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

January 21, 2021

Mr. Brian Hunt
Plant Manager
Honeywell Metropolis Works
P.O. Box 430
Metropolis, IL 62960

SUBJECT: HONEYWELL METROPOLIS WORKS – U. S. NUCLEAR REGULATORY COMMISSION INTEGRATED INSPECTION REPORT NUMBER 40-3392/2020-004

Dear Mr. Hunt:

This letter refers to the inspections conducted from October 1, 2020, through December 31, 2020, for the Honeywell Metropolis Works facility in Metropolis, IL. During that period, the U. S. Nuclear Regulatory Commission (NRC) completed routine, on-site inspections due to favorable conditions that existed at that time involving the novel coronavirus disease (COVID-19).

The enclosed report presents the results of the inspections, which were conducted through a combination of document reviews, interviews, and on-site observations. The inspectors reviewed activities as they relate to public health and safety, the common defense and security, and compliance with the Commission's rules and regulations, as well as the conditions of your license. The inspections covered the areas of Safety Operations, Radiological Controls, and Facility Support. The findings were discussed with you and members of your staff at an exit meeting held on October 7, 2020.

Based on the results of these modified inspections, no violations of more than minor significance were identified.

Additionally, the inspectors implemented measures during the inspection period to support the determination of reasonable assurance that the public and the environment will be adequately protected from the hazards related to the operation of your facility. These compensatory measures included activities such as supplemental reviews of licensee-submitted reports (e.g. effluent reports, plant modification reports, and changes to the Integrated Safety Analysis Summary) and increased communications with your staff to discuss the status of plant operations. The compensatory measures did not constitute direct inspection and were intended to address the impact of the COVID-19 public health emergency on the agency’s routine oversight program, particularly on the continuous engagement with your facility via periodic site visits and in-person interactions. These proactive actions were taken to obtain additional insights into the safe operation of the facility during the COVID-19 public health emergency.

The NRC will continue evaluating the guidelines and recommendations from federal and state authorities, along with the conditions of your facility, to determine how to best conduct inspections until normality can be achieved. In the interim, the NRC will maintain compensatory measures and frequent communications with your staff to discuss regulatory compliance matters and gather information to inform the decisions about future inspections.

In accordance with Title 10 of the *Code of Federal Regulations,* Section 2.390 of the NRC's "Rules of Practice and Procedure," a copy of this letter and 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. To the extent possible, your response should not include any personal privacy or proprietary, information so that it can be made available to the Public without redaction.

Should you have any questions concerning these inspections, please contact Tom Vukovinsky, Senior Project Inspector of my staff at 404-997-4622.

Sincerely,

/RA/

Eric Michel, Chief
Projects Branch 2
Division of Fuel Facility Inspection

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

Enclosure:
NRC Inspection Report 40-3392/2020-004
w/Supplemental Information

cc: w/Attachment via LISTSERV®

SUBJECT: HONEYWELL METROPOLIS WORKS – NUCLEAR REGULATORY COMMISSION INTEGRATED INSPECTION REPORT 40-3392/2020-004 dated January 21, 2021

Distribution:
L. Suggs, RII
E. Michel, RII
T. Vukovinsky, RII
D. Marcano, NMSS
L. Cuadrado, NMSS
D. Tiktinsky, NMSS
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ACCESSION NUMBER: **ML21022A168** ☒ SUNSI REVIEW COMPLETE ☒ FORM 665 ATTACHED

OFFICE	RII:DFFI/PB2	RII:DFFI/PB2	RII:DFFI/PB2	RII:DFFI/PB2	
NAME	T. Vukovinsky	P. Startz	M. Ruffin	E. Michel	
DATE	1/1/2021	1/15/2021	1/15/2021	1/21/2021	

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

INSPECTION REPORT

Docket No.:	40-3392	
License No.:	SUB-526	
Report No.:	40-3392/2020-004	
Enterprise Identifier:	I-2020-004-0037	
Licensee:	Honeywell International, Inc.	
Facility:	Metropolis Works	
Location:	Metropolis, IL 62960	
Dates:	October 1 through December 31, 2020	
Inspectors:	M. Ruffin, Fuel Facility Inspector P. Startz, Fuel Facility Inspector	(Section A.1, A.2, B.3, C.1, C.2, C.3) (Sections A.2, B.1, B.2, B.3, C.3)
Approved by:	E. Michel, Chief Projects Branch 2 Division of Fuel Facility Inspection	

Enclosure

EXECUTIVE SUMMARY

Honeywell International, Inc.
Honeywell Metropolis Works
Nuclear Regulatory Commission Integrated Inspection Report 40-3392/2020-004
October 1 through December 31, 2020

The U.S. Nuclear Regulatory Commission (NRC) regional inspectors conducted inspections during normal shifts in the area of Safety Operations and Facility Support. The inspectors performed a selective examination of licensee activities that were accomplished by direct observation of safety-significant activities and equipment, tours of the facility, interviews and discussions with licensee personnel, and a review of facility records. No violations of more than minor significance were identified during the inspection.

