February 20, 2013

Mr. Larry A. Smith, Plant Manager
Honeywell
P.O. Box 430
2768 North US 45 Road
Metropolis, IL 62960

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION – HONEYWELL METROPOLIS WORKS SAFETY BASIS AND CORRECTIVE ACTION PLAN (TAC L32788)

Dear Mr. Smith:

We have completed our initial technical reviews of your November 30, 2012, submittal of the Safety Basis and Corrective Action Plan for the facility retrofits necessary to comply with the requirements described in the Confirmatory Order issued by the U.S Nuclear Regulatory Commission (NRC) on October 15, 2012. Our review has identified that additional information is needed for the staff to evaluate the facility modifications.

The enclosed Request for Additional Information includes questions related to the emergency response plan and seismic and structural evaluations.

Please provide the additional information requested in the attachments within 15 days of the date of this letter.

If you have any questions regarding this letter, please contact me at (301) 492-3110, or via e-mail to breeda.reilly@nrc.gov.

In accordance with 10 *Code of Federal Regulations* 2.390 of the NRC's "Rules of Practice," a copy of this letter and the enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

M. Breeda Reilly, Senior Project Manager
Programmatic Oversight and
Regional Support Branch
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

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

Enclosure: Request for Additional Information

cc: Mark Wolf /Honeywell
Robert Stokes/ Honeywell

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cc: Mark Wolf /Honeywell
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REQUEST FOR ADDITIONAL INFORMATION

HONEYWELL METROPOLIS WORKS
SAFETY BASIS AND CORRECTIVE ACTION PLAN DATED NOVEMBER 30, 2012
DOCKET: 40-3392 (TAC NO. L32788)

Emergency Response Plan

In its Safety Basis and Corrective Action Plan (SBCAP) dated November 30, 2012, Honeywell provided information regarding its facility modifications necessary to comply with the requirements described in Section IV of the Confirmatory Order dated October 15, 2012. In particular, the Confirmatory Order requested the submittal to the U.S. Nuclear Regulatory Commission (NRC) of a revised Emergency Response Plan (ERP) that defines all planning bases and articulates all necessary modifications to the Metropolis Works facility.

Honeywell is requested to provide and/or justify the following information:

RAI MN-1

In Section V of the SBCAP (pg. 27 of 29), Honeywell stated: "Assuming all modifications are implemented, no changes to the Emergency Response Plan are needed." Section 3.b.2 (pg 16 of 29) provides information related to a credible uranium hexafluoride (UF_6) release from the 4^{th} thru 6^{th} floors for a seismic event. Explain why the ERP will not be revised to include this accident scenario.

RAI MN-2

As part of the license renewal application that was approved in May 11, 2007, the staff reviewed Section 7.0, "Maintaining Emergency Response Capability," of the ERP dated May 27, 2005. The ERP for the license renewal provided the information with following Sections:

7.2.1. Initial Emergency Response Organization Training
7.2.2. Refresher Training
7.2.3. Training for Personnel Who Maintain the Plans
7.2.4. Training and Orientation for Offsite Emergency Response Personnel
7.3. Drills and Exercises
7.4. Emergency Plan Audit Program
7.5. Maintenance and Inventory of Emergency Equipment, Instrumentation, and Supplies
7.5.1. Instrumentation and Supplies
7.5.2. Equipment Tests
7.6. Offsite Emergency Response Organizations

The ERP dated October 14, 2010, relocated the information provided in the above listed sections in the previous revision of the ERP to an Emergency Plan Implementing Procedure (EPIP) 0008, "Maintaining Emergency Preparedness." The licensee is requested to provide a copy of EPIP 0008 for staff's information and review.

Seismic Hazard

RAI JS-1

Explain why the 2010 ABS Consulting Group recommendations (Preliminary Seismic Risk Assessment, August, 2010), which recommends a maximum considered earthquake and design earthquake response spectrum (Table 2-3, Figure 2-3 of ABS Consulting, 2010) derived from ASCE 7 and the 2500-year return period ground motions (USGS, 2002), were not considered in the 2012 SBCAP.

