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**SITE WIDE COMPREHENSIVE ENVIRONMENTAL  
RESPONSE, COMPENSATION, AND LIABILITY  
ACT (CERCLA) QUALITY ASSURANCE PROJECT  
PLAN (SCQ)**

12/09/92

**DOE-0483-93  
DOE-FN/EPA**

*6/2*  
**LETTER**



G-000-306.35

**Department of Energy**  
**Fernald Environmental Management Project**  
P.O. Box 398705  
Cincinnati, Ohio 45239-8705  
(513) 738-6357

**3947**

DEC 09 1992  
DOE-0483-93

Mr. James A. Saric, Remedial Project Director  
U.S. Environmental Protection Agency  
Region V - 5HRE-8J  
77 W. Jackson Street  
Chicago, Illinois 60604

Mr. Graham E. Mitchell, Project Manager  
Ohio Environmental Protection Agency  
40 South Main Street  
Dayton, Ohio 45402

Dear Mr. Saric and Mr. Mitchell:

**SITE WIDE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT  
(CERCLA) QUALITY ASSURANCE PROJECT PLAN (SCQ)**

Reference: Fax transmittal: Letter with comment responses, from George C. Schupp, Quality Assurance Section, to Kevin Pierard, Office of RCRA, Subject: Review of Department of Energy (DOE) Responses to United States Environmental Protection Agency (U.S. EPA) Conditional Approval of the SCQ.

Conference call: November 18, 1992, to discuss final resolution to the outstanding issues associated with the conditionally approved SCQ.

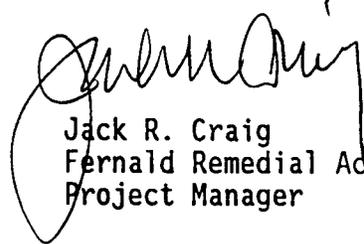
The purpose of this letter is to transmit the changes affected and resolutions agreed to as a result of the conference call on November 18, 1992. These recent adjustments to the conditionally approved SCQ represent final resolution of the outstanding issues. The SCQ will be considered a final approved document once you have had time to review these changes and are satisfied that these changes reflect what was agreed to in the conference call.

A new signature page must be signed and included with the final approved SCQ. The final document will be transmitted to you after the signature page is signed by the appropriate U.S. DOE, U.S. EPA, and Fernald Environmental Restoration Management Corporation (FERMCO) representatives. This is expected to take approximately two weeks, including the time necessary for reproduction of the document.

If you or your staff have any questions, please contact Randy C. Janke at  
FTS/Commercial 613-738-6937.

0489

Sincerely,



Jack R. Craig  
Fernald Remedial Action  
Project Manager

FN:RC Janke

Enclosure: As stated

cc w/enc.:

W. E. Murphie, EM-42, TREV  
K. A. Hayes, EM-424, TREV  
J. Benetti, USEPA-V, AT-18J  
B. Barwick, USEPA-V, 5CS-TUB-3  
J. Kwasniewski, OEPA-Columbus  
P. Harris, OEPA-Dayton  
M. Proffitt, OEPA-Dayton  
T. Schneider, OEPA-Dayton  
T. W. Hahne, PRC  
L. August, GeoTrans  
R. L. Glenn, Parsons  
D. J. Carr, FERMCO/52-8  
L. S. Farmer, FERMCO/2  
J. P. Hopper, FERMCO/52-8  
J. D. Wood, ASI/IT  
J. E. Razor, ASI/IT  
AR Coordinator, FERMCO

The following are the results of the teleconference between USEPA, and DOE-FN/WEMCO/FERMCO concerning the comment resolution to USEPA comments on the SCQ dated October 28, 1992.

#### **SAMPLE CUSTODY.**

a) Field Custody.

i. a. EPA comment

Although the field custody procedure states that the field team leader is responsible for care and custody of samples until they are shipped off-site, there is no explicit description for transfer of custody among the field team. For example, the team leader may not necessarily be the person who actually collected the sample. Other conditions may necessitate custody transfer prior to shipment off-site.

b. DOE-FN/WEMCO response

Section 7.1 states: "The field team leader is personally responsible for the care and custody of samples collected until they are transferred to a transporter or analytical or processing facility." This sentence will be changed to read: "The field team leader or designee is responsible for the care and custody of samples collected until they are transferred to a transporter or an analytical or processing facility. The actual sample collector must sign the chain of custody, and any transfer of the sample within the sampling team will be documented on the chain of custody."

