

# OSES Support Services for Sciences and Engineering

2020



# The Office of Occupational Safety and Environmental Services

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# Science Programs Supported by the Lab Safety Specialist

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- Ex-officio member of IRB
  - Review protocols for application of TCNJ's environmental, health and safety programs
  - Attend monthly meetings
- Ex-officio member of IACUC
  - Review protocols for application of TCNJ's environmental, health and safety programs
  - Attend meetings and annual audit
- Lab Safety Committee (Campus Wide)
  - Some accreditations require this committee, OSES supports this function for the campus
  - Some departments have an additional department safety committee, OSES can attend those too
- Laser Safety Officer
- Bio Safety Officer
- Fume Hood Annual Certification
- Radiation Safety Program
- Hazardous Waste Disposal Coordination

# Environmental and Occupational Program Overlap

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- Hazardous Materials Handling and Proper Disposal
- Right to Know / Hazard Communication / Globally Harmonized System
- Personal Protective Equipment
- Fire Safety – HMIS
- Campus Wide Chemical Hygiene Plan
- Biosafety
- Bloodborne Pathogens
- Ergonomics
- Medical Monitoring

# What we will cover today

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1. Enterprise Risk Management Audit (new this year)
2. At Home Experiments (new this year)
3. Anticipated Regulatory Compliance Inspections
4. HMIS – Hazardous Materials Identification System
5. Science Cloud/BIOVIA
6. TCNJ's Campus Wide Chemical Hygiene Plan
7. OSES Lab Inspection Tool Reports
8. EPA Self Audit
9. Campus Wide Lab Safety Committee

## Additional Links / Handouts

- Faculty Guide for At Home Experiments
- Department Responsibilities for Science Cloud/BIOVIA

# Enterprise Risk Management Audit

## Focus Group – Research & Sponsored Projects

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### **Focus Group Risk Information**

### **Research and Sponsored Projects**

#### **RISKS IDENTIFIED BY SENIOR MANAGEMENT (PRESIDENT AND CABINET)**

#### **RESEARCH AND SPONSORED PROJECTS**

- ☐ Human and Animal Subjects
- ☐ IACUC
- ☐ IRB
- ☐ Lab Safety

# Focus Group Recommendations

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- OSES recommended that someone, such as the Provost, approves all research and sponsored projects
  - This will help all the areas on campus support those with approved research and sponsored projects
- You may see OSES bring items to our VP, Mike Dixon, to confirm something is approved
- You may see OSES bring more items to General Counsel as we learn about compliance

# At Home Experiments

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- OSES was approached regarding at home experiments from various areas on campus
- OSES combined efforts across campus to bridge communication to support the program
  - General Counsel (provided input)
  - Dean of Sciences sent information to all the chairs
- OSES provided a guide to those who are proposing at home experiments





### Example Considerations for At Home Experiments:

1. Chemicals needed for experiment
2. Storage requirements of chemicals/materials
3. Hazards associated with the chemicals/materials
4. Shipping requirements of chemicals/material
5. PPE needs for experiments chosen
6. Waste generated in the experiment
7. Other people who reside in the home of the student
8. Students living on campus may not have access to a kitchen or table

# Regulatory Inspections Completed and Anticipated this Year

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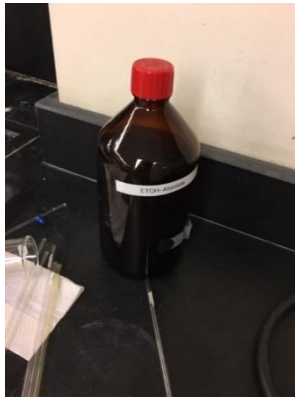
- Right to Know
- Radiation Safety Program
- NJDEP Hazardous Waste

# RTK Inspection

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Things to consider for a RTK Inspection:

1. Labels! All containers need to be labeled, even the distilled water with the English name and CAS #!
2. Safety Data Sheets – all need to be in a central location AND with OSES' RTK Main Central File



# Radiation Safety Inspection

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- Annual Safety Inspection associated with the following:
  - Radiation Lab
    - Authorized User (A.U.) is completing required tasks (i.e. wipe tests after use and documentation)
  - XRD Labs
  - Review paperwork, documentation
- 2020 Annual Inspection - Labs
  - ☐ Corrected: Management System and Assignment of responsibilities for XRD operations
  - ☐ Corrected: Documentation of scheduled XRD Interlock Tests
  - ☐ Corrected: Recordkeeping dosimetry usage
  - ☐ Corrected: A.U. Wipe tests of Radiation Lab in a central location
  - ☐ Corrected: Operator Log for the Scanning Electron Microscope which documents kVp during operation
  - ☐ Recordkeeping was deficient for dosimetry usage, which is an omission and may lead to a violation. The researcher was retrained and documented, will be corrected in the 2021 inspection.

