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JEB FORT STORY, VA  
5090.3a

FAX TRANSMITTING COMMENTS ON REMEDIAL INVESTIGATION WORK PLANS  
FIREFIGHTER TRAINING AREA, LIGHTER AMPHIBIOUS RESUPPLY CARGO (LARC) 60  
MAINTENANCE AREA, AND AUTO CRAFT AREA FORT STORY VA  
11/28/1994  
U.S. ARMY CORPS OF ENGINEERS BALTIMORE DISTRICT

File 6C.10

Date: 28 Nov 94



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U.S. ARMY CORPS OF ENGINEERS  
 BALTIMORE DISTRICT  
 Military Management Section  
 HTRW Branch Engineering Div  
 ATTN: CENAB-EN-HM, Steve Cho  
 10 S. Howard St. (Rm 10200)  
 Baltimore MD 21201

PROJECT: FTA, LARC 60, & Auto Shop  
 LOCATION: Ft Story, VA

TO: NAME: Dan Musel  
 OFFICE: Ft. Eustis, VA  
 PHONE#: 804-878-4231

FAX#: 804-878-4589

FROM: NAME: Steve Cho  
 OFFICE: DESIGN MANAGEMENT (MIL) SECTION  
 PHONE#: (410) 962-2700

FAX#: (410) 962-7736

Dan, here are the comments from us for your information.

Auto Shop, LARC, & FTA RI Work Plans

File: P:\ARMS\FTSTORY\RIWP.DBF

Num	Name	Office	Page/Sheet	Discipline	Rm/Detail
1	DELLACAMERA	CENABEN-GG	FIP3-6	GEO	
3.2 Soil Borings: It is unclear how exactly the piezocone will be used in conjunction with the sampling devices. Will the piezocone be used at all of the subsurface boring and groundwater sampling locations? Please clarify.					
2	DELLACAMERA	CENABEN-GG	FIP3-6	GEO	
3.2 Soil Borings (para 4): This section indicates that the piezocone will be used to determine soil sampling depths, however, section 4.0 Site-Specific Field Investigation provides specific sampling intervals. Please coordinate.					
3	DELLACAMERA	CENABEN-GG	FIP3-6	GEO	
3.2 Soil Borings (para 8): Reference to procedure for sample homogenization in Section 3.1.1 is incorrect. Please correct.					
4	DELLACAMERA	CENABEN-GG	FIP3-7	GEO	
3.3 Temporary Well Installation: Please clarify "continued monitoring of groundwater". According to section 4.0 Site-Specific Field Investigations, all of the temporary direct push well points are being installed but not sampled. Why install these wells if they are not going to be sampled?					
5	DELLACAMERA	CENABEN-GG	FIP3-7	GEO	
3.4 Monitoring Well Installation: Monitoring well construction must comply with state (Virginia) requirements. Please include.					
Please also include a description of the installation procedure to include drilling method, placement of filter pack, annular seal, etc.					
Figure 3-4: Sediment traps should not be used with monitoring wells. Please delete.					
6	DELLACAMERA	CENABEN-GG	FIP3-10	GEO	
3.6 Groundwater Sampling: Please include well development requirements. Also recommend that sampling begin no sooner than 14 days following completion of well development. This allows time for the new well to equilibrate with its new environment thereby increasing the probability of obtaining a sample which is representative of the host aquifer.					
7	DELLACAMERA	CENABEN-GG	FIP3-11	GEO	
3.7 Surface Water and Sediment Sampling (para. 3): Reference to procedure for sample homogenization in Section 3.1.1 is incorrect. Please correct.					

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Num	Name	Office	Page/Sheet	Discipline	Rm/Detail
8	DELLACAMERA	CENABEN-GG	FIG4-1	GEO	
<p>FTA Site Map: Please use a unique symbol (different from the DPWS symbol) for the permanent monitoring wells. Also, please show the locations of the new monitoring wells (if those locations have been selected) and distinguish them on the figure from the existing wells.</p>					
9	DELLACAMERA	CENABEN-GG	FIP4-2	GEO	
<p>Summary of Field Investigation Table: Column labeled Ground Water should be identified as DPT groundwater samples. Please revise.</p>					
10	DELLACAMERA	CENABEN-GG	FIP4-3	GEO	
<p>Groundwater Samples: The work plan does not specify any order in which the work will be accomplished, but the results from the DPT groundwater sampling (in conjunction with previously gathered data) should be evaluated prior to determining need for, and location of, additional permanent monitoring wells. Please clarify the methodology to be used in order to characterize the groundwater situation at the site. Please also include an explanation of the order in which work will be performed in the field.</p>					
11	DELLACAMERA	CENABEN-GG	FIP4-3	GEO	
<p>Groundwater Samples: What is the justification for installing 4 temporary direct push well points and then not sampling them. The work plan states that the well points "may" be used for "short-term groundwater monitoring". This statement is vague at best. If there is no sound reason for the existence of the well points, then they should not be installed. Please review and revise as necessary.</p>					
12	DELLACAMERA	CENABEN-GG	FIG4-2	GEO	
<p>LARC Site Map: See comment #8.</p>					
13	DELLACAMERA	CENABEN-GG	FIP4-5	GEO	
<p>Groundwater Samples: Please explain why the 3 new monitoring wells and 4 direct push well points are being installed but not sampled.</p>					
14	DELLACAMERA	CENABEN-GG	FIG4-3	GEO	
<p>Auto Craft Site Map: Please use a unique symbol for monitoring wells and show the proposed locations of the new monitoring wells, if those locations have been selected.</p>					

