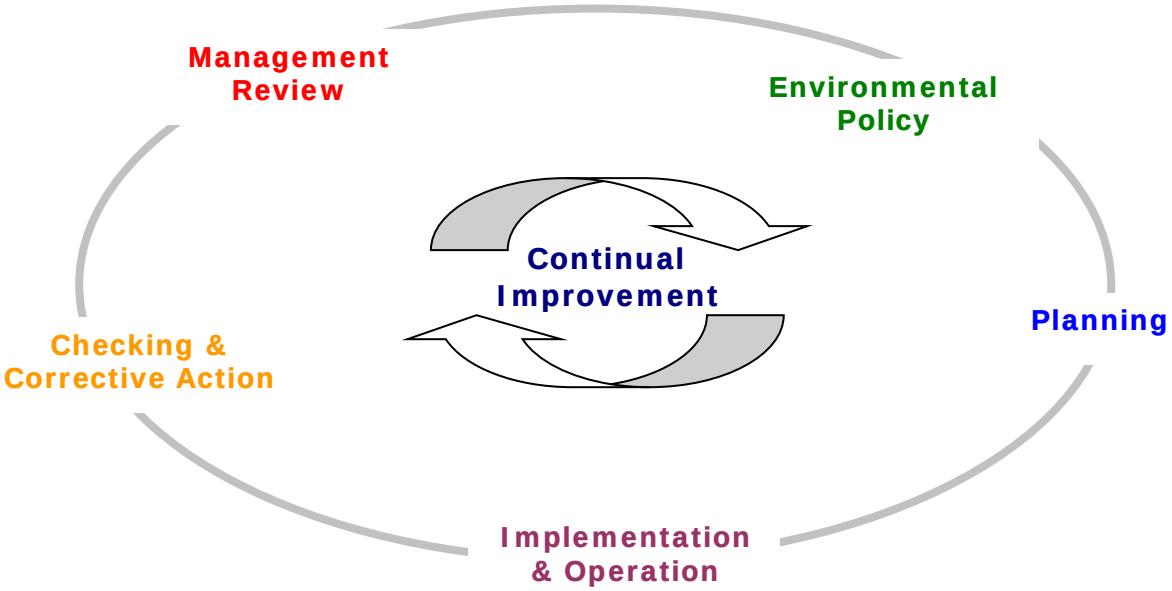
ELON UNIVERSITY

Environmental Management System (EMS) Manual



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Revision Log

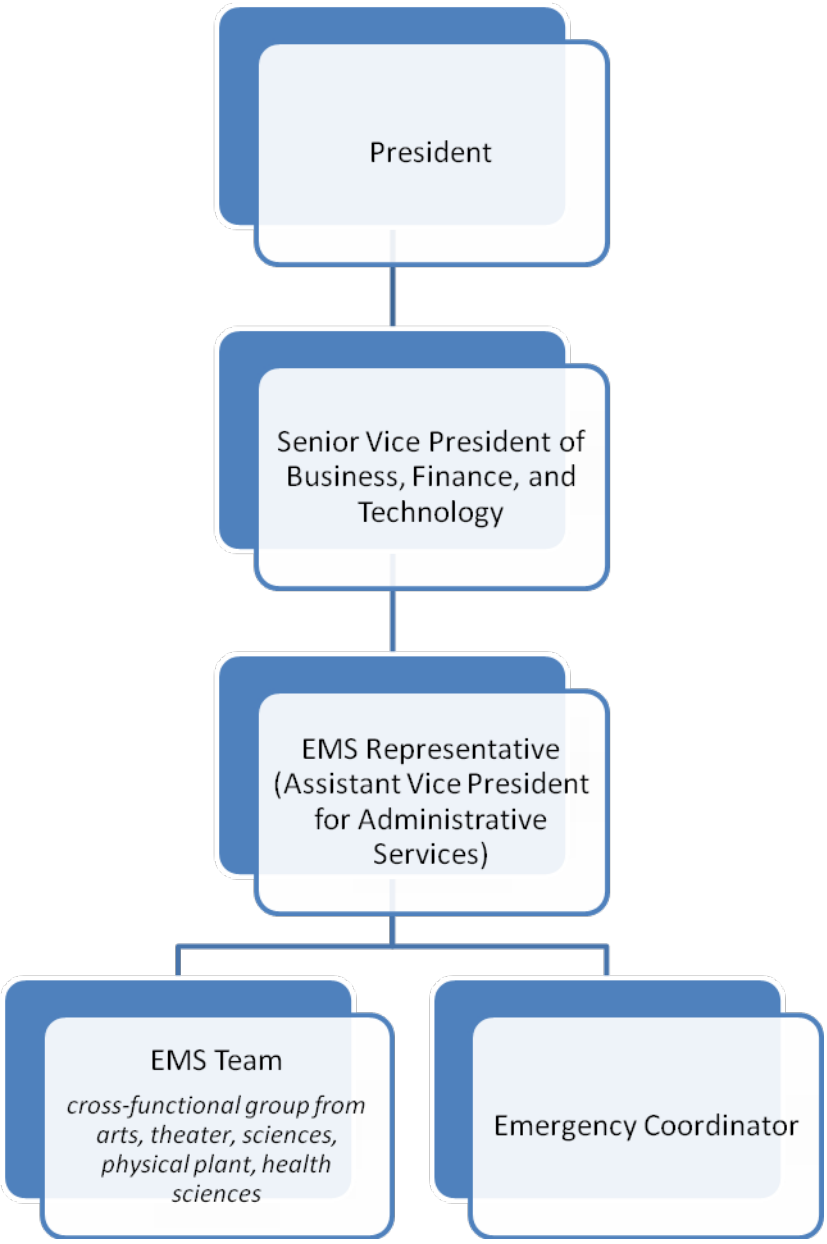
Revision Number	Revision Date	Description of Change
0	11/15/13	Original
1	9/12/14	-remove board of trustees from environmental policy and replaced with senior staff -replace Susan Kirkland with Chris Fulkerson -replace team member names due to recent personnel changes
2	10/13/15	- Updated all appendices - Replaced David Frankena with David Webb

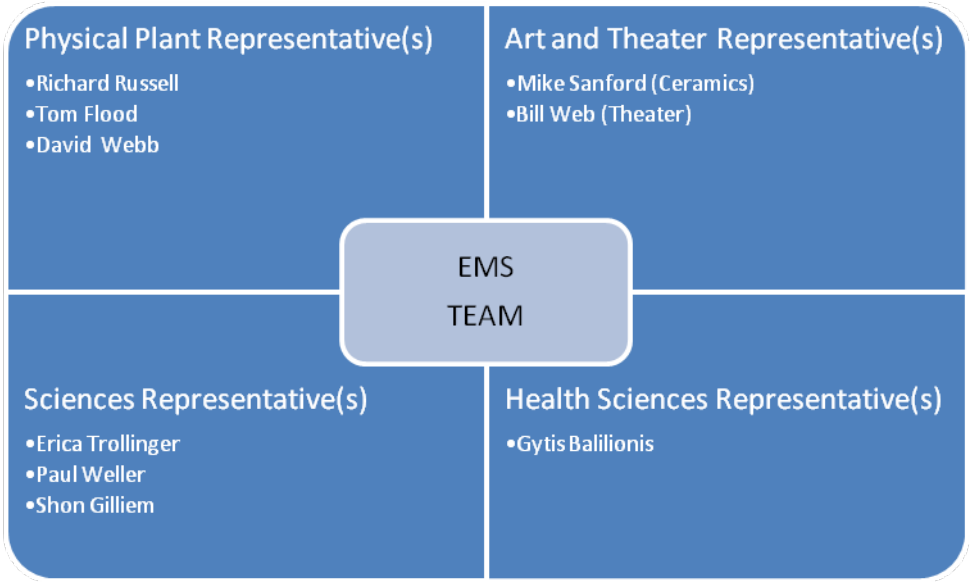
EMS MANUAL
TABLE OF CONTENTS

The Elon University Environmental Management System (EMS) covers the activities of its Elon, North Carolina campus.

This EMS was developed and implemented to ensure sustained compliance with applicable federal, state, and local environmental regulations. This EMS is loosely based on the International Standards Organization (ISO) 14001:2004 system for EMS.

Understanding that an EMS is a constantly evolving program, the EMS Action Item List is incorporated as reference to this manual.


President
Senior Vice President of Business, Finance, and Technology
EMS Representative (Assistant Vice President for Administrative Services)
EMS Team
cross-functional group from arts, theater, sciences, physical plant, health sciences
Emergency Coordinator


Physical Plant Representative(s)
•Richard Russell
•Tom Flood
•David Webb
Art and Theater Representative(s)
•Mike Sanford (Ceramics)
•Bill Web (Theater)
EMS
TEAM
Sciences Representative(s)
•Erica Trollinger
•Paul Weller
•Shon Gilliem
Health Sciences Representative(s)
•Gytis Balilionis

Elon University
Environmental Policy

We, Faculty, and Staff of Elon University recognize that the core mission of the university is the education of its students. In addition, the university will endeavor to make our campus as environmentally secure as possible.

Therefore, Elon University will strive to:

- Educate and engage the campus community in the pursuit of environmental stewardship
- Support student involvement in the environmental issues by providing the resources needed
- Manage and conserve energy, natural resources, and materials resources
- Investigate the implementation of renewable energy sources
- Expand recycling initiatives
- Comply with applicable federal, state, and local environmental laws and regulations
- Monitor continuous improvement to the Environmental Management System program annually
- Conduct affairs in a manner designed to safe guard students, faculty, staff, visitors, and the general public

Senior Staff and the President of Elon University have adopted this policy and will consider full compliance with the law to the minimally accepted standard. Elon University will fully implement this policy by promoting, educating, and the engaging the campus community.

ELON UNIVERSITY	EMS MANUAL 2.0 PLANNING	
	2.1 ASPECTS AND IMPACTS	
	Effective Date: 11/15/13	Rev. 1, 9/12/14

Purpose: The purpose of the aspects and impacts activity is to identify the environmental interactions of Elon University's activities within the scope of this EMS that Elon can control and influence. Elon ranks these aspects and impacts to determine those that are significant. It is these significant environmental aspects, along with the campus' legal and other requirements, that drive the focus of the EMS.

Responsibility: The EMS Representative, with the support of the EMS Team, is responsible for maintaining the aspects and impacts and the resulting significant environmental aspects. The EMS team may ask faculty, staff, and students to assist with the identification of environmental aspects and impacts.

Procedure/Process:

1. Identify Elon University units which may affect the environment.
2. Identify environmental aspects associated with activities and services. Aspect categories may include:
    a. Air Emissions
    b. Water Discharges
    c. Solid Waste Generation
    d. Natural Resource Utilization (water and land)
    e. Other Material Utilization (chemicals, raw materials)
    f. Energy Utilization (oil, natural gas, electricity)
    g. Accidental Release
3. Identify if the aspect is a result of normal, abnormal or emergency conditions on campus.
4. Determine environmental impacts for each environmental aspect. Impact categories may include:
    a. Air Quality Reduction
    b. Water Contamination
    c. Depletion of Natural Resource
    d. Depletion of Raw Material Resource
    e. Contamination of land/groundwater
    f. Depletion of energy resources
    g. Noise
5. Prioritize environmental aspects and impacts according to the following:
    a. Severity – degree to which the university surroundings are affected by the environmental impact
        0 - Unlikely, no potential harm
        4 - Minor, little potential for harm, easily corrected
        12 – Moderate, somewhat harmful, accumulative effect, correctable

24 – Serious, environmental damage, difficult to correct
32 – Major, remediation required, great effort to correct

b. Frequency – how often an environmental impact could occur
   0 – Occurs two times per year or less
   4 - Occurs monthly to three times per year
   12 – Occurs daily to monthly
   24 – Occurs continuously to daily
   32 – Occurs continuously

c. Regulatory Control – if an environmental impact is controlled by the university, local, state, or federal regulatory requirement
   0 – Not regulated
   4 - Not regulated under current regulatory programs, but is either under consideration or has the potential to become regulated in the future
   12 – Covered by a university requirement, but not required under any local, state, or federal regulatory program
   24 – Monitoring and/or reporting requirements associated with regulatory program
   32 – Permit require under a local, state, or federal regulatory program

6. Compile a list of significant environmental aspects as defined by the sum of the severity rating plus frequency rating plus regulatory control rating. Any environmental aspect with a total score greater than 60 is considered to be a significant environmental aspect.
7. This comprehensive list will be reviewed and updated:
   a. Annually as a result of the evaluation of compliance.
   b. With the addition of any new activities or programs on campus as prompted by the campus change procedure
   c. With significant revision of potentially applicable rules or regulations set forth by the EPA, North Carolina Department of Environment and Natural Resources (NC DENR), City of Elon, or Alamance County.
8. With any changes to this EMS document, the remainder of the EMS will be reviewed and updated as appropriate.

