Final Submission

for

Remedial Design
Sites 1 and 2, Phase I
Naval Weapons Industrial Reserve Plant (NWIRP)

Bethpage, New York

Northern Division
Naval Facilities Engineering Command

Contract Number N62472-90-D-1298

Contract Task Order 0212

June 1995

C F BRAUN ENGINEERING CORPORATION

TABLE OF CONTENTS

Design Basis Report

for

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049512/P

DESIGN BASIS REPORT
FOR
REMEDIAL DESIGN
SITES 1 AND 2, PHASE I
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
BETHPAGE, NEW YORK

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT

Submitted to:
Northern Division
Environmental Branch Code 18
Naval Facilities Engineering Command
10 Industrial Highway, Mail Stop #82
Lester, Pennsylvania 19087-1710

Submitted by:
C F Braun Engineering Corporation
661 Andersen Drive
Pittsburgh, PA 15220
CONTRACT NUMBER N62472-90-D-1298
CONTRACT TASK ORDER 0212

JUNE 1995

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PROJECT MANAGER

APPROVED BY:

JOHN J. TREPANOWSKI
PROGRAM MANAGER

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TABLES

FIGURES

1.0 INTRODUCTION

C F Braun Engineering Corporation (C F Braun) has prepared this Design Basis Report in conjunction with the necessary plan drawings and specifications in response to the unilateral Contract Task Order (CTO) 212, a task order under the Comprehensive Long Term Environmental Action Navy-(CLEAN) contract number N 62472-90-D-1298. The scope of work for this CTO is the preparation of necessary plan drawings and specifications to perform the remedial action at the Naval Weapons Industrial Reserve Plant (NWIRP), Bethpage, New York. C F Braun will also provide post-construction award services (PCAs) for the implementation of the remedial action. This Design Basis Report summarizes the information and methodologies used to prepare the plan drawings and specifications.

1.1 SITE BACKGROUND

NWIRP Bethpage is located in Nassau County on Long Island, New York, approximately 30 miles east of New York City. This 108 acre site is bordered on the north, west, and south by the Grumman facilities which covers approximately 605 acres, and, on the east, by a residential neighborhood. The NWIRP is currently listed by NYSDEC as an "inactive hazardous waste site" (#1-30-003B) as is the Northrop Grumman Corporation (#1-30-300A) and the Hooker/RUCO site (#1-30-004) located less than 1/2 mile west of the NWIRP Bethpage.

The NWIRP was established in 1933 and is still active. Since its inception, the primary mission for the facility has been the research prototyping, testing, design engineering, fabrication, and primary assembly of military aircraft.

The facilities at NWIRP include four plants (Nos. 3, 5, and 20, used for assembly and prototype testing; and No. 10, which contains a group of quality control laboratories), two warehouse complexes (north and south), a salvage storage area, water recharge basins, an industrial wastewater treatment plant and several smaller support buildings.

CTO 212 involves providing design documents for the remediation of Site 1 and Site 2. A brief description of each site is presented below.

SITE 1 - FORMER DRUM MARSHALING AREA - This site is located in the middle third of the NWIRP facility and east of Plant 3. It consists of two concrete drum storage pads (no longer active) and an

abandoned cesspool leach field. In addition, this area has been used as a storage area for various types of equipment and heavy materials, including transformers.

SITE 2 - RECHARGE BASIN AREA - This area is located in the northeast corner of the Navy's property and north of Site 1. It contains three recharge basins which currently receive non-contact cooling water. Historically, these basins also received rinse waters from Grumman operations. Also located on this site are the former sludge drying beds which no longer exist and have been filled in. Sludge from the Plant 02 industrial waste treatment facility was dewatered in these beds before being disposed of off site.

1.2 PREVIOUS INVESTIGATION RESULTS

Halliburton NUS conducted the Remedial Investigation, dated May 1992, the Phase 2 Remedial Investigation dated October 1993, subsequent sampling follow-ups in 1993, and the Feasibility Study, dated March 1994, to determine if past industrial practices resulted in adverse impacts to human health or the environment.

The 1992 and 1993 Remedial Investigation Reports and the 1993 Feasibility Study and additional follow-up site sampling determined that PCBs were present at Site 1 and Site 2 above Toxic Substance Control Act (TSCA) action levels. Additionally it was determined that arsenic contamination at Site 1 exists at concentrations which may potentially exceed the Resource Conservation and Recovery Act (RCRA) (40 CFR 261) concentration for determining a characteristic waste. Attachment A contains an excerpt from the Feasibility Study displaying the areas of contamination.

Based on the RI/FS, Proposed Remedial Action Plan (Ref. 2), Halliburton NUS Feasibility Study Report dated March 1994, and the Record of Decision, the remedial action consists of excavation of contaminated soil and off site disposal. PCB contaminated soils above 500 parts per million (ppm) will be removed and incinerated at an EPA approved facility. PCB contaminated soils at concentrations between 10 and 500 ppm will be landfilled. All arsenic contaminated soil at concentrations which result in exceedance of the toxicity characteristic criteria (5.0 mg/l) will be excavated, treated, and disposed.

1.3 REPORT OBJECTIVE AND ORGANIZATION

The objective of this report is to describe the issues that were considered during the preparation of the design documents. This design basis report is organized into four sections. Section 1.0 consists of this brief introduction. Section 2.0 describes the scope of work for the remedial action. Section 3.0 lists the design documents and Section 4.0 provides a summary of the design calculations and methodologies.

2.0 SCOPE OF WORK FOR THE REMEDIAL ACTION CONTRACTOR

2.1 SCOPE OF WORK

There are several areas of PCB contamination and one area of arsenic contamination that require excavation and disposal at an off site facility. The Remedial Action Contractor (RAC) will perform the following Scope of Work at Sites 1 and 2:

Site 1 Excavation and transportation to an off site facility of approximately 1,100 cubic yards of PCB contaminated soil (10 ppm to 500 ppm).
Excavation and incineration at an off site facility of approximately 300 cubic yards of PCB contaminated soil (greater than 500 ppm).
Excavation and transportation to an off site facility of approximately 600 cubic yards of arsenic contaminated soil (RCRA Characteristic Waste).

Site 2 Removal and transportation to an off site facility of approximately 2,600 cubic yards of PCB contaminated soil (10 ppm to 500 ppm).

The RAC will accomplish the above scope of work via the following procedures:

- Preparation of Planning Documents
- Pre-Investigation
- Site Preparation
- Excavation of Contaminated Soils
- Disposal of Contaminated Soil
- Site Restoration
- Permits

The above tasks are discussed in the following sections.

2.2 PLANNING DOCUMENTS

The RAC will prepare and submit for acceptance project planning documents as listed in the SPECSINTACT submittal register and as a minimum include the following:

2.2.1 Work Plan

The RAC will prepare a Work Plan which includes a project description, project objectives, construction schedule, and construction procedures.

2.2.2 Quality Control Plan

The RAC will prepare a Quality Control Plan, which details procedures to be used and personnel responsible for the maintenance of project quality, documentation procedures, a list of subcontracts and a list of definable features of the work. This document will be used to maintain quality, in accordance with the specifications , throughout the duration of the remedial action.

2.2.3 Health and Safety Plan

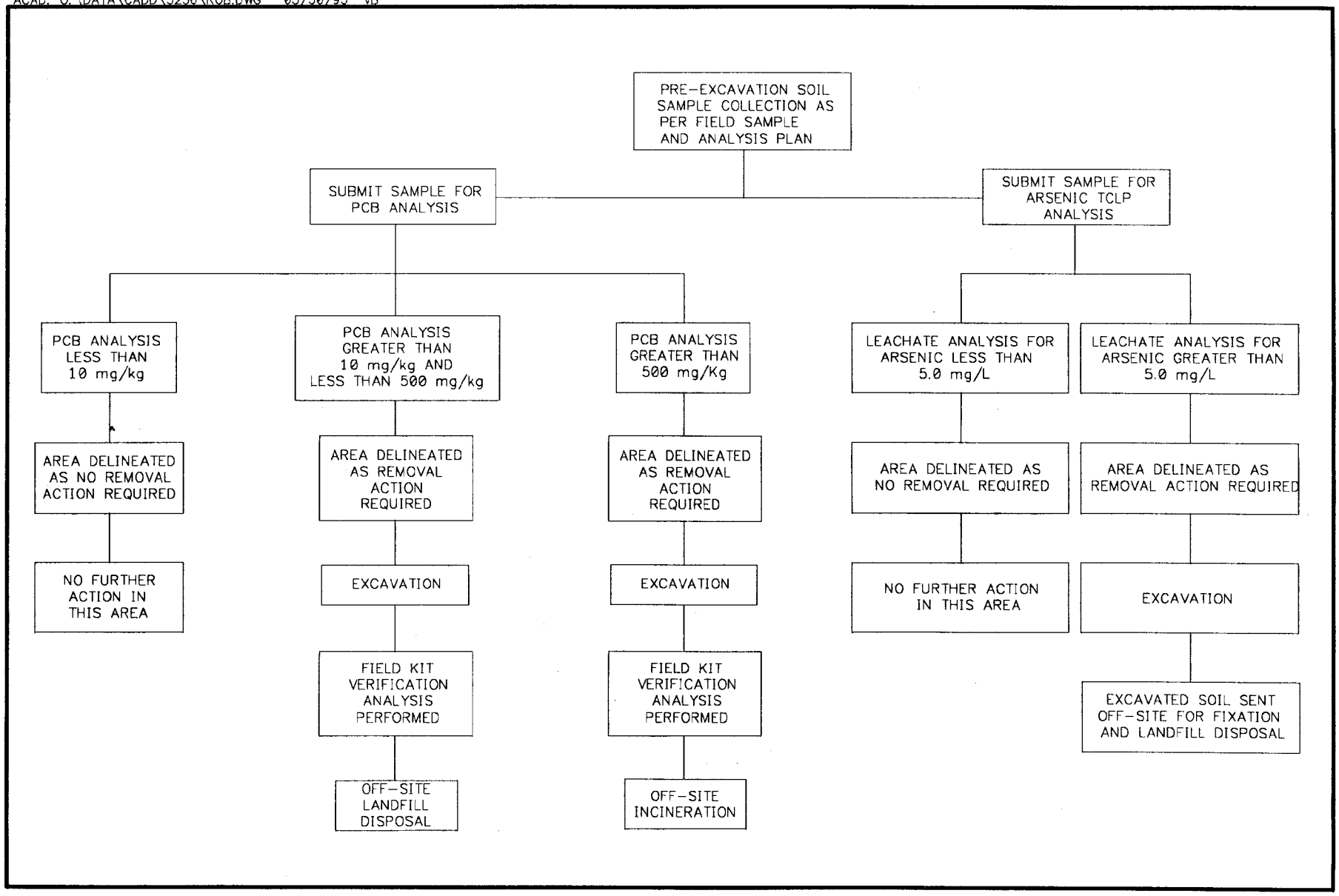
The RAC will prepare a Heath and Safety Plan in accordance with the applicable local, state, and federal regulations and standard which include, but are not limited to , 29 CFR 1910 (Occupational Safety and Health Standards)/ 298 CFR 1926 (Safety and Health Regulations for construction), COE EM-385-1-1 (Corps of Engineers 1992 Safety and Health Requirements Manual), and NIOSH 85-115 (1985 Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities). In addition to the Health and Safety Plan, the RAC will also prepare and submit a Community Air Monitoring Plan (CAMP). An example of this plan is provided in Attachment B.

2.2.4 Sampling and Analysis Plan

The RAC will prepare a pre-excavation Sampling and Analysis Plan in order to determine the limits of the contamination of Site 1 and Site 2. Because the current remediation volumes are based on minimal data, further sampling is warranted to establish the limits of contamination. Figure 2-1 provides a decision flow chart which explains the logic for the sample collection and analysis. The plan shall follow guidance provided in EPA 560/5-85-025 August, 1985. The Sampling and Analysis Plan will also include a Quality Assurance Project Plan (QAPP).

2.2.5 Pre-Investigation Report

The RAC will prepare a report which summarizes the results of the pre-investigation. This report will provide data summary tables, data interpretation, and conclusions. As part of the interpretation/conclusions, the RAC will determine revised remediation volumes.



DECISION FLOW CHART
CTO 212 SITE 1 & 2
NWIRP, BETHPAGE, NY

FIGURE 2-1

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2.2.6 Disposal Plan

The RAC will prepare a Disposal Plan listing disposal facilities which will receive the waste. The plan will describe the methods for handling and transporting the waste to the disposal facilities.

2.2.7 Environmental Protection Plan

The RAC will prepare an environmental protection plan. This plan will describe the necessary procedures that will be utilized to protect the environment.

