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**REMOVAL ACTION NUMBER 9, FERNALD ENVIRONMENTAL
MANAGEMENT PROJECT MIXED WASTE CHEMICAL TREATMENT
PROJECT GENERAL COMPREHENSIVE ENVIRONMENTAL RESPONSE,
COMPENSATION, AND LIABILITY ACT WORK PLAN - RESPONSE TO
COMMENTS**

03/29/96

DOE-0667-96
DOE-FN EPAS
9
RESPONSES



Department of Energy

Ohio Field Office
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MAR 29 1996

DOE-0667-96

Mr. Paul Pardi
Ohio Environmental Protection Agency
401 East Fifth Street
Dayton, Ohio 45402-2911

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

Dear Mr. Pardi and Mr. Schneider:

**REMOVAL ACTION NUMBER 9, FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
MIXED WASTE CHEMICAL TREATMENT PROJECT GENERAL COMPREHENSIVE
ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT WORK PLAN**

This letter is to transmit responses to comments received from the Ohio Environmental Protection Agency (OEPA) on January 4, 1996, concerning the Fernald Environmental Management Project (FEMP) Mixed Waste Chemical Treatment Project General Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Work Plan. Based on the OEPA comments, a revised Applicable or relevant and Appropriate Requirements (ARAR), Table 6-1 has been provided. Highlighted sections of Table 6-1 indicate changes made based on OEPA comments. This comment response document is provided to the OEPA for review and approval.

If you have any questions regarding this matter, please contact John Sattler at (513) 648-3145, or Robert Danner at (513) 648-3167.

Sincerely,

for Jack R. Craig
Director

FN:Danner

Enclosures: As Stated

cc w/encs:

J. Saric, USEPA-V, SRF-5J
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C. Buddich, OEPA-DHWM
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MIXED WASTE CHEMICAL TREATMENT PROJECT WORK PLAN
OHIO EPA COMMENT RESPONSES
JANUARY 4, 1996

Commenting Organization: Ohio EPA Commentor: DHWM
Section #: 6.0 Page #: 74 Line #: Code:
Original Comment #: 1

Comment: Several of the proposed treatment technologies incorporate the use of tanks in the treatment of mixed wastes. DOE-FEMP must comply with the tank standards addressed in the Ohio Administrative Code (OAC) sections 3745-66-92 through 3745-66-991. Any project specific workplan that incorporates the use of a tank for the storage and/or treatment of hazardous waste must list applicable tank standards as ARARs and must describe how DOE will comply with these standards.

Response: Agree. Tanks may be used in association with some of the treatment technologies discussed in the Chemical Treatment Project General CERCLA Work Plan. Tanks that accumulate hazardous waste must meet the tank requirements specified in OAC 3745-66-92 through 991. Applicable requirements include assessment of the integrity of existing tank systems, leak containment and detection devices, general operating requirements, inspections, spill control and response, and closure and post-closure care.

Action: Table 6-1 of the Chemical Treatment Project General CERCLA Workplan will be revised to incorporate reference to Ohio EPA tank standards promulgated under OAC 3745-66-92 through 991. Technology Specific Work Plans that incorporate the use of tanks for the storage and/or treatment of hazardous waste will list applicable tank standards as ARARs and will describe how DOE will comply with the standards.

Commenting Organization: Ohio EPA Commentor: DHWM
Section #: 6.0 Page #: 74 Line #: Code:
Original Comment #: 2

Comment: The work plan indicates that ignitable wastes will be treated in this project. DOE-FEMP must include OAC 3745-65-17, General Requirements for Ignitable, Reactive, or Incompatible Wastes, as an applicable requirement.

Response: Agree. Ignitable wastes will be treated under the Chemical Treatment Project and therefore, OAC 3745-65-17, is an applicable ARAR for the project. Ignitable waste streams will be managed to prevent accidental ignition or contact with ignition sources. Appropriate warning signs will be posted in all waste processing areas associated with the project. Any mixing or commingling of incompatible wastes, or incompatible wastes and materials, will be conducted to prevent the generation of fumes or dusts, violent reactions, or damage to the structural integrity of the device or facility containing the wastes.

