

REQUEST FOR ADDITIONAL INFORMATION REGARDING HONEYWELL METROPOLIS  
WORKS TRIENNIAL UPDATE TO THE DECOMMISSIONING FUNDING PLAN (CAC/DOCKET  
NUMBER/EPID 000224/04003392/L-2019-DDP-0000)

**(DFP-1) Justify key assumptions in the DCE related to the disposition of inventory (10 CFR 40.36(d)(1)(i)(A); 10 CFR 40.36(d)(1)(ii); 10 CFR 40.36(d)(2)(v); Draft Interim Staff Guidance on Decommissioning Funding Plans for Materials Licensees)**

10 CFR 40.36(d)(2)(v) requires that the DFP consider how changes in authorized possession limits may impact the DCE. 10 CFR 40.36(d)(1)(i)(A) requires that the DFP provide a detailed cost estimate that reflects “the cost of...perform[ing] all decommissioning activities.” 10 CFR 40.36(d)(1)(ii) requires that the DFP identify and justify the key assumptions contained in the DCE.

Draft Interim Staff Guidance on Decommissioning Funding Plans for Materials Licensees (June 2018) (ADAMS Accession No. ML18163A087) describes ways in which the disposition of multiple types of inventory can be covered in the DCE, including licensee-owned, customer-owned, and inventory in-process. For customer-owned inventory, the guidance states that a reasonable alternative to including the costs for packaging, loading, and transporting the material to another facility that can accept the material under its license “may be an existing contract under which the customer is responsible for packing, loading and shipping the material to an end destination that can accept the material under the end destination’s license.”

The 2019 DCE does not include decommissioning costs for the disposition of inventory present at the facility at the time of decommissioning. The July 16, 2019 responses to the NRC’s Request for Supplemental Information provides a detailed justification for excluding these costs, including the following statement:

At the MTW, Source Material (SM) inventory consistent of feed stock material, in process material, recovery material and finished goods material. These types of materials are not waste, contamination, or residual radioactivity but rather inventory that will be or has been used during normal operations. Their movement, packing and off-site shipment are principal licensed activities. **Current SM material is owned by MTW customers, is of significant value, and will be utilized as part of normal licensed processes or transferred for use at another facility prior to commencing decommissioning.** The MTW UF<sub>6</sub> processes can be emptied of SM inventory in a timely manner and produce a form of material that can be removed from the site under arrangements that fall under principal licensed activities. Based on the above, MTW assumes that all the inventory has been dispositioned and removed from the plant site prior to the start of decommissioning. Therefore, the costs of removing inventory from the site was not considered in any of the cost estimates. **MTW current contracts require that the customer is responsible for packing, loading, and shipping the material to their NRC controlled site** (emphasis added).

Enclosure



The supplemental information makes clear that inventory at the MTW is customer owned and that current contracts require that the customer is responsible for the costs of disposition. Are there any existing historic customer contracts in place which do not contain this current language?

**(DFP-2) Justify or clarify nonlabor decommissioning costs (10 CFR 40.36(d)(1)(i)(A); NUREG-1757, Vol. 3, Rev. 1, Appendix A, Section A.3.1.2.2)**

10 CFR 40.36(d)(1)(i)(A) requires that the DFP include a detailed cost estimate that reflects “the cost of...perform[ing] all decommissioning activities.” NUREG-1757, Vol. 3, Rev. 1, Appendix A, Section A.3.1.2.2 lists nonlabor costs that are likely to arise during decommissioning, including laboratory costs (including transport of samples to a third-party laboratory, testing and analysis, etc.) and miscellaneous expenses (e.g., license fees, insurance, taxes, security). The 2019 DCE does not make clear how laboratory costs are included in the DCE. The 2019 DCE includes “Regulatory Fees” and “NRC fees,” but does not make clear how other miscellaneous costs (e.g., insurance, taxes, or security) are included in the DCE. To ensure that the DCE covers the costs of performing all decommissioning activities explain how these nonlabor costs are included in the DCE, including either identifying how they are incorporated in the 2019 DCE or justifying why they are not required decommissioning activities.

**(DFP-3) Provide more detail for the facility description in the DCE (10 CFR 40.36(d)(1); NUREG-1757, Vol. 3, Rev. 1, Appendix A, Sections A.3.1.1, A.3.4, and A.3.5). Additionally, provide more detail about subsurface conditions 10 CFR 40.36(c)(5); 10 CFR 20.1501; NUREG-1757, Vol. 3, Rev. 1, Section 3.1.**

**Facility Description**

10 CFR 40.36(d)(1)(i) states that the DFP must include a “detailed cost estimate for decommissioning,” and 10 CFR 40.36(d)(1)(ii) states that the DFP must provide “[i]dentification of and justification for using the key assumptions contained in the DCE.” NUREG-1757, Vol. 3, Rev. 1, Appendix A, Section A.3.1.1 states that “the facility description provides the basic context of the estimate. It should include both general and specific information, including the following: . . . description of facility buildings, rooms, and grounds, including the numbers and dimensions of areas that require decontamination; number and dimensions of facility components (e.g., fume hoods, glove boxes, laboratory benches, ductwork) that require decontamination.” NUREG-1757, Vol. 3, Rev. 1, Appendix A, Section A.3.4 and Section A.3.5 provide an acceptable format for providing the facility description summary and the number and dimensions of facility components.

