



# Tier II Reporting for Emory University, a Leading Research and Healthcare Enterprise

E-Plan Conference

October 2019 | Myrtle Beach, SC



**EMORY**  
UNIVERSITY

Environmental Health and Safety Office  
Research Administration

VINCENT GRAVES | EMORY UNIVERSITY

# Outline

- Emory Overview
  - History
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- Inspections
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- Review Process
  - Safety Data Sheets
  - EHS & Hazardous Chemicals
  - SERC, LEPC, Fire Department
- Submission
  - E-Plan
- Work After Report
  - Data management





## It all started in 1833...

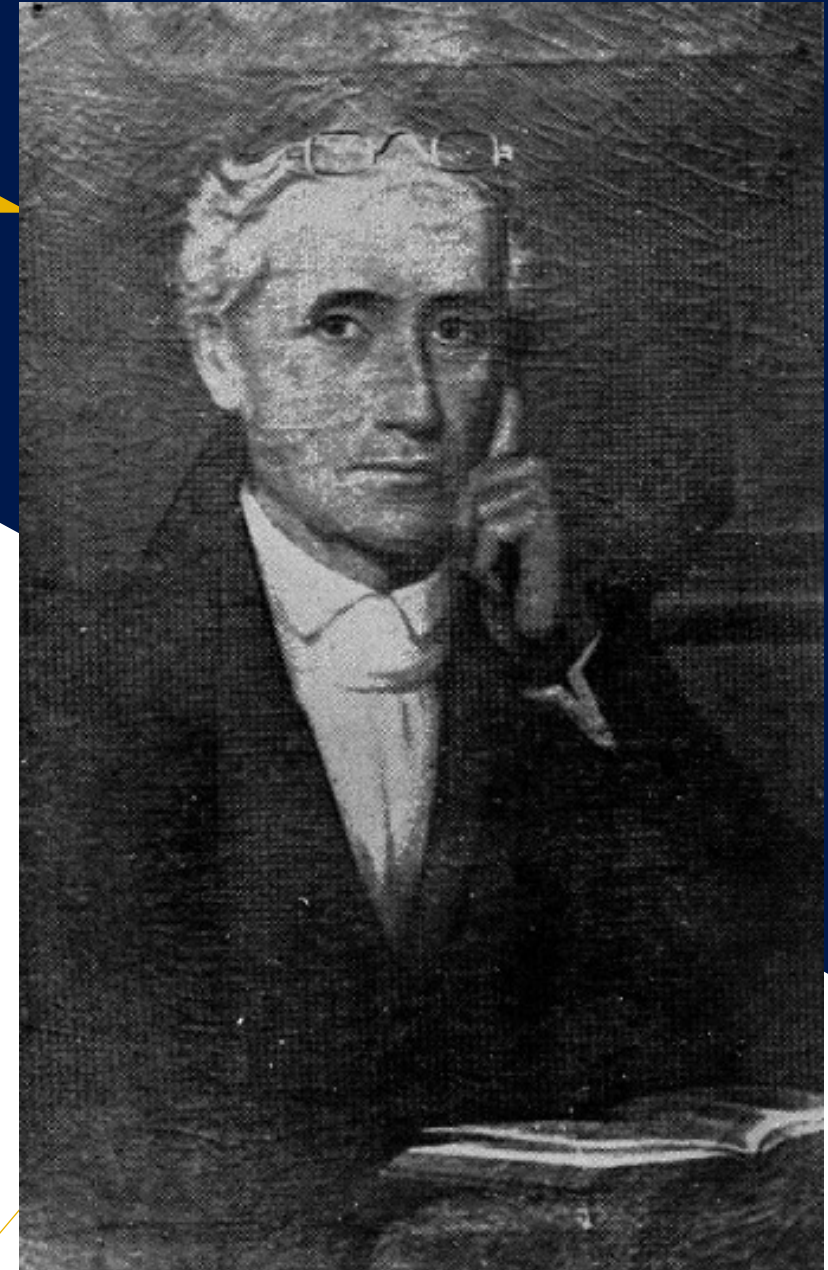
- At the **Georgia Methodist Conference** in 1833, people began to contemplate the establishment of a church-sponsored college.
  - Wanted to combine farm work with a college preparatory curriculum.
- It wasn't until the **1834 Conference** that a preacher known as "**Uncle**" **Allen Turner** declared that Georgia Methodists should stop supporting **Randolph-Macon College** in **Virginia** and have their own college instead.
- On **December 18th, 1834**, the General Assembly of Georgia charters the **Georgia Conference Manual Labor School** and chooses **Ignatius Alphonso Few** to lead.



*Language Hall around 1874*

## Debts began to accumulate in 1835

- During the first year of the school, debts began to mount, and subscriptions dwindled.
- To save the school from failing, **Few** urged the Board of Trustees to expand the school into a College.
  - Few was a Methodist minister, attorney, and a unsuccessful farmer.
- After months of debate on what Few was proposing, the **Georgia General Assembly** granted the **Georgia Methodist Conference** a charter to establish a college on December 10<sup>th</sup>, 1836.



