

# AOE DEPARTMENT SAFETY REVIEW FORM FOR **EXPERIMENTAL RIGS**

In the context of this form 'rig' refers to any potentially hazardous piece of equipment whose safe operation requires more detailed instructions and procedures than can be included in the Experimental Workspace Safety Review form for the area in which the rig is housed. Examples include a wind tunnel, laser system, high pressure tank, material testing machine, rotating system.

Before any such rig in the Department of Aerospace and Ocean Engineering is brought into operation, and **at least once per year** thereafter, a copy of this form must be completed, signed and submitted by the responsible faculty/staff member (usually the principal investigator). When an existing rig undergoes modifications which could affect its safety, a new copy of this form must be submitted by the responsible faculty/staff member at that time, and before it is operated again.

Completed forms should be submitted to the AOE Assistant Department Head for Facilities (Michael Philen) and should also be made available to other faculty/staff with relevant expertise, or with direct involvement in the rig or space where it is housed. Any advice resulting from this interaction should be copied to the Assistant Department Head, as well as being transmitted back to the responsible faculty/staff member. Once the responsible faculty/staff member is satisfied that all safety concerns have been met the final version of the form should be signed and submitted and a copy displayed in a prominent position on or adjacent to the rig and on the department safety website. The responsible faculty/staff member may then authorize its operation. Under no circumstances may a rig be operated without a completed, current copy of this form prominently displayed.

Date of form 8/16/2024..... Form expires (no more than 1 year after form date): 8/15/2025.....

Name of Rig        Towing Carriage .....

Workspace where rig is located        Norris 5.....  
*Include room, building and name given to the space on the EHS training website.*

Faculty/staff member responsible for the rig and its safety        Christine Gilbert .....

Office Address        620 McBryde Hall..... Phone    540-231-9428..... Email    ciked@vt.edu .....

*1. An evaluation of the above rig has been performed and the following safety risks have been identified (append details where necessary):*

The water tank presents a drowning risk and electrocution risk. The carriage moves very fast, and the rails/wheels present hazards of pinning individuals and body parts. The carriage is very heavy.

**NO ONE MAY BE ON THE CARRIAGE WHEN IT IS IN MOTION AT ANY TIME FOR ANY REASON!**

*2. The following actions have been taken to minimize those risks (append details where necessary):*

The carriage will be used by trained PIs and graduate students. Undergraduate students may use the carriage under supervision only. Undergraduate students will not climb on the carriage unless supervised. No one will go into the kayak without someone else in the lab.

Caution tape is on the floor near the tow tank. Everyone **MUST** stand behind the caution tape when the carriage is moving. The carriage operator will loudly shout to indicate that the carriage will be moving. It is the carriage operator's responsibility to ensure that the rails are clear, all people are clear of the carriage, people are outside the hazard tape, and that everyone in the room is aware that the carriage will move.

A red flashing light is outside the door and will be used when the carriage is in motion.

3. A safe operating procedure has been developed (attach the procedure to this form). This includes protective equipment to be worn, whether users may operate the rig alone and, if necessary, precautions to be taken by others working in the same laboratory. The procedure is in a form suitable for posting on the rig.

4. Check one and include a list:  The rig may only be operated by the following individuals.

The rig may only be operated under the supervision of the following individuals.

(List individuals here)

Christine Gilbert, Ben Darden

5. The above individuals are all registered on the EHS training website at [https://secure.hosting.vt.edu/www.ehss.vt.edu/training/training\\_report.php](https://secure.hosting.vt.edu/www.ehss.vt.edu/training/training_report.php) and have taken all appropriate safety training courses. Their training is current and is recorded on the EHS website, under the above workspace name. The appropriate safety courses are (list here):

- Electrical Awareness
- General Laboratory Safety
- Personal Protective Equipment (PPE) Awareness
- HAZCOM RTK
- Portable Fire Extinguishers
- Lockout/Tagout Awareness
- Confined Space Awareness
- Ladder Safety
- Tow Tank Training (Canvas)

Signature of faculty/staff member responsible for the rig and its safety ..... Date .....



8/16/2024