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RESOLUTION OF AIR MONITORING ISSUES AND REVISED SUBMITTAL DATE FOR THE INTEGRATED ENVIRONMENTAL MONITORING PLAN

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LETTER

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Department of Energy
Ohio Field Office
Fernald Area Office
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DOE-0558-97

Mr. James A. Saric, Remedial Project Director
U.S. Environmental Protection Agency
Region V - 5HSF-5J
77 W. Jackson Boulevard
Chicago, Illinois 60604-3590

Mr. Tom Schneider, Project Manager
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, Ohio 45402-2911

Dear Mr. Saric and Mr. Schneider:

RESOLUTION OF AIR MONITORING ISSUES AND REVISED SUBMITTAL DATE FOR THE INTEGRATED ENVIRONMENTAL MONITORING PLAN

On February 10, 1997, representatives from the Department of Energy, Fernald Environmental Management Project (DOE-FEMP) and Fluor Daniel Fernald (FDF) met with Gene Jablonowski and Mike Murphy of the U.S. Environmental Protection Agency (U.S. EPA) and Bill Lohner of the Ohio Environmental Protection Agency (OEPA) to discuss and resolve air monitoring issues concerning the Integrated Environmental Monitoring Plan (IEMP). The purpose of this letter is to summarize the outcome of that meeting and to propose March 7, 1997, as a revised date for IEMP submittal.

Sampling Frequency and Analyte List

The U.S. EPA's request for weekly sampling to ensure adequate air flow through the high volume air samplers was discussed. FEMP historical data was presented that illustrated adequate air flow was obtainable from the high volume air samplers under conditions of relatively high particle loading with similar efficiency observed by the OEPA through the use of their own high volume air samplers on FEMP property. As a result of this information, consensus was reached that two week composite samples would not present a problem. The DOE preference for a biweekly schedule is based on the need to limit intrusions onto private land, and to manage analytical costs. As a result of the discussion, samples will be collected from all air monitors once every two weeks with analysis for total uranium and total suspended particulates. If at anytime particle loading results in inadequate air flow

through the monitors, the DOE will increase sample frequency to weekly. In addition, quarterly composite samples will be prepared from the biweekly samples for each monitor. The composites will be analyzed for the following radionuclides of concern:

ANALYTE	METHOD	HAMDC (pCi/m^3)	HAMDC % OF ISOTOPE SPECIFIC NESHAP STD.
U^{238}	Alpha Spec.	9E-05	1.1
U^{234}	Alpha Spec.	9E-05	1.3
$U^{235/6}$	Alpha Spec.	9E-05	1.2
Th^{228}	Alpha Spec.	7E-06	0.2
Th^{230}	Alpha Spec.	7E-06	0.2
Th^{232}	Alpha Spec.	7E-06	1.1
Ra^{226}	Gamma Spec.	2E-04	6.1

HAMDC = Highest Allowable Minimum Detectable Concentration (HAMDC) as specified in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Quality Assurance Project Plan (SCQ) or as specified in analytical contracts with off-site laboratories. HAMDCs required by the FEMP provide adequate sensitivity to detect below 10% of the corresponding National Emission Standards for Hazardous Air Pollutants (NESHAP) standard for each radionuclide of interest.

The U.S. EPA raised the concern that the analyte list proposed for the alternate monitoring methodology for demonstrating NESHAP compliance did not account for all radionuclide daughters. In response to this concern, the IEMP will be modified to include an evaluation of the dose contribution of radionuclide daughters and a methodology for accounting for any daughters determined to have the potential to contribute significantly to dose.

Background Radionuclide Contributions

Measured radionuclide concentrations from the air monitoring stations will be corrected to account for the contribution from naturally occurring background radionuclides. This correction will yield the "net" concentration of radionuclides for comparison to NESHAP standards. The following method will be used to determine net radionuclide concentrations:

- Two background monitoring stations will be included in the IEMP air monitoring program. Existing monitoring stations AMS 12 and 16 are located 3.2 and 6.2 miles, respectively, from the site.

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- The concentration of each radionuclide of interest will be measured at the background locations. Resulting background concentrations will be averaged for each radionuclide and subtracted from the site monitoring data.

- The resulting net radionuclide concentration will be compared with the NESHAP standards to demonstrate compliance.

Monitoring Locations

Monitoring locations (see enclosed figures) have been selected based on the wind rose sectors and potential Maximally Exposed Individual (MEI) locations. These locations were discussed and visited on February 10, 1997. The MEI location #24 and the grouping of MEI locations #25/#30/#31 were eliminated from further consideration due to the alignment of location #24 with locations #17/#18 and the proximity of #25/#30/#31 with the gravel operation located immediately to the west. The plan is to place monitors as close as possible to all other specified locations. On-site monitors will be used to represent MEIs along the south and west property boundaries; however, due to the proximity of the potential MEIs to the north and east the placement of monitors on private land will be necessary. Again, every effort will be made to place monitors at the locations discussed on February 10, 1997; however, since that meeting the homeowner at location #19 informed the DOE that they would not allow the monitor to be placed on their property. The DOE is evaluating the possibility of placing the monitor on an adjacent piece of property or along an easement. As discussed on February 10, 1997, the DOE will submit the IEMP without the identification of specific off-site monitor locations. The IEMP will reflect the DOE's intention to locate monitors at potential MEI locations in the northeast, northwest, and east-southeast sectors. If access to private property is denied, the DOE will attempt to locate the monitors within existing easements. Once the locations have been established, the DOE will notify EPA and the IEMP will be modified to reflect the actual monitoring locations.

