



Department of Energy

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APR 29 2002

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

DOE-0448-02

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 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 satisfies the commitment for Calendar Quarter, January 1, 2002 through March 31, 2002. Specifically, there are three incidences to report for the time period. This information was reported to the Department of Environmental Services (DOES) on the days they occurred and are included as enclosures.

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

APR 29 2002

DOE-0448-02

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

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

Sincerely,



Johnny Reising
Fernald Remedial Action
Project Manager

FEMP:Kappa

Enclosures: As Stated

cc w/enclosures:

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

cc w/o enclosures:

A. Tanner, OH/FEMP
D. Carr, Fluor Fernald, Inc./MS2
M. Cherry, Fluor Fernald, Inc./MS52-1
D. Dalga, Fluor Fernald, Inc./MS52-1
T. Hagen, Fluor Fernald, Inc./MS65-2
R. Houchins, Fluor Fernald, Inc./MS52-1
D. Zdelar-Bush, Fluor Fernald, Inc./MS52-1
T. Walsh, Fluor Fernald, Inc./MS46
ECDC, Fluor Fernald, Inc./MS52-7

From: Shanks, Pat

Sent: Friday, February 08, 2002 2:56 PM

To: 'Peter.Sturdevant@does.hamilton-co.org'

Subject: Notification of EPA due to steam release at WPRAP

Mr. Sturdevant

The purpose of the message is to document my notification of your office yesterday about 4:45 pm of an incident that occurred at WPRAP on 2/6/02. During routine operation of Dryer A, the differential pressure across the prefilters for HEPA unit- Train B climbed high enough to warrant replacement of the prefilters. At 8:59 pm, HEPA unit- Train B was valved out of service and HEPA unit- Train A was placed into service to accommodate the prefilter replacement on Train B. After the switch to Train A, the draft on the Dryer became unsettled due to the filters in Train A being new and less restrictive compared to Train B where the prefilters were loaded with materials and restricted the flow of air through them. The Control Room Operator tried to control the draft on the Dryer using the operating Induced Draft (ID) Fan A. ID Fan A was unsuccessful in controlling the draft so the Operator switched to the backup ID Fan B. Each ID Fan is equipped with a Swing Damper on the discharge duct. This damper functions as a check valve and is designed to prevent backflow through the ID Fan that is off-line when operating the other ID Fan. When the ID Fans were switched from A to B, the Swing Damper stuck in the closed position. This effectively blocked the flow of air created by the ID Fan B and eliminated the draft on the operating Dryer. The Control Room Operator noted the lost of draft on the Dryer and immediately switched back to ID Fan A. ID Fan A was successful in controlling the draft and the appropriate negative pressure was restored on the Dryer.

The entire event lasted about 5 minutes from 8:59 pm to 9:04 pm. The total time that elapsed when the Swing Damper was closed and ID Fan B was operating was about 1-2 minutes. During this event, the Dryer pressure went slightly positive to a level of approximately +0.3 inches of water column. When the Dryer went positive, a release of steam was observed at the discharge end of the Dryer. The plume reached approximately 3 feet into the air before dissipating. The release was uncontrolled, therefore, notification is required. WPRAP personnel believes the release was insignificant because: a) the Dryer was in positive pressure for a short time; b) the pressure inside the Dryer was not great; and c) the amount of steam that was observed being released out of the Dryer was not great.

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

Pat Shanks
Fluor Fernald

From: Shanks, Pat

Sent: Friday, February 22, 2002 3:59 PM

To: 'Peter.Sturdevant@does.hamilton-co.org'

Subject: Notification of EPA due to the results of a power failure at WPRAP

Mr. Sturdevant

The purpose of this message is to provide more details of the temporary loss of power that occurred at WPRAP on 2/20/02 which I reported to your office at about 4:30 pm on that day.

At 4:47 am on 2/20/02, electric power to a portion of WPRAP was temporarily lost. At the time of the power failure, both Dryers were operating at full temperature and feed was being introduced into both Dryers. When the power failure occurred, power was lost to both Dryers causing the burners to shut down. Power was also lost to the feed and product conveying systems and the off-gas control system, which caused the burners to the Thermal Oxidizer to shut down. The emergency diesel generators immediately kicked on as soon as electrical power was lost. The emergency generators restored power to the ID Fans, Subcooled Quench, and Scrubber in about 20 seconds. The power outage lasted a very short time before normal electrical power was restored.

Feed to the Dryers remained shut down after normal power was restored. The product conveyors resumed operation in order to empty out the Dryers which was accomplished at approximately 5:45 am. The burners for the Thermal Oxidizer and the Dryers had to be purged before they could be re-lit. The burners to the Thermal Oxidizer were re-lit at 5:15 am (temperature inside the Thermal Oxidizer was 500 deg F) and the set operating temperature of 1600 deg F was reached at 6:10 am. Feed to the Dryers was resumed at 6:30 am after plant conditions were completely assessed for readiness to process waste pit materials again.

Immediately after normal power was lost at WPRAP, steam was observed emanating from the Dryer discharge area. This event lasted about 5 minutes coinciding with the loss of power to the ID Fan and the recovery of negative pressure inside the Dryer. Notification of your office was required due to the uncontrolled release of steam from the Dryers and the fact that the Thermal Oxidizer was below the required temperature while pit material was still in the Dryers (until 5:45 am).

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

Pat Shanks
Fluor Fernald

From: Shanks, Pat

Sent: Thursday, March 07, 2002 2:07 PM

To: 'Peter.Sturdevant@does.hamilton-co.org'

Subject: Notification of EPA due to an uncontrolled release at WPRAP

Mr. Sturdevant

This message provides more details of the incident that was reported to your office on 3/5/02 at about 4:30 pm.

During the day on Monday 3/4/02, feed was established to both Dryers A and B at WPRAP. In the morning hours on Tuesday 3/5/02, WPRAP operators started experiencing problems controlling the draft (negative pressure) on the Dryers. When the Dryer pressure reaches zero, the feed to the Dryer is stopped by the process interlocks. The feed system can only be restarted once the pressure inside the Dryer returned negative. The operators spent the morning trying to find what was causing the Dryers to periodically lose the draft on the Dryers. During this investigation process, a hole was discovered in the Dryer B Feed Screw Housing at about 10:30 am. The dimensions of the hole was about 1 inch by 2.5 inches. The metal around the hole was very thin and the hole appeared to have been a result of corrosion.

After the hole was discovered, water vapor was observed being exhausted from the hole each time the pressure inside the Dryer went positive. The water vapor would travel as much as 4 to 5 feet away from the hole before dissipating. The frequency of the Dryer pressure going slightly positive varied anywhere from 5 to 10 minutes apart to occurring every 30 seconds or so. The WPRAP operators do not know when the hole developed to allow water vapor to escape from it. A high volume air sampler was placed in the area minutes after the hole was discovered. A portable HEPA filtration unit was placed at the hole about 10 to 15 minutes after the hole was discovered to filter the water vapor being released from the hole. At about 11:11 am, a temporary patch was placed over the hole which prevented venting of water vapor from the hole. Once the patch was installed, the WPRAP operators were able to maintain negative pressure inside the Dryer.

WPRAP personnel plans to inspect the Feed Screw Housings and other areas of the Dryers. Permanent repair of the hole will be accomplished at the earliest opportunity.

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

Pat Shanks
Fluor Fernald