

REQUEST FOR ADDITIONAL INFORMATION

SECTION 4: RADIATION PROTECTION

HONEYWELL LICENSE RENEWAL APPLICATION DATED FEBRUARY 8, 2017

Renewal of Source Materials License SUB-526 Honeywell International Inc. Metropolis Works, Metropolis, Illinois

RAI 4-1

State the individual who fills the role of Radiation Safety Officer (RSO) for Honeywell Metropolis Works (MTW). The license renewal application (LRA) does not use the term, RSO, nor is it necessarily a requirement. Honeywell cites several U.S. Nuclear Regulatory Commission Regulatory Guides (RG) as a basis for the MTW Radiation Protection Program and many of these guides refer to an identified RSO. It is not apparent from Honeywell's LRA which position fills that role. Clarify the roles of the Regulatory Affairs Manager or the Health Physics Supervisor as they pertain to the radiation protection program of the plant.

Title 10 of the *Code of Federal Regulations* (10 CFR) Paragraph 20.1101(a) states that each licensee shall develop, document, and implement a radiation protection program commensurate with the scope of licensed activities and sufficient to ensure compliance with the provisions of this part.

RAI 4-2

Section 4.4.1 of the LRA states that formal program audits are conducted on, at least, an annual basis. Describe who participates in the review, what areas are reviewed, and what becomes of the resulting report, i.e. what level of management reviews the report. Explain whether or not hourly employees are informed of results of annual reviews, e.g. via annual refresher training.

Paragraph 10 CFR 20.1101(c) states the licensee shall periodically (at least annually) review the radiation protection program content and implementation.

RAI 4-3

Section 4.4.1 of the LRA states that MTW's as-low-as-reasonably achievable (ALARA) program is consistent with the guidance of RG 8.10, "Operating Philosophy for Maintaining Occupational Radiation Exposures As-Low-As Reasonably Achievable," and that management commitment is demonstrated through a written policy statement. Provide and describe how it is disseminated to the working staff.

Paragraph 10 CFR 20.1101(b) states the licensee shall use, to the extent practical, procedures and engineering controls based upon sound radiation protection principles to achieve occupational doses and doses to members of the public that are as low as is reasonably achievable.

RAI 4-4

Section 4.9.1 of the LRA states that for any external doses exceeding the administrative control levels established by the ALARA Committee, an investigation will be performed. State what the administrative control levels for external and internal exposure are.

Paragraph 20.1201(a) of 10 CFR states the licensee shall control the occupational dose to individual adults, to the limits prescribed in 10 CFR 20.1201(a)(1).

RAI 4-5

Section 4.9.1 of the LRA describes the external dosimetry program for Honeywell. Individuals likely to exceed 10 percent of the limits stated in 10 CFR 20.1201 are issued a Honeywell personnel dosimeter. Describe the types of radiation monitored by this dosimeter, the type and sensitivity of the dosimeter, and how often they are collected, processed, and where they are processed. Explain if there is any type of electronic dosimeter or pocket ionization chamber are used.

Paragraph 20.1501(d) of 10 CFR states that all personnel dosimeters that require processing to determine the radiation dose and that are used by licensees to comply with 10 CFR 20.1201 must be processed and evaluated by a dosimetry processor holding current personnel dosimetry accreditation from the National Voluntary Accreditation Program of the National Institute of Standards and Technology.

RAI 4-6

Section 4.9.4.1 of the LRA describes various Area Designations within the Restricted Area based on processes being conducted. Describe how personnel access is managed to ensure only qualified and trained individuals enter controlled areas.

Paragraph 40.32(c) of 10 CFR states that an application for a specific license will be approved if the applicant's proposed equipment, facilities, and procedures are adequate to protect health and minimize danger to life or property.

