NRC FORM 591FF PART 1
(12-2007)
10 CFR 2.201

U.S. NUCLEAR REGULATORY COMMISSION

INSPECTION REPORT

1. LICENSEE OR CERTIFICATE HOLDER/LOCATION INSPECTED:	2. NRC/REGIONAL OFFICE:
Honeywell International, Inc. P. O. Box 430 Metropolis, IL 62960 REPORT NO: 2008-007	U.S. Nuclear Regulatory Commission Region II 61 Forsyth Street, Suite 23T85 Atlanta, GA 30303-8931

3. DOCKET NUMBER:	4. LICENSE OR CERTIFICATE NUMBER:	5. DATE(S) OF INSPECTION:
40-3392	SUB-526	November 4, 2008 – November 7, 2008

LICENSEE OR CERTIFICATE HOLDER:

The inspection was an examination of the activities conducted under your license or certificate as they relate to safety and/or safeguards and to compliance with the Nuclear Regulatory Commission (NRC) rules and regulations and the conditions of your license or certificate. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector. The inspection findings are as follows:

☐ 1. Based on the inspection findings, no violations were identified.

☐ 2. Previous violation(s) closed.

☐ 3. Reported events reviewed

☐ 4. The violation(s), specifically described to you by the inspector as non-cited violations, are not being cited because they were self-identified, non-repetitive, and corrective action was or is being taken, and the remaining criteria in the NRC Enforcement Policy, to exercise discretion, were satisfied.
Non-Cited Violation(s) was/were discussed involving the following requirement(s) and Corrective Action(s):

☑ 5. During this inspection, certain of your activities, as described below and/or attached, were in violation of NRC requirements and are being cited. This form is a NOTICE OF VIOLATION, which may be subject to posting in accordance with 10 CFR 19.11.
(Violations and Corrective Actions)

(See Attached Notice of Violation)

LICENSEE OR CERTIFICATE HOLDER STATEMENT OF CORRECTIVE ACTIONS FOR ITEM 5, ABOVE

I hereby state that, within 30 days, the actions described by me to the inspector will be taken to correct the violation(s) identified. This statement of corrective actions is made in accordance with the requirements of 10 CFR 2.201 (corrective steps already taken, corrective steps which will be taken, date when full compliance will be achieved). I understand that no further written response to the NRC will be required, unless specifically requested.

Title	Printed Name	Signature	Date
LICENSEE/CERTIFICATE HOLDER REPRESENTATIVE			
NRC INSPECTOR	John M. Pelchat	*/RA/*	12/05/2008

NRC FORM 591FF PART 3
(12-2007)
10 CFR 2.201

U.S. NUCLEAR REGULATORY COMMISSION

INSPECTION REPORT

1. LICENSEE OR CERTIFICATE HOLDER/LOCATION INSPECTED:	2. NRC/REGIONAL OFFICE:
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3. DOCKET NUMBER:	4. LICENSE OR CERTIFICATE HOLDER NUMBER:	5. DATE(S) OF INSPECTION:
40-3392	SUB-526	November 4, 2008 – November 7, 2008

6. INSPECTOR(S): John M. Pelchat

7. INSPECTION PROCEDURES USED: 88005, 88051

EXECUTIVE SUMMARY

Summary of Plant Status

The Honeywell Specialty Chemicals (licensee) uranium conversion facility is located on an 1,100 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_6). The uranium conversion process occurs in the Feed Materials Building (FMB). During the inspection period, operations were normal.

Management Organization and Controls (IP 88005)

The inspectors reviewed the licensee's problem and resolution program. Identified issues requiring resolution are documented in Problem Evaluation Reports (PERs). A management review committee convenes weekly (semiweekly if required) to review new PERs, and to prioritize and assign resolution of the issue to a member of the plant management staff for oversight through completion.

