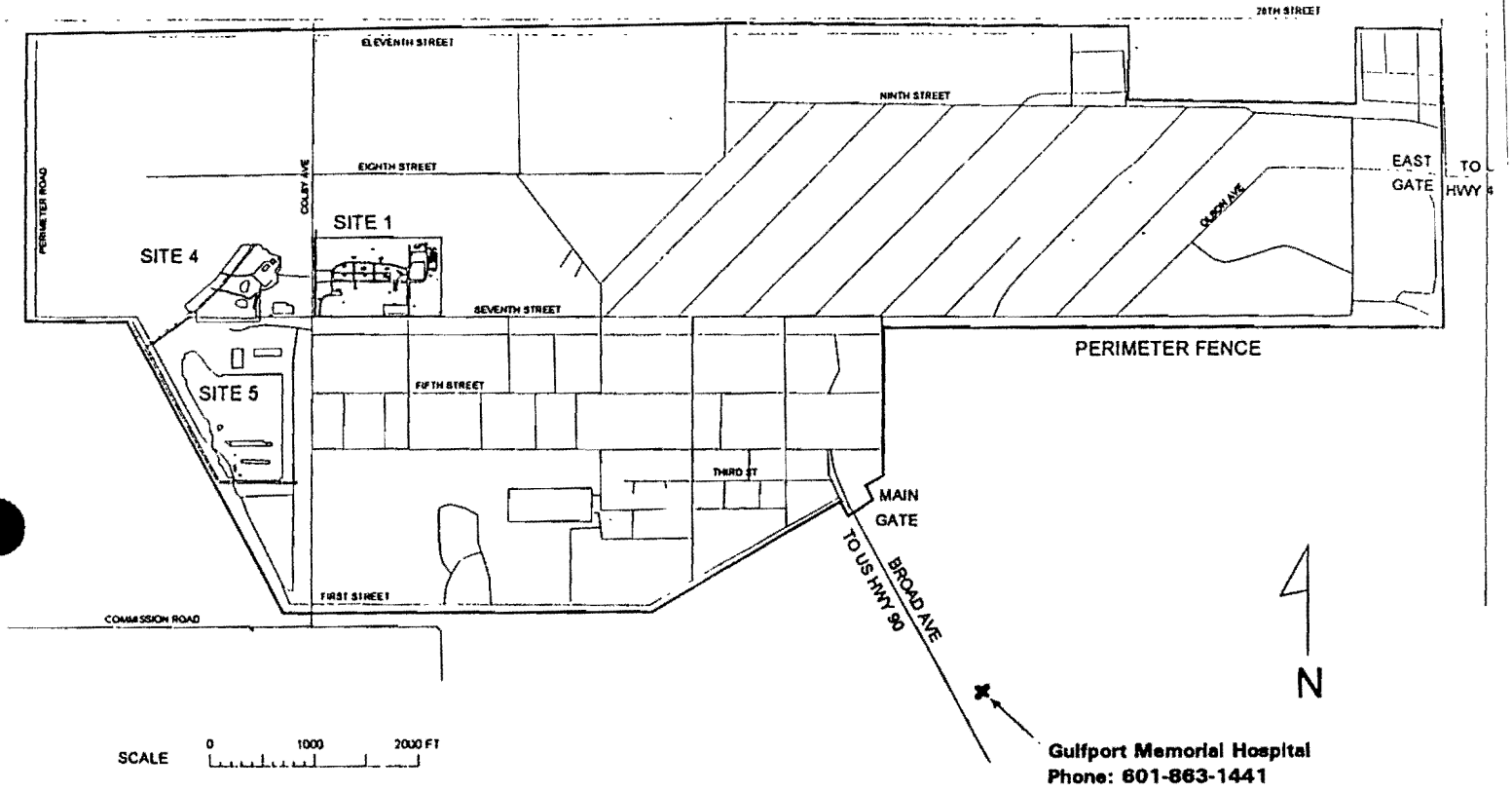

FIGURE A-1 HOSPITAL ROUTE MAP

TABLE A-3 TRAINING AND MEETINGS			
	Type of Training or Meeting	**Time of Training/Meeting**	**GSHP Reference**
1.	Hazardous Waste Operations Training including fire extinguishers	Before Mobilization	GSHP Section 4.1,
2.	Site Specific Training	At Site Prior to Work	GSHP Section 4.2
3.	Hazard Communication	Before Mobilization	GSHP Section 4.5
4.	CPR/First Aid & Bloodborne Pathogens	Before Mobilization	GSHP Section 4.6
5.	DOT Haz Mat	Before Mobilization	GSHP Section 4.7
6.	Safety Meeting	Weekly During Work	GSHP Section 4.8, complete safety meeting form found in the GSHP
7.	Plan-of-the-Day (POD) Meeting	Daily During Work	GSHP Section 4.9, document meeting attendance
8.	Pre-and Post-Entry Briefings (Meeting) **Note: combine with POD meeting above.**	Before and After Each Entry Into An Exclusion Zone	GSHP Section 4.10, document pre-entry meeting attendance.
9.	Quality Control Preparatory Phase Inspection Meeting	Before each Definable Feature of Work	GSHP Section 4.11
10.	Recordkeeping	Before Work Start	GSHP Section 4.12

TABLE A-3 TRAINING AND MEETINGS			
	Type of Training or Meeting	**Time of Training/Meeting**	**GSHP Reference**
1.	Hazardous Waste Operations Training including fire extinguishers	Before Mobilization	GSHP Section 4.1,
2.	Site Specific Training	At Site Prior to Work	GSHP Section 4.2
3.	Hazard Communication	Before Mobilization	GSHP Section 4.5
4.	CPR/First Aid & Bloodborne Pathogens	Before Mobilization	GSHP Section 4.6
5.	DOT Haz Mat	Before Mobilization	GSHP Section 4.7
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8.	Pre-and Post-Entry Briefings (Meeting) **Note: combine with POD meeting above.**	Before and After Each Entry Into An Exclusion Zone	GSHP Section 4.10, document pre-entry meeting attendance.
9.	Quality Control Preparatory Phase Inspection Meeting	Before each Definable Feature of Work	GSHP Section 4.11
10.	Recordkeeping	Before Work Start	GSHP Section 4 12

TABLE A-4
MINIMUM PERSONAL PROTECTIVE EQUIPMENT REQUIREMENTS BY TASK

Site	Activity	PPE
Construction of the Seep Filtration Systems. (Two locations)	1. Preparatory work (all areas) including mobilization and demobilization.	1. Level D. See Note 1.
	2. Decontamination.	2. Modified Level D. See Note 2.
