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**DOCUMENTATION FOR RESOLUTION OF  
VERBAL AGREEMENTS**

**02/03/92**



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DOE-741-92

Mr. James Benetti  
U.S. Environmental Protection Agency  
Region V - 5AR-26  
230 South Dearborn Street  
Chicago, Illinois 60604

Dear Mr. Benetti:

**DOCUMENTATION FOR RESOLUTION OF VERBAL AGREEMENTS**

The purpose of this letter is to document the resolution of verbal agreements on the Radon Flux Measurement survey at the Fernald Environmental Management Project (FEMP) that were made between Behram Shroff, of my staff, and Mr. Mitchell, of your staff, during telephone conversations of October 29, 1991 and December 5, 1991.

The enclosed listing provides responses to each of the comments raised by U.S. EPA, Region V, in their review of the Sample and Analysis Plan for Fernald Radon-Flux Measurement Survey, Phase I (SAP) and the Quality Assurance Project Plan for Fernald Radon-Flux Measurement Survey, Phase I (QAPP). Where appropriate, references are made to changes in the project plans. A final draft copy of each of the plans is enclosed. The changes to these documents have been highlighted in gray for your convenience.

If you or your staff have any questions, please contact Behram Shroff at (513) 738-6003 or FTS 774-6003.

Sincerely,

R. E. Tiller  
Manager

FO:Shroff

Enclosure: As Stated

cc w/enc.:

S. Fauver, EM-424, TREV II  
AR Coordinator, WEMCO

cc w/o enc.:

L. Rogers, WEMCO

- 1) Comment: Since the QAPP is expected to be a stand alone document, a description of the FEMP Site and the Waste Pit Area should be included.
- Response: The QAPP has been revised to include a reference, in Section 1.1, to the document entitled: *Initial Screening of Alternatives for Operable Unit 1, Task 12 Report, Feed Materials Production Center, Fernald, Ohio, Remedial Investigation and Feasibility Study.*
- 2) Comment: Detail is requested, in the QAPP, concerning where the sample canisters will be located in the Waste Pit Area, and within the specific waste pit.
- Response: Section 4.0 of the QAPP was revised as indicated to provide the information concerning sample locations from the SAP.
- 3) Comment: Table 2-1 in the QAPP needs to be modified to incorporate the responsible individual designated as Laboratory Director.
- Response: The final version of the QAPP, Rev 0, as approved on 11-1-91 includes this information.
- 4) Comment: The term "blank" needs to be eliminated and the use of the blanks in the SAP needs to be clarified.
- Response: In the final versions (Rev. 0) of the SAP and the QAPP, as approved on 11-1-91, the following sections address this concern:

QAPP	Section 4.2
SAP	Section 6.3

To add clarification to the use of the various blanks referred to in these documents, it should be noted that the "FIELD BLANK" referred to in Section 6.3, paragraph 2 of the SAP, and in Section 4.2, paragraph 2 must be readily identifiable by the operator of the Gamma-Ray Spectral Analysis system as item No. 10 of the Sequential Instructions in Section 6 of the Radon Laboratory Technical Procedure RN-FLUX-U requires this. This procedure may be found in Appendix A to the SAP. The "additional 6 field blanks" referred to in Section 6.3 of the SAP and in Section 4.2 of the QAPP are used as blind blanks. These will be treated in the same manner as all other samples so far as the gamma-ray analysis is concerned.

- 5) Comment: Details associated with the shipment survey procedures and instruments used should be added to Section 5 of the QAPP.
- Response: Section 5.2, paragraphs 5 and 6 have been changed as indicated to reference the FEMP Safety Procedures which govern shipment of radioactive materials.
- 6) Comment: Clarification concerning the covering of certain units must be made. Which canisters are covered; why they are covered; and how does the cover impact the ability to measure the radon flux?
- Response: The indicated changes were made to Section 4 of the QAPP and to Sections 6.1, 6.2, and 6.3 of the SAP in an effort to clarify the various sample types and their handling.
- 7) Comment: Significant weather factors should be delineated on the charcoal canister label.
- Response: As indicated in Section 6.4 of the SAP the field notebook is the primary means of recording activities and conditions which may affect the radon flux samples. Only that information which is necessary to maintain the identity of the sample and complete the gamma-ray analysis is included on the sample label due to space limitations.
- 8) Comment: The transfer of the charcoal from the large area activated charcoal canister to the sealed canister should take place in a controlled environment.
- Response: The indicated changes were made to Section 4.2.1 of the QAPP and Section 6.3, paragraph 5 of the SAP to state that the samples would be transferred in an environment sheltered from the weather. During the measurements conducted on Pit Nos. 1-3 the sample transfer was conducted in a "Sea-Land" container located in the Waste Pit Area.
- 9) Comment: What type of rubber gasket or seal will be used on Pit No. 4? The type of material and method of sealing should be described in more detail.
- Response: As indicated by the changes in Section 6.1, paragraph 3 of the SAP, sand will be used to form the seal between the LAACC and the covering on Pit No. 4.
- 10) Comment: Will the Pylon continuous radon detectors be used in the determination of the radon flux from the pits?
- Response: Changes were made to Section 4.1 of the QAPP and Section 6.2 of the SAP to clarify the role of the Pylon continuous radon monitors.

11) Comment: The U. S. EPA laboratory review has identified a potential difficulty with both the use and the form of the correction factor.

Response: As specified in the final version of the Sample and Analysis Plan (Rev. 0) as approved on 11-1-91, in Section 8, the final report will include data table listing the results of the standard flux measurements (no correction factor applied) and a separate table listing the results with the correction factor applied. The average flux measured for each waste pit will be listed in both forms also.

The personnel of the GJPO-Radon Laboratory (GJPO-RL) understand the concern expressed by the technical reviewers from the EPA Laboratories regarding the application of the correction factor described in these plans. Moreover, (GJPO-RL) agrees that this subject requires considerably more study than was afforded by the time constraints imposed on this project to properly understand the magnitude and the mechanisms by which an increase in the atmospheric radon concentration affects a LAACC flux measurement. However, (GJPO-RL) feels that the correction factor proposed is an appropriate method to be used to place an upper limit on the effect of high atmospheric radon levels on the flux measurements to be conducted at FEMP.