Documents/Records: The following documents associated with aspects and impacts are maintained in Appendix A:

- Elon University Environmental Aspects, Impacts & Significance Rating Matrix

ELON UNIVERSITY	EMS MANUAL 2.0 PLANNING	
	2.2 LEGAL AND OTHER REQUIREMENTS	
	Effective Date: 11/15/13	Rev. 1, 9/12/14

Purpose: The legal and other requirements to which the campus must comply are identified within the EMS. It is these legal and other requirements, along with the significant environmental aspects, that drive the focus of this EMS.

Responsibility: The EMS Representative, with the support of the EMS Team, is responsible for identifying, or ensuring resources are committed to identify, those legal and other requirements that apply to the campus.

It is the responsibility of each campus director, manager, supervisor, chair, or dean on campus to be aware of the legal and other requirements that affect their respective areas.

It is the responsibility of all Elon faculty and staff to comply with applicable legal and other requirements in their respective area.

Procedure/Process

1. The initial list of legal and other requirements was developed as a result of the comprehensive environmental peer audit conducted in November 2008 and updated during the initial EMS kick-off in 2011.
2. This comprehensive list will be reviewed and updated:
    a. Annually as a result of the evaluation of compliance.
    b. With the addition of any new activities or programs on campus as prompted by the campus change procedure
    c. With significant revision of potentially applicable rules or regulations set forth by the EPA, North Carolina Department of Environment and Natural Resources (NC DENR), City of Elon, or Alamance County.
3. With any changes to this EMS document, the remainder of the EMS will be reviewed and updated as appropriate.

Documents/Records: The following documents associated with legal and other requirements are maintained in Appendix B:

- Elon University Legal Requirements for the Environmental Management System

Purpose: To drive continuous improvement, objectives and targets relative to the EMS are established.

Responsibility: The EMS Representative, with support from the EMS Team, will ensure that the objectives and targets are identified and implemented as appropriate.

Procedure/Process

1. The initial set of objectives and targets were identified during the establishment of the campus EMS.
2. Additional objectives and targets will be solicited during the annual management review.
3. EMS team members may at any time recommend potential objectives and targets for consideration.

Documents/Records: The following documents associated with objectives and targets are maintained in Appendix C:

- Elon University Objectives, Targets and Programs (blank)
- Any completed Objectives and Targets

Working documents associated with objectives and targets are maintained in Appendix X.

Purpose: Roles and responsibilities have been identified to ensure the availability of resources and to establish clear lines of ownership and responsibility.

Responsibility: The EMS Representative, as the Assistant Vice President for Administrative Services, with the support of the President and Senior Vice President for Business, Finance and Technology will ensure that roles and responsibilities are clearly defined, communicated, and resources dedicated to maintain and implement the EMS.

Procedure/Process

1. Within section 1.2 of this EMS manual, the upper level structure of the EMS has been defined.
2. Further detailed within individual elements of this EMS are more task focused roles and responsibilities.

Documents/Records: The following documents associated with roles and responsibilities are maintained in Appendix D:

- Elon University Roles and Responsibilities

The following documents associated with roles and responsibilities are maintained in Appendix E:

- Elon University EMS Training and Awareness
- Elon University EMS Certificates and Licenses
- Elon University EMS External Communication

The following documents associated with roles and responsibilities are maintained in Appendix F:

- Elon University EMS Operational Control, Monitoring and Measuring

The following documents associated with roles and responsibilities are maintained in Appendix G

- Elon University EMS Emergency Preparedness and Response

ELON UNIVERSITY	EMS MANUAL 3.0 IMPLEMENTATION	
	3.2 TRAINING, COMPETENCE AND COMMUNICATION	
	Effective Date: 11/15/13	Rev. 1, 9/12/14

Purpose: Training, competence, and communication protocols have been documented to ensure all employees working on behalf of the campus are aware of how their actions affect campus compliance.

Responsibility: The EMS Representative, with support from the EMS Team, campus directors, supervisors and managers, is responsible for identifying those training and communication requirements that apply to the campus.

It is the responsibility of each director, manager, supervisor or dean to ensure appropriate faculty/staff in their areas attend the necessary training.

Procedure/Process

Training

1. The EMS team identified the various training and awareness programs needed based on the legal and other requirements and Significant Environmental Aspects (SEAs).
2. With the identification of necessary training, for each course, the team identified and documented:
    a. How will the training be administered (i.e. on site, contracted, off-site, etc.)
    b. The training due date
    c. Positions on campus requiring specific training

Competency

1. The EMS team identified those positions on campus whose competency directly affects conformance to the EMS.
2. With the identification of these competencies, the team identified and documented:
    a. Certifications/Licenses held or required
    b. Name of employee with said certification/license
    c. Expiration date/schedule for each license

Communication

1. The EMS team identified what will be communicated externally, outside of the Elon community, with regards to environmental matters.
2. With the identification of these communication needs, the team identified and documented:
    a. What is to be communicated
    b. How such communications will be made
    c. By whom these communications will be made
    d. To whom these communications will be made

Documents/Records: The following documents associated with training, competence, and communication requirements are maintained in Appendix E:

- Elon University EMS Training and Awareness
- Elon University EMS Certificates and Licenses
- Elon University EMS External Communications
- Completed training records

Purpose: Document control protocols have been established to ensure the control, applicability and relevance of EMS Procedures, checklists, forms and other references utilized to ensure compliance.

Responsibility: The EMS Representative, with the support of the EMS team, is responsible for ensuring the appropriate documents, forms, procedures and checklists are readily available for campus use.

Procedure/Process

Elon will utilize the “MOODLE” to control all documents necessary for EMS conformance and environmental compliance. Each team member will have access rights to load documents to the MOODLE site. Campus personnel will have read only access rights.

Purpose: Elon documented procedures, forms, protocols, training, etc. utilized on campus to control its SEAs and Legal and Other Requirements

Responsibility: The EMS Representative and EMS Team will provide support to campus directors, managers, supervisors, chairs, faculty and staff to ensure controls are in place and implemented to manage environmental compliance within their respective areas.

Procedure/Process

Elon identified and created operational control for each of its significant environmental aspects, and legal and other requirements.

Operational controls may include written instructions or procedures, checklists, training programs, maintenance programs, inspection programs, or simple signs and instructions.

When an insufficient or non-existent control was identified, a corresponding action item was added to the action item list provided in Appendix X.

Documents/Records: The following documents associated with Operational Control are maintained in the Appendix F:

- Elon University EMS Operational Control, Monitoring and Measuring

Purpose: Elon documented procedures, forms, protocols, training, etc. utilized on campus to address its potential environmental emergency situations.

Responsibility: The EMS Representative, EMS Team, emergency coordinator, campus directors, managers, and supervisors will provide support to the Director of Physical Plant for the identification of and response to environmental emergency situations.

The emergency coordinator will ensure that procedures are tested periodically and updated as necessary to reflect appropriate actions to be taken by Elon University in an environmental emergency situation.

Procedure/Process

Elon identified, revised, and created procedures and protocols to address potential environmental emergency situations.

When an insufficient or non-existent control was identified, a corresponding action item was added to the action item list.

Documents/Records: The following documents associated with Emergency Response are maintained in Appendix G:

- Elon University EMS Emergency Preparedness and Response

ELON UNIVERSITY	EMS MANUAL 4.0 CHECKING	
	4.1 MONITORING AND MEASURING AND RECORDS	
	Effective Date: 11/15/13	Rev. 1, 9/12/14

Purpose: Elon documented items that could be monitored and measured to ensure it tracks performance relative to its SEAs and Legal and Other Requirements.

Responsibility: Monitoring and measuring responsibilities vary per task but include directors, managers, supervisors, faculty and staff. The EMS representative will periodically ensure that each responsible party is completing its assigned task.

Procedure/Process

Elon identified and created operational control for each of its significant environmental aspects and legal and other requirements.

If monitoring and measuring tasks applied to these operational controls, those specific tasks were documented and responsibilities assigned. Additionally, an indication of where these completed records will be located is identified.

Documents/Records: The following documents associated with Monitoring and Measuring and Records are maintained in the Appendix F:

- Elon University EMS Operational Control, Monitoring and Measuring

Purpose: To ensure that the EMS is working and the campus is in compliance, an evaluation of compliance and internal audit schedule has been developed.

Responsibility: The EMS Representative will ensure that audits are conducted as outlined within the EMS. Additionally, those specifically identified in Appendix F will have specific oversight (internal audit) for their specific areas.

Process/Procedure

As outlined in Appendix F, individuals have specific oversight for specific tasks. The EMS team will support these individuals to ensure these reviews are being completed.

On an annual basis, the EMS representative will ensure an evaluation of compliance with respect to its legal and other requirements is conducted.

Documents/Records: Results from the evaluation of compliance will be communicated directly to the EMS Representative.

ELON UNIVERSITY	EMS MANUAL 4.0 CHECKING	
	4.3 Nonconformity, Corrective Action and Preventive Action	
	Effective Date: 11/15/13	Rev. 1, 9/12/14

Purpose: To ensure the EMS constantly evolves and to drive continuous improvement, a system for tracking and addressing action items has been established.

Responsibility: The EMS Representative will ultimately be responsible for ensuring action items are complete but individual actions items may be assigned to various campus personnel as well as contractors.

Procedure/Process

With the result of audits, periodic reviews, and changing campus conditions, action items will be identified, assigned, tracked and completed.

D**ocuments/Records:** A working document of actions items is maintained in Appendix X.

ELON UNIVERSITY	EMS MANUAL 5.0 MANAGEMENT REVIEW	
	5.0 MANAGEMENT REVIEW	
	Effective Date: 11/15/13	Rev. 1, 9/12/14

Purpose: To ensure upper administration is aware of the environmental compliance status on campus, a schedule for management review has been established.

Responsibility: The EMS Representative will ensure the management review occurs at least annually by December 31 of every year.

Procedure/Process

The EMS Representative will prepare an annual report that shall be provided to and discussed with the Senior Vice President of Business, Finance, and Technology. The Senior Vice President of Business, Finance, and Technology will then share the report, as appropriate, with the President of the University.

Documents/Records: EMS reports presented to the Senior Vice President will be maintained in Appendix H. Any action items resulting from these reviews will be tracked using the action item list in Appendix X.

