Department of Energy
Ohio Field Office
Fernald Environmental Management Project
P. O. Box 538705
Cincinnati, Ohio 45253-8705
(513) 648-3155

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OCT 2 8 2002

DOE-0052-03

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

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, OCTOBER 2002

The purpose of this letter is to transmit the referenced 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 any deviations or excursions from emissions limitations, operational restrictions, and control device operating parameter limitations for the dryer stack.

The information contained in this letter and the enclosure satisfies the commitment for Calendar Quarter July 1 through September 30, 2002. Specifically, there are four incidents to report for the time period. This information was reported to the Department of Environmental Services (DOES), via electronic mail, in accordance with OAC 3745-15-06. Copies of the electronic mail reports are enclosed.

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 Reising

FEMP:Kappa

Johnny W. Reising
Fernald Remedial Action
Project Manager

Enclosure: As Stated

cc w/enclosure:
N. Hallein, EM-31/CLOV
D. Lojek, OH/FEMP
T. Schneider, OEPA-Dayton (three copies of enclosure)
G. Jablonowski, USEPA-V, SRF-5J
F. Bell, ATSDR
M. Cullerton, Tetra-Tech
M. Shupe, HSI GeoTrans
R. Vandegrift, ODH
AR Coordinator, Fluor Fernald, Inc./MS78

cc w/o enclosure:
R. Greenberg, EM-31/CLOV
J. Kappa, OH/FEMP
A. Tanner, OH/FEMP
D. Carr, Fluor Fernald, Inc./MS2
M. Cherry, Fluor Fernald, Inc./MS52-1
D. G. Dalga, Fluor Fernald, Inc./MS52-1
T. Hagen, Fluor Fernald, Inc./MS9
R. W. Houchins, Fluor Fernald, Inc./MS52-1
F. L. Johnston, Fluor Fernald, Inc./MS52-2
P. Shanks, Fluor Fernald, Inc./MS65-2
T. Walsh, Fluor Fernald, Inc./MS52-3
D. L. Zdelar-Bush, Fluor Fernald,/MS52-1
ECDC, Fluor Fernald, Inc./MS52-7

From:	Shanks, Pat
Sent:	Wed 07/03/2002 4:18 PM
To:	Peter.Sturdevant@does.hamilton-co.org
Cc:	Jewett, Marc; Hagen, Terry; Walsh, Thomas; Spradlin, Ted; tom.schneider@epa.state.oh.us'; 'saric.james@epa.gov'; Cherry, Mark; Dalga, Dennis; Desormeau, Joe; Holmes, Renee; Houchins, Ronald; Kappa, John; Limerick, Phil; Lojek, Dave; Poff, Timothy; Skintik, Ed; Spotts, Phil; Zdelar-Bush, Diane
Subject:	Notification of OEPA- Malfunction of WPRAP Thermal Oxidizer

Mr. Sturdevant

The purpose of this message is to notify you, in accordance with OAC 3745-15, of a malfunction that occurred at WPRAP. At 19:50 on 7/2/02, an electrical connector to a thermocouple for the Thermal Oxidizer (TO) became disconnected and caused a "High Temperature" signal to the control room. The "High Temperature" alarm triggered a series of events to occur per design: shut down the burners to the TO, suspended feed to Dryer B, and took the dryer burners to "Low Fire". At the time of the incident, Dryer A was not operating due to maintenance activities on the dryer. The entire off-gas system, except the TO, continued to operate. The draft on Dryer B was maintained during the shutdown of the TO and there was no indication that emissions were released directly from the dryer into the environment. The stack monitoring system did not indicate any increase in radiological emissions during this period.

Once the temperature of the TO fell below its effective range, a light yellow plume was observed coming from the exhaust stack. The problem with the electrical connector was fixed in a timely manner and the TO burners were re-lit at 19:53. The yellow plume coming from the exhaust stack reduced over time as the TO approached its operating temperature of 1600 Deg F. The dryer reached its operating temperature at 20:25 and the yellow plume from the exhaust stack had completely disappeared. Feed of waste pit materials to Dryer B resumed at 20:58.

