FOSTER WHEELER ENVIRONMENTAL CORPORATION

N00296.000252
MOFFETT FIELD
SSIC NO. 5090.3

SWDIV CONTRACT NO. N44255-95-D-6030
DO NO. 0090

FINAL

SAMPLING AND ANALYSIS ADDENDUM FOR POST-CLOSURE MONITORING (SITE 1) AND GROUNDWATER MONITORING (SITE 2)

Revision 0
June 5, 2001

MOFFETT FEDERAL AIRFIELD
MOFFETT FIELD, CALIFORNIA

DCN: FWSD-RACII-01-0197

Southwest Division
Naval Facilities Engineering Command
Contracts Department
1220 Pacific Highway, Building 127, Room 112
San Diego, California 92132-5190

CONTRACT NO. N44255-95-D-6030
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FOSTER WHEELER ENVIRONMENTAL CORPORATION

June 11, 2001
FWSD-RACII-01-0197
5.0

Contracting Officer
Naval Facilities Engineering Command
Southwest Division
Attn: Ms. Regina Blair (06CA.RB)
1220 Pacific Highway
San Diego, CA 92132-5190

SUBJECT: FINAL SAMPLING AND ANALYSIS PLAN ADDENDUM FOR POST-CLOSURE MONITORING (SITE 1) AND GROUNDWATER MONITORING (SITE 2), DELIVERY ORDER 90, MOFFETT FEDERAL AIRFIELD, MOFFETT FIELD, CA

Reference: Contract N44255-95-D-6030, Environmental Remedial Action Contract For Sites in Washington, Oregon, Idaho, Montana, and Alaska

Dear Ms. Blair:

Enclosed is the Final Sampling and Analysis Plan Addendum for Post-Closure Monitoring (Site 1) and Groundwater Monitoring (Site 2) for Moffett Federal Airfield, Moffett Field, California. If you have any questions or require additional information, please contact me at (619) 471-3504.

Sincerely,

Pete Everds
Project Manager

Enclosures: Final Sampling and Analysis Plan Addendum

1230 COLUMBIA STREET, SUITE 640, SAN DIEGO, CA 92101
TEL: 619-234-8696 FAX: 619-234-8591

FOSTER WHEELER

FOSTER WHEELER ENVIRONMENTAL CORPORATION

TRANSMITTAL/DELIVERABLE RECEIPT

Contract No. N44255-95-D-6030 (RAC II)

Document Control No. 01-0197

File Code: 5.0

TO: Contracting Officer
Naval Facilities Engineering Command
Southwest Division
Mr. Richard Lovering, 02R1.RL
1220 Pacific Highway
San Diego, CA 92132-5190

DATE: 06/12/01
DO: 0090
LOCATION: Moffett Fed. Airfield

FROM: _____
Neil Hart, Program Manager

DESCRIPTION: Final Sampling and Analysis Addendum for Post-Closure Monitoring (Site 1) and Groundwater Monitoring (Site 2), 06/05/01

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FINAL SAMPLING AND ANALYSIS PLAN POST-CLOSURE MONITORING (SITE 1) AND GROUNDWATER MONITORING (SITE 2)

ORIGINAL VERSION IS NOT ON FILE

EXTENSIVE RESEARCH WAS PERFORMED BY NAVFAC SOUTHWEST TO LOCATE THE ORIGINAL VERSION. THIS PAGE HAS BEEN INSERTED AS A PLACEHOLDER AND WILL BE REPLACED SHOULD THE MISSING ITEM BE LOCATED.

