DRAFT REQUEST FOR ADDITIONAL INFORMATION

Integrated Safety Analysis Summary and Management Measures

Renewal of Source Materials License SUB-526 Honeywell International Inc.

Metropolis Works, Metropolis, Illinois

General Regulatory Basis Pertaining to Integrated Safety Analysis Summary and Management Measures Reviews

As directed in the Staff Requirements Memorandum to SECY-06-0186, "Increasing Licensing Terms for Certain Fuel Cycle Facilities," the U.S. Nuclear Regulatory Commission (NRC) staff can consider a maximum license term of 40 years only for those licensees who submit Integrated Safety Analysis (ISA) Summaries according to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 70, Subpart H. Honeywell International, Inc. (the licensee or the applicant) submitted, along with its license renewal application (LRA), its "Justification for Forty-Year License Term," which documents a regulatory comparison of the applicant's ISA with 10 CFR 70, Subpart H, and respective management measures. Through this comparison, the applicant concludes that "…MTW [Metropolis Works Facility] ISA contains the relevant provisions of an ISA prepared in accordance to 10 CFR 70 Subpart H and used applicable guidance from NUREG-1520…" Therefore, in addition to compliance with 10 CFR 40, the staff reviewed the application to determine the extent to which the applicant demonstrates compliance with 10 CFR 70, Subpart H.

With respect to 10 CFR 40, the regulatory basis for draft request for additional information (D-RAI) 3-1 through 3-21 includes 10 CFR Paragraph 40.32(c). D-RAI 3-1 through 3-12, and 3-21, assume maintenance of License Condition 18(D), and D-RAI 3-13 through 3-20 assume maintenance of License Condition 18(J). Paragraph 40.32(c) of 10 CFR requires the applicant's proposed equipment, facilities and procedures to be adequate to protect health and minimize danger to life or property. License Condition 18(D) requires the applicant to conduct authorized activities at the Honeywell MTW facility in accordance with the statements, representations and conditions in the current ISA Summary. License Condition 18(J) requires the applicant to conduct authorized activities at the Honeywell MTW facility in accordance with the statements, representations and conditions in the facility's configuration control system.

D-RAI 3-1

Explain the process for analyzing the hazards associated with facility operation in the event the applicant chooses not to implement an ISA methodology. According to the ISA Summary, the applicant performed an ISA "to provide an industry-standard analysis of the hazards associated with operation of the facility." Furthermore, the ISA Summary states, "Honeywell Metropolis Works (MTW) is licensed by the NRC under the requirements of 10 CFR 40. Although not subject to the requirements of 10 CFR 70, Honeywell elected to analyze site risks using the ISA methodologies prescribed by 10 CFR 70…" Given this statement, the applicant could elect in the future not to analyze site risks using 10 CFR 70 ISA methodologies. In other words, should the NRC approve the application, after renewal, the applicant could choose to prepare an ISA that is not in accordance with 10 CFR 70 or consistent with the guidance in NUREG-1520, "Standard Review Plan for Fuel Cycle Facilities License Applications."

D-RAI 3-2

Justify exclusion of a discussion in the LRA on how the applicant will maintain or have access to an ISA team with appropriate training and qualifications to perform and maintain the ISA.

D-RAI 3-3

Justify exclusion of a discussion in the LRA of who manages and has the authority and the responsibility to update the ISA.

D-RAI 3-4

Describe the elements of the ISA program providing reasonable assurance of consistency and repeatability when determining the appropriate analysis methods, demonstrating the performance requirements are met, and designating Plant Features and Procedures (PFAP). The LRA references Process Safety Management Program and NUREG-1513, “Integrated Safety Analysis Guidance Document” as sources for ISA methodologies; however, those sources enumerate numerous generic methods.

D-RAI 3-5

Describe the process or procedure whereby the applicant incorporated the hazards described in Chapter 6, “Process Hazards Analysis” of the ISA Summary into accident sequences. Include a discussion of the exclusion of accident sequences. As mentioned in D-RAI 3-4, the LRA references NUREG-1513 as a source for identifying credible accident sequences and performing and maintaining the ISA. Adequate application of NUREG-1513 would result in an ISA Summary that describes all accident sequences with intermediate or high consequences to which PFAPs are applied. From the more than 50 hazards described in Chapter 6 of the ISA Summary, the applicant documents only eight accident sequences.

D-RAI 3-6

Clarify in the ISA Summary whether hazardous chemicals such as potassium hydroxide, sodium hydroxide, magnesium hydroxide and sulfuric acid physically or chemically interact with licensed materials. If so, justify exclusion from the ISA Summary the accident sequences, quantitative standards, and PFAPs associated with these chemicals. According to the ISA Summary, those substances physically or chemically interact with licensed materials and are toxic, explosive, flammable, corrosive, or reactive to the extent that they can endanger life or health if not adequately controlled.

D-RAI 3-7

PFAP 79 is an administrative control involving the calculation of the time required to overfill a uranium hexafluoride cylinder. According to the ISA Summary, the applicant credits the control with a failure probability index number (FPIN) of -2. The description of the control includes acquiring flow rate data. Clarify whether the FPIN is a conditional failure given the flow rate data is correct. Further clarify whether the FPIN is conditional on other factors such as verification of the calculation.

