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**SITE:** Seven Out  
**BREAK:** 2.2  
**OTHER:** \_\_\_\_\_

**REMOVAL ASSESSMENT  
SAMPLING AND ANALYSIS PLAN  
SEVEN OUT, LLC SITE  
WAYCROSS, WARE COUNTY, GEORGIA**

**FINAL**

**Prepared for  
U.S. ENVIRONMENTAL PROTECTION AGENCY  
Region 4  
Atlanta, Georgia 30303**

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## 1.0 INTRODUCTION

The Tetra Tech EM Inc. (Tetra Tech) Superfund Technical Assessment and Response Team (START) received Technical Direction Document (TDD) No. 4T-04-07-B-011 from the U.S. Environmental Protection Agency (EPA) under Contract No. 68-W-00-120. Under this work assignment, START will assist EPA in conducting removal assessment (RA) activities at the Seven Out, LLC site operating under the facility name of BCX Corporation, located in Waycross, Ware County, Georgia. This sampling plan specifies the type, number, and locations of samples to be collected during the RA, as well as the sampling methodology that will be followed.

The general purposes of an RA are to collect information on current site conditions, including the presence and nature of contamination, provide technical assistance for the RA sampling activities, and determine the need for removal actions at the site.

RA activities will include the following:

- Collecting environmental samples
- Interviewing the site owner and/or State representatives
- Using air monitoring instrumentation to screen the site
- Photographing site features and sampling locations
- Assessing the need for removal activities
- Preparing sampling and chain-of-custody documentation

This RA sampling and analysis plan for the Seven Out site is organized as follows:

- Section 2.0 presents facility background information.
- Section 3.0 describes sampling locations used to determine the hazardous constituents of tank contents.

To further ensure that all appropriate data quality objectives (DQO) are met, field and laboratory activities will be performed in accordance with prescribed guidance documents, including the EPA Science and Ecosystem Support Division (SESD) Region 4 Environmental Investigation Standard Operating Procedures and Quality Assurance Manual (EISOPQAM), EPA Contract

Laboratory Program (CLP) Statement of Work (SOW) for Inorganics Analysis, the CLP National Functional Guidelines for Inorganic Data Review, the Region 4 Data Validation Standard Operating Procedures (SOP) for CLP Routine Analytical Services, Revision 2.1, and the Region 4 Analytical Support Branch Laboratory Operations and Quality Assurance Manual (Refs. 1; 2; 3; 4; 5; 6; 7; and 8 as appropriate). These guidance documents specifically apply to sample types, sampling procedures, field quality assurance and quality control (QA/QC) samples, laboratory procedures, and data validation.

## 2.0 BACKGROUND

The Seven Out site is located at 901 Francis Street in Waycross, Ware County, Georgia. The facility is less than 2 years old and operates as an industrial wastewater treatment facility. The property has 27 storage/treatment tanks with a combined capacity over 450,000 gallons. Wastewater is treated with the treatment process being adjusted for each batch to ensure the end product meets pretreatment standards. Wastes are precipitated out using sodium hydroxide, aluminum sulfate, ferric acid, and sulfuric acid which are stored in bulk tanks on site. The precipitated solids are then sent to a filter press. The filter press solids are sent to the Broadhurst Environmental landfill in Screvin, Georgia. The treated wastewater is discharged to the City of Waycross publicly owned treatment works (POTW) using the City's collection system.

The City of Waycross issued Notices of Violation and an Administrative Order to the facility due to many exceedances of the company's pre-treatment permit. The facility received 8 enforcement letters between May 2003 and December 2003 from the City of Waycross. The facility voluntarily ceased accepting industrial wastewater and stopped discharging to the Waycross POTW on March 1, 2004.

The plant manager informed Georgia Department of Natural Resources (GADNR) personnel that there was no documentation available that demonstrated exactly what was currently in each tank. Some information on past customers and waste profiles were identified. However, information on the current contents of the tanks is not available.

