Appendix B: Contractor Addendum

Note to Contractors and those using this Addendum form:

1. **Once the form is completed, DELETE THIS SECTION**
2. Instructions for filling in this Addendum are in red as are suggestions for what needs to go in the document. Tables and other figures that can be used as part of the Addendum---just adjusted for the project will be in black**. Anything in red should be deleted out of the QAPP Addendum.**
3. In each Section there is generic information or instructions, however, please refer to the SC DHEC QAPP Guide available at http://www.scdhec.gov/environment/envserv/qaguidance.htm
4. This is considered an ADDENDUM to the UST Programmatic QAPP. While the Programmatic QAPP gives specific direction, this addendum will fill in site specific/lab specific/contractor specific information. Please refer to each section of the UST QAPP as this Addendum is prepared. Realize that this Addendum is supposed to be site specific.
5. For help with the parts of the QAPP call the SC DHEC Office of Quality Assurance (OQA) at 803-896-0862 or 0981. For help with specific UST issues please contact your UST Project Manager.
6. Please understand that you are responsible for anything in the programmatic QAPP as well as what is in the Addendum you produce for the project.

Section A: Project Management

A1 Title and Approval Page

Quality Assurance Project Plan
Addendum to the SC DHEC UST Programmatic QAPP
For

Name of Project/Site and UST Permit Number

Site Location (Address, City, State)

Prepared by:_____

Affiliation and Contact Information

Date:_____

Day/Month/Year

Name of Certified Contractor

Approvals

Name _____ Date_____
SC DHEC Project Manager Signature

Name _____ Date_____
Contractor QA Manager Signature

Name _____ Date_____
Site Rehabilitation Contractor Signature

Name _____Date_____
Laboratory Director Signature

A2 Table of Contents

A3 Distribution List

The distribution list is a list of individuals either directly participating in the Project or overseeing the project. Those listed in the distribution list in the Master QAPP are to receive a copy of the QAPP. Those listed below will receive a copy of the Master QAPP and the Site-Specific QAPP Addendum as well as any updates/revisions. Please notice that some DHEC titles are already listed below and along with their addresses. The writer of the QAPP Addendum is to identify the SCDHEC Technical Project that is assigned to this specific project in the table below. Additional rows are left for other personnel who are essential to this project either from SC DHEC, or subcontractors.

Name	Title	Organization/Address	Telephone Number	Fax Number	Email Address
	SC DHEC Technical Project Manager	SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-896-6241	803-896-6245	
	Site Rehabilitation Contractor				
	Field Manager				
	Well Services/Driller				
	Laboratory Director				

Table 1A Addendum Distribution List

A4 Project Organization

The Master UST QAPP has specific roles and the responsibilities of each role outlined in Section A4, however, personnel assigned to these roles must be identified in this QAPP Addendum. Anyone performing essential functions in this project (not given in the Master UST QAPP) should be given below and their duties outlined. The Table below may be used to do this or the Roles may simply be listed as they are in the Master UST QAPP and this Table can be deleted. If there are no other roles to be given, delete the Table below.

Role from the UST Master QAPP	Name of person in this Role for this Project	Organization/Address	Telephone Number	Fax Number	Email Address
Project Manager		SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-896-6241	803-896-6245	
Site Rehabilitation Contractor					
Field Manager					
Analytical Laboratory Director					
Soil Boring and Monitoring Well Driller					
Project Verifier					

Table 2A Addendum Role Identification and Contact Information

An organization chart is necessary for every project. The organization chart below is an example, but it can be used to construct the organizational chart for this project.

