

Baker

12/7/92 - 01738

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December 7, 1992

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Commanding Officer
Atlantic Division
Naval Facilities Engineering Command
Building N-26, Naval Station
Norfolk, Virginia 23511-6287

Attn: Mr. Kenneth Walker
Engineer-in-Charge
Code 1822

Re: Contract N62470-89-D-4814
Navy CLEAN, District III
Contract Task Order (CTO) 0084
Camp Allen Landfill FI/FS
Norfolk Naval Base
Final Project Plan Addendum/CTO Status

Dear Mr. Walker:

Baker Environmental, Inc. (Baker) is pleased to submit the Final Project Plan Addendum required as part of the revised Scope of Work (SoW) for CTO-0084. The Project Plan Addendum has been revised to reflect LANTDIV/Activity comments received on December 4, 1992.

As discussed on December 4, 1992, briefing requirements include a pre-briefing meeting between Baker, LANTDIV, and Activity personnel. A DOD briefing will then be held, followed by a general briefing for Camp Allen area personnel. These briefings will be held prior to start-up of Round 3 field activities.

Baker is pleased to be of continued service on this very important project. Please call me anytime at (412) 269-2017 if you have questions.

Sincerely,

BAKER ENVIRONMENTAL, INC.

Jeri R. Trageser for
Thomas E. Artman
Project Manager

TEA/nd
Attachments (2)

cc: Ms. Susan Hauser, P.E., Code 18 (w/two attachments)
Mr. Dave Forsythe, Code N4 (w/two attachments)

ATTACHMENT 1
REVISED FINAL IP, PAGE 1-2

information on the disposal practices and materials at a particular site, or information from studies of the environment of the particular site.

Very little detailed information is available from NSRR on current and past disposal practices; this limits the basis for negotiation addressing the disposed materials. The most useful basis for the negotiation must now be data indicating the state of the local environment at each site within the facility.

LANTDIV currently possesses information that indicates little adverse effect on human health or the environment as a result of present and past disposal activities at NSRR. There are questions regarding this information most significantly in (a) the distribution of the data [both as stations and as sampling points at those stations], and (b) the relevance of the analytical results [both from the level of quality control and from the quantitation limit].

The approach to the second of the supplementary objectives is to develop technical data from the revised field studies of CTO-0007 to show that the data of the CS for some sites are truly representative of site conditions; these data can then be admitted to the negotiation for the RFI. The result of the second supplementary objective is expected to be the support of the first primary objective in the elimination of some sites (those which data from the CS indicate do not have a significant, adverse effect on human health or the environment) from the RFI. [The corollary is also possible: The new information may invalidate the results of the CS for those sites, which then must be addressed by the RFI.]

Regardless of whether the CS data is verified, the first of the supplementary objectives will be met by the limited field investigation. This will provide the basis for evaluation of each site, considering the limited ability to discuss the disposal materials and practices at each site, in addressing the principal objectives.

The negotiation with the EPA will be strongest if both of the supplementary objectives are met.

FINAL
"ROUND 3"
PROJECT PLAN ADDENDUM
**REMEDIAL INVESTIGATION/
FEASIBILITY STUDY**
CAMP ALLEN LANDFILL
NAVAL BASE, NORFOLK, VIRGINIA
CONTRACT TASK ORDER 0084

Prepared for:

DEPARTMENT OF THE NAVY
ATLANTIC DIVISION
NAVAL FACILITIES
ENGINEERING COMMAND
Norfolk, Virginia

Under the:

LANTDIV CLEAN Program
Contract N62470-89-D-4814

Prepared by:

BAKER ENVIRONMENTAL, INC.
Coraopolis, Pennsylvania

DECEMBER 7, 1992

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1.0 INTRODUCTION

This document presents an addendum to the Final Project Plans, submitted on April 23, 1992, for Contract Task Order (CTO) 0084, Remedial Investigation/Feasibility Study (RI/FS) for the Camp Allen Landfill Site (Areas A and B), Naval Base Norfolk, Virginia. Baker Environmental, Inc. (Baker) is the prime contractor for the Comprehensive Long Term Environmental Action Navy Program (Navy CLEAN) under which this CTO is being performed.

This addendum to the Final Project Plans has been prepared to document the revised scope of work and objectives of the RI/FS activities. Based on a preliminary review of existing site data, recommended options, as well as other alternatives related to final field activities were submitted to LANTDIV. This addendum reflects LANTDIV's decision to proceed with final field efforts on an accelerated schedule. It serves as a tool for establishing investigative tasks, assigning responsibilities and identifying the proposed schedule.