Elon University
Environmental Aspects, Impacts, & Significance Rating Matrix

DEPARTMENT OR UNIT	ID NUMBER	ENVIRONMENTAL ASPECT DESCRIPTION	ENVIRONMENTAL ASPECT CATEGORY	OPERATIONAL CONDITION	ENVIRONMENTAL IMPACT	Environmental Regulations	SEVERITY RATING	FREQUENCY RATING	REGULATORY CONTROL RATING	SIGNIFICANCE SCORE	SAE > 60
All Units	0	Use of water	Water Utilization	Normal	Natural Resource Depletion	40 CFR 142.3, 15A NCAC 18C	4	32	24	60	
Units 1-67	1	Use of internet and cellular service	Energy utilization	Normal	Energy Resource Depletion	RCRA	0	32	0	32	
Units 1-67, excluding 4,15,51	2	Electricity Usage (plug-in)	Energy Utilization	Normal	Energy Resource Depletion	RCRA	0	32	0	32	
Units 1-67, excluding 4,15,51	3	Fire Extinguisher	Solid Waste Generation (non-hazardous) and Air Emission	Normal	Waste Management, Air Pollution	CAA	12	4	0	16	
Units 1-67, excluding 4,15,51	4	Fire Extinguisher	Accidental Release	Abnormal	Air Pollution	CAA	12	4	0	16	
Units 1-67, excluding 4,15,20,51	5	Broken Light Bulbs	Accidental Release	Abnormal	Air Pollution	40 CFR 273.13 (d)(2), 15A NCAC 13A..0119(b)	12	4	24	40	
Units 1-67, excluding 4,15,20,51	6	Use of lightbulbs	Universal Waste generation	Normal	Waste Management	40 CFR 273.13(d)(1); 40 CFR 273.14(e); 40 CFR 273.15(a), 15A NCAC 13A. .0119 (b)	12	32	32	76	SAE
Units 1-67, excluding 4,15,20,51	7	Use of Aerosol spray and air fresheners	VOCs	Normal	Air Pollution	CAA	4	12	0	16	
Units 1-67, excluding 4,15,20,51	8	Punctured Aerosol Can	Accidental Release	Abnormal	Air Pollution	CAA	4	4	0	8	
Units 1-67, excluding 4,15,17,20,51	9	Use of heat and air conditioning	Energy utilization (air emissions, noise emissions)	Normal	Energy Resource Depletion, Air Pollution	CAA	4	24	0	28	
Units 1-67, excluding 4,15,36,51,55	10	Use of water (hot water)	Water Utilization (energy utilization)	Normal	Natural Resource Depletion, Energy Resourse Depletion	40 CFR 142.3, 15A NCAC 18C	4	32	24	60	
Units 1-67, excluding 4,15,17,20,51	11	Generic Solid Waste Generation	Solid Waste Generation	Normal	Waste Management	RCRA	12	24	0	36	
Units 1-67, excluding 4,15,20,23,37,51,55	12	Generation of Paper Products	Solid Waste Generation	Normal	Waste Management	RCRA	4	12	0	16	
Units 1-67, excluding 4,15,20,23,34,51,58,59	13	Generation of recyclable waste	Recyclable Waste generation	Normal	Waste Management	RCRA	4	12	0	16	
Units 1-67, excluding 4,15,20,23,34,51,55,58,59	14	Recycling Used Ink Cartridges	Solid Waste Generation	Normal	Waste Management	RCRA	12	12	0	24	
Units 1-65, excluding 4,15,20,23,34,51,55,58,59	15	Printing	Use of renewable resources, Solid Waste Generation	Normal	Energy Resource Depletion, Waste Management	RCRA	4	24	0	28	
Units 1-67, excluding 4,14,15,20,28,34,39,51,59	16	Use of batteries	Universal Waste generation	Normal	Waste Management	40 CFR 273.13(a); 40 CFR 273.14(a); 40 CFR 273.15(c), 15A NCAC 13A. .0119 (b)	12	32	32	76	SAE
Units 1,5,11,16,24,27,32,35,40,41,42,46,47,52,56	17	Indoor Plants	Solid Waste Generation (non-hazardous) and Water Utilization	Normal	Waste Management, Natural Resource Depletion	RCRA	0	12	0	12	
Units 9,14,18,21,22,24,27,37 (34)	18	Use of water for washing clothes (hot water)	Water Utilization (energy utilization)	Normal	Natural Resource Depletion, Energy Resourse Depletion	40 CFR 142.3, 15A NCAC 18C	4	32	24	60	
Units 9,14,18,21,22,24,27,37 (34)	19	Clothes washer overflow or hose breakage	Accidental Release	Abnormal	Contamination of Land/ Water	CWA, SPCC	12	0	0	12	
Units 6,8,11,12,14,22,43,56	20	Use of water for dishwasher (hot water)	Water Utilization (energy utilization)	Normal	Natural Resource Depletion, Energy Resourse Depletion	40 CFR 142.3, 15A NCAC 18C	4	32	24	60	
Units 6,8,11,12,14,22,43,56	21	Dishwasher overflow or hose breakage	Accidental Release	Abnormal	Contamination of Land/ Water	CWA	12	0	0	12	
Units 4,6,9,17,30,42,60-67	22	Use of vehicles and small engines	Use of petroleum products, air pollution	Normal	Energy Resourse Depletion, Air Pollution	40 CFR 279.22, 40 CFR 279.24, 15A NCAC 13A. .0118(c), 40 CFR 112.8	12	32	24	68	SAE
Units 11,14,24,27,43	23	Use of gas Oven	Energy Utilization	Normal	Energy Resourse Depletion	RCRA	12	24	0	36	
Units 1,6,32,40,56	24	Fish Tank Maintenance	Water Utilization (energy utilization), use of renewable resources	Normal	Natural Resource Depletion, Energy Resourse Depletion	RCRA	0	24	0	24	
Units 21,30,55	25	Medical Supplies	Hazardous Waste	Normal	Waste Management	15A NCAC Chapter 13B.1200	4	24	24	52	
Units 21,30,55	26	Medical Hazards	Accidental Release	Abnormal	Contamination of Land/ Water	15A NCAC Chapter 13B.1200	12	0	12	24	
Units 22,56	27	Use of Propane Grill	Air Emission/ Solid Waste Generation	Normal	Air Pollution, Waste Management	CAA, RCRA	4	4	0	8	
Units 22,56	28	Use of Propane Grill	Accidental Release	Emergency	Air Pollution	CAA	4	0	0	4	
Biology, Chemistry, Physics	29	Labs- broken glass	Waste Generation	Normal	Waste Management	RCRA	4	12	0	16	
Biology, Chemistry	30	Lab-Autoclave	Water Utilization	Normal	Natural Resource Depletion	RCRA	4	12	0	16	
Biology, Chemistry	31	Lab-Autoclave	Heat Exhaust	Normal	Energy Resource Depletion	RCRA	4	12	0	16	
Arts West	32	Purchasing Textile Dying Powder	Raw Materials Usage	Normal	Depletion of Raw Materials	RCRA	4	12	0	16	
Arts West, Paint Shop	33	Disposal of Paint	Solid Waste Generation	Normal	Waste Management	RCRA	12	12	0	24	
Arts West, Paint Shop	34	Generation of Spent Solvent	Hazardous Waste	Normal	Waste Management	40 CFR 262.11, 15A NCAC 13A.0107 (a)	12	12	32	56	
Arts West, Paint Shop	35	Spills of Paints and Solvents	Accidental Releases	Abnormal	Contamination of Land/ Water	40 CFR 262.34(d)(5), 15A NCAC 13A.0107(c)	12	0	24	36	
Athletics (D1AA Sports)	36	Concentrated Odor Suppresent in Bus	Hazardus Waste	Normal	Waste Management	RCRA	4	12	0	16	
Athletics (D1AA Sports)	37	Spill Concentrated Odor Suppresent	Accidental Release	Abnormal	Contamination of Land/ Water	CWA, SPCC	4	0	0	4	
Units 6, 60,61,65,66	38	labs (dyes, ethidium bromide pesticides, bleach, dish washing liquid, various chemicals, etc)	Aqueous waste (proper disposal)	Normal	Waste Management	40 CFR 403.5, 15A NCAC 02H .0909	12	12	24	48	
Units 6,60,61,65,66	39	labs (dyes, ethidium bromide pesticides, bleach, dish washing liquid, various chemicals, preservatives, etc)	Accidental release	Abnormal	Contamination of Land/ Water	40 CFR 403.5, 15A NCAC 02H .0909	12	0	24	36	
Biology	40	labs (fume hoods (filtered), fly nap, gas, CO2, ethanol, etc)	Air emisions	Normal	Air Pollution	40 CFR 52, 15A NCAC 02Q .0300	12	12	24	48	
Biology	41	labs (spray paint, bleach, oil, caulk, ethanol cans, WD-40, etc)	Accidental release	Abnormal	Air Pollution	40 CFR 52, 15A NCAC 02Q .0300	12	0	24	36	