*Igantius Alphonso Few. President of Emory College 1836 - 1839*



# The Beginning of Emory in 1836

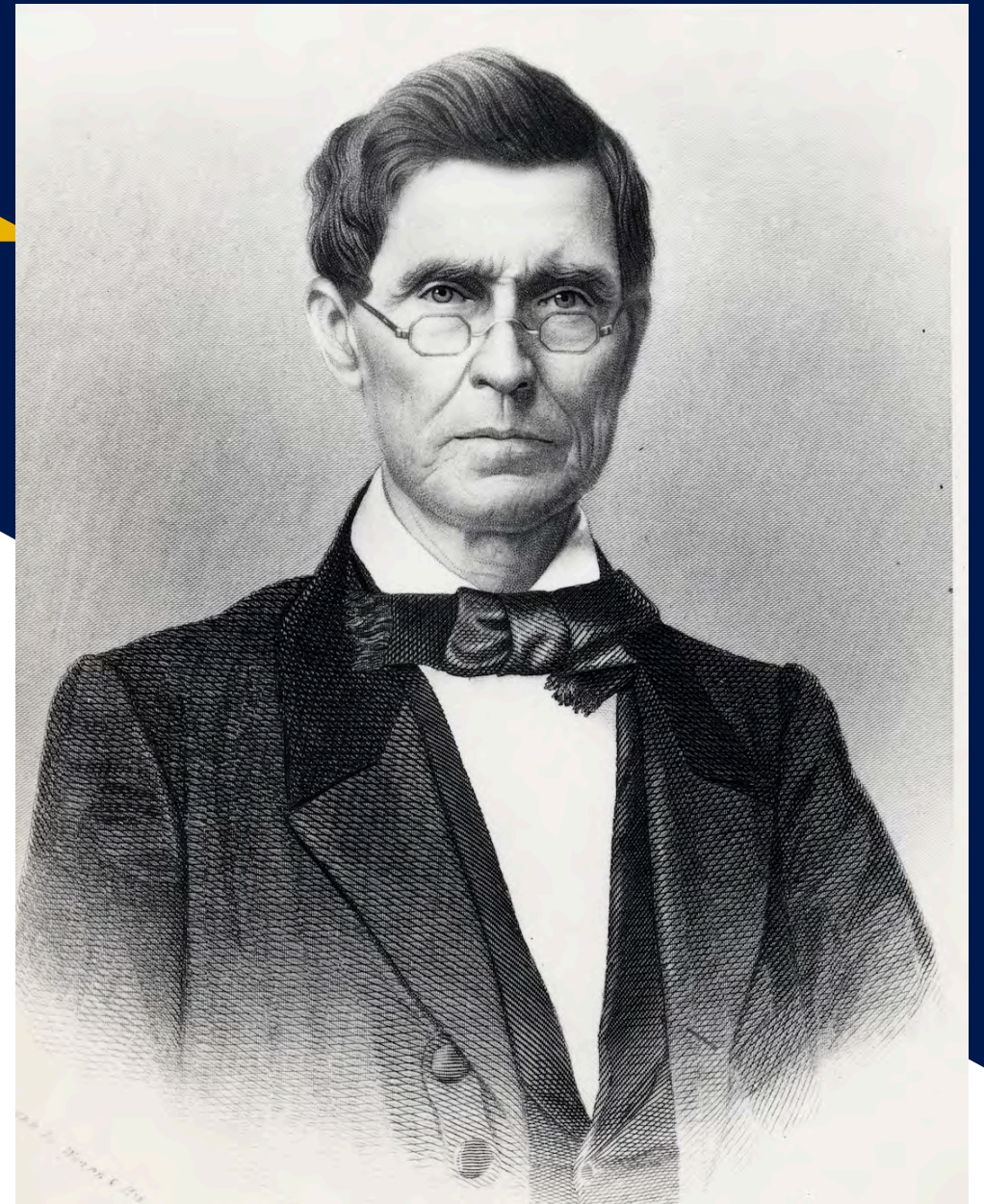
- The new college was to be named after **John Emory** and would begin classes in **1838** as **Emory College**.
  - *Emory & Henry College is named after him as well and was chartered the same year, 1836.*
- The **Board of Trustees** accepted the land belonging to the **Manual Labor School** and proposed a new town along with the school that would be called **Oxford**.
  - The name Oxford was chosen from the University of Oxford; which was the alma mater of the Methodist movement leaders, **Charles and John Wesley**.



Edward Thomas' hand-drawn design of Oxford and Emory College

## Let the classes begin...in 1838

- On **September 17<sup>th</sup>, 1838** Emory College begins classes for 15 students.
- In **1840**, the Board of Trustees takes over all the assets and liabilities from the Manual Labor School.
- **Augustus Longstreet** becomes the college's second president in 1840.
  - Longstreet was an attorney, judge, minister, a farmer, and author of the book *Georgia Scenes*.



Augustus Longstreet. President of Emory College 1840 - 1848



# First Graduates, the Civil War, & the Panic of 1873

- In **1841** Emory College graduates its first students.
- In **1854**, Alexander Means, becomes the college's 4<sup>th</sup> president.
- In **November 1861**, the college closes its doors until "peace takes the place of the present public agitation."
- From **1862 – 1866** Emory College buildings are used by both the Confederate army and the Union army.
  - Many building are destroyed during war leaving the college in ruins and in financial hardship.
- Still struggling from the financial hardships brought from the Civil War, the **Panic of 1873** causes enrollment to drop and school income to dwindle even further.



*Phi Gamma Hall – Built in 1851 as a debate hall*

## End of the 19<sup>th</sup> Century

- In **1880** Emory College president **Atticus Haygood**, preaches a Thanksgiving sermon entitled “**The New South**” encouraging Southerners to put provincialism and illiteracy behind them and cultivate the growth of industry. Begins to turn around the college’s finances.
  - The sermon inspired a wealthy New Yorker, **George I. Seney**, to donate \$130,000 to the college. \$3,272,418.63 in 2019 dollars.
- **1884** – **Mary Haygood Ardis** is the first women to attend Emory College.
- **Bishop Warren Akin Candler** becomes Emory College’s **10<sup>th</sup> president** in **1888**.
  - Persuaded the state legislature to admit Emory Law graduates to the Georgia Bar.
- In **1895** **Asa G. Candler** sends his son a keg of **Coca-Cola**.

