UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

January 24, 2012

Mr. Larry Smith
Plant Manager
Honeywell Specialty Chemicals
P.O. Box 430
Metropolis, IL 62960

SUBJECT: NRC INSPECTION REPORT NO. 40-3392/2011-005 AND NOTICE OF VIOLATION

Dear Mr. Smith:

This refers to the inspections conducted from October 1, 2011 through December 31, 2011, at the Honeywell Specialty Chemicals facility. The purpose of the inspections was to determine whether activities authorized under the license were conducted safely and in accordance with NRC requirements. The enclosed report presents the results of these inspections. On October 20, 2011, November 18, 2011, and January 5, 2012, the findings were discussed with you and other members of your staff.

The inspections consisted of examination of activities conducted under your license as they relate to public health and safety to confirm compliance with the Commission's rules and regulations and with the conditions of your license. 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 two Severity Level IV violations of NRC requirements occurred. The violations were evaluated in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's Web site at (http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html).

The violations are cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding them are described in detail in the subject inspection report. The violations are being cited in the Notice because they were identified by the NRC. You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. If you have additional information that you believe the NRC should consider, you may provide it in your response to the Notice.

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 or proprietary information so that it can be made available to the Public without redaction.

Thank you for your cooperation. If you have any questions, please call me at (404) 997-4418.

Sincerely,

/RA/

Joselito O. Calle, 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. Inspection Report No. 40-3392/2011-005

cc w/encls:
Gary Wright
Emergency Management Agency
Division of Nuclear Safety
Electronic Mail Distribution

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Electronic Mail Distribution

Distribution w/encls:
P. Silva, NMSS
J. Calle, RII
J. Sulima, NMSS
B. Reilly, NMSS
D. Hartland, RII

***see previous concurrence**

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NOTICE OF VIOLATION

Honeywell Specialty Chemicals
Metropolis, Illinois

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

During NRC inspections conducted from October 1, 2011 through December 31, 2011, violations of NRC requirements were identified. In accordance with the NRC Enforcement Policy, the violations are listed below:

A. 10 CFR 40.60(b)(2) requires that each licensee shall notify the NRC within 24 hours after the discovery of an event in which equipment is disabled or fails to function as designed when: (i) The equipment is required by regulation or license condition to mitigate the consequences of an accident; (ii) The equipment is required to be available and operable when it is disabled or fails to function; and (iii) No redundant equipment is available and operable to perform the required safety function.

Contrary to the above, on March 4, 2011, the licensee failed to notify the NRC within 24 hours after the discovery of an event in which equipment was disabled or failed to function as designed when the equipment was required by license condition to mitigate the consequences of an accident; was required to be available and operable; and no redundant equipment was available and operable to perform the required safety function. Specifically, the licensee experienced a loss of offsite power and for approximately two hours, the licensee was without electrical capabilities and no redundant equipment to perform the required safety function for detection of a hydrogen fluoride (HF) release.

This is a Severity Level IV violation (Section 6.9.d.).

B. License Condition No 18, in License Number SUB-526, Amendment 8, dated February 28, 2011, states, in part, that the licensee shall conduct authorized activities in accordance with the statements, representations and conditions (or as revised by the approved configuration management process as described in Item J) in the specific documents including the License Application, dated May 12, 2006, and in the Safety Determination Report (SDR) dated May 12, 2006.

Section 2.6.3, Configuration Control, of the License Application, dated July 19, 2011, states, in part, that the licensee shall establish a configuration management system to evaluate, implement, and track all proposed changes to the site, structures, processes, systems, components, computer programs, and activities of personnel.

Section 1.8.12, Management of Change (MOC), of the SDR, Revision 10, dated July 19, 2011, states, in part, types of changes subject to the MOC process include any change that may be detrimental to employee health and safety or the integrity of process equipment and the infrastructure of Honeywell.

Contrary to the above, the licensee failed to implement the configuration management system, MOC process, to assure proper review and approval of changes to specified equipment that could be detrimental to employee health and safety. Specifically, equipment changes were made to the administration building uninterrupted power

supply (UPS), which is a component through which electrical power is supplied to emergency response equipment, including all hardwired telephones, offsite public Rapid Notify call-out system, fence line HF monitors, onsite public announcement system, visual monitors, and accountability card readers. The licensee failed to implement the MOC process to assure proper reviews and approvals of changes were performed, as described in the following examples:

1. On October 23, 2003, the licensee replaced the UPS under a like-for-like routine repair work order, Order # 100195788. The UPS replacement was installed without an external bypass wiring connection to remove the UPS from the circuitry in the event of an UPS failure or maintenance, and the licensee was not aware of this configuration. The MOC process was not implemented for this change.