Biology	42	Sharps, misc. Chemicals, carosafe, bio hazardous waste, etc) (properly disposed of however)	Hazardous waste	Normal	Waste Management	15A NCAC Chapter 13B.1200	12	12	32	56	
Biology	43	insects, fruit flies, daphnia, etc	Solid waste generation	Normal	Waste Management	RCRA	4	4	0	8	
Biology	44	preserved animals (sent out)	Accidental release	Abnormal	Contamination of Land/ Water	15A NCAC Chapter 13B.1200	4	4	12	20	
Campus Rec	45	Pool Maintenance (backwash)	Water Utilization	Normal	Natural Resource Depletion	40 CFR 142.3, 15A NCAC 18C	4	12	12	28	
Units 6,9,12,45,60,61,64,65,66	46	Old Chemicals	Hazardous Waste	Normal	Waste Management	40 CFR 262.11, 15A NCAC 13A.0107 (a)	12	4	32	48	
Campus Rec	47	Backwash Waste (pool)	Water Waste	Normal	Waste Management	40 CFR 403.5, 15A NCAC 02H .0909	4	12	12	28	
Campus Rec	48	Heating the Pool	Energy Utilization	Normal	Energy Resource Depletion	RCRA	4	32	0	36	
Campus Rec	49	Chlorine (kept in basement closet)	Accidental Release	Abnormal	Contamination of Land/ Water	40 CFR 52, 15A NCAC 02Q .0300	12	0	24	36	
Chemistry	50	Lab- Nontoxic Chemicals	Hazardous Waste Generation	Normal	Waste Management	40 CFR 262.11, 15A NCAC 13A.0107 (a), 40 CFR 403.5, 15A NCAC 02H .0909	4	12	32	48	
Chemistry	51	Lab- Toxic, Corrosive, Oxidizing, Explosive and Hazardous Chemicals	Hazardous Waste Generation	Normal	Waste Management	40 CFR 262.11, 15A NCAC 13A.0107 (a)	24	12	32	68	SAE
Chemistry	52	Lab- Nontoxic Chemicals- Spills, carelessness by the students, any other accident	Accidental Release	Abnormal	Contamination of Land/ Water	40 CFR 262.11, 15A NCAC 13A.0107 (a), 40 CFR 403.5, 15A NCAC 02H .0909	4	0	32	36	
Chemistry	53	Lab- Toxic, Corrosive, Oxidizing, Explosive and Hazardous Chemicals- Spills, carelessness by the students, any other accident	Accidental Release	Abnormal	Contamination of Land/ Water	40 CFR 262.11, 15A NCAC 13A.0107 (a)	24	0	32	56	
Chemistry	54	Lab- Any Chemical	Natural Resource Consumption	Normal	Natural Resource Depleton	40 CFR 370, 40 CFR 370 Subpart C	4	12	12	28	
Chemistry	55	Lab- Compressed Gas Tanks	Air Emissions	Normal	Air Pollution	CAA	12	12	0	24	
Chemistry	56	Lab- Compressed Gas Tanks- Punctured	Accidental Release	Abnormal	Air Pollution	CAA	12	0	0	12	
Chemistry	57	Lab- Liquid Nitrogen and Liquid Helium	Air Emissions	Normal	Air Pollution	CAA	12	12	0	24	
Chemistry	58	Lab- Liquid Nitrogen and Liquid Helium- Punctured	Accidental Release	Abnormal	Air Pollution	CAA	12	0	0	12	
Chemistry	59	Lab-Fume Hood	Air Emissions	Normal	Air Pollution	CAA	12	12	0	24	
Chemistry	60	Lab-Fume Hood	Energy Consumption	Normal	Energy Resource Depletion	RCRA	4	12	0	16	
Chemistry	61	Lab- Air Compressor/Compressed Air Tank	Energy Consumption	Normal	Energy Resource Depletion	RCRA	4	4	0	8	
Chemistry	62	Lab -Air Compressor/Compressed Air Tank (could be dangerous if punctured)	Accidental Release	Abnormal	Air Pollution	CAA	4	0	0	4	
Chemistry	63	Lab- Natural Gas	Accidental Release	Abnormal	Air Pollution	40 CFR 52, 15A NCAC 02Q .0300	12	0	24	36	
Chemistry	64	Lab- Natural Gas	Air Emissions	Normal	Air Pollution	40 CFR 52, 15A NCAC 02Q .0300	12	4	24	40	
Chemistry	65	Lab- Natural Gas	Natural Resource Consumption	Normal	Natural Resource Depletion	RCRA	4	4	0	8	
Chemistry	66	Lab- Sharps/Biohazards	Hazardous Waste Generation	Normal	Waste Management	15A NCAC Chapter 13B.1200	4	12	24	40	
Chemistry	67	Lab- Bleach for sterilizing	Accidental Release	Abnormal	Contamination of Land/ Water	CWA	4	0	0	4	
Chemistry	68	Lab- Glove Box Oil	Natural Resource Consumption	Normal	Natural Resource Depletion	RCRA	4	4	0	8	
Chemistry	69	Lab- Glove Box Oil	Nonhazardous Waste Generation	Normal	Waste Management	RCRA	4	4	0	8	
Chemistry	70	Lab-Hydrolic Press Fluid Leaks	Accidental Release	Abnormal	Contamination of Land/ Water	CWA, SPCC	4	0	0	4	
Chemistry	71	Lab- Hydrolic Press Fluid	Nonhazardous Waste Generation	Normal	Waste Management	RCRA	4	4	0	8	
Chemistry	72	Lab- AA machine	Energy Consumption	Normal	Energy Resource Depletion	RCRA	4	4	0	8	
Chemistry	73	Lab- AA machine	Heat Exhaust	Normal	Air Pollution	CAA	4	4	0	8	
Chemistry	74	Lab- Supermagnet (liquid nitrogen and helium spill)	Hazardous Accidental Release	Abnormal	Contamination of Land/ Water	CWA, SPCC	12	12	0	24	
Chemistry	75	Lab- Cow Tongue, mice	Solid Waste Generation	Normal	Waste Management	RCRA	4	4	0	8	
Chemistry	76	Demos- Use and Disposal of Chemicals	Natural Resource Consumption and Hazardous Waste Generation	Normal	Natural Resource Depletion, Waste Management	40 CFR 262.11, 15A NCAC 13A.0107 (a)	12	4	32	48	
Engineering Workshop	77	Wood, PVC, wire	Solid Waste Generation (non-hazardous)	Normal	Waste Management	RCRA	4	4	0	8	
Green House	78	Use of fertilizers and other chemicals	Water Contamination	Normal	Contamination of Land/ Water	40 CFR 403.5, 15A NCAC 02H .0909	4	4	12	20	
Lindner	79	Use of Poly Vinyl Acetate Glue	Emissions of VOC's	Normal	Air Pollution	40 CFR 52, 15A NCAC 02Q .0300	4	4	12	20	
Lindner	80	Use of Acetate	Emissions of VOC's	Normal	Air Pollution	40 CFR 52, 15A NCAC 02Q .0300	4	4	12	20	
Long Building	81	Neuroscience Labs	Solid Waste Generation (non-hazardous)	Normal	Waste Management	RCRA	4	12	0	16	
Mail Center	82	Printing: Ink Spill	Accidental Release	Abnormal	Contamination of Land/ Water	CWA, SPCC	12	0	0	12	
Mail Center	83	Use of Air Compressor	Solid Waste Generation (non-hazardous)	Normal	Waste Management	RCRA	4	4	0	8	
Mail Center	84	Discovery of Biohazards	Accidental Release	Emergency	Contamination of Land/ Water	15A NCAC Chapter 13B.1200	12	0	12	24	
Mail Center	85	Handling of Chemical Waste (materials sent to science labs)	Accidental Release	Abnormal	Contamination of Land/ Water	40 CFR 262.11, 15A NCAC 13A.0107 (a)	12	0	32	44	
McCrary(Costume Dep)	86	Dyes (used in washer)	Water Waste	Normal	Natural Resource Depletion	40 CFR 403.5, 15A NCAC 02H .0909	4	12	24	40	
McCrary(Costume Dep)	87	Dyes	Hazardous Waste	Normal	Contamination of Land/ Water	CWA, SPCC	12	4	0	16	
McCrary(Costume Dep)	88	Spilled paint or dye	Accidental	Abnormal	Contamination of Land/ Water	40 CFR 403.5, 15A NCAC 02H .0909	12	0	24	36	
McCrary Performing Arts	89	Steel	Solid Waste Generation	Normal	Waste Management	RCRA	4	4	0	8	
McCrary Performing Arts	90	Old Tools	Solid Waste Generation	Normal	Waste Management	RCRA	4	4	0	8	
McCrary Performing Arts	91	Industrial Waste	Solid Waste Generation	Normal	Waste Management	RCRA	4	4	0	8	
McCrary Performing Arts	92	Use of Acetone	Hazardous Material	Normal	Natural Resource Depletion	40 CFR 52, 15A NCAC 02Q .0300	12	4	24	40	
McCrary Performing Arts	93	Use of Paint thinners	Hazardous Material	Normal	Natural Resource Depletion	40 CFR 52, 15A NCAC 02Q .0300	12	4	24	40	