Safety Operations

- In the area of Operational Safety, no violations of more than minor significance were identified. (Paragraph A.1)

- In the area of Fire Protection (Triennial), no violations of more than minor significance were identified. (Paragraph A.2)

Radiological Controls

- In the area of Radiation Protection (RP), no violations of more than minor significance were identified. (Paragraph B.1)

- In the area of Effluent Control and Environmental Protection, no violations of more than minor significance were identified. (Paragraph B.2)

- In the area of Radioactive Waste Processing, Handling, Storage, and Transportation, no violations of more than minor significance were identified. (Paragraph B.3)

Facility Support

- In the area of Maintenance and Surveillance of Safety Controls, no violations of more than minor significance were identified. (Paragraph C.1)

- In the area of Emergency Preparedness, no violations of more than minor significance were identified. (Paragraph C.2)

- In the area of Plant Modifications (Annual), no violations of more than minor significance were identified. (Paragraph C.3)

Attachment:
Key Points of Contact
List of Items Opened, Closed, and Discussed
Inspection Procedures Used
Documents Reviewed

REPORT DETAILS

Summary of Plant Status

The Honeywell Metropolis Works (MTW) uranium conversion facility 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_6). During this inspection period, all uranium conversion processing remained shut down, processing equipment emptied, referred to as ready-idle status. The only significant NRC licensed uranium operations being conducted included the receipt, sampling, storage, and shipment of uranium ore; and radiological support staff operations. The inspection effort during the year 2020 was approximately 20% of the normal effort when the facility is fully operational. This inspection effort was commensurate with the idle-ready state of the facility; as described by the Honeywell Licensee Performance Review 40-3392/2020-005, dated March 2, 2020, ADAMS Accession #ML20062K159.

A. Safety Operations

1. Operational Safety (Inspection Procedure 88020)

a. Inspection Scope

The inspectors evaluated the operational safety of the facility to verify the licensee operated the plant safely and in accordance with Title 10 Code of Federal Regulations (CFR) Part 40, the license, and the License Application (SUB-526). At the time of inspection, the facility was in a “ready-idle” status with minimal operations, therefore the inspectors completed the inspection procedure requirements that were applicable to the current operational status of the facility.

The inspectors conducted a plant walk downs, interviewed the operations personnel and reviewed records associated with the uranium ore sampling building to verify compliance with the License Application. The inspectors also interviewed staff and conducted a walk down of the Feed Materials Building (FMB) to assess the condition and configuration of out-of-service plant systems and components due to the “ready-idle” status and verify they were maintained in a safe condition. The inspectors conducted walked downs of the uranium ore drum storage yard and UF_6 cylinder storage yards to verify the applicable safety controls were functional and available in accordance with the licensing basis documents. The inspectors interviewed licensee staff, reviewed the latest version of the Integrated Safety Analysis (ISA) Summary, reviewed surveillance records, and conducted walk downs to evaluate the applicable safety controls and active plant features and procedures (PFAPs) for the “ready-idle” status and verify they were available and being implemented in accordance with the ISA and License Application.

The inspectors performed walk downs of the sampling plant and the drum storage pad and observed sampling plant operations to verify the applicable safety controls were functional and available and the operations were occurring in accordance with MTW-SOP-SMP-0215, “Sampling Plant System Startup and Operation.” The inspectors also reviewed completed surveillances of the drum storage and UF_6 storage areas to verify management measures were implemented in accordance with approved procedures.

The inspectors reviewed a sample of incident reports (IRs), listed in Section 4.0 of the Attachment, from the licensee's corrective action program (CAP) from the past 12 months to verify safety-significant issues were being entered in the program for resolution and processed in accordance with procedure MTW-ADM-REG-0110 "Corrective Action Program."

b. Conclusion

No Violations of more than minor significance were identified.

2. Fire Protection, Triennial (Inspection Procedure 88054)

a. Inspection Scope

The inspectors performed walkdowns of the operational fire protection systems for the entire plant site. While the UF_6 Conversion operations remain completely shut down, referred to as idle-ready state, significant portions of the fire protection system were placed in an idle-ready state. The only operational portions of the fire protection system that must remain operational includes the underground fire water supply main loop, groundwater pumps that supply the loop, post indicator valves, fire hydrants, fire sprinkler systems in the maintenance offices and shop, and sprinklers in the stores warehouse. The inspectors noted that at least one of two groundwater pumps available was functioning and a pressure gauge indicated positive system pressure. The inspectors were able to verify that all operational water-based fire protection systems were maintained in a fully functional condition in accordance with the current License Application.