2. On and before March 4, 2011, the licensee installed an air conditioning unit in the UPS room and connected the electrical power supply to an UPS supported electrical panel. The MOC process was not implemented for this change.

This is a Severity Level IV violation (Section 6.2.d.).

Pursuant to the provisions of 10 CFR 2.201, Honeywell Specialty Chemicals is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, 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 for each violation: (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, 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, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

Because 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, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public 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 bases 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 safeguards 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 24th day of January, 2012

U.S. NUCLEAR REGULATORY COMMISSION
REGION II

INSPECTION REPORT

Docket No.:	40-3392
License No.:	SUB-526
Report No.:	40-3392/2011-005
Licensee:	Honeywell International, Inc.
Facility:	Metropolis Works (MTW)
Location:	Metropolis, IL 62960
Dates:	October 1 through December 31, 2011
Inspectors:	R. Gibson, Senior Fuel Facility Inspector D. Hartland, Senior Fuel Facility Inspector M. Crespo, Senior Fuel Facility Inspector N. Coovert, Fuel Facility Inspector R. Russell, Resident Inspector, Paducah
Approved by:	J. Calle, Chief Fuel Facility Inspection Branch 2 Division of Fuel Facility Inspection

Enclosure 2

EXECUTIVE SUMMARY

Honeywell Specialty Chemicals
Inspection Report 40-3392/2011-005

Routine, announced and unannounced inspections were conducted in the areas of operational safety, emergency preparedness, post-strike activities, and routine site operations at the Honeywell Specialty Chemicals facility. In addition, a regional initiative inspection was conducted in the area of operational safety. The inspection involved observation of work activities, a review of selected records and procedures, interviews with plant personnel, and a review of the plant activities. The inspections identified the following aspects of the program as outlined below:

Operational Safety

- The licensee adequately implemented required process controls and their management measures to ensure they were able to perform their intended safety function. (Paragraph 2)

Emergency Preparedness

- Two violations were identified in emergency preparedness. The first violation was the failure to notify the NRC within 24 hours, in accordance with 10 CFR 40.60(b)(2), when the licensee was without electrical capabilities and no redundant equipment to perform the required safety function of detecting a potential hydrogen fluoride (HF) release. The second violation involved two examples of the licensee failing to implement the Management of Change process to assure proper review and approval of changes were performed when equipment changes were made to the administration building uninterrupted power supply. (Paragraph 3).

Resumption of Normal Operations After a Strike

- The licensee adequately administered the training and requalification of the operators returning to work. (Paragraph 4).

Implementation of Return to Work After Strike

- The resident inspectors assigned to the Paducah resident office made routine visits to the Honeywell site to evaluate the returning of the workers and the transitions to normal plant operations. The inspectors performed control room and plant tours and conducted inspections of plant operations and maintenance activities. The inspectors determined operations were appropriate in the sampling plant, ore preparation area, green salt, fluorination, distillation, and yard areas

  On October 6, 2011, the inspectors were on site to review the licensee's immediate emergency response activities following a hydrogen fluoride gaseous release in the chemical tank farm area. The licensee declared a plant emergency and activated their emergency response organization. The maintenance workers were able to stop the release and the workers used the spray mitigation towers to suppress the release cloud. The licensee appropriately reported the medical treatment of the workers in the plant dispensary

to the NRC in an event notification, (EN 47329). The licensee identified areas for improvement and entered the items into their corrective action program which may be subject to further NRC inspections, Problem Report IR-11-2565. (Paragraph 5).

Attachment:
Partial Listing of Persons Contacted
List of Items Opened, Closed and Discussed
Inspection Procedures Used
List of Documents Reviewed

REPORT DETAILS

1. Summary of Facility Activities

The Honeywell Specialty Chemicals (licensee) uranium conversion facility is located on a 1,100 acre site (60 acres within the fence line) near Metropolis, IL. 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, operations were normal.