	3. Filtration System.	3. Level D, upgrade to Modified Level D where direct contact with contaminated soil and groundwater is possible.
	4. Sampling and Analysis.	4. Modified Level D
	5. Site Restoration.	5. Level D.
	6. Waste Management.	6. Modified Level D.

Notes:

1. Level D = work coveralls or equivalent, hardhat, safety glasses with side shields, steel-toed boots, and leather work gloves.

2. Modified Level D = standard Tyvek® or equivalent chemical/particulate resistant suit, boots or boot covers, and outer gloves made of nitrile rubber blended equivalent material. Use cotton gloves for inner glove liners. Use chemical safety goggles and full-face plastic shield for high pressure washing.

   Note: the majority of the sampling and analysis tasks will only require chemical protective gloves or disposable nitrile or latex. MK SSHO will assess these tasks and require upgrading where necessary.

ATTACHMENT A

ACTIVITY HAZARD ANALYSIS (AHA)

ACTIVITY HAZARD ANALYSIS (AHA)			
Activity: Preparation Work (all areas) including mobilization and demobilization.		Analyzed By: Frank J. Petrik	Date: 12/5/97
1.0 Principal Steps	**Potential Hazards**	**Recommended Controls**	
1.1 Walk area down, establish work zones.	1.1a. Struck by and struck against physical objects during loading and unloading operations and setup. Slips, trips and falls. 1.1b. Contact by inhalation, direct contact or ingestion of chemical contaminants.	1.1a. Preplan work layout (Work Zone Map completed and posted by Subcontractor, also emergency numbers). Use correct hand and power tools for job and good housekeeping practices. MK SSHO to identify areas require special attention to pedestrian safety. 1.1b. Level D PPE expected. MK SSHO to visually inspect area for evidence of any significant chemical contaminants or related concerns.	
1.2 Equipment to be Used	**Inspection Requirements**	**Training Requirements**	
1.3 Hand and power tools.	Daily inspection by Sub, prior to use per manufacturer's recommendation. Initial safety inspection of all Subcontractor equipment to be completed by MK SSHO.	OSHA 1910.120 40-Hour Training, 3 day OJT, 8 hours Supervisory. 8 hour Refresher, Site Safety and Health Plan (Project Kickoff), POD to include Pre-Entry Briefs and OSHA Hazard Communication.	