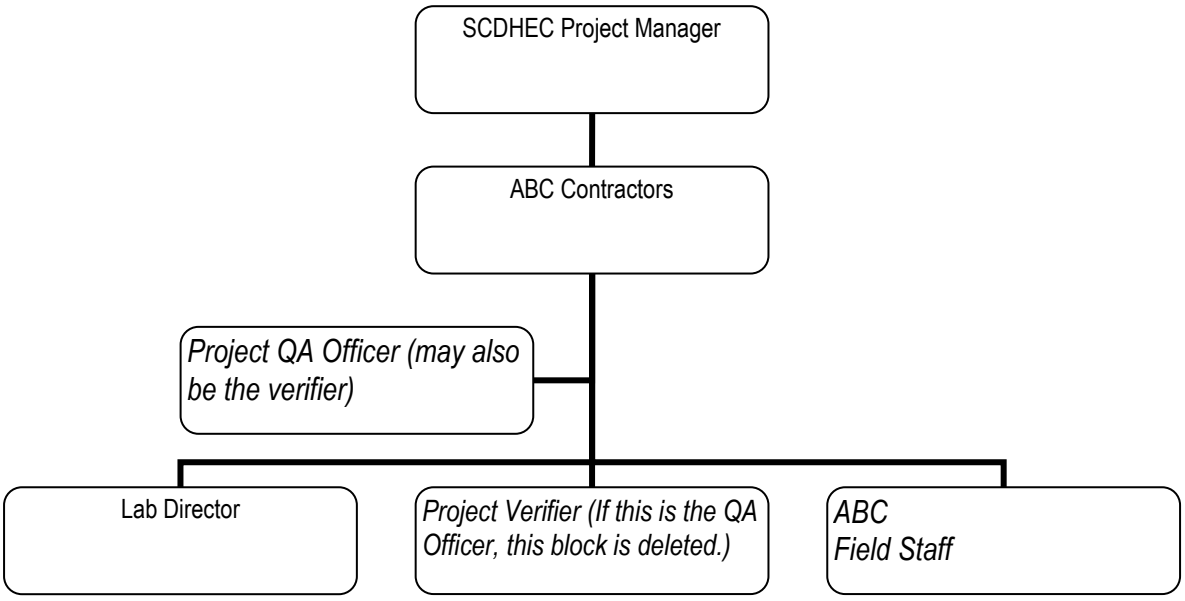

Figure 1A Organizational Chart

A5 Problem Definition/Background

Discuss the background (as much as is known) of the site and appropriate historical information, and why this site is being assessed.

Please answer the following: Does this project fall under UST or Brownfields area?

A6 Project/Task Description

1. ***Summarize what is known about the work to be done. This can be a short sentence indicating what the Scope of this project is (see Master QAPP Section A6).***

2. ***The work will begin within _____ after cost approval and sampling should be complete by_____.***

3. ***Are there are time or resource constraints? Include those factors that may interfere with the tentative schedule.***

A7 Data Quality Objectives (DQOs) and Data Quality Indicators (DQIs)

The Addendum will complete what is given in the Programmatic QAPP Guide on the DOQ Process. Specifically this is Step 4: Defining the Study boundary—which includes a map of the property (Attachment) to show what the extent of the study will cover.

Detail the geographical area that is to be part of the project. Maps should be included to show not only the topography and the geographical area of the State, but also to show more detail of the site itself including property lines.

A8 Training and Certificates

It is necessary to state which individuals must have training/licensing in order to do a job on this project, who they are and when they received the training or the license. Examples would be well drillers that must be licensed in SC. This information goes in the table. Below the table you must indicate who is responsible for ensuring that personnel involved in the project have the proper training and where the records of the training are kept. The Labs that will be used for this project must be certified by the SCDHEC Office of Environmental Certification for every analysis that they will perform. The information for the Laboratories and their SC DHEC Certificate number must be included in this addendum.

Required training and licenses:

Title/Job	Name	Training Required	Date training received	Type of License	License Number

Table 3A Required Training and Licenses

_____(Name)_____ of _____(Company)_____ is responsible to ensuring that personnel participating in this project receive the proper training. All training records will be stored in the following location:_____

It is understood that training records will be produced if requested by SC DHEC.

The Following Laboratory(ies) will be used for this Project:
All labs being used (including ones subcontracted) must be included.

Commercial Lab(s)

Please give the information as listed below for each Laboratory that is being used for sample analysis.

Full Name of the Laboratory_____
Name of Lab Director_____
SC DHEC Certification Number_____
Parameters this Lab will analyze for this project:

Full Name of the Laboratory_____
Name of Lab Director_____
SC DHEC Certification Number_____
Parameters this Lab will analyze for this project:

(If more than 2 labs are being used, copy the above 4 lines and insert into this document)

Please note: SC DHEC may require that the contractor submit some or all of the Laboratory's SOPs as part of this QAPP.