Elon University
Environmental Aspects, Impacts, & Significance Rating Matrix

DEPARTMENT OR UNIT	ID NUMBER	ENVIRONMENTAL ASPECT DESCRIPTION	ENVIRONMENTAL ASPECT CATEGORY	OPERATIONAL CONDITION	ENVIRONMENTAL IMPACT	Environmental Regulations	SEVERITY RATING	FREQUENCY RATING	REGULATORY CONTROL RATING	SIGNIFICANCE SCORE	SAE > 60
McCrary Performing Arts	94	Use of Oil	Hazardous Material and Energy Utilization	Normal	Natural Resource Depletion, Energy Resourse Depletion	RCRA	12	4	0	16	
McCrary Performing Arts	95	Use of lighters	Universal Material	Normal	Waste Management	RCRA	4	4	0	8	
McCrary Performing Arts	96	Use of Paint	Air Emissions	Normal	Air Pollution	40 CFR 52, 15A NCAC 02Q .0300	12	4	24	40	
McCrary Performing Arts	97	Acetone, Paint, Paint thinner, oil Spill	Accidental Release	Abnormal	Contamination of Land/ Water	40 CFR 52, 15A NCAC 02Q .0300	12	0	32	44	
Mosley Center	98	Charcoal Grill	Air Emissions and Solid Waste Generation (non-hazardous)	Normal	Air Pollution, Waste Management	40 CFR 52, 15A NCAC 02Q .0300	4	4	24	32	
Mosley Center	99	Fog Machines	Air Emissions	Normal	Air Pollution	CAA	4	4	0	8	
Physics Department	100	Labs (Use of liquid nitrogen, natural gas hook up, spray paint cans)	Air Emissions	Normal	Air Pollution	40 CFR 52, 15A NCAC 02Q .0300	12	4	24	40	
Physics Department	101	Labs (Propane, vinegar, acids, other misc chemical waste)	Hazardous Waste Generation	Normal	Waste Management	40 CFR 403.5, 15A NCAC 02H .0909	12	4	32	48	
Physics Department	102	propane tanks	Accidental Release, Hazardous Release	Abnormal	Contamination of Land/ Water, Air Pollution	40 CFR 52, 15A NCAC 02Q .0300	12	0	24	36	
Physics Department	103	Radioactive Materials (kept in plastic box, says on container it's not dangerous)	Hazardous Waste Generation	Normal	Waste Management	RCRA	4	4	0	8	
PT	104	Water Use (mixing preservatives)	Water Utilization	Normal	Natural Resoure Depletion	RCRA	4	12	0	16	
PT	105	Gross Anatomy Lab Energy use (Surgical Lamps, Cooler Room-Kept at 5*C, X-Ray Box, Computers)	Energy Utilization	Normal	Energy Resource Depletion	RCRA	4	24	0	28	
PT	106	Wash the tools for the cadavers	Water Utilization	Normal	Natural Resoure Depletion	RCRA	4	12	0	16	
PT	107	Wash the tools for the cadavers	Energy Utilization	Normal	Energy Resouce Depletion	RCRA	4	12	0	16	
PT	108	Embalming Fluid mixed with liquid body waste secreted from the Human Donors residue is flushed down the drain, dishwashing soap, regular hand soap, bleach, disinfectant	Water Contamination	Normal	Contamination of Land/Water	15A NCAC Chapter 13B.1200	4	0	24	28	
PT	109	Anatomy Lab Waste (Human Tissue)	Solid Waste Generation	Normal	Waste Management	15A NCAC Chapter 13B.1200	4	12	24	40	
PT	110	Chemicals (Propanol, propylene glycol, Embalming fluid-water, phenol, ethanol, potassium nitrate, borax, boric acid, formalin)	Liquid Waste Generation	Normal	Waste Management	40 CFR 262.11, 15A NCAC 13A.0107 (a)	12	12	32	56	
PT	111	Chemicals (Propanol, propylene glycol, Embalming fluid-water, phenol, ethanol, potassium nitrate, borax, boric acid, formalin)	Water Contamination	Normal	Contamination of Land/Water	40 CFR 262.11, 15A NCAC 13A.0107 (a), 40 CFR 403.5, 15A NCAC 02H .0909	12	12	32	56	
PT	112	Organs stored in glass containers with preservatives in a cabinet.	Accidental Release	Abnormal	Contamination of Land/Water	15A NCAC Chapter 13B.1200	12	0	24	36	
PT	113	Organs stored in glass containers with preservatives in a cabinet.	Accidental Water Contamination	Abnormal	Contamination of Land/Water	15A NCAC Chapter 13B.1200	12	0	24	36	
Ropes Course	114	Fire Pit Accident	Accidental Release	Emergency	Air Pollution, Contamination of Land/Water, Natural Resource Depletion	CAA, CWA, SPCC, RCRA	12	0	0	12	
Ropes Course	115	Use of Fire Pit	Air Emissions	Normal	Air Pollution, Contamination of Land or Ground Water	CAA, CWA, SPCC	4	4	0	8	
Training Room	116	Use of Rehabilitation Equipment	Energy Utilization	Normal	Energy Resouce Depletion	RCRA	4	12	0	16	
Training Room	117	Use of Chemical Products	Hazardous Waste	Normal	Waste Management	RCRA	4	12	0	16	
Whitley	118	Organ	Energy Consumption	Normal	Energy Resource Depletion	RCRA	4	12	0	16	
Physical Plant Landscaping	4	Application of fertilizers	Natural Resource Utilization	Normal	Depletion of Raw Material Resources		4	4	12	20	
Physical Plant Landscaping	5	Spills of pesticides, fertilizers	Accidental Release	Emergency	Contamination of Land/Groundwater		12	0	24	36	
Physical Plant Landscaping	6	Generation of used oil & oil filters	Used oil Generation	Normal	Waste Management	40 CFR 279.22, 40 CFR 279.24, 15A NCAC 13A. .0118(c), 40 CFR 112.8	4	12	32	48	
Units 60,65	7	Generation of used tires	Solid Waste Generation	Normal	Depletion of Natural Resources		0	12	12	24	
Physical Plant Landscaping	8	Spills of gasoline, biodeisel or oil	Accidental Release	Emergency	Surface Water Pollution	40 CFR 112.5	12	0	32	44	
Units 60,61,64,65,66	10	Wash Landscape equipment, mowers, etc	Water Discharges	Normal	Surface Water Pollution		0	12	0	12	
Physical Plant Landscaping	12	Generation of yard waste leaves limbs grass clippings	Solid Waste Generation	Normal	Waste Management		0	12	0	12	
Physical Plant Landscaping	13	Application of compost	Natural resource utilization	Normal	None		0	4	0	4	
Physical Plant Landscaping	14	Generation of compost	Solid Waste Generation	Normal	None		0	12	0	12	
Physical Plant Landscaping	15	Irrigation of turf & plants	Natural resource utilization	Normal	Depletion of Natural Resources		0	12	0	12	
Physical Plant Landscaping	16	Paint Athletic Fields	Other Material Utilization	Normal	Depletion of other materials		0	12	0	12	
Physical Plant Landscaping	20	Ice Melting Supplies	Water Discharges	Normal	Surface Water Pollution		0	4	0	4	
Physical Plant Paint Shop	21	Paints and Solvents	Raw Materials Usage	Normal	Depletion of Raw Materials Resources		0	24	12	36	
Physical Plant Paint Shop	22	Spent Solvent	Hazardous Waste Generation	Normal	Waste Management	40 CFR 262.11, 15A NCAC 13A.0107 (a)	4	12	32	40	
Physical Plant Paint Shop	24	Air Emissions Outside	Air Emissions	Normal	Air Quality Reduction	40 CFR 52, 15A NCAC 02Q .0300	4	12	24	20	
Physical Plant Paint Shop	27	Air Emissions Inside the Building	Air Emissions	Normal	Air Quality Reduction	40 CFR 52, 15A NCAC 02Q .0300	12	12	24	28	
Physical Plant Paint Shop	29	Spill of Paints and Solvent	Accidental Release	Abnormal	Contamination of Land/ Water	40 CFR 262.11, 15A NCAC 13A.0107 (a)	12	0	32	28	
Physical Plant Paint Shop	36	Outside Bleach Use	Air Emissions	Normal	Air Quality Reduction	40 CFR 52, 15A NCAC 02Q .0300	12	12	24	36	
Physical Plant Utilities: Plumbing	40	Generation of Oxidizers/Amines	Hazardous Waste Generation	Normal	Waste Management		0	0	0	0	
Physical Plant Utilities: Plumbing	42	Generation of Adhesives	Hazardous Waste Generation	Normal	Waste Management		4	4	0	8	
Physical Plant Utilities: Plumbing	43	Generation of Enzyme Pellets	Hazardous Waste Generation	Normal	Waste Management		4	0	0	4	
Physical Plant Utilities: Plumbing	44	Water Main Break	Accidental Release	Abnormal	Depleted Natural Resources		0	4	0	4	
Physical Plant Utilities: Plumbing	45	Sewage Spill	Accidental Release	Emergency	Contamination of Land/Water		12	0	12	24	
Physical Plant Utilities: Plumbing	46	Chemical Usage for Fountain Treatment	Raw Material Usage	Normal	Depletion of Raw Material Resources		4	4	0	8	
Physical Plant Utilities: Plumbing	48	Chemical Lab Waste Holding Tank Spill	Accidental Release	Emergency	Contamination of Land/Water	40 CFR 403.5, 15A NCAC 02H .0909	12	0	32	44	
Physical Plant Utilities: Plumbing	50	Chemical Usage For Drains	Raw Material Usage	Abnormal	Depletion of Raw Material Resources		12	4	0	16	
Units 62,64	55	Boiler Leak	Accidental Release	Abnormal	Contamination of Land/Water		4	0	0	4	
Units 63,64	56	Battery Charging (Chemical Usage) Lead Acid Solution	Raw Material Usages	Normal	Depletion of Raw Material Resource		4	0	0	4	
Units 63,64	57	Battery Charging (Spills during Charging)	Accidental Releases	Abnormal	Surface Water Pollution, Contamination of Land/Water	40 CFR 262.11, 15A NCAC 13A.0107 (a)	12	0	32	44	
Physical Plant HVACR	67	Generation of Freon	Hazardous Waste Generation	Normal	Waste Management	40 CFR 82.161, 40 CFR 82.166	32	12	32	76	SAE
Physical Plant HVACR	68	Freon Leak	Accidental Releases	Emergency	Contamination of Land/ Water	40 CFR 82.161, 40 CFR 82.166	32	4	32	68	SAE
Physical Plant HVACR	79	Chemical Usage for Cooling Tower	Hazardous Waste Generation	Normal	Surface Water Pollution, Contamination of Land/Water		0	0	0	0	
Physical Plant HVACR	81	Natural Gas Usage for Boiler	Energy Utilization	Normal	Depletion of Natural Resources		0	32	0	32	
Physical Plant HVACR	82	Air Emissions from Boiler	Air Emissions	Normal	Air Quality Reduction	40 CFR 52, 15A NCAC 02Q .0300	4	32	24	60	
Physical Plant HVACR	84	Disposal of Vacuum Pump Oil	Hazardous Waste Generation	Normal	Surface Water Pollution	40 CFR 279.22, 40 CFR 279.24, 15A NCAC 13A. .0118(c), 40 CFR 112.8	0	4	24	28	
Physical Plant HVACR	85	Chemical Usage for Maintenance on Cooling Tower	Raw Materials Usage	Normal	Depletion of Raw Material Resources		0	0	0	0	
Physical Plant Automotive Services, HVACR	91	Air Filters	Raw Material Usage	Normal	Waste Management		4	12	0	16	
Physical Plant Automotive Services	91	Oil, Transmission, and Fuel Filters	Raw Material Usage	Normal	Waste Management	40 CFR 279.22, 40 CFR 279.24, 15A NCAC 13A. .0118(c), 40 CFR 112.8	4	12	32	48	
Physical Plant Automotive Services	92	Excess Oil/ Antifreeze	Hazardous Waste Generation	Normal	Waste Management	40 CFR 279.22, 40 CFR 279.24, 15A NCAC 13A. .0118(c), 40 CFR 112.8	4	12	32	48	
Physical Plant Automotive Services	97	Chemical Usage, Parts Washer	Raw Material Usage	Normal	Depletion of Raw Materials		4	12	0	16	
Physical Plant Automotive Services	98	Generation of Parts Washer Solvent	Waste Generation	Normal	Waste Management	40 CFR 262.11, 15A NCAC 13A.0107 (a)	12	12	32	56	
Physical Plant Automotive Services	99	Spill of part washer solvent	Accidental Release	Abnormal	Contamination of Land/Water	40 CFR 262.11, 15A NCAC 13A.0107 (a)	12	0	32	44	
Physical Plant Automotive Services	105	Exhaust Fan Emissions	Air Emissions	Normal	Air Quality Reduction	40 CFR 52, 15A NCAC 02Q .0300	4	12	24	40	
Physical Plant Automotive Services	106	Welding Machine Use	Energy Utilization/Air Emissions	Normal	Air Quality Reduction		0	12	0	12	
Physical Plant Automotive Services	107	Welding Rods/Wire	Other Material Utilization	Normal	Depletion of Raw Materials		0	12	0	12	
Physical Plant Automotive Services	108	A/C Refrigerant (R12 & 134A)	Other Material Utilization	Normal	Depletion of Raw Materials	40 CFR 82.161, 40 CFR 82.166	12	12	32	56	
Physical Plant Automotive Services	109	Vehicle Parking (leak of oil, gas, and antifreeze)	Water Contamination	Abnormal	Contamination of Land/Water		12	12	0	24	
Physical Plant Automotive Services	110	Fueling Station Storage	Raw Material Usage	Normal	Depletion of Raw Materials	40 CFR 112.5	12	24	32	68	SAE
Physical Plant Automotive Services	111	Fueling Station Air Emissions	Air Emissions	Normal	Air Quality Reduction	40 CFR 52, 15A NCAC 02Q .0300	4	24	24	52	
Physical Plant Automotive Services	112	Fuel/Hydraulic fluid Leakage	Accidental Release	Emergency	Contamination of Land/Water		24	12	0	36	
Physical Plant Automotive Services	114	Undrained Motor Storage	Accidental Release	Emergency	Surface Water Pollution	40 CFR 279.22, 40 CFR 279.24, 15A NCAC 13A. .0118(c), 40 CFR 112.8	4	4	24	32	
Physical Plant Automotive Services	117	Window Cleaner Spill	Accidental Release	Emergency	Contamination of Land/Water		4	0	0	4	
Physical Plant Environmental Services	121	Generation of Cleaning Supplies (Chemical)	Hazardous Waste Generation	Normal	Waste Management		4	12	0	16	
Physical Plant Environmental Services	124	Generation of Disinfectants	Hazardous Waste Generation	Normal	Waste Management		4	24	0	28	
Physical Plant Environmental Services	125	Use of Disinfectants	Air Emissions	Normal	Air Quality Reduction		4	24	0	28	
Physical Plant Environmental Services	127	Propane Used for Floor Buffers and Forklift	Raw Material Usage	Normal	Depletion of Raw Material Resources		0	12	0	12	
Physical Plant Carpentry	137	Wood	Raw Material Usage	Normal	Depletion of Raw Material Resources		0	24	0	24	
Physical Plant Carpentry	138	Saw Dust	Solid Waste Generation (Non-Hazardous)	Normal	Waste Management		0	24	0	24	
Physical Plant Carpentry	144	Air Emissions from Adhesives	Air Emissions	Normal	Air Quality Reduction	40 CFR 52, 15A NCAC 02Q .0300	4	12	24	40	

	A
1	Alamance
2	Application Technologies
3	Arts West
4	Athletics (D1AA Sports)
5	Belk Pavilion (Center for Advancement of Teaching and Learning)
6	Biology
7	Book Store
8	Business Services
9	Campus Rec
10	Campus Technology Support
11	Carlton
12	Chemistry
13	Danieley Commons
14	Dormitory
15	Driving Range
16	Duke Science Building
17	Engineering Workshop
18	Field House Offices
19	Financial Planning
20	Green House
21	Health Center
22	Holland House
23	Holt Chapel
24	Honors Pavilion
25	Instructional Design And Development
26	Informational Systems and Technologies
27	International Pavilion
28	Irazu
29	Johnston Hall Alumni Center
30	Koury Administration
31	Koury Business Center
32	Library
33	Lindner
34	Lodge
35	Long Building
36	Mail Center
37	McCrary(Costume Dep)
38	McCrary (Culture)
39	McCrary Performing Arts
40	McEwen Communications Building
41	Mooney
42	Mosley Center
43	Oaks Commons and Offices
44	Pendulum
45	Physics Department
46	Political Science Pavilion
47	Powell
48	Powell House
49	Print Services
50	PT
51	Ropes Course
52	Spence Pavilion (Religious Studies)
53	Sport Academics
54	Teaching and Learning Technologies
55	Training Room
56	Truitt Center (Blake House)
57	University Relations
58	Whitley
59	104 Williamson Ave.
60	Landscaping
61	Paint Shop
62	Plumbing
63	Electricity
64	HVACR
65	Automotive Services
66	Environmental Services
67	Carpentry

Environmental Regulations

	A	B
1	CAA	Clean Air Act
2	CWA	Clean Water Act
3	SPCC	Spill Prevention, Control, and Countermeasure
4	RCRA	Resource Conservation and Recovery Act

Elon University
Legal Requirements for the Environmental Management System (EMS)

