DRAFT REQUEST FOR ADDITIONAL INFORMATION (D-RAI)

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. Therefore, in addition to compliance with 10 CFR 40, the applicant must also demonstrate its compliance, to the extent applicable, with 10 CFR 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…"

With respect to 10 CFR 40, the regulatory basis for draft request for additional information (D-RAI) 3-1 through 3-21 include 10 CFR 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 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 MTW facility in accordance with the statements, representations and conditions in the facility's configuration control system.

D-RAI 3-1

Justify exclusion of commitments in the LRA and ISA Summary on adhering to all applicable requirements in Subpart H of 10 CFR 70. The ISA Summary the applicant submitted with the LRA effectively nullifies the intent of License Condition 18(D) which was to establish criteria and requirements similar to those in Subpart H of 10 CFR 70 by which the NRC could evaluate the performance of the applicant with respect to the ISA and the safe operation of the facility. Specifically, 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. Furthermore, this statement does not sustain the conclusion of the regulatory comparison that at any point in the future, 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. The regulatory comparison does not include a discussion of 10 CFR 70.62(c)(2).

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

Justify exclusion from the ISA Summary all accident sequences with intermediate or high consequences to which PFAPs are applied. 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. However, 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. The current ISA only categorizes accidents by process. Specifically, Chapter 6.0 “Process Hazards Analysis”, of the ISA Summary discusses the process hazards analysis (PHA) and identifies more than 50 hazards, yet the summary describes only eight generic 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, ~~methods of assessing consequences~~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 PHA 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 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 rationale that 10 CFR 70.64 is not applicable for consideration in the context of the regulatory comparison.

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 (i.e., drawings, procurement documentation) to which the controls discussed in Section 11.1 apply besides procedures.

b. Describe how changes to the facility are reflected in the documents described in the list provided in 15.a. and how procedures evaluate the extent of a change in the facility.

~~a.~~c. Describe the organizational structure for the approval 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 update the ISA and personnel who have the authority and responsibility for making changes to the facility that may change previous ISA results.

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 which group is responsible for the review and approval of procedures, and specify criteria for the 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

Justify exclusion of commitments in the LRA that reporting requirements comparable to those of 10 CFR 70.74 will be met. Although the licensee’s regulatory comparison concludes that the applicant’s ISA is prepared in accordance with 10 CFR 70 Subpart H to support safe operation, the applicant would not be required to report safety incidents as described in Appendix A of 10 CFR 70 such as acute chemical exposures that exceed the performance requirements or an event or condition such that no items relied on for safety, as documented in the ISA summary, remained available and reliable.