

Honeywell

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July 21, 2023

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
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. 56586

The Honeywell Metropolis Works facility (MTW) reported to the NRC Operations Center in accordance with 10 CFR 40.60(b)(2) an event where a safety system failed to operate as designed. This letter is a follow-up report to address specific items required by 10 CFR 40.60(c)(2).

NRC Event Number 56586 dated June 22, 2023

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

Description of the Event:

REMOTELY OPERATED ISOLATION VALVE FAILED TO CLOSE

On the first floor of the Feed Materials Building at approximately 1530 (CDT on 06/21/2023) while performing cylinder filling operations a visual indicator of material was identified and operators initiated mitigating actions in accordance with site operating procedures. It was determined that a remotely operated valve closing mechanism at the #4 fill spot failed to close a UF6 cylinder valve. The cylinder valve was then closed manually by operations personnel. Based on preliminary observations, no regulatory limits were exceeded.

NRC Region II informed: Tom Vukovinsky

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

Isotope, Quantities and Chemical Form: Uranium Hexafluoride.

Personnel Radiation Exposure Data (if applicable): Maximum exposure from this event was 1.3 mrem.

IE72
NMSS01
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 June 21, 2023 during normal operations a UF₆ cylinder was placed in the #4 cylinder fill spot on the first floor in the distillation area of the Feed Materials Building (FMB) and connected to the distillation system. The cylinder fill valve was opened and the automatic valve closer was connected to the valve stem. At 15:30 CDT a loss of containment was witnessed leading nearby operations personnel to depress the local Emergency Stop (E-Stop). As part of the E-Stop, the UF₆ cylinder fill spot #4 automatic valve closure motion was activated to shut the cylinder fill valve. Distillation operators observed that the actuator was not connected to the cylinder fill valve. The cylinder valve was checked and found to be in the open position. The cylinder fill valve was closed manually by the operator.

The closer arm selected for service did not have the required set screws on the ends, and the internal mating surfaces appeared to be rough and prone to friction. It is suspected that the closer arm did not fully travel the path of the cylinder valve stem to fully close the cylinder valve. As the cylinder valve closes, the distance between the pneumatic motor and the cylinder valve stem end increases. To perform properly, the closer arm needs to extend the entirety of the travel path in order to fully close the cylinder valve.

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

The exact event location was #4 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 1530 CDT on June 21, 2023, and the 24-hour report was submitted on June 22, 2023, 1300 CDT.

(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 Corrective Action Report (CAR) was initiated in Honeywell's electronic Corrective Action and Tracking system (eCATS) on 6/26/2023. eCATS number – ITA20230177-01
2. A Root Cause Analysis (RCA) was initiated for this event on 6/21/2023. The primary Root Cause was identified as: Improper installation of the cylinder closer arm. The incident was posted under the MST corrective action program number - 475361
3. The following corrective actions were Initiated as recommended by the primary root cause:
 - Revise procedure to have a "in hand" checklist for cylinder hook up.
 - Revise design of cylinder closer arm.
 - Specifically identify closer arm for cylinder type.
 - Require visual inspection of cylinder closer arm.

Additionally, the following contributing causes were also identified during the completion of the RCA:

- Closer Exposed to the elements
- Closer not periodically cleaned and lubricated
- Filling procedure didn't account for multiple closer styles
- Chosen closer arm was not designed to have set screws
- Operations training included OJT simulation. Hook-up to live system not possible during training period to avoid attaching test cylinder to active system.
- Operators whose qualifications were not current performing tasks

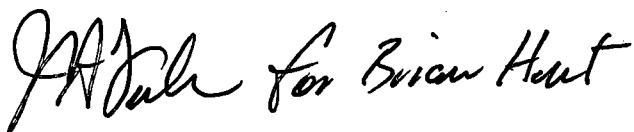
Actions associated with the above contributing causes are being finalized.

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

- The maximum exposure for this event is 1.3 mrem.

Please contact Mr. Sean Patterson, Regulatory Affairs Manager at (618) 524-6341 if you have questions or comments regarding this matter.

Sincerely,

A handwritten signature in black ink that reads "JAH for Brian Hunt". The signature is written in a cursive, flowing style.

Brian Hunt
Director Chemical Plant Operations

cc: Regional Administrator
Region II, US Nuclear Regulatory Commission
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Atlanta, GA 30303-1257