

ABOUT THE REGULATORY AGENCIES

In general, the receipt, possession and use or processing of radioactive material, including low-level radioactive waste (LLRW), requires a radioactive material license from the appropriate New York regulatory agency or the U.S. Nuclear Regulatory Commission. Normally, a single license from a single licensing agency is all that is required for most institutions, corporations, utilities, etc. If an institution or corporation holds multiple licenses under which LLRW was generated, or if people in the organization hold individual licenses under which LLRW was generated, then all of those licenses and the respective licensing agencies must be identified. In that case, append a list of the license numbers and the licensing agencies to the Report Form. The licensing agencies and their respective jurisdictions are:

New York State Department of Health

- Regulates radioactive material users (e.g., hospitals and universities) in New York State outside of New York City, plus industrial users in New York City.

New York City Department of Health

- Regulates non-industrial radioactive material users in New York City.

U.S. Nuclear Regulatory Commission

- Regulates federal radioactive material users (e.g., Veterans Administration hospitals) and major nuclear facilities (e.g., nuclear power plants) in New York State.

GUIDELINES TO THE GENERATOR REPORT FORM

Waste Management Method	Description	Sections to Complete
Storage for Decay — On Site	LLRW containing radionuclides with half-lives up to 90 days stored on site for decay and eventual disposal as non-radioactive waste.	Sections I, II-A, II-G, IV, V NOTE: If managing LLRW by Storage for Decay only, use the condensed form
Storage for Decay — Off Site	Same as above. The LLRW being reported has been transferred to an off-site facility.	Sections I, II-A, II-D, II-G, IV, V See note directly above.
Interim Storage — On or Off Site	LLRW containing radionuclides with half-lives greater than 90 days being held in long-term storage pending disposal. THIS DOES NOT REFER TO ROUTINE ACCUMULATION OF LLRW FOR SUBSEQUENT TRANSFER TO A LICENSED DISPOSAL FACILITY.	Sections I, II-A through C, II-F through I, III, IV, V, VI
Interim Storage — On or Off Site after Processing	Same as above.	All
Ship for Disposal — Direct	LLRW received by a licensed disposal facility via direct transfer from generator.	Sections I, II-A through C, II-F through I, III, IV, V, VI
Ship for Disposal via Broker/Processor	Some LLRW may undergo additional treatment prior to disposal. Please consider this when reporting LLRW volume in Section II-E. If you use a broker to transport your LLRW, he/she can supply this information.	All

ANNUAL LOW-LEVEL RADIOACTIVE WASTE REPORT FORM

NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY

Radioactive Waste Policy and Nuclear Coordination Program

INSTRUCTIONS

(Filing Deadline - March 1st Annually)

GENERAL INSTRUCTIONS

1. Please read these Instructions and the Reporting Regulations before completing the Report Form.
2. Pursuant to Public Authorities Law, Section 1854-d(1) (attached), as enacted by Ch. 673 L. 1986, any person who generates low-level radioactive waste (LLRW) in New York State is required to submit a report on such waste to NYSERDA annually.
3. Regulations governing the reporting of low-level radioactive waste have been promulgated as Part 502 of Chapter XI of Title 21 NYCRR, referred to herein as the "Reporting Regulations" (attached). You should note especially Sections 502.2 through 502.4 of the Reporting Regulations in preparing the Report Form. Terms defined in the Reporting Regulations (e.g., "LLRW," "generator") have the same meaning in the Report Form and these instructions. In the case of any perceived inconsistencies in information required by the Reporting Form and by the Reporting Regulations, the Regulations take precedence.
4. All quantitative data entered on the Report Form must be the total for the entire calendar year being reported, unless otherwise specified.
5. The Report Form is designed to allow you to skip over any questions that don't apply to you. Therefore, you should follow its numerical order from beginning to end. Please complete all applicable items.
6. For LLRW managed by storage for decay, only limited information is required in Sections II, IV and V.
7. Please be sure to mark all "☐ NO ☐ YES" choices clearly with an X (e.g., "☒ YES")
8. The Report Form for each calendar year must be completed and submitted no later than March 1st of the following year.
9. Only one report should be submitted for each facility. However, please note that pursuant to Section 502.3(a) of the Reporting Regulations, any generator who generates LLRW at facilities in New York State located more than 25 miles apart is required to submit a separate Report Form for each such facility. If a generator generates LLRW at facilities in the State located 25 miles or less apart for which separate disposal-site use permits or similar authorizations are held, the generator must submit a separate Report Form for each such facility.
10. If any response exceeds the space available for it in the Report Form, please type or print the response on the "Attachment Sheet" at the end of the Report Form. Write "See attachment" on the Report Form near the question, and note the question number on the attachment. Explanatory notes on attachments are welcome.
11. The Report Form or any of its pages may be reproduced.
12. Please retain these Instructions and a copy of your completed Report Form, attachments and worksheets in the office of the contact person identified in Section I A.