Clean Air Act (CAA)				
Specific Requirement	**Federal Regulation (Code of Federal Regulations)***	**State Regulation (NC Administrative Code)****	**Local Regulation*****	**Due Date**
Ozone Depleting Compounds: • Technician Certifications o Technicians who perform maintenance, service, repair, or disposal that could be reach atmosphere must maintain a CFC certification (Type I, Type II, Type III or Universal). o Elon University must keep a copy of the technician's proof of certification on campus. • Records of Refrigerant Recovery Logs o Technicians servicing appliances that contain fifty (50) or more pounds of refrigerant must provide Elon with an invoice that indicates the amount of refrigerant added to the appliance. o Owners/operators of appliances normally containing fifty (50) or more pounds of refrigerant must keep servicing records documenting the date and type of service, as well as the quantity of refrigerant added.	40 CFR 82.161; 40 CFR 82.166	N/A – no state regulation	N/A	Ongoing
Risk Management Plan – Currently not applicable to Elon University. Elon not likely to trigger. Affected chemicals list provided: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=fc8ae377f0556cef3f3ee6ddacdb5763&rgn=div8&view=text&node=40:15.0.1.1.5.6.1.6&idno=40	40 CFR 68.12	N/A – no state regulation	N/A	To be reviewed as campus chemical storage changes. Applies to large bulk quantities of material
North Carolina State Implementation Plan (SIP) Air Emissions Inventory and associated permits – update the air emissions inventory to reflect all current fuel-burning equipment and all other emissions on campus – conduct calculations to determine Title V and State Air Permit Eligibility.	40 CFR 52	15A NCAC 02Q .0300	N/A	To be updated annually or as campus operations change
New Source Performance Standards (NSPS) For Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After 8/17/1971 – Not applicable as the campus does not operate any boiler rated greater than 250 MMBtu/hr	40 CFR 60, Subpart D	15A NCAC 02D.0524	N/A	Currently not applicable, review each year or as campus operations change
NSPS For Electric Utility Steam Generation Units for Which Construction commenced After 8/18/1978 – Not applicable as the campus does not operate any boiler rated greater than 250 MMBtu/hr	40 CFR 60, Subpart Da	15A NCAC 02D.0524	N/A	Currently not applicable, review each year or as campus operations change
NSPS For Industrial-Commercial Institutional Steam Generating Units – Not applicable as the campus does not operate any boiler rated greater than 100 MMBtu/hr that commenced construction, modification or reconstruction after 6/19/1984	40 CFR 60, Subpart Db	15A NCAC 02D.0524	N/A	Currently not applicable, review each year or as campus operations change
NSPS For Small Industrial-Commercial Institutional Steam Generating Units – Not applicable as the campus does not operate a boiler that was constructed, modified or reconstructed after 6/9/1989 with a rated capacity $\geq$ 10 MMBtu/hr but $\leq$ 100 MMBtu/hr	40 CFR 60, Subpart Dc	15A NCAC 02D.0524	N/A	Currently not applicable, review each year or as campus operations change

Elon University
Legal Requirements for the Environmental Management System (EMS)

Clean Air Act (CAA)				
Specific Requirement	**Federal Regulation (Code of Federal Regulations)***	**State Regulation (NC Administrative Code)****	**Local Regulation*****	**Due Date**
NSPS for Stationary Compression Ignition Internal Combustion Engines (example: diesel emergency generators and fire pumps)– • Applies to: o Owners and operators of generators or fire pumps constructed after 7/11/2005, and o Emergency generators manufactured after 4/1/06, or o Fire pumps manufactured after 7/1/2006, or o Emergency generators and fire pumps modified or reconstructed after 7/11/2005 • Engine must be "certified engine" to comply with emission standards • Document hours of non-emergency operation (i.e. maintenance and testing) • Maintain maintenance records • Purchase low sulfur diesel fuel (less than 15 ppm sulfur)	40 CFR 60, Subpart IIII	15A NCAC 02D.0524	N/A	Will apply to any new stationary Diesel Emergency Generators Applies to Generators 10, 11, 14, 16
NSPS for Stationary Spark Ignition Internal Combustion Engines (example: natural gas emergency generators) • Applies to: o Owners and operators of engines that commenced construction on site after 6/12/2006, and o Manufactured after 7/1/07 and rated > 500 HP, or o Manufactured after 1/1/08 and rated > 500 HP but < 1,350 HP, or o Manufactured after 7/1/08 and rated < 500 HP, or o Emergency engines Manufactured after 1/1/09 and rated > 25 HP • Requirements vary by size of engine • Must have non-resettable hour meter • Engine must be "certified engine" to comply with emission standards	40 CFR 60, Subpart JJJJ	15A NCAC 02D.0524	N/A	Will apply to any new stationary natural gas or propane emergency generators installed on campus
National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart CCCCCC, Gasoline Dispensing Facilities Currently not applicable as the campus does not dispense gasoline in excess of 10,000 gallons per month Campus would trigger this regulations if gasoline tanks were added to campus for the purpose of dispensing gasoline	40 CFR 63 Subpart CCCCCC	15A NCAC 02D.1110	N/A	Currently not applicable, review monthly throughput to ensure 10,000 gallons/month is not exceeded
NESHAP Subpart M, Asbestos • Required to inspect for asbestos prior to <u>any</u> renovation or demolition project • Notification requirements if reno/demo disturbs asbestos in the amounts of o At least 80 linear meters (260 linear feet) on pipes or at least 15 square meters (160 square feet) on other facility components, or o At least 1 cubic meter (35 cubic feet) of facility components where the length or area could not be measured previously. • Follow procedures to control emissions of asbestos during reno/demo activities • Maintain records of waste disposal	40 CFR 61.145	15A NCAC 02D .1110	N/A	Required with each renovation and demolition project, regardless of age of building

* All federal regulations available at: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?sid=517133bdfe784caddb39a8aeb577878c&c=ecfr&tpl=/ecfrbrowse/Title40/40tab_02.tpl
** All NC Department of Environment and Natural Resources regulations available at: http://portal.ncdenr.org/web/guest/rules-policies-laws-and-regulations
*** All Alamance County regulations available at: http://www.alamance-nc.com/d/environmental-health/rules-and-regulations.html

Elon University
Legal Requirements for the Environmental Management System (EMS)

Clean Water Act (CWA)				
Specific Requirement	**Federal Regulation (Code of Federal Regulations)***	**State Regulation (NC Administrative Code)****	**Local Regulation*****	**Due Date**
Stormwater(SW) Permitting (construction) – if a construction project on campus that includes, clearing, grading and/or excavating, disturbs greater than or equal to one (1) acre of land, a National Pollution Discharge Elimination Systems (NPDES) Permit for Discharges Associated with Construction Activities must be obtained, complied with and a copy maintained on campus.	40 CFR 122	15A NCAC 02H .1000	Coordinate with City of Elon as necessary http://www.elonnc.com/index.php?option=com_content&view=article&id=41&Itemid=68	To be obtained prior to initiation of construction project, as applicable
Stormwater Discharges to City System – ensure compliance with City of Elon MS4 NPDES Permit	N/A	N/A	Coordinate with City of Elon as necessary http://www.elonnc.com/index.php?option=com_content&view=article&id=41&Itemid=68	Coordinate discharges with city Review discharges annually or as campus conditions change
POTW Compliance/ Pretreatment – review discharges with local Publically Owned Treatment Words (POTW) to ensure compliance	40 CFR 403.5	15A NCAC 02H .0909	Coordinate with City of Elon as necessary http://www.elonnc.com/index.php?option=com_content&view=article&id=55&Itemid=75	Gain approval from POTW as necessary
Spill Prevention, Control, and Countermeasures (SPCC) Plan Updates – review and update the campus SPCC Plan within six (6) months of any changes to on-campus oil storage.	40 CFR 112.5	N/A	N/A	Update within six (6) months of campus oil storage changes
SPCC Plan Management Review – perform a management review of the campus SPCC Plan every five (5) years from its date of inception.	40 CFR 112.5	N/A	N/A	Every 5 years
SPCC Inspections – conduct monthly inspections of all oil storage units and document records of inspections.	40 CFR 112.8	N/A	N/A	Once a month
Annual SPCC Training – train all oil-handling personnel in operation and maintenance of equipment to prevent discharges, discharge procedure protocols, applicable pollution control laws, rules and regulations, general campus operations and the contents of the campus SPCC Plan. This is an annual requirement.	40 CFR 112.7	N/A	N/A	Within 30 days of hire and Annually by April 1

* All federal regulations available at: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?sid=517133bdfe784caddb39a8aeb577878c&c=ecfr&tpl=/ecfrbrowse/Title40/40tab_02.tpl
** All NC Department of Environment and Natural Resources regulations available at: http://portal.ncdenr.org/web/guest/rules-policies-laws-and-regulations
*** All Alamance County regulations available at: http://www.alamance-nc.com/d/environmental-health/rules-and-regulations.html

Elon University
Legal Requirements for the Environmental Management System (EMS)

Emergency Planning and Community Right to Know Act (EPCRA)				
Specific Requirement	**Federal Regulation (Code of Federal Regulations)***	**State Regulation (NC Administrative Code)****	**Local Regulation*****	**Due Date**
Chemical Inventories – complete and consolidate chemical inventories from all departments/areas of campus to determine whether any chemicals stored on campus require reporting.	40 CFR 370	N/A	N/A	Annually prior to March 1st EPCRA reporting deadline
Tier II Reporting – determine whether any chemicals are stored on campus in a quantity of > 10,000 pounds and/or if any extremely hazardous substances (EHS), per EPCRA's "List of Lists" are stored on campus in a quantity that is greater than or equal to its Threshold Planning Quantity or 500 pounds (whichever is less). If so, report these chemicals on a Tier II Report by March 1st every year to submit to the State Emergency Response Commission (SERC), Local Emergency Planning Council (LEPC) and local Fire Department.	40 CFR 370 Subpart C	North Carolina Department of Crime Control and Public Safety http://www.nccrimecontrol.org/Index2.cfm?a=000003,000010,000064,000390,001815	Alamance County requires the use of its own Reporting System http://www.alamance-nc.com/d/fire-marshal/tier-ii-reporting.html Coordinate local reporting with local fire department	March 1st annually for the previous calendar year data
MSDS Reporting – determine whether any chemicals are stored on campus in a quantity of > 10,000 pounds and/or if any extremely hazardous substances (EHS), per EPCRA's "List of Lists" are stored on campus in a quantity that is greater than or equal to its Threshold Planning Quantity or 500 pounds (whichever is less). If so, submit a copy of the MSDS of that material to the State Emergency Response Commission (SERC), Local Emergency Planning Council (LEPC) and local Fire Department.	40 CFR 370 Subpart C	North Carolina Department of Crime Control and Public Safety http://www.nccrimecontrol.org/Index2.cfm?a=000003,000010,000064,000390,001815	Alamance County requires the use of its own Reporting System http://www.alamance-nc.com/d/fire-marshal/tier-ii-reporting.html Coordinate local reporting with local fire department	Submit MSDS within 90 days of meeting thresholds Resubmit within 90 days of MSDS being revised Submit within 30 days of LEPC request of information
EHS Emergency Planning – if an EHS is determined to be stored on campus in a quantity that meets or exceeds its threshold planning quantity, per EPCRA's "List of Lists", then a MSDS of that chemical must be submitted to the State Emergency Response Commission (SERC), Local Emergency Planning Council (LEPC) and local Fire Department. Additionally, emergency planning procedures must be followed.	40 CFR 355 Subpart B	North Carolina Department of Crime Control and Public Safety http://www.nccrimecontrol.org/Index2.cfm?a=000003,000010,000064,000390,001815	Alamance County requires the use of its own Reporting System http://www.alamance-nc.com/d/fire-marshal/tier-ii-reporting.html Coordinate local reporting with local fire department	One time submission upon determination of new chemical reporting requirement, update with personnel change.

