
**Oak Ridge National Laboratory (ORNL)
Transportation and Packaging Management (TPM)
Container Preparation and Filling Instructions/Checklist**

Reusable Type A Viking Package

ORNL-PKG-25, Rev. 2

Issued: 3/3/1997

Revised: October 25, 2005

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NOTE: The Reusable Type A Viking Package is certified for shipment of Type A amounts of radionuclides in solid or liquid form. For liquids, there are several designs which hold either 1 liter or 4 liters. This volume can be in 1 liter bottles or in several bottles with less than 1 liter capacity, at the direction of the Packaging Supervisor. The pressure requirement for air shipments of liquid materials [95 kPa (13.8 psi)] must be met by the primary container (bottle or vial), or an intermediary container (i.e., 5-liter paint can.) There are three designs currently approved for Type A packaging at Oak Ridge National Laboratory (ORNL):

1. Capacity of 1 liter w/buckle strap closure
P/N VPS-BXKT-001B (See [Attachment A \(Page 1 of 2\)](#) for drawing)
2. Capacity of 1 liter w/twist latch closure
P/N VPS-BXKT-001C (See [Attachment B \(Page 1 of 2\)](#) for drawing)
3. Capacity of 4 liters w/twist latch closure
P/N VPS-BXKT-003C (See [Attachment C \(Page 1 of 2\)](#) for drawing)

A. Prior to Packaging the Reusable Type A Viking Package

**Packaging
Operations**

1. Ensure that external and internal contamination limits are within ORNL site limits by:
 - Reviewing existing Health Physics (HP) tag or documentation, **or**
 - Requesting new HP survey.
2. Inspect the following visually for damage, dents, defects, etc.:
 - Bottom, wall, and top cushioning panels,
 - Bottom and top styrofoam inserts,
 - 5-liter can (as applicable),
 - Polyliner (as applicable), **and**
 - Outer box, including latches, straps, and nameplate.
3. Report any deficiencies to the Packaging Supervisor.
4. Ensure that the primary container(s) are pressure tested to 95 kPa (13.8 psi) for air shipments of liquids.
5. Place the primary container(s) inside the 5-liter can with the closure upward, if applicable.

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B. Packaging the Reusable Type A Viking Package

Packaging Operations

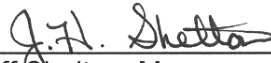
1. P/N VPS-BXKT-001B— See [Attachment A \(Page 2 of 2\)](#) for closing instructions.
2. P/N VPS-BXKT-001C — See [Attachment B \(Page 2 of 2\)](#) for closing instructions.
3. P/N VPS-BXKT-003C — See [Attachment C \(Page 2 of 2\)](#) for closing instructions.
4. Attach a plain wire seal for non-accountable materials; or a controlled, numbered seal for accountable materials, if required.

The seal wire should be threaded through the hole in the center buckle so that the buckle cannot be opened without breaking the wire.

5. Record the controlled, numbered seal information on the Seal Log Sheet, if applicable.

Prepared by: ORNL TPM Organization

Approved by:


Jeff Shelton, Manager (576-6401)
ORNL TPM - Packaging Operations

October 25, 2005

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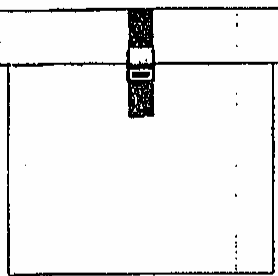
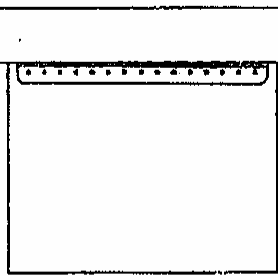
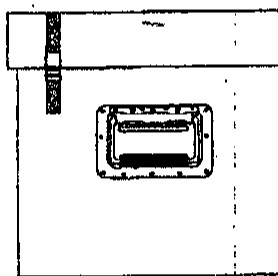
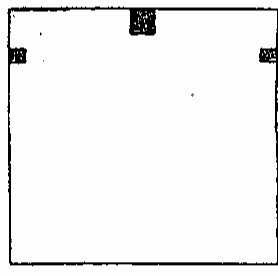
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ATTACHMENT A (Page 1 of 2)

Drawing

VPS-BXKT-001B

<p>Pack-Lite Systems </p> <p><small>3512 E. 55th St. - Tulsa, Oklahoma - 74145 Phone: (918) 663-1391 - Fax: (918) 663-3035</small></p>	<p>VIKING</p>	<p>PL# VXX001062696 26-June-96</p>
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<p>Front View</p> 	<p>Rear View</p> 
<p>End View</p> 	<p>Top View</p> 

<p>DETAILS:</p> <ul style="list-style-type: none"> - tray bottom with hinged lid - double wall lid - minimum 400 LB high density polyethylene corrugated material (.4#/Sq. Ft.) - 2 recessed handles - continuous hinge for easy access - 2 lid stays 	<ul style="list-style-type: none"> - 1 2" LOCK MONSTER BUCKLE & STRAP (WITH BACK-UP PLATE) - 2 1" LOCK MONSTER BUCKLES & STRAPS (WITH BACK-UP PLATES) 1 EACH END - ALL MANUFACTURERS JOINTS; RIVETED
<p>VIKING CHILL-PACK 1B</p>	

