



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

July 20, 2018

Mr. Jeff Fulks
Plant Manager
Honeywell Metropolis Works
P.O. Box 430
Metropolis, IL 62960

**SUBJECT: HONEYWELL METROPOLIS WORKS – NUCLEAR REGULATORY COMMISSION
INTEGRATED INSPECTION REPORT 40-3392/2018-003**

Dear Mr. Fulks:

This letter refers to the inspections conducted from April 1 to June 30, 2018, at the Honeywell Metropolis Works facility in Metropolis, IL. The purpose of the inspections was to determine whether activities authorized under the facility's license were conducted safely and in accordance with U.S. Nuclear Regulatory Commission (NRC) requirements. The enclosed report presents the results of the inspections. The findings were discussed with you and members of your staff at an exit meeting held on May 17, 2018, for this integrated inspection report.

During the inspections, the NRC staff examined activities conducted under your license, as they related to public health and safety, to confirm compliance with the Commission's rules and regulations and with the conditions of your license. The inspections covered the areas of Safety Operations and Facility Support. Within these areas, the inspections consisted of examination of selected procedures and representative records, observations of activities, and interviews with personnel. There were no violations of more than minor significance.

In accordance with Title 10 of the *Code of Federal Regulations*, Section 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter and its enclosure will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

Should you have any questions concerning the inspections, please contact me at (404) 997-4664.

Sincerely,

/RA/

Robert E. Williams Jr., Acting Chief
Projects Branch 1
Division of Fuel Facility Inspection

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

Enclosure:
NRC Inspection Report No. 40-3392/2018-003
w/Attachment: Supplemental Information

cc: (See page 3)

cc:

Jennifer Ricker, Interim Director
Illinois Emergency Management Agency
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Scott Deming, Director
Massac County Emergency Management Agency
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SUBJECT: HONEYWELL METROPOLIS WORKS – NUCLEAR REGULATORY COMMISSION
 INTEGRATED INSPECTION REPORT 40-3392/2018-003

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 ADAMS: Yes ACCESSION NUMBER: ML18201A241 SUNSI REVIEW COMPLETE FORM 665 ATTACHED

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SIGNATURE	/RA/	/RA/	/RA/	/RA/			
NAME	JRivera-Ortiz	N. Peterka	T. Sippel	M. Ruffin			
DATE	7/27/2018	7/27/2018	7/27/2018	7/27/2018			
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**U.S. NUCLEAR REGULATORY COMMISSION
REGION II**

Docket No.: 40-3392

License No.: SUB-526

Report No.: 40-3392/2018-003

Licensee: Honeywell International, Inc.

Facility: Metropolis Works

Location: Metropolis, IL 62960

Inspection Dates: April 1 to June 30, 2018

Inspectors: M. Ruffin, Fuel Facility Inspector
T. Sippel, Fuel Facility Inspector

Approved by: R. E. Williams Jr., Acting Chief
Projects Branch 1
Division of Fuel Facility Inspection

Enclosure

EXECUTIVE SUMMARY

Honeywell Metropolis Works Nuclear Regulatory Commission Integrated Inspection Report 40-3392/2018-003 April 1 – June 30, 2018

The U.S. Nuclear Regulatory Commission (NRC) regional inspectors conducted inspections during normal shifts in the areas of Safety Operations and Facility Support. The inspectors reviewed licensee activities through direct observation of selected safety-significant activities and equipment, tours of the facility, interviews and discussions with licensee personnel, and review of facility records.

Safety Operations

- The inspectors reviewed a sample of activities in the area of Fire Protection to verify compliance with the conditions of the license and regulatory requirements. No violations of more than minor significance were identified. (Section A.1)

Facility Support

- The inspectors reviewed a sample of activities related to the implementation of the Configuration Control Program for “ready-idle” status to verify compliance with the conditions of the license and regulatory requirements. No violations of more than minor significance were identified. (Section B.1)
- The inspectors reviewed a sample of the Emergency Preparedness Program activities to verify compliance with the conditions of the license and regulatory requirements. No violations of more than minor significance were identified. (Section B.2)

Attachment

Key Points of Contact

List of Report Items

Inspection Procedures Used

Documents Reviewed

REPORT DETAILS

Summary of Plant Status

The Honeywell Metropolis Works (MTW) uranium conversion facility is located on a 1,100 acre site (60 acres within the fence line) near Metropolis, IL. The licensee is authorized to possess 150 million pounds of natural uranium ore and to convert this material to uranium hexafluoride (UF₆). The uranium conversion process occurs in the Feed Materials Building (FMB). During this inspection period, the facility was shutdown and maintained in “ready-idle” status as described in a letter from Honeywell to the NRC, dated January 11, 2018 (ADAMS Accession Number ML18023A384).

