



REGION 5

CHICAGO, IL 60604

MEMORANDUM

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Honeywell Metropolis Works, Metropolis, Illinois

FROM: Erin DuMontelle, Environmental Engineer
AECAB (MI/WI)

THRU: Sarah Marshall, Section Supervisor
AECAB (MI/WI)

TO: File

BASIC INFORMATION

Facility Name: Honeywell International Inc.

Facility Location: 2768 S US 45 Road Metropolis, IL 62960

Date of Inspection: February 6 – February 7, 2024

EPA Inspector(s):

1. Erin DuMontelle, Environmental Engineer
2. Veronica Fischer, Environmental Engineer
3. DeMarkus Hodge, Environmental Engineer

Other Attendees:

1. Sean Chisek, Environmental
2. Jeremy Dedmon, Operations Manager
3. Myron Wessel, Operations Manager
4. Natasha Dile, HSE Manager
5. Brett Suits, Plant Manager
6. Sean Patterson, Regulatory Affairs Manager
7. Jeff Taylor, Training Supervisor
8. Bob Sanders, Regulatory Affairs
9. Jno Benard, Site Services Manager
10. Kenton Dunigan, Reliability Supervisor
11. Casey Walls, Maintenance Manager

Facility Name: Honeywell – Metropolis Works
Facility Location: 2768 S US 45 Road Metropolis, IL 62960
Date of Inspection: February 6th - February 7th, 2024

12. Brittany Johnson, HSE Engineer II
13. Darrin Goss, Union President
14. Daniel Bicski, Security Manager
15. Tony Dodd, HSE Lead Engineer
16. James Birdsong, HSE Senior Engineer

Contact Email Address: Sean.Chisek@Honeywell.com

Purpose of Inspection: Review the facility's Chemical Accident Prevention Program, Risk Management Plan and evaluate compliance with the facility's Title V Air Permit

Facility Type: Uranium Processing

Regulations Central to Inspection: 40 C.F.R. Part 68 – Chemical Accident Prevention Provisions, specifically regarding the Risk Management Program, and Section 112 of the Clean Air Act

Date	Arrival Time (CT)	Departure Time (CT)
February 6, 2024	8:07 AM	4:15 PM
February 7, 2024	7:55 AM	4:25 PM

Inspection Type:

- ☐ Unannounced Inspection
☒ Announced Inspection

OPENING CONFERENCE

- ☒ Presented Credentials
☒ Stated authority and purpose of inspection
☒ Small Business Resource Information Sheet not provided since Honeywell is not a small business.
☒ Provided CBI warning to facility

The following information was obtained verbally from Honeywell personnel unless otherwise noted.

Process Description:

Honeywell International Inc. (Honeywell) owns and operates a uranium processing facility in Metropolis, Illinois (the Facility). The Facility receives uranium ore as a raw material and converts it to uranium hexafluoride (UF₆) through a multi-stage process. Processes include: Ore Preparation; Uranium Tetrafluoride Process, also referred to as Green Salt; Uranium Hexafluoride Unit, also referred to as Fluorination; and Distillation. The Facility creates fluorine on-site, as needed, from hydrogen fluoride (HF) that is stored on-site in the Fluorine Plant. The Facility also has a Uranium Recovery Unit that consists of a wet process that recovers the residual uranium and HF from process

Facility Name: Honeywell – Metropolis Works
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waste streams. Chemicals are either stored in rail cars on Facility property, drums, or the tank farm. Chemicals that are used or handled on-site that are listed as regulated substances under the Chemical Accident Prevention Provisions, codified at 40 C.F.R. Part 68 (Part 68) include HF and aqueous ammonia. The Facility also handles the regulated substances hydrogen and fluorine at quantities below the thresholds specified in Part 68.

