



Date: 21 September 2020

Subj: Portable Scientific Vans

From: University-National Oceanographic Laboratory System (UNOLS)

To: Marine Safety Center

Copy: Commandant (CG-ENG)
UNOLS East Coast Van Pool
UNOLS West Coast Van Pool
National Science Foundation (GEO/OCE/IPS)
Office of Naval Research (Code 321)

Ref: a. USCG CG-ENG Policy Letter 01-16 – Portable Accommodation Module (PAM) Guidance dated 29 Apr 2016
b. American Bureau of Shipping Pub. 193, “Guide for Portable Accommodation Modules (August 2019)”
c. UNOLS Portable Science Vans Manual – January 2003
d. USCG MSC-1 letter H1-0101248 dated 24 May 2001
e. 46 CFR Subchapter U Part 195

1. Intent and Impact:

- a. The University-National Oceanographic Laboratory System (UNOLS) operates, maintains, and oversees construction and repair of a national pool of portable scientific laboratory modules (“vans”) for use on UNOLS designated vessels. Reference (a) appears to be in conflict with reference (e), which is the regulatory standard that UNOLS has relied upon (for nearly two decades, with prior review and acceptance by USCG) for design, construction, and installation of these vans on UNOLS vessels. This conflict presents a significant risk to UNOLS, its member institutions, and its federal funding agencies, in that it has the potential to reduce or eliminate the use of most, or all, existing vans without significant expenditure for compliance. A typical laboratory van built to UNOLS design costs over \$200,000 to construct and equip.
- b. We request review regarding the applicability of reference (a) to scientific laboratory vans, current and future, built to meet UNOLS designs (reference(c)), UNOLS-managed, and used onboard UNOLS designated oceanographic research vessels.
- c. We request concurrence with the path ahead suggested by UNOLS in section 4 of this memo.

2. Background:

- a. UNOLS is an advisory body focused on advising federal agencies on all aspects of oceanographic infrastructure. This includes coordination and review of the access to and utilization of facilities for academic oceanographic research, and the current match of facilities to the needs of academic oceanographic programs. UNOLS is federally funded (by multiple agencies including the National Science Foundation, the US Navy’s Office of Naval Research, the National Oceanic and Atmospheric Administration (NOAA), the United States Coast Guard (USCG), and others,) and has 58 member academic institutions / laboratories. This includes 14 institutions that operate 18 oceanographic research vessels across the

United States. Other facilities include two van pools that coordinate and facilitate the use of portable scientific laboratory vans that are used onboard UNOLS designated vessels when needed to support scientific operations. UNOLS portable scientific vans are also used on USCG vessels at times to support polar science cruises.

- b. There are currently 18 portable scientific vans in the UNOLS van pool inventory that have been used on oceanographic research cruises for nearly 20 years. These represent a variety of laboratory types intended to augment a vessel's lab space or provide capabilities beyond those normally available onboard (e.g. radioisotope use, low- or controlled-temperature environment, etc.)
- c. These laboratory vans are built to reference (c) designs which were developed to meet or exceed the guidance of ref (b) and (e), despite these guidelines not being required for scientific vans. The designs were accepted by the USCG in further communications stemming from reference (d).
- d. Van design, construction, maintenance, scheduling, & transport activities are managed by the UNOLS van pools located at the University of Delaware and Oregon State University. This approach ensures consistency in how the inventory of portable scientific vans is managed and utilized, as well as in the design, construction and maintenance of the vans.

3. Discussion:

- a. Reference (e) Subpart 195.11 appears to indicate that laboratory vans are not subject to USCG plan review and approval as is specifically required for accommodation, power and chemical stores vans. Specifically, §195.11-15(b), states that vans that have not undergone plan review (such as is required for accommodations, power or chemical stores vans) only require OCMI acceptance for each voyage they are used on ships.
- b. Scientific laboratory vans are described separately from accommodation, power and chemical stores vans in ref (e) definition §188.10-67 as "equipment installed or carried onboard an oceanographic research vessel ... which is used primarily in the gathering of scientific data or samples or in processing, analyzing, preserving or storing of such data or samples". Additionally, ref (b) specifies laboratories among its definition of industrial modules, which are not required to comply with ref (b) guidelines:

"This Guide is intended for accommodation modules installed onboard ABS-classed vessels or offshore units. Industrial modules in which people normally work (laboratories, workshops, wireline units, mudloggers, ROV control rooms, etc.) need not comply with this Guide so long as the modules are unmanned during heavy weather and sufficient space for the entire complement of personnel assigned to work in the unit(s) is provided in a deckhouse, superstructure, or module complying fully with applicable structural requirements."
- c. Laboratory vans installed on UNOLS ships are installed in sheltered areas and are not staffed during heavy weather. Such installations meet the requirements as outlined in section 5 of reference (b), above, and paragraph 1 of reference (d). Furthermore, the entire complement of personnel assigned to work in the vans is provided berthing and required safety and survival equipment in the deckhouse and/or superstructure on UNOLS vessels in accordance with applicable USCG regulations.
- d. Time constraints, expense and international coordination make the OCMI inspections required by reference (a) and (e) impractical. It is common for UNOLS laboratory vans to be installed or removed during short, hectic domestic and foreign port calls when science parties and their associated science gear change out over a few days.

4. Suggested path forward for UNOLS laboratory vans – existing and future:
 - a. That the previously USCG-accepted UNOLS designs (reference (c)) continue to be accepted as a standard for new and previously built scientific laboratory vans.
 - b. That laboratory vans continue to be treated as portable scientific equipment and therefore not be counted in vessel gross tonnage nor affect the vessel's Stability Letter (treating the vans as deck cargo as provided for in the policy), nor subject to the requirements of references (b) and (e).
 - c. Based on the excellent safety record of the operators of UNOLS vessels with laboratory van use, arrangement and handling, the OCMI review/attendance requirements be waived for the use of UNOLS laboratory vans onboard UNOLS designated vessels.

5. Thank you for your attention to this matter. Please don't hesitate to contact me with any questions you may have. My contact info: Email: doug@unols.org, Phone: 206-321-5320.



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