



# SAFETY MANAGEMENT MANUAL

## SOP/02 PORTABLE VANS

Originator:	Approved By:
Theophilus Moniz III	J. L. Coburn, Jr.

### 1. PURPOSE

The purpose of this procedure is to establish standards for portable vans that are used on board Woods Hole Oceanographic Institution ships. It is intended that this procedure be used as a guideline for Masters accepting portable vans on our ships and as guidelines for WHOI ship users as what our expectation for van is.

### 2. RESPONSIBILITY

It is the responsibility of the Master of each WHOI ship receiving a portable van to ensure that the portable van does not present a safety hazard. It is the responsibility of the portable van supplier whether it is a science user or scientific support activity to provide portable vans that meet the included standards of safety.

It is the responsibility of the Marine Operations Coordinator and the SSSG Manager to inform and educate potential and scheduled scientific users of these policies.

### 3. GENERAL

Portable vans come in many sizes and flavors. Their uses are diversifying with the imagination of the science community that uses them. Largely, many of these vans are not subject to regulatory guidelines as they fall within the definition of "scientific equipment" as defined in 46 CFR 188.10-67.

Title 46 CFR Subpart 195.09 provides very general guidelines for scientific equipment and Subpart 195.11 applies to portable vans and tanks. It should be noted that both of these subparts are applicable to inspected Oceanographic Research Vessels. In this procedure guidelines will be directed toward both inspected vessels and uninspected vessels. Care must be taken to recognize that a van designed and used on uninspected vessels may not be allowed on inspected vessels.

It is important to note that within regulatory guidelines the Coast emphasizes the fact that portable vans are intended to include temporary structures which may be carried aboard a vessel for a limited period of time and which are not permanently attached to the vessel.

Where the term good "marine standards" is used, UL for marine service, IEEE-45 or the Coast Guard regulations are acceptable standards.



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### 4. ON COAST GUARD INSPECTED VESSELS

The Coast Guard regulations in Subpart 195.11 classify portable vans into four different categories. Portable vans are accommodation vans, power vans, vans for the use or storage of chemical stores, or scientific equipment vans. All but scientific equipment vans are subject to regulatory plan approval and inspection by the Coast Guard. For the exact regulatory definition for each of these vans refer to 46 CFR 195.11-10.

Accommodation, power and chemical stores vans are subject to plan approval for construction and reinspection by the Coast Guard at two-year intervals. In each of these types of van other regulations apply within Subchapter U (188 et seq.).

If an accommodation, power or chemical stores van is placed aboard an inspected vessel, the Master shall have documentation that the van has a current reinspection completed by the Coast Guard.

Scientific vans make up the majority of the vans found on WHOI vessels. These vans are not subject to design approval or inspection by the Coast Guard. However, it is WHOI's policy that those vans used for other than dead storage shall meet the same standards as for inspected accommodation vans except for the requirements directly related to the sleeping facilities.

### 5. ON VESSELS NOT INSPECTED BY THE COAST GUARD

Certain oceanographic research vessels are not subject to inspection by the Coast Guard. Therefore, portable vans placed aboard these ships are also not subject to design approval or inspection by the Coast Guard. However, it is WHOI's policy that vans on the uninspected OCEANUS must meet the standards for inspected vessels.

Appendix A is provided for all portable vans. Appendix B is provided for portable vans that would require Coast Guard plan approval and inspection on inspected ships but do not because the vans are only used on uninspected ships. Note that in each appendix the applicable Coast Guard regulations have been referenced where possible.

### 6. ACTION

The Master of a WHOI vessel receiving a van needs to confirm that a portable van requiring Coast Guard inspection is inspected. Any portable vans received that do not require inspection shall be examined for conformance with these guidelines.



