



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303-8931**

November 22, 2004

NMED No. 040596

Mr. Rory J. O'Kane
Plant Manager
Honeywell Specialty Chemicals
P.O. Box 430
Metropolis, IL 62690

SUBJECT: NRC INSPECTION REPORT 40-3392/2004-010 AND NOTICE OF VIOLATION

Dear Mr. O'Kane:

This letter refers to the inspection conducted on October 25 through 29, 2004, at the Honeywell Specialty Chemicals facility. The purpose of the inspection was to perform a routine review of the chemical safety program implementation, and to determine whether activities authorized by the license were conducted safely and in accordance with NRC requirements. At the conclusion of the inspection on October 29, 2004, 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 has determined that a Severity Level IV violation of NRC requirements occurred. The violation was evaluated in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG 1600, which is included on the NRC's web site at <http://www.nrc.gov/what-we-do/regulatory/enforcement.html>. The violation is cited in the enclosed Notice of Violation (Notice), and the circumstances surrounding the violation are described in the subject inspection report. The violation involves failure to provide operators with procedural guidance to address inoperative control room alarms and instrumentation, including requirements to assess the need to take compensatory action to ensure continued safe operations.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

This also refers to your October 8, 2004, response to the Notice of Violation transmitted to you by our letter dated September 10, 2004, with Inspection Report 40-3392/2004-008. We have reviewed your response and have no further questions at this time. Your corrective actions will be examined during future inspections.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response 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>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

Please note that on October 25, 2004, the NRC terminated public access to ADAMS and initiated an additional security review of publicly available documents to ensure that potentially sensitive information is removed from the ADAMS database accessible through the NRC's web site. Interested members of the public may obtain copies of the referenced documents for review and/or copying by contacting the Public Document Room pending resumption of public access to ADAMS. The NRC Public Documents Room is located at NRC Headquarters in Rockville, MD, and can be contacted at (800) 397-4209.

Should you have any questions concerning this letter, 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

Enclosures: 1. Notice of Violation
2. NRC Inspection Report 40-3392/2004-010

cc w/encls:
Gary Wright
Emergency Management Agency
Division of Nuclear Safety
1035 Outer Park Dr., 5th Floor
Springfield, IL 62704

Distribution w/encls: (See page 3)

Distribution w/encls:

- J. Henson, RII
- J. Lusher, NMSS
- B. Nelson, NMSS
- M. Raddatz, NMSS

*see previous concurrence

PUBLIC DOCUMENT (circle one): YES NO

OFFICE	RII:DFFI	RII:DFFI	RII:DFFI		
SIGNATURE	NR 11/22/04	NR 11/22/04	DH 11/2//04		
NAME	*O. Lopez	*N. Rivera	*D. Hartland		
DATE	11/ /04	11/ /04	11/ /04		
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO

NOTICE OF VIOLATION

Honeywell Specialty Chemicals
Metropolis, Illinois

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

During an NRC inspection conducted on October 25 through 29, 2004, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the violation is listed below.

License Condition 10 of NRC License No. SUB-526, Amendment No. 15, authorizes, in part, the use of licensed materials in accordance with the statements, representations, and conditions in Chapters 1 through 7 of the license application dated January 30, 2003.

Chapter 2, Section 2.6 of the license application, dated January 30, 2003, requires that "plant operations shall be conducted in accordance with written Standard Operating Procedure Manuals."

Contrary to the above, as of October 26, 2004, the licensee conducted operations that were not specifically addressed or described in detail in written Standard Operating Procedure Manuals. Specifically, the licensee did not have a written Standard Operating Procedure to address inoperative control room alarms and instrumentation (i.e., low boiler condenser high pressure alarm), including requirements to assess the need to take compensatory action to ensure continued safe operations.

This is a Severity Level IV violation (Supplement VI).

Pursuant to the provisions of 10 CFR 2.201, Honeywell Speciality Chemicals is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555 with a copy to the Regional Administrator, Region II, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, D.C. 20555-0001.

Enclosure 1

Because your response will be made publically available, to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made publically available without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld, and provide in detail the basis for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguard's information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days.

Dated this 22nd day of November, 2004

U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.: 40-3392

License No.: SUB-526

Report No.: 40-3392/2004-010

Licensee: Honeywell International, Inc.

