

Virginia Tech
Chemistry Department

Chemical Hygiene Plan

This CHP applies to rooms: Hahn Hall North (HHN) Teaching Laboratories

Instructions for: New employee
 Current worker beginning a new task
 Reviewing a revised edition of the CHP

1. Complete the safety training courses that your supervisor enters in the EHS Safety Management System (SMS).
2. Read the Chemical Hygiene Plan Online:
http://www.ehss.vt.edu/programs/HCM_program_online.php
3. Read the documents in this packet (Laboratory-Specific Documentation or Lab CHP).
4. Check the boxes on a copy of the Training Documentation form as you complete the tasks and readings. Sign the form and deliver to your supervisor. (New teaching assistants may return the form to Joli Huynh and Brian Tissue will sign as supervisor.)

Laboratory Specific Documentation

This section will be completed by the Principal Investigator (PI) or Laboratory Chemical Hygiene Officer (LCHO) for the laboratory unit to outline procedures that are specific to the laboratory unit. It is a convenient way to compile all documentation into a single manual.

Introduction

This is the “laboratory-specific” part of the Chemical Hygiene Plan (CHP) formerly known as “Part B”. Each section requires documentation to be written or inserted in the lab CHP binder. It is the responsibility of the LCHO to compile and update this information. EHS will verify the completeness of this section during inspection visits.

Laboratory Unit: **General Chemistry Stockroom and Laboratories**
Hahn Hall North 201, 202, 205, 206, 209, 213, 217, 308

Principle Investigator: **Michelle Dalton**
Office Location: **Hahn Hall North 205**
Work Phone Number: **231-7594**

Laboratory Unit: **Upper-level Laboratories**
Hahn Hall North 307, 309, 312, 313, 315, 316

Principle Investigator: **Negin Nazem**
Office Location: **Hahn Hall North 306**
Work Phone Number: **231-2949**

Note: Chemicals and chemical equipment are prohibited in the prelab rooms:
HHN 305 and HHN 314

Laboratory Unit: **4th-floor Stockroom and Laboratories**
Hahn Hall North 401, 405, 406, 407, 410, 411, 414, 415

Principle Investigator: **Claudia Brodtkin**
Office Location: **Hahn Hall North 411**
Work Phone Number: **231-8230**

Lab Chemical Hygiene Officer (if different from above): **same as above**
Additional contact: **Bill Bebout, HHN Supervisor, 231-1940, wbebout@vt.edu**

Checklist

LCHOs should place a check beside each line item once all of the required information has been incorporated into the appropriate section of the Laboratory Specific manual.

- Evacuation Route
- Spill Cleanup Information
- Material Safety Data Sheet Availability
- Standard Operating Procedures
- Training Documentation

Summary of Duties

- Lab Chemical Hygiene Officer (LCHO)
 - Read the University Chemical Hygiene Plan (formerly known as Part A) found online under Chemical Safety on the EHS website. Links are provided to print a hard copy if desired.
 - Be familiar with additional universal requirements of this program, such as hazardous waste disposal and departmental emergency planning.
 - Compile all information listed under “Checklist” and include in a Laboratory CHP manual.
 - Review and update the inserted information annually.
 - Present the information compiled in the Lab CHP to personnel in your laboratory, and ask them to read it and become familiar with the required reading sections. This should be covered with personnel whenever a new revision to the University CHP is received from EHS, or a new person is assigned to the laboratory.
 - Training documentation must be maintained. Using the “Training Documentation” form provided in this appendix, ask each employee to sign a copy after reading the both parts of the CHP (university and lab specific) and file all signed copies either in the Lab CHP manual or other appropriate and known location.
 - This applies to all paid employees (grad-students, post-doc, paid work study, or other wage or salaried personnel) in the laboratory. Everyone must read the CHP and sign the form.
 - Develop (or designate to a responsible person) written standard operating procedures (SOPs) for any procedure in the laboratory which is not adequately addressed in the University CHP. SOPs should include precautions for health and safety, and be inserted into the Lab CHP manual.
- Laboratory Workers
 - Read, at a minimum, all parts of the CHP that are listed on the “Training Documentation” form.
 - Check off all sections from the “Required Reading List” once they have been read.
 - Sign the “Training Documentation” form.
 - Abide by all policies and procedures described in both the University and Laboratory CHP’s.

