



State of Ohio Environmental Protection Agency

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George V. Voinovich, Governor  
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November 13, 1997

RE: DOE FEMP  
COMMENTS: DRAFT  
SITEWIDE CQA PLAN

Mr. Johnny Reising  
U.S. Department of Energy, Fernald Area Office  
P.O. Box 538705  
Cincinnati, OH 45253-8705

Dear Mr. Reising:

This letter provides Ohio Environmental Protection Agency comments on the Draft Site-wide CERCLA Quality Assurance Project Plan. For the most part, the material is adequate and in some instances, surpasses what is normally expected in a Quality Assurance Program Plan.

If you have any questions, please contact Tom Ontko or me.

Sincerely,

Thomas A. Schneider  
Fernald Project Manager  
Office of Federal Facilities Oversight

cc: Jim Saric, U.S. EPA  
Terry Hagen, FDF  
Ruth Vandergrift, ODH  
Mark Shupe, HSI GeoTrans  
Francie Barker, Tetra Tech EM Inc.  
Manager, TPSS/DERR,CO

Handwritten notes and stamps: "FERNALD", "11/13/97", "6:41 p.m.", "L-0296"

DSEQCOM.WPD

Ohio Environmental Protection Agency Comments on the  
Sitewide CERCLA Quality Assurance Project Plan

General Comment

- 1) Commenting Organization: Ohio EPA                      Commentor: OFFO  
 Section #:                      Pg #:                      Line #:                      Code: general  
 Comment: Revision 1 of the SCQ has not yet been updated with sections that will support the real-time gamma spectroscopy methods for soils characterization. Updates should be added to address the proper operation of RTRAK, RSS and HPGe methods and also the Geographic Positioning System (GPS). Topics addressed should include:
  - 1. Operational envelopes such as acceptable weather and atmospheric conditions and procedures to avoid operating in areas where there is potential for unacceptable levels of 'shine'.
  - 2. Operational parameters such as HPGe detector heights and the criteria for operating at one meter or one foot heights.
  - 3. Count times and RTRAK speed.
  - 4. Validation and verification of associated software.
  - 5. Data validation including rejection of data that does not lie within technically defensible calibration ranges.
  - 6. Calibration and associated daily source checks, including acceptable limits.
  - 7. Appropriate Analytical Support Levels (ASLs) for each method, i.e. HPGe and RTRAK.
  
- 2) Commenting Organization: OEPA                      Commentor: HSI-GeoTrans, Inc.  
 Section #:5.1                      Pg. #: 1                      Line # 44                      Code: C  
 Comment: The text should be revised to indicate that the daily log will be a narrative of field events with the status of field activities reported every 30 minutes. The daily log should include cross-references to uniquely numbered field forms such that the time sequence of information acquisition can be readily recreated.
  
- 3) Commenting Organization: OEPA                      Commentor: HSI-GeoTrans, Inc.  
 Section #:5.3.1                      Pg. #: 9                      Line # 17                      Code: C  
 Comment: The PSP should also specify the method for data management, storage, and evaluation. The referenced list should, therefore, be amended to include an additional bullet: "I. Methods for data management (both electronic and hard copy), storage, and evaluation.
  
- 4) Commenting Organization: Ohio EPA                      Commentor: OFFO  
 Section #: 6.1                      Pg #: 2                      Line #: 5-32                      Code:  
 Comment: The sampling information list on Lines 5-32 should include the analytical parameters.
  
- 5) Commenting Organization: OEPA                      Commentor: HSI-GeoTrans, Inc.  
 Section #: 6.2.2.1                      Pg. #: 3                      Line # 42                      Code: C

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Comment: The use of dedicated sampling equipment should also be encouraged when multiple sampling events will occur at the same well or set of wells at regular intervals over a significant period of time.