A. SAFETY OPERATIONS

1. Fire Protection Annual (Inspection Procedure 88055)

a. Inspection Scope

The inspectors conducted walk-downs of the UF₆ cylinder yard, ore drum storage areas, the FMB, the maintenance storage building, and the deep well pumps to assess the material condition of fire protection equipment (e.g., fire extinguishers) and systems (e.g., sprinklers). The inspectors also reviewed licensee procedures, recent combustible material inspections, and the latest FMB transient combustible audit to verify combustible materials were being controlled in accordance with MTW-ADM-FPP-0001, “Control of Transient Combustibles and Ignition Sources,” and ensured the licensee addressed accumulations of combustible material previously identified by licensee staff via the walk-downs. In addition, the inspectors verified the hazards of the facility (e.g., UF₆, flammable material) had been reduced in accordance with the licensee’s plans for “ready-idle” state.

The inspectors reviewed records and interviewed licensee personnel involved in testing the equipment to verify the sprinkler system, in the Maintenance Storage Building, and the deep well pumps were maintained in an adequate state of readiness and were properly tested to validate their ability to perform their intended safety functions. In addition, the inspectors conducted walk-downs to determine whether hydrants and portable extinguishers were at their designated locations and verified their accessibility was unobstructed. The records reviewed included the pump test records, emails from Global Risk Consultants, and Fire Flow Test Results listed in Section 4.0 of the Attachment to this report.

The inspectors reviewed fire protection procedures, fire system impairment records, and incident commander (IC) training records (e.g., IC Fire Impairment Training, dated April 5, 2018) to determine whether impairments to fire protection systems were handled in accordance with MTW-ADM-FPP-0013, “Fire System Impairment Control and Notification,” and if the licensee staff issuing the impairments were trained in accordance with MTW-ADM-FPP-0013. The inspectors also interviewed licensee personnel and representatives from offsite agencies to verify impairments were being communicated in accordance with the procedure.

The inspectors reviewed the licensee's most recent fire protection audit, AUD-2017-0005, "A-62 Fire Protection System," to verify the licensee was conducting routine fire protection audits in accordance with Section 2.7 of the license application. The inspectors reviewed the licensee's corrective action program (CAP) entries for the past 12 months to verify the licensee was identifying safety control and fire protection operability problems at an appropriate threshold and entering them into the CAP. Also, the inspectors evaluated the corrective actions associated with incident reports (IRs)-18-0189, IR-18-0081, IR-17-1227, IR-17-1226, and IR-17-1225, to verify the licensee was tracking items identified during audits and completing corrective actions.

b. Conclusion

No violations of more than minor significance were identified.

B. FACILITY SUPPORT

1. Plant Modifications (Inspection Procedure 88070)

a. Inspection Scope

The inspectors interviewed a manager and licensee staff to verify that the licensee established a Configuration Control Program in accordance with license requirements to evaluate, implement, and track plant modifications to the site that impact safety.

The inspectors reviewed a sample of request for change (RFC) packages, primarily RFC #17ALL4431, RFC #18ISC4461, RFC #18ISC4464, and RFC #18ISC4476, related to transitioning the facility to a "ready-idle" state. The inspectors reviewed these packages, and interviewed licensee staff, to verify the RFC packages were prepared, reviewed, and completed by the licensee in accordance with license requirements in Section 2.6.3, Configuration Control, of the license application. The inspectors walked down the completed modifications associated with RFC #18ISC4464 to verify the modification was implemented as described in the RFC, and did not create any additional hazards not considered by the licensee.

The inspectors also reviewed the change packages, including RFC #17ALL4431, to verify the licensee evaluated whether the changes resulted in a decrease in effectiveness of the fire protection and emergency preparedness programs. The inspectors reviewed the RFCs and changes implemented in the field to verify that hazards were either reduced or eliminated such that protective measures were not needed and could be taken out of service without NRC pre-approval in accordance with Section 2.6.3.C.i of the license application. Specifically, items reviewed included the ability of the deep well pumps to provide fire water for the remaining fire protection systems while the fire water pump and fire water tank were out of service.

b. Conclusion

No violations of more than minor significance were identified.

2. Emergency Preparedness (Inspection Procedure 88050)

a. Inspection Scope

The inspectors interviewed licensee staff and reviewed records to verify the changes made to the Honeywell Metropolis Works Emergency Response Plan (ERP), Emergency Plan Implementing Procedures (EPIPs) and the facility as part of transitioning to a “ready-idle” state had been reviewed by the emergency preparedness (EP) organization. This included inspection to verify the licensee properly reviewed changes and identified when prior NRC approval was required for proposed changes to the program. The inspectors reviewed changes to the EP program and the facility that were determined not to require prior NRC approval to verify these met ERP and license requirements, and did not decrease the overall effectiveness of the EP program commensurate with the current state of the facility. In addition, the inspectors verified that the source term and analysis (MTW-CALC-GEN-0030), used by the licensee as the basis for the ERP, reflected the current state of the facility.