2.3 PRE-EXCAVATION SAMPLING

As per the RAC Sampling and Analysis Plan, the RAC will conduct sampling at Site 1 and Site 2. Samples will be collected and submitted for analysis. The analysis required and an estimate of the number of samples required is provided in Table 2-1.

The purpose of the sampling at Site 1 will be to refine the volume estimate of PCB contamination in the three designated areas. Additionally, it is necessary to distinguish the quantity of soil contaminated with PCBs at concentrations greater than 500 ppm. Sampling and analysis is also necessary to determine the quantity of soil containing arsenic at concentrations above minimum RCRA characteristic waste levels. Figure 2-2 provides the proposed sample locations.

The purpose of the sampling at Site 2 will be to refine the volume estimate of PCB contamination in the designated area. Figure 2-3 provides proposed sample locations.

2.4 SITE PREPARATION

Prior to the start of excavation activities, the RAC will mobilize his equipment and any required office trailers and support utilities to a location at the direction of the Navy. The RAC will implement all appropriate and necessary erosion and sedimentation control measures. The RAC will initiate the construction of a soil collection staging area to collect the contaminated soil in one location for loading onto vehicles for transport to the appropriate disposal facility. The RAC will construct a decontamination area adjacent to the staging area for the purpose of removing site contaminants from the hauling vehicles prior to exiting the work area and entry onto public roadways. The RAC will secure the area through the installation of fencing, gates, locks etc. to protect the site from intrusion by the public.

TABLE 2-1

SUMMARY OF ANALYSIS, BOTTLE REQUIREMENTS PRESERVATION REQUIREMENTS AND HOLDING TIMES

PRE-EXCAVATION SOIL SAMPLES, SITES 1 AND 2

NWIRP BETHPAGE, NEW YORK

Analytical Parameter	Analytical Methodology	Number of Samples	Container TYPE	Preservation and Holding Time
PCB	SW-846/8080	50	8-oz. glass jar	7 days extract; 40 days analysis
TCLP Arsenic	SW-846/1311	15	(2) 8-oz. glass jars	7 days extract; 6 months analysis

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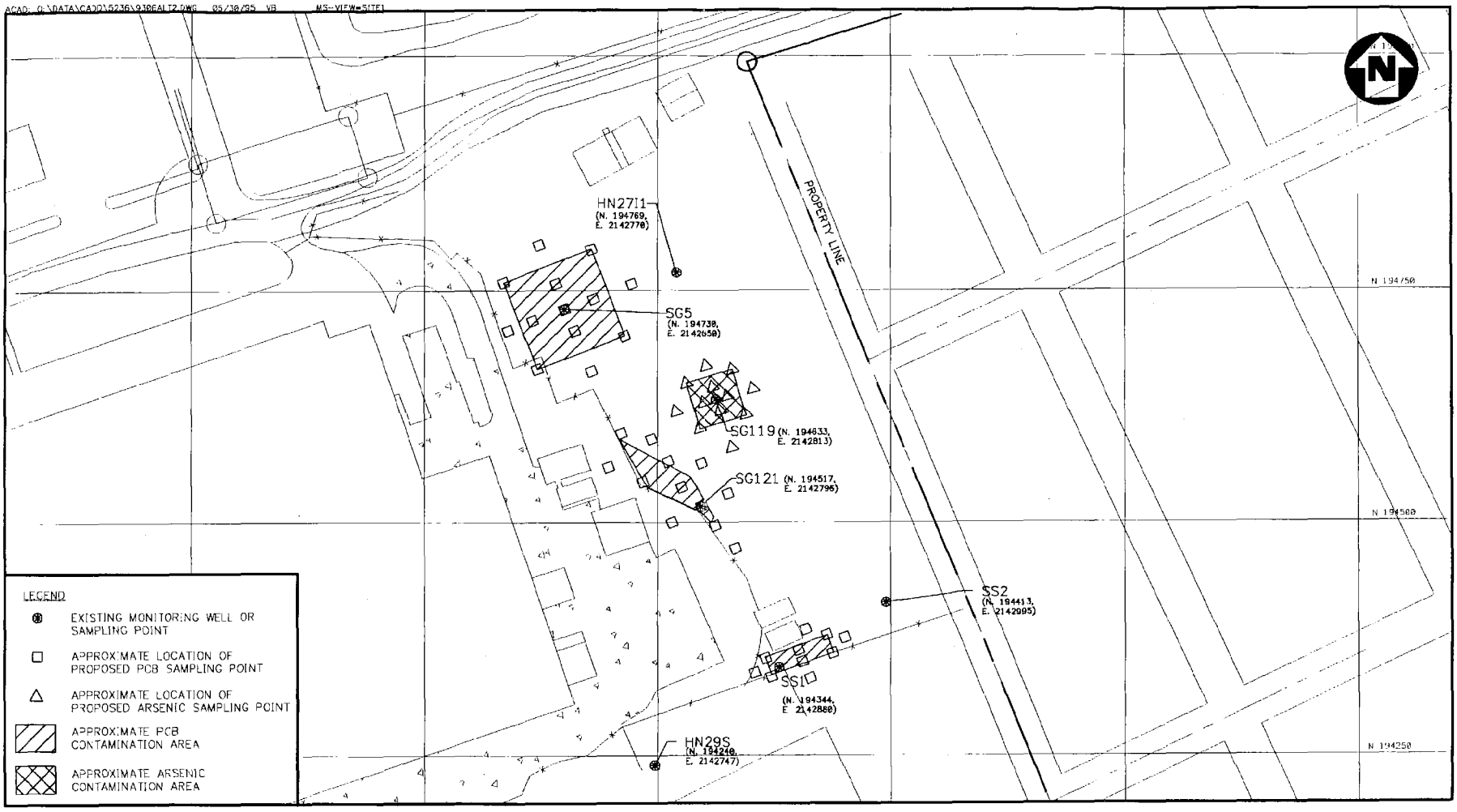

SITE 1
PRE-EXCAVATION SAMPLING PLAN
NWIRP, BETHPAGE, NY

FIGURE 2-2

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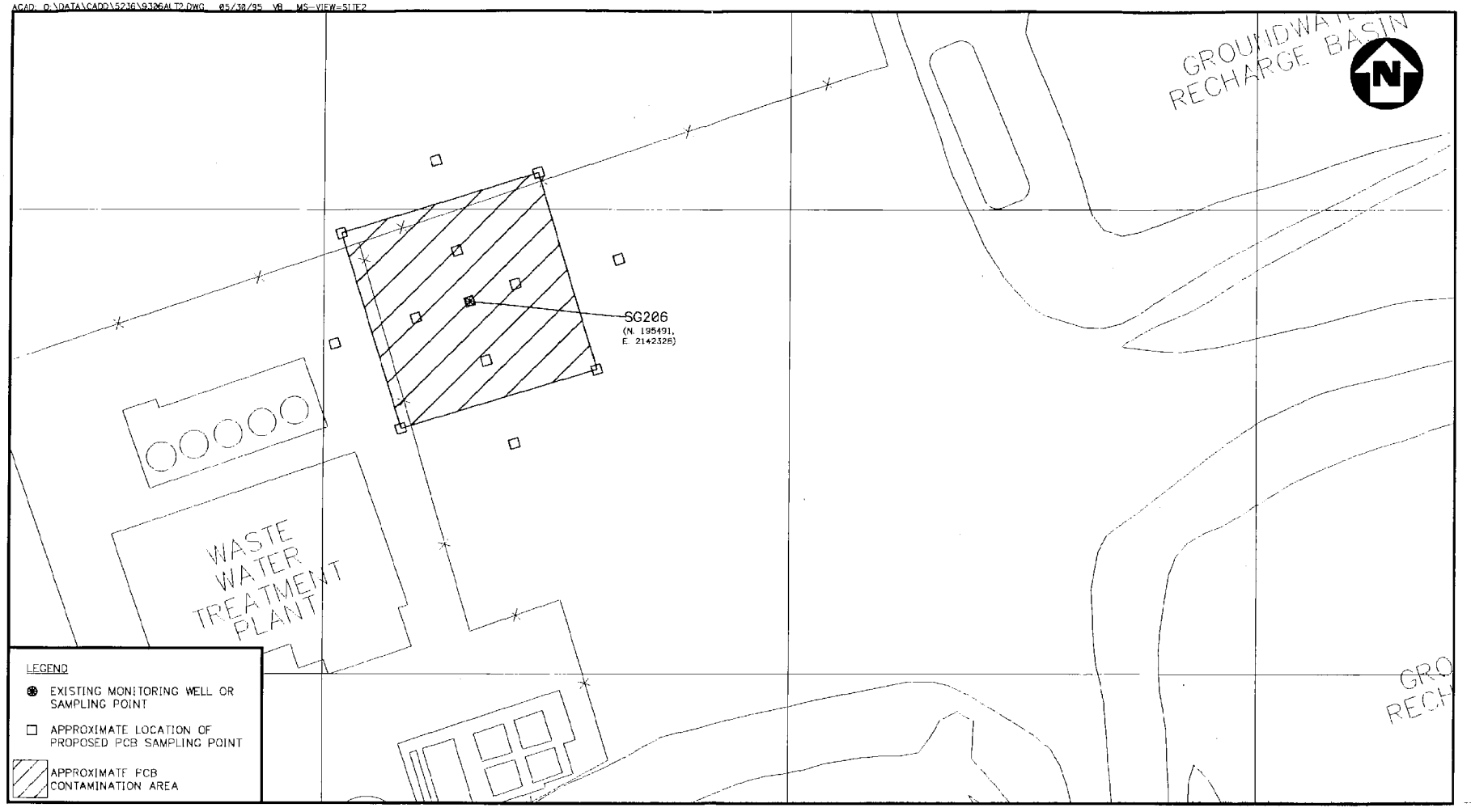

SITE 2
PRE-EXCAVATION SAMPLING PLAN
NWIRP, BETHPAGE, NY

FIGURE 2-3

C.F. BRAUN

2.5 EXCAVATION OF CONTAMINATED SOILS

The RAC will begin excavation activities upon completion of the mobilization activities, verification of the contamination limits and approval of the previously mentioned plan.

The RAC will excavate the PCB contaminated soil in two separate operations to separate the soils into the two PCB action levels (i.e., greater than 500 ppm and between 10 ppm and 500 ppm). Field analysis test will be used to verify the levels of contamination for segregation purposes. The arsenic contaminated soil will be excavated in a separate operation. The RAC shall perform the excavation so that migration of fugitive dust from the site to the surrounding area. In the event of dry dusty conditions, a water mist will be used to suppress dust during removal activities. The RAC shall conduct an air monitoring program to verify that fugitive dust emissions remain within acceptable levels. Upon completion of the excavation, verification samples will be taken by C F Braun in accordance with the Post-Removal Sampling and Analysis Plan (prepared by C F Braun in order to determine the effectiveness of the removal operations. Once it has been determined that excavation activities have been completed, the RAC will survey the excavation.

2.6 DISPOSAL OF CONTAMINATED SOILS

The contaminated soils will be transported to EPA approved off site disposal facilities for the following disposal/treatment:

Item	Action	Statute
PCB's greater than 500 ppm	Incineration -	40 CFR 761
PCB's greater than 10 ppm less and than 500 ppm	Landfill -	40 CFR 761
Arsenic	Landfill -	40 CFR 262 - Federal
		6 NYCFR 372 - New York State

2.7 SITE RESTORATION

The site is currently covered by soil, aggregate and a mixture of aggregate, soil and debris. The excavated areas will be backfilled with borrow material to match pre-excavation grades. Any disturbed areas will be graded to pre-construction conditions. Topsoil, seed and mulch will not be installed.

2.8 PERMITS

The required permits for this work are discussed under a separate document. In accordance with promulgated rules of the State of New York an approved Erosion and Sedimentation Control Plan are not required as the area of disturbance is under 5 acres.

3.0 DESIGN DOCUMENTS

The work described in Section 2.0 will be performed in accordance with the design package as approved by the Navy. The following is a listing of specifications and design drawings:

Specifications

Division 1 General Requirements

01010 General Paragraphs

Division 2 Site Work

02076 Removal and Disposal of Polychlorinated Biphenyls Contaminated Soil

02095 Removal and Disposal of Arsenic Contaminated Soil

02220 General Excavation, Filling and Backfilling

Drawings

Sheet Number	Title Sheet
T-1	Title Sheet
C-1	Remedial Design - Sites 1 and 2, Phase 1 - Site Plan
C-2	Existing Underground Utilities
C-3	Construction Details and Erosion and Sedimentation Control Notes

A project documentation checklist is provided in Table 3-1. This table provides information on the necessary documents which need to be obtained, completed, and filed in order to be in regulatory compliance.

