

No.: PBL-2 Rev. No.: R-3 Date: July 25, 2002	INTERNATIONAL URANIUM (USA) CORPORATION STANDARD OPERATING PROCEDURES Title: Intermodal Container Acceptance, Handling & Release	Page 1 of 7
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1.0 Purpose

The following procedure applies to acceptance, handling, and release of intermodal containers from International Uranium (USA) Corporation (IUSA) White Mesa Mill (Mill). IUSA receives material for processing, in either bulk or non-bulk packaging. This procedure addresses one form of bulk packaging – intermodal containers (IMCs). This procedure may be amended, subject to approval by IUSA's Safety and Environmental Review Panel (SERP), from time to time as appropriate to address the individual requirements of specific feed materials, or projects.

2.0 Ore Receiving

1. Check truck scale for zero balance at the beginning of each shift.
2. Inbound IMCs will be dropped off in a designated staging area near the Scale House outside the Restricted Area.
3. Inspect the inbound IMC for the items listed on the Intermodal Container Inspection Form (copy attached). Notify Mill management of any discrepancies as soon as practicable. The Intermodal Container Inspection Forms will be turned in to the Mill office on a daily basis.
4. Inspect all copies of the Bill of Lading (BOL) to ensure that the shipment is destined for the White Mesa Mill and that all shipping documentation is in order (see Section 8.2). **If any discrepancies are noted notify the Mill management immediately. Do not dump the container until all paperwork discrepancies are corrected.**
5. Assign next available shipment number and White Mesa Mill load number to the inbound IMC. Record the White Mesa Mill load number, inbound date and both the truck and IMC numbers on the Scale house Weight Ticket (SWT).
6. A White Mesa truck will be used to retrieve the loaded IMCs stored in the staging area, outside the Restricted Area, and transport them into the Restricted Area. The Mill truck will be visually inspected and scanned prior to leaving the Restricted Area to pick up a loaded IMC.

3.0 Ore Dumping

1. Prior to the dumping of the IMC the tarp and tarp support structures, if applicable, are inspected for damage and then removed.
2. Connect the Bartlett tipper to the loaded IMC chassis and transport across the truck scales.

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3. Enter the loaded weight of the IMC on the IMC SWT.
4. After weighing the IMC, proceed to the tarping and untarping station. Inspect the tarp then roll the tarp forward. Report the conditions of the tarp and bows of the IMC to the Scalehouse via radio. Then proceed to the designated ore storage area and dump the material.
5. After dumping the material, return the IMC back to the tarping station and replace the tarp and the bows, unless the IMC is being decontaminated for unrestricted release.
6. After the IMC has been retarped, transport the empty IMC back across the scales for an empty weight.
7. Record the empty weight on the appropriate IMC SWT.
8. At the end of each day, turn in outbound SWT to Mill Records Manager.
9. The Mill Records Manager will fill out a Daily Materials Receipts form to obtain the net weight of the material in each IMC.
10. After weighing the IMC, the Bartlett tipper will deposit the IMC in a designated area, within the Restricted Area, for decontamination.
11. Use a front-end loader or similar equipment to push material into the designated ore lot pile.
12. Once an ore lot pile is complete, label the pile with the appropriate ore lot number.

4.0 Decontamination and Release of IMCs

All IMCs, chassis and tires will be decontaminated after dumping prior to leaving the White Mesa Mill. Generators or transporters will notify IUSA whether a specific IMC and chassis is to be released for restricted or unrestricted use. Any IMCs that are to be released for restricted use will be decontaminated according to the requirements contained in U.S. Department of Transportation (DOT) Part 49 CFR 173.441 and 173.443 (a copy of which is attached). Any IMCs that are to be released for unrestricted use will be decontaminated according to the requirements found in Table 1 of the Nuclear Regulatory Commission's (NRC's) Policy and Guidance Directive FC-85-23, "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material" issued May 1987 (a copy is attached). IMCs requiring repair will be decontaminated for unrestricted release, to facilitate repairs by the transporter at the

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transporter's own site. IMCs may be repaired without undergoing full decontamination if repaired within the Restricted Area of the Mill.

