NRC FORM 374	U.S. NUCLEAR REGULATORY COMMISSION	
	MATERIALS LICENSE	

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, *Code of Federal Regulations*, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee	
1. Honeywell International, Inc.	3. License Number: SUB-526, Amendment 16
2. P.O. Box 430	4. Expiration Date: March 24, 2060
Metropolis, Illinois 62960	
	5. Docket Number 40-3392

6. Byproduct Source, and/or Special Nuclear Material	7. Chemical and/or Physical Form	8. Maximum amount that Licensee May Possess at Any One Time Under This License
A. Natural Uranium	A. Yellow cake, U_3O_8, UO_2, UO_3, UF_4, UF_6 and chemical intermediates of these compounds	A. 68 million kg (150 million lbs.)
B. Depleted Uranium	B. U_3O_8, UO_2, UF_4, and UF_6	B. 68 kg (150 lbs.)
C. Cs-137	C. Sealed sources	C. 300 mCi
D. [Deleted]	D. [Deleted]	D. [Deleted]
E. Any licensed material between atomic numbers 3-83.	E. Sealed and unsealed radioactive sources	E. 2 mCi total
F. Any licensed material between atomic numbers 84-95	F. Sealed and unsealed radioactive sources	F. 1 microcurie total

9. [Deleted].

10. Licensed material as defined in LC-6E and LC-6F, shall be used by, or under the supervision of, individuals who have received the training described in the licensee's letter dated December 27, 2006. The licensee shall maintain records of individuals designated as users for three (3) years following the last use of licensed material by the individual.

11. [Deleted].

12. [Deleted].

13. [Deleted].

14. [Deleted].

15. [Deleted].

16. [Deleted].

17. Authorized place of use: The licensee's existing facilities at Honeywell Metropolis Works, Highway 45 North, Metropolis, Illinois.

18. The licensee shall conduct authorized activities at the Honeywell Metropolis Works Facility in accordance with the statements and representations in the current version of the documents listed in LC-18 at A, C, H, and M.

    A. License Application (LA);

    B. [Deleted];

    C. Emergency Response Plan (ERP);

    C. [Deleted];

    D. [Deleted];

    E. [Deleted];

    F. [Deleted];

    G. [Deleted];

    H. Amendment Request dated July 17, 2008, as supplemented by letters dated October 1, 2008, and December 3, 2008, regarding the required process for filling small UF_6 cylinders;

    I. [Deleted];

    J. [Deleted];

    K. [Deleted];

L. [Deleted];

M. Amendment request dated February 12, 2018, as supplemented by letter dated March 16, 2018, stipulates that pre-approval of physical security modifications to the Vehicle Barrier System must be obtained from the NRC before removal of pond material.

N. Amendment request dated April 30, 2021, as supplemented on May 7, 2021 regarding an exemption request from the 2021 graded emergency response exercise required by 10 CFR 40.31 3)(xii).

19. [Deleted].

20. A. **Change Process for the LA** – Italicized/underlined language in the LA indicates Honeywell's *commitments*, as that term is used in Section 11.1.3.2 of the LA. The commitments that comprise the *safety basis*, as that term is defined in the LA, are marked in the LA with an asterisk. Honeywell may not make changes to the LA, without prior NRC approval, if the changes:

1) Reduce the effectiveness of Honeywell's commitments as identified in the LA;

2) Modify methodologies and associated assumptions used in developing the safety basis;

3) Modify the safety basis as identified in the LA; or

4) Conflict with existing license conditions.

Commitments in the LA are not to be construed as license conditions.

Changes to the LA, which the licensee determines do not require prior NRC approval, must be summarized in a report submitted to the NRC. Section 11.1.3.3 "Report of Changes to USNRC" of the LA requires the licensee to submit the report to the NRC within 30 days after the end of the calendar year in which the change was implemented. Honeywell shall not make use of this change process until the procedures implementing the change process are completed. Implementation of this LC shall be completed by December 31, 2020.

B. **Change Process for the ISA Summary.** Honeywell shall maintain an ISA and ISA summary, as committed to in Chapter 3 of the LA. Honeywell may implement changes to the ISA Summary without prior NRC approval, if the change does not:

1) Create new types of accident sequences that, unless mitigated or prevented, would exceed the performance requirements specified in 10 CFR 70.61 and that have not previously been described in the MTW ISA Summary;

2) Use new processes, technologies, or control systems for which Honeywell has no prior experience:

3) Remove, without at least an equivalent replacement of the safety function, one of the Plant Features and Procedures (PFAP) that is listed in the MTW ISA Summary and is necessary for compliance with the performance requirements of 10 CFR 70.61;

4) Alter any PFAP, as listed in the MTW ISA Summary, that is the sole item preventing or mitigating an accident sequence that exceeds the performance requirements of 10 CFR 70.61: or

5) Create any condition or configuration that is otherwise prohibited by license condition or order.