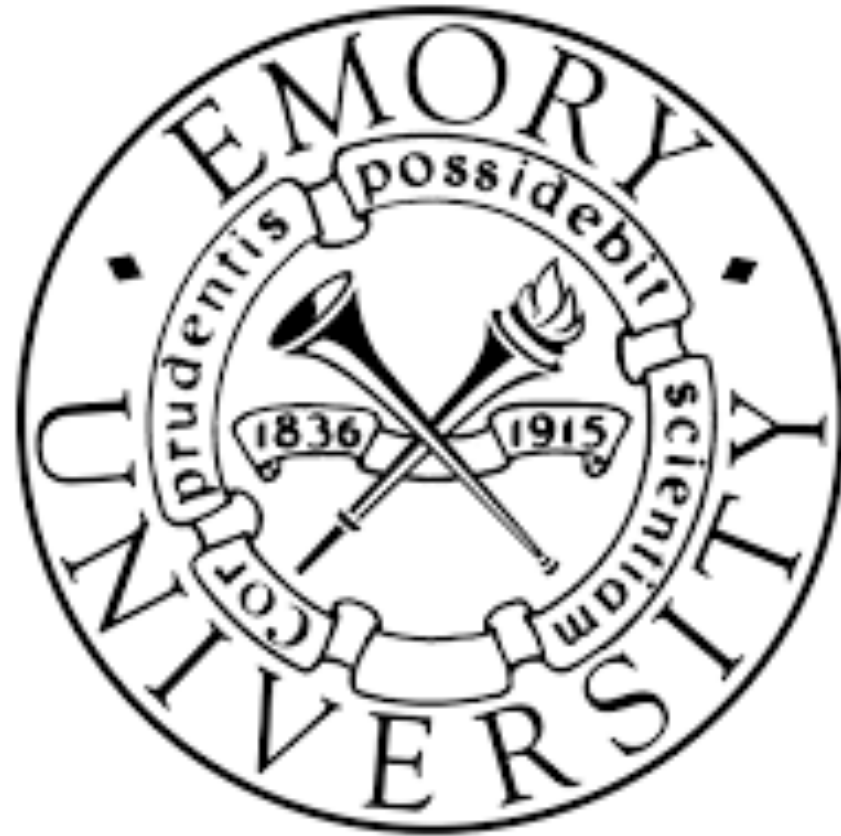


*Seney Hall at Oxford College*



## Moving to Atlanta

- **1914** – The MECS decided to find two universities, one east and one west of the Mississippi River. This was due to a disagreement over who controlled Vanderbilt University. **Atlanta** offered the church **\$500,000** and the use of Wesley Memorial Church and Hospital. **Asa Candler** offered a **\$1,000,000** for use in establishing the school and 75 acres in DeKalb County. Atlanta was eventually chosen for the location and **Bishop Warren Candler** was named chancellor.
- **1915** – **Emory College** moves from its Oxford location and becomes **Emory University** in Atlanta. **Emory Academy** is established at the Oxford campus in return of the move.



## Growth in the 20<sup>th</sup> Century

- The second **Atlanta Medical College** becomes Emory University's School of Medicine in **1915**.
- In **1917 Eleonore Raoul** enrolls in the Lamar College of Law and becomes one of the first women to earn a degree from Emory University.



*Lamar College of Law – 1915 (above)*

*Candler School of Theology – 1920 (right)*





## Growth in the 20<sup>th</sup> Century

- **1922** – With the SOM functioning at Emory University, the outgrown **Wesley Memorial Hospital** in Atlanta moves to Emory's campus in December.
- **1925** – Wesley Memorial Hospital is formally transferred to Emory and in the 1930's becomes known as the **Emory University Hospital**.
- **1929** – **Asa Candler** passes away. His son becomes president of the BoT.
- Emory authorizes a two-year program of college courses at Oxford in **1929**.



*The Calico House which was turned into the Wesley Memorial Hospital moves to Emory in December 1922.*

## Growth in the 20<sup>th</sup> Century

- **1931** – Grady Hospital opens its ward for medical teaching which expands the clinical training for Emory **SOM** students.
- In **1941** Bishop Candler passes away.
- **1942 – 1945** after the US Army sends medical trainees to Emory the **USN** starts the V-12 training program. Military students outnumber civilian students 2:1.



*Grady Hospital circa 1940s*



## Growth in the 20<sup>th</sup> Century

- **1946** – The **USPHS** announces that they will build a communicable disease research center on land made available by and next to **Emory**.
  - *CDC opens in 1960.*
- With **WWII** ending the **G.I. bill** creates an influx of students, causing Emory to double enrollment in a year.
- **1956** – **Yale University** gives Emory it's **Yerkes Laboratories of Primate Biology**. Center moves from Florida to Atlanta campus.



Copyright Atlanta Journal-Constitution. Courtesy of Georgia State University.

*After WWII an influx of students limited the amount of housing Emory had. "Trailertowns" began to spring up around campus.*

## Growth in the 20<sup>th</sup> Century

- 1960s – 1980s – Emory grows and changes drastically with the influx of money from **Robert W. Woodruff** and family totaling **\$230 million**, addition of new neighbors, the **CDC**, and the expansion of **medicine** and **science research** through the **Rollins Family**.