Emergency Response

Map of Evacuation Route - Produce a map that details the building/floor where your facility is located. Highlight the route to take during evacuation of the laboratory. Attach the map behind this page.

Spill Cleanup Information - Each laboratory must have ready access to supplies appropriate to cleaning up any chemicals found in that lab. Chemical spill cleanup materials can be purchased from most scientific and safety supply vendors. A typical stock for a lab kit might include:

- Mercury absorb sponges
- Sorbents (appropriate for your lab)
- Neutralizers

LCHO should fill in the following blanks:

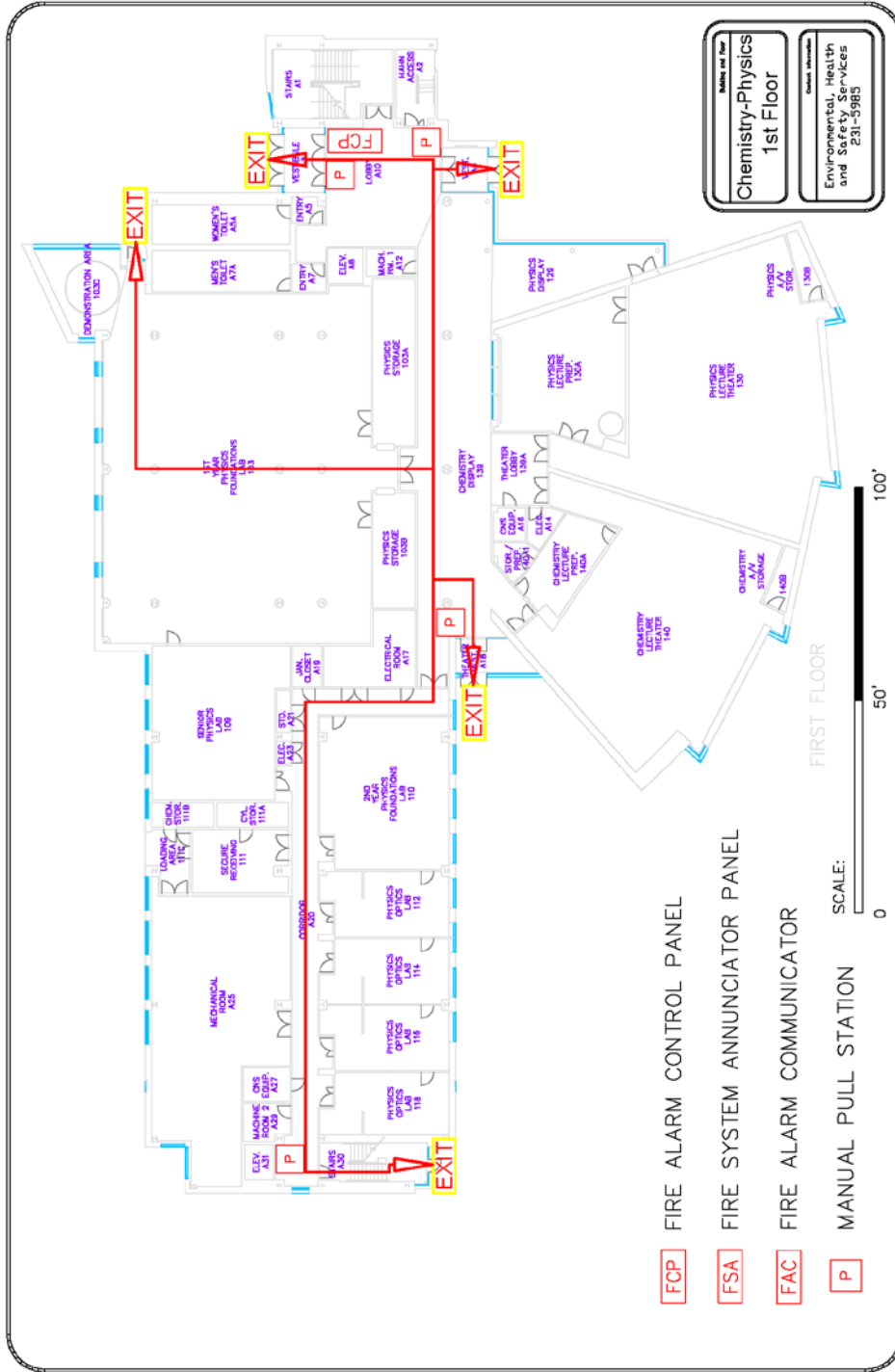
Spill cleanup supplies are located: **Hahn Hall North 205, 309, 315, 316, and 411**

