



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION II  
SAM NUNN ATLANTA FEDERAL CENTER  
61 FORSYTH STREET, SW, SUITE 23T85  
ATLANTA, GEORGIA 30303-8931

July 7, 2006

Mr. David Edwards  
Plant Manager  
Honeywell Specialty Chemicals  
P.O. Box 430  
Metropolis, IL 62690

SUBJECT: NRC INSPECTION REPORT NO. 40-3392/2006-006

Dear Mr. Edwards:

This letter refers to the inspection conducted from June 5-8, 2006, at the Honeywell Specialty Chemicals facility. The purpose of the inspection was to determine whether activities authorized by the license were conducted safely and in accordance with NRC requirements. At the conclusion of the inspection on June 8, 2006, the findings were discussed with those members of your staff identified in the enclosed report.

The inspection consisted of an examination of activities conducted under the license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of the license. Areas examined during the inspection are identified in the enclosed report. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations of activities in progress, and interviews with personnel.

Based on the results of this inspection, the NRC did not identify any violations.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," 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 document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

Should you have any questions concerning this inspection, please contact us.

Sincerely,

/RA/

Jay L. Henson, Chief  
Fuel Facility Inspection Branch 2  
Division of Fuel Facility Inspection

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

Enclosure: (See page 2)

D. Edwards

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Enclosure: NRC Inspection Report 40-3392/2006-006

cc w/encl:

Gary Wright

Emergency Management Agency

Division of Nuclear Safety

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.: 40-3392

License No.: SUB-526

Report No.: 40-3392/2006-006

Licensee: Honeywell International, Inc.

Facility: Metropolis Works

Location: P. O. Box 430  
Metropolis, IL 62960

Dates: June 5 - 8, 2006

Inspectors: Richard Gibson, Jr., Acting Senior Fuel Facility Inspector  
Omar Lopez, Fuel Facility Inspector

Accompanying Personnel: Jay Henson, Chief, Fuel Facility Inspection Branch 2 (FFIB2)  
John Pelchat, Senior Fuel Facility Inspector, FFIB2  
Mike Raddatz, Project Manager, Office of Nuclear Safety and Safeguards  
Henry J. Rabski, Canadian Nuclear Safety Commission  
Jafir A. Jaferi, Canadian Nuclear Safety Commission  
Marty O'Brien, Canadian Nuclear Safety Commission

Approved by: Jay L. Henson, Chief  
Fuel Facility Inspection Branch 2  
Division of Fuel Facility Inspection

Enclosure

## EXECUTIVE SUMMARY

Honeywell International, Inc.  
NRC Inspection Report No. 40-3392/2006-006

This routine, announced inspection was conducted in the areas of emergency preparedness and fire safety. The inspection involved observation of work activities, a review of selected records and procedures, and interviews with plant personnel. The inspection identified the following aspects of the program as outlined below:

### Emergency Preparedness

- The inspectors concluded that the training provided to key management personnel holding new positions as the result of recent changes in the emergency response organization and the installation of new plume modeling software were examples of program changes that positively impacted the effectiveness of the licensee's emergency preparedness program. The licensee conducted effective independent audits and assessments of the emergency response organization. The licensee's emergency call list was current. No violations of NRC requirements were observed (Paragraph 2.a).
- The revised emergency procedures continued to adequately implement the Emergency Response and Radiological Contingency Plan (ERP/RCP) (Paragraph 2.b).
- Based on interviews and training documentation, emergency response training was adequate. Emergency Response Organization personnel selected for review were trained in accordance with procedures (Paragraph 2.c).
- Based on interviews and records reviewed, the licensee's interface with offsite support groups was properly maintained (Paragraph 2.d).
- The licensee conducted exercises in accordance with the requirements of the ERP/RCP. The performance of quarterly hands-on-drills using realistic scenarios provided sufficient challenges to maintain the proficiency of the response organization (Paragraph 2.e).
- Based on the equipment operability checks and documentation for maintenance and calibration, the inspectors determined that the reliability of selected equipment was good and the equipment was maintained in a state of operational readiness (Paragraph 2.f).