- 6) Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: 6.2.2.4 Pg #: 4 Line #: 2 Code:  
 Comment: This is incorrect. According to DOE's Integrated Environmental Monitoring Plan (IEMP), private well monitoring has been limited to three private wells. The wells are located down gradient from Fernald and are sampled on a quarterly basis. Refer to the IEMP, Section #:3.5.2.1, page 3-53, first full paragraph.
- 7) Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: 6.2.4.1 Pg #: 5 Line #: 4 Code:  
 Comment: Line four should read: Storm water runoff discharge to Paddys Run via the Storm Sewer Outfall Ditch.
- 8) Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: 6.2.4.2 Pg #: 6 Line #: 2-3 Code:  
 Comment: This statement is incorrect. Sampling locations 4003, 4004, 4005, and 4006 are required to be monitored for flow twice a year.
- 9) Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: 6.4.1 Pg #: 9 Line #: General Comment Code: C  
 Comment: This section describes the stack monitoring for the Boiler Plant. The Boiler Plant is currently out of service. What (if any) stack monitoring protocols will be used for the new gas-fired plants?
- 10) Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: 6.4.2 Pg #: 10 Line #: General Comment Code: C  
 Comment: The specific isotope of radon should be defined, i.e. Rn-222 or Rn-220. The information provided in this section seems to be consistent with Rn-222 methods.
- 11) Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: 6.4.2 Pg #: 10 Line #: General Comment Code: C  
 Comment: Radon-222 grab sampling of the K65 silo headspace is not mentioned in the SCQ. It should be included.
- 12) Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: 6.4.2 Pg #: 10 Line #: 21-23 Code: C

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Comment: The text states that these requirements are applicable at the time of release. The FFA between the USEPA and DOE also has guidelines and requirements relative to radon monitoring. Also, DOE 5400.5 states that 3 pCi/L...shall be used for Rn-222 releases from DOE facilities.

- 13) Commenting Organization: Ohio EPA                      Commentor: OFFO  
 Section #: 6.4.2.1    Pg #: 11            Line #: 3 & 8                      Code: E  
 Comment: Change the word "contribution" to "component".
  
- 14) Commenting Organization: Ohio EPA                      Commentor: OFFO  
 Section #: 6.4.2.1    Pg #: 11            Line #: 23-24                      Code: C  
 Comment: The text implies that alpha track-etch cups are used to monitor the radon concentrations of the K65 silo headspace. OEPA was under the impression that continuous radon monitors were used for this sampling.
  
- 15) Commenting Organization: Ohio EPA                      Commentor: OFFO  
 Section #: 6.4.2.2    Pg #: 11            Line #: 35                          Code: C  
 Comment: When using the continuous radon monitor in the "pump" mode the sample does NOT pass through a foam barrier as described in the text.
  
- 16) Commenting Organization: Ohio EPA                      Commentor: OFFO  
 Section #: 6.4.2.2    Pg #: 11-12    Line #: 50-3                      Code: C  
 Comment: The text incorrectly states that "gross radon concentrations" are reported. If electronic noise, i.e. instrument background, is not subtracted from the accumulated counts, then gross counts are used to report a radon concentration. "Gross radon concentration" is the concentration of radon present naturally plus any contributions from the FEMP, not electronic noise. It should also be noted that the practice of not subtracting instrument background from the radon concentration calculation limits the FEMP to only monitoring relative changes in radon concentration and not the actual radon concentration.
  
- 17) Commenting Organization: Ohio EPA                      Commentor: OFFO  
 Section #: 6.4.5            Pg #: 12            Line #: General Comment    Code: C  
 Comment: A revised or new section needs to be added here to reflect that high volume air sampling for radionuclides will be used to demonstrate compliance with 40 CFR 61 Subpart H in 1998 as stated in the IEMP.
  
- 18) Commenting Organization: Ohio EPA                      Commentor: OFFO  
 Section #: 6.5            Pg #: 13            Line #: 33-36                      Code:  
 Comment: These statements are not entirely correct. According to DOE's Integrated Environmental Monitoring Plan (IEMP), there are no "regulatory drivers" and there is enough

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ample justification to discontinue monitoring of milk, fish, meat, grass and soil. Please refer to the IEMP, Section#:7.4.2, pages 7-4 - 7-6.