Although Section 7.0 (#7), states: "Any transfer of sample custody from the original samplers in the field must be documented by double transfer signature on the SAR/CR.", we agree that it may be too late in the process. This sentence will be moved to the introductory paragraph in Section 7.1, after the above sentences.

c. Resolution

EPA agreed with this response.

ii. a. EPA comment

The Sitewide Analysis Request/Custody Record (SAR/CR) needs to provide an adequate number of signature/date/time spaces for a complete custody record including transfers in the field as well as for continuation of sample receipt/transfers at the laboratory. The field custody procedure should state that a separate SAR/CR will need to be completed for each laboratory performing analyses (i.e. chemical versus radiological, organic versus inorganic).

**b. DOE-FN/WEMCO response**

The Sitewide Analysis Request/Custody Record (SAR/CR) currently has 10 spaces for double transfer signatures. The NEIC POLICIES AND PROCEDURES, Figure 5, "Completed Chain-of-Custody Record", has 5 spaces for double transfer signatures. Our form has double that amount. We feel that this number is adequate for our purposes.

We feel that there has been a misunderstanding on the last part of this paragraph. The FEMP currently has 3 "processing laboratories", labs onsite that log-in samples and prepare them for the sample-prep and analyzing labs (e.g., inorganic and organic). The SCQ states that their must be separate SAR/CRs for each of these "processing laboratories". We had not intended for separate forms at the analyzing lab level. The example Chain-of-Custody Record listed above, does not separate these labs either. Their example lists "RCRA Characterization" along with "SemiVolatile Organics" on the same form. We will clarify the need for the separate "processing laboratories" in the SCQ.

**c. Resolution**

WEMCO agreed to develop a flow chart to better explain the chain of custody process (see attached). EPA agreed with this response.

**iii. a. EPA comment**

Specify how duplicate labels will be attached to the sample container (i.e. wire inserted through a hole in the label with the wire securely wrapped around the neck of the container).

**b. DOE-FN/WEMCO response**

The duplicate sample label shall be attached to the original sample label by a perforation. The backing shall also be perforated at the point of the duplicate label. When the original label is attached to the sample bottle, the backing shall be left attached to the duplicate label which will stay attached to the original label. The duplicate label can then be detached after analysis has been completed and the backing can be removed so that the duplicate label can be attached to the SAR/CR (for on site laboratories) or the Off site Custody Transfer Record (OCTR) (for off site laboratories). An example of the label and instructions on the attachment of this label will be added to the SCQ.

**c. Resolution**

EPA agreed with this response.

## iv. a. EPA comment

Sections 7.1 and 7.1.5 note the usage of a processing facility to ship samples to an off-site laboratory. The timeframe between sample collection and arrival at the analytical laboratory must be minimized to ensure that all holding times can be achieved by the lab. Samples should be shipped each day to avoid compromising the samples.

## b. DOE-FN/WEMCO response

The following sentence shall be added to the SCQ, Section 7.1: "The time frame between sample collection and arrival at the sample processing facility shall be minimized to ensure that all holding times can be achieved by the lab." The following sentence shall be added to the SCQ, Section 7.1.5: "The timeframe between arrival of samples and delivery to the analytical laboratories shall be minimized to ensure that all holding times can be achieved by the laboratory."

## c. Resolution

EPA agreed with this response.

## v. a. EPA comment

It is not clear from section 7.1.5 (item 7) which types of samples would be amenable to shipment by mail. If no samples are amenable, please delete.

## b. DOE-FN/WEMCO response

Item 7 will be deleted.

## c. Resolution

EPA agreed with this response.

## vi. a. EPA comment

Section 7.1 (item 6) notes that samples requiring refrigeration will be placed in coolers. It should be clearly stated that ice or another means should be used to ensure that samples are properly cooled prior to placement in coolers.

## b. DOE-FN/WEMCO response

The following sentence shall be added to the SCQ, Section 7.1: "All samples requiring refrigeration will immediately be placed in coolers that already have ice or other cooling agents added."

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**c. Resolution**

EPA agreed with this response.