*The Woodruff family and Rollins family both contributed a large amount of money. This allowed Emory to expand even more in research, medicine, and size.*



## Growth in the 20<sup>th</sup> Century

- In **1991** the **Emory University System of Health Care** is established and renamed **Emory Healthcare** in **1995**.
- **1998** – Emory acquires the **Briarcliff Estate**, which becomes a research facility for mental health.



*Emory Briarcliff was once the GMHI.*


## 21<sup>st</sup> Century: Healthcare

- On **August 2<sup>nd</sup>, 2014** Ebola patient arrives at EUH for treatment.
- In **August 2018** DeKalb Medical partners with Emory Healthcare to expand healthcare sites across the Atlanta metropolitan area.
  - *Total hospital count to **10** and Clinic and SA count to over **140**.*



*Emory Healthcare has expanded throughout the 2000s acquiring many hospitals,*





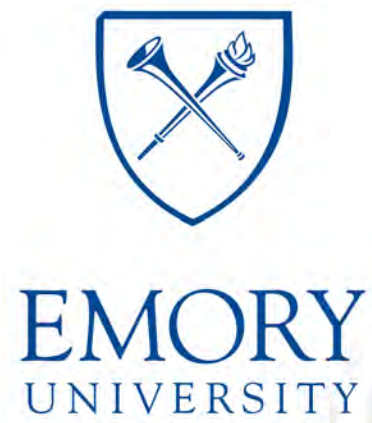
**165 SDSs Added to  
the Online System in  
RY2018**



**RY2018 – 10 Tier II  
Reports  
RY2019 – 14 Tier II  
Reports**



**334 Different  
Chemicals  
Inventoried During  
RY2018 Inspections**



# EPCRA Overview

## Emergency Planning & Community Right-To-Know Act (EPCRA)

- EPCRA was initially created to help communities plan for chemical emergencies in **1986**.
  - Requires industry to report on the storage, use and releases of hazardous substances to **federal, state, and local** government.
    - It also requires many other information and documents to be obtained and/or submitted.





## Emergency Planning & Community Right-To-Know Act (EPCRA)

- The premises of EPCRA came after the **Union Carbide** disaster in **Bhopal**.
  - ~ 40 tons Methyl Isocyanate (MIC) was released into the air.

Bhopal gas tragedy, one of world's worst industrial disasters, struck on the night of December 2-3 in 1984

# A TRAGEDY THAT LIVES ON

Stillbirth rate went up by 300% & neonatal mortality rate by **200%**

**Methyl isocyanate (MIC)** gas leaked from **Union Carbide (UCIL)** pesticide plant

The disaster was triggered by water flowing into a tank with **42 tons** of MIC

**8,000** died within two weeks & another 8,000 since then

**5,58,125** people were exposed to the gas

**\$470m** was the compensation paid by UCC in 1989 to settle litigation

गैस पीड़ितों का मुआवज़ा

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# Emergency Planning & Community Right-To-Know Act (EPCRA)

- Composed of four major areas in which necessary information for applicable sites must be obtained, submitted and managed annually:
  - **Emergency Planning** – Section 301 – 303
    - SERC, LEPC, & Fire Department
  - **Emergency Notification** – Section 304
    - SERC, LEPC, Fire Department, & NRC
  - **Community Right-To-Know** – Section 311 & 312
    - Section 311 – Submission of Safety Data Sheets (SDS)
    - Section 312 – Hazardous Chemical Inventory Reporting (Tier II)
  - **Toxics Release Inventory** – Section 313





## Sections 301 – 303: Emergency Planning

- Emory properties with **Extremely Hazardous Substances** (EHS) onsite above the listed threshold planning quantities (TPQ) must cooperate in emergency planning preparation.
- EHS personal **must identify and determine** any chemicals outside of a laboratory and hospital that **are EHS above the TPQ or 500 pounds**.



## Sections 301 – 303: Emergency Planning

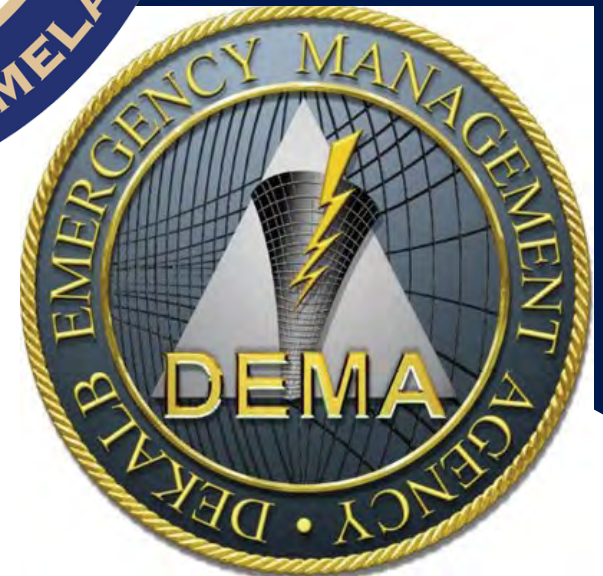
Chemical/Product	EHS?	Gallons	Pounds	RQ or TPQ
AWB-160	Yes	560	4198.32	500
BL-1544	Yes	80	641.07	500
Coil Cleaner	Yes	2	17.49	100
Cure & Seal 309 J18	Yes	55	458.15	100
Dissect-Aid	Yes	2.5	18.95	100
Ethylene Oxide	Yes	N/A	6	10
Formalin	Yes	10	91.63	100
Formula 44	Yes	80	679.73	500

*Example of how EHS Chemicals are tracked in database*



## Section 304: Emergency Notification

- Applicable Emory properties must immediately, within 15 minutes, notify the **State Emergency Response Commission (SEPC)** and the facility's **Local Emergency Planning Committee (LEPC)** after the release of EHS chemicals and hazardous substances that are **greater** than their listed reportable quantities (RQs).
- Written follow up reports after a release must be sent to the **SERC** and **LEPC** within **30 days**.