QUESTIONS MAY BE DIRECTED TO:

DIANE C. SILVA
RECORDS MANAGEMENT SPECIALIST
NAVAL FACILITIES ENGINEERING COMMAND SOUTHWEST
1220 PACIFIC HIGHWAY
SAN DIEGO, CA 92132

TELEPHONE: (619) 532-3676

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ABBREVIATIONS AND ACRONYMS

BMP	Best Management Practice
CCR	Code of Regulations
CFR	Code of Federal Regulations
COC	Chain-of-Custody
DO	Delivery Order
DOT	Department of Transportation
DTSC	Department of Toxic Substances Control
EPA	U.S. Environmental Protection Agency
FSP	Field Sampling Plan
FWENC	Foster Wheeler Environmental Corporation
GW	groundwater
IT	IT Corporation
LDR	land disposal restriction
MFA	Moffett Federal Airfield
OU	Operable Unit
PCB	polychlorinated biphenyl
PPE	personal protective equipment
QAPP	Quality Assurance Project Plan
RCRA	Resource Conservation and Recovery Act
SAP	Sampling and Analysis Plan
SOP	Standard Operating Procedure
STLC	soluble threshold limit concentration
SVOC	semi-volatile organic compound
TCLP	toxicity characteristic leaching procedure
TPH	total petroleum hydrocarbon
TSDF	treatment, storage, and disposal facility
WATS	West-Side Aquifers Treatment System

1.0 INTRODUCTION

This Addendum to the Final Sampling and Analysis Plan (SAP) Post-Closure Monitoring (Site 1) and Groundwater Monitoring (Site 2) has been prepared by Foster Wheeler Environmental Corporation (FWENC) under Delivery Order (DO) No. 0090, Contract No. N44255-95-D-6030. The Final SAP was originally prepared by IT Corporation (IT) to provide specific procedures for groundwater monitoring activities of Operable Unit (OU) 1 at Moffett Federal Airfield (MFA), Moffett Field, California. The Final SAP was reviewed and approved by the Southwest Division Naval Facilities Engineering Command Quality Assurance Officer.

The Addendum provides updates to the Final SAP. Updates to the Final Field Sampling Plan (FSP) and Final Quality Assurance Project Plan (QAPP) are presented in Tables 1-2 and 2-1, respectively.

TABLES

TABLE 1-1

FIELD SAMPLING PLAN UPDATE

Final Sampling and Analysis Plan Post-Closure Monitoring (Site 1) and Groundwater Monitoring (Site 2) (IT, 2000)		
Location	**Reference**	**Change**
All Sections and Subsections	'IT'	Change to "FWENC".
Section 3.1 Site 1, Paragraph 1, Bulleted Item 1	Seven groundwater monitoring wells (W1-5, W1-8, W1-12, W1-14, W1-15, W1-16, and W1-19)	Change to "Nine groundwater monitoring wells (W1-1, W1-5, W1-8, W1-12, W1-14, W1-15, W1-16, W1-19, and W1-24[1])"
Section 3.1 Site 1, Paragraph 5	Landfill gas will be measured quarterly for monitoring of methane concentrations at the well heads of four landfill gas monitoring wells (LGMW1-1, LGMW1-2, LGMW1-3, and LGMW1-4) and 10 gas vents (GV-1 through GV-19) identified in Figure 1.	Change to "Landfill gas will be measured quarterly for monitoring of methane concentrations at the well heads of four landfill gas monitoring wells (LGMW1-1, LGMW1-2, LGMW1-3, and LGMW1-4) and 19 gas vents (GV-1 through GV-19) identified in Figure 1."
Section 3.3 Investigation-Derived Waste (IDW), Paragraph 2	The IDW will not be sampled or analyzed under the provisions of this CTO, as it will be disposed of at a groundwater West-Side Aquifers Treatment System (WATS) currently operating at MFA.	Change to "The IDW will be placed in approved containers. The containers will be properly labeled and stored in a secured storage area in accordance with the procedures outlined in the Waste Management Plan (Appendix A). The secured storage area will have a containment system. The IDW will be sampled and the appropriate waste stream will be determined. The IDW will then be transported off-site and disposed of at an approved facility."
Section 5.1.1 Groundwater Sampling Procedures	Insert the following at the beginning of the section.	Wells (i.e., W1-23) that have exhibited high turbidity measurements [>100 Nephelometric Turbidity Units (NTUs)] will be purged until the turbidity measurement is below 100 NTUs or 100 gallons of purged water has been generated. Wells historically exhibiting high turbidity measurements maybe redeveloped (surged, bailed, and then pumped) by an approved subcontractor. If any well is redeveloped, there shall be a 24-hour waiting period prior to sampling.
Section 5.1.1 Groundwater Sampling Procedures	Additional step to procedure.	12. If tubing was used for this procedure, discard tubing into appropriate waste container. If submersible pump was used, then follow decontamination procedures described in Section 5.3 of this document.

