

memorandum

Fernald Environmental Management Project

DATE: FEB 14 2003

REPLY TO
ATTN OF: FCP:White

DOE-0212-03

SUBJECT: **BLANKET EXEMPTION FOR COMMERCIAL DISPOSAL OF MIXED LOW-LEVEL WASTE**

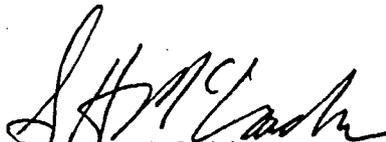
TO: Ward Best, Assistant Manager, OH/OCS

The Fernald Closure Project (FCP) requests an exemption in accordance with the U. S. Department of Energy (DOE) Order 435.1, Chapter I.F.4 in order to continue commercial disposal of Mixed Low-Level Waste (MLLW). The waste streams targeted for disposal at the commercial facility consist of all the MLLW currently indicated in the Fernald Site Treatment Plan (STP) requiring treatment and subsequent disposal.

Envirocare of Utah (Envirocare) is the only available site to receive the treated MLLW for immediate disposal. Disposal of the waste at Envirocare will result in immediate disposition upon treatment, thus avoiding shipment back to the FCP and subsequent storage costs. Immediate disposal at Envirocare also supports the accelerated disposition of low-level waste in accordance with the strategy to achieve 2006 closure at the FCP.

It should also be noted that in order to ensure continued shipment against the Closure Project schedules during approval of the blanket exemptions, 806 cubic yards of mixed low-level waste have been exempted from DOE Order 435.1 pursuant to the existing small quantity exemption. A copy of the January 15, 2003 memorandum providing this notification has been attached as a reference.

Should you require additional information, please contact Debbie White at (513) 648-3218.


Steve H. McCracken
Director

Attachments: As Stated

FEB 14 2003
DOE-0212-03

Mr. Ward Best

-2-

cc w/attachments:

G. Gorsuch, OH/OCS

J. Sattler, OH/FCP

T. Walsh, Fluor Fernald, Inc./MS52-3

cc w/o attachments:

D. White, OH/FCP

**U.S. Department of Energy (DOE)
ORDER 435.1 EXEMPTION REQUEST
FOR COMMERCIAL TREATMENT AND DISPOSAL
OF MIXED LOW-LEVEL WASTE (MLLW) FROM
THE FERNALD CLOSURE PROJECT**

BACKGROUND

Under DOE Order 435.1, when capabilities for treatment, storage or disposal of low level waste (LLW) and mixed low level Waste (MLLW) at DOE facilities are not practical, exemptions may be approved to allow use of non-DOE facilities provided requirements delineated in the order are met.

Waste Stream Description and Project Management

The waste streams covered by this exemption request consist of all the MLLW currently indicated in the Fernald Site Treatment Plan (STP). Also, included under this exemption request are newly generated and future generated MLLW from Fernald which requires or will require treatment and disposal in accordance with the Resource Conservation and Recovery Act (RCRA). All MLLW has been or will be characterized based on process knowledge and or radiological/chemical analysis. All newly generated MLLW will be characterized in accordance with Fernald Closure Project procedures.

The total volume of MLLW covered by this exemption for the period FY 2003 to FY 2006 is approximately 3000 cubic meters. This represents approximately 600 cubic meters of existing MLLW presently managed in accordance with the Fernald STP and approximately 2400 cubic meters expected to be generated from routine and closure activities.

Use of Offsite Disposal Facility

The Fernald site has restrictions on placing wastes exhibiting RCRA characteristics in the Onsite Disposal Facility (OSDF). Other restrictions impacting placement of waste streams into the OSDF include physical, chemical and radiological parameters. The OSDF will ultimately provide on-site disposal capacity for an estimated 2.5 million cubic yards of contaminated soil and debris generated through environmental restoration and facility D&D activities. However, the OSDF is not a viable option for disposal of containerized MLLW waste.

During the Record of Decision (ROD) public comments for Operable Units 2, 3, and 5, the local public and Ohio EPA commented on the need to restrict the disposal of RCRA characteristic waste in the OSDF (beyond numerical Waste Acceptance Criteria limits). This restriction was also a condition of Ohio EPA support of a necessary waiver from the State of Ohio Solid Waste Disposal Regulations to allow the OSDF to be sited at the FCP. As part of the final RODs for Operable Units 2, 3, and 5, approved implementation approaches were developed to meet the intent of the RCRA characteristic waste restriction sought by Ohio EPA.

Based on a review of site characterization data and historical process knowledge, DOE, EPA, and Ohio EPA agreed that several FCP RCRA toxicity characteristic waste streams offer reasonable opportunities to apply cost-effective levels of treatment before off-site disposal.

To date, the use of the Nevada Test Site (NTS) and Hanford to receive MLLW from the FCP is not available. Future availability of these sites will continue to be monitored by the FCP. Due to a need to disposition MLLW after treatment, commercial disposal at Envirocare is the only available option given the regulatory restrictions of the FCP's OSDF.