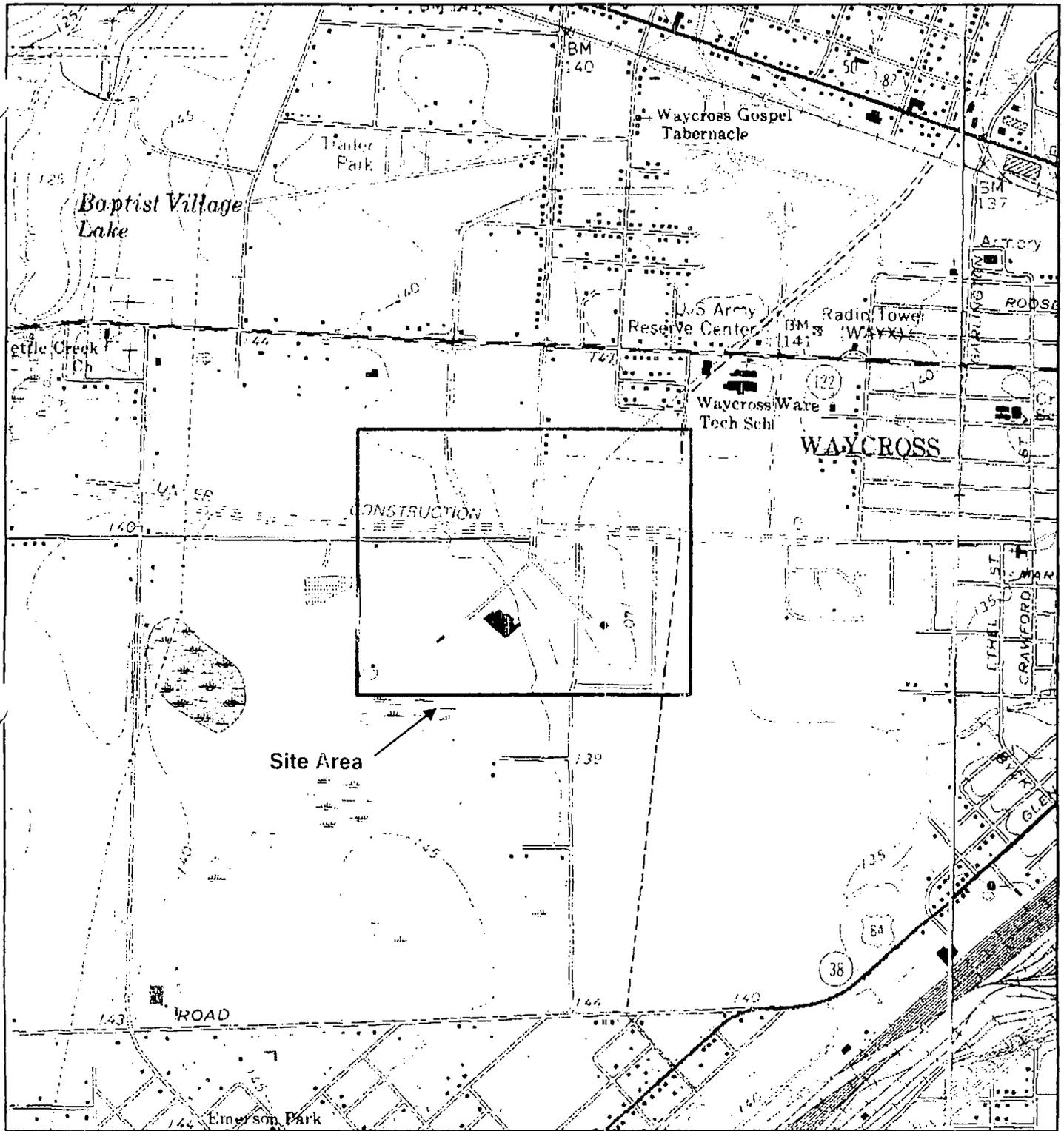
### 3.0 SAMPLING PLAN

The primary purpose of the RA is to collect data to evaluate the need for a removal action at the site. Tetra Tech will focus on collecting samples from all onsite storage and treatment tanks with an emphasis on the settled fractions and/or sludges. Figure 1 is the topographic map of the area, Figure 2 is the Site Layout Map. Table 1 outlines the numbers and types of samples to be collected during the RA and the rationale for each sampling interval from within the tank. The tank numbers will be used and an identifier with additional information based on whether the sample is a sludge/tank bottom, wastewater or light non-aqueous phase liquid (LNAPL).

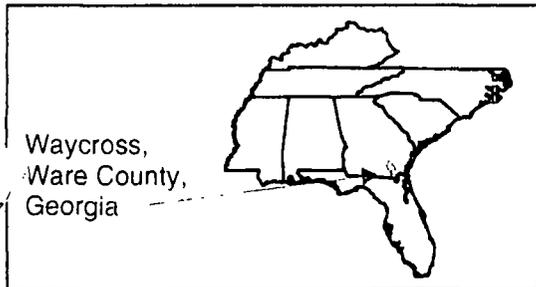
All waste samples will be submitted to AES Laboratories in Atlanta, Georgia for analysis of Target Analyte List (TAL) metals, TAL Volatiles, TAL Semi-volatiles and selected TCLP for metals with analytical service parameters in accordance with the following EPA guidance document, as appropriate:

- U.S. Environmental Protection Agency, Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, EPA 540/R-94/013, February 1994.
- U.S. Environmental Protection Agency, Region 4, Science and Ecosystem Support Division, Data Validation Standard Operating Procedures for Contract Laboratory Program Routine Analytical Services, Revision 2.1, July 1999.
- U.S. Environmental Protection Agency, Science and Ecosystem Support Division Region 4, Analytical Support Branch Laboratory Operations and Quality Assurance Manual, July 1, 2001.