## Section 311: SDS Reporting

- A **Safety Data Sheet (SDS)** is required for any hazardous chemical or EHS used or stored in the workplace that meet one of the following requirements:
  - Hazardous chemicals that are **10,000 pounds or greater**; or
  - EHS that **exceed** their TPQ or are greater than or equal to 500 pounds.
- EHSO is responsible for submitting SDSs of all hazardous chemicals and EHS that meet the above requirement to the SERC, LEPC and local fire department of each facility.

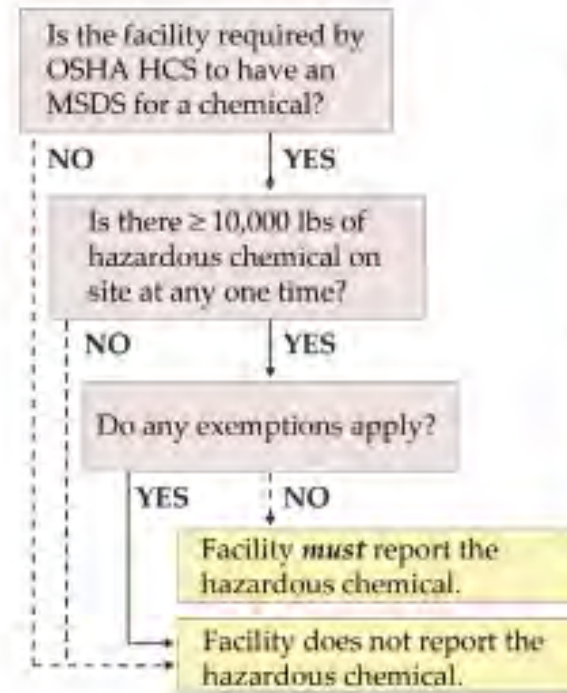




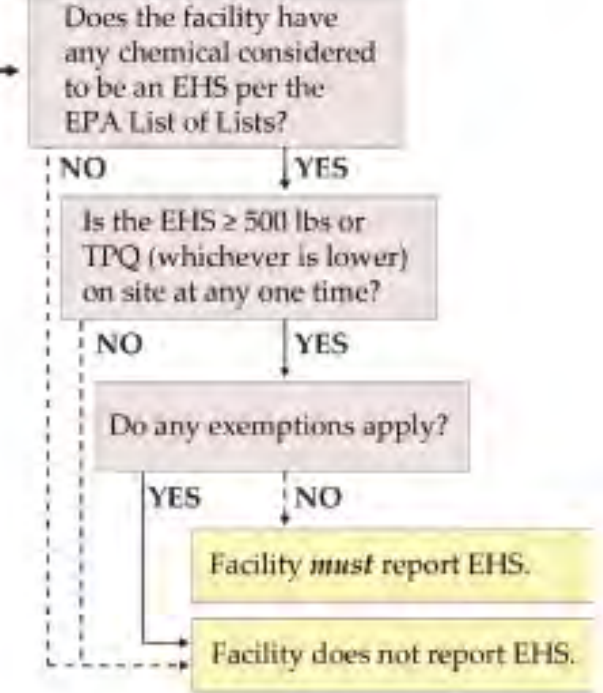
## Section 312: Inventory Reporting

- Each Emory facility must annually report a chemical inventory of hazardous chemicals by **March 1<sup>st</sup>** of each year for the previous year's inventory to their SERC, LEPC and local fire department. These reports are called **Tier II Reports**.

