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INTERNATIONAL TECHNOLOGY CORPORATION

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SUPPLEMENTAL PLAN FOR TASK 15 ACTIVITIES FOR

COMPLETION OF THE SCRDI-BLUFF ROAD SITE RI/FS
RICHLAND COUNTY (COLUMBIA), SOUTH CAROLINA

TASK 15: REMOVAL AND DISPOSAL OF ABOVEGROUND
STEEL TANK AND CONTENTS

DRAFT

Prepared by

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Knoxville, Tennessee 37923

August 18, 1988

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SUPPLEMENTAL PLAN FOR REMOVAL OF A STEEL TANK AND CONTENTS FROM THE SCRDI-BLUFF ROAD SITE

Prepared by:

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August 18, 1988

Approved: _____ Date: 8/18/88
Project Director, IT Corporation

Approved: _____ Date: 8/18/88
Project Manager, IT Corporation

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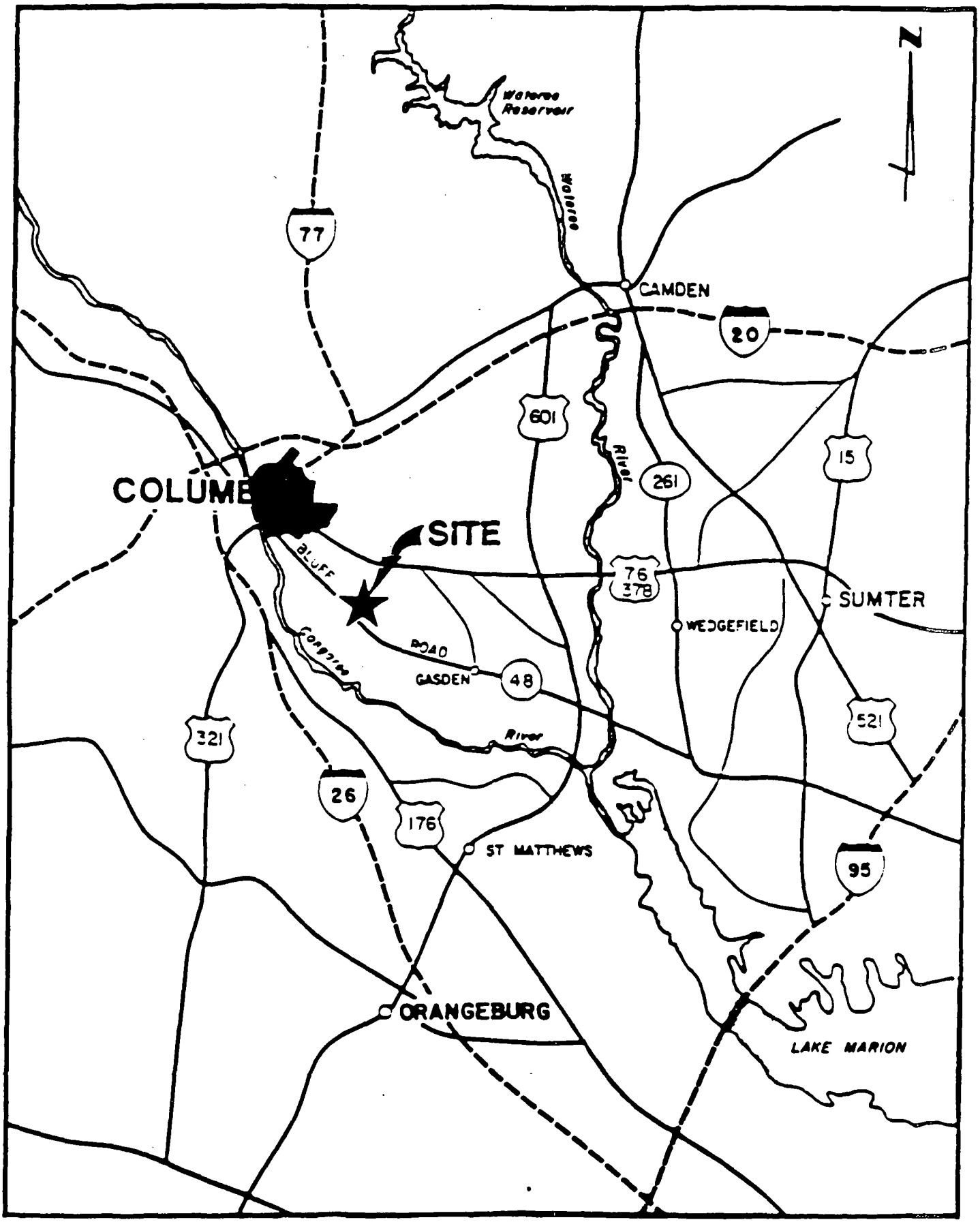
1.0 INTRODUCTION