2.0 INVESTIGATIVE TASKS

The site investigation discussed below presents an overview of the various field activities to be conducted at the Camp Allen Landfill Site (Areas A and B). The specific details of these activities can be found in the Sampling and Analysis Plan (SAP) and Quality Assurance Project Plan (QAPP) that were submitted along with the Final Work Plan on April 23, 1992. The field investigations proposed herein reflect the criteria to meet the RI/FS objectives identified in Section 1.2 of the Final Work Plan and in the Modification Request submitted to LANTDIV on November 23, 1992.

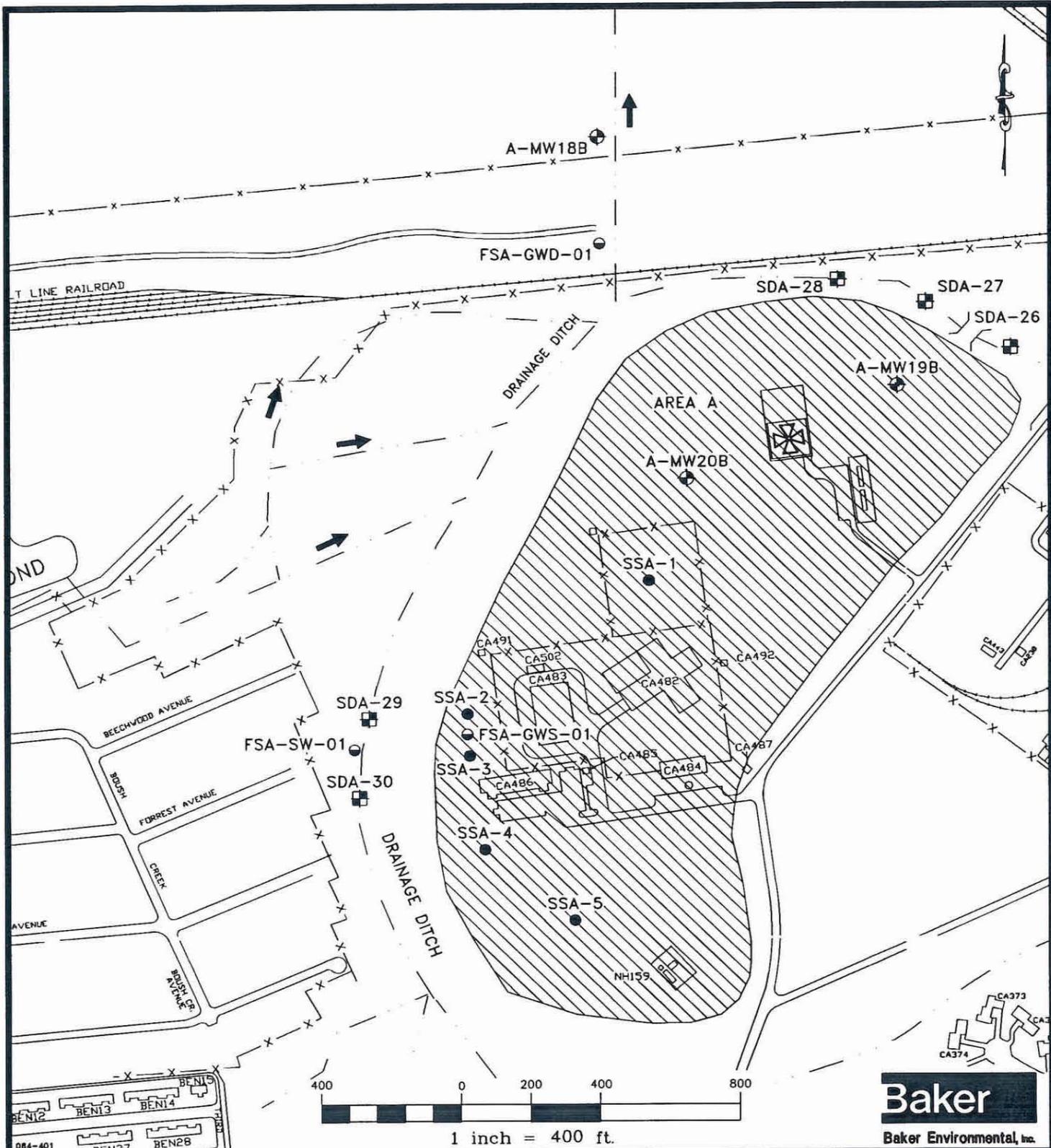
Prior to field activities, procurement of services such as land surveying, drilling, laboratory analysis, and data validation will be performed in accordance with the Navy CLEAN Contract Procurement Manual.