The inspectors reviewed the fire protection program aspects that were revised to accommodate the current "ready-idle" state of the facility to evaluate compliance with the License Application, fire hazard analysis, and MTW-MAN-FPP-0001, "Fire Protection Program Top Tier Manual." The inspectors reviewed a sample of the licensee's pre-fire plans to determine whether they were current, available at required field locations, and reflected any special considerations such as unique chemical hazards.

The inspectors conducted facility walk downs and interviewed licensee personnel to verify the control of transient combustible materials was consistent with MTW-ADM-FPP-0001, "Control of Transient Combustibles and Ignition Sources," and to verify that the cutting, welding, and hot work permit program was implemented in accordance with MTW-SAF-LP-0005, "Hot Work Permits." The inspectors walked down the uranium ore sampling building and the FMB to verify flammable materials were stored and controlled in marked cabinets as specified in MTW-ADM-FPP-0001.

The inspectors conducted facility walk downs and interviewed staff to verify the physical condition of fire detection devices did not show physical damage, blockage, or potential interference with functionality in accordance with MTW-MAN-FPP-0001. The inspectors also walked down the fire detection panel, reviewed annual inspection records, and were able to verify fire detection systems remained functional.

The inspectors interviewed licensee staff and reviewed records concerning out-of-service fire protection systems and impairments to verify adequate compensatory measures had been put in place for out-of-service, degraded or inoperable fire protection equipment, systems or features during the ”ready-idle” state in accordance with MTW-ADM-FPP-0013, “Fire System Impairment Control and Notification.”

The inspectors reviewed the licensee’s incident tracking and corrective actions (IT&CAs) for the past 12 months to verify the licensee identified fire related incidents, entered them into their IT&CA system, and implemented effective corrective actions to correct and resolve the incidents in accordance with MTW-MANFPP-0001.

b. Conclusion

No violations of more than minor significance were identified.

B. Radiological Controls

1. Radiation Protection Appendix A (Inspection Procedure 88030, Appendix A)

a. Inspection Scope

The inspectors reviewed significant revisions to MTW-ADM-HP-0100, “Radiological Protection Program,” and samples of other licensee procedures listed in Section 4 of the attachment, and interviewed the licensee’s health physics (HP) manager and other cognizant staff to determine if the licensee monitored employees for occupational radiation exposure in accordance with 10 CFR 20.1202(a). The inspectors focused on evaluating any changes to the radiation protection program as a result of the temporary suspension of UF_6 production while maintaining uranium ore operations.

The inspectors reviewed samples of the licensee’s procedures used for routine radiation protection functions including contamination surveys, radiation surveys, responses to exceedance of action levels, laboratory analysis activities, radiation work permits, radiological instrumentation availability and calibration, and changes in data management and data storage protocols. The inspectors reviewed the licensee’s dosimetry contractor to verify that the contractor’s program was accredited in 2019/2020 by National Voluntary Laboratory Accreditation Program (NVLAP) in accordance with 10 CFR 20.1501(c).

The inspectors reviewed the methodology and programmatic assumptions made by the licensee in the calculation of dose to verify that the licensee calculated the dose to workers using conservative assumptions in accordance with MTW-MAN-HP-0001, “Internal Dosimetry Technical Basis Manual.” The inspectors reviewed samples of the Bioassay Sampling and Radiological Protection Program procedures, documentation of dose calculations, and equipment and processes used to evaluate internal exposures to determine if the internal dose results were derived in accordance with 10 CFR 20.1204, and that internal dose was monitored in accordance with 10 CFR 20.1502.

The inspectors reviewed bioassay procedure MTW-ADM-HP-0101, “Bioassay Sampling,” and related activities including the oversight of laboratory analysis of bioassay samples. Inspectors also interviewed HP staff to determine if the bioassay program was in compliance with Section 4.0 of the License Application for routine and special samples, for establishing bioassay action levels, for determining internal exposure from the bioassay results, and for investigating results above the investigation level.

The inspectors reviewed a sample of procedures associated with the respiratory protection program to evaluate the current operational status and compliance with MTW-ADM-HP-0113, “Respiratory Protection Program.” The inspectors also interviewed licensee staff to determine if the licensee continued to maintain all respiratory protection programmatic elements in accordance with licensee procedures and 10 CFR 20.1703.

The inspectors interviewed licensee personnel and reviewed the latest meeting minutes from the “as low as reasonably achievable” (ALARA) committee to verify that the licensee used, to the extent practical, engineering controls to achieve occupational doses ALARA in accordance with 10 CFR 20.1101(b), as well as using process or engineering controls to control the concentration of airborne radioactive material in accordance with 10 CFR 20.1701. The inspectors evaluated samples of the licensee’s radiological postings in and around uranium ore drum storage areas, uranium sampling operations, and uranium container labels to evaluate compliance with 10 CFR 20.1902, 20.1903, 20.1904, and 20.1905.

