State of New Jersey
Department of Environmental Protection
Bureau of Environmental Radiation
Radioactive Materials Program
Mail Code 25-01
P.O. Box 420
Trenton, NJ 08625-0420
Phone (609) 984-5462 Fax (609) 633-2210

PHILIP D. MURPHY
Governor

SHEILA Y. OLIVER
Lt. Governor

SHAWN M. LATOURETTE
Commissioner

July 14, 2021

Daniel B. Kocher
EMSL ANALYTICAL, INC.
200 RT 130 NORTH
CINNAMINSON, NJ 08077

RE: New Jersey State Radioactive Materials License Amendment
EMSL ANALYTICAL, INC.
Program Interest No.: 535776
License No.: 535776 - RAD210001

Dear Mr. Kocher :

This refers to your June 7th, 2021 request to amend your radioactive materials license. Enclosed with this letter is New Jersey State Radioactive Materials License No. 535776 - RAD210001 amending License No. 535776 – RAD200001 in its entirety, authorizing the use of specific radioactive materials in the State of New Jersey. Please review the enclosed document carefully and be sure that you understand all conditions. If you have any questions regarding your license, please contact me at (609) 984-5462.

Please note that the Administrator's name no longer appears on your radioactive materials license. The DEP will continue to address all correspondence to the Administrator, therefore, you must notify our office in writing if the Administrator changes. Notifications must be signed by the new Administrator and either the former Administrator or the Radiation Safety Officer.

Thank you for your cooperation.

Sincerely,

Sarah Sanderlin

Digitally signed by Sarah Sanderlin
Date: 2021.07.19 07:23:40 -04'00'

Sarah Sanderlin
Radioactive Materials Program

CC w/ Enclosure: Dominic Gehret, Radiation Safety Officer

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Radioactive Materials License

Pursuant to the Radiation Protection Act (N.J.S.A. 26:2D) and the Radiation Code (N.J.A.C. 7:28, et seq.), as amended, 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 radioactive material(s) 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. This license is subject to all applicable rules, regulations, and orders of the New Jersey Department of Environmental Protection, now or hereafter in effect, and to any conditions specified below.

DOCUMENT INFORMATION

Program Interest (PI) ID: 535776	**Issuance Date:** 7/14/2021
License Number: 535776 - RAD210001	**Expiration Date:** 10/31/2030

ADMINISTRATIVE INFORMATION

Licensee Name and Administrative Address: EMSL ANALYTICAL, INC. 200 RT 130 NORTH CINNAMINSON, NJ 08077	**Radiation Safety Officer:** Dominic Gehret

PROGRAM INFORMATION

Program Code	Description
03620	Research and Development Other
11200	Source Material Other Less than 150 Kilograms
22110	Special Nuclear Material Plutonium - Unsealed, Less than Critical Mass
70001	Financial Assurance (FA)

LICENSE CONDITIONS

This license is subject to the following conditions:

Section A – Authorized Materials, Form, Limits, Uses & Users
Section B – Authorized Locations
Section C – Source & Device Inventory
Section D – Supporting Documents
Section E – License Conditions

This license, which shall be effective immediately, is issued on behalf of the Department under the authority of:

Sarah Sanderlin
Digitally signed by Sarah Sanderlin
Date: 2021.07.19 07:23:58 -04'00'

Issued By: Sarah Sanderlin

Date: 7/14/2021

SECTION A – Materials, Form, Limits, Uses & Users

Material	Form	Max Limit	Authorized Uses	Authorized Users
Americium-241	Any	20 microcuries	Non-Human Use - Calibration and/or quality assurance.	Dominic Gehret
Americium-243	Any	10 microcuries		
Americium-241	Any	20 microcuries	Non-Human Use - Analysis of samples	
Americium-243	Any	10 microcuries		
Any byproduct material with atomic number 1 - 92	Any	100 microcuries	Non-Human Use - Calibration and/or quality assurance.	
Neptunium-237	Any	10 microcuries		
Neptunium-237	Any	10 microcuries	Non-Human Use - Analysis of samples	
Any byproduct or source material (Z = 1-92)	Environmental Samples	10 millicuries		
Curium-243/244	Any	10 microcuries	Non-Human Use - Calibration and/or quality assurance.	
Curium-245	Any	10 microcuries		
Curium-243/244	Any	10 microcuries	Non-Human Use - Analysis of samples	
Curium-245	Any	10 microcuries		
Plutonium-241	Any	10 microcuries	Non-Human Use - Calibration and/or quality assurance.	
Plutonium-242	Any	10 microcuries		
Plutonium-238	Any	10 microcuries		
Plutonium-239	Any	10 microcuries		
Plutonium-241	Any	10 microcuries	Non-Human Use - Analysis of samples	
Plutonium-242	Any	10 microcuries		
Plutonium-238	Any	10 microcuries		
Plutonium-239	Any	10 microcuries		

SECTION B – Authorized Locations

Site ID	Site Name	Street Address	Location Description
420406	EMSL ANALYTICAL INC	200 RT 130 CINNAMINSON, NJ 08077	Storage, Possession, Use: Designated radioactive material receiving, use and storage locations.

