

July 21, 2003

Mr. Rory O'Kane  
Plant Manager  
Honeywell International, Inc.  
P.O. Box 430  
Metropolis, IL 62960-0430

SUBJECT: NRC INSPECTION REPORT 04003392/2003-003(DNMS) (HONEYWELL)

Dear Mr. O'Kane:

On June 27, 2003, the NRC completed a routine regional inspection at your Metropolis, Illinois, 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 27, 2003, the NRC inspector discussed the findings with members of your staff.

This 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 routine regional 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 safety significant violations.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response to this letter 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>.

We will gladly discuss any questions you have concerning this inspection.

Sincerely,

***/RA by P. Hiland Acting for/***

Kenneth G. O'Brien, Chief  
Fuel Cycle Branch

Docket No. 040-03392  
License No. SUB-526

Enclosure: Inspection Report 040-03392/2003-003(DNMS)

cc w/encl: G. Wright, Illinois Department of Nuclear Safety

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No: 04003392

License No: SUB-526

Report No: 04003392/2003-003(DNMS)

Licensee: Honeywell International, Inc.

Facility: Metropolis Works

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

Dates: June 23 through 27, 2003

Inspector: Mary L. Thomas, Paducah Resident Inspector

Approved By: Kenneth G. O'Brien, Chief  
Fuel Cycle Branch  
Division of Nuclear Materials Safety

## EXECUTIVE SUMMARY

**Honeywell International, Inc.  
Metropolis Works  
NRC Inspection Report 04003392/2003-003(DNMS)**

This inspection included aspects of licensee operations, radiological protection and fire protection.

### Operations

- The inspector's review of the licensee's procedure to operate the cylinder wash facility identified two minor discrepancies that were promptly addressed. In addition, the inspector identified that the licensee was not following procedural requirements to use steam to dry excess water from washed cylinders. This lack of procedure adherence constituted a violation of minor safety significance and was not subject to formal enforcement action in accordance with Section IV of the NRC Enforcement Policy. (Section O1.1)

### Plant Support

- The inspector noted several of the licensee's radiological protection procedures were in need of revision due to a license amendment that became effective January 30, 2003. The inspector concluded that the health physics supervisor had been pro-active in developing a list, prior to the inspection, of necessary procedural revisions. (Section R3.1)

### Fire Protection

- The licensee's procedure for monthly inspection of portable fire extinguishers met the intent of the requirements contained in National Fire Protection Association 10, "Standard on Portable Fire Extinguishers." One portable extinguisher was missing from its designated location, and the inspector noted the licensee was prompt in correcting that discrepancy. At the end of the inspection period, the licensee was made aware that the inspector identified another portable extinguisher that was due for its 5-year hydrostatic test. (Section F2.1)
- The inspector concluded that the licensee's procedure, in conjunction with the "Plant Loss Prevention Inspection" sheet, met the intent of the inspection requirements in National Fire Protection Association 25, "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems." The inspector identified that the licensee's implementing procedure did not include an inspection of appropriate valve identification, and the inspector noted through direct field observations that the inspected valves did not have appropriate valve identifications. In addition, the inspector identified that the results of the annual inspection of the facility's fire water control valves, performed by the licensee's insurer, were not documented as required by the referenced standard. These findings constituted violations of minor safety significance and were not subject to formal enforcement action in accordance with Section IV of the NRC Enforcement Policy. (Section F2.2)

## I. Operations

### O1 Conduct of Operations

#### O1.1 Cylinder Wash Activities

##### a. Inspection Scope (TI2600/003)

The inspector toured the cylinder wash facility and reviewed the licensee's procedure that governed facility operations, "3.0 UF<sub>6</sub> Cylinder Hydrostatic Strength Test." The inspector evaluated whether the licensee was adhering to the implementing procedure.

##### b. Observations and Findings

The inspector utilized the licensee's procedure and discussions with cognizant staff to verify operating techniques during a walk-down of the cylinder wash facility. The inspector noted that the licensee's procedure referenced the ASME [American Society of Mechanical Engineers] standards in general; however, no specific reference to ANSI N14.1, "Uranium Hexafluoride - Packaging for Transport," was made regarding the hydrostatic testing of cylinders. The inspector identified a minor discrepancy between the procedure value for a pressure relief valve and the actual setting identified on the pressure relief valve (470 psig versus 425 psig). The pressure relief valve tag had the correct value. The inspector discussed these observations with the cognizant licensee staff, and the licensee initiated a revision of the procedure to correct these discrepancies.