The inspectors interviewed licensee employees and the status of selected recent PERs, including PER IR-08-3121, associated with the cooling water bypass valve to the fire water diesel engine. An NRC fire protection inspection had previously identified that the cooling water supply for the back-up diesel engine associated with the plant's fire pump was controlled by a valve actuated by an electric solenoid. A loss of electrical power would prevent the engine from receiving cooling water unless a manual bypass was operated by plant personnel. Inspectors determined the licensee had not implemented adequate operating procedures or training to ensure plant personnel would operate the cooling bypass valve if required. Although it was determined that the fire pump's design and operation were not subject to NRC requirements, the inspectors shared the finding with licensee representatives. As a result, licensee personnel initiated this PER and it received supervisory approval on October 2, 2008 to identify the corrective actions required to prevent a loss of cooling water to the fire water diesel during an electrical power outage.

The licensee's Corrective Action Procedure, MTW-ADM-QA-0110, Section 4.4 Step 4.4.1 states that 30 calendar days from supervisor review of the PER is allowed for the responsible organization to develop and obtain approvals for corrective action plans (CAPs). Interviews of licensee personnel and review of records revealed that as of November 6, 2008, no corrective action plans had yet been developed or approved to resolve the diesel fire water diesel PER. This and other minor issues related to the licensee's corrective action program were discussed with licensee representatives.

The inspectors reviewed a representative sample of licensee event investigations, including an event that took place on September 13, 2008, during which a minor release took place while licensee personnel were reconnecting a low boiler condenser into the UF_6 production system. Review of the investigation indicated that the licensee properly characterized the release when it initially occurred and that the immediate actions taken by licensee personnel were appropriate. The licensee performed a thorough investigation and determined that the apparent root cause was the failure to comply with UF_6 line break procedures pertaining to the clearing of blockages. The investigation also identified additional failures of staff and management personnel that contributed to this event. The licensee identified and implemented corrective actions to prevent a recurrence of this problem. The licensee performed an adequate safety assessment, including surveys and bioassays and determined that the resultant exposures to the individuals involved were well below regulatory limits. No other findings were observed.

Evaluation of Exercises and Drills (IP 88051)

On November 5, 2008, the licensee conducted a graded biennial emergency exercise. The exercise scenario simulated the release of 500 pounds of uranium hexafluoride (UF_6) from the third floor of the Feed Materials Building (FMB) during a repair of a valve. Maintenance personnel responded appropriately to the release by immediately fleeing the area and reporting the release to the FMB control room.

In accordance with licensee procedures, an Incident Commander took the lead for the licensee's emergency activities. The Incident Commander correctly classified the emergency as a Site Area Emergency based on simulated plant conditions. In accordance with licensee procedures, FMB control room personnel, upon direction by the Incident Commander, provided notification of the Site Area Emergency and made the appropriate protective action recommendation for residents near the plant to shelter in place. Licensee personnel completed these actions within 15 minutes of the onset of the simulated event.

The inspectors observed that no offsite response organizations were present to observe or participate in the biennial graded exercise and that the licensee simulated contact with these organizations. The inspectors reviewed the licensee's preparations for the biennial exercise through discussions with the health physics specialist, who had responsibility for coordination of emergency preparedness. These discussions revealed that the requirement to invite the responsible offsite response organizations to participate in the exercise had been overlooked. 10 CFR 40.31(j)(2)(xii) requires, in part that the licensee invite offsite response organizations to participate in the biennial exercises. The failure to invite offsite response organizations to participate in the biennial exercise was identified as a violation (VIO 04003392/2008007-01).

Upon notification of the simulated release, FMB control room personnel simulated initiating the steps needed to bring the plant to a safe shut down; while in reality the plant continued UF_6 production operations.

License Condition 18 of NRC License SUB-526 states that the licensee shall conduct authorized activities at the Honeywell Metropolis Works Facility in accordance with the statements, representations and conditions in:

- the license application dated May 12, 2006, as supplemented by a letter dated March 20, 2007;
- the Emergency Response Plan dated May 27, 2005;
- and the Safety Demonstration Report dated May 12, 2006.