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Num	Name	Office	Page/Sheet	Discipline	Rm/Detail
15	DELLACAMERA	CENABEN-GG	FIP4-6	GEO	
Groundwater Samples: There is a discrepancy between the number of permanent wells shown on the Summary of Field Investigation table, and the number of wells stated in the section on Groundwater Samples. The table indicated that there are a total of three wells and the text just indicates one existing well. Please coordinate.					
16	DELLACAMERA	CENABEN-GG	FIP4-7	GEO	
Groundwater Samples: The text states there will be 3 temporary direct push well points, however, Figure 4-3 only shows the location of 2 well points. Please coordinate.					
Additionally, see comment #11.					
17	DELLACAMERA	CENABEN-GG	CDAP4-4	GEO	
4.3 Sampling and Preservation Methods: This section contains a lot of procedures for sampling which will not be performed during the investigation of these three sites. Recommend these additional procedures be deleted.					
18	DELLACAMERA	CENABEN-GG	I-3	GEO	
I-2.2 Soil Samples: Reference in second paragraph to Section 3.3 is incorrect. Please correct.					
19	DELLACAMERA	CENABEN-GG	FIGI-2	GEO	
FTA Site Map: See comment #8.					
20	DELLACAMERA	CENABEN-GG	I-4	GEO	
Groundwater Samples: See comment #11.					
21	DELLACAMERA	CENABEN-GG	I-4	GEO	
I-2.3 Sampling and Preservation Procedures: Reference in second paragraph to sample homogenization in Section 4.3.4.3 is incorrect. Please correct.					
22	DELLACAMERA	CENABEN-GG	I-5	GEO	
I-2.5 Filed Documentation: References to Section 5.4 and Section 4.7 are incorrect. Please correct.					
23	DELLACAMERA	CENABEN-GG	II-3	GEO	
Soil Samples: Reference in second paragraph to Section 3.3 is incorrect. Please correct.					

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24	DELLACAMERA Groundwater Samples:	CENABEN-GG	II-3 See comment #13.	GEO	
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25	DELLACAMERA LARC Site Map:	CENABEN-GG	FIGII-2 See comment #8.	GEO	
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26	DELLACAMERA II-2.3 Sampling and Preservation Procedures:	CENABEN-GG	II-4 See comment #21.	GEO	
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27	DELLACAMERA II-2.5 Field Documentation:	CENABEN-GG	II-5 See comment #22.	GEO	
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28	DELLACAMERA Auto Craft Site Map:	CENABEN-GG	FIGIII-2 See comment #14.	GEO	
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29	DELLACAMERA Soil Samples: The second paragraph states that the water table interface is estimated to be 5 to 6 feet below ground surface, however, according to III-1.0, the groundwater depth is estimated at 8 to 10 feet. Please coordinate.	CENABEN-GG	III-3	GEO	
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Also, see comment #23.

30	DELLACAMERA Groundwater Samples: There is a discrepancy between the number of permanent groundwater monitoring wells in the Summary of Field Investigation table on page 4-6 of the Field Investigation Plan, and the number stated here in the text. Please coordinate.	CENABEN-GG	III-3	GEO	
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Also, see comment #16.

31	DELLACAMERA III-2.3 Sampling and Preservation Procedures:	CENABEN-GG	III-3 See comment #21 and comment #29.	GEO	
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32	DELLACAMERA III-2.5 Field Documentation:	CENABEN-GG	III-4 See comment #22.	GEO	
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FTA, LARC 60 & Auto Craft Shop RIs