2. Operational Safety (IP 88020)

a. Inspection Scope and Observations

The inspectors walked down plant features and procedures (PFAPs) and reviewed piping and instrumentation diagrams (P&IDs) in the FMB including PFAP 76, PFAP 77, PFAP 78, and PFAP 79. In addition, the inspectors reviewed the licensee's implementation of the operational requirements from Section 1.6 of the licensee application. The inspectors discussed the PFAPs and requirements with the control room operators and determined that they were in place and available to perform their intended safety function. The inspectors observed shift turnovers, control room activities and operations personnel while performing routine duties. The inspectors found that the operators (hourly operators that had just been qualified following the end of the lockout) were knowledgeable of their responsibilities and were adequately trained and qualified to perform their assigned duties. The inspectors also observed operators perform cylinder change outs, troubleshoot a failed pressure indicator, sample a cylinder, and perform a line break. The inspectors noted that the operators were knowledgeable of the various components and potential hazards posed by the process evolutions they were performing. Through interviews with responsible staff, the inspectors determined that the PFAP procedures contained the appropriate level of detail for the operations involved.

The inspectors reviewed the licensee's piloting of the hard-ore re-drumming operation. The piloting of the operation had just begun the week of November 28, 2011. The operation involved the crushing of the hard-ore drums (the contents and drum together), then the separation of the drum pieces from the now partially crushed hard-ore. The hard-ore is then fed to a new drum for storage. The inspectors noted adequate controls (personal protective equipment and high efficiency particulate air filters) in place to minimize the potential for intake and spread of air borne uranium generated by the crushing operation. The licensee plans to modify the front end of the Ore Prep area of the Feed Material Building during the 2012 spring shutdown to be able to process this partially crushed hard-ore.

b. Conclusion

The licensee adequately implemented required process controls and their management measures to ensure they were able to perform their intended safety function. No findings of significance were identified.

3. Emergency Preparedness (88050)

a. Inspection Scope and Observations

The inspectors evaluated revisions to the Emergency Response Plan (ERP), dated August 10, 2011, and the associated implementing procedures, including emergency staffing responsibilities, minimum staffing verifications, call-out numbers, and emergency operating procedures for the FMB activities. The inspectors also evaluated a select number of emergency plan implementing procedures (EPIPs) to evaluate the licensee's compliance with them. The inspectors determined that no significant physical changes had occurred to the facility or to the support infrastructure that would negatively impact compliance with the ERP or the EPIPs. The inspectors also verified that current copies of the ERP and EPIPs were readily available to the emergency organization personnel. The documentation was properly located in designated buildings and in response vehicles.

The inspectors conducted physical inspections of the facility to evaluate the material condition and operational status of safety systems, equipment, and supplies required to support emergency response challenges. As part of the review, onsite vehicles were inspected, which included the new emergency response truck, the new decon cart, and other support trailers containing equipment and supplies. The inspectors also verified the location of the weather warning radio.

The inspectors reviewed the Security logs, procedures, and surveillance sheets for offsite radio communications, hydrogen fluoride (HF) fence line monitors, pager accountability drills, Rapid Notify public notifications system, phone checks, and offsite siren system testing. The inspectors verified that frequency and test results for the periodic testing of various public warning systems, plant sirens, and other plant communications systems had been completed as required.

The inspectors reviewed training records for select individuals assigned to various emergency response positions and determined that the appropriate personnel had been trained in accordance with procedural requirements. The inspectors also reviewed the additional training required for the "Red Hat" emergency response team (ERT) personnel that were returning to work following the strike resolution. The inspectors determined that emergency response training was adequate to address an emergency response event.

The inspectors reviewed the licensee's agreements with the Massac Memorial, Lourdes, and Western Baptist hospitals. The inspectors had previously reviewed the mutual assistance agreements with the Metropolis city and Massac county fire departments as part of the fire protection inspection in September 2011. The inspectors identified that the licensee had provided some facility familiarization tours, conducted safety training for offsite support agencies on a periodic basis, and supported a public outreach program consisting of a quarterly community bulletin.