## NJDEP Hazardous Waste - Preparing for an inspection

Labels are important!

If the box indicating the hazard is NOT checked off, this is a violation!

**The College of New Jersey  
Hazardous Waste**

Please check the hazard characteristic(s) and list chemicals:

<input type="checkbox"/>	Ignitable
<input type="checkbox"/>	Corrosive
<input type="checkbox"/>	Toxic
<input type="checkbox"/>	Reactive, must be stored in Central Area _____
<input type="checkbox"/>	Other _____

Accumulation Start Date: \_\_\_\_\_

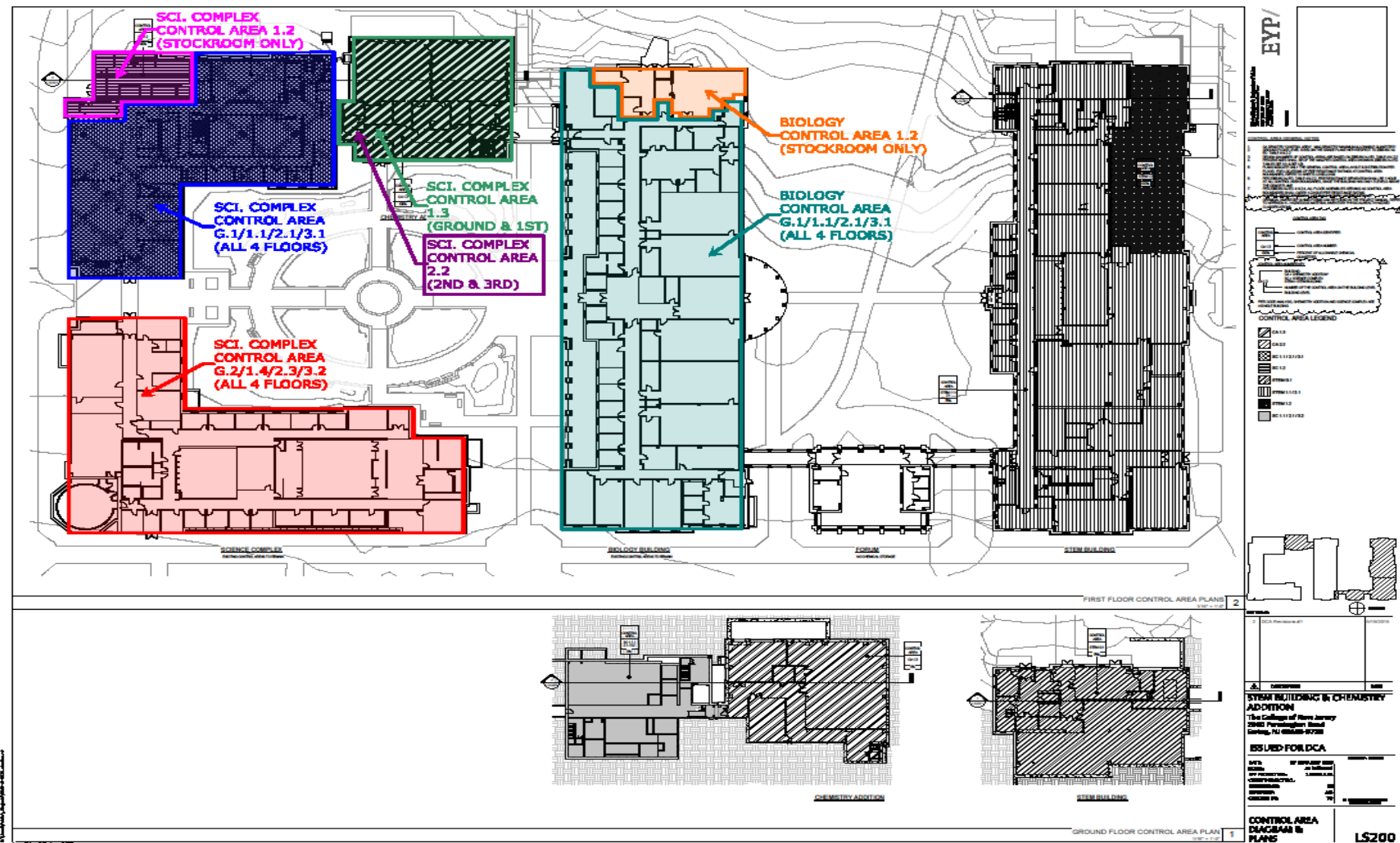
End Satellite Accumulation Area Date: \_\_\_\_\_