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Num	Name	Office	Page/Sheet	Discipline	Rm/Detail
1	HESTER	HTRW-RID	ATTACH -I	SAF	TABLE1-2
a.	Justify use of 10.8 eV lamp for photoionization detection as described in the GSSHP Pg 10-2 Paragraph 10.3. Two contaminants, ie 1,1, dichloroethane and 1,1,1 trichloroethane, have ionization potentials which exceed 10.8 eV. How will these contaminants be monitored for? Of particular concern is that both these contaminants have low exposure limits. Recommend specifying a 11.4 eV lamp. Colorimetric indicator tubes, if available, are also recommended for specific contaminant identification.				
b.	Include and justify in each attachment specific action levels. Four out of five of the organic contaminants listed in the hazard assessment have very low PELs (<5ppm). The action levels listed in the generic portion of the plan do not necessarily apply.				
c.	Use of organic vapor respirators for the upgrade of personal protective equipment is not recommended since three of the four most toxic site contaminants listed have poor warning properties, i.e. the odor thresholds exceed the permissible exposure limits. Please include statement to this effect.				
2	HESTER	HTRW-RID	ATTACH -II	SAF	TABLEII-2
	See comments 1. b and c.				
3	HESTER	HTRW-RID	ALL ATTACH-	SAF	
	Include discussion of potential exposure to heavy metal laden dusts. Include monitoring procedures, if any, action levels, and dust suppression measures.				
4	HESTER	HTRW-RID	GENERAL-	SAF	
	Point of contact for these comments is Ms. Gladys Hester, (410) 962-2217.				

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Num	Name	Office	Page/Sheet	Discipline	Rm/Detail
1	WARMINSKI	NAB-EN-HT	-I-	CEM	PAR 2

The following comments pertain to the CHEMICAL DATA ACQUISITION PLAN (CDAP):

Employee Acknowledgements, 2nd paragraph, last line incorrectly lists Fort Eustis, which should be changed to Fort Story for this Work Plan.

2	WARMINSKI	NAB-EN-HT	1-1	CEM	SEC 1.1
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Purpose. In the second line of the first sentence, change the phrase "evaluation of data" to "evaluation of environmental samples."

3	WARMINSKI	NAB-EN-HT	2-2	CEM	SEC 2.2
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Site Data Quality Objectives. The 3rd sentence in this paragraph states that CLP methodologies will be used. This is not the preferred analytical methods to be used on USACE HTRW projects. Unless specifically mandated by EPA, the preferred analytical methods to use shall be from SW-846, Test Methods for Evaluating Solid Waste, 3rd Edition (Including all revisions and updates).

4	WARMINSKI	NAB-EN-HT	3-5	CEM	SEC 3.2
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Laboratory Qualifications. Instead of listing five additional laboratories that Savannah Laboratories & Environmental Services have, please list only one alternate laboratory which may receive samples if the laboratory located in Savannah, Georgia is not able to handle the workload. The USACE's validation shall be expiring on 21 December 1994 for the laboratory located in Savannah, Georgia. Please ensure this lab's validation is submitted for renewal as soon as possible to the USACE Missouri River Division, through the USACE Project Manger.

The Savannah Laboratories located in Mobile, Alabama and New Orleans, Louisiana are not on the list of USACE Validated Laboratories, therefore do not list them as such. Validation status is either pending or expired.

5	WARMINSKI	NAB-EN-HT	4-1	CEM	SEC 4.1
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Field Equipment, Containers And Supplies. The decontamination procedure listed in the bullet items does not specify a dilute Nitric Acid rinse when sampling for metals contaminants. This should be included in metals are a know or suspect contaminant which is being sampled and tested for.

6	WARMINSKI	NAB-EN-HT	NONE-LISTED	CEM	TABLE 4-1
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Field Equipment Requirements. In the listings for Decontamination Solutions, please list Hexane, and possibly Dilute Nitric Acid (if sampling for metals).

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Num	Name	Office	Page/Sheet	Discipline	Rm/Detail
7	WARMINSKI	NAB-EN-HT	NONE-LISTED	CEM	TABLE 4-2
Sample Container, Preservation And Holding Time Requirements. The containers listed for TCL Volatiles, add to the 40ml glass vial entry that septa caps are to be used.					
8	WARMINSKI	NAB-EN-HT	4-2	CEM	4.2
General Information And Definitions/Quality Control (QC) Samples. Include a sentence at the end of this section stating QC replicates/splits shall be approximately 10% of the field samples.					
9	WARMINSKI	NAB-EN-HT	4-3	CEM	4.2
Trip Blank. State or make it clear that each cooler containing aqueous VOC samples for shipment to the laboratory will have a trip blank packed and sent with that cooler.					
10	WARMINSKI	NAB-EN-HT	4-19 TO 4-25	CEM	VARIOUS
From the Scope of Services and the Sampling Objectives at these various sites, it is my understanding that the following types of sampling are not planned for this project: Sewer Sampling (Section 4.3.8), Drum Sampling (Section 4.3.10), Wood Chip Sampling (Section 4.3.11), Wipe Sampling (Section 4.3.12), and Screened Auger Sampling (Section 4.3.14). Each of these sections should be deleted if those types of sampling activities will not be conducted.					
11	WARMINSKI	NAB-EN-HT	5-1	CEM	SEC 5.1
Overview. In the 3rd sentence, 4th line, change the typo error from "where mode..." to "which mode..."					
12	WARMINSKI	NAB-EN-HT	5-4	CEM	SEC 5.2.2
Chain-of-Custody Record. A sample copy of the COC should be provided in the appendix.					