ACTIVITY HAZARD ANALYSIS (AHA)			
Activity: Decontamination activities.		Analyzed By: Frank J. Petrik	Date: 12/5/97
2.0 Principal Steps	**Potential Hazards**	**Recommended Controls**	
2.1 High pressure spray and wash, also includes manual scrubbing and scraping.	Inhalation, direct contact or ingestion of chemical agents.	Modified Level D, use disposable dust/aerosol dust mask if significant aerosol generation from sprayer.	
	Struck by and struck against physical objects during decontamination activities. Slips/trips, and falls.	Preplan material handling, mechanize where possible. Insure clear walkways and entry/exit points.	
	Spills	Stage spill clean up equipment and supplies.	
2.2 Equipment to be Used	**Inspection Requirements**	**Training Requirements**	
2.3 Hand tools and sprayer.	Daily, prior to use per manufacturer's recommendation.	OSHA 1910.120 40-Hour Training, 3 day OJT, 8 hours Supervisory. 8 hour Refresher, Site Safety and Health Plan (Project Kickoff), POD to include Pre-Entry Briefs, OSHA Hazard Communication, and Operator Training (high pressure sprayer and other cleaning equipment).	

ACTIVITY HAZARD ANALYSIS (AHA)			
Activity: Filtration Systems		Analyzed By: Frank J. Petrik	Date: 12/5/97
3.0 Principal Steps	**Potential Hazards**	**Recommended Controls**	
3.1 Minor excavations, placement of crushed rock; soil compaction; place PVC pipe(s); place granular activated carbon; place filter fabric; place gabions; and restore area placing topsoil and sod.	A. Struck by and struck against incidents during material handling tasks and excavation. B Slip, trips and falls. C. Direct contact with contaminated soil and/or groundwater.	A. Preplan material handling, mechanize where possible. Insure clear walkways and entry/exit points. Personnel working near heavy equipment use high visibility vests. Prepare Excavation and Trenching permit prior to excavation. B. Insure clear walkways and entry/exit points, barricade where necessary. C. Use Modified Level C PPE, downgrade to Level D where appropriate. Review MSDS on activated carbon prior to off loading to insure proper controls are used.	
3.2 Equipment to be Used	**Inspection Requirements**	**Training Requirements**	
3.3 Heavy equipment and material handling equipment and hand tools.	Daily, prior to use per manufacturer's recommendation.	OSHA 1910.120 40-Hour Training, 3 day OJT, 8 hours Supervisory. 8 hour Refresher, Site Safety and Health Plan (Project Kickoff), POD to include Pre-Entry Briefs and OSHA Hazard Communication.	

ACTIVITY HAZARD ANALYSIS (AHA)			
Activity: Sampling.		Analyzed By: Frank J. Petrik	Date: 12/5/97
4.0 Principal Steps	**Potential Hazards**	**Recommended Controls**	
4.1 Obtain groundwater and rinsate samples for analysis.	Direct contact or ingestion of chemical agents.	Modified Level D PPE, modify where necessary as determined by MK SSHO. Use remote sampling equipment where possible.	
	Struck by and struck against physical objects during sampling activities. Slips, trips and falls.	Preplan sampling locations. Insure clear walkways and entry/exit points.	
	Spills	Stage spill clean up equipment and supplies.	
4.2 Equipment to be Used	Inspection Requirements	Training Requirements	
4 3 Sampling equipment.	Daily, prior to use per manufacturer's recommendation.	OSHA 1910.120 40-Hour Training, 3 day OJT, 8 hours Supervisory. 8 hour Refres ıer, Site Safety and Health Plan (Project Kickoff), POD to include Pre-Entry Briefs, and OSHA Hazard Communication.	

ACTIVITY HAZARD ANALYSIS (AHA)			
Activity: Site Restoration.		Analyzed By: Frank J. Petrik	Date: 12/3/97
5.0 Principal Steps	**Potential Hazards**	**Recommended Controls**	
5.1 Remove all field equipment. Remove signs and barriers. Reseed areas.	Struck by and struck against physical objects during site restoration activities. Slips, trips and falls. Ergonomic type injuries. Fires.	Preplan waste handling steps, mechanize where possible. Use correct hand and power tools for job and good housekeeping practices. Dispose of construction debris in proper receptacles and remove from structure.	
5.2 Equipment to be Used	Inspection Requirements	Training Requirements	
5.3 Misc. Hand tools and heavy equipment.	Daily, prior to use per manufacturer's recommendation.	OSHA 1910.120 40-Hour Training, 3 day OJT, 8 hours Supervisory. 8 hour Refresher, Site Safety and Health Plan (Project Kickoff), POD to include Pre- Entry Briefs, and OSHA Hazard Communication.	