The inspectors reviewed the Semiannual Health Physics ALARA Reports for 2019 and the latest for 2020 to determine if the ALARA program was in compliance with 10 CFR 20.1101(b) and the license requirements. The inspectors reviewed ALARA Committee meeting minutes from a previous meeting to determine whether the ALARA program monitored, trended, and where practical, addressed adverse exposure trends. The inspectors interviewed the licensee HP manager concerning implementation of the program and the ALARA goals to determine whether the licensee was meeting the license commitment to ALARA. The inspectors reviewed meeting minutes to determine whether the ALARA Committee was reviewing facility operations in order to control radiation exposure in accordance with the License Application, Section 4.0. The inspectors reviewed procedures and interviewed licensee staff to verify that the radiation protection staff had authority to implement ALARA policies and that workers had been adequately trained to understand the ALARA philosophy and how to implement it in accordance with the license requirements.

The inspectors walked down storage areas containing drums of natural uranium ore and process intermediates, and other outside product storage pads containing uranium hexafluoride cylinders. The inspectors also conducted perimeter walk-downs around the facility boundary and determined that all uranium processing buildings and uranium storage areas were located within security fencing, and that there were functional controlled entry/exit portals for vehicles, rail cars, and personnel. The perimeter walk-downs were performed to determine if licensed materials were all located in secure controlled areas that would prevent unauthorized removal or access as required by 10 CFR 20.1801 and 20.1802.

The inspectors interviewed staff, reviewed procedures including MTW-SOP-HP-0201, "Determination of Airborne Radioactivity," and observed air samplers in the ore sampling building to verify that the air sampling program complied with license requirements for airborne concentration surveys, number, and use of air samplers to support the respirator-use warning lights. The inspectors discussed ongoing radiation/contamination survey results with the HP manager to verify continued compliance with 10 CFR 20.1501, 20.1502, and 20.1503. The inspectors walked through and confirmed all other uranium production areas at the site remained in a "ready-idle" status.

The inspectors reviewed the dose to workers, recorded in NRC Form 5 Equivalent, "Occupational Exposure Report for a Monitoring Period" and supporting documentation, to verify that the dose results include the total effective dose equivalent, the lens dose equivalent, the shallow dose equivalent, and did not exceed the limits in 10 CFR 20.1201, 20.1207, and 20.1208. The inspectors discussed licensee dose calculations with the HP manager to verify continued compliance to verify that worker intake of uranium did not exceed the limits of 10 CFR 20.1201(e).

The inspectors reviewed a sample of incident reports and interviewed staff and management to determine whether the licensee implemented a program to evaluate safety-significant events in the area of radiation protection that met the requirements of the License Application, Section 11.6. The inspectors reviewed selected events related to the radiation protection program to verify that the licensee identified corrective actions to correct problems and prioritized resolution of problems commensurate with their safety significance.

b. Conclusion

No violations of more than minor significance were identified.

2. Effluent Control and Environmental Protection (Inspection Procedure 88045)

a. Inspection Scope

The inspectors reviewed samples of environmental programmatic changes, procedures, and operations during the last 12 months to evaluate if the environmental program and associated procedures remained in compliance with Sections 4 and 9 of the License Application. The inspectors assessed if active facility process exhaust stacks were continuously sampled to measure the radioactive emissions rate, if the ventilation exhaust stack sampling system filters were changed, and if subsequent filter analyses were in compliance with the License Application.

The inspectors performed walk-downs of equipment involved in the final treatment and sampling systems of liquid waste discharges to the Ohio River to verify that such systems were being maintained consistent with Sections 4 and 9 of the License Application. The inspectors observed automated composite sampling equipment and verified that sample collection activities of the sanitary and Ohio River discharge outfall were conducted as required by procedure MTW-ADM-HP-0106, "Hazardous Waste Tracking and Metrics." The review included an analysis of calibration records to verify that sampling equipment was maintained in an accurate and functional state. The inspectors reviewed the latest available six-month summaries of uranium analytical data for 2019 and 2020, to verify that monthly and annual data demonstrated compliance with the limits described in 10 CFR 20, Appendix B.

The inspectors reviewed the previous two semi-annual effluent reports from 2019 to verify that the report contained the information required by 10 CFR 70.59. The inspectors interviewed licensee staff and reviewed the public dose assessment to verify that the total dose to the individual likely to receive the highest dose from the licensed operation did not exceed the regulatory limits for the whole year 2019. The inspectors reviewed samples of calculations, source data, and calibration records of instruments used to monitor effluents to verify the accuracy of licensee source data and calculations.

The inspectors observed a radiological technician change out stack sample filters on gaseous effluent exhaust stacks at the Ore Sampling Building to evaluate compliance with facility procedures MTW-SOP-HP-0201, "Determination of Airborne Radioactivity" and MTW-SOP-HP-0209," Collecting Environmental Samples." The programmatic status of environmental operating procedures, onsite and offsite laboratory analysis results, data transfer and record keeping, and sampling equipment calibration compliance records were discussed with the licensee's HP supervisor. The inspectors evaluated whether the activities had been conducted in accordance with the applicable procedures, at the required frequency, and were in compliance with Sections 4 and 9 of the License Application.

