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# SUBJECT AREA CONTENT

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## Vehicle Radiation Monitor, Use of the Subject Area

Effective Date: **Feb 2, 2017** ([Rev 1.1](#))

Periodic Review Due: **Feb 2, 2020**



### Introduction

This subject area describes how Brookhaven National Laboratory (BNL) staff and non-BNL staff who use conveyances to transport material that has the potential to be radioactively contaminated or activated to off-site locations, or perform on-site transfers of scrap metals, electronics, and Construction-Demolition (C&D) debris, must use the vehicle radiation monitor (VRM) as a final check before proceeding to their final destination.

The VRM at BNL is a series of permanently placed gamma radiation detectors that are operating in a static mode. This unit has the capability to differentiate between radioactivity added and natural background radiation. It also has real-time video and picture-taking capabilities. It offers a two dimensional view of the conveyance to aid the responding Facility Support (FS) personnel in locating the proximity of the radioactive material alarm.

This system operates as a "go/no go" unit, it is not intended to replace or be used in lieu of a radiological survey. Prior to going through the VRM, all suspect material leaving a Radiological Area must be surveyed and documented by FS personnel in accordance with 10 CFR 835 and DOE O 458.1.

The driver must follow the posted instructions at the VRM prior to proceeding through. If a driver is unsure how to properly use the VRM, they should contact FS personnel for assistance.

### This subject area does not cover the following

This subject area does not apply to delivery trucks/conveyances such as, but not limited to, trucks delivering supplies and materials to BNL, United States Postal Service, United Parcel Service, DHL, FedEx, food delivery trucks, etc. This subject area also does not apply to radioactive waste shipments.

### Standards of Performance

All staff and users shall ensure that they are trained and qualified to carry out their assigned responsibilities, and shall inform their supervisor if they are assigned to perform work for which they are not properly trained or qualified.

All staff and guests shall exercise effective stewardship of assets in their custody and control, and shall take reasonable actions to safeguard all assets against theft, loss, misuse, and disruption.

All staff and guests shall assure that only appropriately authorized individuals have access to facilities, information, resources, and assets.

The Laboratory's policies, standards, and Laboratory-wide procedures and guidelines are based on an evaluation of external requirements documents and applicable non-government standards, e.g., orders, directives, and federal, state, and local laws.

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Questions/Comments

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# SUBJECT AREA PROCEDURE CONTENT

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This section applies to BNL and non-BNL delivery of material to the Clean Scrap Yard. This section is also applicable to outside vendors who pick up Clean Scrap Metal for off-site disposition.

### Delivery of Material to the Clean Scrap Metal Yard

1. Prior to pick up, a [Process Knowledge Form \(PKF\) for Clean and Suspension Encumbered Metals](#) for material must be completed.
2. Proceed to the vehicle radiation monitor (VRM) for final survey. Read the posted Instructions prior to going through the VRM. If you do not understand the Instructions, call Facility Support (FS) personnel for assistance. **Do not proceed.**
3. Upon going through the VRM, you will either see a green light indicating a successful pass or you will see a red indication light with an audible alarm, this indicates an unsuccessful pass. For the successful pass, you will then be prompted to take a "clean" ticket. For the unsuccessful pass, you are required to notify FS personnel. **Do not leave the area.**
4. If the VRM is out of service, contact FS personnel for final survey and a clean survey form.
5. With a "clean" ticket in hand, proceed to the Scrap Yard.
6. At the Scrap Yard, you will hand Procurement & Property Management (PPM) personnel the completed PKF and the "clean" VRM ticket or a [VRM Clean Survey Form](#).

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This section applies to Outside Vendors who pick up Clean Scrap Metal for off-site disposition. See the [Industrial Waste](#) Subject Area for more information regarding this waste stream.