Facility: Metropolis Works

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

Dates: October 25 through 29, 2004

Inspectors: Omar R. López, Fuel Facility Inspector
Nilda S. Rivera Feliciano, Fuel Facility Inspector

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

EXECUTIVE SUMMARY

Honeywell International, Inc.
NRC Inspection Report 40-3392/2004-010

The purpose of this inspection was to perform a routine review of the chemical safety program implementation. The inspection involved observation of work activities, a review of selected records, and interviews with plant personnel. The inspection identified the following aspects of the program as outlined below:

- Process safety information was maintained current for the existing plant configuration and was readily accessible to employees. The licensee's program inventory of hazardous chemicals was adequate to control the chemical hazards (Paragraph 2.a).
- Procedures reviewed contained adequate safety and operational information. The licensee continued to implement actions to enhance alarm response procedures. However, a violation was identified for failure to have a written procedure to address inoperative control room alarms and instrumentation (Paragraph 2.b).
- The licensee's maintenance of change program adequately controlled changes in materials, procedures, and equipment. The licensee adequately implemented preventive maintenance to ensure the operability and reliability of safety equipment. The licensee adequately performed maintenance activities in accordance with approved written procedures. In response to a weakness identified by the inspectors, the licensee intended to integrate critical safety equipment information into the corrective maintenance program (Paragraph 2.c).
- The licensee adequately ensured the operability and reliability of monitoring equipment. The inspectors confirmed that licensee safety and security personnel were prepared to respond to chemical emergencies and coordinate efforts with offsite support agencies (Paragraph 2.d).
- The licensee's chemical safety training for new and experienced plant personnel adequately covered safe work practices and chemical hazards (Paragraph 2.e).
- The licensee's program for incident reporting and investigation was adequately implemented (Paragraph 2.f).
- Audits and inspections were documented and conveyed to management, and audit findings were resolved in a timely manner (Paragraph 2.g).

Attachment:

Partial List of Persons Contacted
Inspection Procedures Used
Items Opened, Closed, and Discussed
List of Acronyms Used

REPORT DETAILS

1. Summary of Plant Status

During the inspection period, routine operations were conducted in the Feeds Material Building (FMB) without incident. Only a single fluorination train was operated due to maintenance activities in the fluorine generation plant. On October 26, all plant operations were temporarily placed in the “recycle mode” in response to severe weather.

2. Chemical Safety (Inspection Procedures (IPs) 88056-88066)

a. Process Safety Information (IP 88056) Hazard Identification and Assessment (IP 88057)

(1) Scope and Observations

The inspectors reviewed process safety information (PSI) to ensure that it was maintained current and interviewed licensee staff to verify they had access to the information they needed. The inspectors noted that operators were knowledgeable of the location and use of material safety data sheets (MSDSs) for chemicals used in their process areas.

The inspectors noted that the FMB control room maintained copies of the MSDSs for the chemicals used in the plant. The inspectors also noted that the list of MSDSs in the hazard communication program was up-to-date. The inspectors reviewed process and instrumentation drawings (P&IDs) for fluorinators, cold traps, and the scrubber system. The P&IDs contained adequate detail of the installed equipment. No safety problems were identified.

The inspectors reviewed the process hazard analyses (PHAs) for ammonia and uranium hexafluoride (UF₆) to ensure that they were maintained current for the existing plant configuration. The licensee was in the process of revalidating the PHAs. The inspectors confirmed that team leaders received training on hazard analysis methodologies and that multi-discipline teams, including maintenance and operations personnel, performed the PHAs. The inspectors noted that recent events were incorporated into the analyses. No safety problems were identified.

The inspectors reviewed the licensee’s inventory of hazardous chemicals to ensure adequate control of the hazards. The inspectors examined the licensee’s chemical inventory of hazardous material for October 28. The hazardous chemical inventories were below the maximum capacities allowed to be stored on-site.

