

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

April, 27th 2020

George Alexander, Project Manger
Division of Decommissioning, Uranium Recovery and Waste Programs
Office of Nuclear Material Safety and Safeguards
11545 Rockville Pike
Mail stop T8F5
Rockville, MD 20852

Subject: Form 313 & 314, Request for license termination review, and request for release of property for unrestricted use for license number 24-16273-01 Docet number 030-10716.

Dear Mr. Alexander:

The following information is being provided as requested by you to initiate the license termination review and property release for unrestricted use. I have attached to this document the completed NRC forms 314 and 313. Below I have also included the requested information providing reference to our previous site analytical data, our move toward ALARA, and our environmental assessment statement. If additional information is required please let me know.

Sigma Aldrich MFG LLC has fully characterized the horizontal and vertical extent of radionuclide contamination at the Fort Mims Site (Site). A total of three hundred thirty-nine (339) discrete soil samples were obtained from the upper four (4) meters of soils with the majority of samples coming from the first six (6) inches of soil. This data is presented in the following three (3) separate reports:

- Philotechnics Ltd, *Summary of Soil Sampling and Analysis*, February 24, 2011
- DDES LLC, *Phase 4 – Soil Sampling Results*, February 15, 2016
- DDES LLC, *Phase 5 Southern Abutting Property Soil Sampling Results*, January 10, 2017

Groundwater data from six (6) quarters of sampling onsite and offsite demonstrate that radionuclide concentrations met the United States Environmental Protection Agency's secondary drinking water standards. This data is presented in the following two (2) documents:

- DDES LLC, *Decommissioning Plan*, June 27, 2019
- DDES LLC, *Groundwater Sampling Results*, May 2, 2018

These attached documents demonstrate the Site meets the criteria for unrestricted release as stated in Title 10 Section 20.1402 of the Code of Federal Regulations, *Radiological Criteria for Unrestricted Use*. The Site is now considered acceptable for unrestricted use since the residual radioactivity results in a TEDE to an average member of the critical group does not exceed 25 mrem (0.25 mSv) per year, including that from groundwater sources of drinking water, and that the residual radioactivity has been reduced to levels that are as low as reasonably achievable (ALARA).

The Site also meets Title 10 Section 10 CFR 20.1003 of the Code of Federal Regulations, *As Low As Reasonably Achievable (ALARA)* due to the analyses of the horizontal and vertical soil depth as well as low levels of contamination currently onsite. Sigma made every reasonable effort to maintain exposures to radiation as far below the dose limits as is practical consistent with the purpose for

which the licensed activity is undertaken. Excavation and removal of these soils would present a higher potential risk to workers and to the public rather than leaving them in place.

The Site conditions are stable and will not significantly affect the quality of the human environment. There are no significant hazards or potential for significant change in the soil types. There are also no significant increases in the amounts of any effluents that could be released offsite and no significant increase in individual or cumulative public or occupational radiation exposure. Due to these criteria, a detailed environmental assessment is not warranted for the Site.

If additional assistance is needed for these actions, please contact me by e-mail – Lee.McVay@Milliporesigma.com – or by phone – (314) 267-2010. We appreciate your actions on this request.

Sincerely,

A handwritten signature in black ink, appearing to read 'Lee McVay Sr.', written in a cursive style.

Lee McVay Sr. EHS
Radiation Safety Officer

(01-2020)
10 CFR 30, 32,
33, 34, 35, 36,
37, 39, and 40



APPLICATION FOR MATERIALS LICENSE

Estimated burden per response to comply with this mandatory collection request: 4.3 hours. Submittal of the application is necessary to determine that the applicant is qualified and that adequate procedures exist to protect the public health and safety. Send comments regarding burden estimate to the Information Services Branch (T-6 A10M), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0120), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

INSTRUCTIONS: SEE THE CURRENT VOLUMES OF THE NUREG-1556 TECHNICAL REPORT SERIES ("CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES") FOR DETAILED INSTRUCTIONS FOR COMPLETING THIS FORM: <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1556/>. SEND TWO COPIES OF THE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.

APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

MATERIALS SAFETY LICENSING BRANCH
DIVISION OF MATERIAL SAFETY, STATE, TRIBAL AND RULEMAKING PROGRAMS
OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS
U.S. NUCLEAR REGULATORY COMMISSION
WASHINGTON, DC 20555-0001

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:

IF YOU ARE LOCATED IN:

ALABAMA, CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, FLORIDA, GEORGIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, NORTH CAROLINA, PENNSYLVANIA, PUERTO RICO, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, VERMONT, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA,

SEND APPLICATIONS TO:

LICENSING ASSISTANCE TEAM
DIVISION OF NUCLEAR MATERIALS SAFETY
U.S. NUCLEAR REGULATORY COMMISSION, REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PA 19406-2713

IF YOU ARE LOCATED IN:

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO:

MATERIALS LICENSING BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

IF YOU ARE LOCATED IN:

ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MISSISSIPPI, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING,

SEND APPLICATIONS TO:

NUCLEAR MATERIALS LICENSING BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
1600 E. LAMAR BOULEVARD
ARLINGTON, TX 76011-4511

PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTIONS.

1. THIS IS AN APPLICATION FOR (Check appropriate item)

- A. NEW LICENSE
- B. AMENDMENT TO LICENSE NUMBER 24-16273-01
- C. RENEWAL OF LICENSE NUMBER

2. NAME AND MAILING ADDRESS OF APPLICANT (Include zip code)

Sigma Aldrich MFG LLC

3. ADDRESS WHERE LICENSED MATERIALS WILL BE USED OR POSSESSED
No licensed materials are or will be stored at the Fort Mims site. This is being submitted to request termination review of the license and release of the property for normal unrestricted use.

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Lee McVay

BUSINESS TELEPHONE NUMBER

314-267-2010

BUSINESS CELLULAR TELEPHONE NUMBER

BUSINESS E-MAIL ADDRESS

lee.mcvay@milliporesigma.com

SUBMIT ITEMS 5 THROUGH 11 ON 8-1/2 X 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

5. RADIOACTIVE MATERIAL

a. Element and mass number; b. chemical and/or physical form; and c. maximum amount which will be possessed at any one time.

6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.

7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE.

8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.

9. FACILITIES AND EQUIPMENT.

10. RADIATION SAFETY PROGRAM.

11. WASTE MANAGEMENT.

12. LICENSE FEES (Fees required only for new applications, with few exceptions*) (See 10 CFR 170 and Section 170.31)

*Amendments/Renewals that increase the scope of the existing license to a new or higher fee category will require a fee.

FEE CATEGORY	N/A	AMOUNT ENCLOSED \$	\$0
--------------	-----	--------------------	-----

PER THE DEBT COLLECTION IMPROVEMENT ACT OF 1996 (PUBLIC LAW 104-134), YOU ARE REQUIRED TO PROVIDE YOUR TAXPAYER IDENTIFICATION NUMBER. PROVIDE THIS INFORMATION BY COMPLETING NRC FORM 531: <https://www.nrc.gov/reading-rm/doc-collections/forms/nrc531info.html>.

13. CERTIFICATION. (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, 36, 37, 39, AND 40, AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 62 STAT. 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

CERTIFYING OFFICER - TYPED/PRINTED NAME AND TITLE

Lee McVay Sr. EHS RSO

SIGNATURE

DATE

4/12/2020

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
			\$		
APPROVED BY				DATE	

NRC Form 313 Questions 5-11

For Inclusion with NRC form 313 requesting license termination review and release of the Fort Mims property for unrestricted use.

