May 31, 2003

Rory O'Kane, Plant Manager
Honeywell International, Inc.
P.O. Box 4308
Metropolis, IL 62690

SUBJECT: INSPECTION REPORT NO. 40-3392/2003-201

Dear Mr. O'Kane:

The U.S. Nuclear Regulatory Commission (NRC) conducted a routine, announced chemical safety inspection at your facility in Metropolis, Illinois, from May 12 through 15, 2003. The purpose of the inspection was to determine whether activities involving licensed materials were conducted safely and in accordance with regulatory requirements. An exit meeting was held on May 15, 2003, during which time observations from the inspections were discussed with you and members of your staff.

The inspection consisted of facility walkdowns; selective examinations of relevant procedures and records; examinations of safety-related structures, systems, equipment and components; interviews with plant personnel; and observations of plant conditions and activities in progress. Throughout these inspections, observations were discussed with your managers and staff. Based on the inspections, your activities involving chemical safety were found to be conducted safely and in accordance with regulatory requirements.

In accordance with 10 CFR 2.790 of NRC's "Rules of Practice," this document may be accessed through the NRC's public electronic reading room, Agency-Wide Document Access and Management System (ADAMS) on the Internet at http://www.nrc.gov/reading-rm/ADAMS.html.

If you have any questions concerning this report please contact Merritt Baker, of my staff, at (301) 415-6155.

Sincerely,

/RA/

John Lubinski, Chief
Inspection Section
Special Projects and Inspection Branch
Division of Fuel Cycle Safety and Safeguards
Office of Nuclear Material Safety and Safeguards

Docket No.: 40-3392

Enclosure: Inspection Report No. 40-3392/2003-201

cc w/o enclosure: Gary N. Wright
Illinois Department of Nuclear Safety

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U.S. NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS

Docket No:	40-3392
License No.:	SUB-526
Report No.:	40-3392/2003-201
Licensee:	Honeywell International, Inc.
Location:	Metropolis, IL
Inspection Dates:	May 12-15, 2003
Inspector:	Merritt N. Baker, NRC HQ
Accompanied by:	Diana Diaz-Toro, NRC HQ
Approved:	John W. Lubinski, Chief Inspection Section Special Projects and Inspection Branch Division of Fuel Cycle Safety and Safeguards Office of Nuclear Material Safety and Safeguards

ENCLOSURE

EXECUTIVE SUMMARY

Honeywell International, Inc.
NRC Inspection Report 40-3392/2003-201

Introduction

Staff of the U.S. Nuclear Regulatory Commission performed a routine and announced chemical safety inspection of the Honeywell International facility from May 12-15, 2003. The inspection focused on risk-significant plant operations.

Results

- No new safety concerns were identified during the inspections.
- Plant operations were conducted safely in the observed areas.
- The licensee adequately maintained the mechanical integrity of the bulk chemical storage tanks. Adequate maintenance and calibration activities were performed for chemical safety equipment.
- The licensee is working to complete installation of the anhydrous hydrogen fluoride (HF) mitigation system recommended by industry practices. The HF mitigation spray towers had not been tested, and the Pre-Startup Safety Review had not been finalized. The inspector issued follow-up item **IFI-2003-201-01** to review completed documentation at the next inspection.
- The licensee has an appropriate incident investigation program.

REPORT DETAILS

1.0 Mechanical Integrity

a. Scope

The inspector examined records of the last three mechanical integrity inspections of anhydrous hydrogen fluoride (HF) and anhydrous ammonia (NH_3) storage tanks:

- external inspections
- internal inspections
- relief valve replacement
- ultrasonic thickness measurements
- wet magnetic particle examinations
- functional tests of level alarms

The inspector toured the tank farm area and examined bulk storage tanks, interconnecting piping, valves, diked areas, and instrumentation.

b. Observations and Findings

At the time of the inspection, the internal inspections of HF tank U-201 and anhydrous ammonia tank U-466 had not been completed, and the tanks had been taken out of service. The inspector confirmed that the yard operator and foreman were aware of the operational status of all tanks.

The inspector confirmed that the frequency and scope of the mechanical integrity inspections was in agreement with industry standards.

c. Conclusions

The licensee's mechanical integrity program was adequately implemented to ensure the continued availability of the passive barrier between bulk hazardous chemicals and workers or members of the public.

2.0 Maintenance and Inspection [88062]

a. Scope

The inspector examined a current copy of the licensee's Critical Equipment List, and discussed use of the list with reliability staff.

The inspector examined calibration records for HF fence monitors AT-180 through AT-190, and reviewed drawing MTW-B0964, Rev. B, "HF Monitor Location Outer Perimeter Fence." The inspector examined a selection of detectors in the field as well as the HF monitor alarm station.

The inspector interviewed licensee staff regarding the response to Information Notice IN-2002-31, "Potentially Defective UF_6 Cylinder Valves (1 inch)."

b. Observations and Findings

The inspector verified that important safety equipment, including but not limited to: pressure vessels, relief devices, load cells, toxic gas detectors, and emergency shutdown systems were on the list, and confirmed that the list was linked to the licensee's management of change process. The inspector confirmed that the list was controlled by procedure MP-229, "Maintenance and Inspection Program," and reviewed a copy of the reference procedure.