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Num	Name	Office	Page/Sheet	Discipline	Rm/Detail
13	WARMINSKI	NAB-EN-HT	5-6	CEM	SEC 5.3

Sample Shipment. The bullet at the top of this page, if gel packs will be used always include some ice in the cooler, unless the sample bottles have been pre-chilled.

In the paragraph of the middle of the page which discusses QA sample shipments to ACNED laboratory, include a statement that any samples being shipped to ACNED laboratory shall have written on the top of the Chain-of-Custody Form the ACNED laboratory assigned Project Identification Number. This ACNED Project Number should be available from the USACE Project Manager (if not yet received).

14	WARMINSKI	NAB-EN-HT	6-1	CEM	SEC 6.1
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Analytical Methods. The primary and preferred analytical methods to be used on the project shall be from SW-846, Test Methods for Evaluating Solid Waste, 3rd Edition. Not CLP Methods.

15	WARMINSKI	NAB-EN-HT	NONE-LISTED	CEM	TABLE 6-1
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Analytical Methods. Change the methods to be used for analysis to the following: TAL Metals, 6010 and appropriate 7000 series; TAL Cyanide, 9010 or 335.2, 335.1 from EPA Methods for Chemical Analysis of Water and Wastes; TCL Volatiles, 8240 or 8260; TCL Semivolatiles, 8270. If any other parameters will be added to this table, list the appropriate analytical method from the SW-846 manual.

16	WARMINSKI	NAB-EN-HT	6-4	CEM	SEC 6.4
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Internal Quality Control Checks. In Section 6.4.1 (Field Quality Control) change the frequency of the Field Duplicate Sample to 10%.

17	WARMINSKI	NAB-EN-HT	6-5	CEM	SEC 6.6
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Data Analysis And Reporting. In section 6.6.1 (Reporting), paragraph number 3, include Laboratory Control Standard (LCS) ran with each sample batch. In paragraph number 4, include also copies of Cooler (or Sample) Receipt Form (which document the condition of the samples when received at the contract laboratory), if this is used at the laboratory.

18	WARMINSKI	NAB-EN-HT	7-1	CEM	SEC 7.2
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Data Report To The Quality Assurance Laboratory. In the first sentence, change the term data "validation" to data "assessment/evaluation."

19	WARMINSKI	NAB-EN-HT	NONE-LISTED	CEM	APPEN A
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Laboratory Procedures. Include a copy of the USACE Laboratory Validation letter (as stated in paragraph 3.2).

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Num	Name	Office	Page/Sheet	Discipline	Rm/Detail
20	WARMINSKI	NAB-EN-HT	ATCH I-III	CEM	VARIOUS
On pages I-3, II-3, and III-3, in the paragraph with the heading "Soil Samples," Section 3.3 is referenced. The CDAP does not have a Section 3.3, please list the correct section.					
21	WARMINSKI	NAB-EN-HT	ALL-	CEM	SEC 4.0
On-Site Portable GC Analysis. The CDAP does not address the use of a Portable Gas Chromatograph (GC) for on-site sampling and analysis and associated QC performed with the instrument. In the Field Investigation Plan, Section 3.1.1 addresses the use of On-Site Portable GC Analysis. The use of this instrument should be detailed in the following sections of the CDAP: Section 2.2, Site Data Quality Objectives; Section 4.0, Field Activities; and Section 6.3, Calibration Procedures And Frequency. Discuss how the data retrieved from the field GC will be used for collection of other environmental sampling media and their locations.					
22	WARMINSKI	NAB-EN-HT	3-2	CEM	SEC 3.1.1
The following comments pertain to the FIELD INVESTIGATION PLAN:  Site Data Quality Objectives. The 1st paragraph specifies that CLP methodologies will be used. Under the heading "Off-site Laboratory Analysis," the paragraph states analytical methods will follow the CLP Statement of Work. This is not the preferred methodologies to use on the project. See comment No. 3.					
23	WARMINSKI	NAB-EN-HT	3-9	CEM	SEC 3.6
Groundwater Sampling. Under DPT Procedures, 2nd paragraph, 3rd sentence. Also state the 40ml vials are to be filled completely to the top, no air gaps or bubbles are to be present. The vial should contain acid preservatives for Aqueous Volatile sampling.					
24	WARMINSKI	NAB-EN-HT	3-11	CEM	SEC 3.6
Monitoring Wells/Temporary DPT Wells subparagraph. At end of this section (at the top of p. 3-11) specify that acid preservative is to be added to the sample container after transferring the sample to the container.					
25	WARMINSKI	NAB-EN-HT	3-11	CEM	SEC 3.7
Surface Water And Sediment Sampling. End of 3rd paragraph. The wrong Section is referenced. Change Section 3.1.1 to Section 3.5.					