ACTIVITY HAZARD ANALYSIS (AHA)			
Activity: Waste management and disposal.		Analyzed By: Frank J. Petrik	Date: 12/5/97
6.0 Principal Steps	**Potential Hazards**	**Recommended Controls**	
6.1 Stage waste material, dispose of decontamination liquid at onsite sanitary sewer or offsite location. Used PPE disposed of offsite.	Struck by and struck against physical objects during waste handling. Contact with residual material on containers.	Preplan waste handling steps, mechanize where possible. Inspect outside of all containers for residues. Modify Level D, downgrade to Level D PPE where appropriate.	
Equipment to be Used	**Inspection Requirements**	**Training Requirements**	
6.2. Material handling equipment.	Inspect all containers and labels/manifests.	Modified site specific training. DOT Haz Mat for person supervising the preparation and shipment of materials.	

ATTACHMENT B

WORK ZONE MAPS

Note: Work Zone Maps are field prepared by the Subcontractor and approved by the MK SSHO. The Subcontractor will deliver one set of the Work Zone Maps to the MK SSHO who will insert copies of the map(s) into the field master copy of this SSHP.

APPENDIX B
QUALITY CONTROL DOCUMENTATION

TABLE OF CONTENTS

Certificate of Satisfactory Completion

SEEP FILTRATION AT SITE 4

Naval Construction Battalion Center
Gulfport, Mississippi

Naval Facilities Engineering Command, Southern Division
ERAC Contract Number: N62467-93-D-1106
Delivery Order Number: 0002
Statement of Work: 009

The following personnel acknowledge the satisfactory completion of seep filtration construction in accordance with the Work Plan and approved changes at CBC Gulfport, Mississippi

Morrison Knudsen Corporation

Name:_____ Signature:_____

Title:_____ Date:_____

CBC Gulfport

Name:_____ Signature:_____

Title:_____ Date:_____

TESTING PLAN AND LOG

ERAC Contract Number. N62467-93-D-1106
Delivery Order Number: 0002
Statement of Work: 009

Definable Feature of Work	Inspection Checklist	Three Phases of Control (Enter Dates that Inspections are Performed)			Test or Inspection Results	Comments
		Preparatory	Initial	Follow-up		
Site Preparatory Work	SP-01					
Decontamination	DE-01					
Filtration Systems	FS-01					
Sampling and Analysis	SA-01					
Site Restoration	SR-01					
Waste Management	WM-01					
Regulatory Compliance	RG-01					

MORRISON KNUDSEN CORPORATION
ENGINEERING, CONSTRUCTION, ENVIRONMENTAL GROUP

FIELD INSPECTION CHECKLIST

Checklist Title	Checklist No.	Revision	Checklist
Site Preparatory Work	SP-01	Rev. 0	Page 1 of 1

Item No.	Item Checked	Accept/ Reject	Remarks	Verified By /Date
	Preparatory Inspection			
1	Perform preparatory phase meeting prior to initiating work.			
2	Verify Work Zone is clearly delineated.			
3	Verify completion of any initial surveys.			
4	Verify that a review of safety requirements is performed as part of the preparatory inspection. (Briefing by Site Safety & Health Officer).			
5	Ensure that housekeeping and maintenance requirements are understood.			
	Initial Inspections			
1	Confirm work areas have been located within the limits of established stakes, lines or monuments.			
2	Verify that protection of items not to be removed or disturbed has been provided, as necessary.			
3	Verify removal from the construction area of debris and other deleterious materials.			
4	Ensure compliance with the plans identified in the Preparatory Phase.			
	Follow-Up Inspections			
1	Ensure that needed revisions to the Work Plan are documented and approved by the Project Manager and the ROICC.			
2	Verify continuing compliance with the approved plans identified during the Preparatory Phase Inspection.			
3	Verify completion of site preparatory activities is complete and in accordance with the Work Plan.			