### Fire Safety

- The inspectors confirmed that the licensee assigned and tracked corrective actions related to audit findings. The inspectors determined that the pre-fire planning guide and emergency plan were up to date (Paragraph 3.a).
- Fire safety systems were properly implemented and maintained. However, several deficiencies were noted related to the condition of several systems. An inspection follow up item was opened to track licensee actions regarding the firewater tank internal inspection (Paragraph 3.b).

- The process areas, equipment, and material storage areas were operated in accordance with fire safety requirements (Paragraph 3.c).

Attachment:

Partial List of Persons Contacted

Inspection Procedures Used

Items Opened

List of Acronyms Used

## **REPORT DETAILS**

### **2. Summary of Plant Status**

The Honeywell Speciality Chemicals (licensee) uranium conversion facility (known as the Metropolis Works or MTW) is located on a 1100 acre site (60 acres within the fence line). The licensee is authorized to possess 150 million pounds of natural uranium ore and to convert this material to uranium hexafluoride (UF<sub>6</sub>). The uranium conversion process occurs in the Feeds Material Building (FMB). During the inspection period, routine operations were conducted in the Feeds Material Building without incident.

### **3. Emergency Preparedness (88050) (F3)**

#### **a. Review of Program Changes (F3.01)**

##### **(1) Scope and Observations**

Changes to the Emergency Response and Radiological Contingency Plan (ERP/RCP), organization, facilities, and equipment were reviewed to assess the impact on the effectiveness of the program. The adequacy of the emergency preparedness audit required by Section 7.4 of the ERP/RCP was also evaluated.

Through interviews and reviews of licensee records, the inspectors determined that the licensee had provided emergency response training to individuals who had new management responsibilities as the result of recent changes to the emergency response organization. The licensee also installed new plume modeling software that is capable of back calculating the amount of the release at the source. There were no other significant organization or facility changes since the last inspection in September 2005.

An independent annual audit and management review summaries were reviewed for the emergency preparedness program for 2005. The audit and summaries were compliance and comprehensive, and provided a detailed assessment of the emergency preparedness program. During the tour of the facilities, the inspectors reviewed emergency preparedness control documents to assess the effectiveness of the emergency preparedness program and determined that it was adequate. In addition, the inspectors reviewed the licensee's emergency call list and determined it to be current.

##### **(2) Conclusions**

The inspectors concluded that the training provided to key management personnel holding new positions as the result of recent changes in the emergency response organization and the installation of new plume modeling software were examples of program changes that positively impacted the effectiveness of the licensee's emergency preparedness program. The licensee conducted effective independent audits and assessments of the emergency response organization. The licensee's emergency call list was current. No violations of NRC requirements were observed.

b. Implementing Procedures (F3.02)

(1) Scope and Observations

Emergency Preparedness Implementing Procedures (EPIPs) were reviewed to determine if procedures were adequate and to ensure that revised procedures continued to implement the ERP/RCP. From the review of procedures, the inspectors determined that there had not been any significant procedure changes since the last inspection. The inspectors reviewed a representative sample of procedure changes and determined that the changes were procedure updates or enhancements. The inspectors also determined that the licensee's current procedures continued to effectively implement the ERP/RCP requirements. All changes were developed, reviewed, and approved in accordance with the licensee's procedural requirements.

(2) Conclusions

The inspectors concluded from a review of records and interviews with licensee representatives that the emergency procedures continued to adequately implement the ERP/RCP. No violations of NRC requirements were observed.

c. Training and Staffing of Emergency Organization (F3.03)

(4) Scope and Observations

Emergency response training was reviewed to determine if the licensee had provided adequate training to personnel designated as the primary and/or alternate members of the Emergency Response Organization (ERO). In addition, emergency response training records were reviewed for a random sampling of personnel assigned to the emergency response team (ERT) referred to as the "red hats."

The inspectors reviewed the training outline and class attendance roster sheets for personnel assigned to the ERTs. The inspectors determined that personnel training was current and was conducted in accordance with procedural requirements governing emergency response training. The inspectors conducted interviews with several members of the emergency response team including the crisis manager, the communications officer, several incident commanders, the control room officer and the radiation officer. The ERT members were knowledgeable regarding their roles. Interviews of licensee personnel indicated that they were familiar with the evacuation alarm, evacuation routes, and accountability reporting locations. Emergency response training provided adequate information regarding roles, responsibilities, and recent changes to the ERP/RCP and the emergency procedures. No problems were identified during any of the interviews and walkthroughs.

