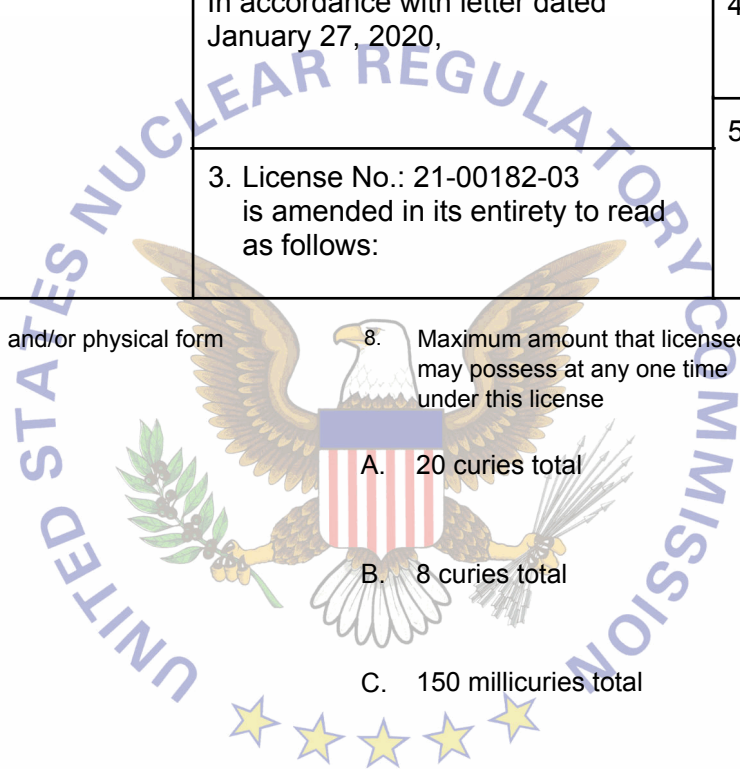


MATERIALS LICENSE

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, 37, 39, 40, 70 and 71, 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.

<p style="text-align: center;">Licensee</p> <p>1. Zoetis LLC</p> <p>2. 333 Portage Street Kalamazoo, MI 49007</p>	<p>In accordance with letter dated January 27, 2020,</p>	<p>4. Expiration Date: November 30, 2025</p>
	<p>3. License No.: 21-00182-03 is amended in its entirety to read as follows:</p>	<p>5. Docket No.: 030-04781 Reference No.:</p>



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	9. Authorized use
A. Hydrogen-3	A. Any	A. 20 curies total	A. For research and development as defined in 10 CFR 30.4, including animal studies.
B. Carbon-14	B. Any	B. 8 curies total	B. Same as Item 9.A.
C. Iodine-125	C. Any	C. 150 millicuries total	C. Same as Item 9.A.
D. Iodine-131	D. Any	D. 150 millicuries total	D. Same as Item 9.A.
E. Phosphorus-32	E. Any	E. 150 millicuries total	E. Same as Item 9.A.

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License No.
21-00182-03

Docket or Reference No.
030-04781

Amendment No. 78

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|---|----------------------------------|--|----------------------|
| 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 | 9. Authorized use |
| F. Phosphorus-33 | F. Any | F. 150 millicuries total | F. Same as Item 9.A. |
| G. Sulfur-35 | G. Any | G. 150 millicuries total | G. Same as Item 9.A. |