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## PORTABLE VANS-APPENDIX A

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## All Portable Vans

### Design and Construction

1. Constructed of steel, aluminum or other substantial material suitable for a marine environment. 195.11-10(b)
2. Suitable attachment points for securing in place on the vessel. 195.11-10(b)
3. Electrical systems shall be of good commercial standards. 195.11-09(a)
4. Electrical and pressure connections to the ship's systems shall be to marine standards. 195.11-09(a)
5. Electrical grounding shall be installed and adequate.
6. All electrical systems shall be free from shock hazards.
7. Support electrical connections adequately.
8. Doors equipped with mechanisms to prevent self-releasing or shock.
9. Doors designed to be left open during the use of van equipped with hold backs.
10. All vans occupied, as for example Lab vans, must have 2 means of egress.
11. Vans used as labs must be adequately ventilated. (8x8x20= 600 scfm, 8x8x40=1200 scfm)
12. Electrical systems must be equipped with adequate circuit breaker protection.
13. All wire must be of the low smoke type and connections shall be in proper boxes.
14. All materials shall be of non-combustible nature in accordance with the guidelines established for accommodation vans.

### Marking and Labeling

1. Provided with a label plate stating the light weight and gross weight. 195.11-20(b)
2. Provided with a label plate with power requirements where applicable. 195.11-20(b)

### Loading and Stowage

1. Determine that electrical connections are adequate and in good condition. 195.11-25(a)(1)
2. Determine that any pressure connections are adequate and in good condition. 195.11-25(a)(1)
3. Van securely stowed and attached to vessel to prevent shifting in a seaway. Those occupied during vessel operation shall be welded, bolted or equivalent. 195.11-25(b)
4. Located to prevent recirculation of vessel exhaust systems. 195.11-25(c)
5. Loaded in accordance with the stability requirements of the vessel. 195.11-25(d)
6. Entered in the official logbook. 195.11-25(e)



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## Special Use Portable Vans

In each case these special use portable vans must meet the requirements of Appendix A. The vans applicable here are vans that are placed on uninspected vessels but would be inspected by the Coast Guard if placed on an inspected vessel.

### Berthing Vans

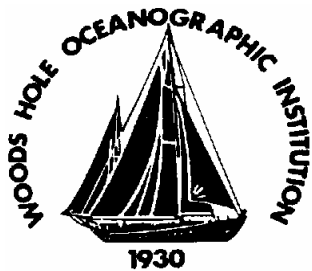
Berthing vans are those intended to provide increased accommodation or related spaces of a temporary nature aboard a vessel.

15. Must have two means of escape. 190.10-5
16. Both means of escape must be free of locking devices or blocked which would render them inaccessible from the inside. 190.10-20
17. Must be ventilated by mechanical means. 190.15-15(b)
18. Must be adequately lighted, heated and air-conditioned. 190.20-5, 190.20-50
19. Must be divided into rooms with no one room may berth more than 4 persons. 190.20-20(b)
20. Each room must provide 30 square feet of deck area and a volume of 210 cubic feet for each person. 190.20-20(c)
21. No more than one berth may be placed above another and each berth must not be less than 27 inches wide and 75 inches long. 190.20-20(d)
22. A locker must be provided for each person. 190.20-20(e)
23. Each berth must have a light. 190.20-45
24. Construction should be of non-combustible materials where possible. 190.07-10(d)
25. Adequate life saving devices must be on board for the increased number of persons accommodated.

### Chemical Store Vans

Vans used for the storage of chemical stores as defined in 194-05-3.

3. Installed equipment, such as shelves and cabinets, shall be constructed of incombustible materials. 194.20-1(a)
4. The access doors must bear the inscription "Chemical Storeroom." 194.20-1(b)
5. The deck shall be non-skid and resistant to chemical spills. 194.20-1(c)
6. All doors must open in the direction of escape. 194.20-1(f)
7. Must be equipped with mechanical ventilation capable of a complete change of air in not more than 4 minutes and must have non-sparking impellers. 194.20-5(a)
8. Exhaust must not be located within 6 feet of interior openings to the vessel. 194.20-5(a)(3)
9. Provisions must be provided so that the van will be ventilated before it is entered. An indicator shall be provided outside the van and the entrance shall be marked "Danger-Ventilate Before Entering." 194.20-5(b)



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10. Fixed fire suppression systems shall be provided.

### Power Vans

Power vans are those outfitted with electrical power generating machinery or batteries providing electrical power for other vans or to scientific equipment.

7. Should meet the regulatory requirements for inspected vessels. 195.11-10(d)
8. Must be equipped with an exterior means to secure fuel supply within the van.
9. Must be equipped with fixed fire suppression system operable from outside the van.
10. The fixed fire suppression system must secure the engine and close all ventilation openings.
11. Must be equipped with adequate circuit breakers for the distribution system