



LowTrack New Users Guide

The following tutorial has been prepared to provide the new user with instructions necessary to generate NRC forms 540 and 541 necessary for radioactive waste and material shipment. In summary, the process entails:

- Input of identification and information regarding the generator;
- Input of container specific data and information;
- Input of shipment specific data and information;
- 540/541 manifest generation.

Each of these topics is addressed below. Before providing container and shipment data, we suggest establishing manifest preferences. Once logged in as Administrator, preferences may be accessed under the Admin tab.

Input of identification and information regarding the generator

- a. From the main menu, click the Admin tab, and Log in as Admin. You should have been prompted to generate a password when the program was installed. Contact LowTrack support (support@lowtrack.com) if you need assistance generating a password.
- b. From the main menu Utility tab, click on Code Maintenance, and then click on Generators; you will see this screen:

The screenshot shows a window titled "Generators" with a "Find Generator" sub-window. The "Find Generator" window has two input fields: "Number:" and "Name:". Below this, there is a larger form with the following fields: "Number:", "Name:", "Address:", "City:", "State:", "ZIP Code:", "Contact:", "Phone:", "Emergency Contact:", "Phone:", and "Comments:". At the bottom of this form are two more fields: "S.C. Transport Permit Number:" and "Other Permit Number:". To the right of the form is a table with two columns: "Number" and "Name". The table is currently empty. At the bottom of the window are four buttons: "Save", "Add New", "Delete", and "Close".



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- c. Click Add New, and provide new generator information and Save:

Number	Name
52-2017	Acme Waste Company

Input of container specific data and information

- a. From the main LowTrack menu - click on Waste Containers, click on Add, click on Blank Waste Container; on Waste Container Form, select your newly created Generator:

Waste Desc.	Generator	

Nuclide	Activity (Ci)	



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- a. Complete the upper section of the form – note that not all fields are required to be filled

0001
WASTE CONTAINER FORM

Generator Number and Name: 52-2017 - Acme Waste Company

Container ID: 0001 Date Received: [] Entry Options (US-Actual)

Physical Location: [] Reason for being held: []

Gross Container Weight: 20000 LBS Gross Disposal Volume: 675 FT3

Total Activity: 0.00000E+00 Ci Decay Date: [] Physical Form: Solid

Form Class: AU Calc. Class

Container Description: 19 Other Intermodal-Roll off Overpack

Site-specific descriptors

Manufacturer / Model #: []

Serial Number: []

Surface Radiation Level: 1.0000E+00 MR/HR

Contamination Surface:
Alpha: <2.0000E+01 DPM/100cm2
Beta-Gamma: <2.0000E+02

Waste Descriptions		
Waste Desc.	Generator	
		Add
		Edit
		Delete

Container Nuclides		
Nuclide	Activity (Ci)	
		Add
		Edit
		Delete

Prev Next Save Cancel Recalc Source /SNM Mangeno Co-60 Calcs

- b. Complete Waste Descriptions box, followed by Container Nuclides box. Note that if radionuclides are added under the Waste Descriptions box, they are not to be added under the Container Nuclides box. Tip: use the Container Nuclides entries if there is only one container in the manifested shipment (or, if there are multiple containers, they all include the same radionuclides); use the nuclide entries under the Waste Descriptions if there are multiple containers (with different radionuclides) within the manifested container. Also note, that when adding radionuclides, there are several check box options (SNM, Source Material, LLD, Indirect Method) – check as appropriate. You may enter either the concentration (pCi/g) or activity (mCi) depending on how you set your preferences; these preferences are under Admin/Preferences/Other tab (ensure the “perform activity calculations” box is checked):

0001
WASTE CONTAINER FORM

Generator Number and Name: 52-2017 - Acme Waste Company

Container ID: 0001 Date Received: [] Entry Options (US-Actual)

Physical Location: [] Reason for being held: []

Gross Container Weight: 20000 LBS Gross Disposal Volume: 675 FT3

Total Activity: 4.20932E-03 Ci Decay Date: [] Physical Form: Solid

Form Class: AU Calc. Class

Container Description: 19 Other Intermodal-Roll off Overpack

Site-specific descriptors

Manufacturer / Model #: []

Serial Number: []

Surface Radiation Level: 1.0000E+00 MR/HR

Contamination Surface:
Alpha: <2.0000E+01 DPM/100cm2
Beta-Gamma: <2.0000E+02

Waste Descriptions		
Waste Desc.	Generator	
DEMOLITION RUBBLE	52-2017	Add
		Edit
		Delete

Container Nuclides		
Nuclide	Activity (Ci)	
Am-241	1.31541E-04	Add
Pu-238	6.57706E-05	Edit
U-235	6.57706E-05	Delete
U-238	3.28853E-03	

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The screenshot shows the 'LowTrack Preferences' dialog box with the 'Other' tab selected. The 'Shipper Preference' dropdown is set to 'EnergySolutions'. Under 'Enter nuclide values as:', the 'Concentration (pci/gm)' radio button is selected. The 'Perform activity calculations automatically' checkbox is checked, while 'Enable contamination surface defaults' is unchecked. Below, the 'Contamination Surface Defaults' section has 'Alpha' and 'Beta-Gamma' input fields. 'OK' and 'Cancel' buttons are at the bottom.