D-RAI 3-8

The sole PFAP, PFAP 48, is an administrative control whereby an operator degreases a component prior to being placed in service. According to the ISA Summary, the applicant credits the control with an FPIN of -2. Clarify whether this FPIN is conditioned on other factors such as verification by another operator.

D-RAI 3-9

PFAP 39 is an administrative control whereby an operator manually shuts down the Reductor System. According to the ISA Summary, the applicant credits the control with an FPIN of -1. PFAP 36 is an administrative control whereby an operator manually shuts down the Reductor Feed. The applicant credits this control with an FPIN of -2. Describe the factors associated with these controls that justifies the difference in FPIN.

D-RAI 3-10

Provide details of the accident sequences described in the ISA Summary. These details should be in a form that allows the reviewer to understand the mechanisms of each accident sequence such as fault trees, event trees, or failure mode effects or what-if analyses.

D-RAI 3-11

Chapter 6, “Process Hazards Analysis,” of the ISA Summary discusses the results of the Process Hazards Analysis specifically hazards associated with cold traps. The accident sequences in Chapter 7, however, do not seem to include accidents associated with those hazards. Provide a justification for the omission of cold trap accident sequences in Chapter 7.

D-RAI 3-12

The licensee’s Subpart H regulatory comparison states that 10 CFR Section 70.64 is not applicable for consideration because Honeywell MTW is not a new facility, and the LRA does not involve new processes. However, in seeking a renewed license, the licensee must provide adequate assurance that it will comply with regulations that may apply at any time through the renewed license term. Although MTW is not a new facility, the licensee may decide to implement new processes later in the license term. Furthermore, Sections 2 and 3 of the applicant’s ISA Summary reference 10 CFR 70.64 in terms of applicable regulatory requirements. Therefore, clarify the reference to 10 CFR 70.64 in the ISA Summary given that the regulatory comparison states that 10 CFR 70.64 is not applicable.

D-RAI 3-13

In Chapter 11, “Management Measures,” the applicant states that management measures will be applied to provide reasonable assurance that PFAPs will perform their intended safety function when needed to prevent accidents or mitigate the consequences of accidents to an acceptable level. In Chapter 2 “Organization and Administration”, Honeywell International Inc. states that the management measures are implemented to provide assurance of the reliability and availability of PFAP as identified in the ISA. Modify the LRA to provide a consistent definition or statement of purpose of management measures.

D-RAI 3-14

Justify exclusion of a discussion regarding NRC approval for changes that create new types of accident sequences that, unless mitigated or prevented, exceed the performance requirements specified in 10 CFR 70.61(a) - (c) and (e), (f). As stated in 11.1.3 of the LRA, the applicant commits to seeking NRC approval for exceeding only the consequence element of the performance requirements.

D-RAI 3-15

Section 11.1, “Configuration Management (CM),” describes the scope and process outline of the CM program for the applicant.

a. Provide a list of documents included in the document control process for Section 11.1 CM (i.e., drawings, procurement documentation).

b. Describe how changes to the facility are controlled and tracked in the documents described in the list provided in 15.a.

c. Describe how Honeywell’s organizational structure for the CM program controls via procedures the approval and implementation of changes performed in the facility.

D-RAI 3-16

Section 11.2, “Maintenance,” provides a description of how the program is implemented by the applicant. Clarify the organizational structure for the oversight and authorization of activities described in this section.

D-RAI 3-17

Section 11.3, “Training and Qualification,” provides a description of training and qualification requirements for new employees, operations, maintenance, and contractor personnel. Please elaborate on how training and qualification apply to the personnel that have the authority and responsibility to verify, approve and incorporate ISA changes.

D-RAI 3-18

Section 11.4, “Procedures,” describes the Procedure Process Program for the applicant. This process includes the elements of identification, development, verification, review and comment resolution, approval, validation, issuance, and change control. State organizational responsibilities for the review and approval of procedures, and specify criteria for the review and periodic review of procedures.

D-RAI 3-19

Section 11.6, “Incident Reports and Investigations,” of the LRA describes the Incident Report and Investigation Program for the applicant. The program describes general procedures and a management structure for investigating incidents and completing appropriate corrective actions. Clarify the statement “the proper and timely completion of required investigation, unless otherwise assigned by the Plant Manager.

Describe criteria used for the evaluation of incident investigation and timeline requirements, e.g. thresholds that need to be met by the incident to perform an investigation. Describe the organizational structure from the establishment, execution and oversight of the Incident Report and Investigation Program. Describe how you retain these records, e.g. electronically, hard copy, database, and the retention period for them.

D-RAI 3-20

Section 11.7, “Records Management,” describes the applicant’s Records Management Program. In this section, the applicant provides a list of categories and the retention period. Provide a list of the type of records under these categories. For example, enumerate the category of records under which PFAPs information regarding failures, procurement documentation, equipment qualification, and equipment maintenance would be recorded.

D-RAI 3-21

Describe the process for reporting to the NRC events that describe acute chemical exposures that exceed the 10 CFR 70.61 performance requirements or conditions such that PFAPs for a given sequence documented in the ISA Summary were unavailable or unreliable.

D-RAI 3-22

Confirm that the definitions and stated purpose of “integrated safety analysis” and ISA summary are consistent among the ISA Summary, LRA, and implementing procedures such as management of change, process hazard analysis, and changes to licensing documents.