(2) Conclusions

Process safety information was maintained current for the existing plant configuration and was readily accessible to employees. The licensee’s program inventory of hazardous chemicals was adequate to control the chemical hazards.

b. Standard Operating Procedures (SOPs) (IP 88058)

(1) Scope and Observations

The inspectors observed that plant operations were performed safely and in accordance with procedural requirements and that personnel had procedures “in-hand,” as applicable. The inspectors reviewed procedure manuals for the fluorination, green salt, and distillation processes to verify that appropriate operating procedures were used. The procedure manuals contained information on plant startup, routine operations, and shutdown (emergency and normal). The procedure manuals also contained MSDSs and equipment lists.

The inspectors observed a shift change in the FMB control room. The inspectors also discussed with fluorination and distillation operators the procedures to be used for the existing operating conditions at the time of the shift change. The inspectors noted that operators were knowledgeable of the operating procedures. Also, the inspectors reviewed the FMB control room alarm response procedures and noted that the licensee was enhancing guidance for alarms provided on computers.

On October 26, 2004, the inspectors observed that the alarm on a computer to alert operators of high pressure in the low boiler condenser was actuated. The inspectors questioned the operators about the status of the alarm, and the operators stated that the alarm had been inoperative for several days. The inspectors noted that the operators did not initiate a work request to have the alarm repaired and did not assess whether compensatory measures were necessary to ensure that the condenser pressure remained within normal operating limits.

Upon further review, the inspectors determined that other alarms were available to alert the operators of a high pressure condition in the condenser. However, the inspectors noted that the licensee did not have a procedure in place to address inoperative control room alarms and instrumentation. The inspectors noted that the licensee previously had a procedure to address inoperative instrumentation, but it was canceled and a replacement was not included in the more recent procedure upgrade initiative.

License Condition 10 of NRC License No. SUB-526, Amendment No. 15, authorized, in part, the use of licensed materials in accordance with the statements, representations, and conditions in Chapters 1 through 7 of the license application dated January 30, 2003. Chapter 2, Section 2.6 of the license application, dated January 30, 2003, required that “plant operations shall be conducted in accordance with written Standard Operating Procedure Manuals.”

Contrary to the above, as of October 26, 2004, the licensee conducted operations that were not specifically addressed or described in detail in written Standard Operating Procedure Manuals. Failure to have a written Standard Operating Procedure to address inoperative control room alarms and instrumentation, including requirements to assess the need to take compensatory action to ensure continued safe operations, is a violation ((VIO) 40-3392/2004-010-01).

(2) Conclusions

Procedures reviewed contained adequate safety and operational information. The licensee continued to implement actions to enhance alarm response procedures. However, a violation was identified for failure to have a written procedure to address inoperative control room alarms and instrumentation.

c. Site-Wide Safety Procedures (IP 88059)
Maintenance of Change (IP 88063)
Maintenance and Inspection (IP 88062)

(1) Scope and Observations

The inspectors reviewed the licensee's maintenance of change program to determine if changes in materials, procedures, or equipment were adequately controlled. The inspectors reviewed different elements of the licensee's management of change program, including procedures and training, and concluded that the program would adequately control changes in materials, procedures, and equipment.

The inspectors examined preventive maintenance (PM) and functional test records for selected safety significance controls to verify that the PM program had been implemented adequately. The inspectors reviewed PM records for critical equipment on the "A" list including but not limited to: pressure relief valves, load cells, emergency shutdown systems, flow totalizers, and weight and temperature indicators. The inspectors observed that PMs were performed at the required frequency.

The inspectors observed maintenance activities to ensure that they were performed in accordance with approved written procedures. The inspectors determined that maintenance personnel wore the required personnel protective equipment. During plant tours, the inspectors noted adequate use of lock-out/tag-out procedures. The inspectors also noted that safety showers and eye wash stations were in satisfactory condition.

However, the inspectors identified a weakness in the maintenance program. The licensee had not integrated the list of critical safety equipment into the work request system for corrective maintenance activities. Therefore, safety equipment could have been potentially returned to service after corrective maintenance without being functionally tested to ensure that it was capable of performing its intended safety function. The inspector discussed the weakness with the licensee, and they intended to incorporate the critical safety equipment information into the corrective maintenance program.