The inspectors interviewed the Emergency Response Coordinator (ERC) at Massac Memorial Hospital. The inspectors discussed the interface agreement with the licensee and the hospital and observed the hospital's emergency response equipment and storage location. The inspectors discussed the licensee's facilitated training at the

hospital and onsite at the facility, including the hospital's participation in the licensee's drills. The inspectors determined from the ERC that in the case of contaminated, injured facility personnel, the licensee would provide support through a radiation technician with a gamma detector. Additionally, the inspectors discussed with the ERC the use of shelter in place, the progression of sending personnel to additional hospitals, and when the ambulance is allowed to enter the facility during an event. The inspectors determined the interface agreement with the Massac Memorial Hospital was adequate to address an emergency response event.

The inspectors reviewed emergency preparedness program audits conducted by the licensee over the previous year and noted that the audits covered the following topics as required by the ERP: procedures, facilities, equipment, training, and lessons learned from the 2010 NRC graded emergency response exercise. Deficiencies identified during the audits had been entered into the licensee's corrective action program. The inspectors determined the audits were adequate and being performed as required.

The inspectors observed an annual emergency preparedness and evacuation drill conducted on October 21, 2011. The drill scenario was a simulated HF release outside the Feed Material Building (FMB), along with a simulated contaminated, injured worker. The inspectors observed the licensee mobilize the crisis management center and the incident command, and conduct personnel accountability in a timely manner. The inspectors observed ERT personnel don appropriate HazMat gear, perform search and rescue for a missing drill participant, decontaminate the simulated injured participant and HazMat responders, and isolate the simulated HF leak. The inspectors also observed the licensee's interface with offsite support including the state liaison and local ambulance personnel.

Based upon the drill scenario, the inspectors observed the licensee appropriately declare an Alert in a timely manner, which is the first elevated level of the emergency action levels (EALs). The licensee elevated the EAL to a site area emergency (SAE) in accordance with their procedure, however, at the time of the EAL upgrade, the fence line HF monitors were reported to be reading 0.0 parts per million (ppm) as part of the drill, and observers at the fence line did not report the simulated HF release crossing the site boundary. The licensee made the appropriate state, local, and NRC notifications in the designated time required.

The inspectors observed two drill critiques, one for the personnel in the field and one for the crisis management center. Participants in both debriefs spoke in a roundtable like setting, each providing comments and/or suggestions for drill improvements. The issues identified during the critiques had been captured in the licensee's corrective action program, under incident report IR-11-2739. The inspectors determined that the drill activities had been conducted in accordance with the licensee's procedures and regulatory requirements, as documented in 10 CFR 40.31(j)(3)(xii), Exercises.

The inspectors also reviewed the licensee's response to actual events since the last emergency preparedness inspection. The inspectors reviewed an event that occurred at 8:48 a.m., on March 4, 2011, when the licensee experienced a loss of offsite power due to a down tree on a power line during a storm. Coinciding with the loss of offsite power, the licensee experienced an electrical overload condition on their main

computer/electrical uninterrupted power supply (UPS), located in the administration building, due to an air conditioning unit being plugged into an UPS supported panel. The plant production process shutdown in a fail-safe condition, however, the licensee was without power to the UPS loads, which included electrically powered emergency preparedness and digital control system (DCS) operator controller capabilities. Specifically, the UPS loads included all hardwired telephones, offsite public Rapid Notify call-out system, fence line HF monitors, onsite public announcement (PA) system, visual monitors, accountability card readers, and the DCS computer system, including the FMB DCS operator stations. Hand radios and cell phones were still operational but these devises were limited to specific personnel.

During loss of normal offsite power conditions, the standby diesel generator would auto-start, run in standby, and through operator action directed by procedure, "Standby Power Action Plan," MTW-ADM-EPIP-0010, Revision (Rev.) 3, required components and systems would be manually loaded to the standby diesel generator. As part of the procedure, Step 4.4.2. directed security personnel to "leave critical systems on and turn off non-critical systems." The circuit for the administration building UPS, circuit 2 in power panel 5, was listed as a critical system to leave on. In addition, the administration building UPS and its backup batteries provided approximately one hour of temporary continuous power during a loss of offsite power while the manual operator actions were performed.

On March 4, 2011, the administration building UPS, including the backup batteries, tripped due to an electrical overload, resulting in the loss of critical systems being fed through and from the UPS. During the event, the standby diesel generator auto-started and ran in standby. The licensee was in the process of implementing procedure, MTW-ADM-EPIP-0010, when the offsite power was restored and the UPS, DCS, and associated emergency preparedness equipment were re-energized through normal offsite power at 10:27 a.m.

