



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
245 PEACHTREE CENTER AVENUE N.E., SUITE 1200  
ATLANTA, GEORGIA 30303-1200

January 24, 2025

Brett Suits  
Plant Manager  
Honeywell Metropolis Works  
P.O. Box 430  
Metropolis, IL 62960

SUBJECT: HONEYWELL METROPOLIS WORKS – INTEGRATED INSPECTION REPORT  
04003392/2024004

Dear Brett Suits:

This letter refers to the U.S. Nuclear Regulatory Commission (NRC) inspection activities conducted from October 1, 2024, to December 31, 2024, for the Honeywell Metropolis Works facility. On October 3, 2024, the NRC inspectors discussed the results of this inspection with you and other members of your staff. The results of this inspection are documented in the enclosed report.

No violations of more than minor significance were identified during this inspection.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

A handwritten signature in blue ink, appearing to read "Eric C. Michel".

Signed by Michel, Eric  
on 01/24/25

Eric C. Michel, Chief  
Fuels Oversight Branch 2  
Division of Fuels, Radiological Safety, and Security

Docket No. 04003392  
License No. SUB-526

Enclosure:  
As stated

cc w/ encl: Distribution via LISTSERV

SUBJECT: HONEYWELL METROPOLIS WORKS – INTEGRATED INSPECTION REPORT  
04003392/2024004 DATED JANUARY 24, 2025.

**DISTRIBUTION:**

L. Suggs, RII  
R. Penmetsa, RII  
E. Michel, RII  
T. Vukovinsky, RII  
G. Goff, RII  
O. Siurano-Perez, NMSS  
J. Downs, NMSS  
R2EICS  
PUBLIC

**ADAMS ACCESSION NUMBER: ML25010A394**

<b>Cover Letter Only:</b>		<input checked="" type="checkbox"/> Non-Sensitive			<input checked="" type="checkbox"/> Publicly Available	
<input checked="" type="checkbox"/> SUNSI Review		<input type="checkbox"/> Sensitive			<input type="checkbox"/> Non-Publicly Available	
OFFICE	RII/DFRSS	RII/DFRSS	RII/DFRSS	RII/DFRSS	RII/DFRSS	
NAME	T. Vukoninsky	G. Goff	J. Radaubaugh	L. Pitts	E. Michel	
DATE	01/12/25	01/10/25	01/21/25	01/12/25	01/24/25	

**OFFICIAL RECORD COPY**

**U.S. NUCLEAR REGULATORY COMMISSION  
Inspection Report**

Docket Number: 04003392

License Number: SUB-526

Report Number: 04003392/2024004

Enterprise Identifier: I-2024-004-0043

Licensee: Honeywell Metropolis Works

Facility: Honeywell Metropolis Works

Location: Metropolis, IL

Inspection Dates: October 01 - 03, 2024

Inspectors: L. Pitts, Sr. Fuel Facilities Inspector  
J. Raudabaugh, Fuel Facilities Inspector

Approved By: Eric C. Michel, Chief  
Fuels Oversight Branch 2  
Division of Fuels, Radiological Safety, and Security

Enclosure

## **SUMMARY**

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an integrated inspection at Honeywell Metropolis Works, in accordance with the fuel cycle facility inspection program. This is the NRC's program for overseeing the safe operation of licensed fuel cycle facilities. Refer to <https://www.nrc.gov/materials/fuel-cycle-fac.html> for more information.

### **List of Violations**

No violations of more than minor significance were identified.

### **Additional Tracking Items**

None.

## PLANT STATUS

The Honeywell Metropolis Works (MTW) uranium conversion facility is located near Metropolis, IL. The licensee is authorized to possess 150 million pounds of natural uranium ore and to convert the uranium ore into uranium hexafluoride (UF<sub>6</sub>). During this inspection period, Honeywell conducted normal conversion operations.

## INSPECTION SCOPES

Inspections were conducted using the appropriate portions of the inspection procedures (IPs) in effect at the beginning of the inspection unless otherwise noted. Currently approved IPs with their attached revision histories are located on the public website at <http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html>. Inspections were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter (IMC) 2600, "Fuel Cycle Facility Operational Safety and Safeguards Inspection Program." The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel to assess licensee performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards.

## RADIOLOGICAL CONTROLS

### 88030 - Radiation Protection

The inspectors evaluated selected aspects of the licensee's radiation protection (RP) program to verify compliance with selected portions of 10 CFR 19, 20, 40, and Chapter 4, "Radiation Protection," and Chapter 11, "Management Measures," of the facility's license application, license conditions, and applicable licensee procedures.