<p>Case Style: Utility</p> <p>Case I.D. (LWH): 14" X 14" X 14.5"</p>	<p>Notes/Comments:</p>
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ATTACHMENT A (Page 2 of 2)

Closing Instructions

VPS-BXKT-001B

1. Ensure bottom cushion, wall and end cushions are intact and properly positioned.
2. Place inner packaging into 5-liter can with closure upward.
3. Place 5-liter can inside bottom poly foam suspension panel.
4. Place top poly foam suspension panel on top of can.
5. Place specified cushioning material cap into outer packaging.
6. Close top lid and snap buckles at all three locations.
7. Ensure gross package weight does not exceed 14 kg.

Note: Seals for middle buckle are available, if needed, please call Viking Packing Specialist at 1-800-788-8525.

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ATTACHMENT B (Page 1 of 2)

Drawing

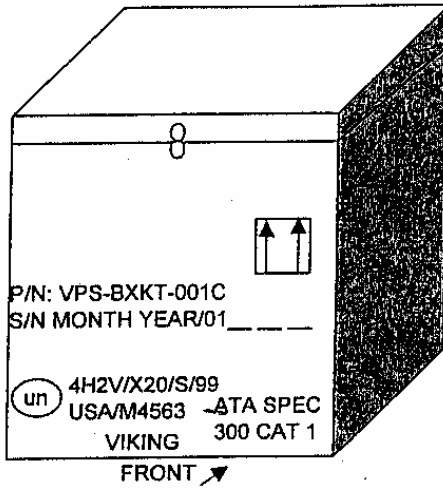
VPS-BXKT-001C

PRINTING INFORMATION

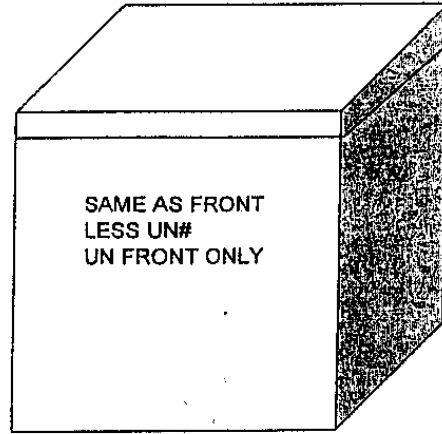


CUSTOMER	VIKING
BOX	VPS-BXKT-001C
DATE	3/30/99

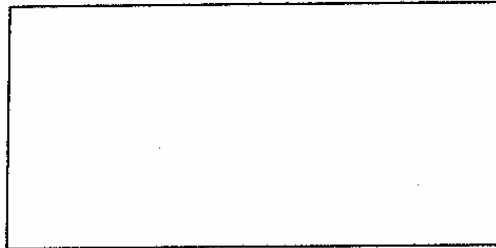
REVISION	0
COLOR(S)	RED, BLACK
FIG.BY/DATE	JL



FRONT ↗



BACK ↗



TOP ↗

DIE #	DESCRIPTION
	P/N
	UN: 4H2
	ATA SPEC
	VIKING
	UP/ARROWS
	S/N

LOCKS USED 2 MED SURFACE MNT TWIST

ADDITIONAL INFO.

P/N=BLACK
 S/N= BLACK
 UN#=RED
 UP ARROWS=RED
 ATA SPEC=BLACK
 VIKING=BLACK
 PACKING INSTRUCTIONS SHOULD BE INCLUDED IN EACH CASE
 HAZARDOUS MARKINGS APPROVAL:

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ATTACHMENT B (Page 2 of 2)

Closing Instructions

VPS-BXKT-001C

Packing Instructions



10221 E. 61st Street, Tulsa, OK 74133

Phone 918-252-5515

1-800-788-8525

Fax 918-252-5518

Work Order/Reference #:	IHT-540-1C
Outer:	4H2V/X20, VPS-BXKT-001C
Inner:	1: 1L Boston Round, Glass
Gross Marked Weight:	20 kg

- Instructions:**
- 1 Ensure that gross weight of inner package does not exceed 2 kg.
 - 2 Seal bottle and pack with a minimum of 2 absorbent sheets in 5L can. * Make sure bottle is surrounded on all sides by absorbent material.
 - 3 Close can tightly with friction fit lid and seal with plastic ringlock. Overseal will snap into place.
 - 4 Place can into polybag, purge excess air and seal with tight knot.
 - 5 If shipping with dry ice, proceed to step 6.
Place can in center of box cavity. Place 8 ice blocks into corners, stacked in pairs and securing the can from movement. Proceed to step 10.
 - 6 When using dry ice, place 1 foam insert into floor of box cavity with the die-cut side facing up.
 - 7 Place can into insert, making sure it fits snugly.
 - 8 Place dry ice into box cavity around can, filling to within 1 1/2" of can lid.
 - 9 Place second insert over top of can, ensuring snug fit.
 - 10 Close lid and secure latches, turning clockwise.
 - 11 Ensure gross package weight does not exceed 20kg.