The licensee performed an apparent cause investigation for the loss of primary electrical power to the plant, but the evaluation narrowly focused on the down power line. The investigation did not evaluate the root cause of the loss of the UPS. In addition, the investigation and corrective actions did not considered the larger impact that this fault had on the licensee's overall emergency preparedness capabilities.

As a result of the loss of offsite power and the subsequent loss of emergency response equipment, the licensee did not notify the NRC within 24 hours of the March 4, 2011 event, as required per Part 10 of the Code of Federal Regulations (CFR). Specifically, 10 CFR 40.60(b)(2) requires that each licensee shall notify the NRC within 24 hours after the discovery of an event in which equipment is disabled or fails to function as designed when: (i) The equipment is required by regulation or license condition to mitigate the consequences of an accident; (ii) The equipment is required to be available and operable when it is disabled or fails to function; and (iii) No redundant equipment is available and operable to perform the required safety function.

License Condition 18 of the License, Amendment 8, states, in part, that the licensee shall conduct authorized activities in accordance with the statements, representations, and conditions in the ERP. Section 2.5 of the ERP, Mitigating Actions, dated August 10, 2011, states in part, risk assessments associated with the licensee indicate

that accidents involving releases of UF_6 constitute the most significant hazard to public health and safety. The licensee maintains a wide range of systems and administrative controls to reduce the likelihood of accidents involving the release of hazardous materials and the risk associated with multi-chemical release scenarios. These systems and controls are directed toward preventing releases of significant quantities of hazardous materials under normal operating conditions and mitigating the effects of such releases under emergency conditions. The hazardous chemicals and related systems and controls, Section 2.5.6., for uranium hexafluoride (UF_6) include smoke detectors and cameras in distillation areas. As stated in 10 CFR 40.60(b)(2)(i), HF detection is required by License Condition 18.

Section 2.7.2, in the ERP, states, in part, that alarm systems associated with UF_6 releases include those associated with ionization detectors located within the FMB and a series of halide detectors located at the plant security fence. Because the most reliable indicator of a UF_6 release is visual detection of the condensing UF_6 cloud, an alarm associated with either of these systems will trigger operating personnel to undertake efforts to perform a visual confirmation of the release. As stated in 10 CFR 40.60(b)(2)(ii), HF detection is required to be available and operable to trigger operating personnel to take actions.

During the loss of offsite power on March 4, 2011, and the subsequent loss of the administration building UPS, for approximately two hours, the licensee was without electrical capabilities for detection of an HF release. The HF detection systems that were without power were the DCS alarm system associated with ionization detectors (smoke detectors) in the FMB, the series of halide detectors located at the plant security fence, the facility video cameras, including those located in the distillation areas, and parking lot lighting, if required for night or cloudy conditions. As stated in 10 CFR 40.60(b)(2)(iii), no redundant equipment was available and operable to perform the required safety function for HF detection.

Contrary to the above, on March 4, 2011, the licensee failed to notify the NRC within 24 hours after the discovery of an event, the loss of offsite and standby electrical power, and as a result, HF detection was disabled or failed to function as designed when the equipment was required by a license condition to mitigate the consequences of an accident; was required to be available and operable when it is disabled or fails to function; and no redundant equipment was available and operable to perform the required safety function. The failure to notify the NRC within 24 hours, in accordance with 10 CFR 40.60(b)(2), is a considered a violation of NRC requirements, VIO 40-3392/2011-005-01.

The inspectors determined that the failure to notify the NRC within 24 hours per 10 CFR 40.60(b)(2) was of low safety significance because an HF release did not occur on March 4, 2011, and limited visual observation of an HF release would have still been available. However, no redundant equipment existed to perform the required safety function and the licensee did not have compensatory actions in place to address the loss of HF detection equipment.

The inspectors also reviewed the configuration management of the administration building UPS, as it related to actual plant configuration and the overload condition due to an air conditioning unit being plugged into an UPS supported panel. The inspectors

reviewed the UPS electrical design, procedures and work requests, and performed interviews and equipment walkdowns. The inspectors identified that contingency actions were not established such that if the licensee had a similar event in the future, it was not clearly defined how they would be able to mitigate the consequences of an event and meet the requirements of the ERP. In addition, the inspectors identified that the configuration control process with respect to the administration building UPS had not been performed in accordance with the licensee's management of change (MOC) process.