**b) Laboratory Custody.**

**a. EPA comment**

US DOE indicated that they will not dictate a detailed custody procedure which its contractor labs will be required to follow. Section 7.2 provides some general guidelines for lab custody, however we reserve our recommendation for final approval of lab custody until lab-specific custody SOPs are provided either for inclusion to the QAPjP addenda to the sitewide or operable unit QAPjP.

In spite of statements to the contrary, the lab custody procedures should specify that the duplicate label (acting as a tag) should be removed following sample prep or analysis of the particular sample aliquot. The lab-specific SOPs should spell out the lab's actual numbering system, its sample receipt procedures, and explicit custody documents which may be generated by the lab to supplement the existing field-initiated custody documents.

**b. DOE-FN/WEMCO response**

Laboratories that perform work for the FEMP are subjected to pre-award surveys and post-award audits. These evaluations include inspection of the chain-of-custody process employed by the laboratory. Any inadequacies are documented and correction is verified and documented. The Quality Assurance Manual is also reviewed prior to award and during post-award audits; this review includes verification that the Chain-of-Custody process is addressed. A copy of each laboratory's Quality Assurance Manual is retained by the FEMP Site Sample Management subsection. Inclusion of all laboratories' written chain-of-custody procedures in the SCQ would make the document considerably larger and would necessitate frequent revisions. The EPA is encouraged to also verify the existence and implementation of the procedures in their audits of laboratories.

Regarding the request that lab-specific SOPs address sample numbering, sample receipt, and custody transfer, the FEMP verifies during surveys and audits that these items are addressed. The only exception is sample numbering. Numbering systems are generally inherent to the computer system employed and are described during tours of laboratories at the beginning of surveys or audits. The numbering system, however, is not generally specified in the SOPs. Future FEMP laboratory services contracts will include this requirement.

**c. Resolution**

EPA asked that a statement be added that stated that DOE will accept full responsibility for ensuring that all off-site laboratories' chain of custody (COC) procedures will be contained in written Quality Assurance Plans or SOPs, and that these COC procedures are fully consistent with the field COC procedures as defined in the SCQ. In addition, DOE will accept full liability in the event that an off-site lab is approved, and is later found to have insufficient COC procedures. DOE stated that this responsibility and liability must be accepted by FERMCO not DOE. FERMCO in a meeting with DOE stated that this would not be a problem at this time but will need to meet with their upper management and legal department to assess long term impacts.

**DATA VALIDATION****a. EPA comment**

There appears to be new issues emerging in US DOE's response memorandum. US DOE now is emphasizing its past data collection activities to substitute for some (or all?) of the CERCLA RI/FS risk assessment. It is our understanding that past data collection activities were only to be considered as background information for the project and was not going to be used to substitute for the risk assessments.

US DOE seems to presume that all chemical data collected in the past using CLP procedures/requirements may substitute for at least part of the RI/FS by some contortion of the validation requirements to meet completeness requirements. The potential usage of other past data (i.e. radiological) for the RI/FS is not as clear according to the US DOE's response. It would seem necessary for a firm decision on the adequacy of any part of the past data for risk assessment through mutual concurrence between USEPA and US DOE. This would seem to be a prerequisite for final approval of all project documents for the proposed RI/FS.

**b. DOE-FN/WEMCO response**

The US DOE concludes from reading this comment that there is a need for further clarification of the position on data validation and the use of RI/FS data to perform risk assessments and to develop and evaluate alternatives. There was no intention to create new issues associated with this facet of the SCQ. The DOE's position on this subject is that the historical data, which will be used to form a substantive data base at Level IV or Level D (ASL IV under the original RI/FS QAPP is considered analogous to ASL D in the SCQ) for chemical data collection and evaluation, is limited to sampling efforts performed under the RI/FS QAPP. This essentially limits the data base to RI/FS data for OU1, OU2, and OU4 (and some of the OU5 data) for chemical (non-radiological) data only.