Any concerns regarding this package can be answered by calling Viking at 1-800-788-8525

7:30 am - 4:30 pm Central Time

VSPF-10-01-M

Rev.1 date 10/30/97

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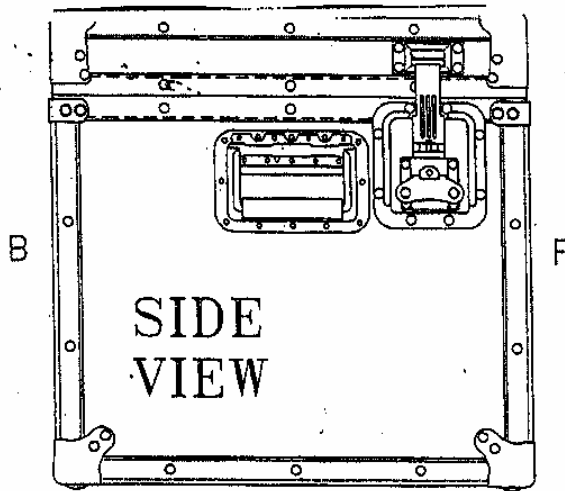
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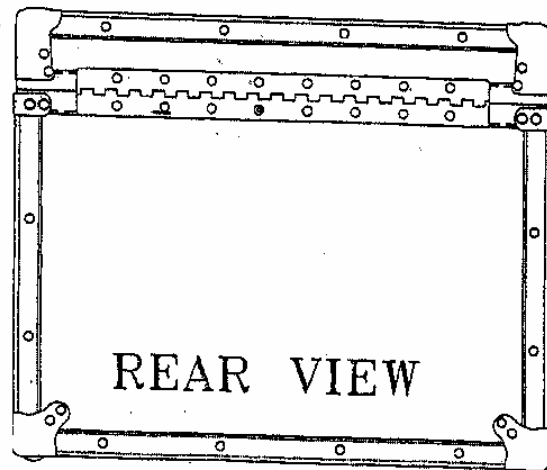
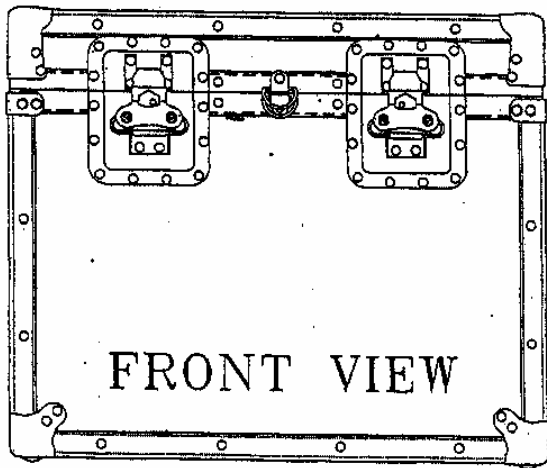
ATTACHMENT C (Page 1 of 2)

Drawing

VPS-BXKT-003C



VIKING PACKING SPECIALIST
ITEM: VPS-BXKT-003C
W/O #: IHT-540-3C
3/4/99
Drawn 2/6/99



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Closing Instructions

VPS-BXKT-003C

Packing Instructions



10221 E. 61st Street, Tulsa, OK 74133

Phone 918-252-5515

1-800-788-8525

Fax 918-252-5518

Work Order/Reference #:	IHT-540(3C)
Outer:	4H2V/X31, VPS-BXKT-003C
Inner:	4: 1L Boston Round, Glass
Gross Marked Weight:	31 kg

- Instructions:**
- 1 Place large polyliner into box.
 - 2 Place 2 absorbent sheets into bottom of polyliner, covering the floor of package.
 - 3 Place 2 absorbent sheets into bottom of small polybag.
 - 4 Place foam insert into small polybag.
 - 5 Place insert/small polybag into package, within large polyliner.
 - 6 Place ice packs into slots in foam insert.
 - 7 Ensure gross weight of inner packages does not exceed 4kg.
 - 8 Place bottles into inserts.
 - 9 Place 2 absorbent sheets on top of foam insert, within small polybag.
 - 10 Purge excess air from small polybag and close with knot or wire twist-tie.
 - 11 Place 2 absorbent sheets on top of insert.
 - 12 Repeat step 10 for large polyliner.
 - 13 Close lid, secure all 4 latches, turning clockwise (2 on front wall, 1 on each end wall).
 - 14 Ensure gross total package weight does not exceed 31kg.

Any concerns regarding this package can be answered by calling Viking at 1-800-788-8525.

7:30 am - 4:30 pm Central Time

VSPF-10-01-M

Rev.1 date 10/30/97

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