License Condition 18, of the License, Amendment 8, states, in part, that the licensee shall conduct authorized activities in accordance with the statements, representations, and conditions in the License Application and the Safety Determination Report (SDR). Section 2.6.3, Configuration Control, of the License Application, dated July 19, 2011, states, in part, that that the licensee shall establish a configuration management system, to evaluate, implement, and track all proposed changes to the site, structures, processes, systems, components, computer programs, and activities of personnel. The Management of Change (MOC) process addresses the following criteria, which includes: the technical basis for the change; impact of the change on safety and health and control of licensed material, authorization requirements for the change; and the impact of the change on the facility's documented Integrated Safety Analysis (ISA), ISA Summary, SDR, or other safety program information.

Section 1.8.12, Management of Change, of the SDR, Revision 10, states, in part, that the MOC process is implemented to assure proper review and approval of changes to specified procedures, equipment, or processes that could be detrimental to employee health and safety, environmental quality, or equipment integrity. Types of changes subject to the MOC process include any change that may be detrimental to employee health and safety or the integrity of process equipment and the infrastructure of Honeywell.

Contrary to the above, on October 23, 2003, the licensee failed to comply with their configuration management system by not performing proper reviews and approvals for equipment changes that may be detrimental to employee health and safety. Specifically, the licensee replaced the administration building UPS under a like-for-like work order, Routine Repair Order # 100195788, "Install Administration UPS Replacement." The UPS replacement did not install an external bypass wiring connection to remove the UPS from the circuitry in the event of an UPS failure or maintenance, and the licensee was not aware of this configuration. As a result, engineering paperwork and maintenance work would be required if the UPS had to be externally bypassed. The replaced UPS also did not have any remote alarms or indicators, only a local alarm and horn to alert people in the immediate area if a degraded condition or failure occurred. The failure to implement the MOC process to assure proper review and approval of changes were performed was considered a violation of NRC requirements, VIO 40-3392/2011-005-02.

The second example occurred on and before March 4, 2011 when the licensee installed an air conditioning unit in the UPS room to cool the room and meet operational needs of the UPS. The installation was not performed under a work order and a MOC review or approval was not performed. The electrical power supply for the air conditioning unit was added to an UPS supported electrical panel. On March 4, 2011, the licensee

experienced a loss of offsite power and subsequently the UPS tripped on an overload condition due to the air conditioning unit. As a result, the licensee was without power to all UPS loads, including emergency response equipment and DCS operator control stations. On March 18, the licensee removed the air conditioning unit from the UPS supported panel and the new UPS load was at approximately 85%. The failure to implement the MOC process to assure proper review and approval of changes were performed was considered another example of violation, VIO 40-3392/2011-005-02.

As stated previously, the licensee performed an apparent cause investigation on the loss of primary electrical power to the plant. The investigation did not evaluate the cause of the loss of UPS, specifically; the latent weakness in the design and modification process that allowed the like-for-like UPS replacement in 2003 and the subsequent unanalyzed modification that added the air conditioning unit to the UPS.

The inspectors determined that the failure to implement the MOC process for the UPS modifications and the subsequent loss of emergency preparedness capabilities on March 4, 2011 were of low safety significance because an HF release did not occur during the event and hand radios and cell phones were still operational for offsite notification capabilities. However, the failure to evaluate and address the impact that the UPS modifications had on the supporting emergency response equipment resulted in degraded emergency preparedness capabilities and the licensee did not have compensatory actions to address this type of event.

b. Conclusion

Two violations were identified in emergency preparedness. The first violation was the failure to notify the NRC within 24 hours, in accordance with 10 CFR 40.60(b)(2), when the licensee was without electrical capabilities and no redundant equipment to perform the required safety function of detecting a potential hydrogen fluoride (HF) release. The second violation involved two examples of the licensee failing to implement the Management of Change process to assure proper review and approval of changes were performed when equipment changes were made to the administration building uninterrupted power supply (UPS).

4. Resumption of Normal Operations After a Strike (92712)

a. Inspection Scope and Observations

The inspectors reviewed the licensee's operator and maintenance training and qualification program for the returning workers. The inspection consisted of a review of documentation including lesson plans, procedures, and completed qualification packages. Observations of training activities included classroom and examination sessions and evaluation of training activities performed in the field.