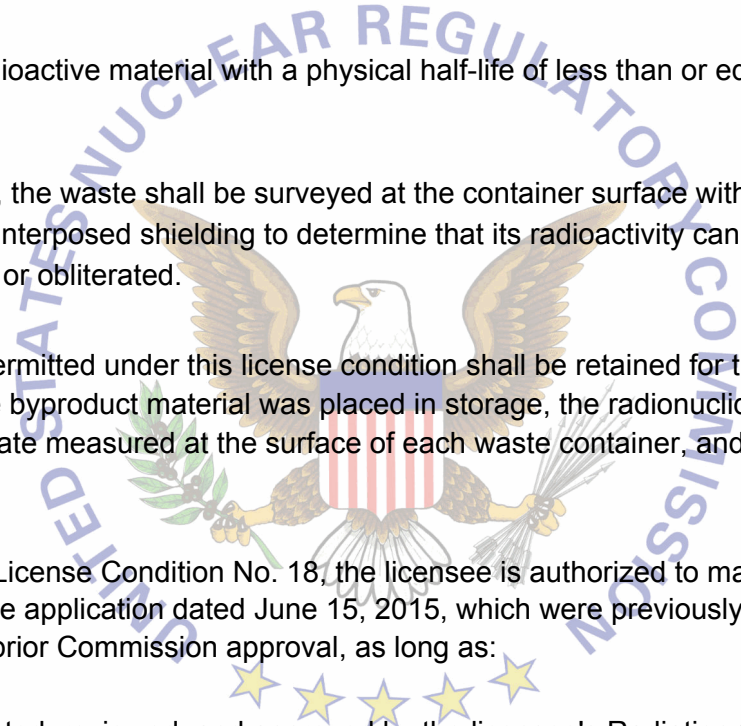
CONDITIONS

10. Licensed material may be used or stored at the licensee's facilities located at:
- A. 5300 N. 28th Street, Richland, Michigan, 49083
B. 333 Portage Street, Kalamazoo, Michigan, 49007
11. The Radiation Safety Officer (RSO) for this license is John M. Stuedemann.
12. Licensed material shall only be used by, or under the supervision of, individuals designated by the licensee's Radiation Safety Committee, Pamela L. Boner, R.Ph., Ph.D., Chairperson.
13. Licensed material shall not be used in or on human beings except as provided otherwise by specific condition of this license.
14. Experimental animals, or the products from experimental animals, that have been administered licensed materials shall not be used for human consumption.

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**License No.
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030-04781

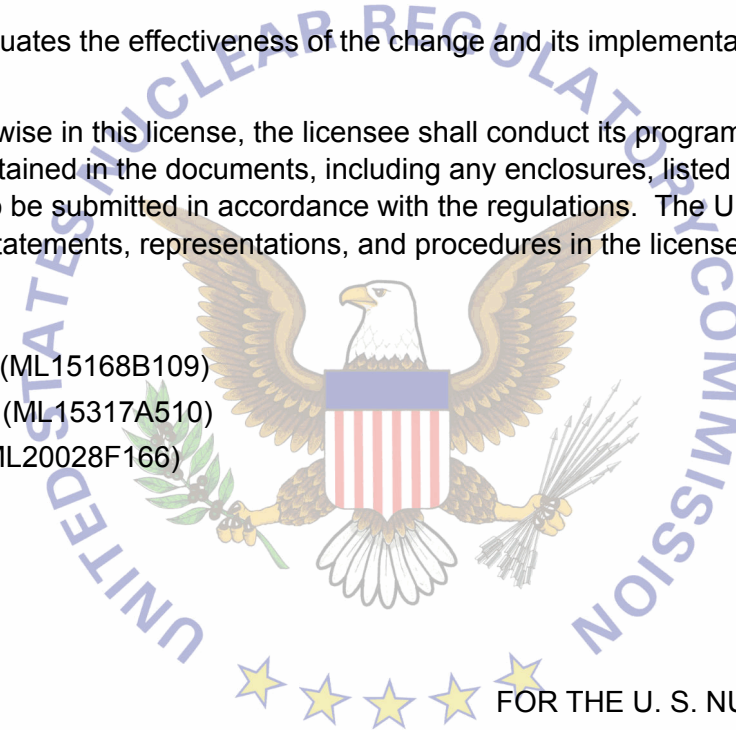
15. The licensee shall not use licensed material in field applications where activity is released except as provided otherwise by specific condition of this license.
16. The licensee is authorized to hold radioactive material with a physical half-life of less than or equal to 120 days for decay-in-storage before disposal in ordinary trash, provided:
- A. Before disposal as ordinary trash, the waste shall be surveyed at the container surface with the appropriate survey instrument set on its most sensitive scale and with no interposed shielding to determine that its radioactivity cannot be distinguished from background. All radiation labels shall be removed or obliterated.
 - B. A record of each such disposal permitted under this license condition shall be retained for three years. The record must include the date of disposal, the date on which the byproduct material was placed in storage, the radionuclides disposed, the survey instrument used, the background dose rate, the dose rate measured at the surface of each waste container, and name of the individual who performed the disposal.
17. Notwithstanding the requirements of License Condition No. 18, the licensee is authorized to make program changes and changes to procedures specifically identified in the application dated June 15, 2015, which were previously approved by the Commission and incorporated into the license without prior Commission approval, as long as:
- A. the proposed revision is documented, reviewed, and approved by the licensee's Radiation Safety Committee, in accordance with established procedures prior to implementation;
 - B. the revised program is in accordance with regulatory requirements, will not change the license conditions, and will not decrease the effectiveness of the Radiation Safety Program;
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**MATERIALS LICENSE
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- C. the licensee's staff is trained in the revised procedures prior to implementation; and
- D. the licensee's audit program evaluates the effectiveness of the change and its implementation.
18. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. This license condition applies only to those procedures that are required to be submitted in accordance with the regulations. The U.S. Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.
- A. Application dated June 15, 2015 (ML15168B109)
 - B. Letter dated November 12, 2015 (ML15317A510)
 - C. Letter dated January 27, 2020 (ML20028F166)

Date: April 15, 2020By: _____
Bryan A. Parker
Region III