Emergency Planning and Community Right to Know Act (EPCRA)				
Specific Requirement	**Federal Regulation (Code of Federal Regulations)***	**State Regulation (NC Administrative Code)****	**Local Regulation*****	**Due Date**
EPCRA Emergency Notification – if an EHS or a CERCLA hazardous substance is released at or exceeding its listed "RQ" (reference the list of lists) then immediate notification of the release is required to: • Alamance County Emergency Management (336) 227-1365 • NC Department of Crime Control and Public Safety (919) 733-3825 • National Response Center at (800) 424-8802 for CECRLA Hazardous Substances	40 CFR 355 Subpart C	North Carolina Department of Crime Control and Public Safety http://www.nccrimecontrol.org/Index2.cfm?a=000003,000010,000064,000390,001815	Alamance County requires the use of its own Reporting System http://www.alamance-nc.com/d/fire-marshal/tier-ii-reporting.html Coordinate local reporting with local fire department	Notification required immediately after release (within 15 minutes) Written report within 30 days following incident

Reference List of Lists available at: http://www.epa.gov/emergencies/docs/chem/list_of_lists_revised_7_26_2011.pdf

* All federal regulations available at: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?sid=517133bdfe784caddb39a8aeb577878c&c=ecfr&tpl=/ecfrbrowse/Title40/40tab_02.tpl
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*** All Alamance County regulations available at: http://www.alamance-nc.com/d/environmental-health/rules-and-regulations.html

Federal Insecticide Fungicide and Rodenticide Act (FIFRA)				
Specific Requirement	**Federal Regulation (Code of Federal Regulations)***	**State Regulation (NC Administrative Code)****	**Local Regulation*****	**Due Date**
Pesticide Applicator Licenses – maintain copies of all pesticide applicators' licenses in campus files.	40 CFR 171	02 NCAC 09L .0100 (NC Department of Agriculture)	N/A	Annually based on date of issuance
Pesticide Worker Protection Requirement - currently does not apply as the campus does not apply pesticides (restricted use or general use) for commercial purposes (i.e. no selling of plants) nor research purposes (no application of pesticides in research labs, greenhouses, fields, etc.)	40 CFR 170	02 NCAC 09L .0100 (NC Department of Agriculture)	N/A	Review annually for applicability changes

* All federal regulations available at: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?sid=517133bdfe784caddb39a8aeb577878c&c=ecfr&tpl=/ecfrbrowse/Title40/40tab_02.tpl
** NC Department of Agriculture and Consumer Services regulations available at: http://www.ncagr.gov/SPCAP/pesticides/Authorit.htm
*** All Alamance County regulations available at: http://www.alamance-nc.com/d/environmental-health/rules-and-regulations.html

Elon University
Legal Requirements for the Environmental Management System (EMS)

Resource Conservation and Recovery Act (RCRA)				
Specific Requirement	**Federal Regulation (Code of Federal Regulations)***	**State Regulation (NC Administrative Code)****	**Local Regulation*****	**Due Date**
Waste Determinations - conduct a waste determination on all chemical and chemical-related waste streams. Document the completed waste stream determination and maintain such documentation for at least three (3) years from the date the waste was last generated.	40 CFR 262.11	15A NCAC 13A.0107 (a)	N/A	Review and update annual or upon generation of new hazardous waste stream
Waste Generator Status – Small Quantity Generator • Generate greater than 220 pounds per month but less than 2,200 pounds per month, • Generate less than 2.2 pounds of acutely hazardous waste (P-listed waste), • Never exceed 13,200 lbs accumulation of hazardous waste at any given time, • Never exceed 2.2 lbs accumulation of acutely hazardous waste at any given time, and • Never exceed 180-day accumulation time limit of hazardous waste.	40 CFR 262.34(d) and (d)(1)	15A NCAC 13A.0107 (c)	N/A	Ongoing
Haz Waste - Emergency Planning: • Have at least one employee or a designee with authority as an Emergency Coordinator (EC) on 24-hour call; • Next to the telephone in all areas where hazardous waste is generated, stored, managed and/or disposed, post o The EC name and phone number; o Fire department's number; and o Location of fire extinguishers, spill control equipment/material, and fire alarm (if any). • Follow emergency procedures in 40 CFR 262.34(d)(5), including taking necessary steps to address spills and fires and notifying the National Response Center (24-hour number: 800-424-8802) and the State Emergency Management (919- 733-3825). • Attempt to make arrangements with local emergency responders	40 CFR 262.34(d)(5)	15A NCAC 13A.0107 (c)	N/A	Ongoing, update arrangements with local emergency responders annually or as personnel changes are made
Haz Waste - Management Training – ensure employees who manage hazardous waste are thoroughly familiar with proper hazardous waste handling and emergency response.	40 CFR 262.34(d)(5)(iii)	15A NCAC 13A.0107 (c)	N/A	Within 30 days of hire and Annually by April 1
Haz Waste - Record Keeping – keep all hazardous waste records for a minimum of three (3) years, including: • waste determinations, • manifests, • land disposal restriction notifications, • lab pack inventories, • test results, • training rosters, and • container inspections.	40 CFR 262.44	15A NCAC 13A.0107 (d)	N/A	Ongoing
Department Of Transportation (DOT) Hazardous Materials Training – personnel that offer hazardous waste for shipment and sign hazardous waste manifests must be trained in the DOT shipping regulations every three (3) years.	40 CFR 262.30; 40 CFR 262.31; 40 CFR 262.32	15A NCAC 13A.0107 (c)	N/A	Within 90 days of hire and Every 3 years thereafter
Haz Waste - Satellite Accumulation Area Container Management – hazardous waste containers within satellite accumulation areas must be: • Labeled with the words hazardous waste and/or other words that identify the contents, • securely closed, • in good condition, • compatible with their contents, • separated from incompatible wastes, and • at or near the point of generation of the waste and under the control of the operator.	40 CFR 262.34(c)	15A NCAC 13A.0107 (c)	N/A	Ongoing

Elon University
Legal Requirements for the Environmental Management System (EMS)

Resource Conservation and Recovery Act (RCRA)				
Specific Requirement	**Federal Regulation (Code of Federal Regulations)***	**State Regulation (NC Administrative Code)****	**Local Regulation*****	**Due Date**
Haz Waste - Central Storage Area Container Management – hazardous waste containers in the central storage area must be: • labeled with the words "hazardous waste", • labeled an accumulation start date, • securely closed, • in good condition, • compatible with their contents, • separated from incompatible wastes, • stored such that the container and label is visible for inspection, • inspected weekly and the results of the inspections documented	40 CFR 262.34(d)(2) and (d)(4)	15A NCAC 13A.0107 (c)	N/A	Ongoing
***Haz Waste - Campus Operations*:** • Maintain and operate the campus in a clean, safe manner. • Maintain adequate aisle space for evacuation, inspection of hazardous waste containers, etc., e.g., no less than three (3) feet.	40 CFR 262.34(d)	15A NCAC 13A.0107 (c)	N/A	Ongoing
Haz Waste - Land Disposal Restrictions – a Land Disposal Restriction (LDR) Certification or Notification must accompany the initial manifest for a restricted waste.	40 CFR 262.34(d)	15A NCAC 13A.0107 (c)	N/A	Upon generation of a new hazardous waste stream and its disposal via manifest
Universal Waste - Used Lamps – used lamps must be stored in closed, structurally sound packaging that is adequate to prevent breakage. The container in which the lamps are stored must be labeled or clearly marked with any one of the following phrases: • "Universal Waste – Lamp(s)"; • "Waste Lamp(s)"; or • "Used Lamp(s)". Additionally, the used lamp container must be dated to ensure that the used lamps are not accumulated on campus for more than one (1) year past the date of generation.	40 CFR 273.13(d)(1); 40 CFR 273.14(e); 40 CFR 273.15(a)	15A NCAC 13A. .0119 (b)	N/A	Ongoing, disposal within one year
Universal Waste - Leaking/Damaged Lamps – broken bulbs must be cleaned up immediately and placed in a container that is closed, structurally sound, compatible with the contents of the lamp and in good condition. The container must also be clearly labeled and dated to ensure disposal within one (1) year.	40 CFR 273.13(d)(2)	15A NCAC 13A. .0119 (b)	N/A	Ongoing
Universal Waste - Waste Batteries – waste batteries must be stored in such a way so as to prevent releases to the environment. The waste batteries or the container in which the waste batteries are stored must be labeled or clearly marked with any one of the following phrases: • "Universal Waste – Battery(ies)"; • "Waste Battery(ies)"; or • "Used Battery(ies)". Additionally, the waste batteries or the container in which the waste batteries are stored must be dated to ensure that the used lamps are not accumulated on campus for more than one (1) year past the date of generation.	40 CFR 273.13(a); 40 CFR 273.14(a); 40 CFR 273.15(c)	15A NCAC 13A. .0119 (b)	N/A	Ongoing
Universal Waste - Spent Mercury-Containing Devices – spent mercury-containing devices must be stored in closed, structurally sound packaging that is adequate to prevent breakage. The container in which the spent mercury-containing devices are stored must be labeled or clearly marked with any one of the following phrases: • "Universal Waste – Mercury-Containing Equipment"; • "Waste Mercury-Containing Equipment"; or • "Used Mercury-Containing Equipment". Additionally, the spent mercury-containing device container must be dated to ensure that the spent mercury-containing devices are not accumulated on campus for more than one (1) year past the date of generation.	40 CFR 273.13(c); 40 CFR 273.14(d)(1); 40 CFR 273.15(c)	15A NCAC 13A. .0119 (b)	N/A	Ongoing

Elon University
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Resource Conservation and Recovery Act (RCRA)				
Specific Requirement	**Federal Regulation (Code of Federal Regulations)***	**State Regulation (NC Administrative Code)****	**Local Regulation*****	**Due Date**
Universal Waste Handler Training – personnel who handle or have the responsibility for managing universal wastes must be informed of the proper handling and emergency procedures appropriate to the universal wastes generated on campus. The training should be documented.	40 CFR 273.16	15A NCAC 13A. .0119 (b)	N/A	Within 30 days of hire and annually by April 1
Used Oil Storage – used oil must be stored in tanks or containers that are: • clearly labeled with the words "used oil" • in good condition (no severe rusting, apparent structural defects or deterioration) with no visible oil leakage • if damaged or leaking, must respond immediately to stop, control, and correct damage or leak	40 CFR 279.22	15A NCAC 13A. .0118 (c)	N/A	Ongoing
Used Oil Disposal - used oil must be managed: • by a used oil handler/transport which has an EPA Identification Number • self transported up to 55 gallons in a campus vehicle to a "do-it-yourselfer" (i.e. Jiffy Lube)	40 CFR 279.24	15A NCAC 13A. .0118 (c)	N/A	Ongoing
Underground Storage Tanks – does not currently apply to the campus as the campus does not have any known underground storage tanks	40 CFR 280	15A NCAC 2N – 2P	N/A	Review applicability with any campus changes

* All federal regulations available at: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?sid=517133bdfe784caddb39a8aeb577878c&c=ecfr&tpl=/ecfrbrowse/Title40/40tab_02.tpl
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Safe Drinking Water Act				
Specific Requirement	**Federal Regulation (Code of Federal Regulations)***	**State Regulation (NC Administrative Code)****	**Local Regulation*****	**Due Date**
Backflow Prevention – Install and maintain back flow preventers in accordance with city code	40 CFR 142.3	15A NCAC 18C	Coordinate with City of Elon as necessary http://www.elonnc.com/index.php?option=com_content&view=article&id=55&Itemid=75	Annual Backflow testing
Public Water Supply – Elon is not engaged in public water supply.	40 CFR 142.3	15A NCAC 18C	N/A	Review annually or as campus conditions change

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** All NC Department of Environment and Natural Resources regulations available at: http://portal.ncdenr.org/web/guest/rules-policies-laws-and-regulations
*** All Alamance County regulations available at: http://www.alamance-nc.com/d/environmental-health/rules-and-regulations.html