5.0 Decontamination and Release of IMCs for Restricted Use

1. A White Mesa Mill truck will pick up the empty IMC, from the staging area within the Restricted Area, and transport it to the decontamination pad.
2. Decontaminate the exterior of each IMC, chassis and tires thoroughly, using a high-pressure water wash. Put the chassis into the extended position to improve access to the rear chassis tires.
3. After the IMC is decontaminated, use the White Mesa Mill truck or other designated on-site equivalent equipment to move the IMC along the decontamination route. The decontamination route is a graveled roadway specifically designed for decontaminated equipment to exit the restricted area. Do not leave the decontamination route. If it becomes necessary due to environmental conditions or residual mud in the tires etc., proceed along the decontamination route to the secondary wash station. Wash any visual residual mud off of the tires, chassis or exterior surface of the container.
4. Proceed along the decontamination route to the tertiary decontamination and final scanning area.
5. Contact a Radiation Technician to perform a radiological contamination survey of the IMC. If the Radiation Technician indicates select areas on the IMC that require further decontamination, decontaminate those areas as necessary.
6. The Radiation Technician or RSO will scan the IMC, chassis, tires and White Mesa Mill truck in various locations as shown on the IMC Container Survey for Restricted Release (attached) and document the scan readings on the Container Survey for Restricted Release. The contamination survey will be performed using appropriate radiological instrumentation for total activity in accordance with DOT transportation regulations. The release standards to be met for restricted release are contained in U.S. Department of Transportation (DOT) Part 49 CFR 173.441 and 173.443 (a copy of which is attached).
7. If the IMC, chassis or tires do not meet the radiological release survey requirements or shows visually observable contamination, the IMC will either be returned to the secondary decontamination pad for further decontamination or will be washed again at the tertiary decontamination area.
8. The Radiation Technician or RSO will fill out the IMC survey for Restricted Release form (copy attached) to document that the IMC has been authorized for release for restricted use. These forms are filed in the Radiation Department. The

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Radiation Technician or RSO will place a white sticker on the IMC that says, "EMPTY" and "This package conforms to the conditions and limitations specified in 49 CFR 173.428 for radioactive material, excepted package – empty package, UN2910".

9. After an IMC has been released, the IMC will be delivered by a White Mesa Mill truck to the designated staging area for empty IMCs, outside the Restricted Area. After staging a loaded IMC in the designated area, the incoming driver will pick up an empty IMC at the designated area. Prior to leaving the staging area the driver will perform a visual inspection of the IMC, chassis and tires. Leaving his truck outside of the Restricted Area, the driver will return to the Scale House to pick-up the documentation for the empty IMC and sign the Intermodal Container Inspection Form.
10. A Radiation Technician, or the RSO, will scan the designated decontamination route and staging area(s) on a quarterly basis. The survey readings will be recorded and kept on file in the Radiation Department.

6.0 Decontamination and Release of IMCs for Unrestricted Use

1. A White Mesa Mill truck will pick up the empty IMC, from the staging area within the Restricted Area, and transport it to the decontamination pad.
2. Open the tailgate and decontaminate each IMC using a high-pressure water wash. Make sure to thoroughly wash the inside and outside of each IMC, the chassis and tires.
3. After the IMC is decontaminated, use the White Mesa Mill truck or other designated on-site equivalent equipment to move the IMC along the decontamination route. The decontamination route is a graveled roadway specifically designed for decontaminated equipment to exit the restricted area. Do not leave the decontamination route. If it becomes necessary due to environmental conditions or residual mud in the tires etc., proceed along the decontamination route to the secondary wash station. Wash any visual residual mud off of the tires, chassis or exterior surface of the container. Otherwise, proceed along the decontamination route to the tertiary decontamination and final scanning area.
4. Contact a member of the Radiation Department staff to conduct the appropriate radiological survey of the IMC, chassis, tires and White Mesa Mill truck, as delineated in Section 2.6 of the White Mesa Mill Radiation Protection Manual. The release standards to be met for unrestricted release are contained in Table 1 of the Nuclear Regulatory Commission's (NRC's) Policy and Guidance Directive FC-85-23, "Guidelines for Decontamination of Facilities and Equipment Prior to

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Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material” issued May 1987 (Copy attached).

