

EXPORT LICENSE

NRC FORM 250
(10-07)

UNITED STATES OF AMERICA

Nuclear Regulatory Commission
Washington, D.C. 20555

NRC LICENSE NO.: XMAT411/01

Page 1 of 2

DOCKET NO.: 11005831

LICENSE EXPIRES: December 31, 2017


Pursuant to the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974 and the regulations of the Nuclear Regulatory Commission issued pursuant thereto, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued to the licensee authorizing the export of the materials and/or production or utilization facilities listed below, subject to the terms and conditions herein.

<p align="center">LICENSEE</p> <p>Sigma-Aldrich Co. LLC 3050 Spruce Street St. Louis, MO 63103</p> <p>Attn: Jared Fenton</p>	<p align="center">ULTIMATE CONSIGNEE(S) IN FOREIGN COUNTRY(IES)</p> <p>Ontario Power Generation 100 University Avenue Toronto, Ontario M5G 1X6 Canada</p> <p>(Heavy Water for purification/upgrade from a 60% solution [in water] to 98% pure deuterium oxide for future return to the U.S.)</p>
--	--

<p align="center">INTERMEDIATE CONSIGNEE(S) IN FOREIGN COUNTRY(IES)</p> <p align="center">NONE</p>	<p align="center">OTHER U.S. PARTY(IES) TO EXPORT</p> <p align="center">See page 2</p>
--	--

<p>APPLICANT'S REFERENCE NO.: Appl. Dated 8/9/12</p>	<p>ULTIMATE DESTINATION: Canada</p>
--	-------------------------------------

<p align="center">QUANTITY</p>	<p align="center">DESCRIPTION OF MATERIALS OR FACILITIES</p> <p>The Licensee is authorized to export a cumulative total of 8,400.0 kilograms of deuterium in the form of deuterated compounds, deuterium oxide (heavy water), and deuterium gas.</p> <p align="right">XMAT411/01 continued on Page 2.</p>
--------------------------------	---

<p>Neither this license nor any right under this license shall be assigned or otherwise transferred in violation of the provisions of the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974.</p> <p>This license is subject to the right of recapture or control by Section 108 of the Atomic Energy Act of 1954, as amended, and to all of the other provisions of said Acts, now or hereafter in effect and to all valid rules and regulations of the Nuclear Regulatory Commission.</p>	<p align="center">THIS LICENSE IS INVALID UNLESS SIGNED BELOW BY AUTHORIZED NRC REPRESENTATIVE</p> <p>SIGNATURE: </p> <p>NAME AND TITLE: Stephen Dembek, Acting Deputy Director Office of International Programs</p> <p>DATE OF ISSUANCE: September 20, 2012</p>
---	--

EXPORT LICENSE

OTHER U.S. PARTY(IES) TO EXPORT: (Cont'd)

1. Aldrich Chemical Co. LLC
6000 N. Teutonia Avenue
Milwaukee, WI 53209
2. Aldrich Chemical Co. LLC
3858 Benner Road
Miamisburg, OH 45342
3. Aldrich Chemical Co. LLC
6950 Ambassador Drive
Allentown, PA 18106

(Suppliers)

DESCRIPTION OF MATERIALS OR FACILITIES: (Cont'd)

License is amended to: 1) revise licensee name; 2) change licensee address; 3) add three "Other U.S. Party(ies) to Export"; and 4) extend the expiration date from December 31, 2014 to December 31, 2017.

All other conditions remain the same.

//////////////////////////////////////END//////////////////////////////////////