### Radiation Protection Program Review (IP Sections 02.01, 02.02, 02.03, 02.23)

The inspectors interviewed licensee staff and reviewed licensee procedures and other documentation related to the implementation of the RP and radioactive waste programs and the ALARA program to verify compliance with 10 CFR 20.1101(a), 20.1101(b), 20.1101(c), 20.2102, and sections 4.1, 4.4, and 11.4 of the license application. Specifically, the inspectors performed the following:

#### Radiation Protection/Waste Program Implementation and Procedures (Inspection Procedure (IP) Sections 02.01 and 02.03)

- reviewed MTW-ADM-HP-0100, "Radiological Protection Program," Revision (Rev.) 27
- reviewed MTW-SOP-HP-0112, "Release of Personnel, Materials, Equipment, and Transport Vehicles from the Restricted Area," Rev. 11
- interviewed licensee staff and security officers regarding implementation of the requirements in MTW-SOP-HP-0112
- observed security officers performing surveys of transport vehicles prior to releasing these vehicles
- reviewed the quarterly random alpha spot surveys (MTW-SOP-HP-112C) for March, June, and September 2024

- reviewed MTW-SOP-HP-0216, "Respiratory Protection Training and Fit Testing," Rev. 23
- interviewed licensee staff regarding labeling and shipping of radioactive waste
- observed the radioactive waste labeling for shipment 0714-04-0249
- reviewed MTW-SOP-HP-0222, "Packaging and Surveying Bulk Radioactive Waste Shipments," Rev. 12
- reviewed the shipping documents for radioactive waste shipments USE-24-008, USE-24-009, 0716-04-0247, and 0716-04-0248
- reviewed initial and refresher radiation worker training provided to employees and contractors

Radiation Program Review and ALARA (IP Section 02.02 and 02.23)

- reviewed Audit 2023-0003, "A-50 Respiratory Protection Program," 09/14/2023
- reviewed Audit 2023-0005, "A-37 ALARA Policy and A-30 Management Review Committee," 11/02/2023
- reviewed Audit 2023-0007, "HP-1 Change Rooms and Protective Clothing," 12/31/2023
- reviewed quarterly ALARA meeting minutes and PowerPoint slides for 2023 and 2024

Training (IP Section 02.04)

The inspectors interviewed licensee staff and reviewed radiation worker training to verify compliance with 10 CFR 19.12, 19.13, and sections 4.7 and 11.3 of the license application. Specifically, the inspectors reviewed training records and interviewed licensee staff concerning the following:

- initial site orientation training
- radiation worker training
- tracking of employee radiological training

Safety-Significant Events (IP Section 02.05)

The inspectors reviewed the licensee's disposition of safety-significant events and RP and radioactive waste-related corrective action program (CAP) entries to verify compliance with 10 CFR 20.2202(a), 20.2202(b), 20.2203, and 10 CFR 40.60. Specifically, the inspectors reviewed documents and interviewed licensee staff concerning the following:

- MTS 491367
- MTS 513167
- MTS 515728
- MTS 516870
- MTS 518065
- MTS 526773
- MTS 527989

### Radiation Exposure Controls (IP Sections 02.06 and 02.18)

The inspectors reviewed licensee's measures such as radiological work permits (RWPs) to control the concentration of radioactive material in air or limiting intake to keep doses ALARA to verify compliance with 10 CFR 20.1101(b), 20.1701, 20.1702, and sections 4.1 and 4.10.4 of the license application. Specifically, the inspectors performed the following:

- walked down the areas of the plant where radioactive material is stored and observed postings and boundaries for those areas
- walked down the accessible areas of the Feed Materials Building (FMB) to observe postings and boundaries
- interviewed licensee staff on the use RWPs and General Work Permits
- reviewed the RWPs (Blue Cards) for confined space entry permits 40606, 40611, 40616, and 40628
- reviewed the General Work Permits for the FMB, Drum Shack, and Plant Wide contractor work activities

### Instrument Calibration and Surveys (IP Sections 02.07, 02.08, 02.14, and 02.15)

The inspectors reviewed licensee's procedures and documentation for RP instrument calibration, radiation surveys, contamination control measures; use of radiation detecting instruments and equipment; and interviewed licensee staff to verify compliance with 10 CFR 20.1501, 20.1902, 20.2103, and section 4.3.2 and 4.3.3 of the license application. Specifically, the inspectors performed the following:

#### Instrument and Equipment/Calibration (IP Sections 02.07 and 02.08)

- interviewed licensee staff regarding calibration of survey instruments
- reviewed the calibration records for the hand and foot monitors at the exit to the administration building
- observed the physical condition and calibration dates of the following survey instruments: serial numbers 190632, 353470, 257664, 260079
- interviewed licensee staff regarding inspections and source checks of instruments prior to use

#### Radiation Surveys & Contamination Control (IP Sections 02.14 and 02.15)

- observed security officers performing the surveys required by section 5.3 of MTW-SOP-HP-0112, for release of transport vehicles
- observed licensee staff performing hand and foot monitor calibrations as required by section 5.1 of MTW-SOP-HP-0112, for release of personnel and personal items
- reviewed quarterly dose rate surveys performed in FMB, bed materials fines building, and ore storage pads for 2023 and 2024
- reviewed weekly contamination surveys for 2024 of uncontrolled areas such as lunchrooms, cooling rooms, office spaces
- interviewed licensee staff regarding actions to be taken when contamination surveys exceed limits

- observed licensee staff performing surveys of incoming 48Y cylinders in accordance with MTW-FRM-HP-0221A

#### Postings and Labeling (IP Sections 02.09, 02.10, and 02.16)

The inspectors observed the posting and labeling of radiation areas, radioactive material storage areas, radioactive containers, and control of licensed sealed sources to verify compliance with 10 CFR 20.1902 and 20.1903, 20.1904, 20.1905, sections 4.9.6, 4.10.1, and 4.10.2 of the license application, and License Condition (LC) 22. Specifically, the inspectors performed the following:

##### Posting/Container Labeling (IP Sections 02.09 and 02.10)

- observed radiation area and airborne radioactivity area boundaries and postings at the entrances to the first floor of the FMB
- observed the red-light indications for airborne radioactivity areas in the FMB
- observed radiation area and airborne contamination area postings at the entrances to the Overpack Building
- observed the radioactive material storage posting for sealed sources
- reviewed MTW-SOP-HP-0222, "Packaging and Surveying Bulk Radioactive Waste Shipments," Rev. 12
- observed the radioactive material labeling for shipment of radioactive waste
- interviewed licensee staff regarding packaging and labeling bulk radioactive waste shipments
- observed the radioactive waste labeling for shipment 0714-04-0249

##### Sealed Sources (IP Section 02.16)

- reviewed the July 25, 2024, completed inventory check sheet for sealed sources (MTW-FRM-HP-0121A)
- reviewed the completed "Sealed Source Leak Testing and Analysis," dated 8/21/2024 (MTW-SOP-HP-0120)
- interviewed licensee staff regarding performance of seal source inventory checks and leak tests

#### Posting of Notices (IP Section 02.11)

The inspectors observed the Posting of Notices to verify compliance with 10 CFR 19.11. Specifically, the inspectors performed the following:

- observed the posting of NRC Form 3 in a conspicuous location

#### Access Control (IP Section 02.12)

The inspectors observed/reviewed the licensee's access control measures for radiation areas to verify compliance 10 CFR 20.1502(a)(4), 20.1601, 20.1602, and section 4.10.3 of the license application. Specifically, the inspectors observed controls and interviewed licensee staff concerning the following:

- radiation area and airborne radioactivity area boundaries and postings at the entrances to the first floor of the FMB
- red-light indications for airborne radioactivity areas in the FMB
- radiation area and airborne contamination area postings at the entrances to the Overpack Building
- permanent radiation area boundaries on floors one, four, five, and six of the FMB

#### Licensed Material Control (IP Section 02.13)

The inspectors observed/reviewed the licensee's measures to secure stored material and control and maintain constant surveillance of licensed material not in storage to verify compliance with 10 CFR 20.1801, 20.1802, and section 4.10 of the license application. Specifically, the inspectors observed the following:

- observed two access points to the restricted area which are protected by the fence and monitored by a security force

#### Dose Assessment Program (IP Sections 02.17 and 02.22)

The inspectors interviewed licensee staff and reviewed records and calculations related to the licenses assessment and assignment of doses to workers to verify compliance with 10 CFR 20.1201, 20.1204, 20.1208, 20.1502(b), 20.2106, and sections 4.9 and 4.11 of the license application. Specifically, the inspectors:

- reviewed licensee dose tracking software for calculation methodology
- interviewed staff and reviewed dose records to verify that dose was calculated in accordance with 10 CFR 20.1202
- reviewed samples of NRC Form 5 generated by the licensee dose tracking software
- interviewed staff as to whether there were any minors employed at Honeywell
- interviewed staff regarding requirements for declared pregnant workers