5. The Radiation Technician will perform a radiological contamination survey of the IMC. If the Radiation Technician indicates select areas on the IMC that require further decontamination, decontaminate those areas as necessary.
6. If the IMC, chassis or tires do not meet the radiological release survey requirements and/or has visually observable contamination, the IMC will either be returned to the secondary decontamination pad for further decontamination or will be washed again at the tertiary decontamination area.
7. If the IMC, chassis and tires meet the radiological release survey and visual inspection requirements, the Radiation Technician will place a red sticker on the IMC that says, “THIS CONTAINER HAS BEEN FULLY DECONTAMINATED AND SURVEYED FOR “UNRESTRICTED USE” BY: (FILL IN NAME OF RADIATION TECHNICIAN)”. The RSO or Radiation Technician that performed the release survey will then sign the red sticker and date it. In addition, the RSO or Radiation Technician will fill out a Decontamination Final Release Form (a copy of which is attached) to document that the IMC has been cleared for unrestricted release. The form includes a schematic diagram of the IMC with points to be scanned and locations on the schematic to fill in survey values for each IMC. The Decontamination Release Form will be turned in to the Mill Administration Office daily for filing and distribution.
8. After an IMC has been released, the IMC will be delivered by the White Mesa Mill truck to the designated staging area for empty IMCs, outside the Restricted Area. After staging a loaded IMC in the designated area, the incoming driver will pick up an empty IMC at the designated area. Prior to leaving the staging area, the driver will do a visual inspection of the IMC, chassis and tires. Leaving his truck outside of the Restricted Area, the driver will return to the Scale House to pick-up the documentation for the empty IMC and sign the Intermodal Container Inspection Form.

7.0 Hazard Identification and Safety

7.1 Required Personnel Protective Equipment (PPE)

In all areas of the Mill covered by this procedure, hard hats, safety glasses and steel-toed shoes are required as a minimum. These must be worn in all areas of the Mill with the exception of the Administration Building.

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7.2 Industrial Hazards and Safety

1. Use caution when chassis are backing onto the Ore Pad.
2. Ensure that all personnel within 50 feet of the area where the IMC is hooked up to the Bartlett tipper are aware that dumping is about to commence.
3. Bartlett tipper operators must use caution during the dumping process. Move at least 25 feet away from the rear of the IMC during the initial dumping operation.
4. Do not place any part of your body inside the IMC when the chassis is being tipped and the tailgate is open. The IMC could be lowered or accidentally fall at any time, which would cause the tailgate to close rapidly and result in injury. Only work under the tailgate after it has been properly blocked open.
5. Be aware of high-pressure wash water.
6. When the crane is in operation, make sure all personnel, except the persons in charge of the tag lines, are 50 feet away from the IMC being moved. The persons in charge of the tag lines should **never** be underneath the IMC that is being moved.
7. Be aware of slippery conditions on the ore pad during periods of inclement weather.
8. Be aware of the potential for ice build-up on and around the decontamination pad during periods of cold weather.
9. Use caution when entering or exiting equipment. Be sure to use the ladders and hand rails. **Do not jump off of the equipment.**
10. Always use a ladder when entering and/or exiting the interior of an IMC.

8.0 Paperwork Tracking

1. Each IMC will have a unique sequential project number assigned to it at the generating facility. This number will be entered onto the Bill of Lading (BOL) and attached to the IMC prior to shipment from the generation site.
2. Upon arrival at the White Mesa Mill, the truck driver will turn in all of his/her paperwork to the Scale House operator who will verify that the BOL number, IMC number and project number assigned to the shipment match on all copies of the BOL. The Scale House operator will also verify that the actual IMC number matches the BOL IMC Number. **If there are any discrepancies in any of the numbers notify Mill management immediately.** Only original paperwork will

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be accepted. If the original paperwork does not come with the IMC, **notify Mill management immediately**. The Scale House operator will sign the BOL, acknowledging receipt of the material at the Mill, **if all of the paperwork is in order**. Depending on contractual and/or sampling requirements, final acceptance or rejection of certain alternate feed materials may be contingent on analytical results.

3. Each IMC will be transported across the scale at the Mill prior to and after being unloaded. The appropriate information will be entered into the project database. All copies of the SWTs and BOLs will be forwarded to the Mill Records Manager on a daily basis or other frequency specified by Mill Management, from time to time.
4. The Mill Records Manager will compile and reconcile the BOL's and SWTs for distribution. The accounting department will forward a summary of all receipts to the International Uranium corporate office and the generator of the material at least twice monthly, or at other frequencies as determined for the specific project.

