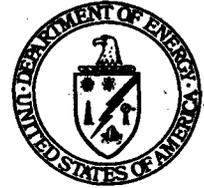




Department of Energy

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JAN 31 2002

Mr. James A. Saric, Remedial Project Manager
United States Environmental Protection Agency
Region V-SRF-5J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

DOE-0274-02

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

Mr. Peter Sturdevant
Compliance Specialist
Air Quality Management Division
Hamilton County Department of Environmental Services
250 William Howard Taft Road
Cincinnati, OH 45218-2660

Dear Mr. Saric, Mr. Schneider, and Mr. Sturdevant:

QUARTERLY REPORT ON DRYER STACK

The purpose of this letter is to transmit the subject report for your review. This information is being provided in response to the Ohio Environmental Protection Agency (OEPA) comments on the Draft Remedial Action Package in which the Department of Energy, Fernald Environmental Management Project (DOE-FEMP) agreed to provide quarterly reports of deviations or excursions from emissions limitations, operational restrictions, and control device operating parameter limitations for the dryer stack. The information contained in this letter satisfies the commitment for Calendar Quarter October 1 through December 31, 2001. Specifically, there are three incidences to report for the time period.

1. During the morning of October 16, 2001, the FEMP in-place testing group was replacing the High Efficiency Particulate Air (HEPA) filters on Bank B of the HEPA Filtration System. Prior to replacing the filters, the crew performed an in-place removal efficiency test. The HEPA filters failed the in-place test at a removal efficiency of 99.92% (99.97% required to pass). While the HEPA filters were in

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operation, the beta detector on the stack filter had not alarmed due to radionuclides (other than radon daughters) building up on the stack filter. In addition, the data from the beta detector did not indicate that radionuclides, other than radon daughters, were collecting on the stack filter. Hence, release of radionuclides out of the stack was negligible. This information was reported to the United States Environmental Protection Agency (USEPA), OEPA, and the Hamilton County Department of Environmental Services (DOES).

2. At 6:35 p.m. on November 15, 2001, a thermocouple for the Thermal Oxidizer (TO) failed causing an erroneous high temperature reading that resulted in the TO shutting down. Feed to the dryer automatically shut down, but the Induced Draft (ID) fan continued to operate ventilating the dryer. Since the TO was shut down while the ID fan operated with waste pit material still in the dryer, the malfunction was reported. The TO is considered the Best Available Technology (BAT) for organic emissions from the dryer and must be operating whenever the ID fan is ventilating the dryer during the processing of pit materials. All of the pit material was out of the dryer and emptied in the product bin in about 45 minutes. Feed to the dryer remained suspended as the dryer was shut down for the weekend.

Releases from the dryer stack were minimal while the dryer was being emptied (45-minute period) because of the following:

- a. The off-gas system was operating, except for the TO, so that only potential emissions from the stack would be hydrocarbons.
- b. The scrubber aided in the removal of hydrocarbons.
- c. Feed was suspended to the dryer so material that was inside the dryer became less as the 45 minutes elapsed.

Also, at 6:58 p.m., the troubleshooting of the failed thermocouple caused a second thermocouple on the same circuit card to erroneously read a high temperature. The second thermocouple is located near the flame arrester for the TO. The false high temperature reading triggered nitrogen to be released in the off-gas system and dryer. As a result of introducing nitrogen, the off-gas system and dryer went into positive pressure. This condition lasted about three minutes (until 7:01 p.m.) before it was corrected and the off-gas system and dryer went back into negative pressure. Although the off-gas system/dryer went into positive pressure, potential emissions from the system were minimal because positive pressure inside the system only lasted for three minutes and most of the material was out of the dryer when the high temperature was erroneously measured by the thermocouple. This information was reported to the Hamilton County DOES.

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3. At 5:18 a.m. on December 21, 2001, Dryer A at the Waste Pits Remedial Action Project (WPRAP) pressurized causing a small steam release at the discharge end of the dryer. The plume was observed at the discharge end and was described to be about 18 inches tall and two inches wide. The dryer continued to pressurize intermittently (a total of 11 times) for a period of 33 minutes. Feed was immediately shut down and remained shut down until after the first of the year. The dryer was pressurized for an estimated total of three to four minutes during the 33 minute period. The highest positive pressure reading inside the dryer was 0.14 inches of water, but most of the readings were less than 0.1 inches of water. The average positive pressure reading inside the dryer was about 0.08 inches of water.

Pressurization of the dryer resulted in an uncontrolled release into the environment. However, these releases were insignificant due to the following:

- a. The dryer was pressurized for a short period of time
- b. Positive pressure readings inside the dryer were minimal
- c. Air samplers near the dryer did not show a significant increase in radioactivity within the vicinity of the dryer during/after the incident.

This information was reported to the Hamilton County DOES.

No additional deviations or excursions occurred during the referenced time period.

If you have any questions or comments, please contact John Kappa at (513) 648-3149.

Sincerely,



Johnny W. Reising
Fernald Remedial Action
Project Manager

FEMP:Kappa

Mr. James A. Saric
Mr. Tom Schneider
Mr. Peter Sturdevant

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cc:

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AR Coordinator, Fluor Fernald, Inc./MS78
ECDC, Fluor Fernald, Inc./MS52-7