Section 2.6.1 of the license application, dated May 12, 2006, requires, in part, that the licensee establish a process to identify those process operations that require procedural guidance to ensure proper execution and require that these process operations be conducted in accordance with approved procedures.

Section 10.3 of the Safety Demonstration Report states that the FMB Control Room is configured as a "Safe Haven." Accordingly, the control room is equipped with systems for area isolation, protective clothing and

equipment, and non-contaminated operator breathing air. Should there be a chemical release that threatens the safety of control room personnel, the FMB Control Room can be isolated, allowing the operators to proceed with safe shutdown of the licensed portion of the facility.

The Control Room ventilation system draws fresh air through two separate intakes. Each intake is equipped with a damper that is normally open and that will automatically close to isolate the ventilation system in the event of a chemical release. The control room has a system that indicates the position of the dampers to plant operators. The ventilation system is also equipped with a blower to create positive pressure in the control room thus preventing the leakage of released material into the room.

The inspectors determined that the FMB Safe Haven Pressurization System Operation Procedure (MTW-SOP-F2N-0122) was inadequate. Specifically, the procedure for operation of the Safe Haven System describes the following sequence of steps for control room personnel in the event that a chemical release threatens the control room:

- Select Safe Haven Controls on the Home Page (on the Digital Control System computer console located at the fluorination operator position).
- Start the blower by pressing the ON push button located on the North control panel.
- Ensure the East Damper and West Dampers are open.
- When directed by supervision, and when a known hydrogen fluoride source and wind direction is known, then select CLOSED for either the East or West Damper on the Safe Haven Control screen.

The procedure did not require that control room operators verify the proper air supply damper was closed prior to starting the blower to pressurize the control room. As currently sequenced, this procedure could result in the intake of UF_6 or other hazardous materials into the control room's air supply. The procedure also failed to specify what actions were to be taken in the event of a damper failure.

Interviews of control room operators further revealed that some control room personnel were not familiar with the operation and use of the back-up air supply system that is to be used in the event that the ventilation isolation system fails. Through interviews and review of training materials, the inspectors found that the operation and use of the back-up air supply system was discussed in detail in operator training. However, the licensee did not have any control room procedures in place regarding the operation of the back-up air supply system or the circumstances under which the system should be used.

The failure to have adequate procedures to properly isolate the control room ventilation system and the failure to have adequate procedures regarding the use of the back-up air supply system were identified as examples of a violation (VIO 0400392/2008007-02).

The Honeywell MWT Emergency Response Plan, Section 4.3, "Coordination with Offsite Support Organizations," describes the process for generation of press releases. The emergency plan states that "Press releases that result from local plant activities or conditions are drafted by the Plant Manager or his designee. They are faxed to the Marketing Communications Director in Morristown, NJ for the final approval. The approved document is then faxed back to the Plant Manager for release to the local media and response organizations."

The inspectors observed that despite several unsuccessful attempts, members of crisis management team were unable to directly contact the designated individual. A voice mail was left for the designated individual in Morristown, describing the simulated emergency and requesting statements suitable for release to the press

for each emergency classification including Plant Emergency, Alert, and Site Area Emergency.

Honeywell personnel from Morristown, NJ, developed and e-mailed the simulated media release to the plant secretary. An excerpt of the press release stated that:

> "At approximately 9:30 this morning, Honeywell Metropolis Works experienced a leak of hydrofluoric acid within an enclosed area of the facility. The release was contained and there was no off-site impact."

This information contradicted the correct characterization of the release and protective action recommendations made by the licensee approximately 45 minutes earlier. The press release was then faxed to a simulated media outlet. The simulated issuance of a materially incorrect press release was identified as an Exercise Weakness (IFI 04003392/2008007-01).