It is the position of the DOE to consider this as the data base for which the determination of sufficient ASL D data is available such that collection of ASL C data (which has the same QC) will be sufficient for the continuation of the RI/FS for OU5 and OU3. The radiological data collected under the RI/FS QAPP was essentially ASL V data and conformed to a non-standard analytical method. The SCQ has standardized the radiological analytical methods and thus has incorporated these into ASL D. For this reason the radiological data base will need to be established through any new RI/FS characterization activities that are planned for the future. These include OU3 and selected programs in OU5. The programs in OU5 which will conform to the SCQ and will be identified on a case by case basis to ensure that the resulting information is appropriate for use in risk assessment and for evaluating remedial action alternatives. The criteria for evaluating whether the data shall be collected under the SCQ or the original RI/FS QAPP is based in part on representativeness, comparability, accuracy, precision, and completeness.

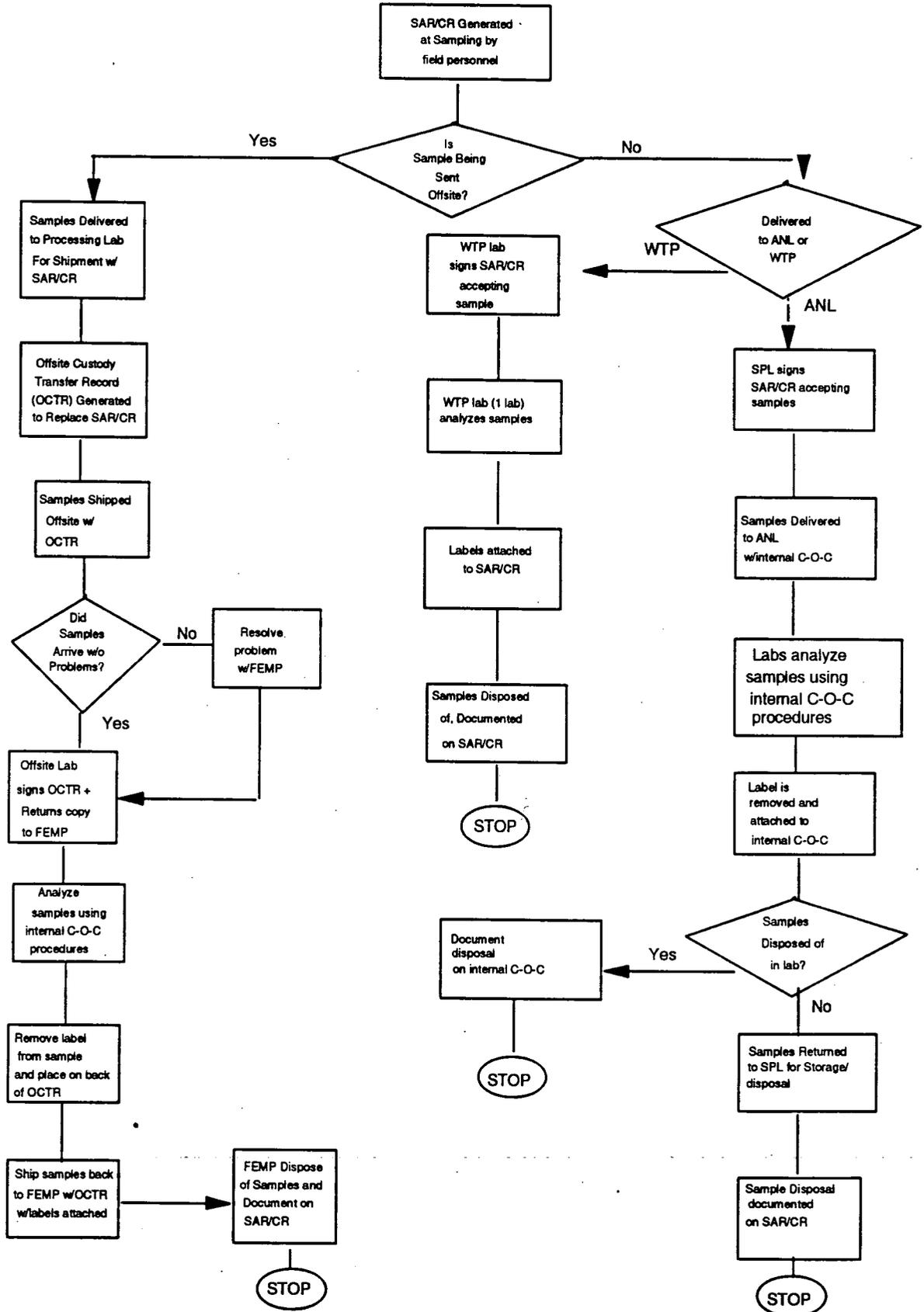
The use of the term background or historical or past data for the purposes of establishing the data base was intended to mean only that data as collected and validated through the RI/FS QAPP. There is no intention to substitute historical data for RI/FS data in the risk assessment process. The RI/FS Risk Assessment Work Plan Addendum provides a hierarchy of data sources for the purposes of performing the risk assessment. Data sources other than RI/FS are to used only when RI/FS data are not available.