### STEP 1:



### STEP 2:



## EPCRA at Emory

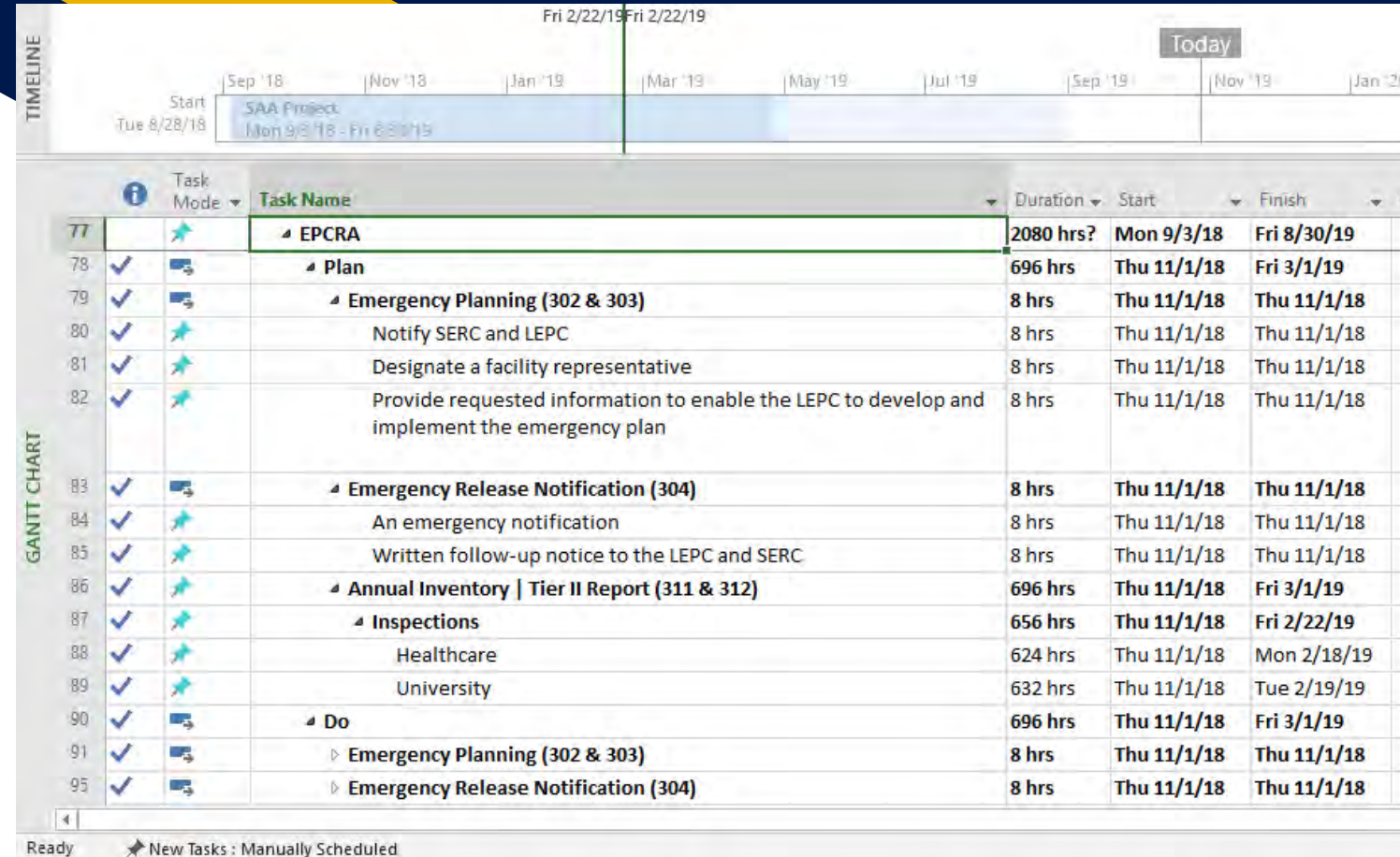
- The purpose of the **EPCRA Program** at Emory is to ensure **compliance** to applicable Federal, State and Local regulations on regards to hazardous chemicals and substances.
- Incorporate the **EMS PDCA** in the program
  - Inspections – Plan & Do
  - Reviews – Check
  - Submission – Act & Plan



# Inspections

## • Planning

- EPCRA staff first meet on first Thursday of November.
- Prior to conducting inspections a timeline is established.
  - 14 sites to visit
  - 50 + people emailed and/or called
  - Review of last RY Data to get a scope of work
  - Program development or changes
  - Important data to track



*MS Project is used to track EPCRA Project*



# Inspections

- **Do**

- Scheduling for site visits are completed by **December 15<sup>th</sup>** of each year. Inspections are conducted from **December to February**.
- A general checklist is used during inspections to determine if chemical information needs to be recorded.
- Each week **EPCRA** staff meet to review inspections, data, and obtain SDSs.
  - Newly introduced EHS or hazardous chemicals are researched further for additional Health and Safety documents.
  - **Lists of Lists**
  - Search for health and safety issues with handling, storing and use of chemical.



# Reviews

- **Check**

- Once a site is completed, EPCRA staff ensure that all applicable SDSs and chemicals have been collected prior to moving on to final review stage.
  - If SDSs haven't been obtained, staff will call company and/or vendor until they provide one.
    - *May reach out to other entities to obtain SDSs.*
- Central data collection is used to determine similarities across sites and to establish universal nomenclature of data. – MS Excel



# Submission

- **Act**

- EPCRA Program SME reviews inventory data, SDSs, and health and safety documents to ensure compliance.
- Once finalized from SME, EPCRA Staff begin inputting required information into **E-Plan**. One complete reports are submitted.