TABLE 3-1

PROJECT DOCUMENTATION CHECKLIST, SITE 1 AND SITE 2
BETHPAGE, NEW YORK

Activity	Type of Permit/License/ Certification	Issuing Agency	Applicability	Reason
Hazardous Waste Generation	EPA Identification Number	State	Applicable	The generator site must obtain an EPA identification number prior to handling or transporting any TSCA or hazardous waste.
Waste Transport (PCB-contaminated waste)	Form 8700-22	EPA or State	Applicable	Offsite transport of PCB-contaminated soil is regulated under 40 CFR 761 and 6 NY CRR 371.
Waste Transport (Arsenic-contaminated waste)	Form 8700-22	State	Applicable	Offsite transport of arsenic-contaminated soil is regulated under 6 NY CRR 372.
Disposal of PCB- and arsenic-contaminated soil	Notification of Authorization of Disposal, Certification of Disposal	State	Applicable	Disposal of PCB- and arsenic-contaminated soil is regulated by 40 CFR 761 and 6 NY CRR 372.

4.0 DESIGN CALCULATIONS AND METHODOLOGY

This section discusses methodologies used to prepare the design documents.

4.1 LOCATION

The soil, ground water and surface sample locations identified in the Feasibility and Remedial Investigation Studies performed by C F Braun were surveyed by a Professional Land Surveyor. The survey information was used to locate the sample points and prepare a site drawing for the project. The points are tied to an arbitrary coordinate system and two fixed monitoring well point coordinates established by the surveyor. The monitoring wells are numbered HN 27I 1 and HN 29S. The 1966 Grumman Quadrangle as-builts were used for the location of the background facilities shown on the plan sheets.

4.2 CONTAMINATION EXCAVATION LIMITS

The points of contamination were evaluated during the design by level of contamination and by proximity to each other. The limits of the action levels (greater than 500 ppm, greater than 10, and less than 500 ppm) were estimated in order to establish soil volumes. Attachment C provides the calculations of the estimated soil volumes for each contaminant action level.

4.3 STAGING AREA

The staging area was located to accommodate the excavation and loading sequencing assumed to be used by the RAC. The excavation production was estimated to be greater than the removal and hauling production by a factor of two, therefore the staging area was sized to store more soil than may be removed and hauled in one day. The staging area containment is designed to contain a 25 year - 24 hour storm event per 40 CFR 264.251. Water collected in the staging area containment will be disposed of by the RAC in the on-site waste water treatment plant. Attachment D provides the calculation of the 25 year storm and the sizing of the staging area containment.

4.4 CONSTRUCTION COST ESTIMATE

A construction cost estimate is included under a separate report.

REFERENCES

HNUS (Halliburton NUS) 1992. Remedial Investigation Report, Comprehensive Long Term Environmental Action Navy (CLEAN) Contract. Naval Weapons Industrial Reserve Plant (NWIRP), Bethpage, New York Contract N6472-90-D-1298, CTO 0003 May.

HNUS (Halliburton NUS) 1993. Phase 2 Remedial Investigation Report, Comprehensive Long Term Environmental Action Navy (CLEAN) Contract. Naval Weapons Industrial Reserve Plant (NWIRP), Bethpage, New York Contract N6472-90-D-1298, CTO 0089 July.

HNUS (Halliburton NUS) 1994. Feasibility Study Report, Comprehensive Long Term Environmental Action Navy (CLEAN) Contract. Naval Weapons Industrial Reserve Plant (NWIRP), Bethpage, New York Contract N6472-90-D-1298, CTO 0089 March.

Design Drawings

for

Remedial Design
Sites 1 and 2, Phase I
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Bethpage, New York

Northern Division
Naval Facilities Engineering Command

Contract Number N62472-90-D-1298

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049512/P

DESIGN DRAWINGS
FOR
REMEDIAL DESIGN
SITES 1 AND 2, PHASE I
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
BETHPAGE, NEW YORK

COMPREHENSIVE LONG-TERM
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JUNE 1995

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APPROVED BY:

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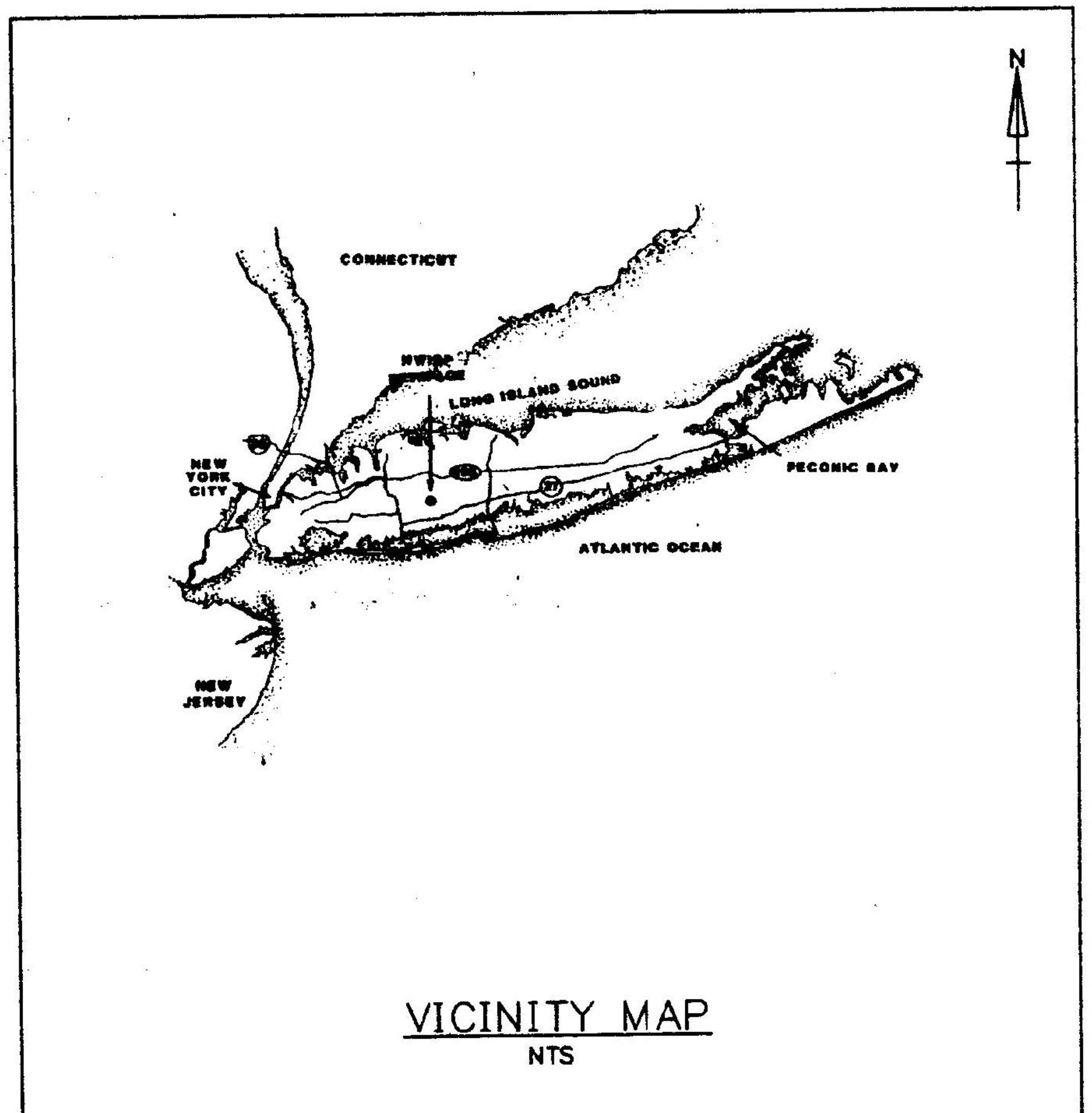
PROGRAM MANAGER

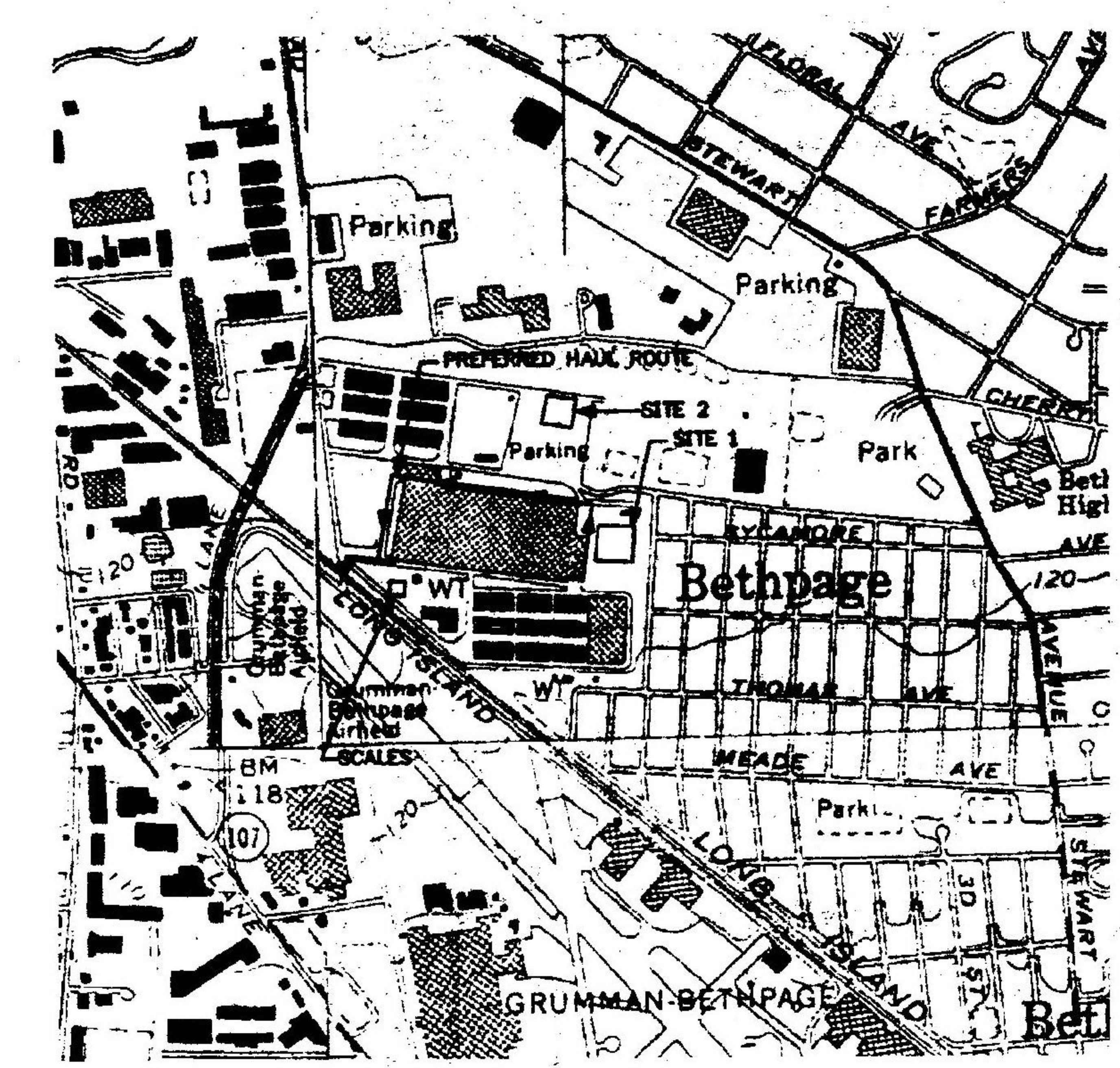
REMEDIAL DESIGN
SITES 1 AND 2, PHASE I
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
BETHPAGE, NEW YORK
CONSTRUCTION CONTRACT No. N62472-94-C-0398