A9 Documents and Records

Personnel will receive the most current version of the QAPP Addendum via:
(Check all that apply)

____US Mail ____Courier ____Hand delivered

Other (please specify):_____

This section requires a list of the records—pertinent to the project- produced during the project by the Contractor, Laboratories, and Subcontractors. Please note that the Programmatic QAPP requires records to be kept at least 5 years.

Record	Produced By	Hardcopy/ Electronic	Storage Location For how long?	Archival

Record	Produced By	Hardcopy/ Electronic	Storage Location For how long?	Archival

Table 4A Record Identification, Storage, and Disposal

Section B Measurement/Data Acquisition

B1 Sampling Process/Experimental Design

In the table below list the schedule for project activities. This would include drilling the wells, developing the wells, collecting samples and so on.

Item	Start Date	End Date	Comments

Table 5A Sampling Activities

B2 Sampling Methods

Please note: The contractor must follow sampling protocols as given in the UST QAPP.

***Estimate* the number of samples of each matrix that are expected to be collected:**

Soil _____

Ground Water from monitoring wells _____

From Drinking/Irrigation water wells _____

From surface water features _____

Total number of Water samples _____

In this next part indicate if the samples will be homogenized and split and describe the way this will be done.

The samples will be (check as many as apply): ____Homogenized ____Split

If any of the above are circled please indicate how will it be done and the equipment needed.

Will Sampling Equipment have to be cleaned and decontaminated or is everything disposable?

If sampling equipment must be cleaned please give a detailed description of how this is done and the disposal of by-products from the cleaning and decontamination.

Identify any equipment and support facilities needed. This may include such things as Fed-ex to ship the samples, a Geoprobe, field analysis done by another contractor (who must be certified), and electricity to run sampling equipment.

Address the actions to be taken when problems occur in the field, and the person responsible for taking corrective action and how the corrective action will be documented.

Failure	Response	Documentation	Individual Responsible

Table 6A Field Corrective Action

B3 Sample Handling and Custody

This section deals with how samples are physically handled. Please answer the following questions and please attach a copy of the Lab's chain of custody. If multiple labs are used along with multiple chains of custodies, all of them must be attached. The chain of custody procedure should describe how the sample's location is accounted from collection to disposal (for each lab). If the laboratory has a SOP for this, it may be attached as long as sampling personnel understand that they must adhere to it. Please note that holding times and preservation for samples must adhere to the requirements in the Master UST QAPP. Preservation and sample handling details must be given in either a case narrative or on the Chain of Custody.

1. ***How will the samples get from the Site to the Lab to ensure holding requirements are met?***

2. ***How will the contactors cool the samples and keep the samples cool?***

3. ***How will the lab determine the temperature of the samples upon receipt? Will they be using a temperature blank?***

4. ***Where will the samples be stored in the Lab once they are received?***

5. ***Describe the chain of custody procedure and attach a copy of each chain of custody that will be used. If a Chain of Custody SOP exists from the Lab and the Contractor is willing to adhere to it, then this may be attached.***

B4 Analytical Methods

This section will give specific information about exactly which Methods will be used for analysis. The allowable methods are given in the Programmatic QAPP, but often there are choices so the Contractor's addendum must list the exact methods that will be used. Although the SOPs of the lab are reviewed during their Laboratory Certification Process, UST or the OQA may require submission of some or all SOPs. SOPs may be identified by the full nomenclature from the lab or by abbreviation as long as the abbreviations are explained.

The tables below may be used for the first requirement.

1. ***Identify the SOPs which will be used to analyze the samples, the method which the SOP references and the equipment or instrumentation that is needed:***

Parameter	SOP ID*	Method Referenced	Equipment	Comments

Table 7A Analytical SOPs and Referenced Methods

- **This can be a full name of a SOP, an abbreviation, or a number. In the latter two cases, the abbreviation or number must be associated with the full name of the SOP. See also Table 8A SOP Abbreviation Key.**

Abbreviation	Lab Identification of this SOP	Full Name of the SOP

Table 8A SOP Abbreviation Key

Item 2 may be in an attachment from the Lab from their QA/QC plan or it may be a table (see Table 8A) or a combination because the Lab has a QA/QC plan that states what is done, but field personnel do not.