- 19) Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: 6.7 Pg #: 19 Line #: 22 Code:  
 Comment: What is meant by natural waters? Am I to assume groundwater and surface water?  
 Please clarify.
- 20) Commenting Organization: Ohio EPA Commentor: DERR  
 Section #: 12 Pg #: Line #: Code: g  
 Comment: This Section does not specify dates when Audits and/or Surveillances will be  
 conducted. We request that OEPA become a part of these audits/Surveillances. We think it  
 would be beneficial to be involved in this process.
- 21) Commenting Organization: Ohio EPA Commentor: DERR  
 Section #: 13 Pg #: Line #: Code: g  
 Comment: This section discusses the existence of the FEMP Preventative Maintenance Program.  
 No copy of this could be located in this document. There is information pertaining to  
 preventative maintenance, but no inclusion of an actual Preventative Maintenance Program. If  
 there exists such a guidance and/or statement of maintenance, it would be beneficial to include it  
 in an Appendix to this document (that would be aside from Table 13-1).
- 22) Commenting Organization: OEPA Commentor: HSI GeoTrans  
 Section #: D.2.4 Pg #: 6 Line # 34-35 Code: C  
 Comment: The term "metals" is not interchangeable with the term "inorganics". If  
 additional/different laboratory codes are to be used for non-metal inorganics, please specify.  
 Otherwise, the term inorganics should be used. The use of the term "metals" should be checked  
 throughout Appendix D.
- 23) Commenting Organization: OEPA Commentor: HSI GeoTrans  
 Section #: App. E Pg #: 1 Line # 42 Code: C  
 Comment: Laboratory backlog is extremely unpredictable. How is FEMP assured that  
 laboratories will meet sample hold times. Is there a contingency plan? Will the lab be allowed  
 to use its other facilities in the event of unanticipated backlog? Does laboratory approval apply  
 only to a specific location or does it extend to its other facilities?
- 24) Commenting Organization: OEPA Commentor: HSI GeoTrans  
 Section #: E.2.2 Pg #: 3 Line # 6-14 Code: C  
 Comment: Will the blind QC samples be different for each lab or will they be splits of the same

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sample. It is not unusual for different laboratories to produce different results for the same sample. Regardless, the performance criteria should be clearly specified in this section. What action will occur if the performance criteria are not met?

- 25) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: F.2.3 Pg #: 2 Line #: 23 Code: C  
Comment: Are data qualifiers used in electronically transmitted data? Please describe if data qualifiers are used in data that is available to the public, or if only certain qualified data is made available.
- 26) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: F.3.2 Pg #: 2 Line #: 49 Code: C  
Comment: The text states that recorded data is referenced to a location through the state of Ohio planar coordinate system. Please further describe how this data appears, i.e. as points on a map, written coordinates, etc.
- 27) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: F.3.6 Pg #: 3 Line #: 24 Code: C  
Comment: Who are the data validators that review data packages and assign qualifiers? Are these FDF/DOE employees or an independent group?
- 28) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: F.4.1 Pg #: 4 Line #: 36 Code: C  
Comment: An explanation of the FACTS system and included subsystems may be easier to understand if a graphical explanation of the subsystems and how they are linked is included. This comments is also applicable to the SED section F.4.3.
- 29) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: F.5.1 Pg #: 7 Line #: 17 Code: C  
Comment: Please describe the various organizations that maintain the ORACLE database.
- 30) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: F.5.1 Pg #: 7 Line #: 32 Code: C  
Comment: Please explain the meaning of the term normalized as it applies to the ORACLE database.
- 31) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: F.7 Pg #: 10 Line #: 14 Code: C

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Comment: Please define the term "cut-over."