Staff Interview:

Honeywell runs 24/7 with approximately 200 employees and 150 contractors. The facility went into shutdown in 2012 for a year. In 2017, the plant went into the annual shutdown, but did not resume operation following the routine shutdown period because the Facility was idled for economic reasons. Following the notice, the plant emptied vessels and tanks and was fully closed by mid-2018. During the idle, the Facility continued to receive uranium ore and operate its uranium ore handling process. In February 2021, the facility received a restart notice. HF was brought back on-site in December of 2022, and the facility was in full operation by July 2023.

All uranium is owned by the customer; the ore that arrives comes from multiple international sites, and a blend is created. Different blends are specified and managed through the use of batch sheets. The facility is solely using the materials to produce UF₆.

Data Collected and Observations:

Emissions and Control Equipment

Honeywell's process contains various hazardous air pollutants (HAPs), including uranium compounds, HF, and metal HAP. The HF unloading operation is controlled using a scrubber. The Facility also has scrubbers for its green salt process and fluorination process. A system of dust collectors is used to control particulate emissions, including HAP emissions, across the Facility. The ash vacuum system is the primary dust collection system used to control particulate and particulate HAP from the main process. EPA inspectors requested records related to performance testing and monitoring of these control devices for review following the inspection.

Process Hazard Analysis

Process hazard analyses are performed for each process using a hazard and operability study (HAZOP) methodology. If needed, a layer of protection analysis (LOPA) will be performed for scenarios for which the required risk reduction was not met or there are not enough safeguard credits.

Mechanical Integrity

A third-party contractor completes the tank inspections for all UT of tanks, piping, and pressure vessels. Each process inspects their unique E-Stops annually; the facility had plans to incorporate each E-stop inspection into one inspection. Honeywell noted that they are completing an on-going study to review unique damage mechanisms.

Facility Name: Honeywell – Metropolis Works
Facility Location: 2768 S US 45 Road Metropolis, IL 62960
Date of Inspection: February 6th - February 7th, 2024

Management of Change (MOC)

The facility uses an online management system for all MOCs. The process requires the initiation paperwork and both area and department approval before work can be completed. A Pre-Startup Safety Review (PSSR) is required before the change can be implemented. PSSR documents are required to be uploaded with the MOC documentation. At the time of the inspection, there were MOCs that were missing the PSSR.

Pre-Startup Safety Review (PSSR)

The facility provided the current PSSR documentation that requires a punch list. This punch list was either blank or missing for multiple PSSRs to notate whether they had been properly completed.

Compliance Audits

All the 2023 PSM Audit recommendations were still open at the time of the inspection. The compliance audit team is always lead by a corporate-level team that also utilizes a third-party contractor who is knowledgeable in the process.

Training

Training includes classroom hours and on-the-job Training (OJT). Both conclude with an evaluation and interview that is required to be signed by both the evaluators (usually subject matter experts and/or experienced operators) and the new trainee operator. Certification can be pulled on concern which would require requalification.

Contractors

Contractors are reviewed using a third-party database that pre-screens the companies. Contractors do not complete normal operations at the site. Each contractor group is required to have a designated Honeywell person assigned to their project.

TOUR INFORMATION

EPA Toured the Facility: Yes

Tour Observations:

Unloading Area

The unloading area for rail cars contains three bays; two are dedicated to HF, and the third is for acids. Two HF cars were onsite. Rail cars were also positioned on the track outside of the fence line. The unloading area contains multiple HF sensors and multiple visible alarms to denote the status of the tank. The scrubber is connected to control vapors from unloading and can be viewed from the DCS.

Main Process Area

Each process area has dedicated HF monitors that are monitored from the DCS. The process area is color-coded based on each specific process.

Control Room

The control room was relocated during the idle. Each station is dedicated to a part of the process, but each has access to the HSE alarms both inside the process unit and along the fence line. There was one fence line monitor down at the time of the inspection. Personnel noted that it was standard to notify the supervisor in the area if a monitor went off and then to send an assistant or lead to visually check.

Cylinder Storage

Cylinders are stored for an allotment of time before they can be loaded for shipment.

Hydrogen Tank

The hydrogen tank is owned and operated by AirGas; Honeywell operators do not have access to the tank.