The TO is considered Best Available Technology (BAT) for organic and CO emissions from the dryers and must be operating whenever the ID fan is ventilating the dryers during the processing of waste pit materials.

During this event, releases from the exhaust stack were considered minimal because: 1) feed to the dryer was suspended immediately so material that was inside the dryer became less as time elapsed; the feed material that was inside the dryer had been run out of the system by approximately 20:40; 2) the off-gas system continued to operate during the malfunction, except for the TO, so the only potential emissions from the exhaust stack would have been CO and hydrocarbons; 3) the scrubber would have removed some of the hydrocarbons; and 4) hydrocarbon and CO emissions would lessen as the TO approached its operating temperature.

If you have any further questions, please call at 648-4203 or send an e-mail message.

Pat Shanks
Fluor Fernald

From: Shanks, Pat
Sent: Thu 08/15/2002 2:23 PM
To: Peter.Sturdevant@does.hamilton-co.org
Cc: tom.schneider@epa.state.oh.us; Hagen, Terry; Jewett, Marc; Spradlin, Ted; Cherry, Mark; Dalga, Dennis; Desormeau, Joe; Holmes, Renee; Houchins, Ronald; Kappa, John; Lojek, Dave; Limerick, Phil; Couch, Mark; Poff, Timothy; Spotts, Phil; Skintik, Ed; Zdelar-Bush, Diane; saric.james@epa.gov; Miller, Barry
Subject: Notification of OEPA- Failure of HEPA filters at WPRAP

Mr. Sturdevant

Pursuant to OAC-3745-15-06, I am notifying you of a malfunction that occurred at WPRAP. On 8/8/02, the DOP Crew went out to WPRAP to replace HEPA filters on Bank B of the HEPA filtration units. The HEPA units are part of the off-gas treatment system for the Dryers. The DOP Crew performed an in-place test of the HEPA filters prior to replacement to verify that the HEPA filters were not leaking while they were in service. The HEPA filters failed the in-place test at 99.94% particulate removal efficiency (passing is 99.97% or greater). The HEPA filters were only in service since 8/5/02. These HEPA filters were replaced with new filters and an in-place test was performed on the new filters after installation. The new filters passed the in-place test at 99.99% particulate removal efficiency.

The DOP Crew did not see any defects or anything unusual (such as the gasket shifted out of place) with the HEPA filters that failed the in-place test. WPRAP personnel are currently investigating the possible cause(s) of why these HEPA filters failed the in-place test.

The beta detector on the stack monitoring system did not alarm while the failed HEPA filters were in service. The purpose of the beta detector is to survey the sample filter on the stack monitoring system for beta radiation to determine if radionuclides are being collected on the sample filter. If the beta detector alarms then this is an indication that the HEPA filters are leaking. I also looked at the data from the beta detector during the time the failed HEPA filters were in service and the data showed that radionuclides were not building up on the sample filter. Therefore, leakage of the HEPA filters was minimal and a release of radionuclides out of the stack was not noticeable.

Please contact me if you have any questions at 648-4203 or send me an e-mail message.

Pat Shanks
Fluor Fernald

From: Shanks, Pat
Sent: Tue 09/10/2002 10:35 AM
To: Peter.Sturdevant@does.hamilton-co.org
Cc: Tom.Schneider@epa.state.oh.us'; 'Saric.James@epa.gov'; Bill.Lohner@epa.state.oh.us'; Hagen, Terry; Jewett, Marc; Spradlin, Ted; Cherry, Mark; Dalga, Dennis; Desormeau, Joe; Houchins, Ronald; Kappa, John; Lojek, Dave; Limerick, Phil; Couch, Mark; Poff, Timothy; Spotts, Phil; Skintik, Ed; Zdelar-Bush, Diane; Miller, Barry; Holmes, Renee
Subject: Notification of OEPA- Failure of HEPA Filters at WPRAP

Mr. Sturdevant

This e-mail message serves as a notification to OEPA of a malfunction that occurred at WPRAP. This notification of a malfunction is in accordance with OAC 3745-15-06.