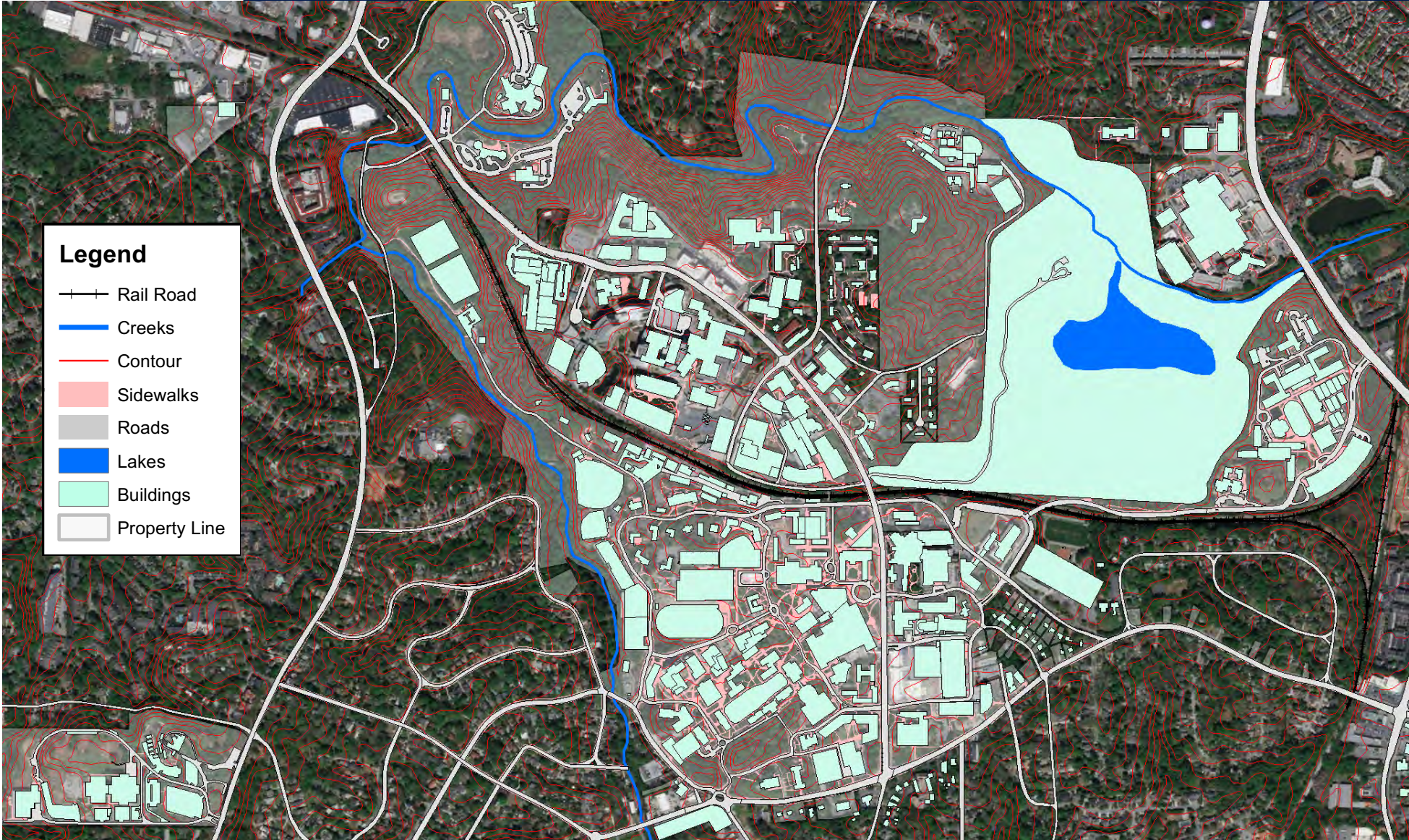
- **Plan**

- Staff begins to write reports on changes from previous RY
- **GIS** and **AutoCAD** software is used to generate annual report to Directors and Emergency Planners.
- **SOPs** to hand out to all applicable personal that handle and/or come in to contact with reportable chemicals.
- **Spill Response** planning