- c. Save and close. You can now create your next container. From main menu, click Waste Containers. Click add on the waste container inventory screen – you may then generate a new container by either choosing Blank waste container, or Copy selected waste container:

The screenshot shows the 'Create a new waste container' dialog box. It has two radio buttons: 'Blank waste container' (selected) and 'Copy selected waste container'. Below the buttons is a table with two columns: 'Generator Number' and 'Container Number'. The 'Container Number' column has a dropdown arrow on its right side.

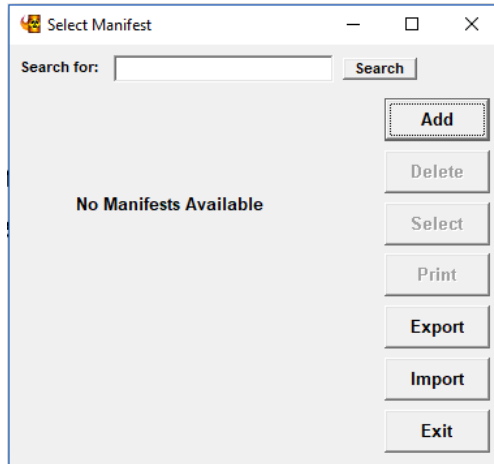
- d. Continue this process until all containers to be included in a shipment are added. At this point, you're ready to enter shipment-specific information, and generate your manifest.



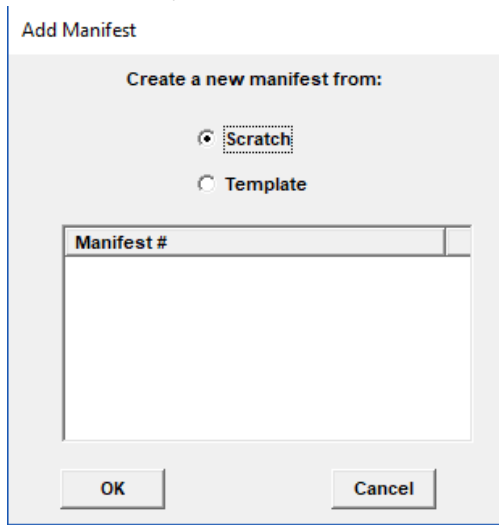
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Input of shipment specific data and information

- a. From the main menu, click the Manifests button.
- b. Click the Add button on the Select Manifest screen (note that in the screenshot below, there are no existing manifests in the database):



- c. As a new user, click Create a New Manifest from Scratch:





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- d. Populate the Manifest Form window as follows:
1. Assign a manifest number;
 2. From the Select manifest Type drop down menu, select the desired manifest format;
 3. Click the appropriate radio button with regard to surface radiation level units;
 4. Click the Add to list button and select the containers to be included in the manifested shipment.

Manifest Form

Manifest Number:

Type & Containers | 540 Page 1 | 540 Page 2 | 540 Page 3 | 540 Page 4 | 542 | MSR Data

Generator Number	Container Number
------------------	------------------

Select manifest Type: NRC

Report surface radiation levels in:
 Microsieverts/hour
 Millisieverts/hour

Prev Next Save Cancel Manifest Notes Copy to Template

- e. Complete all fields under tabs 540 Page 1 through 540 Page 4 - this information will populate blocks 1 through 10 on the 540 form.
- f. You may select the shipper information from the drop down under the 540 Page 2 tab. The Utah Generator Site Access Permit number must be included for shipments to the EnergySolutions Clive, UT facility.
- g. Truck # and Trailer # are optional entries under the 540 Page 3 tab. EPA number to be included if this is a mixed waste shipment.
- h. The Consignee information is automatically populated if shipment going to EnergySolutions as identified on the drop down for manifest type under the Types and Containers tab.
- i. The Proper Shipping Name (PSN) is available under the Add button. The drop down includes all Class 7 shipment PSNs. Other PSNs can be added and saved.



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- j. Once the PSN is selected, complete applicable fields under DOT Description

Generator Number	Container Number
52-2017	0001

- k. DOT Description needs to be filled out for each container.
l. Any Manifest Notes can be added from the 540 Page 4 tab.
m. At this point, all required manifest information has been entered.

540/541 Manifest Generation

- a. To export the manifest electronically, click the Export button. The file will be exported and saved as a .zip file. To extract the .mc text file, double click on the zip. The .mc text file may be opened in a word processor such as Notepad or MS Word. Most TSDFs accept the .mc text file as the electronic manifest for import and validation.
b. Hard copy of the generated manifest may be created and saved as a pdf by clicking the Print button. You may choose the manifest format under from the Type of manifest drop down.

Type of manifest: NRC

Entire Low-Level Waste Manifest

Form 540

Form 541

Form 542

Additional Notes

Isotope Report

OK Cancel

- c. You may also import manifests into LowTrack. Imported manifests need to be either .zip or .mc files.

Please note that this tutorial is meant to provide a new user with basic instruction to generate a 540/541. LowTrack has many features that are not addressed in this tutorial. Please contact our technical support at support@lowtrack.com with project-specific questions.