



2021 Low-Level Radioactive Waste Management Report Preparation Guide

Code of Maryland Regulations (COMAR) 26.15.03.07 (Annual Report) requires that persons managing radioactive hazardous substances prepare and submit an annual report by **March 1** for the preceding calendar year. Management is defined as “transportation, treatment, storage or disposal”. **The report for calendar year 2021 is due March 1, 2022.**

The Maryland Department of the Environment (MDE) is required to provide the report form and instructions to be used for the report. This preparation guide contains the required instructions to be used for submitting the 2021 Low-Level Radioactive Waste (LLRW) Management Report. You should retain this document for future reference.

Questions regarding the completion of this report should be directed to Mr. Caj Didigu at 410-537-4004. Mr. Didigu may also be reached via e-mail at caj.didigu@maryland.gov.

GENERAL INSTRUCTIONS

1. Completing the report.

COMPLETE ALL PARTS OF THE REPORT.

- a. The report consists of five parts on two pages. All parts should be completed and returned whether they apply or not.
- b. Check all parts for accuracy and completeness. Make sure there is an entry for each item, even if the entry is “not applicable”.
- c. Make a copy for your records.

2. Submitting the report. The completed report may be submitted by e-mail to caj.didigu@maryland.gov. Alternatively, you may mail the completed report to:

Maryland Department of the Environment
Resource Management Program
Attn: Caj Didigu
1800 Washington Blvd., Suite 610
Baltimore, MD 21230-1719

3. DUE DATE. This report must be completed and returned by **March 1, 2022**

4. Inventory of waste on-site. Note that to complete this report, **at some point in December 2021 you must conduct an inventory of the LLRW on site, including the number of LLRW containers, and the volume and activity of the LLRW.** This information is needed to complete Part 3 of the report.



Calendar Year 2021 Low-Level Radioactive Waste Management Annual Report Form

DETAILED INSTRUCTIONS

BACKGROUND

The purpose of this report is to allow MDE to have sufficient data for gauging the amount of low-level radioactive waste being generated in the State and to allow for planning for its management and disposal accordingly.

These instructions should enable you to complete MDE's Calendar Year 2021 Low-Level Radioactive Waste Management Report Form. Before completing the report, please examine and become familiar with the layout and content of the report form. Please ensure that each line in Part 1 (identification) of the form is fully and accurately completed.

In the "Current Company Information" column, enter the current information for your company or organization. Enter this information even if you submitted the LLRW Management Annual Report to the Department in 2020 or in previous years.

Please print legibly. Missing or unintelligible data will result in MDE having to contact you individually for correct information.

SPECIAL REQUIREMENTS FOR PROCESSORS

Processors (Owners and Operators of Low Level Radioactive Waste Treatment, Storage, and Disposal Facilities accepting waste from off-site) are required to provide additional information (a separate form) to MDE. Any processor located in Maryland is required to contact MDE for the appropriate form. To request a form, contact Mr. Caj Didigu by phone at (410) 537-4004 or by e-mail at caj.didigu@maryland.gov.

REPORT FORM

A person in Maryland who manages LLRW is required by law to file an annual report form. Management is defined as "transportation, treatment, storage or disposal". You may make as many blank copies of the form as necessary. **Please complete a separate form for each site at which low-level radioactive waste is generated.** The form is based on the U.S. Nuclear Regulatory Commission (NRC) forms 540 and 541, uniform manifest, which is required (by federal regulations) to be completed for each shipment of low-level radioactive waste prior to shipment.

Part 1, Identification: All those receiving this report should complete and return this portion.

Material Users License Number- MDE assigns this number (a 7 digit field that may also include one alpha character). The license number is unique to each location.

Generator name- This information should match the entry made in block 5 of the uniform manifest, NRC form 540, under "shipper name".

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TTY Users: 800-735-2258



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Shipper ID Number-This is the ID number assigned by the host state in which the disposal facility is located. It is the number listed in block 5 of the NRC form 540. If you do not know your ID number, contact the disposal facility. If you have more than one, list all.

Facility Address (including city, state and zip code) - This information should match the entries made in block 5 of the uniform manifest, NRC form 540.

County - Enter the name of the county in which the facility is physically located. Use “Baltimore City” if located in the City of Baltimore.

Generator Type - Use the same category listed on NRC form 540. If unknown, simply state “unknown”.

Facility Contact Person – Enter the name of the individual responsible for the submission of this report. This should be the name of the person responsible for responding to questions regarding the information reported.

Title- Enter the title ("Radiation Safety Officer", "LLRW Supervisor", etc.) of the facility contact person.

Department - Enter the department name ("Radiation Safety", "Laboratory Services", etc.) to which the facility contact person is attached. If not applicable enter “N/A” or “not applicable”.

Telephone Number - Enter the facility contact person’s telephone number including area code.

FAX Number - Enter the facility contact person’s FAX number including area code.

E-mail – Enter the e-mail address of the contact person. Be sure to print legibly.

Before continuing to complete this report you should compile all copies of NRC 540 and 541 that have been completed for any shipment that has been shipped during calendar year 2021. In addition, you should inventory the number of disposal containers of LLRW on site (including those ready for shipment that have not yet left) at the time of this report. You should also inventory waste being stored for decay. As described in the instructions for Part 3 below, this inventory should be conducted at some point during December 2021.