The inspector verified that the licensee was aware of Information Notice IN-2002-31, "Potentially Defective UF_6 Cylinder Valves (1 inch)," and observed an operator aid in the Feed Materials Building addressing the Notice.

c. Conclusions

The program was adequately implemented to ensure that important safety equipment was identified, calibrated, and maintained to ensure operability and reliability.

The licensee has taken an adequate approach in response to IN-2002-31.

3.0 Incident Investigation [88065]

a. Scope

The inspector confirmed that the licensee utilized the Triangle of Prevention (TOP) program for abnormal events. The inspector attended the monthly "B" Council safety meeting, where a presentation was made regarding recent investigations. The inspector evaluated the licensee's procedure for satisfactory links to other site procedures required implementation of the TOP system. As part of the evaluation, the inspector reviewed the recommendations from past investigations in the "A" Council minutes, as well as the Action Item List for tracking the closure of recommendations.

b. Observations and Findings

The licensee has established protocols that provide procedures necessary to conduct thorough review of incidents or near-misses involving chemical hazards, and identify and implement recommendations to reduce the probability of recurrence or mitigate potential consequences.

c. Conclusions

The program was adequately implemented to ensure systematic and adequate handling of incident reporting and investigation at the facility.

4.0 Emergency Response Plan [88064]

a. Scope

The inspector examined current copies of the licensee's Emergency Response Plan and interviewed affected personnel regarding its status. The inspector reviewed the operation of HF fence monitors and discussed emergency responses with licensee safety and security personnel.

b. Observations and Findings

At the time of the inspection, the emergency response plan was in the final stages of its annual review. Since there had been a number of recent personnel changes, the telephone notification lists were being updated.

c. Conclusions

The inspector confirmed that licensee safety and security personnel were prepared to respond to chemical emergencies and coordinate efforts with offsite support agencies.

5.0 HF Mitigation System

a. Scope

The inspector observed the HF mitigation system components, including:

- HF spray rings
- HF water spray towers
- north and south spray tower control stations
- spray ring control panels
- water supply piping
- 30-inch diameter storm water shutoff valve

The inspector interviewed the cognizant engineer regarding the status of the HF mitigation system, and examined a selection of important design and construction documents including but not limited to:

- HF mitigation system initial training package
- piping and valve specifications, Morristown FAX dated 5/29/02
- PHA/What If for HF vaporizers dated 7/31/02
- FMB HF vaporizers spray ring scope of work-mechanical
- scope of work for civil and electrical at spray rings
- appropriation request #1035EF 8627 and cost estimate
- drawings MTW-437636 and MTW-437638

- PT-101 number499, dated 11/20/02
- punchlist for construction
- draft procedures for operation and maintenance

The inspector interviewed licensee personnel regarding operation of the HF mitigation system during an HF valve body gasket leak event of May 8, 2003. The Initial Incident Report Form and the preliminary investigation results were discussed. Photos of the failed valve were examined.

b. Observations and Findings

The inspector noted that most of installation, testing, and operator training for the spray rings installed at the HF vaporizers had been performed. At the time of the inspection, the majority of the punchlist items were for the spray towers in the yard area.

The inspector observed that human factors related to operation of the switches and joy sticks on the spray tower control stations might be improved by revising the layout of the control station to an arrangement that matched the operator's view from the control station. Plant personnel had offered a similar suggestion during preliminary review of the equipment.

c. Conclusions

Because the HF mitigation spray towers had not been tested, and the Pre-Startup Safety Review had not been finalized, the inspector issued follow-up item **IFI-2003-201-01** to review completed documentation at the next inspection.

6.0 Conduct of Operations [88100]

a. Scope

The inspector toured selected facility areas, including but not limited to:
- ore sampling
- yard area
- tank farm, including the HF tanks, NH_3 tanks, diked area, HF monitors at tank farm catwalk and rail car unloading;
- Feed Materials Building including the control room, dissociators, cylinder loading and scales
- Fluorine plant and control room

The inspector observed selected plant operations to ensure that operations were conducted safely and in accordance with good industry practices.

b. Observations and Findings

In the observed areas, housekeeping and conduct of operations were satisfactory. The licensee has improved housekeeping in several facility areas over the span of recent inspections.

c. Conclusions

The licensee has conducted plant operations safely, and in accordance with regulatory requirements.

7.0 Items Opened, Closed, and Discussed

Opened

IFI-2003-201-01 Because the HF mitigation spray towers had not been tested, and the Pre-Startup Safety Review had not been finalized, the inspector issued follow-up item **IFI-2003-201-01** to review completed documentation at the next inspection.

Closed
None

Discussed
None

8.0 Management Meetings

The inspector met with licensee management and staff throughout the week of the inspection to discuss the status of various safety-related issues and their resolution. The results of the inspection were discussed with licensee management at an exit meeting on May 15, 2003. Licensee management acknowledged the results of the inspection. No proprietary information was discussed during the inspection.

9.0 Partial List of Persons Contacted

Honeywell International

R. Allshouse	Engineering
B. Bass	Reliability
K. Benard*	Reliability
C. Blanchard	Yard Foreman
M. Davis	Supervisor-Health Physics Technicians
D. Dodge	Supervisor, Environmental
J. Ellerbusch	Instrument Supervisor
M. Ginzel*	Health Physics Supervisor
A. Kelley	Engineering
D. Mays*	Safety Leader
R. O'Kane*	Plant Manager
N. Rodgers	Health Physics Supervisor
M. Shepherd*	Manager, Environmental Affairs

*Denotes those present at the exit meeting on May 15, 2003.