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Num	Name	Office	Page/Sheet	Discipline	Rm/Detail
26	WARMINSKI	NAB-EN-HT	3-12	CEM	SEC 3.8
Decontamination Procedures. In the bullet items, add a dilute nitric acid rinse after the deionized water rinse when sampling for metal contaminants has occurred. Check on disposal requirements for methanol, it may have to be treated as a listed hazardous waste.					
27	WARMINSKI	NAB-EN-HT	4-2	CEM	SEC 4.2.1
Firefighter Training Area (Site 4). First paragraph on this page. Why is TAL analysis only being conducted on 20% of the soil and groundwater samples? Which ones will be chosen for TAL analysis? Explain your rationale.					
28	WARMINSKI	NAB-EN-HT	4-4	CEM	SEC 4.2.2
LARC Maintenance Area (Site 6). First paragraph on p. 4-4. See comment No. 27					
29	WARMINSKI	NAB-EN-HT	4-6	CEM	SEC 4.2.3
Auto Craft Building Area (Site 7). First paragraph on p 4-6, see comment No. 27.					
1	MARSH	NAB-EN-HT	2-1	ENV	2.1.1
Since you have started talking about the potable water supply you should expand upon the effect (or lack of) the installation contamination has on it.					
2	MARSH	NAB-EN-HT	2-2	ENV	2.1.2
Specify NGVD 29 or 83.					
3	MARSH	NAB-EN-HT	2-7	ENV	2.4.1
Executive Summary- The Underground Fuel Storage Tanks are mentioned in this section, however, nothing regarding what actions were taken. Included what action swere taken					
4	MARSH	NAB-EN-HT	2-8 & 2-9	ENV	2.4.1
Several of the sections on this page mention "trigger actions", however, there is no mention as to what the levels are, or which agency limits are being considered (EPA, VADEQ, etc.). Please specify.					
5	MARSH	NAB-EN-HT	2-10	ENV	2.4.1
Fifth bullet- Indicat how the recovery trench is performing.					

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Num	Name	Office	Page/Sheet	Discipline	Rm/Detail
6	MARSH	NAB-EN-HT	2-13	ENV	2.6
Second paragraph- This section indicates a hydraulic conductivity of approximately 8.2 centimeters per second, this is much greater than previously stated. Coordinate.					
7	MARSH	NAB-EN-HT	3-5	ENV	3.2
Third paragraph, fourth sentence- This sentence appears to be a duplication of effort and contradicts what was previously stated. Coordinate.					
8	MARSH	NAB-EN-HT	3-6	ENV	3.2
Fisrt paragraph- There needs to be more quantative and definitive information on location, number and depth of samples.					
9	MARSH	NAB-EN-HT	3-7	ENV	3.3
Explain why the temporary well are going to be installed. They appear to be unnecessary and can be deleted.					
10	MARSH	NAB-EN-HT	3-8	ENV	3.4
1. Include US Army Corps of Engineers Engineering and Design, Monitoring Well Installation at Hazardous and Toxic Waste Sites EM 1110-7-XX (FR) as guidance.					
2. Recommend installing 4-inch wells if pumps are to be installed later from sampling or remediation.					
3. Specify 0.010 or 0.0020 inch screens.					
11	MARSH	NAB-EN-HT	3-8	ENV	3.5
There needs to be some estimated quantity of samples to be collected. The way it is written is to general.					
12	MARSH	NAB-EN-HT	FIGURE 3-4	ENV	
1. Identify the length of screen below the water table.					
2. If DNAPLs are a contaminant of concern this well will not sufficiently characterize the plume due to the fact that they are "sinkers". Coordinate.					
13	MARSH	NAB-EN-HT	3-9	ENV	3.6
Recommend including Redox (Eh-1) potential if possible.					

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14	MARSH	NAB-EN-HT	3-10	ENV	3.6
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There are several discrepancies regarding monitoring parameters in this section. Coordinate.

15	MARSH	NAB-EN-HT	3-12	ENV	3.9
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All investigation derived waste (IDW) is to be handled on, unless there is specific guidance from the State/EPA directing otherwise. We do not want to containerize IDW unless absolutely necessary.

16	MARSH	NAB-EN-HT	3-13	ENV	3.9
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Similar to the above comment, we do not want to containerize unless necessary. PPE and other disposable equipment will not be placed in drums, but will be placed in plastic trash bags and handled as solid waste in the installation's dumpster.

17	MARSH	NAB-EN-HT	3-13	ENV	3.10
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What does the sentence "The Fort Storyt GIS will be used if available." mean. Either it is available or it isn't.

18	MARSH	NAB-EN-HT	3-14	ENV	3.10
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How will the locations of sediment and surface water be determined? Specify.

19	MARSH	NAB-EN-HT	4.2.1	- ENV	FIG 4-1
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1. Indicate the direction of groundwater flow.