Based on the changes to the IEMP discussed in this letter, the DOE proposes to submit the revised document to the EPA on or before March 7, 1997, along with the On-site Disposal Facility (OSDF) Groundwater Plan and the OSDF Air Monitoring Response-to-Comment Document. As discussed during the conference call on January 30, 1997, a revised OSDF Air Monitoring document will not be submitted since the air monitoring strategies outlined in the IEMP and the Impacted Materials Placement Plan will have addressed all OSDF air monitoring requirements.

If you have questions regarding these issues please contact Kathleen Nickel at (513) 648-3166.

Sincerely,

Johnny Reising

Johnny W. Reising
Fernald Remedial Action
Project Manager

FEMP:Nickel

Enclosure: As Stated

cc w/enc:

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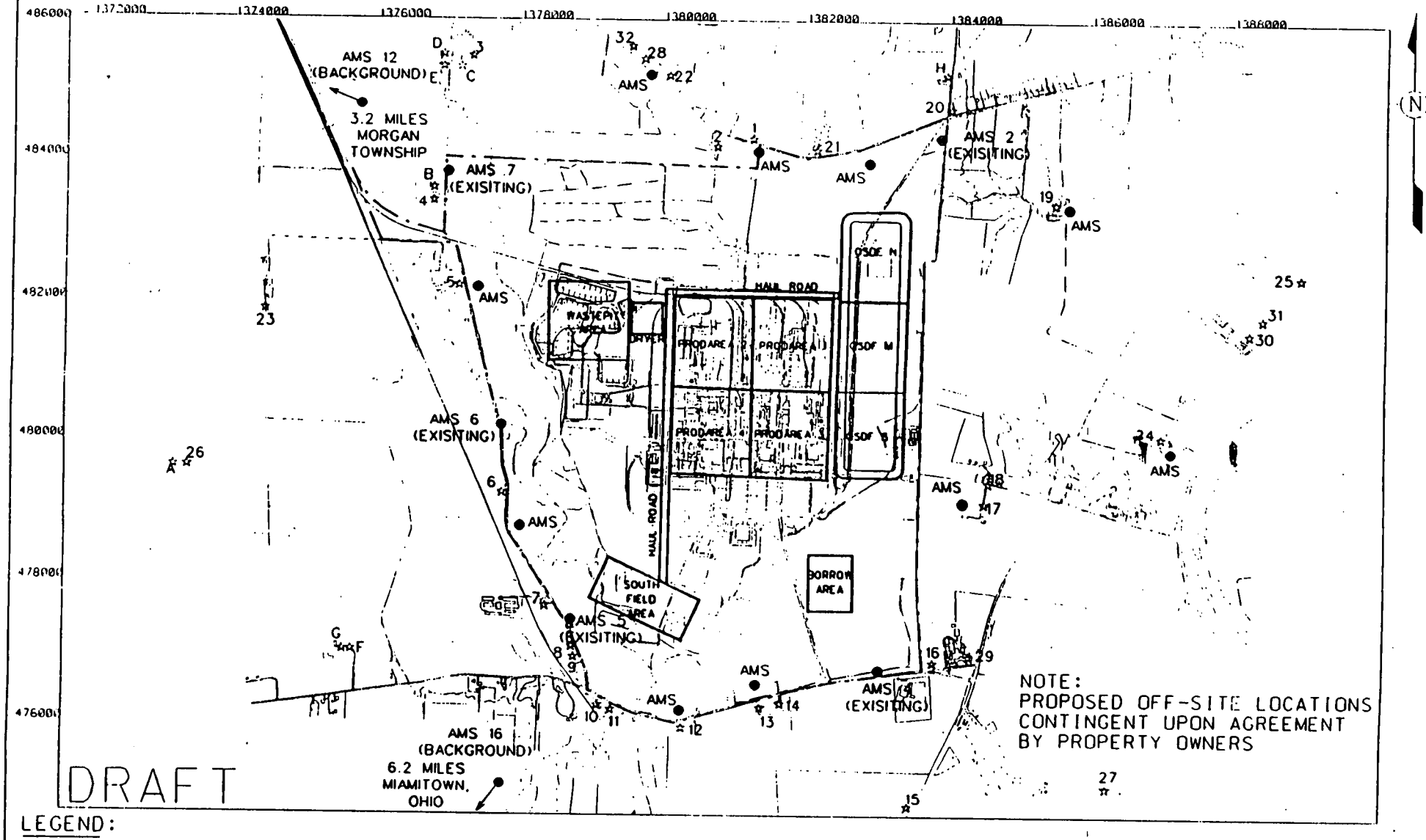

FIGURE 2-X. LOCATION MAP FOR IEMP AIR MONITORING