The inspectors reviewed the training schedule for the returning workers to be trained on their specific job. The inspectors reviewed training documents, attended classroom training, and observed facility field walk downs (on-the-job training) and oral boards with the last group of returning workers consisting of green salt, fluorination, and distillation operators. Training materials consisted of flow charts of the specific operating areas, P&IDs, instructions specific to work, and procedures. The inspectors determined that the training materials were adequate.

The inspectors reviewed procedures and related documentation associated with the training and qualification program. Procedures adequately addressed the administrative aspects of the training and qualification program. Details addressing the conduct of training, remedial training requirements, and necessary measures to successfully progress through the various stages of the training and qualification program were incorporated in approved procedures. The inspectors reviewed a sampling of completed qualification packages for completeness and accuracy.

The inspectors reviewed and discussed final exams and task performance evaluation (TPE) of the last group of returning workers. In addition, the inspectors observed TPE of workers performing system walk down utilizing a checklist while being observed by a supervisor and/or other individual qualified in the specific task area. The workers were required to demonstrate knowledge of the location of system components, critical monitoring instrumentation, and indicators monitoring system operability status. The workers had to be familiar with operating parameters and knowledgeable of system checklist performance requirements. The inspectors noted that the workers were required to complete the system checkout with no assistance from the evaluator.

b. Conclusion

The licensee adequately administered the training and requalification of the operators returning to work. No findings of significance were identified.

5. Implementation of Return to Work After Strike (92711)

a. Inspection Scope and Observations

The resident inspectors assigned to the Paducah resident office made routine visits to the Honeywell site. The purpose of the inspections was to evaluate the efficiency of Honeywell's strike/lock-out transition plan for the returning of the workers and the transitions to normal plant operations. The inspectors performed control room and plant tours and conducted inspections of plant operations and maintenance activities.

The inspectors evaluated the interface between the returning workers and the contract workers retained for normal plant maintenance activities at the facility. The inspectors evaluated the housekeeping of the facilities and the storage yards and evaluated the material condition of equipment and facilities. The inspectors reviewed operations in the sampling plant, ore preparation area, green salt, fluorination, distillation, and yard areas. The inspectors evaluated cylinder movement operations about the plant site and product cylinder preparations for transportation and shipment.

On October 6, 2011, the site emergency response organization and emergency plan was activated to respond to a hydrogen fluoride gaseous release in the chemical tank farm area. The licensee had been conducting maintenance activities on an anhydrous hydrogen fluoride storage tank. When the maintenance workers made a line-break into the tank's associated piping, hydrogen fluoride held-up in a section of the piping was released. The maintenance workers were wearing personal protective clothing and equipment.

The inspectors were on site to review the licensee's immediate emergency response activities. After the onset of the release, the licensee declared a plant emergency and activated their emergency response plan. They activated the on-scene command post and onsite emergency operations center and notified the local offsite response organizations. The maintenance workers were able to stop the release by re-connecting the piping and the tank farm workers used the spray mitigation towers to suppress the release cloud. After decontamination of the workers, two maintenance workers received first aid treatment at the onsite medical dispensary and were returned to work.

The licensee reported the medical treatment of the workers in the plant dispensary to the NRC in an event notification, (EN 47329). Also, the licensee identified areas for improvement to include on-site communications and personnel accountability and entered the items into their corrective action program which may be subject to further NRC inspections. (Problem Report IR-11-2565).

b. Conclusion

No findings of significance were identified.

6. Exit Meeting

The inspection scope and results were summarized on October 21, and November 18, 2011, and January 5, 2012, with Larry Smith, Plant Manager, and other members of the licensee's staff. Although proprietary information was reviewed during this inspection, proprietary information is not included in this report.

SUPPLEMENTAL INFORMATION

1. LIST OF PERSONS CONTACTED

S. Anderson, Training
T. Barnes, Maintenance Manager
B. Bass, Maintenance Engineer
D. Bilski, Security Manager
B. Burgess, Health Physics Specialist
T. Dodd, Operations Regulatory Affairs Coordinator
D. Duty, Fire Protection Specialist
M. Greeno, Regulatory Affairs Manager
L. Litinski, Regulatory Affairs
D. Palmer, Operations Manager
S. Patterson, Health Physics Supervisor
L. Smith, Plant Manager
B. Stephenson, Emergency Response
B. Stokes, Health Physics Manager
R. Thomas, Environmental Supervisor
M. Wolf, Nuclear Compliance Director

Other licensee employees contacted included operation, management staff, engineers, HP-technicians, security and office personnel.