The inspector noted that the governing procedure required the use of steam to remove excess water from the cylinder after the hydrostatic test. The inspector asked if steam was being used to remove excess water from the cylinder, and licensee staff indicated they had been directed not to use steam to remove excess water. The inspector discussed this lack of procedure adherence with cognizant licensee supervisory personnel, who stated operators would be instructed to follow the procedural steps, i.e. use steam to remove excess water. Not using steam to dry the excess water resulted in the cylinders having to be dried with heated plant air for longer periods of time to reach the procedurally required dew-point of -30° Fahrenheit. The lack of procedure adherence constituted a violation of minor safety significance and was not subject to formal enforcement action in accordance with Section IV of the NRC Enforcement Policy. (NRC Identified)

##### c. Conclusion

The inspector identified two discrepancies during the review of the licensee's procedure to operate the cylinder wash facility. The licensee initiated a revision of the procedure to correct these discrepancies. In addition, the inspector determined that the licensee was not following the implementing procedure with respect to using steam to dry the excess water from the tested cylinders. The inspector determined that this lack of procedure adherence constituted a violation of minor safety significance and was not subject to formal enforcement action in accordance with Section IV of the NRC Enforcement Policy.

### III. Plant Support

#### R3 Radiological Protection Procedures and Documentation

##### R3.1 Radiological Procedures

###### a. Inspection Scope (83822)

The inspector reviewed several of the licensee's radiological protection (RP) procedures to evaluate if the procedures conformed with the conditions of the license. The inspector reviewed the "Procedure for Review of the Plant Radiation Safety Program," "Procedure for Reporting Radioactive Materials Incidents to the Nuclear Regulatory Commission," "Procedure for Personnel Contamination Control," and the daily source checks for the exit monitoring instruments.

###### b. Observations and Findings

On January 30, 2003, a license amendment became effective that affected several RP procedures. At the time of the inspection, the licensee's health physics (HP) supervisor had only been on site for five months. Prior to the inspection, the HP supervisor had the RP staff develop a list of RP procedures that were affected by the recent amendment.

The inspector noted that the annual RP audit procedure "Procedure for Review of the Plant Radiation Safety Program," dated 1996, had not been revised to reflect the current License Condition 2.7, which no longer required that the annual RP audit be performed by an outside individual. In addition, the incident response procedure "Procedure for Reporting Radioactive Materials Incidents to the Nuclear Regulatory Commission," dated 1996, contained an out-of-date NRC emergency response telephone number. The HP supervisor stated that he used the NRC Operations Center telephone number given in 10 CFR 20.2202(d)(2) to report incidents.

The inspector noted that the exit monitoring procedure "Procedure for Personnel Contamination Control," dated 2002, required individuals to monitor their extremities, and to concentrate on their hands and feet. The sign posted by each monitor instructed individuals to monitor their hands and feet and their head, necks and ears if they had been in a dusty area. The inspector discussed this observation with cognizant RP staff as the definition of "extremity" in 10 CFR 20.1003 means hand, elbow, arm below the elbow, foot, knee, or leg below the knee. The RP staff stated that the intent was for individuals to monitor their hands and feet before exiting the plant.

The inspector observed that the daily source checks were not performed on the exit monitors for the following dates: June 14, 15, 18, 19, 21, 22, and 23. The HP supervisor stated that the daily source check practice was not a procedural requirement, had been in place for about one month, and that the checks were not performed on the noted dates due to communication problems.

The HP supervisor added the NRC-identified procedural discrepancies to his pre-existing list of needed procedural revisions. The inspector noted that the discrepancies were editorial in nature and not safety significant.

c. Conclusions

The inspector concluded that several of the licensee's radiological protection procedures needed revision due to the licensee's recent license amendment which became effective January 30, 2003. The inspector also concluded that the health physics supervisor had been pro-active in developing a list of such procedures.

**R8 Miscellaneous Radiological Protection Issues**

R8.1 Miscellaneous Open Item Closures (92701)

R8.1.1 2003001-04 (VIO): Annual radiation protection program audit not conducted by an individual from outside the plant staff in 2002. The inspector reviewed the licensee's response letter, dated March 14, 2003 and the current license conditions. The inspector determined that Section 2.7 of the license had been amended to state that the annual radiation protection program audit may be conducted by an individual from outside of the plant staff. The inspector's recent review of radiological protection procedures identified that the internal audits procedure still stated: "... shall be conducted." The inspector determined that this procedure was on the licensee's list of radiological protection procedures to be revised. This item is closed.