SECTION C – Souorce & Device Inventory

N/A

SECTION D – Supporting Documents

Doc Type	Title/Description	Date	Contact Name (signature)
Radioactive Material License Application	NJDEP License Application	07/21/2020	Vince Daliessio
Electronic Mail (email)	Additional information in support of RAD 200001	10/02/2020	Daniel Kocher

SECTION E – License Conditions (Requirements Report attached)

EMSL ANALYTICAL, INC.
535776 RAD210001 RAD Materials License -Amended License Requirements Report

Subject Item: PI 535776 -

1. The licensee must confine use of radioactive materials to the materials, physical forms, maximum possession limits, authorized uses and authorized users listed in Section A of this license document. Licensed material shall only be used at the locations specified in Section B of this license document. [N.J.A.C. 7:28-51.1]
2. Compliance with State and Federal agencies having jurisdiction and regulations for radioactive materials must be maintained. [N.J.A.C. 7:28-51.1]
3. Licensed material shall not be used in or on human beings except as provided otherwise by specific condition of this license. [N.J.A.C. 7:28-51.1]
4. The licensee shall not use licensed material in field applications where activity is released except as provided otherwise by specific condition of this license. [N.J.A.C. 7:28-51.1]
5. In addition to the possession limits in Section A, the licensee shall further restrict the possession of licensed material to quantities below the minimum limit specified in N.J.A.C. 7:28-51.1 (10 CFR 30.72) which require consideration of the need for an emergency plan for responding to a release of licensed material. [N.J.A.C. 7:28-51.1]
6. The licensee is authorized to hold byproduct material with a physical half-life of less than or equal to 120 days for decay-in-storage before disposal without regard to its radioactivity if the licensee:
(A) Monitors byproduct material at the surface before disposal and determines that its radioactivity cannot be distinguished from the background radiation level with an appropriate radiation detection survey meter set on its most sensitive scale and with no interposed shielding;
(B) Removes or obliterates all radiation labels, except for radiation labels on materials that are within containers and that will be managed as biomedical waste after they have been released from the licensee;
(C) Maintains records of the disposal of licensed materials for 3 years. The record must include the date of the disposal, the survey instrument used, the background radiation level, the radiation level measured at the surface of each waste container, and the name of the individual who performed the disposal. [N.J.A.C. 7:28-51.1]
7. (A) Sealed source leak tests shall be capable of detecting the presence of 0.005 microcurie (185 becquerels) of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie (185 becquerels) or more of removable contamination, a report shall be filed with the Department in accordance with N.J.A.C. 7:28-51.1 [10 CFR 30.50(c)(2)] and the source shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Department regulations.
(B) Tests for leakage and/or contamination, including leak test sample collection and analysis, shall be performed by the licensee or by other persons specifically licensed by the Department, the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.
(C) Records of leak test results shall be kept in units of microcuries and shall be maintained for 3 years. [N.J.A.C. 7:28-51.1]

Subject Item: PI 535776 -

8. (A) Sealed sources shall be tested for leakage and/or contamination at intervals not to exceed the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or by an Agreement State.
(B) In the absence of a certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or by an Agreement State, sealed sources shall be tested for leakage and/or contamination at intervals not to exceed 6 months.
(C) Notwithstanding Paragraphs A and B of this Condition, sealed sources designed to primarily emit alpha particles shall be tested for leakage and/or contamination at intervals not to exceed 3 months.
(D) In the absence of a certificate from a transferor indicating that a leak test has been made within the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or by an Agreement State prior to the transfer, a sealed source or detector cell received from another person shall not be put into use until tested.
(E) Sealed sources need not be tested if they contain only hydrogen-3; or they contain only a radioactive gas; or the half-life of the isotope is 30 days or less; or they contain not more than 100 microcuries of beta- and/or gamma-emitting material or not more than 10 microcuries of alpha-emitting material.
(F) Sealed sources need not be tested if they are in storage and are not being used. However, when they are removed from storage for use or transferred to another person, and have not been tested within the required leak test interval, they shall be tested before use or transfer. No sealed source shall be stored for a period of more than 10 years without being tested for leakage and/or contamination. [N.J.A.C. 7:28-51.1]

9. The licensee shall conduct a physical inventory every six months to account for all sealed sources and/or devices received and possessed under the license. Records of inventories shall be maintained for 3 years from the date of each inventory and shall include the radionuclides, quantities, manufacturer's name, model numbers, serial numbers and the date of the inventory. [N.J.A.C. 7:28-51.1]

10. Except for maintaining labeling as required by N.J.A.C. 7:28-6.1 or 61.1 (10 CFR Part 20 or 71), the licensee shall obtain authorization from the U.S. Nuclear Regulatory Commission or Agreement State before making any changes in the sealed source, device, or source-device combination that would alter the description or specifications as indicated in the respective Registration Certificates issued either by the Commission pursuant to 10 CFR 32.210 or by an Agreement State. [N.J.A.C. 7:28-51.1]

11. The licensee is authorized to transport licensed material only in accordance with the provisions of N.J.A.C. 7:28-61.1 (10 CFR Part 71), Packaging and Transportation of Radioactive Material. [N.J.A.C. 7:28-51.1]

12. 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, specified in Section D of this license document. [N.J.A.C. 7:28-51.1]