(2) Conclusions

Based on interviews and reviews of training documentation, the inspectors concluded that emergency response training was adequate. Personnel selected for review were trained in accordance with procedures. No violations of NRC requirements were observed.

d. Offsite Support (F3.04)

(1) Scope and Observations

Licensee activities in the areas of training, agreements, and exercises were reviewed to determine if the licensee was periodically involving offsite support groups.

The inspectors determined that agreements with offsite support groups were maintained in accordance with the ERP/RCP. The inspectors reviewed offsite support training records and determined that annual training was provided to offsite support in accordance with the ERP/RCP and procedures. The inspectors also determined that site familiarization tours were provided to offsite fire support groups and rescue personnel. The inspectors discussed the interface between the licensee and offsite authorities with representatives of the Massac County Fire Department and the Emergency Services Disaster Agency. The radiation safety training provided to offsite response personnel was adequate and provided the appropriate level of understanding regarding the potential hazards that may be encountered during an onsite response. Offsite authorities participated in the last biennial exercise conducted in May 2005. No problems were identified.

(2) Conclusions

Based on interviews and records reviewed, the inspectors concluded that the licensee maintained adequate interfaces with offsite support groups. No violations of NRC requirements were observed.

e. Drills and Exercises (F3.05)

(1) Scope and Observations

The ERP/RCP required that biennially, an emergency exercise be conducted. The inspectors reviewed the licensee's exercise scenarios to determine if they adequately tested both onsite and offsite emergency response capability. The effectiveness of the licensee's critiques to self identify areas of improvement was also reviewed.

The last biennial exercise was observed by the NRC on May 24, 2005, and included participation by federal, State, and local support agencies. In addition, to the biennial exercise, the licensee conducted periodic hands-on drills and table top exercises involving activation of the emergency response organization. Through interviews of licensee staff, the inspectors determined that the licensee postulated drill and accident scenarios that provided sufficient challenges to maintain the proficiency of onsite and offsite response personnel. The inspectors also reviewed the response of the licensee's emergency response organization to a number of actual events experienced by the licensee and determined that the licensee's response in each case was adequate.

Review of records and interviews of licensee personnel indicated that effective critiques of the drills were conducted, and areas for improvement were documented and tracked in the licensee's corrective action system.



(2) Conclusions

The licensee conducted exercises in accordance with the requirements of the ERP/RCP and procedures. The performance of hands-on-drills and table top exercises using realistic scenarios provided sufficient challenges to maintain the proficiency of onsite and offsite response organizations. No violations of NRC requirements were observed.

f. Emergency Equipment and Facilities (F3.06)

(1) Scope and Observations

Emergency response equipment, instrumentation, vehicles and supplies used to evaluate and assess radiological conditions were examined to determine if they were maintained in a state of operational readiness.

The licensee's emergency equipment and kits were inspected in the control room, on several floors of the FMB, pump houses, site vehicles and other designated areas at the facility. The inspectors observed an inventory and operability check of equipment at selected locations and noted that survey instruments were operational. The inspectors also observed that respiratory protection equipment, air samplers, and supplies were checked for shelf-life, reliability and quantity, and found to be maintained in an adequate state of readiness. Documentation in support of the calibration and maintenance of the onsite meteorological system, the HF fence monitors, and monthly testing of the UF<sub>6</sub> evacuation alarm and the public warning system sirens were reviewed. No problems were noted.

(2) Conclusions

Based on the equipment operability checks and documentation for maintenance and calibration, the inspectors concluded that emergency response equipment was maintained in an adequate state of operational readiness. No violations of NRC requirements were observed.

**3. Fire Protection (Inspection Protection (IP) 88055)**

a. Review of Documentation Related to the Fire Protection Program, Insurer's Audit, and Safety Committee (O4.02)  
Pre-Fire Plan (O4.07)

(1) Scope and Observations

The inspectors reviewed the last two insurer's audit reports. The inspectors verified that the licensee assigned corrective actions for the findings and tracked them until completion. The inspectors reviewed the licensee's fire pre-fire planning guide and the emergency plan to verify that recent changes were included in the document. The inspectors did not identify any significant problems.

