

US Army Corps of Engineers

Savannah District

**FINAL** 

# QUALITY CONTROL SUMMARY REPORT

PHASE I RCRA FACILITY INVESTIGATION FORT STEWART, GEORGIA

Volume I of III

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### 1.0 Introduction

Fort Stewart is located approximately 30 miles southwest of Savannah, Georgia. The military installation, which was established in 1940, covers approximately 437 square miles of land. On August 14, 1987, Fort Stewart was issued a RCRA Part B permit for the storage and treatment of hazardous wastes. As a condition of this permit, a RCRA Facility Investigation (RFI) had to be conducted at all Solid Waste Management Units (SWMUs) listed in the permit. A corrected final RFI Workplan was completed by Geraghty & Miller, Inc., in April 1993 and was submitted to the Georgia Environmental Protection Division (GEPD) for approval. Field work for the investigation was executed by both Geraghty & Miller, Inc., and by Corps of Engineers (COE) personnel.

### 1.1 Project Description

Field work for this project involved sampling at SWMUs located throughout the installation. Several of the SWMUs are comprised of multiple sites. A list of the SWMUs sampled during the RFI is shown below.

FST-001 - South Central Landfill

FST-002 - Camp Oliver Landfill

FST-003 - Tac-X Landfill

FST-004A - Burn Pit

FST-004B - Burn Pit

FST-004C - Burn Pit

FST-004D - Burn Pit

FST-004E - Burn Pit

FST-004F - Burn Pit

FST-009 - EOD Area

FST-010 - EOD Area

FST-011 - EOD Area

FST-012 - Current EOD Area

FST-014 - Old Fire Training Pit

FST-017 - DRMO Hazardous Waste Storage Area

FST-018 - Industrial Waste-Water Treatment Plant

FST-024A - "New" Radiator Shop

FST-025 - 86 Waste Oil Tanks (14 tank sites sampled)

FST-026 - 724th Tanker Purging Station

FST-027 - Motor Pools (Wash, Grease, and Steam Racks)

FST-028 - 724th Battery Shop

FST-029 - Evans Army Heliport POL Storage Facility

FST-030 - Recirculating Wash Impoundment ("Bird Bath")

FST-031 - Three DEH Asphalt Tanks

FST-032 - Supply Diesel Tank

FST-033 - DEH Pesticide Warehouse

FST-034 - DEH Equipment Wash Rack

Geraghty & Miller, Inc., was tasked with the installation of 30 new ground-water monitoring wells at various units located throughout the installation. During well drilling, they collected soil samples as required by the RFI Workplan (Geraghty & Miller, Inc., 1993). The COE completed all other sampling for this project. A summary of the data collected by the COE may be found in Table 1. A more detailed breakdown of the analyses collected may be found in the RFI Report (RUST, Inc., 1994). Typical chemical testing of samples for this project included VOCs (EPA Method 8240), RCRA total metals, pesticides/PCBs (EPA Method 8080), TPH (EPA Method 8015), explosive residues (modified EPA Method 8330), and full TCLP.

TABLE 1 SWMU Sample Data

|          |   | No.     |        | No.   | No.           |
|----------|---|---------|--------|-------|---------------|
| Number   | Description                               | Samples | Matrix | QA 1/ | QC <u>1</u> / |
| FST-001  | South Central Landfill                    | 6       | GW     | 3     | 3             |
| FST-001  | South Central Landfill                    | 2       | sw     | 3     | 3             |
| FST-002  | Camp Oliver Landfill                      | 4       | GW     | 3     | 3             |
| FST-002  | Camp Oliver Landfill                      | 2       | SW     | 3     | 3             |
| FST-003  | Tac-X Landfill                            | 4       | GW     | 3     | 3             |
| FST-003  | Tac-X Landfill                            | 1       | SS 3/  | ī     | 1             |
| FST-004A | Burn Pits                                 | 4       | GW     | 3     | 3             |
| FST-004B | Burn Pits                                 | 4       | GW     | 3     | 3             |
| FST-004C | Burn Pits                                 | 4       | GW     |       |               |
| FST-004D | Burn Pits                                 | 4       | GW     |       |               |
| FST-004E | Burn Pits                                 | 4       | GW     |       |               |
| FST-004F | Burn Pits                                 | 4       | GW     |       |               |
| FST-009  | EOD Area                                  | 6       | SS     | 1     | 1             |
| FST-010  | EOD Area                                  | 6       | SS     | 1     | 1             |
| FST-011  | EOD Area                                  | 6       | SS     | 1     | 1             |
| FST-012  | Current EOD Area                          | 10 2/   | SS     | 1     | 1             |
| FST-014  | Old Fire Training Pit                     | 4       | GW     | 3     | 3             |
| FST-017  | DRMO Hazardous Waste Storage Area         | 4       | SB     | 1     | 1             |
| FST-018  | Industrial Waste-Water Treatment Plant    | 1       | SLD    | 1     | 1             |
| FST-018  | Industrial Waste-Water Treatment Plant    | 4       | SB     | 1     | 1             |
| FST-018  | Industrial Waste-Water Treatment Plant    | 8       | SED    | 1     | 1             |
| FST-018  | Industrial Waste-Water Treatment Plant    | 2       | ww     | 3     | 3             |
| FST-018  | Industrial Waste-Water Treatment Plant    | 8 2/    | sw     | 4 2/  | 3             |
| FST-024A | "New" Radiator Shop                       | 3       | SB     | 1     | 1             |
| FST-025  | 86 Waste Oil Tanks                        | 16 2/   | SB     | 1     | 1             |
| FST-025  | 86 Waste Oil Tanks                        | 16 2/   | GW     | 3     | 3             |
| FST-026  | 724th Tanker Purging Station              | 6 2/    | SB     | 1     | 1             |
| FST-026  | 724th Tanker Purging Station              | 2 2/    | SS     |       |               |
| FST-027  | Motor Pools (Wash, Grease, & Steam Racks) | 3       | SB     | 1     | 1             |
| FST-028  | 724th Battery Shop                        | 4       | SB     | 1     | <u> </u>      |
| FST-029  | Evans Army Heliport POL Storage Facility  | 8       | SB     | 1     | <del>-</del>  |
| FST-030  | Recirculation Wash Impoundment            | 2       | SLD    | 1     | Ī             |
| FST-031  | Three DEH Asphalt Tanks                   | 6       | SS     | 1     | 1             |
| FST-032  | Supply Diesel Tank                        | 6       | SS     | 1     | 1             |
| FST-033  | DEH Pesticide Warehouse                   | 2       | SS     | 1     | 1             |
| FST-034  | DEH Equipment Wash Rack                   | 3       | SS     | 1     | 1             |
|          | Totals                                    | 179     |        | 54    | 53            |

- 1/ This number includes Duplicates, Blanks, and Trip Blanks
   2/ Extra sample taken over and above those specified in the W Extra sample taken over and above those specified in the Work Plan
- 3/ Substitute sample for unavailable leachate sample

### MATRIX LEGEND:

GW Ground Water Soil Boring

SS Surface Soil

SLD Sludge

SED Sediment

SW Surface Water WW Waste Water

### 1.2 Project Objectives

The objectives of the Phase I RFI was to determine if any contamination was present at any of the SWMU's. Unless additional reasons for further investigation were encountered during the investigation, sites where sampling revealed no contamination would be recommended for no further action (NFA). A Phase II investigation will be required to delineate and define any contamination found during Phase I. The data quality objective (DQO) for samples collected for this project was EPA Level III. The EPA data quality objective levels are defined herein on Table 2. All analyses were performed by off-site laboratories utilizing EPA testing methods, except aqueous pH and specific conductivity, which were field tested. All laboratories were also required to be certified by the COE Missouri River Division (MRD). EPA Level I data quality objective was used for screening soil samples in the field and for health and safety site monitoring (see Table 3).

### 1.3 Project Implementation

COE field work was initiated in July 1993 and was completed on November 23, 1993. A project specific Site Health and Safety Plan was compiled for the work to be completed by COE personnel. Mr. Judson Smith was designated as Sampling Team Leader for the project. He was responsible for the collection of samples in accordance with the RFI Workplan, completion of the Daily Quality Control Reports (DQCRs), coordination of site access, and shipment of samples to the laboratories. Quality Control Officer for the project was Dr. Franz Froelicher. He was responsible for data quality control for the COE sampling effort. This included, but was not limited to, validation of both field and laboratory data in accordance with the Quality Assurance Project Plan (QAPP) contained in the RFI Workplan (Geraghty & Miller, 1993), documentation and correction of problems as they occurred, maintaining the analytical files for the project, approval of payment requests from the laboratories, and completion of Monthly Progress Reports (MPRs).

Two analytical laboratories were utilized by the COE for testing samples collected by COE personnel. These were James H. Carr & Associates, Inc. (Carr Laboratory), Columbia, South Carolina, and International Technology Corporation Analytical Services (IT Laboratory), of Knoxville, Tennessee. Carr Laboratory executed all laboratory analyses for volatile, semi-volatile organics, pesticides, TCLP, and metals, while the IT Laboratory was contracted to perform all analyses for explosive constituents. Geraghty & Miller, Inc., used Savannah Laboratories for their analysis. The QA laboratory for the entire project was the COE South Atlantic Division (SAD) Laboratory in Marietta, Georgia.

### 1.4 Purpose of this Report

The purposes of this Quality Control Summary Report (QCSR) are as follows: (a) to describe Quality Control procedures followed to ensure that data generated by the Corps of Engineers during the Phase I RCRA Facility Investigation at Fort Stewart, Georgia would meet project requirements; (b) to describe problems encountered during the course of the study, and their solutions; and (c) to describe the quality of the data collected. This report does not cover data collected for this project by Geraghty and Miller, Inc. A separate QCSR has been prepared to address those data. Two QA reports will be completed by the SAD Laboratory, one covering data collected by the COE and one covering Geraghty and Miller's data.

### 2.0 QC Procedures

A Quality Assurance Project Plan (QAPP) was developed for this project and may be found in Volume II of the RFI Workplan (Geraghty & Miller, 1993). The purpose of this document was to not only enumerate the numbers and type of samples to be taken in characterizing the site, but also the number and type of Quality Assurance/Quality Control (QA/QC) samples to be used to evaluate the quality of the data obtained.

# TABLE 2 Definition of EPA Levels of Data Quality No longer applicable Now use "Screening data and Definitive data"

- Level I Field screening or analysis using portable instruments. Results are usually limited to
  volatile compounds, often not compound specific, and not quantitative, but can indicate
  presence or absence. Results available immediately
- Level II Field screening or analysis using more sophisticated portable instruments. The quality
  of data generated is highly variable, depending on the use of suitable calibration
  standards, reference materials, sample preparation equipment, and the training of the
  operator. Results available almost immediately.
- Level III All analyses performed in an off-site laboratory that may or may not follow
   Environmental Protection Agency (EPA) CLP procedures. Quality assurance/quality
   control (QA/QC) and documentation are less rigorous than CLP protocols. Results
   delayed.
- Level IV CLP Routine Analytical Services. All analyses are performed in an off-site CLP laboratory following CLP procedures. QA/QC protocols and documentation are rigorous. Results delayed.
- Level V Analysis by Non-Standard methods. All analyses are performed in an off-site CLP laboratory that may or may not be a CLP laboratory. CLP Special Analytical Services are Level V.

TABLE 3
EPA Data Quality Levels for Specific Project Objectives

| Project Objectives                               | Objective Approach                 | Data Collection   | Data Quality Level |
|--|------------------------------------|---|--------------------|
| Health and Safety                                | On-Site Monitoring                 | Organic Vapor<br>Concentration (FID or<br>PID)                | I                  |
| Selection of Soil<br>Samples for Lab<br>Analysis | Screening of Soil<br>Samples       | Organic Vapor<br>Concentration<br>(Headspace)<br>(FID or PID) | I                  |
| Nature and Extent of Contamination               | Ground-water Sampling and Analysis | Chemical Composition  | Ш                  |
|  | Soil Sampling and<br>Analysis      | Chemical Composition  | Ш                  |

The procedures established in the QAPP required that for every 20 samples or less of each matrix and analyte group destined for chemical analysis, one sample would be collected in duplicate and analyzed by the contractor laboratory. In order to assess the degree of accidental contamination by volatile organic compounds (VOC) during the sample collection and shipment procedures, trip blanks accompanied each cooler containing samples for VOC analysis.

The QAPP also established requirements for laboratory QC samples. The various types of laboratory QC samples included: laboratory duplicates, laboratory blanks (i.e., reagent water spikes), known references (i.e., laboratory standards), surrogate spikes, and matrix spike/matrix spike duplicates. Details of the preparation of the various field and laboratory QC samples can be found in the QAPP. In accordance with the QAPP, QA samples were also sent to COE South Atlantic Division Laboratory in Marietta, Georgia.

The laboratory and field QC data provided information to evaluate the quality of the field sample data collected. The evaluation paid particular attention to exceptions to the planned QC activities, problems encountered, and the effectiveness of the methodologies used. Monthly progress was summarized by the QC Officer in Monthly Progress Reports (MPRs). These are included herein in Appendix A. A summary of all daily activities is presented in the Daily Quality Control Reports (DQCRs). The DQCRs are presented in Appendix B. These were completed in the field by the Sampling Team Leader.

Precision, accuracy, and completeness are defined in the QAPP in Sections 12.1, 12.2, and 12.3 (page AA-106 and AA-107). Precision is determined by the Relative Percent Differences (RPDs) for the field duplicates or the Matrix Spikes/Matrix Spike Duplicates (MS/MSDs). The method blank, MS/MSD, and surrogate recovery are used to determine the accuracy of the data. The data evaluator used professional judgment based upon established analytical chemistry principles and the guidelines presented in "Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses" (EPA, 1988) and in "National Functional Guidelines for Organic Data Review (EPA, 1991). All data were to be used, if possible. The completeness parameter was determined after the determination of the usability of the data.

### 2.1 Evaluation of Field Data Quality

To access the quality of the field activities, Quality Control (QC) and Quality Assurance (QA) samples were collected. These samples were required by the RFI Workplan. The nature of the QC and QA samples required is discussed below. Evaluation of field data quality consisted of investigations of completeness, trip blanks (if any), and field duplicate RPDs. Equipment rinsate samples were not required by the RFI Workplan.

QC samples were collected along with the field samples to assess the accuracy of sampling. For the samples collected for analysis by Carr Laboratory, the QC samples collected were field duplicates and trip blanks, as defined in the RFI Workplan. The QC samples were collected in the same sample containers and were treated in the same manner as the field samples. They were analyzed by Carr Laboratory concurrently with the field samples.

QA samples were collected along with the field samples to assess the accuracy of sampling and of Carr Laboratory's analyses. The QA samples collected were field duplicates and trip blanks, as defined in the RFI Workplan. When appropriate (i.e., for samples for analysis of volatile organic parameters), trip blanks were also sent to the QA laboratory. The QA samples were analyzed by the COE SAD Laboratory in Marietta, Georgia.

### 2.2 Monthly Progress Reports (MPRs)

An MPR was completed by the QC officer for every month from 15 July 1993 to 31 January 1994. The MPRs contain the following information: work completed, problems encountered, solutions, summary of findings, and upcoming work. They are contained in Appendix A.

### 2.3 Daily Quality Control Reports (DQCRs)

The Sampling Team Leader, Judson Smith, produced all Daily Quality Control Reports. These include information such as, but not limited to, sampling team members, type and number of samples taken, problems encountered, OVA readings, instrument calibrations, sample identification, sample location, sample container type, field sample preparation techniques, preservation methods, and other pertinent facts. The DQCRs are included in Appendix B.

### 2.4 SL Level II Laboratory Reporting

The QAPP for this project had very specific requirements for laboratory data reporting. The QAPP identified Savannah Laboratory (SL) as the lab for this project. The QAPP required that all laboratory reports be SL Level II. SL Level II reporting includes the following information:

- a) sample results
- b) laboratory blank results
- c) laboratory control samples (% recovery)
- d) precision (% RPD)
- e) surrogate recoveries (organics only)
- f) date extracted
- g) date analyzed.

Due to contractual reasons, the COE utilized Carr Laboratory and IT Laboratory to complete the analytical testing for the samples collected by the COE. These laboratories were required to submit reports equivalent to SL Level II reporting. Therefore, all laboratory reports contained QC information equivalent to SL Level II, as required by the QAPP, except as described in Paragraph 3.3. Data results contained in these reports are defined below.

### 2.4.1 Laboratory Blanks

Laboratory blanks are deionized water samples that are pure and unadulterated. These are run to ascertain if the glassware are clean and that the laboratory procedures or environment have not contaminated the samples.

### 2.4.2 Laboratory Control Samples (% Recovery)

The laboratory spikes a pure water or soil sample with a known group of compounds. They are used to see if the methods and processing used produced uniform and reproducible results.

### 2.4.3 Precision (% RPD)

To evaluate laboratory precision, the values reported for a matrix spiked sample (MS) and its duplicate, the matrix spiked duplicate (MSD), or any other SL Level II duplicate parameter, were used to calculate a relative percent difference (RPD) utilizing the following equation:

$$RPD = \frac{[Vs - Vd]}{[Vs + Vd]/2} \times 100$$

Where Vs is the value reported for the matrix spiked sample (MS) and Vd is the value reported for its duplicate (MSD). RPD goals were set for soil samples, which tend to be relatively difficult to homogenize. An RPD of 45% or less is generally considered a reasonable goal for laboratory soil analyses. For water samples, RPDs of 20% or less are generally considered acceptable for laboratory analyses.

In addition to the matrix spike sample, field duplicates were collected to assess sampling precision. Duplicate samples were collected to meet the frequency guidance established by CEMRD (approximately 10%). Field and matrix spike duplicate RPDs were "graded" as follows:

TABLE 4 RPD Categories

| Matrix | Good | Fair | Poor |
|--------|------|------|------|
| Water  | <25% | <50% | >50% |
| Soil   | <40% | <80% | >80% |

Field and matrix spike duplicate RPDs are calculated only for analytical values that are greater than or equal to the method quantitation limit. RPDs are considered "not calculable" for concentrations below the method quantitation limit because of analytical uncertainty, but EPA usage allows a zero RPD to be reported in cases of below-minimum quantitation limit results. This grading scheme is based on guidelines from the Contract Laboratory Program's Data Validation Program (EPA, 1988a and 1988b) and reflects the generally inhomogeneous nature of soil, which makes it difficult to obtain a reproducible sample in the laboratory and the field.

### 2.4.4 Surrogate Recoveries (organics only)

Surrogate recoveries are measures of accuracy. Accuracy measures the bias in a measurement system. The measurement of accuracy will be performed in accordance with the specifics provided in the analytical methods. For the Gas Chromatograph (GC) and the Mass Spectrometer (MS) for GC/MS analysis, accuracy will be determined by spiking certain samples with known concentrations of surrogate compounds and calculating percent recoveries (% R). Similarly, one field sample in an analytical batch was spiked with a known amount of analyses, and the percent recoveries were calculated. The general formula for the calculation of accuracy is the following:

# $%R = \frac{\text{Concentration of spike found}}{\text{Concentration of spike added}}$

### 2.4.5 Holding Times

Holding times are the maximum times that a method allows any given analyset to be stored before it is either extracted from the sample or analyzed. It is calculated from the time the sample is collected in the field until it is analyzed by the laboratory.

### 2.5 Data Validation

The objective when evaluating the quality of the chemical data is to determine its usability. The evaluation is based upon the interpretation of the laboratory QC data, the field QC data, and the project Data Quality Objectives (DQOs). The evaluation process is often termed "data validation".

The QAPP for this project contained Data Validation Checklists to facilitate data validation. These checklists were completed by the QC Officer for each SWMU data package. Each Data Validation Checklist contains one page pertaining to field data validation and five pages which were completed during laboratory data validation. Data validation checklists for each SWMU are included herein in Appendix C.

### 2.5.1 Field Data Validation

Daily Quality Control Reports were completed by the Sampling Team Leader, Mr. Judson Smith. The DQCRs and other field generated documents such as sampling logs, boring logs, and Project Chemical Exposure Data Reports were received by the QC Officer. A Field Data Package was produced for each SWMU. Section I of the Field Data Validation Checklist was completed by the reviewer. Section I categorized each field task as "Reported," "Performance Acceptable," or "Not Required."

### 2.5.2 Laboratory Data Validation

Sections II through V of the Data Validation Checklists were completed during laboratory data validation. Laboratory data were evaluated to assess completeness, adherence to holding times, method blank contamination (if any), surrogate recoveries (where applicable), and matrix spike/matrix spike duplicate (MS/MSD) relative percent differences (RPDs), and any other SL Level II reportables. These criteria (except completeness) were used to evaluate the bias and precision of the data generated by the laboratory. In order to perform this evaluation, the laboratory QC data were required to be submitted along with the field sample data. The bias of the laboratory data was assessed through consideration of the following:

- Adherence to the prescribed method;
- Recovery of spikes from field samples spiked with known amounts (the MS and MSD);
- Method blank contamination, if any;
- Adherence to preparation and analysis holding times;
- Recovery of surrogate spikes for analyses by gas chromatography/mass spectrometry.
- Field duplicate match

### 2.5.3 Definition of Data Qualifiers (Flags)

During the data validation process, all laboratory data had to be evaluated and assigned a data flag or code, as applicable. These flags are listed in Section V of the Data Validation Checklists. They are defined in the 1991 EPA document titled, "National Functional Guidelines for Organic Data Review." The guidance also describes procedures to be followed when coding data. The data flags are defined as follows:

When the material was analyzed for, but was not detected above the level of the associated value, a "U" was used to flag the compounds. A flag of "J" is usually used when the associated value is an estimated quantity. Data flagged with "R" are unusable. In some cases the flag "UJ" may be used to mean that the material was analyzed for, but was not detected, and the associated value is an estimate and may be inaccurate or imprecise. Data qualifier flags were not assigned to data that were totally in compliance with Quality Control requirements.

### 2.5.4 Flagged Samples

A few samples had to be flagged for certain specific parameters. Thus a sample might be flagged for pesticides, or some specific metal, or acid-base-neutrals (ABN) only, or for some other specific group because the QC recoveries or RPDs were too high, or the peaks were interfered with, or were masked in some way by unknown impurities. Samples where the QC samples showed a few high QC recoveries for a minority of compounds in the group were not flagged. The samples listed in Table 5 were flagged because of peak interference in the chromatogram that masked the true peaks and caused higher than acceptable recoveries.

# TABLE 5 Flagged Data

| Site    | Flag | Comments  |
|---------|------|---|
| FST-025 | R    | Samples 4AA-L-11-93 & 4AA-S-11-93 for Pesticides & ABN only |

(R = Unusable)

### 3.0 Problems Encountered and Corrective Actions Taken

The problems encountered during this investigation are described below. When problems were encountered they were corrected as soon as possible Sampling data that did not meet QC requirements were rejected, and the sites were resampled for the questionable parameters in all cases except for the samples listed in Table 5, above.

### 3.1 Holding Times

Holding times were exceeded with the samples taken on 15 - 19 July 1993 from Site FST-001 and were resampled and rerun on 5 October 1993.

### 3.2 Surrogate Recoveries

No discrepancies were found.

### 3.3 Precision (% RPD)

Occasionally an RPD of zero was assigned to compounds, even though a value below minimum detection limits was reported. Although dividing by zero is not possible mathematically, the EPA commonly allows this practice of calculating RPD.

The reason that detection limits are established is to establish a point at which the statistical certainty that a concentration exists in a sample is greater than 95%. A reported value of less than the detection limit is just as valid as a reported value above the detection limit, and a comparison between these data, the zero data, is also valid. This reasoning was agreed to and supported by Mr. Charlie Hooper at EPA Region IV (706-546-3286) as long as these methods are not used when trying to set up and calibrate a new instrument or performing some higher level of Quality Control.

### 3.4 Laboratory Blanks

Two laboratory blanks were found contaminated and were rejected, resampled, and rerun. See Paragraph 3.5, below.

### 3.5 Laboratory Contamination

Carr Laboratory inadvertently found that samples, duplicates, and blanks, including lab blanks, from FST-002 and FST-003, taken on 6 - 7 October 1993, were contaminated by the laboratory with Aldrin, a pesticide. The sites were resampled for the pesticide parameters on 16 - 17 November 1993.

### 3.6 Warm Shipping Coolers

During the heat of July and August, ice in the coolers from sites FST-001, FST-031, FST-032, and FST-033 was not sufficient to keep the coolers and their contents to a mandatory 4 degrees Centigrade during overnight shipping, and they arrived at the laboratory destinations, SAD Laboratory and Carr Laboratory, too warm. After the shipping procedure was changed to include a small cooler, iced down

inside a larger iced cooler for shipments to CESAD Laboratory, and sample pickup by personnel from Carr Laboratory, the sites were resampled on 5 October 1993.

### 3.7 Broken Bottles

The field blank from FST-014 was broken by the laboratory. A duplicate blank was available and was used.

#### 3.8 Free Product

Heavy concentrations of odoriferous petroleum based compounds were found at SWMU FST-025 at waste oil tanks 4A, 64A, 70, 94C, and 100A. The occurrence was reported to the Installation.

### 3.9 Other Problems

Monitor well MW-1 at SWMU FST-002 and well MW-4 at FST-004F contained only approximately 1 foot of water when initially measured during sampling. During well purging, recoveries were very slow. Sampling these wells was very difficult. The low water levels in these wells and poor recoveries were most likely due to the drought conditions present during the summer months. Well boring logs indicate that the 10-foot well screens were installed approximately 7 feet into the water tables.

At SWMU FST-003, collection of the two required surface water samples was not possible (also due to drought). Several visits were made to the site in an attempt to locate surface water. The "pond" area was completely dry. No leachate was found at the site either. A soil sample was collected in the area immediately downslope of the trenches at the site (per telephone conversation with GEPD, June 1993).

At site FST-001, samples from monitor wells were found to contain radium (Ra 226/228). Radium 226, which occurs naturally in most soils and common rocks, decays to radon 222 and is the fifth decay product of uranium 238. The EPA-suggested limit is 4 pCi/L for radon, the daughter product of radium, while the National Council of Radiation Protection (NCRP) suggested limit is 8 pCi/L. Samples tested for radioactivity showed results of Ra 226/228 as follows:

| Sample No. | Results   |
|------------|-----------|
| SCM1-7-93  | 3.8 pCi/L |
| SCM2-7-93  | 8.5 pCi/L |
| SCM3-7-93  | 3.2 pCi/L |
| SCM4-7-93  | 5.0 pCi/L |
| SCM5-7-93  | 2.8 pCi/L |
| SCM6-7-93  | 1.6 pCi/L |

During sampling, Judson Smith, the Sampling Team Leader, was splashed with liquid from sample SCM2-7-93 and swallowed one half mouthful (approx. 50 cc) of the splashed liquid. A report regarding the splash and swallowing of the water was made to the Industrial Hygienist, Kathleen Miles by Judson Smith. Although the Site Safety and Health Plan (SSHP) specified that a face shield be worn, the equipment was not available. The field equipment was updated to include face shields, Silver Shield gloves, and Tyvek coveralls to help to insure that this incident would not be repeated. No revisions to Site Safety and Health Plan were required.

During the middle of July 93 (14 Jul 93 to 20 Jul 93) Carr Labratories changed some methods without notifying us. After the fact, the tests were judged equivalent enough by the District Chemist. The samples were not rerun. According to the SAD Division Laboratory Manager, these tests are equivalent and are accepted as such by the State of Georgia whom we queried.

### 4.0 Summary of Data Quality

Table 1 of this report portrays pertinent data regarding sampling results at the Fort Stewart SWMU's. The table gives the site number and description, the number of samples taken at each site, the sample matrix designation, and the number of QA and QC samples taken.

The results of the data quality evaluation indicate the overall quality of data is acceptable to confirm the presence or absence of contamination on the Ft. Stewart sites. Some problems were noted with the laboratory analyses, holding times, and sample shipment. All data from the COE sampling efforts are quantitative data and are not assigned any data qualifier flags, except the samples from FST-025 shown in Table 5 which were flagged "R." Quantitative data may be used for studies and designs.

In addition, SWMU FST-001 presented a myriad of problems, because of exceeded holding times, and because of exceeded sample temperature when these arrived at the Lab. Since this is a Phase I study used to determine if contamination is present, we decided that the discrepancies will not significantly effect the usefulness of this data for the purpose of this project.

### 5.0 Conclusions

All data samples were within usable QC limits even though some had to be resampled to be considered usable. All analyses were performed off-site using SW-846 methods (except for explosives analyses, which used Corps of Engineers modifications to EPA approved methods). Both laboratories were certified by CEMRD, and Carr Laboratory was also certified by the State of South Carolina. The EPA Level III data quality objective was met.

The data quality objective for the Fort Stewart RCRA Facility Investigation was that laboratory data completeness be 95 percent for ground-water samples and 90 percent or better for other matrix samples. The completeness measure for the Fort Stewart data for all media was above 95 percent. Therefore, this objective was met or exceeded. The quality requirements were met by resampling any samples that did not meet the quality objectives. The resampling of any questionable data was possible through the implementation of a strict, concurrent QC program executed during the COE sampling.

Thus, both data quality objectives and completeness criteria were met, and we conclude that the data for Fort Stewart site meet the project objectives.

The EPA Functional Guidelines for data validation were used as applicable where appropriate for this project and while keeping in mind the phase and level of data needed to be able make future judgments as to whether contamination is present or not. Of course, strict CLP protocol was not followed in the validation of this data.

### 6.0 References

Geraghty & Miller, Inc., 1993, Phase I RCRA Facility Investigation Workplan, Fort Stewart, Georgia

- RUST Environmental & Infrastructure, Inc., 1994, Phase I RCRA Facility Investigation Report, Fort Stewart, Georgia
- U. S. Environmental Protection Agency, 1991, National Functional Guidelines for Organic Data Review
- U. S. Environmental Protection Agency, 1991, Environmental Services Division, Environmental Compliance Branch Standard Operating Procedures and Quality Assurance Manual
- U. S. Environmental Protection Agency, 1988a, Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analysis [also called "Contract Laboratory Program's Data Validation Program (LDV, 1988)"]

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U. S. Environmental Protection Agency, 1986, Office of Solid Waste and Emergency Response: Washington, DC, Test Methods for Evaluating Solid Waste, Third Edition with Revisions and Updates, SW-846

# QUALITY CONTROL SUMMARY REPORT

PHASE I RCRA FACILITY INVESTIGATION FORT STEWART, GEORGIA

# APPENDIX A

# MONTHLY PROGRESS REPORTS

SAVANNAH DISTRICT U. S. ARMY CORPS OF ENGINEEERS

### Monthly Progress Report Ft. Stewart In-House RFI Sampling July 15, through August 15, 1993

### WORK COMPLETED

During the time from project beginning, approximately 15 July, and lasting until 15 August 93, the following activities were conducted:

Sites sampled during this time were: FST-001, FST-004C, FST-004D, FST-014, FST-017, FST-024, FST-031, FST-032, and FST-033.

Lab results and QC for FST-001, FST-004D, FST-014, FST-017, and FST-024 were received.

### PROBLEMS ENCOUNTERED

Samples for sites FST-031, FST-032, FST-033 were received at SAD Lab and Carr Lab too warm. Iced coolers were mailed by an express company during the later part of July 1993 to the SAD laboratory in Atlanta and also to Carr Lab in Columbia, SC. When they arrived, it was found that the ice had melted and the contents of the coolers were hotter than room temperature. After researching the travel path of the coolers, it became clear that the express companies hold the packages (in this case the coolers) in transit warehouses without A/C where temperatures often reach 100 degrees F. or higher. The sites will be have to be resampled.

The site FST-001 monitor wells were found to contain six radium (Ra 226/228) containing samples. Radium 226, which occurs naturally in most soils and common rocks, decays to radon 222 and is the fifth decay product of uranium 238. The EPA suggested limit is 4 pCi/L for radon, the daughter product of radium, while the National Council of Radiation Protection (NCRP) suggested limit is 8 pCi/L. SCM1-7-93 shows a Ra 226/228 concentration of 3.8 pCi/L. Additional samples containing radium were:

SCM2-7-93, containing 8.5pCi/L Ra

SCM3-7-93, containing 3.2pCi/L Ra

SCM4-7-93, containing 5.0pCi/L Ra

SCM5-7-93, containing 2.8pCi/L Ra

SCM6-7-93, containing 1.6pCi/L Ra

During sampling, Judson Smith was splashed with liquid from sample SCM2-7-93 and swallowed one half mouthful (approx. 50 cc) of the splashed liquid.

### SOLUTIONS

After various other modes of transport were checked, a "best way" was selected for sample shipment. The coolers going to the SAD laboratory in Atlanta will be shipped in a cooler which is itself placed in a cooler. Both containers were iced down and a trial run proved the efficacy of the method. Due to the number of samples being sent to Carr Lab, arrangements have been made to have Carr Lab personnel pick the samples up at the District offices once or twice a week depending on need.

A report regarding the swallowing of the splash of sample SCM2-7-93 was made to the Industrial Hygienist, Kathleen Miles by Judson Smith. Although the SSHP specifies that a face shield be worn, the equipment was not available. The field equipment has been updated to include face shields, Silver Shield gloves, and Tyvek coveralls to help to insure that this incident will not be repeated. In any case, no additional protective equipment will be called for by the SSHP plan.

### SUMMARY OF FINDINGS

In addition to the radium find at site FST-001, low concentrations of metals, especially lead and arsenic, were found in some of the samples. Low levels of VOCs were detected in some samples. No "free-product" was found in any samples during this month.

### **UPCOMING WORK**

After 15 Aug 93, FST-004A, 004B, 004E, and 004F will be sampled. The fifteen waste oil tank sites (SWMU FST-025) will also be sampled. At some sites, the water table is too deep to allow drilling by hand auger to reach ground water. These sites will be postponed and bored with the drilling rig. Sites 031, 032, and 033 will be resampled. If time allows, sampling at sites FST-001, 002, and 003 will be completed. Additional sampling of sites FST-018, 026, 028, and 034 are pending.

In addition, we will conduct the normal reporting and data gathering which include the following activities:

- Sample water and soils as planned
- acquire permits to enter and work at various sites (including EOD sites)
- prepare Daily Quality Control Reports
- prepare logs
- conduct data validation including Field Data Validation and Lab Data Validation
- prepare Quality Control Summary Report

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Dr. Franz Froelicher, Chemist HTRW Section

Date prepared: September 14, 1993

### Monthly Progress Report Ft. Stewart In-House RFI Sampling August 15 through September 15, 1993

### WORK COMPLETED

During the time from August 15 and lasting until 15 September 1993 the following activities were conducted:

Sites sampled during this time were: FST-004A, FST-004B, FST-004E, FST-004F, FST-025, and FST-028.

Lab results and QC for FST-004A, FST-004B, FST-004E, FST-004E, and FST-004F were received.

### PROBLEMS ENCOUNTERED

Some sampling sites (FST-004A, FST-004B, FST-004E, and FST-004F) were located near active weapon firing ranges and clearence to sample the sites had to be obtained. In one case, weapons activity on an adjacent firing range was heard and ground vibrations were felt by the samplers. The site had been cleared for site sampling where the team was working.

At monitor well FST-004F MW4, difficulty was experienced with water flow. The 19.35 foot well had only a foot of ground water and recovery flow rates were so poor that it was almost impossible to bail the well and still have enough ground water to sample. This was most likely the result of the current drought conbditions; however, poor well construction may also be the cause of the low water production of the well.

FST-025-70 and FST-025-94 were not completed as planned because the soil was too hard and the hand auger used could not penetrate the hardpan at level 14.5 feet and 15 feet below the surface. Augering adjacent locations showed that the hardpan was areally extensive. High PID readings were recorded by the sampling crew during the initiation of sampling at site FST-025-4A at the Tanker Purging Station. These readings occurred while nearby tanker purging operations were in progress.

The battery shop site (FST-028) presented a problem because the .9 ft. thick concrete slab which covered the area of the sampling sites, was harder than expected and drilling was more difficult and took longer.

### SOLUTIONS

The burn pit areas access was obtained by checking with Range Control to see if the site was inactive and safe to sample.

Monitor well FST-004F MW4 was finally sampled after 45 bails produced one small sample. FST-025-70 and FST-025-94 were not completed and will be saved until a later date when they will be bored using the drill rig. The crew did not enter site FST-025-4A until PID readings returned to normal.

### SUMMARY OF FINDINGS

High concentrations of hydrocarbons or "free product" were found at FST-025-100A, FST-025-94C, FST-025-64A. Concentrations of metals, especially lead and arsenic, continue to be found in many samples.

### UPCOMING WORK

After 15 Sep 93, FST-028, FST-018, and FST-029 will be sampled. The fifteen waste oil tank sites (SWMU FST-025) will continue to be sampled until complete. At some sites, the water table is too deep to reach by hand auger. These sites will be postponed and bored with the drilling rig. Sites 031, 032, and 033 will be resampled. If time allows, sampling at sites FST-001, 002, and 003 will be completed. Additional sampling of sites 026 and 034 are pending.

In addition, we will conduct the normal reporting and data gathering which include the following activities:

- Sample water and soils as planned
- Acquire permits to enter and work at various sites (including EOD sites)
- Prepare Daily Quality Control Reports
- Prepare logs
- Conduct data validation including Field Data Validation and Lab Data Validation
- Prepare Quality Control Summary Report

Dr. Franz Froelicher, Chemist HTRW Section

Date prepared: September 20, 1993

### Monthly Progress Report Ft. Stewart In-House RFI Sampling September 15 through October 15, 1993

### WORK COMPLETED

During the time from September 15 and lasting until October 15, 1993 the following activities were conducted:

Sites sampled during this time were: FST-002, FST-003, FST-018, FST-025, FST-026, FST-027, FST-029, FST-030, and FST-034. FST-032 was resampled. Lab results and QC for FST-018, FST-026 were received.

### PROBLEMS ENCOUNTERED

At FST-002, Camp Oliver Landfill, the 23.32 foot monitor well already in place was found to be too shallow to be effective as there was only 1.5 ft of standing water and near zero flow. Recent drought conditions may also be a factor. At FST-003 surface water trenches and ponds were dried up making it impossible to obtain water samples. Leachate also could not be found at this site.

### **SOLUTIONS**

To remedy the problem of no surface water or leachate at site FST-003, the sampling team followed the ditches to their intersection to the pond location. There the team took a surface soil sample covering the same parameters as for the proscribed but unavailable aqueous samples. For SWMU FST-027, samples were to be taken at Building 1060 at an adjacent ditch, but the building did not exist. The ditch actually occurs between Buildings 1070 and 1076 where samples were taken. This site was confirmed and approved by Thomas Houston on 9/16/93.

### SUMMARY OF FINDINGS

Concentrations of metals, especially lead and arsenic, continue to be found in many samples. Free product was found at FST-026.

### UPCOMING WORK

After 15 Oct 93, the remaineder of the sites will be sampled including the EOD sites. The sampling should be completed before 15 Nov 93 except for one site which must be sampled while the Hotel Range is closed. At site FST-026 additional samples will be taken in the ditch which appears contaminated. Sites FST-001, FST-004C, FST-031, and FST-033 will be resampled due to prior sampling handling problems. Because of laboratory contamination, FST-002 and FST-003, pesticides only, will also have to be resampled.

In addition, we will conduct the normal reporting and data gathering which include the following activities:

- Sample water and soils as planned
- Acquire permits to enter and work at various sites (including EOD sites)
- Prepare Daily Quality Control Reports
  - Prepare logs
- Conduct data validation including Field Data Validation and Lab Data Validation
- Prepare Quality Control Summary Report

Fichated by

Dr. Franz Froelicher, Chemist HTRW Section

Date prepared: November 12, 1993

# Monthly Progress Report Ft. Stewart In-House RFI Sampling October 15 through November 15, 1993

### WORK COMPLETED

During the time from October 15 and lasting until November 15, 1993 the following activities were conducted:

Sites sampled during this time were: FST-003, FST-004C, FST-010, FST-011, FST-012, FST-018, FST-025, FST-026, and FST-031.

### PROBLEMS ENCOUNTERED

Carr Laboratory informed us that they had inadvertantly contaminated samples from SWMU FST-002 and FST-003 with the pesticide Aldrin. The site must be sampled again for pesticides.

### **SOLUTIONS**

Samples will be retaken from SWMUs FST-002 and FST-003 for pesticide analysis only.

### SUMMARY OF FINDINGS

Concentrations of metals, especially lead and arsenic, continue to be found in many sample. Free product was found at FST-025, Tank 70.

### UPCOMING WORK

Samples must be retaken during this month from SWMUs FST-002 and FST-003 for pesticide analysis only. All the sampling should be completed before 15 Nov 93 except for one site which must be sampled while the Hotel Range is closed. This is EOD area SWMU FST-009.

In addition, we will conduct the normal reporting and data gathering which include the following activities:

- Sample water and soils as planned
- Acquire permits to enter and work at various sites (including EOD sites)
- Prepare Daily Quality Control Reports
- Prepare logs
- Conduct data validation including Field Data Validation and Lab Data Validation
- Prepare Quality Control Summary Report

Prepared by:

Dr. Franz Froelicher, Chemist

HTRW Section

Date prepared: November 30, 1993

# Monthly Progress Report Ft. Stewart In-House RFI Sampling November 15 through December 15, 1993

### WORK COMPLETED

During the time from November 15 and lasting until December 15, 1993 the following activities were conducted:

The site sampled during this time was FST-009. An EOD Safety Specialist from the COE, Huntsville Division swept the areas prior to sampling by the team. FST-002 and FST-003 were resampled.

### PROBLEMS ENCOUNTERED

The U.S. Army Corps of Engineers mailroom sent SAD's lab sample cooler to the IT Laboratory in Knoxville TN and the IT Lab sample cooler to SAD Marietta, GA.

All QC reports from Carr Laboratory had to be revised as the Relative Percent Difference were not calculated or included in the reports. Numerous other problems were encountered with the QC reporting. These included a lack of explanation of the way they handled the matrix spikes and matrix spike duplicates and their proper identification in the report, not including the matrix spikes and matrix spike duplicates in reports, numerous incorrect calculations, repetitions of same mistakes even after corrections, the listing of the samples numbers and their corresponding laboratory assigned sample numbers, and the general presentation of the data.

### **SOLUTIONS**

The labs mailed each other the coolers and holding times were not exceeded. After some guidance, Carr Laboratory is resubmitting the QC in a modified presentation. Constant proof reading on our part is required to assure the quality of the QC data.

### SUMMARY OF FINDINGS

No special finding are reported this month.

### UPCOMING WORK

The project sampling is complete and no additional field work is planned at this time. The Quality Control Summary Report narrative is being prepared and remaining lab results should be received shortly.

Remaining work includes the following:

- Complete all data validation
- Complete Quality Control Summary Report
- Submit all data to the SAD Laboratory for their use during QA Report preparation.

Prepared by:

Dr. Franz Froelicher, Chemist HTRW Section

Date prepared: December 21, 1993

### Monthly Progress Report Ft. Stewart In-House RFI Sampling December 15 through January 31, 1994

### WORK COMPLETED

During the time from December 15, 1993 and lasting until January 31, 1994 the Ft. Stewart RFI data validation was completed, and the Quality Control Summary Report was completed.

### PROBLEMS ENCOUNTERED

A problem surfaced regarding the method Carr Laboratory used to calculate the relative percent difference (RPD). Occasionally an RPD of zero was assigned to QC compounds even though a value below minimum detection limits was reported and compared to another number below detection limits. The COE pointed out that dividing any number by zero is not a logical calculation. Other minor errors in the QC data were pointed out.

### **SOLUTIONS**

Although dividing by zero is not possible mathematically, the EPA commonly allows this practice of calculating RPD. The reason that detection limits are established, is to establish a point at which the statistical certainty that a concentration exists in a sample is greater than 95%. A reported value of less than the detection limit is just as valid as a reported value above the detection limit, and a comparison between these data, the zero data, is also valid. This reasoning was agreed to and supported by Mr. Charlie Hooper at EPA Region IV (706-546-3286). Other errors were corrected.

### SUMMARY OF FINDINGS

No special finding are reported this month.

### UPCOMING WORK

This completes the sampling and laboratory data validation for the Ft. Stewart RFI.

Prepared by:

Dr. Franz Froelicher, Chemist HTRW Section

Date prepared: Jaunary 31, 1994

# QUALITY CONTROL SUMMARY REPORT

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PHASE I RCRA FACILITY INVESTIGATION FORT STEWART, GEORGIA

# APPENDIX B

# DAILY QUALITY CONTROL REPORTS

SAVANNAH DISTRICT U. S. ARMY CORPS OF ENGINEEERS

DATE 7/15/93

| A E DAU V OUALITY   | L        | <u> </u>     | 17              |         |
|---|----------|--------------|-----------------|---------|
| A-E DAILY QUALITY   |          | ·            |                 |         |
| CONTROL REPORT WEATHER  | Sun Ca   | MAY OVERCOME | Ren             | Snow    |
|   | 301      |              |                 |         |
| TEMP  | To 32 32 | 50 50-70     | 70-85           | مريه    |
| CCE PROJECT MANAGER Toni Nicholson  | ~        |              | *               |         |
| PROJECT FST-001, FORT STEWART SOUTH CENTER LANGELL WIND                           | S31 140  | xxer high    | P400            | n NO.   |
| 108 per Fort Stewart RFI HUMIDAY  | Dry No   | cor   Humas  | 1               |         |
| CONTRACT NO HOME  | . '      | 1×           | ļ               |         |
| 5007607 70  |          |              |                 |         |
| SUB-CONTRACTORS ON SITE:  |          |              |                 |         |
| PERSONEL ON SITE: DUDSON SMITH CH   |          | Q =          |                 |         |
| TERSONEL ON SITE: UNDSON SMITH, CH  | ARLIE    | DECIN        |                 |         |
|   |          | <del> </del> |                 |         |
| ECUIPMENT ON SITE.  |          |              |                 |         |
| BALLERS (4), WELL SAMPLING SOUPMENT, PID, CG                                      | 1271     | OH METE      | R               |         |
| SPEC COND. METER, CALIBRATION SOLUTION, WA  | _        | *            | -               |         |
| WORK PERFORMED (INCLUDING SAMPLING):  | 616 050  | Et METER     | <u></u>         |         |
|   |          | To wen       | \$ C.C.A        | 12      |
| 7/15/93 ARRIVED ON SITE, STARTED START<br>@ 0920. TOOK WATER LEVEL MEASUREMENTS ! |          |              |                 |         |
| WATER LEVEL INSTRUMENT. CALLULATED AMOUNT   |          |              |                 |         |
|   |          |              |                 |         |
| WITH DECONED BAILERS, HAD CBELIN START BA   |          |              |                 |         |
| CHECKING BREATHING AIR WITH PID AND CO  | 1. 3.7.  | INITS & 2    | 0.10z           | d. 0.01 |
| LELO WATER EVATUATION WITH TIFEON BAILER. THE                                     |          |              |                 |         |
|   |          |              |                 |         |
| WERE CAUBRATED 09:32 PH READ 70 IN SA   |          |              |                 |         |
| SPC CONDMETER CALIBRATED IN NACI SOLUT  |          |              |                 |         |
| OF WELL WATER FOR PH, SPC & I WELL VOLUME,  |          |              |                 | LIM     |
| GAL D SMITH alternated BAILENG IN   | S Gal    | INTERVAL     | <u> </u>        | -       |
| DSMITH MARKED BOTTLES DURING CBELINS 1  | BAILING. | QAIQC        | <u>ン</u>        |         |
| SAMPLES ARE TO BE TAKEN AT THIS WELL.   | VOC IN   | 40 ml Gla    | <u>۱۲۲۴ د د</u> | HCI,    |
| RCRA METALS IN SOUM! PLASTIC WITH HNOZ, RA 776/228                                |          |              |                 |         |
| and PESTIPCB 1000-1 Glass all also preserved with                                 | ICE S    | AMPLE TI     | m E             | 1,00    |
| endel 11:30. STARTED FOT DOI SCM3 @ 1759  | used     | same p       | roced           | 2 ver   |
| as above except, only recalibrated pH   | meter    | 01310        | o L             | v1)     |
| neodol. PIO retalings 3.9 CGI Or 20.3 and LE                                      | ι ο.ω.   | BAIL AMON    | VT 5            | 44      |
| Alternated bailing between CBELINA J SMITH.                                       |          |              |                 |         |
| LOCATED IN SAMPLE LOG. DECON PROCEDURE: WASH W                                    |          |              |                 |         |
| LIQUINOX TOMPLETELY, RIUSE COMPLETELY, WASH DE W.                                 | HER. V   | VASH JSO     | PROPY           | ۷       |
| ALEONOL THICK, WASH AV. Free WATER, DRY,  | WRAD     | N Au         | N CH   100      | 1       |
| FOIL FOR STORAGE  |          |              |                 |         |
|   | ·        |              |                 |         |

| PRIJECT. EST-001 FT SEWART SOUTH CENTRAL LANDELL REPORT NO.                                  |
|--|
| JOBNO,   |
| CUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)                                    |
| PID was pre-culibrated 7/15/93 @ ENG DEPOT USING   |
| Isopotilene 250pm pending 251 units. pH meter calibrated                                     |
| ONCE IN ENG OFFOT THEN 7/15/93 0932 & #310. SPC METER  |
| Calibrated once ENO DEDIT THEN 7/5/93 @ 9:32. ALL SOUPMENT                                   |
| 15 DECONED AS PER DER QA 001/92 DER USE. ALL CODUERS   |
| CONTAINING BY VOC SAMPLE MONTAINS TRIP BLANKS.   |
|  |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.   |
| PID & CGI READINGS ARE TAKEN PER SITE. NEITHER   |
| EXCEELED NOTED READINGS SO MOD LEVEL D REMIND  |
| IN EFFECT. Gloves (Later) always used in sampling  |
| and baileng activities.  |
|  |
| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN   |
| THE HEAT CAUSED MANY PROBLEMS. FIRST BOTH  |
| FEERTS ISADING PORTH EXPERIENCE ADVERSE HEALTH   |
| EFFECTS LEADING POSSIBLY TOWARD HEAT STRESS OR   |
| STROKE SO WE ALTERNATED PHYSICAL ACTIVITIES.  THE HEAT ALSO LOCKED THE BAILER VALUE ONTO THE |
| BAILER, THIS HAS TO BE REMEDYED WITH COOL WATER.   |
| THE AMOUNT OF WATER AND TIME PER WELL WAS NOT TAKEN CORRECTLY INTO                           |
| SPECIAL NOTES CONSIDERATION, AMERING MUST BE SET UP TO ENAMINE THIS CLOSE                    |
| ANY PERSON HELPING WITH THIS PROJECT MUST  |
| PHYSICALLY BE ABLE TO DO SO.   |
| TOMORROWS EXPECTATIONS ( MONDRY)   |
| MEETING BETWEEN B DIKELLEY METER   |
| MEETING BETWEEN B. O'KELLEY, M FIFE; T. NICHOLSON UND J SMITH, + TWO WELLS.                  |
|  |
|  |
|  |
|  |

ВУ\_\_\_

|  | QATE        | 7           | /19/                           | 193               |              |                   |
|--|-------------|-------------|--------------------------------|-------------------|--------------|-------------------|
| •  | DAY         | S,          | × T                            | W.                | हे ।         | s                 |
| A-E DAILY QUALITY                              |             |             | <u> </u>                       |                   |              | <u> </u>          |
| CONTROL REPORT                                 | WEATHER     | Sun<br>Sun  | Chaer                          | Очетовия<br>      | Run.         | Snow              |
| COE PROJECT MANAGER                            | TEMP        | To 32       | 32-50                          | 50-70             | 70-85        | مر که<br>X        |
| PROJECT FST-UCI SOUTH CENTRAL LANDEILL         | WIND        | ÄX          | Moder                          | Нерт              | Fec          | n.No,             |
| JOB NO   | HUMIDITY    | Dry         | Moder                          | Humas             | d            | )<br><del>-</del> |
| SUB-CONTRACTORS ON SITE:                       |             |             | ·                              |                   | <u> </u>     |                   |
| <u></u>  |             |             |                                |                   |              |                   |
| PERSONELL ON SITE: JUDSON SMOTH                | LARRY Ou    | , £ E       | · . <u> </u>                   |                   | <del>-</del> |                   |
| ECUIPMENT ON SITE.                             |             |             |                                |                   |              | <del></del> .     |
| BAILERS (4) WELL SAMPLING FOURMEN              | T PID COT   | ファル         | a 14 A                         | 15750             | Saec         |                   |
| COND METER CARIBRATION GASES,                  | CALIBRATION | Seco        | با بدي. <del>.</del><br>ا بدي. | Vater 1           | EVEL I       | ENO.              |
| WORK PERFORMED (INCLUDING SAMPLING):           |             |             |                                |                   | <u> </u>     | <u></u>           |
| 7/19/93 1000 ARRIVED ON                        | SITE. C     | 1212124     | ΤΕϦ                            | ALL               |              |                   |
| INSTRUMENTS PRICE TO SAMPLIN                   | E. Touk     | PID         | c, _ ck²                       | CG <u>T</u>       |              |                   |
| BACKGROUND READINGS ON EACH                    | WELL T.     | ) DE        | TERM                           | INE               |              | _                 |
| IF ANY PRIBLEMS EXIST IN THE                   | RREATHING   | 20 A        | /E. "                          | ALL               |              |                   |
| DATA IS LECATED ON INDIVIDUAL                  | DATA SHEE   | r.s. ''     | THE                            |                   | ς            |                   |
| WATER LEVEL READINGS WERE                      |             |             |                                |                   |              |                   |
| THE METER WAS DECONED. THE NEEDED AMOUNT TO BE |             |             |                                |                   |              |                   |
| BAILED WAS THEN BAILED. 4                      |             |             |                                |                   |              |                   |
| BAILER, YZ AMOUNT BAILED AND                   | CALCULA     | TED         | Am 0                           | E.NT              | 4            |                   |
| A WATER SAMPLE LUAS TAKE                       | EN FOR      | oH, 51      | FC CL                          | . بر . <i>الد</i> | · cl         |                   |
| TEMP AF THE PERIMETERS STA                     | RILITZED .  | THE S       | AMS                            | CES               |              | ·                 |
| NEBETAKEN. THEN THE EQUIPME                    | FHT BAILE   | 125, E      | ۲¢ ، ۲                         | ~ E 12 E          |              |                   |
| DECONED. THIS WAS ACCOMPUS                     | HFO FOR     | FS          | T-00                           | i-SC M            | 4 , 4        | <u></u>           |
| SCMI. ALSO A SURFACE WATER                     | 2 SAMPL     | <u>E F</u>  | 7-00                           | 1- Sul            | 5-1          |                   |
| FUR THAT SAMPLE, ONLY ONE                      | VEXT TO     | <u>Est</u>  | - 531-                         | SCNI              | <del>;</del> |                   |
| WAS DONE.                                      | PH, TEMP    | c N         | SF                             | ic C              | ONO          | <del></del>       |
| or, year.                                      |             |             | ·                              | <del></del>       |              |                   |
|  |             |             |                                | <del></del> -     |              |                   |
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|  |             |             | 514                            | ET                | ≎ <b>F</b>   |                   |
|  |             |             |                                |                   |              |                   |

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(Continuation Sheet) PARSECT FST-001 SOUTH CENTRAL LANDFILL REPORTNO. QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS) IHE PID WAS CALIBRATED WITH ZERU MIR AND 350 April 13. BUTYLENE. THE ISOBUTYLENE CHECK OUT AS 253 UNITS ON THE PIO. THE PH METER WAS CALIPRATED WITH STANDARD 7 EAR ID. AND THE CONDUCTIONY METER NITH WALL SOUTION. ALL EQUIPMENT WAS DECENED BET FROM ONE WELL TO ANOTHER USING DER-GA-CO1/92 PRUCEDURES, HEALTH AND SAFETY LEVELS AND ACTIVITIES. PRITECTION LEVEL WAS AT DMODIFIED. PROBLEMS ENCOUNTERED/CORRECTION ACTION TAXEN: SPECIAL NOTES. TOMORROW'S EXPECTATIONS

BY\_\_\_\_TITLE\_\_\_\_

| DATE   | 7/20               | 153                |         |              |
|--|--------------------|--------------------|---------|--------------|
| A-E DAILY QUALITY  | SU                 | / <del>W   1</del> | भिह     | S            |
| CONTROL REPORT WEATHER                                   | Scott Caser<br>Sun | )<br>X             |         |              |
| COE PROJECT MANAGERTEMP                                  | Lo 12   25-20      | क्र-व्य            | 70-85   | هي که        |
| PROJECT FST-LOJ FT STEWART S WITH C'ENTRAL LANDFILL WIND | Stay   Mooser      | لأضر               | Fecc    | n No.        |
| JOB NOHUMIDITY   | Dry Hooser         | l Haustonia        |         | 3            |
| CONTRACT NO  |                    | X                  |         |              |
| SUB-CONTRACTORS ON SITE:                                 |                    |                    |         |              |
| PERSUMELL ON SITE : JUNES SMITH,                         | LAIZIZY C          | LLIFF              |         |              |
| EQUIPMENT ON SITE.                                       |                    |                    |         |              |
| GAILERS (4), WELL SAMPLING EQUIPMENT PID, CEI 27         | 71 DH ME           | TER. S             | PEC     | ·            |
| CNNO METER, CALIBRATION GAS AND SCHUTIO                  | NS WATE            | O / EVE            | · M     | ETF2.        |
| WORK PERFORMED (INCLUDING SAMPLING):                     |                    |                    |         |              |
| 7/20/03 APRIVED ON SITE 11:30- SAMP                      | LFO WE             | LLS                |         |              |
| FST-UOI-SCHS AND FST-UUI-SCMG USIN                       | G REG              | ULAR               |         |              |
| WELL SAMPLING PROTOCAL & CALIBRAT.                       | NG Tus             | TRUM               | ENTS    |              |
| CHECKING SITE, WATERLEVEL DECEN                          | BAIL               | TAK                | £       | <del>,</del> |
| PEADINGS, SAMPLE & DECIN. SOME                           | √ A5               | LUCA               | TED     |              |
| IN A RESTRICTED AREA TO PERMIS                           | 510N N             | EEPED              | )       |              |
| TO BE OBTAINED TO ENTER. ALSO,                           |                    |                    | <u></u> |              |
| WAS COUFITED IN POISON IVEY SO                           |                    |                    |         |              |
| WAS CAREFULLY PLANNED.                                   |                    |                    |         |              |
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| PARSECT FST-001, FT STEWART SENTIA CENTRAL L. A           | EPORT NO.                             |
|---|---------------------------------------|
| JOB NO  | DUTE 7/20/93                          |
| QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS) |                                       |
| THE PID WAS CALIBRATED WITH ZE                            | RU AIR AND                            |
| 150 BUTYLENE (250 ppm). OH METER ~                        | LAS CALIBRATED                        |
| WITH TEIN STANDARD AND CO                                 | NOUTICITY METER                       |
| As 2=0 D=2 in (=2   | MENT IS DECEMED                       |
| AS PER DER-UA-001/92                                      |                                       |
|   |                                       |
|   |                                       |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.                  |                                       |
| LEVEL D MOD WAS USED BUT CAU                              | TION WAS                              |
| ESPECIALLY TAKEN AT SOME ARO                              | UND THE                               |
| PERSON INEY.  |                                       |
|   |                                       |
| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN              |                                       |
|   |                                       |
|   |                                       |
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|   |                                       |
|   |                                       |
|   |                                       |
| SPECIAL NOTES.  |                                       |
|   |                                       |
|   |                                       |
| TOUGO   |                                       |
| TCMORROW'S EXPECTATIONS                                   |                                       |
| START AND TRY TO COMPLETE FST.                            | -017                                  |
|   |                                       |
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TITLE

|   | DATE      |              | 7/2                                   | 2/92               | >         |             |
|---|-----------|--------------|---------------------------------------|--------------------|-----------|-------------|
| A-E DAILY QUALITY   | DAY       | S            | ш                                     | W                  | 71        | S           |
| CONTROL REPORT  | WEATHER   | Broom<br>Sur | Char                                  | Overcook           | Ran IS    | · ~ ·       |
| OE PROJECT MANAGER  | ТЕМР      | To 32        | 32-50                                 | 50 <sub>-</sub> 70 | 70-85   a |             |
| ROJECT FST-032 d. FST-033   | WINO.     | 35/K         | Moder                                 | Han                | F-con.    | NO.         |
| 08 NO   | HUMIDITY  | Cry          | Moder                                 | HUTED/             | 14        |             |
| SUB-CONTRACTORS ON SITE:  |           |              |                                       |                    |           |             |
| LARRY CLUEF, NUDSON S   | .m.j TH   |              |                                       |                    |           |             |
| EQUIPMENT ON SITE.  |           |              | · · · · · · · · · · · · · · · · · · · | <del></del> -      |           | <del></del> |
| HAND AUGER, PID, FID, THERMO ME<br>DECON EUU. PMENT, CUCLERS<br>YORK PERFORMED MIXCLUDING SAMPLING! | TER, CUI  | 271,         | SA                                    | MPLE               | Bit       | LES         |
| ARRIVED IN SITE AT 10   |           |              |                                       |                    |           |             |
| ETISTED. THE BURINGS WER  |           |              |                                       |                    |           | ~           |
| TO PLAN THEN LATER MEA  | SUPE 12   | 1 RE         | LATI                                  | on T               | 72 D.211  | ( <u> </u>  |
| MHEN BURING LOCATION WAS  | DETERMIN  | IED          | LAR                                   | RY+                | 400       |             |
| AUGERTO TO PERDETERMETE   | R STEPTI  | 1 in         | HILE                                  | وا منائرة          | らいん       |             |
| MARKED THE SAMPLE PROTEES.  | THE FULL  | win          | G TI                                  | 55 T 5             | ARE       |             |
| TO BE PERFURMED ON SAMPLES  | FROM FST  | -032         | : VU                                  | C 5                | 240       |             |
| (125 ml SEPTA TOP GLASS ROTLE)  | 1 TON SOI | Sugar        | 1 HE LI                               | /V /2              | e, 1      | Ì           |

CHASS BOTTLE). AND ON EST-033: VOC 8240 (125ml SEPTA TOP CHASS BOTTLE) AND PEST/PCB 8030 (250ml GLASS BOTTLE). THE ONLY PERSERVATIVE WILL BE ICE. SAMPLES FOR LAB TESTING AND PID AND FID READINGS WERE TAKEN

AT BOTH FST-032 ANDEST D33. HAND AUGER WAS COMPLETED DECENED BETWEEN HOLES. QAD QC WILL BE COLLECTED

BETWEEN THE 1.5 AND 20 FOOT MARK. SOL WAS
CLASSIFIED AS TO TYPE. THIS WAS ACCOMPLICATED

PER SITE, SITE MAP WILL COVER SAMPLE BORING

COCATIONS.