Inspectors in the FMB and with the forward control point outside the FMB observed that licensee personnel experienced significant difficulties with radio communications. The Incident Commander (IC) and the Control Room Officer (CRO) were unable to establish effective two-way communications with members of the Emergency Response Team (ERT) performing building entries during the exercise. An inspector overheard radio communications on a controller's handheld radio and observed that entry team members wearing self-contained breathing apparatus (SCBA) were unable to hear the IC or the CRO.

During a critique after the exercise, the CRO discussed how he attempted to use one radio and cycle between two channels to communicate with licensee personnel operating on different radio frequencies. During the critique, licensee personnel described how throughout the exercise, evaluators and some exercise participants were able to hear communications from the IC, CRO and the ERT, but these same communications could not be heard by the IC, CRO or the ERT.

Because of the ineffective radio communications, the IC retreated to a room in a small building nearby where he was able to establish limited communications using a landline phone system. The inspectors observed that this hampered the IC in his ability to remain aware of developments during the course of the scenario. The inspectors further observed that communication difficulties hampered the IC in effectively evaluating personnel safety needs of ERT members. For example, the inspectors observed and it was later identified during a licensee critique, that the IC was not informed of a simulated personnel injury at the scene until that individual was simulated being transported offsite by ambulance. The considerable communications difficulties experienced by control room and ERT personnel during the exercise were identified as an Exercise Weakness (IFI 04003392/2008007-02).

The inspectors observed and licensee personnel later identified during a critique that some emergency response equipment was not maintained in a state of readiness. Licensee personnel noted that the Emergency Response Vehicle was hard to start and stalled while being driven to where the IC had established his forward control point. Through interviews of licensee personnel, the inspectors determined that preventive maintenance for the Emergency Response Vehicle was not scheduled or performed. During the critique, licensee personnel discussed the condition of emergency radios and associated battery chargers stored on the Emergency Response Vehicle. ERT members stated that when they arrived at the vehicle to drive it to the forward control point, the chargers were found de-energized and as a result, the emergency radio batteries on the Emergency Response Vehicle were discharged.

During a post-exercise critique, a number of ERT members stated that protective chemical suits staged for the emergency response team were limited in the sizes that were available. Specifically, there were few medium or large suites. The emergency response personnel felt that it was difficult and unsafe to utilize a protective suit that was several sizes too large. They further stated that when in the past they had commented on the insufficient availability of protective suits in the appropriate sizes, they were told that it was always possible for a smaller person to wear an over-sized protective suit. These multiple examples of the failure to maintain

adequate material readiness for emergencies were identified as an Exercise Weakness (IFI 04003392/2008007-03).

As discussed above, the inspectors observed a number of post exercise critiques. These critiques were notable for the frank and open manner in which participants identified both strengths and weaknesses discovered during the exercise. Licensee personnel discussed each issue and a record was made of issues requiring further investigation or corrective action. The inspectors observed that the openness of these critiques was markedly better than observed during previous biennial graded emergency exercises and this was noted as a programmatic strength during the inspection exit at the end of the inspection.

Exit Meeting Summary

The inspection scope and results were summarized on Friday, November 7, 2008 with the Plant Manager and members of his staff. The inspectors asked the licensee staff whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

Key Points of Contact

Name	Title
Mitch Tillman	Plant Manager
Larry Parscale	Regulatory Affairs Manager
Robert Stokes	Health Physics Specialist
Michael Greeno	Compliance Manager

List of Items Opened, Closed, Discussed

Item Number	Status	Description
VIO 04003392/2008007-01	Opened	Failure to invite offsite response organizations to participate in the biennial drill
VIO 04003392/2008007-02	Opened	Failure to have adequate procedures to properly isolate the control ventilation system along with the failure to have adequate procedures regarding the use of the back-up air supply system
IFI 04003392/2008007-01	Opened	Simulated issuance of a materially incorrect press release during exercise
IFI 04003392/2008007-02	Opened	Radio communications difficulties experienced by control room and ERT personnel during the exercise
IFI 04003392/2008007-03	Opened	Multiple examples of the failure to maintain adequate material readiness for emergencies