2.1 Field Activities - Area A

Field activities in Area A will include; sediment sampling, surface soil sampling, drilling and installation of groundwater monitoring wells with associated groundwater sampling, and feasibility study samples conducted on surface water, shallow groundwater, and deep groundwater. The following sections detail Area A activities.

2.1.1 Sediment Sampling

Five sediment samples will be taken at a depth of zero to approximately six inches from the drainage ditch that borders Area A (see Figure 2-1). Sediment sample locations are based on existing site analytical information. In general, the sampling points are located in areas where previous surface water samples were found to contain concentrations of various TCL parameters. Sediment samples obtained will be analyzed for Target Compound List (TCL) volatile organic compounds, semivolatile organic compounds, pesticides/PCBs in accordance with Contract Laboratory Program (CLP) protocols. All analysis will be performed under Level D QA/QC. Also, samples will be analyzed for total organic content (TOC). TOC samples will be analyzed using non-CLP methods and will have no associated QA/QC samples.



LEGEND

- SDA-30 PROPOSED SEDIMENT SAMPLE LOCATION
- SSB-05 PROPOSED SURFACE SOIL SAMPLE LOCATION
- FSB-GWS-01 PROPOSED FEASIBILITY STUDY SAMPLE LOCATION
- B-MW18B PROPOSED WELL INSTALLATION LOCATION

SOURCE: LANTDIV, OCTOBER 1991

FIGURE 2-1
PROPOSED SAMPLE AND WELL LOCATIONS
CAMP ALLEN LANDFILL
AREA A
NORFOLK NAVAL BASE
NORFOLK, VIRGINIA

2.1.2 Surface Soil Sampling

Five surface soil samples (depth of zero to approximately six inches) will be taken from Area A (see Figure 2-1). Soil sample locations have been selected based on primarily risk related criteria. Two soil samples (SSA-1 and SSA-5) are located within ball fields present atop Area A. One sample location (SSA-4) is situated next to the Brig picnic area. The remaining two locations (SSA-2 and SSA-3) are based on the results of the source characterization. Surface soil samples obtained will be analyzed for both TCL and Target Analyte List (TAL) parameters. The TCL parameters consist of the following; volatile organic compounds, semivolatile organic compounds, and pesticides/PCBs. The TAL parameters consist of total metals. Both the TCL and TAL analysis will be conducted in accordance with CLP protocols and will be performed under Level D QA/QC. Also, samples will be analyzed for total organic content (TOC) using non-CLP methods and will have no associated QA/QC samples.

2.1.3 Groundwater Sampling of Newly Installed Wells

Three Type III groundwater monitoring wells will be installed to a depth of approximately sixty (60) feet in Area A (see Figure 2-1). Monitoring well A-MW18B is proposed as the northern-most monitoring point in order to characterize the extent of contamination in the Yorktown Aquifer potentially from Area A. This well will be installed/constructed using Level D personal protection. Monitoring well locations A-MW19B and A-MW20B are proposed in order to provide additional information regarding the source of contamination in the Yorktown Aquifer. At present, it is unclear as to whether detected concentrations of various parameters are originating from Area A or from other potential off-site sources.

As these monitoring wells are proposed to be installed in potential landfill areas, Level B personal protection will be required. Based on previous subsurface investigations, Area A is considered to be a noncontinuous landfill area. Past disposal activities appear to have been performed in "isolated pocket areas" rather than one large landfill cell. In consideration of the above, if "gross waste" areas are encountered during drilling of the surface casing zone, Baker will terminate the boring location and will modify/relocate the proposed Type III monitoring well to an adjacent area. By not installing these double-cased wells through landfilled contaminant source materials, any potential for new cross-aquifer contamination will be eliminated. Otherwise, the surface casing will be set into the confining clay layer between the water table and Yorktown aquifers, if present. The monitoring point will then be advanced into the Yorktown Aquifer.

Once the surface casing zone has been drilled, and the potential for encountering landfilled materials has passed, Baker will reevaluate site conditions in order to downgrade from Level B protection. If warranted, downgrading to Level C or Level D will be authorized by the Site Health and Safety Officer.