[1] Well W1-24 has not been constructed.

TABLE 1-1

FIELD SAMPLING PLAN UPDATE

Final Sampling and Analysis Plan Post-Closure Monitoring (Site 1) and Groundwater Monitoring (Site 2) (IT, 2000)		
Location	**Reference**	**Change**
Section 5.3 Decontamination Procedure, end of Paragraph 1	This procedure has been proven to be adequate for these particular sites.	Add "If dedicated sampling equipment will not be used, then the FWENC decontamination procedure, (described in Appendix B), will be followed."
Section 5.4 Sample Numbering, entire section	All	Change to "This section will be modified to read the following: All samples submitted to an analytical laboratory will be uniquely numbered according to the following format: 0090 - YYY Where, 0090, is the four-digit DO number and YYY is a sequential number for this project. The sample number will be recorded in the field logbook and on the chain-of-custody (COC) form at the time of sample collection. A complete description of the sample and sampling circumstances will be recorded in the field logbook and referenced using the unique sample identification number."
Section 5.5 Sample Labeling, Paragraph 1, Sentence 2	Non-waterproof sample labels will be covered with clear tape according to IT SOP 17.1.	Change to "Each sample label will be covered with clear tape."
Section 5.6 Sample Packaging and Shipment, Paragraph 3	Upon collection, samples will be handled according to IT SOP 2.1	Change to "Upon collection, samples will be labeled, custody seals affixed, bagged, and immediately placed in a sample cooler with bagged ice."
Section 5.7.1 Chain-of-Custody, entire section	The COC form will be completed according to the requirements of IT SOP 1.1.	Change to "The COC form will be completed according to Appendix C."
Section 5.7.2 Field Logbooks, last sentence	Groundwater and leachate sampling will be recorded on the site-specific Groundwater Monitoring Data Forms.	Change to "Groundwater and leachate sampling will be recorded on the site-specific Groundwater Monitoring Data Forms and in the field logbook.

TABLE 1-1

FIELD SAMPLING PLAN UPDATE

Final Sampling and Analysis Plan Post-Closure Monitoring (Site 1) and Groundwater Monitoring (Site 2) (IT, 2000)		
Location	**Reference**	**Change**
Table 2 Analytical References, Containers, Preservation, and Holding Time for Groundwater Samples	SVOCs container requirement stated as 1L amber glass, Teflon-lined cap	Change to " Two 1L amber glass, Teflon-lined cap"
	Pesticides/PCBs container requirement stated as 1L amber glass, Teflon-lined cap	Change to " Two 1L amber glass, Teflon-lined cap"
	TPH-extractable fuels container requirement stated as 1L amber glass, Teflon-lined cap	Change to " Two 1L amber glass, Teflon-lined cap"
	Organochlorine pesticides container requirement stated as 1L amber glass, Teflon-lined cap	Change to " Two 1L amber glass, Teflon-lined cap"
	PCBs container requirement stated as 1L amber glass, Teflon-lined cap	Change to " Two 1L amber glass, Teflon-lined cap"
	Metals (except mercury) container requirement stated as HDPE or glass, 500 mL	Change to "HDPE, 500 mL"
	Mercury EPA 7472	Omit from Table 2

Notes:

COC – chain-of-custody
DO – Delivery Order
EPA – U.S. Environmental Protection Agency
FWENC – Foster Wheeler Environmental Corporation
HDPE – high-density polyethylene
IDW – investigation-derived waste
IT – IT Corporation
NTU – nephelometric turbidity unit
PCB – polychlorinated biphenyl
SOP – Standard Operating Procedure
SVOC – semi-volatile organic compound
TPH – total petroleum hydrocarbon

TABLE 1-2

QUALITY ASSURANCE PROJECT PLAN UPDATE

Final Sampling and Analysis Plan Post-Closure Monitoring (Site 1) and Groundwater Monitoring (Site 2) (IT, 2000)		
Location	**Reference**	**Change**
All Sections and Subsections	'IT'	Change to "FWENC".
Section 2.0 Project Organization, entire section	All	Change "IT to "FWENC". FWENC Project Organization is outlined in Figure 1-1 (CQC Addendum for Sites 1 and 2)."
Section 7.1.4 Electronic Deliverables, Paragraph 1	The electronic data deliverable (EDD) will be in the IT Environmental Management System (ITEMS) Version 4.0 format delivered as ASCII text.	Change to "The electronic data deliverable (EDD) will be format as ASCII text."
Section 7.1.4 Electronic Deliverables, Paragraph 4	Upon receipt by the IT ITEMS Data Manager, electronic data will be uploaded into a temporary access database.	Change to "Upon receipt by the FWENC Data Manager, electronic data will be uploaded into a temporary access database."
Section 8.1.5 Performance Evaluation Sample Programs, Paragraph 1	The off-site laboratory will participate in the EPA PE Water Supply and Water Pollution Studies programs or equivalent programs for state certifications.	Change to "The off-site laboratory will participate in an independent PE Water Supply and Water Pollution Studies program for state certifications."

Notes:

CQC – Contractor Quality Control
EDD – electronic data deliverable
EPA – U.S. Environmental Protection Agency
FWENC - Foster Wheeler Environmental Corporation
ITEMS – IT Environmental Management System

APPENDIX A

WASTE MANAGEMENT PLAN

APPENDIX A

WASTE MANAGEMENT PLAN

This Waste Management Plan (WMP) was developed to identify necessary regulatory requirements applicable to the characterization and disposal of waste generated during project activities involving groundwater monitoring at Sites 1 and 2 at MFA, Moffett Field, California. The WMP details the waste management practices and documentation that are necessary to ensure proper waste handling, transportation, and disposal. In addition, the WMP provides guidance regarding waste minimization practices to be followed during the project to reduce the volume of waste generated, stored, and removed from the site for disposal.

The WMP addresses the following anticipated regulated activities:

- Containerization and storage of potentially non-hazardous and non-Resource Conservation and Recovery Act (RCRA) hazardous or RCRA hazardous waste material [decontamination water, groundwater well purge and development water, and (personal protective equipment (PPE)]
- Sampling and analysis of wastes (e.g., containerized water) for subsequent characterization, management, and disposal purposes, as necessary
- Preparing materials, completing documentation, and labeling waste containers for transport to an appropriate disposal facility

REGULATORY REQUIREMENTS

Project activities are expected to generate non-hazardous waste and possible non-RCRA hazardous wastes. RCRA hazardous wastes are not likely, but will be addressed in this WMP. As such, the following federal, state, and local regulations and requirements are applicable and must be complied with during implementation of planned project activities:

- California and U.S. Environmental Protection Agency (EPA) Regulations for Identification and Management of Hazardous Waste, 22 California Code of Regulations (CCR), Sections 260-299 and 40 Code of Federal Regulations (CFR), Parts 260 through 299
- Department of Transportation (DOT) Rules For Hazardous Materials Transport, 49 CFR, Parts 100 through 178
- California Hazardous Waste Management Regulations, 22 CCR, Sections 260 through 299
- Applicable MFA Approvals, Policies, and Procedures

Waste Minimization

In order to minimize the volume of waste, the following general rules will be applied:

- Contaminated materials will not be unnecessarily commingled with uncontaminated materials
- When practicable, material and equipment will be decontaminated and reused
- Volume reduction techniques will be utilized, as appropriate

PROJECT WASTE DESCRIPTIONS

The anticipated wastes associated with the planned project activities can be categorized as follows:

- Decontamination water
- Groundwater well development and purge water
- PPE

WASTE MANAGEMENT ACTIVITIES

This section describes in more detail how waste generated during investigation activities will be characterized and classified.