VICINITY MAP
NTS

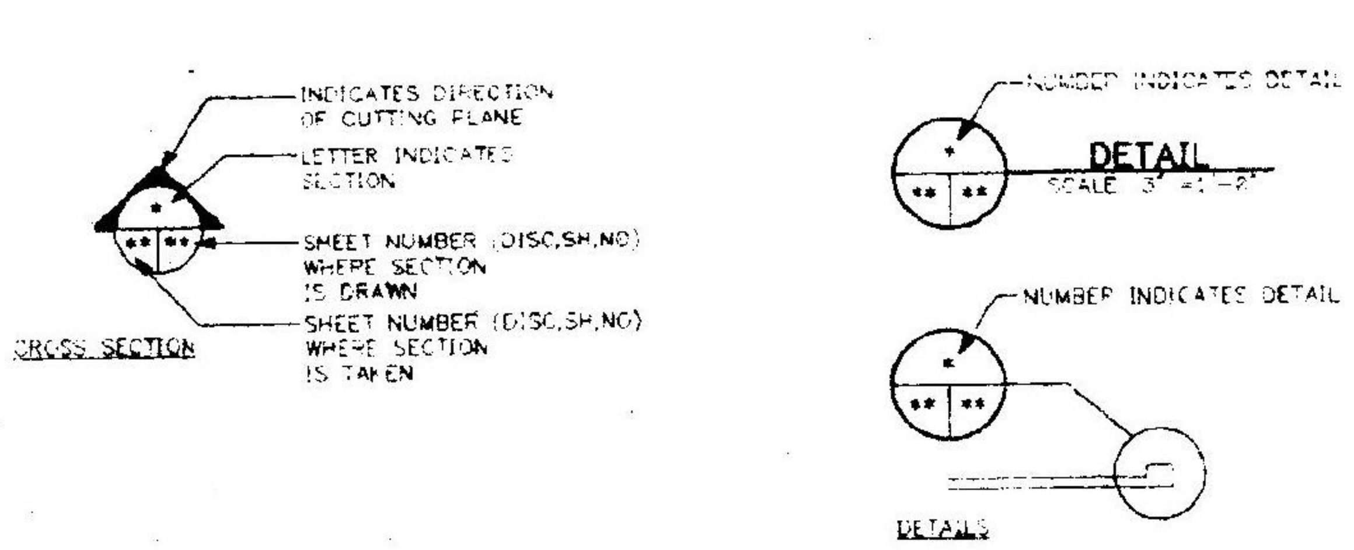
DRAWING INDEX

SHEET No.	DRAWING TITLE
T-1	TITLE SHEET
C-1	SITE PLAN
C-2	EXISTING UNDERGROUND UTILITIES
C-3	CONSTRUCTION DETAILS AND EROSION SEDIMENT CONTROL NOTES



SITE LOCATION MAP

REFERENCE SYMBOLS



GENERAL NOTES

1. ALL WORK FOR THIS PROJECT SHALL BE IN STRICT ACCORDANCE WITH THE CONTRACT DRAWINGS AND SPECIFICATIONS. ALL METHODS OF WORK FOR THIS PROJECT SHALL ALSO COMPLY WITH FEDERAL, STATE OF NEW YORK AND LOCAL ORDINANCES, UNLESS OTHERWISE NOTED IN THE CONTRACT DRAWINGS AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING ADEQUATE EROSION AND SEDIMENTATION CONTROL MEASURES DURING THE COURSE OF CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LIMITING ALL WORK TO THE IMMEDIATE PROJECT AREA. ALL AREAS DISTURBED BY THE CONTRACTOR THAT ARE OUTSIDE THE LIMITS OF WORK SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE GOVERNMENT.
4. FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS.
5. BACKGROUND TOPOGRAPHY DIGITIZED FROM 1"=100' NWIRP NOS TOPOGRAPHIC MAPS.
6. THE CONTRACTOR SHALL PERFORM SAMPLING PRIOR TO THE START OF EXCAVATION ACTIVITIES TO DETERMINE THE EXTENT OF THE WORK. THE CONTRACTOR SHALL FIELD STAKE THE LOCATION OF ALL AREAS TO BE EXCAVATED OR DISTURBED PRIOR TO ACTUAL WORK. THE FIELD LOCATIONS MUST BE REVIEWED BY THE CONTRACTING OFFICER PRIOR TO EXCAVATION.
7. MAXIMUM PROTECTION SHALL BE PROVIDED FOR EXISTING UTILITIES WHICH ARE TO REMAIN IN SERVICE. CONTRACTOR SHALL PROVIDE ALL TEMPORARY SERVICE. THE CONTRACTOR SHALL COORDINATE WITH THE NWIRP PRIOR TO THE START OF EXCAVATION TO DETERMINE THE LOCATION OF UNDERGROUND UTILITIES.
8. THE CONTRACTOR SHALL THOROUGHLY INSPECT THE SITE PRIOR TO CONSTRUCTION TO VERIFY EXISTING SITE CONDITIONS.
9. ALL AREAS SHALL BE GRADED TO DRAIN.
10. THE CONTRACTOR'S STAGING AND DECONTAMINATION AREAS ARE TO BE APPROVED BY THE CONTRACTING OFFICER AND SHALL BE LOCATED TO MINIMIZE CONFLICTS WITH BASE VEHICULAR TRAFFIC AND/OR PEDESTRIAN FLOW.
11. VERIFICATION SAMPLING WILL BE PERFORMED BY THE GOVERNMENT AND SITE RECONSTRUCTION EFFORTS ARE NOT TO BE PERFORMED UNTIL CONFIRMATION OF REMOVAL HAS BEEN ACHIEVED.

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ACAD D:\DATA\CADD\5236\9503270I.DWG 05/26/95 VB

C.F. BRAUN
DSGN: A. BERENBROK DR: T. D'ALESSANDRIS CHK: R.F. SIMCIK
SUPV: M. SPERANZA CH ENG: S. HUGHES
SUBMITTED BY: J. TEPANDRSKI (FIRM MEMBER) PROGRAM MANAGER (TITLE) (DATE)
NOR DIV / DM / FPC — HD / HD / DIR
OFFICER IN CHARGE
APPROVED DATE

REV.	DESCRIPTION	PREP BY	DATE	APPRVD

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND
NORTHERN DIVISION
LESTER, PENNSYLVANIA
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT, BETHPAGE, NY
REMEDIAL DESIGN – SITES 1 AND 2, PHASE I
TITLE SHEET
APPROVED / DATE / NORTHDIV FOR COMMANDER, NAVFAC

SEAL AREA: STATE OF NEW YORK — LICENSED PROFESSIONAL ENGINEER — No. 071391-1

SAT TO / DATE
CODE I.D. NO.
SCALE: AS SHOWN
SPEC. NO. 04-94-0398
CONSTR. CONTR. NO. N62472-94-C-0398
NAVFAC DRAWING NO. 2175497
SHEET 1 OF 4
SIZE: D DIS. SH. NO. T-1

LEGEND

- PROPERTY LINE
- EXISTING FENCE
- PCB AREA
- ARSENIC AREA
- EXISTING CONCRETE
- STAGING — STAGING AREA
- DECON — DECONTAMINATION AREA
- SS - SURFACE SAMPLE
- SB - SOIL BORING
- SG - SOIL GAS SAMPLE
- SBD — STRAW BALE DIKE
- HN29S — MONITORING WELL LOCATION
- SAMPLE POINT

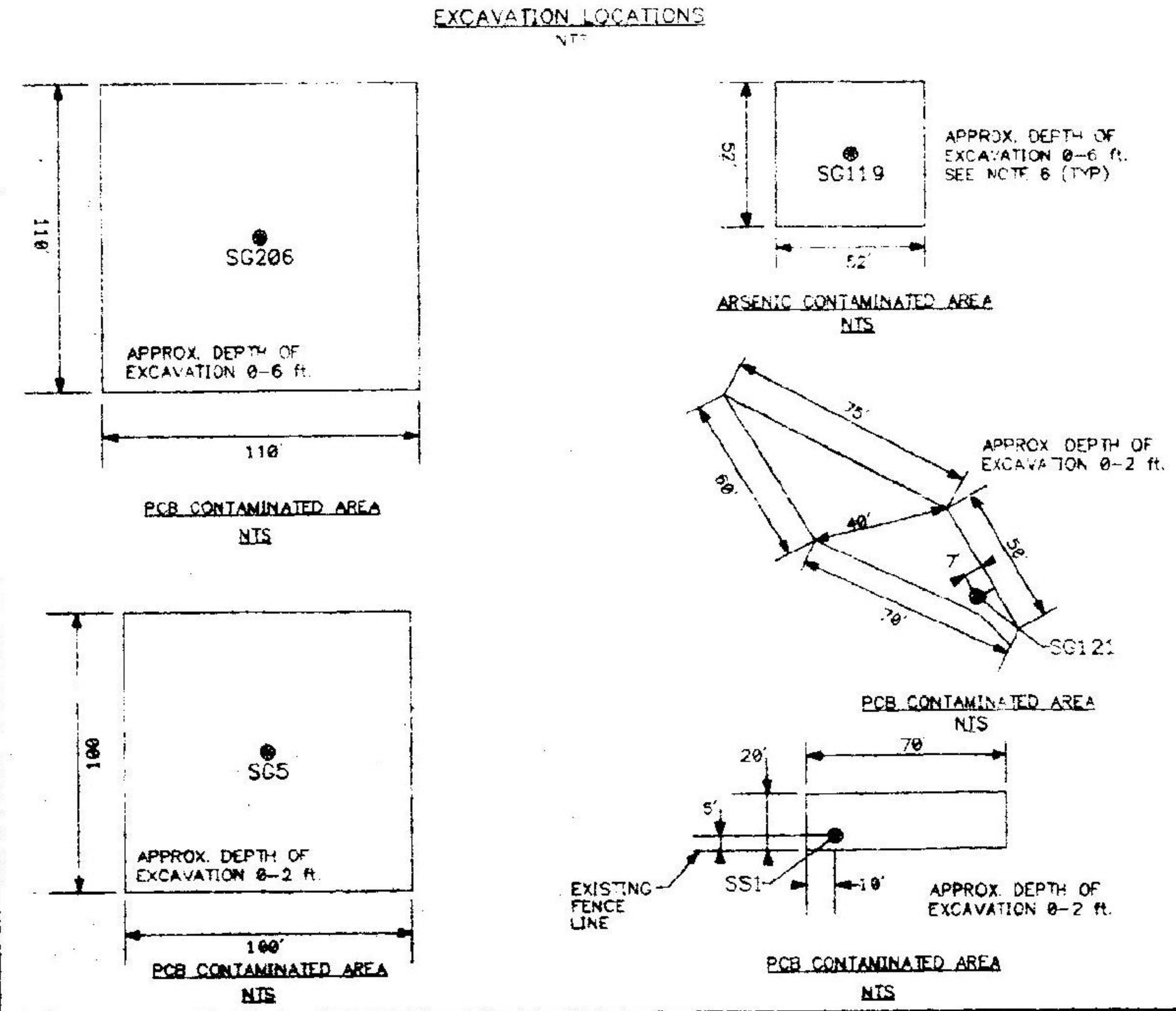
NOTES:

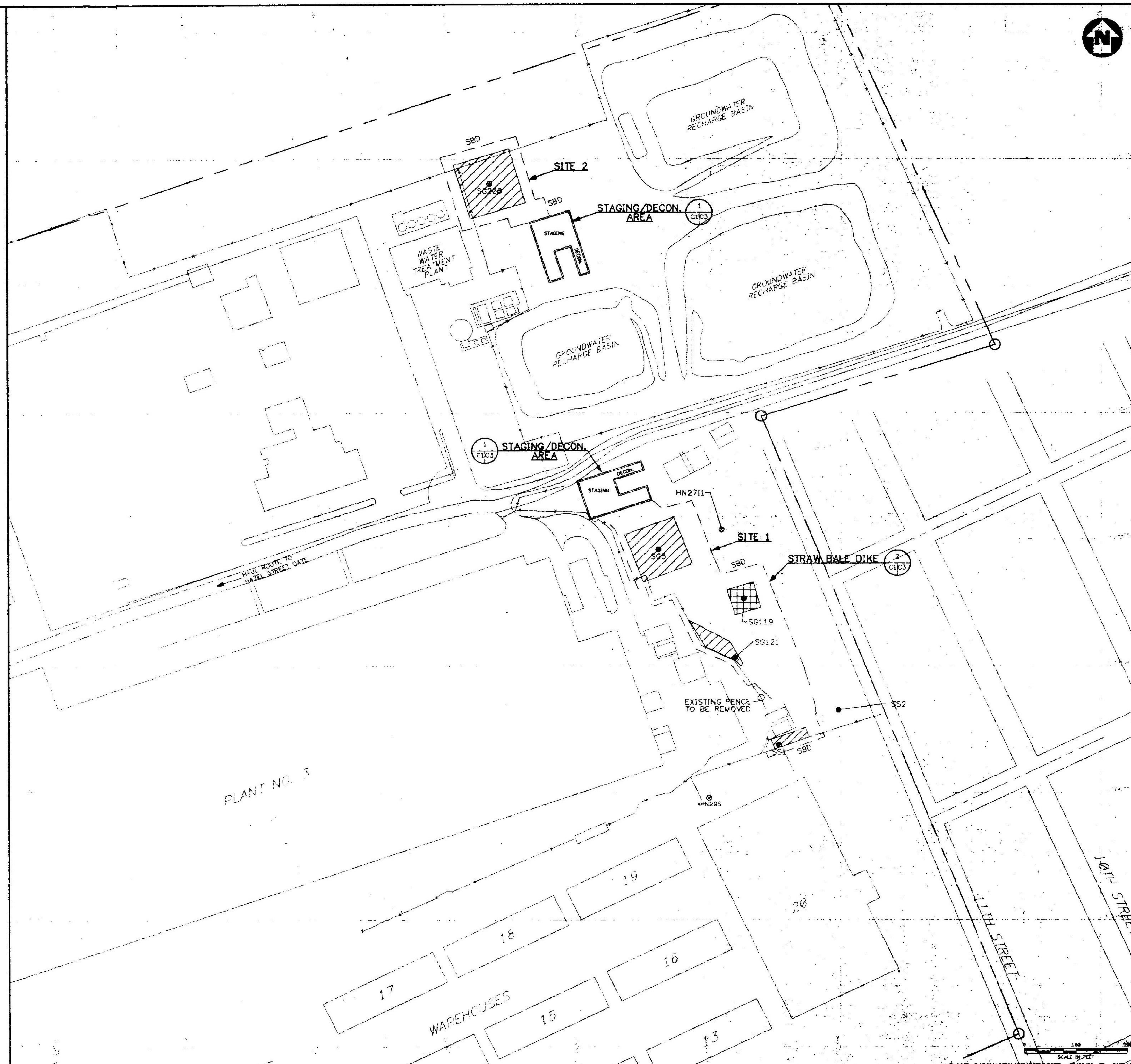
1. STAGING AND DECONTAMINATION AREAS SHOWN ARE APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL ADJUST LOCATIONS BASED UPON APPLICABLE TRAFFIC PATTERNS.
2. REMOVE EXISTING FENCE ADJACENT TO EXCAVATION AREA. LIMIT OF FENCE REMOVAL TO BE DETERMINED BY NAVFAC.
3. INSTALL STRAW BALE DIKE SYSTEM IN THE APPROXIMATE LOCATIONS SHOWN. THE GROUNDWATER RECHARGE BASINS ARE TO BE DIKED WITH STRAW BALES AS APPLICABLE FOR PROTECTION FROM SURFACE RUNOFF. SEE SHEET No. C-3 FOR EROSION & SEDIMENT CONTROL NARRATIVE.
4. MONITORING WELLS HN29S AND HN27I1 ARE THE BENCHMARKS FOR THE REFERENCED COORDINATE SYSTEM. BOTH ARE WELL CASINGS ABOVE GROUND SURFACE.
5. ALL EXISTING STORM SEWER INLETS ARE TO BE DIKED PER THE DETAIL SHOWN ON SHEET No. C-3.
6. DEPTHS OF EXCAVATION SHOWN ARE APPROXIMATE. ACTUAL DEPTH IS TO BE DETERMINED BY THE CONTRACTOR THROUGH THE SAMPLING PLAN.
7. MONITORING WELL POINTS ARE FIXED COORDINATES AND CAN BE LOCATED IN THE FIELD. THESE WELLS SHALL BE DEEMED AS TEMPORARY BENCH MARKS.

REFERENCE COORDINATES		
POINT NUMBER	NORTH	EAST
HN29S	194,240	2,142,747
HN27I1	194,709	2,142,770
SG206	195,451	2,140,128
SG121	194,517	2,142,[illegible]96
SG119	194,633	2,142,81[illegible]
SS1	194,344	2,140,86[illegible]
SS2	194,413	2,142,[illegible]45
SG5	194,[illegible]	2,142,650

EXCAVATION LOCATIONS

NTS





C.F BRAUN	DSGN A BERENBROK DR T D'ALESSANDRIS CHK R.F. SIMCIK; SUPV. M SPERANZA CH ENG S. HUGHES; SUBMITTED BY J. TREPANOWSKI; OFFICER IN CHARGE
REV. DESCRIPTION PREP BY DATE APPRVD	
DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND	NORTHERN DIVISION
LESTER, PENNSYLVANIA	NAVAL WEAPONS INDUSTRIAL RESERVE PLANT, BETHPAGE, NY
REMEDIAL DESIGN - SITES 1 AND 2, PHASE I	SITE PLAN
APPROVED / DATE	NORTHDIV FOR COMMANDER, NAVFAC
SCALE	AS SHOWN
SPEC NO	04-93-0397
CONSTR. CONTR. NO.	N62472-93-C-0398
NAVFAC DRAWING NO.	2175498
SHEET	2 OF 4
SIZE	D
DRAWING NO.	C-1

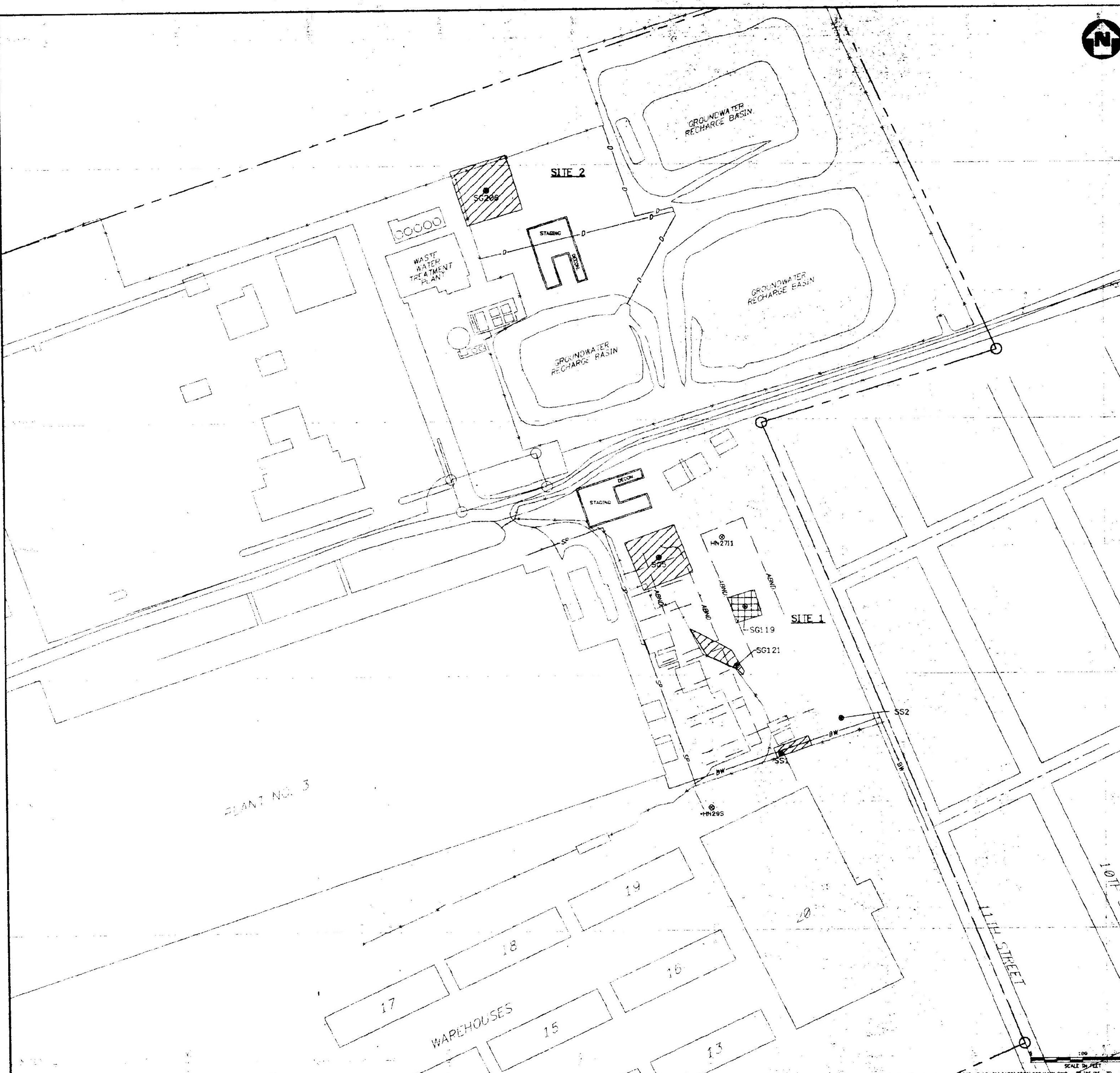
NYSDEC 063292

LEGEND

Symbol	Description
— — —	PROPERTY LINE
· · ·	EXISTING FENCE
(hatched)	PCB AREA
(grid)	ARSENIC AREA
(stippled)	EXISTING CONCRETE
STAGING	STAGING AREA
DECON	DECONTAMINATION AREA
SS	SOIL SAMPLE
SB	SOIL BORING
SG	SOIL GAS SAMPLE
—BW—	BETHPAGE WATER
—D—	DRAIN LINE
—SP—	SPRINKLER LINE
—ABND—	ABANDONED LEACH FIELD
⊗ HN29S	MONITORING WELL LOCATION
●	SAMPLE POINT

NOTES

1. STAGING AND DECONTAMINATION AREAS SHOWN ARE APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL ADJUST LOCATIONS BASED UPON APPLICABLE TRAFFIC PATTERNS.
2. REMOVE EXISTING FENCE ADJACENT TO EXCAVATION AREA. LIMIT OF FENCE REMOVAL TO BE DETERMINED BY THE GOVERNMENT.
3. INSTALL STRAW BALE DIKE SYSTEM IN THE APPROXIMATE LOCATIONS SHOWN. THE GROUNDWATER RECHARGE BASINS ARE TO BE DIKED WITH STRAW BALES AS APPLICABLE FOR PROTECTION FROM SURFACE RUNOFF. SEE SHEET No. C-3 FOR EROSION & SEDIMENT CONTROL NARRATIVE.
4. MONITORING WELLS HN29S AND HN2711 ARE THE BENCHMARKS FOR THE REFERENCED COORDINATE SYSTEM. BOTH ARE WELL CASING [illegible] ABOVE GROUND SURFACE.
5. ALL EXISTING STORM SEWER INLETS ARE TO BE DIKED PER THE DETAIL SHOWN ON SHEET No. [illegible]



REV.	DESCRIPTION	PREP BY / DATE / APPRVD

C.F. BRAUN

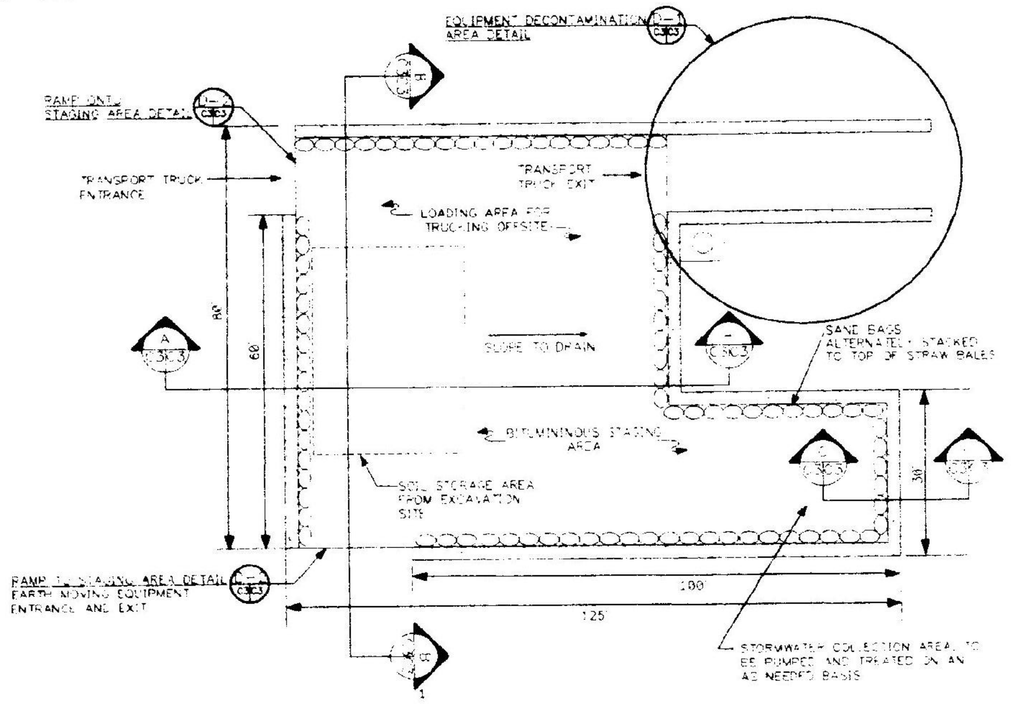
DSGN. A. BERENBROK | DR. T.D. ALESSANDRIS | CHKD. R.F. SIMCIK
SUBMITTED BY: M. SPERANZA | CH ENG. S. HUGHES
OFFICER IN CHARGE
APPROVED