Additional Notes or comments: Use Additional Sheets as necessary

Specific Item Identification or Location, as applicable:

MORRISON KNUDSEN CORPORATION
ENGINEERING, CONSTRUCTION, ENVIRONMENTAL GROUP

FIELD INSPECTION CHECKLIST

Checklist Title	Checklist No.	Revision	Checklist
Decontamination	DE-01	Rev. 0	Page 1 of

Item No.	Item Checked	Accept/ Reject	Remarks	Verified By /Date
	Preparatory Inspection			
1	Verify Subcontractor Decontamination Plan is submitted and it conforms with the Technical Specification.			
2	Review the specification requirements regarding decontamination equipment.			
3	Review the requirement for visual inspection of the decontamination equipment and documentation requirements.			
4	Review decontamination procedures for the external surfaces of field equipment as contained in the Work Plan/Technical Specifications			
5	Verify that container for storage of decontamination water is established and of adequate size.			
6	Verify Subcontractor has required supplies for decontamination activities.			
7	Review Site Safety & Health Plan requirements for the Personnel Decontamination Facility. (Briefing by the Site Safety & Health Officer).			
	Initial Inspections			
1	Verify that the decontamination equipment is provided as shown in the approved decontamination plan.			
2	Perform an initial inspection of the decontamination equipment for evidence of leakage.			
3	Verify decontamination activities are performed in accordance with the Work Plan and Technical Specifications.			

Additional Notes or comments: Use Additional Sheets as necessary

Specific Item Identification or Location, as applicable:

MORRISON KNUDSEN CORPORATION ENGINEERING, CONSTRUCTION, ENVIRONMENTAL GROUP			FIELD INSPECTION CHECKLIST		
Checklist Title Decontamination			Checklist No. DE-01	Revision Rev. 0	Checklist Page 2 of 2
Item No.	**Item Checked**	**Accept/ Reject**	**Remarks**		**Verified By /Date**
	Follow-up Inspections				
1	Monitor on-going decontamination operations to verify compliance with the Work Plan/Technical Specifications.				
2	Verify that inspections of the decontamination equipment are performed and documented.				
3	Verify that records of any leakage are promptly repaired are documented.				
4	Verify decontamination wastes are disposed of properly.				

Additional Notes or comments: Use Additional Sheets as necessary

Specific Item Identification or Location, as applicable:

MORRISON KNUDSEN CORPORATION
ENGINEERING, CONSTRUCTION, ENVIRONMENTAL GROUP

FIELD INSPECTION CHECKLIST

Checklist Title	Checklist No.	Revision	Checklist
Filtration Systems	FS-01	Rev. 0	Page 1 of

Item No.	Item Checked	Accept/ Reject	Remarks	Verified By /Date
	Preparatory Inspection			
1	Perform preparatory phase meeting.			
2	Review the Work Plan and Specifications for Filtration Systems.			
	Initial Inspections			
1	Ensure that seep areas are inspected prior to construction and deviations from drawings and plans noted.			
2	Ensure that Field Change Requests (FCR) are prepared and approved to accommodate any field change conditions.			
3	Ensure that materials for construction are in accordance with specifications.			
	Follow-Up Inspections			
1	Ensure that the filtration systems are constructed and installed as specified.			
2	Verify that excess material are removed from the site.			

Additional Notes or comments: Use Additional Sheets as necessary

Specific Item Identification or Location, as applicable:

MORRISON KNUDSEN CORPORATION

ENGINEERING, CONSTRUCTION, ENVIRONMENTAL GROUP

FIELD INSPECTION CHECKLIST

Checklist Title	Checklist No.	Revision	Checklist
Sampling and Analysis	SA-01	Rev. 0	Page 1 of 1

Item No.	Item Checked	Accept/ Reject	Remarks	Verified By /Date
	Preparatory Inspection			
1	Schedule Preparatory Phase Meeting prior to initiating field analytical sampling activities.			
2	Verify that analytical field laboratory services have been procured.			
3	Verify that sample containers, coolers, chain-of-custody records (COCs), labels, seals and all necessary sampling equipment is present.			
	Initial Inspections			
1	Verify that sampling equipment is properly protected from possible contamination prior to sample collection.			
2	Verify that the correct sample containers are used for sample collection			
3	Verify that the sampling technician wears proper PPE.			
4	Verify that quality control samples are collected.			
5	Ensure that proper decontamination procedures are followed.			
	Follow-Up Inspections			
1	Ensure that samples are properly field-preserved.			
2	Ensure that sample containers are properly identified with labels.			
3	Ensure that COCs and receipt for sample forms are properly completed **REVIEW ALL COCs PRIOR TO SAMPLE SHIPMENT**.			
4	Ensure that sample coolers are sealed with dated custody seals.			
5	Ensure that the results of analyses are received.			