SHEET OF

| PANIECT FST-032 + FST-033                                 | REPORT NO.           |
|---|----------------------|
| JOS NO  | OUTE 7/22/93         |
| CUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS) |                      |
| FID WAS CALIBRATED WITH ZERO                              | AID WETHAUT IT DOWN  |
| AND 95 ppm. 10 ppm requisitional or                       | s 10 1 and 95 non as |
| 98pm. PID WAS CALIBRATED WITH                             | ZERO AID AND DEGIN   |
| ISOBUTYLENES (REGULSTERED 257-11-                         | -> )=                |
|   |                      |
|   |                      |
|   |                      |
|   |                      |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.                  |                      |
| LEVEL O MOD, USED.  |                      |
|   |                      |
|   |                      |
|   |                      |
| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN              | The figure 1         |
| COULD NOT DO EST-017 ACCOR                                | 20 WB TO 0101        |
| ASPHALT COVERED THE GROUNDO FUR                           |                      |
| SO HAD TO TAKE PIDIFIN SAMPLE                             | S RACK TO LABS.      |
|   |                      |
|   |                      |
|   |                      |
|   |                      |
| SPECIAL NOTES.  |                      |
|   |                      |
|   |                      |
| TOMORROW'S EXPECTATIONS                                   |                      |
| FST-USI TO BE COMPLETED                                   |                      |
| 10 DE COMPLETED   | • •                  |
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BY\_\_\_\_

|   | DATE  |              | 1123                         | 772  |                   |         |
|---|---|--------------|------------------------------|--|-------------------|---------|
| A-E DAILY QUALITY                                 | DAY   |              | u f                          | W  | ты ў              | < s     |
| CONTROL REPORT                                    | WEATHER   | \$ <b>*</b>  | Char                         | Overcome                                       | Ran               | Snow    |
| COE PROJECT MANAGER                               | TEMP  | To 32        | 32-50                        |  |                   | 25 700  |
| PROJECT_FST-631 DFH ACHHALT TANKS                 | WIND  | <b>S4</b>    | Moder                        | Hon  | ١.                | ort No. |
| CONTRACT NO                                       | HUMIDITY  | Çτγ          | Hoose                        | Human  | 1                 | 2<br>   |
| SUB-CONTRACTORS ON SITE:                          |   |              |                              |  |                   |         |
| Justin Smith, LARRY CI                            | LIFF  |              |                              |  |                   |         |
| EQUIPMENT ON SITE.                                |   | <del></del>  |                              |  | <del></del>       |         |
| HAND AUGER PID FID THERMEN MEDER                  | FTER, CGI   | <u> 2</u> 71 | , 54                         | мре  | で                 | TLE     |
| WORK PERFORMED (INCLUDING SAMPLING):              |   |              |                              | , , ,  |                   |         |
| ARRIVED ON SITE AT 11:30, NA                      | LKED THE  | S,           | TE.                          | WITH   | TH                | E       |
| CGE, AVD PIDE TO PETERMINE                        | IF ANY  | 71204        | EMS                          | EXI  | ST.               |         |
| THE PURIORS WERF MARKED                           | IN ACCOR  | DAM          | OE.                          | To P   | LAN               |         |
| DRAND OUTO WHEN BORINGS<br>HAND AUGERED TO A PERT | DEFE N  | 1941212      | <u>=0</u>                    | LAR  | 12 Y              | ·       |
| 1.5 2.0 TO TAKE THE SAME                          | OF E E TO   | <u> </u>     | <u> </u>                     | PIH  |                   |         |
| TESTS WILL BE DONE! JH                            | 9045 (20  | - 75<br>Dal  | -, 4                         | <u>co (                                   </u> | <u>~</u><br>31.0€ |         |
| 8240 COSOL STOTATOP CLASS                         | MOTTLE) 0   |              | TPH                          | 1 120 a  |                   | רממ     |
| HEAVY ( 250ml (GLASS, BOTHE) &                    | THE MAL   | 1 8          | F 125E                       | RUNT   | ا<br>انتخار ا     |         |
| WILL BE ICEO SOIL TYPE G                          | WILL RE   | FIEL         | 00                           | 24ASS  | 1911              | € D.,   |
| CLA and GC BAMPLES will of                        | E COLLEC  | TEL          | ) <u>, S</u>                 | /T-  | MA                | 0       |
| WILL COUER SAMPLE PORI                            | NG LOCA   | Tron         | ری                           |  |                   |         |
|   |   |              |                              |  |                   |         |
|   |   |              | · ·-                         |  | ·                 |         |
|   | 9 - MART 11 100 PM, 30 PM AV 1 MIN 11 MART 1 MART 11 MART 1 MART |              | AN PAN DE 118 AN TAIN NOTICE |  |                   |         |
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| PANECT   | (Continuation Shipping REPORT NO |
|--|----------------------------------|
| .08 NO   | DATE 7/27/43                     |
| QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)  |                                  |
| FID WAS CALIBRATED WITH ZERO AI<br>and 95 ppm. 10ppm rend on a<br>93 ppm. PID WAS CALIBRATE<br>AIR IND 250 ppm 150 BUTYLENE. O<br>252 mits | R METHANE 18                     |
| and 95ppm, 10ppm read on   | 7.8 = 1d 95 75                   |
| 9 3pgm. PID WAS CALIBRATE  | - O WITH ZERO                    |
| AIR AND 250 pom 150 BUTYLENE.  | 250 ppm reach us                 |
| 252 MITS A   |                                  |
|  |                                  |
|  |                                  |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.   |                                  |
| LEVEL PINCO USED   |                                  |
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| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN   |                                  |
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| PECIAL NOTES.  |                                  |
|  |                                  |
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|  |                                  |
| CMORROWS EXPECTATIONS  |                                  |
| FST-014 TO BE COMPLETED.   |                                  |
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|   | DATE                                  | 7/28/               | 93                                    |                          |
|---|---------------------------------------|---------------------|---------------------------------------|--------------------------|
|   | DAY                                   | SMI                 | T 40 17                               | HFS                      |
| A-E DAILY QUALITY                                     | Į.                                    |                     |                                       |                          |
| CONTROL REPORT  | WEATHER                               | \$ C.               | Overcome                              | Rain Snow                |
| COE PROJECT MANAGER                                   | TEMP                                  | To 32 32-50         | 50-70                                 | 70-85   55 10            |
| PROJECT FST. 514 OLD FIRE TRAINING PIT                | W#HD                                  | Staty Moder         | ⊬¢u                                   | Recort No.               |
| JOB NO  | HUMIDITY                              | Dry Mooer           | HU170                                 | 6                        |
| SUB-CONTRACTORS ON SITE:                              |                                       | <u>'</u>            |                                       |                          |
|   |                                       | <del></del>         | ····                                  |                          |
| WOSEN (SMITH UM HALEY                                 |                                       |                     | ·                                     |                          |
| EQUIPMENT ON SITE.                                    | · · · · · · · · · · · · · · · · · · · | <del> </del>        | · · · · · · · · · · · · · · · · · · · | <u> </u>                 |
| BAILERS (4), WELL SAMPLING EQU                        | OMENT I                               | 210 06              | 771                                   | H Meres                  |
| SPEC COND METER, CALIBRATION CO                       | 15 A SULV                             | TION WATE           | R LEVEL                               | METER                    |
| WURK PERFORMED MIKELUDING SAMPLING):                  |                                       |                     |                                       | i                        |
| 7/28/93 ARRIVED ON SITE 10000                         | CALIBR.                               | ATED ALL            | INS                                   | TRUMENTS                 |
| PRIOR TO SAMPLING, TOOK PIR                           | AND CGI                               | FEADING             | -5 IN                                 |                          |
| BREATHING JONE, MODIEVELD DE                          | TERMINED                              | TO BE USES          | o. To                                 | UK                       |
| WATER LEVEL READINGS TO DE                            | TERMINI                               | = AMOUN             | TTO                                   | RE                       |
| PAILED THEN DECONED. TOOK 121                         | - TEMP                                | AND C               | 02000                                 | TILLTY                   |
| THE CALCULATED MARK TO 1                              | ETED MI                               | NE C-               | MARI                                  | 12 24-10                 |
| FOR SAMPLING ON THE INITIO                            | AL OPEN                               | VING CE             | +1 1516 1<br>F AC                     | 1 4 12 114 1<br>11 11/20 |
| A PID READING IS TAKEN. T                             | HE PER                                | IMETE               | 12° )                                 | REINIC-                  |
| TESTED FOR ARE: 8240 VOC                              | 4001 38                               | pta top vi          | 61). RC                               | PA                       |
| - 15 TAL METALS ( SOUM) PLASTIC                       | I TOHLI                               | GHT CHO             | ml ann                                | ta, 100                  |
| VIAL) MINE TPH HEAVY (1000 ml A                       | MBERGLAS                              | ( RETTLE)           | •                                     | 1                        |
| THE S240 and TPHLIGHT -WG                             | percen                                | coll on the         | HCI                                   | Und ICE                  |
| THE PERATURAL MIFTALS                                 | - 1 3 0 1 0 0 0 (°                    | <u> </u>            | -1 600 -                              | 10 10 F                  |
|   | 12. H1 10                             | E. AFTE             | R 121                                 |                          |
| SAMPUNG ALL EGUIPMENT IS<br>CRA 001/92. TOP OF CASING | IN ECONE                              | 0 15 1              | FRE E                                 | 2)F 12                   |
| PERHOLE GA AND GC SAMPLE                              | <u> </u>                              | 20 15 /1<br>20 10 F | 15 1-                                 | - CEURDED                |
| FOT-014-MNI BLANKS WILL ALS                           | on Bi Co                              | LLECTE              | ) HF:                                 | 25                       |
|   |                                       |                     |                                       | -                        |
|   |                                       |                     |                                       |                          |
|   |                                       |                     | ·                                     |                          |
|   |                                       | F 1 4               | EF                                    | ~ ~                      |

| PARTECT. EST-014 OLD FIRE TRAINING PIT  | REPORT NO.   |
|---|--|
| .08 NO  | OUTE 7/78/93   |
| CUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)   |  |
| THE CH METER WAS CALIBRATED OF  | ITH TANDIE STANDARI  |
| THE CONDUCTION TY METER WAS CALLE   | BRATED WITH NACT   |
| SOUTION. THE PID WATH ZERO AND<br>ALL EQUIPMENT WAS DECINED AS  | PER DEP QA col/sz  |
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|   |  |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.  |  |
| MODITIED LEVEL DUSED  |  |
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| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN-   | • .  |
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| SPECIAL NOTES.  |  |
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| TOMORROWS EXPECTATIONS  |  |
| FST-004C, CONPLETE SITE,  |  |
| an managan a sana managan sa managan sa managan sa managan managan sa managan sa managan sa managan sa managan man<br>Managan managan man | and to security section and managed to secure action, and managed to security and allower the self-times and the |
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|                                    | DATE                                  | 112  | 175          |               |
|------------------------------------|---------------------------------------|--|--------------|---------------|
| A-E DAILY QUALITY                  |                                       | SM   | 1 ₩          | X F S         |
| CONTROL REPORT                     | WEATHER                               | Srope Chan   | Overcom      | Ram Snow      |
| COE PROJECT MANAGER                | TEMP                                  | To 32 32:50  | 50-70        | 70-85   85,00 |
| PROJECT FST-004C. BURN PIT         | W#ND                                  | Still Hoose  | r Hon        | PHOOT NO.     |
| 008 NO                             | нимиргту                              | Dry Moos   | rauman<br>X  | 7             |
| SUB-CONTRACTORS ON SITE:           |                                       |  |              |               |
| Jussey Smith, Just HALEY           |                                       |  |              |               |
| EQUIPMENT ON SITE.                 |                                       |  |              |               |
| METER (4) WELL SAMPLING EQUIPME    | - PIO CC.                             | (d. 44=  |              |               |
| - CAMPBILATION SOLUTION AMP        | 3 1555, WATE                          | PLEVEL   | METE         | PEC LOND<br>R |
| HONE PENTORMED INCLUDING SAMPLING! |                                       |  |              |               |
| 7/29/13 ARRIVED ON SITE @ 13       | CALIBR.                               | ATED A.  | INS          | TRUMENT       |
| Phone To Sampling AcTILITIES. 1    | CALKED THE                            | E SITE   | WITH         | THE           |
| 1210 HOO COLTO DETERMINE II        | = ANY CE                              | HANGE K  | NEE          | DED           |
| LEVEL OF PROTECTION, NONE          | DETECTE                               | O. WHE   | N EAC        | 14            |
| HEADS DADE CLOSE TO READING        | 5 TAKEN                               | TO CI  | ECIL .       | EXISTING      |
| HEADSPACE GASES. THE WATER         | LEVEL A                               | ND GOT   | TOM 0        | F WELL        |
| 18 THEN DETERMINE TO CALCUL        | A1F 7127                              | CONT T   | 3 BE         | BAILED.       |
| EN THE ENST RALLED HAVE            | CADINES                               | ARE C  | OLLEC        | TED           |
| AMOUNT WHILE BALLING. AT           | - MARIE                               | AND C.   | ALC VEA      | 7ED           |
| POINT UNLESS READINGS WOULD        | 11166 61                              | C C C C C C C C C C C C C C C C C C C  | 30241        | <u> </u>      |
| SAMPLES ARE TAKEN. THE S           | A TOPL SAIL                           | GEO: M   | CTTOC        | <u>_1HF</u>   |
| ARF : 3240 VOC (40ml Vial mi       | MARCHE GIVE                           | 1 510 1741   | EIEKS        |               |
| METALS (500 I PLANTIC POTTLE WITH  | Here's A                              | <u>u 7,60 (62)</u>   | 2005         | <u></u>       |
| 13 THEN DECEMED AND THE            | - 12 12 0 V                           | - CACI   | 1/1/E        | > E . ( 0 = ) |
| CA WEN.                            |                                       | wanter of the same | <u> </u>     | OC V HILLA    |
|                                    |                                       |  |              |               |
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|                                    | · <del></del> -· · · · ·              | <del></del>  |              |               |
| ,                                  |                                       | SI   | ÆET          | <br>_         |

| PROJECT FST-COUC BURN PIT  | REPORTINO;   | (Communion Sheet   |
|--|--|--|
| .08 NO   |  | 7/29/93  |
| QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS   |  |  |
| THE PID WAS CAUTERATED WITH  | 950  |  |
| and 2000 ur - 250 con 1000   | et 755 w   | C DUTITALE   |
| METER WAS CALIBRATED - 17H   | 7 6 10   | S= 11210   |
| COURCETIONTY METER WITH NOCH   | 4.   | A KIRLING DY   |
|  |  |  |
|  | <u> </u>   |  |
|  |  |  |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.   | 1. 3   |  |
| MILE LEVEL P USED.   |  | · · · · · · · · · · · · · · · · · · ·                                    |
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| PROBLEMS ENCOUNTESTS COORSESTION AT THE PROBLEMS OF THE PROBLE |  |  |
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| CANIA PROBLEM FACOUNTER  | ED was A   | STRUNG   |
| THURDERSTORM. WE ACCOM   | 112615450  | THE SITE   |
| DIGHT BEFORE IT HIT THEN DIEFIC. (TIFS.  | CH . CTHER   | 1615 6 20-   |
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| SPECIAL NOTES  |  |  |
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| CMORROWS EXPECTATIONS  | ······································   |  |
| FST-004D   |  |  |
|  |  | MINI TELEVISIONE DE LA MOTE HANDANTE MANTE LE TANDOLIS. A MOTE HANDAN LE |
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|  | o to the control of t | n Roger (MA)   |
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DATE 7/30/93

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|  | DAY         | Si                        | ы                         | WI                                    | THI FAIR            |
|--|-------------|---------------------------|---------------------------|---------------------------------------|---------------------|
| A-E DAILY QUALITY  |             |                           |                           |                                       | XIS                 |
| CONTROL REPORT   | WEATHER     | 8-pm.<br>Sun              | 27                        | Own                                   | Ram   Snow          |
| COE PROJECT MANAGER  | TEMP        | To 32                     | 32.50                     | 50-70                                 | 70-45   45-47       |
| PROJECT =ST-0044) B-22 P   | . WIND      | Sal                       | Hoter                     | Hori                                  | 7-007: NO.          |
| JOB NO.  | HUMIDITY    | Ĉγ                        | Hoose                     | HU(190                                | 1 8                 |
| CONTRACT NO  | -           |                           |                           | X                                     |                     |
| SUB-CONTRACTORS ON SITE:   |             |                           |                           |                                       |                     |
| JUDSON SMITH, J. M HAL   | E,Y.        |                           |                           |                                       |                     |
| ECUIPMENT ON SITE  |             |                           |                           | · · · · · · · · · · · · · · · · · · · |                     |
| <del></del>  |             |                           | <del></del>               | <del> </del>                          |                     |
| BAILERS (4), WELL SAMPLING EGO.  | PMENT, PID, | <u>661,</u>               | pt!                       | NETER                                 | SPEC.               |
| COND METER CALIBRATION SOLUTION WORK PERFORMED MINCLUDING SAMPLINGS:   | U ATER      | <u>650</u>                | = 1 V                     | NETEI                                 | 2                   |
| 7/3-/53 +02:152 5 6  | 250         |                           |                           |                                       |                     |
| ASTURIES T CAMBRIDE  | X TSFF      | v.Z E                     | AN                        | <u> </u>                              | MPLING              |
| REINTE STANDARDS USING   | L LNSTR     | OF                        | <u> </u>                  | WITH                                  | APPRO               |
| THE SITT TO DETERMINE IF   | THE ST      | <u>ار از مرا</u><br>ایران | <i>H</i> (                | IGL .                                 | L MACKET            |
| PROTECTION IS NEFDED; NONE   | EN VO       | <u>ا جي ي</u><br>اند سم   | 100                       | EVEL                                  | u ore u             |
| DITTO THE WATER LEVEL AND  | WELL DE     | 27 LJ                     | 714 (;<br>714 (;          | CACO                                  | ,—,,                |
| DETERMINE TOTAL AMOUNT   | TO RE       | -12 21 1                  | EA                        | 1./-1.                                | <u> </u>            |
| THE WELL CAP IS FIRST  | REMOVEL     | ) 1                       |                           | 100                                   | PFANIS.             |
| TAREN AT THE TOP TO  | DETER       | MIN                       | E                         | +1 = 11:                              | 200000              |
| 275 DI TEMP AND C  | ONDUCTIO    | iTY                       | PE                        | ADIN                                  | C /C                |
| 7216 FN 21 HE 7 1725)  | ISAIL F     | ULL                       | 7                         | 11 -                                  | Dir                 |
| THE CALCULATE  | D FINIA     | c·M                       | 4121                      | . Was                                 | LFSC                |
| CLECUX OCCURS IN THE   | COARDOR     | $T \sim 10^{-3}$          | r 12                      | - 0                                   | n II                |
| TAKE THEN TAKE   | J. THE      | C 1 a                     | 1011                      | 150 8                                 | 7-0.46              |
| and the second s |             |                           | e in accommon property of | no filmono a conseguitar for          | Same and the second |
| 7 5 1AL 6015 1ACS - 1 HF 8740  |             |                           |                           |                                       | i                   |
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| = 43110 7761   | ューテロー ロイング・ | a ·/                      | 7                         | C 2                                   | O                   |
|  | TALE 137    | 7 57                      | CA                        | SINC                                  | 2                   |
| PEFUATION IS THEN TAKEN.   |             |                           | <u> </u>                  |                                       |                     |
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| PRIMECT. FST-0040   | REPORT NO.        | <del></del> (.) |
|---|-------------------|-----------------|
| JOB NO  | DATE 7/30/93      |                 |
| QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS) |                   | _               |
| THE PH METER WAS CALIBRATED                               |                   |                 |
| STANDARD. THE CONDUCTION METER                            | WAS DA SOATEA     |                 |
| EVITA NOCT STANDARD, AND THE                              | Q10 1315 CALL 201 |                 |
| TANDARD. ALL EDINA  | MENT WAS DECEMEN  | <u>だ</u><br>ウ   |
| AS PER DER CALCOLISE                                      |                   |                 |
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| HEALTH AND SAFETY LEVELS AND ACTIVITIES.                  |                   |                 |
| INOU LEVEL DUSTO  |                   |                 |
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|   |                   | _               |
| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN              |                   | _               |
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|   |                   | -               |
|   |                   | 7               |
| SPECIAL NOTES   |                   |                 |
|   |                   | _               |
|   |                   | $\frac{1}{2}$   |
| TOMORROW'S EXPECTATIONS                                   |                   | $\dashv$        |
| FST-UU4A  | ••.               | -               |
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|  | DATE   |                         | 191                                   | 93           |                       |              |
|--|--|-------------------------|---------------------------------------|--------------|-----------------------|--------------|
| A-E DAILY QUALITY<br>CONTROL REPORT                | - DAY  | S                       | Chie                                  | Overcom      | īH F<br>IR <b>≥</b> n | S            |
|  | MONTER   | Sun                     |                                       | 1            | X                     |              |
| COE PROJECT MANAGER                                | TEMP   | To 32                   | 32:50                                 | 50-70        | 70-85                 | కు అ         |
| PROJECT  | .W <b>⊪</b> NO   | Sal                     | Y X                                   | Hiçh         | Feat                  | ON 70        |
| JOB NOFST - 017                                    | HUNIOTY  | Ory                     | Moder                                 | Human<br>X   | 1                     |              |
| SUB-CONTRACTORS ON SITE:                           |  |                         |                                       |              |                       |              |
| Dusson Smith, LARRY OWIFF, H                       | ORACE FU   | TCHE                    | Ŕ,                                    | Dove.        | NS CA                 | -            |
| ECUIPMENT ON SITE.                                 |  | <del></del>             | <del></del>                           |              |                       | <del></del>  |
| DAIL RIG. 4" AUGER, STEAM                          | CLEANED  | <u> </u>                | ا مدن                                 | FALL M       | 10.00                 | 2            |
| The Daks, Car, I'D, DVA ar                         | IL VARIO   | — <del>Σ</del> ι        | ILLIN                                 | t. F.a       | U.P.M                 | LAKO         |
| TOTAL TEATON WED THAT UDING SAMPLINGS              |  |                         |                                       |              |                       |              |
| THE PRIMARY REAPONSIB                              | WITY TOD   | AY                      | 13.                                   | A TR         | 2AVE                  | u NG         |
| DAY OUS TO THE ON GOING H                          | EAVY Ti  | 1 V ND                  | ER ST                                 | Dem 1        | 1C TIV                | ITY.         |
| ALL NECESSARY SQUIPMENT                            | WAS LO   | <u> 4 D E D</u>         | -15                                   | 0 4T         | THE                   |              |
| YARD AND TAKEN TO THE<br>SPOKE TO VARIOUS PERSONEL | 140 100  | 47                      | HE                                    | SITE         | <u> </u>              | <del>-</del> |
| LOCATION TO ASSURE THAT                            | WE Way   | 1-120                   |                                       | 1 HA         | <u> </u>              |              |
| OPERATIONS. THEIR REPLY W                          | AS DOSI  | TIVI                    | - 100                                 | 7/4<br>VID - | 15 V                  |              |
| IF WE COULD START WITH                             | 5B1 F  | 11257                   |                                       | /F 2         | All.                  |              |
| UP COURSE COMPIY. I EXPLAIN                        | VEO THE  | OP                      | ERAT                                  | 10 N         | ro                    |              |
| THE DRILL CREW AND LARRY OF                        | CIEF.  |                         |                                       |              | ·                     |              |
|  | · · · · · · · · · · · · · · · · · · ·  |                         |                                       |              |                       |              |
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| РЯЗЈЕСТ. <u>FST-017</u>         |                       | REPORT NO.   | (Commution She |
|---------------------------------|-----------------------|--|----------------|
| JCB NO                          |                       |  | 8/9/93         |
| QUALITY CONTROL ACTIVITIES (INC | LUDING FIELD CALIBRAT |  |                |
| PID WAS CAUB                    | RATED WITH            | 250 ppm k  | THUMAN         |
| ISOBUTYLENE. REA                | 10 254 UNITS.         | <u> </u>   | - IN DITTED    |
| OVA WAS CALIBR                  | ATED WITH             | 10 MAN STANDA  | 20             |
| METHANE, 12 EAD                 | 9.7 ppm               |  | -              |
|                                 |                       |  |                |
|                                 |                       |  |                |
|                                 | <del> </del>          |  |                |
| HEALTH AND SAFETY LEVELS AND A  |                       |  |                |
| LEYELD MOD W                    | ILL BE MAIN           | TAINED INC   | LUDING         |
| HARDHATS AND ST.                | EL-TOED BOOTES        | <b>}</b>   |                |
|                                 |                       |  |                |
|                                 |                       |  |                |
| PROBLEMS ENCOUNTERED/CORREC     | TION ACTION TAKEN:    | * • •  |                |
| I HUNDERSTORM.                  |                       | TING   |                |
|                                 |                       |  |                |
|                                 | ••                    |  |                |
|                                 |                       |  |                |
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|                                 |                       |  |                |
| SPECIAL NOTES.                  |                       |  |                |
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|                                 |                       | · · · · · · · · · · · · · · · · · · ·  |                |
| CMORROWS EXPECTATIONS           |                       |  |                |
| SBJ- SB4 Fo                     | R COLLECTIONS         | OF PIDA  | FID.           |
| READINGS.                       |                       | annous care illustration of policients of the first of the second of the |                |
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|                                      | DATE 8/10/93                         |
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|                                      | DAY IS IN TERMS                      |
| A-E DAILY QUALITY                    | 3 X W H F S                          |
| CONTROL REPORT                       | WEATHER SUN Cher Overcom Rain Show   |
|                                      | To 32 32-50 50.70 70.45 145.00       |
| COE PROJECT MANAGER                  | TEMP TO 12 12-50 50-70 70-88   25-10 |
| PROJECT                              | WIND Stall Mooter High Record No.    |
| JOB NOFST-017                        | HUMIDITY DIY MOORY HUMED             |
| CONTRACT NO                          |                                      |
| SUB-CONTRACTORS ON SITE:             |                                      |
| JUDSON SMITH, LAZRY DUIFF. HOR       | ACE FUTCHER DOUGLAS                  |
| LallowCHE                            |                                      |
| ECUIPMENT ON SITE.                   |                                      |
| DRILL RIG 4" AUGER, STEAM            | CLEANER . ALVM. FOU. MASAU . 1405    |
| CGI, PID. UVA and                    | LARIOUS DRILLING & QUIPMENT          |
| WORK PERFORMED (INCLUDING SAMPLING): |                                      |
| WE BECAN THIS MORNING                | WITH FST-017-SBI AND                 |
| 148 EXERCISES WENT FAST              | ER THEN PLANNED.                     |
| H. FUTCHER and DOUGLAS en            | ERE ON DRILL RIC.                    |
| LARRY WAS STRICKLY OCES              | PONSIBLE FOR THE ROTTLES             |
| (PID) FID) AND JUDSON WA             | 45 RECORDING THE BORINGS             |
| AND ANYTHING ELSE THAT +             | APPENS. WE COMPLETED                 |
| SRI- SB4 (FID/PID) SA                | IMPLES BEEODE LUNCH                  |
| AND AS DESCRIBE IN ME                | THOP LET THEM SIT                    |
| OF FOR AT LEAST AN                   | HOUR WHILE WE                        |
| ATE LUNCH. ONCE BACK                 | JOSON CALIBRATED                     |
| THE FIDIPID WITH CALIBR              | ATE GAS. 108 FIDIPID                 |
| READINGS WERE TAKEN THE              | N AND IF AFTER WORDS                 |
| THE DEPTHS OF THE ACTUA              | 4L SAMPLES WERE                      |
| DETERMINED. WE WERE AK               | CE TO DO BOTH                        |
| SB4 (FROM WHICH WERE WE              | TOOK QA & QC)                        |
| and SBI. CGI & PID                   | READINGS WERE                        |
| TAKEN IN THE BREATH                  | TING ZONE PERIODICALLY               |
| FOR SAFETY                           |                                      |
|                                      |                                      |
|                                      |                                      |
|                                      |                                      |
|                                      |                                      |
|                                      | SHEET OF                             |

| DATE 8/10/33  COMMITTY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)  PID WAS CALIBRATED WITH 250 PPM STANDARD  ISO BUT YLENE. READ 252 MILTS.  OVA WAS CALIBRATED WITH 10 PPM STAND ARD  METHANE. READ 9.6 PPM  HEALTH AND SAFETY LEVELS AND ACTIVITIES.  LEVEL D MOD WITH IDARDHATS & STEEL-TUED  BOOTS  PROBLEMS ENCOUNTEREDICGRAECTION ACTION TAKEN.  SPECIAL NOTES.  COMORROWS EXPECTATIONS  SB2 - SB3 AND START ON PST-024 | PRINECT. FST-     | 017                   |                                       | OCEDOGE NO | (Continuation She |
|--|-------------------|-----------------------|---------------------------------------|------------|-------------------|
| OUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)  PID WAS CALIBRATED WITH 250 PPM STANDARD  ISOBUTYLENE. READ 252 WITE.  OVA WAS CALIBRATED WITH 10 PPM STAND ARD  METHANE. READ 9.6 PPM  HEALTH AND SAFETYLEVELS AND ACTIVITIES.  LEVEL D MOD WITH: I)ARDHATS & STEEL-TOED  BIOTS  PROBLEMS ENCOUNTERED/CCARECTION ACTION TAKEN.   | .OM.BOL           |                       |                                       |            |                   |
| PID WAS CALIBRATED WITH 250 PPM STANDARD  ISOBUTYLENE. READ 252 MITS.  OVA WAS CALIBRATED WITH 10 PPM STAND ARD  METHANE. READ 9.6 PPM  HEALTH AND SAFETYLEVELS AND ACTIVITIES.  LEVEL D MOD WITH: HARDHATS & STEEL-TOED  BOOTS  PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:  CMORROWS EXPECTATIONS  SOLUTIONS  CMORROWS EXPECTATIONS  | QUALITY CONTROL   | CTMITIES (INCLUDING E | SI S CALLES A TICLES                  | WIE        | 110 113           |
| OVA WAS CALIBRATED WITH 10ppm STAND ARD  METHANE, READ 9.6 ppm  HEALTH AND SAFETY LEVELS AND ACTIVITIES.  LEVEL D MOD WITH: HARDHAT'S & STEEL-TOED  BOOTS  PROBLEMS ENCOUNTERED/CORRECTION ACTION TAXEN:  SPECIAL NOTES.   | PID WAS           | ALICO AT CA           | ELU CALIBHATIONSI                     |            |                   |
| METHANE. READ 9.6 ppm  HEALTH AND SAFETYLEVELS AND ACTIVITIES.  LEVEL D MOD WITH: HARDHAT'S & STEEL-TOED BOOTS  PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:  SPECIAL NOTES.  | ISO RUTY S        | HEISKATED WITH        | 4 250 ppm                             | STANDARD   |                   |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.  LEVEL D MOD WITH: HARDHAT'S & STEEL-TOED  BOOTS  PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:  SPECIAL NOTES.   | OVA WAS C         | ME. KEAO 25           | 2 DNITE.                              |            |                   |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.  LEVEL D MOD WITH: HARDHAT'S & STEEL-TOED  BOOTS  PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:  SPECIAL NOTES.   | METHANE           | ACIBICATED WI         | TH 10ppm                              | STAND AR.  | 0                 |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.  LEVEL D MOD WITH: HARDHATS & STEEL-TOED  BOOTS  PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:  SPECIAL NOTES.  CMORROWS EXPECTATIONS  SAGE  CMORROWS EXPECTATIONS  | HANE,             | TEEAD 7.6             | opm                                   |            | <u> </u>          |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.  LEVEL D MOD WITH: HARDHATS & STEEL-TOED  BOOTS  PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:  SPECIAL NOTES.  CMORROWS EXPECTATIONS  SAGE  CMORROWS EXPECTATIONS  |                   |                       |                                       |            |                   |
| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN.  SPECIAL NOTES.  CMORROWS EXPECTATIONS   |                   |                       |                                       | • •        |                   |
| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN.  SPECIAL NOTES.  CMORROWS EXPECTATIONS   |                   |                       |                                       |            |                   |
| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN.  SPECIAL NOTES.  CMORROWS EXPECTATIONS   | HEALTH AND SAFETY | LEVELS AND ACTIVITIES |                                       |            |                   |
| PROBLEMS ENCOUNTERED/CCRRECTION ACTION TAKEN:  SPECIAL NOTES.  ICMORROWS EXPECTATIONS  | ,                 |                       |                                       |            | ^                 |
| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:  SPECIAL NOTES.  ICMORROWS EXPECTATIONS  | B0075             |                       | DAKOHA                                | 13 a STEE  | L-TUED            |
| SPECIAL NOTES.  CMORROWS EXPECTATIONS  |                   |                       |                                       |            |                   |
| SPECIAL NOTES.  CMORROWS EXPECTATIONS  |                   |                       |                                       |            |                   |
| SPECIAL NOTES.  CMORROWS EXPECTATIONS  |                   |                       |                                       |            |                   |
| SPECIAL NOTES.  CMORROWS EXPECTATIONS  | PROBLEMS ENCOUNT  | ERED/CORRECTION ACT   | CN TAKEN:                             | *          |                   |
| SPECIAL NOTES.  CMORROWS EXPECTATIONS  |                   |                       |                                       |            |                   |
| SPECIAL NOTES.  CMORROWS EXPECTATIONS  |                   | .*                    |                                       |            |                   |
| CMORROWS EXPECTATIONS  |                   |                       | •                                     |            | •                 |
| CMORROWS EXPECTATIONS  | 4                 |                       |                                       |            |                   |
| CMORROWS EXPECTATIONS  |                   |                       |                                       |            |                   |
| CMORROWS EXPECTATIONS  |                   |                       |                                       |            |                   |
| CMORROWS EXPECTATIONS  | •                 |                       |                                       |            |                   |
| 500 000  | SPECIAL NOTES.    |                       |                                       |            |                   |
| 500 000  |                   |                       | ·                                     |            |                   |
| 800 000  | <u> </u>          |                       | · · · · · · · · · · · · · · · · · · · |            |                   |
| 800 000  | CUORGO            |                       |                                       |            |                   |
| SBC-SBS AND START ON FST-024   |                   |                       | ·                                     | -          |                   |
|  | <u> </u>          | AND STAR              | T ON EST                              | -024       | •                 |
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|  | A-E DAILY QUALITY  |
| ,  | CONTROL REPORT WEATHER SUN CLAM CONTROL Run Store  |
| THE HALFITE THE  | COE PROJECT LEVILOGE TO TO TO AS 145 -   |
|  | BROUGER . TEMP . TEMP . SUB  |
| of the same of   | JOB NO FST-017 / FST-024 WIND SOL MODER HOTE RECOGNO.  |
|  | CONTRACT NO HUMIDITY DY MOON HUMIDITY  |
| weight.  | SUB-CONTRACTORS ON SITE:   |
|  | JUDSON SMITH, LARRY OLLIFF, HORACE FUTCHER, DOUGLAS LA ROUCHE  |
| ٠  | ECUIPMENT ON SITE.   |
| κ  | Dain Rig. UM AUGEO STAN CORNELL A  |
| ž  | DRILL RIG. 4" AUGER, STEAM CLEANER, ALUM. FOIL, MASON JAR, SAMPLE JARS, CGI, PID, OVA and VARIOUS DRILLING EQUIPMENT WORK PERFORMED MIKCLUDING SAMPLING!   |
|  |  |
|  | HAD A HOLE GET BLOWN IN IT THIS MODILING T   |
|  | 1 TORACE TO GET A NEW ONE WHIE WE  |
|  | PROCEDED TO DO FST-017-SBZ and FST-017-SB3.  |
| ·  | THAT TO GENTE HE PURE PLANT IN THE   |
|  | WE FINISHED BEFORE HORACE GUT BACK SO I  |
|  | ASSIGNED THE SITE CLEANUP DUTIES TO COMPETE  |
|  | HOLES WERE KEPILLED AND ASHAIT DATA WAS  |
|  | DEV 10 SEAL THE HOLFS, HODACE ADDITION AS IT   |
|  | FINISHING AND THE LAST THING DOUG DOUG   |
|  | The state of the s |
|  | THE CONCH WE STARTED ON TEXT 20 THE  |
|  | THOUGH THE LONGOFTE ADE TAMANA   |
|  | TOTAL TIS LAKING 40 MINUTES TO ROOT TO   |
| MAY TO STROLL MAD BE AN ANY SELECTION OF THE SHEET TO SHEET TO SHEET | THE PART CAPE LANGE LANGE COME   |
|  | ( TISSIBILLY ) HE WALL COEN THE TANK OF DE   |
|  | THE CONCRETE IN A.   |
|  | THE TIME OF MANGERS  |
| <i>.</i> 4   | THE THEOLOGICAL TO THE THEOLOGICAL TO THE TOTAL THE THEOLOGICAL THE THEOLOGICAL THE THEOLOGICAL THEOLO |
| <u></u>  | and PIP READINGS TAKEN IN BREATHING ZUNE.  |
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| ~ (                                      | MUECT. F37-017   | REPORT NO  | (Continuation Sheet  |
|--|--|------------|--|
|  | JC8 NO   | _          | 8/11/93  |
|  | QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)  |            |  |
|  | PID WAS CALIBRATED WITH 250  | 2 ppm 5-7. | ANDARD   |
| and manages are                          | PID WAS CALIBRATED WITH 250<br>#SOBUTYLENE. READ 252 UNITS<br>OUA WAS CHLIBRATED WITH 10<br>METHANE. NEAD 98 |            |  |
|  | METHANE. READ 9.8 FOM  | ppm ST     | ANDARD   |
| N VV 1                                   | St. St.  |            |  |
|  |  |            |  |
|  |  |            |  |
|  | HEALTH AND SAFETY LEVELS AND ACTIVITIES.   |            |  |
|  | LEVEL D MOD WITH HARDHATS  | and ST     | EEL-TOED BOOT  |
|  |  |            |  |
|  |  | 2          |  |
|  |  |            |  |
|  | PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:  |            |  |
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|  |  |            |  |
|  |  |            |  |
| }  |  |            |  |
|  |  | •          |  |
| <u> </u>                                 | SPECIAL NOTES.   |            |  |
| }-                                       | I MET MOMENTALLY WITH M. DASHER  | IND SAID   | THAT   |
| <u> </u>                                 | ELAVE WITH HIM WAVE F.   | 1 CT-201   |  |
| Ţ  | EST-028. HE SAID THAT WE WALLD GET TOGETHER  | r Early N  | EXT WEEK   |
| <u> -</u>                                |  |            |  |
| 2001 20 00 00 000 000 000 000 000 000 00 |  |            | AND A SECRETARISM CONTRACT OF THE SECRETARISM OF THE SECRETARISM CONTRACT OF THE SECRE |
|  |  |            |  |
|  |  | ь.         |  |
|  |  |            |  |

8Y

|  | DATE         | 8          | /12     | 193           |  | _        |
|--|--------------|------------|---------|---------------|--|----------|
| A-E DAILY OLLALITY   | DAY          | S          | м Т     | W             | H F  | s        |
| A-E DAILY QUALITY<br>CONTROL REPORT                                  | WEATHER      | Бтртя      | Char    | Overcass      | Ran  | Snow     |
|  | "Diren       | Sun        |         | -             |  |          |
| COE PROJECT MANAGER  | LEMP         | To 32      | 32-50   | 50-70         | 70-85  | 55 up.   |
| PROJECT  | WIND         | <b>231</b> | Moder   | H¢ <b>2</b> 0 | Pecc   | X1 NO.   |
| CONTRACT NO  | HUMIDITY     | Dry        | Moder   | Huma          | ]  |          |
| SUB-CONTRACTORS ON SITE:   | *            |            |         |               | <u>.                                    </u> |          |
| JUDSON SMITH, LARRY DECIFF, HORA                                     | CE FUTCHED   | Dave       | 145     | 1.61          | SUCH   |          |
|  |              | // 5+6     |         |               | 00011  | <u> </u> |
| ECUIPMENT ON SITE.   |              |            |         | ,             |  |          |
| PRICE RIG. 4" AUGER, STEAMS CLEANER,                                 | Aum. For     | L, MA      | SON J   | AR, S         | MPLE   |          |
| WARS, CGI, PID, OVA and Various WORK PERFORMED MINCLUDING SAMPLINGS: | DRILLING     | <u> </u>   | PMEN    | T             |  |          |
|  |              |            |         |               |  | ···      |
| STARTED ON BOILINGS 4-6 W  | HEN FIRS     | T A        | RRIV    | EO. L         | DURIN  | G        |
| THE FIRST PART OF THIS WE  | TICK, A BA   | CICH       | 0E      | WAS           | OIGG   | ING      |
| A LAYER OF OIL STAINED LOOKING                                       | VING. 1HE    | DITC       | H CY    | ZEATEL        | ) SHO  | WED      |
| AND HAD A PIO READING OF 31  | 2 - 2        | 91 51      | MELL    | E 0 01        | - DI   | ES EL    |
| THE CGI READING WAS ONLY AT  | 003 50       | GHI<br>T   | ABUU    | <u> </u>      | <i>LUC7</i>                                  | 45.0     |
| OF EXPLOSIVE HAZARD AND THE  | RREATHIN     | G 20       | 1/5 1/  | EVER          | مرعات د                                      | T        |
| ABOUE 5 INITS. WORK CONTINUED. BU                                    | T IT POES    | 5'H7       | w C     | ONTAN         | d with                                       |          |
| 13 AT THAT LOCATION. WE FINISHED                                     | 4-6 A 41     | TTLE       | AFTI    | ED 117:       | OU   | 700      |
| AND TOOK ALL THE PIDIFID SAM   | APLES BY     | 11:        | 20.     | APTE R        | 1.UN   | сн       |
| LARRY OWIFF AND I READ THE   | SAMPLES      | AFTE       | o C     | 46127         | Tini   | s i l    |
| ALL THE READINGS POINTED   | TOWARD       | THE        | LOW     | EST .         | OF AT  | H        |
| 45 WHERE THE CONTAMINATION   | 15. 7/2-8    | ON         | CE (    | BETTING       | <u>ح</u>                                     |          |
| LARRICY OLLIFF AND THE DRILL CREW S                                  | THISTED WIT  | H TH       | E SA    | MPLING        | $\mathcal{Z}$                                |          |
| WENT TO TAKE THE SLUDGE SAME   | VE. NO AD    | EQUA       | TE N    | MTERIA        | <u> </u>                                     |          |
| CTISTED IN THE DRAIN, IT WAS ALL &                                   | OBKS RUST    | Y PI       | ECES    | AND C         | IKE  | 1        |
| THEREFORE NO SAMOLE TO   | 410 = M $MH$ | E */       | 2 444 0 | 11:0/6        | WAC  |          |
| CHAIR E FILLED OUT THE CHAI  | N OF CUST    | ODIES      | · A     | ND SE         | NI   | 1        |
| LITE SAMPLES WITH LAPRY OL   | LIFF SO      | THF        | - SA    | MPLES         | CA   | N        |
| DE IN THE OFFICE WHEN CARR   | 1.4BS ADD    | PIUFS      | ` 🛮 🗸   | 11 5          | AMD.   | , 5      |
| STOCERS HAVE THEIR ICE REPL  | ACED AT      | LFAS       | T 7     | WICE          | DAIL   | у.       |
| THE SAD LAB COOLERS WILL BE SENT MON                                 | DAY MORNING  | 50 7       | uav .   | JE!!          | 400  | ,        |

| COUNTY CONTROL ACTIVITIES INCLUDING FIELD CALIBRATIONS  PID WAS CALIBRATED WITH 250 ppm STANDARD ISOBUTYLENE.  READ 253 WITS.  OVA WAS CALIBRATED WITH 10 ppm STANDARD METHANE.  READ 9.6 ppm.  HEALTH AND SAFETY LEVELS AND ACTIVITIES.  LEVEL D MOD WITH HARD HATS AND STEEL-TOED BOOTS.  PROBLEMS ENCOUNTEREDICCRRECTION ACTION TAKEN  SPECIAL NOTES. CONT PAGE 1. WHEN SUMEOUE IS THERE TO TAKE THEM INSTEAD OF SITTING WHERE THEY MAY GET HOT.  ICMORROWS EXPECTATIONS  CIUE THEY FORMS TO M. DASHER SO HE CAN SET UP A TIME NEXT WEEK THAT WE CAN WACK.  THOSE SITES. (FST-025 & FST-028) | PRINECT. FST-024                                   | REPORT NO.                             |
|---|--|--|
| PIO WAS CALIBRATE O NITH 250 ppm STANDARD ISOBUTYLENE.  READ 253 MITS.  OVA WAS CALIBRATED WITH 10 ppm STANDARD METHANE.  READ 9.6 ppm.  HEALTH AND SAFETY LEVELS AND ACTIVITIES.  LEVEL D MOD WITH HARD HATS AND STEEL-TOED BOOTS.  PROBLEMS ENCOUNTERED/CCRRECTION ACTION TAXEN.  SPECIAL NOTES. CONT PAGE 1. WHEN SOMEONE IS THERE TO ARKE THEM INSTEAD OF SITTING WHERE THEY MAY GET HOT.  TOMORROWS EXPECTATIONS  CIVE THEY FORMS TO M. DASHER SO HE CAN SET UP A TIME NEXT WEEK THAT WE CAN WACK  | .C8 NO   | DATE 8/12/43                           |
| CVA WAS CALIBRATED WITH 10 ppm STANDARD METHANE.  WEAD 9.6 ppm.  HEALTH AND SAFETY LEVELS AND ACTIVITIES.  LEVEL D MOD WITH HARD HATS AND STEEL-TOED BOOTS.  PROBLEMS ENCOUNTEREDICCARRECTION ACTION TAKEN:  SPECIAL NOTES. CONT PAGE 1. WHEN SOMEONE IS THERE TO AAKE THEM INSTEAD OF SITTING WHERE THEY MAY GET HOT.  TOMORROWS EXPECTATIONS  CIVE THEY FORMS TO M. DASHER SO HE CAN SET UP A TIME NEXT WEEK THAT WE CAN WACK   |  |  |
| COVA WAS CALIBRATED WITH 10 ppm STANDARD METHANE.  READ 9.6 ppm.  HEALTH AND SAFETY LEVELS AND ACTIVITIES.  LEVEL D MOD WITH HARD HATS AND STEEL-TOED BOOTS.  PROBLEMS ENCOUNTERED/CORRECTION ACTION TAXEN:  SPECIAL NOTES CONT PAGE 1. WHEN SUMEONE IS THERE TO AKE THEM INSTEAD OF SITTING WHERE THEY MAY GET HOT.  TOMORROWS EXPECTATIONS  CIVE THEY FORMS TO M. DASHER SO HE CAN SET UP A TIME NEXT WEEK THAT WE CAN WACK   | PID WAS CALIBRATED WITH 250 ppm<br>READ 258 UNITS. | STANDARD ISOBUTYLENE.                  |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.  LEVEL D MOD WITH HARDHATS AND STEEL-TOED BOOTS.  PROBLEMS ENCOUNTEREDICCRRECTION ACTION TAXEN:  SPECIAL NOTES. CONT page 1. WHEN SUMEONE IS THERE TO TAXEN THEM INSTEAD OF SITTING WHERE THEY MAY GET HOT.  ICMORROWS EXPECTATIONS  CIVE THEY FORMS TO M. DASHER SO HE CAN WACK   | OVA WAS CALIBRATED WITH 10 ppm                     | STANDARD METHANE.                      |
| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:  SPECIAL NOTES. CONT PAGE 1. WHEN SOMEONE IS THERE TO MAKE THEM INSTEAD OF SITTING WHERE THEY MAY GET HOT.  TOMORROWS EXPECTATIONS  CIVE THEY FORMS TO M. DASHER SO HE CAN SET UP A TIME NEXT WEEK THAT WE CAN WACK   |  |  |
| LEVEL D MOD WITH HARDHATS AND STEEL-TOED BOOTS.  PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN  SPECIAL NOTES. CONT PAGE 1. WHEN SOMEONE IS THERE TO  AAKE THEM INSTEAD OF SITTING WHERE THEY MAY  GET HOT.  TOMORROWS EXPECTATIONS  CIVE THEY FORMS TO M. DASHER SO HE CAN  SET UP A TIME NEXT WEEK THAT WE CAN WACK  |  |  |
| LEVEL D MOD WITH HARDHATS AND STEEL-TOED BOOTS.  PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN  SPECIAL NOTES. CONT PAGE 1. WHEN SOMEONE IS THERE TO  AAKE THEM INSTEAD OF SITTING WHERE THEY MAY  GET HOT.  TOMORROWS EXPECTATIONS  CIVE THEY FORMS TO M. DASHER SO HE CAN  SET UP A TIME NEXT WEEK THAT WE CAN WACK  |  |  |
| LEVEL D MOD WITH HARDHATS AND STEEL-TOED BOOTS.  PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN  SPECIAL NOTES. CONT PAGE 1. WHEN SOMEONE IS THERE TO  AAKE THEM INSTEAD OF SITTING WHERE THEY MAY  GET HOT.  TOMORROWS EXPECTATIONS  CIVE THEY FORMS TO M. DASHER SO HE CAN  SET UP A TIME NEXT WEEK THAT WE CAN WACK  | HEALTH AND SAFETY LEVELS AND ACTIVITIES.           |  |
| PROBLEMS ENCOUNTEREDICCRRECTION ACTION TAXEN  SPECIAL NOTES. CONT page 1. WHEN SUMEONE IS THERE TO TAKE THEM INSTEAD OF SITTING WHERE THEY MAY GET HOT.  TOMORROWS EXPECTATIONS  CIVE THEY FORMS TO M. DASHER SO HE CAN SET UP A TIME NEXT WEEK THAT WE CAN WACK  |  | AND STEEL-TOED BOOTS.                  |
| SPECIAL NOTES. CONT PAGE 1. WHEN SUMEONE IS THERE TO  AAKE THEM INSTEAD OF SITTING WHERE THEY MAY  GET HOT.  TOMORROWS EXPECTATIONS  CIUE THEY FORMS TO M. DASHER SO HE CAN  SET UP A TIME NEXT WEEK THAT WE CAN WACK   |  |  |
| SPECIAL NOTES. CONT PAGE 1. WHEN SUMEONE IS THERE TO  AAKE THEM INSTEAD OF SITTING WHERE THEY MAY  GET HOT.  TOMORROWS EXPECTATIONS  CIUE THEY FORMS TO M. DASHER SO HE CAN  SET UP A TIME NEXT WEEK THAT WE CAN WACK   |  |  |
| SPECIAL NOTES. CONT PAGE 1. WHEN SUMEONE IS THERE TO  AAKE THEM INSTEAD OF SITTING WHERE THEY MAY  GET HOT.  TOMORROWS EXPECTATIONS  CIUE THEY FORMS TO M. DASHER SO HE CAN  SET UP A TIME NEXT WEEK THAT WE CAN WACK   | `  |  |
| AAKE THEM INSTEAD OF SITTING WHERE THEY MAY  GET HOT.  TOMORROWS EXPECTATIONS  CIUE THEY FORMS TO M. DASHER SO HE CAN  SET UP A TIME NEXT WEEK THAT WE CAN WACK   | PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:      |  |
| AAKE THEM INSTEAD OF SITTING WHERE THEY MAY  GET HOT.  TOMORROWS EXPECTATIONS  CIUE THEY FORMS TO M. DASHER SO HE CAN  SET UP A TIME NEXT WEEK THAT WE CAN WACK   |  |  |
| AAKE THEM INSTEAD OF SITTING WHERE THEY MAY  GET HOT.  TOMORROWS EXPECTATIONS  CIUE THEY FORMS TO M. DASHER SO HE CAN  SET UP A TIME NEXT WEEK THAT WE CAN WACK   |  |  |
| AAKE THEM INSTEAD OF SITTING WHERE THEY MAY  GET HOT.  TOMORROWS EXPECTATIONS  CIUE THEY FORMS TO M. DASHER SO HE CAN  SET UP A TIME NEXT WEEK THAT WE CAN WACK   | •  |  |
| AAKE THEM INSTEAD OF SITTING WHERE THEY MAY  GET HOT.  TOMORROWS EXPECTATIONS  CIUE THEY FORMS TO M. DASHER SO HE CAN  SET UP A TIME NEXT WEEK THAT WE CAN WACK   |  |  |
| AAKE THEM INSTEAD OF SITTING WHERE THEY MAY  GET HOT.  TOMORROWS EXPECTATIONS  CIUE THEY FORMS TO M. DASHER SO HE CAN  SET UP A TIME NEXT WEEK THAT WE CAN WACK   |  |  |
| AAKE THEM INSTEAD OF SITTING WHERE THEY MAY  GET HOT.  TOMORROWS EXPECTATIONS  CIUE THEY FORMS TO M. DASHER SO HE CAN  SET UP A TIME NEXT WEEK THAT WE CAN WACK   |  | ······································ |
| AAKE THEM INSTEAD OF SITTING WHERE THEY MAY  GET HOT.  TOMORROWS EXPECTATIONS  CIUE THEY FORMS TO M. DASHER SO HE CAN  SET UP A TIME NEXT WEEK THAT WE CAN WACK   | SPECIAL NOTES. CONT Page 1. WEEN S                 | OMEONE IS THERE TO                     |
| TCMORROWS EXPECTATIONS  CIVE THEY FORMS TO M. DASHER SO HE CAN  SET UP A TIME NEXT WEEK THAT WE CAN WACK  | AAKE THEM INSTEAD OF SITTIN                        | IG WHERE THEY MAY                      |
| CIVE THEY FORMS TO M. DASHER SO HE CAN<br>SET UP A TIME NEXT WEEK THAT WE CAN WACK  | GET HOT.   |  |
| CIVE THEY FORMS TO M. DASHER SO HE CAN<br>SET UP A TIME NEXT WEEK THAT WE CAN WACK  | TCMORROWS EXPECTATIONS                             |  |
| SET UP A TIME NEXT WEEK THAT WE CAN WACK  |  | ASHER SO HE CAN                        |
| THOSE SITES. (FST-025 & FST-028)  | SET UP A TIME NEXT WEE                             | KTHAT WE CAN WACK                      |
|   | THOSE SITES. (FST-025 & FST-028                    | 7)                                     |
|   |  |  |
|   |  | <u> </u>                               |

ВУ

|  | DATE            | 2                         | 3/19        | 193         |                |        |
|--|-----------------|---------------------------|-------------|-------------|----------------|--------|
| •  | DAY             |                           | H I         | 1 7 1       | THE E          | i s    |
| A-E DAILY QUALITY  |                 |                           |             |             | X I            |        |
| CONTROL REPORT   | WEATHER         | Bron<br>Sun               | Char        | Overcom     | X              | Snow   |
| COE PROJECT MANAGER  | TEMP            | To 32                     | 32.50       | 50-70       | 70-85          | صرية   |
| PROJECT_FST-004F   | - W#ND          | State                     | Moger       | hoùu        | <u> </u>       | X1-NO. |
| JOB NO   | HUMIDAY         | Cry:                      | Moore       | hen         | ]              |        |
| CONTRACT NO  |                 |                           |             | X           | <u> </u>       |        |
| SUB-CONTRACTORS ON SITE:   |                 | <del> </del>              |             | <del></del> |                |        |
| JUDSEN SMITH BILL TOWNSEND   |                 |                           |             |             |                |        |
| ECUIPMENT ON SITE.   |                 |                           |             | <del></del> |                |        |
|  |                 | ····                      | <del></del> |             |                |        |
| PHMETER CONDUCTIVITY METER BA  | THERS (DISPO    | SARLE                     | ), w        | ATER L      | EVEL           |        |
| WORK PERFORMED INCLUDING SAMPLINGS:  | NI, SAMPU       | £ #50                     | TLES .      | e Cio       | CE RS          |        |
| ARRIVED AT FT STEWART  | Aganto          | 172                       | . 20        | C 11 =1     | - 11 = 0       | 7      |
| BE PARE CONTROL WHI  | CH WF           | DEC                       | 1 = 0       | - 1/200     | 1              |        |
| LE ROPER 10 DO WITH EV   | IERY SITE       | - Č                       | PUTSI       | DE C        | ANTO           | N -    |
| THE NOT FIRE A FOR SAFETY APPR   | POVED SIT       | $\epsilon$ $\tilde{\tau}$ | -<br>שעש    | SAMP        | CINC           | 2      |
| TOE PHINETER COND. 2 1   | 210 -4515       | -                         | 00 E        | A 40.       | 0000           |        |
| THE LAB BEFORE CEAVING, INI  | TIAL TEST       |                           | 10000       | 2-          |                |        |
| THE TO PIU BREATH  | ING ZON         | /F 4                      | REA         | DING.       | TOE            | H      |
| THE WILL IS UNCAPPED AN  | D A WE          | 16.                       | RED         | Dung        | -              |        |
| ALONG PID IS TAKEN, WELL h   | STER LE         | VEL                       | RE          | AONG        | ۶.5            |        |
| QUEF A TOP OF CASIN  | G ELEVA         | TION                      | TA          | KEN.        |                |        |
| THOUNT OF WIATED   | T 0 0 -         |                           |             |             | تے ساہ 14      | 0      |
| The state of the s |                 | 4 4 4                     |             | a / l       | •              |        |
| COND READINGS ARE T<br>FULL HALF POINT AND F   | AREN            | 4—                        | FI          | LST 1       | BAIL           |        |
| BRASTIC CHANGES ARE 18   | INAC.           |                           | E           | 1 N Y       |                |        |
|  |                 |                           |             |             |                |        |
| SPICRA METAL PERSERVAT   | FOR VI          | <u>, c</u>                | 5240        | 2 44        | -              |        |
|  |                 | (E)                       | 410         | -141        | C±             |        |
| CUOLFO TO 4°C USING 10F  | =               |                           | 1705        | 3 77/0      | <u> </u>       |        |
|  | <del>&lt;</del> |                           |             | <del></del> | <del>-</del> - |        |
|  |                 |                           |             | <del></del> | <del></del>    |        |
|  |                 |                           |             |             |                |        |
| * v  |                 |                           | e cie i     |             |                |        |

|  | OATE           | 8             | 1/20         | 193  |  |
|--|----------------|---------------|--------------|--|--|
| A-E DAILY QUALITY                              | DAY            | S             | M I          | w  | TH X S                                 |
| CONTROL REPORT                                 | WEATHER        | Brogra<br>Sun | X            | Owon   | Ran Snow                               |
| COE PROJECT MANAGER                            | TEMP           | To 32         | 32:20        | 50-70  | 70-85 95/10                            |
| PROJECT +ST-00 4F                              | '₩ <b>₽</b> •0 | Xe            | Moder        | ) pichu                                      | Recort No.                             |
| CONTRACT NO                                    | HUMIDITY       | Dry           | Hoose        | rumes<br>X                                   |  |
| SUB-CONTRACTORS ON SITE:                       |                |               |              |  |  |
| JUDSON SMITH, BILL TOWNS                       | END            |               |              |  | ······································ |
| ECUIPMENT ON SITE.                             |                |               | <del>-</del> |  |  |
| PID, DECON EUR PMENT,                          | ERS I WATE     | e 2<br>R      | EVEL         | ME   | TER, CG I                              |
| THE CAMED ISSOCIUDING SAMPLING):               |                |               |              |  |  |
| ARRIVED AT STEWART BY                          | 09:20.         | CH            | ECK          | Eρ   | IN                                     |
| WITH RANGE CONTROL. SI<br>TESTED BREATHING ZON | TE APPR        | OVEP          | =0.          | n F  | MTRANCE                                |
| WELLS AND CHECKED P                            | ID READ        | 211/0         | 2.           | ONE  | 5 - A-C                                |
| - WELL SHOWED VERY HIGH                        | H Cov-         | م ما          |              |  | 2540.10                                |
| IN PID UNITS ( FST-004F-MW4                    | 1: 2544        | 100           | 1)           | 40   | <u></u>                                |
| a Just sheen und volor                         | and of         | 1000          | 1.75         | , az   | A . J . A                              |
| TOP OF CASING ,                                | MEASURE        | <u>.e</u>     | For          | ع ہ  | ACH_                                   |
| WELL NATED LEVEL RE                            | ADINGS 7       | AND           | 13           | <u>0170m</u>                                 | <i>,</i> +                             |
| RELL READINGS TAKEN FO                         | R EACH         |               | DEL          |  | EFURE                                  |
| BAILING. AMOUNT NEEDED                         | 13 KE CE       | SAICE         | 0 1          | s /  | EAST                                   |
| AMOUNT " OFTEN MORE IS BA                      | WER NEI        | ER            | LE           | 55-  | pH                                     |
| A CONO. READINGS TAKEN                         | AT FIRST       | - L           | A ILE        | HAI  | E                                      |
| POINT AND FINAL PRASTIC (                      | HANGES         | w/1           | در           | CED  | To                                     |
| MORE BAILING WELL FST                          | -004 F-M       | v4            |              |  |  |
| A SLOW FILLER. SITE HA                         | 45 VARIO       | <u> </u>      | 17           | EM5  |  |
| TO CONSIDER FOR SAFETY WH                      | EN NEXT        | EL            | TER          | <i>30.</i> S                                 | EVERAL                                 |
| TREES CONTAINS UNKNOWN (TO                     | Osar           | 1cE           | <u>د</u> د   | UNICH  | 1                                      |
| HAVE BEEN IGNITED AND BURNT                    | PART OF        | TH            | ET           | REE  | IT 15                                  |
| ONNECTED TO AND SDUE OF T                      | HE GROV        | ND.           | WIR          | <u> 5                                   </u> | ED TS                                  |
| DULD BE A SAFETY HAZARD.                       | DEU DEVI       | CES           | or           | THIS   | KIND                                   |
| - The thirty                                   |                |               | SHE          | E T  |  |

| PACIECT.                                    | (Communition Show                                  |
|---|--|
| 108NO. FST-004F                             | REPORT NO.   |
| QUALITY CONTROL ACTIVITIES IINCLUDING FIELD | DIE 8/20/93  |
| PID CAMBRATED 12.                           | CALIBRATIONS)                                      |
| METER WITH 7/10                             | ESUPPIN (SOBUTYLENF. ptt                           |
| METER WITH D. 180 .                         | 250ppm (SOBUTYLENF. ptt<br>STANDARD & CONDUCTIVIT! |
|   | STANDARD.  |
|   |  |
|   |  |
|   |  |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.    |  |
| Check WITH RANGE C                          | ONTROL TO SEE IF SITE WAS                          |
| OKAY TO SAMPLE NOT                          | 4 STIVITIES SITE VAS                               |
| FOR ENTRANCE. USE M                         | 4 -TIVITIES SITE APPROVED                          |
|   |  |
| PROBLEMS ENCOUNTERED/CORRECTION ACTION T    |  |
| ALSO DIE OF O                               | AKEN   |
| THE PREVIOUS DAVI                           | TAD SHOULD HAD NOT BEEN                            |
| ENTERED.                                    | THO SHOULD THAT NOT BEEN                           |
|   |  |
|   |  |
|   |  |
| SPECIAL NOTES                               |  |
|   |  |
|   |  |
|   |  |
| FST - 004A                                  |  |
| F31-004A                                    |  |
|   |  |
|   |  |
|   |  |
|   |  |

| DATE 8/21/93                                   |             |
|--|-------------|
| DAY  |             |
| A-E DAILY QUALITY                              | 1 5         |
| CONTROL REPORT WEATHER SAN COM PARTIES         | Snow        |
|  | 245 25      |
| PROJECT FST-004A + AB WIND SOX MODER FOR       | Facon No.   |
| CONTRACT NO HUMIDITY ON MOORE HUMID            |             |
| SUB-CONTRACTORS ON SITE:                       |             |
| JUDSON SMITH, DOUGLAS LA Rouche                |             |
| ECUIPMENT ON SITE.                             |             |
| PESCON SOLDER , BALLERS, WATER LEVEL METER, CG |             |
| AMPLE ARMIES & COLOR                           | 1, PI()     |
| TOTAL CAPCHINED (INCLUDING SAMPLING):          |             |
| CONTROL. APPROVAL GIVEN FOR SITE ENTRANCE. PID | RANG        |
| TARTED TO USE OUR SU                           | _           |
| THE WEASUREMENTS CHECKED                       |             |
| SLEVATIONS AND WATER LEVELS TO                 | R           |
| THING TEVEL REMOVED AND ROTTOM OF THE HE       | LEO         |
| TAKEN AT MWI. THIS WILL RE DIE                 |             |
| - BAIDE SAMPLES THEY FOR BE ONE OF THE         |             |
| PROJECT OUT PH & COUP SAMPLES WILL BE          |             |
| TAKEN AT FIRST, + ALE and Final No Don         |             |
| DISTRES OCCURED IN PLEAPINGS. SAMPLES W        | 1111        |
| ESTED LOG GOUD LOU L.                          | , ,         |
|  | ES          |
| ALE COOLED TO 4°C, USING ICE.                  |             |
|  |             |
|  | <del></del> |
|  |             |
|  |             |
|  |             |
| SHEET O  |             |

| CORNO   |                         |
|---|-------------------------|
| CUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)  PID WAS DOWN. SHUT OFF A FIRST SITE. pt) ME WITH 7/10 STANDARD & CONDUCTIVITY METER OF 180 MORAN NaCl STANDARD. QALQC + BLANK TAKEN.  HEALTH AND SAFETY LEVELS AND ACTIVITIES. |                         |
| PID WAS DOWN. SHUT OFF A FIRST SITE. pt) ME WITH 7/10 STANDARD & CONDUCTIVITY METER OF 180 MODEN NaCl STANDARD. QALQC + BLANK TAKEN.  HEALTH AND SAFETYLEVELS AND ACTIVITIES.   | ETER<br>WITH<br>Samples |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.  | TER<br>WITH<br>Sample   |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.  | WITH<br>SAMPLE          |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.  | Sampie                  |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.  |                         |
| HEALTH AND SAFETYLEVELS AND ACTIVITIES.  Checkel with RANGE CONTROL TO SEE LE   |                         |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.  Checkel WITH RANGE CONTROL TO SEE LE  | <u> </u>                |
| HEALTH AND SAFETYLEVELS AND ACTIVITIES.  Checkel WITH RANGE CONTROL TO SEE LE   |                         |
| Checkel WITH RANGE CONTROL TO COT IS  |                         |
| Checkel WITH RANGE CONTROL TO SET 15  | <del></del>             |
|   |                         |
| WAS OKAY TO SAMPLE, NO ACTIVITIES SITE-   | 115                     |
| FOR ENTRANCE. USE MOD LEVEL D.  | TPPIONE                 |
|   | <u></u>                 |
|   |                         |
| ROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN   | ĭ                       |
|   |                         |
|   |                         |
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|   |                         |
|   |                         |
|   |                         |
| PECIAL NOTES.   |                         |
|   |                         |
|   |                         |
|   |                         |
| MORROWS EXPECTATIONS  |                         |
| FST-0043  |                         |
|   |                         |
|   |                         |
|   |                         |
|   |                         |
|   |                         |

|                                      | Care        | 8/22/         | - 2      |                         |
|--------------------------------------|-------------|---------------|----------|-------------------------|
| A                                    | DAY         | 0/20/         |          |                         |
| A-E DAILY QUALITY                    | JA1         | × 1 1 1       | W   i    | H F S                   |
| CONTROL REPORT                       | WEATHER     | \$ C          | O        | Ram Snow                |
| COE PROJECT MANAGER                  | TEMP        | 10 II II-20   | 50-70    | 70-85 S5 ye             |
| PROJECT_FST-OU4B                     | -<br>- Wind | SON MODER     | hen      | Fecort No.              |
| JOB NO.                              | -           | Dry I Hoose I |          |                         |
| CONTRACT NO                          | HUMIDITY    | 0,            |          |                         |
| SUB-CONTRACTORS ON SITE:             |             |               |          |                         |
| UNDSON SMITH, DOUGLAS                | LA ROUCHS   | <u> </u>      | <u>.</u> |                         |
|                                      |             |               |          |                         |
| ECUIPMENT ON SITE.                   |             |               |          |                         |
| PH METER COND METER, BALLE           | es WATER    | I EVEL M      | 1/5-51   |                         |
| TILL ALEGN EQUIPMENT                 | 215 - River | S Aug         | Con      | <u>; C(+) ;</u><br>= 00 |
| WORK PERFORMED (INCLUDING SAMPLING): | <u> </u>    | *             |          | EE)                     |
| GARIVED AT STEWART BY                | 0850.0      | CHIFCK ED     | 14       | en) (TH                 |
| LEANGE CONTROL. SITE ADA             | PROUED P    | men Mich      | 0 1      | 1.0                     |
| AND WORKING BREATHING                | ZONE        | CHECKI        | F (2)    | Mag                     |
| SED. CHECKED                         | TOPO        | J CAS,        | ING      | SIF-                    |
| VATION. BERFORNIED PIO RI            | EADING ON   | V WELL        | WHI      | TN                      |
| FIRST PLEMOVED CAP.                  | QA. Q       | c and         | RIA      | N F                     |
| SAMPLES TAKEN. THIS I                | S THE O     | THER OF       | 7.       | <b>√</b> 0              |
| TO BE TAKEN FOR THE                  | WHOLE O     | F FST         | -004     |                         |
| NATER LEVEL READING                  | TAKEN       | ' AND         | BOTTO    | m                       |
| -DF WELL, AMOUNT OF a                | NATER T     | · REA         | EMAN     | 50                      |
| AT EIRE                              | TIVITY .    | READING       | 35 T     | AKEN                    |
| FIRST HALF AND F                     | INAL N      | D. Alase      | TO 0     | -4 /1// 1               |
| AC BADINAL DEEDAFD                   | ALL CUA     |               | ~ ~ ~ ~  |                         |
| FORMS FILLED OUT A                   | Vn SAM      | DIE COL       | 0156     | າ ເົ                    |
| ANCE PEROVIED FOR SHIP               | MENT        | SAMPLES       |          |                         |
| FIRE / FETER FOR SOME                | ~ 1 . 1     | 1             |          | //                      |
| Sound PLASTIC A                      | 5           | 1 HNO3)       | SAM      | PLES                    |
| ARE COOLED TO 4°C, USING             | ICE.        |               |          |                         |
|                                      |             |               |          |                         |
|                                      | <del></del> |               |          | `                       |
|                                      |             |               |          |                         |
|                                      |             |               |          | ]                       |
|                                      |             | SHEE          | 7        | JF                      |

| PROJECT.  | "non-   | (Communion Sheet)  |
|---|---|--|
| 108NOFST-004B   | — PEPORT NO   | 8/22/93  |
| CUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATION               |   |  |
| PID WAS CALIBRATED WITH "NEW TANK" PH METER WAS 7/10 STANDARD & CONDI | 200   |  |
| "NEW TANK" DH METER WAS   | Caroppu   | 1 SOBUTYLENE   |
| 7/10 STANDARD & COND  | CHUBRATER   | 11   |
| NITH 0.180 nohm STANDARD  | cholly v  | ETER   |
|   |   |  |
|   |   |  |
|   |   |  |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.                              |   |  |
| CHECKED WITH DANCE  |   |  |
| CHECKED WITH RANGE CONTROL WAS OKAY TO SAMOE NO. 1-                   | 70 SEE  | IF SITE  |
| WAS OKAY TO SAMPLE, NO ACT<br>FOR ENTRANCE. USE MOD LE                | INITIES. S  | ITE APPROVED   |
|   | 120 (1).  |  |
| 0.000 5   |   |  |
| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN                          |   |  |
|   |   |  |
|   |   |  |
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|   |   |  |
|   |   |  |
| SPECIAL NOTES   |   |  |
|   |   |  |
|   |   |  |
| TCMORROW'S EXPECTATIONS   |   |  |
| START FST-028   |   |  |
| <u> </u>  | CONTROL NET A MATERIA CONTROL NET CONTROL NA CASTA MATERIA CONTROL NA CASTA CONTROL NA CASTA CONTROL NA CASTA C | TAN PAN MEN MENON AND AND AND AND AND AND AND AND AND AN |
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TITLE

| CCT $0.18$   |
|--|
| DATE 8/24/93   |
| DAY S W W THIF IS  |
| A-E DAILY QUALITY  |
| CONTROL REPORT WEATHER STOPE   Cheer Courtner   Plan   Stope   |
| Sun X  |
| CCE PROJECT MANAGER TEMP TO IZ 12-50 50-70 70-85 1554  |
| PROJECT FT STEWART BATTERY SHOP FST-028 WIND SE MOOR HON RECOLDED  |
| CONTRACT NO HUMIDITY DY MOST HUMIS   |
| SUB-CONTRACTORS ON SITE:   |
|  |
| HOSON SMITH, DERRICK AMIDON, DONGLAS LAROUCHE,   |
| ECUIPMENT ON SITE.   |
| BRILL RIG, BRILL EQUIPMENT, STEAM CLEANER, DECON EQUIPMENT,  |
| PIO, OVA, CGI, WASON JARS, ALUMINUM FOIL CAUBRANT GASES, SAMPE BOT   |
| WORK PERFORMED INCLUDING SAMPLINGS:  |
| ARRIVED ON SITE AT \$700. NO ONE TO OPEN GATES CHILL 07:30. STACTED FST. 088581  |
| THE CONCRETE BEING DAILED INTO 15 FULL OF GRANITE AND OTHER ASSOCIATION  |
| MOCIES IN A COMPACTED FORMATION. THIS HAS MADE THE CONCRETE SO HARD  |
| 144) IT HAS TAKEN MUCH LONGER THAN HOPED. TODAY HAS GOVE AS EQUIPMED.  |
| DET-UP DRIVE RIG. HODIE OF WATER AND I DELTERA CONSTRUT WATER CLOCK  |
| - 11 1413 COULD NOT BE DONE (WATER SUPPLY) UNTIL 5180. SHOP CLOSE D. DEPENDE LT  |
| = TETALTION. 0840 - [115 SBI PIN/FID CONCRETE BURING. 115-1200 LUNCH   |
| 1200-1495 SBI, LAB SAMPLE CONCRETE, 1435-1710 SB2, PID/FID CONCRETE.   |
| PROCESS HE DOUGLAS LAROUCHE ANY POSSIBILITY OF SPEEDING UP THE   |
| PROCESS. HE DOES NOT KNOW HOW. THE CONCRETE IS . 95+ THICK. TO SPEED UP THE  |
| PROCESS ON WENSPAY, DERRICK AND MYSELF WILL HAND AUGER THE PIDIFIED  |
| THE LAB SAMPLES AS DOUGLAS AND HODACE NO THE   |
| CONCRETE BORINGS. TO BETTER USE THE POWN TIME, I HAD DERRICK MARK ALL OF THE   |
| ATTERY SHOP WERE NOTIFIED YESTERDAY. EXPLAINED AND HELP DOUGLAS. ALL PERSONEL AT THE                                     |
| HAD DOUGLAS AND DEPOLICE FULL IN THE EVERTHING TO SET SASTED I   |
| MAD DOUGLAS AND DERRICK FILL UP THE WATER TANK FOR TOMORROW. WATER   |
| MAY NOT BE AVAILABLE TO 0900 THE HYDROUG CLYINDERTHAT PULLS THE TABLE IN AND OUT IS BROKE. I DISCUSSED WITH THE PERSONEL |
| AT THE BATTERY SHOP AND LOCATED A PLACE TO FIX THE PERSONEL  |
| ZEH ENGR DEPARTMENT HAS AN ARC WELDER. THEY OPEN AT 0800   |
| TEMORROW SO WE WILL HAVE THE DRILL RIG THERE FIRST THING   |
| N THE BOOKNING.  |
| SHEET OF   |
|  |

| PACT             |           |              | <u> </u>     |                                       | — REPORTN                              | ردی Continuation)<br>رحی Continuation |
|------------------|-----------|--------------|--------------|---------------------------------------|--|---------------------------------------|
|                  | FST-025   |              | ·            |                                       |  | E 0/24/53                             |
| OUALITY C        | ONTROL AC | TIVITIES (IN | ICLUDING FIE | LD CALIBRATION                        | (S)                                    |                                       |
| PID              | CALIB     | RATED        | WITH         | 758 pp-                               | (so BUTY                               | ENE.                                  |
|                  |           |              |              |                                       |  |                                       |
|                  |           |              |              |                                       |  |                                       |
|                  |           |              |              |                                       |  |                                       |
| EALTH AND        | DSAFETYLE | VELS AND     | ACTIVITIES.  |                                       |  |                                       |
| HAID.            | OFF       | AREA         | TO SH        | tow EVE                               | EYONE WI                               | FERE THE                              |
|                  | 6 41 A1   |              |              | OD LEVEL                              | D WITH                                 | STEFL-TOED                            |
|                  |           |              |              | · · · · · · · · · · · · · · · · · · · |  |                                       |
| 9001 C10 1       |           |              |              |                                       |  |                                       |
| NUBLEMS E        | COUNTER   | ED/CORRE     | CTION ACTIO  | N TÁKEN:                              | • • .                                  |                                       |
| -EE              | FRONT     | PAGE         | FINAL        | SENTENC                               | <u> </u>                               |                                       |
|                  |           | <u> </u>     | <u> </u>     | • •                                   | ,                                      |                                       |
|                  |           |              |              |                                       |  |                                       |
|                  |           | <del></del>  |              |                                       |  |                                       |
|                  |           | ·            |              |                                       |  |                                       |
| ECIAL NOT        | FS        |              |              | <u> </u>                              | <u> </u>                               | 2                                     |
|                  | ,         |              |              | <del> </del>                          |  |                                       |
|                  |           |              |              |                                       |  |                                       |
|                  |           |              |              |                                       |  | *                                     |
| MORROWS          | EXPECTAT  | IONS         |              |                                       |  |                                       |
| FST- 02<br>-SAMP | PLING.    | VE Co        | RE BO        | RINGS A                               | ND START                               | PIDIFID                               |
|                  |           |              |              |                                       | ······································ |                                       |
|                  |           | <del></del>  |              | •                                     |  |                                       |
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| k at   | DATE 8/25/93 .                      |
| •  | DAY CELLY (                         |
| A-E DAILY QUALITY  | 5   3   M   1   X   M   1   S       |
| CONTROL BERGE  |                                     |
| CONTROL REPORT   | WEATHER BOTH CLAS Overcom Ran Show  |
|  | <u>~.</u>                           |
| COE PROJECT MANAGER  | TEMP TO 12 12-50 50-70 70-85 145 40 |
| PROJECT ET STEWART BATTERY SHOP (FST-028)  | X                                   |
| JOB NO   | WIND SON MOOR HON FRONT NO.         |
| CONTRACT NO  | HUMIDITY Dry Moor I HUMIN           |
|  |                                     |
| SUB-CONTRACTORS ON SITE:   |                                     |
| JUDSON Smith DEBRUM A  |                                     |
| JUDSON SMITH, DERRICK AMIDON, DOUGLAS  | LAROUCHE, HORACE FUTCHER            |
| <del></del>  |                                     |
| EQUIPMENT ON SITE.   |                                     |
| DRILL RIG DRILL EQUIPMENT, STEAM CLEANE,<br>CGI. MASON JAPS A. L.                  | 1 Dear 5 1                          |
| CGI, MASON JAPS A. JAMES TO CO   | E. DECON CQUIPMENT, PID, OVA        |
| WORK PERFORMED (INCLUDING SAMPLING):   | LIBRANT GASES SAMPLE BOTTLES        |
|  |                                     |
| LOCATED PERSONEL TO ARC WELD   | PIECE "BRACKET ON HYDRAULIC         |
| AT DE HI WORK STARTED OF   | 9,16 02 170,10 0 1 1                |
| DY URILLING ST   | ARTED R. 0030 THE                   |
| JOJEINGS WENT MUCH FACTED T  | 3344                                |
| SB4 REQUIRE SXTRA EFFORT   | OUT T                               |
| 1T 13 1.15 ST THICK ARE T  | OF TO THE FACT THAT                 |
| TODAY WHICH WILL BE ALL  | DO ALL THE PIOTFID SAMPLES          |
| TONI   | TEA THE TOTAL                       |
| DORINGS ARE COMPLE   | TE ALONG WITH 1.                    |
| OF THE PIDIFID BORINGS. FOR  | COST · EFFECTIVENESS, I WILL        |
| THE DRILL CREW TO THE  | F 1/122 T- 1/22 T-                  |
| THE KIG. ADDING 18:00  | 77 00 0                             |
| PERUIRING ADDITIONAL FIXING.<br>DONE 17: 00 HAND-AUGERED FINA<br>FINISHED BY 18:00 | THE RIG POPPED A GEAR               |
| PONE 17:00 11.50   | FINAL CORE BORING                   |
| FINISHED BY 18:00  | L PIDIFID SAMPLE.                   |
| BY 18:00   |                                     |
|  |                                     |
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|  | SHEET SE                            |

| PROJECT.  | — (ŘEРОЯТ NO. <u> </u> | (Continuation)                        |
|---|------------------------|---------------------------------------|
| DBNO. FST-004E  |                        |                                       |
| QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATION               | CATE                   | 0/19/93                               |
| PID CALIBRATION   | (S)                    |                                       |
| PID CACIBRATION WITH 250 FRM PH MITER WITH 7/10 STAND                 | ISO BUTYLENE.          |                                       |
| PH MITER WITH 7/10 STANDS<br>CONDUCTIVITY METER CALIBRAT              | ARD.                   |                                       |
| CONDUCTIVITY (METER CALIBRAT  | ED WITH O              | 180 4-                                |
| STANDARO.   |                        | -, -,                                 |
|   |                        |                                       |
|   |                        |                                       |
|   |                        |                                       |
|   |                        |                                       |
| FEALTH AND SAFETY LEVELS AND ACTIVITIES.                              |                        |                                       |
| CHECKED WITH RANGE CONTROL TO   | SEE TE S               | グロー ノンニー                              |
| - CAY 13 SAMPLE. NO ACTIVITIES  | SITE AMP. C            | 2 620                                 |
| ENTRANCE. USE MOD LEVEL D.  | - /1/ F K C-E1         | rox                                   |
|   |                        |                                       |
|   |                        |                                       |
| ROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN-                          | •••                    | · · · · · · · · · · · · · · · · · · · |
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|   |                        | <u> </u>                              |
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|   | ···                    |                                       |
|   |                        |                                       |
|   |                        |                                       |
|   | ELY CLUE,              | AFTER                                 |
| ECIAL HOTES  ARTILLARY FIRE SEEM EXTREME EVEN CLEAN AREA APPROVED FUR | SAMPLING.              | AFTER                                 |
| EVEN CLEAN AREA APPROVED FOR  | SAMPLING.              | AFTER                                 |
| ARTILIARY FIRE SEEM EXTREME<br>EVEN CLEAN AREA APPROVED FOR           | SAMPLING.              | AFTER                                 |
| EVEN CLEAN AREA APPROVED FOR  | SAMPLING.              | A FTER                                |
| AORROWS EXPECTATIONS  | SAMPLING.              | AFTER                                 |
| ARTILIARY FIRE SEEM EXTREME<br>EVEN CLEAN AREA APPROVED FOR           | SAMPLING.              | A FTER                                |
| ARTILIARY FIRE SEEM EXTREME<br>EVEN CLEAN AREA APPROVED FOR           | SAMPLING.              | AFTER                                 |