- 32) Commenting Organization: OEPA Commentor: HSI GeoTrans  
Section #: App. F Pg. #: 3 Line # 13-16 Code: C  
Comment: A consistent reporting format for laboratory data packages should be required and referenced here in the text.
- 33) Commenting Organization: OEPA Commentor: HSI GeoTrans  
Section #: App.G Pg. #: 7 Line # Footnotes Code: C  
Comment: Add footnote to this table and/or Appendix A (p. 23, References) that specifies the use of Update 3 (June 13, 1997) or most recent version for SW-846 methods.
- 34) Commenting Organization: OEPA Commentor: HSI-GeoTrans, Inc.  
Section #: J.4.1.2 Pg. #: 2 Line # 16 Code: C  
Comment: The lithologic log should also include the boring identifier, logging geologist, drilling rig make/model, and drilling company name.
- 35) Commenting Organization: OEPA Commentor: HSI-GeoTrans, Inc.  
Section #: J.4.1.3 Pg. #: 3 Line # 17 Code: C  
Comment: The borehole abandonment Record should also include borehole identifier.
- 36) Commenting Organization: OEPA Commentor: HSI-GeoTrans, Inc.  
Section #: J.4.1.4 Pg. #: 3 Line # 33 Code: C  
Comment: The well completion log should also include well identifier, drill rig make/model, drilling company name, and supervising geologist name.
- 37) Commenting Organization: OEPA Commentor: HSI-GeoTrans, Inc.  
Section #: J.4.1.5 Pg. #: 4 Line # 16 Code: C  
Comment: The plugging and abandonment form should also include the well identifier.
- 38) Commenting Organization: OEPA Commentor: HSI-GeoTrans, Inc.  
Section #: J.4.1.6 Pg. #: 4 Line # 37 Code: C  
Comment: The monitoring well development form should also include the well identifier and a description of the method of purge water containment and management. The list of information presented here should be consistent with the requirements presented in Section J.4.4.G.
- 39) Commenting Organization: OEPA Commentor: HSI-GeoTrans, Inc.  
Section #: J.4.2 Pg. #: 7 Line # 22 Code: C  
Comment: "Geoprobe" is a trade name and should be replaced with the term "direct push" for

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generality.

- 40) Commenting Organization: OEPA Commentor: HSI-GeoTrans, Inc.  
Section #: J.4.3.2 Pg. #: 12 Line # 41 Code: C  
Comment: The 5-foot bentonite seal should be placed on top of the native collapse material consistent with Item 3 in this list.
- 41) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: K.3.1 Pg #: 1 Line #: 36-41 Code:  
Comment: Is the project manager responsible for coordinating project efforts that may involve Ohio EPA or USEPA, i.e., split sampling or oversight activities? Or is this project specific?
- 42) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: K.4.1 Pg #: 2 Line #: 36 Code:  
Comment: Line 36 is confusing, please omit. The specific field measurements are already outlined in detail in the SCQ for each media.
- 43) Commenting Organization: OEPA Commentor: HSI-GeoTrans, Inc.  
Section #: K.4.1.5 Pg. #: 6 Line # 35 Code: C  
Comment: The referenced bullet states that the redox meter will be calibrated weekly while all other meters are calibrated on a daily basis. For consistency, the redox meter should also be calibrated each day.
- 44) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: K4.2.2 Pg #: 9-10 Line #: 49 to 1-14 Code:  
Comment: Line 49 on page 9, begins by saying that certain conditions need to be avoided to collect a representative groundwater sample. Though, the following items listed explain what is 'not' supposed to take place, they do not explain 'how' to avoid it from happening. It would make sense to have both explanations included in the criteria listed.
- 45) Commenting Organization: OEPA Commentor: HSI-GeoTrans, Inc.  
Section #: K.4.2.2 Pg. #: 11 Line # 5 Code: C  
Comment: The SCQ should provide guidance as to when one of the well purging procedures is preferable to the other.
- 46) Commenting Organization: OEPA Commentor: HSI-GeoTrans, Inc.  
Section #: K.4.2.2 Pg. #: 13 Line # 4 Code: C  
Comment: What are the criteria for defining when the well has recovered "sufficiently" for sampling to begin (e.g., 90 percent of the original well volume, enough to fill sample containers,

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etc.)?