RAI 4-7

Section 4.10.1.4 of the LRA states that Honeywell MTW posts High Radiation Areas in accordance with 10 CFR 20.1902(b) and provides access controls in accordance with 10 CFR 20.1602. This reference applies to Very High Radiation Areas, which were not described in the LRA. Clarify whether or not Honeywell possesses such areas and, if the access controls were meant to refer to High Radiation Areas, clarify what methods of access control are used by Honeywell.

Paragraph 40.32(c) of 10 CFR states that an application for a specific license will be approved if the applicant's proposed equipment, facilities, and procedures are adequate to protect health and minimize danger to life or property.

RAI 4-8

Section 4.9.1 of the LRA states that routine urinalysis is on an established schedule. It also states that special urinalysis is performed for confined space entries, following uranium

hexafluoride release, and that employees “are encouraged to submit” urine samples at the start of the next work shift following a suspected exposure. Define what the established schedule for routine urinalysis is. Explain how worker intakes are measured, assessed, and recorded. Explain if there is any difference between the analysis of a routine sample and a special sample, other than a change in frequency. Explain whether it is optional for employees to submit urine samples following a suspected release.

Paragraph 40.32(c) of 10 CFR states that an application for a specific license will be approved if the applicant’s proposed equipment, facilities, and procedures are adequate to protect health and minimize danger to life or property.

RAI 4-9

Section 4.9.2 of the LRA describes the airborne radioactivity sampling program, identifying two action levels. At a concentration of 30 percent of the Derived Air Concentration (DAC) or greater, an area is posted as an airborne radioactivity area. Explain what will define how much of an area will be posted, relative to the sample taken. The LRA states that at a concentration of greater than 1 DAC, due to an unplanned event, a formal investigation is initiated. Describe the airborne radioactivity concentration, or administrative level, under which employees will be required to wear respiratory protection.

Paragraph 20.1702(a)(3) of 10 CFR states that when it is not practical to apply process or other engineering controls to control the concentrations of radioactive material in the air to values below those that define airborne radioactivity area, the licensee shall, consistent with maintaining the Total Effective Dose Equivalent equivalent ALARA, by the use of respiratory equipment.

RAI 4-10

Section 4.9.2 of the LRA states that Honeywell utilizes work area samplers, fixed or portable, in areas where radioactive materials are handled or processed when operations could expose workers to inhalation of quantities of radioactive material exceeding 10 percent of a DAC. Explain what determines when portable air samplers will be deployed.

Paragraph 40.32(c) of 10 CFR states that an application for a specific license will be approved if the applicant’s proposed equipment, facilities, and procedures are adequate to protect health and minimize danger to life or property.

RAI 4-11

Table 4-2 of Honeywell’s LRA identifies radiological monitoring instruments, their purpose, sensitivity, and range. Calibration frequency is identified as “at a frequency recommended by the manufacturer.” Section 4.3.2 of the LRA states instrument calibration is performed by qualified vendors or trained health physics technicians. Explain which instruments are calibrated in-house or by vendors and why they are treated differently. Explain whether Honeywell perform its own calibrations and what standard is used.

Paragraph 40.32(c) of 10 CFR states that an application for a specific license will be approved if the applicant’s proposed equipment, facilities, and procedures are adequate to protect health and minimize danger to life or property.

RAI 4-12

Section 4.9.4.1 of 10 CFR the LRA states that surface contamination is identified, in part, by smear taking. Explain what dictates when smears are taken and how they are analyzed.

Paragraph 40.32(c) of 10 CFR states that an application for a specific license will be approved if the applicant's proposed equipment, facilities, and procedures are adequate to protect health and minimize danger to life or property.

RAI 4-13

Section 4.4.2 of the LRA states the ALARA Committee reviews operations and exposure records to determine where exposures may be reduced. RG 3.55, Section 11.10 states the licensee shall provide an analysis of exposures (internal and external) covering, at least the last two years. Provide a summary that addresses the criteria in the RG.

Paragraph 20.1101(c) of 10 CFR states the licensee shall periodically (at least annually) review the radiation protection program content and implementation.