

NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. 5-91

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Subi: Inspection and Certification of River Barges Carrying Occupied Recreational Vehicles (RV's)

1. PURPOSE. The purpose of this Circular is to provide guidance to OCMI's and the marine industry for the inspection and certification of barges carrying occupied RV's
2. BACKGROUND.
 - a. Several proposals have recently been presented to the Coast Guard by private citizens and organizations involving scenarios where occupied RV's are carried on the decks of barges and operated on inland waters.
 - b. Previously, RV tours have been available on piggyback trains and ferries. One of the proposed operators has been in business since 1975, conducting these tours in Alaska, Canada, and Mexico. These recent proposals involve the use of several deck barges in tows of varying lengths. At least one proposal involved former tank barges that have been gas freed and modified for this service.
 - c. Since the regulations in Title 46 CFR do not specifically address this type of operation, these tows have been operated under bareboat charter without the benefit of Coast Guard inspection and certification.
3. DISCUSSION.
 - a. The Coast Guard has explored the question of whether barges with occupied RV's on board could be certificated. Upon review, a passenger carrying situation has been determined to exist in these instances. Due to the uniqueness of this type of operation, it has also been determined that the size of the vessel does not adequately reflect the safety risks involved. Accordingly, regardless of size, these vessels should be inspected in accordance with 46 CFR Subchapter H -Passenger Vessels.
 - b. Several significant issues are apparent when attempting to make these converted barges conform to Coast Guard passenger vessel regulations. Due to the large amount of wood, aluminum, and plastic used in the construction of the RV's, it is impossible for these vehicles to meet the standards for accommodations on passenger vessels as specified in Subchapter H. Cooking and heating equipment typically found in the RV's would not be of marine quality and built to the marine standards for inspected vessels.

- c. Title 46 CFR Part 70.15 provides for the substitution of any fitting, material, apparatus, equipment, or arrangement subject to the approval of Commandant (G-MVI). Such substitution must be at least as effective as that specified in Subchapter H. The National Fire Protection Association (NFPA) Code 501C - Standard on Fire Safety Criteria for Recreational Vehicles, and American National Standards Institute (ANSI) A119.2 provide a standard for the construction of recreational highway vehicles. It is believed that the use of these standards combined with certain operational restrictions (i.e., the barge's routes of operation will be restricted and the tow will normally be moored between the hours of 10 p.m. and 6 a.m.), will provide an equivalent level of safety to that of Subchapter H.

4. IMPLEMENTATION.

- a. Owners or operators of barges intended for the carriage of occupied RV's should be guided by enclosure (1) when applying for Coast Guard inspection for certification.
- b. This Circular applies only to those barges carrying occupied RV's while operating on rivers routes or other inland routes equivalent to rivers routes.



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- Encl.: (1) Guidelines for Equivalencies on Passenger Barges in River Service Carrying Occupied RV's

**GUIDELINES FOR EQUIVALENCIES ON PASSENGER BARGES IN RIVER SERVICE
CARRYING OCCUPIED RECREATIONAL
VEHICLES (RV's)**

Listed below are guidelines for the inspection of passenger barges carrying occupied RV's. These guidelines are intended to provide an equivalent level of safety to that contained in 46 CFR Subchapter H. Where particular arrangements required by the regulations are unreasonable or impracticable, an equivalent degree of safety consistent with the minimum standards set forth in Subchapter H may be demonstrated as follows:

1. Equivalencies for construction and arrangement.
 - a. Structural fire protection for the RV's.
 - (1) The occupied RV's being carried on board passenger barges must meet the requirements of National Fire Protection Association (NFPA) 501C, American National Standards Institute (ANSI) A119.2 or another recognized standard for recreational highway vehicles. The RV must have a readily visible manufacturer's plate certifying construction to the required industry standard.
 - (2) The following operational restrictions in addition to the requirements in Subchapter H are considered necessary:
 - (a) Prior to certification, an operations manual must be approved by the Officer in Charge, Marine Inspection (OCMI) and available on board for reference by the passengers and crew. At a minimum, the operations manual must address the following areas: operating restrictions placed on the tow, such as the designated facilities or safe mooring locations where the tow will be moored during evening hours; passenger safety, such as how passengers will be debarked to shore during an emergency; extent of passenger involvement in firefighting and lifesaving drills; location and use of emergency equipment and lighting; duties and responsibilities of barge master, crew, and night watchman; vessel stability and vehicle restraints; limitations on RV machinery operation and open cooking fires.
 - (b) The tow will normally be moored between the hours of 10 p.m. and 6 a.m. alongside a facility or mooring location deemed safe by the barge master. At issue, is the operator's ability to quickly and safely evacuate the vessel's passengers during a fire. This compensates for the differences in structural fire protection between 46 CFR Subchapter H and Department of Transportation, NFPA, and ANSI RV standards. The local OCMI may ease this restraint for specific occasions, on a case-by-case basis.
 - (c) An illuminated gangway providing a ready means of escape from the tow to shore in the event of an emergency must be provided. A suitable second means of escape must also be provided. It is envisioned that safe refuge on board the towing vessel will meet the provision for a secondary means of escape.