TITLE

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| PROJECT. F                                   | W 22                 |            |           |            |             | <del></del> |            |             |              |
|--|----------------------|------------|-----------|------------|-------------|-------------|------------|-------------|--------------|
| JOB NO                                       |                      |            |           |            |             |             | _ 01       | E8          | 125/93       |
| CUALITY CO                                   | NTROL ACT            | MITIES (IN | ICLUDING  | FIELD CAL  | BRATION     | SI          |            |             |              |
| CALIB  | RATED                | THE        | PID       | USING      | 258         | 1508        | UTYIE      | NF S        | STANDAR      |
|  |                      |            |           |            |             |             |            |             |              |
| 21-0 19                                      | nggo                 | MET        | HANE.     | READ       | 10          | 200         | and of     | <u> </u>    | - 1000.      |
| asye   | e + , +              | +7-0       | 1         |            |             | 1           | 43-0       | 7.3         | pps          |
|  |                      |            |           | ,          |             |             |            |             | <del>-</del> |
|  |                      |            |           |            | <del></del> |             |            | <del></del> | <del></del>  |
|  |                      |            |           |            |             |             | -          |             |              |
|  |                      |            |           |            |             |             |            |             |              |
| HEALTH AND                                   | SAFETYLEV            | ELS AND    | ACTIVITIE | ES.        | <del></del> |             |            |             |              |
| ROPE   | OFF                  | A          | F4 -      | 70 5       |             | 1/          | , ,1       |             |              |
| Moo  | LEVEL                | D          | WITH      | STEE       | <del></del> | TARE        | - <u> </u> | T 7         | REA.         |
| HARD -                                       | HATS.                |            |           | STOE       | <u> </u>    | EO C        | 1500TS     | <u> </u>    | <u> </u>     |
|  |                      |            |           |            |             |             |            |             |              |
|  |                      |            |           |            |             |             |            |             |              |
|  | <u> </u>             |            |           |            |             |             |            |             |              |
| POBLEMS FN                                   | COUNTERS             |            |           |            |             |             |            |             |              |
| PROBLEMS EN                                  | COUNTERE             | D/CCRRE    |           |            |             |             |            |             |              |
| PROBLEMS EN                                  | COUNTERE             | D/CCRRE    |           |            |             |             |            |             |              |
| PROBLEMS EN                                  | COUNTERE             | D/CCRRE    |           |            |             |             |            |             |              |
| PROBLEMS EN<br>SEE FA                        | COUNTERE             | D/CCRRE    |           |            |             |             |            |             |              |
| PROBLEMS EN<br>SEE FA                        | COUNTERE<br>Z ON T   | D/CCRRE    |           |            |             |             |            |             |              |
| PROBLEMS EN<br>See Fa                        | COUNTERE<br>2 OW T P | D/CCRRE    |           |            |             |             |            |             |              |
| PROBLEMS EN<br>SEE FA                        | COUNTERE<br>2 ON T P | D/CCRRE    |           |            |             |             |            |             |              |
| SEE FA                                       | cont f               | D/CCRRE    |           |            |             |             |            |             |              |
| SEE FA                                       | cont f               | D/CCRRE    |           |            |             |             |            |             |              |
| SEE FA                                       | cont f               | D/CCRRE    |           |            |             |             |            |             |              |
| SEE FA                                       | cont f               | D/CCRRE    |           |            |             |             |            |             |              |
| SEE FA                                       | cont f               | D/CCRRE    |           |            |             |             |            |             |              |
| SEE FA                                       | 2 ON T P             | D/CORRE    |           |            |             |             |            |             |              |
| SEE FA                                       | S. XPECTATIO         | D/CCARE    | CTION AC  | CTION TAKE | N:          |             |            |             |              |
| SEE FA                                       | 2 ON T P             | D/CCARE    |           | CTION TAKE | N:          |             | AMP        | 116.        |              |
| SEE FA                                       | S. XPECTATIO         | D/CCARE    | CTION AC  | CTION TAKE | N:          |             | AMP        | 116.        |              |
| PROBLEMS EN  SEE FA  PECIAL NOTES  MORROWS E | S. XPECTATIO         | D/CCARE    | CTION AC  | CTION TAKE | N:          |             | AMP        | ING.        |              |
| SEE FA                                       | S. XPECTATIO         | D/CCARE    | CTION AC  | CTION TAKE | N:          |             | AMP        | ING.        |              |

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FST-038 8/26/93 DAY IS A-E DAILY QUALITY CONTROL REPORT WEATHER Sun To 32 32-50 COE PROJECT MANAGER TEMP PROJECT FT STEWART BATTERY SHOP FST-028 WIND HUNIOTY CONTRACT NO\_ SUB-CONTRACTORS ON SITE: VOSON SMITH DOUGLAS LAROUCHE, HORACE FUTCHER ECUIPMENT ON SITE HAND-AUGERS, STEAM CLEANER, DECON SQUIPMENT, PID, OVA, CGI, MASON JARS, ALUMINUM FOIL, CALIBRANT GASES, SAMPLE BUTTLES WORK PERFORMED (INCLUDING SAMPLING): SENT DRILL CREW TO DELIVER RIG BACK TO MINMITE COST. LABELED ALL BOTTLES. 11110 TOOK FIRST SAMPLE WHICH 15 TO ac SAMPLE FST-028-582-8-93 10016 FST-028-SB1 Full TELP and 250 ml G BOTTLE TCLP USES 500 mlG and 125 ml amb G and TPH uses ALL SAMPLES WERE ICEN TO PROBLEM TODAY WERE THUNDERSTORMS WHICH CONTINUED THROUGH MOST OF THE DAY. AU HOLES WERE SEALED WITH CONCRETE AND OPERATION ARE Moved To FST-025-100A.

SHEET

| PANECT. FST-028   |              | (Commution Sh) |
|---|--------------|----------------|
| LOB NO.   | - REPORT NO  | -              |
|   | CATE         | 8/26/13        |
| QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS            | )            |                |
| CALIBRATED THE PID WITH 258 P. METHANE - READ 9.7 4 101.            | pm 150 BUTYL | ENE IZZAP      |
| MOTHERS CALIBRATED THE FID  | WITH 10pp.   | m & 100 pp     |
| METHANE. READ 9.7 2 101. Res  | Property by  |                |
|   |              |                |
|   |              |                |
|   | <u> </u>     | +              |
|   | <del></del>  |                |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.                            |              |                |
| MOD LEVEL O WITH MORD HAT AM  |              |                |
| THE WORD THAT AN  | VD STEEL-TOE | ED 1500TS-     |
|   |              |                |
|   |              |                |
|   |              |                |
| ROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:                        |              |                |
| THE STOCK ACTION ACTION TAKEN.                                      | • •          |                |
| THUNDER STORMS SAMPLED DULL   |              |                |
| PAINING PERIODS. SAMPLED DWLY                                       |              | E LIGHTER      |
| RAINING PERIODS.  |              | E LICHTE       |
| THUNDER STORMS, SAMPLED DNLY<br>RAINING PERIDOS.                    |              | E LIGHTE       |
| THUNDER STORMS, SAMPLED DWLY RAINING PERIODS.                       |              | E LIGHTE       |
| THUNDER STORMS, SAMPLED DWLY. RAINING PERIODS.                      |              | E LIGHTE       |
| PAINING PERIODS.  |              | E LIGHTE       |
| THUNDER STORMS, SAMPLED DNLY RAINING PERIODS.                       |              | E LIGHTE,      |
| PAINING PERIODS.  |              | E LIGHTE       |
| PAINING PERIODS.  |              | E LIGHTE       |
| PECIAL NOTES.   |              | E LIGHTE       |
| PAINING PERIODS.  SAMPLED DULY  PECIAL NOTES.  MORROWS EXPECTATIONS |              | E LIGHTE       |
| PECIAL NOTES.   |              | E LIGHTE       |
| PAINING PERIODS.  SAMPLED DULY  PECIAL NOTES.  MORROWS EXPECTATIONS |              | E LIGHTE       |
| PAINING PERIODS.  SAMPLED DULY  PECIAL NOTES.  MORROWS EXPECTATIONS |              | E LIGHTE,      |
| PAINING PERIODS.  SAMPLED DULY  PECIAL NOTES.  MORROWS EXPECTATIONS |              | E LIGHTE,      |

| The same of the sa | DATE           | 8/2             | 7/93                                  |             | •       |
|--|----------------|-----------------|---------------------------------------|-------------|---------|
| A-E DAILY QUALITY  | DAY            | SW              | W                                     | TH X        | S       |
| CONTROL REPORT   | WEATHER        | Sun Char        | Overcom                               | X           | Snow    |
| COE PROJECT WANAGER  | TEMP           | 10 II II-20     | 50-70                                 | 70-65       | 55/10   |
| PROJECT FT. STEWART, 86 WASTE OIL TANKS, FST-UZG   | W#40           | Stal Mogaz      | Hçn                                   | Reco        | n NO.   |
| JOB NO   | - HURIDITY     | Dry Mooer       | - Perman                              | 1           |         |
| SUB-CONTRACTORS ON SITE:   |                |                 | 1/\                                   | <u> </u>    |         |
|  |                | <del></del>     |                                       |             |         |
| DUDSON SMITH, DOUGLAS LAROUCHE, HOW  | ACE FULCHE     | ER              | •                                     | <del></del> |         |
| ECUIPMENT ON SITE.   |                |                 |                                       | <del></del> |         |
| HAND-AUGERS WELL CASING, WELL SCREEN, LOCKE CAP  | STEAM CLEAN    | VED BECOM       | af ab as a s                          | <u> </u>    | 2. 5    |
| TOTAL CONDUCTIVITY METER, MASON ) 104  | AL. FOIL. CALL | RPANT GASE      | C+ Source                             | us Can      | air lia |
|  |                |                 |                                       |             | CE DAK  |
| THE METHOD OF DOING FST-025 WILL   | LL OCCUR       | AS FOLLO        | ws, F11                               | est         |         |
| THE SUL BURINGS COLLECT  | NG A DIN       | I S CI S        |                                       |             | 2 Y     |
| HALF A FOOT. ONCE WE REACH WATER, I<br>SAMPLES AND ILEEP DIGGING UNTIL   | NE DISCON      | TINUE TA        | KTNG                                  | PIDIF       | 01      |
| TALL AS PARAS POSSIBLE, A TI   | EMPONANU       | Lieu MA         | 00 -                                  |             | ł       |
| TOTAL TOUT OF STICK-UP IS  | S THEN O       | 10400 100       |                                       |             | =       |
| THER PUC). THE PAELL IS THEN   | ECUAED IN      | 0.1             | 11 Pr. m. n                           | ٠.          |         |
| TOTAL IS HEN USED TO ASSUAF U  | 1/611 /6       | Burney 1        | ·                                     |             |         |
| THE ALL WOLLS ARE COULECTED  | Ann istens     | larera.         |                                       |             |         |
| AT LEAST ONE HOUR HAS PASSED, TO   | HE PID/FI      | O READIL        | 10 ACI                                | <u> </u>    |         |
| THEN TAKEN TODAY, WE COMPLETE AND ALL READINGS TAKEN THEN THE  | ACTUM /        | le: Chia        | ARE                                   | INSTA       | LLED    |
| THE COMPLETED THE  | E INSTALL      | ATION A.        | . הי                                  |             |         |
|  | シャッち・9ルク       |                 |                                       |             | 1       |
| FURTHER PROGRESS ON  | SITE. ALL      | PIPI FI         | PREX                                  | DINGS       | ,       |
| ARE TAKEN.   |                |                 |                                       |             |         |
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| PROJECT,    | FT STEWART   | 86 WASTE                              | 0. 7   | AND TO               |   |  |                  |  | (Commusition, S.   |
|-------------|--|---------------------------------------|--|----------------------|---|--|------------------|--|--|
| .08 NO      | With the same of t | -                                     | <u> </u>   | 1/1×2/ C3            | 11-052                                  | RI   | PORT N           | )  |  |
|             |  | <del></del>                           |  |                      |   |  | ОΑП              | 8/2  | 7/93   |
| CONTILL     | CONTROL ACT  | VITIES (INCL                          | UDING FIE  | ELD CALI             | BRATION                                 | SI   |                  |  |  |
| / H         | E PID W  | AS CA.                                | 1200   | -0                   | 1                                       | 2-6  | <del></del>      |  |  |
|             |  |                                       |  |                      |   |  |                  |  |  |
| 1000        | AD 262<br>- 8 90p  | om m                                  | r ne<br>Istan  | 7 70                 | WAS                                     | CALI   | BRATE            | 0 W  | 1TH  |
|             |  | 7.,                                   | CITAN  | <del>E , )&lt;</del> | <u> </u>                                | 9.6  | 2 92             | ppm  | <u> </u>   |
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| ·           |  |                                       |  |                      |   |  | ·                |  |  |
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| HEALTH A    | ND SAFETY LEV  | FISANDAC                              | TIMPLE   |                      |   | · · · · · · · · · · · · · · · · · · ·        |                  |  |  |
| MOD         | LEVEL O  |                                       | .,   |                      |   | <u>.                                    </u> |                  |  |  |
| LATEY       | LEVEL D<br>GLOVES.   | WITH -                                | HARD -   | H <u>4T5,</u>        | STEEL                                   | -TOED  | 1300T            | quel   |  |
|             | CEDUES,  |                                       |  | <del></del>          |   |  |                  |  | *  |
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| DODL ELLE   |  |                                       |  |                      | <del> </del>                            |  |                  |  | · · · · · · · · · · · · · · · · · · ·  |
| HOBLEMS     | ENCOUNTERE   | DICCRRECTI                            | ON ACTIO   | ABAAT K              | ł:                                      | • •  |                  |  |  |
| 1 HUA       | DERSTURA   | 15 ST                                 | OPPER  | w                    | 2005                                    | 1  | F 0              | 'S1/ 5   | 1 4 -  |
| HEAVY       | PRAINS   | KEEP A                                | u. W   | ORK                  | Form                                    | Carre  |                  | <del>17C,</del>  | LIGHTNIN   |
|             |  |                                       |  | •                    | , | 0001   | 120,2            |  |  |
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| ECIAL NO    | TES.   |                                       |  |                      |   | ···-   |                  | · · · · · · · · · · · · · · · · · · ·  |  |
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| MORROW      | S EXPECTATIO   | NS                                    |  |                      |   |  |                  |  |  |
|             | ,  |                                       |  |                      | ·                                       |  | <u> </u>         |  |  |
| NEXT        | V V E.E.K.   |                                       | / 1 ) <del>[</del>   |                      |   |  |                  |  |  |
| NEXT        | and the artist of the state of  | CONTIA                                |  | 1-57-6               | 25.                                     | <del></del>                                  | . No. of \$1.000 | CONTRACTOR CONTRACTOR CONTRACTOR   | and the state of t |
| NEXT        |  | CONTIX                                | GOOD CARROLLES DE LA COMPANION | 1-ST-6               | 25.                                     |  |                  | o construction and the second second   | an transpire e ante ra transpire de las desarrantes de la companya de la companya de la companya de la company   |
| NEXT        |  | CONTIA                                | Menor I and Angles Control of Angles I and Angles Control of Angle | 1-5T-6               | 25.                                     |  | <u> </u>         |  |  |
| NEXT        |  | CONTIA                                |  | 1-ST-6               | 25.                                     |  |                  | 14 Maria (1994) - 14 Maria (19 |  |
| NEXT        |  | CONTIA                                |  | J- ST-6              | 25.                                     | ,  |                  | e and an annual section of the secti | and the second section of the section of t |

| DATE 8/31/93  |
|---|
| A-E DAILY QUALITY CONTROL REPORT  WEATHER SUN CLAW DIRECTOR   Sun   Show  |
| COE PROJECT MANAGER TEMP TO 32 32-50 50-70 TO-85 85/0 PROJECT FT STEWART, 86 WASTE DIC TANKS, FST-025 WIND WIND TO HOST PRODUCTION.  JOB NO   |
| SUB, CONTRACTORS CH SITE:  JUDSON SMITH DONGLAS LAROCHE, HURACE FULCHER  EQUIPMENT ON SITE.   |
| HAND-AUGISE, WELL CASING, WELL Screen, LOCKED CAPS, STEAM CLEANED, DECEMBED, PID. OVA CGI. H METER, CONDUCTIVITY METER, MISSIN JABS, AL FOIL CALLED, SAMPLE JABS WORK PERFORMED CHICLUSING SAMPLING:  3130193 N. WARK COND BE PERFORMED. THUND EXSTURMS WERE ACTUE ALL AFTERNOOMS STARTED WITH HOLE FST-025-748. As WITH MANY CTHEN BUSINES, HAD TO REDO ROMINGS METER LOPT AND 90 FT. HIT IMPASSABLE. PURE WITH HAD HOLER.  CHECK WITH THE PUD AND CGT BEFORE PERSONNEL  CAR FITER SITE. WELL TINSTALLATION AND PERSONNEL  READINGS WERE COMPLETED ON HOLES 94 B 164,  CHA AND 4A. WATER LEVEL INDICATOR WAS:  ALL EQUIPMENT DECLIED AS PER JUSTPOLYTIM. |
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| (  | $\mathcal{L}_{\mathcal{L}}}}}}}}}}$ |
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|  | PRIJECT. FT STEWART, 86 WASTE OIL TANKS, FST-025 REPORTING.   |
|  | JOBNOREPORTNO   |
|  |   |
| •  | CUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)  THE PLD 445  |
|  | THE PLD   |
|  | 210 WAS CALIBRATED WITH 258 and 1503  |
|  | THE FID WAS CALLEGATION IS BUTGLENE, READ   |
|  | THE PID WAS CALIBRATED WITH 258 ppm 150 BUTYLENE, READ  METHANE, 12EAU 9,7ppm d 89ppm.  |
|  | 7. 18gm a 89 gpm.   |
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| · q  |   |
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|  | HEALTH AND SACETYLEVE   |
| ,  | HEALTH AND SAFETY LEVELS AND ACTIVITIES.  |
|  | LATEX GLOVES.   |
|  | LATEX GLOVES. TIARV HATS, STEEL-TOED BOOTS and  |
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|  | PROPIETIO E   |
|  | PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:   |
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| • .  | SPECIAL NOTES.  |
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|  | TCMORROWS EXPECTATIONS  |
|  | CONTINUE FST-025.   |
|  | PST-025.  |
| Complete to a record of the record to the second to the se |   |
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| N. A  | DATE                                    | 9/1/   | 93             |  | •  |
|---|---|--|----------------|--|--|
| A-E DAILY QUALITY   | · - DÂY                                 | SM   | '   X          | пн р   | S  |
| CONTROL REPORT  | WEATHER                                 | Sun  | X              | Ran  | Snow   |
| COE PROJECT MANAGER   | TEMP                                    | 10 X X-20  | 50-70          | 70-85  | 1500   |
| PROJECT FISTEWART, 86 WASTE OIL TANKS, FST-025  | WIND                                    | Sal Moon   | Hợn            | Pec  | 27 NO.   |
| JOB NO  | ~ HUĀIDITY                              | Dry Hoos   | 77             | 1  |  |
| SUB-CONTRACTORS ON SITE;  |   |  |                |  |  |
| JUDSON SMITH, DOUGLAS LAROUCHE, HOIZ  | ACE FULCH                               | ER   |                |  |  |
| ECUIPMENT ON SITE.  |   |  |                | <del></del>                                    |  |
| HAND-AUGERS WELL CASING, WELL SCREEN, LOCK& CA  | PE STEAM CLEAN                          | NED BECOM  | -F 13 13 13 14 |  | 2.0  |
| OVA CGI, PH METER CONDUCTIVITY METER, MASSON JARS WORK PERFORMED INCLUDING SAMPLINGS:     | AL. FOIL, CAL                           | BRANT GASE                                       | 5+ Solution    | us, SA.  | PRE JA   |
| HAD THE FIELD PERSONEL CLEAN OUT THE MA TO MIKE DASHER ABOUT WHEN HE COULD 220 AND 232 JE | SON JARS WHI                            | LE JUDSO   | N SMIT         | + TAI  | KED  |
| 220 AND 232 HE INFORMED JUDSON THAT   | HE MAN 17:                              | 5 <u>8 ( E                                  </u> | 1-025-         | 714, 2   | <u> 215,                                    </u> |
| THE SITES DURING THE WEEK OF 09/06  | 193 - 09/10                             | 193 Com  | O BXA          | MINI   | =  |
| IHE BORINGS FOR FST-025-56 AND  | FST-025-6                               | 7 1401.41  | خ سريده        | ETTIA  | 16   |
| THE FIDIPIO READINGS. FST-025-70  | AND PST                                 | 025-94   | WERE           | NOT  |  |
| COMPLETED BECAUSE THE SOIL WHERE  | SIBARIA E                               | RE BORI  | NG WI          | 15   |  |
| BOTTOM OF THE HOLE WHICH WAS 14.5   | SCRAPED 3                               | CL DET   | OF THE         | <u> </u>                                       |  |
| LOCATIONS WERE TRIED AND SAME TH  | AND 13.0                                | H DEEP   | AOJA           | CENT   | ·  |
| THESE LOCATIONS WILL HAVE TO BE ON  | ING DECOTE                              | <u> </u>   | <u> T DE</u>   | PTH  | <u> </u>   |
| THESE LOCATIONS WILL HAVE TO BE SAU   | ED UNTIL                                | LATER  | WHEN           | WE   |  |
| CAN USE THE DRILL RIG. NO BORING  | 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | COROFO   | 13 EC          | AUSE   |  |
| HOLE WILL NOT BE USED AND OPENION. ALL DRILLING EQUIPM                                    | - Conine                                | 5 LOG  | MAY            | CAUS   | <u> </u>   |
| A RICLING EQUIPM  | ENT DECEM                               | PER  | TTULE!         | )  |  |
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| •             | STEWART 8                                    |                |                             | -012             | REPORT NO        | (Continuation )          |
|---------------|--|----------------|-----------------------------|------------------|------------------|--------------------------|
| 00/.800.      | 1112   |                |                             |                  |                  |                          |
| CUALITY CO    | NTROL ACTROS                                 |                |                             |                  |                  | 9/1/93                   |
| PIN           | NTROL ACTIVITIE                              | S (INCLUDING F | TELD CALIB                  | RATIONS          |                  |                          |
| 7.0           | WAS CALIB                                    | RATED US       | ING                         | 258 pp m         | ISA BUTYI        | ENE, READ                |
| 256 v         | NITS. FIE                                    | WAS CA.        | LIRZAT                      | ED USING         | 10               | ENE, READ<br>AND 90 pp 1 |
| METH          | ANE, PEAD                                    | 9.800          | 240 9                       | 1 000            | - To pan         | 4ND 90pp                 |
| ·             |  |                | <u> </u>                    | Por.             |                  |                          |
|               |  |                |                             |                  |                  |                          |
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|               |  |                |                             |                  |                  |                          |
|               |  |                |                             |                  |                  |                          |
| HEALTH AND    | SAFETY LEVELS                                | AND ACTIVITIES |                             |                  | <u> </u>         |                          |
| MOD L         | EVEL D                                       | -TU 11-23      |                             | _                |                  |                          |
| LATEX G       | EVEL D W                                     | TTAKU          | 774T5,                      | STEEL-TOE        | D BOUTS          | avel.                    |
|               |  |                |                             |                  |                  |                          |
|               |  |                |                             |                  |                  |                          |
|               |  |                |                             |                  |                  |                          |
|               |  |                |                             |                  |                  |                          |
| ROBLEMS EX    | ACOUNTEDED CO                                | 000000         | <del></del>                 |                  |                  |                          |
| ROBLEMS EN    | COUNTERED/CO                                 | PRECTION ACT   | ICN TAKEN:                  | •                | •                |                          |
| FOBLEMS EN    | COUNTEREDICO                                 | OF COM         | CH TAKEN:                   | IG TW            | 0 5016           | - Borings.               |
| AND I         | NSTALL ING                                   | OF Com         | CN TAKEN: PLETIA PLETIA     | IG TW<br>WILL IN | SOIL             | - Borings,<br>r Use      |
| AND I         | COUNTEREDICO  PABLE  NSTALL ING  LILL PC.C   | OF Com         | CH TAKEN: PLETIM            | IG TW<br>Will H  | SOIL             | BORINGS,<br>R USE        |
| AND I         | NSTALL ING                                   | OF Com         | PLETIA<br>ELLS              | IG TW<br>Will W  | O SOIC           | - Borings,<br>r Use      |
| AND I         | NSTALL ING                                   | OF Com         | CN TAKEN:<br>PLETIA<br>ELLS | IG TW<br>WILL H  | SOLL<br>VALT FOR | BORINGS,<br>R USE        |
| AND I         | NSTALL ING                                   | OF Com         | CH TAKEN: PLETIA PLETIA     | VG TW<br>Will W  | SOIL             | BORINGS,<br>R USE        |
| AND I         | RABLIE<br>NSTALLING<br>LILL PCIC             | OF Com         | CH TAKEN: PLETIA PELLS.     | IG TW<br>WILL IN | SOLE             | - Borings,<br>r Use      |
| AND I         | RABLIE<br>NSTALLING<br>LILL PCIC             | OF Com         | CH TAKEN: PLETIA PLUS.      | VG Tw<br>Wine h  | SOIL             | BORINGS,<br>R USE        |
| AND I         | RABLIE<br>NSTALLING<br>LILL PCIC             | OF Com         | CH TAKEN: PLETIA PELLS.     | MILL M           | SOLE             | BORINGS,<br>R USE        |
| AND I         | RABLIE<br>NSTALLING<br>LILL PCIC             | OF Com         | CH TAKEN:                   | VG Tw            | O SOLL           | BORINGS,<br>R USE        |
| ECIAL NOTES   | RABLE (NETALL ING<br>NETALL ING<br>NILL PCIG | OF Com         | CH TAKEN: PLETIA PLUS.      | Will In          | SOLE             | BORINGS,<br>R USE        |
| AND I.  OF AT | EXPECTATIONS                                 | OF Con         | CH TAKEN:                   | VG Tw            | O SOIC           | BORINGS,<br>R USE        |
| AND I.  OF AT | EXPECTATIONS                                 | OF Con         | PLETIA<br>PLETIA            | Will In          | O SOLE           | BORINGS,<br>PRUSE        |
| AND I.  OF AT | RABLE (NETALL ING<br>NETALL ING<br>NILL PCIG | OF Con         | CH TAKEN:                   | VG Tw            | O SOIC           | BORINGS,<br>R USE        |
| ECIAL NOTES   | EXPECTATIONS                                 | OF Con         | CH TAKEN:                   | VG TW            | O SOIC           | BORINGS,<br>R USE        |
| AND I.  OF AT | EXPECTATIONS                                 | OF Con         | CH TAKEN: PLETIA PELLS.     | VG TW            | O SOLE           | BORINGS, R USE           |
| AND I.  OF AT | EXPECTATIONS                                 | OF Con         | CH TAKEN:                   | VG TW            | O SOIC           | BORINGS, R USE           |

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|--|-----------------|-------------|--------------|-------------|--------------|--------|
|  | DATE            | <u>ع</u>    | 1/2          | 157         |              | •      |
|  | DAY             |             |              |             |              |        |
| A-E DAILY QUALITY  | JA!             | 3           | <b>4</b>   1 | W           | 7            | S      |
| CONTROL BERN   |                 |             |              |             | <u> </u>     |        |
| CONTROL REPORT   | WEATHER         | Sun         | C            | O-Port      | Ren          | Snow   |
|  | •               | 331         | 195          | X-          |              |        |
| COE PROJECT MANAGER  | TEMP            | To 32       | 32-50        | 50-70       | 70-85        | صياكة  |
| PROJECT FISTEWART, 86 WASTE OIL TANKS, FST-025   |                 | 9           | Moder        | h-l         | <del> </del> |        |
| JO8 NO   | W#MO            | 义           |              | High        | hecc         | 71 NO. |
| CONTRACT NO  | HUÄIIDITY       | Cry         | Moder        | HUTTES      | 1            | !      |
| Cluster  |                 | -           | <u></u>      |             |              |        |
| SUB-CONTRACTORS ON SITE:   |                 |             |              | <del></del> |              |        |
| JUDSON SMITH DOUGLAS LARGUELE HOLL   |                 |             |              |             |              |        |
| JUDSON SMITH, DOUGLAS LAROUCHE, HORAC  | E FULCHO        | ER, L       | ) EKRIC      | K Ami       | 202          |        |
| ECUIPMENT ON SITE.   | <u> </u>        |             |              |             |              |        |
|  |                 |             |              |             |              |        |
| HAND-AUGERS WELL CASING WELL SCREEN, LOCKE CAPS,   | STEAM CLEAR     | VER DE      | CON          | COUPA       | FAIT S       | 210    |
|  | · For CAL       | C P AATT    | Gares        | 4 C         |              |        |
|  |                 |             |              |             |              |        |
| BORINGS THE DESTINATION FROM THE PIL   | ALEIN AE        | 11          |              |             |              |        |
| BORINGS. THE DEPTHE NEEDED TO  | ITFID RE        | 401NG       | 3 01         | THE         | SOIL         |        |
| BORINGS, THE DEPTHS NEEDED FOR TAKE  | ENG LAB         | SAM         | PLES         | 15 D        | ETER         | TINER  |
| SAMIFEE WILL TO  | 5 7AJEA         | / .le.      |              |             | 1 1          |        |
| DOING F.E.D ALL D  | WALL CONTINUE   | منا ينجم من | 4-           | 4           | •            |        |
| THE USSERVED, 14F  | 15 411 00       |             |              |             |              |        |
| THE PROPERTY OF ACCOUNTS   | Dicastia        | 10 1        | <b>-</b>     |             |              |        |
| THE DEING USE ISETWEEN HOLD  | Tage ( )        |             |              |             |              |        |
| THE SAMPLES WALL BE DECONE   | 2000            | <u> </u>    | evel         | 1201        | CATOR        | -      |
| THE GOMPLES WILL BE LECONE   | DUSING          | 40          | PROU         | ED M        | ETHOP        | -      |
| THE PROPERTY OF THE PROPERTY O | 100 020         | L ( )       | ו כי הכ      |             |              | _ 1    |
| TIERVY FOR AGUED   | التصبار         |             |              | _ ^         | ~            |        |
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|  | · T B / ) 1. // | $\sigma M$  |              |             |              |        |
|  |                 |             |              |             |              | 4-     |
| HAS FREE PRODUCT () DOVE TO BE   | 2,000           | 21163       | IVUZ         | AND         | 940          |        |
| HAS FREE PRODUCT (LOOKS TO BE WAS  | TE OIL).        | 100 A       | <u> 445</u>  | +4.03       | 7            |        |
|  |                 |             |              |             |              |        |
| THE WAY BY WELLS W   | ILL BE          | LEI         | ET A         | ETER        | WP           |        |
| LEAVE FOR FURTHER SAMPLING.  |                 |             |              |             |              | _      |
|  |                 | ,           |              |             |              |        |
|  |                 |             |              |             |              |        |
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| PAZIECT. Fr | STEWART, 86      | WASTE OIL TAN      | KS, FST-025                                   | - REPORT NO      | (Communition Su   |
|-------------|------------------|--------------------|---|------------------|---|
| JOB NO      | 112              |                    |   | nat <del>e</del> | 9/2/93  |
| CONTILL COL | YTHOL ACTIVITIES | S (INCLUDING FIELD | CALIBRATIONS                                  |                  |   |
| pH M        | ETER NAS         | CALIBRATE          | 0 6/50  |                  |   |
| CONDUC      | TIVITY ME        | TER WAS C          | D WITH 1                                      | 2 10 STAN        | DAIZD.  |
| PID WA      | S CALLERY        | TER WAS C          | ALIBRATED                                     | WITH 0.180-      | whi Naci Stani  |
| FID WA      | S C41121         | ATED WITH          | 258 pm  | 1 subutylen      | ٠   |
|             | 2 27 27 15/6     | PATED WITH         | 10 gpm d                                      | 90 ppm MI        | THANE.  |
|             |                  |                    |   |                  |   |
|             |                  |                    |   |                  |   |
|             |                  |                    | <del></del>                                   |                  |   |
| HEALTH AND  | 215572454        |                    |   |                  |   |
| WAY -       | SAFETY LEVELS A  | NO ACTIVITIES.     |   |                  |   |
| MIOU L      | EVEL D WIT       | TH HARD HA         | ITS, STEEL-                                   | TOED BOUTS       | and   |
| LATEX G     | OUES.            |                    |   |                  |   |
|             |                  | · _ · _            |   |                  |   |
|             |                  |                    |   | <del></del>      |   |
|             |                  |                    |   |                  |   |
| ROBLEMS EN  | COUNTERED/CCF    | RRECTION ACTION    | TIVEN   |                  |   |
| No P        | POBLEMS          |                    | MACH.   |                  |   |
|             |                  |                    |   |                  |   |
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| ECIAL NOTES | <del></del>      |                    | *   |                  |   |
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|             |                  |                    |   |                  |   |
| <b></b>     | XPECTATIONS      |                    |   |                  |   |
|             | OLLECTING        | INSTALLED          | 15.10   | WELL SAM         | 21 C C  |
| DF FST      | -025             |                    | EMI   | YELL SAM         | PUE Service and a service and |
|             |                  |                    |   |                  |   |
| •           |                  |                    |   |                  |   |
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|--|-------------|-------------|--------------|--------------|---------------|-------------|
| Mary   | DATE        | 9/          | 3/9          | 3            |               | •           |
| A-E DAILY QUALITY  | DAY         | SW          |              | WI           | H   X         | <br>'   S   |
| CONTROL REPORT   | WEATHER     | Bright      | csar lo      | vercom       | Ren           | Snow        |
| COE PROJECT MANAGER  | ТЕМР        | To 32       | x-20         | 50-70        | 70-85         | عربكه       |
| PROJECT FISTEWART, 86 WASTE OIL TANKS, FST-UZS             | WINO        | \$ 1        | loopr        | Неуп.        | Peco          |             |
| JOB NOCONTRACT NO  | нойюту      |             | Accor        | רייייי       |               |             |
| SUB-CONTRACTORS ON SITE:                                   |             | !           |              |              | <u> </u>      |             |
| JUDSON SMITH, DOUGLAS LAROUCHE, HORACE                     | FULCHE      | e, D        | ERRIC        | e Ar         | AI DU A       | ,           |
| EGUIPMENT ON SITE.   |             |             |              |              |               | <del></del> |
| HAND-AUGERS, WELL CASING, WELL SCREEN, LOCK& CAPS,         | STEAM CLEAR | VER, DEC    | ON E         | امرحانة      | ENT F         | מוי         |
| WORK PERFORMED (INCLUDING SAMPLING):                       | FOIL, CALL  | BRANT (     | Gases+.      | SOLUTION     | is, Sam       | RE JAS      |
| WHEN ARRIVED WE DISCOVERED T                               | HAT ALL     | OF -        | THE C        | GATES        | +140          | ····        |
| DEEN COCKED AND VISUALLY NO ONE                            | SEEMED      | TO 13F      | A 20         | שעט.         | 1 Eres        | D           |
| WAITING SEVERAL MINUTES, , es D                            | ECLOFO T    | TO 40       | CATE         | 50           | ~ = ~ A       | VE          |
| SO WE COULD GAIN ACCESS TO O                               | UP ER       | J. PME      | NT.          | 2 ~ 5        | 4 C LI        |             |
| SITE, WE CHECKED TO MAKE SURE PA                           | RKING       | EQUIP       | MEN          | Γ <i>4</i> - | 74            | T           |
| SITE WAS ALRIGHT AND NO PROBLE                             | MS IN       | RELA        | TION .       | 70 7         | THE           |             |
| THE PAGE UNFORTUNELY, WE WI                                | ERE NO      | TIA         | VFOR.        | M OF         | <u> </u>      |             |
| THE BASE-HOLIDAY, I LOCATED SO                             | MEONE       | 70 0        | PEN          | THE          | ·<br>·        |             |
| FENCE AND WE WERE ABLE TO COL                              | LECT .      | SAMPL       | . <u>E.S</u> | FRO          | , m           |             |
| BLANK SALOSS ( ST. STAE LUCAT                              | ION OF      | 74KI        | NG.          | FST-0'       |               |             |
| BLANK SAMPLES (FST-025-BLK-9-93).                          | 64A HA      | 5 14        | 05+          | 05           | ·             |             |
| PREE PRODUCT WHICH LOOKS AND                               | SMECLS      | 0F 1        | ~4ST<br>-    | E 01         | 4.            |             |
| DOUGLAS AND HORACE HAD TO LEA<br>MORNING TO GET TO ANOTHER | IVE FIRE    | 2ST (       | HING         | 1 415        | <u> </u>      |             |
| AND JUDSON WERE LEFT TO TAKE                               | 3116        | <u> </u>    | LY E         | JE (212)     | ICK_          |             |
| LOCATIONS WERE NOT ACCESSIBLE D                            | NE S        | AMPLE       | 25 2 6       | OTHEY.       | 2             |             |
|  | VL 10       | 4021)       | DAY.         |              |               |             |
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|  |             | <del></del> | SHEET        |              | <del>С</del>  |             |

| P        | RUECT. FT STEWART, 86 WASTE OIL TANKS, FST-025 REPORTNO.               |
|----------|--|
| J.       | -0 NO  |
|          | DUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)              |
|          | PH METER WAS CHIPPETED   |
| . L      | CONDUCTIVITY METER WAS CALIBRATED WITH 7 & 10 STANDARD.                |
| 4        | PID WAS CALIBRATED WITH 0.180 - who Nice S                             |
| H        | PID WAS CALIBRATED WITH 258 pp 1 Subutylene.                           |
|          | FID WAS CALIBRATED WITH 10 ppm & 90 ppm METHANE.                       |
|          |  |
| <b>-</b> |  |
| -        |  |
| 1        | EALTH AND SAFETY LEVELS AND ACTIVITIES.                                |
| }-       | MOD LEVEL D WITH HARD HATS, STEEL-TOED BOUTS AND                       |
| <u> </u> | LATEX GLOVES.  |
| <u>-</u> |  |
|          |  |
| PR       | ORI EUS ENCOUNTESSE  |
|          | OBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:                            |
|          | SQUIPMENT LUCKED UP, FOUND INDIVIDUAL TO UNLO                          |
|          |  |
|          |  |
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| SPE      | CIAL NOTES.  |
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| 1 -      |  |
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|          |  |
| TGM      | DRAOWS EXPECTATIONS  |
| TGMO     | PRAOWS EXPECTATIONS  ECIEVE PERMITS AND CONTINUE FOR 22 F.             |
| TOMO     | DRAOWS EXPECTATIONS<br>PECIEVE PERMITS AND CONTINUE FST-025 (NEXT WEEK |
| TCIA     | DRAOWS EXPECTATIONS  PERMITS AND CONTINUE FST-025 (NEXT WEEK           |
| TGIAG    | DRAOWS EXPECTATIONS  PECIEVE PERMITS AND CONTINUE FST-025 (NEXT WEEK   |

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TITLE

| DATE 9/14 /93   |             |
|---|-------------|
| A-E DAILY QUALITY   | S           |
| CONTROL REPORT WEATHER STORE CAME PARTIES SUN                                     | Snow        |
| PROJECT FST-029: EVANS ARMY HELIPOPH FOL ST. FAC WIND SON HOST HOST FACE          | 246         |
| JOB NO  | 1 NO.       |
| CONTRACT NO HUMIDITY DY MOON PAIRS  |             |
| SUB CONTRACTORS ON SITE:  |             |
| DUDSON SMITH DOUGLAS LARGENE, HORACE FULCHER                                      |             |
| ECUIPMENT ON SITE.  |             |
| CALIBRANT CASTS STEAM CLEANER, DEWN EGP., PID, OVA, CGI, MASON JARS, ALLMINUM FO. |             |
|   | <u>  </u>   |
| TOTAL PERFORMED (INCLUDING SAMPLING):   |             |
| WELLS AT EST-025 AL COMED ONLY MAPTHE LOCATIONS OF TEM                            | P           |
| LAILEY KERON DAILE TO T   | ì           |
| HOLES AT AN THOSE FOOT INTERVALS AFTER LEN  | <i>∓€</i> : |
| TICAT 1/0 I des   | TING        |
|   | 1           |
| THE DATA INTER THE YEAR OF  |             |
| 1 TORNED OC TO  | ł           |
| WERE OBSERVED AT THIS SITE. FIRST, BY FST-02                                      | FMS         |
| THE GROUND CHARLES TO HAVE BADLY LEAKED ONTO                                      | 7-          |
|   |             |
|   |             |
|   | $\neg$      |
| SOMETHING OTHER THAN FUEL THE SMELL IS GUITE                                      |             |
|   |             |
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| PANECT. FST-029 HELIPORT POL STORAGE FAC REPORT NO.  | nuation Shee |
|--|--------------|
| JOB NO DATE _ 9/14/  | 193          |
| QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)  |              |
| CAUBRATER DIA COL  |              |
| PID WITE DAY TO THE TOTAL TOTAL TO THE TOTAL TOTAL TOTAL TO THE TOTAL TO THE TOTAL TOTAL TOTAL TOTAL TOTAL TO |              |
| READ 262 UNITS.  | ENE.         |
| OVA WITH 10 can & 90 cm METHANE  |              |
| READ 9.7 & 92 ppm METHANE  |              |
|  |              |
|  |              |
|  |              |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.   |              |
| Mon LEVEL D WITH THAPP THATS AND STEEL   | 1050-        |
| 17) 00 TS  |              |
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| 9000151105110511   |              |
| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAXEN.  |              |
| PISCONTINUED UNTIL PASSED.   |              |
| MISCONTINUED UNTIL PASSED.   | •            |
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| SPECIAL NOTES.   |              |
| CCINC NOTES.   |              |
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| CHOSE CHARLES THE CONTRACT OF  |              |
| CMORROWS EXPECTATIONS  |              |
| FINISH EST-026 & START FST-026   |              |
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TITLE.

|   | DATE        | 9/16        | 193           |              |  |  |
|---|-------------|-------------|---------------|--------------|--|--|
| A-E DAILY QUALITY   | DAY         | SHI         | ] "   3       | H F S        |  |  |
| CONTROL REPORT  | WEATHER     | Sun         | X             | Ran Snow     |  |  |
| PROJECT MANAGER  PROJECT FOT-026 & FST-027                      | TEMP        | 10 32 32.50 | <del></del>   | 10-82   =2/0 |  |  |
| JOB NO.   | W#40        | A Moor      | ىڭد           | FICOT NO.    |  |  |
| CONTRACT NO   | HUMIDATY    | Dry Hoose   | Humps         |              |  |  |
| SUB-CONTRACTORS ON SITE:  |             |             |               |              |  |  |
| JUDSUN SMITH, DERRKK AMIDON, D                                  | OUGLAS LAR  | ouche, Hor  | ACE FU        | ne wer       |  |  |
| EQUIPMENT ON SITE.  |             |             |               | ·            |  |  |
| HAND-AUCER, STEAMS CLEANER, DECON SG                            | 1.0 ME D    | A 0/4 CG    |               | . 17 ~       |  |  |
| CALIBRANT (TACES SAME   | PLE JARS.   | U, UVA, CG  | MASON         | JAES         |  |  |
| MONA PERFORMED (INCLUDING SAMPLING):                            |             |             |               |              |  |  |
| ANDIVE ON SITE FST-026 AT 07:                                   | . Som FON   | E LET US    | IN B          | v 07:45      |  |  |
| COMPLETED FINAL BOILING FOR FIDI                                | OIP RENOWE  | C EST7      | 1 . e 44 . C. | 4 2          |  |  |
| WECONED -FLAND - AUGER. WHILE WAITING FO                        | A FIDIPID   | SAMPLES     | To Vac        | AT 1. 575    |  |  |
| THE CAB SAMPLES FROM FST-026-SBI-FST-026-SPZ TIE                |             |             |               |              |  |  |
| 10 DE PERFURMED ARE VOC8240 TOLPO                               | FULL) TOU   | MOD HEAD    | N 4000        |              |  |  |
| AN THE WILL BE PIKTORM ON                                       | HOLE SSS.   | DETER S     | OR THE        | FIGURIA      |  |  |
| SAMPLES WERE RAN AND THE LAB CAMPLEST                           | TAKEN. SITE | FST 027     | WAS N         | 101          |  |  |
| THE PITCH COURS PET TO PROPER PLA                               | N. 1060 (B) | DOES (OI    | NOT 2         | XILT.        |  |  |
| THE DITCH OCCURS BETWEEN BIR ILL VERIFIED BY THOMS HOUSTON ON 9 | LUCAND BI   | d Hoge      | THIS V        | V45          |  |  |
| WITHIN THIS SITE WAS ED IN T                                    | 116/93 2 12 | NON. 2      | ACH B         | DLING        |  |  |
| PROUND WATER SP CHELL OF  | CES THAN    | TWO FE      | ET TO         | TRVE         |  |  |
| INISHED QUICK. ACTO THREE TOTAL                                 | AL POLICE   | E BOKE      | NGS WE        | =RE          |  |  |
| FTERWORDS, LAB SAMPLES WERE TO BE DONE: 100 2200 Tal            | TOUR TWO    | S WEPE      | PUR           | FORMER       |  |  |
|   |             |             |               |              |  |  |
| SITTE FST-029 WAS EXAMINE TO                                    | CEE LE      | Owner       | ) 1VD         | <i>-≠ +</i>  |  |  |
| 140 OCCURRED. AS OF TODAY, I                                    | T HAD NOT   | - DEOM      | CEMOU.        | 14           |  |  |
|   | 1 FIAD NOT  | •           | <del></del>   |              |  |  |
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(Communition Sheet) PROJECT \_\_\_ REPORT NO. \_\_ DATE 9/16/93 CUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS) OVA CALIBRATED 0900 PID CALIBRATED 07 to 258 pm 150 BUTYLENE READ 260 MITS 559 WNITE HEALTH AND SAFETY LEVELS AND ACTIVITIES. MOD LEVEL O WITH STEEL TOED BOOTS AND HALD HATS PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN-SPECIAL NOTES. TCMORROWS EXPECTATIONS FST-029 FINISH

BY\_\_\_\_\_\_TITLE\_\_\_\_\_

|  | DATE 9/17/53                        |
|--|-------------------------------------|
| A-E DAILY QUALITY                      | DAY S W I W M & S                   |
| CONTROL REPORT                         | WEATHER BOTE Case Overcome Ran Show |
| COE PROJECT MANAGER                    | TEMP TO IZ 12:50 50:70 70-85 15,00  |
| PROJECT_FST-UZ9                        | WINO Set Moder High Recort No.      |
| JOB NO                                 |                                     |
| CONTRACT NO                            | HUMIDITY DAY HOUSE HALLES           |
| SUB-CONTRACTORS ON SITE:               |                                     |
| JUDSON SMITH, DERRICK AMIDO            | N, HORACE. FULCHER                  |
| ECUIPMENT ON SITE.                     |                                     |
| }————————————————————————————————————— |                                     |
| HUND AUGER STEAM CLEANER, DECON        | EGP. PID, OVA, CGI, MASON JARS,     |
| WORK PERFORMED MINCLUDING SAMPLING!    | SES, SAMPLE JARS                    |
| HAD TO PETURA SINIY                    |                                     |
| DUT CORRES CARLY                       | TO DEFICE TO SEND                   |
| COULTRY. COULD                         | NOT SAMPLE TODAY.                   |
|  |                                     |
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| PROJECT.   | - REPORT NO.   | (Commution S   |
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| .ON BOL  |  | 9/17/53  |
| QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS | )  |  |
| N: 1A NOT ON SITE  |  |  |
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| HEALTH AND SAFETY LEVELS AND ACTIVITIES.                 |  |  |
| MUD LEVEL D  |  |  |
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| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:            |  |  |
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| PECIAL NOTES.  |  |  |
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| CMORROWS EXPECTATIONS                                    |  |  |
| FST-018 & FST-029 FINISH                                 |  |  |
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|   | DATE                                  |                  | 1281                                   | 93  |            |             |
|---|---------------------------------------|------------------|--|---|------------|-------------|
| A-E DAILY QUALITY   | DAY                                   | S                | <b>'</b> X                             | / <b>**</b>                                   | 7 Ki       | S           |
| CONTROL REPORT  | WEATHER                               | Brant<br>Sun     | Car                                    | 0.00  | Ren        | 500         |
| COE PROJECT MANAGER   | TEMP                                  | To 32            | 32-50                                  | 50-70   | 70.48      | కిన అం      |
| PROJECT IND. WASTEWATER TREATMENT PLANT FST-018                     | WIND                                  | State            | MAXXXX I                               | H¢n   | Fec        | )<br>21 NO. |
| JOB NO  | HUMIDATY                              | Dry              | Moder I                                | Jruma   | -          |             |
| CONTRACT NO   | 1 (Omitor)                            |                  |  | <u>×                                     </u> |            |             |
| SUB-CONTRACTORS ON SITE:  |                                       |                  | ·· · · · · · · · · · · · · · · · · · · |   |            |             |
| JUDSON SMITH MIKE BALLY   | *                                     |                  |  |   |            |             |
| EQUIPMENT ON SITE 1)  |                                       |                  | <del>,</del>                           |   | -          |             |
| ECUIPMENT ON SITE. HAND AUGER, DISPUSABLE TEF                       | LON RAILERS                           | s, ova,          | P10,1                                  | GE, jit                                       | 4 METI     | ER,         |
| CONDUCTIVITY METER, CALIBRATION FOURMEN                             | T, DECOM                              | ERVIF            | MENT                                   | به ک ر  | NOLE       |             |
| WORK PERFORMED (INCLUDING SAMPLING):                                |                                       |                  | <u> </u>                               |   |            |             |
|   | <u> </u>                              |                  | <u> </u>                               | - 0   |            |             |
| THE CENTRAL SUBJECT PORTHE  | NEER FRO                              | n de             | ANDY                                   | - PARK  | !s Oi      | <u>-</u>    |
| THE CENTRAL ENERGY PLANT STARTE<br>Soil BORINGS. INITIALLY TOOK THE | DIHE S                                | <u>'T€</u>       | 57 <u>~</u>                            | FOINC   | THE        | <u> </u>    |
| WHERE SAMPLES NEED (LAB) NEED TO B                                  | COATPID                               | SAMP.            | ES                                     | 0 1/2   | reem:      | NE          |
| ARE USED ON ALL SAMPLE COLLI  | E JAKEN.                              | WEC              | ON S                                   | Proce   | OUR        | <u>ES</u>   |
| MONITORING OF GASES TO DETERM                                       | INE PO                                | CC . DI          | 1 <u>es</u>                            | <u> 45  </u>                                  | <u>S</u>   |             |
| RAISE LEVEL OF PROTECTION. AFTE                                     | R Acca                                | MPLI<br>MPLI     | 54.11                                  | CR  | 10         | /C C        |
| THE SLUDGE SAMPLE WAS COLL  | FCTED. 1                              | 151116           | 77                                     | <u> </u>                                      | 210        | G-3,        |
| AND THE CGI SAFETY WAS DETE   | RNINFO                                | 501              | T45                                    | 10  | <b>Ξ</b> Δ |             |
| SEFORE ANY ENTRANCE, HOSPING  | SAFETY                                | PETE             | RMIA                                   | IFD F   | 20517      | WE          |
| AND SAMPLE COLLECTED. FIRST   | SEDIMENT                              | T S              | AMP                                    | E Ca  | LLE        | c TF        |
| S COCATION IN THE SAND FILTERS                                      | APPROXI                               | 4TFLY            | 10                                     | FEET  | UNE        | 020         |
| LAE SURFACE. AS ABOVE DECIN   | PADOCEDUA                             | ES A             | 0=                                     | Force   |            | ,           |
| ELIERINE THAT TEFLON BAUERS   | 40= 0=                                | ~ <del>-</del> - | = = PU                                 | and in  | 00         |             |
| SURFACE SAMPLE AND HAND AL  | MERC FO                               | 0 1.1            | 1vE                                    | SEDIA   | AFAT       | •           |
| POR OF FUND IS VERY SLIPPE  | RV $AND$                              | 1.41             | 1.11/1                                 | 1 11/   | ' , (      |             |
| FIN PEACH HAZARD. FIN   | ISHED                                 | 3 A10            | EE                                     | OF 7  | HE         |             |
| SUPFACE WATER SAMPLES.  | · · · · · · · · · · · · · · · · · · · |                  |  |   |            |             |
| <u> </u>  |                                       |                  |  |   |            |             |
|   |                                       |                  |  |   |            |             |
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| PRINECT. FST-018  | REPORT NO.   | teeningtion 2r   |
|---|--|--|
| .O8 NO  | CATE_  | 9/28/93  |
| QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)   | · · · · · · · · · · · · · · · · · · ·  |  |
|   | METER  | AND  |
| CALIBRATION OF OVA PID, PH<br>CONDUCTIVITY METER PEREN DONE | IN FIEL  | D  |
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|   | <del></del>  |  |
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| HEALTH AND SAFETY LEVELS AND ACTIVITIES.                    |  |  |
| MOD LEVEL O.  |  |  |
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| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN -              |  |  |
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| SPECIAL NOTES.  |  |  |
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|   | · · · · · · · · · · · · · · · · · · ·  |  |
| CMORROWS EXPECTATIONS                                       |  |  |
| FST-029 FINISH, CUNTINUE FST-018                            |  |  |
|   | THE AND THE PARTY OF THE THE PARTY OF THE PA | era, anne armerina de la della nomenica e anne armerina della della nomenica di si |
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|   | DATE        | ·'                                    | 1/20                                    | 1/93                                    |               |               |
|---|-------------|---------------------------------------|---|---|---------------|---------------|
|   | DAY         | SI                                    | 4   1                                   | 1 97 /                                  | ਹਮ   ੬        | i s           |
| A-E DAILY QUALITY   |             |                                       |   | X                                       | · · · · ·     | 1             |
| CONTROL REPORT  |             | 8001                                  | Char                                    | ^                                       |               |               |
| COMMOL NEPONT   | WEATHER     | Sun                                   | X                                       | Overcoat                                | Ran           | Snow          |
| COE PROJECT MANAGER   | . ТЕМР      | Torg                                  | 32-50                                   | 50-70                                   | rsyc:         | ص که          |
| PAQUECT FST-029 , FST-018   | WIND        | S <del>X</del>                        | Moder                                   | Hợn                                     | F=00          | r. No.        |
| IOB NO  |             | Dry                                   | Moder                                   |   | 4             |               |
| CONTRACT NO   | HUMIDITY    |                                       |   | X                                       |               |               |
| SUB-CONTRACTORS ON SITE:  |             |                                       |   |   |               |               |
| DUDSON SMITH, MIKE BANY   | <del></del> |                                       |   |   | <del></del> - | <del></del> - |
|   | 4 · • •     |                                       |   |   | ,             |               |
| ECUIPMENT ON SITE, HAND AVER, DISPOSABLE METER, CONDUCTIVITY METER CHIRROTION | Bauses      | TEELOL                                | ) ().                                   | 11 0.0                                  | <u></u>       |               |
|   | EQUIPME     | NT L                                  | er co                                   | 1 600                                   | 20118         | English       |
| 27. 1-0 0-06 27-0.  | 11          | <u> </u>                              | 2007                                    | <u> </u>                                | 21 1-7418     | =N-1,         |
| WORK PERFORMED (INCLUDING SAMPLING):  | ,<br>1      |                                       |   | * · · · · · · · · · · · · · · · · · · · | -             | <u></u>       |
| PERFORMED SAMPLING (LAR) +  | CTIVITIES   | ON                                    | Si                                      | TE A                                    | EST-0         | 201           |
| TOTE USING CONFICTE   | n nath      | 7.0                                   | 0E-                                     |   | 11.4.5        |               |
| WE TOOK ALL LAR S   | AMDIFS I    | Or 1.                                 | in c                                    | 1 14                                    | 1500          |               |
| - 13 LOCA   | TEO NEA     | 0 3                                   | 10                                      | 1917 ビ                                  | . THI         | C             |
| - LAF SITE OF THE UNUSUAL ODD   | a AND _     | SPILL                                 | LIW                                     | EN                                      | APKI          | VCS           |
| N THE GROWN COMING FROM THE   | STACKS      | OF                                    | 56                                      | 40                                      | ARUM          | ıc            |
| I PSING TO BE DONE ON THE   | EE SAM      | 1PIF                                  | ,                                       | s Vo                                    | ,             | )             |
| 23ING ICOMI GLASS SEPTUM TOP SAMPLE   | JAR FULL    | -                                     | 10                                      | 110 .                                   | 10- 6.2       | es 1          |
| PHILE GLASS SAMPLE , DAR AND TOH  | MOD HEA     | VV .                                  | 5 14/1                                  | ح و ح                                   | 0-16          | 1.00          |
| SAMPLES ARE ICED  | IMME        | 21 ATE                                | iv                                      | To 1                                    | 10/           |               |
| TIELE FOILORD WAS FINISHED  | SIMPLES     | -                                     | ======================================= | Car                                     |               |               |
| EDNINUED ON FST-018. VARIO  | 45 542      | V1911                                 | <del></del>                             | 1011                                    | <del></del>   | أصد           |
| The VARCIOUS  | $\leq AMU$  | 150                                   | C -22 4                                 | · ·                                     | ^             |               |
| TICL PECOILDED IN BOTH THE  | 11101111    | Dulle                                 | <                                       | 1.00.                                   | = 10          | ا ہے۔         |
| FIE STUDIOS CH (USTOUY, FIE   | 10 111      | 11/03                                 | · -                                     | וא וא                                   | 'A            |               |
| AMPLES- INCLUDE TEMPERATUR  | E OH        | 4110                                  | C 110                                   | 0000                                    | <u> </u>      | - (3          |
|   | 7 1 1       | C174 17                               | <u> </u>                                | 1000                                    |               | <del>-</del>  |
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| PRIMECT. FST-029, FST-018  | REPORT N   | (Communion S  |
|--|--|---|
| .ON BO.  |  | 9/29/93   |
| QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRAT   |  |   |
| FIELD CALIBRATIONS WERE OVA, PH METER AND COND   | PERFORME   | 0 01/ 00  |
| OVA PH METER AND COND  | DUCTIVITY A  | METER   |
|  |  | TLTCK   |
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| A CONTRACTOR OF THE CONTRACTOR |  |   |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.   | The second second  |   |
| MOD LEVEL D.   | er ,   |   |
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| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:  | 1  |   |
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| PECIAL NOTES.  |  |   |
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| CMORROWS EXPECTATIONS  |  |   |
| FINISH FST-018   |  |   |
|  | CONTRACTOR AREA DE TRACTA ACTUAL CONTRACTOR A AREA DE TRACTA ACTUAL CONTRACTOR CONTRACTOR ACTUAL CONTRACTOR CO | TO DECEMBER THE RESIDENCE AND ADDRESS OF THE PROPERTY OF THE PARTY OF |
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| DATE 9/30/93  |
|---|
| A-E DAILY QUALITY   |
| CONTROL REPORT WEATHER STOR COM DATE REN STOW                                     |
| COE PROJECT MANAGER   |
| PROJECT INDUSTRIAL WASTEMATER TREATMENT PLANTEST-018 WIND SX MOOR HOT FROM NO.    |
| CONTRACT NO HUMIDITY DY MOSE HUTES  |
| SUB-CONTRACTORS ON SITE:  |
| UNSON SMITH, MIKE BAILY.  |
| ECUIPMENT ON SITE. FLAND AUGER DISPOSABLE TEFLUN RAILERS OVA, PID, CGI, DH METER, |
| THEIR CALIBRATION CONFIRM THEORY EON PRIENTS SINDS                                |
| COS CINS AND BOTILES  |
| WORK PERFORMED (INCLUDING SAMPLING):  |
| FINISHED TAKING ALL SAMPLES FOR FST-018.  |
| ALL SAMPLES WERE ICED IMMEDIATELY. BURING   |
| EARLY SAMPLING ACTIVITIES, VAN GOT STUCK IN THE MUD, TOOK DUER AN HOUR TO GET     |
| IT OUT. RETURNED KEY TO RANDY PARKS.  |
| TO MANY FAIRES.   |
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| PADJECT. IND. WASTEWATER TREATMENT PLANT, FST-018         | REPORT NO.   |
|---|--|
| JOB NO  | OUTE 9/30 /53  |
| QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS) |  |
| FIELD CALIBRATIONS WERE PERFORMED                         | ON PID, OVA.   |
| PH METER AND CONDUCTIVITY M                               | ETER.  |
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| HEALTH AND SAFETY LEVELS AND ACTIVITIES.                  | * · ·  |
| MOD LEVEL D   |  |
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| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN              |  |
| VAN GOT STUCK IN MUD. TOUK ABOUT                          | T AN HOUR TO   |
| TRY TO GET IT OUT, FAIL AND GE                            | T HELP.  |
|   |  |
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|   |  |
| SPECIAL NOTES.  |  |
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| TCMORROWS EXPECTATIONS                                    |  |
| FST-032, FST-033, FST-034                                 |  |
|   | commonwealth and commonwealth accommonwealth and commonwealth accommonwealth accommon to accommon to |
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|---|------------|---------------|------------|----------------|---|-------------------------|
| A-E DAILY QUALITY                                 | DAY        | 5             | М          | W              | TH X                                    | S                       |
| CONTROL REPORT                                    | ₩ЕАТНЕЯ    | Brogra<br>Sun | X          | 0-0-           | Ren                                     | Snow                    |
| COE PROJECT MANAGER                               | TEMP       | To 32         | 35:20      | 50,70          | 70-85                                   | 45 up                   |
| PROJECT F ST-037, FST-033, FST-034                |            | S <b>21</b>   | Moder      | Hon            | Feco                                    | rt NO.                  |
| IOB NO  | - HUMIDITY | Dry           | Moder      | Human          |   |                         |
| SUB-CONTRACTORS ON SITE:                          | 1          |               |            |                |   |                         |
| JUDSON SMITH, MIKE BAILY                          |            | <u> </u>      | •          | *              | ·- ·- • · · · · · · · · · · · · · · · · |                         |
|   |            |               |            |                | ı                                       |                         |
| EQUIPMENT ON SITE. HAND AUGERS, DECU              | N EQUAM    | ENT           | <u>. c</u> | VA, F          | oio.                                    |                         |
| CGI, CALIBRATION EQUIPMENT                        | 5 SAMPL    | E Co          | POLIE      | es An          | 10 B                                    | OTTLE                   |
| WORK PERFORMED (INCLUDING SAMPLING):              |            |               | ·          |                |   |                         |
| SAMPLES TO BE TAKEN                               | AT S       | TES           | F          | T-037          | 3.3                                     |                         |
| AND 34 ARE SURFACE SO                             | 165 TAI    | <u> </u>      | APP        | 2000.          | <del></del>                             | ELY                     |
| UNE FOOT BEN UNDER GI                             | ROUND. T   | HESI          | <b>=</b> 9 | SITES          | -40                                     | , <u>-</u>              |
| ALL WITHIN 100 METERS                             | F EACH     | 07            | HFO        | ALC            | 041.                                    | NG                      |
| FOR QUICK SAMPLING OF                             | SITES H    | 1 THO         | UT         | Do             | بدن                                     |                         |
| REQUIDING LAR ANALYSES                            | IS THE S   | JAP.          | cy z       | DIE SE         | L 11                                    | ANK                     |
| REQUIDING LAR ANALYSES FST-033 IS THE PESTICIDE W | ARENO SE   | 0 50          | <u> </u>   | 7              | HH                                      | EAVL                    |
| VOC AND PESTIPEB (5050).                          | AND FST    | -074          | 0172       | NG             | 824                                     | <i>0</i>                |
| TOTAL TOTAL TOTAL TOTAL                           | UIRING     | 8240          | Vere       | . 4            | σ.                                      | <i>=  </i> <del>-</del> |
| TIT MOD TIEAVY DECON POP                          | CEOURES    | ARE           | Fo         | LLOW           | ED                                      |                         |
| PER HOLE.   |            | •             |            |                |   |                         |
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|   |            |               | SHE        | ET             | _ CF                                    |                         |