INTERNATIONAL URANIUM

WHITE MESA MILL

INTERMODAL CONTAINER INSPECTION FORM

Number

Container Number

Chassis Number

Incoming

Outgoing

		Incoming	Outgoing
1	Correct Paperwork		
2	Decontaminated		
3	Tarps		
4	Tarp Tie Downs		
5	Tarp Support Bows		
6	Bow Attachment Brackets		
7	Lifting Lugs		
8	Structural Damage		
9	Latch Mechanisms		
10	Tires		
11	Mudflaps		

Additional Comments

Incoming

Outgoing

Date

IUC

Driver&Trk Num.

INTERNATIONAL URANIUM (USA) CORPORATION
DECONTAMINATION FINAL RELEASE

I have verified that tractor _____ NA _____ and/or container
Tractor Number
_____ has been checked for any contamination and has been
Container Number
authorized for final release.

Radiation Department

Radiation Technician
Title

Date

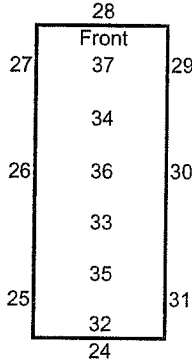
International Uranium (USA) Corporation
Intermodal Container Survey for Restricted Release

Date: _____

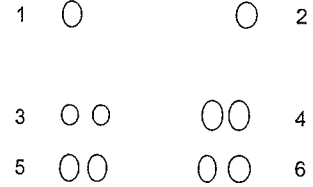
Container ID: _____ Surveyed By: _____

Ashland or Linde

Outside Locations



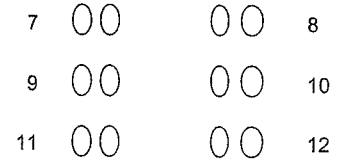
IUSA Truck and Tire Survey



Location #	Total Alpha/ Beta-Gamma cpm
24	
25	
26	
27	
28	
29	
30	
31	
32	
33	
34	
35	
36	
37	
Rails	

Location #	Total Alpha/ Beta-Gamma cpm
1:	
2:	
3:	
4:	
5:	
6:	
Truck Ext.:	

IMC CHASSIS TIRES



Instrument Data

*Total Alpha/
Beta/Gamma*

Model #: _____
 SN: _____
 Cal. Date: _____
 Source: _____
 Efficiency: _____

Location #	Total Alpha/ Beta-Gamma cpm
7	
8	
9	
10	
11	
12	
Chassis Ext.	

International Uranium (USA) Corporation

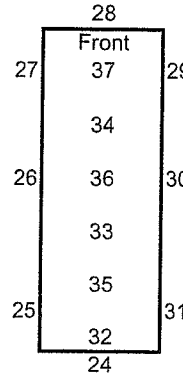
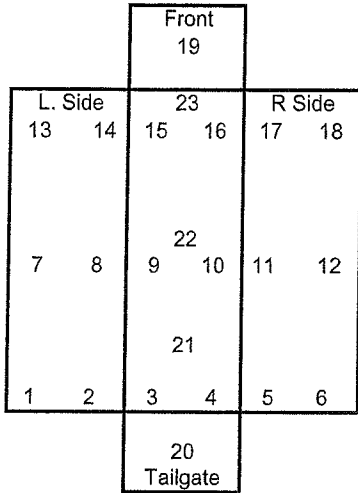
Intermodal Container Survey for Unrestricted Release

Date: _____ Container ID: _____ Surveyed By: _____

Inside Locations

Ashland or Linde

Outside Locations



IUSA Truck and Tire Survey

1 ○ ○ 2
3 ○ ○ ○ ○ 4
5 ○ ○ ○ ○ 6

dpm/100cm²

Location #	Total Alpha	Removable Alpha
	dpm/100cm ²	dpm/100cm ²
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		

Location #	Total Alpha	Removable Alpha
	dpm/100cm ²	dpm/100cm ²
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		
33		
34		
35		
36		
37		
Rails		

Total Alpha/Beta-Gamma	
Location #	cpm
1:	
2:	
3:	
4:	
5:	
6:	
Truck Ext.:	

IMC CHASSIS TIRES

7 ○ ○ ○ ○ 8
9 ○ ○ ○ ○ 10
11 ○ ○ ○ ○ 12

Total Alpha/Beta-Gamma
Location # cpm

7	
8	
9	
10	
11	
12	
Chassis Ext.	