# HMIS

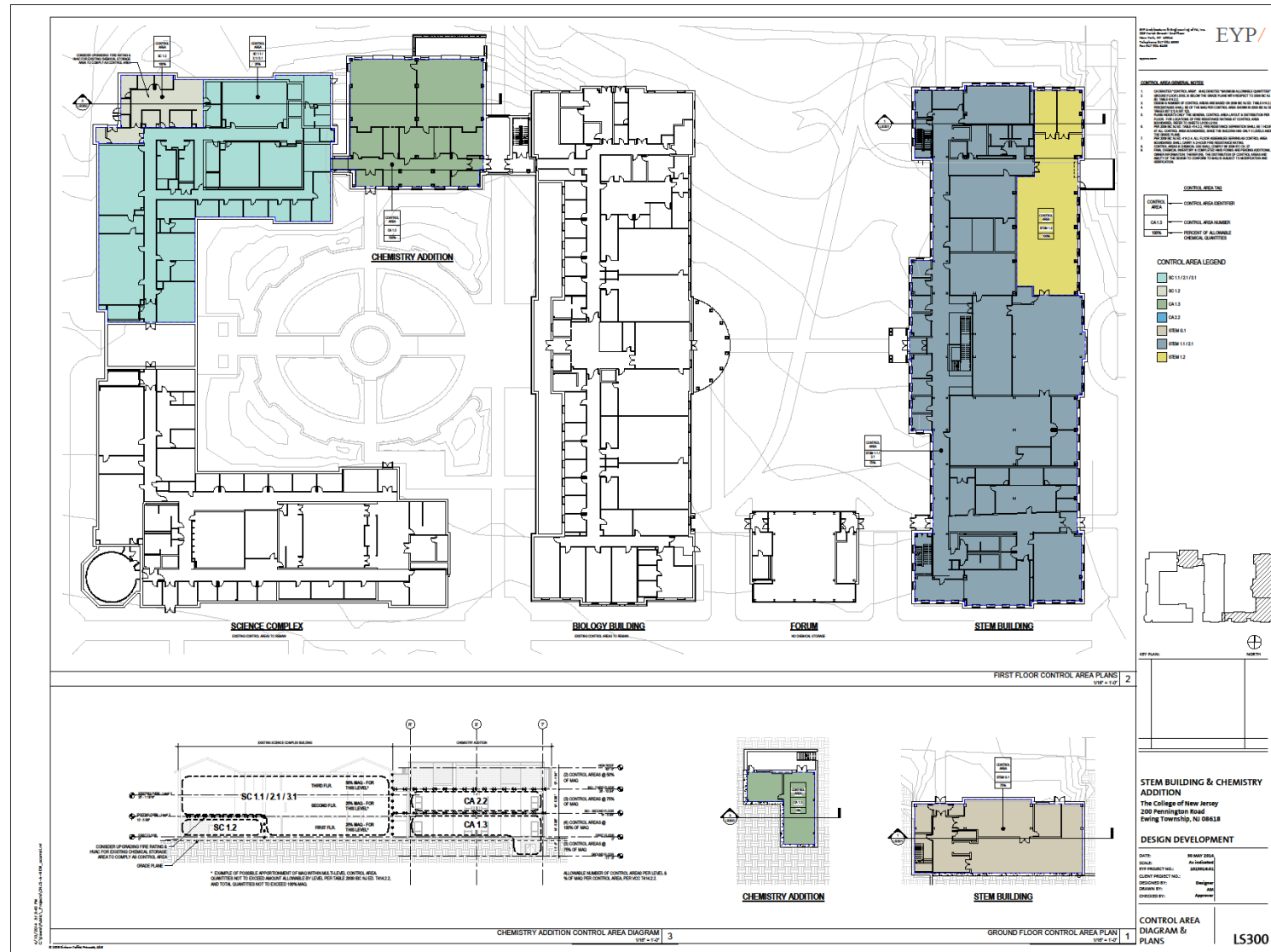
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- Hazardous Materials Identification System
- At any one time TCNJ is required to know where all the hazardous materials are and confirm that they are not over their limits within the control areas
- The Fire Inspector is the one who may request this information, they are regularly on campus

# HMIS Control Zones – Science Complex



## HMIS Control Zones – Chem and STEM





# Science Cloud (BIOVIA)

## TCNJ's Web Based Chemical Inventory System



Username

Password

**Sign In**

[Forgot username?](#)

[Forgot password?](#)

Transform  
**Scientific Collaboration**

Transform the way you run  
your externalized R&D project:  
multiple collaborators, single  
platform, one conversation.