2. Identify/label all elements.

3. Based on the data provided (especially Appendix A) it is not very clear the rationale for the layout. Clarify.

20	MARSH	NAB-EN-HT	4-2	ENV	TABLE
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1. The number of upgradient groundwater samples seems quite high, they could be better served as downgradient samples.

2. The DQO Level specified (III) conflicts with 3.1.1. Coordinate.

21	MARSH	NAB-EN-HT	4-2	ENV	PARA 2
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Soil Samples- Identify which samples will be which (ie., FTP, northern, solvent).

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22	MARSH	NAB-EN-HT	4-3	ENV	PARA 1
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Groundwater- 1. Since DNAPLs are contaminants of concern, collecting samples from just the upper 5 feet of the aquifer will not be adequate to characterize the plume. Coordinate.

2. Has the tidal influence been considered? There has been no mention of it to this point.

3. The installation of temporary wells seems unnecessary. Justify why they are needed, or delete them.

23	MARSH	NAB-EN-HT	FIGURE 4-2	ENV	
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1. Indicate the direction of groundwater flow.

2. Label/indentify all elements.

3. The grid pattern selected appears to duplicate JMM's. This doesn't appear to meet one of the objectives of this investigation, which is to identify the horizontal and vertical extent of contamination. JUstify the selected pattern.

4. Has the existing production well been sampled with regards to the contamination? If not has it been considered?

24	MARSH	NAB-EN-HT	4-4	ENV	TABLE
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1. Indicate why there are no upgradient samples.

2. The DQO levels conflict with 3.1.1. Coordinate.

25	MARSH	NAB-EN-HT	4-4	ENV	PARA 1
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On page 3-10 it indicates that samples are being filtered, however, this section indicates that both total and dissolved compounds are going to be analyzed. Coordinate.

26	MARSH	NAB-EN-HT	4-4	ENV	PARA 2
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Soil samples- This section indicates that one upgradient sample will be collected, however, the summary table above indicates that no upgradient samples will be collected. Coordinate.

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Num	Name	Office	Page/Sheet	Discipline	Rm/Detail
27	MARSH	NAB-EN-HT	4-5	ENV	PARA 2
Groundwater Samples- 1. This section indicates that a 7' screen will be installed. Isn't this a bit unusual?					
2. This section indicates that the new wells will not be sampled as part of this effort. Is this correct? If so, it should be changed so that they are sampled.					
28	MARSH	NAB-EN-HT	FIGURE 4-3	ENV	
1. Inducate the direction of GW flow.					
2. Identify/ label all points.					
29	MARSH	NAB-EN-HT	4-6	ENV	TABLE
The DQO level conflicts with 3.1.1 (page 3-2). Coordinate.					
30	MARSH	NAB-EN-HT	4-7	ENV	
Justify why it is necessary to install temporary wells when permanent wells are going to be installed.					
31	MARSH	NAB-EN-HT	6-2	ENV	6.3
How is the field book any different than the daily site log book. There should only be one log book per site to eliminate confusion and "missing" data.					
32	MARSH	NAB-EN-HT	6-2	ENV	6.4
This paragraph is incorrect. At the completion of the project all documentation shall be turn over to the US Army Corps of Engineer project manager.					
33	MARSH	NAB-EN-HT	APPENDIX -A	ENV	
All figures in this appendix are extremely difficult to read. Please correct.					
34	MARSH	NAB-EN-HT	-	ENV	
The Remedial Investigation and Design POC for the environmental engineering comments is Russell Marsh at (410) 962-2227.					





Preliminary Draft  
Volume II of II (Appendices)

S0406  
File: 6C.10  
60.4  
60.4  
60.7

# Remedial Investigation Report

Firefighter Training Area (FTSTY-04)  
LARC 60 Maintenance Area (FTSTY-06)  
Auto Craft Building Area (FTSTY-07)  
Fort Story, Virginia

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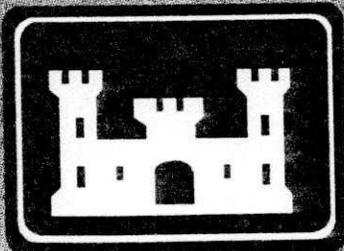
**U. S. Army Transportation Center  
Fort Eustis, Virginia**

and

**U. S. Army Corps of Engineers  
Baltimore District**

July 1995

0285-588





Draft

S0401

File: 6C.10

# Quality Control Summary /Analytical Results Report

Firefighter Training Area (FTSTY-04)  
LARC 60 Maintenance Area (FTSTY-06)  
Auto Craft Building Area (FTSTY-07)  
Fort Story, Virginia

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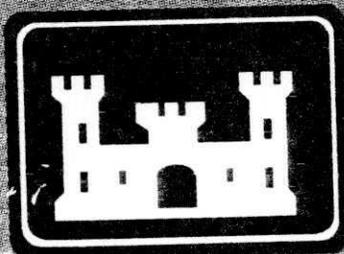
**U. S. Army Transportation Center  
Fort Eustis, Virginia**

and

**U. S. Army Corps of Engineers  
Baltimore District**

July 1995

0285-589





Draft

50402  
File 6C.10

# Quality Control Summary /Analytical Results Report

## Appendix D Data Validation Reports

Firefighter Training Area (FTSTY-04)  
LARC 60 Maintenance Area (FTSTY-06)  
Auto Craft Building Area (FTSTY-07)  
Fort Story, Virginia