The inspectors reviewed property fence line dosimeter results for portions of calendar years 2019 and 2020 that were used, in part, to calculate the public dose. The inspectors evaluated samples of radiological airborne effluent-specific public dose calculations used to determine if the public dose results remained less than the ALARA constraint on air emissions as required in 10 CFR 20.1101(d). The inspectors verified that the annual public dose associated with all licensed activities remained less than 100 mrem/year as required by 10 CFR 20.1301.

The inspectors reviewed samples of environmental monitoring locations for soil, surface water, ambient air, and external radiation immediately around the facility, including the Ohio River, to determine compliance with Sections 4 and 9 of the License Application. The inspectors assessed whether the locations and physical characteristics of the sampling locations were appropriate, would provide satisfactory data, and the equipment was maintained in a fully functional state in accordance with MTW-SOP-HP-0209, "Collecting Environmental Samples."

The inspectors reviewed a sample of entries from the licensee's CAP created since the last inspection to verify that environmental issues had been documented and reviewed promptly, as required by License Application, Chapter 11.6. In addition, the inspectors reviewed the licensee's corrective actions to verify they were adequate to address and resolve the issue(s) as required.

b. Conclusion

No violations of more than minor significance were identified.

3. Radioactive Waste Processing, Handling, Storage, and Transportation (Inspection Procedure 88035)

a. Inspection Scope

The inspectors reviewed portions of the radioactive waste processing, handling, storage and transportation programs to verify licensee compliance with 10 CFR 20, 10 CFR 61, and the License Application. The inspectors evaluated samples of procedures to verify that the licensee had established, maintained, and implemented applicable procedures that accurately addressed: low-level radioactive waste form, classification, stabilization, packages, labeling, storage areas, documentation of shipping preparations, and final shipping manifesting.

The inspectors performed walk-downs of the licensee's radioactive material storage areas including areas containing drums of uranium ore, UF_6 conversion process intermediates, UF_6 shipping cylinders, and supersacks of excavated materials derived from the ongoing environmental excavation project on the south side of the protected area. The inspectors reviewed the postings in the storage areas to verify that they had the required postings and the material was stored in accordance with the safety requirements. The inspectors reviewed the containers' labeling and condition to verify that the containers were properly labeled to reflect the hazards of their contents and were in adequate physical condition or had additional controls in place.

The inspectors reviewed training records to ensure that the licensee had administered hazardous materials transportation training to applicable personnel as required by DOT 49 CFR 172.704 and the license application.

The inspectors reviewed a sample of entries from the licensee's CAP created since the last inspection to verify that fire protection issues involving environmental, radiological, chemical, fire safety, emergency preparedness, procedural compliance problems were documented and reviewed promptly, as required by License Application, Chapter 11.6. In addition, the inspectors reviewed the licensee's corrective actions to verify they were adequate to address and resolve the issue(s) as required.

b. Conclusion

No violations of more than minor significance were identified.

C. Facility Support

1. Maintenance and Surveillance of Safety Controls (Inspection Procedure 88025)

a. Inspection Scope

The inspectors performed field walkdowns of the uranium ore sampling building complex to evaluate licensee compliance with 10 CFR Part 20, 10 CFR Part 40, and the License Application (SUB-526), and license basis documents. The inspectors were able to interview personnel who were operating uranium ore drum sampling systems, preparing ore drums for shipping, loading/unloading ore drums during shipping/receiving evolutions, and performing activities related to maintaining ore drums in their storage yard. During the walk-through of the ore drum processing area, inspectors were able to verify that ventilation systems were functional, that work areas were free of uranium ore residues, and that there were indications of operators wearing respirators.

The inspectors also performed walkdowns of the UF_6 production building and verified that all UF_6 Conversion operations remained completely shut down, referred to as idle-ready state. The idle-ready state of the UF_6 conversion building required that hazardous chemicals, natural gas, hydrogen gas, and steam had been shut off and emptied to the extent practical, and that all significant volumes of UF_6 and uranium ore feed stock had been removed from UF_6 processing equipment. The UF_6 chemical reactors remained sealed and purged with inert nitrogen gas. The inspectors were able to verify that idle-ready conditions of the UF_6 building remained in that state. The inspectors verified that maintenance and operational functionality of safety related equipment, (PFAPs) continued to not be required while UF_6 conversion facility remained in the idle-ready state. The inspectors also verified that no significant process changes had been implemented.

The inspectors reviewed training records for continuing training programs to verify compliance with training requirements of the License Application, Chapter 11.3. The inspectors reviewed several qualification records for various functional positions to verify that the individuals were currently qualified in their positions.