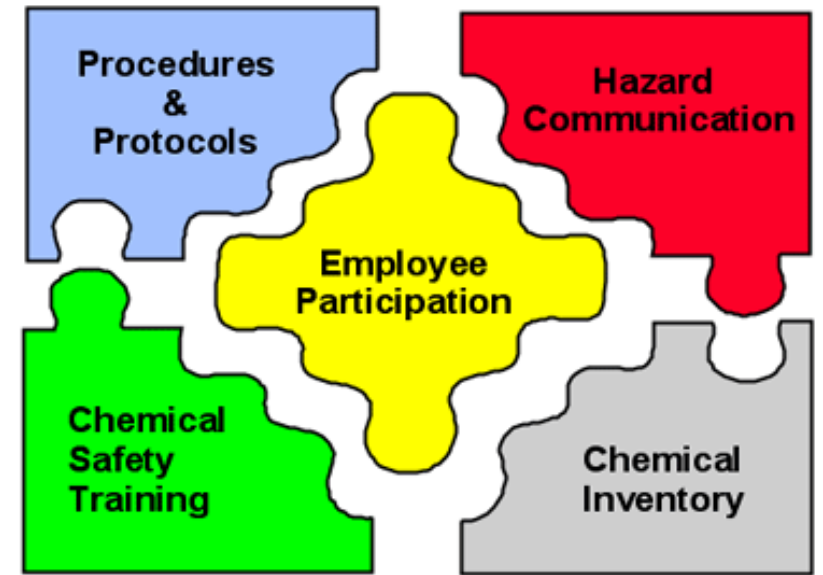
[Privacy policy](#)

# What can we do with Science Cloud/Biovia?

1. Receive new chemicals and materials in inventory (tracked by control area)
2. Delete expired or used chemicals and materials from inventory
3. Create barcode labels for all chemicals and materials to be applied to containers
4. Reconcile the inventory
5. Create a report for Right to Know Regulatory Requirements!
6. Assign locations to chemicals/materials as required in the HMIS
7. Any questions regarding this tool are sent to OSES, so that the response is shared with all people who have an account

## TCNJ's Campus Wide Chemical Hygiene Plan (with OSES)

- a. Any lab with specific hazards (i.e. research labs) are required to have their own written procedures or Standard Operation Procedures
- b. OSES reviews any written procedures or Standard Operation Procedures for environmental, health and safety requirements
- c. The Lab Safety Committee shares written procedures from other areas on campus



# EPA Self Audit

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- EPA Program for colleges to self inspect every 3 years in order to avoid monetary fines
- OSES manages the audit and works with each department
- A large focus of the audit is LABS for HAZARADOUS WASTE MANAGEMENT
- Last completed, 2018
  - \* Some containers were missing GHS information
  - \* Some containers were not completely labeled for RTK
  - \* Proper segregation of chemicals sometimes overlooked
  - \* Some secondary containers missing clear description in English regarding contents
- Next Audit Scheduled, 2021

# OSSES Inspection Tool –Example Corrective Actions (start of report)

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## Corrective Actions Required

### Chemical Hygiene Plan

**CH-11) No** Is a current Emergency Preparedness Procedures Booklet installed on the wall?

#### Corrective Action

A work order is being placed to install a TCNJ Campus Police Emergency Preparedness Procedures Booklet.

**Responsible Party:** OSSES

**CH-26) No** Is each eyewash inspected monthly?

#### Corrective Action

Please note that an eye wash was missed in this lab. A work order has been entered to have the eye wash inspected and put on the monthly schedule.

**Responsible Party:** Facilities

### Hazardous Waste

**HW-31) No** Does the laboratory have appropriate spill kits? (i.e. acids, and if mercury is in the lab it will need a spill kit, etc.)

#### Corrective Action

The necessary spill kits were not available in the lab. Acquire the necessary spill kits. This lab does appear to have any activity. However a spill kit is recommended for future use

**Responsible Party:** Department

# OSSES Lab Inspection Tool – Example Report – CHP

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## Laboratory Inspection Checklist

CH-22	NA	Is the path to each safety shower unobstructed?
CH-23	NA	Is each safety shower inspected monthly?
CH-24	Yes	Is the path to each eyewash station unobstructed?
CH-25	Yes	Is each eyewash clean, empty, and has the caps/covers in place?
CH-26	No	Is each eyewash inspected monthly?
CH-27	Yes	Are the locations of emergency showers and eye wash stations clearly identified with the correct signage?
CH-28	NA	Are the labels of all chemical containers visible?
CH-29	NA	Is the chemical container in good condition (no rust, etc.)?

## LABORATORY SAFETY COMMITTEE

- ☐ Monthly meeting (continued virtually) addresses issues regarding regulations, safety, current laboratory concerns and hygiene
- ☐ Area membership and responsibilities
- ☐ SOP requested for each department, multiple SOPs requested as needed
- ☐ Suggestions for topics are always welcome

# At Home Medical Waste

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At home medical waste are sharps used for personal medical matters.

Vitamins, sugar control

Needles, lancets, syringes

These items cannot go into the regular trash. They must go into a personal sharps container.

OSes may be placing informational flyers regarding At Home medical waste within your buildings to protect our Building Services Attendants.





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