| PROBLEMS ENCOUNTEREDICCRRECTION ACTION TAKEN  CMORROWS EXPECTATIONS  PROBLEMS ENCOUNTEREDICCRRECTION ACTION TAKEN  CMORROWS EXPECTATIONS  NEXT WEEK, FST-pol, FST-002, FST-603  | PARIECT FST-032, FST-034                                   | (Continuation Shae |
|---|--|--------------------|
| QUALITY CONTROL ACTIVITIES INCLUDING FIELD CALIBRATIONS!  PID CALIBRATED WITH 758 pp. ISORUTYLENE  READ 257-MITS.  OVA CALIBRATED WITH 10, 190 pp. METHANE  READ 9.8 pp. d 92 pp.  HEALTH AND SAFETY LEVELS AND ACTIVITIES.  MOD LEVEL D  PROBLEMS ENCOUNTERED/CCRRECTION ACTION TAKEN.  SPECIAL NOTES. |  | REPORT NO.         |
| PID CALIBRATED WITH 758 pp. ISORUTYLENE READ 257  | JOB NO   | DATE               |
| PIO CALIBRATEO DE WITH 758 CM ISORUTYIENE BEAD 257-WITS.  OVA CALIBRATEO WITH 10, 190 pp. METHANE READ 9.8 pp. 4 92 pp.  HEALTH AND SAFETY LEVELS AND ACTIVITIES.  MOD LEVEL O  PROBLEMS ENCOUNTERED/CCRRECTION ACTION TAXEN.  SPECIAL NOTES.  CMORROWS EXPECTATIONS                                    | LOCALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS) |                    |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.  MOD CEVEL D  PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:  SPECIAL NOTES.  CMORROW'S EXPECTATIONS  | PID CALIBRATED WITH 758 00                                 | 15.0.5             |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.  MOD CEVEL D  PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:  SPECIAL NOTES.  CMORROW'S EXPECTATIONS  | READ 257-NITS.   | 1 SONS OF YELENE   |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.  MOD CEVEL D  PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:  SPECIAL NOTES.  CMORROW'S EXPECTATIONS  | OVA CALIBRATED WITH 10,190                                 | DAY METHALE        |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.  MOD LEVEL D  PROBLEMS ENCOUNTERED/CORRECTION ACTION TAXEN:  SPECIAL NOTES.  CMORROW'S EXPECTATIONS  | BEAD 9.8 ppm & 92 ppm.                                     | - CETANNE          |
| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:  SPECIAL NOTES.  CMORROWS EXPECTATIONS  |  |                    |
| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:  SPECIAL NOTES.  CMORROWS EXPECTATIONS  |  |                    |
| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:  SPECIAL NOTES.  CMORROWS EXPECTATIONS  |  |                    |
| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:  SPECIAL NOTES.  CMORROWS EXPECTATIONS  | HEALTH AND SAESTYLEYS SAUD ASTRUMEN                        |                    |
| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:  SPECIAL NOTES.  CMORROW'S EXPECTATIONS   |  |                    |
| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:  SPECIAL NOTES.  CMORROW'S EXPECTATIONS   | THIS CEVEL D   |                    |
| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:  SPECIAL NOTES.  CMORROW'S EXPECTATIONS   |  |                    |
| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:  SPECIAL NOTES.  CMORROW'S EXPECTATIONS   |  |                    |
| SPECIAL NOTES.  CMORROW'S EXPECTATIONS  |  |                    |
| SPECIAL NOTES.  CMORROW'S EXPECTATIONS  | PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:              |                    |
| CMORROW'S EXPECTATIONS  |  |                    |
| CMORROW'S EXPECTATIONS  | SPECIAL NOTES  |                    |
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|   | CMORROWS EXPECTATIONS                                      |                    |
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|   | DATE   | /                        | 015                                   | 193         |               |          |
|---|--|--------------------------|---------------------------------------|-------------|---------------|----------|
| A-E DAILY QUALITY                       | DAY  | S                        | 3                                     | ( "         | DH F          | S        |
| CONTROL REPORT                          | WEATHER  | Sun                      | X                                     | Overcode    | Ran           | Snow     |
| COE PROJECT MANAGER                     | TEMP   | To 32                    | 32.50                                 | 50-70       | 7000          | 55 vo    |
| PROJECT SOUTH CENTRAL LANDFILL, FST-001 | WIND   | \$2                      | Moder                                 | Hon         | Reco          | on No.   |
| JOB NO                                  | НОМОТ  | Ογ                       | X                                     | Hunts       |               |          |
| SUB-CONTRACTORS ON SITE:                |  |                          |                                       |             |               |          |
| JUDSON SMITH, MIKE BAILY                |  |                          |                                       |             |               |          |
| ECUIPMENT ON SITE.                      |  |                          |                                       | <del></del> |               |          |
| Pomp, VOC APPROVED TUBING, DESPUSABL    | E TERM R   | 4                        | /D-                                   |             |               |          |
| PID, PH METER, COND METER, CALIF        | 2 CATION EG  | AILERS                   | : <u> </u>                            | م مروی      | e Co          | MENT,    |
| WORK PERFORMED (INCLUDING SAMPLING):    | SKATION OF   |                          | en i                                  | Z/M/L       | E C.22        | CERZ     |
| T USED FOR THE FIRST TIME               | ON SITE  | For                      | z n                                   | l ELI       |               |          |
| EVACUATION, THE PERISTALTIC F           | Pumpo RE   | CULAR                    | 2 B                                   | AICING      | 2             |          |
| TOUR FAR TO LONG TNITIALLY              | So WE  | Te                       | IEO                                   | Usin        | C             | ····     |
| A PERISTACIC PUMP. IHE IDEA             | BEHIND T   | HIS                      | TYPI                                  | = Pus       | m Ø           |          |
| NAS I MAT THE PUMP ITSELF               | IS NEVER   | یکر ی                    | xPo                                   | SEO T       |               |          |
| IHE CONTAMINATES AND THE                | = TURING   | . ,                      | · /                                   | 10000       | CARS E.       | <u> </u> |
| DITE FSI-001 HAD TO BE A                | REPEATE P  | ) <u>F</u>               | OR                                    | ONL         | V             |          |
| THE VOC 8240 SAMPLES, S                 | ITE COM  | 7 PLE                    | TED                                   | IN          | 0~E           | <u> </u> |
| DAY. DECONTAMINATION PROCE              | PURES  | STILL                    |                                       | ompo        | ETE           | 4        |
| FOLLOWED FOR ALL EQUIPMEN               | NT, WAT  | ERL                      | EVE                                   | LIN         | DICA          | TOR      |
| AND OTHER EXPOSED EQUIPM                | ENT GE   | NER                      | ATO                                   | R a         | 1/5           |          |
| PLACED FAR ENOUGH AND D                 | OWN WIN  | 0                        | S.0                                   | No          | STR           | AY       |
| VOC'S MAY AFFECT THE RESU               | <u> </u>   | <del>"</del> .           |                                       |             | <del></del> _ |          |
|   |  |                          |                                       |             |               |          |
|   | no es como mais se que acominaciones de o almos es como mais acominaciones acomi | anomara de ante tanto de |                                       |             |               |          |
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| PAZIECT. SUTH CENTRAL LANDFILL                             | (Communication                        |       |
|--|---------------------------------------|-------|
| 2010.  | DATE 10/5/93                          | <br>7 |
| QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)  |                                       |       |
| PH METER CACIBRATED WITH 7                                 |                                       |       |
| 08:50 DITH 7   | & 10 pH STANDARD                      |       |
| CONQUETILE   |                                       |       |
| CONDUCTIVITY METER CALIBRA. STANDARD 0850                  | TEP WITH 0.18 1/A                     | , _   |
| STANDARD 0850 PID CALIBRATED WITH 258 (READ 256 WITS) 0875 |                                       | Ľ.    |
| DALIBRATED WITH 258  | AT TSORUTY ENE                        |       |
| (12 FAD 136 UNITS) 08 35                                   | N TO THE                              |       |
|  |                                       |       |
|  |                                       |       |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.                   |                                       |       |
| MOD LEVEL D  |                                       |       |
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|  |                                       |       |
|  |                                       |       |
| ROBLEMS ENCOUNTERED CORRESPONDE                            |                                       |       |
| ROBLEMS ENGOUNTERED/CORRECTION ACTION TAKEN:               |                                       |       |
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| ECIAL NOTES.   |                                       |       |
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|  |                                       |       |
| MORROW'S EXPECTATIONS                                      |                                       |       |
| FST-002  |                                       |       |
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|  | DATE          | 10/6/93  |              |
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| A-E DAILY QUALITY<br>CONTROL REPORT                                      | DAY WEATHER   | X X  | DH F S       |
| COE PROJECT WANAGER  | ТЕМР          | To 32 32:50 50:70  |              |
| JOB NO   | WIND          | Stall Mooter High  | Recon No.    |
| CONTRACT NO  | HUMIDITY      | Dry Hoose Huma   |              |
| SUB-CONTRACTORS ON SITE:   | <u> </u>      |  |              |
| DUDSON SMITH, MIKE BAILY   |               |  |              |
| ECUIPMENT ON SITE.   |               |  |              |
| Pump VOC APPRIVED TOURS  |               |  |              |
| PUMP VOC APPRILED TIBING, DISPOSABLE  PH METER, COND. METER. CALIBRATION | TEFLOW BALLER | es DECON EQUIPM  | ENT, PID,    |
| WORK PERFORMED (INCLUDING SAMPLING):                                     | CORDIPMENT    | SAMPLE COULT   | RS & BOTTLES |
| THE ROAD LEADING TO EST-002  | THE SITE      | E WHEN 1de   |              |
| THE ROAD LEADING TO FST-007, STUCK ON THE WAY COST OF                    | ONE OF        | IHE VANS GO  | TOUND        |
| STUCK ON THE WAY. COST OF  | VER TWO H     | OURS. ONCE   | $A_{\tau}$   |
| FIRST WELL EST-DOZ   | PLING AC      | TIVITIES THE   | =            |
| FAR TO SHALLOW TO BE AN EF<br>TABLE WAS 21.75 ST AND THE                 | ESCTUS        | God MICLER   | WAS          |
| TABLE WAS 21.75 ST AND THE<br>DEEP. THE BOTTOM DIO NOT FEE               | WELL          | AS DALL THE O  | WATER        |
| PEFP. THE BOTTOM DIO NOT FEE.  | CAS TO        | JOUGH SEOM   | SC FEET      |
| HAD FILLED IT UP, IT FELT SO<br>A PUC WELL TIP, ALSO THE DEL             | LIP, LIKE     | THE BOTTOM   | OF           |
| A PUC WELL TIP, ALSO THE DRU<br>REMOVED. FINISHED ALL SAMO               | MS +AD        | NOT YET E  | PEEN         |
| SAMPLE ANALYSIS 10=  | NE ACT        | IVITIES ON   | TIME         |
| RESTIRCE SORD, DUE MISTING   | XCKA TO       | TAL METALS A   | NO           |
| 15 FST-002-SW1-10-93 -115 5  | MADE IN       | SAMPLE N   | UMBERIL      |
| 15 ACTUALLY CO-82 DU MAG   |               | FACE WATER   | SAMPLE       |
| AND F-ST-002-SWZ-10-93 15  | 0-51.         | CONTROL OF THE CONTRO | <u>FUAN</u>  |
|  |               |  |              |
|  |               |  |              |
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|  |               | SHEET  | <u></u>      |

| JOB NO            |                      |               | ST-002                                | _        |                 |
|-------------------|----------------------|---------------|---------------------------------------|----------|-----------------|
| QUALITY CONTROL   | ACTIVITIES (INCLUC   | W.C. 551 5 6  |                                       |          | E 10/6/93       |
| OH METER          | C 4 - 3 5 4          | ING FIELD CA  | LIBRATIONS                            |          |                 |
| 11:45             | CACIBATED            | ed ITH        | 7810 D                                | H STA    | NDARD SOLUTION  |
| <u> </u>          |                      |               | V                                     | , , , ,  | - SOCOTIO       |
| CONDUCTIVI        | TY METER             | CALIR         | RATEO                                 | .] =.    |                 |
| STANDARD          | SOLUTION             | 11:45         | 11-0 0                                | 0.14 0   | 1.180 mohan NGC |
| PID CA            | SOLUTION<br>LIBRATED | 1. TI         | 050                                   |          |                 |
| St 11:30          |                      |               | E38 JE                                | m /50%   | BUTYLENE        |
|                   |                      |               |                                       |          |                 |
|                   |                      |               |                                       |          |                 |
| HEALTH AND SAFETY | / LEVELS AND LOTH    |               | · · · · · · · · · · · · · · · · · · · |          |                 |
| 127.0             | CETELS AND ACTIV     | TITES.        |                                       |          |                 |
| Mon L             | EVEC ()              |               |                                       |          |                 |
|                   |                      |               |                                       |          |                 |
|                   |                      |               |                                       |          |                 |
|                   |                      |               |                                       |          |                 |
|                   |                      |               |                                       |          |                 |
|                   |                      |               |                                       |          |                 |
| ROBLEMS ENCOUNT   | ERED/CORRECTION      | LICTON TO     |                                       |          |                 |
| ROBLEMS ENCOUNT   | ERED/CORRECTION      | I ACTION TAKE | ĒN:                                   |          |                 |
| ROBLEMS ENCOUNT   | ERED/CORRECTION      | I ACTION TAKE | EN:<br>O HAO                          | ··       |                 |
| ROBLEMS ENCOUNT   | ERED/CORRECTION      | I ACTION TAKE | EN:<br>D HAC                          | ·· TEVCK | < TOWED.        |
| ROBLEMS ENCOUNT   | ERED/CORRECTION      | ACTION TAKE   | EN:<br>O HAC                          | ·· Tevck | C TOWED.        |
| ROBLEMS ENCOUNT   | EREDICORRECTION      | I ACTION TAKE | EN:<br>O HAC                          | ·· TEVCK | < TOWED.        |
| ROBLEMS ENCOUNT   | EREDICORRECTION      | ACTION TAKE   | EN:<br>O HAO                          | TRUCK    | C TOWED.        |
| ROBLEMS ENCOUNT   | EREDICORRECTION      | ACTION TAKE   | EN:<br>O, HAC                         | TRUCK    | < TOWED.        |
| ROBLEMS ENCOUNT   | ERED/CORRECTION      | ACTION TAKE   | EN:<br>O HAO                          | TRUCK    | C TOWED.        |
| 1 Ruck            | EREDICORRECTION      | ACTICN TAKE   | EN:<br>O HAC                          | TRUCK    | TOWED.          |
| ROBLEMS ENCOUNT   | ERED/CORRECTION      | ACTION TAKE   | EN:<br>O HAO                          | TEVER    | TOWED.          |
| 1 Ruck            | ERED/CORRECTION      | ACTION TAKE   | EN:<br>O HAO                          | TEVCK    | C TOWED.        |
| 1 Ruck            | ERED/CORRECTION      | ACTICN TAKE   | EN:  D HAO                            | TEVCK    | C TOWED.        |
| ECIAL NOTES       | STUCK                | ACTICN TAKE   | EN:<br>O HAO                          | TRUCK    | C TOWED.        |
| ECIAL NOTES       | STUCK                | ACTICN TAKE   | EN:<br>O HAO                          | TRUCK    | TOWED.          |
| 1 Ruck            | STUCK                | ACTICN TAKE   | EN:  O HAO                            | TEVCK    | < TOWED.        |
| ECIAL NOTES       | STUCK                | ACTION TAKE   | EN:  O HAO                            | TEVCK    | < TOWED.        |
| ECIAL NOTES       | STUCK                | ACTICN TAKE   | EN:<br>O HAO                          | TRUCK    | C TOWED.        |
| ECIAL NOTES       | STUCK                | ACTICN TAKE   | EN:  O HAO                            | Tevck    | < TOWED.        |
| ECIAL NOTES       | STUCK                | ACTICN TAKE   | EN:  O HAO                            | TEVCK    | < TOWED.        |

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| A-E DAILY QUALITY CONTROL REPORT  COE PROJECT MANAGER  PROJECT TAC-X LAND FILL FST-003  JOB NO  CONTRACT NO  SUB-CONTRACTORS  | DATE         10 / 7 / 9 3           DAY         S         M         W         RW         F         S           WEATHER         Brons         Class Overcom         Ran         Snow           TEMP         To 32         32-50         50-70         70-85         85-10           WIND         Still         Moder         High         Recort No.           HUMIDITY         Dry         Moder         Heyest |
|---|---|
| SUB-CONTRACTORS ON SITE:  JUPSON (SMITH, MIKE BAILY)  ECUIPMENT ON SITE.  PUMP, VOC APPROVED TUBING, DISPOSABLE TERKE PID, DH METER, CONDUCTIVITY METER, CALIBRAT  WORK PERFORMED LINCULUING SAMPLINGI:  COULD NOT BEGAN SITE FOR  SITE PERSONEL HAD TO BRING.  TO OFFICE WHEN ARRIVED CO  BLOWN LAID OUT AS ON MAP.  EXIST AND INTERSECT AS SO  POND EXISTED OR ANY LOC  SAMPLE. ALL WAS DRYO FURT  WELL NUMBERS SO WE HAD  A FEW TIMES TO NUMBER  A CONSTANT PROBLEM TORA | N BAILERS, DECON EQUIPMENT, FON EQUIPMENT, SAMPLE COOLERS  ST-003 UNTIL LATE BECAUSE  SAMPLE COOLER BACK  ON SITE, SITE WAS NOT  THE TRENCHES DID  SHOWN, BUT NO LAKE OR  ATION TO TAKE A LEACHATE  THERMORE, NO WELLS HAD  O TO WALK THE SITE  R WELLS CORRECTLY.  |
|   | SHEET CF  |

| PROJECT. FST-003 TAC-X CAND FILL REPORTNO.  |
|---|
| DATE 10/7/93  |
| OUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)                         |
| 14:12 CALIBRATED WITH 78 10 pH STANDARD.  |
| CONDUCTIVITY METER CALIBRATED WITH 0.180 nohm NGC)                                |
|   |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.  |
| MOD LEVEL A   |
|   |
| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN.  THUNDERSTORMS OF THE MOST OF THE O |
| THUNDERSTORMS OCCUR MOST OF THE DAY, COULD NO WORK DURING PERIODS OF LIGHTNING.   |
|   |
| SPECIAL NOTES.  |
|   |
| CMORAOWS EXPECTATIONS  FINISH FST-003   |
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TITLE

|  | DATE 10/8/93  |
|--|---|
| A-E DAILY QUALITY<br>CONTROL REPORT  | WEATHER BOTH CLAN DAYS RAN STOW   |
| COE PROJECT MANAGER  | TEMP TO 32 32-50 50-70 70-85 45 to  |
| JOB NO   | WIND Still Moder High Recording.  |
| SUB-CONTRACTORS ON SITE:  JUDSUN SMITH, MIKE BY  ECUIPMENT ON SITE.  PUMP, YOU APPROVED TIBING, DISPOSABLE  PID, OH METER, CONDUCTIVITY METER, WORK PERFORMED MINCLUDING SAMPLING!:  COULD ONLY SAMPLE I  REMOVED AND THE ONLY TO  WAS VERY THIN FRAMATICAP  ALL SAMPLES WERE ICE  ANALYSIS ARE VOC8240, RCRI  PESTIPCB 5080, WILL DO.  FST-UU3-MW3 WHEN RETURN  QA AND QC AND ALSO BLANKS W  FST-UO3-MW1-10-93. | TEFLON BAILERS, DECON & OUIPMENT, CALIBRATION EQUIPMENT, SAMPLE COCIEBS  WO OF THE THREE: QUIRED 75 Gals TO BE REON TUBING WE HAD  V SCOWING US DOWN.  P TO 4°C. SAMPLE  4 TOTAL METALS AND  THE FINAL WELL |
|  |   |
|  | SHEETCF   |

|            | FST-003 TAC                                    | C-X CANDE       | TLL               | REPORT NO   | (Communion ) |
|------------|--|-----------------|-------------------|---|--------------|
|            |  |                 |                   | DATE 10   | 15153        |
| OUNTILA C  | ONTROL ACTIVITIES (III                         | NCLUDING FIELD  | " AL IOD ( Time ) |   |              |
|            |  |                 |                   |   |              |
| COND       | CHUITY METER                                   | DICATED         | WITH 78 11        | O STANDARD  | 0850         |
| PIG        | CALLER   | CALIBOA         | TEO WITH OIL      | 80 mohn Naci  | 12850        |
| 0 8:30     | - GCIRRAT                                      | TED WIT         | H 258 ,           | pm 1500   | CT V. CAL    |
| 261.       | <u>.                                      </u> |                 |                   | , ————————————————————————————————————  | VI TI FIVE   |
|            |  | :               |                   |   |              |
|            |  |                 |                   |   |              |
|            |  |                 |                   |   |              |
| HEALTH AND | S.I.C. Thurston                                | •               |                   |   |              |
| 101 AN     | SAFETY LEVELS AND                              | ACTIVITIES.     |                   |   |              |
| 70100      | LEVEL D  |                 |                   |   |              |
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|            |  |                 |                   |   |              |
|            |  |                 |                   |   | <del></del>  |
|            |  |                 |                   |   |              |
| PROBLEMS E | NCOUNTERED/CORRE                               | CTION ACTION TA | KEN .             |   |              |
|            |  |                 | WEN               |   |              |
|            |  |                 |                   |   |              |
|            |  | * .             |                   |   |              |
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| ECIAL NOTE | ~  |                 |                   |   | <del></del>  |
| CONT NOTE  | <u> </u>                                       |                 |                   |   |              |
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|            |  |                 | <del></del>       |   | <del></del>  |
|            | EXPECTATIONS                                   |                 |                   | <del></del>   |              |
| MORROWS    | WEEK FOT                                       | -030 EcT-01     | 3/ EST            |   |              |
| NEXT       | <del></del>                                    |                 | 11, -31-025 C     | EXCEPT DRILL  |              |
| NEXT       | EST-003.                                       | MW ?            |                   |   | REQUIRE      |
| NEXT       | WEEK, FST<br>E) FST-003.                       | Mwz             |                   | ORNOL IN CHINOLOGIC BOOK CHINOCO LE HONOCO LE HONOCO LE PRIMINO LE CONTRA PRIMINO LE CONTRA PRIMINO LE CONTRA P | REQUIRE      |
| NEXT       | E) FST-003.                                    | Mw Z            |                   | ann   | .REQUIRE     |
| NEXT       | E) FST-003.                                    | Mwz             |                   |   | KEBUIRE!     |

|  | DATE        |  | 0/12                                  | 193  |             |             |
|--|-------------|--|---------------------------------------|--|-------------|-------------|
| A-E DAILY QUALITY                        | DAY         | S  | ×                                     | , w  | TH A        | s           |
| CONTROL REPORT                           | WEATHER     | 6noni<br>Sun                                 | Claur                                 | Owon   | Ran         | Snow        |
| COE PROJECT MANAGER                      | TEMP        | To 32  | 32-30                                 | 50-70  | 7045        | 35 up       |
| PROJECT FST-009 / FST-00 2               | W#WO        | St   | Moder                                 | Ноп  | - A<br>Reco | or No.      |
| JOB NO                                   | HUMIDITY    |  | Moosy                                 |  |             |             |
| CONTRACT NO                              | - FUMIDITY  |  | X                                     | . 43.13                                      | 1           |             |
| SUB-CONTRACTORS ON SITE:                 | ·           |  |                                       |  |             |             |
| JUDSON SMITH, TONI NICHULSON             | MIKE        | BAU  | - 7/ , . (                            | KATHLEE                                      | N N         | iLES        |
| ECUIPMENT ON SITE.                       |             |  |                                       |  | ŧ           | ,           |
|  |             |  |                                       |  |             |             |
|  |             | ·  |                                       |  |             |             |
| WORK PERFORMED (INCLUDING SAMPLING):     |             |  |                                       | <del></del>                                  | <del></del> | <del></del> |
|  |             |  |                                       |  |             |             |
| EXAMINED EACH SITE                       | FST-009     | THO  | IR 1                                  | -ST-01                                       | 2.          |             |
| PIERE SAMOI                              | 1410 10     |  |                                       |  |             |             |
| PLACE. SAMPLING WILL EACH SITE IS INDOOR | NOT CO.     | MME  | NSF                                   | UN   | TIL         |             |
|  | 7 27 -      | ~~~  | 1 ~ -                                 |  | 0           |             |
| JULIE DALLY AND                          | o Lores     |  | ~                                     |  |             |             |
| EN ENI AND                               | FIRST TORS  | -A A   | n -                                   |  | RED         | ,           |
| MEERS AMPLIA                             | IC ACTU     | ., -, 0                                      |                                       | _  |             | - 1         |
| JACITULE ARE                             | 51214 215   | 220  | 7 7 2                                 |  |             | ()          |
| 30, 31, 03 ALONG WITH A                  | 1APPING     | AND  | 07                                    | HER  | DUT         | ES.         |
|  |             |  |                                       |  |             |             |
|  | 1           | <del>_</del>                                 | •                                     |  |             |             |
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|  |             | ·  |                                       | <u> </u>                                     |             |             |
|  |             |  |                                       | MOTO A CHINGS PROGRES FOR SECTION 11 CONTROL |             |             |
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PACT. FST-009- FST-002 (Communition Sheet) JOB NO. \_\_\_\_ DATE 10/12/93 QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS) HEALTH AND SAFETY LEVELS AND ACTIVITIES. PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN SPECIAL NOTES TCMORROW'S EXPECTATIONS FST-025 (210-232)

8Y\_\_\_\_\_TITLE\_\_\_\_

|   | DATE 10/ 3/93   |          |
|---|---|----------|
| A-E DAILY QUALITY<br>CONTROL REPORT                             | X   | S        |
| COE PROJECT MANAGER   | TEMP TO 32 32-50 50-70 70 45 65   |          |
| JOB NO  | WIND St. Moder High Recon No  | Э.       |
| CONTRACT NO.  | HOMIDITY DIX MOON HUISS   |          |
| SUB-CONTRACTORS ON SITE:  |   |          |
| JUDSON SMITH, MIKE BAILEY                                       | - 1   | -        |
| EQUIPMENT ON SITE.  |   | $\dashv$ |
| CONDUCTIVITY METER, MASON JAPS, ALVEN FOLL                      |   |          |
| WORK PERFORMED MINCLUDING SAMPLINGS:                            | PS. DECON & QUIPMENT, PID, OVA, CG1, pH METE CALIBRANT GASES A SOMUTIONS, SAMPLE JARS | e,       |
| COMPLETED IN FULL LUSTER  |   |          |
|   |   | -        |
|   |   | -        |
|   |   | 7        |
| ASSURE A GOOD AQUEOUS SAMPL<br>WE CALIBRATED THE PID WITH       | E. BEFORE ANY AUGERING STAFFEL  | 2 .      |
| THE BRENIHING ZONE CHICE WAS                                    | ESD JAM ISPBUTYLENE AND CHECKED   | 2        |
|   |   | ╣,       |
| HEAT UP, AND SAMPLES WERE RA.<br>DEPTH. SAMPLES ARE TO BE ELEVA | N TO CHECK JAR STAR   | -        |
|   |   | 1        |
|   |   | 1        |
| MOD HEAVY NON ACTIONS 40= 1                                     | PCRA TOTAL METALS AND TOH   | 1        |
| AND TOH MOD-HEAVY.  | LYSED FOR PH, FULL TELP   | 1        |
|   |   |          |
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|   | SHEET 75  |          |

| PANECT. FST-025   | ON TRC       | ,                                       | ~ interestion 2x*  |
|---|--------------|---|--|
| JOB NO  |              |   | 113/53   |
| CUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS) |              | 75 /                                    |  |
| AH METER CALLATER   |              |   |  |
| STANDARD CALIBRATED 14:00 WITH                            | 7 AN         | 2 10                                    |  |
| Canada  |              |   |  |
| STANDARD  CONDUCTOUTY METER CAUBRATED 14:00 W  NOC!       | 174          | 0.18                                    | o moha   |
| PIR ON ACTION OF THE                                      |              |   |  |
| PIO CALIBRATED 08.00 & 12:40                              | w            | 1 TH                                    | 258 pp   |
| 150 BUT YLENE<br>OUT CALIBRATED 12:40 WITH                |              | •                                       | <u> </u>   |
| 12:40 WITH  | 1000         | &                                       | 95 pm  |
| T. TANK   | ·            |   |  |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.                  |              |   |  |
| MOD LEVEL D   |              |   |  |
|   |              |   |  |
|   |              |   |  |
|   |              |   | e <sup>1</sup> .   |
| PROPI CHA PARA  |              |   |  |
| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:             |              |   |  |
| NA  |              |   |  |
| . 1   |              |   |  |
| •   |              |   |  |
| ·   |              |   |  |
|   |              |   |  |
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|   |              |   |  |
| SPECIAL NOTES.  |              |   |  |
|   |              |   |  |
|   |              | 1                                       |  |
|   |              |   |  |
| CMORROWS EXPECTATIONS                                     |              |   |  |
| F5T-025-214, 215, 44 AND 36.                              |              |   |  |
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|   |              | *************************************** | A SECTION OF THE PROPERTY OF T |
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| A-E DAILY QUALITY CONTROL REPORT  COE PROJECT MANAGER PROJECT FST-030, FST-025 JOB NO CONTRACT NO | DATE         10 / 14 / 9 3           DAY         S         M         I         W         III         F         S           WEATHER         Brown Sun         Chan Discrete Rain Show X         Show X         F         Show X         S |
|---|---|
| SUB-CONTRACTORS ON SITE:  |   |
| JUDSON SMITH, MIKE BAILEY   |   |
| <del> </del>  |   |
| ECUIPMENT ON SITE,  |   |
| HAND AUGER WELL SCREEN AND CASING, LD<br>CGI, PH METER, CONDUCTIVITY METER, MASSON TA             |   |
| CGI, PH METER, CONDUCTIVITY METER, MASON JA WORK PERFORMED INCLUDING SAMPLINGS:                   | CKS & CAPS, DECON EQUIPMENT PID, OVA  |
| MORK PERFORMED INCLUDING SAMPLING!  | THEM FOR CALIBRANT GASES & SOLUTION   |
| STARTED TODAY ON EST OF   | SAMPLE JAMS   |
| CBECAUSE FST-030 WOULD B- C   | EAD 01- FST-075-714   |
| AND NOT EST-027 24  | LOSED ON THE WEEKEND  |
| SAMPLES OUT OF THE RE<br>USENG THE HAND AUGER A   | CHE COLLECTED SCUDGE  |
| USENCE TOF HAND AUCER ACTOR   | LINE WASH IMPOUNDMENT   |
| TO EXIST TO ASSURE SAFET  | Y. W. CASSET SPACE  |
| TONE BEFORE ENTERING. AFTE IFST-025-4A.10.93. THE WELL  | R FST-030 HE BREATHIAL  |
| MOSTLY GAS AND DIESEL TOOK  | CONTAIN FOR D   |
| MOSTLY GAS AND DIESEL TOUR  | THE SOLL ROBUCT   |
| NERE SAMPLED FST-025-56-10-   | 92 ONCE THESE LANGE   |
| VVA: ABIC TO  | - 31-0 (3-214 AND 21E   |
| READINGS.   | WELL AND GAILE OVAIPID  |
|   | THE DVAITIO   |
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| · • ·   | SHEET CF  |

PARTECT FST-030, FST-025 (Commutton Sheet) REPORT NO. JOB NO. \_ DATE\_10/14/93 CUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS) PID CALIBRATED WITH 258 pp 150 BUTYLENT.

OVA CALIBRATED WITH 10 ppn & 75 ppn METHANE

OH METER CALIBRATED WITH 7, and 10 pH STANDARD.

COND METER CALIBRATED WITH 0.180 mohn NACL. HEALTH AND SAFETY LEVELS AND ACTIVITIES. MOD LEVEL D. PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN: SPECIAL NOTES. TOMORROWS EXPECTATIONS FUNISH FST-025-214 AND 215

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| •   |  |
|---|--|
|   | DATE 10 / 15 / 93                          |
|   | - DAY                                      |
| A-E DAILY QUALITY                                 | DAY S M I W TH X S                         |
| CONTROL REPORT                                    | WEATHER Bross Cher Overcook Ran Show       |
| COE PROJECT MANAGER                               | TEMP To 32 32-50 50-70 70-85 155 LD        |
| PROJECT FST-025 86 WASTE OIL TANKS                | WINO Stal Moder High Record No.            |
| CONTRACT NO                                       | HUMIOTTY Dry Magar Human                   |
| SUB-CONTRACTORS ON SITE:                          |  |
| JUDSON SMITH, MIKE BAILEY                         |  |
| ECUIPMENT ON SITE                                 | -  |
|   |  |
| CONDUCTIVITY METER, MASON JACS, ALUM FOIL CA      | DECON E QUIPMENT, PID, OVA, CGI, pH METER, |
| WORK PERFORMED (INCLUDING SAMPLING):              | ILIGIAN GASES & SOLUTIONS, SAMPLE JARS.    |
| CAN BE SENT TO THE ASSA                           | To Conps OFFICE SO THEY                    |
|   |  |
| TRIP TOOK OVER HALF THE COMPLETED WAS THE INSTALL | 7 a . j                                    |
| TEMP WELL.  | 143 10N OF FST-025-215                     |
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|   | SHCET                                      |

PANECT. FST-025 SE WASTE DIL TANKS (Commustion Sheet) REPORT NO. \_\_ \_\_ .0MBOL DATE 10/15/93 CUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS) PID WAS CALIBRATED WITH 258 ppm ISOBUTYLENG. OVA WAS CALIBRATED WITH LUGAM AND 95 ppm METHANE. HEALTH AND SAFETY LEVELS AND ACTIVITIES. MOD LEVEL PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN: SPECIAL NOTES. TOMORROWS EXPECTATIONS FST-025-214, 215 AND FST-003

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|   | U,                | (1E          | 1 16   | <u> </u>                       |         |             |
|---|-------------------|--------------|--|--------------------------------|---------|-------------|
| A F D 4 H 34 G 14 4 1                         | 0/                | YS           | м  | W                              | TH F    | X           |
| A-E DAILY QUALI                               |                   |              | <del></del>                                  |                                |         |             |
| CONTROL REPOR                                 | T WEATH           | ER Sun       | Char   | Overcost                       | X       | Snow        |
| COE PROJECT MANAGER                           | ΤΕ:               | up To 32     | 32-50  | 50,70                          | 70-85   | కిస్త్రీ ఆం |
| PROJECT_FST-003 TAC-X LANDFILL                |                   | 40 Sal       | Moder  | Hygn                           | Reco    | M NO.       |
| OB NO   | HUMIDI            | ~ 07         | Moder  | Hunnes                         | -       |             |
| CONTRACT NO                                   | ————              | , ,          |  | X                              |         |             |
| SUB-CONTRACTORS ON SITE:                      |                   |              |  |                                |         |             |
| JUDGON SMITH, MIKE BAILEY                     |                   |              |  |                                |         |             |
| ECUIPMENT ON SITE.                            |                   | <del> </del> |  |                                |         | <del></del> |
| HAND AVEER, PEKISTALTIC PUMP, JUBING, LUCKS & | CAPS, DECON EQUIP | MENT P       | D, al  | CGI, ot                        | METE    | R           |
| CONDUCTIVITY METER SAMPLE BUTLES FLAD         | COOLERS, CALIBRAN | - GASES!     | INU SOL                                      | א א א ה דע.<br>א א א א א דע. ( | JEN EPA | ITUR_       |
| WORK PERFORMED (INCLUDING SAMPLING):          |                   |              |  |                                |         |             |
| ARRIVED ON SITE AROUND                        | 08:00 HEAVY       | RAMS         | PRE  | VENTEL                         | ANY     | 1.          |
| OTHER SAMPLING BUT THIS S.                    |                   |              |  |                                |         |             |
| BAD, WE PUMPED 75 GALS                        | OUT OF FST        | -003-1       | 1w3,   | AND.                           | USIN    | G           |
| A TEFLON BISPOSABLE BAILER                    | . TOOK REG        | UIREL        | 2 SA/  | MPLE                           | s .     |             |
| THE WATER WAS CHECK                           | AT START,         | Dul          | 21NG   | AND                            |         |             |
| RIGHT BEFORE COMPLETION                       | N FOR T           | EMP          | OH   | ANO                            |         |             |
| CONDUCTIVITY. pt & Co                         | NOUCTIVITY        | METE         | RS h   | PERE                           |         |             |
| CALIBRATED D8:40. ONCE L                      | JE LEFT .         | SITE         | 003  | DUE                            |         |             |
| TO THE HEAVY RAINS PERV                       | FNT ANY FU        | THER         | PRO  | GRES.                          | SIN     |             |
| ANY OF THE OTHER SITE S                       | TAMPLING AC       | TIVIT        | 185 P  | UE H                           | ENT     | 1           |
| TO EACH OF THE SITES                          | WHERE "           | ELLS         | WERE   | EIN                            | STALL   | E0          |
| BY GERAGHTY AND MILLER TO                     | SEE IF            | THE .        | DRung  | HA                             | D       |             |
| BEEN IZEMOVED.                                |                   |              |  |                                |         |             |
| SITES Dawn                                    | IS REMOVED        | <u>-</u>     |  |                                |         |             |
|   | Vo                |              |  |                                | •       | ]           |
| <u>FST-004A</u> Y                             | <u> </u>          | ·-···        |  |                                |         |             |
| FST-004B UA                                   | ABLE TO ACCES     | s Due        | TO   | ZOAD C                         | MUD)    |             |
| FST-004C N                                    | D                 |              |  |                                |         |             |
| FST- 004 D N                                  | 2                 |              |  |                                |         | ]           |
| FST-004 = F1                                  | RING RANGE        | 4CTIVE       | <u>.                                    </u> |                                |         |             |
| FST-204 F YE                                  |                   |              |  |                                |         |             |
| FST-094 NO                                    |                   |              |  | —————                          |         |             |
|   |                   |              | SH   | EET                            | ≎F      |             |

| PROJECT FST-003 TAC-X LANDFILL                            | (Communition Sheet) |
|---|---------------------|
| JOB NO  | DATE 10/16/93       |
| QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS) |                     |
| PH METER CALIBRATED 10/16/43 08                           | . 4. 0              |
| CONDUCTIVITY METER CAUBRATED "                            |                     |
| PID CALIBRATED WITH 258 I SOBUTILENE                      | 20.30               |
| DEALT SOLIT SES 130801NENE                                | <i>V</i> 8.         |
|   |                     |
|   |                     |
|   |                     |
|   |                     |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.                  |                     |
| MOD LEVEL O   |                     |
|   |                     |
|   |                     |
|   |                     |
| OBODI CHE CHEOMINICATO COLOR                              |                     |
| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN -            | -                   |
| -HEAVY PAINS AND LIGHTNING. DISC                          | ONTINUED            |
| FIELD EXERCISES DURING LIGHTNING                          |                     |
|   |                     |
| , , , , , , , , , , , , , , , , , , ,                     |                     |
|   |                     |
|   |                     |
| SPECIAL NOTES.  |                     |
|   |                     |
|   |                     |
|   |                     |
| TOMORROW'S EXPECTATIONS                                   |                     |
| FST-031, FST-025-214 2 215                                |                     |
|   |                     |
|   |                     |
| · · · · · · · · · · · · · · · · · · ·                     |                     |
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BY\_\_\_

TITLE

|  | DATE                                  |  | 2/17                               | 1/93                              | ·           |          |
|--|---------------------------------------|--|------------------------------------|-----------------------------------|-------------|----------|
| A-E DAILY QUALITY<br>CONTROL REPORT  | - DÀY                                 | X                                      | ч Г                                |                                   | TH P        | S        |
|  | WEATHER                               | Son<br>Sun                             | Char                               | X                                 | Rain        | Snow     |
| COE PROJECT MANAGER  | TEMP                                  | To 32                                  | 32.50                              | 50-70                             | 70-85       | \$5 up   |
| PROJECT FST-031 ASPHALT TANK RESAMPLE, FST-025   | WiNO                                  | S2 <b>3</b>                            | Moder                              | Жул                               | Reco        | X1 NO.   |
| JOB NO   | HUMIDITY                              | Оy                                     | Moder                              | huma                              |             |          |
| SUB-CONTRACTORS ON SITE:   |                                       |  |                                    |                                   |             |          |
| JUDSON SMITH MIKE BAILEY   | -                                     |  |                                    |                                   |             |          |
| EQUIPMENT ON SITE.   |                                       |  | <del> </del>                       |                                   |             |          |
| HAND-AUGER PERISTALTIC PUMP, TUBING LOCK & CAPS, CONDUCTIVITY METER, SAMPLE BOTTLES AND COOLERS, CALL. WORK PERFORMED INCLUDING SAMPLINGS: | Bayers, Dēco<br>Brant Gases           | Equ <sub>II</sub><br>Ano S             | PARVI, I                           | RO, OVA,                          | COI, P      | HMBTEZ   |
|  |                                       |  |                                    |                                   |             |          |
| BREATHING ZONE READINGS. ALL SAMPLES   |                                       | 1                                      | 4.0                                | ~                                 |             |          |
|  |                                       |  | _                                  | _                                 |             |          |
|  |                                       |  |                                    |                                   |             |          |
|  |                                       | _                                      |                                    |                                   |             |          |
|  | T 526 0                               | <b>*</b>                               | _                                  | $\sim$                            |             |          |
| AQUEOUS AND NONAQUEOUS SA<br>READINGS TAKEN. BEFORE SAMP   | LING -A                               | 15 R.F.                                | <u> 47+ 1/</u>                     | va Z                              | -ONE        |          |
|  | <u> </u>                              | 7 101                                  | 1165,                              |                                   |             |          |
|  |                                       |  |                                    | <u> </u>                          | <del></del> | $\dashv$ |
|  | · '                                   |  |                                    |                                   |             |          |
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|  |                                       |  | <u> </u>                           | •.                                |             |          |
|  |                                       | ······································ | Para mentan dan tahun kecamatan da | PARSON LINES PARSON LE ROSTA HARM |             |          |
|  | <u> </u>                              | -                                      |                                    |                                   |             |          |
|  |                                       | <del></del>                            | <del></del>                        |                                   |             |          |
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|  |                                       |  |                                    |                                   |             |          |
|  |                                       |  |                                    |                                   |             |          |

SHEET\_

| PROJECT TET-071 ASPLACT TANKS, FST-025 (214, 215)         | (Continuation Sheet) |
|---|----------------------|
| .C8 NO  | AB-OAT AO.           |
| QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS) | DATE 10/17/93        |
| PID CACIBRATED 07:40 W/ 150.                              |                      |
| READ 256 WITZ.  | BUTYLENE (258 pp.m.) |
| PH METER CACIBRATED 11:15 WITH COND "                     | 760 5                |
| Cono " "  | 0.180mehm Sauce      |
|   | STANDARD.            |
|   |                      |
|   |                      |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.                  |                      |
| MODLEVEL O  |                      |
|   |                      |
|   |                      |
|   |                      |
| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN              |                      |
| LIGHT RAIN. FIR NOT                                       |                      |
| USED ONLY PID.  | TOURG PROPERLY.      |
|   |                      |
|   |                      |
|   |                      |
|   |                      |
| SPECIAL NOTES.  |                      |
|   |                      |
|   |                      |
| TOLLOGO   |                      |
| TCMORROW'S EXPECTATIONS                                   |                      |
| PETURN OFFICE   |                      |
|   |                      |
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BY\_

|                                      | DATE                                  |   | 121/  | 43                                     |                                  |
|--------------------------------------|---------------------------------------|---|---|--|----------------------------------|
| A-E DAILY QUALITY                    | DAY                                   | SM  | 1 14  | \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ | S                                |
| CONTROL REPORT                       | WEATHER                               | Sun Ct  |   | Rum                                    | Snow                             |
| COE PROJECT MANAGER                  | TEMP                                  | To 32 32.   | 50 50-70                                      | 70-85                                  | కిస్ అం                          |
| PROJECT FST-025 86 WASTE OIL TANKS   | WIND                                  | Still Hox   | eer High                                      | Recc                                   | rt No.                           |
| JOB NO                               | нимірлу                               | Dry Hax   | Pumps   |  |                                  |
| SUB-CONTRACTORS ON SITE:             |                                       |   |   |  |                                  |
| JUDSON SMITH, MIKE BAILEY            | -                                     |   |   |  |                                  |
| ECUIPMENT ON SITE.                   |                                       |   |   |  |                                  |
| BAUGOS DECRE SAL BURE                |                                       |   |   |  | <del></del>                      |
| BALLERS, DECON EQUIPMENT, SAMPLE     | LOOLERS                               | < BOTTL   | ES, P10                                       | · · · · · · · · · · · · · · · · · · ·  |                                  |
| WORK PERFORMED (INCLUDING SAMPLING): |                                       | <del></del>   |   | ·                                      |                                  |
|                                      |                                       |   |   |  |                                  |
| PETURNED TO EACH OF FORE             | ) HE LEM                              | p We  | LLS A:  | <u>ري کر</u><br>—                      | TE.                              |
| FREE PRODUCT FROM FST-02             | E PRODUCT                             | · SAZ   | 1 PLED  | THE                                    |                                  |
| 94C SHOW 2.8 ST OF FREE              | S-CTTE,                               | TA 1  | 00A & 6                                       | 447                                    |                                  |
| THAN EARLIER, SHOWED 2.5             | St B=                                 | · 4A  | SHOW  | EO HI                                  | CHER                             |
| WERE OVER 3,0 St. 4A SI              | EEMS TO                               | RE 1  | ANUG  | 44                                     |                                  |
| OF FUELS (G45, DEISEL, JA            | 24 (24)                               | NE 74   | 45 10-  | 1                                      |                                  |
| AND 940 SEEMS TO BE OF               | LS EST                                | -018- 3   | 13 100,<br>W7 .,                              | 4 64                                   | 4                                |
| RESAMPLED FOR METALS                 | TO MA                                 | Rn C  | HECK  | <u> </u>                               | 1.50                             |
| RESULTS. DRILL CREW INCA             | PABLE C                               | E 11  | PRILLE  | CHE                                    | 2166                             |
| =14611NG FST-025-94 AND.             | -フロー ムノロ・                             | CAL A   | ~ ~ ~   |  |                                  |
| REMAINING HOLES PEQUIRI              | NG THE                                | VP 4  | CP.   | FE ON                                  | <u>~~y</u>                       |
|                                      |                                       | 01210   | <u> </u>                                      | <u>-w.</u>                             |                                  |
|                                      |                                       |   |   |  |                                  |
|                                      |                                       |   |   | ·                                      |                                  |
|                                      |                                       | er an History and Prantist Control Practice for the | to Harrison of Resident Labora Decree 1989 to | Harris of the Albert Carrie Decree     | Therefore is the contract of the |
|                                      |                                       | ·   |   | <del></del>                            |                                  |
|                                      |                                       |   |   |  |                                  |
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|                                      |                                       |   |   | <del></del>                            |                                  |
|                                      |                                       |   | SHEET   | _ TF                                   |                                  |

| DATE 10/21/13  COULTY CONTROL ACTIVITIES INCLUDING FIELD CALIBRATIONS)  PLO CALIBRATED NITH 256 ppm / SOBUTYLENE PLEAD  254 NITS (080° 10/21/33  MEALTH AND SAFETY LEVELS AND ACTIVITIES.  MICH LEVEL D WITH DWALE CLOVES  PROBLEMS ENCOUNTEREDICORRECTION ACTION TAXEN  PECIAL NOTES.  MARKED SAMPLE BOTTLES FREE PRODUCT TO WARN  TECHNICIANS AT LAB  MORROWS EXPECTATIONS  FST-025-94 & 70 | PARLECT. FOT-025 86 WASTE DIG TANKS                       | REPORT NO.  | (Continuation Sr   |
|---|---|-------------|--|
| PIO CALIBRATED NITH 256 PPM 150 BUTTLENE MEAD  254 NITS (08:00 11/1/3)  HEALTH AND SAFETY LEVELS AND ACTIVITIES.  WHOD LEVEL D NITH DOBGE CLOVES  PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN.  PECIAL NOTES.  MARKED SAMPLE BOTTLES FREE PRODUCT TO WARM  TECHNICIANS AT LAB  EMORROWS EXPECTATIONS   | JOB NO  |             | (21/33   |
| PECIAL NOTES.  MARKED SAMPLE BOTLES FREE PRODUCT TO WARM  MORROWS EXPECTATIONS  | QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS) |             | ~~~~   |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.  WOOD LEVEL D WITH BORGE CLOVES  ROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN  PECIAL NOTES.  MARKED SAMPLE BOTTLES FREE PRODUCT TO WARM  TECHNICIANS AT LAB  MORROWS EXPECTATIONS  | PID CALIBRATED WITH 251                                   | ,           |  |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.  WOOD LEVEL D WITH BORGE CLOVES  ROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN  PECIAL NOTES.  MARKED SAMPLE BOTTLES FREE PRODUCT TO WARM  TECHNICIANS AT LAB  MORROWS EXPECTATIONS  | 254 256 ppm   | 150BUTYLENE | READ   |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.  WOOD LEVEL D WITH BORGE CLOVES  ROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN  PECIAL NOTES.  MARKED SAMPLE BOTTLES FREE PRODUCT TO WARM  TECHNICIANS AT LAB  MORROWS EXPECTATIONS  | 100113 (08, 10/21/1)                                      |             |  |
| PROBLEMS ENCOUNTEREDICORRECTION ACTION TAKEN  PECIAL NOTES.  MARKED SAMPLE BOTLES FREE PRODUCT TO WARM  TECHNICIANS AT LAB  MORROWS EXPECTATIONS  |   |             |  |
| ROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN  PECIAL NOTES.  MARKED SAMPLE BOTLES FREE PRODUCT TO WARM  TECHNICIANS AT LAB  MORROWS EXPECTATIONS   |   |             |  |
| ROBLEMS ENCOUNTERED/CORRECTION ACTION TAXEN  PECIAL NOTES.  MARKED SAMPLE BOTLES FREE PRODUCT TO WARM  TECHNICIANS AT LAB  MORROWS EXPECTATIONS   |   |             |  |
| ROBLEMS ENCOUNTERED/CORRECTION ACTION TAXEN  PECIAL NOTES.  MARKED SAMPLE BOTLES FREE PRODUCT TO WARM  TECHNICIANS AT LAB  MORROWS EXPECTATIONS   |   |             | <del></del>  |
| ROBLEMS ENCOUNTERED/CORRECTION ACTION TAXEN  PECIAL NOTES.  MARKED SAMPLE BOTLES FREE PRODUCT TO WARM  TECHNICIANS AT LAB  MORROWS EXPECTATIONS   |   | <u> </u>    |  |
| ROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN  PECIAL NOTES.  MARKED SAMPLE BOTLES FREE PRODUCT TO WARM  TECHNICIANS AT LAB  MORROWS EXPECTATIONS   |   |             |  |
| ROBLEMS ENCOUNTERED/CORRECTION ACTION TAXEN  PECIAL NOTES.  MARKED SAMPLE BOTLES FREE PRODUCT TO WARM  TECHNICIANS AT LAB  MORROWS EXPECTATIONS   | HEALTH AND SAFETY LEVELS AND ACTIVITIES                   |             |  |
| ROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN  PECIAL NOTES.  MARKED SAMPLE BOTTLES FREE PRODUCT TO WARM  TECHNICIANS AT LAB  MORROWS EXPECTATIONS  | Mod Liver D   |             |  |
| ROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN  PECIAL NOTES.  MARKED SAMPLE BOTTLES FREE PRODUCT TO WARM  TECHNICIANS AT LAB  MORROWS EXPECTATIONS  | DEVEL D WITH BOUBLE (                                     | = LOVES     |  |
| ECIAL NOTES.  MARKEO SAMPLE BOTLES FREE PRODUCT TO WARN  TECHNICIANS AT LAB  MORROWS EXPECTATIONS   |   |             |  |
| ECIAL NOTES.  MARKEO SAMPLE BOTLES FREE PRODUCT TO WARNY TECHNICIANS AT LAB  MORROWS EXPECTATIONS   |   |             |  |
| ECIAL NOTES.  MARKEO SAMPLE BOTLES FREE PRODUCT TO WARNY TECHNICIANS AT LAB  MORROWS EXPECTATIONS   |   |             |  |
| ECIAL NOTES.  MARKEO SAMPLE BOTLES FREE PRODUCT TO WARNY TECHNICIANS AT LAB  MORROWS EXPECTATIONS   |   |             |  |
| PECIAL NOTES.  MARIEN SAMPLE BOTLES FREE PRODUCT TO WARNY  TECHNICIANS AT LAB  MORROWS EXPECTATIONS   | ROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN               |             |  |
| MARKED SAMPLE BOTLES FREE PRODUCT TO WARM TECHNICIANS AT LAB MORROWS EXPECTATIONS   | TOTAL TACK  | •           |  |
| MARKED SAMPLE BOTLES FREE PRODUCT TO WARM TECHNICIANS AT LAB MORROWS EXPECTATIONS   |   |             |  |
| MARKED SAMPLE BOTLES FREE PRODUCT TO WARM TECHNICIANS AT LAB MORROWS EXPECTATIONS   |   |             |  |
| MARKED SAMPLE BOTLES FREE PRODUCT TO WARM TECHNICIANS AT LAB MORROWS EXPECTATIONS   |   |             |  |
| MARKED SAMPLE BOTLES FREE PRODUCT TO WARM TECHNICIANS AT LAB MORROWS EXPECTATIONS   |   |             | <u> </u>   |
| MARKED SAMPLE BOTLES FREE PRODUCT TO WARM TECHNICIANS AT LAB MORROWS EXPECTATIONS   |   |             | <del></del>  |
| MARKED SAMPLE BOTLES FREE PRODUCT TO WARM TECHNICIANS AT LAB MORROWS EXPECTATIONS   |   |             |  |
| MARKED SAMPLE BOTTLES FREE PRODUCT TO WARM TECHNICIANS AT LAB MORROWS EXPECTATIONS  |   |             | · · · · · · · · · · · · · · · · · · ·                      |
| MARKED SAMPLE BOTTLES FREE PRODUCT TO WARM TECHNICIANS AT LAB MORROWS EXPECTATIONS  | ECIAL NOTES.  |             |  |
| MORROWS EXPECTATIONS  | MARKER SALATER  |             | ·  |
| MORROWS EXPECTATIONS  | TAICHE DAMPLE DOTLES FREE                                 | PRODUCT TO  | WARM   |
|   | - FEHNICIANS AT LAB                                       |             |  |
|   | None  |             |  |
| + 57-025-94 8 70  |   |             |  |
|   | +51-025-94 & 70   |             |  |
|   |   |             | <u> </u>   |
|   |   |             | Carrier Const. of Household in Section 1994 (Section 1994) |
|   |   |             | <u>**</u>  |
|   |   |             |  |
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ВУ\_\_

TITLE

|   | DATE   | 10 /22   | 193  |                                     |
|---|--|--|--|-------------------------------------|
| A-E DAILY QUALITY<br>CONTROL REPORT   | DAY<br>WEATHER                                   | S M T  | W TH   | S Sow                               |
| PROJECT_FST-025 86 WASTE O. L TANKS   | TEMP   | To 12 12:50  | <u> </u>   | 15 mg                               |
| JOB NO  | W#NO   | SX   Moor  | Hon  | PACON NO.                           |
| CONTRACT NO   | HUMIDITY   | Dry Moder  |  | 1                                   |
| SUB-CONTRACTORS ON SITE:  |  |  |  |                                     |
| JUDSON SMITH, MIKE BAILEY, H  | ORACE FU   | LCHER, Do  | uglas La   | POUCHE                              |
| ECUIPMENT ON SITE   | · · · · · · · · · · · · · · · · · ·              | ····   | · <u> </u>   |                                     |
| DRIN RIG, DECON EQUIPMENT, STEAM CLEANER,<br>CASING WELL SCREEN, SAMPLE BOTTLES,<br>WORK PERFORMED (INCLUDING SAMPLING):  | HAND AVGES<br>SAMPLE C                           | e, Well P  | DINTS, WE<br>DOVA, CGI,  | CAL. GASES                          |
| CHECKED BREATHING ZONE AFTER SAFFTY LEVEL. THEN STARTED FST-025 FST-025-94 AND FST-025-70. TOOK HALF FOOT. FST-025-70 WELLOOKED CONTAMINATED. STARTING AROUND STRONG OF VARIOUS VOC'S. T OF THE SOIL INDICATED HEAVY RESIDUE. THE FIDIPID SHOWED THE VOLATILE. TEMPORARY WELLS WE LOCATIONS. & SOILE SAMPLES WE ARJEDUS SAMPLENG WAS LEFT TO SAMPLE COULD BE TAKEN. | OVA (PID) TO BE A 9.05+ HE COLL CONTAMINA OF THE | SAMPLE. SAMPLE REPRESO F THE SOI ON AND TOUN OF CONTAMINA PLACED | ROUND W<br>S EVER<br>BADLY<br>L SMELL<br>TEXTUR<br>AN OIL<br>ME IS I   | E<br>HIGHLY                         |
|   |  |  | A STATE OF THE STA | 1.1100 PAR 1910 SIGN, HAVE AND SAME |
|   |  |  |  |                                     |
|   |  | SHEE   | I  |                                     |

PROJECT FST-025 86 WASTE ON TANKS REPORTNO. (Continuation Sheet) .O8 NO. \_\_\_\_\_ \_ DATE 10/22/93 QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS) PID CACIBRATED WITH 256 DAM SO BUTYLENE " 10 & 95 ppm METHANE HEALTH AND SAFETY LEVELS AND ACTIVITIES. MOD LEVEL D PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN SPECIAL NOTES. TOMORROW'S EXPECTATIONS FST-025-94, 70 AQUE OUS

BY\_\_\_\_\_TITLE\_\_\_\_

|  | DATE        | 10            | 125                                   | 193  |              |             |
|--|-------------|---------------|---------------------------------------|--|--------------|-------------|
| A-E DAILY QUALITY<br>CONTROL REPORT  | DAY WEATHER | S             | X                                     | W Owns   | TH F         | S           |
| The state of the s | WENTHEH     | Sun           |                                       |  | Rank         | Snow        |
| COE PROJECT MANAGER  | ТЕМР        | To 32         | 32-50                                 | 50-70  | 70 <b>45</b> | 55 up       |
| PROJECT FST-025 86 WASTE OIL TANK  | W#NO        | Sol           | Moder                                 | Hçn  | Peoc         | or No.      |
| JOB NOCONTRACT NO  | HUMIDITY    | Dγ            | Moosr                                 | Hugges   | 1            |             |
| SUB-CONTRACTORS ON SITE:   |             |               |                                       |  | <u> </u>     |             |
| JUDSON SMITH   |             |               |                                       |  |              |             |
|  | -           | <del></del>   |                                       |  |              |             |
| ECUIPMENT ON SITE.   |             |               | · · · · · · · · · · · · · · · · · · · | <del></del>  |              |             |
| TEFLON BALLERS, DECON EQUIPMEN   | T SINDIE    | Can           | - 15                                  | . 0  |              |             |
| COUNTY WILLIAM   | BRATION     | STANO         | ARNS                                  | <u> </u>   | HUES         |             |
| and the same conditions and the same conditions are same conditions.   |             |               |                                       |  |              | <del></del> |
| A HALE DAY OF ACTION   | 075-94 0    | ! FS          | T-02                                  | S-70   | FOR          | <del></del> |
| THE DAY OF TRUE OF SI  | MOLLAGE     | 70            | رة ك                                  | 1  | . , .        |             |
| TELL PREE PRODUCT THE TEN  | EI $OE$     |               | A                                     | / 47-  |              |             |
| THE SOIL APPEARED TO BE  | MORE.       | FST           | -025                                  | -94  | WAS          |             |
| WITHIN A LOCKED MOTOR<br>AN HOUR TO LOCATE THE   | POOL AN     | $\frac{p}{c}$ | T                                     | 700 K  | <u> </u>     |             |
| TO OPEN IT.  | NECES       | SAIC          | 4                                     | PERS   | ONNE         |             |
|  |             | <u> </u>      |                                       | <u></u>  |              |             |
|  |             | -             | <del></del>                           | <del></del>  |              |             |
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| ·  |             |               | SH€                                   | ET   | CF_          |             |

| JOB NO          | 57-025                           |                   |                        | · · · · · · · · · · · · · · · · · · · | REPORT N  | D:       | [Commusion ] |
|-----------------|----------------------------------|-------------------|------------------------|---------------------------------------|-----------|----------|--------------|
|                 | TROL ACTIVITIES                  | W.G. Law          |                        |                                       | DATE      |          | 125/9        |
| OH              | METER.                           | TINCLUDING        | FELD CALIBR            | ATIONS                                |           |          |              |
| CONOU           | TIVITY                           | 1 = = 2 A         | SICATED                | WITH                                  | 741       | 0 57     | ANDARD       |
| Naci            |                                  | - CIL             | CALIBR                 | ATEP                                  | WITH      | 0-180    | mohm         |
|                 | METER<br>CTIVITY N<br>SOLUT      | 10 N              |                        |                                       |           |          |              |
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|                 |                                  |                   |                        |                                       |           |          |              |
| HEALTH AND S    | AFETY LEVELS A                   | NO ACTIVITIE      | S.                     |                                       |           |          |              |
| 11/0            | DLEVE                            | 10                |                        |                                       |           |          |              |
|                 |                                  |                   |                        |                                       |           |          |              |
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| BOB! SIZE SIZE  |                                  | •                 | · <del></del>          |                                       |           |          |              |
|                 |                                  |                   |                        |                                       |           |          |              |
| 4-111           | OUNTERED/COR                     | RECTION AC        | TION TAKEN             |                                       |           |          |              |
| TEAVY           | SCAIN                            | RECTION AC        | TION TAKEN:            | RREO                                  | IN 5      | PATS     | 40.0         |
| TEAVY           | COUNTEREDICORI<br>RAIN.<br>MPCE. | PECTION AC<br>ONL | TION TAKEN             | REO                                   | :<br>In S | COTS     | , ARIE       |
| TEAVY           | SCAIN                            | PECTION AC        | TICH TAKEN:<br>Y Occ 1 | REO                                   | :<br>In S | POTS     | , ARCE       |
| TEAVY           | SCAIN                            | PECTION AC        | TICN TAKEN:<br>Y Occu  | PRED                                  | :<br>In S | COTS     | , ARIE       |
| TEAVY           | SCAIN                            | RECTION AC<br>ONL | TION TAKEN             | PRED                                  | :<br>In S | POTS     | , ARIE       |
| TEAVY           | SCAIN                            | RECTION AC        | TICN TAKEN:<br>Y Occ 1 | PRED                                  | In S      | COTS     | , ARCE       |
| TEAVY           | SCAIN                            | PECTION AC        | TICN TAKEN:            | PRED                                  | :<br>/n S | POTS     | , ARIE       |
| TTEAVY<br>TO SA | SCAIN                            | PECTION AC        | TION TAKEN             | PRED                                  | :<br>/n S | COTS     | , ARIE       |
| TTEAVY<br>TO SA | SCAIN                            | RECTION AC        | TICN TAKEN             | PRED                                  | :<br>In S | POTS     | , ARIE       |
| ECIAL NOTES.    | BCAIN.                           | RECTION AC        | TICN TAKEN:            | PRED                                  | :<br>/n S | POTS     | , ARIE       |
| ECIAL NOTES.    | PECTATIONS                       | RECTION AC        | TICH TAKEN: Y Occ 4    | PRED                                  | ·<br>/n S | COTS     | , ARIE       |
| ECIAL NOTES.    | PECTATIONS                       | RECTION AC        | TICN TAKEN: Y Occ 4    | PRED                                  | :<br>/n S | COTS     | , ARCE       |
| ECIAL NOTES.    | BCAIN.                           | RECTION AC        | TICN TAKEN:            | PRED                                  | /n S      | COTS     | , ABIE       |
| ECIAL NOTES.    | PECTATIONS                       | RECTION AC        | TICN TAKEN             | PRED                                  | :<br>/n S | COTS     | , ARIE       |
| ECIAL NOTES.    | PECTATIONS                       | RECTION AC        | TICN TAKEN             | I                                     | /n S      | COTS     | , ARIE       |
| ECIAL NOTES.    | PECTATIONS                       | RECTION AC        | TICN TAKEN: Y Occ 4    | PRED                                  | /n S      | COTS     | , ARIE       |

TITLE

|  | DATE 10 / 28 / 93   |
|--|---|
| A-E DAILY QUALITY<br>CONTROL REPORT  | WEATHER BOTH CAN DATE RATE STORY  |
| PROJECT FST-003 TAC - X LAND FILL  | TEMP TO IZ 12-50 50-70 70/45 55 40  |
| JOB NO   | WIND Moder High Recort No.  |
| SUB-CONTRACTORS ON SITE:   | X Man   |
| JUDSON SMITH, TONI NICHOLS   | on, BILL TOWNSEND   |
| ECUIPMENT ON SITE.   |   |
| HAND AUGER, DECON SQUIPMEN   | T, SAMPLE COOLERS AND BOTTLES   |
| WORK PERFORMED (INCLUDING SAMPLING):   |   |
| AND FST-025- 4A (WITH FST-026)  FURTHER: WORK NEEDS TO  LOCATIONS. FST-025-56 IS  THERE FORE DOES NOT NEED  4A NEEDS TO BE MOVED  CLOSER TO THE TANK. TH  BORING WILL BE SO MA  FST-026 NEEDS 7 MORE ROR  AROUND THE STAINED LOCATION  SAMPLE EACH AND ONE  4 TOTAL OF 4 TOTAL SAMPLE  SAMPLED FOR ONE SURFACE  NOT PRESENT, ALL DRIED UP. | SE DONE AT THOSE  LICATED UNDER CONCRETE,  TO BE SAMPLED. FST-025-  TO WITHIN FLOST OR  E SAMPLES FROM THIS  RIED FST-025-444,  INGS WITHIN THE DITCH  ONS. ONE SURFACE  SOIL BORING EACH FOR  CES. FST-003 WAS  LE SOIL INSTEAD OF |
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| · -  | SPEET OF  |

| PRIMECT F57-00 3   | — R⊞ORT                               | NO   | (Continuation 5 |
|--|---------------------------------------|--|-----------------|
|  |                                       |  | 10/28/93        |
| CUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS | 3)                                    |  | 7.5             |
| N/A  | ,,                                    | <del></del>  |                 |
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|  |                                       |  |                 |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.                 |                                       |  |                 |
| MOD EEUEL D  |                                       |  |                 |
| TO CLUEL D   |                                       |  |                 |
|  | 1                                     |  |                 |
|  |                                       |  |                 |
|  |                                       |  |                 |
| ROBI FUS ENCOUNTERED TO                                  |                                       |  |                 |
| ROBLEMS ENCOUNTERED/CORRECTION ACTION TAXEN              | ÷ •                                   |  |                 |
| NONE   | -                                     |  |                 |
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| ECIAL NOTES.   |                                       |  |                 |
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| MORROWS EXPECTATIONS                                     |                                       |  |                 |
| MORROWS EXPECTATIONS EOD SITES                           |                                       |  |                 |
| CORROWS EXPECTATIONS  EOD SITES                          |                                       | NAMES IN A 488 TO 1 4 FRO  |                 |
| ACAROWS EXPECTATIONS  EOD SITES                          |                                       | V-100-10 M of all 100 M  |                 |
| AORROWS EXPECTATIONS  EOD SITES                          |                                       | N-100-100 A of a 400-100   |                 |
| MORROWS EXPECTATIONS  EOD SITES                          |                                       | Name of Castler's Castler' |                 |