2. Identify procedures to follow when failures occur, identify the individual responsible for corrective action and appropriate documentation:

Failure	Response	Documented Where?	Individual Responsible

Table 9A Corrective Action Procedures

3. Identify sample disposal procedures.

Analysis	Matrix	Schedule for disposal	Method for disposal	Comments

Table 10A Sample Disposal

4. Provide SOPs for the Kerr Method or the Ferrous Iron Method if these are parameters for this study. This can be attached or written here. If attached please note that it is an attachment and where it is located (if applicable).

B5 Quality Control Requirements:

All QC will follow the requirements laid out in Section B5 of the UST Programmatic QAPP.

B6 Field Instrument and Equipment Testing, Inspection and Maintenance

1. Identify all field and laboratory equipment needing periodic maintenance, the schedule for this, and the person responsible. Not the availability and location of spare parts.

Instrument	Serial Number	Type of Maintenance	Frequency	Parts needed/Location	Person responsible

Table 11A Instrument and Equipment Maintenance

2. Identify the testing criteria for each lab or field instrument that is used to ensure the equipment is performing properly. Indicate how deficiencies, if found, will be resolved, re-inspections performed, and effectiveness of corrective action determined and documented. Give the person responsible for this

Instrument/Equipment & Serial Number	Type of Inspection	Requirement	Individual Responsible	Resolution of Deficiencies

Table 12A Instrument and Equipment Inspection

B7 Instrument Calibration and Frequency

1. Identify equipment, tools, and instruments for field or lab work that should be calibrated and the frequency.
2. Describe how the calibrations should be performed and documented, indicating test criteria and standards or certified equipment.
3. Identify how deficiencies should be resolved and documented. Identify the person responsible for corrective action.

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action (CA)	Person Responsible for CA	SOP Reference*

Table 13A Instrument Calibration Criteria and Corrective Action

*** This can be a full name of a SOP, an abbreviation, or a number. In the latter two cases, the abbreviation or number must be associated with the full name of the SOP. See also Table 8A SOP Abbreviation Key.**

B8 Inspection/Acceptance Requirements for Supplies and Consumables

1. Identify critical supplies and consumables for field and laboratory, noting supply source, acceptance criteria, and procedures for tracking, storing and retrieving these materials.
2. Identify the individual(s) responsible for this.

Consumables are things like disposable bailers, nitrile gloves, sample containers, and so on.

Item	Vendor	Acceptance criteria	Handling/Storage Conditions	Person responsible for inspection and tracking.

Table 14A List of Consumables and Acceptance Criteria

B9 Data Acquisition Requirements (Non-Direct Measurements)

This section discusses data that was not generated by this project. This includes historical data, information Tax Maps, computer data bases, weather data from the National Weather Service, Scientific Literature, and so on. This discussion must include information about why this data is usable for this project.

1. Identify data sources, for example, computer databases or literature files, or models that should be accessed or used.
2. Describe the intended use of this information and the rationale for their selection, i.e., its relevance to project.
3. Indicate the acceptance criteria for these data sources and/or models.

Data Source	Used for	Justification for use in this project	Comments

Table 15A Non-Direct Measurements

4. Identify key resources/support facilities needed. This will probably be Non-applicable for most projects. This would be addressed if the contractor employed someone to provide data modeling, database upkeep, and so on.