Types available (Acid, base, solvent, Mercury, combo, etc.):

- **acid/base neutralizer**
- **organic solvent and oil absorbing mats**
- **mercury sponges**

Usage information:

- **If a spill is large or the material is hazardous, evacuate the room, call Virginia Tech EHS (231-3600), and notify the Chemistry Department main office (231-5391).**
- **If spill cleanup is manageable, pour the neutralizer or sorbent around and then over the spill area. Sweep the sorbent into a leak-safe bag or other suitable container.**
- **Attach a hazardous waste label to the bag, list the contents, and deliver to a waste collection area.**
- **Clean the area of the spill with soap and water.**
- **Notify stockroom personnel of the spill.**



FCP FIRE ALARM CONTROL PANEL

FSA FIRE SYSTEM ANNUNCIATOR PANEL

FAC FIRE ALARM COMMUNICATOR

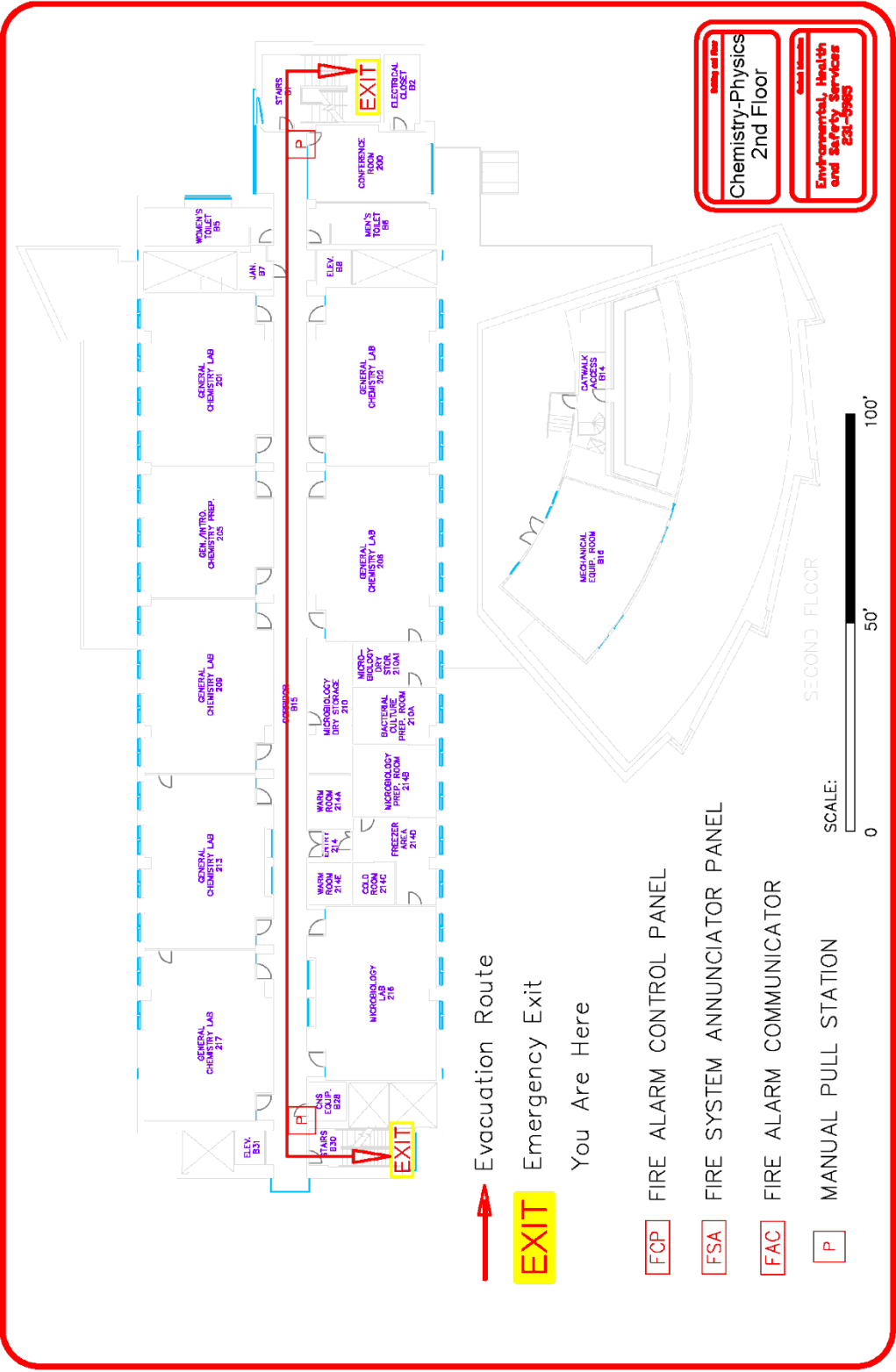
P MANUAL PULL STATION

SCALE:



Building and Floor
Chemistry-Physics
1st Floor

Contact Information
 Environmental, Health
 and Safety Services
 231-3985



Evacuation Route

EXIT

Emergency Exit

You Are Here

FCP FIRE ALARM CONTROL PANEL

FSA FIRE SYSTEM ANNUNCIATOR PANEL

FAC FIRE ALARM COMMUNICATOR

P MANUAL PULL STATION

SCALE:



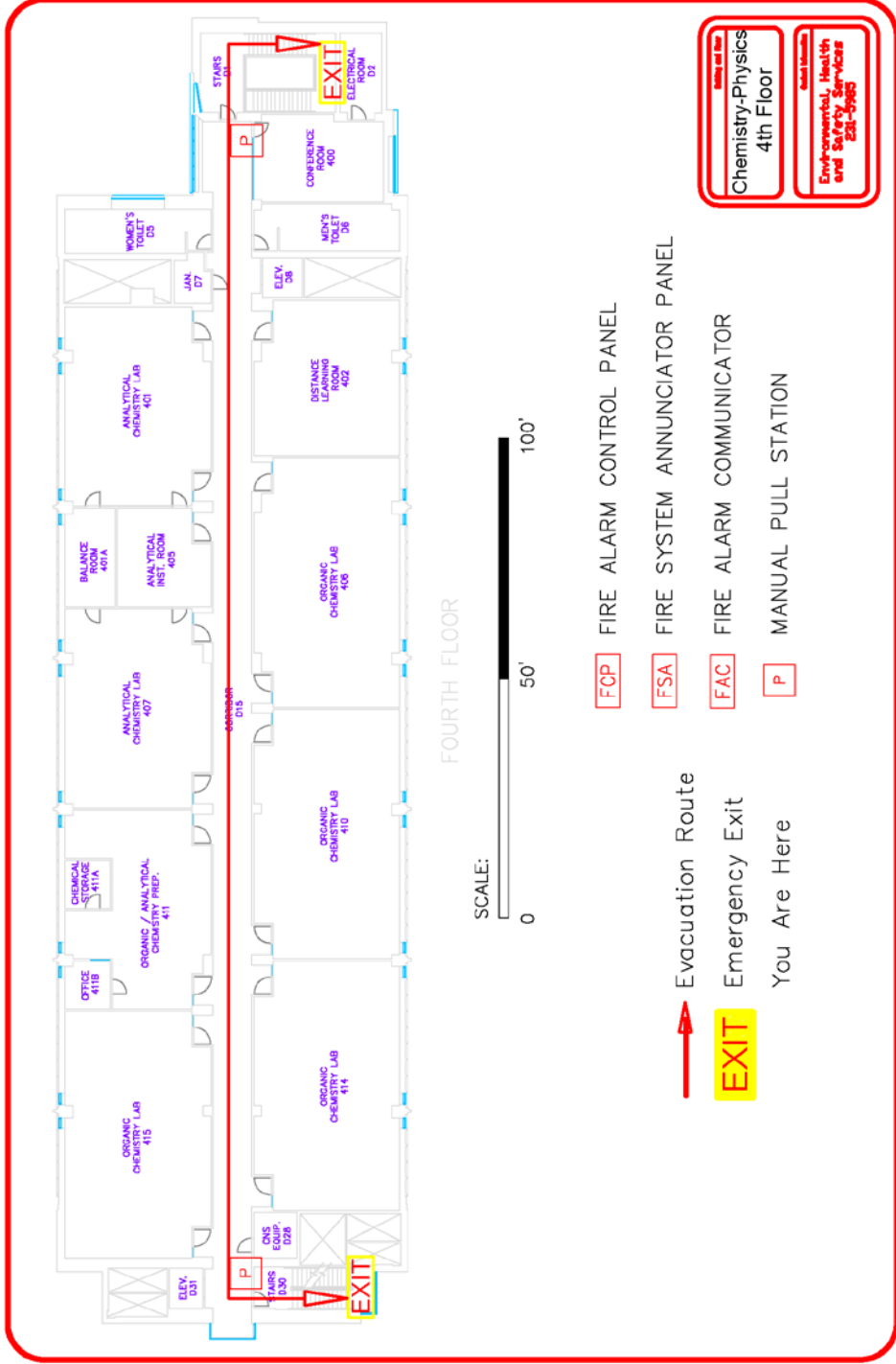
Evacuation Route

**Chemistry-Physics
2nd Floor**

Evacuation Route

**Environmental, Health
and Safety Services
232-5965**

SECOND FLOOR



Material Safety Data Sheets

On the bottom of this page, specify how to locate MSDSs for chemicals in your laboratory. For small labs, a binder containing the MSDSs should be kept in a central location near this (Lab CHP) document. For larger labs, a departmental file might be accessed. If so, give detailed information about the location of this file. Alternatively, you may have other quick reference sources for the MSDS files*. Every lab worker should be instructed on the use and access of MSDS files.

MSDS for our chemicals can be found:

- In this laboratory, located **HHN 205 and HHN 411 Stockrooms** and,
- In the departmental file, located in "Departmental Database" at:
<http://www.chem.vt.edu/general.php?page=safety>
(click on Department Database and login with VT PID)
- On Tom Bell's personal computer, located in Davidson 480A*

***While MSDS research may be done via the internet or with computerized files, it is still a legal requirement that hard copies (paper) MSDS files be maintained. Please do not rely on any electronic system as your sole source of MSDS files.**

Standard Operating Procedures

Written SOPs for any hazardous procedure or use of extremely hazardous materials must be developed and included in this section, *unless* the information overlaps information already provided in the universal requirements detailed in the University CHP. These specific SOPs are only needed to describe protocols in using equipment or materials that pose **unique** hazards.

- Labs that contain laser equipment must develop a written SOP for the safe use of that equipment.
- Labs that use radioactive materials, biohazards, or reproductive toxins must have written SOPs for the safe use of these materials. SOPs for working with such hazards may include provisions for establishing a “designated work area”, containment devices, and decontamination procedures.