The primary commercial facilities proposed for treatment of FCP MLLW include the Bechtel Jacobs Broad Spectrum Contractors (Perma-Fix Environmental Services, Inc. and Waste Control Specialists, LLC) and Envirocare of Utah, Inc.

Selection of Existing Contracts

The FCP will continue to use the latest Oak Ridge Field Office contract with Envirocare of Utah, Inc. for disposal of MLLW. Access to the contract will be via an On-line Payment and Collection System. Also, other turnkey treatment/disposal contracts with Envirocare of Utah, Inc will be utilized. Examples are the new Chicago and FCP Basic Ordering Agreement Delivery Orders with Envirocare of Utah, Inc. for treatment and disposal.

Method of Transportation

Both truck and rail transport may be used for sending the waste to treatment and disposal facilities. The decision as to the method is based on cost, schedule, and availability.

Transportation Analysis

The disposition of low level waste is a fundamental component of the CERCLA actions being conducted at the FCP. The DOE NEPA implementing regulations consider transportation as an activity that is necessary and included within the scope of CERCLA Remedial actions. All material shipped from FCP will be packaged in accordance with Title 49 Code of Federal Regulations. Although DOE excludes CERCLA Remedial actions from requiring detailed NEPA documentation, two separate integrated CERCLA/NEPA processes (with full public involvement) were carried out at the FCP which identified the disposition of low level waste as a fundamental component of the remediation of OU3.

**EXEMPTION CRITERIA FOR COMMERCIAL TREATMENT
AND DISPOSAL OF MIXED LOW LEVEL WASTE FROM FCP**

Each of the requirements specified in the U.S. Department of Energy Order 435.1 dealing with approval of exemptions for use of waste disposal services at non-DOE facilities is addressed below.

The non-DOE facilities shall comply with applicable Federal, state, and local requirements.

The non-DOE facilities shall have the necessary permit(s), license(s), and approval(s) for the specific waste(s).

The primary commercial facilities proposed for treatment of FCP MLLW include the Bechtel Jacobs Broad Spectrum Contractors (Perma-Fix Environmental Services, Inc. and Waste Control Specialists, LLC) and Envirocare of Utah, Inc.. Envirocare of Utah, Inc. will be used as the commercial disposal site for all FCP MLLW and treatment residuals.

The DOE and/or DOE contractors have performed audits of these facilities in 2001 and 2002.¹ The latest audit was performed by the Oak Ridge Operations Office in January 2002. The audit revealed no significant deficiencies at any of the facilities. These facilities meet all applicable regulatory requirements. As pertaining to disposal of MLLW, Envirocare of Utah, Inc. possesses the appropriate Federal, State and Local licenses and permits for the storage, treatment and disposal of MLLW. Analytical results from sampling and analysis of FCP MLLW and its treatment residuals will ensure that any waste sent for disposal on behalf of the FCP meets the Waste Acceptance Criteria (WAC) for Envirocare of Utah, Inc. The requisite advanced notifications of MLLW shipments to Envirocare of Utah, Inc. will be made to the proper authorities. Envirocare of Utah, Inc. has been used by the FCP since 1993 for MLLW disposal without incident.

The non-DOE facilities shall be determined by the Field Manager to be acceptable based on a review conducted annually by DOE.

The Oak Ridge Operations Office performed an audit of Envirocare of Utah, Inc. (EOU) in January 2002 and found no significant deficiencies.¹ The Ohio Field Office manager accepts the results of this audit as evidence that EOU is in compliance with DOE 435.1. The use of commercial treatment and disposal facilities will be reviewed periodically by DOE-FCP. Changes in the compliance status of DOE Disposal Facilities will be factored into this planning tool for future MLLW treatment/disposal activities.

Exemptions for the use of the non-DOE facilities shall be documented to be cost effective and in the best interest of DOE, including consideration for alternatives for onsite disposal, an alternative DOE site, and available non-DOE facilities; consideration of life-cycle cost potential liability; and protective of public health and the environment.

In that there are presently no other options, use of Envirocare of Utah, Inc. is cost effective and is in the best interest of the government. Although the STP doesn't specifically mandate disposal schedules of treated waste, immediate disposal is technically and economically justified. Specifically, waste is treated such that the final form must meet both Land Disposal Restriction (LDR) treatment standards as well as the WAC for the available disposal facility. Treated waste, if shipped back to FCP would incur unnecessary storage costs and would greatly impede the FCP Closure Schedule, with no guarantee the waste would be accepted at a later date by a future DOE disposal facility without further characterization and profiling.

The use of commercial treatment and disposal facilities will be reviewed periodically by the DOE FCP. Changes in the availability of appropriate DOE disposal facilities will be factored into this planning tool for future MLLW treatment/disposal activities.

DOE waste shall be sufficiently characterized and certified to meet the facility's waste acceptance criteria (WAC).