Additional Notes or comments: Use Additional Sheets as necessary

Specific Item Identification or Location, as applicable:

MORRISON KNUDSEN CORPORATION ENGINEERING, CONSTRUCTION, ENVIRONMENTAL GROUP	FIELD INSPECTION CHECKLIST

Checklist Title	Checklist No.	Revision	Checklist
Site Restoration	SR-01	Rev. 0	Page 1 of

Item No.	Item Checked	Accept/ Reject	Remarks	Verified By /Date
	Preparatory Inspection			
1	Verify that excavation and backfill is complete.			
2	Verify that sod from off-site source is in accordance with the specifications.			
	Initial Inspections			
1	Verify that top soil has been placed in accordance with the specifications.			
2	Verify that the surface is moistened prior to laying sod.			
3	Verify that sod is laid with no visible open joints and no overlapping.			
4	Verify that sod pieces are not stretched.			
5	Ensure that the sod is aligned with adjoining grass areas.			
	Follow-Up Inspections			
1	Ensure that sodded areas are watered immediately after installation.			
2	Ensure good bonding between sod and soil.			
3	Ensure that the sodded area is neat.			

Additional Notes or comments: Use Additional Sheets as necessary

Specific Item Identification or Location, as applicable:

MORRISON KNUDSEN CORPORATION

ENGINEERING, CONSTRUCTION, ENVIRONMENTAL GROUP

FIELD INSPECTION CHECKLIST

Checklist Title	Checklist No.	Revision	Checklist
Waste Management	WM-01	Rev. 0	Page 1 of 1

Item No.	Item Checked	Accept/ Reject	Remarks	Verified By /Date
	Preparatory Inspection			
1	Coordinate with Public Works to identify storage areas for potential hazardous waste.			
2	Verify that appropriate waste containers are available.			
3	Verify that the disposal/treatment facility is approved by the Project Manager.			
	Initial Inspections			
1	Verify that all containers are labeled with the source and generation date.			
2	Verify that drums are placed on pallets for shipment and that the drums are banded together with non-metallic banding.			
3	Ensure that waste manifests are completed			
4	Verify that a log is kept of generated wastes.			
	Follow-Up Inspections			
1	Verify that containers are transported to the proper staging areas.			
2	Ensure regular inspections are performed on hazardous waste accumulation areas per 40 CFR 262.			
3	Verify that a copy of the waste log is provided to the ROICC on a weekly basis.			

Additional Notes or comments: Use Additional Sheets as necessary

Specific Item Identification or Location, as applicable.

MORRISON KNUDSEN CORPORATION

ENGINEERING, CONSTRUCTION, ENVIRONMENTAL GROUP

FIELD INSPECTION CHECKLIST

Checklist Title	Checklist No.	Revision	Checklist
Regulatory Compliance	RG-01	Rev. 0	Page 1 of

Item No.	Item Checked	Accept/ Reject	Remarks	Verified By /Date
	Preparatory Inspection			
1	Review applicable environmental regulations identified in the Work Plan.			
2	Ensure that permit waiver have been obtained from Mississippi Department of Environmental Quality (MDEQ).			
3	Verify that all personnel handling hazardous substance are trained per 29 CFR 1910.120 and training is up-to-date.			
	Initial Inspections			
1	Verify that training certificates of workers are received in accordance with 29 CFR 1910.120 and 29 CFR 1926.65 prior to start of work.			
2	Verify that all workers handling hazardous waste are trained per 49 CFR 172.704 and 29 CFR 1910.120.			
3	Verify that wastes are classified per 40 CFR 261.			
4	Verify that shipping papers are prepared in accordance with 49 CFR 172.			
	Follow-Up Inspections			
1	Ensure regular inspections are performed on hazardous waste accumulation areas per 40 CFR 262.			
2	Verify that the wastes are properly disposed of and manifests signed by the disposal facility have been returned to the generator.			

Additional Notes or comments: Use Additional Sheets as necessary

Specific Item Identification or Location, as applicable

APPENDIX C
ENVIRONMENTAL PROTECTION PLAN

APPENDIX C
ENVIRONMENTAL PROTECTION PLAN

TABLE OF CONTENTS

LIST OF FIGURES

1.0
INTRODUCTION

This Plan describes the environmental protection measures MK proposes to use at CBC Gulfport. The project involves construction of a filtration system to control migration of contamination through seeps. At Seep A, there will be no soil excavation. Only about two feet of soil will be excavated at site B. Therefore, the construction work will have minimal impact on existing air, water and soil conditions at the site.