R8.1.2 2003001-03 (URI): Licensee's calibration methodology in relation to industry standards. The licensee is now sending radiation survey instruments to an offsite vendor. This item is closed.

R8.2 Miscellaneous Open Item Discussions (92701)

R8.2.1 2003001-01 (URI): Effectiveness of the ALARA Committee in identifying and reversing an apparent increase in personnel whole body exposure. The inspector reviewed the first quarter 2003 ALARA Committee presentation and noted that the licensee recognized and evaluated a trend in increased exposure. Some of the increased exposure was attributed to the use of the Kinetic Phosphorescence Analyzer (KPA) for urinalyses and the fact that the 1994 revision to 10 CFR 20 combined external and internal exposures, thus giving a higher value for total effective dose equivalent than the previously used whole body exposure. The licensee was in the process of evaluating radiation worker practices, process engineering controls, and work tasks that create Airborne Radioactivity Areas. The inspector noted that the number of individuals with exposures greater than one rem in 2002 was 24. This item remains open.

R8.2.2 2003001-02 (IFI): Licensee efforts to enhance controls for alerting personnel prior to entering areas requiring a respirator. The licensee recognized a need to move the controls (postings and lights) for alerting personnel prior to entering Airborne Radioactivity Areas (ARA) requiring a respirator. In the interim, the licensee directed operators notify the health physics staff when a floor becomes an ARA so that the health physics staff can post the doors to the ARA. The licensee is also evaluating those work tasks that create ARAs. This item remains open.

## IV. Fire Protection

### F2 Status of Fire Protection Facilities and Equipment

#### F2.1 Portable Fire Extinguishers

##### a. Inspection Scope (88055)

The inspector reviewed the licensee's procedure and associated inspection records for the monthly inspection of portable fire extinguishers to verify the extinguishers were being inspected and were spaced in accordance with the requirements of NFPA [National Fire Protection Association] 10, "Standard on Portable Fire Extinguishers." The inspector also toured the Feed Materials Building to verify the portable fire extinguishers had been hydrostatically tested every 5 years as required by NFPA 10.

##### b. Observations and Findings

The inspector reviewed the licensee's procedure and inspection records for monthly inspection of portable fire extinguishers and determined that the procedure, in conjunction with the inspection records, met the intent of the requirements contained in NFPA 10.

The licensee had not yet performed their monthly (June 2003) inspection of the portable fire extinguishers in the Feed Materials Building (FMB) at the time of the on-site inspection. The inspector toured the FMB and observed that fire extinguishers were located on each floor of the FMB in all but one location. The inspector observed that one fire extinguisher was due for its required 5-year hydrostatic test, another fire extinguisher had a broken seal, a third had no seal, and all of the fire extinguishers in the FMB were due for monthly inspections. The inspector discussed these findings with the licensee's safety supervisor. The licensee promptly replaced the missing fire extinguisher and replaced the seals on the affected fire extinguishers. Replacing the seals also required that the extinguishers be weighed to determine if they had been discharged. At the end of the on-site inspection, the fire extinguisher which was due for its 5-year hydrostatic test, was being scheduled for testing by an offsite vendor.

##### c. Conclusions

The inspector concluded that the licensee's procedure for monthly inspection of portable fire extinguishers met the intent of the requirements contained in National Fire Protection Association 10, "Standard on Portable Fire Extinguishers." The inspector also concluded that the licensee took prompt corrective actions to replace a missing fire extinguisher.

#### F2.2 Fire Water Control Valves

##### a. Inspection Scope (88055)

The inspector reviewed the licensee's procedure and associated inspection records for monthly inspection of fire water control valves to evaluate if the valves were being inspected in accordance with the requirements of NFPA [National Fire Protection Association] 25, "Standard for the Inspection, Testing, and Maintenance of Water-Based

Fire Protection Systems.” The inspector toured the grounds of the facility to determine if fire water control valves were sealed in their normal open/closed positions.

b. Observations and Findings

The inspector reviewed the licensee’s procedure and “Plant Loss Prevention Inspection” sheet and noted that the fire water control valves were being inspected as required by NFPA 25. While the licensee’s procedure met the intent of NFPA 25, it did not include an inspection requirement to verify that the valves were provided with appropriate identification; and, the inspector identified through direct field observations that the control valves did not have appropriate identifications. However, the “Plant Loss Prevention Inspection” sheet listed the valve identification numbers and physical locations that enabled an experienced member of the licensee’s staff to perform an adequate inspection. The inspector observed that the lack of appropriate valve identification both in the procedure and on the actual valves constituted a violation of minor safety significance and was not subject to formal enforcement action in accordance with Section IV of the NRC Enforcement Policy. (NRC Identified)