Action: The ARARs presented in Table 6-1 of the Chemical Treatment Project General CERCLA Work Plan will be revised to incorporate reference to OAC 3745-65-17. Reference to this ARAR and a description of DOE's compliance plan will be included in any subsequent Technology Specific Work Plans that involve the treatment, storage, and/or disposal of ignitable or reactive hazardous wastes

Commenting Organization: Ohio EPA Commentor: DHWM
Section #: 6.0 Page #: 74 Line #: Code:
Original Comment #: 3

Comment: DOE-FEMP must include OAC 3745-52-40 and -42 as an applicable requirement addressing record keeping with regards to retention of manifest documentation.

Response: Agree. OAC 3745-52-40 and OAC 3745-52-42 will be ARARs for any projects involving the off-site shipment of hazardous waste. Manifest copies will be retained in accordance with these requirements, and exception reports will be filed as required, for any projects involving these types of activities.

Action: Table 6-1 of the Chemical Treatment Project General CERCLA Work Plan will be revised to incorporate reference to these requirements. These ARARs will be included in any subsequent Technology Specific Work Plans involving the off-site shipment of hazardous waste.

Commenting Organization: Ohio EPA Commentor: DHWM
Section #: 6.0 Page #: 74 Line #: Code:
Original Comment #: 4

Comment: A possible error was noted in Table 6-1 on page 74. This error occurs in the block titled "Preparing and Transporting Hazardous Waste Off-Site". The OAC references in this block appear to be in error. DOE-FEMP must reevaluate the adequacy of the references and revise as appropriate.

Response: Agree. The correct OAC citations for preparing and transporting hazardous waste off-site are OAC 3745-52-20 through 33.

Action: Table 6-1 of the Chemical Treatment Project General CERCLA Work Plan will be revised to reflect this change.

Commenting Organization: Ohio EPA Commentor: DHWM
Section #: 3.2 Page #: 12 Line #: Code:
Original Comment #: 5

Comment: Section 3.2, page 12, "Mercury Treatment Treatability Study". The plan indicates that approximately 36 drums of mercury contaminated wastes are currently on-site. The plan states that this entire inventory will be consumed in the treatability study. The DHWM requests additional information on the treatability study and also believes that this should be addressed under ARARs (OAC 3745-51-04E).

Response: Agree. OAC 3745-51-04 (E) is an ARAR for the Mercury Treatment Treatability Study. The quantity of mercury from each waste stream (MEF) used for each process being evaluated under the treatability study will be limited to 1000 kg and the mass of each shipment of mercury waste will be limited to 1000 kg as per existing OAC 3745-51-04(E)(2)(a). Samples will be packaged and shipped in accordance with Department of Transportation, U.S. Postal Service, or other applicable shipping requirements. Documentation of shipping and contract records and the appropriate information on the laboratory receiving the waste will be retained and reported in the RCRA Annual Report.

Action: Table 6-1 of the Chemical Treatment Project General CERCLA Work Plan will be revised to reflect this change. Specific information on sample disposition, the amount of waste shipped under the exemption, laboratory information, and the date of waste shipments will be included in the RCRA Annual Report.