GF2 Process Area

This process area has designated maintenance staff, and the area is run on an on-demand basis. There are cell booths for maintenance which are connected to a scrubber, but there was a sewer booth that was not connected at the time of the inspection. There are HF monitors both inside the cell room and near the maintenance booths which will alarm at the DCS for the GF2 control station in the building. 53 cells were online at the time of the inspection out of 76 positions available.

Photos and/or Videos: were taken during the inspection and are listed in Appendix A.
Photos were taken using a Canon 360HS Digital Camera.

RECORDS REVIEW

EPA reviewed documents for the Following RMP Level 3 Requirements: Program Applicability, Management Structure, Off-site consequence analysis, Worst-case release scenario analysis, Alternative release scenario analysis, Hazard Assessment Documentation, Five-year accident history, Process Safety Information (PSI), Process Hazard Analysis (PHA), Mechanical Integrity (MI), Operating Procedures (SOP), Training, Management of Change, Pre-startup safety review (PSSR), Compliance Audits, Incident Investigation, Employee Participation, Hot Work Permit, Contractors, Emergency Response, and their Risk Management Plan.

CLOSING CONFERENCE

☐ Provided U.S. EPA point of contact to the facility

Outstanding requested documents following the inspection:

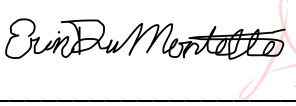
- Baker Risk Report for Old Command Center
- Design and Sizing documentation for GS and F/D Relief Tanks
- Emissions Tracking Spreadsheet
- Emissions records from 2021 to 2024

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- Documentation of the emission points correlated to the equipment IDs
- SO2 emission calculations since 2023 restart
- Health Physics sample location results from 2021 to 2024
- CAM logs from 2021 to 2024
- KOH sample records for scrubbers from 2021 to 2024
- CAM Plan Applications
- Permit renewal application
- Stack test report for the thermal oxidizer
- Stack test for the GF2 scrubber
- Install date of the thermal oxidizer and design documentation
- 2023 Semi-annual report covering January through June
- Root Cause Analysis for June 2023 Line Break
- Monthly UF6 production records since 2023 startup
- Monthly HF usage since HF was brought back onsite after 2018 idle
- Date for when cell washing was started
- Date for when cells started pushing gas to the process

Concerns: Any concerns are noted above in the Data Collected and Tour Observation sections. These concerns were discussed with Honeywell personnel during the closing conference.

DIGITAL SIGNATURES

Report Author:  Digitally signed by ERIN
DUMONTELLE
Date: 2024.04.04 08:44:27
-05'00'

Section Supervisor: **SARAH
MARSHALL**  Digitally signed by SARAH
MARSHALL
Date: 2024.04.04 13:31:48
-05'00'

APPENDICES

1. Appendix A: Digital Image Log and Digital Video Log

Facility Name: Honeywell – Metropolis Works
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APPENDIX A: DIGITAL IMAGE LOG AND DIGITAL VIDEO LOG

Inspector Name: Erin DuMontelle

Archival Record Location: Enf_HoneywellMTW_IL_24_Inspection_Photos

Image Number	File Name	Date and Time (CDT)	Description of Image
1	IMG_0681.JPG	02/07/2024 - 2:09 PM	Unloading Area
2	IMG_0682.JPG	02/07/2024 - 2:09 PM	Unloading Area
3	IMG_0683.JPG	02/07/2024 - 2:11 PM	Unloading Scrubber
4	IMG_0684.JPG	02/07/2024 - 2:19 PM	Emission Vents
5	IMG_0685.JPG	02/07/2024 - 2:19 PM	Incinerator Stack
6	IMG_0686.JPG	02/07/2024 - 2:23 PM	F/D Relief Tank
7	IMG_0687.JPG	02/07/2024 - 2:23 PM	Incinerator (East)
8	IMG_0688.JPG	02/07/2024 - 2:25 PM	GS Relief Tank
9	IMG_0689.JPG	02/07/2024 - 2:25 PM	Hydrogen Tank