Groundwater samples obtained from these wells will be analyzed for both TCL and TAL parameters. The TCL parameters consist of the following; volatile organic compounds, semivolatile organic compounds, and pesticides/PCBs. The TAL parameters consists of total and dissolved metals. Both the TCL and TAL analysis will be conducted in accordance with CLP protocols and will be performed under Level D QA/QC.

2.1.4 Feasibility Study Samples

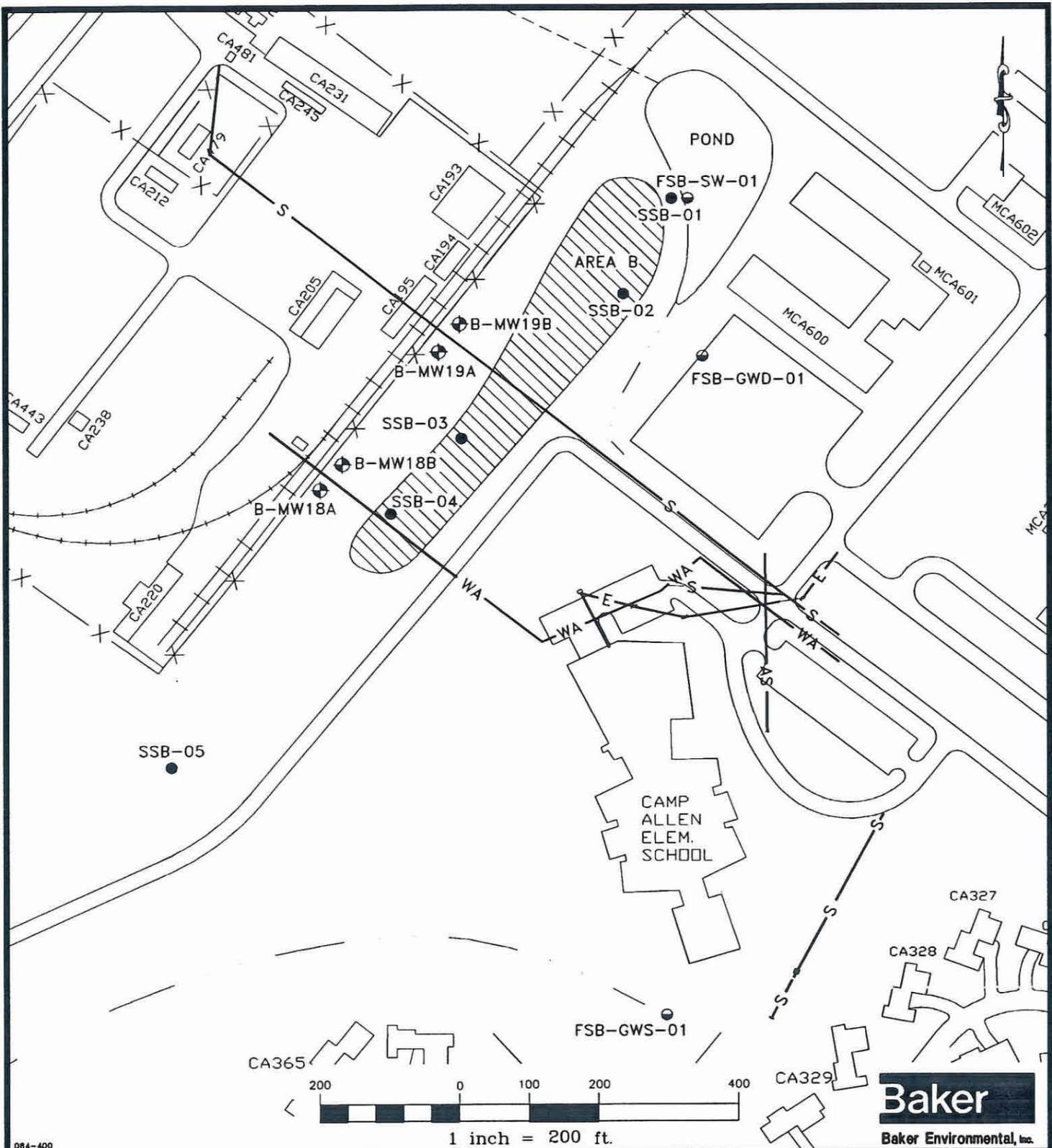
Three feasibility study (FS) samples will be taken from Area A from the following media; one surface water, groundwater from one shallow monitoring well, and groundwater from one deep monitoring well. The approximate locations for these samples can be found on Figure 2-1. In general, FS samples will be collected from areas where previously collected data has indicated "worst case" contamination conditions. Samples obtained will be analyzed for Total Organic Carbon (TOC), Chemical Oxygen Demand (COD), Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS). This information is critical in the FS process when groundwater recovery and treatment alternatives are formulated and evaluated. These samples do not fall under CLP protocols and will not have data validation or QA/QC samples associated with them.