If any location exceeds 1000 dpm/100 cm² total alpha, a smear/wipe survey for removable alpha must be performed.
However, additional removable alpha swipes, although not required, may be performed.

Instrument Data

Total Alpha
Instrument: ESP-1 / AC-3
SN 02299 / 1
02286 / 2
Cal. Date: _____
Function Check (5 x 1 min.)
Th 230 @ 30300 dpm
Bkg Average: _____
Dpm Average: _____

Removable Alpha
Model: _____
SN: _____
Cal. Date: _____
Function Check (5 x 1 min.)
Alpha Bkg Ave: _____
Alpha eff: _____
Alpha Factor: _____

Total Beta/Gamma
Model #: _____
SN: _____
Cal. Date: _____
Source: _____
Efficiency: _____

[Code of Federal Regulations]
[Title 49, Volume 2, Parts 100 to 185]
[Revised as of October 1, 1999]
From the U.S. Government Printing Office via GPO Access
[CITE: 49CFR173.441]

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TITLE 49--TRANSPORTATION

CHAPTER I--RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION, DEPARTMENT OF
TRANSPORTATION

PART 173--SHIPPERS--GENERAL REQUIREMENTS FOR SHIPMENTS AND PACKAGINGS--Table of Cont

Subpart I--Class 7 (Radioactive) Materials

Sec. 173.441 Radiation level limitations.

(a) Except as provided in paragraph (b) of this section, each package of Class 7 (radioactive) materials offered for transportation must be designed and prepared for shipment, so that under conditions normally incident to transportation, the radiation level does not exceed 2 mSv/hour (200 mrem/hour) at any point on the external surface of the package, and the transport index does not exceed 10.

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(b) A package which exceeds the radiation level limits specified in paragraph (a) of this section must be transported by exclusive use shipment, and the radiation levels for such shipment may not exceed the following during transportation:

(1) 2 mSv/h (200 mrem/h) on the external surface of the package unless the following conditions are met, in which case the limit is 10 mSv/h (1000 mrem/h):

(i) The shipment is made in a closed transport vehicle;

(ii) The package is secured within the vehicle so that its position remains fixed during transportation; and

(iii) There are no loading or unloading operations between the beginning and end of the transportation;

(2) 2 mSv/h (200 mrem/h) at any point on the outer surfaces of the vehicle, including the top and underside of the vehicle; or in the case of a flat-bed style vehicle, at any point on the vertical planes projected from the outer edges of the vehicle, on the upper surface of the load or enclosure if used, and on the lower external surface of the vehicle;

(3) 0.1 mSv/h (10 mrem/h) at any point 2 meters (6.6 feet) from the outer lateral surfaces of the vehicle (excluding the top and underside of the vehicle); or in the case of a flat-bed style vehicle, at any point 2 meters (6.6 feet) from the vertical planes projected by the outer edges of the vehicle (excluding the top and underside of the vehicle); and

(4) 0.02 mSv/h (2mrem/h) in any normally occupied space, except that this provision does not apply to carriers if they operate under the provisions of a State or federally regulated radiation protection program and if personnel under their control who are in such an occupied space wear radiation dosimetry devices.

(c) For shipments made under the provisions of paragraph (b) of this section, the offeror shall provide specific written instructions for maintenance of the exclusive use shipment controls to the carrier. The instructions must be included with the shipping paper information. The instructions must be sufficient so that, when followed, they will cause the carrier to avoid actions that will unnecessarily delay delivery or unnecessarily result in increased radiation levels or radiation exposures to transport workers or members of the general public.

(d) Packages exceeding the radiation level or transport index prescribed in paragraph (a) of this section may not be transported by aircraft.

[Amdt. 173-244, 60 FR 50307, Sept. 28, 1995, as amended at 63 FR 48568, Sept. 10, 1998]

[Code of Federal Regulations]
 [Title 49, Volume 2, Parts 100 to 185]
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TITLE 49--TRANSPORTATION

CHAPTER I--RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION, DEPARTMENT OF
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PART 173--SHIPPERS--GENERAL REQUIREMENTS FOR SHIPMENTS AND PACKAGINGS--Table of Cont

Subpart I--Class 7 (Radioactive) Materials

Sec. 173.443 Contamination control.