SOPs should be written according to the following outline:

- I. Title
- II. Purpose
- III. Equipment or chemicals involved
- IV. Protocol
- V. Safety

Attach SOPs to this section.

Training Documentation

I have received information and training on the subject of chemical hygiene, including the following:

I have read the University Chemical Hygiene Plan for Virginia Tech, and for my laboratory (formerly known as Parts A and B).

I have been given the opportunity to read the OSHA Lab Standard, 29 CFR 1910.1450.

https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10106

I have been instructed on how to locate important reference materials, such as those containing hazard information about chemicals, Permissible Exposure Limits (PEL), and chemical hygiene practices.

I know where to locate the SDS files for chemicals in this laboratory.

I am (check one):

A new employee Beginning a new task Not a lab worker

Reviewing the revised edition of the CHP

Required Reading (check each section that you have read):

General Requirements (Laboratory Requirements: University CHP)

- | | |
|---|--|
| <input type="checkbox"/> Responsibilities | <input type="checkbox"/> Special Chemical Hazards |
| <input type="checkbox"/> Training | <input type="checkbox"/> Eye Wash Stations |
| <input type="checkbox"/> Prudent Laboratory Practices | <input type="checkbox"/> Fume Hoods |
| <input type="checkbox"/> Food and Drink | <input type="checkbox"/> Fire Extinguishers |
| <input type="checkbox"/> Working Alone | <input type="checkbox"/> Emergency Response |
| <input type="checkbox"/> Laboratory Chemical Storage | <input type="checkbox"/> Safety Inspections |
| <input type="checkbox"/> Controlled Substances / List Chemicals | <input type="checkbox"/> Chemical Storage & Management |
| <input type="checkbox"/> Laboratory Waste Storage | |

Laboratory Documentation (Lab CHP)

All sections

I certify that I have been provided a copy of the Chemical Hygiene Plan and that I have read the above sections of the University CHP and all of my Lab's CHP.

Print Name: _____

PID (email): _____

Signature: _____

Date: _____

Supervisor Signature: _____

Date: _____