(2) Conclusions

The licensee's maintenance of change program adequately controlled changes in materials, procedures, and equipment. The licensee adequately implemented preventive maintenance to ensure the operability and reliability of safety equipment. The licensee adequately performed maintenance activities in accordance with approved

written procedures. In response to a weakness identified by the inspectors, the licensee intended to integrate critical safety equipment information into the corrective maintenance program.

d. Detection and Monitoring (IP 88060)
Emergency Procedures (IP 88064)

(1) Scope and Observations

The inspectors examined calibration, PM, and functional test records for detection/monitoring equipment (including hydrofluoric acid (HF) fence monitors, UF₆ and hydrogen detectors, and hand-held monitoring equipment). Also, the inspectors discussed the emergency response to HF monitor alarms with licensee safety and security personnel. No problems were noted.

The inspectors reviewed selected portions of the licensee's Emergency Response Plan to ensure that the facility's pre-planning efforts adequately addressed mitigation activities associated with potential chemical emergencies. The Emergency Response Plan included emergency procedures that covered chemical safety areas. Also, the inspectors noted evacuation routes were clearly marked throughout the facility. No safety problems were identified.

(2) Conclusions

The licensee adequately ensured the operability and reliability of the monitoring equipment. The inspectors confirmed that licensee safety and security personnel were prepared to respond to chemical emergencies and coordinate efforts with offsite support agencies.

e. Chemical Safety Training (IP 88061)

(1) Scope and Observations

The inspectors discussed the chemical safety training program for new and experienced plant personnel with cognizant licensee managers and reviewed lesson plans to verify that the training program adequately covered safe work practices and chemical hazards. The inspectors noted that the plant personnel training program adequately addressed PSI such as material safety data sheets, personal protective equipment, confined space entry, safe work practices, job hazard analyses, chemical job hazard analyses, and hazard communication.

Discussions with recently hired and experienced operators on safety and health hazards indicated an adequate understanding of specific job hazards. The inspectors also observed on-the-job training for a new operator in the green salt area and reviewed related documentation, including written tests. No problems were identified.

(2) Conclusions

The licensee's chemical safety training for new and experienced plant personnel adequately covered safe work practices and chemical hazards.

f. Incident Investigation (IP 88065)

(1) Scope and Observations

The inspectors reviewed the licensee's incident investigation process to ensure that the licensee had a systematic process for handling incident investigations. Also, the inspectors reviewed selected incident investigations in the chemical safety area to ensure appropriate and timely closure of incident reports and investigations.

The inspectors reviewed the recommendations from past investigations as tracked in the "A" Council meeting minutes and the Triangle of Prevention reports for abnormal events. The inspectors reviewed two investigation reports of incidents or near-misses involving chemical hazards. No issues were identified.

(2) Conclusions

The licensee's program for incident reporting and investigation was adequately implemented.

g. Audit and Inspection (IP 88066)

(1) Scope and Observations

The inspectors reviewed the licensee's audit and inspection program to verify that audits and inspections were performed, the results documented and conveyed to management, and that audit findings were resolved in a timely manner. The results of selected portions of several weekly and monthly audits and inspections were reviewed. The inspectors noted that the audits were documented, assigned, and tracked to completion or follow-up. The inspectors verified that proper notification and follow-up actions were taken as appropriate. There were no issues noted in this area.

(2) Conclusions

Audits and inspections were documented and conveyed to management, and audit findings were resolved in a timely manner.

h. Follow-up on Previously Identified Issues and Reportable Events

- (1) (Open) VIO 40-3392/2004-008-02: Two examples of conduct of operations that were not specifically addressed or described in detail in written SOPs. The first example was failure to have a procedure that described cross-tie configuration between fluorinator trains and the Nash pumps. The licensee modified the fluorination operation procedure to incorporate single/dual train fluorination operation and cross-tied configuration with the Nash pumps.

The inspectors reviewed and discussed the revised procedure with operations personnel and determined that they were aware of the changes. The licensee also modified existing round sheets to include the requirement to log the positions of the valves during each shift. The inspectors interviewed operators to verify that they were aware of the configuration of the equipment.

The second example was failure to have a procedure that provided detailed instructions for ensuring over-pressure protection of the low condenser condensers during a dry cleaning evolution. The licensee initiated a standing order to prevent the dry cleaning activities. The inspectors interviewed the operators to verify that they were aware of the order.