(a) The level of non-fixed (removable) radioactive contamination on the external surfaces of each package offered for transport must be kept as low as reasonably achievable. The level of non-fixed radioactive contamination may not exceed the limits set forth in table 11 and must be determined by either:

(1) Wiping an area of 300 square centimeters of the surface concerned with an absorbent material, using moderate pressure, and measuring the activity on the wiping material. Sufficient measurements must be taken in the most appropriate locations to yield a representative assessment of the non-fixed contamination levels. The amount of radioactivity measured on any single wiping material, when averaged over the surface wiped, may not exceed the limits set forth in table 11 at any time during transport; or

(2) Using other methods of assessment of equal or greater efficiency, in which case the efficiency of the method used must be taken into account and

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the non-fixed contamination on the external surfaces of the package may not exceed ten times the limits set forth in table 11, as follows:

Table 11--Non-Fixed External Radioactive Contamination-Wipe Limits

Contaminant	Maximum permissible limits		
	Bq/cm ²	uCi/cm ²	
Beta and gamma emitters and low toxicity alpha emitters.....	0.4	10 ⁻⁵	22
All other alpha emitting radionuclides..	0.04	10 ⁻⁶	2.2

(b) Except as provided in paragraph (d) of this section, in the case of packages transported as exclusive use shipments by rail or public highway only, the removable (non-fixed) radioactive contamination on any package at any time during transport may not exceed ten times the levels prescribed in paragraph (a) of this section. The levels at the beginning of transport may not exceed the levels prescribed in paragraph (a) of this section.

(c) Except as provided in paragraph (d) of this section, each transport vehicle used for transporting Class 7 (radioactive) materials as an exclusive use shipment that utilizes the provisions of paragraph (b) of this section must be surveyed with appropriate radiation detection instruments after each use. A vehicle may not be returned to service until the radiation dose rate at each accessible surface is

0.005 mSv per hour (0.5 mrem per hour) or less, and there is no significant removable (non-fixed) radioactive surface contamination as specified in paragraph (a) of this section.

(d) Paragraphs (b) and (c) of this section do not apply to any closed transport vehicle used solely for the transportation by highway or rail of Class 7 (radioactive) material packages with contamination levels that do not exceed 10 times the levels prescribed in paragraph (a) of this section if--

(1) A survey of the interior surfaces of the empty vehicle shows that the radiation dose rate at any point does not exceed 0.1 mSv per hour (10 mrem per hour) at the surface or 0.02 mSv per hour (2 mrem per hour) at 1 meter (3.3 feet) from the surface;

(2) Each vehicle is stenciled with the words "For Radioactive Materials Use Only" in letters at least 76 millimeters (3 inches) high in a conspicuous place on both sides of the exterior of the vehicle; and

(3) Each vehicle is kept closed except for loading or unloading.

[Amdt. 173-244, 60 FR 50307, Sept. 28, 1995, as amended by Amdt. 173-244, 61 FR 20753, May 8, 1996]

GUIDELINES FOR DECONTAMINATION OF FACILITIES AND EQUIPMENT
PRIOR TO RELEASE FOR UNRESTRICTED USE
OR TERMINATION OF LICENSES FOR BYPRODUCT, SOURCE,
OR SPECIAL NUCLEAR MATERIAL

U.S. Nuclear Regulatory Commission
Division of Fuel Cycle, Medical, Academic,
and Commercial Use Safety
Washington, DC 20555

May 1987

The instructions in this guide, in conjunction with Table 1, specify the radionuclides and radiation exposure rate limits which should be used in decontamination and survey of surfaces or premises and equipment prior to abandonment or release for unrestricted use. The limits in Table 1 do not apply to premises, equipment, or scrap containing induced radioactivity for which the radiological considerations pertinent to their use may be different. The release of such facilities or items from regulatory control is considered on a case-by-case.