2.0
MEASURES FOR PROTECTING NATURAL RESOURCES

2.1 LAND PROTECTION

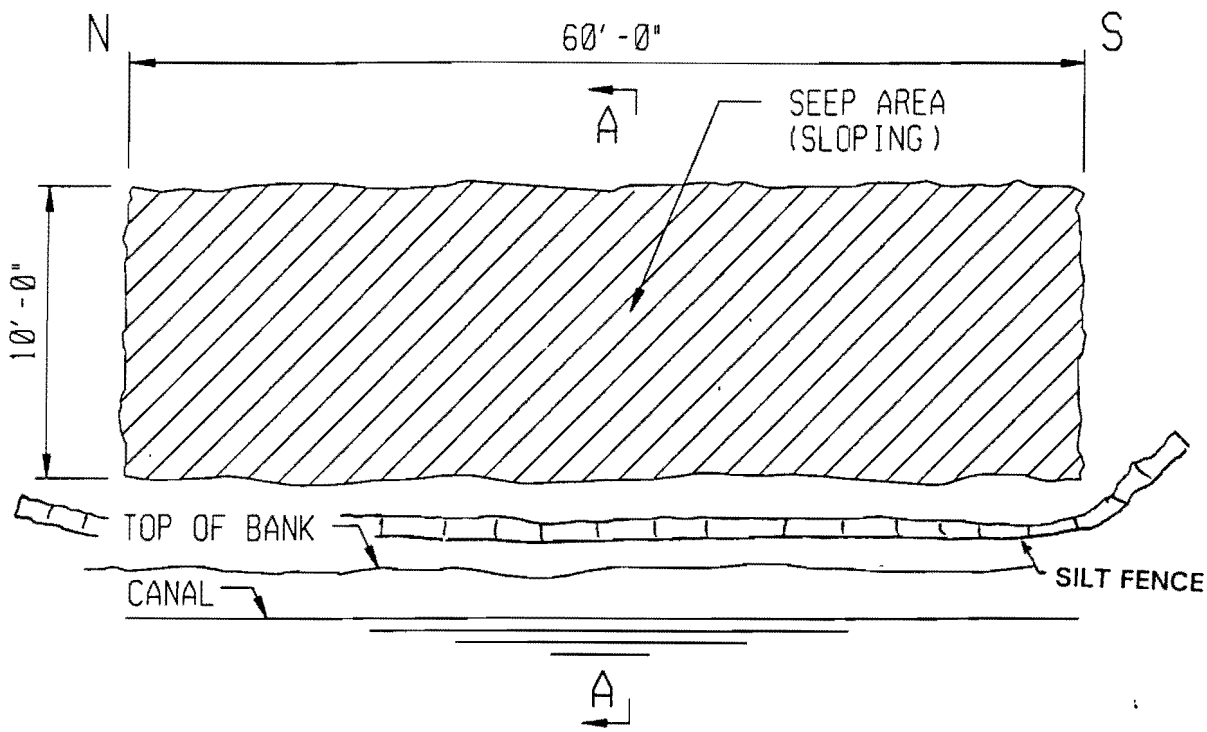
The erosion and scouring of the bridge abutment will be filled and measures implemented to minimize such occurrences in the future. Thus, there will be improvement to the land at Seep A. The minor excavation at Seep B will be backfilled and restored with sodded grass.

2.2 PROTECTION OF WATER RESOURCES

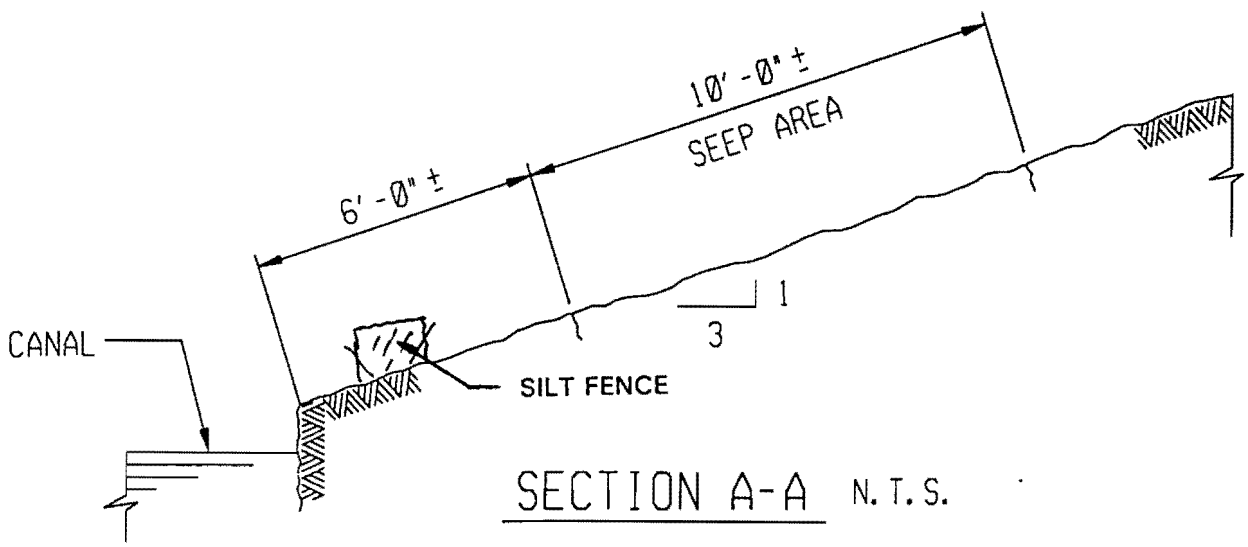
The construction area of the filtration system will be performed in a manner that will have no adverse impact on the canal. Excavation and backfill operations will be minor and will be performed under controlled conditions using small equipment. Silt fences will be installed as shown on Figure C-1 to prevent silt from entering the canal during construction at Seep B.