TITLE

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|  | O a Tr       | E11/1/93   |
| •  | DATE TANK    | Sivilia  |
| A-E DAILY QUALITY  |              | 3   X   TH   F   S   |
| CONTROL REPORT   | WEATHER      | State Char Overcome (Ram   Snow  |
| COE PROJECT MANAGER  |              | sin X  |
| PROJECT_FST-OIL FOD SITE   | ТЕМР         | TO 32 22-50 50-70-85 85-10   |
| JO8 HO   | - WIND       | Self Moder High Recon No.  |
| CONTRACT NO  | HUMIDITY     | Dry Wood Humon   |
| SUB-CONTRACTORS ON SITE:   |              |  |
| JUDSON SMITH, MIKE STEVENS   |              |  |
|  | - 1(ANDY +1A | Laris  |
| ECUIPMENT ON SITE.   |              | ,  |
| CALIBRATION GASES  | DIF CHOLERS  | ex Time Danne  |
| WORK PERFORMED WAS LIGHT   | - India      | SE DARS PID, CGI   |
| WORK PERFORMED (INCLUDING SAMPLING):                                     |              |  |
| THE FOLLOW WE LASS BOOKEN IN   | SAMPLES C    | U.L. B= SENT T.  |
| WILL RECIEVE PHISPS VEC 8240   | ~ By AN      | ALYSIS: CARR LABS  |
| IT LABS WILL PECE  | AND RORA     | METAL SAMPLES!   |
| SAU WILL RECIEVE CAMPIES OF  | VE RESTUUE   | SAMPLES AND  |
| MET Sat IZWIN AND RANDY HADDIS   | ALL PERIA    | METER EXEPT PHISRE   |
| E 12:00 WE WENT TO EOD S   | SITE EST     | HOUSTON'S OFFICE   |
| Let Very Very  | ERMINE       |  |
| META, 15-  | UNCION       | W174 715   |
| METAL DETECTOR TO SE ONCE  | E THE Y      | PIT WAS SHOWN  |
| SAMPLES WERE TAKEN BETWEEN SURFACE, BUT CONSIDER SICOMPLETE THREE TODAY. | HAND-AU      | GER TO SAMPGE  |
| SURFACE RIT CAREN BETW   | JEEN 1-1     | YZ FT BELOW  |
| COMPLETE THREE TODAY.  | URFACE S     | AMPCES. WE   |
| THE TON AY.  |              |  |
|  |              | estisses timasen tikosainsesses arvitaninen koalisa, etissä etissä aika kaaninen kunnassa saasaan esittää esit |
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|-----------------------------------|---------------------|------------|----------------|
| .0N 80L                           |                     |            |                |
| CUALITY CONTROL ACTIVITIES LINCLE |                     |            | DATE 11/1/93   |
| CALIBRATES                        | JUING FIELD CALIBRA | LTIONS)    |                |
| CALIBRATIED F                     | 10 WITH             | 256 ppm    | ISORUTUI SUF   |
|                                   |                     |            | 200-17CEX1.    |
|                                   |                     |            |                |
|                                   |                     |            |                |
|                                   |                     |            |                |
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|                                   |                     |            |                |
| 15.1.7.                           |                     |            |                |
| HEALTH AND SAFETY LEVELS AND ACT  | IVITIES.            |            |                |
| 100 LEVEL 1                       | 1-0 0.0             | ) Tu = 10  |                |
| PETERMINE SAFET<br>SOD SPECIALIST | Y / F1/51           | DITH /VIET | AL DETECTOR TO |
| SOD SPECIALIST                    | ( ) ( ) ( )         | CANDY H.   | ARRIS A TRAIN  |
| EXPLOSIVE HAZARDS                 | Sin                 | DETERMIN   | ED IF ANY      |
|                                   | - KISTED            |            |                |
| ROBLEMS ENCOUNTERED/CORRECTIO     |                     |            |                |
| - ENEDICONNECTIC                  | N ACTION TAKEN      | • •        |                |
|                                   |                     |            |                |
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| ECIAL NOTES.                      | ·                   |            |                |
| ECIAL NOTES.                      | ·                   |            |                |
| ECIAL NOTES.                      |                     |            |                |
| ECIAL NOTES.                      |                     |            |                |
|                                   |                     |            |                |
| ICRROWS EXPECTATIONS              |                     |            |                |
| ICRROWS EXPECTATIONS              | T-01Z               |            |                |
| ICRROWS EXPECTATIONS              | 7-012               |            |                |
| ICRROWS EXPECTATIONS              | 7-012               |            |                |
| ICRROWS EXPECTATIONS              | T-012               |            |                |
| ICRROWS EXPECTATIONS              | T-01Z               |            |                |
| ICRROWS EXPECTATIONS              | T-01Z               |            |                |

| A-E DAILY QUALITY CONTROL REPORT  COE PROJECT MANAGER  PROJECT _FST 011   | OATI OAY WEATHER TEMP WIND HUMIDITY   | Sun Com<br>Sun Com<br>To 12 12-50                  | SOX0   Prign   | Plan Show 70-85   25 LD                |
|---|---|--|--|--|
| SUB-CONTRACTORS ON SITE:  JUDSON SMITH, MIKE STEVENS, RE  EQUIPMENT ON SITE.  HAND AUGER, DECON SQUIPMENT, SAMPLE CO  CALIBRATE GASES  WORK PERFORMED MINCLUDING SAMPLINGS:  THE DIRT ROAD TO NUMBER  HOLES BEFORE GETTING TO THE SIT                         | POLERS AND JA   | rs, P10  |  | Mup                                    |
| HOLES BEFORE GETTING TO THE SITE I TOOK A WRONG TURN WHILE ON PUDDLE ON THE ROAD I WAS ON DEEPER. THE VAN SUNK UP TO I MUD. WE COULD NOT FIND I COME PULL OUT THE VAN. AFTE AN HALF HOUR, IT SEEMED THE ACH HOLE WAS ENTERED WITH THE METAL DETECTOR TO DETER | THE DIN<br>PROVED:<br>HE BUMPE<br>HELP TILL<br>R RUNN,<br>TO WORK<br>FST-011. | INTLY,  PT ROA  TO BE  R IN N  AFTER  NG IT  ALPIG | IHIS A<br>OS. A<br>SOMEV<br>VATER<br>18:00<br>FOR<br>HT. M | ORNING<br>SIMILAR<br>WHAT<br>AND<br>TO |
|   |   |  |  |  |
| ie.   |   | SF€£   | S  | F                                      |

| JOB NO     |                      |              |               | E                   |          |            |
|------------|----------------------|--------------|---------------|---------------------|----------|------------|
| CUALITY C  | ONTROLACT            | IVITIES LINC | 1110100 551 5 | CALIBRATIONS)       | OAT      | E_ 11/2/13 |
| CAL        | IBRATEO              | 0,0          | CODING FIELD  | CALIBRATIONS        |          |            |
|            |                      | FID          | WITH          | 256 ppn             | 150307   | VLFNE      |
|            |                      |              |               |                     |          | 1-12-2-    |
|            |                      | <del></del>  |               |                     |          |            |
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|            |                      | ······       |               |                     |          | ·          |
| FAI TH AND |                      | ,            |               |                     |          |            |
| 220        | SAFETY LEV           | ELS AND AC   | TIVINES.      |                     |          |            |
| 100        | LEVEL                | 0            |               |                     |          |            |
| DC AND     | 1 HARRI              | s, An        | 500 SP1       | ECIALIST CHE        |          |            |
| tor.       | 5 xpcosic            | E -HAZ       | ARDS -R       | Ersar E             | CKED 1+  | E AREA     |
| P10 7      | O PET                | RMINE        | CAFET         | FERE EM<br>Y LEVEL. | ERING. 7 | 4450 USE   |
|            |                      | <del></del>  | <u> </u>      | Y / EVEI            |          |            |
|            |                      |              |               |                     |          |            |
| POBLÉMS E  | NCOUNTERE            | CORRECT      | ICN ACTION T  |                     |          |            |
| POBLÉMS E  | NCOUNTERE            | CORRECT      | ICN ACTION T  |                     |          |            |
| POBLÉMS E  | NCOUNTERE            | CORRECT      | ICN ACTION T  | IXEN.               |          |            |
| POBLÉMS E  | NCOUNTERE            | CORRECT      | ICN ACTION T  |                     |          |            |
| POBLÉMS E  | NCOUNTERE            | CORRECT      | ICN ACTION T  |                     |          |            |
| POBLÉMS E  | NCOUNTERE            | CORRECT      | ICN ACTION T  |                     |          |            |
| POBLÉMS E  | NCOUNTERE            | CORRECT      | ICN ACTION T  |                     |          |            |
| POBLÉMS E  | NCOUNTERE            | CORRECT      | ICN ACTION T  |                     |          |            |
| POBLEMS E  | NCOUNTERES<br>STUCK. | CORRECT      | ICN ACTION T  |                     |          |            |
| POBLÉMS E  | NCOUNTERES<br>STUCK. | CORRECT      | ICN ACTION T  |                     |          |            |
| POBLEMS E  | NCOUNTERES<br>STUCK. | CORRECT      | ICN ACTION T  |                     |          |            |
| COBLEMS E  | NCOUNTERES<br>STUCK. | CORRECT      | ICN ACTION T  |                     |          |            |
| COBLEMS E  | NCOUNTERES<br>STUCK. | CORRECT      | ICN ACTION T  |                     |          |            |
| CIAL NOTE  | NCOUNTERES<br>STUCK. | CORRECT.     | ICN ACTION T  |                     |          |            |
| CRAOWS E   | NGOUNTERES  STUCK.   | CORRECT.     | ICN ACTION T  |                     |          |            |
| CIAL NOTE  | NGOUNTERES  STUCK.   | CORRECT.     | ICN ACTION T  |                     |          |            |
| CRAOWS E   | NGOUNTERES  STUCK.   | CORRECT.     | ICN ACTION T  |                     |          |            |
| CRAOWS E   | NGOUNTERES  STUCK.   | CORRECT.     | ICN ACTION T  |                     |          |            |
| CRAOWS E   | NGOUNTERES  STUCK.   | CORRECT.     | ICN ACTION T  |                     |          |            |
| CRAOWS E   | NGOUNTERES  STUCK.   | CORRECT.     | ICN ACTION T  |                     |          |            |

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DATE 11/3/43

| •                                    | DAY                                   | S               | H I I      | TWA                                    | H I E                                   |             |
|--------------------------------------|---------------------------------------|-----------------|------------|--|---|-------------|
| A-E DAILY QUALITY                    |                                       |                 |            |  |   | S           |
| CONTROL REPORT                       | WEATHER                               | Score<br>Score  | Ciar       | Overcome                               | Ren                                     | Snow        |
|                                      |                                       | To 32           | 32.50      |  |   |             |
| COE PROJECT MANAGER                  | TEMP                                  |                 |            | 50-70                                  | No.                                     | కుత         |
| PROJECT FST-01Z ACTIVE END SITE      | . WIND                                | **              | Moder      | भट्टम                                  | F400                                    | n,No.       |
| CONTRACT NO                          | . HOMIDULA                            | Ory             | 400        | muntag                                 |   |             |
| SUB-CONTRACTORS ON SITE:             |                                       |                 |            |  | <u></u>                                 |             |
| JUDSON STOTA MINE SEEVEN, PANOT      | 7 22.5.41                             |                 |            | <del></del>                            | <del> </del>                            |             |
| SE SOFFIE TO AND TO                  | ATARILIN, SE                          | <del>91_1</del> | Les · V    | ······································ | <del></del>                             |             |
| ECUIPMENT ON SITE.                   |                                       |                 |            | · · · · · · · · · · · · · · · · · · ·  | <u></u>                                 |             |
| HAND AUGER DECO. & GUPLIEUT SAMPLE   | E Conters de                          | JAVES           | PID        | CGI                                    | · · · · · · · · · · · · · · · · · · ·   | <del></del> |
| CALIBRATION (JAS                     |                                       |                 |            |  |   |             |
| WORK PERFORMED (INCLUDING SAMPLING): |                                       |                 |            | -                                      |   |             |
| ApplyED Ca SITE AROND CS 10-         | Im. Sqi IRW.                          | V F             | STEW       | ART ED                                 | ۽رڪ 0                                   | CHUST       |
| - 14410 FUR THEN COFT-               | 42000 09                              | 120 13          | andy t     | TAPPIS                                 | CHEC                                    | KFO.        |
| - M. LCCATION: KEFULL DICEING WITH A | CERTION I                             | PLACE.          | - ين الشر  | +101=5                                 | in a de                                 |             |
| CHECKED AS CONFINED SPACES. BAKKEN   | ELNO SAMPO                            | Ē er            | 145        | 14KEN                                  | /                                       | <u> </u>    |
| BEHIND BUNKER FOR BIST RESE          | 135. FST-017                          | ?~(ss 2·        | - \$\$5)   | WHIC                                   | 1 H                                     | <u>.</u>    |
| TO BE TAKEN HAD THE APPLICABLE       | TEST WERE                             | : -             | <u> 45</u> | NEED.                                  | <u>/ルピー</u>                             |             |
| LICHTO THE AREA IS COVERED IN        | LESTING O                             | 40.40           | H Moi      | 2 +  EA1                               | <u> </u>                                | UD          |
| VARIOUS METALS. A HIGH METALS        | PESUIT FROM                           | ~ T:            | STUDY      | D OTH                                  | : 12Cm                                  | 2.1         |
| PRIETALS IS FICURTABLE MILAUY 1      | SUCLETS API                           | OFAR            | ALL        | = 1116                                 | J 10 55                                 | <del></del> |
| COMPLETE, THE BLAST PITS P           | REPETERM                              | INFO            | $A_{T}$    | TAP S                                  | ARI                                     | =0          |
| MEETING WERE SAMPLED                 | 45 & Cru                              | PNE             | VT CA      | Jac 1                                  | 2FCax                                   | 1250        |
| COLLECTERCIENT WATER TA              | O WATER, -                            | A 15            | D PRO      | PANO                                   | c 11                                    | 10          |
| FOR WATER.                           |                                       |                 |            |  |   |             |
|                                      |                                       |                 |            |  |   |             |
|                                      |                                       |                 |            |  | *************************************** |             |
|                                      |                                       |                 |            |  |   |             |
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|                                      |                                       |                 | Spec       | £Ι                                     |   |             |
|                                      |                                       |                 |            |  |   |             |

| PANECT EST-017 ALTIVE EUD SITE                            | - REPORTINO.  | (Continuation Shaw)                     |
|---|---|---|
| JOB NO  | OATE  | 11/3/53                                 |
| OUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS) |   |   |
| 08.10 PID WAS CALLED WITH                                 |   |   |
| READ 254 WIS  | 256 ppm   | 1 SUBLTY CENE                           |
| 08.10 PID WAS CALIBRATED WITH  ZEAO 254 WITS              |   |   |
|   |   |   |
|   |   |   |
|   |   |   |
|   |   |   |
|   |   |   |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.                  |   |   |
| MOD LEVEL D. AS SARLIER                                   |   |   |
| ARLIEN  | e SOD   |   |
|   |   |   |
|   |   |   |
|   |   |   |
| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN.             |   |   |
|   |   |   |
|   |   |   |
| 7.4   |   |   |
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|   |   |   |
|   |   |   |
| SPECIAL NOTES.  |   |   |
|   |   |   |
|   |   |   |
|   |   |   |
| CMORROWS EXPECTATIONS                                     | <del></del>   |   |
| FST-010   |   |   |
|   | THE PLANE WAS AND A STREET OF PROPERTY OF THE PARK OF THE STREET OF THE | NO. |
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|--------------------------------------|--|--|-------------------------------|-------------|--|
|                                      | DATE   | 11/4   | 153                           |             |  |
| •                                    | " " DAY  | Sul  | WI                            | Pot A F     | İs   |
| A-E DAILY QUALITY                    |  |  |                               | X           |  |
| CONTROL REPORT                       | WEATHER  |  | Overcom                       | Ran         | Snow   |
|                                      | -  | Sun X  | -                             |             |  |
| COE PROJECT HANAGER                  | TEMP   | To 32 32-50  | 50-70                         | 70.85       | 45 00  |
| PROJECT FST-010, INACTIVE GOD SITE   | W#WD   | Stay Mooor   | High                          | Fect        | on No.   |
| JOB NO                               | HUMIDITY   | Dry Hagas  | Humes                         | -{          |  |
| CONTRACT NO.                         |  | <u> </u>   |                               | <u> </u>    | <u>.</u>   |
| SUB-CONTRACTORS ON SITE:             |  |  |                               |             | <del></del>                                      |
| JUDSON SMITH, MIKE STEVENS, RAN      | 10Y -1/A201  |  |                               |             |  |
| ·                                    |  | <del></del>  | ····                          | ·····       |  |
| ECUIPMENT ON SITE.                   | ž,   |  |                               |             |  |
| HAND AUGER PECON SQUENT, SAME        | DE CODIENS   | & JARS   | 00                            | ·~~~T       | _  |
| CHERRITION GASES                     |  | C DAICS,   | $\sigma v$                    | (-(-+       | <del>-                                    </del> |
| WORK PERFORMED (INCLUDING SAMPLING); |  |  | ·····                         |             | <u> </u>   |
| PRRIVE ON SITE BY USIN-              | 1m. THE F  | -IRST F  | PTN                           | /E          |  |
| DILOVE TO, NOT PART OF THE           | ACTUAL S   | ITE FST.   | 010 1                         |             |  |
| THE VENTINION THRUES TO HAVE I       | REEN AN  | UNAUT  | "41 / 1 1 T                   | ZEO         |  |
| CHARLOUS SCRAPS.                     | BANDY HI   | ARDIS -  | NO                            | · · · ·     |  |
| WOUSON SMITH CHECKED TH              | TE SITE  | Inc.   | SAFE                          | TY          | <del></del>                                      |
| LEVEL AND EXPLUSIVE TA               | ZAROSO (   | DUCE A   | DETER                         |             | ED   |
| SAFET WE SAMPLED THE                 | SITE FO  | e pH   | SPC                           |             |  |
| VOC 8240 RCRA METALS AND             | 2 SXPLO  | SIVE B   | ESID                          | OFO         |  |
| THE BACKEROUND WAS TAKE              | NAT )  | HE OTH   | ER S                          | 3106        | _  |
| OF THE BIRT GLOAD APPR               | POPRIATEL  | y 15.0   | + -                           | ALL         | -  |
| SAMPLES ARE S-REACE                  | Soils  | DAKEN  | BETU                          | UEEL        | /  |
| 1-1.5 St. PRETURNED TO               | OFFIC  | <u> </u>   | <del></del>                   |             |  |
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|--------------------------------------|------------------|--|-----------|-------------|---------------|---------------------------------------|
| JOB NO                               |                  |  |           |             | DATE_         |                                       |
| CUALITY CONTRO                       | OL ACTIVITI      | ES (INCLUO                             | ING FIELD | CALIBRATION | SY            |                                       |
| CACIBRA<br>BEA 3                     | ATED - S         | PID :                                  | NITH.     | 256pgm      | 150BUTYLEN    | · F                                   |
| 71 2                                 | 570N.            | 1 20                                   |           |             |               | <i></i>                               |
|                                      |                  |  |           |             |               |                                       |
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| HEALTH AND SAFE                      | ETY LEVELS       | AND ACTIV                              | UDES      |             |               | · · · · · · · · · · · · · · · · · · · |
| Mon                                  | 1-E              | /F [ -                                 |           | <u></u>     |               |                                       |
|                                      | - Colonia        |  |           |             | 1             |                                       |
|                                      |                  |  |           |             |               |                                       |
|                                      |                  |  |           |             |               |                                       |
|                                      |                  |  |           |             |               |                                       |
| PROBLEMS ENCOL                       | UNTERED/C        | CARECTIO                               | Y ACTION  | TAKEN-      | * .           |                                       |
|                                      |                  |  |           |             |               |                                       |
|                                      |                  |  |           |             | :             |                                       |
|                                      |                  |  |           |             |               |                                       |
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|                                      |                  |  |           | •           |               |                                       |
|                                      |                  |  |           |             |               |                                       |
| DECIM NOVES                          |                  |  |           |             |               |                                       |
| PECIAL NOTES.                        |                  |  |           |             |               |                                       |
| PECIAL NOTES.                        |                  |  |           |             |               |                                       |
| PECIAL NOTES.                        |                  |  |           |             |               |                                       |
|                                      | ECTATIONS C      |  |           |             |               |                                       |
| DMORROWS EXPE                        |                  |  |           |             |               |                                       |
| CMCHAOWS EXPE                        | ECTATIONS<br>EEK |  | 35-4/     |             | T-026 (5A-6R) | AND                                   |
| DMORROWS EXPE                        |                  |  | 35-4/     |             | T-026 (5A-6B) | AMD                                   |
| CMCHAOWS EXPE                        |                  |  | 35-4/     |             | T-026 (5A-6B) | AMD                                   |
| CMCAROWS EXPE<br>NEXT WE<br>FST-OOLL |                  |  | 35-4/     |             | T-026 (5A-6R) | AND                                   |

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| •<br>अ  | UATE          |              | 1011               | <u> </u>                   |                 |   |
|---|---------------|--------------|--------------------|----------------------------|-----------------|---|
| A-E DAILY QUALITY   | - ĐẠY         | S            | C'aur 10           |                            | ਜ ਵਿ            | S                                       |
| CONTROL REPORT  | WEATHER       | Sun<br>Sun   |                    | Vence                      | X               |   |
| DOE PROJECT MANAGER   | TEMP          | To 32        | 32-50              | \$0,00                     | 70-85           | ص که ا                                  |
| PROJECT FST-025 FST-026   | WIND          | S21          | Mogor              | بخير                       | Fecc            | xt No.                                  |
| OB NO   | HUMIDITY      | Cry          | Mccoar             | Hey 25                     | 1               |   |
| SUB-CONTRACTORS ON SITE:  | <u> </u>      |              |                    |                            |                 |   |
| JUDSON SMITH, JIM BIDDLE  |               |              | ······             |                            |                 |   |
| ECUIPMENT ON SITE.  |               | ·            |                    |                            |                 |   |
| HAND AUGER, DECON. EQUIPMENT, WELL SCREEN, WELL CA                                | SING LOCKER   | CADS         | PID U              | VA CGI                     |                 | SPC.                                    |
| METER, CALIBRATION GASES AND SOLUTIONS BALLS WORK PERFORMED (INCLUDING SAMPLING): | ERS, BAILER L | INE S        | AMPLE              | Cool                       | - ERS 4         | NO JA1                                  |
| AT FST-025-44 SITE, WE INS  | TAUED         | NC N         | 1025 \             |                            | _13             |   |
| 3.05+ FROM THE WELL TANK. THE RI  | Am Scower     | Page         | DESS               | T.T S                      | 71800<br>741815 |   |
| CONSIDERABLY HARD. BURING THE SLO   | W PERIODS     | Aus          | REF                | برا جرد<br>سا جرد          | <u>-Mige</u>    | ·                                       |
| COMMENSED WE USED THE INSTR   | UMENTATION    | To           | ) ETER             | in all is                  | LEV             |   |
| CE SAFETY! AS WITH OTHER SUIL BOM   | ZINGS, WE C   | OLLEC        | TED                | Pini                       | FID             |   |
| SAMPLES SVERY HALF FOUT. ULUSON   | Smith the     | IND T        | UC-FRF             | 0 6                        | ے ہیں۔          | *************************************** |
| VIM BIDDLE EDETERMINED SOIL TO  | IPE AS W      | E WEA        | IT DO              | OWN.                       | Soil            |   |
| TIPPEARED TIGHLY CONTAMINATED. FST.   | -076 NEE      | DED          | Two                | Man                        | r (=            |   |
| CORINGS TO BE LAKEN WITHIN  | THE DITCH     | - As         | Disc               | - 25510                    | سر.             |   |
| NITH TONI NICHOLSON, WE PIT TO  | E FIRST       | 110          | THE                | $\mathcal{M}_{\mathrm{D}}$ | DOLE            |   |
| DE THE DITCH APPROXIMATELY 4 FT 1   | V FRONT C     | DE T         | IF OU              | TLE T                      | PIPE            |   |
| AND 10 FT TO THE LEFT FACING THE  | Woods.        | THE          | SECO               | ND Z                       | 3,,,,,          | <u></u>                                 |
| NAS PLACE AT THE EDGE OF THE  | E DITCH LA    | waran        | ت ہے               | Tic (                      | 2.,             |   |
| HE JANK ( NOT FUREST ) SIDE INSTEAD   | OF THE        | ומס ו או     | $\epsilon \cdot I$ | T WAS                      | Em.             |   |
| ZE WAIER. WAS APPROPRIATELY 2 FT  | LN FOOR       | $\sigma$ $O$ | E 114              | E OU                       | デルチェ            |   |
| PIPE AND 25 FT TO THE LEFT.   | OVAIPID.      | READI        | NGS                | TAKE                       | ~               |   |
|   |               | <del></del>  | <del></del>        |                            |                 |   |
|   |               |              |                    | ·                          |                 |   |
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(Continuation Sheet) PARTECT \_FST-025 / FST-026 REPORT NO. \_\_\_ JOB NO. \_\_\_\_\_ DATE 11/8/93 QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS) PID CALIBRATION HEALTH AND SAFETY LEVELS AND ACTIVITIES. MOD LEVEL D PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN SPECIAL NOTES. TOMORROW'S EXPECTATIONS FIRMISH FST-025/FST-026

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TITLE\_\_\_

|  | DATE                                   |             | 191                                    | 93                                    |                         |
|--|--|-------------|--|---------------------------------------|-------------------------|
| A-E DAILY QUALITY  | DAY                                    | S           | Ϋ́                                     |                                       | TH F S                  |
| CONTROL REPORT   | же <b>а</b> тнея                       | Brom<br>Sun | Clear                                  |                                       | Srow                    |
| COE PROJECT MANAGER  | TEMP                                   | Tox         | 32-50                                  | 33/10                                 | 70-85   85 10           |
| PROJECT_FST-025 FST-026 FST-004C   | WIND                                   | S21         | Moor                                   | hon                                   | Recort No.              |
| JOB NOCONTRACT NO  | HUNIDITY                               | רים         | Hoose                                  | Human                                 | 1                       |
| SUB-CONTRACTORS ON SITE:   |  |             |  |                                       |                         |
| JUDSON SMITH JIM BIDDLE  | •                                      |             |  |                                       |                         |
| ECUIPMENT ON SITE.   |  |             |  | · · · · · · · · · · · · · · · · · · · |                         |
| HAND AUGER, DECON- EQUIPMENT, WELL SCREEN, WELL C<br>METER, CALIBRATION GASES AND SOLUTIONS BALL<br>WORK PERFORMED (INCLUDING SAMPLING): | Asive, Locies &<br>ERS, BAILER L       | CAPS,       | PID, C                                 | VA CGI                                | . pH, SPC<br>ERS AND JA |
| TOOK SEVERAL HOURS TO GET K  | EYS FOR                                | THE .       | SITE.                                  | Our                                   | F /N                    |
| WETERMINED SAFETY LEVEL + LEAVY  | RAINS HAVE                             | = 12 =      | E 11                                   | Pour.                                 | E.                      |
| DEVERAL FLAVS TO THE DITCH WAS   | FULL OF                                | AN          | OLLY                                   | SHEEN                                 | 1. THE                  |
| FIREA HISO LIGHT SMELLED OF EVE  | L COUR. TH                             | E Roe       | ATHIN                                  | ~ 7.                                  | 0-11                    |
| POT THE FREA WAS INDICATED THE   | OGH THAT T                             |             | ic s                                   | SAFE                                  | Fire                    |
| SECO SAMPLED 1-ST-025-44(A) " SECO   | ND WELL AT                             | SITE        | FST                                    | -025-4                                | 4 " A                   |
| THERE WAS 1.83 FEET OF FREE F  | RODUCT. SA                             | MPLED       | ANY                                    | WAY )                                 | HOUGH                   |
| AND MARKED THE WARNINGS ON THE   | E CHIN OF                              | - Cus1      | 004.                                   | TOOK                                  | THÊ                     |
| SOL SAMPLE FORM FST-025. 4A(A) A   | T THE DET                              | ERMI        | NED                                    | DEPTH                                 | , 9.05t.                |
| THE SAMPLES AT FST-025-26  | FIRE NU                                | NREREI      | <u> 5</u>                              | A, 51                                 | 3, <i>6 A</i>           |
| AND 6B FOR THE FOLLOWING   | CEASONS                                | Eia         | 57                                     | 4رک                                   | NO                      |
| SECOND AS DEL DE   | SURINGS F                              | OR          | $S_{ITI}$                              | <u> F57</u>                           | -026.                   |
| ESCULLAS PER DISCUSSION U  | ン・エロー しっしょ                             | ×/ . ~      | dore.                                  | ~ て                                   | 12                      |
| THE SAMPLE CAT AND   | UNESO                                  | 11 /5       | CODIA                                  | a CP                                  | ' \ MED                 |
| HOLE; THUS SA, SB AND GA,  | 6 B. FINAL                             | <u>c y</u>  | W <u>=</u>                             | _WE                                   | 12 E                    |
| ABLE TO SAMPLE TWO OF  | 1 4E NIV                               | V AT        | <i>r</i> -57                           | -004C                                 | <u> </u>                |
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| PANECT FST-025, FST-026, FST-004C                         | REPORT NO.   | (Continuation Sheet)  |
|---|--|---|
| JOB NO  |  | 11/9/93   |
| QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS) | ·  |   |
| PIO CALIBRATED 256 DON TSORUTYLENE Q                      | 09.35.   |   |
| CONO " O. 180 o.h. "                                      | 09:35.   | <b>-</b>  |
| CONO " " 0.180 a.ha "                                     | 14:07  |   |
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| HEALTH AND SAFETY LEVELS AND ACTIVITIES.                  |  |   |
| MOD LEVEL P   |  |   |
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| HEAVY GLAIN   |  |   |
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| SPECIAL NOTES.  | ^  |   |
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| TCMORROW'S EXPECTATIONS                                   | <u> </u>   |   |
| FST-004C FINISH   |  |   |
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| ,  | DATE        |                          | 11 / 1              | 0/97         | <u> </u>    | _  |
|--|-------------|--------------------------|---------------------|--------------|-------------|--|
| A-E DAILY QUALITY  | DAY         | S                        | 4   1               | ×            | η F         | s  |
| CONTROL REPORT   | WEATHER     | Brans<br>Sun             | Class               | Overcoas     | X           | Snow   |
| COE PROJECT MANAGER  | ТЕМР        | To 32                    | 72,80               | 50-70        | 28-07       | 55 to  |
| PROJECT FST-004C BURN PITS                                 | WIND        | S24                      | Moore               | Hon          | Reco        | in No.                                       |
| CONTRACT NO  | НОМІРСТУ    | Ογ                       | Moder               | Humm         |             |  |
| SUB-CONTRACTORS ON SITE:                                   |             | <del></del>              |                     |              |             |  |
| JUDSUN SMITH JIM BIDDLE                                    |             |                          |                     |              |             |  |
| ECUIPMENT ON SITE.   |             | <del></del>              |                     | <del></del>  |             |  |
| BAILER BAILER LINE, DELVN EQUIPMENT                        | WATER 1 SIE |                          |                     | _ o O        | 0 00        | ·  |
| OH METER SPC METER, CALIBRATIO                             | W GASES AND | - Soci                   | T13 N S             | iek, I'      | ν, c        | <i>.</i>                                     |
| WORK PERFORMED (INCLUDING SAMPLING):                       |             |                          |                     |              |             |  |
| ARRIVED ON SITE AT   | 0800.       | BAIN                     | Æ,                  | LUXED        | ΒEτ         | WEEN   |
| MEDIUM AND HEAVY. COULD NOT                                | DaNE        | 70                       | Mo                  | VITORI       | NC          | <del></del>                                  |
| COMPER PID SOME THE EQUIP                                  | MENT . To   | ی الا                    | PID                 | READI        | wgs         | <del></del>                                  |
| CONTRED PID SO WOLD NOT GET W<br>LEVELS. DURING THE SLOWER | (ET) 10 B   | ETERA                    | MINE                | <u> </u>     | ETY_        | - 4  |
| From DIENTING THE SAMPLE V                                 | VE SAMPLI   | ERI 246<br>ED 2          | Mul                 | 3 2 ~        | 142 G       | t r  |
| PH, SPC AND TEMPERATURE                                    | WERE F.     | ELO "                    | SAN                 | IPLE D       | Fon         | <u>.                                    </u> |
| ALL WELLS. PEROMINE DEC                                    | CONED ALL   | ۽ کے                     | 2010                | MENT         | AS          |  |
| PER QA 001/42 (ADOPTED C                                   | ORP PROCE   | =DUIZF                   | ) v                 | VHICH        | G           | )ಟ   |
| AS FULLUME CLEAN WITH DE                                   |             |                          |                     |              |             |  |
| LAR WATER RINSE, DE RIN                                    | SE, TECH    | GRA                      | DE _                | Isopa        | OPAN        | ′0 C   |
| PRINSE TWICE AND FLUAR D                                   | I WATER     | Final                    | R.                  | NSE.         | <del></del> |  |
| TWO SITES TOO. OF SAMPLE                                   | ATURLIES C  | ONTA                     | <u>سرا دیز</u><br>م | ATED         |             |  |
| WITH PESTICIPE. MUST B                                     | = 5 FS1 -   | <u>00 C</u>              | <u>a. 1</u>         | -31-00       | <u>&gt;</u> |  |
|  | EUCESA      | <u> </u>                 | · 12.               |              | <u> </u>    |  |
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| PARECT. FST-004C BURN PITS REPORTNO   | (Continuation Sheet)   |
|---|--|
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| WIE_/   | 1/10/93  |
| CUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)   |  |
| CALIBRATED PH METER of 7,10 STANDARD  | 08'5   |
| Constituty " 0.180 moha "   | 0815   |
| CALIBRATED OH METER of 7,10 STANDARD  " CONDUCTIVITY " 0.180 m.hm "  " PID of 256 ppm \$50 BUTYLENE | 080  |
|   | ···  |
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| HEALTH AND SAFETY LEVELS AND ACTIVITIES.  |  |
| MOD LEVEL J   |  |
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| ABORI CIAC ENGONINESSES ACCESSES  |  |
| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:   |  |
| TTEAVY ICAIN  |  |
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| SPECIAL NOTES.  |  |
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| CMORROW'S EXPECTATIONS  |  |
| CIMORADOV S EXPECTATIONS  |  |
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|  | DATE   |                                       | /16/                     | 93   |               |             |
|--|--|---------------------------------------|--------------------------|--|---------------|-------------|
| A-E DAILY QUALITY                            | - DAY  | 5 1                                   | ¹   X                    |  | h į           | S           |
| CONTROL REPORT                               | WEATHER  | Sun                                   |                          | Over The second  | Ran           | Snow        |
| COE PROJECT HANAGER                          | TEMP   | To 32                                 | 35.20                    | 50-70  | 200           | కుం         |
| PROJECT FST-002 CAMP OLIVIER LANGFILL JOB NO | ом:<br>Упојији   | \$24<br> <br>                         | Moder<br>Moder           | Hynta  | Facc          | xt No,      |
| CONTRACT NO                                  | HOMILITY   |                                       | X                        |  |               |             |
| SUB-CONTRACTORS ON SITE:                     |  |                                       | <del> </del>             |  |               |             |
| JUDSON SMITH, JIM BIODLE                     |  |                                       | -                        |  |               |             |
| EQUIPMENT ON SITE.                           | <del></del>  |                                       |                          |  | <del></del>   |             |
| SAMPLE PUMP ATUBING, GENERATOR, BAILER       | RA4 = 0 1  |                                       | )=c.ou                   | <u> </u>   |               |             |
| 1 10, OGI, WIT METER CONDUCTIVITY METER CA   | LIRPATION  | CASE S                                | San                      | <u>с сы.</u>   | PMEN          | <del></del> |
| The Commododing SAMPCINGI,                   |  |                                       |                          |  |               |             |
| HAD TO RESAMPLE FST.002                      | DUE T  | υ C                                   | ARI                      | 2 LA   | B'5           |             |
| MISTAKE. ARRIVED AROUND 10:00                | , COULC  | No                                    | TF                       | IND  |               |             |
| THE TURN-OFF SO HAD TO GO AND                | THER W.  | 41                                    | FAR                      | ST V   | VELL          | · .         |
| FST. 002-MWI STILL ONLY WITH                 | 1.687  | ert o                                 | 1                        | WATE   | <u>r.</u>     |             |
| BOTTOM FEELS LIKE THE BOTTOM                 | OF An  | Eu.                                   | AN                       | o No   | <del>7</del>  |             |
| YUMP, TUBING COLLAGPED SO                    | Cours  | <u>/s</u>                             | E' C                     | For  | <u>:121ST</u> | AUIC        |
| FOR OTHER MINITORING WELL.                   | - 100V   | Sug                                   | <u> </u>                 | 15E<br>11/1  | <u>LT</u>     |             |
| SAMPLES WHILE JIM BALLED !                   | AST al   | Sz.                                   | AGA                      |  | EST-0         | 02-         |
| SWI AND SWZ APPEAR OPPOSI                    | TE FRO   | M c                                   | NOR                      | KPLA   | N.            | <u> </u>    |
|  | <u> </u>   |                                       |                          |  |               |             |
|  |  | *                                     |                          | -  |               |             |
|  |  |                                       |                          |  |               |             |
|  | <del></del>  |                                       |                          |  | <u></u> .     |             |
|  | NO DESCRIPTION DE LA PROPERTICION DE LA PROPERTICIO | · Marine Barrelland (Company)         | no transcript decreasing | and the second s |               |             |
|  |  | · · · · · · · · · · · · · · · · · · · |                          |  |               |             |
|  | *****  |                                       | <u> </u>                 |  |               |             |
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|  |  |                                       | <del> </del>             | <del></del>  |               |             |
|  |  |                                       |                          |  |               |             |
|  |  |                                       |                          |  |               |             |

| PANECT. FST-007, CAMP OLIVIER   | REPORT NO.          |
|---|---------------------|
| .08 NO  | DATE 11/16/93       |
| QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)                                   |                     |
|   | OBUTICENE 10:00     |
| CALIBRATED DH NETER WITH 7.10   | STANDARD 10:15      |
| CALIBRATED PID WITH 256PM 15. CALIBRATED PH NETER WITH 7,10 "CONDUCTIVITY METER WITH 0-180, | NACL STANDARD 10:15 |
|   |                     |
|   |                     |
|   |                     |
|   |                     |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.  |                     |
| INO LEVEL D   |                     |
|   |                     |
|   |                     |
|   |                     |
| PROPIETIS ENCOUNTERED CORRECTION (CTON TAKEN  |                     |
| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN.   | •                   |
|   |                     |
|   |                     |
|   |                     |
|   |                     |
|   |                     |
| SPECIAL NOTES   |                     |
| o. concrotes.   |                     |
|   |                     |
|   |                     |
| TOMORROWS EXPECTATIONS  |                     |
| FST-003   |                     |
|   |                     |
|   |                     |
|   |                     |
|   |                     |

|  | OATE_                                 | 11/22              | 193         |                |
|--|---------------------------------------|--------------------|-------------|----------------|
| A-E DAILY QUALITY  | OAY                                   | s X I              | WIT         | H F S          |
| CONTROL REPORT   | THE ALDERI                            | cont Char<br>ion X | Overcoda    | Ram Snow       |
| COE PROJECT MANAGER  | TEMP                                  | То 🗵 🞞 50          | 50-70       | 70-85/ 85 LD   |
| PROJECT_FST-009, EOD AREA  | W#40                                  | Set Hoose          | High        | R4cort No.     |
| JOB NO   | HUMIDITY                              | Ory Harris         | Humad       |                |
| SUB-CONTRACTORS ON SITE:   |                                       |                    |             |                |
| JUDSON SMITH, DEREK AMIDON,  | Jim BIDDLE                            | RANDY              | +11.22      | IS COE         |
| Humtsville)  |                                       |                    |             |                |
| EQUIPMENT ON SITE.   |                                       |                    |             |                |
| HAND AUGER, DECON EQUIPMENT, SA.   | MPLE JARS A                           | NO COOLER          | S PIL       | $Q \subset GI$ |
| CALIBRATION GASES (RAVOY HARRIS METAWORK PERFORMED (INCLUDING SAMPLING): | L DETECTOR),                          | CAMERA             |             |                |
| CHECKED IN FORST WITH RAN  | and Contract                          | 5                  |             | 1 100          |
| NOT KNOW OF OUR ARRIVAL. FIR   |                                       |                    |             |                |
| PICKED OF RANDY HARRIS EDD   | SAFETY S                              | PECIALIST          | 500 T       | - IRWIN.       |
| ET STEWART EOD SPECIALIST A  | AND WENT                              | Ov -               | TO F        |                |
| WHICH IS LOCATED BEHIND 1  | PEO CLOUD                             | HOTEL              | RAN         | 101            |
| MARKED THE SOIL SAMPLE LO  |                                       |                    |             |                |
| METAL IS PRESENT UNDER THE   |                                       |                    |             |                |
| SUCH SEREK WAS BEHIND HING CH  |                                       |                    |             |                |
| TO DETERMINE LE VOC'S ARE  |                                       |                    |             |                |
| TO ALTER LEVEL OF SAFETY.  | i                                     |                    |             |                |
| REDURED SAMPLES AND 10   |                                       | _                  |             |                |
| REMOVE ALL TEMP MONITORIN  | IG (A) EUS                            | EXC =              | OT F        | T-025          |
| 94B 294C Could NOT   | GAN A                                 | -                  | To A        | -D=A           |
| FILLED IN HOLES.   |                                       |                    |             | ·              |
|  |                                       |                    |             |                |
|  | · · · · · · · · · · · · · · · · · · · |                    | _           |                |
|  | <del></del>                           |                    |             |                |
| <u> </u>   |                                       |                    |             |                |
|  |                                       |                    | <del></del> |                |
|  |                                       | <u> </u>           | <u> </u>    |                |
|  |                                       | ć i .              | £ E T       |                |

| PROJECT. FST-009, EOD AREA REPORTNO.                      | (Communition Sheet  |
|---|---|
| THAT  | 11/22/53  |
| CUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS) | 11/60113  |
| CACIBRATED PID WITH 256 gpg 15030                         |   |
| E 20 April 18 USO   | TYLENE  |
|   |   |
|   |   |
|   |   |
|   |   |
|   |   |
| HEALTH AND SAFETY LEVELS AND ACTIVITIES.                  |   |
| TE EXPLOSIVE - HAZARD EXISTED (NONE                       | IN E  |
| IF EXPLOSIVE HAZARD EXISTED (NONE                         | Found)  |
|   |   |
|   |   |
| PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN              |   |
| NONE  |   |
|   |   |
| ·   |   |
|   |   |
|   |   |
|   |   |
| SPECIAL NOTES.  |   |
| LAST FIELD SAMPLING EVENT!                                |   |
|   |   |
| CMORROWS EXPECTATIONS                                     |   |
| FINISH PAPER WORK   |   |
|   | MODERNO COMO DO COMO DE MODERNO DE |
|   |   |
|   |   |
|   |   |
| <b>25</b>   |   |

## QUALITY CONTROL SUMMARY REPORT

PHASE I RCRA FACILITY INVESTIGATION FORT STEWART, GEORGIA

## APPENDIX C

DATA VALIDATION CHECKLISTS

SAVANNAH DISTRICT U. S. ARMY CORPS OF ENGINEEERS Fort Stewart RFI

## DATA VALIDATION CHECKLIST SECTION ONE

| PROJECT NAME: Et Stewart South Co to 1 10:11                                  |
|---|
| PROJECT NUMBER: FCT- ODI  |
| INAMPLING DATE: 100 T/OS  |
| SAMPLE IDENTIFICATION: FST-001 /SOLF3/SEM 1-10-93 SEM BLK-10-93. SW BLK-10-93 |
| ILSAMPLITAC TO                            |
| ANALYZING LABORATORY: Corr Laboratory   |
|   |
| 1 - 103.7 $15 (1).192 17 17 - 10.9$   |
| SAMPLE MATRIX: O 4 40+44  |
| QA REPORTING LEVEL:   |
|   |

## FIELD DATA PACKAGE DOCUMENTATION

PERFORMANCE REPORTED ACCEPTABLE FIELD SAMPLING LOGS:1/ Not YES No YES REQUIRED 1. SAMPLING DATES NOTED 2. SAMPLING TEAM INDICATED 3. SAMPLE IDENTIFICATION TRACEABLE TO LOCATION COLLECTED 4. SAMPLE LOCATION 5. SAMPLE DEPTH FOR SOILS 6. COLLECTION TECHNIQUE (BAILER, PUMP ETC 7. FIELD SAMPLE PREPARATION TECHNIQUES 8. SAMPLE TYPE (GRAB, COMPOSITE) 9. SAMPLE CONTAINER TYPE 10. PRESERVATION METHODS 11. CHAIN OF CUSTODY FORM COMPLETED 12. REQUIRED ANALYTICAL METHODS REQUESTED 13. FIELD (WATER AND SOIL) SAMPLE LOGS COMPLETED PROPERLY AND SIGNED 14. NUMBER AND TYPE OF FIELD OC SAMPLES COLLECTED (BLANKS, REPLICATES, SPLITS, ETC.) 15. FIELD EQUIPMENT CALIBRATION 16. FIELD EQUIPMENT DECONTAMINATION 17. SAMPLE SHIPPING 18. LABORATORY TASK ORDER 1/ FIELD SAMPLING LOGS = WATER AND/OR SOIL/SEDIMENT SAMPLING LOGS

DATA VALIDATION CHECKLIST SECTION ONE CONTINUED

| ANALYTICAL DATA PACKAGE   | DOCUMENTATION  |  |
|---|--|--|
| GENERAL INFORMA   | TION   |  |
|   | PERFORMANCE REPORTED ACCEPTABLE NOT  |  |
| ALL QA REPORTING LEVELS   | NO YES NO YES REQUIRED   |  |
| 1. SAMPLE RESULTS 2. PARAMETERS ANALYZED 3. METHOD OF ANALYSIS 4. DETECTION LIMITS OF ANALYSIS 5. MASTER TRACKING LIST 6. SAMPLE COLLECTION DATE 7. LAB SAMPLE RECEIVED DATE 8. SAMPLE PREPARATION/EXTRACTION DATE 9. SAMPLE ANALYSIS DATE 10. COPY OF CHAIN-OF-CUSTODY FORM SIGNED BY THE LAB SAMPLE CUSTODIAN 11. A NARRATIVE SUMMARY OF QA OR SAMPLE PROBLEMS IS PROVIDED. |  |  |
| COMMENTS:   |  |  |
| AFTER COMPLETING SECTION ONE PROCEED TO THE APPROPRIATE QA REPORTING LEVEL OF SECTION TWO (INORGANIC ANALYSES) AND/OR SECTION THREE (ORGANIC ANALYSES). FOLLOWING COMPLETION OF THESE SECTIONS PROCEED TO SECTION FOUR (Data Evaluation Summary).   |  |  |
| ANALYTICAL DATA VALIDATION CHECKLIST SECTION TWO  |  |  |
| METALS AND CLASSICAL WET C  | HEMISTRY METHODS   |  |
| QA REPORTING LEVEL: I<br>REQUIREMENTS (BAICH SPECIFIC QA)'/   | REPORTED IN LIMITS NOT<br>NO YES NO YES REQUIRED   |  |
| 1. METHOD BLANKS % RECOVERY (%R) 2. MS2' OR RWSD5' OR LD6' %R 4. RPD7'  |  |  |
| COMMENTS:   |  |  |
|   |  |  |
| 4/ MSD = MATRIX SPIKE DUP.; 5/ RWSD   | PLES IN ANALYTICAL BATCH  = REAGENT WATER SPIKE;  = REAGENT WATER SPIKE DUP.;  = RELATIVE PERCENT DIFFERENCE |  |

| SECTION TWO   |   |
|---|---|
| METALS AND CLASSICAL WET  | YSES  |
| QA REPORTING LEVEL: II REQUIREMENTS (BAICH SPECIFIC DA) 1/  | REPORTED IN LIMITS NOT                                  |
| 1. METHOD BLANKS 2. MS % RECOVERY (%R) 3. MSD OR LAB DUPLICATE % R 4. RWS % R 5. RWSD % R 6. RPDS FOR MS/MSD, SAMPLE/LD, RWS/RWSD 7. LCS*/ %R 8. ICVS **/ %R  | MEGOTREC  |
| COMMENTS:   |   |
|   |   |
| QA REPORTING LEVEL: III REQUIREMENTS (SAMPLE SPECIFIC QA) 10/  1. CALIBRATION CURVE STANDARDS   |   |
| 2. ICVS %R 3. CCVS''' %R 4. LCS %R 5. METHOD BLANKS 6. ICS'2' %R (ICP ONLY) 7. DCS'3' %R (ICP ONLY) 8. MS %R 9. LD OR MSD %R AND RPD 10. POST DIGESTION ANALYTICAL SPIKE 144                                      |   |
| OMMENTS:  |   |
|   | -   |
|   |   |
| / LCS = LABORATORY DUPLICATE; 7/ RPD = / TCVS = INTERPRETED SAMPLE;   | = REAGENT WATER SPIKE;<br>= RELATIVE PERCENT DIFFERENCE |
| ICVS = INITIAL CALIBRATION VERIFICATION  O/ SAMPLE SPECIFIC QA: APPLIES TO PROJECT  1/ CCVS = CONTINUING CALIBRATION VERIFICA  2/ ICS = INTERFERENCE CHECK SAMPLE: 13/  4/ POST DIGESTION ANALYTICAL SPIKE APPLIE | SPECIFIC SAMPLES.                                       |

| 4. MSD (BATCH SPECIFIC) 5. LD (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES |  |  |
|--|--|--|
|--|--|--|

<sup>1/</sup> RWS = REAGENT WATER SPIKE; 2/ RWSD = REAGENT WATER SPIKE DUPLICATE;

<sup>3/</sup> RPD = RELATIVE PERCENT DIFFERENCE; 4/ MS = MATRIX SPIKE; 5/ MSD = MATRIX SPIKE DUPLICATE: 6/ LD = LAB DUP

Fort Stewart RFI

| DATA EVALUATION S  | SUMMARY  |
|--|--|
| PROJECT NAME: S. C. tral Londell PRO. OA REPORTING LEVEL: D. VALIDATION (  | JECT NUMBER: FST-001<br>DATE: 16 Non-93  |
| ALL QA REPORTING LEVELS (I.II, III)  | PERFORMANCE  |
| SUMMARY OF CHECKLIST FINDINGS  | REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRED   |
| 1. FIELD MEASUREMENTS OF PH AND SPECIFIC CONDUCTANCE ARE CONSISTENT WITH HISTORICAL DATA  2. FIELD RECORDS 3. METHODS (GEN.INFO. SECTION ONE) 4. HOLDING TIMES (MASTER SAMPLE LIST) A. EXTRACTION HOLDING TIMES B. ANALYSIS HOLDING TIMES 5. DETECTION LIMITS (SECTION ONE) 6. BLANKS (SECTIONS TWO OR THREE) A. EQUIPMENT RINSATE BLANKS B. FIELD BLANKS C. TRIP BLANKS D. LABORATORY BLANKS 7. FIELD REPLICATES 8. FIELD SPLITS 9. GEOPHYSICAL COMPARISONS A. CATION VS ANION B. TDS VS SPEC. CONDUCTANCE C. PH VS ALK/ACIDITY D. OTHER 10. METALS QA DATA (SECTION TWO) 11. INORGANIC WET CHEMISTRY (SEC. TWO) 12. ORGANIC GA DATA-GC (SECTION THREE-A) 13. ORGANIC WET CHEMISTRY (SEC. THREE-B) 14. ORGANIC QA DATA-GC/MS (SEC. THREE-B) | KKKIK       KKKIK       KKKIK       KKKIK       KKKIK       KKKIK       KKKIK       KKKIK       KKKIK       KKIK       KKIK </td |
| AFTER COMPLETING THIS SECTION GO TO SECTION COMMENTS:  | ON FIVE.   |
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Ft. Stewart RFI

| DATA VALIDATION CODING   |  |                  |  |
|--|--|------------------|--|
| PROJECT NAME: S. Central familial PROJECT NUMBER: FST-001  QA REPORTING LEVEL: IT VALIDATION DATE: 16 how 93 |  |                  |  |
| h  |  |                  |  |
|  | 1. QUALIFIER CODES ASSIGNED TO DATA: R. U. J. U/J. B. NO FLAG    |                  |  |
| 2. IDENTIFICATION OF SAMPLES AND PARAMETERS WITH CODES:  Sample ID PARAMETERS                                |  |                  |  |
| R CODE   |  |                  |  |
|  |  |                  |  |
| B CODE   |  |                  |  |
|  |  |                  |  |
| U CODE   |  |                  |  |
|  |  |                  |  |
| J CODE   | ,  |                  |  |
|  |  |                  |  |
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|  |  |                  |  |
| U/J  |  |                  |  |
| CCDE   |  |                  |  |
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| EVEL ANATION   |  |                  |  |
| EXPLANATION  |  | ā-A              |  |
|  | all acceptal   | ulg              |  |
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|  | re annu sagu paga agu a maga agu agu agu agu agu agu agu agu agu |                  |  |
|  |  |                  |  |
| VALIDATION F   | PERFORMED BY.  | -RANZ FROELICHER |  |
| SIGNED: FROELICHER   |  |                  |  |
| STONED:  |  |                  |  |

DATA VALIDATION CHECKLIST Ft. Stewart RF1 SECTION ONE Olive PROJECT NAME: Come / 16 NOV 93 VALIDATION DATE: \$1 Des 93 SAMPLE IDENTIFICATION: MW-10-93 M& M3 M3 Pup MW Noule MUIY SAMPLING TEAM: IS with, M. Bailer ANALYZING LABORATORY:\_ ANALYSES PERFORMED: 8240, RCDA nietaky, P. SAMPLE MATRIX: agueous + non agueous QA REPORTING LEVEL: TE FIELD DATA PACKAGE DOCUMENTATION PERFORMANCE REPORTED ACCEPTABLE Not FIELD SAMPLING LOGS: 1/ NO YES NO YES REQUIRED 1. SAMPLING DATES NOTED 2. SAMPLING TEAM INDICATED 3. SAMPLE IDENTIFICATION TRACEABLE TO LOCATION COLLECTED 4. SAMPLE LOCATION 5. SAMPLE DEPTH FOR SOILS 6. COLLECTION TECHNIQUE (BAILER, PUMP ETC 7. FIELD SAMPLE PREPARATION TECHNIQUES 8. SAMPLE TYPE (GRAB, COMPOSITE) 9. SAMPLE CONTAINER TYPE 10. PRESERVATION METHODS 11. CHAIN OF CUSTODY FORM COMPLETED 12. REQUIRED ANALYTICAL METHODS REQUESTED 13. FIELD (WATER AND SOIL) SAMPLE LOGS COMPLETED PROPERLY AND SIGNED 14. NUMBER AND TYPE OF FIELD OC SAMPLES COLLECTED (BLANKS, REPLICATES, SPLITS, ETC.) 15. FIELD EQUIPMENT CALIBRATION 16. FIELD EQUIPMENT DECONTAMINATION 17. SAMPLE SHIPPING 18. LABORATORY TASK ORDER 1/ FIELD SAMPLING LOGS = WATER AND/OR SOIL/SEDIMENT SAMPLING LOGS COMMENTS:\_\_\_\_

| ANALYTICAL DATA PACKAGE   | DOCUMENTATION  |  |
|---|--|--|
| GENERAL INFORMATION   |  |  |
| ALL QA REPORTING LEVELS   | PERFORMANCE REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRE  |  |
| 1. SAMPLE RESULTS 2. PARAMETERS ANALYZED 3. METHOD OF ANALYSIS 4. DETECTION LIMITS OF ANALYSIS 5. MASTER TRACKING LIST 6. SAMPLE COLLECTION DATE 7. LAB SAMPLE RECEIVED DATE 8. SAMPLE PREPARATION/EXTRACTION DATE 9. SAMPLE ANALYSIS DATE 10. COPY OF CHAIN-OF-CUSTODY FORM SIGNED BY THE LAB SAMPLE CUSTODIAN 11. A NARRATIVE SUMMARY OF QA OR SAMPLE PROBLEMS IS PROVIDED. |  |  |
| AFTER COMPLETING SECTION ONE PROCEED TO THE LEVEL OF SECTION TWO (INORGANIC ANALYSES) ANALYSES). FOLLOWING COMPLETION OF THESE FOUR (DATA EVALUATION SUMMARY).  | HE APPROPRIATE QA REPORTING<br>AND/OR SECTION THREE (ORGANI<br>SECTIONS PROCEED TO SECTION                   |  |
| ANALYTICAL DATA VALIDATION CHECKLIST SECTION TWO  |  |  |
| INORGANIC ANALYS  METALS AND CLASSICAL WET C  | SESHETHODS   |  |
| QA REPORTING LEVEL: I REQUIREMENTS (BATCH SPECIFIC QA) '/   | REPORTED IN LIMITS NOT<br>NO YES NO YES REQUIRED   |  |
| 1. METHOD BLANKS % RECOVERY (%R) 2. MS2' OR RWSD5' OR LD6' %R 4. RPD7'  |  |  |
| COMMENTS:   |  |  |
|   |  |  |
| 5/ RWSD   | PLES IN ANALYTICAL BATCH  = REAGENT WATER SPIKE;  = REAGENT WATER SPIKE DUP.;  = RELATIVE PERCENT DIFFERENCE |  |

| INORGANIC ANALYS   |   |  |
|--|---|--|
| METALS AND CLASSICAL WET CH  | SES <u>.</u><br>HEMISTRY ME             | THODS  |
| QA REPORTING LEVEL: II REQUIREMENTS (BATCH SPECIFIC OA) '  | REPORTED<br>NO YES                      |  |
| 1. METHOD BLANKS 2. MS % RECOVERY (%R) 3. MSD OR <del>LAB DUPLICATE</del> % R 4. RWS % R 5. RWSD % R 6. RPDs FOR MS/MSD, <del>SAMPLE/LD</del> , RWS/RWSD 7. LCS <sup>6</sup> / %R 8. ICVS <sup>9</sup> / %R            | 4 KAKKA                                 |  |
| COMMENTS:  |   |  |
|  |   |  |
| QA REPORTING LEVEL: III  REQUIREMENTS (SAMPLE SPECIFIC QA) 10/   |   |  |
| 1. CALIBRATION CURVE STANDARDS 2. ICVS %R 3. CCVS'1/ %R 4. LCS %R 5. METHOD BLANKS 6. ICS'2/ %R (ICP ONLY) 7. DCS'3/ %R (ICP ONLY) 8. MS %R 9. LD OR MSD %R AND RPD 10. POST DIGESTION ANALYTICAL SPIKE'4/             |   |  |
| COMMENTS:JL  |   |  |
|  |   | *  |
|  |   |  |
| LD = LABORATORY DUPLICATE: 7/ RPD =  | REAGENT W<br>RELATIVE F                 | ATER SPIKE:<br>WATER SPIKE DUP.;<br>PERCENT DIFFERFNCF |
| ICVS = INITIAL CALIBRATION VERIFICATION  O/ SAMPLE SPECIFIC QA: APPLIES TO PROJECT  1/ CCVS = CONTINUING CALIBRATION VERIFICATION  2/ ICS = INTERFERENCE CHECK SAMPLE; 13/ [4/ POST DIGESTION ANALYTICAL SPIKE APPLIES | N STANDARD<br>SPECIFIC S<br>TION STANDA | ;<br>SAMPLES.<br>ARD;                                  |

| SECTION THREEORGANIC ANAL  | YSES   |
|--|--|
| QA REPORTING LEVEL: I_ REQUIREMENTS  | REPORTED IN LIMITS NOT<br>NO YES NO YES REQUIRED |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. RWS1' 4. RWSD2' 5. RPD3'   |  |
| COMMENTS:  |  |
|  | (6   |
| QA REPORTING LEVEL: II REQUIREMENTS A. GAS CHROMATOGRAPHY (NO MASS SPEC) OR  | WET CHEMISTRY PROCEDURE                          |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS4' (BATCH SPECIFIC) 4. MSD5' (BATCH SPECIFIC) 5. LD6' (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES |  |
| B. GAS CHROMATOGRAPHIMASS SPECTROMETER   | _  |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS (BATCH SPECIFIC) 4. MSD (BATCH SPECIFIC) 5. LD (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES       |  |
| COMMENTS:  |  |
|  |  |
| 1/ PWS = 05105W  |  |

<sup>1/</sup> RWS = REAGENT WATER SPIKE; 2/ RWSD = REAGENT WATER SPIKE DUPLICATE; 3/ RPD = RELATIVE PERCENT DIFFERENCE; 4/ MS = MATRIX SPIKE; 5/ MSD = MATRIX SPIKE DUPLICATE; 6/ LD = LAB DUP

ANALYTICAL DATA VALIDATION CHECKLIST SECTION FOUR DATA EVALUATION SUMMARY Ft Stewart RF1 PROJECT NAME: Camp Bliver Lawfill PROJECT NUMBER: FST-007 OA REPORTING LEVEL: TE VALIDATION DATE: 21 Ros 9 ALL QA REPORTING LEVELS (I.II.III) PERFORMANCE SUMMARY OF CHECKLIST FINDINGS REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRED 1. FIELD MEASUREMENTS OF PH AND SPECIFIC CONDUCTANCE ARE CONSISTENT WITH HISTORICAL DATA 2. FIELD RECORDS 3. METHODS (GEN.INFO. SECTION ONE) 4. HOLDING TIMES (MASTER SAMPLE LIST) A. EXTRACTION HOLDING TIMES B. ANALYSIS HOLDING TIMES 5. DETECTION LIMITS (SECTION ONE) 6. BLANKS (SECTIONS TWO OR THREE) A. EQUIPMENT RINSATE BLANKS B. FIELD BLANKS C. TRIP BLANKS D. LABORATORY BLANKS 7. FIELD REPLICATES 8. FIELD SPLITS 9. GEOPHYSICAL COMPARISONS A. CATION VS ANION B. TDS VS SPEC. CONDUCTANCE C. PH VS ALK/ACIDITY D. OTHER 10. METALS QA DATA (SECTION TWO) 11. INORGANIC WET CHEMISTRY (SEC. TWO) 12. ORGANIC GA DATA-GC (SECTION THREE-A) 13. ORGANIC WET CHEMISTRY (SEC. THREE-A) 14. ORGANIC QA DATA-GC/MS (SEC. THREE-B) AFTER COMPLETING THIS SECTION GO TO SECTION FIVE.

| SECTION FIVE  |   |  |  |
|---|---|--|--|
| PROJECT NAME: Comp Office Janfill PROJECT NUMBER: EST-002 |   |  |  |
| QA REPORTING LEVEL:                                       | VALADATION DATE: 11 Vac 92                  |  |  |
| 1. QUALIFIER CODES ASSIG                                  | NED TO DATA: R. U. J. U/J. B. NO FLAG       |  |  |
| 2. IDENTIFICATION OF SAME SAMPLE ID                       | PLES AND PARAMETERS WITH CODES:  PARAMETERS |  |  |
| R COBE  |   |  |  |
| 8 CODE  |   |  |  |
| U CODE  |   |  |  |
|   |   |  |  |
| J CODE  |   |  |  |
|   |   |  |  |
| CODE  |   |  |  |
|   |   |  |  |
| EXPLANATION:  | ros talilo                                  |  |  |
|   | - Arabica                                   |  |  |
|   |   |  |  |
|   |   |  |  |
| VALIDATION PERFORMED BY:_                                 | FRANZ FROELICHER                            |  |  |
| SIGNED:S<br>DATE:_  | 21 Dec 93                                   |  |  |

Ft Stewart RF1

DATA VALIDATION CHECKLIST SECTION ONF

| The state of the s | PROJECT NUMBER: FST-CO3 SAMPLING DATE: 16 Sep 43 4 VALIDATION DATE: 21 DOC 23 SAMPLE IDENTIFICATION: MW-1-10-43 HW Chy HW2 MW4 HWRIGHT HU2 H-93 FST-003-SS 10-73 FST-003-SS Win -10 03/MW2, 1, 4, bray Alenda ANALYZING TEAM: J. Smith M. Boole, ANALYZING LABORATORY: Co22 Johnshoften ANALYZING LABORATORY: Co22 Johnshoften ANALYZING PREFORMED: 1H, SPC, 8390 PCCA 20 Tok, Post PCB  SAMPLE MATRIX: Smith Water |   |  |
|--|---|---|--|
| QA REPORTING LEVEL: F  | NA REPORTING LEVEL:   | PROJECT NUMBER: FST-003  SAMPLING DATE: 16 Sep 93 A VALIDATION DATE: 21 Noc 93  SAMPLE IDENTIFICATION: MW-1-10-93 MW, Cym, MW2 MW4 MWRICH HU3 H-9  FST-003-SS-10-43 FST-003-SS NIA-10 93/MW2, 1,4, Vary Alexa  AMPLING TEAM: J Smith M Box, leg.  ANALYZING LABORATORY: Corr Locked La.  ANALYSES PERFORMED: 1H, SPC, 8340 RCCA 20 Tack, Post PCB |  |
|  |   |   |  |

## FIELD DATA PACKAGE DOCUMENTATION

PERFORMANCE REPORTED ACCEPTABLE FIELD SAMPLING LOGS: 1 NOT ZEY NO YES REQUIRED 1. SAMPLING DATES NOTED 2. SAMPLING TEAM INDICATED 3. SAMPLE IDENTIFICATION TRACEABLE TO LOCATION COLLECTED 4. SAMPLE LOCATION 5. SAMPLE DEPTH FOR SOILS 6. COLLECTION TECHNIQUE (BAILER, PUMP ETC 7. FIELD SAMPLE PREPARATION TECHNIQUES 8. SAMPLE TYPE (GRAB, COMPOSITE) 9. SAMPLE CONTAINER TYPE 10. PRESERVATION METHODS 11. CHAIN OF CUSTODY FORM COMPLETED 12. REQUIRED ANALYTICAL METHODS REQUESTED 13. FIELD (WATER AND SOIL) SAMPLE LOGS COMPLETED PROPERLY AND SIGNED 14. NUMBER AND TYPE OF FIELD QC SAMPLES COLLECTED (BLANKS, REPLICATES, SPLITS, ETC.) 15. FIELD EQUIPMENT CALIBRATION 16. FIELD EQUIPMENT DECONTAMINATION 17. SAMPLE SHIPPING 18. LABORATORY TASK ORDER 1/ FIELD SAMPLING LOGS = WATER AND/OR SOIL/SEDIMENT SAMPLING LOGS COMMENTS:\_\_\_

| ANALYTICAL DATA PACKAGE DOCUMENTATION   |  |  |  |
|---|--|--|--|
| GENERAL INFORMATION   |  |  |  |
| ALL QA REPORTING LEVELS   | PERFORMANCE REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRED   |  |  |
| 1. SAMPLE RESULTS 2. PARAMETERS ANALYZED 3. METHOD OF ANALYSIS 4. DETECTION LIMITS OF ANALYSIS 5. MASTER TRACKING LIST 6. SAMPLE COLLECTION DATE 7. LAB SAMPLE RECEIVED DATE 8. SAMPLE PREPARATION/EXTRACTION DATE 9. SAMPLE ANALYSIS DATE 10. COPY OF CHAIN-OF-CUSTODY FORM SIGNED BY THE LAB SAMPLE CUSTODIAN 11. A NARRATIVE SUMMARY OF CA OR SAMPLE PROBLEMS IS PROVIDED. |  |  |  |
| AFTER COMPLETING SECTION ONE PROCEED TO T LEVEL OF SECTION TWO (INORGANIC ANALYSES) ANALYSES). FOLLOWING COMPLETION OF THESE FOUR (DATA EVALUATION SUMMARY).  | AND/OR SECTION THORE (ODGENIE  |  |  |
| ANALYTICAL DATA VALIDATION CHECKLIST  SECTION TWO INORGANIC ANALYSES  METALS AND CLASSICAL WET CHEMISTRY METHODS  |  |  |  |
| METALS AND CLASSICAL WET C  | HEMISTRY METHODS   |  |  |
| QA REPORTING LEVEL: T REQUIREMENTS (BATCH SPECIFIC QA) 1/   | REPORTED IN LIMITS NOT<br>NO YES NO YES REQUIRED   |  |  |
| 1. METHOD BLANKS % RECOVERY (%R) 2. MSD4/ OR RWSD5/ OR LD6/ %R 4. RPD7/   |  |  |  |
| COMMENTS:   |  |  |  |
|   |  |  |  |
| 4/ MSD = MAIRIX SPIKE DUP.; 5/ RWSD   | PLES IN ANALYTICAL BATCH  = REAGENT WATER SPIKE;  = REAGENT WATER SPIKE DUP.;  = RELATIVE PERCENT DIFFERENCE |  |  |