2. INSPECTION PROCEDURES USED

IP 88020	Operational Safety
IP 88050	Emergency Preparedness
IP 92712	Resumption of Normal Operation After a Strike
IP 92711	Implementation of Return to Work After Strike

3. ITEMS OPENED, CLOSED, AND DISCUSSED

Item	Status	Description
VIO 40-3392/2011-005-01	Open	Failure to notify the NRC within 24 hours, in accordance with 10 CFR 40.60(b)(2), when the licensee was without electrical capabilities and no redundant equipment to perform the required safety function for detection of an HF release.
VIO 40-3392/2011-005-02	Open	Failure to implement the MOC process for equipment changes made to the administration building UPS on October 23, 2003 and on and before March 4, 2011.
EN 47329	Open	Medical Treatment of Employees with Contamination on Clothing.

4. LIST OF DOCUMENTS REVIEWED

MTW-SAF-IP-0018	Rev .5	Housekeeping
MTW-SOP-F2N-0122	Rev. 9	Safety Haven Pressurization System Operation
MTW-EOP-ORE-0600	Rev. 4	Ore Emergency Operations
MTW-DOC-ERP-0701	Rev. 2	Emergency Managers and SME Recall List
MTW-EOP-F2N-0600	Rev. 1	Fluorination Emergency Operations
MTW-EOP-DIS-0600	Rev. 2	Distillation Emergency Operations
MTW-FRM-OPS-0104A	08/05/11	UF6 Operations Shift Turnover Checklist
MTW-ADM-EPIP-001	Rev. 2	Identification and Reporting Emergency Conditions Emergency Classification and Notification
MTW-ADM-EPIP-002	Rev. 3	Crisis Management and Incident Command Staff
MTW-ADM-EPIP-003	Rev. 2	Responsibilities Emergency Response Organization Activities
MTW-ADM-EPIP-004	Rev. 2	Personnel Evacuation and Accountability
MTW-ADM-EPIP-006	Rev. 4	Personnel and Equipment Decontamination Under
MTW-ADM-EPIP-007	Rev. 0	Emergency Conditions
MTW-ADM-EPIP-008	Rev. 3	Maintaining Emergency Preparedness
MTW-ADM-EPIP-009	Rev. 1	Chemical Release Control
MTW-ADM-EPIP-0010	Rev. 3	Standby Power Action Plan
MTW-ADM-EPIP-0011	Rev. 1	Responding to Credible Airborne Threats
MTW-ADM-EPIP-0012	Rev. 0	Transportation Emergency Response
MTW-DOC-EP-005	05/17/10	Mutual Assistance Agreement with Massac Memorial Hospital
MTW-DOC-EP-003	11/03/10	Mutual Assistance Agreement with Lourdes Hospital
MTW-DOC-EP-004	07/08/10	Mutual Assistance Agreement with Western Baptist Hospital
MTW-DOC-EP-001	10/14/10	Mutual Assistance Agreement with Metropolis City Fire Department
MTW-DOC-EP-002	10/19/10	Mutual Assistance Agreement with Massac County Fire Department
MTW-ADM-OPS-0121	Rev. 10	Management of Plant Features and Procedures
MTW-SAF-LS-0007	Rev. 2	Line Breaking
MTW-ADM-OPS-0104	Rev. 12	Shift Turnover
MTW-SOP-DIS-0200	Rev. 19	Distillation Operations
MTW-IRP-DIS-0451	Rev. 2	Distillation Indicator Response
MTW-ADM-HP-0121	Rev. 3	Fixed Gauges Management Program

Integrated Safety Analysis Summary, 6/17/2010, Revision 2
Full Incident Report, Incident I.D.: IR-11-2792
Interim Distillation Systems Manual
Preliminary External Exposure Evaluation due to Cs-137, 11/16/2011
Calibration/functional Test for PFAP 76
Preventive Maintenance Plan (PMP) 27776
PMP 29266

Drawings Reviewed

B4598, Revision 14
B4601, Revision 11
B4602, Revision 9
B4603, Revision 7
B4604, Revision 8