- (d) Between the hours of 10 p.m. and 6 a.m., a roving watchman must be provided. The watchman will be under the direct charge of the barge master. The watchman's responsibilities and duties are to be clearly specified in the operations manual.
- (e) The RV's carried must be built to a recognized RV industry standard. Examples are: NFPA 501C or ANSI A119.2. Uncertified RV's will not be allowed. Procedures to be followed by the barge master in evaluating compliance with these standards must be clearly specified in the operations manual.
- (f) Emergency firefighting, lifesaving and debarkation drills, which include the participation of the passengers, must be conducted prior to commencement of the voyage and after embarkation of additional passengers. Instruction of the passengers in debarkation procedures, under both routine and emergency conditions, is of particular importance. These requirements should be made clear to all passengers at the time of embarkation.
- (g) The towing vessel's whistle may be used as the general alarm. The passengers must be instructed in appropriate response to general alarms during safety briefings. A public address system and suitable emergency lighting must be provided.

b. Construction details of the barge.

- (1) All vehicles must be choked and secured to tie down points on the barge. This will ensure that RV's do not move during the vessel's transit or in the event of a casualty.
- (2) An eight foot space must be maintained between the body of each RV to provide protection against the spreading of a fire from one RV to another and allow access in event of emergencies.
- (3) Safety of passengers requires each barge to have peripheral handrails. Additionally, guards or rails must be provided around the areas where towing cables are secured.
- (4) Barges intended for use in carrying RV's under this Circular must be of an open single deck design.
- (5) The constantly changing amounts, sources, and arrangements of the fire loads associated with the carriage of RV's on the barge's deck necessitates an aggressive prevention, and firefighting capability. Accordingly, a fixed fire main pressurized from the barge with emergency backup on the tug is the minimum fire protection system configuration acceptable.

2. Equivalencies for lifesaving equipment.

- a. This type of vessel arrangement will be treated like all other river passenger barge configurations. As such, a passenger barge carrying RV's must comply with those regulations. These vessels' routes will be restricted; therefore, substitution of liferafts (or life floats) for required lifeboats with a suitable rescue boat is acceptable. A suitable rescue boat means a motorized boat that is easily launched and maneuverable. Title 46 CFR 160.056 specifies the general requirements for a rescue boat.

3. Equivalencies for fire protection equipment.
 - a. Although installed to a recognized standard, such as NFPA 501C or ANSI A119.2, cooking and heating equipment typically found in the RV's will not be of marine quality and built to the marine standards required for vessels certificated under Subchapter H. The following items, in addition to the requirements in 46 CFR Part 76, are considered to be the minimum necessary to demonstrate an equivalent level of safety:
 - (1) Filling of liquefied petroleum gas or compressed natural gas tanks will not be allowed on board the barge.
 - (2) Cooking done outside of an RV must be conducted in a designated area where additional B-II firefighting equipment is provided and readily available.
 - (3) Operation of RV related internal combustion engines is to be restricted once the RV's are secured on the barge. This includes both the RV or towing vehicle engines as well as any small portable generators. Exceptions to this policy will be under the direct supervision of the barge master. No refueling of motor fuel tanks will be allowed on board the barge. If continuous electrical power is desired for the RV's, a generator and distribution system with local hook-ups must be installed on the tow in accordance with 46 CFR Subchapter J.
 - (4) Each RV must have an Underwriters Laboratories approved smoke detector and portable fire extinguisher.
 - (5) The firemain and primary fire pump(s) for the tow must be operationally independent from a source of power on the towing vessel. Normal fire hydrant spacing is envisioned. Each fire station must have a United States Coast Guard approved B-II extinguisher.
 - (6) Emergency lighting to illuminate the deck of the barge adequately for emergency debarkation and efficient firefighting operations must be installed. In particular, the area between barges should be adequately illuminated to prevent tripping. The towboat's search lights may serve as emergency lighting, however, while moored, some other form of security lighting must be installed.
4. Miscellaneous considerations.
 - a. These vessels must comply with the standards within Subchapter H for structural efficiency and the requirements in Subchapter S for stability and subdivision. One compartment subdivision is envisioned.
 - b. It is the responsibility of the owner to provide the OCMI with suitable calculations from a naval architect or professional engineer showing the barge has adequate deck strength and intact stability for the route and service intended.
 - c. Based upon the limited route, and if the barge has two compartment subdivision, the barge's bilge system may be portable. It is envisioned that suitable drop pumps supplied by the tug, may be utilized. On barges not meeting two compartment subdivision, an installed system (which may utilize the barge's firepumps as the prime mover) is required.
 - d. A marine sanitation device must be provided. An installed main to each space or a collector type RV dump system is acceptable. Sewage piping may be run under deck. Bulkhead penetrations are to be made water tight.

- e. On tows made up of multiple barges, a suitable bow thruster must be provided.
5. Manning of passenger barges under tow.
- a. Manning must be in accordance with the guidelines set forth in the Marine Safety Manual, volume III, chapter 23, section H. Sample manning scales are contained in chapter 19, section G of the same volume. In situations where multiple barges are being lashed together to form one tow, it will not be necessary or practical to have a separate crew for each barge. The OCMI should assign a manning scale based on the combined barge arrangement. However, in every case, the OCMI should require sufficient crew members to ensure that there is at least one crew member available for each barge when the tow is underway, and a roving watchman between the hours of 10 p.m. and 6 a.m.