Waste Characterization/Classification

Unless waste materials are predetermined to be hazardous waste, 22 CCR, Section 66261, and 40 CFR, Part 261, requires a determination of whether or not the materials are a hazardous waste. Listed wastes are specifically identified in 22 CCR, Section 66261, Article 4. Where a clear hazardous waste determination cannot be made, the materials will be sampled and analyzed in accordance with federal and California Hazardous Waste Management Regulations and Solid Waste Management Regulations.

The State requirements for determining whether a waste is hazardous under the toxicity characteristic requires a soluble threshold limit concentration (STLC) leaching procedure and a totals analysis for certain inorganics and organics that is generally more conservative than the federal toxicity characteristic leaching procedure (TCLP). Therefore, some wastes may be considered hazardous wastes under California regulations and not under federal regulations. These wastes are referred to as non-RCRA wastes. The hazardous waste classification requirements apply to decontamination water generated from daily decontamination activities, and groundwater purge and development water.

Documentation of all proposed waste classifications will be provided to MFA for final waste stream characterizations. MFA personnel are responsible for making all final waste characterizations and for signing waste manifests.

Hazardous Waste Management

RCRA Subtitle C and the California Hazardous Waste Management Regulations govern hazardous waste management from the point of generation, through storage and treatment (if necessary), to its ultimate disposal. The California Department of Toxic Substances Control (DTSC) is authorized by the EPA to oversee management of the hazardous waste program in California.

Hazardous waste must comply with the following requirements:

- Any waste generated during investigation activities must be characterized to determine whether it is a hazardous waste. Analytical testing requirements are discussed in the SAP.
- Hazardous waste must be managed in accordance with 22 CCR, Section 66262, Standards Applicable to Generators of Hazardous Waste.
- Hazardous waste transported off site must be manifested in accordance with 22 CCR, Section 66262, Article 2, Manifests, and accompanied by land disposal restriction (LDR) certification notices as per 22 CCR, Section 66268.7, Waste Analysis and Recordkeeping.
- Hazardous waste must be stored in accordance with 22 CCR, Section 66265, Article 9, Use and Management of Containers.
- All containers of hazardous waste to be stored or disposed will be clearly marked with a completed hazardous waste label, indicating the starting date of accumulation, EPA identification number, EPA waste code, etc., and DOT markings (prior to transport for disposal).
- Hazardous waste must be disposed of only at a hazardous waste disposal facility permitted for the disposal of the particular type of hazardous waste generated, and approved by FWENC and the Navy.

Waste Containerization and Storage

Container selection will be performed by DOT-trained personnel based on type and quantity of waste to be generated. Containers will include DOT-specification drums and bins. It is recommended that liquids be stored in DOT 1A1-type drums.

Prior to commencing project field activities, FWENC will, with approval from MFA personnel, select and secure areas for the temporary staging and storage of waste materials and decontamination water. At this time, it is anticipated that a secure area within the fenced confines of Site 1 would be appropriate for construction of a temporary container storage area.

Waste material must be classified according to California and DOT criteria before the labels are applied. Upon classification, each container will be marked and labeled as required. Trained personnel as required by 49 CFR, Section 172, Subpart H, will conduct all DOT functions.