Process knowledge and analytical results from sampling and analysis will form the basis for determining that all untreated FCP MMLW conforms to the applicable treatment facility's WAC prior to shipment. This will be accomplished through the waste profiling process. Verification from the treatment facility will be obtained prior to shipping waste off the FCP.

Analytical results from sampling and analysis of treated FCP MMLW will ensure any waste sent for disposal on behalf of the FCP meets the WAC for Envirocare of Utah, Inc.

Appropriate National Environmental Policy Act (NEPA) review must be completed

The disposition of mixed waste is a fundamental component of the CERCLA actions being conducted at the FCP. The DOE's National Environmental Policy Act NEPA Implementing Regulations consider transportation as an activity that is necessary and included within the scope of CERCLA remedial actions. All waste shipped from the FCP will be packaged in accordance with Title 49 Code of Federal Regulations. Although DOE excludes CERCLA actions from requiring detailed NEPA documentation, two separate integrated CERCLA/NEPA processes (with full public involvement) were carried out at the FCP, which identified the disposition of MLLW as a fundamental component of the FCP remediation. The documents referenced below are available in the Fernald Public Environmental Information Center.

(DOE-FCP) has addressed compliance with the National Environmental Policy Act for disposition of MLLW from the Fernald Site to off-site locations pursuant to DOE's NEPA Implementing Regulations and 10 CFR 1021. The disposition of

MLLW waste from the Fernald Site was initiated as part of Removal Action #9, *Removal of Waste Inventories* from the former production facilities at the FCP. DOE determined that the implementation of the Removal Action #9 was excluded from requiring a detailed NEPA evaluation (e.g., an Environmental Assessment).

In 1994, DOE-FCP developed an integrated Proposed Plan-Environmental Assessment (PP-EA) that identified the dismantling and decontamination of all structures contained within Operable Unit (OU) 3 as an appropriate Interim Remedial Action at the FCP. The PP-EA followed the process required by 10 CFR 1021 for preparation of Environmental Assessments, including public involvement. The PP-EA identified a number of remedial actions that required completion as part of the remediation of Operable Unit 3. One of the remedial actions was Removal Action #9, which included the disposition of mixed waste from the FCP to off-site receptors. The public was provided an opportunity to comment on the PP/EA during the public review period held in 1994. An Interim Record of Decision was approved in July of 1994 for implementation of the Interim Remedial Action after completion of the public involvement process.²

In 1996, DOE-FCP developed an Integrated Remedial Investigation/Feasibility Study which evaluated the appropriate final remedial action for Operable Unit 3. Pursuant to DOE's revised policy statement on NEPA issued in June, 1994, NEPA values were incorporated into the Integrated RI/FS and the public involvement process pursuant to CERCLA was followed. The integrated RI/FS did not reconsider decisions made in previous documents (e.g., OU3 IROD), but it once again identified the Remedial actions (including Removal Action #9) that required completion as part of the remediation of OU3. The final ROD³ for OU3 was approved in September of 1996 after completion of the public involvement process.

Headquarters shall be notified of any exemption allowing use of a non-DOE facility and the Office of the Assistant Secretary for Environment, Safety, and Health (EH-1) shall be consulted of the exemption being executed.

The exemption request is being provided to EH-41 by DOE Ohio Field Office. If a response is not received in 15 days, it will be assumed that there are no environmental objections and further consultation with EH-41 is not required.

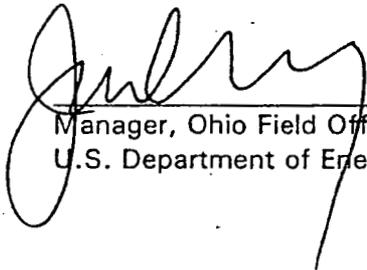
Host States and State Compact where non-DOE facilities are located shall be consulted prior to approval of an exemption to use such facilities and notified prior to shipments being made.

The State of Utah has adopted a Generator Site Access Permit Program that requires generators to obtain a permit to use Utah Radioactive Disposal Sites. FCP has obtained a permit and notified the State of Utah that radioactive waste will be shipped to Oak Ridge in the calendar year 2002.⁴ There have been no expressed concerns associated with planned MLLW shipments.

References

1. U.S. Department of Energy, Office of Environmental Management Oak Ridge Operations, "FY2002 Offsite Treatment/Storage/Disposal Facility Audit, Envirocare of Utah", 1/8/02-1/11/02.
2. U.S. Department of Energy, June 1994; "Operable Unit 3 Record of Decision for Interim Remedial Action." Fernald Environmental Management Project, DOE, Fernald Area Office, Cincinnati, OH.
3. U.S. Department of Energy, August 1996; "Operable Unit 3 Record of Decision for Final Remedial Action." Fernald Environmental Management Project, DOE, Fernald Area Office, Cincinnati, OH.
4. Utah Department of Environmental Quality, Division of Radiation Control, Generator Site Access Permit Number 0110 000 921.

APPROVAL:



Manager, Ohio Field Office
U.S. Department of Energy

2/18/03

Date