The 2019 DCE generally describes the facility buildings that will require decontamination but does not provide specifics about the numbers and dimensions of areas that will be decontaminated, nor the number and dimensions of facility components that will require decontamination. Therefore, to allow the NRC to determine the adequacy of the DCE, provide the description of facility buildings, rooms, and grounds, including the numbers and dimensions of areas that require decontamination, and the number and dimensions of facility components (e.g., fume hoods, glove boxes, laboratory benches, ductwork) that require decontamination.



## **Subsurface Conditions**

In accordance with 10 CFR 20.1406(c), licensees must minimize the introduction of significant residual radioactivity into the site, including the subsurface. In accordance with 10 CFR 20.1501, licensees must perform radiological surveys to identify and evaluate the extent of residual radioactivity at their sites, including the subsurface. These surveys are to be reasonable under the circumstances to evaluate concentrations or quantities of residual radioactivity (as defined in 10 CFR 20.1003) that would require remediation at the time of decommissioning. Further, 10 CFR 40.36 ©(5) states, “If, in surveys made under 10 CFR 20.1501(a), residual radioactivity in the facility and environment, including the subsurface, is detected at levels that would, if left uncorrected, prevent the site from meeting the 10 CFR 20.1402 criteria for unrestricted use, the licensee must submit a decommissioning funding plan within one year of when the survey is completed.” Finally, survey records describing the location and amount of subsurface residual radioactivity identified at the site must be kept with records important for decommissioning, and such records must be retained in accordance with 10 CFR 40.36(f).

The 2019 DCE neither addresses nor eliminates the potential for radiological groundwater contamination in any areas of the Honeywell site. Honeywell should either (a) indicate that funds are not needed because significant residual radioactivity is not present in site groundwater; or (b) provide an estimate of funds needed to address radioactive contamination in groundwater. Substantiating information (e.g., for areas downgradient of the restricted area, the drainage swale to Outfall 002, etc.) should be provided in an explanation for including or not including groundwater remediation funds.

### **(DFP-4) Apply the contingency factor to the “Illinois Rad Waste Fee” (10 CFR 40.36 (d)(1)(i)(D); NUREG-1757, Vol. 3, Rev. 1, Appendix A, Section A.3.1.2.3)**

10 CFR 40.36(d)(1)(i)(D) requires that the DCE must be in an amount reflecting “an adequate contingency factor.” NUREG-1757, Vol. 3, Rev. 1, Appendix A, Section A.3.1.2.3 states that the contingency factor should be applied to all estimated decommissioning costs. The guidance also explains that an adequate contingency factor is required “[b]ecause of the uncertainty in contamination levels, waste disposal costs, and other costs associated with decommissioning” and states that “[p]roposals to apply the contingency only to selected components of the cost estimate, or to apply a contingency lower than 25 percent, should be approved only in circumstances when a case-specific review has determined that there is an extremely low likelihood of unforeseen increases in the decommissioning costs (e.g., if the decommissioning costs are highly predictable and are established by binding contracts).”

The DCE includes a contingency of 25 percent, which is applied to all decommissioning costs other than the Illinois Rad Waste Fee (See Table 4-1, “Decommissioning Cost Summary”). The Illinois Rad Waste Fee is a cost associated with the decommissioning of the MTW facility and, therefore, in accordance with the guidance, the contingency factor should be applied to the Illinois Rad Waste Fee, or justification needs to be provided on why the Illinois Rad Waste Fee has an extremely low likelihood of unforeseen increases in the decommissioning costs. To ensure that adequate funding is available to cover decommissioning, the DCE needs to be updated to apply the



contingency factor to all estimated decommissioning costs, including the Illinois Rad Waste Fee or provide specific justification on why it is unnecessary.

**(DFP-5) Update the basis for cost estimates in the DFP (10 CFR 40.36(d)(1)(ii); NUREG-1757, Vol. 3, Rev. 1, Appendix A, Sections A.3.1 and A.3.15)**

The requirements in 10 CFR 40.36(d)(1)(ii) state that a DFP must contain "identification of and justification for using the key assumptions contained in the DCE." In addition, NUREG-1757, Vol. 3, Rev. 1, Appendix A, Section A.3.1 states that "a decommissioning estimate should contain a substantial level of detail, consistent with the guidance presented in this section, to allow the NRC to fully evaluate the adequacy of the estimate" and that "the labor estimates, material costs, and other factors of the cost estimate should have a clear and reasonable basis." The DCE does not provide an adequate basis for labor costs or equipment costs. Therefore, provide additional information on these cost elements, as described further below.

