

Performance Materials and Technologies

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December 17, 2013

UPS/Next Day Air

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

Docket No. 40-3392
License No. SUB-526

Subject Honeywell Metropolis Works 30-Day Written Follow-Up Report
Event No. 49552

The Honeywell Metropolis Works facility (MTW) reported to the NRC Operations Center in accordance with 10 CFR 40.60(b)(2) an event in which equipment is disabled or fails to function as designed. This letter is a follow-up report to address specific items required by 10 CFR 40.60(c)(2).

NRC Event Number 49552 dated November 18, 2013

The following information was provided in the 24 Hour NRC Telephone Report:

Description of the Event:**REMOTELY OPERATED ISOLATION VALVE FAILED TO CLOSE**

"At approximately 1400 (CDT on 11/17 /2013) the facility suspended operations due to a tornado warning. Located on the first floor of the Feed Materials Building, it was determined that a remotely operated valve closing mechanism at the #2 fill spot failed to close a UF6 cylinder valve. The cylinder valve was then closed manually by operations personnel. There was no damage, no release, or employee exposure due to this event."

NRC Region II informed: Richard Gibson

Reporting Requirement: 10 CFR 40.60(b)(2), Safety Equipment Failure

Isotope, Quantities and Chemical Form: Uranium Hexafluoride.

Personnel Radiation Exposure Data (if applicable): None.

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NMSS

10 CFR 40.60(c)(2) written 30-day follow up report required sections

(2)(i) A description of the event, including the probable cause and the manufacturer and model number (if applicable) of any equipment that failed or malfunctioned.

On November 17, 2013 at 1301 CST, during normal operations a UF₆ cylinder was placed in #2 cylinder fill spot on the first floor Distillation Area of the Feed Materials Building and connected to the distillation system. The cylinder fill valve was opened and the automatic valve closer was connected to the valve stem. At 1400 CST, a tornado warning prompted an emergency shutdown of operations at Metropolis Works. As a part of the emergency shutdown, the UF₆ cylinder fill spot #2 automatic valve closer motor was activated to shut the cylinder fill valve. At 1410 CST, the distillation operators noticed that the valve actuator was still turning and was not connected to the cylinder valve. The cylinder valve was checked and found to be in the open position. The valve closer was shut off and the cylinder valve closed manually.

Operators notified supervisors and the actuator was inspected. No physical defects were found and the motor operated normally. Cylinder valve was also checked and did not show any indication of damage and had operated normally when closed. Further investigation revealed that operators connecting the actuator were careful not to over-tighten the set screw that holds the actuator extension onto the valve stem for concern of over damaging or wearing out the set screw. At the same time, the square tubing of the extension was worn, rusted, and prone to some degree of binding when it should slide freely in and out to follow the motion of the valve stem as it closes. If the extension binds under torque and the set screw is not tight, the valve stem will pull out of the extension and fail to operate the valve fully.

Based on operator reports and physical examination the likely root cause was determined to be a combination of operator's error and equipment wear.

(2)(ii) The exact location of the event.

The exact event location was #2 cylinder fill spot on the first floor Distillation Area of the Feed Materials Building.

(2)(iii) The isotopes, quantities, and chemical and physical form of the licensed material involved.

The isotope processed in the Distillation Area of the Feed Materials Building is natural uranium in the form of Uranium Hexafluoride (UF₆).

(2)(iv) Date and time of the event.

The incident occurred at 1400 CST on November 17, 2013, and the 24-hour report was submitted on November 18, 2013, at 1351 ET.

(2)(v) Corrective actions taken or planned and the results of any evaluations or assessments.

The following actions were taken in response to the event:

1. A Problem Evaluation Report (PER) was initiated in Honeywell's Incident Tracking & Corrective Actions (IT&CA) system on 11/18/2013.
2. A Root Cause Analysis (RCA) was initiated for this event on 11/19/2013. The RCA determined that the root cause was a failure to identify and correct worn equipment despite regular daily use in connecting the valves.
3. The following interim containment action was completed as recommended by the RCA:
 - Operators were instructed to tighten the set screw fully. Completed on 11/19/2013.

The following actions recommended by the RCA are planned in response to the event:

- The extension slide will be polished and reamed associated with surface corrosion. Target date 12/19/2013.
- Revise the standard operating procedure to specifically address the installation of the extension slide. Target date 01/10/2014.
- Revise the preventative maintenance inspection to include the extension slide for each fill spot. Target date 01/10/2014.
- Evaluate the design of the actuator and the use of the extension slide. Target date 03/01/2014.

(2)(vi) The extent of exposure of individuals to radiation or to radioactive materials without identification of individuals by name.

N/A.

Please contact Mark Wolf, Nuclear Compliance Director, at (618) 309-5013, if you have questions or comments regarding this matter.

Sincerely,



Jim Pritchett
Plant Manager

cc: Regional Administrator
Region II, US Nuclear Regulatory Commission
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