This work plan supplements the RI/FS Implementation Plan developed by IT for completion of the Remedial Investigation/Feasibility Study (RI/FS) of the SCRDI-Bluff Road "Superfund" site. The site location is shown in Figure 1. This supplemental plan deals exclusively with removal of a 3000-gallon capacity cylindrical steel tank from the site. A layout of the site showing the tank location is shown in Figure 2. This tank was reported by a previous investigation (Golder Associates, Inc., 1985) to contain an oily sludge that contained chlorinated organics. The sludge sample was analyzed for "Priority Pollutants" only, the results of which are given in Table 1. These contaminants represent 5 percent of the sample by weight; the constituents of the remaining 95 percent of the sludge are unknown. The source of the sludge is unknown; therefore, until it has been adequately characterized, it must be regarded as a solid waste that is potentially a hazardous waste.

The following is an excerpt from the second (and final) draft of the RI report prepared by Golder Associates in 1986. The field investigations and analytical work was performed in 1985.

> A tank remaining from the surficial cleanup lies on the ground surface just inside the fence line near Bluff Road. The cylindrical steel tank is approximately 5 feet in diameter and about 20 feet long. The outer surface of the tank is rusty, but no holes, bulges, or other signs of serious deterioration are evident. The only openings evident are several round holes at the top of the tank.
>
> Golder Associates sampled the material in the tank in September 1985. The tank contained no ponded fluid but contained about 0.5 feet of sludge. A sludge sample was obtained by inserting a one-inch diameter PVC pipe into a sample jar. The sludge was black and dark brown with an oily appearance. The sample was analyzed for priority pollutants. Analysis results indicate that the sludge is composed primarily of 2-chlorophenol and Phenol at concentrations of 33,330 ppm and 13,774 ppm respectively. Trichloroethylene, 2,4-Dichlorophenol, and 2,4,6-Trichlorophenol were the only other priority pollutants indicated by the analysis.



Bluff Road Site Location Map

Figure 1

From Golder Associates (1986)