**Labor Costs**

The 2019 DCE does not specify the source for labor costs. However, the July 16, 2019 responses to the NRC's Request for Supplemental Information states that:

Estimates for labor costs were developed using two different methods, one for craft labor categories and one for non-craft labor categories. Labor costs for craft labor categories (equipment operators, foreman, laborers, etc.) were sources from R S Means (2018). It was assumed that the craft labor would be local to the site and no per diem was included in the labor cost. Labor costs for non-craft labor (engineers, geologists, project management, etc.) were sources from industry knowledge of prevailing rates for personnel experienced in facility decommissioning. It was assumed that experienced non-craft labor is not readily locally, so per diem rates were applied to non-craft labor categories based on 2018 GSA per diem rates for the continental United States.

Although the supplemental information identifies the source of the labor costs, additional information is needed to allow the NRC to fully evaluate the adequacy of the labor cost estimates. Table 4.3, "Decommissioning Estimate Selected Unit Cost Factors," provides only a sub-set of unit costs relied on in calculating labor costs and does not provide adequate information to allow one to recreate the labor cost calculations presented in Appendix A-2 (Cost Summary) using the hours estimates provided in Appendix A-4 (Labor Summary). Specifically, Appendix A-4 identifies hours estimates for a broader and different group of labor categories than the group of labor categories for which unit costs are provided in Table 4.3. The following table compares the labor categories included in Table 4-3 (Decommissioning Estimate Selected Unit Cost Factors) to the labor categories in Appendix A-4 (Labor Summary).



Labor Categories in Table 4.3	Labor Categories in Appendix A-4
Engineer Administrative Assistant Equipment Operator Laborer Radiation Protection Supervisor Laborer Foreman Instrument Technician Radiation Protection Technician	Engineer Administrative Assistant Equipment Operator Laborer D&D Supervisor Project Manager HP Technician Radiation Safety Officer/Certified Health Physicist Assistant Project Manager Environmental Health & Safety Manager QA/Waste Manager Cost and Schedule Controls

Because a unit cost is not provided for all labor categories included in Appendix A-4, NRC cannot determine the reasonableness of the total labor costs presented in Appendix A-2. Therefore, provide additional information, including why categories are not needed, if that is the assumption, that would allow the NRC to recreate the labor costs, including a comprehensive list of the labor rates relied on in the DCE with labor categories consistent with the labor categories utilized in Appendix A-4.

Furthermore, additional information is needed explaining how travel and living expenses were incorporated into the DCE. As stated above, supplemental information provided by the licensee states that “Labor costs for non-craft labor (engineers, geologists, project management, etc.) were sources from industry knowledge of prevailing rates for personnel experienced in facility decommissioning. It was assumed that experienced non-craft labor is not readily locally, so per diem rates were applied to non-craft labor categories based on 2018 GSA per diem rates for the continental United States.” However, Appendix A-2 indicates that Travel and Living Expenses were only included in the labor costs for activities related to “Project Management.” Because Appendix A-4 shows that non-craft labor is relied on to perform decommissioning activities other than “Project Management,” provide additional information explaining how travel and living expenses are incorporated in the DCE, including for decommissioning activities performed by non-craft labor other than “Project Management.”

### **Equipment Costs**

The 2019 DCE does not provide an adequate basis for the equipment costs. Appendix A-2 (Cost Summary) provides an itemized list of costs, including costs for equipment. The costs for equipment do not identify unit costs or the quantity of equipment needed, but rather roll up the cost estimate to total cost for equipment by decommissioning task. Additionally, a source of unit costs for equipment is not provided in the DCE. The July 16, 2019 responses to the NRC’s Request for Supplemental Information states that:

Equipment costs for the 2018 DCE were determined by the site review team by first establishing the likely approach to demolition to be utilized. Based on the selected approach to demolition; the required equipment, manpower and durations necessary for removal of the equipment and building demolition or



scabbling of concrete pads and moving waste directly to the gondola cars was developed. No additional handling is expected and transportation to the railcars is part of the demolition task. The sources of the costs for equipment were 2018 RS Means. Regionally developed equipment costs are selected in lieu of updating costs originally developed in 2006 DCE.

To ensure that adequate funding is available to cover the cost of equipment at the time of decommissioning, additional information is needed about the break-down of equipment costs (i.e., quantities and unit costs) consistent with the equipment/supply cost tables included in NUREG-1757, Vol. 3, Rev. 1, Appendix A, Section A.3.15 and previous DCE submissions provided by the licensee (See Appendix 9 to Honeywell's 2015 DCE).