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

Before experimental activities can begin in any room in the Department of Aerospace and Ocean Engineering, 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). 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 space. 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 prominently displayed on the door to the space and on the department safety website. The responsible faculty/staff member may then authorize experimental activities.

Date of form: 08/16/2025 Form expires (no more than 1 year after form date): 08/15/2026

Name of workspace VT Tow Tank and Hydroelasticity Laboratory Location Norris 005

Faculty/staff member responsible for Experimental Workspace and its safety Christine Gilbert

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

## ***GENERAL SAFETY REVIEW***

*1. The workspace houses the following potentially hazardous experimental rigs. An 'Experimental Rig Safety Form' has been completed, posted, and is current for each of these.*

*Water Tank*
*Large Slamming Tank*
*Tow Tank Carriage*
*Tow Tank Vertical Planar Motion Mechanism*

*2. An evaluation of the above experimental workspace has been performed and the following safety risks have been identified, in addition to those associated with the above facilities (append details where necessary)*

*There are power tools such as drills, etc. in the lab. There are two tanks of water than can leak or cause electrocution if electrical equipment is dropped into the water.*

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

*Students are not allowed to use any moving equipment unless they have been trained to use it and have been evaluated by the PI or PhD students. Undergraduate students must not complete work alone in the laboratory if they have to climb onto the frame surrounding the water tank, go in the kayak, move the carriage or VPMM. Students must not place any electrical components in any of the water tanks.*

*4. EHSS Safety Requirements and Training*

a) *All workspaces must have a corresponding website listed on the EHSS Safety Management System (https://ehss.vt.edu/sms/index.php). If not created, contact Michael Philen (mphilen@vt.edu) to set one up.*
b) *All users of this workspace must be registered on the EHS training website at https://www.ehss.vt.edu/training/.*
c) *All SMS sites must include the courses listed below, which are required for all users. Additional courses specific to the lab must be included (e.g. laser, high voltage, etc.)*
d) *All chemicals and lasers must be registered on the SMS site.*

Name of the EHSS SMS Workspace*:* Norris Hall, 5 - Tow Tank (cikeda)

Link to the SMS Workspace: https://ehss.vt.edu/sms/space.php?id=1652

.....

*The minimum required safety courses for all workspaces are:*

1. Electrical Awareness
2. General Laboratory Safety
3. HAZCOM RTK
4. Portable Fire Extinguishers
5. Lockout/Tagout Awareness
6. Personal Protective Equipment (PPE) Awareness

*The required safety courses specific for this workspace are:*

7. Laser Safety
8. Confined Space Awareness
9. Hand and Power Tool Safety
10. Ladder Safety
11. Tow Tank Training (Canvas)
12. Vertical Planar Motion Mechanism Training (Canvas)

## ***HAZARD COMMUNICATION PLAN***

*1. A Chemical Hygiene Plan (CHP) is required for this workspace. (The responsible faculty/staff member is required to contact EHS to make this determination before answering this question)*

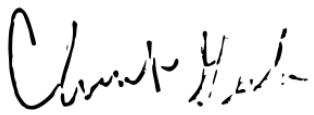
*No* ☒*. Continue to step 2*

*Yes* ☐*. Sign below to certify that a current and complete Chemical Hygiene Plan has been completed for this space. Provide the location of the CHP in the workspace* .....

*2. In signing below I am acknowledging that I am responsible for managing the Hazard Communication Plan for this workspace, specifically, it is my responsibility to ensure:*

- *a) that all workspace users (include students, staff, other faculty) understand and follow this plan through Scheduled HazCom training, all necessary EHS training, and disciplinary action.*
- *b) that a hazardous chemical inventory is compiled and maintained, using the EHS Safety Management System at https://www.ehss.vt.edu/. Click on the **Safety Management System** on left border. A list of hazardous chemicals, downloaded from that site, is appended to the paper copy of this form to be posted on the door to the space. Note that consumer products intended for household use, and used in a manner consistent with that intent need not be listed.*
- *c) that all containers of classified hazardous chemicals associated with or stored in the workspace are clearly and prominently labeled, in English, with the original manufacturers label. If that label is not available then a label based on information from the Safety Data Sheet (product name, danger/warning indication, pictogram…) that clearly communicates the hazard to the user will be used.*
- *d) that procedures are reviewed at least annually, on or about the expiration/renewal date of this form.*
- *e) that Safety Data Sheets (SDS) are available for all chemicals in the attached list are available to lab users*
- *f) that EHS has been consulted on all other training requirements, and these training requirements have been met and are properly recorded on the EHS training website.*
- *g) that meetings to communicate health hazards associated with the use of all hazardous chemicals and the use of proper PPE will be held*
  - *with all new workspace users before they begin work,*
  - *with all workspace users when a new chemical or other hazard is added to the workspace (and at least annually)*
- *h) that all HazCom information and training of employees will at a minimum meet the requirements of OSHA 29 CFR 1910.1200(h), see below .*

Signature of faculty/staff member responsible
for workspace and its safety ..... Date 08/16/2025



## ***LIST OF HAZARDOUS CHEMICALS***

Clorox® Germicidal Bleach
GLASS CLEANER
DOW CORNING(R) 4 ELECTRICAL INSULA TING COMPOUND
M-Bond 200 Adhesive
M-Coat FB
Clear Ballistics Gel
DOW CORNING(R) 737 NEUTRAL CURE SEALANT - BLACK
PVC Medium Clear Cement
Oatey Purple Primer- NSF Listed for PVC and CPVC
PTOUCH 2X +SSPR 6PK FLAT BLACK (Spray Paint)
TSM Conditioner

## ***LOCATION OF SDS SHEETS FOR CHEMICALS***

Sink at the entrance of the lab

## ***LOCATION OF PERSONAL PROTECTIVE EQUIPMENT (PPE)***

Sink at the entrance of the lab

**1910.1200(h)**

*Employee information and training*.

**1910.1200(h)(1)**

Employers shall provide employees with effective information and training on hazardous chemicals in their work area at the time of their initial assignment, and whenever a new chemical hazard the employees have not previously been trained about is introduced into their work area. Information and training may be designed to cover categories of hazards (e.g., flammability, carcinogenicity) or specific chemicals. Chemical-specific information must always be available through labels and safety data sheets.

**1910.1200(h)(2)**

*Information*. Employees shall be informed of:

**1910.1200(h)(2)(i)**

The requirements of this section;

**1910.1200(h)(2)(ii)**

Any operations in their work area where hazardous chemicals are present; and,

**1910.1200(h)(2)(iii)**

The location and availability of the written hazard communication program, including the required list(s) of hazardous chemicals, and safety data sheets required by this section.

**1910.1200(h)(3)**

*Training*. Employee training shall include at least:

**1910.1200(h)(3)(i)**

Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area (such as monitoring conducted by the employer, continuous monitoring devices, visual appearance or odor of hazardous chemicals when being released, etc.);

**1910.1200(h)(3)(ii)**

The physical, health, simple asphyxiation, combustible dust, and pyrophoric gas hazards, as well as hazards not otherwise classified, of the chemicals in the work area;

**1910.1200(h)(3)(iii)**

The measures employees can take to protect themselves from these hazards, including specific procedures the employer has implemented to protect employees from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and personal protective equipment to be used; and,

**1910.1200(h)(3)(iv)**

The details of the hazard communication program developed by the employer, including an explanation of the labels received on shipped containers and the workplace labeling system used by their employer; the safety data sheet, including the order of information and how employees can obtain and use the appropriate hazard information.