Table 2 presents QA/QC samples to be collected during the RA field activities. Table 3 presents the analytical methodology for each sample matrix, as well as the appropriate sample container and sample preservative. Sampling and field QA/QC procedures for RA field activities will be conducted in accordance with the EPA SESD Region 4 EISOPQAM (Ref. 1).



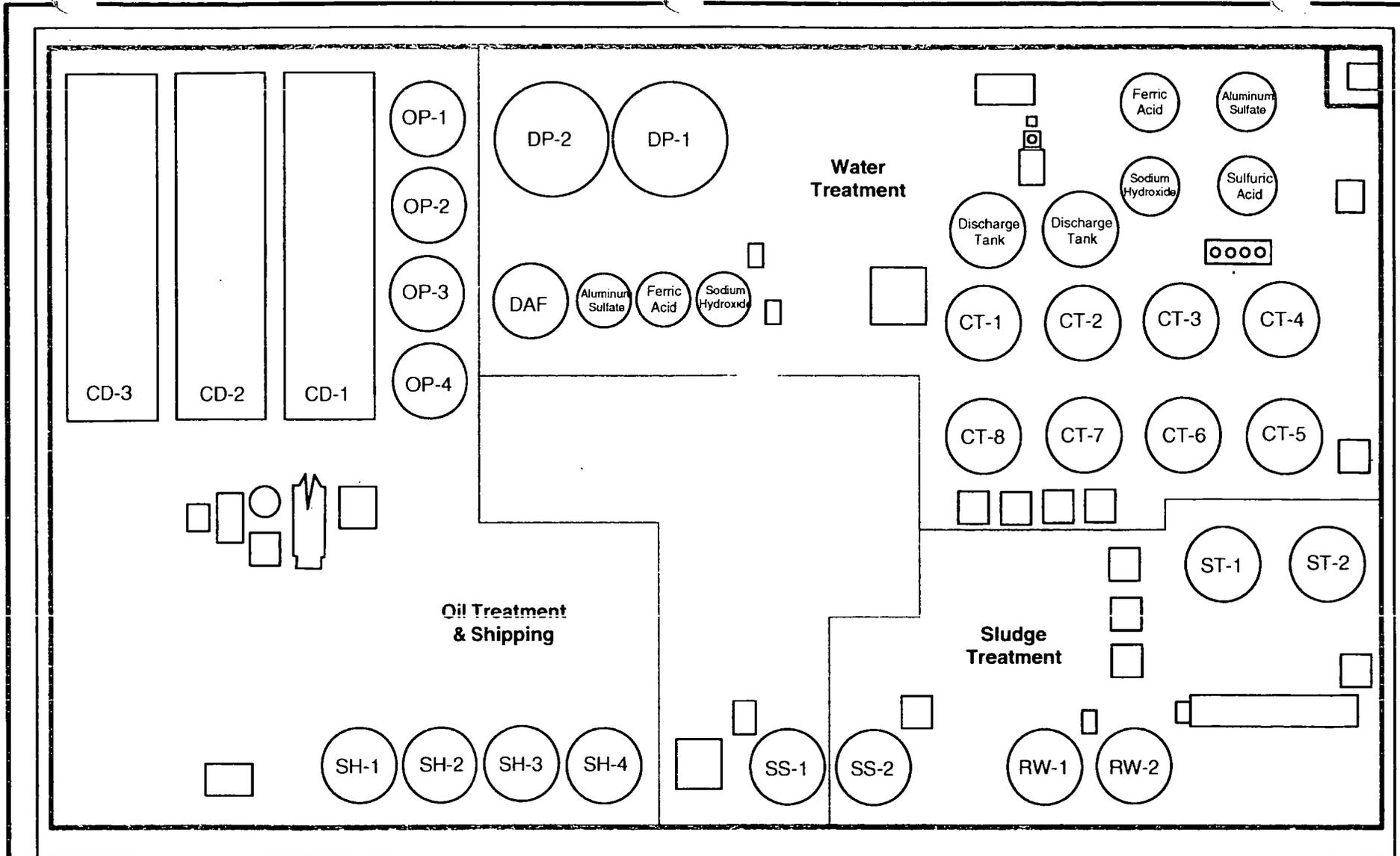
Modified from USGS 7.5 Minute Quadrangles: Waycross East, GA, 1993; Waycross West, GA, 1993



SEVEN OUT  
 WAYCROSS, WARE COUNTY, GEORGIA  
 TDD No. 4T-04-07-A-011

FIGURE 1 - FACILITY LOCATION MAP

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FIGURE 2 - FACILITY LAYOUT MAP