1. The licensee shall make a reasonable effort to eliminate residual contamination.
2. Radioactivity on equipment or surfaces shall not be covered by paint, plating, or other covering material unless contamination levels, as determined by a survey and documented, are below the limits specified in Table 1 prior to the application of the covering. A reasonable effort must be made to minimize the contamination prior to use of any covering.
3. The radioactivity on the interior surfaces of pipes, drain lines, or ductwork shall be determined by making measurements at all traps, and other appropriate access points, provided that contamination at these locations is likely to be representative of contamination on the interior of the pipes, drain lines, or ductwork. Surfaces of premises, equipment, or scrap which are likely to be contaminated but are of such size, construction, or location as to make the surface inaccessible for purposes of measurement shall be presumed to be contaminated in excess of the limits.
4. Upon request, the Commission may authorize a licensee to relinquish possession or control of premises, equipment, or scrap having surfaces contaminated with materials in excess of the limits specified. This may include, but would not be limited to, special circumstances such as razing of buildings, transfer to premises to another organization continuing work with radioactive materials, or conversion of facilities to a long-term storage or standby status. Such requests must:
 - a. Provide detailed, specific information describing the premises, equipment or scrap, radioactive contaminants, and the nature, extent, and degree of residual surface contamination.
 - b. Provide a detailed health and safety analysis which reflects that the residual amounts of materials on surface areas, together with other considerations such as prospective use of the premises, equipment, or scrap, are unlikely to result in an unreasonable risk to the health and safety of the public.

5. Prior to release of premises for unrestricted use, the licensee shall make a comprehensive radiation survey which establishes that contamination is within the limits specified in Table 1. A copy of the survey report shall be filed with the Division of Fuel Cycle, Medical, Academic, and Commercial Use Safety, U. S. Nuclear Regulatory Commission, Washington, DC 20555, and also the Administrator of the NRC Regional Office having jurisdiction. The report should be filed at least 30 days prior to the planned date of abandonment. The survey report shall:
- a. Identify the premises.
 - b. Show that reasonable effort has been made to eliminate residual contamination.
 - c. Describe the scope of the survey and general procedures followed.
 - d. State the findings of the survey in units specified in the instruction.

Following review of the report, the NRC will consider visiting the facilities to confirm the survey.

TABLE 1

ACCEPTABLE SURFACE CONTAMINATION LEVELS

NUCLIDES ^a	AVERAGE ^b c f	MAXIMUM ^b d f	REMOVABLE ^b e f
U-nat, U-235, U-238, and associated decay products	5,000 dpm α /100 cm ²	15,000 dpm α /100 cm ²	1,000 dpm α /100 cm ²
Transuramics, Ra-226, Ra-228, Th-230, Th-228, Pa-231, Ac-227, I-125, I-129	100 dpm/100 cm ²	300 dpm/100 cm ²	20 dpm/100 cm ²
Th-nat, Th-232, Sr-90, Ra-223, Ra-224, U-232, I-126, I-131, I-133	1000 dpm/100 cm ²	3000 dpm/100 cm ²	200 dpm/100 cm ²
Beta-gamma emitters (nuclides with decay modes other than alpha emission or spontaneous fission) except Sr-90 and others noted above.	5000 dpm $\beta\gamma$ /100 cm ²	15,000 dpm $\beta\gamma$ /100 cm ²	1000 dpm $\beta\gamma$ /100 cm ²

^awhere surface contamination by both alpha- and beta-gamma-emitting nuclides exists, the limits established for alpha- and beta-gamma-emitting nuclides should apply independently.

^bAs used in this table, dpm (disintegrations per minute) means the rate of emission by radioactive material as determined by correcting the counts per minute observed by an appropriate detector for background, efficiency, and geometric factors associated with the instrumentation.

^cMeasurements of average contaminant should not be averaged over more than 1 square meter. For objects of less surface area, the average should be derived for each such object.

^dThe maximum contamination level applies to an area of not more than 100 cm².

^eThe amount of removable radioactive material per 100 cm² of surface area should be determined by wiping that area with dry filter or soft absorbent paper, applying moderate pressure, and assessing the amount of radioactive material on the wipe with an appropriate instrument of known efficiency. When removable contamination on objects of less surface area is determined, the pertinent levels should be reduced proportionally and the entire surface should be wiped.

^fThe average and maximum radiation levels associated with surface contamination resulting from beta-gamma emitters should not exceed 0.2 mrad/hr at 1 cm and 1.0 mrad/hr at 1 cm, respectively, measured through not more than 7 milligrams per square centimeter of total absorber.

INTERNATIONAL URANIUM (USA) CORPORATION
DECONTAMINATION FINAL RELEASE

I have verified that tractor _____ NA _____ and/or container
Tractor Number
_____ has been checked for any contamination and has been
Container Number
authorized for final release.

Radiation Department

Radiation Technician
Title

Date