#### Dosimetry Program (IP Sections 02.19, 02.20, and 02.21)

The inspectors interviewed licensee staff and reviewed the implementation and documentation of the internal and external dosimetry programs including bioassay, whole-body counting, and use of dosimetry in the field to verify compliance with 10 CFR 20.1502(a), 20.1502(b), 10 CFR 20.2103(b)(3), and section 4.9 and 4.11 of the license application. Specifically, the inspectors conducted the following activities:

##### Bioassay Program & Whole-Body Counting (IP Section 02.19 and 02.20)

- reviewed bioassay records summarized in quarterly ALARA committee review minutes
- reviewed licensee dose calculation methodology to verify the inclusion of internal exposures as measured by bioassay results.
- interviewed staff regarding bioassay procedures and frequency

- reviewed licensee's determination explaining that routine whole-body counting is not a useful method for measuring low-level exposures to natural uranium compounds

#### Dosimetry (IP Section 02.21)

- reviewed the National Voluntary Laboratory Accreditation Program (NVLAP) accreditation for issued dosimetry
- reviewed external dosimetry records in quarterly ALARA committee review minutes for 2023 and 2024
- observed personnel dosimetry in use throughout the plant

### **INSPECTION RESULTS**

No issues were identified.

### **EXIT MEETINGS AND DEBRIEFS**

The inspectors verified no proprietary information was retained or documented in this report.

- On October 3, 2024, the inspectors presented the integrated inspection results to Brett Suits and other members of the licensee staff.

## DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
88030	Calibration Records	259888 3	Calibration certificate for detector SN: 259888	07/30/2024
88030	Calibration Records	322100 40901P	Calibration certificate for detector SN: 322100	03/18/2024
88030	Calibration Records	351081 3	Calibration certificate for detector SN: 351081	03/18/2024
88030	Calibration Records	68430 177	Calibration certificate for detector SN: 68430	12/14/2023
88030	Corrective Action Documents	MTS 491367		
88030	Corrective Action Documents	MTS 513167		
88030	Corrective Action Documents	MTS 515728		
88030	Corrective Action Documents	MTS 516870		
88030	Corrective Action Documents	MTS 518065		
88030	Corrective Action Documents	MTS 526773		
88030	Corrective Action Documents	MTS 527989		
88030	Corrective Action Documents Resulting from Inspection	MTS 537363	Observations Made by NRC Inspectors	10/03/2024
88030	Procedures	MTW-ADM-HP-0100	Radiological Protection Program	Rev. 27
88030	Procedures	MTW-ADM-HP-0113	Respiratory Protection Program	Rev. 24
88030	Procedures	MTW-ADM-HP-0118	External Radiation Exposure Control	Rev. 6

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
88030	Procedures	MTW-ADM-HP-0218	Health Physics Confined Space Survey Data	Rev. 8
88030	Procedures	MTW-SOP-HP-0112	Release of Personnel, Material, Equipment, and Transport Vehicles from the Restricted Area	Rev. 11
88030	Procedures	MTW-SOP-HP-0201	Determination of Airborne Radiation Activity	Rev. 13
88030	Procedures	MTW-SOP-HP-0213	Kinetic Phosphometric Determination of Uranium	Rev. 17
88030	Procedures	MTW-SOP-HP-0215	Surveying, Sorting, and Segregating Waste for Disposal	Rev. 3
88030	Procedures	MTW-SOP-HP-0216	Respiratory Training and Fit Testing	Rev. 23
88030	Procedures	MTW-SOP-HP-0232	Smear and Radiation Dose Surveys	Rev. 15
88030	Radiation Surveys	202409291013	Shipment Smear Report	09/29/2024
88030	Radiation Surveys	MTW-FRM-HP-0221A	UF6 Cylinder Survey for UREU227257	09/29/2024
88030	Radiation Surveys	MTW-FRM-HP-0221A	UF6 Cylinder Survey for UREU225329	09/29/2024
88030	Radiation Surveys	MTW-FRM-HP-0221A	UF6 Cylinder Survey for UREU227284	09/29/2024
88030	Self-Assessments	AUD-2023-0003	A-50 Respiratory Protection Program	09/14/2023
88030	Self-Assessments	AUD-2023-0005	A-37 ALARA Policy & A-30 Management Review Committee	11/02/2023
88030	Self-Assessments	AUD-2023-0007	HP-1 Change Rooms and Protective Clothing	12/31/2023