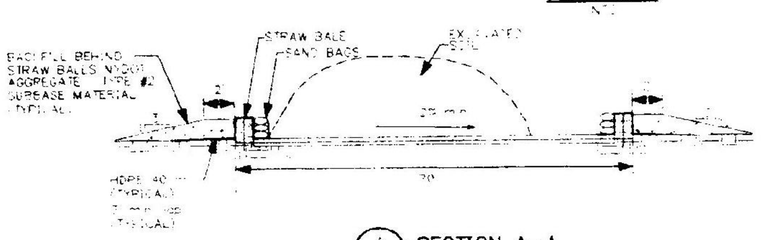
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NORTHERN DIVISION
LESTER
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
BETHPAGE, NY
REMEDIAL DESIGN – SITES 1 AND 2, PHASE I
EXISTING UNDERGROUND UTILITIES
APPROVED | DATE | NORTHDIV FOR COMMANDER, NAVFAC

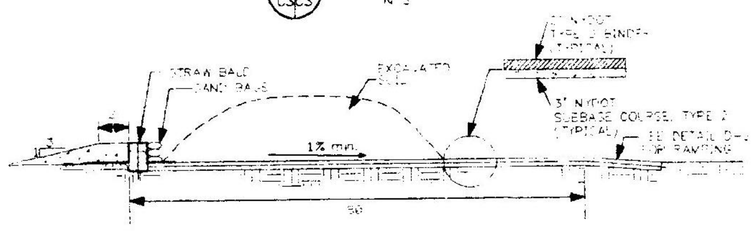
SEAL AREA
STATE OF NEW YORK · LICENSED PROFESSIONAL ENGINEER

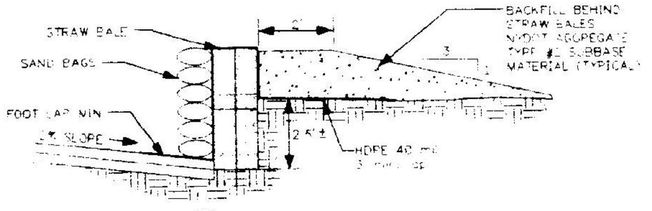
SAT TO	DATE
CODE I.D. NO.	
SCALE	AS SHOWN
SPEC. NO.	04-93-0397
CONSTR. CONTR. NO.	N62472-93-C-0398
NAVFAC DRAWING NO.	2175499
SHEET	3 OF 4
SIZE	D
DIS. SH. NO.	C-2

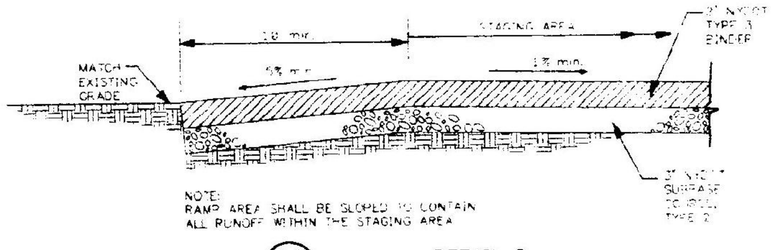
NYSDEC 063293

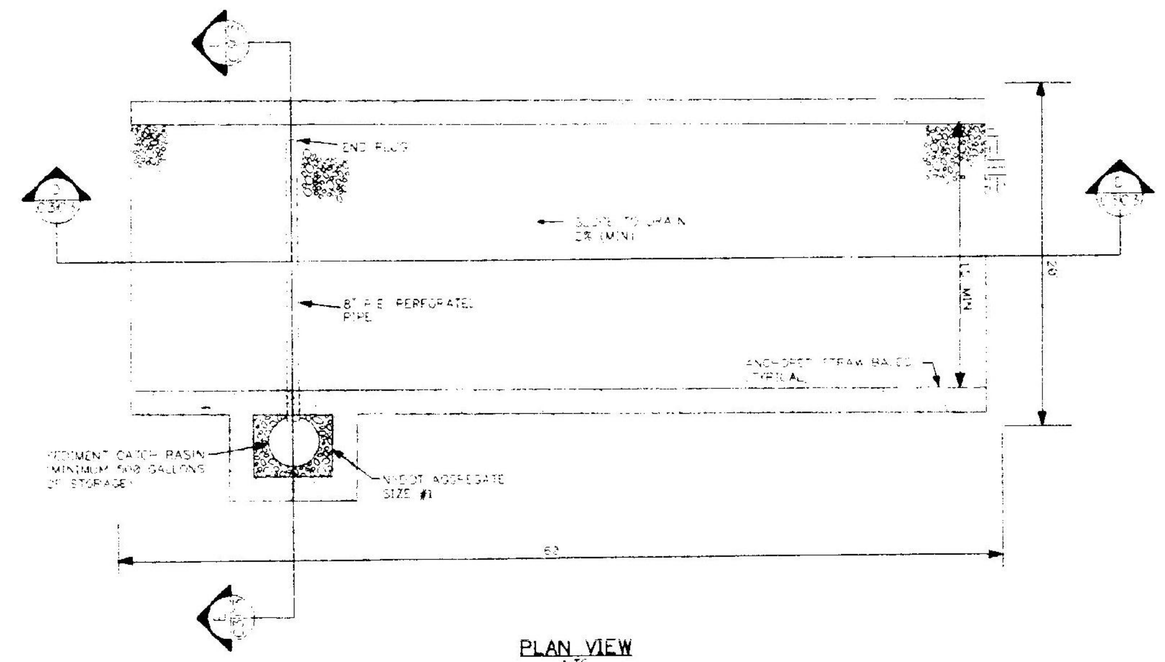


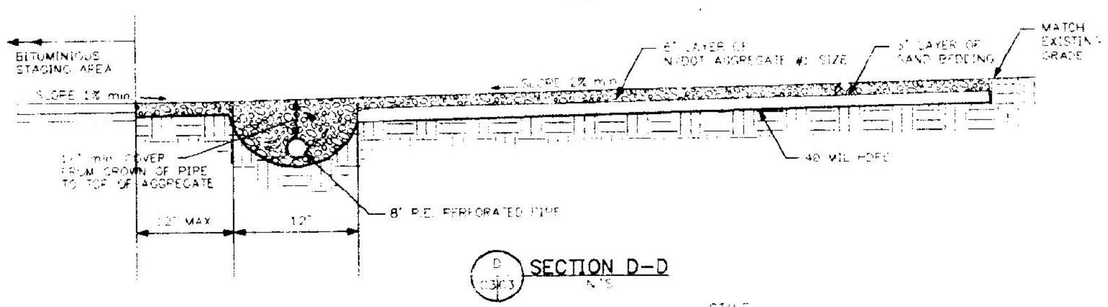


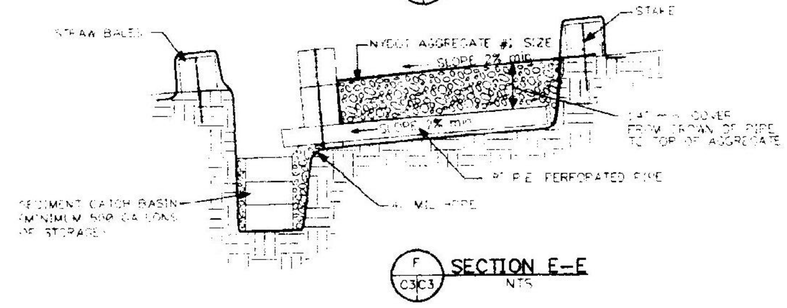


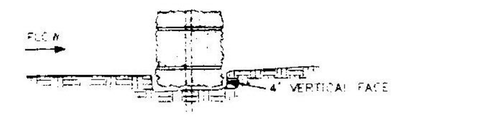


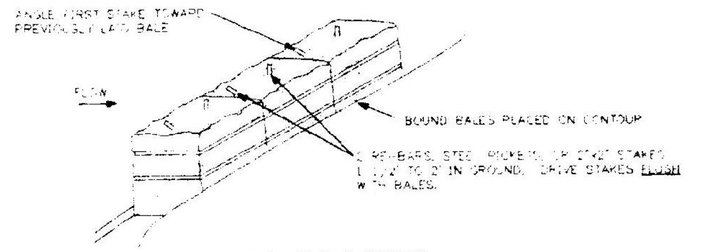


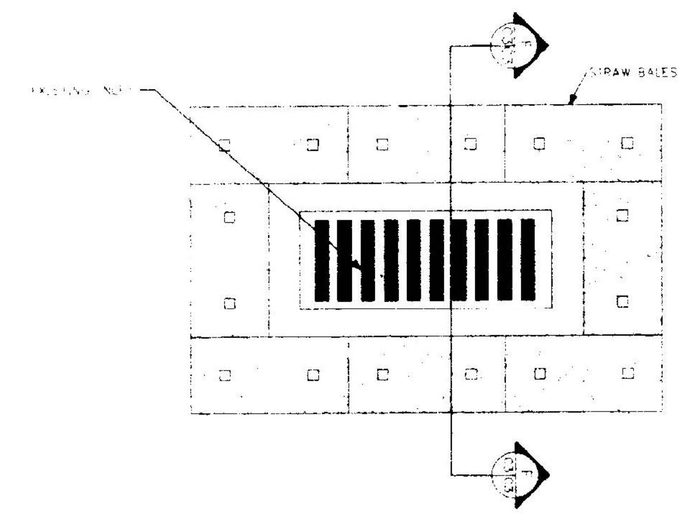


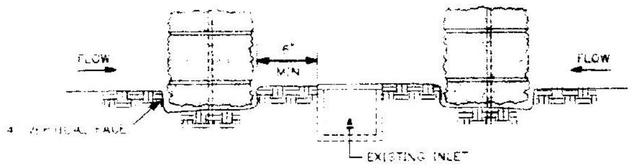












NOTE

1. THIS PLAN DETAIL OUTLINES THE GENERAL SHAPE AND TRAFFIC PATTERN TO MINIMIZE CONTAMINATION OF AREAS BEYOND THE WORK AREA
2. COVER SOIL STOCKPILE WITH PLASTIC SHEETING TO MINIMIZE WIND AND WATER EROSION
3. THE LOADING AREA FOR TRANSPORT TRUCKS SHALL ACCOMODATE THE MOVEMENTS OF A WB-50 DESIGN VEHICLE
4. THE ENTIRE STAGING AND DECONTAMINATION AREA SHALL BE EXCAVATED, DECONTAMINATED AND PROPERLY DISPOSED OF AFTER THE COMPLETION OF CONSTRUCTION ACTIVITIES

PLAN VIEW

NTS

SECTION A-A

A C3C3

NTS

SECTION B-B

B C3C3

NTS

SECTION C-C

C C3C3

NTS

NOTE:
RAMP AREA SHALL BE SLOPED TO CONTAIN ALL RUNOFF WITHIN THE STAGING AREA

DETAIL 2
RAMP ONTO STAGING AREA

D-2 C3C3

NTS

STAGING AREA

1 C1C3

NTS

PLAN VIEW

NTS

SECTION D-D

D C3C3

NTS

SECTION E-E

E C3C3

NTS

DETAIL 1
EQUIPMENT DECONTAMINATION AREA

D-1 C3C3

NTS

EROSION & SEDIMENTATION CONTROL PLAN NOTES

1. THE RAC SHALL CONSTRUCT ALL EROSION AND SEDIMENT CONTROL MEASURES PER THESE EROSION AND SEDIMENT CONTROL NOTES PRIOR TO BEGINNING ANY EARTH DISTURBANCES. MINOR SEDIMENT CONTROL DEVICE LOCATION ADJUSTMENTS MAY BE MADE IN THE FIELD. THE RAC SHALL ENSURE THAT ALL RUNOFF FROM DISTURBED AREAS IS DIRECTED TO THE SEDIMENT CONTROL DEVICES, AND SHALL NOT REMOVE ANY EROSION OR SEDIMENT CONTROL MEASURE WITHOUT PRIOR PERMISSION FROM THE GOVERNMENT.

2. THE RAC SHALL PROTECT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS TO PREVENT THE DISPOSITION OF MATERIALS ONTO PUBLIC ROADS. ALL MATERIAL DEPOSITED ONTO PUBLIC ROADS SHALL BE REMOVED IMMEDIATELY.

3. THE RAC SHALL INSPECT DAILY AND MAINTAIN CONTINUOUSLY THE EFFECTIVE OPERATING CONDITION OF ALL EROSION AND SEDIMENT CONTROL MEASURES UNTIL SUCH TIMES AS THEY ARE REMOVED WITH PRIOR PERMISSION FROM THE GOVERNMENT.