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**TABLE 1**  
**SAMPLING PLAN**

<b>Sample Number</b>	<b>Sample Type/Matrix</b>	<b>Location</b>	<b>Rationale</b>
SO- 1 to 40- w/tank identifier	Grab/Sludge wastewater or LNAPL	Tank Specific	Determine presence of hazardous substances
SO- 1 to 5 - w/tank identifier	Grab/Sludge	Tank Specific	Determine presence of hazardous substances

Notes: SO - Seven Out. LLC Site  
LNAPL - Light Non-Aqueous Phase Liquid Sample

**TABLE 2**  
**QUALITY ASSURANCE AND QUALITY CONTROL SAMPLING PLAN**

<b>Sample Number</b>	<b>Quality Control Sample Type</b>	<b>Rationale</b>
SO-WB-01	Water trip blank	Determine if site conditions or sample handling procedures are influencing sample results
SO-RB-01	Equipment rinsate blank	<b>Determine if decontamination procedures adequately clean equipment</b>
SO-XX-XX	MS/MSD	Provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology
SO-XX-XX	Field Duplicate	Measure both field and laboratory precision

Notes: SD - Seven Out Site  
 WB - Water blank  
 RB - **Rinsate blank**  
 MS/MSD - Matrix spike/matrix spike duplicate

**TABLE 3**  
**ANALYTICAL METHODOLOGY, REQUIRED SAMPLE CONTAINERS,**  
**AND PRESERVATIVES**

<b>Matrix</b>	<b>Analysis</b>	<b>Method</b>	<b>Sample Container</b>	<b>Preservative</b>
Sludge	TCLP	1311/6010B	4 oz Glass	Cool to 4 °C
Sludge	TAL Metals	6010B/7471A	8 oz Glass	Cool to 4 °C
Sludge	TAL Volatiles	8260B	8 oz Glass	Cool to 4 °C
Sludge	TAL Semi-Volatiles	8270C	8 oz Glass	Cool to 4 °C
Waste Water	TAL Metals	6010B/7471A	2 - 1 Liter Poly	Cool to 4 °C
Waste Water	TAL Volatiles	8260B	2 - 40ml	Cool to 4 °C
Waste Water	TAL Semi-Volatiles	8270C	1 Liter Amber Glass	Cool to 4 °C

Notes: EPA - U.S. Environmental Protection Agency  
TCLP - Total  
°C - Degree Celsius  
oz - Ounce  
ml - Milliliter

SESD Region 4 EISOPQAM, the CLP SOWs for Inorganic Analysis, the CLP National Functional Guidelines for Inorganic Data Review, the Region 4 Data Validation SOP for CLP Routine Analytical Services, Revision 2.1, and the Region 4 Analytical Support Branch Laboratory Operations and Quality Assurance Manual (Refs. 1: 2; 3; 4; 5; 6; and 7, as appropriate).

Tetra Tech will collect a total of 40 waste sludge/wastewater samples from the tanks on site. Tetra Tech will visually survey the tank contents using collection methods to include sludge judges, disposable bailers, and Bacon bomb sampling devices. Access to the tanks will be gained through the use of a 45 foot articulating man-lift and conventional ladders. Air monitoring will be conducted around the tanks prior to sampling activities.

All sludge and wastewater samples will be collected and placed on ice in accordance with the EPA SESD Region 4 EISOPQAM (Ref. 1). The sample collection strategy is subject to change based on the observed characteristics of the tank contents or at the discretion of the EPA on-scene coordinator (OSC).

**REFERENCES**

1. U.S. Environmental Protection Agency, Science and Ecosystem Support Division (SESD) Region 4 Environmental Investigation Standard Operating Procedures and Quality Assurance Manual (EISOPQAM), May 1996, Includes 1997 Revisions.
2. U.S. Environmental Protection Agency, Contract Laboratory Program Statement of Work for Organics Analysis, OLM04.2a, May 1999, with contract modifications.
3. U.S. Environmental Protection Agency, Contract Laboratory Program Statement of Work for Inorganics Analysis, ILM04.1, January 2000.
4. U.S. Environmental Protection Agency, Contract Laboratory Program National Functional Guidelines for Organic Data Review, EPA 540/R-99/008, October 1999.
5. U.S. Environmental Protection Agency, Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, EPA 540/R-94/013, February 1994.
6. U.S. Environmental Protection Agency, Region 4, SESD, Data Validation Standard Operating Procedures for Contract Laboratory Program Routine Analytical Services, Revision 2.1, July 1999.
7. U.S. Environmental Protection Agency, SESD Region 4, Analytical Support Branch Laboratory Operations and Quality Assurance Manual, July 1, 2001.