The inspectors reviewed a sample of entries from the licensee's CAP created since the last inspection to verify that operational issues involving environmental, radiological, chemical, fire safety, emergency preparedness, procedural compliance problems were documented and reviewed promptly, as required by License Application, Chapter 11.6. In addition, the inspectors reviewed the licensee's corrective actions to verify they were adequate to address and resolve the issue(s) as required.

b. Conclusion

No violations of more than minor significance were identified.

2. Emergency Preparedness (Inspection Procedure 88050)

a. Inspection Scope

The inspectors interviewed staff and reviewed records to verify that 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 EP organization. This included inspections to verify the licensee properly reviewed changes and identified when prior NRC approval was required for proposed changes to the program. The inspectors reviewed the changes made to the emergency preparedness program and facility to verify the changes met ERP and license requirements and specifically did not decrease the overall effectiveness of the emergency preparedness program without prior NRC approval. In addition, the inspectors determined 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 Mutual Assistance Agreements and interviewed licensee staff and members of offsite response agencies to verify that changes to the emergency preparedness program were coordinated with offsite support groups and agencies.

The inspectors reviewed a sample of the revised EPIPs (listed in Section 4.0 of the Attachment) and interviewed 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 provide 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 interviewed licensee staff, including incident commanders and security staff, regarding emergency preparedness, 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 utilizing 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. Offsite personnel were also contacted to verify their training included opportunities for routine orientation tours of the facility and refresher training required by the Section 7.2.3 of 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 Fire Chief, Massac County 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 reviewed the package from the most recent emergency drill and interviewed licensee personnel to verify the licensee conducted emergency exercises in accordance with their emergency response plan and that the drill was a challenging credible scenario and tested key components of the emergency response plan.

The inspectors reviewed corrective actions in the area of emergency preparedness 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.

3. Plant Modifications - Annual (Inspection Procedure 88070)

a. Inspection Scope

The inspectors reviewed the licensee's configuration management program to determine whether the licensee established an effective program capable of evaluating, implementing, and tracking modifications to facility processes in accordance with License Application Section 11, "Configuration Management." The inspectors also reviewed the licensee's program to verify it addressed pre-job planning and preparation of plant modification design packages; and that it had adequate provisions in place to prevent plant modifications from degrading performance capabilities of PFAPs or other safety controls that were part of the safety design basis.

The inspectors reviewed MTW-ADM-REG-0120, “Management of Change,” and interviewed the licensing manager to verify the configuration management program was being implemented in accordance with the aforementioned requirements. Due to the “ready-idle” status of the facility, the licensee had continued to suspend all significant plant modifications. The inspection mainly focused on the functionality of licensee’s change management system.

The inspectors reviewed the following Request for Change (RFC) packages implemented since the last plant modification inspection was conducted: RFC-19ISC4609, RFC-19ISC4633, RFC-19ISC4614, and RFC-19ALL4649. The inspectors reviewed these packages and interviewed licensee staff to verify the change packages were prepared, reviewed, and completed by the licensee in accordance with the License Application and Management of Change procedure. Specifically, that the design packages contained the following: the technical basis for the change, the impact of the change on safety and health or on the control of licensed material, the necessary training prior to operations, the authorization requirements for the change, and the impacts of the change to the ISA or other safety program information developed in accordance with section 11.1.2, “Process Outline,” of the License Application.

Inspectors reviewed the aforementioned change packages to verify the licensee identified any applicable post-maintenance installation and testing requirements and performed them prior to implementing the plant modifications. Due to the “ready-idle” status of the facility, many of the modifications were directed at taking systems out of service and therefore post-maintenance installation and testing wasn’t necessary. The inspectors also reviewed the change packages and interviewed staff to ensure the removed systems were not safety systems that were necessary in the “ready-idle” status and that the performance capabilities were not degraded.

The inspectors reviewed the change packages to verify any designs of plant modifications met the specific design criteria as specified in applicable modification packages. The inspectors also evaluated the packages to verify that completed modifications were adequately reviewed prior to implementation and the responsible evaluators of the packages were qualified. A sample of modification evaluations were reviewed by inspectors to determine whether the licensee adequately evaluated the need for NRC pre-approval of select facility modifications.

The inspectors performed a walk-down of the DCS room in the FMB, to verify the field conditions were in accordance with the approved design documents. The inspectors also reviewed samples of related documentation including procedures, fire hazard analyses, and the ISA, to verify they were revised.

Inspectors also reviewed the licensee’s document retention policy to verify the licensee maintained records of facility modifications in accordance with license application section 11.1.4, “Change Implementation and Records.”

b. Conclusion

No violations of more than minor significance were identified.

D. Exit Meetings

The inspection scope and results were presented to Mr. Jon Price, Plant Manager, and members of his staff at exit meetings conducted on October 8, 2019. Proprietary information was discussed, but not included in this report.