2.2 Field Activities - Area B

Field activities in Area B will include; surface soil sampling, drilling and installation of deep monitoring wells with associated groundwater sampling, and feasibility study samples conducted on surface water, shallow groundwater, and deep groundwater. The following sections detail Area B activities.

2.2.1 Surface Soil Sampling

Five soil samples will be taken at a depth of zero to six inches from Area B (see Figure 2-2). Locations approximate areas which previous investigations have indicated as potential



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- SSB-05 ● PROPOSED SURFACE SOIL SAMPLE LOCATION
- FSB-GWS-01 ● PROPOSED FEASIBILITY STUDY SAMPLE LOCATION
- B-MW18B ● PROPOSED WELL INSTALLATION LOCATION
- S— APPROXIMATE LOCATION OF ACTIVE STORM SEWER
- AS— APPROXIMATE LOCATION OF ABANDONED STORM SEWER
- E— APPROXIMATE LOCATION OF ELECTRIC LINE (ABOVE/BELOW)
- WA— APPROXIMATE LOCATION OF WATER LINE

SOURCE: LANTDIV, OCTOBER 1991

FIGURE 2-2
PROPOSED SAMPLE AND
WELL LOCATIONS
CAMP ALLEN LANDFILL
AREA B
NORFOLK NAVAL BASE
NORFOLK, VIRGINIA



contaminant sources. Surface soil samples obtained will be analyzed for both TCL and TAL parameters. The TCL parameters consist of the following; volatile organic compounds, semivolatile organic compounds, and pesticides/PCBs. The TAL parameters consist of total metals. Both the TCL and TAL analysis will be conducted in accordance with CLP protocols and will be performed under Level D QA/QC. Also, samples will be analyzed for TOC using non-CLP methods and no associated QA/QC samples.

2.2.2 Groundwater Sampling of Newly Installed Wells

Four groundwater monitoring wells -- two well nests -- will be installed in Area B (see Figure 2-2). Each well nest will have one shallow well approximately fifteen to twenty (15-20) feet in depth, and one deep well approximately sixty (60) feet in depth.

The shallow wells will be located to determine groundwater quality in the vicinity of two underground conduits (storm water and sewer lines). At present, it is unclear as to whether detected concentrations of various chemicals are originating from the Area B landfill or from another (off-site) source. Additionally, the shallow well will characterize the migration potential via the underground conduits.

The deep wells will be nested with the shallow wells (Figure 2-2) to determine the presence or absence of a confining unit as well as characterize the groundwater quality in the upper Yorktown Aquifer.

As discussed in Section 2.1.3, drilling activities are proposed in close proximity to known waste areas and will be performed in Level B protection, initially. Once the surface casing zone has been drilled, the potential downgrading of the personal protection will be evaluated. Groundwater samples obtained from these wells will be analyzed for both TCL and TAL parameters. The TCL parameters consist of the following; volatile organic compounds, semivolatile organic compounds, and pesticides/PCBs. The TAL parameters consist of total and dissolved metals. Both the TCL and TAL parameters will be conducted in accordance with CLP protocols and will be performed under Level D QA/QC. In addition, monitoring well GW-04 will be resampled for volatile organic compounds only in order to verify previous results.

2.2.3 Feasibility Study Samples

Three feasibility study samples will be taken from Area B from the following media; one surface water sample, groundwater from one shallow monitoring well, and groundwater from one deep monitoring well. The approximate locations for these samples can be found on Figure 2-2. Again, FS sample locations have been selected based on analytical result indications of "worst case" contamination conditions. Samples obtained will be analyzed for TOC, COD, BOD, and TSS. These samples do not fall under CLP protocols and will not have data validation and QA/QC samples associated with them.

2.2.4 Originally Scoped "Round 3" Activities

As detailed in the Final Project Plans submitted on April 23, 1992, the original scope of "Round 3" activities included the sampling of existing deep wells and newly installed shallow monitoring wells for volatile organic compounds only. This consists of 16 wells (15 deep and 1 newly installed shallow) at Area A and 12 wells (6 deep and 6 newly installed shallow) at Area B.