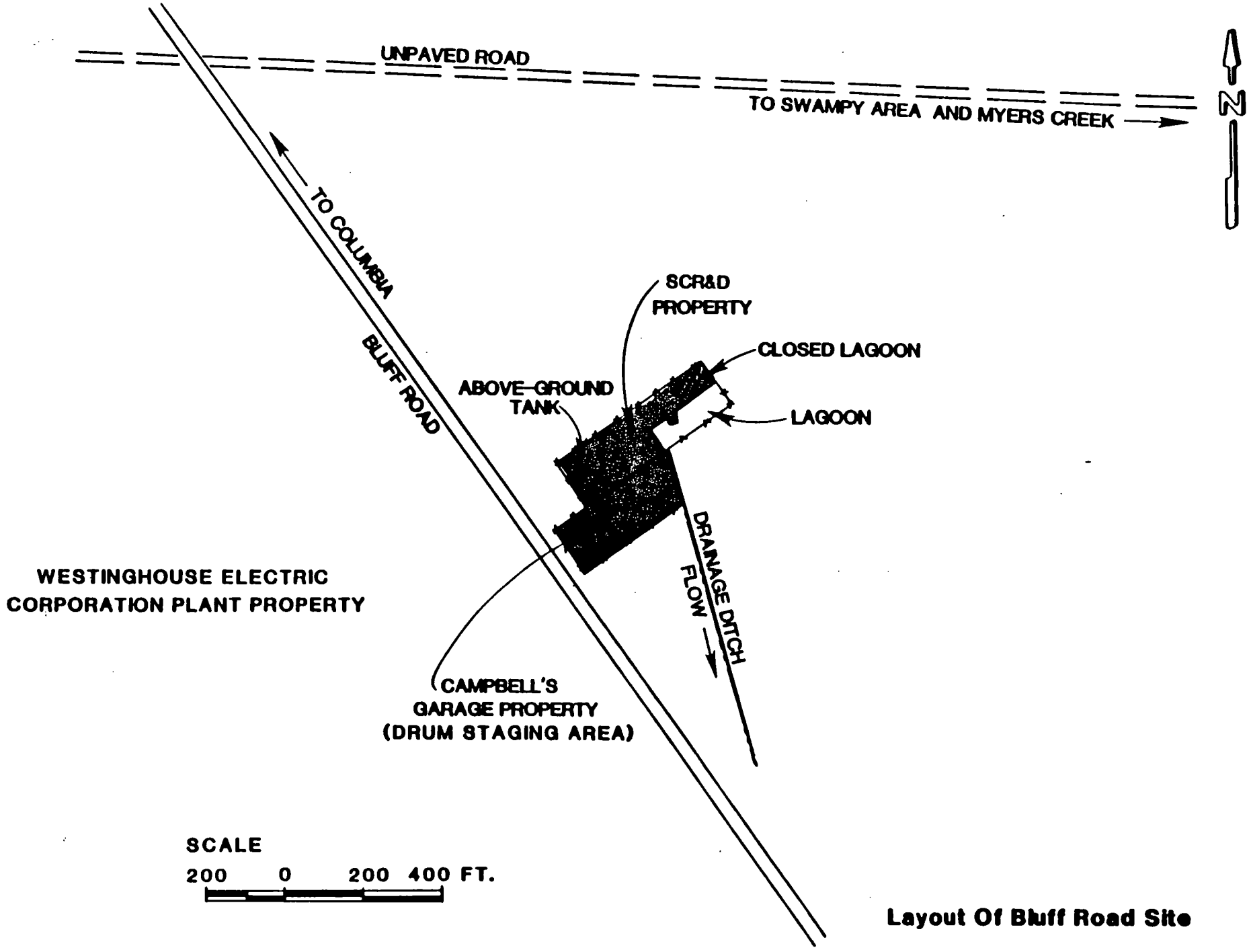

UNPAVED ROAD
TO SWAMPY AREA AND MYERS CREEK
N
TO COLUMBIA
BLUFF ROAD
SCR&D PROPERTY
CLOSED LAGOON
ABOVE-GROUND TANK
LAGOON
DRAINAGE DITCH
FLOW
WESTINGHOUSE ELECTRIC CORPORATION PLANT PROPERTY
CAMPBELL'S GARAGE PROPERTY (DRUM STAGING AREA)
SCALE
200 0 200 400 FT.
Layout Of Bluff Road Site

Figure 2

Table 1. Organic Priority Pollutants Present in Tank Sludge in 1985

Priority Pollutants	Concentrations (ppm)
A. Volatile organics	
1. trichloroethylene	122
B. Acid-extractable semivolatile organics	
1. 2-chlorophenol	33,330
2. 2,4-dichlorophenol	511
3. phenol	13,774
4. 2,4,6-trichlorophenol	1786
C. Base/Neutral-Extractable Semivolatile Organics	
1. None detected	---
D. Pesticides and PCBs	
1. None detected	
Total Organic Priority Pollutants:	49,523

One set of samples will be taken from the steel tank. The sample set will consist of three 500-ml and 40-ml packaged samples needed for the required analyses to be performed as requested by Chemical Waste Management, Inc.

2.1 WASTE SAMPLING

The steel tank has four circular openings, each approximately 4 inches in diameter, evenly spaced along the 20-foot length of the tank. The tank is lying on its side (the axis of the cylinder is parallel to the ground) with the openings on the "up" side. Samples will be composites of grab samples taken through each of the openings. Each grab sample will be a core-type sample through the complete depth of the sludge (last reported to be approximately 6 inches). A minimum sampling device reach of 6 feet will be required to reach the bottom of the 5-foot diameter tank. All grab samples will be thoroughly mixed using precleaned stainless steel or Teflon®-coated containers and tools.