SUPPLEMENTAL INFORMATION

1. KEY POINTS OF CONTACT

Name	Title
J. Benard	Radiological Transportation Specialist
C. Metzger	Health Physics Specialist
R. Lindberg	Health Physics Supervisor
S. Patterson	Regulatory Affairs and ESH Manager
J. Fulks	Plant Manager
E. Robinson	Operations Manager/Technical Area Lead
R. Sanders	Senior Quality Engineer
J. Taylor	Training Lead

2. LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

None

3. INSPECTION PROCEDURES USED

88020	Operational Safety
88025	Maintenance and Surveillance of Safety Controls
88030	Radiation Protection (Appendix A)
88035	Radioactive Waste Processing, Handling, Storage and Transportation
88045	Effluent Control and Environmental Protection
88054	Fire Protection (Triennial)
88070	Permanent Plant Modifications

4. DOCUMENTS REVIEWED

Records:
AUD-2019-0003, Audit Report A-68 Emergency Response Plan, dated November 22, 2019
Census Drill 03-30-20 AAR Final, Incident/Drill After Action Report, dated March 30, 2020
Census Drill 06-26-20, Debrief After Action Report Final, dated June 26, 2020
Fire Alarm and Life Safety System Inspection Certificate, dated September 21, 2020
Honeywell Metropolis Works 2020 Emergency Response Exercise, dated October 22, 2019
Medical AED Drill AAR, dated July 25, 20019
MTW-DOC-EP-0002, Massac County Fire Department, dated November 4, 2019
MTW-DOC-EP-0005, Massac Memorial Hospital, dated October 31, 2019
MTW-DOC-EP-0011, Massac County Emergency Management, dated October 30, 2019
MTW-DOC-EP-0012, Metropolis Police Department, dated October 31, 2019
MTW-DOC-EP-0013, Metropolis Office of Emergency Management
MTW-SAF-LP-0005, Hot Work Permits: Concrete Prep Work, dated June 4, 2020
MTW-SAF-LP-0005, Hot Work Permits: Sampling Plant, dated February 8, 2020
Plant Loss Prevention Inspection, dated August 25, 2020; May 4, 2020; April 6, 2020; February 13, 2020; January 29, 2020

Sprinkler Inspection Certificate, dated September 21, 2020
SUB-526-ERP, Honeywell Metropolis Works Emergency Response Plan, Revision 10, dated January 18, 2018
SUB-526-ISA, Integrated Safety Analysis Summary Source Materials License SUB-526, Revision 16, dated November 27, 2017
SUB-526-LRA, Honeywell Metropolis Works Application for Renewal of USNRC Source Materials License SUB-526, Revision October 8, 2018
SUB-526-LRA, Honeywell Metropolis Works Application for Renewal of USNRC Source Materials License SUB-526 (Idle State Version), Revision May 12, 2020

Procedures:
MTW-ADM-EPIP-0001, Identification and Reporting of Emergency Conditions, Revision 8, dated July 14, 2020
MTW-ADM-EPIP-0002, Emergency Classification and Notification, Revision 22, dated August 26, 2019
MTW-ADM-EPIP-0003, Incident Command Staff Responsibilities, Revision 14, dated March 8, 2019
MTW-ADM-EPIP-0006, Personnel Evacuation and Accountability, Revision 16, dated October 28, 2019
MTW-ADM-EPIP-0008, Maintaining Emergency Preparedness, Revision 14, dated July 14, 2020
MTW-ADM-EPIP-0011, Responding to Credible Airborne Threats, Revision 5, dated January 17, 2018
MTW-ADM-EPIP-0012, Transportation Emergency Response, Revision 2, dated May 1, 2017
MTW-ADM-EPIP-0013, Natural Disaster: Tornado, Thunderstorm, Flooding, and Earthquake, Revision 7, dated January 17, 2018
MTW-ADM-EPIP-0014, Natural Gas Leak Response, Revision 5, dated January 17, 2018
MTW-ADM-FPP-0001, Control of Transient Combustibles and Ignition Sources, Revision 8, dated July 13, 2020
MTW-ADM-FPP-0007, Fire Pre-Plan Guide – Fire Emergency and Prevention, Revision 4, dated October 22, 2018
MTW-ADM-FPP-0012, Fire Protection Systems and Maintenance, Revision 9, dated August 8, 2020
MTW-ADM-FPP-0013, Fire System Impairment Control and Notification, Revision 4, dated October 17, 2019
MTW-ADM-MT-0001, Control of Maintenance and Modification Activities Associated with PFAP-Related Equipment (LR-1), Revision 5, dated July 13, 2020
MTW-ADM-OPS-0121, Management of Plant Features and Procedures, Revision 24, dated July 14, 2020
MTW-ADM-REG-0110, Corrective Action Program, Revision8, dated August 27, 2020
MTW-ADM-REG-0120, Management of Change, Revision6, dated March 6, 2018
MTW-ADM-QA-0160, Performance of Internal Audits and Inspections, Revision 7, dated August 3, 2020
MTW-AOP-SMP-0500, Sampling Plant Abnormal Operation, Revision 1, dated February 22, 2018
MTW-DOC-ERP-0701, Emergency Managers and SME Recall List, Revision 68, dated June 19, 2020

