

via email

May 10, 2013

Mary Adams  
Senior Environmental Engineer  
Conversion, Deconversion, and MOX Branch  
Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Re: Docket ID: Docket No. 40-3392, NRC-2012-0000

Draft Environmental Assessment and Finding of No Significant Impact for Source Material License SUB-526 Amendment Request From Honeywell for Decommissioning of Ponds B, C, D, and E at Honeywell Metropolis Works, Metropolis

Dear Ms. Adams:

In response to your April 11, 2013 email seeking comments from the State of Illinois on the United States Nuclear Regulatory Commission's (NRC) draft Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) referenced above, the Illinois Emergency Management Agency (IEMA) offers the following comments.

In general, IEMA's review of the draft EA resulted in environmental stewardship concerns, which contradict the draft EA and FONSI. IEMA believes that allowing Honeywell Metropolis Works (MTW) to leave in place a quasi-Subtitle C landfill containing radioactive material adjacent to the Ohio River, and on top of the New Madrid Fault Zone, creates a potential environmental risk. It is noted that there are differences between the NRC's and IEMA's decommissioning and radioactive material licensing standards. Please find our specific concerns and issues below.

### **Regulatory Issues**

In total, MTW plans on solidifying 88,000 tons of un-stabilized calcium fluoride (CaF<sub>2</sub>) contaminated with approximately 427 pCi/g combined uranium, on average. Once MTW completes the stabilization process, the pond would be removed from their license and



released for unrestricted use. If the NRC allows MTW to proceed as proposed, this will result in a tract of land that has residual contamination exceeding decommissioning limits set forth in IEMA regulations which are used for other similarly contaminated sites around Illinois, specifically 5 pCi/g above background as specified in 32 Ill. Adm. Code 340, Appendix A (c) (2).

IEMA is also concerned that once operations at MTW permanently cease and their NRC radioactive material license is terminated, this site, specifically the pond areas, will become a legacy site for the State of Illinois. Since the residual uranium in the ponds is considered source material, it would be subject to licensure under 32 Ill. Adm. Code 330. Additionally, since all four ponds have been found to be leaking, IEMA is concerned about future pond liner failure, either from degradation or seismic damage, resulting in uranium groundwater contamination.

Further, if MTW were to excavate the pond material for offsite disposal, it would be properly classified as low-level radioactive waste (LLRW). The state of Illinois has statutes and regulations that apply to the management of LLRW. The Illinois Low-Level Radioactive Waste Management Act (Act) establishes a program for the management of LLRW in Illinois. The Act has the following definitions that are applicable to the proposed action by MTW:

"Disposal" means the isolation of waste from the biosphere in a permanent facility designed for that purpose.

"Shallow land burial" means a land disposal facility in which radioactive waste is disposed of in or within the upper 30 meters of the earth's surface. However, this definition shall not include an enclosed, engineered, structurally re-enforced and solidified bunker that extends below the earth's surface.

MTW's proposed action of stabilizing the CaF<sub>2</sub>, and placing an engineered cover over it, results in the waste material being disposed onsite. The goal of the cover is to prevent water infiltration and isolate the waste from the environment. Therefore, MTW's action meets the definition of disposal under the Act.

MTW's proposed action does not include an enclosed, engineered, structurally re-enforced, and solidified bunker. Therefore, MTW's proposed action can be classified as shallow land burial. The Act prohibits the shallow land burial of LLRW in Illinois and MTW's proposed action is a violation of the Act.

The State of Illinois is a member of the Central Midwest Interstate Low-Level Radioactive Waste Compact. The Congressionally approved enabling statute for the Compact (Central Midwest Radioactive Waste Compact Act) also includes a prohibition on shallow land burial. The Compact Act also provides that "Unless authorized by the Commission pursuant to Article III(i), or otherwise provided in this Compact, after January 1,

1986 it is a violation of this compact . . . for any person to dispose of waste at a facility other than a regional facility.” The Compact Commission has adopted a Regional Management Plan that provides for regulatory actions by the member states. Since there is no regional disposal facility in the Compact and the proposed MTW action is not in accordance with a regulatory action by a member state, the disposal of the CaF<sub>2</sub> at MTW is a violation of the Compact Act.

### **Environmental Issues**

MTW’s engineering report evaluated the liquefaction potential due to seismic activity for the 1-foot thick un-stabilized CaF<sub>2</sub> zone at the bottom of the ponds. This material will allow the stabilized CaF<sub>2</sub> to move back and forth when subjected to ground motion due to an earthquake event. MTW calculated the displacement of the stabilized material and the impact it would have on the cap. The lateral movement in the cover did not exceed the allowable limit established in US EPA guidance. However, it appears MTW did not evaluate the potential for this un-stabilized CaF<sub>2</sub> to be ejected similar to a sand boil. This would have potential long-term impact on the cover system and possibly result in material being discharged to the surface. Once the contaminated material reached the ground surface, engineered controls would be inconsequential and the material would pose a threat to the surrounding environment.

Please contact me at your convenience for discussion or clarification. On behalf of IEMA, I want to express our appreciation for allowing us an opportunity to comment on the draft Environmental Assessment and Finding of No Significant Impact. Our Agency looks forward to our continued partnership in ensuring the protection of the health and safety of the public and the environment through the safe and secure use of radioactive material.

Sincerely,



Adnan G. Khayyat  
Bureau Chief  
Environmental Radiation Safety  
217.782.1329