TABLE 6-1 APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARAR)		
PERMIT THAT WOULD BE REQUIRED	PERMIT REQUIREMENTS (ARAR)	COMPLIANCE PLAN
National Emission Standards for Hazardous Air Pollutants - (NESHAP) - 40 CFR Part 61, Sub-part H - Emissions of Radionuclides Other Than Radon From DOE Facilities	<p>40 CFR 61.92: Radiological emissions (except radon-222 and radon-220) to the ambient air from DOE facilities shall not exceed those amounts that would cause any member of the public to receive an effective dose equivalent of 10 mrem in any one year.</p> <p>40 CFR 61.07 and 61.96(b): An application for approval does not have to be filed for radionuclide sources if the effective dose equivalent caused by all emissions from the new construction or modification is less than 0.1 mrem per year.</p> <p>40 CFR 61.93(b): Continuous emission monitoring is required for stacks and vents that have the potential, under normal operating conditions, but without emission control devices, to release radionuclides in sufficient quantities to cause any member of the general public to receive an effective dose equivalent of 0.1 mrem/year or greater.</p>	<p>Dose estimates for sub-projects, included under the Chemical Treatment Project, will be included in the annual FEMP NESHAP Sub-part H report. Emissions from the project will not exceed the annual 10 mrem per year standard to off-site members of the general public.</p> <p>Evaluations will be conducted to determine if continuous emission monitoring will be required for stacks and vents associated with the project.</p> <p>Radionuclide emissions from the project are not expected to cause any member of the general public to receive an effective dose equivalent of 0.1 mrem/year or greater.</p>
National Pollutant Discharge Elimination System (NPDES) Permit - OEPA NPDES Permit No. 11000004*DD (OAC 3745-33-05)	<p>Waste water discharges must not cause a violation of effluent limitations or loading rates at NPDES permitted outfalls. Discharges must be conducted in accordance with applicable terms and conditions of the permit. These include compliance with the notification requirements promulgated in 40 CFR 122.42 and OEPA water quality standards established under OAC 3745-1.</p>	<p>Discharges associated with the Chemical Treatment Project will comply with the current FEMP NPDES permit. All excess water that is not consumed during treatment of wastes will be managed until characterization indicates the waste water can be discharged to the FEMP Waste Water Treatment System.</p>
Atomic Energy Act (10 CFR 835)	<p>Radiation doses, levels, and concentrations in restricted and unrestricted areas.</p>	<p>Emissions from the Chemical Treatment Project will not result in the radiation limits being exceeded in restricted and unrestricted areas in accordance with the Project Specific Health and Safety Plan.</p>

**TABLE 6-1
APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARAR)**

PERMIT THAT WOULD BE REQUIRED	PERMIT REQUIREMENTS (ARAR)	COMPLIANCE PLAN
<p>Air Pollution Control - Permits to Install & Permits to Operate (OAC 3745-31 and OAC 3745-35)</p>	<p>OAC 3745-31-05(A) Permits to Install: Installation of the proposed air contaminant sources must not prevent or interfere with the attainment or maintenance of applicable ambient air quality standards; and must not result in a violation of any applicable laws; and must employ the Best Available Technology (BAT) to control emissions.</p> <p>OAC 3745-35-01 (C) - Permits to Operate: Air contaminant sources must be operated in compliance with applicable air pollution control laws; must be constructed, located, or installed in compliance with the substantive requirements of the permit to install; and must not violate NESHAP standards adopted by the Administrator of USEPA.</p>	<p>Any air contaminant sources installed under the Chemical Treatment Project will not interfere with the attainment of any applicable air quality standards or cause a violation of any applicable laws. BAT will be implemented in the form of HEPA filtration to control radiological particulate emissions. BAT requirements for toxic air pollutants will be determined for each treatment process on a case-by-case basis in accordance with OEPA's Air Toxic Policy.</p> <p>Process equipment will be operated in compliance with applicable air pollution control laws and will not violate applicable NESHAP Standards.</p>
<p>Safe Drinking Water Act (42 U.S.C. 300G; PL 93-523)</p>	<p>National Primary Drinking Water Regulations (40 CFR 141).</p> <p>National Revised Primary Drinking Water Regulations (40 CFR 141.60 through 141.63)</p> <p>Ohio Primary Drinking Water Regulations (OAC 3745-81)</p>	<p>Compliance will be demonstrated by site-wide environmental monitoring, including air, soil, and groundwater. Reports summarizing the site-wide monitoring results will be submitted to EPA.</p> <p>Surface water discharges will be conducted in accordance with the site NPDES permit and are not expected to impact groundwater quality.</p> <p>Engineering controls and best management practices will be used to mitigate the potential discharge of contaminated waste water to the underlying aquifer. The FEMP will ensure groundwater is not adversely impacted through continued monitoring under its existing Groundwater Monitoring Program.</p>
<p>Radiation Exposure to the Public</p>	<p>Radiation Dose Limit (40 CFR 192.02(b))</p> <p>Radiation Dose Limit (Drinking Water Pathway) (10 CFR 834)</p>	<p>The project will be designed and operated to minimize the releases of radionuclides. Compliance will be demonstrated by site-wide environmental monitoring, including air, soil, and groundwater. Reports summarizing the site-wide monitoring results will be submitted to the EPA.</p>
<p>Resource Conservation and Recovery Act (U.S.C. 6901 et. seq.)</p>	<p>Hazardous Waste Determinations (OAC 3745-52-11) (40 CFR 262.11)</p>	<p>Project wastes will be characterized to determine their corresponding EPA waste codes and appropriate LDR treatment standards. Wastes generated from the project will be characterized in accordance with site procedure EW-0001 and the FEMP Waste Analysis Plan.</p>