The inspector evaluated the licensee’s annual operation inspection of the fire water control valves. The licensee stated that their insurer performed the required inspection, but did not document the specific inspection results. The inspector determined that the lack of inspection documentation constituted a violation of minor safety significance and was not subject to formal enforcement action in accordance with Section IV of the NRC Enforcement Policy. (NRC Identified)

c. Conclusions

The inspector concluded that the licensee’s procedure, in conjunction with the “Plant Loss Prevention Inspection” sheet, met the intent of the inspection requirements in NFPA 25, “Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems.” The inspector concluded that the lack of appropriate fire water control valve identification and the lack of inspection documentation constituted violations of minor safety significance. These minor violations were not subject to formal enforcement action in accordance with Section IV of the NRC Enforcement Policy. Based on the inspectors findings, the licensee acknowledged that their fire protection inspection program needed additional focus with respect to procedures, valve tagging, and inspection documentation.

**F8 Miscellaneous Fire Protection Issues**

F8.1 Offsite Fire Department

a. Inspection Scope (88055)

The inspector evaluated the licensee’s training session provided to the offsite fire department (provides emergency assistance) regarding the facility’s unique characteristics and the approach to combating onsite fires.

b. Observations and Findings

The inspector reviewed the training material presented to the offsite fire department on June 5, 2003. The inspector noted that the licensee familiarized the offsite fire department with the facility, the locations and types of fire fighting equipment, and the potential fire hazards at the facility.

c. Conclusions

The inspector concluded that the licensee familiarized the offsite fire department with the facility and the constraints of fighting a fire onsite.

## V. Management Meetings

### V1. Exit Meeting Summary

The inspector presented the inspection results to members of the plant staff and management at the conclusion of the inspection on June 27, 2003. The inspector asked the plant staff whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

## PARTIAL LIST OF PERSONS CONTACTED

### Honeywell Specialty Chemicals

- \* R. O'Kane, Plant Manager
- \* M. Ginzler, Health Physics Supervisor
- \* M. Shephard, Regulatory Affairs Manager
- \* D. Mays, Safety Leader
- \* N. Rodgers, Health Physics Specialist
- \* M. Davis, Health Physics
- \* J. Johnson, Safety Supervisor
- \* P. Bryan, Nuclear Services Leader

Other members of the licensees' staff were also contacted during the inspection.

\* Denotes those attending the exit meeting on June 27, 2003.

## INSPECTION PROCEDURES USED

TI 2600/003	Operational Safety Review
IP 83822	Radiological Protection
IP 88055	Fire Protection
IP 92701	Follow-up

## ITEMS OPENED, CLOSED, AND DISCUSSED

<u>Opened</u>	<u>Type</u>	<u>Summary</u>
None		
<u>Closed</u>	<u>Type</u>	<u>Summary</u>
04003392/2003001-04	VIO	An annual radiation protection program audit was not conducted by an individual from outside the plant staff in 2002 as required by license requirements.
04003392/2003001-03	URI	Inspector review of the licensee's calibration methodology in relation to industry standards.
<u>Discussed</u>	<u>Type</u>	<u>Summary</u>
04003392/2003001-01	URI	Inspector review of the effectiveness of the ALARA Committee in identifying and reversing an apparent significant increase in personnel whole body exposure.
04003392/2003001-02	IFI	Inspector review of the licensee's efforts to enhance controls for alerting personnel prior to entering areas requiring a respirator, as well activating such controls prior to initiating activities having a high potential for causing positive air samples to be received.

## LIST OF ACRONYMS USED

ARA	Airborne Radioactivity Area
ADAMS	Agencywide Document Access and Management System
ALARA	As-Low-As-Reasonably-Achievable
CFR	Code of Federal Regulations
DNMS	Division of Nuclear Material Safety
FMB	Feed Materials Building
HP	Health Physics
IP	Inspection Procedure
KPA	Kinetic Phosphorescence Analyzer
NFPA	National Fire Prevention Association
NRC	Nuclear Regulatory Commission
PARS	Publicly Available Records
PDR	Public Document Room
PERR	Public Electronic Reading Room
psig	pounds per square inch gauge
RP	Radiological Protection
UF <sub>6</sub>	Uranium Hexafluoride