(2) Conclusions

The inspectors confirmed that the licensee assigned and tracked corrective actions related to fire protection audit findings. The inspectors determined that the pre-fire planning guide and emergency plan were up to date. No violations of NRC requirements were observed.

b. Building Design, Construction, and Ventilation System (O4.03)  
Fire Protection Systems (O4.05)  
Fire Hazard Analysis (O4.06)

(1) Scope and Observations

The inspectors examined several fire suppression and protection systems in the process, storage, and shop areas. The examined equipment included, but was not limited to: hydrants, hose houses and hose reels, portable extinguishers, automatic sprinklers, fire pumps and drivers, the fire water storage tank, as well as smoke and explosive gas detectors. The inspectors noted that portable fire extinguishers were charged to normal operating pressure and no visible damage was noted. The inspectors also noted that hose houses and hose reels did not evidence any visible damage, and the hoses were the required length and diameter. No violations were identified.

The inspectors noted several observations regarding the condition of fire protection systems as they relate to the guidance in National Fire Protection Association (NFPA) Publication 25. The licensee is not committed to compliance to NFPA 25 and these observations are not violations of NRC requirements. During the examination of fire systems in the FMB, the inspectors noted that the pressure gauge in the main fire water line for the building (inlet) and the gauge at the hydraulically most remote point (6th floor) were not working. Further review revealed that the licensee did not verify that the gauges were in working condition on a routine basis, which is necessary to verify that normal pressure is maintained as specified by chapter 12 of NFPA 25. In addition, the licensee had not flow-tested and pressure tested the standpipes (hose reels) in the FMB to ensure that the design specification was being maintained as specified in Chapter 6 of NFPA 25. The inspectors also noted that the main isolation valve for the FMB was not secured as specified by Chapter 12 of NFPA 25 to prevent an unauthorized individual from closing the valve.

Based on these observations, the inspectors determined that the only way that the licensee had to verify the operability of the system was by actually discharging water through the hoses. As an immediate corrective action the licensee replaced the defective pressure gauges and tested the hose at the hydraulically most remote point to ensure the operability of the system.

The inspectors reviewed the licensee's program for the inspection, testing, and maintenance of fire safety systems. Interviews of licensee personnel indicated that fire hose nozzles were inspected periodically. However, the licensee did not have documentation to demonstrate that the hose nozzles had been inspected and tested as required by their administrative procedures; and as specified in Chapter 6 of NFPA 25.

In addition, the licensee had not performed a five-year internal inspection of the firewater tank as required by their administrative procedures and as specified in Chapter 9 of NFPA 25. The inspectors observed that the interior wall of the tank was covered with about 1 to 1-1/2 inches of scale, the water was nearly opaque green, and filled with debris (apparently large accumulations of algae) floating in the water. The inspectors noted the licensee had added the type and amount of algaecide as recommended in an insurer's report. However, the algaecide is apparently ineffective. The licensee committed to perform a weekly functional test of the hydrofluoric acid mitigation system to ensure system operability until they could inspect the tank and assess its condition. These non-regulatory requirements were communicated to the licensee for action. An inspection follow up item (IFI), 40-3392/2006-006-01, was opened to track licensee actions.

(2) Conclusions

Fire safety systems were installed and maintained in accordance with NRC requirements. However, several observations were noted related to the condition of several fire protection systems. These non-regulatory requirements were communicated to the licensee for action. An IFI was opened to track licensee actions regarding the firewater internal inspection. No violations of NRC requirements were observed.

c. Fire Safety of Process, Equipment, and Storage Areas (O4.04)

(1) Scope and Inspections

The inspectors performed walk downs of the sampling plant, the FMB and surrounding areas, storage and shop areas, vehicle fueling areas, and the pump house to ensure that combustible materials and flammable liquids were properly controlled. The inspectors noted that flammable liquids were properly stored in designated cabinets. Accumulations of transient combustibles in the operating process areas were adequately controlled to levels below a significant fire hazard. The inspectors also noted that outside areas were kept free of significant amounts of transient combustibles that were large enough to be a fire exposure hazard.