# Work After Report





# Work After Report



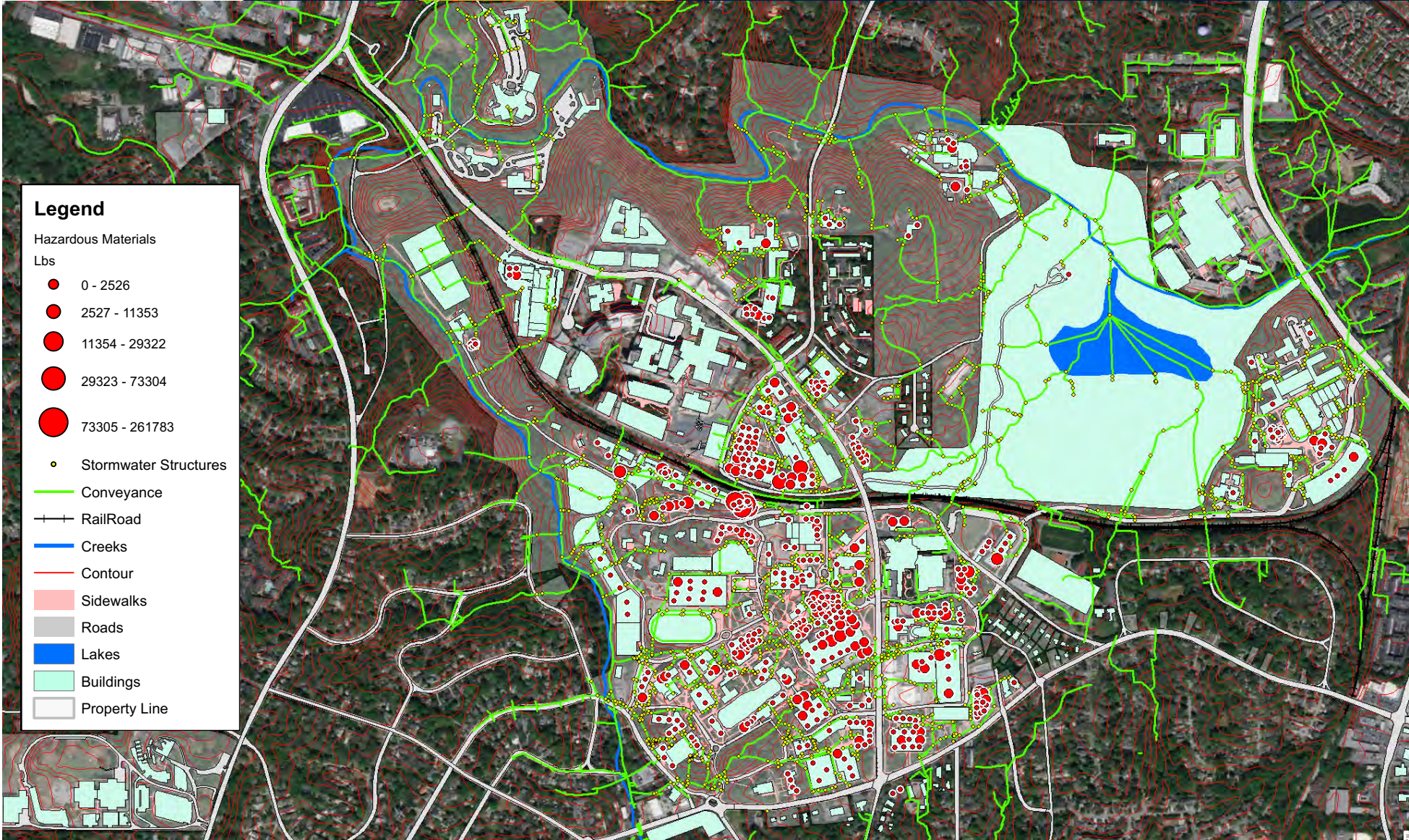


# Work After Report



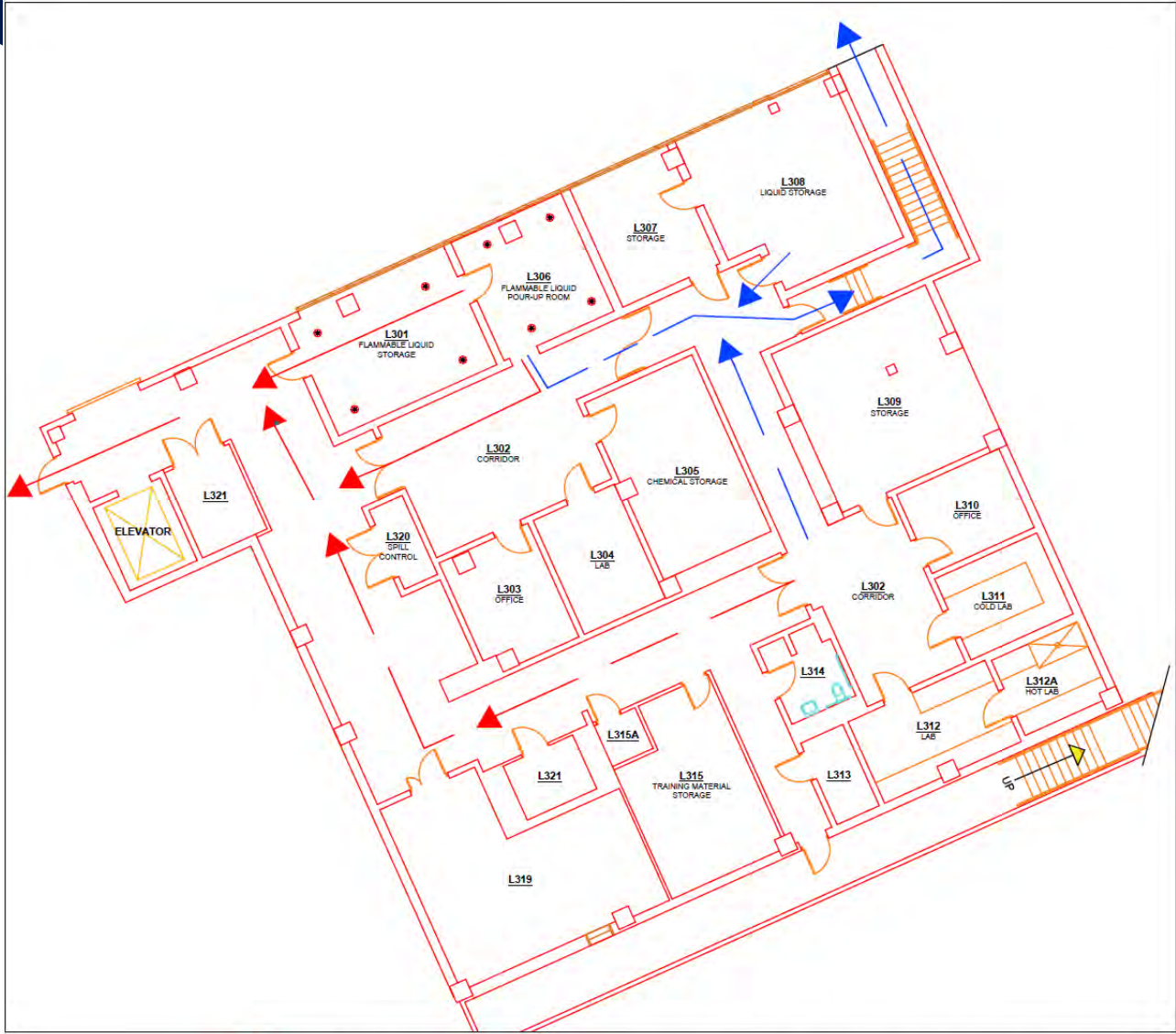


# Work After Report





# Work After Report



WHITEHEAD BIO RSC BLD GROUND FLOOR	
SCALE FACTOR = N/A	DRAWING TYPE = RCRA EVACUATION
ROUTE KEY =	EHSO FILE NAME = WBRB EVACUATION
PRIMARY	LAST REVISION = DEC 13, 2017

GR  
LEVEL



# THANK YOU!

Vincent Graves

Emory University

Environmental Health &  
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