13. If you require assistance, please contact Alyse Peterson at (518) 862-1090, ext. 3274; e-mail llradmin@nyserda.org.

14. Please return the completed Report Form and attachments to:
Alyse Peterson, Project Manager
Radioactive Waste Policy and Nuclear Coordination
New York State Energy Research and Development
Authority
17 Columbia Circle
Albany, NY 12203-6399
llradmin@nyserda.org

SPECIFIC INSTRUCTIONS

The Report Form is largely self-explanatory, but for some questions and terms, explanations may be helpful. Wherever possible, coded lists of answers have been established to simplify responses. Note: whenever the answer "Other" is used, it must be accompanied by an explanation. The explanation may be entered in Section VII of the Report Form.

These specific instructions are numbered to correspond to the Report Form questions. Please read the specific instruction for each question before responding. Where no instruction is considered necessary, the statement "self-explanatory" is used.

SECTION I. Generator Information

A Please enter your 4-digit generator ID, which can be found on the mailing label of your annual postcard. If you are a new generator, please contact NYSERDA and you will be assigned an ID.

Please enter the reporting year.

The "Contact Person" is the person you prefer we contact with any questions regarding your completed Report Form.

B Self-explanatory.

C Self-explanatory.

D Please review Section 502.3(c)(vii) of the Reporting Regulations for a description of authorization. An example is the State of South Carolina's permit for use of the Barnwell licensed LLRW disposal facility.

E Use the following "Facility Type Codes" table to determine the letter and number codes that describe your facility. Choose one letter from the left column and one number from the right column within the selected category.

Examples:

- Gauge manufacturer: H 2
- City-owned hospital: C 2
- Private medical research facility: D 5

Facility Type Codes			
ELECTRIC UTILITY			
A	Nuclear Power Plant	1	Boiling Water Reactor
B	Other*	2	Pressurized Water Reactor
		3	Other*
MEDICAL			
C	Governmental	1	Medical School
D	Private	2	Hospital
E	College or University	3	Office
F	Other*	4	Laboratory, non-research
		5	Research
		6	Nuclear Pharmacy
		7	Other*
INDUSTRIAL			
G	Research and Development	1	Radiopharmaceuticals
H	Manufacturing	2	Devices and Gauges
I	Other*	3	Non-destructive Testing
		4	Nuclear Laundry
		5	Waste Broker/Processor
		6	Radiotracers
		7	Analysis
		8	Other*
ACADEMIC (NON-MEDICAL)			
J	College or University	1	Research, non-medical
K	Other*	2	Education and Training
		3	Other*
GOVERNMENTAL (NON-MEDICAL)			
L	New York State	1	Research
M	Other*	2	Laboratory, non-research
		3	Other*

*If you used any of the codes for "Other," an explanation must be provided in Section VII "Attachment Sheet".

F Self-explanatory.