B10 Data Management

1. Describe the data management scheme from field to final use and storage.

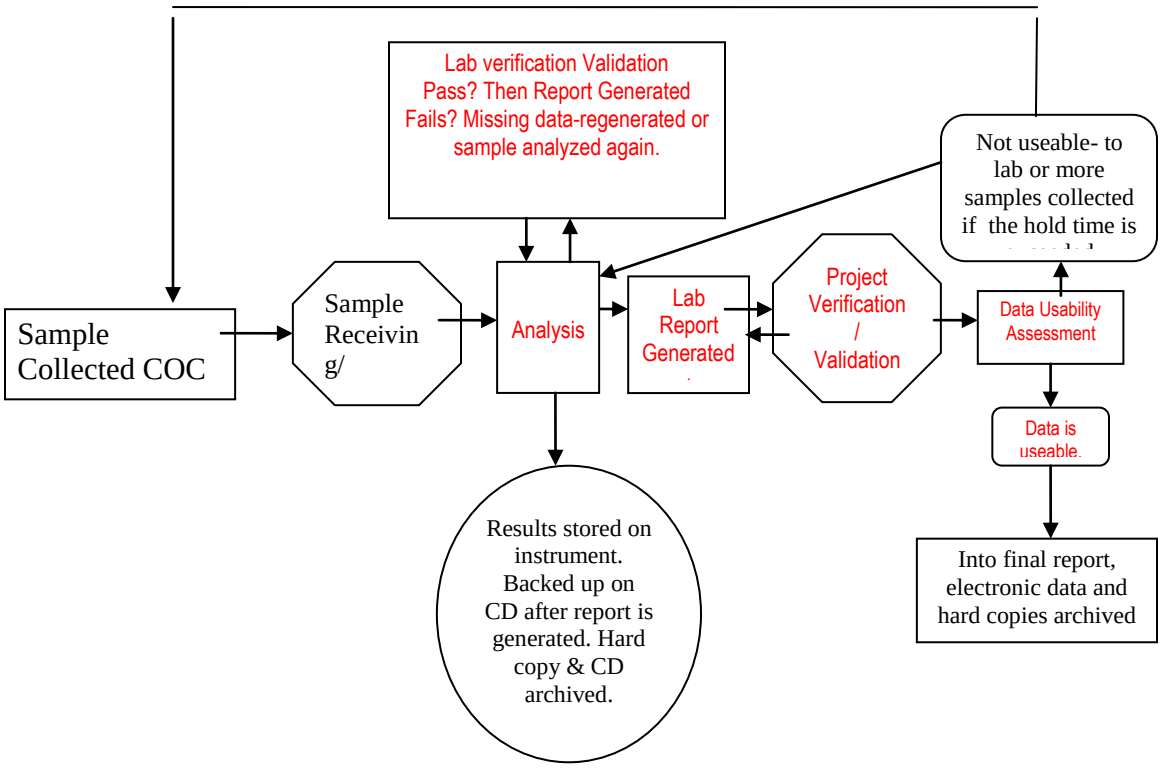

Figure 2 Example of a Data Management Scheme

A diagram, such as the one above, can be used to satisfy Item 1 or a description can be used instead.

2. How does the lab and field staff ensure that no unauthorized changes are made to the chain of custody, sampling notebooks, laboratory notebooks and computer records?
3. How does the lab ensure that there are no errors in samples records including times when sample information is compiled, data calculated and/or transmitted.

Items 2 and 3: This is a discussion of how errors will be avoided. This includes errors in the field paperwork, chain of custody and laboratory processes. Usually this is done by overview of a supervisor who looks over work or rechecks calculations. Software issues also come into play here. Is there a process to keep data from being corrupted or restoring it if the data becomes corrupted? Is there a process to avoid data loss though computer malfunctions? What about security of the data? Is the data protected from tampering? How does the Lab or contractor know that the software/hardware that is used is acceptable? In each process identify who is responsible for oversight.

4. How will the data be archived once the report is produced? How can it be retrieved? (This applies to both electronic and hard copies).

Section C Assessment and Oversight

C1 Assessment and Response Actions

1. *The Contractor is supposed to observe field personnel daily during sampling activities to ensure samples are collected and handled properly and report problems to DHEC within 24 hours. . Please state who is responsible for doing this and what observations will be made. Will this person have the authority to stop work if severe problems are seen?*
2. *The SCDHEC UST QAPP states that the Lab will receive an Offsite Technical System Audit. For this project, what assessments will be done on the Commercial Lab(s) that are being used—other than their certification audit? When or how often are these done? Who will the results be given to and who has the ability to stop work if problems are severe?*

C2 Reports to Management

See the SC DHEC UST Programmatic QAPP (UST Master QAPP).

Section D Data Validation and Usability

See the SC DHEC UST Programmatic QAPP (UST Master QAPP).