The inspectors reviewed a sample of the revised EPIPs (listed in Section 4.0 of the Attachment to this report) and interviewed licensee staff to determine whether current copies of the implementing procedures were readily available to members of the emergency management and response organizations. The inspectors reviewed the content of the procedures to determine whether the revised procedures provided for the detection and proper classification of accidents, assessments of releases, protective actions recommendations, personnel accountability, notification and coordination, and authority for initiating site evacuation as required by the ERP. The inspectors walked down the licensee’s dispensary to ensure the licensee was still properly prepared and that emergency equipment still in service was operable.

The inspectors interviewed licensee staff, including ICs and Security staff, regarding EP, and reviewed training records (e.g., ERP & EPIP IC Training Attendance Records). The inspectors conducted this review to verify the licensee provided training for their personnel on emergency equipment (e.g., radios, medical equipment) as required by the ERP and the individuals responsible for using the equipment were trained and familiar with emergency procedures they would use and implement during an actual emergency. The inspectors interviewed staff to verify the licensee provided training for expected emergency situations consistent with the ERP.

The inspectors reviewed the written Mutual Assistance Agreements between Honeywell and the City of Metropolis, Illinois, Fire Department; the Massac County Fire Department; and the Metropolis Office of Emergency Management; to verify the licensee had current agreements with these organizations. The inspectors also interviewed the Public Safety Chief of the Metropolis Fire Department, and the Director of the Metropolis Office of Emergency Management, and reviewed records of the most recent emergency exercise to verify they maintained an adequate understanding of the written agreements, and that the licensee invited these and other off-site emergency response organizations for training and drill participation as required by Section 7.2.3 of the ERP. The inspectors also reviewed the agreements, and interviewed licensee staff and members of offsite response agencies, to verify that changes to the EP program were coordinated with offsite support groups and agencies.

The inspectors reviewed documentation from the most recent emergency drill and interviewed licensee personnel to verify the licensee conducted emergency exercises in accordance with their ERP and that the drill was a challenging credible scenario, testing key components of the ERP. The inspectors also reviewed drill response records to verify the licensee adequately critiqued their response effort and addressed the critiques in the CAP.

The inspectors reviewed licensee audit records to verify the licensee conducted EP audits as required by Section 2.7 of the license application. The inspectors reviewed corrective actions in the area of EP, including IR-17-1055, IR-17-1054, IR-17-0757, and IR-17-0669 to verify the findings and recommendations were adequately addressed in the licensee's CAP.

b. Conclusion

No violations of more than minor significance were identified.

C. EXIT MEETING

The inspection scope and results were presented to members of the licensee's staff at various meetings throughout the inspection period and were summarized on May 17, 2018 to Mr. Jeff Fulks, Plant Manager, and other staff members. Proprietary information was discussed but not included in the report.

SUPPLEMENTAL INFORMATION

1. KEY POINTS OF CONTACT

<u>Name</u>	<u>Title</u>
J. Fulks	Plant Manager
R. Sanders	Sr. Quality Engineer
S. Patterson	Regulatory Affairs Manager
K. Davis	Director, Metropolis Office of Emergency Management
H. Masse	Metropolis Public Safety Chief
C. Patterson	Regulatory Affairs Manager, Honeywell

2. LIST OF REPORT ITEMS

None

3. INSPECTION PROCEDURES USED

88020 Operational Safety
88025 Maintenance and Surveillance of Safety Controls
88035 Radioactive Waste Processing, Handling, Storage, and Transportation

4. DOCUMENTS REVIEWED

Records:

AUD-2017-0004, A-68 Emergency Response Plan, dated August 24, 2017
AUD-2017-0005, A-62 Fire Protection System, dated October 19, 2017
FMB Transient Combustible Audit, dated September 25, 2017
FMB Transient Combustible Audit, dated September 25, 2017
Form A- Combustible Material Inspection, dated February 27, 2018
Form A- Combustible Material Inspection, dated January 31, 2018
Form A- Combustible Material Inspection, dated March 19, 2018
Form A- Combustible Material Inspection, dated March 20, 2018
Form A- Combustible Material Inspection, dated March 21, 2018
Form A- Combustible Material Inspection, dated November 11, 2017
Form A- Combustible Material Inspection, dated October 30, 2017
Honeywell Metropolis Works Emergency Response Plan, Revision (Rev.) 10, dated January 18, 2018
Honeywell Metropolis Works Emergency Response Plan, Rev. 9, dated May 1, 2017
MTW-CALC-GEN-0030, Consequences of Hydrogen Fluoride Release to the Atmosphere Resulting from a Breach of a UF6 Cylinder with Solidified Contents within MTW Cylinder Yard, Rev. 0, dated January 19, 2018
MTW-DOC-EP-0001, Mutual Assistance Agreement with City of Metropolis, Illinois, Fire Department, dated November 17, 2017
MTW-DOC-EP-0002, Mutual Assistance Agreement with Massac County Fire Department, dated March 23, 2017
MTW-DOC-EP-0003, Mutual Assistance Agreement with Metropolis Office of Emergency Management, dated November 17, 2017
P-120, #1 Jockey Fire H2O Pump, (M), 1yr, dated November 27, 2017
P-66:#1 Deep Well Water Pump (E) 2yr, dated May 19, 2017

P-67: Insp #3 Deep Well Pump (E) 2yr, dated September 5, 2017
P-68: Sanitary Well Pump (E) 1yr, dated January 29, 2018
P-94:#2 Deep Well Turbine Pump (E) 2yr, dated October 16, 2017
P-994, #2 Fire H2O Jockey Pump (PMP), 1yr, dated February 12, 2018
RFC #17ALL4431
RFC #18ISC4461
RFC #18ISC4464
RFC #18ISC4476

Procedures:

MTW-ADM-EPIP-0001, Identification and Reporting of Emergency Conditions, Rev. 5, dated January 19, 2018
MTW-ADM-EPIP-0002, Emergency Classification and Notification, Rev. 17, dated January 19, 2018
MTW-ADM-EPIP-0003, Incident Command Staff Responsibilities, Rev. 2, dated January 18, 2018
MTW-ADM-EPIP-0006, Personnel Evacuation and Accountability, Rev. 15, dated March 20, 2018
MTW-ADM-EPIP-0008, Maintaining Emergency Preparedness, Rev. 11, dated January 19, 2018
MTW-ADM-EPIP-0011, Responding to Credible Airborne Threats, Rev. 5, dated January 19, 2018
MTW-ADM-EPIP-0012, Transportation Emergency Response, Rev. 2, dated May 1, 2017
MTW-ADM-EPIP-0013, Natural Disaster: Tornado, Thunderstorm, Flooding, and Earthquake, Rev. 7, dated January 19, 2018
MTW-ADM-EPIP-0014, Natural Gas Leak Response, Rev. 5, dated January 19, 2018
MTW-ADM-FPP-0001, Control of Transient Combustibles and Ignition Sources, Rev. 5, dated March 21, 2018
MTW-ADM-FPP-0007, Fire Pre-Plan Guide - Fire Emergency and Prevention, Rev. 2, dated March 21, 2018
MTW-ADM-FPP-0012, Fire Protection Systems and Maintenance, Rev. 5, dated March 21, 2018
MTW-ADM-FPP-0013, Fire System Impairment Control and Notification, Rev. 3, dated March 21, 2018
MTW-ADM-FPP-0014, Placement and Maintenance of Portable Fire Extinguishers, Rev. 3, dated March 20, 2018
MTW-DOC-FPP-0001, Fire Hazards Analysis for Honeywell Metropolis, Illinois, dated October 24, 2017
MTW-MAN-FPP-0001, Fire Protection Program Top Tier Manual, Rev. 4, dated May 10, 2018

Corrective Action Program Documents (Incident Reports):

IR-17-0669	IR-17-1227
IR-17-0757	IR-18-0081
IR-17-1054	IR-18-0189
IR-17-1055	IR-18-0282
IR-17-1225	IR-18-0424**
IR-17-1226	

**Report generated as a result of NRC inspection.

Other Documents:

Email from Global Risk Consultants, dated January 4, 2018, Subject: RE: Honeywell
Metropolis IL 1722.0055

Email from Global Risk Consultants, dated May 17, 2018, Subject: RE: Honeywell
Metropolis IL 1722.0055

ERP & EPIP IC Training Attendance Records, Various Dates

Fire Flow Test Results, performed October 26, 2017

IC Fire Impairment Training, dated April 5, 2018

Major Revision to the Honeywell Emergency Response Plan and Emergency Plan
Implementing Procedures (EIPs) – Effective 1/19/2018, dated January 19, 2018

MAP-180-C4291-01, Metropolis Works Plant Layout Fire & Emergency Training Plan,
Rev. 9, dated September 20, 2010

Waste Alky Line to No. 3 Pond, dated December 20, 2017