SECTION II. Information on LLRW

This section of the report is a tabular or spreadsheet format, and is largely self-explanatory. Each entry is followed across the entire spreadsheet of SECTION II. General guidelines follow:

- Categorize the waste. A waste category is defined by several fundamental features such as (see waste codes):
 - same waste type;
 - similar isotopic content;
 - same disposal class; or
 - presence of chelating agents.
- Determine the management method for each waste category. See the list of waste management codes (II A-2).
- Complete the form. Enter each waste category on a separate line of the report form. **If the same type of waste was managed by two different methods, you must complete two lines on the form, one for each method.**
- Continuation Sheets are available if you need more lines.
- For LLRW managed only by storage for decay (waste management code W7), you need only complete items A-1, A-2 and G-30.
- Explain "other." If you choose a code number corresponding to "other," please use Section VII "Attachment Sheet" at the end of

the form to explain.

A LLRW AS GENERATED

A-1 Select waste description code that best describes LLRW as generated.

A-2 Select a waste management method code for each category of LLRW generated.

A-3 Select chemical form code that best describes waste.

A-4 Select hazard code, if any, that best describes waste.

B ON-SITE WASTE TREATMENT

B-5 Select code for each category of LLRW treated on site.

B-6 Select sorption or solidification code, if applicable.

B-7 Enter best estimate of the effectiveness of treatment in terms of volume. Note increase or decrease by ↑ or ↓ (e.g., 5:1 ↓ or 20% ↑).

B-8 Enter post-treatment volume for each waste category in cubic meters (m³).

C ON-SITE CONTAINER INFORMATION

C-9 Select code for container used to package LLRW.

C-10 Enter volume of container noted in C-9 in m³.

C-11 Note maximum surface-radiation level in (milli-Sieverts per hour) mSv/hr.

C-12 Enter number of containers described in C-9.

D BROKER/PROCESSOR INFORMATION

D-13 Select code that identifies LLRW broker used.

D-14 Select code that identifies LLRW processor used.

D-15 Select code for each category of LLRW processed. Use B-5 codes.

E POST-PROCESSOR TREATMENT INFORMATION

E-16 See instructions for B-7, above.

E-17 Enter post-treatment volume of LLRW in m³.

F OTHER CHARACTERISTICS

This section asks for information on source and special nuclear material and chelating agents that may be present in your LLRW. If this section does not apply, please draw a line through each applicable cell and skip to Section G — Disposal and Storage.

F-18 Select applicable source material code.

F-19 Source material weight must be noted in grams.

F-20 Select applicable special nuclear material (SNM) code.

F-21 Total weight in grams for SNM reported in F-20.

F-22 Enter maximum weight of SNM in any single shipment in grams.

F-23 Select applicable chelate code.

F-24 Enter volume (m³) of LLRW containing chelating agents.

F-25 Enter weight (kg) of LLRW containing chelating agents.

F-26 Enter weight percent for each chelating agent.

G DISPOSAL AND STORAGE

G-27 Enter class of LLRW.

G-28 Select code that describes how waste was disposed of.

G-29 Choose appropriate disposal site code, if applicable.

G-30 Choose appropriate storage site code, if applicable.

H LLRW NOT MEETING DISPOSAL FACILITY ACCEPTANCE CRITERIA

H-31 Enter waste class of any LLRW you are holding because it does not meet waste acceptance criteria at any of the operating disposal facilities. Use G-27 codes.

H-32 Select hazard code, if any, that best describes waste. Use B-4 codes.

H-33 Enter volume of LLRW identified in H-31 in m³.

H-34 Enter activity of LLRW identified in H-31 in Megabecquerels (MBq).

H-35 Enter radionuclides in waste identified in H-31.

I CONTAINERS WITH SURFACE RADIATION LEVELS GREATER THAN 2mSv/hr (200 mR/hr)

NOTE: Complete this section for each container noted in C-11 with a maximum surface radiation level greater than 2mSv/hr (200 mR/hr). Use continuation sheets if necessary.

I-36 Enter class of LLRW for each container.

I-37 Enter volume of each container in m³.

I-38 Enter activity of waste in I-36 by radionuclides (MBq).

SECTION III. LLRW Summary

A Enter volume (m³) and activity (MBq) of LLRW received by a licensed LLRW disposal facility by class and via broker or direct transfer.

B Enter volume (m³) and activity (MBq) of LLRW in interim storage on and off site by class, as indicated.