ANALYTICAL DATA VALIDATION CHECKLIST

| SECTION TWO  |  |  |  |  |
|--|--|--|--|--|
| INORGANIC ANALYS<br>INORGANIC ANALYS   | SES  |  |  |  |
| QA REPORTING LEVEL: II REQUIREMENTS (BATCH SPECIFIC QA) > C  | REPORTED IN LIMITS NOT<br>NO YES NO YES REQUIRED   |  |  |  |
| 1. METHOD BLANKS 2. MS % RECOVERY (%R) 3. MSD OR LAB DUPLICATE % R 4. RWS % R 5. RWSD % R 6. RPDS FOR MS/MSD, SAMPLE/LD, RWS/RWSD 7. LCS*/ %R 8. ICVS **/ %R   | THEOURED THE STATE OF THE STATE |  |  |  |
| COMMENTS:  |  |  |  |  |
|  |  |  |  |  |
| QA REPORTING LEVEL: III REQUIREMENTS (SAMPLE SPECIFIC OA) 19/  |  |  |  |  |
| 1. CALIBRATION CURVE STANDARDS 2. ICVS %R 3. CCVS 1 / %R 4. LCS %R 5. METHOD BLANKS 6. ICS 2 / %R (ICP ONLY) 7. DCS 2 / %R (ICP ONLY) 8. MS %R 9. LD OR MSD %R AND RPD 10. POST DIGESTION ANALYTICAL SPIKE 14 /  |  |  |  |  |
| COMMENTS:  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| 2/ BATCH SPECIFIC QA: APPLIES TO ANY SAMPI<br>2/ MS = MATRIX SPIKE; 3/ RWS =<br>3/ RWS =<br>5/ MSD = MATRIX SPIKE DUP.; 5/ RWSD =<br>6/ LD = LABORATORY DUPLICATE; 7/ RPD =<br>8/ LCS = LABORATORY CONTROL SAMPLE;<br>1/ CVS = INITIAL CALIBRATION VERIFICATION<br>1/ CCVS = CONTINUING CALIBRATION VERIFICATION<br>1/ CCVS = CONTINUING CALIBRATION VERIFICATION<br>2/ ICS = INTERFERENCE CHECK SAMPLE; 13/ CONTINUING CALIBRATION VERIFICATION<br>4/ POST DIGESTION ANALYTICAL SPIKE APPLIES | REAGENT WATER SPIKE;  = REAGENT WATER SPIKE DUP.;  RELATIVE PERCENT DIFFERENCE  N STANDARD;  SPECIFIC SAMPLES.;  TION STANDARD;  |  |  |  |

| ANALYTICAL DATA VALIDATION CHECKLIST   | ·  |
|--|--|
| SECTION THREEORGANIC ANAL  | YSES   |
| QA REPORTING LEVEL: I_<br>REQUIREMENTS   | REPORTED IN LIMITS NOT<br>NO YES NO YES REQUIRED |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. RWS¹' 4. RWSD²' 5. RPD³'   |  |
| COMMENTS:  |  |
|  | · • •  |
| QA REPORTING LEVEL: II REQUIREMENTS A. GAS CHROMATOGRAPHY (NO MASS SPEC) OR  | WET CHEMISTRY PROCEDURE                          |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS4/ (BATCH SPECIFIC) 4. MSD5/ (BATCH SPECIFIC) 5. LD6/ (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES |  |
| B. GAS CHROMATOGRAPH/MASS SPECTROMETER   | -  |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS (BATCH SPECIFIC) 4. MSD (BATCH SPECIFIC) 5. LD (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES       |  |
| COMMENTS:  |  |
|  |  |
| 1/ RWS = REAGENT WATER SPIKE: 2/ PWSD =  |  |

<sup>1/</sup> RWS = REAGENT WATER SPIKE; 2/ RWSD = REAGENT WATER SPIKE DUPLICATE; 3/ RPD = RELATIVE PERCENT DIFFERENCE; 4/ MS = MATRIX SPIKE; 5/ MSD = MATRIX SPIKE DUPLICATE; 6/ LD = LAB DUP

| ANALYTICAL DATA VALIDATION CHECKLIST   |  |  |  |  |
|--|--|--|--|--|
| DATA EVALUATION S  | UMMARY Ft. Stewart RP1                         |  |  |  |
| PROJECT NAME: TEX X Janufill PROJ<br>OA REPORTING LEVEL: # VALIDATION D  | ECT NUMBER: FOT-003 ATE: H Don 03              |  |  |  |
| ALL QA REPORTING LEVELS (I,II,III)   | PERFORMANCE                                    |  |  |  |
| SUMMARY OF CHECKLIST FINDINGS  | REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRED |  |  |  |
| 1. FIELD MEASUREMENTS OF PH AND SPECIFIC CONDUCTANCE ARE CONSISTENT WITH HISTORICAL DATA  2. FIELD RECORDS  3. METHODS (GEN.INFO. SECTION ONE)  4. HOLDING TIMES (MASTER SAMPLE LIST)  A. EXTRACTION HOLDING TIMES  E. ANALYSIS HOLDING TIMES  5. DETECTION LIMITS (SECTION ONE)  6. BLANKS (SECTIONS TWO OR THREE)  A. EQUIPMENT RINSATE BLANKS  B. FIELD BLANKS  C. TRIP BLANKS  C. TRIP BLANKS  7. FIELD REPLICATES  8. FIELD SPLITS  9. GEOPHYSICAL COMPARISONS  A. CATION VS ANION  B. TDS VS SPEC. CONDUCTANCE  C. PH VS ALK/ACIDITY  D. OTHER  10. METALS GA DATA (SECTION TWO)  11. INORGANIC WET CHEMISTRY (SEC. TWO)  12. ORGANIC GA DATA-GC (SECTION THREE-A)  13. ORGANIC WET CHEMISTRY (SEC. THREE-B)  AFTER COMPLETING THIS SECTION CO. TO SECTION |  |  |  |  |
| AFTER COMPLETING THIS SECTION GO TO SECTION FIVE.  COMMENTS:  Specke QC Sample # 10 + 193  |  |  |  |  |
| Sauna RHC 205% R   |  |  |  |  |
| aldrin 190% R  | aldrin 190% R                                  |  |  |  |
| all are anonomouly High above to interfering plates  |  |  |  |  |
| sample stulf is assortable.  |  |  |  |  |
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| SECTION          | FIVE   | . , |
|------------------|--|-----|
|                  | DATA VALIDATION CODING Ft. Stewart RF  | 1   |
| PROJEC<br>QA REI | T NAME: Too X Jondfill PROJECT NUMBER: EST -003 PORTING LEVEL: IT VALIDATION DATE: II Dec 13 |     |
| 1. QUAL          | FIER CODES ASSIGNED TO DATA: R, U, J, U/J, B, NO FLAG  |     |
| 2. IDEN          | IFICATION OF SAMPLES AND PARAMETERS WITH CODES:  Sample ID  PARAMETERS                       |     |
| R CODE           |  |     |
| B CODE           |  |     |
| U CODE           |  |     |
| J CODE           |  |     |
| U/J<br>CODE      |  | *** |
| EXPLANAT         |  |     |
|                  | all acceptable   |     |
|                  |  |     |
|                  |  |     |
| VALIDÁTI         | ON PERFORMED BY: FRAW? FROELICHEN.   |     |
|                  | DATE: It Dec 93  |     |

| SAMPLE IDENTIFICATION: EST GOYA MW3-8-93  SAMPLING TEAM: T. Smith Pouglas Ja Pouglas  ANALYZING LABORATORY: Carr Soberatory  | Puts<br>ALIDATION DATE: 28 Sept 93<br>HW4-8-93, MW1, HW1, + Dup |
|--|---|
| FIELD SAMPLING LOGS:1/   | PERFORMANCE REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRES      |
| 1. SAMPLING DATES NOTED 2. SAMPLING TEAM INDICATED 3. SAMPLE IDENTIFICATION TRACEABLE TO LOCATION COLLECTED 4. SAMPLE LOCATION 5. SAMPLE DEPTH FOR SOILS 6. COLLECTION TECHNIQUE (BAILER, PUMP ETC 7. FIELD SAMPLE PREPARATION TECHNIQUES 8. SAMPLE TYPE (GRAB, COMPOSITE) 9. SAMPLE CONTAINER TYPE 10. PRESERVATION METHODS 11. CHAIN OF CUSTODY FORM COMPLETED 12. REQUIRED ANALYTICAL METHODS REQUESTED 13. FIELD (WATER AND SOIL) SAMPLE LOGS COMPLETED PROPERLY AND SIGNED 14. NUMBER AND TYPE OF FIELD QC SAMPLES COLLECTED (BLANKS, REPLICATES, SPLITS, ETC.) 15. FIELD EQUIPMENT CALIBRATION 16. FIELD EQUIPMENT CALIBRATION 17. SAMPLE SHIPPING 18. LABORATORY TASK ORDER |   |

| ANALYTICAL DATA PACKAGE DOCUMENTATION   |   |  |  |
|---|---|--|--|
| GENERAL INFORMATION   |   |  |  |
| ALL QA REPORTING LEVELS   | PERFORMANCE<br>REPORTED ACCEPTABLE NOT<br>NO YES NO YES REQUIRED  |  |  |
| 1. SAMPLE RESULTS 2. PARAMETERS ANALYZED 3. METHOD OF ANALYSIS 4. DETECTION LIMITS OF ANALYSIS 5. MASTER TRACKING LIST 6. SAMPLE COLLECTION DATE 7. LAB SAMPLE RECEIVED DATE 8. SAMPLE PREPARATION/EXTRACTION DATE 9. SAMPLE ANALYSIS DATE 10. COPY OF CHAIN-OF-CUSTODY FORM SIGNED BY THE LAB SAMPLE CUSTODIAN 11. A NARRATIVE SUMMARY OF QA OR SAMPLE PROBLEMS IS PROVIDED. |   |  |  |
| AFTER COMPLETING SECTION ONE PROCEED TO T LEVEL OF SECTION TWO (INORGANIC ANALYSES) ANALYSES). FOLLOWING COMPLETION OF THESE FOUR (DATA EVALUATION SUMMARY).  | AND/OR SECTION THREE (ORGANIC   |  |  |
| ANALYTICAL DATA VALIDATION CHECKLIST SECTION TWO INORGANIC ANALYSES METALS AND CLASSICAL WET CHEMISTRY METHODS  |   |  |  |
| QA REPORTING LEVEL: I REQUIREMENTS (BATCH SPECIFIC QA) 1/   | REPORTED IN LIMITS NOT NO YES NO YES REQUIRED   |  |  |
| 1. METHOD BLANKS % RECOVERY (%R) 2. MS2' OR RWSD5' OR LD6' %R 4. RPD7'  |   |  |  |
| COMMENTS:   |   |  |  |
| 4/ MSD = MATRIX SPIKE DUP.; 5/ RWSD   | MPLES IN ANALYTICAL BATCH  = REAGENT WATER SPIKE;  D = REAGENT WATER SPIKE DUP.;  = RELATIVE PERCENT DIFFERENCE |  |  |

| INORGANIC ANALYSES METALS AND CLASSICAL WET CHEMISTRY METHODS   |  |  |  |
|---|--|--|--|
| CA REPORTING LEVEL: II REQUIREMENTS (BATCH SPECIFIC OA) 1/  | REPORTED<br>No YES                       | IN LIMITS                              | NOT<br>REDUIRED  |
| 1. METHOD BLANKS 2. MS % RECOVERY (%R) 3. MSD OR LAB DUPLICATE % R 4. RWS % R 5. RWSD % R 6. RPDS FOR MS/MSD, SAMPLE/LD, RWS/RWSD 7. LCS*/ %R 8. ICVS */ %R   |  |  | NEGOTRED   |
| COMMENTS:   |  |  |  |
| QA REPORTING LEVEL: III REQUIREMENTS (SAMPLE SPECIFIC QA) 10/   |  |  |  |
| 1. CALIBRATION CURVE STANDARDS 2. ICVS %R 3. CCVS 1 / %R 4. LCS %R 5. METHOD BLANKS 6. ICS 2 / %R (ICP ONLY) 7. DCS 3 / %R (ICP ONLY) 8. MS %R 9. LD OR MSD %R AND RPD 10. POST DIGESTION ANALYTICAL SPIKE 14 /                 |  |  |  |
| COMMENTS:   |  |  |  |
| 1/ BATCH SPECIFIC ON ADDITION   |  |  |  |
| 2/ MS = MATRIX SPIKE; 3/ RWS = 4/ MSD = MATRIX SPIKE DUP.; 5/ RWSD = 6/ LD = LABORATORY DUPLICATE; 7/ RPD =   | REAGENT WA<br>RELACENT W<br>RELATIVE F   | NTER SPIKE<br>MATER SPIK<br>PERCENT DI | •  |
| 9/ ICVS = INITIAL CALIBRATION VERIFICATIO<br>10/ SAMPLE SPECIFIC QA: APPLIES TO PROJECT<br>11/ CCVS = CONTINUING CALIBRATION VERIFICA<br>12/ ICS = INTERFERENCE CHECK SAMPLE: 13/<br>14/ POST DIGESTION ANALYTICAL SPIKE APPLIE | N STANDARD;<br>SPECIFIC S<br>TION STANDA | AMPLES                                 | mental de mental de la composition della composi |

| ANALYTICAL DATA VALIDATION CHECKLIST SECTION THREE ORGANIC ANALYSES  |  |               |                  |
|--|--|---------------|------------------|
| A REPORTING LEVEL: I_<br>EQUIREMENTS   | REPORTED<br>No YES                     |               | NOT<br>OUIRED    |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. RWS¹/ 4. RWSD²/ 5. RPD³/   |  |               |                  |
| COMMENTS:  |  |               |                  |
|  | ······································ |               |                  |
| DA REPORTING LEVEL: II REQUIREMENTS A. GAS CHROMATOGRAPHY (NO MASS SPEC)   | OR WET CHEMIS                          | TRY PROCEDURE |                  |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS4/ (BATCH SPECIFIC) 4. MSD5/ (BATCH SPECIFIC) 5. LD6/ (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES | N N N N N N N N N N N N N N N N N N N  |               |                  |
| B. GAS CHROMATOGRAPHIMASS SPECTROMETE  | <u> </u>                               |               | -1-80            |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS (BATCH SPECIFIC) 4. MSD (BATCH SPECIFIC) 5. LD (OPTIONAL) 6. MS/MSD RPD OR—SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES       |  |               | \( \tag{\tau} \) |
| COMMENTS: Trip Blanks for T  | netals not                             | run by v      | equest           |
|  |  | <i>V</i>      |                  |

<sup>1/</sup> RWS = REAGENT WATER SPIKE; 2/ RWSD = REAGENT WATER SPIKE DUPLICATE; 5/ RPD = RELATIVE PERCENT DIFFERENCE; 4/ MS = MATRIX SPIKE; 5/ MSD = MATRIX SPIKE DUPLICATE; 6/ LD = LAB DUP

| ANALYTICAL DATA VALIDATION CHECKLIST SECTION FOUR   |  |
|---|--|
| DATA EVALUATION S   | SUMMARY Ft. Stewart RF1                        |
| PROJECT NAME: Ft Stewart Aunu Pits PROJECT NAME: Ft Stewart Aunu Pits PROJECT OA REPORTING LEVEL: IV VALIDATION D   | JECT NUMBER: FST-004A DATE: APSopt 93          |
| ALL QA REPORTING LEVELS (I.II.III)  | PERFORMANCE                                    |
| SUMMARY OF CHECKLIST FINDINGS   | REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRED |
| 1. FIELD MEASUREMENTS OF PH AND SPECIFIC CONDUCTANCE ARE CONSISTENT WITH HISTORICAL DATA  2. FIELD RECORDS  3. METHODS (GEN.INFO. SECTION ONE)  4. HOLDING TIMES (MASTER SAMPLE LIST)  A. EXTRACTION HOLDING TIMES  B. ANALYSIS HOLDING TIMES  5. DETECTION LIMITS (SECTION ONE)  6. BLANKS (SECTIONS TWO OR THREE)  A. EQUIPMENT RINSATE BLANKS  B. FIELD BLANKS  C. TRIP BLANKS  D. LABORATORY BLANKS  7. FIELD REPLICATES  8. FIELD SPLITS  9. GEOPHYSICAL COMPARISONS  A. CATION VS ANION  B. TDS VS SPEC. CONDUCTANCE  C. PH VS ALK/ACIDITY  D. OTHER  10. METALS QA DATA (SECTION TWO)  11. INORGANIC WET CHEMISTRY (SEC. TWO)  12. ORGANIC GA DATA-GC (SECTION THREE-A)  13. ORGANIC WET CHEMISTRY (SEC. THREE-A)  14. ORGANIC QA DATA-GC/MS (SEC. THREE-B)  AFTER COMPLETING THIS SECTION GO TO SECTION | N FIVE.  |
| COMMENTS:   | M FIVE.  |
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| ANALYTIC<br>SECTION  | AL DATA VALIDATION C   | CHECKLIST, LA OL LA  |
|--|--|--|
|  | DAT  | A VALIDATION CODING Ft. Stewart RF                           |
| PROJEC<br>QA REP   | T NAME: Ft Stawort & ORTING LEVEL: ##  | Jun Pite PROJECT NUMBER: FIT-000A VALIDATION DATE: 28 Cat 93 |
| ,  |  |  |
|  |  | TO DATA: R, U, J, U/J, B, NO FLAG                            |
| 2. IDENT   | IFICATION OF SAMPLES  SAMPLE ID  | AND PARAMETERS WITH CODES: PARAMETERS                        |
| R CODE   |  |  |
|  |  |  |
|  |  | 4.6  |
| B CODE   |  |  |
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|  |  |  |
| U CODE   |  |  |
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| J CODE   | ·  |  |
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|  |  |  |
| U/J<br>CODE  |  |  |
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| EXPLANAT   | ION: all a   | * table  |
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| VALIDATI   | ON PERFORMED BY: F   | RANZ FROKLICHEN  |

28 Opt 93

SIGNED:

DATE:\_

| SAMPLE IDENTIFICATION: MW/ MWS MWS Dun<br>BLK-8-93 (are Samples cealed to -93 to lo<br>SAMPLING TEAM: J. Smith Down las La Ro   | ALIDATION DATE: DESCRIPOS  |
|---|--|
| ANALYZING LABORATORY: CARRY SA DIAGRATORY ANALYSES PERFORMED: 6248240 2 20 20 20 20 20 20 20 20 20 20 20 20   | MENTATION  |
| FIELD SAMPLING LOGS: '/   | PERFORMANCE<br>REPORTED ACCEPTABLE NOT<br>NO YES NO YES REQUIRES |
| 1. SAMPLING DATES NOTED 2. SAMPLING TEAM INDICATED 3. SAMPLE IDENTIFICATION TRACEABLE TO LOCATION COLLECTED 4. SAMPLE LOCATION 5. SAMPLE DEPTH FOR SOILS 6. COLLECTION TECHNIQUE (BAILER, PUMP ETC 7. FIELD SAMPLE PREPARATION TECHNIQUES 8. SAMPLE TYPE (GRAB, COMPOSITE) 9. SAMPLE CONTAINER TYPE 10. PRESERVATION METHODS 11. CHAIN OF CUSTODY FORM COMPLETED 12. REQUIRED ANALYTICAL METHODS REQUESTED 13. FIELD (WATER AND SOIL) SAMPLE LOGS COMPLETED PROPERLY AND SIGNED 14. NUMBER AND TYPE OF FIELD QC SAMPLES COLLECTED (BLANKS, REPLICATES, SPLITS, ETC.) 15. FIELD EQUIPMENT CALIBRATION 16. FIELD EQUIPMENT DECONTAMINATION 17. SAMPLE SHIPPING 18. LABORATORY TASK ORDER  1 FIELD SAMPLING LOGS = WATER AND/OR SOIL/COMMENTS: |  |

| ANALYTICAL DATA PACKAGE   | DOCUM            | ENTATI          | ON             |                  |                   |
|---|------------------|-----------------|----------------|------------------|-------------------|
| GENERAL INFORMA   |                  |                 |                |                  |                   |
| ALL QA REPORTING LEVELS   |                  |                 | ACCE           |                  | NOT<br>REQUIRED   |
| 1. Sample Results 2. Parameters analyzed 3. Method of analysis 4. Detection limits of analysis 5. Master tracking list 6. Sample collection date 7. Lab sample received date 8. Sample preparation/extraction date 9. Sample analysis date 10. Copy of Chain-of-Custody form signed by the lab sample custodian 11. A narrative summary of QA or sample problems is provided. |                  | K R KKKKKKKK    |                | 1 KARKACIC       |                   |
| COMMENTS:  AFTER COMPLETING SECTION ONE PROCEED TO TEVEL OF SECTION TWO (INORGANIC ANALYSES) ANALYSES). FOLLOWING COMPLETION OF THESE FOUR (DATA EVALUATION SUMMARY).  ANALYTICAL DATA VALIDATION CHECKLIST SECTION TWO   | AND/<br>SECT     | OR SE           | CTION<br>PROCE | 1 THRE           | E (ORGANIC        |
| QA REPORTING LEVEL: I REQUIREMENTS (BATCH SPECIFIC QA):/  | REPO             | RTED<br>YES     | In I           | LIMITS<br>YES    | · · · <del></del> |
| 1. METHOD BLANKS % RECOVERY (%R)<br>2. MSD4/ OR RWSD5/ OR LD6/ %R<br>4. RPD7/   |                  |                 |                |                  |                   |
| COMMENTS:   |                  |                 |                |                  |                   |
|   | _··· •           |                 |                |                  |                   |
|   | = R.E.<br>) = R! | AGENT<br>EAGENT | WATE<br>F WAT  | R SPIK<br>ER SPI |                   |

| ANALYTICAL DATA VALIDATION CHECKLIST SECTION THREE ORGANIC ANALY   | SES  |
|--|--|
| QA REPORTING LEVEL: I_<br>REQUIREMENTS   | REPORTED IN LIMITS NOT<br>NO YES NO YES REQUIRED |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. RWS'/ 4. RWSD <sup>2</sup> / 5. RPD <sup>3</sup> /   |  |
| COMMENTS:  |  |
| QA REPORTING LEVEL: II REQUIREMENTS A. GAS CHROMATOGRAPHY (NO MASS SPEC) OR  | WET CHEMISTRY PROCEDURE                          |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS4/ (BATCH SPECIFIC) 4. MSD5/ (BATCH SPECIFIC) 5. LD6/ (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES |  |
| B. GAS CHROMATOGRAPHIMASS SPECTROMETER   | <u>-</u>   |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS (BATCH SPECIFIC) 4. MSD (BATCH SPECIFIC) 5. LD (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES       |  |
| COMMENTS:  |  |
| 1/ RWS = REAGENT WATER SPIKE: 2/ PWSD =  |  |

<sup>1/</sup> RWS = REAGENT WATER SPIKE; 2/ RWSD = REAGENT WATER SPIKE DUPLICATE; 3/ RPD = RELATIVE PERCENT DIFFERENCE; 4/ MS = MATRIX SPIKE; 5/ MSD = MATRIX SPIKE DUPLICATE; 6/ LD = LAB DUP

| METALS AND CLASSICAL WET C  | SES                                      | THORS  |
|---|--|--|
| QA REPORTING LEVEL: II REQUIREMENTS (BATCH SPECIFIC OA) 1/  | REPORTED<br>NO YES                       |  |
| 1. METHOD BLANKS 2. MS % RECOVERY (%R) 3. MSD OR LAB DUPLICATE % R 4. RWS % R 5. RWSD % R 6. RPDS FOR MS/MSD, SAMPLE/LD, RWS/RWSD 7. LCSB/ %R 8. ICVS B/ %R   |  |  |
| COMMENTS:   | -1                                       |  |
|   |  |  |
| QA REPORTING LEVEL: III REQUIREMENTS (SAMPLE SPECIFIC QA) 10/   |  |  |
| 1. CALIBRATION CURVE STANDARDS 2. ICVS %R 3. CCVS'' / %R 4. LCS %R 5. METHOD BLANKS 6. ICS'2 / %R (ICP ONLY) 7. DCS'3 / %R (ICP ONLY) 8. MS %R 9. LD OR MSD %R AND RPD 10. POST DIGESTION ANALYTICAL SPIKE 14 / |  |  |
| COMMENTS:   |  |  |
|   |  |  |
| 1/ CATCH COLLEGE  |  |  |
| 5/ LD = LABORATORY DUPLICATE: 7/ RPD 8/ LCS = LABORATORY CONTROL SAMPLE   | = REAGENT W<br>= REAGENT<br>= RELATIVE   | ATER SPIKE:<br>WATER SPIKE DUP.;<br>PERCENT DIFFERENCE |
| 9/ ICVS = INITIAL CALIBRATION VERIFICATI 10/ SAMPLE SPECIFIC QA: APPLIES TO PROJEC 11/ CCVS = CONTINUING CALIBRATION VERIFIC 12/ ICS = INTERFERENCE CHECK SAMPLE; 13/ 14/ POST DIGESTION ANALYTICAL SPIKE APPLI | ON STANDARD<br>T SPECIFIC<br>ATION STAND | :<br>SAMPLES.<br>ARD;                                  |

| ANALYTICAL DATA VALIDATION CHECKLIST SECTION FOUR DATA EVALUATION   | SUMMARY Ft Stewart RF1                                     |
|---|--|
| PROJECT NAME: Fl Show Burn Pit PRO. OA REPORTING LEVEL: J VALIDATION 1  |  |
| ALL QA REPORTING LEVELS (I.II.III)  SUMMARY OF CHECKLIST FINDINGS  1. FIELD MEASUREMENTS OF PH AND  | PERFORMANCE REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRED |
| SPECIFIC CONDUCTANCE ARE CONSISTENT WITH HISTORICAL DATA  2. FIELD RECORDS 3. METHODS (GEN.INFO. SECTION ONE) 4. HOLDING TIMES (MASTER SAMPLE LIST) A. EXTRACTION HOLDING TIMES B. ANALYSIS HOLDING TIMES 5. DETECTION LIMITS (SECTION ONE) 6. BLANKS (SECTIONS TWO OR THREE) A. EOUIPMENT RINSATE BLANKS B. FIELD BLANKS C. TRIP BLANKS C. TRIP BLANKS D. LABORATORY BLANKS 7. FIELD REPLICATES 8. FIELD SPLITS 9. GEOPHYSICAL COMPARISONS A. CATION VS ANION B. TDS VS SPEC. CONDUCTANCE C. PH VS ALK/ACIDITY D. OTHER 10. METALS GA DATA (SECTION TWO) 11. INORGANIC WET CHEMISTRY (SEC. TWO) 12. ORGANIC GA DATA-GC (SECTION THREE-A) 13. ORGANIC WET CHEMISTRY (SEC. THREE-B) 14. ORGANIC QA DATA-GC/MS (SEC. THREE-B) |  |
| AFTER COMPLETING THIS SECTION GO TO SECTION COMMENTS:   | ON FIVE.   |
|   |  |
|   |  |

| SECTION          | PIVE DATA VALIDATION CHECKLIST  DATA VALIDATION CODING Ft. Stewart RF1   |
|------------------|--|
| PROJEC<br>QA REF | T NAME: Ft. Showt Auru Pit PROJECT NUMBER: 1-St-0048 PORTING LEVEL: The Validation Date: 88 Syst 93                                |
|                  | FIER CODES ASSIGNED TO DATA: R. U., J., U/J., B., NO FLAG  FIFICATION OF SAMPLES AND PARAMETERS WITH CODES:  Sample ID  PARAMETERS |
| R CODE           |  |
| B CODE           |  |
| U CODE           |  |
| J CODE           |  |
| Ú/J<br>CODE      |  |
| EXPLANA          | TION:  all Greetable   |
| VALIDAT          | ION PERFORMED BY: FRAWZ FROELICHER  SIGNED: 48 Sept 93   |

DATA VALIDATION CHECKLIST Ft. Stewart RFA SECTION ONE Dura PROJECT NAME:\_ PROJECT NUMBER: SAMPLING DATE: 391 11 DOV 93 VALIDATION DATE: 21 DON 93 SAMPLE IDENTIFICATION: pd4 c ~1-11-93, 3-11-93, 3-11-93, 4-11-93 SAMPLING TEAM: J. Smith ANALYZING LABORATORY: Carr Toboratory ANALYSES PERFORMED: 8740 ACKA METals SAMPLE MATRIX:\_ agreous OA REPORTING LEVEL: 71 FIELD DATA PACKAGE DOCUMENTATION PERFORMANCE REPORTED ACCEPTABLE Not FIELD SAMPLING LOGS:1/ YES No YES REQUIRED 1. SAMPLING DATES NOTED 2. SAMPLING TEAM INDICATED 3. SAMPLE IDENTIFICATION TRACEABLE TO LOCATION COLLECTED 4. SAMPLE LOCATION 5. SAMPLE DEPTH FOR SOILS 6. COLLECTION TECHNIQUE (BAILER, PUMP ETC 7. FIELD SAMPLE PREPARATION TECHNIQUES 8. SAMPLE TYPE (GRAB, COMPOSITE) 9. SAMPLE CONTAINER TYPE 10. PRESERVATION METHODS 11. CHAIN OF CUSTODY FORM COMPLETED 12. REQUIRED ANALYTICAL METHODS REQUESTED 13. FIELD (WATER AND SOIL) SAMPLE LOGS COMPLETED PROPERLY AND SIGNED 14. NUMBER AND TYPE OF FIELD QC SAMPLES COLLECTED (BLANKS, REPLICATES, SPLITS, ETC.) 15. FIELD EQUIPMENT CALIBRATION 16. FIELD EQUIPMENT DECONTAMINATION 17. SAMPLE SHIPPING 18. LABORATORY TASK ORDER 1/ FIELD SAMPLING LOGS = WATER AND/OR SOIL/SEDIMENT SAMPLING LOGS COMMENTS:\_\_\_\_

| ANALYTICAL DATA PACKAGE   | DOCUMENTATION  |
|---|--|
| GENERAL INFORMA   |  |
| ALL OA REPORTING LEVELS   | PERFORMANCE REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRED   |
| 1. SAMPLE RESULTS 2. PARAMETERS ANALYZED 3. METHOD OF ANALYSIS 4. DETECTION LIMITS OF ANALYSIS 5. MASTER TRACKING LIST 6. SAMPLE COLLECTION DATE 7. LAB SAMPLE RECEIVED DATE 8. SAMPLE PREPARATION/EXTRACTION DATE 9. SAMPLE ANALYSIS DATE 10. COPY OF CHAIN-OF-CUSTODY FORM SIGNED BY THE LAB SAMPLE CUSTODIAN 11. A NARRATIVE SUMMARY OF QA OR SAMPLE PROBLEMS IS PROVIDED. |  |
| COMMENTS:  AFTER COMPLETING SECTION ONE PROCEED TO T LEVEL OF SECTION TWO (INORGANIC ANALYSES) ANALYSES). FOLLOWING COMPLETION OF THESE FOUR (DATA EVALUATION SUMMARY).   | AND/OR SECTION THREE CORCANIC  |
| ANALYTICAL DATA VALIDATION CHECKLIST SECTION TWO INORGANIC ANALY  | SES  |
| METALS AND CLASSICAL WET C  | HEMISTRY METHODS   |
| QA REPORTING LEVEL: I REQUIREMENTS (BATCH SPECIFIC QA) '  | REPORTED IN LIMITS NOT<br>NO YES NO YES REQUIRED   |
| 1. METHOD BLANKS 2. MS2' OR RWSS' % RECOVERY (%R) 3. MSD4' OR RWSD5' OR LD6' %R 4. RPD7'  |  |
| COMMENTS:   |  |
|   |  |
| 4/ MSD = MATRIX SPIKE DUP.; 5/ RWSE   | PLES IN ANALYTICAL BATCH  = REAGENT WATER SPIKE;  = REAGENT WATER SPIKE DUP.;  = RELATIVE PERCENT DIFFERENCE |

| THOROTOR INC   |  |  |  |
|--|--|--|--|
| METALS AND CLASSICAL WET C   | SES  | TUODE  |  |
| OA REPORTING LEVEL: II REQUIREMENTS (BAICH SPECIFIC OA) 1/   | REPORTED<br>No YES   | IN LIMITS<br>NO YES                              | S NOT<br>REQUIRED                      |
| 1. METHOD BLANKS 2. MS % RECOVERY (%R) 3. MSD OR <del>LAB DUPLICATE</del> % R 4. RWS % R 5. RWSD % R 6. RPDs FOR MS/MSD, SAMPLE/LD, RWS/RWSD 7. LCS*/ %R 8. ICVS */ %R COMMENTS:   |  |  | AEGOTRED                               |
|  |  |  | ······································ |
| QA REPORTING LEVEL: III REQUIREMENTS (SAMPLE SPECIFIC QA) 10/  |  |  |  |
| 1. CALIBRATION CURVE STANDARDS 2. ICVS %R 3. CCVS 1 / %R 4. LCS %R 5. METHOD BLANKS 6. ICS 2 / %R (ICP ONLY) 7. DCS 3 / %R (ICP ONLY) 8. MS %R 9. LD OR MSD %R AND RPD 10. POST DIGESTION ANALYTICAL SPIKE 4 /   |  |  |  |
| COMMENTS:  |  |  |  |
|  |  |  |  |
| 1/ EATCH SPECIFIC QA: APPLIES TO ANY SAME 2/ MS = MATRIX SPIKE; 3/ RWS = 4/ MSD = MATRIX SPIKE DUP.; 5/ RWSD 6/ LD = LABORATORY DUPLICATE; 7/ RPD = 8/ LCS = LABORATORY CONTROL SAMPLE; 9/ ICVS = INITIAL CALIBRATION VERIFICATION 10/ SAMPLE SPECIFIC QA: APPLIES TO PROJECT 11/ CCVS = CONTINUING CALIBRATION VERIFICATION 12/ ICS = INTERFERENCE CHECK SAMPLE; 13/ 14/ POST DIGESTION ANALYTICAL SPIKE APPLIE | REAGENT WE REAGENT WE RELATIVE DOWN STANDARD SPECIFIC STANDARD | ATER SPIKE WATER SPIKE PERCENT DI : SAMPLES ARD; | E;<br>KE DUP.;<br>IFFERENCE            |

| ANALYTICAL DATA VALIDATION CHECKLIST SECTION THREE ORGANIC ANALY   |   |
|--|---|
| QA REPORTING LEVEL: I_ REQUIREMENTS  | REPORTED IN LIMITS NOT NO YES NO YES REQUIRED |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. RWS¹/ 4. RWSD²/ 5. RPD³/   |   |
| COMMENTS:  |   |
|  | 16.6  |
| QA REPORTING LEVEL: II REQUIREMENTS A. GAS CHROMATOGRAPHY (NO MASS SPEC) OR  | WET CHEMISTRY PROCEDURE                       |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS4/ (BATCH SPECIFIC) 4. MSD5/ (BATCH SPECIFIC) 5. LD6/ (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES |   |
| B. GAS CHROMATOGRAPH/MASS SPECTROMETER   | -   |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS (BATCH SPECIFIC) 4. MSD (BATCH SPECIFIC) 5. LD (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES       |   |
| COMMENTS:  |   |
|  |   |
| 1/ RWS = REAGENT WATER SPIKE: 2/ RWSD = 3/ RPD = RELATIVE PERCENT DIFFERENCE: 4 5/ MSD = MATRIX SPIKE DUPLICATE: 6/ LD   | / MS = MATRIX SPIKE:                          |

| DATA EVALUATION SUMMARY A SUMMARY  PROJECT NAME: A: D: D: PROJECT NUMBER: FST OOGC  A REPORTING LEVELS (I,II,III)  PERFORMANCE  ALL OA REPORTING LEVELS (I,II,III)  PERFORMANCE  REPORTED ACCEPTABLE NOT  NO YES NO YES REQUIRED  1. FIELD MEASUREMENTS OF PH AND  SPECIFIC CONDUCTANCE ARE CONSISTENT  WITH HISTORICAL DATA  2. FIELD RECORDS  3. METHODS (GEN.INFO. SECTION ONE)  4. HOLDING TIMES (MASTER SAMPLE LIST)  A. EXTRACTION HOLDING TIMES  5. DETECTION LIMITS (SECTION ONE)  6. BLANKS (SECTIONS TWO OR THREE)  A. EQUIPMENT RINSATE BLANKS  C. TRIP BLANKS  C. TRIP BLANKS  C. TRIP BLANKS  7. FIELD SPLITS  9. GEOPYSICAL COMPARISONS  A. CATION VS ANION  B. TOS VS SPEC. CONDUCTANCE  C. PH VS ALK/ACIDITY  D. OTHER  10. METALS QA DATA (SECTION TWO)  11. INORGANIC WET CHEMISTRY (SEC. THO)  12. ORGANIC WET CHEMISTRY (SEC. THREE-A)  13. ORGANIC WET CHEMISTRY (SEC. THREE-A)  14. ORGANIC OAD DATA-GC (SECTION THREE-A)  13. ORGANIC WET CHEMISTRY (SEC. THREE-A)  14. ORGANIC OAD DATA-GC/MS (SEC. THREE-B)  AFTER COMPLETING THIS SECTION GO TO SECTION FIVE. | ANALYTICAL DATA VALIDATION CHECKLIST   |  |
|---|--|--|
| ALL QA REPORTING LEVELS (I,II,III)  PERFORMANCE SLIMMARY OF CHECKLIST FINDINGS  PERFORMANCE REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRED  1. FIELD MEASUREMENTS OF PH AND SPECIFIC CONDUCTANCE ARE CONSISTENT WITH HISTORICAL DATA 2. FIELD RECORDS 3. METHODS (GEN.INFO. SECTION ONE) 4. HOLDING TIMES (MASTER SAMPLE LIST) A. EXTRACTION HOLDING TIMES B. ANALYSIS HOLDING TIMES S. ANALYSIS HOLDING TIMES S. ANALYSIS HOLDING TIMES C. DETECTION LIMITS (SECTION ONE) 6. BLANKS (SECTIONS TWO OR THREE) A. EQUIPMENT RINSATE BLANKS B. FIELD BLANKS C. TRIP BLANKS C. TRIP BLANKS C. TRIP BLANKS D. LABORATORY BLANKS 7. FIELD REPLICATES 8. FIELD SPLITS 9. GEOPHYSICAL COMPARISONS A. CATION VS ANION B. TDS VS SPEC. CONDUCTANCE C. PH VS ALK/ACIDITY D. OTHER 10. METALS QA DATA (SECTION TWO) 11. INORGANIC WET CHEMISTRY (SEC. TWO) 12. ORGANIC VET CHEMISTRY (SEC. THREE-A) 13. ORGANIC WET CHEMISTRY (SEC. THREE-B)  AFTER COMPLETING THIS SECTION GO TO SECTION EIVE  |  | SUMMARY It Stewart RF                          |
| SLIMMARY OF CHECKLIST FINDINGS  REPORTED ACCEPTABLE NOT NO YES REQUIRED  1. FIELD MEASUREMENTS OF PH AND SPECIFIC CONDUCTANCE ARE CONSISTENT WITH HISTORICAL DATA  2. FIELD RECORDS  5. METHODS (GEN. INFO. SECTION ONE)  4. HOLDING TIMES (MASTER SAMPLE LIST)  A. EXTRACTION HOLDING TIMES  6. ANALYSIS HOLDING TIMES  5. DETECTION LIMITS (SECTION ONE)  A. EOUIPMENT RINSATE BLANKS  C. TRIP BLANKS  D. LABORATORY BLANKS  T. FIELD REPLICATES  8. FIELD SPLITS  9. GEOPHYSICAL COMPARISONS  A. CATION VS ANION  B. TDS VS SPEC. CONDUCTANCE  C. PH VS ALK/ACIDITY  D. OTHER  10. METALS QA DATA (SECTION TWO)  11. INORGANIC WET CHEMISTRY (SEC. TWO)  12. ORGANIC GA DATA-GC (SECTION THREE-A)  13. ORGANIC WET CHEMISTRY (SEC. THREE-B)  AFTER COMPLETING THIS SECTION GO TO SECTION ELVE  | PROJECT NAME: Reuse Pit PRO OA REPORTING LEVEL: IT VALIDATION  | JECT NUMBER: FST-004C DATE: 1 (ROX43           |
| 1. FIELD MEASUREMENTS OF PH AND SPECIFIC CONDUCTANCE ARE CONSISTENT WITH HISTORICAL DATA  2. FIELD RECORDS  3. METHODS (GEN.INFO. SECTION ONE)  4. HOLDING TIMES (MASTER SAMPLE LIST)  A. EXTRACTION HOLDING TIMES  E. ANALYSIS HOLDING TIMES  5. DETECTION LIMITS (SECTION ONE)  6. BLANKS (SECTIONS TWO OR THREE)  A. EQUIPMENT RINSATE BLANKS  C. TRIP BLANKS  C. TRIP BLANKS  D. LABORATORY BLANKS  7. FIELD REPLICATES  8. FIELD SPLITS  9. GEOPHYSICAL COMPARISONS  A. CATION VS ANION  B. TDS VS SPEC. CONDUCTANCE  C. PH VS ALK/ACIDITY  D. OTHER  10. METALS QA DATA (SECTION TWO)  11. INORGANIC WET CHEMISTRY (SEC. TWO)  12. ORGANIC WET CHEMISTRY (SEC. THREE-A)  13. ORGANIC WET CHEMISTRY (SEC. THREE-A)  14. ORGANIC GA DATA-GC/MS (SEC. THREE-B)  AFTER COMPLETING THIS SECTION GO TO SECTION FIVE   | ALL QA REPORTING LEVELS (I.II.III)   |  |
| SPECIFIC CONDUCTANCE ARE CONSISTENT WITH HISTORICAL DATA  2. FIELD RECORDS  5. METHODS (GEN.INFO. SECTION ONE)  4. HOLDING TIMES (MASTER SAMPLE LIST) A. EXTRACTION HOLDING TIMES B. ANALYSIS HOLDING TIMES  5. DETECTION LIMITS (SECTION ONE)  6. BLANKS (SECTIONS TWO OR THREE) A. EQUIPMENT RINSATE BLANKS B. FIELD BLANKS C. TRIP BLANKS D. LABORATORY BLANKS  7. FIELD REPLICATES 8. FIELD SPLITS 9. GEOPHYSICAL COMPARISONS A. CATION VS ANION B. TOS VS SPEC. CONDUCTANCE C. PH VS ALK/ACIDITY D. OTHER  10. METALS QA DATA (SECTION TWO) 11. INORGANIC WET CHEMISTRY (SEC. TWO) 12. ORGANIC WET CHEMISTRY (SEC. THREE-A) 13. ORGANIC WET CHEMISTRY (SEC. THREE-B)  AFTER COMPLETING THIS SECTION GO TO SECTION EIVE   | SUMMARY OF CHECKLIST FINDINGS  | REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRED |
| AFTER COMPLETING THIS SECTION GO TO SECTION FIVE.  COMMENTS:  | SPECIFIC CONDUCTANCE ARE CONSISTENT WITH HISTORICAL DATA  2. FIELD RECORDS 3. METHODS (GEN.INFO. SECTION ONE) 4. HOLDING TIMES (MASTER SAMPLE LIST) A. EXTRACTION HOLDING TIMES B. ANALYSIS HOLDING TIMES 5. DETECTION LIMITS (SECTION ONE) 6. BLANKS (SECTIONS TWO OR THREE) A. EOUIPMENT RINSATE BLANKS B. FIELD BLANKS C. TRIP BLANKS D. LABORATORY BLANKS 7. FIELD REPLICATES 8. FIELD SPLITS 9. GEOPHYSICAL COMPARISONS A. CATION VS ANION B. TOS VS SPEC. CONDUCTANCE C. PH VS ALK/ACIDITY D. OTHER 10. METALS QA DATA (SECTION TWO) 11. INORGANIC WET CHEMISTRY (SEC. TWO) 12. ORGANIC QA DATA-GC (SECTION THREE-A) 13. ORGANIC WET CHEMISTRY (SEC. THREE-B) 14. ORGANIC QA DATA-GC/MS (SEC. THREE-B) |  |
|   | AFTER COMPLETING THIS SECTION GO TO SECTION COMMENTS:  | ON FIVE.                                       |
|   |  |  |
|   |  |  |
|   |  |  |
|   |  |  |
|   |  |  |
|   | •  |  |

| SECTION F          | DATA VALIDATION CODING / - Tewart RF/   |
|--------------------|---|
| PROJECT<br>QA REPO | NAME: Auru Pit PROJECT NUMBER: FST-0040 PRING LEVEL: # VALIDATION DATE: \$1 ADD 93  |
|                    | TIER CODES ASSIGNED TO DATA: R. U. J. U/J. B. NO FLAG FICATION OF SAMPLES AND PARAMETERS WITH CODES:  SAMPLE ID  PARAMETERS |
| R CODE _           |   |
| S CODE             |   |
| U CODE _           |   |
| J CODE _           |   |
| U/J<br>ccoe _<br>- |   |
| EXPLANATI          | all acceptable  |
| )/A1 TDATE         | $E_{1}$   |
| VALIDATIC          | SIGNED: LI POL PE   |

DATA VALIDATION CHECKLIST F.D. Stewart RF1 SECTION ONE PROJECT NAME: FT Stewart PROJECT NUMBER: FST-804D SAMPLING DATE: 30 Jul \_ Validation Date: 18 Cent 93 4W1-7-93 MW3-7-93 SAMPLE IDENTIFICATION: MW/-MW4-7-93 SAMPLING TEAM:\_ ANALYZING LABORATORY: \_\_\_\_\_\_ ANALYSES PERFORMED: 644/9140 SAMPLE MATRIX: aqueous QA REPORTING LEVEL: FIELD DATA PACKAGE DOCUMENTATION PERFORMANCE REPORTED ACCEPTABLE Not FIELD SAMPLING LOGS:1/ No YES No YES REQUIRED 1. SAMPLING DATES NOTED 2. SAMPLING TEAM INDICATED 3. SAMPLE IDENTIFICATION TRACEABLE TO LOCATION COLLECTED 4. SAMPLE LOCATION 5. SAMPLE DEPTH FOR SOILS 6. COLLECTION TECHNIQUE (BAILER, PUMP ETC 7. FIELD SAMPLE PREPARATION TECHNIQUES 8. SAMPLE TYPE (GRAB, COMPOSITE) 9. SAMPLE CONTAINER TYPE 10. PRESERVATION METHODS 11. CHAIN OF CUSTODY FORM COMPLETED 12. REQUIRED ANALYTICAL METHODS REQUESTED 13. FIELD (WATER AND SOIL) SAMPLE LOGS COMPLETED PROPERLY AND SIGNED 14. NUMBER AND TYPE OF FIELD OC SAMPLES COLLECTED (BLANKS. REPLICATES, SPLITS, ETC.) 15. FIELD EQUIPMENT CALIBRATION 16. FIELD EQUIPMENT DECONTAMINATION 17. SAMPLE SHIPPING 18. LABORATORY TASK ORDER 1/ FIELD SAMPLING LOGS = WATER AND/OR SOIL/SEDIMENT SAMPLING LOGS COMMENTS:

| ANALYTICAL DATA PACKAGE   | DOCUMENTATION   |
|---|---|
| GENERAL INFORMA   | TION  |
| ALL QA REPORTING LEVELS   | PERFORMANCE<br>REPORTED ACCEPTABLE NOT<br>NO YES NO YES REQUIRED  |
| 1. SAMPLE RESULTS 2. PARAMETERS ANALYZED 3. METHOD OF ANALYSIS 4. DETECTION LIMITS OF ANALYSIS 5. MASTER TRACKING LIST 6. SAMPLE COLLECTION DATE 7. LAB SAMPLE RECEIVED DATE 8. SAMPLE PREPARATION/EXTRACTION DATE 9. SAMPLE ANALYSIS DATE 10. COPY OF CHAIN-OF-CUSTODY FORM SIGNED BY THE LAB SAMPLE CUSTODIAN 11. A NARRATIVE SUMMARY OF QA OR SAMPLE PROBLEMS IS PROVIDED. |   |
| AFTER COMPLETING SECTION ONE PROCEED TO TLEVEL OF SECTION TWO (INORGANIC ANALYSES) ANALYSES). FOLLOWING COMPLETION OF THESE FOUR (DATA EVALUATION SUMMARY).  ANALYTICAL DATA VALIDATION CHECKLIST SECTION TWO INORGANIC ANALY   | AND/OR SECTION THREE (ORGANIC<br>E SECTIONS PROCEED TO SECTION<br>(SES  |
| METALS AND CLASSICAL WET C  | HEMISTRY METHODS  |
| QA REPORTING LEVEL: I REQUIREMENTS (BATCH SPECIFIC QA) 1/   | REPORTED IN LIMITS NOT<br>NO YES NO YES REQUIRED  |
| 1. METHOD BLANKS<br>2. MS2' OR RWSD' % RECOVERY (%R)<br>3. MSD4' OR RWSD' OR LD' %R<br>4. RPD'  |   |
| COMMENTS:   |   |
|   |   |
| 4/ MSD = MATRIX SPIKE DUP.; 5/ RWS  | MPLES IN ANALYTICAL BATCH  = REAGENT WATER SPIKE;  D = REAGENT WATER SPIKE DUP.;  = RELATIVE PERCENT DIFFERENCE |

| THOROUGH THO   |   |  |
|--|---|--|
| INORGANIC ANALYSES   |   |  |
|  | HEMISTRY ME   | THODS  |
| QA REPORTING LEVEL: II REQUIREMENTS (BATCH SPECIFIC OA) 1/   | REPORTED<br>No YES  | IN LIMITS NOT<br>NO YES REQUIRED                                 |
| 1. METHOD BLANKS 2. MS % RECOVERY (%R) 3. MSD OR LAB DUPLICATE % R 4. RWS % R 5. RWSD % R 6. RPDS FOR MS/MSD, SAMPLE/LD, RWS/RWSD 7. LCS* %R 8. ICVS * %R  |   |  |
| COLLIER 13.  |   |  |
|  | ·····   |  |
| OA REPORTING LEVEL: III REQUIREMENTS (SAMPLE SPECIFIC QA) 10/  |   |  |
| 1. CALIBRATION CURVE STANDARDS 2. ICVS %R 3. CCVS'' / %R 4. LCS %R 5. METHOD BLANKS 6. ICS'2 / %R (ICP ONLY) 7. DCS'3 / %R (ICP ONLY) 8. MS %R 9. LD OR MSD %R AND RPD 10. POST DIGESTION ANALYTICAL SPIKE'4/  |   |  |
| COMMENTS:  |   |  |
|  |   |  |
|  |   |  |
|  |   |  |
| 1/ SATCH SPECIFIC QA: APPLIES TO ANY SAME 2/ MS = MATRIX SPIKE; 3/ RWS = 4/ MSD = MATRIX SPIKE DUP.; 5/ RWSD 6/ LD = LABORATORY DUPLICATE; 7/ RPD = 8/ LCS = LABORATORY CONTROL SAMPLE; 9/ ICVS = INITIAL CALIBRATION VERIFICATION 10/ SAMPLE SPECIFIC QA: APPLIES TO PROJECT 11/ CCVS = CONTINUING CALIBRATION VERIFICATION 12/ ICS = INTERFERENCE CHECK SAMPLE; 13/ 14/ POST DIGESTION ANALYTICAL SPIKE APPLIE | REAGENT WAR REAGENT WAR RELATIVE IN STANDARD STANDARD STANDARD STANDARD | ATER SPIKE; WATER SPIKE DUP.; PERCENT DIFFERENCE ; SAMPLES. ARD; |

| ORGANIC AN   | WF 12E2  |
|--|--|
| A REPORTING LEVEL: I_<br>EQUIREMENTS   | REPORTED IN LIMITS NOT<br>NO YES NO YES REQUIR |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. RWS¹/ 4. RWSD²/ 5. RPD³/   |  |
| OMMENTS:   |  |
|  | · · ·  |
| A REPORTING LEVEL: II<br>EQUIREMENTS<br>. GAS CHROMATOGRAPHY (NO MASS SPEC)  | OR WET CHEMISTRY PROCEDURE                     |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS4/ (BATCH SPECIFIC) 4. MSD5/ (BATCH SPECIFIC) 5. LD6/ (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES |  |
| GAS CHROMATOGRAPH/MASS SPECTROMETI   | ER _   |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS (BATCH SPECIFIC) 4. MSD (BATCH SPECIFIC) 5. LD (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES       |  |
| OMMENTS:   |  |

<sup>3/</sup> RPD = RELATIVE PERCENT DIFFERENCE; 4/ MS = MATRIX SPIKE; 5/ MSD = MATRIX SPIKE DUPLICATE; 6/ LD = LAB DUP

| ANALYTICAL DATA VALIDATION CHECKLIST SECTION FOUR DATA EVALUATION S  | SUMMARY Ft. Stewart RF1                                    |
|--|--|
| PROJECT NAME: Ft. Stewart Burn Pit PROJ<br>QA REPORTING LEVEL: I VALIDATION D  | JECT NUMBER: FST-004D  ATE: 28 Sept 93                     |
| ALL QA REPORTING LEVELS (I.II.III)  SUMMARY OF CHECKLIST FINDINGS  | PERFORMANCE REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRED |
| 1. FIELD MEASUREMENTS OF PH AND SPECIFIC CONDUCTANCE ARE CONSISTENT WITH HISTORICAL DATA  2. FIELD RECORDS  3. METHODS (GEN.INFO. SECTION ONE)  4. HOLDING TIMES (MASTER SAMPLE LIST)  A. EXTRACTION HOLDING TIMES  B. ANALYSIS HOLDING TIMES  5. DETECTION LIMITS (SECTION ONE)  6. BLANKS (SECTIONS TWO OR THREE)  A. EQUIPMENT RINSATE BLANKS  B. FIELD BLANKS  C. TRIP BLANKS  D. LABORATORY BLANKS  7. FIELD REPLICATES  8. FIELD SPLITS  9. GEOPHYSICAL COMPARISONS  A. CATION VS ANION  B. TDS VS SPEC. CONDUCTANCE  C. PH VS ALK/ACIDITY  D. OTHER  10. METALS QA DATA (SECTION TWO)  11. INORGANIC WET CHEMISTRY (SEC. TWO)  12. ORGANIC GA DATA—GC (SECTION THREE—A)  13. ORGANIC WET CHEMISTRY (SEC. THREE—B) |  |
| AFTER COMPLETING THIS SECTION GO TO SECTIO COMMENTS:   | N FIVE.  |
|  |  |
|  |  |
|  |  |

| ANALYTICA<br>SECTION A | DATA VALIDATION CHECKLIST  DATA VALIDATION CODING Ft. Stewart RF(   |
|------------------------|---|
| PROJECT<br>QA REPO     | T NAME: FSTewat Aun PilPROJECT NUMBER: FST-904D DRTING LEVEL: It VALIDATION DATE: 28 Sept 93                                  |
|                        | FIER CODES ASSIGNED TO DATA: R. U. J. U/J. B. NO FLAG  IFICATION OF SAMPLES AND PARAMETERS WITH CODES:  SAMPLE ID  PARAMETERS |
| R CODE                 |   |
| B CODE                 |   |
| U CODE                 |   |
| J CODE                 |   |
| U/J<br>code            |   |
| EXPLANAT               | ION: all acceptable   |
|                        |   |
| VALIDATIO              | DATE: 28 Sept 93  |

|   | MULL ALL S-93  |
|---|--|
| FIELD SAMPLING LOGS: 1/   | PERFORMANCE REPORTED ACCEPTABLE NOT NO YES NO YES REOUIRES |
| 1. SAMPLING DATES NOTED 2. SAMPLING TEAM INDICATED 3. SAMPLE IDENTIFICATION TRACEABLE TO LOCATION COLLECTED 4. SAMPLE LOCATION 5. SAMPLE DEPTH FOR SOILS 6. COLLECTION TECHNIQUE (BAILER, PUMP ETC. 7. FIELD SAMPLE PREPARATION TECHNIQUES 8. SAMPLE TYPE (GRAB, COMPOSITE) 9. SAMPLE CONTAINER TYPE 10. PRESERVATION METHODS 11. CHAIN OF CUSTODY FORM COMPLETED 12. REQUIRED ANALYTICAL METHODS REQUESTED 13. FIELD (WATER AND SOIL) SAMPLE LOGS COMPLETED PROPERLY AND SIGNED 14. NUMBER AND TYPE OF FIELD QC SAMPLES COLLECTED (BLANKS, REPLICATES, SPLITS, ETC.) 15. FIELD EQUIPMENT CALIBRATION 16. FIELD EQUIPMENT DECONTAMINATION 17. SAMPLE SHIPPING 18. LABORATORY TASK ORDER |  |

| ANALYTICAL DATA PACKAGE   | DOCUMENTATION  |  |
|---|--|--|
| GENERAL INFORMA   | TION   |  |
| ALL QA REPORTING LEVELS   | PERFORMANCE REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRED   |  |
| 1. SAMPLE RESULTS 2. PARAMETERS ANALYZED 3. METHOD OF ANALYSIS 4. DETECTION LIMITS OF ANALYSIS 5. MASTER TRACKING LIST 6. SAMPLE COLLECTION DATE 7. LAB SAMPLE RECEIVED DATE 8. SAMPLE PREPARATION/EXTRACTION DATE 9. SAMPLE ANALYSIS DATE 10. COPY OF CHAIN-OF-CUSTODY FORM SIGNED BY THE LAB SAMPLE CUSTODIAN 11. A NARRATIVE SUMMARY OF QA OR SAMPLE PROBLEMS IS PROVIDED. |  |  |
| COMMENTS:  AFTER COMPLETING SECTION ONE PROCEED TO THE APPROPRIATE OA REPORTING LEVEL OF SECTION TWO (INORGANIC ANALYSES) AND/OR SECTION THREE (ORGANIC ANALYSES). FOLLOWING COMPLETION OF THESE SECTIONS PROCEED TO SECTION FOUR (DATA EVALUATION SUMMARY).  ANALYTICAL DATA VALIDATION CHECKLIST SECTION TWO  |  |  |
| INORGANIC ANALY METALS AND CLASSICAL WET C  | SES<br>HEMISTRY METHODS  |  |
| QA REPORTING LEVEL: I REQUIREMENTS (BATCH SPECIFIC QA) 1/   | REPORTED IN LIMITS NOT<br>NO YES NO YES REQUIRED   |  |
| 1. METHOD BLANKS % RECOVERY (%R) 2. MSD4/ OR RWSD5/ OR LD6/ %R 4. RPD7/   |  |  |
| COMMENTS:   |  |  |
| 4/ MSD = MATRIX SPIKE DUP.; 5/ RWSD   | PLES IN ANALYTICAL BATCH  = REAGENT WATER SPIKE;  = REAGENT WATER SPIKE DUP.;  = RELATIVE PERCENT DIFFERENCE |  |

| SECTION TWO   |   |   |
|---|---|---|
| INORGANIC ANALYS METALS AND CLASSICAL WET CH  | SES   | TUODS   |
| QA REPORTING LEVEL: II  |   |   |
| REQUIREMENTS (BATCH SPECIFIC OA) 1/   | REPORTED<br>NO YES                                  | IN LIMITS NOT<br>NO YES REQUIRED                                |
| 1. METHOD BLANKS 2. MS % RECOVERY (%R) 3. MSD OR LAB DUPLICATE % R 4. RWS % R 5. RWSD % R 6. RPDs FOR MS/MSD, SAMPLE/LD, RWS/RWSD 7. LCS*/ %R 8. ICVS */ %R   |   |   |
| COMMENTS:   | <u> </u>  |   |
|   |   |   |
| QA REPORTING LEVEL: III<br>REQUIREMENTS (SAMPLE SPECIFIC QA) 10/  |   |   |
| 1. CALIBRATION CURVE STANDARDS 2. ICVS %R 3. CCVS 1 / %R 4. LCS %R 5. METHOD BLANKS 6. ICS 2 / %R (ICP only) 7. DCS 3 / %R (ICP only) 8. MS %R 9. LD OR MSD %R AND RPD 10. POST DIGESTION ANALYTICAL SPIKE 4 /  |   |   |
| COMMENTS:   |   |   |
|   |   |   |
|   |   |   |
| 2/ BATCH SPECIFIC QA: APPLIES TO ANY SAMP 2/ MS = MATRIX SPIKE; 3/ RWS = 4/ MSD = MATRIX SPIKE DUP.; 5/ RWSD 5/ LD = LABORATORY DUPLICATE; 7/ RPD = 6/ LCS = LABORATORY CONTROL SAMPLE; 6/ ICVS = INITIAL CALIBRATION VERIFICATIO 6/ SAMPLE SPECIFIC QA: APPLIES TO PROJECT 6/ CCVS = CONTINUING CALIBRATION VERIFICA 6/ ICS = INTERFERENCE CHECK SAMPLE; 13/ 6/ POST DIGESTION ANALYTICAL SPIKE APPLIE | REAGENT WE RELATIVE IN STANDARD SPECIFIC TION STAND | ATER SPIKE; WATER SPIKE DUP.; PERCENT DIFFERENCE ; SAMPLES ARD; |

| ANALYTICAL DATA VALIDATION CHECKLIST SECTION THREE ORGANIC ANALY   | YSES   |
|--|--|
| QA REPORTING LEVEL: I_ REQUIREMENTS  | REPORTED IN LIMITS NOT<br>NO YES NO YES REQUIRED |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. RWS1' 4. RWSD2' 5. RPD3'   |  |
| COMMENTS:  |  |
|  |  |
| QA REPORTING LEVEL: II REQUIREMENTS A. GAS CHROMATOGRAPHY (NO MASS SPEC) OR  | WET CHEMISTRY PROCEDURE                          |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS4/ (BATCH SPECIFIC) 4. MSD5/ (BATCH SPECIFIC) 5. LD6/ (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES |  |
| B. GAS CHROMATOGRAPH/MASS SPECTROMETER   | -  |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS (BATCH SPECIFIC) 4. MSD (BATCH SPECIFIC) 5. LD (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES       |  |
| COMMENTS:  |  |
|  |  |
| 1/ RWS = REAGENT WATER SPIKE: 2/ RWSD =  | REAGENT WATER SPIKE DURI TOAT                    |

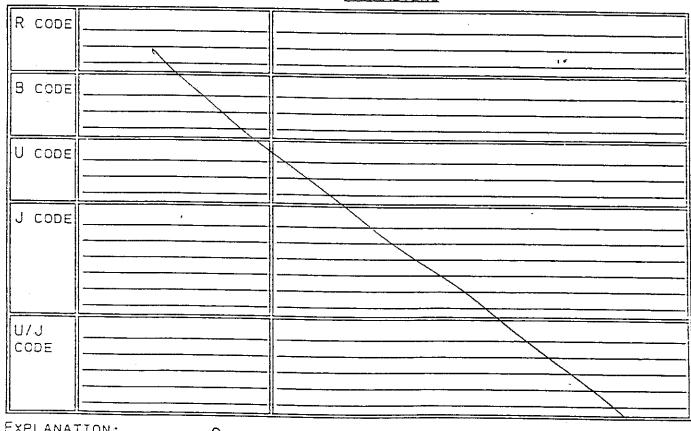
<sup>3/</sup> RPD = RELATIVE PERCENT DIFFERENCE; 4/ MS = MATRIX SPIKE; 5/ MSD = MATRIX SPIKE DUPLICATE; 6/ LD = LAB DUP

| ANALYTICAL DATA VALIDATION CHECKLIST SECTION FOUR  |  |
|--|--|
| DATA EVALUATION S  | SUMMARY Ft. Stewart RF1                                    |
| GA REPORTING LEVEL: TE VALIDATION D  | ATE: 28 Sept 93  |
| ALL QA REPORTING LEVELS (I.II.III)  SUMMARY OF CHECKLIST FINDINGS  | PERFORMANCE REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRED |
| 1. FIELD MEASUREMENTS OF PH AND SPECIFIC CONDUCTANCE ARE CONSISTENT WITH HISTORICAL DATA 2. FIELD RECORDS 3. METHODS (GEN.INFO. SECTION ONE) 4. HOLDING TIMES (MASTER SAMPLE LIST) A. EXTRACTION HOLDING TIMES B. ANALYSIS HOLDING TIMES 5. DETECTION LIMITS (SECTION ONE) 6. BLANKS (SECTIONS TWO OR THREE) A. EQUIPMENT RINSATE BLANKS B. FIELD BLANKS C. TRIP BLANKS D. LABORATORY BLANKS 7. FIELD REPLICATES 8. FIELD SPLITS 9. GEOPHYSICAL COMPARISONS A. CATION VS ANION B. TDS VS SPEC. CONDUCTANCE C. PH VS ALK/ACIDITY D. OTHER 10. METALS QA DATA (SECTION TWO) 11. INORGANIC WET CHEMISTRY (SEC. TWO) 12. ORGANIC GA DATA-GC (SECTION THREE-A) 13. ORGANIC WET CHEMISTRY (SEC. THREE-B) |  |
| AFTER COMPLETING THIS SECTION GO TO SECTION COMMENTS:  | N FIVE.  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

ANALYTICAL DATA VALIDATION CHECKLIST SECTION FIVE

|  | DATA VALIDATION CODIN                        |                                 |
|--|--|---------------------------------|
| PROJECT NAME: <u>Ft</u> .<br>QA REPORTING LEVE | Stewart Burn Pitproject: IT VALIDATION DATE: | NUMBER: FST-004E<br>: 28 Cyt 93 |

- 1. QUALIFIER CODES ASSIGNED TO DATA: R, U, J, U/J, B, NO FLAG
- 2. IDENTIFICATION OF SAMPLES AND PARAMETERS WITH CODES: SAMPLE ID PARAMETERS



|                   |  | JL         |           |  |  |
|-------------------|--|------------|-----------|--|--|
| EXPLANATION:      | ael  | accentable | 2         | -  |  |
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|                   |  |            |           |  |  |
|                   | TOTAL STATE OF THE |            |           | - The Hardware of the Land Control of the Control o | VITALINA DEL SE LA SECULIA DE LA CONTRACTOR DE LA CONTRAC |
|                   |  |            |           |  |  |
| VALIDATION PERFOR | RMED BY:   | FRANT      | FROBLicht | a  |  |
|                   | SIGNED:  |            |           |  |  |