At the time of generation, all waste containers (including containers holding non-hazardous materials) and will be labeled, using indelible ink, with the following information:

- Source and location
- Contents and quantity of material
- Accumulation start date (the date the first drop of material was put in the container)
- Contractor phone number and contact name

Containers determined to contain hazardous waste will be immediately labeled with a completed commercial "HAZARDOUS WASTE" label, which will include the accumulation start date and other requested information.

All hazardous waste stored in containers (i.e., 55-gallon drums or roll-off bins) will be kept within a pre-designated waste accumulation area. In addition, where practicable, 55-gallon containers will be stored on wooden pallets.

Containers of hazardous waste, if present, will be inspected on a weekly basis and the inspections will be logged in a central location. Inspections will encompass evaluation for proper labeling, secure closure, the condition of each container, number of containers, and condition of the storage area. Any signs of deterioration, leaking, or dents will be noted, and containers will be immediately overpacked, if necessary.

As a FWENC Best Management Practice (BMP) and as required by MFA policy, containers of non-hazardous materials will also be labeled with respect to contents, quantity, physical state, source of origin, accumulation start date, contractor phone number and contact name.

Waste Accumulation Areas

While extracted groundwater, decontamination water and PPE associated with groundwater monitoring activities at Sites 1 and 2 at MFA is not anticipated to be hazardous, these materials should be containerized and managed as hazardous waste until the results of analytical testing are received and evaluated. If these wastes are confirmed to be non-hazardous, hazardous waste labels shall not be applied and the storage area need not be posted as a hazardous waste storage area. However, labels identifying the contents, source, responsible party, and contact information shall be applied to the containers; inspections shall be conducted and documented at least weekly; secondary containment shall be maintained; and emergency response equipment (e.g., spill kits and fire extinguishers) shall be maintained in the area.

Hazardous waste storage areas also require:

- A sign, with the legend "Danger Hazardous Waste Area-Unauthorized Personnel Keep Out" (written in English and Spanish), posted at each less-than-90-day-accumulation area and stockpile in sufficient numbers to be seen from any approach. The signs will be legible from a distance of at least 25 feet.
- Aisle space maintained to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless aisle space is not needed for any of these purposes.
- Secondary containment adequate to contain the contents of the containers plus ten percent in addition to reasonable expected precipitation (this is a FWENC BMP).
- The following emergency equipment be located or available to personnel during active waste management activities at each accumulation area:
    - A device, such as a telephone or a hand-held two-way radio, capable of summoning emergency assistance.
    - Portable fire extinguishers, fire control equipment, spill control equipment, and decontamination equipment.
    - A spill response kit for minor spills. The kit should include a shovel, adsorbent pads and/or "kitty litter," and a collection container.

Transportation

Transportation documentation will comply with DOT regulations, 49 CFR, Parts 100 through 178, and will be prepared by appropriately trained FWENC personnel.

Containers will be marked, labeled, and/or placarded prior to off-site transport. Treatment, storage, and disposal facility (TSDF) waste profile sheets, LDR notifications, waste manifests, and shipping documents will be prepared by FWENC personnel for the appropriate MFA facility officials to review and sign.

Waste transporters used will be registered with the California DTSC and approved in accordance with FWENC's procedures for TSDF and transporter approvals.

Waste Disposal

Decontamination water, groundwater monitoring well purge/development water, and used PPE will be managed in accordance with the regulations and transported for appropriate recycling or disposal. Each waste stream requiring off-site disposal will be characterized using groundwater analytical results or will be sampled and analyzed to ensure that it is properly characterized and profiled and meets the waste acceptance criteria and packaging requirements for the proposed TSDF prior to transport. The following FWENC Safety and Quality personnel in Santa Ana are to be contacted concerning appropriate disposal facilities and transporters for the respective wastes:

- Craig O'Rourke (949) 756-7511 Program Compliance Manager
- Greta Neuman (949) 756-7552 Compliance Coordinator

Decontamination water and groundwater monitoring well development/purge water, if contaminated, will be disposed of off site at an appropriate disposal or recycling facility. However, waste water characterized as "clean" (i.e., all constituents are non-detectable), based on analytical data, may be considered for on-site disposal at WATS, with pre-approval from MFA and in accordance with applicable permit requirements.