#### **c. Resolution**

EPA agreed to this response. EPA asked for the names of the person(s) to contact in order to conduct RI/FS (OU1, 2 and 4) an audit on the data validation process. The people to contact to set up as audit are Dennis Carr (FERMCO) and John Wood (ASI).

SAMPLE CUSTODY FLOWCHART

(DRAFT)





## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

## MEMORANDUM

REPLY TO THE ATTENTION OF:

8Q-14J

DATE: OCT 28 1992

SUBJECT: Review of Department of Energy's Response to USEPA's Conditional Approval of the Quality Assurance Project Plan (QAPjP) for the CERCLA Remedial Investigation/Feasibility at the Feed Material Production Center (Fernald, Ohio)

FROM: George C. Schupp, Chief  
Quality Assurance Section

TO: Kevin Pierard, Chief  
MN/OH Technical Enforcement Section  
Office of RCRA

ATTENTION: James Saric

My staff has reviewed the subject response memorandum (QAS SF Log-In # 1812) from the U.S. Department of Energy (USDOE) received on October 21, 1992. ESD's memorandum dated August 21, 1992 recommended conditional approval for the QAPjP but noted two areas (custody, data validation) which needed to be reconciled. The response from USDOE still does not adequately address the previously noted deficiencies.

Attachment 1 discusses US DOE's responses.

I would suggest that a conference call with US DOE and its contractors may be the best forum to discuss the remaining issues and resolve them in the most expeditious manner. If you should have any questions regarding the attached comments, please contact Kevin Bolger of my staff at 3-7712

cc: Kaushal Khanna, WMD

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ATTACHMENT 1: USEPA REGION 5 ESD COMMENTS ON US DOE'S  
RESPONSES TO THE FERNALD CONDITIONAL  
APPROVAL RECOMMENDATION  
PAGE 1 OF 2

**SAMPLE CUSTODY.**

a) Field Custody.

- i. Although the field custody procedure states that the field team leader is responsible for care and custody of samples until they are shipped off-site, there is no explicit description for transfer of custody among the field team. For example, the team leader may not necessarily be the person who actually collected the sample. Other conditions may necessitate custody transfer prior to shipment off-site.
- ii. The Sitewide Analysis Request/Custody Record (SAR/CR) needs to provide an adequate number of signature/date/time spaces for a complete custody record including transfers in the field as well as for continuation of sample receipt/transfers at the laboratory. The field custody procedure should state that a separate SAR/CR will need to be completed for each laboratory performing analyses (i.e. chemical versus radiological, organic versus inorganic).
- iii. Specify how duplicate labels will be attached to the sample container (i.e. wire inserted through a hole in the label with the wire securely wrapped around the neck of the container).
- iv. Sections 7.1 and 7.1.5 note the usage of a processing facility to ship samples to an off-site laboratory. The timeframe between sample collection and arrival at the analytical laboratory must be minimized to ensure that all holding times can be achieved by the lab. Samples should be shipped each day to avoid compromising the the samples.
- v. It is not clear from section 7.1.5 (item 7) which types of samples would be amenable to shipment by mail. If no samples are amenable, please delete.
- vi. Section 7.1 (item 6) notes that samples requiring refrigeration will be placed in coolers. It should be clearly stated that ice or another means should be used to ensure that samples are properly cooled prior to placement in coolers.

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In spite of statements to the contrary, the lab custody procedures should specify that the duplicate label (acting as

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## ATTACHMENT 1: PAGE 2 OF 2

a tag) should be removed only following sample prep or analysis of the particular sample aliquot. The lab-specific SOPs should spell out the lab's actual numbering system, its sample receipt procedures, explicit custody transfer requirements as well as any additional custody documents which may be generated by the lab to supplement the existing field-initiated custody documents.

**DATA VALIDATION.**

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