5. Radioactive Material: N/A Material was removed from site and properly disposed of years ago.
6. Purpose for which Licensed Material will be used: No material is used on site since decommissioning was started and material was properly removed from the site.
7. Individual responsible for Radiation Safety Program and their training and experience: Lee McVay MPH CSP RSO is responsible for the radiation program. I have served 3 years as the RSO for Milliporesigma, received radiation training during a master's degree in environmental occupational health & safety, attended week long Radiation Safety Officer training from Nevada Technical associates, completed RSO observation under Jim Hatton from Sachis, and obtained my CSP certification from the Board of Certified Safety Professionals.
8. Training for individuals working in or frequenting restricted areas: N/A There is not currently work being completed at the Fort Mims site and there won't be any radiation work completed on the site in the future.
9. Facilities and Equipment: N/A Currently the Fort Mims site is a simple grassy area where the old radiation building was located before decommissioning started.
10. Radiation Safety Program: Milliporesigma & Sigma Aldrich MFG LLC have a radiation safety program managed by and RSO covering this decommissioning event as well as their use of active radioactive material at the 3050 Spruce St. Louis, Mo 63103 site. Training is provided and applicants are taught to handle material by users authorized on the license.
11. Waste Management: N/A No additional material will be brought to the site. This application amendment is to request license termination review and release of the property for unrestricted use.

Sincerely,



Lee McVay RSO



CERTIFICATE OF DISPOSITION OF MATERIALS

Estimated burden per response to comply with this mandatory collection request: 30 minutes. This submittal is used by NRC as part of the basis for its determination that the facility is released for unrestricted use. Send comments regarding burden estimate to the FOIA, Privacy, and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollections.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NE08-10202, (3150-0028), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE NAME AND ADDRESS Sigma Aldrich MFG LLC 3050 Spruce St. Louis, MO 63103	LICENSE NUMBER 24-16273-01	DOCKET NUMBER 030-10716
	LICENSE EXPIRATION DATE	

A. LICENSE STATUS (Check the appropriate box)

- This license has expired. This license has not yet expired; please terminate it.

B. DISPOSAL OF RADIOACTIVE MATERIAL

(Check the appropriate boxes and complete as necessary. If additional space is needed, provide attachments)

The licensee, or any individual executing this certificate on behalf of the licensee, certifies that:

1. No radioactive materials have ever been procured or possessed by the licensee under this license.
2. All activities authorized by this license have ceased, and all radioactive materials procured and/or possessed by the licensee under this license number cited above have been disposed of in the following manner.
- a. Transfer of radioactive materials to the licensee listed below:
- b. Disposal of radioactive materials:
1. Directly by the licensee:
2. By licensed disposal site:
All Radioactive waste was sent to Toxco Materials Mangement Center in Oak Ridge, Tennessee for decay in storage.
Address: 109 Flint Rd, Oak Ridge, TN 37830 (865) 482-5532
3. By waste contractor:
- c. All radioactive materials have been removed such that any remaining residual radioactivity is within the limits of 10 CFR Part 20, Subpart E, and is ALARA.

C. SURVEYS PERFORMED AND REPORTED

1. A radiation survey was conducted by the licensee. The survey confirms:
- a. the absence of licensed radioactive materials
- b. that any remaining residual radioactivity is within the limits of 10 CFR 20, Subpart E, and is ALARA.
2. A copy of the radiation survey results:
- a. is attached; or b. is not attached (Provide explanation); or c. was forwarded to NRC on: June 17th, 2019
Date
3. A radiation survey is not required as only sealed sources were ever possessed under this license, and
- a. The results of the latest leak test are attached; and/or b. No leaking sources have ever been identified.

The person to be contacted regarding the information provided on this form:

NAME Lee McVay	TITLE Senior EHS & RSO	TELEPHONE (Include Area Code) 314-267-2010	E-MAIL ADDRESS lee.mcvay@milliporesigma.com
--------------------------	--------------------------------------	--	---

Mail all future correspondence regarding this license to:

Lee McVay 3050 Spruce Street St. Louis, MO 63103

C. CERTIFYING OFFICIAL I CERTIFY UNDER PENALTY OF PERJURY THAT THE FOREGOING IS TRUE AND CORRECT

PRINTED NAME AND TITLE Lee McVay Sr. EHS RSO	SIGNATURE 	DATE 4/27/2020
--	---------------	--------------------------

WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT TO CIVIL AND/OR CRIMINAL PENALTIES. NRC REGULATIONS REQUIRE THAT SUBMISSIONS TO THE NRC BE COMPLETE AND ACCURATE IN ALL MATERIAL RESPECT. 18 U.S.C. SECTION 1001 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.