On 9/7/02, the DOP Crew went out to WPRAP to replace HEPA filters on Bank B of the HEPA filtration units that are part of the off-gas treatment system for the Dryers. The DOP Crew performed an in-place test of the HEPA filters prior to replacement in order to verify that the HEPA filters were not leaking while in service. The HEPA filters failed the in-place test at 99.90% particulate removal efficiency (passing is 99.97% or greater removal efficiency). The failed HEPA filters were replaced with new HEPA filters. The new HEPA filters were also in-place tested after installation and passed the test at 99.975% particulate removal efficiency.

The HEPA filters that failed the in-place test were only in service for about one day. The DOP Crew did not observe anything unusual with the failed HEPA filters prior to replacement such as a gasket shifted out of place or holes in the filter media . The HEPA filters needed to be replaced due to the filters becoming saturated with moisture, which is typically the case for these HEPA filters, and not due to particulate loading.

The beta detector on the stack monitoring system did not alarm while these failed HEPA filters were in service, which indicates radionuclides were not collecting on the stack filter. If the beta detector had alarm then this is an indication that the HEPA filters were leaking and radionuclides were bypassing the HEPA filters. I also looked at the data for the beta detector while the failed HEPA filters were in service. The data also showed that radionuclides were not building up on the stack filter. Therefore, leakage of the HEPA filters was minimal and a release of radionuclides out of the stack was not noticeable.

Please contact me if you have any questions at 513-648-4203 or send me an e-mail message.

Pat Shanks
Environmental Compliance
Fluor Fernald

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From: Shanks, Pat
Sent: Thu 09/19/2002 1:58 PM
To: Peter.Sturdevant@does.hamilton-co.org
Cc: Tom.Schneider@epa.state.oh.us'; 'Saric.James@epa.gov'; Bill.Lohner@epa.state.oh.us'; Hagen, Terry; Jewett, Marc; Spradlin, Ted; Spotts, Phil; Poff, Timothy; Cherry, Mark; Dalga, Dennis; Desormeau, Joe; Houchins, Ronald; Kappa, John; Lojek, Dave; Limerick, Phil; Couch, Mark; Skintik, Ed; Zdelar-Bush, Diane; Yaeger, Daniel
Subject: Notification of OEPA-Malfunction of Thermal Oxidizer at WPRAP

Mr. Sturdevant

Pursuant to OAC 3745-15-06, I am notifying you of a malfunction that occurred at WPRAP. On 9/17/02 at 10:38, an unplanned power outage occurred at WPRAP. The power outage interrupted power to the Dryers and off-gas system. The WPRAP emergency safety systems performed as designed which included the immediate start-up of the emergency generator (approximately 15 seconds after power was interrupted), the shutdown of feed to both Dryers, and the shutdown of the burners to both the Thermal Oxidizer (TO) and the Dryers. The start-up of the emergency generator restored normal operation of the off-gas system except for the TO. The burners to the TO could not be re-lit immediately.

During the time the burners were not lit on the TO, a yellow plume was observed being emitted from the exhaust stack. At 10:50, incoming power was restored at WPRAP and the emergency generator was shut down. At 10:56, the burners to the Thermal Oxidizer were re-lit. As the Thermal Oxidizer approached the normal operating temperature , the yellow plume began to disappear. At 10:59, the Thermal Oxidizer was near normal operating temperature and the yellow plume was no longer visible. At 13:23, the Dryers reached proper operating temperatures and feed was restored to both Dryers.

This incident is being reported to OEPA due to the fact that the TO was not operating while the ID Fan was operating and waste pit materials were being processed inside the Dryers. The TO is considered Best Available Technology (BAT) for organic and carbon monoxide emissions from the Dryers and must be operating whenever the ID Fan is ventilating the Dryers during the processing of pit materials.

Releases from the exhaust stack were considered minimal during this incident because: 1) feed to the Dryers was suspended immediately after the power outage began so material inside the Dryers became less as time elapsed; 2) the only potential emissions from the exhaust stack were organics and carbon monoxide since the TO was the only off-gas equipment not operating while the TO burners were not lit; 3) the scrubber would have removed some of the organics from the off-gas stream; and 4) the TO was not at proper operating temperature for only 21 minutes.

If you have any further questions, please call at 648-4203 or send an e-mail message.

Pat Shanks
Fluor Fernald