

Pursuant to the Maryland Radiation Act, 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 listed below; and to use such radioactive material for the purpose(s) and at the place(s) designated below. The license is subject to all applicable rules, regulations and orders of the Maryland State Department of the Environment, now or hereinafter in effect and to any conditions specified below.

1. Name: Ecology Services, Inc. 2. Address: 9135 Guilford Road, Suite 150 Columbia, Maryland 21046	3. License No.: MD-27-061-01 4. Amendment No.: 19 RENEWAL Code 03232 5. Expiration Date: February 29, 2024
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6. Radioactive material (element and mass number)	7. Chemical and/or physical form	8. Maximum amount of activity which licensee may possess at any one time
A. Any radioactive material	A. Any sealed source	A. See Item 6A below
B. Any radioactive material	B. Any	B. 50 millicuries, with no sample to exceed 1 millicurie
C. Plutonium-239	C. Sealed source (EIC model SD-3)	C. 0.005 microcuries
D. Strontium-90	D. Sealed source (EIC model SD-3)	D. 0.007 microcuries
E. Iodine-129	E. Sealed source (NEN model NES-9999)	E. 0.023 microcuries
F. Hydrogen-3	F. Sealed source (IPL#EAB003)	F. 4.970 microcuries
G. Iodine-129	G. Sealed source (IPL#EAB129)	G. 0.1055 microcuries
H. Carbon-14	H. Sealed source (IPL#EAB014)	H. 0.1086 microcuries
I. Silicon-32	I. Sealed source (IPL#EAB032)	I. 0.0255 microcuries
J. Nickel-63	J. Sealed source (IPL#EAB063)	J. 6.690 microcuries
K. Barium-133	K. Sealed source (IPL#EAB133)	K. 0.1063 microcuries
L. Lead-210	L. Sealed source (IPL#EAB210)	L. 0.1111 microcuries
M. Cesium-137	M. Sealed source (J.L Shepherd model 28-5A Calibrator)	M. 200 millicuries
N. Any radioactive material	N. Any	N. 50 millicuries, See Item 6N below

CONDITIONS

9. Authorized Use(s):
  - A. Leak testing services for sealed sources and devices which contain such sources.
  - B. For evaluation of samples of soil, ash, water-effluent, biological material or other materials to determine the presence of contamination or type and/or quantity of radionuclides.
  - C-L. Calibration standards for quality assurance and calibration of counting equipment and survey instruments.
  - M. For calibration of survey instruments.
  - N. For the performance of various services for other licensees at customer sites. The services include spill clean up, decontamination services, waste characterization and packaging.
  
10. The authorized place of use is the licensee's address stated in Item 2. The licensee must notify the Radiological Health Program 30 days prior to vacating a permanent use address.
  
- 11A. The radiation protection program shall be under the supervision of Timothy W. Osborne, CHP.

License Number: MD-27-061-01

Amendment Number: 19 RENEWAL

CONDITIONS

11B. Radioactive material shall be used by, or under the supervision of:

Authorized User	Type and Quantity of Licensed Material to be Used
Timothy W. Osborne, CHP	Items 6A through 6N
Paul Marshall	Items 6A through 6N
Ashley Woodward	Items 6A through 6N
Gregory E. Keck	Items 6A through 6N
Colt Greer	Items 6A through 6N
Andrew Stacy	Item 6A through 6N
James Dean	Items 6A through 6N

12. The licensee shall comply with all appropriate provisions of COMAR 26.12.01.01 "Regulations for the Control of Ionizing Radiation." and shall possess a copy of these regulations.
- 13A. Each sealed source containing radioactive material, other than Hydrogen-3 with a half-life greater than thirty (30) days and in any form other than gas shall be tested for leakage and/or contamination at intervals not to exceed SIX (6) months. In the absence of a certificate from a transferor indicating that a test has been made within six (6) months prior to the transfer, the sealed source shall not be put into use until tested. If there is reason to suspect that a sealed source might have been damaged, or might be leaking, it shall be tested for leakage before further use.
- 13B. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. The test sample shall be taken from the sealed source or from the surfaces of a device in which the sealed source is permanently mounted or stored on which one might expect contamination to accumulate.
- 13C. Records of leak tests shall be kept in units of microcuries and maintained for inspection by the Department.
- 13D. If the test reveals the presence of 0.005 microcurie or more of removable contamination, the licensee shall immediately withdraw the sealed source from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with Department regulations. A report shall be filed within five (5) days of the test with the Administrator, Radiological Health Program, 1800 Washington Boulevard, Suite 750, Baltimore, Maryland 21230, describing the equipment involved, the test results, and the corrective action taken.
- 13E. Test for leakage and/or contamination shall be performed by persons specifically authorized by the Department, the U.S. Nuclear Regulatory Commission or another Agreement State to perform such services.
- 13F. Notwithstanding the periodic leak test required by this condition, any licensed sealed source is exempt from such leak tests when the source contains 100 microcuries or less beta and/or gamma emitting material or 10 microcuries or less of alpha emitting material.
- 13G. Except for alpha sources, the periodic leak test required by this condition does not apply to sealed sources that are stored and not being used. The sources excepted from this test shall be tested for leakage prior to any use or transfer to another person unless they have been tested within six months prior to the date of use or transfer.

License Number: MD-27-061-01

Amendment Number: 19 RENEWAL

CONDITIONS

14. Sealed sources shall not be opened.
15. The licensee shall conduct a physical inventory every six (6) months to account for all sealed sources received and possessed under the license. The records of the inventories shall be maintained for three (3) years from the date of the inventory for inspection by the Department, and shall include the quantities and kinds of radioactive material, location of sealed sources, and the date of the inventory.
16. Transportation of radioactive material in the State of Maryland shall be in compliance with Part T, Section T.5 "Transportation of Licensed Material" of COMAR 26.12.01.01.
17. Food and beverage containers shall not be discarded in radioactive or normal trash containers in licensee's areas utilizing radioactive materials.
- 18A. The licensee shall not make any false statement, representation, or certification in any application, record, report, plan, or other document regarding radiation levels, tests performed or radiation safety conditions or practices. Additionally, the licensee shall not falsify, tamper with, or render inaccurate any monitoring device or method.
- 18B. Violation of any term, condition, or regulation could subject the licensee to administrative or civil penalty or criminal prosecution, as specified in Title 8, Radiation, of the Article Environment of the Annotated Code of Maryland.
19. The licensee shall not transfer ownership and/or control of this license to any person or entity without providing required information regarding the transfer for the Agency's review and without receiving written authorization for the transfer by the Agency.

License Number: MD-27-061-01

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20. Except as specifically provided otherwise by this license, the licensee shall possess and use radioactive material authorized by this license in accordance with statements representations, and procedures contained in:

➤ Renewal application with attachments dated July 28, 2016.

COMAR 26.12.01.01 "Regulations for the Control of Ionizing Radiation" shall govern the licensee's statements in applications or letters, unless the statements are more restrictive than the regulations.

FOR THE MARYLAND DEPARTMENT OF THE ENVIRONMENT



January 26, 2017

NAO

Roland G. Fletcher, Manager IV  
Radiological Health Program  
Air and Radiation Management Administration

*cm 2/24/2017*  
*NAO*  
*1/26/2017*