**TABLE 6-1
APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARAR)**

PERMIT THAT WOULD BE REQUIRED	PERMIT REQUIREMENTS (ARAR)	COMPLIANCE PLAN
Resource Conservation and Recovery Act (U.S.C. 6901 et. seq.)	<p>Tank Standards: (OAC 3745-66-92 through 991) (40 CFR 265.190 through 40 CFR 265.199)</p>	<p>Tanks may be used in association with some of the treatment technologies discussed in the Chemical Treatment Project General CERCLA Work Plan. Tanks that accumulate hazardous waste must meet the tank requirements specified in OAC 3745-66-92 through 991. Applicable requirements include assessment of the integrity of existing tank systems, leak containment and detection devices, general operating requirements, inspections, spill control and response, and closure and post-closure care.</p> <p>Technology Specific Work Plans that incorporate the use of tanks for the storage and/or treatment of hazardous waste will list applicable tank standards as ARARs and will describe how DOE will comply with the standards.</p>
	<p>Interim Status: Treatment, Storage, and Disposal General Facility Standards (OAC 3745-65-13 through 17) (40 CFR 265.13 through 265.16)</p>	<p>The Chemical Treatment Project will be conducted in accordance with RCRA regulations. Existing site security measures will be utilized. Inspections will be conducted in accordance with RCRA regulations and existing site procedures. Personnel will be trained in accordance with FEMP requirements.</p> <p>Ignitable waste streams will be managed to prevent accidental ignition or contact with ignition sources. Appropriate warning signs will be posted in all waste processing areas associated with the project. Any mixing or commingling of incompatible wastes or incompatible wastes and materials, will be conducted to prevent the generation of fumes or dusts, violent reactions, or damage to the structural integrity of the device or facility containing the wastes.</p>
	<p>Interim Status: Treatment, Storage, and Disposal Facility Preparedness and Prevention (OAC 3745-65-31 through 35, 3745-65-37) (40 CFR 265.31 through 265.35, 265.37)</p>	<p>Preparedness and prevention equipment, as specified in regulations, will be on-site, available, and in operating condition throughout the duration of the project. The existing FEMP site-wide internal communications/alarm systems will be used. Portable fire extinguishers and spill control equipment will be placed in accessible locations to assist in emergency response. Warning signs will be posted at the entrance to each process area. Containers and equipment will be inspected in accordance with existing site procedures.</p>
	<p>Interim Status: Treatment, Storage and Disposal Facility Contingency Plan and Emergency Procedures (OAC 3745-65-51 through 56) (40 CFR 265.51 through 265.56)</p>	<p>The existing RCRA FEMP Contingency Plan and Emergency Procedures will be followed for any hazardous waste emergency associated with the project.</p>