SECTION IV. Radionuclide Information for Waste Disposed, Held for Decay, and Stored

- For LLRW managed only by storage for decay (waste management code W7), you need only complete items B-1 and B-2.

A-1 List radionuclides contained in LLRW received by a licensed LLRW disposal facility during the reporting year as reported in Section III-A. For each radionuclide, identify total activity (MBq) contained in such LLRW.

A-2 Self-explanatory.

B-1 Self-explanatory.

B-2 Self-explanatory.

C-1 Self-explanatory.

C-2 Self-explanatory.

C-3 Self-explanatory.

SECTION V. Storage Facility Information

- For LLRW managed only by storage for decay (waste management code W7), you need only complete item A-3.

A-1 Self-explanatory.

A-2 Note total on-site storage capacity in m³.

A-3 Note maximum volume of LLRW held for storage for decay at any one time in m³.

B Self-explanatory.

C Self-explanatory.

D Self-explanatory.

SECTION VI. Future LLRW Generation

Provide your best estimate for future generation of LLRW requiring disposal. Provide activity (MBq) and volume (m³).

CONVERSIONS FOR UNITS				
Quantity	SI* Unit	Conventional Unit	Value of Conventional Unit in SI Units	To Convert from Conventional Unit to SI Units
Activity	Becquerel (Bq)	Curie (Ci)	3.7×10^{10} Bq	$\text{Ci} \times 3.7 \times 10^4 = \text{Megabecquerels}$
Dose Equivalent	Sievert (Sv)	Rem	0.01 Sv	$\text{Rem} \times 0.01 = \text{Sieverts}$
Volume	cubic meters (m ³)	cubic feet (ft ³)	0.028 m ³	$\text{ft}^3 \times 0.028 = \text{m}^3$
Weight	kilograms (kg)	pounds (lb)	0.455 kg	$\text{lb} \times 0.455 = \text{kg}$

* SI — International System

Activity conversions.				Dose-equivalent conversions.		Volume conversions.	
mCi	MBq	μCi	MBq	Rems	Sieverts	ft ³	m ³
500	18,500	1,000	37	500	5	11.9 (89 gal. drum)	0.33
200	7,400	500	18.5	100	1	11.1 (83 gal. drum)	0.31
100	3,700	100	3.7	10	100 mSv	7.5 (55 gal. drum)	0.21
50	1,850	50	1.85	1	10 mSv	4.01 (30 gal. drum)	0.11
20	740	20	0.74	100 mrem	1 mSv	0.67 (5 gal. pail)	0.019
10	370	10	0.37	10 mrem	10 ⁻¹ mSv		
5	185	5	0.185	1 mrem	10 ⁻² mSv		
2	74	2	0.074	100 μrem	10 ⁻³ mSv		
1	37	1	0.037	10 μrem	10 ⁻⁴ mSv		

DEFINITIONS

- **Transfer** by itself or in phrases such as "**transfer for disposal**" means transfer either directly by the generator or by its broker.
- **Disposal** by itself or in phrases such as "**transfer for disposal**" means disposal at a licensed LLRW disposal facility.
- **Volume** means container or waste package volume, as typically reported on disposal site manifests.
- **Radionuclides** mean each individual radionuclide if known, or, at a minimum, all radionuclides that have been or would have to be identified on disposal site manifests. H-3, C-14, Tc-99, and I-129 must be identified where present
- **Direct transfer** means transfer of LLRW directly from the facility where it was generated to a licensed LLRW disposal facility.
- **Transfer via broker** means transfer from the facility where the LLRW was generated to one or more collection or treatment facility/ies, and then from such facility/ies to a licensed LLRW disposal facility.
- **Interim storage** means long-term storage of LLRW containing long-lived radionuclides (half-lives > 90 days) pending the availability of a licensed LLRW disposal facility. This does not refer to normal accumulation of LLRW for disposal (staging) or storage for decay.
- **Storage for Decay** means storage of LLRW containing short-lived radionuclides (half-lives < 90 days) until the radioactivity has diminished to levels that will permit disposal as non-radioactive waste.

Also see the inside front cover for waste management descriptions.