4. SURFACE DRAINAGE FLOWS OVER UNSTABILIZED CUT AND FILL SLOPES SHALL BE CONTROLLED BY EITHER PREVENTING DRAINAGE FLOWS FROM TRAVERSING THE SLOPES OR BY INSTALLING PROTECTIVE DEVICES TO LOWER THE WATER DOWNSLOPE WITHOUT CAUSING EROSION. DIKES SHALL BE INSTALLED AND MAINTAINED AT THE TOP OF CUT OR FILL SLOPES UNTIL THE SLOPE AND DRAINAGE AREA TO IT ARE FULLY STABILIZED, AT WHICH TIME THEY MUST BE REMOVED AND FINAL GRADING DONE TO PROMOTE SHEET FLOW DRAINAGE. PROTECTIVE METHODS MUST BE PROVIDED AT POINTS OF CONCENTRATED FLOW WHERE EROSION IS LIKELY TO OCCUR.

5. TEMPORARY SWALES OR OTHER POINTS OF CONCENTRATED WATER FLOW SHALL BE STABILIZED WITH AN APPROVED EROSION CONTROL MATTING OR BY OTHER APPROVED STABILIZATION MEASURES.

6. SITE 2 IS LOCATED NEAR INFILTRATION DEVICES (RECHARGE BASINS) WHICH ARE USED FOR THE CONTROL OF STORMWATER. EXTREME CARE MUST BE TAKEN TO PREVENT RUNOFF FROM UNSTABILIZED AREAS ENTERING THE RECHARGE BASINS DURING CONSTUCTION. SEDIMENT CONTROL DEVICES PLACED IN INFILTRATION AREAS MUST BE PLACED TO DIRECT ANY RUNOFF FROM THE EXCAVATED AREA AWAY FROM THE INFILTRATION DEVICE.

7. TOTAL AREA: SITE 1 6.6 AC, SITE 2 2.9AC
AREA DISTURBED: SITE 1 0.56 AC, SITE 2 0.44AC
AREA TO BE ROOFED OR PAVED: 0.0 AC
TOTAL CUT: SITE 1 2,000 CUBIC YARDS, SITE 2 [illegible] CUBIC YARDS
TOTAL FILL: SITE 1 2,000 CUBIC YARDS, SITE 2 [illegible] CUBIC YARDS
OFFSITE BORROW LOCATION: TO BE DETERMINED
FILL MATERIAL SHALL BE CLEAN COMMON FILL MEETING THE GRADATION NOTED IN SECTION 02220 OF THE SPECIFICATIONS.

8. THE TIME TO PERFORM THE REQUIRED CONSTRUCTION IS ESTIMATED TO BE APPROXIMATELY 15 WEEKS
STEP 1 - INSTALL EROSION AND SEDIMENT CONTROL DEVICES. INSTALL STRAW BALE DIKES
STEP 2 - INSTALL STAGING AREA AND DECON AREA. STOCKPILE CLEAN EXCAVATED MATERIAL TO BE REINSTALLED AFTER REMOVAL OF STAGING AREA.
STEP 3 - EXCAVATE CONTAMINATED SOIL. EXCAVATE AND HAUL PCB AND ARSENIC CONTAMINATED SOIL FROM SITES 1 AND 2 TO THE STAGING AREA
STEP 4 - CONTAMININATED STAGING AREA. PLACE CONTAMINATED SOIL AS DIRECTED. COVER AND ANCHOR WITH 8 mil PLASTIC TO STOP WIND & WATER EROSION OF STAGED MATERIAL
STEP 5 - BACKFILL DISTURBED AREAS. BACKFILL AND GRADE ALL AREAS DISTURBED BY CONSTRUCTION WITH CLEAN BORROW MATERIAL. GRADE TO DRAIN
STEP 6 - REMOVE EROSION AND SEDIMENT CONTROL DEVICES. AFTER CONSTRUCTION ACTIVITIES ARE COMPLETED, PERMANENT STABILIZATION HAS BEEN ESTABLISHED AND WITH THE PERMISSION OF THE NAVFAC, REMOVE EROSION AND SEDIMENT CONTROL DEVICES.

9. WARNING: EROSION AND SEDIMENTATION CONTROL MEASURES WILL BE STRICTLY ENFORCED

BEDDING

NTS

ANCHORING DETAIL

NTS

CONSTRUCTION SPECIFICATIONS

1. BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES
2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF (4) INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE
4. INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED
5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM WATER FLOW OR DRAINAGE

STRAW BALE DIKE

2 C3C3

NTS

PLAN VIEW

NTS

NOTE:
INLET MAY BE ROUND OR RECTANGULAR

SECTION F-F

F C3C3

NTS

INLET PROTECTION

3 C1C3

NTS

C.F BRAUN
DSGN A BERENBROK DR T D'ALESSANDRIS CHK R.F. SIMCIK
SUPV. M SPERANZA CH ENG S. HUGHES
SUBMITTED BY J. TREPANOWSKI PROGRAM MANAGER
REV. DESCRIPTION PREP BY DATE APPRVD
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NORTHERN DIVISION
LESTER PENNSYLVANIA
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT BETHPAGE, NY
REMEDIAL DESIGN - SITES 1 AND 2, PHASE I
CONSTRUCTION DETAILS AND EROSION SEDIMENT CONTROL NOTES
APPROVED DATE NORTHDIV FOR COMMANDER, NAVFAC
OFFICER IN CHARGE
SEAL AREA
NO. 071391
SCALE AS SHOWN
SPEC NO 04 04-93-0397
CONSTRN. CONTR. NO. N62472-93-C-0398
NAVFAC DRAWING NO. 2175500
SHEET 4 OF 4
SIZE: D DIS. SH. NO. C-3

Specifications

for

Remedial Design
Sites 1 and 2, Phase I
Naval Weapons Industrial Reserve Plant (NWIRP)

Bethpage, New York

Northern Division
Naval Facilities Engineering Command

Contract Number N62472-90-D-1298

Contract Task Order 0212

June 1995

C F BRAUN ENGINEERING CORPORATION

DEPARTMENT OF THE NAVY
NORTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
10 INDUSTRIAL HIGHWAY, MAIL STOP NO. 82
LESTER, PA 19113-20904

SPECIFICATION NO:
04-94-0398

CONTRACT NO:
N62472-94-C-0398

APPROPRIATION:
DERA

REMEDIAL DESIGN SITES 1 AND 2, PHASE I

at the

NAVAL WEAPONS INDUSTRIAL RESERVE PLANT

BETHPAGE, NEW YORK

DESIGN BY:

CF BRAUN ENGINEERING CORPORATION
661 ANDERSEN DRIVE
PITTSBURGH, PENNSYLVANIA 15220

SPECIFICATION PREPARED BY:

Architectural:	Civil:	Structural:
N/A		N/A

Electrical:	Mechanical:	Submitted by:
N/A	N/A	

JUNE 6, 1995

SPECIFICATION APPROVED BY: _____ DATE: _____

Environmental Permits Report

for

Remedial Design
Sites 1 and 2, Phase I
Naval Weapons Industrial Reserve Plant (NWIRP)

Bethpage, New York

Northern Division
Naval Facilities Engineering Command

Contract Number N62472-90-D-1298

Contract Task Order 0212

June 1995

C F BRAUN ENGINEERING CORPORATION

039516/P

ENVIRONMENTAL PERMITS REPORT
FOR
REMEDIAL DESIGN
SITES 1 AND 2, PHASE I
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP)
BETHPAGE, NEW YORK

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT

Submitted to:
Northern Division
Environmental Branch Code 18
Naval Facilities Engineering Command
10 Industrial Highway, Mail Stop #82
Lester, Pennsylvania 19087-1710

Submitted by:
C F Braun Engineering Corporation
661 Andersen Drive
Pittsburgh, Pennsylvania 15220
CONTRACT NUMBER N62472-90-D-1298
CONTRACT TASK ORDER 0212

JUNE 1995

PREPARED BY:

Mark P. Speranza

MARK P. SPERANZA
PROJECT MANAGER

APPROVED BY:

JOHN J. TREPANOWSKI
PROGRAM MANAGER

TABLE OF CONTENTS

TABLES

1.0 INTRODUCTION

This Environmental Permits Report (Report) was prepared under Contract Task Order (CTO) 0212, under the Comprehensive Long-Term Environmental Action Navy (CLEAN), Contract Number N62472-90-D-1298. Under CTO 0212 C F Braun Engineering Corporation is performing engineering, design, and post construction award services for a remedial action at Site 1 - Former Drum Marshaling Area and for Site 2 - Recharge Basin Area at the Naval Weapons Industrial Reserve Plant (NWIRP) Bethpage, New York.

1.1 BACKGROUND INFORMATION

1.1.1 Site 1 - Former Drum Marshaling Area

Site 1, the Former Drum Marshaling Area, is a 4-acre plot, adjacent to the eastern side of Plant No. 3. Between the early 1950's and the late 1970's, approximately 200 to 300 drums containing cadmium, cyanide, and halogenated and nonhalogenated liquid compounds were stored at this site.

Analytical results for soil samples collected from various locations at Site 1 indicated widespread surface soil contamination by arsenic, chlorinated solvents and polychlorinated biphenyls (PCBs). The higher concentrations of chlorinated solvents as well as concentrations of volatile organic compounds were detected in subsurface soil samples collected between depths of 3 feet and 5 feet. It was estimated that approximately 600 cy of surface soil is contaminated by arsenic, approximately 1400 cy of surface and subsurface soils were contaminated by PCBs (300 cy greater than 500 mg/kg, 1,100 cy less than 500 mg/kg).

Surface soil collected from one sample point on Site 1 contained an elevated arsenic concentration of 3,380 mg/kg. The soil removed during drilling (i.e., drill cuttings) at this sample point was drummed and a composite sample of the drummed material was analyzed for TCLP characteristics. The arsenic concentration of this leachate sample was 0.855 mg/L. While this concentration is below the RCRA characteristic level for arsenic of 5.0 mg/L, it is possible that discrete portions of the soil collected from this sample location may generate leachate concentrations for arsenic in excess of 5.0 mg/L. For this reason, it is currently estimated that approximately 600 cy of soil from this boring location on Site 1 will be classified as hazardous waste due to TCLP concentrations of arsenic. TCLP analysis of field samples collected during soil excavation will be used to more accurately identify the value of excavated soil to be treated as hazardous waste.

1.1.2 Site 2 - Recharge Basin Area

Site 2, the Recharge Basin Area, occupies approximately 16 acres. Site 2 lies in the northeast corner of the base. Prior to 1984, production-line rinse waters from Plant No. 3 were discharged to the recharge basins. Between the late 1970's and early 1980's, noncontact cooling water was also discharged into these recharge basins. Also, sludge from the Plant No. 2 Industrial Waste Treatment Facility was dewatered in the Site 2 drying beds before offsite disposal. All these disposal activities have been terminated at Site 2.

PCBs were found in both surface and near surface (depths of 3 to 5 feet) soils throughout Site 2. PCB soil contamination was found in soil boring SB206 at a concentration of 33 mg/kg. This boring is located in the northwest corner of Site 2. It is estimated that approximately 2,600 cy of soil are contaminated with PCBs at concentrations between 10 mg/kg and 500 mg/kg.

1.2 PURPOSE

This report identifies the applicable permits, filing procedures, and filing costs required to complete the remedial action outlined in Section 2.0.

2.0 PROPOSED REMEDIAL ACTION

2.1 REMOVAL ACTION OBJECTIVE

The objective of the proposed removal action for Site 1 is to excavate arsenic- and PCB-contaminated soils. The objective of the proposed removal action for Site 2 is to excavate PCB-contaminated soils. The action level for PCBs at Site 1 and Site 2 is 10 mg/kg. The action level for arsenic will be based upon the TCLP leachate analysis. If the leachate concentration exceeds the RCRA toxicity limit of 5.0 mg/L the soil will be considered a RCRA waste and disposed of on an approved landfill.

2.2 REMOVAL ACTION DESCRIPTION

2.2.1 Site 1

The following steps shall be taken to remove and decharacterize arsenic- and PCB-contaminated soils from Site 1.

- **General Site Preparation**. Grading will be required to access the work area and to implement the removal action. However, the disturbed area will be restricted to only those areas necessary to perform work.

- **Excavation and Stabilization of Arsenic-Contaminated Soil**. Approximately 600 cy of soil containing arsenic at concentrations that cause exceedance of the RCRA criteria for toxicity shall be excavated at Site 1 and stabilized off-site using an appropriate soil stabilization process. The soil will be stabilized to reduce the concentrations of arsenic in the leachate to below 5.0 mg/L. The stabilized soil will then be deposited in an offsite solid waste landfill.

- **Excavation and Incineration of PCB-Contaminated Soil**. Approximately 300 cy of surface and subsurface soils at Site 1 contain PCBs at concentrations exceeding 500 mg/kg. This soil shall be excavated and transported to a TSCA-permitted waste incinerator.