2.2.5 Sample Summary

As detailed in Section 2.1.1 through 2.2.4, the final field effort for the Camp Allen Landfill RI/FS consists of the original "Round 3" groundwater sampling event plus additional sediment/soil/groundwater/FS-related samples added to the project scope of work in order to fill data gaps identified during the preliminary data evaluation process. Table 2-1 contains a sample summary for this final field effort. Please note that similar sampling events (i.e., soil sampling) for both Area A and Area B have been combined on the sample summary. Also, given the nature of sampling programs, QA/QC related samples are dependent on sampling times and conditions and are therefore subject to field modifications.

**TABLE 2-1
SAMPLE SUMMARY
CAMP ALLEN LANDFILL EXPANDED "ROUND 3"**

Parameter Grouping/Media	Environmental Sample		Duplicate		Trip	Equipment Rinsate	Field Blank	Matrix Spike/ Matrix Spike Dup.	
	Aqueous	Solid	Aqueous	Solid	Aqueous	Aqueous	Aqueous	Aqueous	Solid
VOAs									
Groundwater	36	--	4	--	10	8	2	4	--
Sediment	--	5	--	1	1	1	--	--	2
Soil	--	10	--	1	2*	2*	--	--	2
SVOAs									
Groundwater	7	--	1	--	--	2*	2	2	--
Sediment	--	5	--	1	--	1	--	--	2
Soil	--	10	--	1	--	2*	--	--	2
Pesticides/PCBs									
Groundwater	7	--	1	--	--	2*	2	2	--
Sediment	--	5	--	1	--	1	--	--	2
Soil	--	10	--	1	--	2*	--	--	2
TAL Metals (Total)									
Groundwater	7	--	1	--	--	2*	2	2	--
Sediment	--	--	--	--	--	--	--	--	--
Soil	--	10	--	1	--	2*	--	--	2
TAL Metals (Dissolved)									
Groundwater	7	--	1	--	--	2*	2	2	--
TOC/COD/BOD/TSS									
Sediment		5***	--	--	--	--	--	--	--
Soil		10***	--	--	--	--	--	--	--
Surface Water	2**	--	--	--	--	--	--	--	--
Shallow Groundwater	2**	--	--	--	--	--	--	--	--
Downgradient Groundwater	2**	--	--	--	--	--	--	--	--

* One trip blank per area. One equipment rinsate per area.

** One sample per area.

*** Solid samples will be analyzed for TOC only.

3.0 SITE STAGING AND WASTE MANAGEMENT

Due to the size, complexity, and accelerated schedule of the additional field program, field coordination, Navy briefings, community relations, and site staging are very important considerations. An initial Navy briefing is anticipated on December 7, 1992. This briefing will likely be held at the Brig Facility and will serve to familiarize Navy personnel and surrounding residents with upcoming field events. Field coordination will be primarily initiated at the central staging area located southeast of the Salvage Yard. Coordination of all drilling, sampling and surveying activities will initially be conducted at the staging area during the daily briefings. Baker's support trailer and portable laboratory facilities will occupy this area.

Short-term drum staging is scheduled for the southwestern portion of the staging area. Please note that the Salvage Yard personnel have indicated an interest in the anticipated schedule of drum removal. Waste management activities are not included in the scope of work.

4.0 SCHEDULE

The anticipated field schedule and milestones are presented in Figure 4-1. Remaining project activities (i.e., air sampling, reporting) are dependent on the completion of the field efforts identified in this addendum.

FIGURE 4-1

ESTIMATED FIELD TIMETABLE
CAMP ALLEN LANDFILL EXPANDED "ROUND 3"

Task	S 12/6	M 12/7	T 12/8	W 12/9	TH 12/10	F 12/11	S 12/12	S 12/13	M 12/14	T 12/15	W 12/16	TH 12/17	F 12/18	S 12/19
Mobilization	█													
Briefing/Set-Up		█												
Area B Wells														
B-MW18B			█	█										
B-MW18A			█	█	█									
B-MW19B			█	█	█									
B-MW19A					█									
Area A Wells														
A-MW19B						█	█							
A-MW20B						█	█							
A-MW18B (Level D)								█	█					
Well Development						█				█				
Sediment Sampling				█										
Soil Sampling														
Area A					█									
Area B						█								
FS/GW Sampling														
Area A										█	█			
Area B								█	█					
Surveying												█		
Demobilization												█	█	

4-2