Changes to the ISA Summary, which the licensee determines do not require prior NRC approval, must be summarized in a report submitted to the NRC. Section 11.1.3.3 "Report of Changes to USNRC" of the LA requires the licensee submit the report to the NRC within 30 days after the end of the calendar year in which the change was implemented. Honeywell shall not make use of this change process until the procedures implementing the change process are completed. Implementation of this LC shall be completed December 31, 2020.

C. Proposed changes to the LA or the ISA Summary that do not meet the criteria in LC-20A or LC-20B require the licensee to submit an application to the NRC to amend the license, in compliance with the requirements of 10 CFR 40.44. In addition, proposed changes to the criteria in Section 11.1.3.1, Section 11.1.3.2, or Section 11.1.3.3 require the licensee to submit an application to the NRC to amend the license, in compliance with the requirements of 10 CFR 40.44. Proposed changes requiring an amendment shall not be implemented until NRC approval is granted.

21. Honeywell is granted an exemption from the "receipts" requirement in 10 CFR 40.64(a) and must implement the following alternative: Honeywell shall, within 10 days of receipt of source material, report to the Nuclear Materials Management and Safeguards System (NMMSS), the shipper's values of the natural uranium. Shipper's values shall be reported (Blocks 1 through 27s of DOE/NRC Form 741) as stated in Section 2.1.1 of NUREG/BR-0006. The final quantity determination, as agreed upon with the supplier, shall be reported to the NMMSS database within 10 days of the date on which the agreement is finalized.

22. The licensee is granted an exemption from the requirements of 10 CFR 20.1902(a) requiring the posting of warning signs in individual radiation areas within the facility and 10 CFR 20.1904(a) requiring labeling of containers of natural uranium and the resulting intermediates and byproducts of uranium processing operations. Instead of posting radiation areas and containers individually, the licensee will establish one or more areas within, or congruent with the restricted area, and to post all entrance or access points to these area(s) with signs bearing the standard radiation trefoil and the words:

CAUTION RADIATION AREA
RADIOACTIVE MATERIAL AREA
Any area or container in this plant (or "beyond this point") may contain radioactive materials

23. [Deleted].

24. [Deleted].

25. [Deleted].

26. [Deleted].

27. [Deleted].

28. The licensee is granted an exemption from using the Derived Air Concentrations (DACs) and Annual Limits on Intake (ALIs) listed in Appendix B to 10 CFR Part 20 to calculate occupational exposures to radionuclides. As the alternative to the DACs and ALIs in Appendix B, the licensee must use adjusted DAC values and adjusted ALI values listed in ICRP Publication 68 (Annals of the ICRP, Volume 24, No. 4).

29. The licensee is granted an exemption from calculating effective dose assessments using the organ dose weighting factors in 10 CFR 20.1003. As the alternative to the organ dose weighting factors in 10 CFR 20.1003, the licensee must use the tissue weighting factors listed in ICRP Publication 60 (Annals of the ICRP, Volume 21, No. 1-3) for effective dose assessments listed in ICRP Publication 68 methodologies.

30. [Deleted]

31. The licensee is granted an exemption from the full requirements of 10 CFR 40.60(b)(3). Specifically, the licensee is granted an exemption from the requirement to notify the NRC within 24 hours of an unplanned medical treatment of an individual with spreadable contamination on the individual's clothing or body at the on-site medical facility. The licensee commits to maintain a log of contaminated workers treated at the on-site medical facility and provide the information for NRC inspection upon request.

32. Honeywell shall notify the NRC within 30 days of its decision to resume full operations. Prior to restarting the production of UF_6, Honeywell shall implement an Emergency Response Plan that contains emergency planning requirements that are equivalent to those in Revision 9 of the Emergency Response Plan for MTW.

33. Honeywell shall maintain a security program in accordance with Compensatory Measures Safeguards Order (EA 02-025) dated March 25, 2002 as approved and amended.