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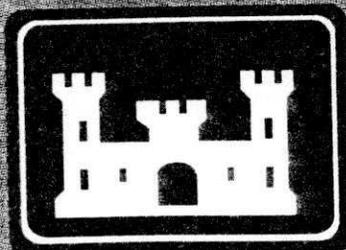
**U. S. Army Transportation Center  
Fort Eustis, Virginia**

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Baltimore District**

July 1995

0285-589





## Final Work Plan

# FIELD INVESTIGATION PLAN

Remedial Investigation  
For  
Fort Story, Virginia

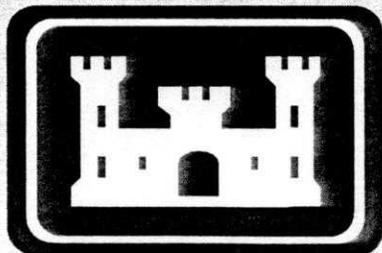
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U. S. Army Transportation Center  
Fort Eustis, Virginia

and

U. S. Army Corps of Engineers  
Baltimore District

December 1994



Final Work Plan

# CHEMICAL DATA ACQUISITION PLAN

Remedial Investigation  
For  
Fort Story, Virginia

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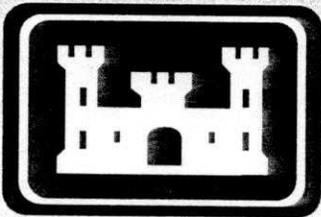
**U. S. Army Transportation Center  
Fort Eustis, Virginia**

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Baltimore District**

**December 1994**

0285-588



50400



Final Work Plan

# SITE SAFETY AND HEALTH PLAN

Remedial Investigation  
For  
Fort Story, Virginia

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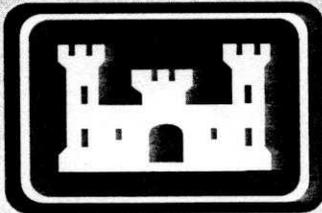
**U. S. Army Transportation Center  
Fort Eustis, Virginia**

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**U. S. Army Corps of Engineers  
Baltimore District**

**December 1994**

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**MALCOLM  
PIRNIE**

**Draft Work Plan**

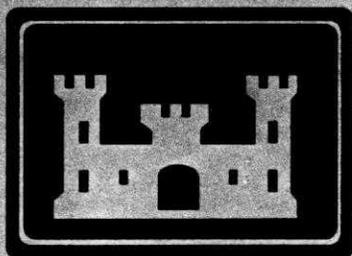
**FIELD  
INVESTIGATION  
PLAN**

**Remedial Investigation  
For  
Fort Story, Virginia**

**Prepared By:**

**Malcolm Pirnie, Inc.  
11832 Rock Landing Drive, Suite 400  
Newport News, Virginia 23606**

**October 1994**



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Baltimore District**

**0285-588**

**MALCOLM  
PIRNIE**

**Draft Work Plan**

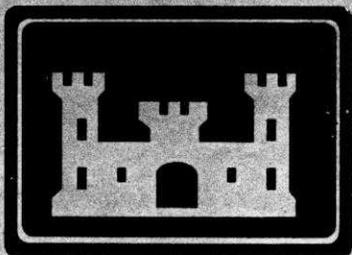
**CHEMICAL DATA  
ACQUISITION PLAN**

**Remedial Investigation  
For  
Fort Story, Virginia**

**Prepared By:**

**Malcolm Pirnie, Inc.  
11832 Rock Landing Drive, Suite 400  
Newport News, Virginia 23606**

**October 1994**



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of Engineers  
Baltimore District**

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**MALCOLM  
PIRNIE**

58370  
**Draft Work Plan**

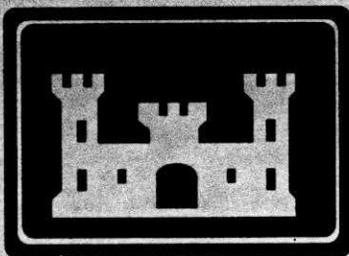
# **SITE SAFETY AND HEALTH PLAN**

**Remedial Investigation  
For  
Fort Story, Virginia**

**Prepared By:**

**Malcolm Pirnie, Inc.  
11832 Rock Landing Drive, Suite 400  
Newport News, Virginia 23606**

**October 1994**



**US Army Corps  
of Engineers  
Baltimore District**

**0285-588**

REVIEW COMMENTS

DOCUMENT:	Draft - Chem. Data Acquisition Plan / Remedial Investigation For Fort Story, Va.		
PREPARED BY:	Malcolm Pirnie	DATE OF DOCUMENT:	October 1994
PROJECT:	RMIS No's. FTSTY-04, FTSTY-06, & FTSTY-07	1383 NUMBER:	STOS930001 STOS930004 STOS930006
REVIEWED BY:	Dwight Hunt	DATE OF REVIEW:	8 November 1994