- 47) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: K.4.2.3.1                      Pg #: 14                      Line #: 46                      Code:  
Comment: Line 47 is unclear. It reads as the VOC vial is to be over filled. Please reword.
- 48) Commenting Organization: OEPA                      Commentor: HSI-GeoTrans, Inc.  
Section #: K.4.2.3.2                      Pg #: 15                      Line #: 18                      Code: C  
Comment: The text should be clarified to indicate if SVOCs will be collected into 1-liter bottles or 2-liter bottles.
- 49) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: K.4.2.3.1                      Pg #: 15                      Line #: 2                      Code:  
Comment: Line 2 explains that air bubbles in a VOC sample bottle must be topped off and rechecked. Wouldn't "topping off" the vial defeat the purpose of collecting the VOCs by allowing them to escape?
- 50) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: K.4.2.3.2                      Pg #: 15                      Line #: 25-27                      Code:  
Comment: This paragraph is unclear. There is no explanation on how it is determined that a sample requires additional preservative, when it is determined, i.e., in the field or laboratory, and where the sample is brought to its desired pH. Please clarify.
- 51) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: K.4.3.3.1                      Pg #: 21                      Line #: 27                      Code:  
Comment: Sentence is incorrect. VOCs are to be collected into a preserved container according to Section K.4.2.3.1, page 14, Item C., Line 45.
- 52) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: K.4.3.3.3                      Pg #: 22                      Line #: 1-10                      Code:  
Comment: This section does not mention sample preservation. Please clarify.
- 53) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: K.4.4.1                      Pg #: 23                      Line #: 50                      Code:  
Comment: By definition, this does not describe a composite sample. Please clarify.
- 54) Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: K.4.4.2                      Pg #: 24                      Line #: 48                      Code:  
Comment: A field measurement is not a type of sample that's collected. Field parameters are

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usually measured first from a separate container, but taken from the same volume of water that was also collected for the samples.

- 55) Commenting Organization: OEPA Commentor: HSI-GeoTrans, Inc.  
Section #: K.4.6 Pg. #: 27 Line # 30 Code: C  
Comment: The minimum requirements for reagent-grade water should be specified in this SCQ and referenced in the indicated text.
- 56) Section #: K.4.6 Pg. #: 27 Line # 30 Code: C  
Comment: For consistency with Section K.11.1, certified deionized water as defined in Section K.11.1 should be specified for the QA procedures described in this section in place of reagent water.
- 57) Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: K.5.1 Pg #: 29 Line #: 35-39 Code:  
Comment: Items G and H are unclear, especially transferring VOC samples from one container to another. This would cause the VOCs to volatilize and the sample would not be a representative one.
- 58) Commenting Organization: OEPA Commentor: HSI-GeoTrans, Inc.  
Section #: K.5.3 Pg. #: 32 Line # 24 Code: C  
Comment: Head space VOC screening should also be required and described in this section. This procedure involves placing into a sealed container a portion of the soil sample and leaving an air head space above the soil. The organic vapor concentration in the head space is then measured after a prescribed length of time.
- 59) Commenting Organization: OEPA Commentor: HSI-GeoTrans, Inc.  
Section #: K.6.2.4 Pg. #: 44 Line # 22 Code: C  
Comment: Are there specific types or brands of pumps, filters, and counting instruments that will be used?
- 60) Commenting Organization: OEPA Commentor: HSI-GeoTrans, Inc.  
Section #: K.6.4.1 Pg. #: 45 Line # 29 Code: C  
Comment: The text should also mention that high concentrations of methane will also effect PID readings.