- **Excavation and Off-Base Landfill of PCB-Contaminated Soil**. Approximately 1,100 cy of PCB-contaminated surface and subsurface soils at Site 1 contain PCBs at concentrations between

10 mg/kg and 500 mg/kg. This soil shall be excavated and transported to a TSCA-permitted landfill.

- **Restoration of the Site**. Following post-removal verification sampling and analysis to ensure removal action goals have been achieved, the excavated site will be backfilled with clean soil. The site will be regraded to its pre-existing condition.

2.2.2 Site 2

The following steps shall be taken to remove PCB-contaminated soil from Site 2:

- **General Site Preparation**. Grading will be required to access the work area and to implement the removal action. The disturbed area will be restricted to only those areas necessary to perform the work.

- **Off-Base Landfill of PCB-Contaminated Soil**. Approximately 2,600 cy of PCB-contaminated surface and subsurface soils at Site 2 contain PCBs at concentrations between 10 mg/kg and 500 mg/kg. This soil shall be excavated and transported to a TSCA-approved landfill.

- **Restoration of the Site**. Following post-removal verification sampling to ensure removal action goals have been met, the excavated site will be backfilled with clean soil. The site will be regraded to its pre-existing condition.

3.0 REQUIRED DOCUMENTATION

Table 3-1 presents a project documentation checklist to determine which documents will be required in order to assure regulatory compliance. This table lists the type of permits/license/certification that are required by government agencies for specific types of projects.

No filing fees or monitoring requirements will be associated with any of the required documentation.

3.1 FEDERAL REGULATIONS

The offsite transport and onsite storage of PCB-contaminated soil is regulated by the Toxic Substances Control Act (TSCA) 40 CFR 761. The offsite transport and onsite storage of arsenic-contaminated soil is regulated by the Resource Conservation and Recovery Act (RCRA) 40 CFR 262.

3.2 STATE REGULATIONS

The offsite transport of PCB-contaminated soil and arsenic-contaminated soil is regulated by the State of New York (6 NY CRR 372).

3.3 LOCAL REGULATIONS

No local regulations were found to apply to the proposed soil removal activities.

TABLE 3-1

PROJECT DOCUMENTATION CHECKLIST, SITE 1 AND SITE 2
BETHPAGE, NEW YORK

Activity	Type of Permit/License/ Certification	Issuing Agency	Applicability	Reason
Stationary Air Emission Source	Permit to Construct/Permit-to-Operate	State	Not Applicable	No air emission sources are being constructed or operated.
Hazardous Air Pollutant (HAP) Emission Source	HAP Emission Statement	State	Not Applicable	Hazardous air pollutants will not be emitted.
Floodplain Management Regulations Development	Development Permit	State	Not Applicable	Excavation will not occur in the 100-year floodplain. A permit is not required.
Wastewater Discharge to "Waters of the U.S."	Permit-to-Discharge (SPDES or NPDES)	State or EPA	Not Applicable	NPDES or SPDES permits will not be required. Wastewaters will not be discharged.
Wastewater Discharge to Sewer	Sewer-Use Permit	State or Local	Not Applicable	No wastewater discharges to a public sewer system will occur.
Potable Water Treatment	Permit-to-Operate	State	Not Applicable	Water is not being treated for potable use.
Underground Injection for Waste Disposal	Permit-to-Operate	State or EPA	Not Applicable	Underground injection will not be performed.
Ocean Dumping	Permit-to-Dump	EPA	Not Applicable	Ocean Dumping will not be performed.
Dredging	Dredge-Fill Permit Ocean Disposal Permit State Water Quality Cert.	COE COE State	Not Applicable	Dredging is not being performed.
Structure in Navigable Waters	Section 10 Permit	COE	Not Applicable	Structures are not being built in navigable waters.

TABLE 3-1 (Continued)
PROJECT DOCUMENTATION CHECKLIST, SITE 1 AND SITE 2
BETHPAGE, NEW YORK

Activity	Type of Permit/License/ Certification	Issuing Agency	Applicability	Reason
Stormwater Discharge to "Waters of the U.S."	Permit-to-Construct/Modify Source	State	Not Applicable	No stormwater will be discharged to "Waters of the U.S."
Earth-Moving Operations	Permit to Construct/Erosion and Sediment Control Plan	State	Not Applicable	Site 1 and Site 2 construction will disturb less than the 5-acre limit specified by New York regulations.
Fill Wetlands	Dredge/Fill Permit State Water Quality Cert. State Wetland Permit	COE State	Not Applicable	The project is not proposing to fill in a wetlands area.
Hazardous and Non-Hazardous Waste Landfills	Permit-to-Operate	State	Not Applicable	A hazardous waste landfill is not being constructed or operated.
Hazardous Waste Generation	**EPA Identification Number**	**State**	**Applicable**	**The generator site must obtain an EPA identification number prior to handling or transporting any TSCA or hazardous waste.**
Waste Transport (PCB-contaminated waste)	**Form 8700-22**	**EPA or State**	**Applicable**	**Offsite transport of PCB-contaminated soil is regulated under 40 CFR 761 and 6 NY CRR 372.**
Waste Transport (Arsenic-contaminated waste)	**Form 8700-22**	**State**	**Applicable**	**Offsite transport of arsenic-contaminated soil is regulated under 40 CFR 262, and 6 NY CRR 372.**
Disposal of PCB- and arsenic-contaminated soil	**Notification of Authorization of Disposal Certification of Disposal**	**State**	**Applicable**	**Disposal of PCB- and arsenic-contaminated soil is regulated by 40 CFR 761, 40 CFR 262, and 6 NY CRR 372.**

TABLE 3-1 (Continued)
PROJECT DOCUMENTATION CHECKLIST, SITE 1 AND SITE 2
BETHPAGE, NEW YORK

Activity	Type of Permit/License/ Certification	Issuing Agency	Applicability	Reason
Onsite storage of PCB-contaminated soil	Notification of PCB Activity\ Form 7710-53	EPA	Not Applicable	Excavated soil containing PCBs will not be stored on site for more than 30 days.
Transport of PCB- and arsenic-contaminated soil through New York City limits.	Waste Transporter Permit	State	Not Applicable	Permit is required for transport of flammable materials through New York City limits. Soils are not flammable by New York City definition.
Hazardous Waste Treatment, Storage, Disposal	Permit-to-Construct Permit-to-Operate (Part B Permit)	State or EPA	Not Applicable	The generator is not operating a treatment, storage, or disposal facility.
Underground Storage Tanks	Permit-to-Construct Permit-to-Operate	State or EPA	Not Applicable	No underground tanks exist within this project.
Pesticide Application	Applicator Certification	DOD	Not Applicable	Pesticides will not be used.

4.0 COMPLIANCE PROCEDURES

4.1 WASTE GENERATION DOCUMENTATION

4.1.1 EPA Identification Number

An EPA waste identification number for the generator is required for all soil excavated from Site 1 and Site 2 that contain PCBs at concentrations exceeding the Federal limit of 50 mg/kg. An EPA waste identification number for the generator is required for all soil excavated from Site 1 that contains arsenic at concentrations which generate TCLP concentrations for arsenic in excess of the 5.0 mg/L action level. Because the NWIRP is registered as a RCRA facility, the existing Base EPA ID number can be applied to excavated soil containing PCBs and arsenic for both Site 1 and Site 2.

4.2 WASTE TRANSPORT DOCUMENTATION

Prior to excavation and transport of soils containing PCBs or arsenic, the waste generator must receive and retain written confirmation from the selected waste transporter/transporters that each transporter is authorized to transport the designated type and quantity of soil in the particular states entered during waste transport.

The transport of soil containing concentrations of PCBs is regulated by TSCA (40 CFR 761) and the State of New York (6 NY CRR 372). Soil containing concentrations of PCBs less than 50 mg/kg are reported by a waste manifest procedure that is different than for soils containing PCBs at concentrations greater than 50 mg/kg. Each procedure is reviewed below.

4.2.1 PCB-Contaminated Soils Less Than 50 mg/kg (Site 1 and Site 2)

Prior to shipping the PCB-contaminated soil, the waste generator must complete the Federal Uniform Hazardous Waste Manifest 8700-22 (4-page version), and distribute the copies according to the instructions printed on the form.

Copies of Form 8700-22 must be filed with the designated departments within 5 days of the start of waste transport.

4.2.2 PCB-Contaminated Soils Greater Than 50 mg/kg (Site 1 and Site 2) and Arsenic-Contaminated Soil with TCLP Greater Than 5.0 mg/L (Site 1)

Prior to shipping the PCB-contaminated soil, the waste generator must complete the State of New York Uniform Hazardous Waste Manifest 8700-22 (8-page version), including information required by TSCA in Section J, and distribute the copies according to the instructions printed on the form. Since soil containing concentrations of PCBs less than 500 mg/kg and all soil containing concentrations of arsenic shall be disposed at the Model City, New York facility, copies of form 8077-22 to be filed with the Disposer State office and the Generator State office should be mailed to:

State of New York
Department of Environmental Conservation
Division of Hazardous Substances Regulation
Hazardous Waste Manifest
P.O. Box 12820
Albany, New York 12212

Soil containing concentrations of PCBs greater than 500 mg/kg will be incinerated. Design has been based on incineration of the waste at the Aptus facility in Coffeyville, Kansas. According to State of Kansas regulations, a copy of form 8077-22 does not have to be filed with the State of Kansas for incineration of soil containing concentrations of PCBs.

Additional copies of the waste manifest will be distributed by the waste disposer and waste transporter according to guidelines printed on the form. One copy of the form is carried by the transporting vehicle.

Copies of Form 8700-22 must be filed with the designated departments within 5 days of the start of waste transport.

4.3 WASTE DISPOSAL

Disposal of soils containing concentrations of PCBs and arsenic are regulated by TSCA (40 CFR 761) and by the State of New York (6 NY CRR 372). Disposal of soils containing concentrations of arsenic are regulated by RCRA (40 CFR 262) and the State of New York (6 NY CRR 372).

4.3.1 Disposal of PCB- and Arsenic-Contaminated Soils

To dispose of soils containing PCBs or arsenic, the waste generator must satisfy the following requirements for each waste stream:

- Prior to shipment, obtain written communication from the disposal facility that it is authorized to accept the waste, has the capacity, and will assure that the proper disposal method is applied to the waste.

- The generator must receive a Certificate of Disposal that will be prepared by the owner or operator of the disposal facility for each shipment the facility accepts. The Certificate of Disposal must be sent to the generator within 30 days of the date that disposal was completed. A letter on facility letterhead with the signed manifest as the Certificate of Disposal is acceptable.

- When the generator has employed an independent transporter to transport the waste to a commercial disposer, the generator shall confirm by telephone, or by other means of confirmation agreed to by both parties, that the disposer actually received the manifested waste.

- The generator shall confirm receipt of the waste by close of business the day after he receives the manifest hand-signed by the commercial disposer.

- State of New York Time Limit. A generator must immediately contact the transporter and/or disposal facility to determine the status of the shipment if a copy of the manifest with a handwritten signature of the owner or operator of the facility was not received within 15 days from the date of shipment. If a copy is not received within 20 days from the date of shipment, an Exception Report must be submitted to the State of New York Department of Environmental Conservation to the attention of the Removal Project Manager, and include the information specified in 6 NY CRR 372.2(c)(3).

- Federal Time Limit. If the generator has not received the manifest within 35 days after the transporter accepted the waste, the generator shall telephone the disposer to determine if the waste was actually received. If it was not received, the generator shall contact the transporter to determine the location of the waste.

- Federal Time Limit. If the generator has still not received the manifest within 45 days after the transporter accepted the waste, the generator shall submit an Exception Report to the EPA Regional Administrator (Region 2) as specified in 40 CFR 761 and 40 CFR 262.

- An Annual Report must be submitted to the State of New York Commissioner of Environmental Conservation by the generator who ships any hazardous waste for disposal no later than March 1 for the previous year and must include the information specified by 6 NY CRR 372.2(c)(2).

- A Biennial Report must be submitted to the Regional Administrator by the generator who ships any hazardous waste for disposal no later than March 1 for the previous year and must include the information specified by 40 CFR 262.41.

- As specified in 40 CFR 761.180, all documents pertaining to PCB waste shipments occurring between January 1st and December 31st of a particular year must be organized by the waste generator into an Annual Document Log. The Log must be organized by July 1st of the following year.

- The generator shall retain a written record of all telephone or other communications to be included in the Annual Document Log.

- The generator must keep a copy of each of the following for at least 3 years:

  - Manifests signed by the disposing facility (from the date the waste is accepted by the initial transporter).
  - Annual Reports, Biennial Reports, Annual Document Logs, and Exception Reports (from the due date of the report).
  - Records of any test, waste analyses, or other determinations.
  - Certificates of Disposal (from the date received from the disposer).