NO.	SECTION	PAGE	PARA.	COMMENTS
1				Cover should list sites studied and identify these sites by corresponding RMIS Nos. - Fire Training Area (FTSTY-04), LARC 60 Maintenance Area (FTSTY-06), & Auto Craft Shop (FTSTY-07)
2				Inside cover and throughout documents should identify sites by RMIS Nos., not site nos.
3				Inside cover should identify LARC Maintenance Area as LARC 60 Maintenance Area.
4	Table of Contents	ii		Under List of Figures, Fort Story Location Map follows page 2-1 not 1-1 as noted.
5	Table of Contents	ii		Under List of Figures, FTA Site Map follows page I-3 not I-2 as noted.
6	Table of Contents	ii		Under List of Figures, LARC Site Map follows page II-3 not II-2 as noted.
7	Table of Contents	ii		Break out contents one step further, ie. under each section such as 4.3 please list 4.3.1 and so on. Not necessary to break out further.
8	4.3.15	4-25		ID for Sampling Equipment should be 4.3.15.1 not 4.13.15.1
9	4.3.15	4-26		ID for Sampling Procedures should be 4.3.15.2 not 4.13.15.2
10	ATCH I FTA	i		Under List of Tables, FTA Sample Summary follows page I-4 not I-3 as noted.
11	ATCH I FTA	i		Under List of Figures, FTA Site Map follows page I-3 not I-2 as noted.
12	ATCH II LARC 60	i		Under List of Tables and List of Figures, all descriptions should be LARC 60 not FTA as noted.
13	ATCH II LARC 60	i		Under List of Tables, LARC 60 Sample Summary follows page II-4 not II-3 as noted.
14	ATCH II LARC 60	i		Under List of Figures, LARC 60 Site Map follows page II-3 not II-2 as noted.
15	ATCH III AUTO CRAFT	i		Under List of Tables and List of Figures, all descriptions should be Auto Craft not FTA as noted.
16	ATCH III AUTO CRAFT	i		Under List of Tables, Auto Craft Sample Summary follows page III-4 not III-3 as noted.
17	Sampling Procedure			All sections referring to sampling procedures should state that all Investigative Derived Waste (IDW) will be placed in containers approved for that particular waste, properly labeled and taken to the Fort Story Hazardous Waste Facility for disposal.

6C.10

REVIEW COMMENTS

DOCUMENT:	Draft - Field Investigation Plan / Remedial Investigation For Fort Story, Virginia		
PREPARED BY:	Malcolm Pirnie	DATE OF DOCUMENT:	October 1994
PROJECT:	RMIS No's. FTSTY-04, FTSTY-06, FTSTY-07	1383 NUMBER:	STOS930001 STOS930004 STOS930006
REVIEWED BY:	Dwight Hunt Dan Musel	DATE OF REVIEW:	3 November 1994

NO.	SECTION	PAGE	PARA.	COMMENTS
1				Cover should list sites studied and identify these sites by corresponding RMIS Nos. - Fire Training Area (FTSTY-04), LARC 60 Maintenance Area (FTSTY-06), & Auto Craft Shop (FTSTY-07)
2				Inside cover and throughout document should identify sites by RMIS Nos., not site nos.
3				Inside cover should identify LARC Maintenance Area as LARC 60 Maintenance Area.
4				Add an Executive Summary
5				Add a list of acronym
6	Table of Contents	i		Under Sec. 6.5 - Reporting is on pg. 6-3 not 6.2
7	1.2	1-1	1	Include the Scope of Services as an Appendix.
8	2	2-11	Table	Need to give this table a no. and identify in LIST OF TABLES pg. ii
9	4	4-2	Table	Need to give this table a no. and identify in LIST OF TABLES pg. ii
10	4	4-4	Table	Need to give this table a no. and identify in LIST OF TABLES pg. ii
11	4	4-6	Table	Need to give this table a no. and identify in LIST OF TABLES pg. ii



Preliminary Draft  
Volume I of II (Text, Tables  
and Figures)

50405  
File: 6C.10  
6D.4  
6D.6  
6D.7

# Remedial Investigation Report

Firefighter Training Area (FTSTY-04)  
LARC 60 Maintenance Area (FTSTY-06)  
Auto Craft Building Area (FTSTY-07)  
Fort Story, Virginia

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**U. S. Army Transportation Center  
Fort Eustis, Virginia**

and

**U. S. Army Corps of Engineers  
Baltimore District**

**August 1995**

0285-588