DATE: 25 Sept 93

| FIELD DATA PACKAGE DOCUMENTATION  PERFORMANCE REPORTED ACCEPTABLE NOT NO YES NO YES REOUIRS  1. SAMPLING DATES NOTED 2. SAMPLING TEAM INDICATED 3. SAMPLE IDENTIFICATION TRACEABLE TO LOCATION COLLECTED 4. SAMPLE LOCATION 5. SAMPLE DEPTH FOR SOILS 6. COLLECTION TECHNIQUE (BAILER, PUMP ETC 7. FIELD SAMPLE PREPARATION TECHNIQUES 8. SAMPLE TYPE (GRAB, COMPOSITE) 9. SAMPLE TYPE (GRAB, COMPOSITE) 10. PRESERVATION METHODS 11. CHAIN OF CUSTODY FORM COMPLETED 12. REQUIRED ANALYTICAL METHODS REQUESTED 13. FIELD (WATER AND SOIL) SAMPLE LOGS COMPLETED PROPERLY AND SIGNED 14. NUMBER AND TYPE OF FIELD OC SAMPLES COLLECTED (BLANKS, REPLICATES, SPLITS, ETC.) 15. FIELD EQUIPMENT CALIBRATION 16. FIELD EQUIPMENT DECONTAMINATION 17. SAMPLE SHIPPING 18. LABORATORY TASK ORDER | SAMPLE IDENTIFICATION: MWF-8-93, MWS, with FST004F  SAMPLING TEAM: T. Smith W. Towner ANALYZING LABORATORY: Corr Yelend   | ALIDATION DATE: 28 1193<br>MW3, MW4, all #'s Profined |
|---|---|---|
| 1. SAMPLING DATES NOTED 2. SAMPLING TEAM INDICATED 3. SAMPLE IDENTIFICATION TRACEABLE TO LOCATION COLLECTED 4. SAMPLE LOCATION 5. SAMPLE DEPTH FOR SOILS 6. COLLECTION TECHNIQUE (BAILER, PUMP ETC) 7. FIELD SAMPLE PREPARATION TECHNIQUES 8. SAMPLE TYPE (GRAB, COMPOSITE) 9. SAMPLE CONTAINER TYPE 10. PRESERVATION METHODS 11. CHAIN OF CUSTODY FORM COMPLETED 12. REQUIRED ANALYTICAL METHODS REQUESTED 13. FIELD (WATER AND SOIL) SAMPLE LOGS COMPLETED PROPERLY AND SIGNED 14. NUMBER AND TYPE OF FIELD QC SAMPLES COLLECTED (BLANKS, REPLICATES, SPLITS, ETC.) 15. FIELD EQUIPMENT CALIBRATION 16. FIELD EQUIPMENT DECONTAMINATION 17. SAMPLE SHIPPING 18. LABORATORY TASK ORDER   |   | PERFORMANCE<br>REPORTED ACCEPTABLE NOT                |
| - 1/ FIELD DAMPLING LOGS = WATER AND/OR SOIL/SEDIMENT SAMOLING LOGG   | 1. SAMPLING DATES NOTED 2. SAMPLING TEAM INDICATED 3. SAMPLE IDENTIFICATION TRACEABLE TO LOCATION COLLECTED 4. SAMPLE LOCATION 5. SAMPLE DEPTH FOR SOILS 6. COLLECTION TECHNIQUE (BAILER, PUMP ETC) 7. FIELD SAMPLE PREPARATION TECHNIQUES 8. SAMPLE TYPE (GRAB, COMPOSITE) 9. SAMPLE CONTAINER TYPE 10. PRESERVATION METHODS 11. CHAIN OF CUSTODY FORM COMPLETED 12. REQUIRED ANALYTICAL METHODS REQUESTED 13. FIELD (WATER AND SOIL) SAMPLE LOGS COMPLETED PROPERLY AND SIGNED 14. NUMBER AND TYPE OF FIELD QC SAMPLES COLLECTED (BLANKS, REPLICATES, SPLITS, ETC.) 15. FIELD EQUIPMENT CALIBRATION 16. FIELD EQUIPMENT DECONTAMINATION 17. SAMPLE SHIPPING |   |

| ANALYTICAL DATA PACKAGE DOCUMENTATIONGENERAL INFORMATION  |   |  |  |
|---|---|--|--|
| ALL QA REPORTING LEVELS   | PERFORMANCE<br>REPORTED ACCEPTABLE NOT<br>NO YES NO YES REQUIRE |  |  |
| 1. SAMPLE RESULTS 2. PARAMETERS ANALYZED 3. METHOD OF ANALYSIS 4. DETECTION LIMITS OF ANALYSIS 5. MASTER TRACKING LIST 6. SAMPLE COLLECTION DATE 7. LAB SAMPLE RECEIVED DATE 8. SAMPLE PREPARATION/EXTRACTION DATE 9. SAMPLE ANALYSIS DATE 10. COPY OF CHAIN-OF-CUSTODY FORM SIGNED BY THE LAB SAMPLE CUSTODIAN 11. A NARRATIVE SUMMARY OF QA OR SAMPLE PROBLEMS IS PROVIDED. |   |  |  |
| COMMENTS:  AFTER COMPLETING SECTION ONE PROCEED TO T LEVEL OF SECTION TWO (INORGANIC ANALYSES) ANALYSES). FOLLOWING COMPLETION OF THESE FOUR (DATA EVALUATION SUMMARY).   | AND/OR SECTION THREE (ORGANI                                    |  |  |
| ANALYTICAL DATA VALIDATION CHECKLIST SECTION TWO  | (SES  |  |  |
| QA REPORTING LEVEL: T<br>REQUIREMENTS (BATCH SPECIFIC QA) 1/  | REPORTED IN LIMITS NOT<br>NO YES NO YES REQUIRED                |  |  |
| 1. METHOD BLANKS % RECOVERY (%R) 2. MSD4/ OR RWSD5/ OR LD6/ %R 4. RPD7/   |   |  |  |
| COMMENTS:   |   |  |  |
| 1/ BATCH SPECIFIC QA: APPLIES TO ANY SAN  | MPLES IN ANALYTICAL BATCH                                       |  |  |

2/ MS = MATRIX SPIKE; 3/ RWS = REAGENT WATER SPIKE; 4/ MSD = MATRIX SPIKE DUP.; 5/ RWSD = REAGENT WATER SPIKE DUP.; 6/ LD = LABORATORY DUPLICATE; 7/ RPD = RELATIVE PERCENT DIFFERENCE

| INORGANIC ANALYS  | SES  |   |  |
|---|--|---|--|
| METALS AND CLASSICAL WET CHEMISTRY METHODS  |  |   |  |
| QA REPORTING LEVEL: II REQUIREMENTS (BATCH SPECIFIC QA) 1/  | REPORTED<br>No YES                             | IN LIMITS NOT<br>NO YES REQUIRED                                |  |
| 1. METHOD BLANKS 2. MS % RECOVERY (%R) 3. MSD OR LAB DUPLICATE % R 4. RWS % R 5. RWSD % R 6. RPDs FOR MS/MSD, SAMPLE/LD, RWS/RWSD 7. LCS** %R 8. ICVS ** %R   |  |   |  |
| COMMENTS:   |  |   |  |
|   |  |   |  |
| QA REPORTING LEVEL: III REQUIREMENTS (SAMPLE SPECIFIC QA) 10/   |  |   |  |
| 1. CALIBRATION CURVE STANDARDS 2. ICVS %R 3. CCVS''' %R 4. LCS %R 5. METHOD BLANKS 6. ICS'2' %R (ICP ONLY) 7. DCS'3' %R (ICP ONLY) 8. MS %R 9. LD OR MSD %R AND RPD 10. POST DIGESTION ANALYTICAL SPIKE'*   |  |   |  |
| COMMENTS:   |  |   |  |
|   |  |   |  |
| 1/ SATCH SPECIFIC QA: APPLIES TO ANY SAMP 2/ MS = MATRIX SPIKE; 3/ RWS = 4/ MSD = MATRIX SPIKE DUP.; 5/ RWSD 6/ LD = LABORATORY DUPLICATE; 7/ RPD = 8/ LCS = LABORATORY CONTROL SAMPLE; 9/ ICVS = INITIAL CALIBRATION VERIFICATIO 10/ SAMPLE SPECIFIC QA: APPLIES TO PROJECT 11/ CCVS = CONTINUING CALIBRATION VERIFICA 12/ ICS = INTERFERENCE CHECK SAMPLE; 13/ 14/ POST DIGESTION ANALYTICAL SPIKE ADDITE | REAGENT WE RELATIVE STANDARD SPECIFIC STANDARD | ATER SPIKE; WATER SPIKE DUP.; PERCENT DIFFERENCE ; SAMPLES ARD; |  |
| 14/ POST DIGESTION ANALYTICAL SPIKE APPLIE  | S TO FURNA                                     | CE AA ONLY;   |  |

| ORTED IN LIMITS NOT YES NO YES REQUIR |
|---------------------------------------|
|                                       |
|                                       |
|                                       |
|                                       |
| 3.6                                   |
| CHEMISTRY PROCEDURE                   |
|                                       |
| _                                     |
|                                       |
|                                       |

<sup>1/</sup> RWS = REAGENT WATER SPIKE; 2/ RWSD = REAGENT WATER SPIKE DUPLICATE; 3/ RPD = RELATIVE PERCENT DIFFERENCE; 4/ MS = MATRIX SPIKE; 5/ MSD = MATRIX SPIKE DUPLICATE: 6/ LD = LAB DUP

ANALYTICAL DATA VALIDATION CHECKLIST SECTION FOUR DATA EVALUATION SUMMARY It. Steven PROJECT NAME: Ft. Stewart Burn Dit PROJECT NUMBER: FST-QA REPORTING LEVEL: T VALIDATION DATE: J& Sept 9 ALL QA REPORTING LEVELS (I.II.III) PERFORMANCE REPORTED ACCEPTABLE NOT SUMMARY OF CHECKLIST FINDINGS No YES NO YES REQUIRED 1. FIELD MEASUREMENTS OF PH AND SPECIFIC CONDUCTANCE ARE CONSISTENT WITH HISTORICAL DATA 2. FIELD RECORDS 3. METHODS (GEN.INFO. SECTION ONE) 4. HOLDING TIMES (MASTER SAMPLE LIST) A. EXTRACTION HOLDING TIMES B. ANALYSIS HOLDING TIMES 5. DETECTION LIMITS (SECTION ONE) 6. BLANKS (SECTIONS TWO OR THREE) A. EQUIPMENT RINSATE BLANKS B. FIELD BLANKS C. TRIP BLANKS D. LABORATORY BLANKS 7. FIELD REPLICATES 8. FIELD SPLITS 9. GEOPHYSICAL COMPARISONS A. CATION VS ANION B. TDS VS SPEC. CONDUCTANCE C. PH VS ALK/ACIDITY D. OTHER 10. METALS QA DATA (SECTION TWO) 11. INORGANIC WET CHEMISTRY (SEC. TWO) 12. ORGANIC GA DATA-GC (SECTION THREE-A) 13. ORGANIC WET CHEMISTRY (SEC. THREE-A) 14. ORGANIC QA DATA-GC/MS (SEC. THREE-B) AFTER COMPLETING THIS SECTION GO TO SECTION FIVE. COMMENTS: \_\_\_\_

VALIDATION PERFORMED BY: FRANZ FROGELICHER

SIGNED: 28 Pert 93

DATA VALIDATION CHECKLIST SECTION ONE PROJECT NUMBER: FST - 00 9 SAMPLING DATE: 27 NOU 93 VALIDATION DATE: 30 00 SAMPLE IDENTIFICATION: \$5-1-11-93 557-41-93 553, 504, 555 556-11-95 SAMPLING TEAM: \(\sigma\). ANALYZING LABORATORY: COND Jaboratores and I ANALYSES PERFORMED: 5340 RC&+ motals Ph Causes SAMPLE MATRIX: Lack QA REPORTING LEVEL:\_\_ FIELD DATA PACKAGE DOCUMENTATION PERFORMANCE REPORTED ACCEPTABLE Not FIELD SAMPLING LOGS: 11 No YES NO YES REQUIRED 1. SAMPLING DATES NOTED 2. SAMPLING TEAM INDICATED 3. SAMPLE IDENTIFICATION TRACEABLE TO LOCATION COLLECTED 4. SAMPLE LOCATION 5. SAMPLE DEPTH FOR SOILS 6. COLLECTION TECHNIQUE (BAILER, PUMP ETC 7. FIELD SAMPLE PREPARATION TECHNIQUES 8. SAMPLE TYPE (GRAB, COMPOSITE) 9. SAMPLE CONTAINER TYPE 10. PRESERVATION METHODS 11. CHAIN OF CUSTODY FORM COMPLETED 12. REQUIRED ANALYTICAL METHODS REQUESTED 13. FIELD (WATER AND SOIL) SAMPLE LOGS COMPLETED PROPERLY AND SIGNED 14. NUMBER AND TYPE OF FIELD QC SAMPLES COLLECTED (BLANKS. REPLICATES, SPLITS, ETC.) 15. FIELD EQUIPMENT CALIBRATION 16. FIELD EQUIPMENT DECONTAMINATION 17. SAMPLE SHIPPING 18. LABORATORY TASK ORDER 1/ FIELD SAMPLING LOGS = WATER AND/OR SOIL/SEDIMENT SAMPLING LOGS COMMENTS:\_\_\_\_

| ANALYTICAL DATA PACKAGE DOCUMENTATION   |  |  |  |
|---|--|--|--|
| GENERAL INFORMATION   |  |  |  |
| ALL QA REPORTING LEVELS   | PERFORMANCE REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRED   |  |  |
| 1. SAMPLE RESULTS 2. PARAMETERS ANALYZED 3. METHOD OF ANALYSIS 4. DETECTION LIMITS OF ANALYSIS 5. MASTER TRACKING LIST 6. SAMPLE COLLECTION DATE 7. LAB SAMPLE RECEIVED DATE 8. SAMPLE PREPARATION/EXTRACTION DATE 9. SAMPLE ANALYSIS DATE 10. COPY OF CHAIN-OF-CUSTODY FORM SIGNED BY THE LAB SAMPLE CUSTODIAN 11. A NARRATIVE SUMMARY OF CA OR SAMPLE PROBLEMS IS PROVIDED. |  |  |  |
| AFTER COMPLETING SECTION ONE PROCEED TO T LEVEL OF SECTION TWO (INORGANIC ANALYSES) ANALYSES). FOLLOWING COMPLETION OF THESE FOUR (DATA EVALUATION SUMMARY).  ANALYTICAL DATA VALIDATION CHECKLIST SECTION TWO INORGANIC ANALY  | AND/OR SECTION THREE (ORGANIC SECTIONS PROCEED TO SECTION  |  |  |
| METALS AND CLASSICAL WET C  | HEMISTRY METHODS  REPORTED IN LIMITS NOT   |  |  |
| REQUIREMENTS (BATCH SPECIFIC QA) 1/  1. METHOD BLANKS % RECOVERY (%R) 2. MS2' OR RWSD5' OR LD6' %R 4. RPD7'   | NO YES NO YES REQUIRED   |  |  |
| COMMENTS:   |  |  |  |
| 4/ MSD = MATRIX SPIKE DUP.; 5/ RWS[   | PLES IN ANALYTICAL BATCH  = REAGENT WATER SPIKE;  = REAGENT WATER SPIKE DUP.;  = RELATIVE PERCENT DIFFERENCE |  |  |

| INORGANIC ANALYSES  |                         |  |
|---|-------------------------|--|
| METALS AND CLASSICAL WET CH<br>QA REPORTING LEVEL: II   | HEMISTRY ME             | THODS  |
| REQUIREMENTS (BATCH SPECIFIC QA) 1/   | REPORTED<br>NO YES      | IN LIMITS NOT<br>NO YES REQUIRED                       |
| 1. METHOD BLANKS 2. MS % RECOVERY (%R) 3. MSD OR <del>LAB DUPLICATE</del> % R 4. RWS % R 5. RWSD % R 6. RPDs FOR MS/MSD, <del>SAMPLE/L</del> D, <del>RWS/RW</del> SD 7. LCS** %R 8. ICVS ** %R                      |                         |  |
| COMMENTS:   |                         |  |
| QA REPORTING LEVEL: III REQUIREMENTS (SAMPLE SPECIFIC QA) 10/  1. CALIBRATION CURVE STANDARDS   | T II                    |  |
| 2. ICVS %R 3. CCVS'1/ %R 4. LCS %R 5. METHOD BLANKS 6. ICS'2/ %R (ICP ONLY) 7. DCS'3/ %R (ICP ONLY) 8. MS %R 9. LD OR MSD %R AND RPD 10. POST DIGESTION ANALYTICAL SPIKE'4/   |                         |  |
| COMMENTS:   |                         |  |
| 1/ EATCH SPECIFIC QA: APPLIES TO ANY SAMP 2/ MS = MATRIX SPIKE; 3/ RWS = 4/ MSD = MATRIX SPIKE DUP.; 5/ RWSD 6/ LD = LABORATORY DUPLICATE; 7/ RPD = 8/ LCS = LABORATORY CONTROL SAMPLE;                             | REAGENT W<br>RELATIVE ( | ATER SPIKE:<br>WATER SPIKE DUP.;<br>PERCENT DIFFERENCE |
| 9/ ICVS = INITIAL CALIBRATION VERIFICATIO 10/ SAMPLE SPECIFIC QA: APPLIES TO PROJECT 11/ CCVS = CONTINUING CALIBRATION VERIFICA 12/ ICS = INTERFERENCE CHECK SAMPLE; 13/ 14/ POST DIGESTION ANALYTICAL SPIKE APPLIE | SPECIFIC :              | SAMPLES<br>ARD;  |

#### ANALYTICAL DATA VALIDATION CHECKLIST SECTION THREE \_\_\_\_ORGANIC ANALYSES\_\_\_\_\_ QA REPORTING LEVEL: I\_ REPORTED IN LIMITS Not REQUIREMENTS\_\_\_\_\_ NO YES NO YES REQUIRED WATER BLANKS 2. EXTRACTION BLANKS RWSI RWSD2/ RPD3/ COMMENTS: QA REPORTING LEVEL: II REQUIREMENTS A. GAS CHROMATOGRAPHY (NO MASS SPEC) OR WET CHEMISTRY PROCEDURE WATER BLANKS EXTRACTION BLANKS MS4' (BATCH SPECIFIC) MSD5' (BATCH SPECIFIC) LD6/ (OPTIONAL) MS/MSD RPD OR SAMPLE/LD RPD RWS 8. RWSD RWS RPD 9. 10. SURROGATE SPIKES B. GAS CHROMATOGRAPH/MASS SPECTROMETER WATER BLANKS EXTRACTION BLANKS MS (BATCH SPECIFIC) MSD (BATCH SPECIFIC) LD (OPTIONAL) MS/MSD RPD OR SAMPLE/LD RPD RWS RWSD 8. RWS RPD 10. SURROGATE SPIKES COMMENTS:

<sup>1/</sup> RWS = REAGENT WATER SPIKE; 2/ RWSD = REAGENT WATER SPIKE DUPLICATE;

<sup>3/</sup> RPD = RELATIVE PERCENT DIFFERENCE; 4/ MS = MATRIX SPIKE; 5/ MSD = MATRIX SPIKE DUPLICATE; 6/ LD = LAB DUP

ANALYTICAL DATA VALIDATION CHECKLIST SECTION FOUR DATA EVALUATION SUMMARY Ft. Stewart RF1 PROJECT NAME: EDD Site PROJECT NUMBER: FST-009 OA REPORTING LEVEL: 1 VALIDATION DATE: 40 Page 93 ALL QA REPORTING LEVELS (I,II,III) PERFORMANCE REPORTED ACCEPTABLE NOT SUMMARY OF CHECKLIST FINDINGS NO YES REQUIRED 1. FIELD MEASUREMENTS OF PH AND SPECIFIC CONDUCTANCE ARE CONSISTENT WITH HISTORICAL DATA 2. FIELD RECORDS 3. METHODS (GEN.INFO. SECTION ONE)
4. HOLDING TIMES (MASTER SAMPLE LIST) A. EXTRACTION HOLDING TIMES B. ANALYSIS HOLDING TIMES 5. DETECTION LIMITS (SECTION ONE)
6. BLANKS (SECTIONS TWO OR THREE) A. EQUIPMENT RINSATE BLANKS B. FIELD BLANKS C. TRIP BLANKS D. LABORATORY BLANKS 7. FIELD REPLICATES 8. FIELD SPLITS 9. GEOPHYSICAL COMPARISONS A. CATION VS ANION B. TDS VS SPEC. CONDUCTANCE C. PH VS ALK/ACIDITY D. OTHER 10. METALS QA DATA (SECTION TWO) 11. INORGANIC WET CHEMISTRY (SEC. Two) 12. ORGANIC CA DATA-GC (SECTION THREE-A) 13. ORGANIC WET CHEMISTRY (SEC. THREE-A) 14. ORGANIC QA DATA-GC/MS (SEC. THREE-B) AFTER COMPLETING THIS SECTION GO TO SECTION FIVE. COMMENTS:

| ANALYTICAL SECTION FIV |   |
|------------------------|---|
| PROJECT N<br>QA REPORT | DATA VALIDATION CODING // Sewant R/ NAME: FOD Site PROJECT NUMBER: FST-009 FING LEVEL: # VALIDATION DATE: PO DEC 93 |
| 1. QUALIFIE            | ER CODES ASSIGNED TO DATA: R. U. J. U/J. B. NO FLAG   |
| 2. IDENTIF:            | CATION OF SAMPLES AND PARAMETERS WITH CODES:  SAMPLE ID  PARAMETERS   |
| R CODE                 |   |
| B CODE                 |   |
| U CODE                 |   |
| J CODE                 |   |
| U/J<br>CODE            |   |
| EXPLANATIO             | N: Cel Ceceptable   |
|                        |   |
|                        | $E_{\alpha} = E_{\alpha} = C^{\alpha} = C^{\alpha}$   |
| VALIDATION             | PERFORMED BY: FRANZ FROELICHEN  SIGNED:   |
|                        | DATE: 20 Par 93   |

DATA VALIDATION CHECKLIST terrait RF1 SECTION ONE PROJECT NAME: \_\_\_\_\_\_\_ PROJECT NUMBER: FS SAMPLING DATE: VALIDATION DATE: SAMPLE IDENTIFICATION: SCI SAMPLING TEAM: V. Smith ANALYZING LABORATORY: Car Toboratore and 170 lactrice Residue 8 730, VOC. ANALYSES PERFORMED: \_ FXA SAMPLE MATRIX: **QA REPORTING LEVEL:** FIELD DATA PACKAGE DOCUMENTATION PERFORMANCE REPORTED ACCEPTABLE Not FIELD SAMPLING LOGS: 1 No YES NO YES REQUIRED 1. SAMPLING DATES NOTED 2. SAMPLING TEAM INDICATED 3. SAMPLE IDENTIFICATION TRACEABLE TO LOCATION COLLECTED 4. SAMPLE LOCATION 5. SAMPLE DEPTH FOR SOILS 6. COLLECTION TECHNIQUE (BAILER, PUMP ETC 7. FIELD SAMPLE PREPARATION TECHNIQUES 8. SAMPLE TYPE (GRAB, COMPOSITE) 9. SAMPLE CONTAINER TYPE 10. PRESERVATION METHODS 11. CHAIN OF CUSTODY FORM COMPLETED 12. REQUIRED ANALYTICAL METHODS REQUESTED 13. FIELD (WATER AND SOIL) SAMPLE LOGS COMPLETED PROPERLY AND SIGNED 14. NUMBER AND TYPE OF FIELD QC SAMPLES COLLECTED (BLANKS, REPLICATES, SPLITS, ETC.) 15. FIELD EQUIPMENT CALIBRATION 16. FIELD EQUIPMENT DECONTAMINATION 17. SAMPLE SHIPPING 18. LABORATORY TASK ORDER 1/ FIELD SAMPLING LOGS = WATER AND/OR SOIL/SEDIMENT SAMPLING LOGS COMMENTS:\_\_\_

| ANALYTICAL DATA PACKAGE DOCUMENTATION   |   |  |  |
|---|---|--|--|
| GENERAL INFORMA   | TION  |  |  |
| ALL QA REPORTING LEVELS   | PERFORMANCE<br>REPORTED ACCEPTABLE NOT<br>NO YES NO YES REQUIRED  |  |  |
| 1. SAMPLE RESULTS 2. PARAMETERS ANALYZED 3. METHOD OF ANALYSIS 4. DETECTION LIMITS OF ANALYSIS 5. MASTER TRACKING LIST 6. SAMPLE COLLECTION DATE 7. LAB SAMPLE RECEIVED DATE 8. SAMPLE PREPARATION/EXTRACTION DATE 9. SAMPLE ANALYSIS DATE 10. COPY OF CHAIN-OF-CUSTODY FORM SIGNED BY THE LAB SAMPLE CUSTODIAN 11. A NARRATIVE SUMMARY OF QA OR SAMPLE PROBLEMS IS PROVIDED. |   |  |  |
| AFTER COMPLETING SECTION ONE PROCEED TO THE LEVEL OF SECTION TWO (INORGANIC ANALYSES) ANALYSES). FOLLOWING COMPLETION OF THESE FOUR (DATA EVALUATION SUMMARY).  ANALYTICAL DATA VALIDATION CHECKLIST  | AND/OR SECTION THREE (ORGANIC   |  |  |
| SECTION TWO INORGANIC ANALY   | YSES  |  |  |
| QA REPORTING LEVEL: I REQUIREMENTS (BATCH SPECIFIC QA) 1/   | REPORTED IN LIMITS NOT NO YES NO YES REQUIRED   |  |  |
| 1. METHOD BLANKS % RECOVERY (%R) 2. MSD4/ OR RWSD5/ OR LD6/ %R 4. RPD7/   |   |  |  |
| COMMENTS:   |   |  |  |
|   |   |  |  |
| 4/ MSD = MATRIX SPIKE DUP.; 5/ RWS  | MPLES IN ANALYTICAL BATCH  = REAGENT WATER SPIKE;  D = REAGENT WATER SPIKE DUP.;  = RELATIVE PERCENT DIFFERENCE |  |  |

| THORGANIC ANALYS  | C= A                             |  |
|---|----------------------------------|--|
| METALS AND CLASSICAL WET C  | SES <u>-</u><br>HEMISTRY MF      | THODS  |
| QA REPORTING LEVEL: II REQUIREMENTS (BATCH SPECIFIC QA)'  | REPORTED<br>NO YES               | IN LIMITS NOT<br>NO YES REQUIRED                       |
| 1. METHOD BLANKS 2. MS % RECOVERY (%R) 3. MSD OR LAB DUPLICATE % R 4. RWS % R 5. RWSD % R 6. RPDs FOR MS/MSD, SAMPLE/LD, RWS/RWSD 7. LCS*/ %R 8. ICVS */ %R   |                                  |  |
| COMMENTS:   |                                  |  |
|   |                                  |  |
| QA REPORTING LEVEL: III REQUIREMENTS (SAMPLE SPECIFIC QA) 10/   |                                  |  |
| 1. CALIBRATION CURVE STANDARDS 2. ICVS %R 3. CCVS 1 / %R 4. LCS %R 5. METHOD BLANKS 6. ICS 2 / %R (ICP only) 7. DCS 3 / %R (ICP only) 8. MS %R 9. LD OR MSD %R AND RPO 10. POST DIGESTION ANALYTICAL SPIKE 4 /        |                                  |  |
| COMMENTS:   |                                  |  |
|   | -                                |  |
|   |                                  |  |
| 1/ SATCH SPECIFIC QA: APPLIES TO ANY SAMP 2/ MS = MATRIX SPIKE; 3/ RWS = 4/ MSD = MATRIX SPIKE DUP.; 5/ RWSD 5/ LD = LABORATORY DUPLICATE; 7/ RPD = 8/ LCS = LABORATORY CONTROL SAMPLE; 9/ ICVS = INITIAL CALTERITIES | REAGENT W<br>REAGENT<br>RELATIVE | ATER SPIKE:<br>WATER SPIKE DUP.;<br>PERCENT DIFFERENCE |
| 9/ ICVS = INITIAL CALIBRATION VERIFICATION OF SAMPLE SPECIFIC QA: APPLIES TO PROJECT 11/ CCVS = CONTINUING CALIBRATION VERIFICATION OF SAMPLE: 13/ 14/ POST DIGESTION ANALYTICAL SPIKE APPLIES                        | SPECIFIC TION STAND              | SAMPLES<br>ARD:  |

| A REPORTING LEVEL: I_ EQUIREMENTS  | REPORTED IN LIMITS NOT<br>NO YES NO YES REQUIRE |
|--|---|
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. RWS¹/ 4. RWSD²/ 5. RPD³/   |   |
| OMMENTS:   |   |
|  | **  |
| DA REPORTING LEVEL: II<br>REQUIREMENTS<br>L. GAS CHROMATOGRAPHY (NO MASS SPEC)   | OR WET CHEMISTRY PROCEDURE                      |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS4/ (BATCH SPECIFIC) 4. MSD5/ (BATCH SPECIFIC) 5. LD6/ (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES |   |
| 3. GAS CHROMATOGRAPH/MASS SPECTROMETE  | <u>-</u>  |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS (BATCH SPECIFIC) 4. MSD (BATCH SPECIFIC) 5. LD (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES       |   |

<sup>3/</sup> RPD = RELATIVE PERCENT DIFFERENCE; 4/ MS = MATRIX SPIKE; 5/ MSD = MATRIX SPIKE DUPLICATE; 6/ LD = LAB DUP

| DATA EVALUATION SUMMARY Ft. Stewart CF1   |
|---|
| DATA EVALUATION SUMMARY [ N. SALUATION SUMMARY ]  |
| PROJECT NAME: Sucrtice EOD Site PROJECT NUMBER: FST-010  OA REPORTING LEVEL: The Validation Date: 11 Jon 94   |
| ALL QA REPORTING LEVELS (I.II.III) PERFORMANCE  |
| SUMMARY OF CHECKLIST FINDINGS  REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRED   |
| 1. FIELD MEASUREMENTS OF PH AND SPECIFIC CONDUCTANCE ARE CONSISTENT WITH HISTORICAL DATA  2. FIELD RECORDS 3. METHODS (GEN.INFO. SECTION ONE) 4. HOLDING TIMES (MASTER SAMPLE LIST) A. EXTRACTION HOLDING TIMES B. ANALYSIS HOLDING TIMES 5. DETECTION LIMITS (SECTION ONE) 6. BLANKS (SECTIONS TWO OR THREE) A. EOUIPMENT RINSATE BLANKS B. FIELD BLANKS C. TRIP BLANKS D. LABORATORY BLANKS T. FIELD SPLITS 9. GEOPHYSICAL COMPARISONS A. CATION VS ANION B. TDS VS SPEC. CONDUCTANCE C. PH VS ALK/ACIDITY D. OTHER  10. METALS QA DATA (SECTION TWO) 11. INORGANIC WET CHEMISTRY (SEC. TWO) 12. ORGANIC GA DATA—GC (SECTION THREE—A) 13. ORGANIC WET CHEMISTRY (SEC. THREE—B) 14. ORGANIC OA DATA—GC/MS (SEC. THREE—B) |
| AFTER COMPLETING THIS SECTION GO TO SECTION FIVE.   |
|   |
|   |
|   |
|   |
|   |
|   |

| ANALYTIC<br>SECTION | FIVEDATA VALIDATION CODING Ft. Stewart RF(  |
|---------------------|---|
| PROJEC<br>QA REP    | T NAME: FOOD REPROJECT NUMBER: FST-010 PORTING LEVEL: TE VALIDATION DATE: 11 Jon 94   |
|                     | FIER CODES ASSIGNED TO DATA: R. U. J. U/J. B. NO FLAG  IFICATION OF SAMPLES AND PARAMETERS WITH CODES:  SAMPLE ID  PARAMETERS |
|                     | SAMPLE 10 PARAMETERS  |
| R CODE              |   |
|                     | 15  |
| B CODE              |   |
|                     |   |
|                     |   |
| U CODE              |   |
|                     |   |
| J CODE              |   |
|                     |   |
|                     |   |
|                     |   |
|                     |   |
| U/J<br>CODE         |   |
|                     |   |
|                     |   |
|                     |   |
| EXPLANAT            | TION:   |
|                     | all esseptable  |
|                     |   |
|                     |   |
|                     |   |
|                     |   |
| VALTDATT            | ON DEDECOMED BY   |
| AMEIDALI            | SIGNED: FRANZ FLOELICHER  |
|                     |   |
|                     | DATE: 11 Jan 94   |

DATA VALIDATION CHECKLIST SECTION ONE PROJECT NAME:\_ PROJECT NUMBER: CST-SAMPLING DATE: 1-2 non-93 SAMPLE IDENTIFICATION: \_ SSI thrushe place 10 SAMPLING TEAM: T. Smith ANALYZING LABORATORY: / / ANALYSES PERFORMED: \$23 SAMPLE MATRIX: QA REPORTING LEVEL:\_ FIELD DATA PACKAGE DOCUMENTATION PERFORMANCE REPORTED ACCEPTABLE Not FIELD SAMPLING LOGS: 1/ YES No YES REQUIRED 1. SAMPLING DATES NOTED 2. SAMPLING TEAM INDICATED 3. SAMPLE IDENTIFICATION TRACEABLE TO LOCATION COLLECTED 4. SAMPLE LOCATION 5. SAMPLE DEPTH FOR SOILS 6. COLLECTION TECHNIQUE (BAILER, PUMP ETC) 7. FIELD SAMPLE PREPARATION TECHNIQUES 8. SAMPLE TYPE (GRAB, COMPOSITE) 9. SAMPLE CONTAINER TYPE 10. PRESERVATION METHODS 11. CHAIN OF CUSTODY FORM COMPLETED 12. REQUIRED ANALYTICAL METHODS REQUESTED 13. FIELD (WATER AND SOIL) SAMPLE LOGS COMPLETED PROPERLY AND SIGNED 14. NUMBER AND TYPE OF FIELD QC SAMPLES COLLECTED (BLANKS, REPLICATES, SPLITS, ETC.) 15. FIELD EQUIPMENT CALIBRATION 16. FIELD EQUIPMENT DECONTAMINATION 17. SAMPLE SHIPPING 18. LABORATORY TASK ORDER 1/ FIELD SAMPLING LOGS = WATER AND/OR SOIL/SEDIMENT SAMPLING LOGS COMMENTS:

425

| ANALYTICAL DATA PACKAGE   | DOCIMENTATION  |  |  |
|---|--|--|--|
| GENERAL INFORMATION   |  |  |  |
| ALL QA REPORTING LEVELS   | PERFORMANCE REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRED                       |  |  |
| 1. SAMPLE RESULTS 2. PARAMETERS ANALYZED 3. METHOD OF ANALYSIS 4. DETECTION LIMITS OF ANALYSIS 5. MASTER TRACKING LIST 6. SAMPLE COLLECTION DATE 7. LAB SAMPLE RECEIVED DATE 8. SAMPLE PREPARATION/EXTRACTION DATE 9. SAMPLE ANALYSIS DATE 10. COPY OF CHAIN-OF-CUSTODY FORM SIGNED BY THE LAB SAMPLE CUSTODIAN 11. A NARRATIVE SUMMARY OF OA OR SAMPLE PROBLEMS IS PROVIDED. |  |  |  |
| AFTER COMPLETING SECTION ONE PROCEED TO THE APPROPRIATE OA REPORTING LEVEL OF SECTION TWO (INORGANIC ANALYSES) AND/OR SECTION THREE (ORGANIC ANALYSES). FOLLOWING COMPLETION OF THESE SECTIONS PROCEED TO SECTION FOUR (DATA EVALUATION SUMMARY).  ANALYTICAL DATA VALIDATION CHECKLIST SECTION TWO   |  |  |  |
| INORGANIC ANALY  METALS AND CLASSICAL WET C   | 'SES<br>'HEMISTRY METHODS  |  |  |
| QA REPORTING LEVEL: T<br>REQUIREMENTS (BATCH SPECIFIC QA) 1/  | REPORTED IN LIMITS NOT<br>NO YES NO YES REQUIRED                                 |  |  |
| 1. METHOD BLANKS % RECOVERY (%R) 3. MSD4/ OR RWSD5/ OR LD6/ %R 4. RPD7/   |  |  |  |
| COMMENTS:   |  |  |  |
|   |  |  |  |
| 4/ MSD = MATRIX SPIKE DUP.; 5/ RWSE   | MPLES IN ANALYTICAL BATCH  = REAGENT WATER SPIKE;  = RELATIVE PERCENT DIFFERENCE |  |  |

| INORGANIC ANALYS   | SES   |   |              |
|--|---|---|--------------|
| METALS AND CLASSICAL WET CH  | EMISTRY ME  | THODS   |              |
| QA REPORTING LEVEL: II REQUIREMENTS (BAICH SPECIFIC QA)'/  | REPORTED<br>NO YES  | IN LIMITS NOT<br>NO YES REQUIRE                                 | :D           |
| 1. METHOD BLANKS 2. MS % RECOVERY (%R) 3. MSD OR LAB DUPLICATE % R 4. RWS % R 5. RWSD % R 6. RPDS FOR MS/MSD, SAMPLE/LD, RWS/RWSD 7. LCS8/ %R 8. ICVS 9/ %R  |   |   |              |
| COMMENTS:  |   |   | <del>!</del> |
|  |   |   | <u> </u>     |
| QA REPORTING LEVEL: III REQUIREMENTS (SAMPLE SPECIFIC QA) 10/  | *   |   |              |
| 1. CALIBRATION CURVE STANDARDS 2. ICVS %R 3. CCVS 1 / %R 4. LCS %R 5. METHOD BLANKS 6. ICS 1 / %R (ICP ONLY) 7. DCS 1 / %R (ICP ONLY) 8. MS %R 9. LD OR MSD %R AND RPD 10. POST DIGESTION ANALYTICAL SPIKE 14 /  |   |   | -            |
| COMMENTS:  |   | •   |              |
|  |   |   |              |
|  |   |   |              |
| 1/ BATCH SPECIFIC OA: APPLIES TO ANY SAME 2/ MS = MATRIX SPIKE; 3/ RWS = 4/ MSD = MATRIX SPIKE DUP.; 5/ RWSD 6/ LD = LABORATORY DUPLICATE; 7/ RPD = 8/ LCS = LABORATORY CONTROL SAMPLE; 9/ ICVS = INITIAL CALIBRATION VERIFICATION 10/ SAMPLE SPECIFIC OA: APPLIES TO PROJECT 11/ CCVS = CONTINUING CALIBRATION VERIFICATION 12/ ICS = INTERFERENCE CHECK SAMPLE; 13/ 14/ POST DIGESTION ANALYTICAL SPIKE APPLIE | F REAGENT W = REAGENT F RELATIVE ON STANDARD T SPECIFIC ATION STAND | ATER SPIKE; WATER SPIKE DUP.; PERCENT DIFFERENC ; SAMPLES. ARD; |              |

| ANALYTICAL DATA VALIDATION CHECKLIST SECTION THREE   |  |
|--|--|
| ORGANIC ANA  | LYSES  |
| OA REPORTING LEVEL: I_ REQUIREMENTS  | REPORTED IN LIMITS NOT<br>NO YES NO YES REQUIRED |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. RWS¹' 4. RWSD²' 5. RPD³'   |  |
| COMMENTS:  |  |
|  | 71 F   |
| QA REPORTING LEVEL: II REQUIREMENTS A. GAS CHROMATOGRAPHY (NO MASS SPEC) O   | R WET CHEMISTRY PROCEDURE                        |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS4/ (BATCH SPECIFIC) 4. MSD5/ (BATCH SPECIFIC) 5. LD6/ (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES |  |
| B. GAS CHROMATOGRAPH/MASS SPECTROMETER   | _  |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS (BATCH SPECIFIC) 4. MSD (BATCH SPECIFIC) 5. LD (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES       |  |
| COMMENTS:  |  |
|  |  |
| 1/ PWS = REAGENT WATER CRIVE, 2/ DUSD  |  |

<sup>1/</sup> RWS = REAGENT WATER SPIKE; 2/ RWSD = REAGENT WATER SPIKE DUPLICATE; 3/ RPD = RELATIVE PERCENT DIFFERENCE; 4/ MS = MATRIX SPIKE; 5/ MSD = MATRIX SPIKE DUPLICATE; 6/ LD = LAB DUP

ANALYTICAL DATA VALIDATION CHECKLIST DATA EVALUATION SUMMARY Ft. Stewart RF1 SECTION FOUR PROJECT NAME: FON Cite PROJECT NUMBER: O/ OA REPORTING LEVEL: TO VALIDATION DATE: 1/ Jone 90 ALL QA REPORTING LEVELS (I,II,III) PERFORMANCE REPORTED ACCEPTABLE NOT SUMMARY OF CHECKLIST FINDINGS NO YES REQUIRED NO YES 1. FIELD MEASUREMENTS OF PH AND SPECIFIC CONDUCTANCE ARE CONSISTENT WITH HISTORICAL DATA 2. FIELD RECORDS 3. METHODS (GEN.INFO. SECTION ONE) 4. HOLDING TIMES (MASTER SAMPLE LIST) A. EXTRACTION HOLDING TIMES B. ANALYSIS HOLDING TIMES 5. DETECTION LIMITS (SECTION ONE) 6. BLANKS (SECTIONS TWO OR THREE) A. EQUIPMENT RINSATE BLANKS B. FIELD BLANKS C. TRIP BLANKS D. LABORATORY BLANKS 7. FIELD REPLICATES 8. FIELD SPLITS 9. GEOPHYSICAL COMPARISONS A. CATION VS ANION B. TDS VS SPEC. CONDUCTANCE C. PH VS ALK/ACIDITY D. OTHER 10. METALS QA DATA (SECTION TWO) 11. INORGANIC WET CHEMISTRY (SEC. TWO)
12. ORGANIC OA DATA-GC (SECTION THREE-A) 13. ORGANIC WET CHEMISTRY (SEC. THREE-A) 14. ORGANIC OA DATA-GC/MS (SEC. THREE-8) AFTER COMPLETING THIS SECTION GO TO SECTION FIVE. COMMENTS:

| ANALYTIC<br>SECTION | FIVE DATA VALIDATION CHECKLIST  DATA VALIDATION CODING Ft. Stewart CF1                |
|---------------------|---|
| PROJEC<br>QA REP    | T NAME: FOD STO PROJECT NUMBER: FOT-011 PORTING LEVEL: TO VALIDATION DATE: (1 for 94) |
|                     | FIER CODES ASSIGNED TO DATA: R. U. J. U/J. B. NO FLAG                                 |
| 2. IDENT            | IFICATION OF SAMPLES AND PARAMETERS WITH CODES:  SAMPLE ID PARAMETERS                 |
| R CODE              |   |
| 8 CODE              |   |
| U CODE              |   |
| J CODE              |   |
| CCDE<br>N\1         |   |
| EXPLANAT            | ION: all acceptable   |
|                     |   |
| VALIÐATI            | ON PERFORMED BY: FRANZ FROELICHEN  SIGNED:  |

DATA VALIDATION CHECKLIST SECTION ONE PROJECT NAME: active PROJECT NUMBER: PST - 012 SAMPLING DATE:\_\_\_ VALIDATION DATE: SAMPLE IDENTIFICATION: EST-0125 SSS Plus an artitude SSA SAMPLING TEAM: T. Smith ANALYZING LABORATORY: ANALYSES PERFORMED: 2330 and RCKA netals SAMPLE MATRIX: Zione QA REPORTING LEVEL:\_\_ FIELD DATA PACKAGE DOCUMENTATION PERFORMANCE REPORTED ACCEPTABLE Not FIELD SAMPLING LOGS: ' YES NO YES REQUIRED 1. SAMPLING DATES NOTED 2. SAMPLING TEAM INDICATED 3. SAMPLE IDENTIFICATION TRACEABLE TO LOCATION COLLECTED 4. SAMPLE LOCATION 5. SAMPLE DEPTH FOR SOILS 6. COLLECTION TECHNIQUE (BAILER, PUMP ETC) 7. FIELD SAMPLE PREPARATION TECHNIQUES 8. SAMPLE TYPE (GRAB, COMPOSITE) 9. SAMPLE CONTAINER TYPE 10. PRESERVATION METHODS 11. CHAIN OF CUSTODY FORM COMPLETED 12. REQUIRED ANALYTICAL METHODS REQUESTED 13. FIELD (WATER AND SOIL) SAMPLE LOGS COMPLETED PROPERLY AND SIGNED 14. NUMBER AND TYPE OF FIELD QC SAMPLES COLLECTED (BLANKS, REPLICATES, SPLITS, ETC.) 15. FIELD EQUIPMENT CALIBRATION 16. FIELD EQUIPMENT DECONTAMINATION 17. SAMPLE SHIPPING 18. LABORATORY TASK ORDER 1/ FIELD SAMPLING LOGS = WATER AND/OR SOIL/SEDIMENT SAMPLING LOGS COMMENTS:

| ANALYTICAL DATA PACKAGE DOCUMENTATION   |   |  |
|---|---|--|
| GENERAL INFORMATION   |   |  |
| ALL QA REPORTING LEVELS   | PERFORMANCE REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRED  |  |
| 1. SAMPLE RESULTS 2. PARAMETERS ANALYZED 3. METHOD OF ANALYSIS 4. DETECTION LIMITS OF ANALYSIS 5. MASTER TRACKING LIST 6. SAMPLE COLLECTION DATE 7. LAB SAMPLE RECEIVED DATE 8. SAMPLE PREPARATION/EXTRACTION DATE 9. SAMPLE ANALYSIS DATE 10. COPY OF CHAIN-OF-CUSTODY FORM SIGNED BY THE LAB SAMPLE CUSTODIAN 11. A NARRATIVE SUMMARY OF CA OR SAMPLE PROBLEMS IS PROVIDED. |   |  |
| AFTER COMPLETING SECTION ONE PROCEED TO THE APPROPRIATE GA REPORTING LEVEL OF SECTION TWO (INORGANIC ANALYSES) AND/OR SECTION THREE (ORGANIC ANALYSES). FOLLOWING COMPLETION OF THESE SECTIONS PROCEED TO SECTION FOUR (DATA EVALUATION SUMMARY).  ANALYTICAL DATA VALIDATION CHECKLIST SECTION TWO   |   |  |
| METALS AND CLASSICAL WET C  | CHEMISTRY METHODS   |  |
| QA REPORTING LEVEL: I REQUIREMENTS (BATCH SPECIFIC QA) 1/   | REPORTED IN LIMITS NOT<br>NO YES NO YES REQUIRED  |  |
| 1. METHOD BLANKS % RECOVERY (%R) 2. MSD4/ OR RWSD5/ OR LD6/ %R 4. RPD7/   |   |  |
| COMMENTS:   |   |  |
|   |   |  |
| 4/ MSD = MATRIX SPIKE DUP.; 5/ RWS  | MPLES IN ANALYTICAL BATCH  = REAGENT WATER SPIKE;  D = REAGENT WATER SPIKE DUP.;  = RELATIVE PERCENT DIFFERENCE |  |

ANALYTICAL DATA VALIDATION CHECKLIST SECTION TWO

| INORGANIC ANALYS  METALS AND CLASSICAL WET CH  | SES   |   |
|--|---|---|
| QA REPORTING LEVEL: II REQUIREMENTS (BATCH SPECIFIC QA)  | REPORTED NO YES   | IHODS IN LIMITS NOT NO YES REQUIRED                             |
| 1. METHOD BLANKS 2. MS % RECOVERY (%R) 3. MSD OR LAB DUPLICATE % R 4. RWS % R 5. RWSD % R 6. RPDS FOR MS/MSD, SAMPLE/LD, RWS/RWSD 7. LCS®/ %R 8. ICVS 9/ %R  |   |   |
| COMMENTS:  |   |   |
|  |   |   |
| QA REPORTING LEVEL: III REQUIREMENTS (SAMPLE SPECIFIC QA) 10/  |   |   |
| 1. CALIBRATION CURVE STANDARDS 2. ICVS %R 3. CCVS''' %R 4. LCS %R 5. METHOD BLANKS 6. ICS'2' %R (ICP ONLY) 7. DCS'3' %R (ICP ONLY) 8. MS %R 9. LD OR MSD %R AND RPD 10. POST DIGESTION ANALYTICAL SPIKE'4'   |   |   |
| COMMENTS:  |   |   |
|  |   |   |
| 1/ SATCH SPECIFIC QA: APPLIES TO ANY SAME 2/ MS = MATRIX SPIKE: 3/ RWS = 4/ MSD = MATRIX SPIKE DUP.; 5/ RWSD 6/ LD = LABORATORY DUPLICATE; 7/ RPD = 8/ LCS = LABORATORY CONTROL SAMPLE; 9/ ICVS = INITIAL CALIBRATION VERIFICATION 10/ SAMPLE SPECIFIC QA: APPLIES TO PROJECT 11/ CCVS = CONTINUING CALIBRATION VERIFICATION 12/ ICS = INTERFERENCE CHECK SAMPLE: 13/ 14/ POST DIGESTION ANALYTICAL SPIKE APPLIE | = REAGENT W<br>= REAGENT W<br>= RELATIVE W<br>ON STANDARD<br>- SPECIFIC W<br>ATION STANDARD | ATER SPIKE; WATER SPIKE DUP.; PERCENT DIFFERENCE ; SAMPLES ARD; |

| A REPORTING LEVEL: I_<br>EQUIREMENTS   | REPORTED IN LIMITS NOT<br>NO YES NO YES REQUIRED |
|--|--|
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. RWS¹' 4. RWSD²' 5. RPD³'   |  |
| COMMENTS:  |  |
| DA REPORTING LEVEL: II REQUIREMENTS A. GAS CHROMATOGRAPHY (NO MASS SPEC)   | OR WET CHEMISTRY PROCEDURE                       |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS4/ (BATCH SPECIFIC) 4. MSD5/ (BATCH SPECIFIC) 5. LD6/ (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES |  |
| 3. GAS CHROMATOGRAPH/MASS SPECTROMETE  | R  |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS (BATCH SPECIFIC) 4. MSD (BATCH SPECIFIC) 5. LD (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES       |  |
| COMMENTS:  |  |

<sup>5/</sup> RPD = RELATIVE PERCENT DIFFERENCE; 4/ MS = MATRIX SPIKE; 5/ MSD = MATRIX SPIKE DUPLICATE; 6/ LD = LAB DUP

| ANALYTICAL DATA VALIDATION CHECKLIST SECTION FOUR  |  |
|--|--|
| DATA EVALUATION S  | SUMMARY Ft. Stewart RP1                        |
| PROJECT NAME: <u>FOD</u> Site PROJ<br>OA REPORTING LEVEL: <u>II</u> VALIDATION D   | DECT NUMBER: FST-019 DATE: 11 Jan 94           |
| ALL QA REPORTING LEVELS (I.II, III)  | PERFORMANCE                                    |
| SUMMARY OF CHECKLIST FINDINGS  | REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRED |
| 1. FIELD MEASUREMENTS OF PH AND SPECIFIC CONDUCTANCE ARE CONSISTENT WITH HISTORICAL DATA  2. FIELD RECORDS 3. METHODS (GEN.INFO. SECTION ONE) 4. HOLDING TIMES (MASTER SAMPLE LIST) A. EXTRACTION HOLDING TIMES B. ANALYSIS HOLDING TIMES 5. DETECTION LIMITS (SECTION ONE) 6. BLANKS (SECTIONS TWO OR THREE) A. EQUIPMENT RINSATE BLANKS B. FIELD BLANKS C. TRIP BLANKS C. TRIP BLANKS D. LABORATORY BLANKS 7. FIELD REPLICATES 8. FIELD SPLITS 9. GEOPHYSICAL COMPARISONS A. CATION VS ANION B. TDS VS SPEC. CONDUCTANCE C. PH VS ALK/ACIDITY D. OTHER 10. METALS QA DATA (SECTION TWO) 11. INORGANIC WET CHEMISTRY (SEC. TWO) 12. ORGANIC GA DATA-GC (SECTION THREE-A) 13. ORGANIC WET CHEMISTRY (SEC. THREE-B)  AETER COMPLETING |  |
| AFTER COMPLETING THIS SECTION GO TO SECTION COMMENTS:  | ON FIVE.                                       |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

| ANALYTICAL DATA VALIDATI<br>SECTION FIVE | _DATA VALIDATION CODING Ft. Stewart RF1          |
|--|--|
|  | PROJECT NUMBER: FST-017 VALIDATION DATE: 11 pugg |
| 1. OUALIFIER CODES ASSIG                 | NED TO DATA: R, U, J, U/J, B, NO FLAG            |
| 2. IDENTIFICATION OF SAM<br>SAMPLE ID    | PLES AND PARAMETERS WITH CODES:  PARAMETERS      |
| R CODE                                   |  |
| B CODE                                   |  |
| U CODE                                   |  |
| J CODE                                   |  |
| U/J<br>CCDE                              |  |
| EXPLANATION:                             | acceptable.                                      |
|  |  |
| VALIDATION PERFORMED BY:                 | FRANT FRONKLICHEN                                |
| SIGNED:<br>DATE:                         |  |

DATA VALIDATION CHECKLIST SECTION ONE PROJECT NAME: 150 Fire Taxining Ret PROJECT NUMBER: SAMPLING DATE: SAMPLE IDENTIFICATION! SAMPLING TEAM: J. ANALYZING LABORATORY: ANALYSES PERFORMED: SAMPLE MATRIX: OA REPORTING LEVEL: FIELD DATA PACKAGE DOCUMENTATION PERFORMANCE REPORTED ACCEPTABLE NOT FIELD SAMPLING LOGS: 1/ No YES NO YES REQUIRED 1. SAMPLING DATES NOTED 2. SAMPLING TEAM INDICATED 3. SAMPLE IDENTIFICATION TRACEABLE TO LOCATION COLLECTED 4. SAMPLE LOCATION 5. SAMPLE DEPTH FOR SOILS 6. COLLECTION TECHNIQUE (BAILER, PUMP ETC. 7. FIELD SAMPLE PREPARATION TECHNIQUES 8. SAMPLE TYPE (GRAB, COMPOSITE) 9. SAMPLE CONTAINER TYPE 10. PRESERVATION METHODS 11. CHAIN OF CUSTODY FORM COMPLETED 12. REQUIRED ANALYTICAL METHODS REQUESTED 13. FIELD (WATER AND SOIL) SAMPLE LOGS COMPLETED PROPERLY AND SIGNED 14. NUMBER AND TYPE OF FIELD QC SAMPLES COLLECTED (BLANKS, REPLICATES, SPLITS, ETC.) 15. FIELD EQUIPMENT CALIBRATION 16. FIELD EQUIPMENT DECONTAMINATION 17. SAMPLE SHIPPING 18. LABORATORY TASK ORDER 1/ FIELD SAMPLING LOGS = WATER AND/OR SOIL/SEDIMENT SAMPLING LOGS COMMENTS:

| ANALYTICAL DATA PACKAGE   | DOCUMENT            | ATION    |                                       |                 |
|---|---------------------|----------|---------------------------------------|-----------------|
| GENERAL INFORMA   |                     |          |                                       |                 |
| ALL QA REPORTING LEVELS   |                     | D ACCE   |                                       |                 |
| 1. SAMPLE RESULTS 2. PARAMETERS ANALYZED 3. METHOD OF ANALYSIS 4. DETECTION LIMITS OF ANALYSIS 5. MASTER TRACKING LIST 6. SAMPLE COLLECTION DATE 7. LAB SAMPLE RECEIVED DATE 8. SAMPLE PREPARATION/EXTRACTION DATE 9. SAMPLE ANALYSIS DATE 10. COPY OF CHAIN-OF-CUSTODY FORM SIGNED BY THE LAB SAMPLE CUSTODIAN 11. A NARRATIVE SUMMARY OF QA OR SAMPLE PROBLEMS IS PROVIDED. |                     |          | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |                 |
| COMMENTS:  AFTER COMPLETING SECTION ONE PROCEED TO T LEVEL OF SECTION TWO (INORGANIC ANALYSES) ANALYSES). FOLLOWING COMPLETION OF THESE FOUR (DATA EVALUATION SUMMARY).   | AND/OR              | SECTION  | THREE                                 | E (ORGANIC      |
| ANALYTICAL DATA VALIDATION CHECKLIST SECTION TWO INORGANIC ANALY  METALS AND CLASSICAL WET C  | (SES<br>HEMISTR     | Y METHOD | ) 5                                   |                 |
| QA REPORTING LEVEL: I<br>REQUIREMENTS (BATCH SPECIFIC QA) 1/  | REPORT              | ED IN L  |                                       | NOT<br>REQUIRED |
| 1. METHOD BLANKS % RECOVERY (%R) 2. MS2' OR RWSD5' OR LD6' %R 4. RPD7'  |                     |          |                                       |                 |
| COMMENTS:   |                     |          |                                       |                 |
|   |                     |          |                                       |                 |
| 4/ MSD = MATRIX SPIKE DUP.; 5/ RWS  | = REAGE<br>) = REAG | NT WATE  | R SPIK<br>ER SPI                      |                 |

| INORGANIC ANALY   | QE 0.              |                                   |  |  |  |
|---|--------------------|-----------------------------------|--|--|--|
| METALS AND CLASSICAL WET CHEMISTRY METHODS  |                    |                                   |  |  |  |
| QA REPORTING LEVEL: II REQUIREMENTS (BATCH SPECIFIC QA) '/  | REPORTED<br>NO YES | In Limits Not<br>No Yes Required  |  |  |  |
| 1. METHOD BLANKS 2. MS % RECOVERY (%R) 3. MSD OR LAB DUPLICATE % R 4. RWS % R 5. RWSD % R 6. RPDs FOR MS/MSD, SAMPLE/LD, RWS/RWSD 7. LCS*/ %R 8. ICVS */ %R   |                    |                                   |  |  |  |
| COMMENTS:   |                    |                                   |  |  |  |
|   |                    |                                   |  |  |  |
| QA REPORTING LEVEL: III REQUIREMENTS (SAMPLE SPECIFIC QA) 10/   |                    |                                   |  |  |  |
| 1. CALIBRATION CURVE STANDARDS 2. ICVS %R 3. CCVS 1 / %R 4. LCS %R 5. METHOD BLANKS 6. ICS 2 / %R (ICP ONLY) 7. DCS 2 / %R (ICP ONLY) 8. MS %R 9. LD OR MSD %R AND RPD 10. POST DIGESTION ANALYTICAL SPIKE 14 /   |                    |                                   |  |  |  |
| COMMENTS:   |                    |                                   |  |  |  |
|   |                    |                                   |  |  |  |
| 1/ BATCH SPECIFIC QA: APPLIES TO ANY SAMPLES IN ANALYTICAL BATCH. 2/ MS = MATRIX SPIKE; 3/ RWS = REAGENT WATER SPIKE; 4/ MSD = MATRIX SPIKE DUP.; 5/ RWSD = REAGENT WATER SPIKE DUP.; 8/ LD = LABORATORY DUPLICATE: 7/ RPD = RELATIVE PERCENT DIFFERENCE 9/ ICVS = LABORATORY CONTROL SAMPLE; 10/ SAMPLE SPECIFIC QA: APPLIES TO PROJECT SPECIFIC SAMPLES. 11/ CCVS = CONTINUING CALIBRATION VERIFICATION STANDARD; 12/ ICS = INTERFERENCE CHECK SAMPLE; 13/ DCS = DILUTION CHECK SAMPLE; 14/ POST DIGESTION ANALYTICAL SPIKE ARPLIES TO PROJECT SPECIFIC SAMPLE; |                    |                                   |  |  |  |
| 14/ POST DIGESTION ANALYTICAL SPIKE APPLIE  | ES TO FURNA        | TION CHECK SAMPLE;<br>CE AA ONLY; |  |  |  |

| ANALYTICAL DATA VALIDATION CHECKLIST SECTION THREE   |  |  |  |  |
|--|--|--|--|--|
| ORGANIC ANALYSES   |  |  |  |  |
| OA REPORTING LEVEL: I_ REQUIREMENTS  | REPORTED IN LIMITS NOT<br>NO YES NO YES REQUIRED |  |  |  |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. RWS¹/ 4. RWSD²/ 5. RPD³/   |  |  |  |  |
| COMMENTS:  |  |  |  |  |
|  | ~*   |  |  |  |
| QA REPORTING LEVEL: II REQUIREMENTS A. GAS CHROMATOGRAPHY (NO MASS SPEC) OR  | WET CHEMISTRY PROCEDURE                          |  |  |  |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS4/ (BATCH SPECIFIC) 4. MSD5/ (BATCH SPECIFIC) 5. LD6/ (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES |  |  |  |  |
| B. GAS CHROMATOGRAPHIMASS SPECTROMETER   |  |  |  |  |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS (BATCH SPECIFIC) 4. MSD (BATCH SPECIFIC) 5. LD (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES       |  |  |  |  |
| COMMENTS:  |  |  |  |  |
|  |  |  |  |  |

<sup>1/</sup> RWS = REAGENT WATER SPIKE; 2/ RWSD = REAGENT WATER SPIKE DUPLICATE; 3/ RPD = RELATIVE PERCENT DIFFERENCE; 4/ MS = MATRIX SPIKE; 5/ MSD = MATRIX SPIKE DUPLICATE; 6/ LD = LAB DUP

ANALYTICAL DATA VALIDATION CHECKLIST SECTION FOUR DATA EVALUATION SUMMARY Ft. Stewart RF1 PROJECT NAME: FT. Stowat old Fire Trans LitroJECT NUMBER: FST - 014 OA REPORTING LEVEL: TE VALIDATION DATE: AR POL ALL QA REPORTING LEVELS (I,II,III) PERFORMANCE REPORTED ACCEPTABLE NOT SUMMARY OF CHECKLIST FINDINGS NO YES No YES REQUIRED 1. FIELD MEASUREMENTS OF PH AND SPECIFIC CONDUCTANCE ARE CONSISTENT WITH HISTORICAL DATA 2. FIELD RECORDS 3, METHODS (GEN.INFO. SECTION ONE) 4. HOLDING TIMES (MASTER SAMPLE LIST) A. EXTRACTION HOLDING TIMES B. ANALYSIS HOLDING TIMES 5. DETECTION LIMITS (SECTION ONE) 6. BLANKS (SECTIONS TWO OR THREE) A. EQUIPMENT RINSATE BLANKS B. FIELD BLANKS C. TRIP BLANKS D. LABORATORY BLANKS 7. FIELD REPLICATES 8. FIELD SPLITS 9. GEOPHYSICAL COMPARISONS A. CATION VS ANION B. TDS VS SPEC. CONDUCTANCE C. PH VS ALK/ACIDITY D. OTHER 10. METALS QA DATA (SECTION TWO) 1). INORGANIC WET CHEMISTRY (SEC. TWO) 12. ORGANIC CA DATA-GC (SECTION THREE-A) 13. ORGANIC WET CHEMISTRY (SEC. THREE-A) 14. ORGANIC QA DATA-GC/MS (SEC. THREE-B) AFTER COMPLETING THIS SECTION GO TO SECTION FIVE. COMMENTS:\_\_\_\_

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ANALYTICAL DATA VALIDATION CHECKLIST SECTION FIVE DATA VALIDATION CODING Ft. Stewart RF1 PROJECT NAME: Old Fire tame, Pit PROJECT NUMBER: FST-014 OA REPORTING LEVEL: The Walidation Date: & De 1. QUALIFIER CODES ASSIGNED TO DATA: R. U. J. U/J. B. NO FLAG 2. IDENTIFICATION OF SAMPLES AND PARAMETERS WITH CODES: SAMPLE ID PARAMETERS R CODE 40 B CODE U CODE J CODE U/J CODE EXPLANATION: asentale all

VALIDATION PERFORMED BY: FRANZ FRANZ FRANZ FRANZ FRANZ

SIGNED:

DATE: 28 Sept 93

| PROJECT NAME: Ft Stewart, Hoyardous to<br>PROJECT NUMBER: FST-017<br>SAMPLING DATE: 9/10/11 aug 93 VA  | Vasto.             | 0 7 7                            |                   |
|--|--------------------|----------------------------------|-------------------|
|  | ALIDATION          | DATE: 28                         | Sent 93<br>4 Kaup |
| SAMPLING TEAM: J. Smith, Farm Olly H. ANALYZING LABORATORY: Carry Faller to ANALYSES PERFORMED: 634/8340, 1811, T  | Fulster<br>Ck.P    | o. Jefou                         | sle               |
| SAMPLE MATRIX: Soil how Cigulous  QA REPORTING LEVEL: TT   |                    |                                  |                   |
| FIELD DATA PACKAGE DOCUM   | MENTATION          |                                  |                   |
| IELD SAMPLING LOGS:"/  | REPORTED<br>No YES | PERFORMAN<br>ACCEPTABL<br>NO YES | E NOT             |
| 1. SAMPLING DATES NOTED 2. SAMPLING TEAM INDICATED 3. SAMPLE IDENTIFICATION TRACEABLE TO LOCATION COLLECTED 4. SAMPLE LOCATION 5. SAMPLE DEPTH FOR SOILS 6. COLLECTION TECHNIQUE (BAILER, PUMP ETC 7. FIELD SAMPLE PREPARATION TECHNIQUES 8. SAMPLE TYPE (GRAB, COMPOSITE) 9. SAMPLE CONTAINER TYPE 10. PRESERVATION METHODS 11. CHAIN OF CUSTODY FORM COMPLETED 12. REQUIRED ANALYTICAL METHODS REQUESTED 13. FIELD (WATER AND SOIL) SAMPLE LOGS COMPLETED PROPERLY AND SIGNED 14. NUMBER AND TYPE OF FIELD OC SAMPLES COLLECTED (BLANKS, REPLICATES, SPLITS, ETC.) 15. FIELD EQUIPMENT CALIBRATION 16. FIELD EQUIPMENT CALIBRATION 17. SAMPLE SHIPPING 18. LABORATORY TASK ORDER |                    | SAMPLING                         | Logs              |

| ANALYTICAL DATA PACKAGE   |   |
|---|---|
| GENERAL INFORMA   | ATION   |
| ALL QA REPORTING LEVELS   | PERFORMANCE REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRED  |
| 1. SAMPLE RESULTS 2. PARAMETERS ANALYZED 3. METHOD OF ANALYSIS 4. DETECTION LIMITS OF ANALYSIS 5. MASTER TRACKING LIST 6. SAMPLE COLLECTION DATE 7. LAB SAMPLE RECEIVED DATE 8. SAMPLE PREPARATION/EXTRACTION DATE 9. SAMPLE ANALYSIS DATE 10. COPY OF CHAIN-OF-CUSTODY FORM SIGNED BY THE LAB SAMPLE CUSTODIAN 11. A NARRATIVE SUMMARY OF QA OR SAMPLE PROBLEMS IS PROVIDED. |   |
| AFTER COMPLETING SECTION ONE PROCEED TO LEVEL OF SECTION TWO (INORGANIC ANALYSES) ANALYSES). FOLLOWING COMPLETION OF THESE FOUR (DATA EVALUATION SUMMARY).  | ) AND/OR SECTION THREE (ORGANIC   |
| ANALYTICAL DATA VALIDATION CHECKLIST SECTION TWOINORGANIC ANALY   | YSES  |
| METALS AND CLASSICAL WET  | CHEMISTRY METHODS   |
| QA REPORTING LEVEL: I REQUIREMENTS (BATCH SPECIFIC QA)''  | REPORTED IN LIMITS NOT NO YES NO YES REQUIRED   |
| 1. METHOD BLANKS<br>2. MSZ' OR RWSDS % RECOVERY (%R)<br>3. MSD4' OR RWSDS' OR LDG' %R<br>4. RPDZ'   |   |
| COMMENTS:   |   |
|   |   |
| 4/ MSD = MATRIX SPIKE DUP.; 5/ RWS  | MPLES IN ANALYTICAL BATCH  = REAGENT WATER SPIKE;  D = REAGENT WATER SPIKE DUP.;  = RELATIVE PERCENT DIFFERENCE |

| INORGANIC ANALY   | CEC                         |                                  |
|---|-----------------------------|----------------------------------|
| - METALS AND CLASSICAL WET C  | SES_<br>HEMISTRY ME         | THODS                            |
| QA REPORTING LEVEL: II REQUIREMENTS (BATCH SPECIFIC QA) 1/  | REPORTED<br>NO YES          | IN LIMITS NOT<br>NO YES REQUIRED |
| 1. METHOD BLANKS 2. MS % RECOVERY (%R) 3. MSD OR LAB DUPLICATE % R 4. RWS % R 5. RWSD % R 6. RPDS FOR MS/MSD, SAMPLE/LD, RWS/RWSD 7. LCSB/ %R 8. ICVS 9/ %R   | CK KKKK K                   |                                  |
| COMMENTS:   | <u> </u>                    |                                  |
|   |                             |                                  |
| QA REPORTING LEVEL: III REQUIREMENTS (SAMPLE SPECIFIC QA) 10/   |                             |                                  |
| 1. CALIBRATION CURVE STANDARDS 2. ICVS %R 3. CCVS 1 / %R 4. LCS %R 5. METHOD BLANKS 6. ICS 2 / %R (ICP only) 7. DCS 3 / %R (ICP only) 8. MS %R 9. LD OR MSD %R AND RPD 10. POST DIGESTION ANALYTICAL SPIKE 14 /                 |                             |                                  |
| COMMENTS:   |                             | •                                |
| 5/ RWSD   | = REAGENT WA<br>= REAGENT V | ATER SPIKE;                      |
| 8/ LCS = LABORATORY CONTROL SAME  | RELATIVE F                  | PERCENT DIFFERENCE               |
| 9/ ICVS = INITIAL CALIBRATION VERIFICATIO<br>10/ SAMPLE SPECIFIC QA: APPLIES TO PROJECT<br>11/ CCVS = CONTINUING CALIBRATION VERIFICA<br>12/ ICS = INTERFERENCE CHECK SAMPLE: 13/<br>14/ POST DIGESTION ANALYTICAL SPIKE APPLIE | SPECIFIC S                  | SAMPLES.<br>ARD;                 |

| ANALYTICAL DATA VALIDATION CHECKLIST SECTION THREE   |  |                     |                 |
|--|--|---------------------|-----------------|
| ORGANIC ANALY  | SES                                    |                     |                 |
| QA REPORTING LEVEL: I_ REQUIREMENTS  | REPORTED<br>NO YES                     | IN LIMITS<br>NO YES | NOT<br>REQUIRED |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. RWS¹/ 4. RWSD²/ 5. RPD³/   |  |                     |                 |
| COMMENTS:  |  |                     |                 |
|  |  | -1.6                |                 |
| QA REPORTING LEVEL: II REQUIREMENTS A. GAS CHROMATOGRAPHY (NO MASS SPEC) OR  | WET CHEMIS                             | TRY PROCED          | URE             |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS4/ (BATCH SPECIFIC) 4. MSD5/ (BATCH SPECIFIC) 5. LD6/ (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES | KKKK KKK                               |                     |                 |
| B. GAS CHROMATOGRAPH/MASS SPECTROMETER   |  |                     | ~               |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS (BATCH SPECIFIC) 4. MSD (BATCH SPECIFIC) 5. LD (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES       |  |                     |                 |
| COMMENTS:  |  |                     | <b></b>         |
|  | ······································ |                     |                 |

<sup>1/</sup> RWS = REAGENT WATER SPIKE; 2/ RWSD = REAGENT WATER SPIKE DUPLICATE; 3/ RPD = RELATIVE PERCENT DIFFERENCE; 4/ MS = MATRIX SPIKE; 5/ MSD = MATRIX SPIKE DUPLICATE; 6/ LD = LAB DUP

ANALYTICAL DATA VALIDATION CHECKLIST SECTION FOUR DATA EVALUATION SUMMARY Ft. Stewart RF PROJECT NAME: FT Stewart DRMO PROJECT NUMBER: OA REPORTING LEVEL: 72 VALIDATION DATE: 48 S ALL QA REPORTING LEVELS (I.II.III) PERFORMANCE REPORTED ACCEPTABLE NOT SUMMARY OF CHECKLIST FINDINGS NO YES No YES REQUIRED 1. FIELD MEASUREMENTS OF PH AND SPECIFIC CONDUCTANCE ARE CONSISTENT WITH HISTORICAL DATA 2. FIELD RECORDS 3. METHODS (GEN.INFO. SECTION ONE) 4. HOLDING TIMES (MASTER SAMPLE LIST) A. EXTRACTION HOLDING TIMES B. ANALYSIS HOLDING TIMES 5. DETECTION LIMITS (SECTION ONE)
6. BLANKS (SECTIONS TWO OR THREE) A. EQUIPMENT RINSATE BLANKS B. FIELD BLANKS C. TRIP BLANKS D. LABORATORY BLANKS 7. FIELD REPLICATES 8. FIELD SPLITS 9. GEOPHYSICAL COMPARISONS A. CATION VS ANION B. TDS VS SPEC. CONDUCTANCE C. PH VS ALK/ACIDITY D. OTHER 10. METALS QA DATA (SECTION TWO) 11. INORGANIC WET CHEMISTRY (SEC. TWO) 12. ORGANIC GA DATA-GC (SECTION THREE-A) 13. ORGANIC WET CHEMISTRY (SEC. THREE-A) 14. ORGANIC QA DATA-GC/MS (SEC. THREE-B) AFTER COMPLETING THIS SECTION GO TO SECTION FIVE. COMMENTS: Dup SB- 4-8-93 original.