Hazardous Waste Manifests and LDR Certification

All hazardous waste transported from the site will be accompanied by a Hazardous Waste Manifest. MFA personnel will be responsible for reviewing and signing all waste documentation, including waste profiles, manifests, and LDR notifications (manifest packages).

An LDR form will accompany the shipment of hazardous waste to the TSDF. The TSDF must be notified prior to sending the waste. The following items must accompany the notification and are included in one of the following facility specific forms:

- EPA ID number
- Manifest number
- Waste analysis data
- If the waste is also restricted, corresponding concentration-based or technology-based treatment standards or prohibition

APPENDIX B

DECONTAMINATION PROCEDURES

APPENDIX B

DECONTAMINATION PROCEDURES

Decontamination of nondisposable sampling equipment will be performed to prevent the introduction of extraneous material into samples and to prevent cross-contamination between samples. All sampling equipment will be decontaminated by steam cleaning or by washing with a nonphosphate detergent, such as Liquinox™, or equivalent. Decontamination water will be handled under Section 3.3 of the existing SAP (IT, 2000).

The following steps will be followed for decontamination of nondisposable sample equipment:

1. **Wash with nonphosphate detergent and water solution**—This step will remove all visible contamination from the equipment. Using a 5-gallon bucket [or 55-gallon poly drum for groundwater (GW) pumps and tubing] approximately 75 percent full of solution and a long-handled brush is suggested for this step. Dilute nonphosphate detergent as directed by the manufacturer.
2. **Rinse with potable water**—This step will rinse all the detergent solution away from equipment. Using a 5-gallon bucket (or 55-gallon poly drum for GW pumps and tubing) approximately 75 percent full of solution and a long-handled brush is suggested for this step. Periodic changing of this water is required.
3. **Rinse with deionized/laboratory reagent-grade water**—This step will rinse any detergent solution and potable water residues. Rinsing is most effective when water is applied using a stainless steel Hudson-type sprayer or Nalgene® squeeze bottle while holding equipment over a 5-gallon bucket. For GW pumps and tubing, running the pump with attached tubing in a 55-gallon poly drum 75 percent full of deionized water.
4. **Rinse with deionized/laboratory reagent-grade water**—This step will be a final rinse to remove any contaminants. Rinsing is most effective when water is applied using a stainless steel Hudson-type sprayer or Nalgene® squeeze bottle while holding equipment over a 5-gallon bucket. For GW pumps and tubing, running the pump with attached tubing in a 55-gallon poly drum 75 percent full of deionized water.

APPENDIX C

CHAIN-OF-CUSTODY PROCEDURES

APPENDIX C

CHAIN-OF-CUSTODY PROCEDURES

The following will be recorded on the COC form:

- Project name
- Project location
- Project number (FWENC)
- Purchase order number
- Sample ID
- Sampler name
- Sampler signature
- Project contact
- Airbill number (if applicable)
- Date (of sample collection)
- Time (of sample collection to the nearest minute, 24-hour clock)
- Sample type (matrix)
- Turn-around-time
- Sample location codes:

  Examples:

groundwater wells:	Well ID No.
stockpile samples:	*Site name*-STOCKPILE
wastewater tank samples:	*Site name*-TANK
wastewater drum samples:	*Site name*-DRUM

- Sample depth in feet (start, end)
- QC type:

  REG: regular sample

  FD: field duplicate

- Laboratory name
- Number of sample containers
- Analyses required
- Comments
  - MS/MSD samples
  - Observations specific to sample
- Transfer signature (to relinquish samples)
  - The sampler will be the first person to relinquish sample possession
- Courier/laboratory representative signature (for commercial carrier, record airbill number here)
- Date/time (of custody transfer)
- Laboratory instruction
- Data package requirement (Level III/C or IV/D)