2.3 REMOVAL OF TEMPORARY CONSTRUCTION FACILITIES

The decontamination and other temporary facilities will be removed after work activities are completed.



ELEVATION LOOKING EAST N.T.S.



SECTION A-A N.T.S.

FIGURE C-1
SILT FENCE AT SEEP B

MORRISON KNUDSEN CORPORATION
1500 WEST 3RD STREET
CLEVELAND, OHIO 44113-1406
PHONE: (216) 523-5600 FAX: (216) 523-5201

APPENDIX D
WASTE MANAGEMENT PLAN

APPENDIX D
WASTE MANAGEMENT PLAN

TABLE OF CONTENTS

SECTION **PAGE**

1.0
INTRODUCTION

This plan describes methods to manage the various waste streams generated during this project. All generated wastes, decontamination water, and drummed PPE will be handled, stored, transported, and disposed of in accordance with all applicable federal, state and local regulations The Material Safety Data Sheets (MSDSs) for the materials used during construction and installation will be available on site.

MK is responsible for the following activities:

- Ensuring that all waste streams are managed in accordance with the procedures in this plan
- Providing field oversight and ensuring Subcontractor compliance with the procedures in this plan
- Ensuring that appropriate waste containers are provided
- Ensuring all waste containers are properly labeled and managed in accordance with state and federal laws and regulations
- Maintaining waste records for the field effort

The Navy will be the Generator of the wastes and MK will prepare all manifests before they are signed by the ROICC. Copies of all the manifests will be transmitted to the Navy.

All personnel handling hazardous waste will be trained per 49 CFR 172.704 and 29 CFR 1910 120. All personnel responsible for waste labeling, inspecting, profiling, manifesting, and transportation preparation will be trained per 49 CFR 172.704, 29 CFR 1910.120, HM-181, and HM-126.

2.0
WASTE STREAMS

Waste streams expected to be generated during work activities include:

- Decontamination liquids
- Disposable personal protective equipment and clothing
- Used activated carbon

2.1 DECONTAMINATION LIQUIDS

Liquids generated during decontamination will be collected and temporarily stored at the site. A sample will be collected from the decontamination liquid for analytical testing. The decontamination liquid will be transported and pumped to sanitary sewer at the site if approved by the Publicly Owned Treatment Works (POTW). Otherwise, the decontamination liquid will be disposed of at an off-site treatment facility.

2.2 DISPOSABLE PERSONAL PROTECTIVE EQUIPMENT

Used personal protective equipment (PPE) includes disposable Tyvek suits, gloves, booties, and plastic sheeting. The quantity of PPE generated depends upon the schedule and the number of times PPE is discarded daily. Contaminated PPE will be placed in a plastic-lined 55-gallon drum immediately after use and the drum will be labeled to identify its contents and source of generation. Used PPE will be disposed of at an off-site landfill.

2.3 USED ACTIVATED CARBON

In the event of a breakthrough and/or end of temporary measure, the used activated carbon will be handled and managed as part of final remedial measure and in accordance with the remediation plans to be prepared at that time. The current plan is to use Site 8 at CBC Gulfport for storage of the used activated carbon. This plan is consistent with previous management of the excavated dioxin contaminated material, which was approved by MDEQ for CBC Gulfport. However, if off-site disposal is required, the used activated carbon will be containerized, sampled and tested per disposal facility permit requirements prior to shipment.