EXPORT LICENSE

NRC FORM 250 (10-07)

UNITED STATES OF AMERICA

Nuclear Regulatory Commission Washington, D.C. 20555

XMAT417/01 NRC LICENSE NO.:

Page 1 of 3

DOCKET NO .:

11005954

LICENSE EXPIRES:

November 01, 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.

LICENSEE

ULTIMATE CONSIGNEE(S) IN FOREIGN COUNTRY(IES)

Sigma-Aldrich Co. LLC 3050 Spruce Street St. Louis, MO 63103

See Page 2

Attn: Jared Fenton

(For distribution into medical, pharmaceutical, chemical, and industrial markets for

non-nuclear end use)

INTERMEDIATE CONSIGNEE(S) IN FOREIGN COUNTRY(IES)

NONE

OTHER U.S. PARTY(IES) TO EXPORT

See Page 3

APPLICANT'S REFERENCE NO.: Appl. dated 6/15/2012 and 8/9/2012

ULTIMATE DESTINATION: China

QUANTITY

DESCRIPTION OF MATERIALS OR FACILITIES

The Licensee is authorized to export a cumulative total of 3,000.0 kilograms of deuterium in the form of deuterated compounds, deuterium oxide (heavy water), and deuterium gas.

XMAT417/01 continued on Pages 2 and 3.

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.

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.

THIS LICENSE IS INVALID UNLESS SIGNED BELOW BY AUTHORIZED NRC REPRESENTATIVE

SIGNATURE:

NAME AND TITLE:

Stephen Dembek, Acting Deputy Director

Office of International Programs September 5, 2012

DATE OF ISSUANCE:

EXPORT LICENSE

ULTIMATE CONSIGNEE(S) IN FOREIGN COUNTRY(IES): (Cont'd)

- 1. Sigma-Aldrich (Shanghai)
 Zhangjiang High Tech East Park
 No. 509 Ren Qing Rd, Bldg 10, Pudong
 Shanghai 201201
 China
- 2. Sigma-Aldrich (Shanghai) Trade Co Ltd XinRi Logistics Warehouse LiQiao Town, Shun Yi District Hou Qiao Village (East 1500M) Shun Yi District Beijing 101304 China
- 3. Shanghai Tomoe Trading Co Ltd
 No 1088 Jiaqian Road Jiading District
 Shanghai 201802
 China
- 4. Wuxi Apptec (Shanghai) Co Ltd 288 Fute Zhong Road Waigaoqiao Bonded Zone Shanghai 200131, China
- 5. Wuxi Apptec (Shanghai) Co Ltd Air Cargo Services (AAS) No 555 Hai Tian 1 Rd Pu-Dong International Airport Shanghai 201202 China
- 6. Wuxi Apptec (Tianjin) Co Ltd No 111 Huanghai Rd 4th Ave Teda Tianjin 300457 China
- 7. Shanghai Syntheall Pharmaceutical Co No 9, Yuegong Road Jinshan District (W) Shanghai Chemical Industry Park Shanghai 201507 China
- 8. Taiyo Nippon Sanso Trading (Shanhai) 428 South Yanggao Rd, Pudong Shanghai 200127 China

(For distribution into medical, pharmaceutical, chemical, and industrial markets for non-nuclear end use)

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)

The license is amended to: 1) revise Licensee name and address; 2) extend the expiration date from November 1, 2014 to November 1, 2017; 3) revise the address of one 'Ultimate Foreign Consignees'; 4) add seven new 'Ultimate Foreign Consignees'; and 5) add three 'Other U.S. Party(ies) to Export.'

All other conditions remain the same.