HONEYWELL

Key Messages:

- NRC staff has heightened its oversight of the Honeywell International, Inc., uranium conversion facility in Metropolis, IL, as a result of several recent releases of hazardous chemicals.

Background/Context:

- On January 27, 1998, three workers received hydrofluoric acid burns to their skin from a UF_6 leak. An AIT reviewed the event and determined the root cause to be that management's expectations for procedural adherence were not clear in some cases and had been eroded through acceptance of site practices that contradicted procedural directions.
- On September 9, 2003, a hydrofluoric acid (HF) spill resulted in injuries to a maintenance mechanic.
- On September 12, 2003, a chemical release of antimony pentafluoride (SbF5) occurred, not related to the uranium process, creating a plume that traveled past the fence line. A site Alert was declared.
- On September 30, 2003, a small release of uranium hexafluoride (UF6) occurred from a cylinder pigtail. The release was contained on site.
- A special inspection was conducted on October 6 through November 26, 2003, to review the circumstances regarding these events and to determine whether activities authorized by the license were conducted safely and in accordance with NRC requirements. The root cause of these events was similar to that in the 1998 release.
- Inspections were conducted prior to and during start up of the UF_6 operations to verify corrective actions.
- An inspection report was issued on December 17, 2003, citing two severity Level IV violations for failure to use and/or follow required procedures for the UF6 release. No enforcement action was taken for the SbF5 release or the HF spill because the inspection team determined that the events did not have the potential to affect the safety of radioactive material and the HF spill was material used prior to the addition of the uranium.
- On December 22, 2003, a UF6 release occurred from one of the plant's chemical process lines. The release lasted approximately 40 minutes. The release resulted in the declaration by Honeywell of a Site Area Emergency which was terminated approximately four hours later. About 25 people offsite were temporarily evacuated and some 75 persons remained sheltered for a time in their homes. Four individual went to the hospital; three were examined and released. The fourth was held for observation and released the next day. Based on preliminary information, it appears that this release had minimal impact on worker or public health and safety.

Accomplishments:

- A special team inspection was conducted and an inspection report was issued related to the first three events.
- Honeywell took corrective actions to the first three events including reviewing operations and comparing existing procedures with current practices, amending the existing procedures to include all steps in the described process, retraining staff on the amended procedures and on the need to comply with the procedures, and temporarily increased management oversight of operations on all three shifts to ensure compliance with the amended procedures.
- Inspections were conducted to observe and assess these corrective actions.
- A Confirmatory Action Letter was issued on December 22, 2003, requiring Honeywell to discuss the results of its investigation and the proposed corrective actions with NRC prior to restart of the UF6 processes.
- An Augmented Inspection Team (AIT) was chartered to inspect and assess the December 22nd release.
- A public exit meeting was held in Metropolis, IL, on January 6. The majority of the comments focused on the off site response and the coordination between the licensee and the off site responders. In response to these concerns, Honeywell stated that it recognized that off site response and coordination were areas that needed to be improved and that Honeywell had held a recent meeting with off site emergency response personnel to initiate the improvement process. Both Region II staff and Honeywell stated that Honeywell would not restart its operations until NRC is satisfied with Honeywell's corrective actions. Approximately 120 people attended the two hour meeting.

Current Status:

- Honeywell is conducting a root cause analysis and formulating its proposed corrective actions.

Pending Actions:

- The AIT inspection report is being developed.
- A management meeting between NRC and Honeywell is scheduled for February 11, 2004 (a Category 1 public meeting).

Stakeholders and Their Interest

- Local interest is very high as evidenced at the AIT exit meeting.

Challenges:

- Changing an apparent corporate culture that relies on worker knowledge/experience rather than written procedures for infrequent operations

Policy Issues:

- None identified

Risks:

- When UF6 is released to the atmosphere, it forms uranyl fluoride and HF. It is the HF that presents the greatest hazard.