**TABLE 6-1
APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARAR)**

PERMIT THAT WOULD BE REQUIRED	PERMIT REQUIREMENTS (ARAR)	COMPLIANCE PLAN
Resource Conservation and Recovery Act (U.S.C. 6901 et. seq.)	Container Storage (OAC 3745-52-34, 3745-66-70 through 77) (40 CFR 262.34, 265.170 through 265.177)	Containers of hazardous waste will be managed and inspected in accordance with regulatory requirements. Secondary containment will be provided for the tanks and drumming stations. Containers will be handled in a manner to prevent rupture, leakage, or spillage. Containers will be compatible with the material being stored and will remain closed during storage.
	Residue of Hazardous Waste in Empty Containers (OAC 3745-51-07) (40 CFR 261.7)	Containers used for the Chemical Treatment Project will be considered empty in accordance with the requirements of this rule.
	Land Disposal Restrictions (OAC 3745-59) (40 CFR 268)O	Waste will be treated to meet the appropriate LDR treatment standards. A treatability variance may be required for certain types of waste.
	CERCLA Off-site (40 CFR Part 300)	All material removed from the FEMP will be managed in compliance with applicable provisions of RCRA and other Federal and State requirements including EPA's off-site rule and Waste Analysis Plan.
	Treatability Studies (OAC 3745-51-04 (E)) (40 CFR 262.4 (e))	The quantity of waste from any one waste stream (MEF) used for each process being evaluated under a treatability study, will be limited to 1000 kg and the mass of each shipment of waste will be limited to 1000 kg. Samples will be packaged and shipped in accordance with Department of Transportation, U.S. Postal Service, or other applicable shipping requirements. Treatability study samples will be shipped to RCRA permitted or interim status facilities. Documentation of shipping and contract records, waste disposition and appropriate information on the laboratory receiving the waste, will be retained and reported in the RCRA annual report.
	Reusable Equipment Decontamination (OEPA Closure Plan Review Guidance for RCRA Facilities)	Decontamination of reusable equipment is discussed in Section 4.10 of this Work Plan. Reusable equipment contacting waste will be triple rinsed in accordance with OEPA Closure Plan Review Guidance.
	Preparing and Transporting hazardous Waste Off-site (OAC 3745-52-20 through 31) (OAC 3745-52-3 and 33) (OAC 3745-52-40 and OAC 3745-52-42) (40 CFR 262.20 through 262.33 and 40 CFR 263.20)	Any generator who transports hazardous waste for off-site treatment, storage, or disposal must originate and follow-up the manifest for off-site shipments. Pre-transporting requirements include appropriate packaging, labeling, marking, and placarding. Any project waste residues determined to be RCRA hazardous waste that are destined for off-site disposal will be subject to manifest and Exemption Reporting requirements.

TABLE 6-1 APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARAR)		
PERMIT THAT WOULD BE REQUIRED	PERMIT REQUIREMENTS (ARAR)	COMPLIANCE PLAN
Resource Conservation and Recovery Act (U.S.C. 6901 et. seq.)	Air Emissions Standards for Process Vents (40 CFR 265.1032 through 265.1034)	Activities regulated under these standards will comply with the substantive requirements of Sub-part AA.
	Air Emissions Standards for Equipment Leaks (40 CFR 265.1052 through 265.1063)	Leak detection monitoring and repair of equipment components regulated under these standards will be conducted in accordance with the substantive requirements of Sub-part BB.
PCB Treatment Requirements (40CFR 761.60(e))	Any person who is required to incinerate any PCBs and PCB items under this Sub-part may demonstrate that an alternative method of destroying PCBs and PCB items exists; provided that this alternative method can achieve a level of performance equivalent to 40 CFR 761.70 incinerators or high efficiency boilers.	This requirement is applicable only if PCB contaminated items (cloth, debris) or soil exhibiting a concentration greater than 50 ppm are treated on property using a method besides incineration.
Occupational Worker Protection & Training (29 CFR 1904 & 1910)	All facility personnel will be trained. Employers will develop and implement a written safety and health program for employees involved in hazardous waste operations.	The Chemical Treatment Project will be conducted in accordance with the requirements of the Project Specific Health and Safety Plan.
DOT Requirements for Transportation of Hazardous Materials 49 CFR 171-173 and 49 CFR 177-179	No one may transport hazardous materials on public highways except in accordance with these regulations.	Off-site shipment of hazardous wastes will be conducted in accordance with these requirements. Shipping papers, marking, labeling, placarding, and emergency response information will be prepared for off-site shipments.
National Environmental Policy Act (NEPA) (10 CFR 1021)	Ensure that all federal agencies (including DOE) consider environmental impacts in the planning and decision-making phases of their projects.	On June 13, 1994 the DOE issued a revised policy statement on NEPA. The new policy allows DOE to rely on the CERCLA process to satisfy the procedural aspects of NEPA. To achieve the goals of this policy, NEPA values will be incorporated in the project through the CERCLA process.
DOE Orders 0.00	To be considered.	All project design activities shall be implemented according to existing site procedures.

Representatives from the FEMP will conduct inspections during performance of this response action to ensure operations are conducted consistent with discussions in technology specific work plans. Inspections will ensure equipment associated with the project is properly cleaned and decontaminated and wastes resulting from the project are properly stored, labeled, and characterized.