The licensee also revised the operating procedure to remove the sections related to dry cleaning of the low boiler condensers. The licensee stated that dry cleaning of the low boiler condensers would not be performed until an approved procedure was generated to address the American Society of Mechanical Engineering (ASME) code requirements. The inspectors determined that VIO 40-3392/2004-008-02 would remain open until the licensee resolved the issue regarding the ASME code requirements for the dry cleaning of the condensers.

- (2) (Open) Inspector Follow-up Item (IFI) 40-3392/2004-004-03: Testing fluorination/distillation equipment with interlocks in place. This IFI was initiated due to the inability of production personnel to leak test the fluorination system with the interlocks as originally installed.

The licensee developed a method to leak-test the system which did not require manipulation of the interlock software. The method consisted of pressurizing the system by sections. The inspectors discussed the method with the licensee and verified that the method was incorporated in the fluorination startup procedure. This IFI remains open pending issuance of a generic procedure to address controls for disabling and restoration of interlocks and other safety features for maintenance and testing (i.e., lifted and landed leads).

- (3) (Closed) Event Notification 40978 (NMED No. 040596): On August 23, 2004, the emergency diesel-driven backup power generator failed to automatically start during a routine weekly test due to a bad magnetic sensor. The licensee took the plant to a safe stand-down position. Also, an additional equivalent generator was tied into the system to provide backup power while repairs were performed. The licensee performed several tests after the failed part was replaced to ensure equipment functionality. The inspectors reviewed maintenance of change documentation related to the addition of the backup power generator and functional test records. No problems were identified and this item is closed.

3. Exit Meeting Summary

The inspectors presented the inspection results to members of the plant staff and management at the conclusion of the inspection on October 29, 2004. The plant staff acknowledged the findings presented. The inspectors asked the plant staff whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

ATTACHMENT

1. PARTIAL LIST OF PERSONS CONTACTED

- *R. O’Kane, Plant Manager
- *P. Bryan, Nuclear Fuel Manager
- *M. Ginzel, Health Physics Supervisor
- D. Mays, Environmental and Regulatory Affairs Manager
- *B. Vandermeulen, Quality Assurance/Supply Chain Manager

* Denotes those present at the exit meeting on October 29, 2004

2. INSPECTION PROCEDURES USED

- IP 88056 Process Safety Information
- IP 88057 Hazard Identification and Assessment
- IP 88058 Standard Operating Procedures
- IP 88059 Site-Wide Safety Procedures
- IP 88060 Detection and Monitoring
- IP 88061 Chemical Safety Training
- IP 88062 Maintenance and Inspection
- IP 88063 Maintenance of Change
- IP 88064 Emergency Procedures
- IP 88065 Incident Investigation
- IP 88066 Audits and Inspection

3. ITEMS OPENED, CLOSED, AND DISCUSSED

<u>Item</u>	<u>Status</u>	<u>Description</u>
VIO 40-3392/2004-010-01	Open	Failure to have a written Standard Operating Procedure to address inoperative control room alarms and instrumentation (Paragraph 2.b).
VIO 40-3392/2004-008-02	Open	Two examples of conduct of operations that were not specifically addressed or described in detail in written standard operating procedures (Paragraph 2.h).
IFI 40-3392/2004-004-03	Open	Testing fluorination/distillation equipment with interlocks in place (Paragraph 2.h).
Event Notification 40978	Closed	Emergency diesel-driven backup power generator failed to automatically start during a routine weekly test due to a bad magnetic sensor (Paragraph 2.h).

4. LIST OF ACRONYMS USED

ADAMS	Agency Document Access and Management System
ASME	American Society of Mechanical Engineering
CFR	Code of Federal Regulations
FMB	Feeds Material Building
HF	Hydrofluoric Acid
IFI	Inspector Follow-up Item
IP	Inspection Procedure
MSDS	Material Safety Data Sheet
NMED	Nuclear Material Events Database
No.	Number
NRC	Nuclear Regulatory Commission
P&ID	Process and Instrumentation Drawing
PARS	Publicly Available Records
PHA	Process Hazard Analysis
PM	Preventive Maintenance
PSI	Process Safety Information
SOP	Standard Operating Procedure
UF ₆	Uranium Hexafluoride
VIO	Violation