### Pickup of Clean Scrap Metal by an Outside Vendor

1. Driver must proceed to the vehicle radiation monitor (VRM) for a survey of empty container(s).
2. Read the posted Instructions prior to going through the VRM. If you do not understand the Instructions, call Facility Support (FS) personnel for assistance. **Do not proceed.**
3. After passing through the VRM you will receive one of two indications, a "green" light indicates a clean passage, if this occurs, continue to the next step. If you receive a "red" light, this indicates a failed passage; you will also get an audible alarm. In this case contact FS personnel. **Do not leave the VRM area.**
4. If the VRM is out of service, contact FS personnel for initial survey of empty container(s) and obtain a VRM Clean Survey Form.
5. Proceed to the Weigh Station for weight of empty container(s).
6. Proceed to Clean Scrap Metal Yard.
7. Hand over the "clean" VRM ticket or VRM Clean Survey Form and the scale ticket to PPM personnel.
8. PPM personnel will load container(s) with Clean Scrap Metal.
9. Proceed to VRM for final survey.
10. After passing through the VRM you will receive one of two indications, a "green" light indicates a clean passage, if this occurs, continue to the Main Gate to exit the Lab property. If you receive a "red" light, this indicates a failed passage; you will also get an audible alarm. In this case contact FS personnel. **Do not leave the VRM area.**
11. If the VRM is out of service, contact FS personnel for the survey of the full container(s) and obtain a VRM Clean Survey Form.
12. Proceed to the weigh station for weight of the full container(s).
13. Hand over the "clean" VRM ticket or VRM Clean Survey Form to PPM personnel.

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Questions/Comments

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This section applies to BNL personnel and non-BNL personnel who transfer Salvage Material and excess Warehouse Material for disposal. See the [Industrial Waste](#) Subject Area for more information on these waste streams.

### Disposition of Salvage Material and Excess Warehouse Material

1. Proceed to the vehicle radiation monitor (VRM) for final survey. Read the posted instructions prior to going through the VRM. If you do not understand the instructions, call Facility Support (FS) personnel for assistance. **Do not proceed.**
2. Upon going through the VRM, you will either see a green light indicating a successful pass or a red indication light with an audible alarm, which indicates an unsuccessful pass. For the successful pass, you will then be prompted to take a "clean" ticket. For the unsuccessful pass, you are required to notify FS personnel. **Do not leave the area.**
3. If the VRM is out of service, contact FS personnel for final survey and a clean survey form.
4. Upon a successful pass, proceed to the appropriate location for disposition of material.
5. At the designated location, turn in the "clean" VRM ticket or a VRM Clean Survey Form to PPM personnel.

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This section applies to BNL personnel who transfer Municipal Solid Waste off-site. See the [Industrial Waste](#) Subject Area for more information regarding this waste stream.

### Release of Municipal Solid Waste/Industrial Waste Off-site (only if the potential exists for radioactive contamination or activation)

1. Proceed to vehicle radiation monitor (VRM) for final survey.
  2. Read the posted instructions prior to going through the VRM. If you do not understand the instructions, call Facility Support (FS) personnel for assistance. **Do not proceed.**
  3. After passing through the VRM you will receive one of two indications. A "green" light indicates a clean passage; if this occurs, continue to the Main Gate to exit the Lab property. If you receive a "red" light, this indicates a failed passage; you will also get an audible alarm. In this case, contact FS personnel and do not leave the VRM area.
  4. If VRM is out of service, contact FS personnel for final survey.
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# DEFINITION CONTENT

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### Definitions

Term	Definition
None	None

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# LESSONS LEARNED CONTENT

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## Lessons Learned

BNL's Lessons Learned Program supports ongoing learning by collecting and sharing work experiences and good practices. This allows us to better understand risks and hazards and develop strategies to control them. Many managers share selected Lessons Learned with their staff at daily briefings and morning meetings to update everyone's knowledge and skills. The Program draws information from BNL, the DOE complex, and private industry. For more, [see the BNL Lessons Learned Program website](#).

Here is a selection of recent Lessons Learned related to this particular Subject Area:

Title	Date
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