34. The Licensee shall meet the following requirements with respect to impacts on cultural resources.

    A. Disturbances Associated with Proposed NRC-Regulated Activities and Identification of Cultural Resources: The licensee shall not undertake ground-disturbing activities on its property that are related to a pending or potential NRC licensing action without prior NRC approval. The NRC will assess the proposed activities in accordance with Section 106 of the National Historic Preservation Act of 1966 and its implementing regulations in consultation with American Indian Tribes that might attach religious and cultural significance to affected historic

resources and the Illinois SHPO, as appropriate. If the NRC's initial assessment of the proposed ground-disturbing activities determines further investigation is needed, the licensee, in consultation with the NRC, shall conduct a cultural resources inventory of the area of potential effect (APE). The inventory shall be based on information from literature searches, available information on places of significance to consulting American Indian tribes, the results of any existing surveys, and if needed, the results of new surveys.

B. **Unevaluated Resources:** When ground disturbance could affect unevaluated historic or cultural resources within the APE for the proposed licensing action, the licensee shall avoid direct and indirect impacts until the unevaluated resource is evaluated in accordance with 36 CFR Part 800 in consultation with consulting American Indian Tribes, the Illinois SHPO, and the NRC, as appropriate.

C. **Unanticipated Discoveries and Human Remains**: In the event a previously unknown cultural resource is discovered during ground disturbance activities on any portion of the Honeywell-owned property, the licensee shall cease work to avoid direct or indirect impacts until the cultural resource is evaluated in accordance with 36 CFR Part 800 in consultation with consulting American Indian Tribes, the Illinois SHPO, and the NRC, as appropriate. Native American human remains, funerary objects, sacred objects, or items of cultural patrimony found on the Honeywell property shall be handled respectfully, in accordance with the Illinois Human Skeletal Remains Protection Act (20 ILCS 3440).

35. A. Honeywell shall perform specific accident analyses prior to the re-start of UF_6 production at the Honeywell MTW that adhere to the configuration management program. This program is described in detail in the ISA methodology section of Chapter 3 and in Chapter 11 of the revised LRA. The analyses shall include the analysis of past and potential accidents, and accidents with the potential to reoccur, and shall include these specific accidents and hazards:

1) the feed operations for UF_6 from a cylinder back into the feed materials building;
2) the movement of filled UF_6 cylinders within the plant;
3) a leak of UF_6 in the FMB that occurred on October 26, 2014 during the routine sublimation and draining of a cold trap;
4) the release of UF_6 during a cold trap valve decontamination that occurred in February 2014;
5) the release of UF_6 from the low boiler condensers that occurred in August 2015;
6) the hazards, consequences, and safety controls described in Section 6.3 of the ISA Summary;
7) the potential for releases of NH_4 or UF_6 after the loss of offsite power, and
8) the potential for significant buildup of combustible material near buildings.
9) processes involving potassium hydroxide (KOH), sodium hydroxide (NaOH), magnesium hydroxide (MgOH) and sulfuric acid when mixed with licensed material.

B. Integrated safety analysis team qualifications. To assure the adequacy of the integrated safety analysis, the analyses in (A) must be performed by a team with expertise in engineering and process operations. The team shall include at least one person who has experience and knowledge specific to each process being evaluated, and persons who have experience in

radiation safety, fire safety, and chemical process safety. One member of the team must be knowledgeable in the specific integrated safety analysis methodology being used.

36. By December 31, 2020, Honeywell shall revise its ISA Summary and MTW's procedures for PHA process and configuration management to require that potential accident scenarios involving maintenance activity and facility personnel are evaluated in the ISA.

37. The licensee is granted an exemption from performing the biennial exercise listed in 10 CFR 40.31(j)(3)(xii) in calendar year 2021 but must complete said exercise within 35 months of the previously evaluated exercise which occurred on May 12, 2019. Following that evaluated exercise, the licensee will resume biennial exercise in even number years.

38. Notwithstanding the requirements of 10 CFR 40.60(b)(1), the licensee is granted an exemption from the requirements in 10 CFR 40.60(b)(1) for reporting unplanned contamination events provided that the following conditions are met:

1. The event occurs in a restricted area in a building which is maintained inaccessible to the public by multiple access controls,
2. The area was controlled for contamination before the event occurred, the release of radioactive material is under control, and no contamination has spread outside the area,
3. Radiation safety personnel trained in contamination control are readily available,
4. Equipment and facilities that may be needed for contamination control are readily available, and
5. The otherwise reportable unplanned contamination event is documented in the licensee's Corrective Action Program.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Jacob I. Zimmerman

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Date: August 26, 2021

Jacob I. Zimmerman, Chief
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