ANALYTICAL DATA VALIDATION CHECKLIST DATA VALIDATION CODING Ft. Stewart RF1 SECTION FIVE PROJECT NAME: FST Hay Waste DRMO PROJECT NUMBER: FST-017 QA REPORTING LEVEL: 0 \_ VALIDATION DATE: 28 Sent 93 1. QUALIFIER CODES ASSIGNED TO DATA: R. U. J. U/J. B. NO FLAG 2. IDENTIFICATION OF SAMPLES AND PARAMETERS WITH CODES: SAMPLE ID PARAMETERS R CODE 20 S CODE U CODE J CODE U/J CODE EXPLANATION: accentable Froelichen VALIDATION PERFORMED BY: \_\_\_\_\_ AUZ SIGNED:

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DATA VALIDATION CHECKLIST SECTION ONE PROJECT NAME: Ft PROJECT NUMBER: FST-SAMPLING DATE: 78 19 SAMPLE IDENTIFICATION: SAMPLING TEAM! I Swite ANALYZING LABORATORY:\_ ANALYSES PERFORMED: 608/2000 9040/9044 RI TCLP SAMPLE MATRIX: OA REPORTING LEVEL! TT FIELD DATA PACKAGE DOCUMENTATION PERFORMANCE REPORTED ACCEPTABLE Not FIELD SAMPLING LOGS: 1/ NO YES No YES REQUIRED 1. SAMPLING DATES NOTED 2. SAMPLING TEAM INDICATED 3. SAMPLE IDENTIFICATION TRACEABLE TO LOCATION COLLECTED 4. SAMPLE LOCATION 5. SAMPLE DEPTH FOR SOILS 6. COLLECTION TECHNIQUE (BAILER, PUMP ETC. 7. FIELD SAMPLE PREPARATION TECHNIQUES 8. SAMPLE TYPE (GRAB, COMPOSITE) 9. SAMPLE CONTAINER TYPE 10. PRESERVATION METHODS 11. CHAIN OF CUSTODY FORM COMPLETED 12. REQUIRED ANALYTICAL METHODS REQUESTED 13. FIELD (WATER AND SOIL) SAMPLE LOGS COMPLETED PROPERLY AND SIGNED 14. NUMBER AND TYPE OF FIELD QC SAMPLES COLLECTED (BLANKS. REPLICATES, SPLITS, ETC.) 15. FIELD EQUIPMENT CALIBRATION 16. FIELD EQUIPMENT DECONTAMINATION 17. SAMPLE SHIPPING 18. LABORATORY TASK ORDER 1/ FIELD SAMPLING LOGS = WATER AND/OR SOIL/SEDIMENT SAMPLING LOGS

## FT. STEWART Number Key

## JOB NUMBER FST-018

Carr Lab No.

| FT STEWART ID | FST-018 SB1-9-93 | B3-9-93              | B4-9-9<br>B4-9-9 | D-9-9    | 6        | 13       | NF-9-9   | W2-9-9   | 3 - 9 - 9 | 4-9-9    | 5-9-9    | 9-6-     | 6-6      | DUP-9-   | (-6-b)   | 9-93    | -BIA    | F-DUP-9-9 | " TRIP BLANK | 0 - 1 - 9 - 9 | ED-2-9-9 | ED-3-9-9 | 9       | ED-5-9-9 | ED-6-9-9 | ED       | ED-7-DUP |
|---------------|------------------|----------------------|------------------|----------|----------|----------|----------|----------|-----------|----------|----------|----------|----------|----------|----------|---------|---------|-----------|--------------|---------------|----------|----------|---------|----------|----------|----------|----------|
| arr Lab No.   | 10-6528-93       | 0-6530-9<br>0-6531-9 | 0 - 6532 - 9     | 0-6533-9 | 0-6535-9 | 0-6536-9 | 0-6537-9 | 0-6538-9 | 0-6239-0  | 0-6540-9 | 0-6541-9 | 0-6542-9 | 0-6543-9 | 0-6544-9 | 0-6545-9 | -6546-9 | -6547-9 | -6548-9   | -6249-9      | -6220-9       | -6551-9  | -6552-9  | -6223-9 | -6554-9  | -6555-9  | -65556-9 | -6557-9  |

| ANALYTICAL DATA PACKAGE I  | OCUMENTATION   |
|--|--|
|  | TION   |
| ALL QA REPORTING LEVELS  | PERFORMANCE REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRED                       |
| 1. SAMPLE RESULTS 2. PARAMETERS ANALYZED 3. METHOD OF ANALYSIS 4. DETECTION LIMITS OF ANALYSIS 5. MASTER TRACKING LIST 6. SAMPLE COLLECTION DATE 7. LAB SAMPLE RECEIVED DATE 8. SAMPLE PREPARATION/EXTRACTION DATE 9. SAMPLE ANALYSIS DATE 10. COPY OF CHAIN-OF-CUSTODY FORM SIGNED BY THE LAB SAMPLE CUSTODIAN, 11. A NARRATIVE SUMMARY OF QA OR SAMPLE PROBLEMS IS PROVIDED. |  |
| AFTER COMPLETING SECTION ONE PROCEED TO TLEVEL OF SECTION TWO (INORGANIC ANALYSES) ANALYSES). FOLLOWING COMPLETION OF THESE FOUR (DATA EVALUATION SUMMARY).  ANALYTICAL DATA VALIDATION CHECKLIST SECTION TWO  | AND/OR SECTION THREE (ORGANIC  |
| INORGANIC ANALY  |  |
| QA REPORTING LEVEL: I REQUIREMENTS (BATCH SPECIFIC QA) 1/  | REPORTED IN LIMITS NOT<br>NO YES NO YES REQUIRED                                 |
| 1. METHOD BLANKS % RECOVERY (%R) 2. MS2' OR RWSD5' OR LD6' %R 4. RPD7'   |  |
| COMMENTS:  |  |
| 4/ MSD = MATRIX SPIKE DUP.; 5/ RWS   | MPLES IN ANALYTICAL BATCH  = REAGENT WATER SPIKE;  = RELATIVE PERCENT DIFFERENCE |

ANALYTICAL DATA VALIDATION CHECKLIST SECTION TWO

| SECTION TWO   |                         |  |
|---|-------------------------|--|
| METALS AND CLASSICAL WET CH   | SESMEMISTRY ME          | TUODS  |
| QA REPORTING LEVEL: IT  |                         |  |
| REQUIREMENTS (BATCH SPECIFIC QA) 1/   | REPORTED<br>NO YES      | IN LIMITS NOT<br>NO YES REQUIRED                       |
| 1. METHOD BLANKS 2. MS % RECOVERY (%R) 3. MSD OR LAB DUPLICATE % R 4. RWS % R 5. RWSD % R 6. RPDs FOR MS/MSD, SAMPLE/LD, RWS/RWSD 7. LCS*/ %R 8. ICVS */ %R   |                         |  |
| COMMENTS:   | <u> </u>                |  |
|   |                         |  |
| QA REPORTING LEVEL: III REQUIREMENTS (SAMPLE SPECIFIC QA) 10/   |                         |  |
| 1. CALIBRATION CURVE STANDARDS 2. ICVS %R 3. CCVS'' / %R 4. LCS %R 5. METHOD BLANKS 6. ICS'2 / %R (ICP ONLY) 7. DCS'3 / %R (ICP ONLY) 8. MS %R 9. LD OR MSD %R AND RPD 10. POST DIGESTION ANALYTICAL SPIKE'4/   |                         |  |
| COMMENTS:   |                         |  |
|   |                         |  |
| 1/ SATCH SPECIFIC QA: APPLIES TO ANY SAMP 2/ MS = MATRIX SPIKE; 3/ RWS = 4/ MSD = MATRIX SPIKE DUP.; 5/ RWSD 5/ LD = LABORATORY DUPLICATE; 7/ RPD = 6/ LCS = LABORATORY CONTROL SAMPLE;   | REAGENT W<br>RELATIVE F | ATER SPIKE:<br>WATER SPIKE DUP.;<br>PERCENT DIFFERENCE |
| ICVS = INITIAL CALIBRATION VERIFICATION OF SAMPLE SPECIFIC QA: APPLIES TO PROJECT OF CONTINUING CALIBRATION VERIFICATION OF CONTINUING CALIBRATION VERIFICATION OF CONTINUING CALIBRATION OF CONTINUING CALIBRATICAL | SPECIFIC:               | SAMPLES.<br>ARD:                                       |

ANALYTICAL DATA VALIDATION CHECKLIST

| SECTION THREEORGANIC ANALY   | SES                                     |                                  |
|--|---|----------------------------------|
| OA REPORTING LEVEL: I_ REOUIREMENTS  |   | IN LIMITS NOT<br>NO YES REQUIRED |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. RWS¹/ 4. RWSD²/ 5. RPD³/   |   |                                  |
| COMMENTS:  |   |                                  |
|  |   | 47                               |
| QA REPORTING LEVEL: II REQUIREMENTS A. GAS CHROMATOGRAPHY (NO MASS SPEC) OR  | WET CHEMIS                              | TRY PROCEDURE                    |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS4/ (BATCH SPECIFIC) 4. MSD5/ (BATCH SPECIFIC) 5. LD6/ (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES | 2 |                                  |
| B. GAS CHROMATOGRAPH/MASS SPECTROMETER   |   | -                                |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS (BATCH SPECIFIC) 4. MSD (BATCH SPECIFIC) 5. LD (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES       | K K K K K K K K K K K K K K K K K K K   |                                  |
| COMMENTS:  |   |                                  |
|  |   |                                  |

<sup>1/</sup> RWS = REAGENT WATER SPIKE; 2/ RWSD = REAGENT WATER SPIKE DUPLICATE; 3/ RPD = RELATIVE PERCENT DIFFERENCE; 4/ MS = MATRIX SPIKE; 5/ MSD = MATRIX SPIKE DUPLICATE; 6/ LD = LAB DUP

ANALYTICAL DATA VALIDATION CHECKLIST SECTION FOUR DATA EVALUATION SUMMARY Ft. Starefut RF1 PROJECT NAME: FST Woute treatment flowit PROJECT NUMBER: FST - 018 OA REPORTING LEVEL: IL VALIDATION DATE: 19 0 2 93 ALL QA REPORTING LEVELS (I.II.III) PERFORMANCE REPORTED ACCEPTABLE NOT SUMMARY OF CHECKLIST FINDINGS NO YES REQUIRED NO YES 1. FIELD MEASUREMENTS OF PH AND SPECIFIC CONDUCTANCE ARE CONSISTENT WITH HISTORICAL DATA 2. FIELD RECORDS 3. METHODS (GEN.INFO. SECTION ONE)
4. HOLDING TIMES (MASTER SAMPLE LIST) A. EXTRACTION HOLDING TIMES B. ANALYSIS HOLDING TIMES 5. DETECTION LIMITS (SECTION ONE) 6. BLANKS (SECTIONS TWO OR THREE) A. EQUIPMENT RINSATE BLANKS B. FIELD BLANKS C. TRIP BLANKS D. LABORATORY BLANKS 7. FIELD REPLICATES 8. FIELD SPLITS 9. GEOPHYSICAL COMPARISONS A. CATION VS ANION B. TDS VS SPEC. CONDUCTANCE C. PH VS ALK/ACIDITY D. OTHER 10. METALS QA DATA (SECTION TWO) 11. INORGANIC WET CHEMISTRY (SEC. TWO) 12. ORGANIC CA DATA-GC (SECTION THREE-A) 13. ORGANIC WET CHEMISTRY (SEC. THREE-A) 14. ORGANIC QA DATA-GC/MS (SEC. THREE-B) AFTER COMPLETING THIS SECTION GO TO SECTION FIVE. COMMENTS:\_\_ Sw7-9

| ANALYTICAL SECTION FI  | DATA VALIDATION CHECKLIST   |
|--|---|
| 25CLTON LT   | DATA VALIDATION CODING Ft. Stewart RF/                                |
| PROJECT  | NAME. FST (North Instant NO tons 100 100)                             |
| QA REPOR   | RTING LEVEL: TE VALIDATION DATE: 190193                               |
| 1. QUALTET   | TER CODES ASSIGNED TO DATA: R. U. J. U/J. B. NO FLAG                  |
|  |   |
|  | FICATION OF SAMPLES AND PARAMETERS WITH CODES:  SAMPLE ID  PARAMETERS |
| R CODE   |   |
|  |   |
| B CODE _   |   |
|  |   |
| U CODE   |   |
|  |   |
|  |   |
| J CODE   |   |
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|  |   |
| U/J  |   |
| CODE _   |   |
|  |   |
|  |   |
| XPLANATIO  | SW7-9-93 run again  |
|  | all applitable  |
|  |   |
| THE REAL PROPERTY AND THE PROPERTY OF THE PROP |   |
|  |   |
| ALTDATION  | personner ov Early (C. )  |
| ALIDATION  | PERFORMED BY: FRANZ FROCELACKEOZ                                      |
|  | SIGNED:   |
|  | DATE: 48 200-93   |

DATA VALIDATION CHECKLIST SECTION ONE PROJECT NAME: Et. Stewart PROJECT NUMBER: \_\_ F SAMPLING DATE: VALIDATION DATE: 28 SAMPLE IDENTIFICATION: pst 4 SAMPLING TEAM: I Smith ANALYZING LABORATORY: Carr ANALYSES PERFORMED:\_\_\_\_ SAMPLE MATRIX:\_\_ QA REPORTING LEVEL:\_ FIELD DATA PACKAGE DOCUMENTATION PERFORMANCE REPORTED ACCEPTABLE Not FIELD SAMPLING LOGS: 1/ NO YES NO YES REQUIRED 1. SAMPLING DATES NOTED 2. SAMPLING TEAM INDICATED 3. SAMPLE IDENTIFICATION TRACEABLE TO LOCATION COLLECTED 4. SAMPLE LOCATION 5. SAMPLE DEPTH FOR SOILS 6. COLLECTION TECHNIQUE (BAILER, PUMP ETC 7. FIELD SAMPLE PREPARATION TECHNIQUES 8. SAMPLE TYPE (GRAB, COMPOSITE) 9. SAMPLE CONTAINER TYPE 10. PRESERVATION METHODS 11. CHAIN OF CUSTODY FORM COMPLETED 12. REQUIRED ANALYTICAL METHODS REQUESTED 13. FIELD (WATER AND SOIL) SAMPLE LOGS COMPLETED PROPERLY AND SIGNED 14. NUMBER AND TYPE OF FIELD QC SAMPLES COLLECTED (BLANKS, REPLICATES, SPLITS, ETC.) 15. FIELD EQUIPMENT CALIBRATION 16. FIELD EQUIPMENT DECONTAMINATION 17. SAMPLE SHIPPING 18. LABORATORY TASK ORDER 1/ FIELD SAMPLING LOGS = WATER AND/OR SOIL/SEDIMENT SAMPLING LOGS COMMENTS:

| ANALYTICAL DATA PACKAGE   | DOCUMENTATION   |
|---|---|
| GENERAL INFORMA   | TION  |
| ALL QA REPORTING LEVELS   | PERFORMANCE REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRED  |
| 1. SAMPLE RESULTS 2. PARAMETERS ANALYZED 3. METHOD OF ANALYSIS 4. DETECTION LIMITS OF ANALYSIS 5. MASTER TRACKING LIST 6. SAMPLE COLLECTION DATE 7. LAB SAMPLE RECEIVED DATE 8. SAMPLE PREPARATION/EXTRACTION DATE 9. SAMPLE ANALYSIS DATE 10. COPY OF CHAIN-OF-CUSTODY FORM SIGNED BY THE LAB SAMPLE CUSTODIAN 11. A NARRATIVE SUMMARY OF CA OR SAMPLE PROBLEMS IS PROVIDED. |   |
| AFTER COMPLETING SECTION ONE PROCEED TO TEVEL OF SECTION TWO (INORGANIC ANALYSES) ANALYSES). FOLLOWING COMPLETION OF THESE FOUR (DATA EVALUATION SUMMARY).  ANALYTICAL DATA VALIDATION CHECKLIST SECTION TWO INORGANIC ANALYSES.  | AND/OR SECTION THREE (ORGANIC<br>SECTIONS PROCEED TO SECTION<br>(SES  |
| METALS AND CLASSICAL WET C<br>QA REPORTING LEVEL: I<br>REQUIREMENTS (BATCH SPECIFIC QA) 1/  | CHEMISTRY METHODS  REPORTED IN LIMITS NOT  NO YES NO YES REQUIRED   |
| 1. METHOD BLANKS % RECOVERY (%R) 2. MS2' OR RWSD5' OR LD6' %R 4. RPD7'  |   |
| COMMENTS:   |   |
| 4/ MSD = MATRIX SPIKE DUP.; 5/ RWS  | MPLES IN ANALYTICAL BATCH  = REAGENT WATER SPIKE;  = REAGENT WATER SPIKE DUP.;  = RELATIVE PERCENT DIFFERENCE |

| INORGANIC ANALYS   | 25.0                        |  |
|--|-----------------------------|--|
| METALS AND CLASSICAL WET CH  | SES <u>.</u><br>HEMISTRY MF | THODS  |
| QA REPORTING LEVEL: II REQUIREMENTS (BATCH SPECIFIC OA) '/   | REPORTED<br>NO YES          |  |
| 1. METHOD BLANKS 2. MS % RECOVERY (%R) 3. MSD OR LAB DUPLICATE % R 4. RWS % R 5. RWSD % R 6. RPDS FOR MS/MSD, SAMPLE/LD, RWS/RWSD 7. LCS** %R 8. ICVS ** %R  |                             |  |
| COMMENTS:  |                             |  |
|  |                             |  |
| QA REPORTING LEVEL: III<br>REQUIREMENTS (SAMPLE SPECIFIC QA) 10/   |                             |  |
| 1. CALIBRATION CURVE STANDARDS 2. ICVS %R 3. CCVS 1  |                             |  |
| COMMENTS:  |                             |  |
| / BATCH SPECIFIC OA: ARRIVES TO  |                             |  |
| MS = MATRIX SPIKE;  MSD = MATRIX SPIKE DUP.;  MSD = LABORATORY DUPLICATE;  MSD = LABORATORY CONTROL SAME   | REAGENT WAR RELATIVE F      | ATER SPIKE;<br>WATER SPIKE DUP.;<br>PERCENT DIFFERENCE |
| O/ ICVS = INITIAL CALIBRATION VERIFICATION O/ SAMPLE SPECIFIC QA: APPLIES TO PROJECT 1/ CCVS = CONTINUING CALIBRATION VERIFICA 2/ ICS = INTERFERENCE CHECK SAMPLE; 13/ 4/ POST DIGESTION ANALYTICAL SPIKE APPLIE | SPECIFIC STANDA             | SAMPLES.<br>ARD;                                       |

| ORGANIC ANALYSES  OA REPORTING LEVEL: I_ REPORTED IN LIMITS NOT RECOUREMENTS NO YES REQUIREMENTS  1. WATER BLANKS 2. EXTRACTION SLANKS 3. RWS1' 4. RWSD2' 5. RPD3'  COMMENTS:  OA REPORTING LEVEL: II REQUIREMENTS A. GAS CHROMATOGRAPHY (NO MASS SPEC) OR WET CHEMISTRY PROCEDURE  1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS4' (BATCH SPECIFIC) 4. MSD5' (BATCH SPECIFIC) 5. LD0' (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES  1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS (BATCH SPECIFIC) 4. MSD (BATCH SPECIFIC) 5. LD (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES  COMMENTS:  | NALYTICAL DATA VALIDATION CHECKLIST ECTION THREE  |            |             |              |
|--|---|------------|-------------|--------------|
| REGUIREMENTS NO YES NO YES REDUIT  1. WATER BLANKS 2. EXTRACTION BLANKS 3. RWS1' 4. RWSD2' 5. RPD3'  COMMENTS:   ORGANIC ANAL  | YSES       |             |              |
| 2. EXTRACTION BLANKS 3. RWS1' 4. RWSD2' 5. RPD3'  COMMENTS:  COMME |   |            |             |              |
| QA REPORTING LEVEL: II REQUIREMENTS A. GAS CHROMATOGRAPHY (NO MASS SPEC) OR WET CHEMISTRY PROCEDURE  1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS4' (BATCH SPECIFIC) 4. MSD5' (BATCH SPECIFIC) 5. LD6' (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES  1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS (BATCH SPECIFIC) 4. MSD (BATCH SPECIFIC) 5. LD (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES  | 2. EXTRACTION BLANKS 3. RWS1/ 4. RWSD2/   |            |             |              |
| DA REPORTING LEVEL: II REQUIREMENTS A. GAS CHROMATOGRAPHY (NO MASS SPEC) OR WET CHEMISTRY PROCEDURE  1. WATER BLANKS 2. EXTRACTION BLANKS 3. MSD' (BATCH SPECIFIC) 4. MSD' (BATCH SPECIFIC) 5. LD6' (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES  1. WATER BLANKS 2. EXTRACTION BLANKS 2. EXTRACTION BLANKS 3. MS (BATCH SPECIFIC) 4. MSD (BATCH SPECIFIC) 5. LD (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES  | OMMENTS:  |            |             |              |
| REQUIREMENTS A. GAS CHROMATOGRAPHY (NO MASS SPEC) OR WET CHEMISTRY PROCEDURE  1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS4' (BATCH SPECIFIC) 4. MSD5' (BATCH SPECIFIC) 5. LD6' (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES  1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS (BATCH SPECIFIC) 4. MSD (BATCH SPECIFIC) 5. LD (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES   |   |            | 4.6         |              |
| 2. EXTRACTION BLANKS 3. MS <sup>4</sup> / (BATCH SPECIFIC) 4. MSD <sup>5</sup> / (BATCH SPECIFIC) 5. LD <sup>6</sup> / (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES  1. WATER BLANKS 2. EXTRACTION BLANKS 5. MS (BATCH SPECIFIC) 4. MSD (BATCH SPECIFIC) 5. LD (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES  | REQUIREMENTS  | WET CHEMIS | STRY PROCED | MISE         |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS (BATCH SPECIFIC) 4. MSD (BATCH SPECIFIC) 5. LD (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES   | 2. EXTRACTION BLANKS 3. MS4/ (BATCH SPECIFIC) 4. MSD5/ (BATCH SPECIFIC) 5. LD6/ (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD |            |             |              |
| 2. EXTRACTION BLANKS 3. MS (BATCH SPECIFIC) 4. MSD (BATCH SPECIFIC) 5. LD (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES   | 3. GAS CHROMATOGRAPH/MASS SPECTRÖMETER  |            |             | <del>-</del> |
| COMMENTS:  | 2. EXTRACTION BLANKS 3. MS (BATCH SPECIFIC) 4. MSD (BATCH SPECIFIC) 5. LD (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD       |            |             |              |
|  | COMMENTS:   |            |             |              |
|  |   |            |             |              |

<sup>1/</sup> RWS = REAGENT WATER SPIKE; 2/ RWSD = REAGENT WATER SPIKE DUPLICATE; 3/ RPD = RELATIVE PERCENT DIFFERENCE; 4/ MS = MATRIX SPIKE; 5/ MSD = MATRIX SPIKE DUPLICATE; 6/ LD = LAB DUP

| ANALYTICAL DATA VALIDATION CHECKLIST SECTION FOUR  | CL CA I Bri                                    |
|--|--|
| DATA EVALUATION S  | SUMMARY H. Stewart RF1                         |
| PROJECT NAME: FST Radiator Shap PROJ<br>OA REPORTING LEVEL: IT VALIDATION D  | JECT NUMBER: FST-024 DATE: JE Sept 93          |
| ALL QA REPORTING LEVELS (I.II.III)   | PERFORMANCE                                    |
| SUMMARY OF CHECKLIST FINDINGS  | REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRED |
| 1. FIELD MEASUREMENTS OF PH AND SPECIFIC CONDUCTANCE ARE CONSISTENT WITH HISTORICAL DATA  2. FIELD RECORDS  3. METHODS (GEN.INFO. SECTION ONE)  4. HOLDING TIMES (MASTER SAMPLE LIST) A. EXTRACTION HOLDING TIMES B. ANALYSIS HOLDING TIMES  5. DETECTION LIMITS (SECTION ONE)  6. BLANKS (SECTIONS TWO OR THREE) A. EQUIPMENT RINSATE BLANKS B. FIELD BLANKS C. TRIP BLANKS D. LABORATORY BLANKS  7. FIELD REPLICATES  8. FIELD SPLITS  9. GEOPHYSICAL COMPARISONS A. CATION VS ANION B. TDS VS SPEC. CONDUCTANCE C. PH VS ALK/ACIDITY D. OTHER  10. METALS QA DATA (SECTION TWO) 11. INORGANIC WET CHEMISTRY (SEC. TWO) 12. ORGANIC GA DATA-GC (SECTION THREE-A) 13. ORGANIC WET CHEMISTRY (SEC. THREE-B) 14. ORGANIC QA DATA-GC/MS (SEC. THREE-B) |  |
| AFTER COMPLETING THIS SECTION GO TO SECTION COMMENTS:  | ON FIVE.                                       |
|  |  |
|  |  |
|  |  |
|  |  |
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|  |  |
|  |  |

| ANALYTIC<br>SECTION | · · · · <del>-</del>                              | DATION CODING Ft. Stewart RF1              |
|---------------------|---|--|
| PROJEC<br>QA REF    | CT NAME: FST Restator Chay PORTING LEVEL: IF VALI | 657 63//                                   |
|                     | IFIER CODES ASSIGNED TO DATA                      |  |
| Z. IDENT            | TIFICATION OF SAMPLES AND P.  Sample ID           | ARAMETERS WITH CODES:<br><u>Parameters</u> |
| R CODE              |   |  |
| B CODE              |   |  |
| U CODE              |   |  |
| J CODE              |   |  |
| CCDE                |   |  |
| EXPLANAT            | TION: all akoly                                   | toble                                      |
|                     |   |  |
| /ALIDATI(           | ION PERFORMED BY: FRANZ                           | Fædelichen                                 |
|                     | SIGNED:   |  |
|                     | DATE: 28 Se                                       | × 93                                       |

DATA VALIDATION CHECKLIST SECTION ONE PROJECT NAME: Et Stewart Waste oil PROJECT NUMBER: PST-015 SAMPLING DATE: 8/17 88/ 9/ VALIDATION DATE: SAMPLE IDENTIFICATION: SAMPLING TEAM: 3 ANALYZING LABORATORY:\_ ANALYSES PERFORMED: \$50.1/904019045 TCLA SAMPLE MATRÍX: \_ a QA REPORTING LEVEL! IT FIELD DATA PACKAGE DOCUMENTATION PERFORMANCE REPORTED ACCEPTABLE Not FIELD SAMPLING LOGS:1/ No YES NO YES REQUIRED 1. SAMPLING DATES NOTED 2. SAMPLING TEAM INDICATED 3. Sample identification traceable to LOCATION COLLECTED 4. SAMPLE LOCATION 5. SAMPLE DEPTH FOR SOILS 6. COLLECTION TECHNIQUE (BAILER, PUMP ETC 7. FIELD SAMPLE PREPARATION TECHNIQUES 8. SAMPLE TYPE (GRAB, COMPOSITE) 9. SAMPLE CONTAINER TYPE 10. PRESERVATION METHODS 11. CHAIN OF CUSTODY FORM COMPLETED 12. REQUIRED ANALYTICAL METHODS REQUESTED 13. FIELD (WATER AND SOIL) SAMPLE LOGS COMPLETED PROPERLY AND SIGNED 14. NUMBER AND TYPE OF FIELD QC SAMPLES COLLECTED (BLANKS, REPLICATES, SPLITS, ETC.) 15. FIELD EQUIPMENT CALIBRATION 16. FIELD EQUIPMENT DECONTAMINATION 17. SAMPLE SHIPPING 18. LABORATORY TASK ORDER 1/ FIELD SAMPLING LOGS = WATER AND/OR SOIL/SEDIMENT SAMPLING LOGS COMMENTS: \_\_\_

FT. STEWART Number Key JOB NUMBER FST-025

## FT STEWART ID

|-ST\cas\_100A-9-93 100A-9-93 100B-9-93 140B-9-93 140B-9-93 164-9-93 164-9-93 164-9-93 164-9-93 164-9-93 164-9-93 164-9-93 164-9-93 17RIP BLANK 167-9-93

Carr Lab No.

09-5866-93 09-5867-93 09-5867-93 09-5870-93 09-5871-93 09-5871-93 09-5873-93 09-5874-93 09-5876-93 09-5876-93 09-5876-93

| ANALYTICAL DATA PACKAGE   | DOCUMENTATION  |
|---|--|
|   | TION   |
| ALL QA REPORTING LEVELS   | PERFORMANCE REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRED   |
| 1. SAMPLE RESULTS 2. PARAMETERS ANALYZED 3. METHOD OF ANALYSIS 4. DETECTION LIMITS OF ANALYSIS 5. MASTER TRACKING LIST 6. SAMPLE COLLECTION DATE 7. LAB SAMPLE RECEIVED DATE 8. SAMPLE PREPARATION/EXTRACTION DATE 9. SAMPLE ANALYSIS DATE 10. COPY OF CHAIN-OF-CUSTODY FORM SIGNED BY THE LAB SAMPLE CUSTODIAN 11. A NARRATIVE SUMMARY OF GA OR SAMPLE PROBLEMS IS PROVIDED. |  |
| AFTER COMPLETING SECTION ONE PROCEED TO T LEVEL OF SECTION TWO (INORGANIC ANALYSES) ANALYSES). FOLLOWING COMPLETION OF THESE FOUR (DATA EVALUATION SUMMARY).  ANALYTICAL DATA VALIDATION CHECKLIST SECTION TWO  | AND/OR SECTION THREE (ORGANIC SECTIONS PROCEED TO SECTION SECTION SECTION SECTION SES                        |
| METALS AND CLASSICAL WET C<br>QA REPORTING LEVEL: I<br>REQUIREMENTS (BATCH SPECIFIC QA) 1/  | HEMISTRY METHODS  REPORTED IN LIMITS NOT  NO YES NO YES REQUIRED   |
| 1. METHOD BLANKS % RECOVERY (%R) 2. MS2' OR RWSD5' OR LD6' %R 4. RPD7'  |  |
| COMMENTS:   |  |
| 4/ MSD = MATRIX SPIKE DUP.: 5/ RWSD   | PLES IN ANALYTICAL BATCH  = REAGENT WATER SPIKE;  = REAGENT WATER SPIKE DUP.;  = RELATIVE PERCENT DIFFERENCE |

ANALYTICAL DATA VALIDATION CHECKLIST SECTION TWO

| SECTION TWO  | •  |
|--|--|
| INORGANIC ANALY<br>METALS AND CLASSICAL WET C  | SES<br>HEMISTRY_METHODS  |
| QA REPORTING LEVEL: II REQUIREMENTS (BATCH SPECIFIC QA) 1/   | REPORTED IN LIMITS NOT<br>NO YES NO YES REQUIRED                               |
| 1. METHOD BLANKS 2. MS % RECOVERY (%R) 3. MSD OR <del>LAB DUPLICATE</del> % R 4. RWS % R 5. RWSD % R 6. RPDS FOR MS/MSD, SAMPLE/LD, RWS/RWSD 7. LCS** %R 8. ICVS ** %R   |  |
|  |  |
| QA REPORTING LEVEL: III REQUIREMENTS (SAMPLE SPECIFIC QA) 10/  |  |
| 1. CALIBRATION CURVE STANDARDS 2. ICVS %R 3. CCVS 1 / %R 4. LCS %R 5. METHOD BLANKS 6. ICS 2 / %R (ICP ONLY) 7. DCS 2 / %R (ICP ONLY) 8. MS %R 9. LD OR MSD %R AND RPD 10. POST DIGESTION ANALYTICAL SPIKE 4 / |  |
| COMMENTS:  |  |
|  |  |
| 5/ LD = LABORATORY DUPLICATE; 7/ RPD = 8/ LCS = LABORATORY CONTROL SAMPLE; 9/ ICVS = INITIAL CALTERATION   | REAGENT WATER SPIKE; = REAGENT WATER SPIKE DUP.; = RELATIVE PERCENT DIFFERENCE |
| 10/ SAMPLE SPECIFIC QA: APPLIES TO PROJECT 11/ CCVS = CONTINUING CALIBRATION VERIFICA 12/ ICS = INTERFERENCE CHECK SAMPLE; 13/ 14/ POST DIGESTION ANALYTICAL SPIKE APPLIE                                      | SPECIFIC SAMPLES.  |

| ANALYTICAL DATA VALIDATION CHECKLIST SECTION THREE ORGANIC ANALY   | SES                |                     |  |
|--|--------------------|---------------------|--|
| QA REPORTING LEVEL: I_ REQUIREMENTS  | REPORTED<br>No YES | IN LIMITS<br>NO YES |  |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. RWS'/ 4. RWSD <sup>2</sup> / 5. RPD <sup>3</sup> /   |                    |                     |  |
| COMMENTS:  |                    |                     |  |
| QA REPORTING LEVEL: II REQUIREMENTS A. GAS CHROMATOGRAPHY (NO MASS SPEC) OR  | WET CHEMIS         | TRY PROCED          | URE                                    |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS4/ (BATCH SPECIFIC) 4. MSD5/ (BATCH SPECIFIC) 5. LD6/ (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES |                    |                     |  |
| B. GAS CHROMATOGRAPH/MASS SPECTROMETER   |                    |                     | ~                                      |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS (BATCH SPECIFIC) 4. MSD (BATCH SPECIFIC) 5. LD (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LO RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES       |                    |                     |  |
| COMMENTS:  |                    |                     |  |
|  |                    |                     | ······································ |

<sup>1/</sup> RWS = REAGENT WATER SPIKE; 2/ RWSD = REAGENT WATER SPIKE DUPLICATE; 3/ RPD = RELATIVE PERCENT DIFFERENCE; 4/ MS = MATRIX SPIKE; 5/ MSD = MATRIX SPIKE DUPLICATE; 6/ LD = LAB DUP

| ANALYTICAL DATA VALIDATION CHECKLIST SECTION FOUR  |  |
|--|--|
| DATA EVALUATION S  | SUMMARY It. Stewart RF1                        |
| PROJECT NAME: (ST-World oil towns PROJOR REPORTING LEVEL: The VALIDATION E   | JECT NUMBER: FST-DJ5 DATE: JJDor 93            |
| ALL QA REPORTING LEVELS (I,II,III)   | PERFORMANCE                                    |
| SUMMARY OF CHECKLIST FINDINGS  | REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRED |
| 1. FIELD MEASUREMENTS OF PH AND SPECIFIC CONDUCTANCE ARE CONSISTENT WITH HISTORICAL DATA  2. FIELD RECORDS  3. METHODS (GEN.INFO. SECTION ONE)  4. HOLDING TIMES (MASTER SAMPLE LIST)  A. EXTRACTION HOLDING TIMES  B. ANALYSIS HOLDING TIMES  5. DETECTION LIMITS (SECTION ONE)  6. BLANKS (SECTIONS TWO OR THREE)  A. EQUIPMENT RINSATE BLANKS  B. FIELD BLANKS  C. TRIP BLANKS  D. LABORATORY BLANKS  7. FIELD REPLICATES  8. FIELD SPLITS  9. GEOPHYSICAL COMPARISONS  A. CATION VS ANION  B. TDS VS SPEC. CONDUCTANCE  C. PH VS ALK/ACIDITY  D. OTHER  10. METALS QA DATA (SECTION TWO)  11. INORGANIC WET CHEMISTRY (SEC. TWO)  12. ORGANIC GA DATA-GC (SECTION THREE-A)  13. ORGANIC WET CHEMISTRY (SEC. THREE-A)  14. ORGANIC OA DATA-GC/MS (SEC. THREE-B) |  |
| AFTER COMPLETING THIS SECTION GO TO SECTION COMMENTS:  | ON FIVE.                                       |
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| ANALYTICAL DATA VALIDATION CHECKLIST SECTION FIVE  |
|--|
| DATA VALIDATION CODING It Stewart RF1  |
| PROJECT NAME: FS7 Waste oil tanks PROJECT NUMBER: FS7-015  QA REPORTING LEVEL: TO VALIDATION DATE: 31 for 93           |
| 1. QUALIFIER CODES ASSIGNED TO DATA: R, U, J, U/J, B, NO FLAG  |
| 2. IDENTIFICATION OF SAMPLES AND PARAMETERS WITH CODES:  SAMPLE ID  PARAMETERS   |
| R CODE 4AA-L-11-93 Postionale Delata BAC & Claid Bare houtials 4AA-9-11-93 Postionale Delata BAC & Claid Bare houtials |
| B CODE   |
| U CODE   |
| J CODE .   |
| U/J<br>code  |
| EXPLANATION: Spile Oc Sample # 1/1193 for Pertural showed the to a to the formal of 56.46 willing the to               |
| Locame of peak interference<br>also Grid Rose neutralstare minury Dups spile Comples<br>for some Sample bootsk.        |
| f  |
| VALIDATION PERFORMED BY: FRANZ FROGELICURE   |
| DATE: 22 Pos 93  |

DATA VALIDATION CHECKLIST SECTION ONE PROJECT NAME: PROJECT NUMBER: SAMPLING DATE: 15-16 VALIDATION DATE: SAMPLE IDENTIFICATION: FS SAMPLING TEAM: ANALYZING LABORATORY: Com ANALYSES PERFORMED: 8015 13/1 7CLD 52 com SAMPLE MATRIX:\_\_ QA REPORTING LEVEL: \_\_\_\_ FIELD DATA PACKAGE DOCUMENTATION PERFORMANCE REPORTED ACCEPTABLE Иот FIELD SAMPLING LOGS:1/ NO YES NO YES REQUIRED 1. SAMPLING DATES NOTED 2. SAMPLING TEAM INDICATED 3. SAMPLE IDENTIFICATION TRACEABLE TO LOCATION COLLECTED 4. SAMPLE LOCATION 5. SAMPLE DEPTH FOR SOILS 6. COLLECTION TECHNIQUE (BAILER, PUMP ETC 7. FIELD SAMPLE PREPARATION TECHNIQUES 8. SAMPLE TYPE (GRAB, COMPOSITE) 9. SAMPLE CONTAINER TYPE 10. PRESERVATION METHODS 11. CHAIN OF CUSTODY FORM COMPLETED 12. REQUIRED ANALYTICAL METHODS REQUESTED 13. FIELD (WATER AND SOIL) SAMPLE LOGS COMPLETED PROPERLY AND SIGNED 14. NUMBER AND TYPE OF FIELD QC SAMPLES COLLECTED (BLANKS, REPLICATES, SPLITS, ETC.) 15. FIELD EQUIPMENT CALIBRATION 16. FIELD EQUIPMENT DECONTAMINATION 17. SAMPLE SHIPPING 18. LABORATORY TASK ORDER 1/ FIELD SAMPLING LOGS = WATER AND/OR SOIL/SEDIMENT SAMPLING LOGS COMMENTS:\_\_\_\_

| ANALYTICAL DATA PACKAGE   |  |
|---|--|
| GENERAL INFORMA   | TION   |
| ALL QA REPORTING LEVELS   | PERFORMANCE REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRED   |
| 1. SAMPLE RESULTS 2. PARAMETERS ANALYZED 3. METHOD OF ANALYSIS 4. DETECTION LIMITS OF ANALYSIS 5. MASTER TRACKING LIST 6. SAMPLE COLLECTION DATE 7. LAB SAMPLE RECEIVED DATE 8. SAMPLE PREPARATION/EXTRACTION DATE 9. SAMPLE ANALYSIS DATE 10. COPY OF CHAIN-OF-CUSTODY FORM SIGNED BY THE LAB SAMPLE CUSTODIAN 11. A NARRATIVE SUMMARY OF CA OR SAMPLE PROBLEMS IS PROVIDED. |  |
| AFTER COMPLETING SECTION ONE PROCEED TO T LEVEL OF SECTION TWO (INORGANIC ANALYSES) ANALYSES). FOLLOWING COMPLETION OF THESE FOUR (DATA EVALUATION SUMMARY).  ANALYTICAL DATA VALIDATION CHECKLIST  | AND/OR SECTION THREE (ORGANIC  |
| SECTION TWOINORGANIC ANALYINCREASICAL WET C   |  |
| QA REPORTING LEVEL: I REQUIREMENTS (BATCH SPECIFIC QA) 1/   | REPORTED IN LIMITS NOT<br>NO YES NO YES REQUIRED   |
| 1. METHOD BLANKS % RECOVERY (%R) 2. MS2' OR RWSD' % RECOVERY (%R) 3. MSD' OR RWSD' OR LD' %R 4. RPD'  |  |
| COMMENTS:   |  |
| 4/ MSD = MATRIX SPIKE DUP.; 5/ RWSE   | PLES IN ANALYTICAL BATCH  = REAGENT WATER SPIKE;  = REAGENT WATER SPIKE DUP.;  = RELATIVE PERCENT DIFFERENCE |

ANALYTICAL DATA VALIDATION CHECKLIST SECTION TWO

| INORGANIC ANALYS   | SES  |  |
|--|--|--|
| QA REPORTING LEVEL: II REQUIREMENTS (BAICH SPECIFIC QA)  | REPORTED<br>NO YES                                     | IHOUS IN LIMITS NOT NO YES REQUIRED                    |
| 1. METHOD BLANKS 2. MS % RECOVERY (%R) 3. MSD OR LAB DUPLICATE % R 4. RWS % R 5. RWSD % R 6. RPDS FOR MS/MSD, SAMPLE/LD, RWS/RWSD 7. LCS** %R 8. ICVS ** %R  |  |  |
| COMMENTS:  |  |  |
|  |  |  |
| OA REPORTING LEVEL: III REQUIREMENTS (SAMPLE SPECIFIC OA) 10/  |  |  |
| 1. CALIBRATION CURVE STANDARDS 2. ICVS %R 3. CCVS'' / %R 4. LCS %R 5. METHOD BLANKS 6. ICS'2 / %R (ICP ONLY) 7. DCS'3 / %R (ICP ONLY) 8. MS %R 9. LD OR MSD %R AND RPD 10. POST DIGESTION ANALYTICAL SPIKE'4 /   |  |  |
|  |  |  |
| 5/ LD = LABORATORY DUPLICATE: 7/ RPD = 8/ LCS = LABORATORY CONTROL SAMPLE: 9/ ICVS = INITIAL CALIBRATION VERIFICATION SAMPLE SPECIFIC OA: APPLIES TO THE PROPERTY OF THE PROPE | REAGENT WA<br>= REAGENT W<br>RELATIVE F<br>N STANDARD: | ATER SPIKE:<br>VATER SPIKE DUP.;<br>PERCENT DIFFERENCE |
| 11/ CCVS = CONTINUING CALIBRATION VERIFICA<br>12/ ICS = INTERFERENCE CHECK SAMPLE; 13/ I<br>14/ POST DIGESTION ANALYTICAL SPIKE APPLIE   | TION STANDA  | ARD;   |

| ECTION THREEORGANIC ANALY  | 'SES               | · /• • • ·          |                                       |
|--|--------------------|---------------------|---------------------------------------|
| A REPORTING LEVEL: I_<br>EQUIREMENTS   | REPORTED<br>No YES | In LIMITS<br>No YES | Not<br>Required                       |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. RWS¹/ 4. RWSD²/ 5. RPD³/   |                    |                     |                                       |
| OMMENTS:   |                    |                     | · · · · · · · · · · · · · · · · · · · |
|  |                    | .,                  |                                       |
| NA REPORTING LEVEL: II<br>REQUIREMENTS<br>A. GAS CHROMATOGRAPHY (NO MASS SPEC) OR  | WET CHEMIS         | TRY PROCED          | URE                                   |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS4/ (BATCH SPECIFIC) 4. MSD5/ (BATCH SPECIFIC) 5. LD6/ (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES |                    |                     |                                       |
| B. GAS CHROMATOGRAPH/MASS SPECTROMETER   |                    |                     | <u>-</u>                              |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS (BATCH SPECIFIC) 4. MSD (BATCH SPECIFIC) 5. LD (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES       |                    |                     |                                       |
| COMMENTS:  |                    | -                   |                                       |

<sup>1/</sup> RWS = REAGENT WATER SPIKE; 2/ RWSD = REAGENT WATER SPIKE DUPLICATE; 3/ RPD = RELATIVE PERCENT DIFFERENCE; 4/ MS = MATRIX SPIKE; 5/ MSD = MATRIX SPIKE DUPLICATE; 6/ LD = LAB DUP

| ANALYTICAL DATA VALIDATION CHECKLIST SECTION FOUR   |             | Ct dra  | •                         |
|---|-------------|---|---------------------------|
| DATA EVALUATION S   | SUMMARY 17  | - Hewart Rt (                                   |                           |
| PROJECT NAME: <u>tauler Purgin Station</u> OA REPORTING LEVEL: The VALIDATION OF  | JECT NUMBER | : FS7-026                                       |                           |
| ALL QA REPORTING LEVELS (I.II.III)  SUMMARY OF CHECKLIST FINDINGS   |             | PERFORMANCE<br>ACCEPTABLE NOT<br>NO YES REQUIRE | ====1<br>ED               |
| 1. FIELD MEASUREMENTS OF PH AND SPECIFIC CONDUCTANCE ARE CONSISTENT WITH HISTORICAL DATA  2. FIELD RECORDS 3. METHODS (GEN.INFO. SECTION ONE) 4. HOLDING TIMES (MASTER SAMPLE LIST) A. EXTRACTION HOLDING TIMES B. ANALYSIS HOLDING TIMES 5. DETECTION LIMITS (SECTION ONE) 6. BLANKS (SECTIONS TWO OR THREE) A. EQUIPMENT RINSATE BLANKS B. FIELD BLANKS C. TRIP BLANKS D. LABORATORY BLANKS 7. FIELD REPLICATES 8. FIELD SPLITS 9. GEOPHYSICAL COMPARISONS A. CATION VS ANION B. TDS VS SPEC. CONDUCTANCE C. PH VS ALK/ACIDITY D. OTHER 10. METALS QA DATA (SECTION TWO) 11. INORGANIC WET CHEMISTRY (SEC. TWO) 12. ORGANIC QA DATA-GC (SECTION THREE-A) 13. ORGANIC WET CHEMISTRY (SEC. THREE-B) |             |   |                           |
| AFTER COMPLETING THIS SECTION GO TO SECTION COMMENTS:   | ON FIVE,    |   |                           |
|   |             | -   |                           |
|   |             |   | Harristan of the Miller R |
|   |             |   |                           |
|   |             |   |                           |
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| ANALYTIC<br>SECTION | AL DATA VALIDATION CHECKLIST   |
|---------------------|--|
|                     | DATA VALIDATION CODING Ft. Stewat RF1                                  |
| PROJEC<br>QA REP    | ORTING LEVEL: # VAUIDATION DATE: 11 Jan 94                             |
|                     | FIER CODES ASSIGNED TO DATA: R. U. J. U/J. B. NO FLAG                  |
| Z. IDENT            | IFICATION OF SAMPLES AND PARAMETERS WITH CODES:  SAMPLE ID  PARAMETERS |
| R CODE              |  |
| B CODE              |  |
| U CODE              |  |
| J CODE              |  |
| U/J<br>CCDE         |  |
| EXPLANAT            | ION:Oll Acophable  |
|                     |  |
|                     |  |
| VALIDATI(           | ON PERFORMED BY: FRANZ FROESICHER  SIGNED:                             |
|                     | DATE: 11 Jon 94  |

| Ft. Stewart RF1 DATA VALIDATION CHECK   | KLIST   |
|---|---|
| SAMPLE IDENTIFICATION: FST-037 SRI- 9-93  | ALIDATION DATE: 4 Oct 93<br>582, S83 Pup, 183     |
| SAMPLING TEAM: S. Smith, D. Cermsdon, O. ANALYZING LABORATORY: Corr Jaboratore ANALYSES PERFORMED: 8015 624/8240 39 TCLP 1311, TCLP 52 components SAMPLE MATRIX: non aqueous (Soil) QA REPORTING LEVEL: T   | Fo Rouse, H. Fulder<br>50, 150,1/9040/9045        |
| FIELD DATA PACKAGE DOCU   | PERFORMANCE                                       |
| FIELD SAMPLING LOGS: 1/   | REPORTED ACCEPTABLE NOT<br>NO YES NO YES REQUIRES |
| 1. SAMPLING DATES NOTED 2. SAMPLING TEAM INDICATED 3. SAMPLE IDENTIFICATION TRACEABLE TO LOCATION COLLECTED 4. SAMPLE LOCATION 5. SAMPLE DEPTH FOR SOILS 6. COLLECTION TECHNIQUE (BAILER, PUMP ETC 7. FIELD SAMPLE PREPARATION TECHNIQUES 8. SAMPLE TYPE (GRAB, COMPOSITE) 9. SAMPLE CONTAINER TYPE 10. PRESERVATION METHODS 11. CHAIN OF CUSTODY FORM COMPLETED 12. REQUIRED ANALYTICAL METHODS REQUESTED 13. FIELD (WATER AND SOIL) SAMPLE LOGS COMPLETED PROPERLY AND SIGNED 14. NUMBER AND TYPE OF FIELD QC SAMPLES COLLECTED (BLANKS, REPLICATES, SPLITS, ETC.) 15. FIELD EQUIPMENT CALIBRATION 16. FIELD EQUIPMENT CALIBRATION 17. SAMPLE SHIPPING 18. LABORATORY TASK ORDER  1 FIELD SAMPLING LOGS = WATER AND/OR SOIL/COMMENTS: |   |

| ANALYTICAL DATA PACKAGE   | OCUMENTATION  |
|---|---|
| ·   | TION  |
| ALL QA REPORTING LEVELS   | PERFORMANCE REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRED  |
| 1. SAMPLE RESULTS 2. PARAMETERS ANALYZED 3. METHOD OF ANALYSIS 4. DETECTION LIMITS OF ANALYSIS 5. MASTER TRACKING LIST 6. SAMPLE COLLECTION DATE 7. LAB SAMPLE RECEIVED DATE 8. SAMPLE PREPARATION/EXTRACTION DATE 9. SAMPLE ANALYSIS DATE 10. COPY OF CHAIN-OF-CUSTODY FORM SIGNED BY THE LAB SAMPLE CUSTODIAN 11. A NARRATIVE SUMMARY OF CA OR SAMPLE PROBLEMS IS PROVIDED. |   |
| AFTER COMPLETING SECTION ONE PROCEED TO TLEVEL OF SECTION TWO (INORGANIC ANALYSES) ANALYSES). FOLLOWING COMPLETION OF THESE FOUR (DATA EVALUATION SUMMARY).   | AND/OR SECTION THREE (ORGANIC   |
| ANALYTICAL DATA VALIDATION CHECKLIST SECTION TWO INORGANIC ANALY METALS AND CLASSICAL WET   |   |
| QA REPORTING LEVEL: I REQUIREMENTS (BATCH SPECIFIC QA) 1/   | REPORTED IN LIMITS NOT NO YES NO YES REQUIRED   |
| 1. METHOD BLANKS % RECOVERY (%R) 2. MS2' OR RWSD5' OR LD6' %R 4. RPD7'  |   |
| COMMENTS:   |   |
| 4/ MSD = MATRIX SPIKE DUP.; 5/ RWS  | MPLES IN ANALYTICAL BATCH  = REAGENT WATER SPIKE;  D = REAGENT WATER SPIKE DUP.;  = RELATIVE PERCENT DIFFERENCE |

ANALYTICAL DATA VALIDATION CHECKLIST SECTION TWO

| INORGANIC ANALYS   | SES  |   |
|--|--|---|
| METALS AND CLASSICAL WET CH  | EMISTRY ME   | THODS   |
| OA REPORTING LEVEL: II REQUIREMENTS (BATCH SPECIFIC OA)'   | REPORTED<br>No YES   | IN LIMITS NOT<br>NO YES REQUIRED                            |
| 1. METHOD BLANKS 2. MS % RECOVERY (%R) 3. MSD OR LAB DUPLICATE % R 4. RWS % R 5. RWSD % R 6. RPOS FOR MS/MSD, SAMPLE/LD, RWS/RWSD 7. LCS#/ %R 8. ICVS #/ %R  |  |   |
| COMMENTS:  |  |   |
|  |  |   |
| QA REPORTING LEVEL: III<br>REQUIREMENTS (SAMPLE SPECIETO QA) 10/   |  |   |
| 1. CALIBRATION CURVE STANDARDS 2. ICVS %R 3. CCVS''/ %R 4. LCS %R 5. METHOD BLANKS 6. ICS'2/ %R (ICP ONLY) 7. DCS'3/ %R (ICP ONLY) 8. MS %R 9. LD OR MSD %R AND RPD 10. POST DIGESTION ANALYTICAL SPIKE'4/   |  |   |
| COMMENTS:  |  |   |
|  |  |   |
|  |  |   |
| 2/ BATCH SPECIFIC QA: APPLIES TO ANY SAMP 2/ MS = MATRIX SPIKE; 3/ RWS = 4/ MSD = MATRIX SPIKE DUP.; 5/ RWSD 6/ LD = LABORATORY DUPLICATE; 7/ RPD = 8/ LCS = LABORATORY CONTROL SAMPLE; 8/ ICVS = INITIAL CALIBRATION VERIFICATION 1/ CCVS = CONTINUING CALIBRATION VERIFICATION 2/ ICS = INTERFERENCE CHECK SAMPLE; 13/ ICS = INTERFERENCE CHECK SAMPLE | REAGENT WARE RELATIVE FOR STANDARD SPECIFIC STANDARD STANDARD STANDARD STANDARD STANDARD SPECIFIC STANDARD STAN | ATER SPIKE: WATER SPIKE DUP.; PERCENT DIFFERENCE ; SAMPLES. |

ANALYTICAL DATA VALIDATION CHECKLIST SECTION THREE \_\_\_\_ORGANIC ANALYSES\_\_\_\_ QA REPORTING LEVEL: I\_ REPORTED IN LIMITS NOT REQUIREMENTS\_\_\_\_\_ NO YES NO YES REQUIRED 1. WATER BLANKS 2. EXTRACTION BLANKS 3. RWS1/ 4. RWSD2/ 5. RPD3/ COMMENTS: \_\_ QA REPORTING LEVEL: II REQUIREMENTS A. GAS CHROMATOGRAPHY (NO MASS SPEC) OR WET CHEMISTRY PROCEDURE WATER BLANKS 2. EXTRACTION BLANKS 3. MS4/ (BATCH SPECIFIC) 4. MSD5/ (BATCH SPECIFIC) 5. LDG/ (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 110. SURROGATE SPIKES B. GAS CHROMATOGRAPHIMASS SPECTROMETER 1. WATER BLANKS 2. EXTRACTION BLANKS MS (BATCH SPECIFIC)MSD (BATCH SPECIFIC) 5. LD (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES COMMENTS:

<sup>.1/</sup> RWS = REAGENT WATER SPIKE; 2/ RWSD = REAGENT WATER SPIKE DUPLICATE;

<sup>3/</sup> RPD = RELATIVE PERCENT DIFFERENCE; 4/ MS = MATRIX SPIKE; 5/ MSD = MATRIX SPIKE DUPLICATE; 6/ LD = LAB DUP

ANALYTICAL DATA VALIDATION CHECKLIST SECTION FOUR \_\_\_\_DATA EVALUATION SUMMARY\_ PROJECT NAME: FST 25 motor Posls PROJECT NUMBER: FS OA REPORTING LEVEL: TE VALIDATION DATE: L'ON ALL QA REPORTING LEVELS (I,II,III) PERFORMANCE REPORTED ACCEPTABLE NOT SUMMARY OF CHECKLIST FINDINGS NO YES NO YES REQUIRED 1. FIELD MEASUREMENTS OF PH AND SPECIFIC CONDUCTANCE ARE CONSISTENT WITH HISTORICAL DATA 2. FIELD RECORDS 3. METHODS (GEN.INFO. SECTION ONE) 4. HOLDING TIMES (MASTER SAMPLE LIST) A. EXTRACTION HOLDING TIMES B. ANALYSIS HOLDING TIMES 5. DETECTION LIMITS (SECTION ONE)
6. BLANKS (SECTIONS TWO OR THREE) A. EQUIPMENT RINSATE BLANKS B. FIELD BLANKS C. TRIP BLANKS D. LABORATORY BLANKS 7. FIELD REPLICATES 8. FIELD SPLITS 9. GEOPHYSICAL COMPARISONS A. CATION VS ANION B. TDS VS SPEC. CONDUCTANCE C. PH VS ALK/ACIDITY D. OTHER 10. METALS QA DATA (SECTION TWO) 11. INORGANIC WET CHEMISTRY (SEC. TWO) 12. ORGANIC GA DATA-GC (SECTION THREE-A) 13. ORGANIC WET CHEMISTRY (SEC. THREE-A)
14. ORGANIC QA DATA-GC/MS (SEC. THREE-B) AFTER COMPLETING THIS SECTION GO TO SECTION FIVE. COMMENTS:

| ANALYTICAL DATA VALIDAT<br>SECTION FIVE  |   |
|--|---|
| PROJECT NAME: 25 Wet OA REPORTING LEVEL: | DATA VALIDATION CODING                      |
| 1. QUALIFIER CODES ASSI                  | GNED TO DATA: R, U, J. U/J, B, NO FLAG      |
| JACIFE III                               | MPLES AND PARAMETERS WITH CODES: PARAMETERS |
| R CODE                                   |   |
| B CODE                                   |   |
| U CODE                                   |   |
| J CODE                                   |   |
| U/J<br>CCDE                              |   |
| EXPLANATION:                             | acceptable                                  |
|  |   |
| VALIDATION PERFORMED BY: SIGNED: DATE:   | 1 Od s                                      |

DATA VALIDATION CHECKLIST SECTION ONE PROJECT NAME: PROJECT NUMBER:\_\_\_ SAMPLING DATE: 24 26 Que 92 VALIDATION DATE: \_ SAMPLE IDENTIFICATION: PS 078 -8-83, 582, 581 Dup SAMPLING TEAM: J. Snute, Des. Comisson ANALYZING LABORATORY: Civ ANALYSES PERFORMED: 8015, 3550 Talp 51 comp SAMPLE MATRIX: \_\_ / QA REPORTING LEVEL: FIELD DATA PACKAGE DOCUMENTATION PERFORMANCE REPORTED ACCEPTABLE NOT FIELD SAMPLING LOGS: 1/ NO YES YES REQUIRED 1. SAMPLING DATES NOTED 2. SAMPLING TEAM INDICATED 3. SAMPLE IDENTIFICATION TRACEABLE TO LOCATION COLLECTED 4. SAMPLE LOCATION 5. SAMPLE DEPTH FOR SOILS 6. COLLECTION TECHNIQUE (BAILER, PUMP ETC) 7. FIELD SAMPLE PREPARATION TECHNIQUES 8. SAMPLE TYPE (GRAB, COMPOSITE) 9. SAMPLE CONTAINER TYPE 10. PRESERVATION METHODS 11. CHAIN OF CUSTODY FORM COMPLETED 12. REQUIRED ANALYTICAL METHODS REQUESTED 13. FIELD (WATER AND SOIL) SAMPLE LOGS COMPLETED PROPERLY AND SIGNED 14. NUMBER AND TYPE OF FIELD QC SAMPLES COLLECTED (BLANKS, REPLICATES, SPLITS, ETC.) 15. FIELD EQUIPMENT CALIBRATION 16. FIELD EQUIPMENT DECONTAMINATION 17. SAMPLE SHIPPING 18. LABORATORY TASK ORDER 1/ FIELD SAMPLING LOGS = WATER AND/OR SOIL/SEDIMENT SAMPLING LOGS COMMENTS:\_\_\_

| ANALYTICAL DATA PACKAGE   | POCUMENTATION   |
|---|---|
| GENERAL INFORMA   | TION  |
| ALL QA REPORTING LEVELS   | PERFORMANCE REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRED  |
| 1. Sample results 2. Parameters analyzed 3. Method of analysis 4. Detection limits of analysis 5. Master tracking list 6. Sample collection date 7. Lab sample received date 8. Sample preparation/extraction date 9. Sample analysis date 10. Copy of Chain-of-Custody form signed by the lab sample custodian 11. A narrative summary of QA or sample problems is provided. |   |
| AFTER COMPLETING SECTION ONE PROCEED TO THE LEVEL OF SECTION TWO (INORGANIC ANALYSES) ANALYSES). FOLLOWING COMPLETION OF THESE FOUR (DATA EVALUATION SUMMARY).  ANALYTICAL DATA VALIDATION CHECKLIST SECTION TWO  | AND/OR SECTION THREE (ORGANIC<br>E SECTIONS PROCEED TO SECTION  |
| INORGANIC ANALY<br>METALS AND CLASSICAL WET (   |   |
| QA REPORTING LEVEL: I<br>REQUIREMENTS (BATCH SPECIFIC QA) 1/  | REPORTED IN LIMITS NOT<br>NO YES NO YES REQUIRED  |
| 1. METHOD BLANKS % RECOVERY (%R) 2. MS2' OR RWSD5' OR LD6' %R 4. RPD7'  |   |
| COMMENTS:   |   |
| 4/ MSD = MATRIX SPIKE DUP.; 5/ RWS  | MPLES IN ANALYTICAL BATCH  = REAGENT WATER SPIKE;  D = REAGENT WATER SPIKE DUP.;  = RELATIVE PERCENT DIFFERENCE |

ANALYTICAL DATA VALIDATION CHECKLIST SECTION TWO

| THOOGAUTE  |                                   |  |
|--|-----------------------------------|--|
| INORGANIC ANALY:  METALS AND CLASSICAL WET C   | SES                               | TUODS  |
| QA REPORTING LEVEL: II REQUIREMENTS (BATCH SPECIFIC QA) 1/   | REPORTED<br>NO YES                | IN LIMITS NOT<br>NO YES REQUIRED                   |
| 1. METHOD BLANKS 2. MS % RECOVERY (%R) 3. MSD OR LAB DUPLICATE % R 4. RWS % R 5. RWSD % R 6. RPDs FOR MS/MSD, SAMPLE/LD, RWS/RWSD 7. LCS** %R 8. ICVS ** %R  | KIKIKK                            |  |
| COMMENTS:  | <u></u>                           |  |
|  |                                   |  |
| QA REPORTING LEVEL: III REQUIREMENTS (SAMPLE SPECIFIC QA) 10/  |                                   |  |
| 1. CALIBRATION CURVE STANDARDS 2. ICVS 7R 3. CCVS 1 / 7R 4. LCS 7R 5. METHOD BLANKS 6. ICS 2 / 7R (ICP only) 7. DCS 2 / 7R (ICP only) 8. MS 7R 9. LD OR MSD 7R AND RPD 10. POST DIGESTION ANALYTICAL SPIKE 4 /   |                                   |  |
| COMMENTS:  |                                   |  |
|  |                                   | •  |
|  |                                   |  |
| 1/ EATCH SPECIFIC QA: APPLIES TO ANY SAMP 2/ MS = MATRIX SPIKE; 3/ RWS = 4/ MSD = MATRIX SPIKE DUP.; 5/ RWSD 6/ LD = LABORATORY DUPLICATE; 7/ RPD = 8/ LCS = LABORATORY CONTROL SAMPLE; 9/ ICVS = INITIAL CALIBRATION VERIFICATIO 10/ SAMPLE SPECIFIC QA: APPLIES TO PROJECT 11/ CCVS = CONTINUING CALIBRATION VERIFICATIO | REAGENT WAR RELATIVE FOR STANDARD | ATER SPIKE: WATER SPIKE DUP.; PERCENT DIFFERENCE ; |
| 11/ CCVS = CONTINUING CALIBRATION VERIFICA 12/ ICS = INTERFERENCE CHECK SAMPLE: 13/ 14/ POST DIGESTION ANALYTICAL SPIKE APPLIE   | TION STAND                        | ARD;   |

| ANALYTICAL DATA VALIDATION CHECKLIST SECTION THREE ORGANIC AN  | ALYSES  |
|--|---|
| DA REPORTING LEVEL: I_<br>REQUIREMENTS   | REPORTED IN LIMITS NOT<br>NO YES NO YES REQUIRED  |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. RWS'' 4. RWSD2' 5. RPD3'   |   |
| COMMENTS:  |   |
| DA REPORTING LEVEL: II REQUIREMENTS A. GAS CHROMATOGRAPHY (NO MASS SPEC)   | OR WET CHEMISTRY PROCEDURE  |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS4/ (BATCH SPECIFIC) 4. MSD5/ (BATCH SPECIFIC) 5. LD6/ (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES | LANGE |
| B. GAS CHROMATOGRAPH/MASS SPECTROMETI  | <u>.</u>  |
| 1. WATER BLANKS 2. EXTRACTION BLANKS 3. MS (BATCH SPECIFIC) 4. MSD (BATCH SPECIFIC) 5. LD (OPTIONAL) 6. MS/MSD RPD OR SAMPLE/LD RPD 7. RWS 8. RWSD 9. RWS RPD 10. SURROGATE SPIKES       |   |
| COMMENTS:  |   |
|  |   |
| 1/ RWS = REAGENT WATER SPIKE; 2/ RWS<br>3/ RPD = RELATIVE PERCENT DIFFERENCE<br>5/ MSD = MATRIX SPIKE DUPLICATE; 6/  | : 4/ MS = MATRIX SPIKE:   |

| ANALYTICAL DATA VALIDATION CHECKLIST SECTION FOUR  | SUMMARY Tt. Stewart RF1                        |
|--|--|
| DATA EVALUATION S  | SUMMARY / M- School KIT                        |
| PROJECT NAME: Battery Chap PROJECT NAME: Battery Chap PROJECT VALIDATION D   | DATE: J& Sept 83                               |
| ALL QA REPORTING LEVELS (I,II,III)   | PERFORMANCE                                    |
| SUMMARY OF CHECKLIST FINDINGS  | REPORTED ACCEPTABLE NOT NO YES NO YES REQUIRED |
| 1. FIELD MEASUREMENTS OF PH AND SPECIFIC CONDUCTANCE ARE CONSISTENT WITH HISTORICAL DATA  2. FIELD RECORDS 3. METHODS (GEN.INFO. SECTION ONE) 4. HOLDING TIMES (MASTER SAMPLE LIST) A. EXTRACTION HOLDING TIMES B. ANALYSIS HOLDING TIMES 5. DETECTION LIMITS (SECTION ONE) 6. BLANKS (SECTIONS TWO OR THREE) A. EQUIPMENT RINSATE BLANKS B. FIELD BLANKS C. TRIP BLANKS D. LABORATORY BLANKS 7. FIELD REPLICATES 8. FIELD SPLITS 9. GEOPHYSICAL COMPARISONS A. CATION VS ANION B. TOS VS SPEC. CONDUCTANCE C. PH VS ALK/ACIDITY D. OTHER 10. METALS QA DATA (SECTION TWO) 11. INORGANIC WET CHEMISTRY (SEC. TWO) 12. ORGANIC GA DATA-GC (SECTION THREE-A) 13. ORGANIC WET CHEMISTRY (SEC. THREE-A) 14. ORGANIC QA DATA-GC/MS (SEC. THREE-B) |  |
| AFTER COMPLETING THIS SECTION GO TO SECTION COMMENTS:  | ON FIVE.                                       |
|  |  |
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| ANALYTICAL DATA VALIDATION FIVE                 | ON CHECKLIST  _DATA VALIDATION CODING [T] Stewart REL                             |
|---|---|
| PROJECT NAME: Battery QA REPORTING LEVEL: Y     | PROJECT NUMBER: F57-028  VALIDATION DATE: 28 Sept 93                              |
|   | NED TO DATA: R. U. J. U/J. B. NO FLAG PLES AND PARAMETERS WITH CODES:  PARAMETERS |
| R CODE  |   |
| B CODE  |   |
| U CODE  |   |
| J CODE  |   |
| U/J<br>CCDE                                     |   |
| EXPLANATION:                                    | all acceptable  |
|   |   |
| VALIDATION PERFORMED BY:_<br>SIGNED:_<br>DATE:_ | FRANZ FROELINER  28 Sept 93   |