RAI JS-2

Explain how the site seismic amplification effects of these soft soils were accounted for in determining the design basis ground motion values, given that the 1991, report by Leighton and Associates, Inc., indicates that the site soils are relatively soft and fall into the soil Site Class D.

RAI JS-3

Explain how potential liquefaction effects of the soft soils were evaluated and determined not to be a potential hazard at the site.

RAI JS-4

Provide additional information on how the three seismographs, to be installed on site and used to trigger valve closures, will be maintained, calibrated, and tested.

Structural

The selection of seismic design basis and performance criteria and mitigation of seismic risk through analysis, design, and construction of a nuclear facility using appropriate site characterization data and design codes and standards are complex problems. For the methodologies that Honeywell has chosen to use, it is necessary to demonstrate their appropriateness and acceptability.

The following Requests for Additional Information (RAI) from the staff seek to understand how the seismic design basis and performance criteria have been selected and the mitigation of seismic risk has been addressed.

Honeywell is requested to provide and/or justify the following information:

RAI AC-1

Provide details for reconciling the difference between the definition of "Highly Unlikely" for seismic events as "Less than 10^{-4} per event, per year" (SBCAP, pg. 7 of 29) and using "475-yr return period" earthquake as the "Design Basis Earthquake" (SBCAP, pg. 8 of 29).

RAI AC-2

Provide detailed analyses and design of the confinement shell (SBCAP, pg. 13 of 29) of the UF_6 distillation process area, specifically, from basement through the 3rd floor that will be used to seal-off this area from the remaining Fuel Manufacturing Building (FMB) process space and the exterior environment as a secondary means of confinement to protect both workers and public from toxic hydrogen fluoride (HF) and uranyl fluoride (UO_2F_2) plumes resulting from a UF_6 release during a seismic event.

RAI AC-3

Demonstrate that the piping fragility values presented in Table 8 (SBCAP, pg. 19 of 29) are consistent with the piping fragility values that could be developed using one of the quantitative methodologies used in the industry.

RAI AC-4

Provide detailed design of protective shielding (metal or composite) that will be installed to mitigate the effects of tornado missile strikes on piping systems, vessels, storage tanks, FMB structure, and other "weak points" (SBCAP, pg. 23-25 of 29).

RAI AC-5

Provide details showing how the aging effects on piping systems, vessels, storage tanks, FMB structure, and other components have been considered.

RAI JM-1

Provide additional information on the level of knowledge and knowledge factor used for the seismic retrofit of the FMB. (Ref. 10, ABS Report "Feed Materials Building Structural Seismic Evaluation," 17 June 2011.)

RAI JM-2

Provide design to capacity ratios for the structural elements of the FMB after the implementation of retrofits. If the calculations are dependent on additional analysis, provide a timeframe for providing this information to NRC.

RAI JM-3

Provide a summary and detailed evaluation of the impact of loss of all power to the plant. Reference 9 of the Honeywell submittal states that "An evaluation of the impact of loss of all power to the plant is currently being performed. This evaluation will determine if any of the structures, systems or components associated with these systems is required to prevent an unacceptable release of hazardous materials."

RAI JM-4

Provide a copy of the latest revision of Honeywell fire hazards analysis described in the Integrated Summary Analysis Section 10.3.

RAI JM-5

Provide the amount of residual natural gas that remains in the pipe line after closure of the seismic shutoff valve. (Ref. MTW-CALC-GEN-0013)

RAI JM-6

Provide an evaluation of the consequences of an explosion or fire with the remaining amount of natural gas in the pipe line. (Ref. MTW-CALC-GEN-0013)

RAI JM-7

Provide additional information associated to the potential consequences of failures to the fire water tank and fire pump under a seismic event. (Reference 9 of SBCAP, Attachment C.)