2.2 SAMPLE PACKAGING AND PRESERVATION

After mixing, the discrete samples taken from the composite sample will be packaged in the proper containers to minimize loss of volatile and semivolatile constituents.

The total volume of composited grab samples needed for all analyses is approximately 1.5 liters. Excess sample material and decontamination wastewater/solvents will be deposited in the tank. The volume of this wastewater/solvents and approximate volume of each constituent (water, isopropyl alcohol, etc.) will be recorded on the Field Activity Daily Log and used in the computation of waste constituents for waste disposal purposes.

Samples will be placed in coolers suitable for shipping, and cooled to approximately 40°C by means of "blue ice". Vermiculite or the equivalent will be used to cushion the samples and to provide further thermal insulation. Two

coolers will be required for sample shipment. One will be sent to Chemical Waste Management. The other will be sent to IT's laboratory in Knoxville, Tennessee.

2.3 SAMPLE MANIFESTING AND SHIPPING

Samples will be manifested by means of the IT Chain-of-Custody form (COC). A COC will be required for each cooler. A Request for Analysis form will also be included in both coolers. A Waste Material Profile sheet will be included with the sample sent to Chemical Waste Management. Copies of all three forms are included in Appendix A.

2.4 LABORATORY ANALYSES

Samples for Chemical Constituent and Hazardous Characteristics Analyses will be shipped to IT's Middlebrook Pike and Chemical Waste Management analytical laboratories. The shipping information is:

IT Analytical Services
5815 Middlebrook Pike
Knoxville, Tennessee 37921
(615) 588-6401
ATTN: Robyn Wagner

Chemical Waste Management
Highway 17/Mile Marker 163
Emelle, Alabama 35459
(901) 362-7158
ATTN: Frank Hauck

3.0 DISPOSAL OF TANK AND CONTENTS

The most cost-effective means to dispose of the steel tank and contents is to have the contents removed, drummed, and transported to a hazardous waste management facility (HWMF) for disposal and to have the empty tank cut up and transported to an HWMF for disposal. The tank is considered to be empty for waste transportation purposes if the contents do not exceed 1 percent of the tank volume. Currently, the tank contents are approximately 5 percent of the tank volume, making it impossible to load the tank "as is" and transporting it to an HWMF for further handling. The on-site work will take approximately four days and may be planned to coincide with other field work, while IT field personnel will be on-site to perform oversight duties and assist as necessary.

3.1 SUMMARY OF SUBTASKS

Removal of the tank will proceed as follows:

- A commercial waste transporter will be subcontracted to provide equipment and labor for all work.
- The subcontractor will pump the sludge from the tank into containers suitable for transport of the sludge to a designated HWMF for disposal.
- The subcontractor will cut up the decontaminated tank with shears and load the tank pieces onto a truck for transport to a designated HWMF for disposal.

IT will provide oversight to verify that work is performed satisfactorily, that site safety rules are obeyed, and that all required paperwork (e.g., Hazardous Waste Manifests) is completed.

3.2 POTENTIAL HAZARDS AND HAZARD MITIGATION

Potential hazards tentatively identified for this subtask are:

- Inhalation of fumes or vapors
- Skin contact with corrosive substances.

Since the tank contents will be removed by suction hose, Level C protective clothing and safety precautions routinely used by commercial firms for this type of work will minimize potential hazards.

3.3 PERFORMANCE OF TANK AND WASTE REMOVAL

A commercial waste management firm that is certified by the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Transportation (DOT) for transportation of hazardous wastes and hazardous substances, respectively, will be subcontracted for performance of this task. The on-site work will be performed under IT's supervision. IT will insure that all site-specific safety requirements are fulfilled. Prior to commencement of the work, the results of the waste analysis and characterization (Section 2.0) will have been forwarded to the subcontractor so that compatible waste handling equipment and storage containers can be selected for the job. IT's Health and Safety Officer (HSO) will have also evaluated the data, and, if necessary, issued an amendment to the Project Health and Safety Plan (HSP).