Part 2, Did/Did Not Manage LLRW: This is a calendar year report. Check one of the two boxes CERTIFYING whether you DID or DID NOT manage LLRW at this facility during calendar year 2021. Management is defined as “transport, treat, store or dispose of”. Also check one of the two boxes indicating whether you did or did not manage Class B and/or Class C LLRW at this facility during calendar year 2021. (Class B and Class C LLRW are defined by the U.S. Nuclear Regulatory Commission in the Code of Federal Regulations (CFR) at 10 CFR 61.55 (available on line in the Code of Federal Regulations collection accessible from a link under the “Browse” heading at <http://www.gpo.gov/fdsys/search/home.action>).



Part 3, LLRW ON SITE Summary (DO NOT LEAVE BLANK): This should be completed if there is any LLRW on site in labeled disposal containers at the end of calendar year 2021. If there is none, please **note** NOT APPLICABLE or NONE but do NOT leave blank. In general, only waste that would require the use of the NRC form 540 if sent for disposal should be counted here. (Waste that is being stored for decay that would otherwise require the use of NRC form 540 should be reported in the appropriate column).

Inventory Date: This is the date on which a physical inventory was taken for the purposes of completing this report. The date must fall either on or between December 1 and December 31, 2021. It is recommended that this inventory be taken as of December 31, 2021.

Storage until decay below regulatory concern - Decay and hold for storage may be considered as a method of waste reduction. This includes LLRW in labeled disposal containers not yet manifested that will **NOT** be manifested for shipment on an NRC form 540. This LLRW will be held until it no longer meets the definition of LLRW. List how much is currently on site as of the inventory date. Also report (on the line following the table) the number of days the longest-held of the packages being held for decay had been stored (on the inventory date).

Awaiting pickup for transport - This includes only LLRW in a labeled disposal container that is required to be manifested for shipment on an NRC form 540, whether or not the container has been manifested at the time of the inventory. That is, it includes LLRW in labeled disposal containers not yet manifested as well as LLRW manifested but not yet offered for transportation (signed for by the carrier). It does not include containers of waste that are being stored for decay.

Total Number of Packages- (ON SITE) Report the total number of disposal containers physically at the facility (including those manifested but still there). You arrive at this number by doing an inventory.

Total Volume- (ON SITE) Estimate the volume in the total number of packages on site. Use the external volume of the disposal container. For example, a 55-gallon drum generally equals 7.5 cubic feet, and a 30-gallon drum equals 4.01 cubic feet. For consistency, please report this number in the same units of measurement used on the NRC 540 form for OFF SITE. (Optional – list more than one unit of measurement but specifically identify each.)

Activity - (ON SITE) Estimate the activity for all isotopes in the total number of packages on site. For consistency, please report this number for ALL nuclides in the same units of measurement used on the NRC 540 form for OFF SITE. You are NOT required to list each nuclide. (Optional – list more than one unit of measurement but specifically identify each.)

Part 4, LLRW OFF SITE Summary (DO NOT LEAVE BLANK): If you did not manage any LLRW OFF SITE in calendar year 2021, please check the appropriate box (i.e., “not applicable”). Do NOT leave blank. If you did manage LLRW OFF SITE, check the box indicating how you are providing the information required by Part 4. You may fulfill the requirements for Part 4 by EITHER attaching and forwarding copies of all Nuclear Regulatory Commission (NRC) forms 540 and 541 OR by completing the summary table and returning that.

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Waste that has been shipped should be reported in Part 4 of the form. Waste falls into this category if Nuclear Regulatory Commission (NRC) forms 540 and 541 have been prepared as required AND the transporter has signed for receipt of the shipments (as verified by the completed carrier signature and date in block 6 of NRC form 540).

Total Number of Shipments (OFF SITE) - Report the total number of NRC forms 540 that you have prepared and that have been dated and signed as received by the carrier during calendar year 2021.

Total Number of Packages (OFF SITE) – Report as the off site count the sum of the number of containers (block 1, manifest totals, number of packages/disposal containers) on all copies of NRC form 541 described above under “LLRW Managed Off Site that has been shipped”.

Disposal Volume (OFF SITE) – Collect all copies of NRC forms 541 described above under “LLRW Managed Off Site that has been shipped”, total the entries concerning disposal volume on these NRC forms 541 (block 1, manifest totals, net waste volume), and report this volume, listing the unit of measurement used.

Activity (OFF SITE) – Collect all copies of NRC forms 541 described under “LLRW Managed Off Site that has been shipped”, total the entries under “activity” (block 1, manifest totals, all nuclides), and report this total activity, **listing the unit of measurement used**.

Part 5, Signature & Date: This applies to all Parts. Before signing, please ensure that all preceding Parts are complete (with either specific information entered or the entry of NONE or NOT APPLICABLE if appropriate) and accurate.

Name of person completing this report – Type or print.

Title – Type or print the proper title (“Radiation Safety Officer”, “LLRW Manager”, etc.) of the person completing the report.

Signature – Signature of the person responsible for submission of the report.

Date – Type or print the date on which the report is signed.