(2) Conclusions

The process areas, equipment, and material storage areas were operated in accordance with fire safety requirements. No violations of NRC requirements were observed.

**5. Temporary Instruction 2600-012**

a. The following Temporary Instruction (TI) 2600/012 items were reviewed:

IN-02-024, "Potential Problems with Heat Collectors on Fire Protection Sprinklers." The conditions identified in the information notice were not applicable to the licensee because the licensee did not use heat collectors on fire protection sprinklers.

IN-99-028-S1, "Recall of Star Brand Fire Protection Sprinkler Heads." The conditions identified were not applicable to the licensee because the licensee did not have any heads meeting the criteria referenced in the information notice.

IN-99-007, "Failed Fire Protection Deluge Valves and Potential Testing Deficiencies in Preaction Sprinkler Systems." The inspectors verified that the deluge valves were installed to operate at line pressure consistent with manufactures design specifications. The inspectors noted that licensee procedures for maintenance and testing of fire protection deluge valves were in accordance with manufacturers' recommendations.

IN 86-047, "Potential Problems With Worn or Distorted Hose Clamps on Self-Contained Breathing Apparatus,"

IN 00-007, "National Institute for Occupational Safety and Health Respirator User Notice: Special Precautions for Using Certain Self-Contained Breathing Apparatus Air Cylinders"

IN 86-024, "Respirator Users Notice: Increased Inspection Frequency for Certain Self-Contained Breathing Apparatus Air Cylinders"

Based on interviews, documentation, and physical inspection of Self Contained Breathing Apparatus (SCBA) possessed by the licensee, the inspectors determined that, the licensee had not taken actions to address the issues identified in the three related INs. The licensee plans to implement actions to address the issues identified in the INs. The inspectors identified one hose clamp connection with a tear at the quick connect to the regulator on an SCBA stored aboard the licensee's emergency response van.

## **5. Exit Meeting Summary**

The inspectors presented the inspection results to members of the plant staff and management at the conclusion of the inspection on June 8, 2006. The plant staff acknowledged the findings presented. Although proprietary documents may have been reviewed during this inspection, the proprietary nature of these documents is not included in this report. No dissenting comments were received from the licensee.

## ATTACHMENT

### 1. **PARTIAL LIST OF PERSONS CONTACTED OR ATTENDED EXIT MEETING**

#### Licensee

K. Babcock, F2 Products Leader  
J. Cybulski, Supply Chain Leader  
C. DeLand, Maintenance/Reliability Manager  
D. Edwards, Plant Manager  
R. Erickson, Operations Manager  
J. Johnson, Safety Supervisor  
L. Litinski, Health Physics Specialist  
B. Muter, Training  
E. Murphy, IT Manager  
S. Patterson, Health Physics Supervisor  
J. Riley, Nuclear Regulatory Affairs Manager  
N. Rodgers, HP Specialist  
G. Stegman, Maintenance Representative  
B. Stokes, Health Physics Specialist  
G. Wood, Project Manager, Security

Other licensee employees contacted included engineers, technicians, and office personnel.

### 2. **INSPECTION PROCEDURES USED**

88050            Emergency Preparedness  
88055            Fire Protection

### 3. **ITEMS OPENED, CLOSED, AND DISCUSSED**

<u>Item Number</u>	<u>Status</u>	<u>Description</u>
2006-06-01	Open	IFI - Internal inspection of a firewater tank (Paragraph 3.b)

### 4. **LIST OF ACRONYMS USED**

ADAMS	Agency Document Access and Management System
CFR	Code of Federal Regulations
EPIP	Emergency Preparedness Implementing Procedure
ERO	Emergency Response Organization
ERP/RCP	Emergency Response and Radiological Contingency Plan
ERT	Emergency Response Team
FMB	Feed Materials Building
IFI	Inspector Follow Up Item

IN	Information Notice
MTW	Metropolis Works
NFPA	National Fire Protection Association
NRC	Nuclear Regulatory Commission
PARS	Publicly Available Records
SCBA	Self Contained Breathing Apparatus
TI	Temporary Instruction
UF <sub>6</sub>	Uranium Hexafluoride