The bulk of the sludge will be removed from the tank via a vacuum hose. If necessary, a solvent such as diesel fuel will be added to the tank to make the sludge pumpable. A suitable solvent will have been preselected based on the waste analysis and characterization data. Because the work will be performed in the summer and the tank will be in full sunlight, heating of the tank to decrease viscosity or aid in solvation should not be necessary.

The sludge will be pumped into suitable containers for transportation to the designated HWMF. Since the material has been inside an unlined steel tank for at least 5 years to date, unlined DOT 17H (55-gallon) open-top drums should be suitable. It is anticipated that three to five drums will be needed, depending on the amount of solvent (if any) added to make the sludge more pumpable. Pumping will continue until all pumpable sludge is removed.

The subcontractor will cut up and load the tank pieces onto a truck or trailer for transportation to a designated HWMF for disposal.

4.0 ADDITIONAL INFORMATION

4.1 SUBCONTRACTOR INFORMATION

The subcontractor for this task is:

Company Name: Chemical Waste Management

EPA I.D. No.: _____

Address: P. O. Box 55
Highway 17/Mile Marker 163
Emelle, Alabama 35459

Telephone No.: 901/362-7158

Contact: Frank Hauck

4.2 DESIGNATED HAZARDOUS WASTE MANAGEMENT FACILITY INFORMATION

The sludge removed from the tank will be consigned to:

Company Name: (Same as above)

Facility EPA ID No.: _____

Facility Address: _____

Telephone No.: _____

Contact: _____

The method of sludge disposal is: incineration

The tank will be consigned to:

Company Name: Same as above

Facility EPA ID No.: _____

Facility Address: _____

_____

_____

Telephone No.: _____

Contact: _____

The method of tank disposal is: landfill or metal recycle

APPENDIX A

FORMS REQUIRED FOR TASK 15

INTERNATIONAL TECHNOLOGY CORPORATION

CHAIN-OF-CUSTODY RECORD

R/A Control No. _____

C/C Control No. 002289

PROJECT NAME/NUMBER _____ LAB DESTINATION _____

SAMPLE TEAM MEMBERS _____ CARRIER/WAYBILL NO. _____

Sample Number	Sample Location and Description	Date and Time Collected	Sample Type	Container Type	Condition on Receipt (Name and Date)	Disposal Record No.

Special Instructions: _____

Possible Sample Hazards: _____

SIGNATURES: (Name, Company, Date and Time)

1. Relinquished By: _____

   Received By: _____

2. Relinquished By: _____

   Received By: _____

3. Relinquished By: _____

   Received by: _____

4. Relinquished By: _____

   Received By: _____

WHITE - To accompany samples
YELLOW - Field copy

REQUEST FOR ANALYSIS

R/A Control No.
C/C Control No. 007680

PROJECT NAME _____
PROJECT NUMBER _____
PROJECT MANAGER _____
BILL TO _____

PURCHASE ORDER NO. _____

DATE SAMPLES SHIPPED _____
LAB DESTINATION _____
LABORATORY CONTACT _____
SEND LAB REPORT TO _____

DATE REPORT REQUIRED _____
PROJECT CONTACT _____
PROJECT CONTACT PHONE NO. _____

Sample No.	Sample Type	Sample Volume	Preservative	Requested Testing Program	Special Instructions

TURNAROUND TIME REQUIRED: (Rush must be approved by the Project Manager.)

Normal _____ **Rush** _____ (Subject to rush surcharge)

POSSIBLE HAZARD IDENTIFICATION: (Please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances)

Nonhazard _____ **Flammable** _____ **Skin Irritant** _____ **Highly Toxic** _____ **Other** _____ **(Please Specify)**

SAMPLE DISPOSAL (Please indicate disposition of sample following analysis. Lab will charge for packing, shipping, and disposal.)

Return to Client _____ **Disposal by Lab** _____

FOR LAB USE ONLY

Received By _____ **Date/Time** _____

WHITE - Original, to accompany samples
YELLOW - Field copy