MTW-EOP-SMP-0600, Sampling Plant Emergency Operation, Revision 1, dated February 22, 2018
MTW-MAN-FPP-0001, Metropolis Works Fire Protection Program Top Tier Manual, Revision 6, dated July 16, 2020
MTW-ADM-ENV-0106 Hazardous Waste Tracking AND Metrics, Page 1 of 8, Revision 0
MTW-ADM-ENV-0102, Waste Characterization and Inventory, Revision 2
MTW-ADM-ENV-0101 Environmental Shipment of Waste, Revision 2
MTW-ADM-ENV-0100 Waste Management, Revision 6
MTW-ADM-MT-0105 Maintenance Work Notifications, Revision 0
MTW-ADM-MI-0001 MTW Mechanical Integrity Program, Revision 11
MTW-SOP-HP-0223, Pond Remediation Contamination Survey Procedure Revision 1
MTW-SOP-HP-0222, Packaging and Surveying Bulk Radioactive Waste Shipments, Revision 8
MTW-SOP-HP-0215, Surveying, Sorting, and Segregating Waste for Disposal, Revision 1
MTW-SOP-HP-0213, Kinetic Phosphormetric Determination of Uranium, Revision 15
MTW-SOP-HP-0209, Collecting Environmental Samples, Revision 9
MTW-SOP-HP-0207, Calibration of Flowmeters, Revision 8
MTW-SOP-HP-0201, Determination of Airborne Radioactivity, Revision 11
MTW-SOP-HP-0104, Control of Gaseous Effluents, Revision 15
MTW-SOP-SMP-0211, Cleaning of Sampler Room, Revision 4, dated July 31, 2020
MTW-SOP-SMP-0213, Dust Collector Cleanout, Changeout, & Other Work, Revision 3, dated July 31, 2020
MTW-SOP-SMP-0215, Sampling Plant System Startup and Operation, Revision 8, dated December 7, 2017
MTW-SOS-HP-0007 CAP 88-PC Program Revision 1
MTW-SOP-SMP-0214, Inspecting, Loading, and Unloading Uranium Ore CONCENTRATES, Revision 7
MTW-SOP-HP-0232, Smear and Radiation Dose Surveys, Revision 13
MTW-SAF-LS-0005 Hot Work Permits, Revision 14
MTW-SAF-LS-0002 LOCK/TAG/TRY (LTT), Revision 7
MTW-ADM-HP-0101 Bioassay Sampling program, Revision 4
Honeywell Metropolis Works Emergency Response Plan, Revision 10, Honeywell Metropolis Works 6 Month Facility Effluent Report, August 28, 2020
2020 Q2 ALARA Slides
2020 Q2 ALARA Minutes
2020 Q1 ALARA Minutes
Docket No. 40-3392; License No. SUB-526
Subject: Honeywell Metropolis Works 6 Month Facility Effluent Report Enclosed are six copies of Honeywell Metropolis Works Facility Effluent Report representing the period July 1 through December 31, 2019, dated 2/27/2020

Condition Reports Reviewed:
IR 19-0371, IR 19-0564, IR 19-0609, IR 19-0084, IR 19-0141

Other Documents:
Automatic External Defibrillators, dated January 29, 2020; February 27, 2020; March 25, 2020; April 21, 2020; May 26, 2020; June 26, 2020; July 24, 2020; August 21, 2020; September 15, 2020
eMoc 19ALL4597, dated March 29, 2019
eMoc 19ISC4614, dated May 6, 2019
eMoc 18ISC4544, dated October 12, 2018
Fire Flow Test Results, September 21, 2020
Off-Site Emergency Siren Tests Activation, dated January 7, 2020; February 4, 2020; March 3, 2020; April 7, 2020; May 5, 2020; June 2, 2020; July 7,2020; August 4, 2020; September 1, 2020
Site Fire and Disaster Siren Test, dated January 8, 2020; February 5, 2020; March 4, 2020; April 1, 2020; May 6, 2020; June 3, 2020; August 5,2020; September 9, 2020
UF_6 Cylinder Emergency Kit, dated January 29, 2020; February 29, 2020; March 25, 2020; April 21, 2020; May 26; 2020, June 26, 2020; July 24, 2020; August 21, 2020; September 15, 2020

Condition Reports Reviewed:
IR-18-0684, IR-18-0780, IR-18-0804, IR-0164, IR-19-0122

Condition Report Written as a Result of the Inspection:
IR-20-0205