Toxic Substance Control Act				
Specific Requirement	**Federal Regulation (Code of Federal Regulations)***	**State Regulation (NC Administrative Code)****	**Local Regulation*****	**Due Date**
Lead-Based Paint (LBP) disclosures– provide lessees of "target housing" with a lead-based paint information pamphlet, written notification of potential presence of lead-based paint due to occupying a home built before 1978, information regarding any known presence of lead-based paint hazards, specific disclosure and warning language regarding lead-based paint. Maintain documentation of all notifications and signatory receipt of such info from lessees.	40 CFR 745.107; 40 CFR 745.113	N/A	N/A	Upon signing of new/renewed leases
Lead-Based Paint – Renovation, Repair and Painting Rule (RRP) – applies to campus day care facilities (currently none on campus) and occupants of "target housing" Pre-renovation education requirements: 1. Distribute EPA's Lead Pamphlet to the occupants/owner before renovation starts 2. For Child-Occupied Facility: distribute lead pamphlet to owner or adult representatives prior to renovation AND either distribute renovation notices to parents/guardians of the children attending the facility or post informational signs about the renovation or repair job 3. Have occupants/adult/parents sign off on pamphlet and maintain for 3 years Training, Certification, and Work Practice Requirements: 1. Firm completing work (event sole-proprietor) must be certified 2. Renovators must be trained 3. Lead Safe Work Practices must be followed ***Compliance Guide Available at: http://epi.publichealth.nc.gov/lead/pdf/SmallEntityGuide.pdf***	40 CFR 745 Subpart E and Subpart L	NC Department of Health and Human Services: http://epi.publichealth.nc.gov/lead.html 10A N.C.A.C. 41C.0900	N/A	For each painting, renovation, and repair project associated with homes predating 1978 and with any painting, renovation, or repair associated with child occupied facilities (children less than 6 years)
Pre-manufacturing notification (PMN) - Applies as Elon is engaged in the generation of new chemicals, although only for research and development and in very small amounts (The least onerous requirements apply to a University producing small quantities of chemicals used for research and development. The term "small quantities" is not quantitatively defined in the regulations but must "not [be] greater than reasonably necessary for such (R&D) purposes." Elon must notify all employees using or handling the chemical of any health risks associated with the chemical. Additionally, the chemical must be used by or directly under the supervision of a technically qualified individual. Elon should document compliance with these requirements. All shipping of these chemicals should be done in accordance with DOT requirements (i.e. those packaging and shipping must be trained in DOT Hazardous Materials and potentially additional training if shipping by air)	40 CFR 720.36(c)	N/A	N/A	Ongoing for Chemistry Research Personnel
Asbestos (AHERA) – currently does not apply as Elon does not have k-12 education on campus	40 CFR 763 Subpart E	N/A	Department of Health and Human Services	Review applicability each year or as new campus activities dictate
PCBs – currently does not apply as Elon does not have any PCB transformers, PCB ballast, or known PCB material on campus.	40 CFR 761 Subpart D	N/A	N/A	Review applicability each year or as new campus activities dictate

Elon University
Legal Requirements for the Environmental Management System (EMS)

Medical Waste (Biohazardous Waste)				
Specific Requirement	**Federal Regulation (Code of Federal Regulations)***	**State Regulation (NC Administrative Code)****	**Local Regulation*****	**Due Date**
Medical Waste, which includes any solid waste that is generated in the diagnosis, treatment or immunization of human beings or animals, must be managed as follows: • Sharps (needles, syringes with attached needles, scalpel blades) shall be placed in a container which is rigid, leak-proof when in an upright position and puncture-resistant. Contained sharps shall not be compacted prior to off-site transportation. After leaving the generating facility, the container and its contents shall be handled in a manner that avoid human contact with the sharps. • Blood and body fluids in individual containers of 20 milliliters or less (e.g. vacuum tubes used for blood samples) must be stored in a secured area restricted to authorized personnel prior to off-site transportation or packaged in accordance with the regulated medical waste packaging requirements listed in I5A NCAC 13B.1204(b)(1) or in a container suitable for sharps; and • Regulated medical waste should not be compacted.	N/A	15A NCAC Chapter 13B.1200	N/A	Ongoing
Regulated Medical Waste, which include blood and body fluids in individual containers in volumes greater than 20 milliliters (does not refer to blood absorbed by materials such as bandages and dressings), microbiological waste and pathological wastes, must be managed as follows: • Packaged in a minimum of one plastic bag in rigid fiberboard box, rigid drum or other rigid container constructed in a manner that prevents leakage of the contents; • Plastic bag shall be impervious to moisture and have a strength sufficient to preclude ripping, tearing, or busting the waste-filled bag under normal conditions of usage and handling; • Plastic bag shall be constructed of material of sufficient single thickness to pass the 165-gram dropped dart impact resistance test; • Stored in a manner that maintains the integrity of the packaging at all times; • Each package must be labeled with a water-resistance universal biohazard symbol; • Outer surface of the package must be marked with the following information: o The generator's name, address, and telephone number o The transporter's name, address, and telephone number o Storage facility name, address, and telephone number, when applicable; o Treatment facility name, address, and telephone number; o Date of shipment; and o "INFECTIOUS WASTE" or "MEDICAL WASTE". • Records of each shipment must include the information listed below: o Amount of waste by number of packages (piece count); o Date shipped off-site; o Name of transporter; and o Name of storage or treatment facility. o Records must be maintained at the generating facility for no less than three (3) years; and • Prepare and maintain a plan on how to properly manage regulated medical wastes as the campus generates 50 pounds or more of regulated medical waste per month	N/A	15A NCAC Chapter 13B.1200	N/A	Ongoing

* All federal regulations available at: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?sid=517133bdfe784caddb39a8aeb577878c&c=ecfr&tpl=/ecfrbrowse/Title40/40tab_02.tpl
** All NC Department of Environment and Natural Resources regulations available at: http://portal.ncdenr.org/web/guest/rules-policies-laws-and-regulations
*** All Alamance County regulations available at: http://www.alamance-nc.com/d/environmental-health/rules-and-regulations.html

Radioactive Material				
Specific Requirement	**Federal Regulation (Code of Federal Regulations)***	**State Regulation (NC Administrative Code)****	**Local Regulation*****	**Due Date**
Bone Density Scanner (GE Model 41170)– see the following pamphlet for compliance information specifically for density scanners in addition to the following for this unit: http://www.ncradiation.net/Xray/documents/bonedensitygud.pdf *1. General Requirements* (a) Administrative controls (1) The registrant shall be responsible for directing the operation of the x-ray machines which he has registered with the agency. He or his agent shall assure that the following provisions are met in the operation of the x-ray machine(s): (A) An x-ray machine which does not meet the provisions of these Rules shall not be operated for diagnostic or therapeutic purposes, if so ordered by the agency in accordance with Rules .0109 and .0110 of this Chapter. (B) Individuals who will be operating the x-ray equipment shall be instructed in the safe operating procedures and use of the equipment and demonstrate an understanding thereof to the registrant. (C) In the vicinity of each diagnostic x-ray system's control panel, a chart shall be provided, which specifies for all usual examinations and associated projections which are performed by that system, a listing of information including patient's anatomical size versus technique factors to be utilized at a given source to image receptor distance. The chart shall also provide: (i) type and size of the film or film-screen combination to be used, (ii) type and ratio of grid to be used, if any, and focal spot to film distance, (iii) type and placement of gonad shielding to be used. (D) Written safety procedures and rules shall be established and made available to each individual operating x-ray equipment under his control. The operator shall be familiar with these rules. (E) Only the professional staff and ancillary personnel required for the medical procedure or for training shall be in the room during the radiographic exposure. Other than the patient being examined: (i) All individuals shall be positioned such that no part of the body including the extremities which is not protected by 0.5 mm lead equivalent will be exposed to the useful beam. (ii) Professional staff and ancillary personnel shall be protected from the direct scatter radiation by protective aprons or whole body protective barriers of not less than 0.25 mm lead equivalent. (iii) Patients who cannot be removed from the room shall be protected from the direct scatter radiation by whole body protective barriers of 0.25 mm lead equivalent or shall be so positioned that the nearest portion of the body is at least six feet from both the tube head and the nearest edge of the image receptor. (iv) When a portion of the body of a non- occupationally exposed professional staff or ancillary personnel is potentially subjected to stray radiation which would result in that individual receiving one-fourth of the maximum permissible dose as defined in Rule .1604 of this Chapter, additional protective measures shall be employed. (v) Upon written application to the agency, the agency may waive the requirements in Subparts (a)(1)(E)(ii) and (a)(1)(E)(iii) of this Rule if the registrant demonstrates that such waiver is necessary for best management of patients and will not result in violation of the public and occupational dose limits established in the rules in this Chapter. (F) Gonad shielding of not less than 0.5 mm lead equivalent shall be used for potentially procreative patients during radiographic procedures in which the gonads are in the direct, or useful beam, except for cases in which this would interfere with the diagnostic procedures. (G) Individuals shall not be exposed to the useful beam except for healing arts purposes. Such exposures shall have been authorized by a licensed practitioner of the healing arts. This provision specifically prohibits deliberate exposure of an individual for training, demonstration or other nonhealing arts purposes. (H) When a patient or film must be provided with auxiliary support during a radiographic exposure: (i) Mechanical holding devices shall be used whenever medical circumstances permit. Written safety procedures, as required in Part (a)(1)(D) of this Rule shall indicate the requirements for selecting a holder; (ii) If a human holder is required, written safety procedures as required in Part (a)(1)(D) of this Rule, shall indicate the instructions provided to the holder; (iii) The human holder shall be protected as required in Part (a)(1)(E) of this Rule; (iv) No individual shall be used routinely to hold patients or film.	N/A	15A NCAC 11.0600 (for x-rays used in healing arts) http://reports.oah.state.nc.us/ncac.asp?folderName=%5CTitle%2015A%20-%20Environment%20and%20Natural%20Resources%5CChapter%2011%20-%20Radiation%20Protection	N/A	Ongoing

Radioactive Material				
Specific Requirement	**Federal Regulation (Code of Federal Regulations)***	**State Regulation (NC Administrative Code)****	**Local Regulation*****	**Due Date**
(I) Procedures and auxiliary equipment designed to minimize patient and personnel exposure commensurate with the needed diagnostic information shall be utilized. This includes, but is not limited to, the following requirements: (i) The speed of film or screen and film combinations shall be the fastest speed consistent with the diagnostic objective of the examinations. (ii) The radiation exposure to the patient shall be the minimum exposure required to produce images of good diagnostic quality. (iii) Portable or mobile equipment shall be used only for examinations where it is impractical for medical reasons to transfer the patient to a stationary radiographic installation. (J) All persons who are associated with the operation of an x-ray system are subject to the occupational exposure limits as defined in Rules .1604 and .1638 of this Chapter, and personnel monitoring procedures in Rule .1614 of this Chapter. In addition, when protective clothing or equipment is worn on portions of the body and a monitoring device(s) is required, at least one such monitoring device shall be utilized as follows: (i) When an apron is worn the monitoring device shall be worn at the collar outside the apron. (ii) The dose to the whole body shall be recorded in the reports required in Rule .1640 of this Chapter. If more than one device is used, each dose shall be identified with the area where the device was worn on the body. (2) The registrant shall maintain at least the following information for each x-ray machine: (A) current registration information and other correspondence with the agency regarding that machine; (B) records of surveys and calibrations; (C) records of maintenance or modifications which affect the useful beam after the effective date of these Rules, along with the names of persons who performed the service. (b) Plans Review. Prior to construction or structural modification, the floor plans and equipment arrangement of all installations utilizing x-rays for diagnostic or therapeutic purposes shall be reviewed by a qualified expert. The registrant shall submit recommendations of the expert to the agency. (c) Radiation Survey (1) For installations of x-ray equipment after the effective date of this Rule, an area radiation survey shall be performed within 30 days following initial operation of each radiation machine to show compliance with Rule .0604(b) of this Section. This survey shall include: (A) a drawing of the room in which a stationary x-ray system is located and radiation levels in adjacent areas; and (B) the name of the person approved by the agency performing the survey and the date the survey was performed. (2) Any modification to the x-ray room or adjacent areas which could increase the radiation dosage to any individual shall require a new survey. (3) Records of this survey shall be maintained in accordance with Subparagraph (a)(2) of this Rule.				
Radiographic Teltron Model 580M – ***1.*** *Equipment Requirements* (a) A safety device which prevents the entry of any portion of an individual's body into the primary x-ray beam path of which causes the beam to be shut off upon entry into its path shall be provided on all open-beam configurations. (b) Open-beam configurations shall be provided with a readily discernible indication of: (1) X-ray tube status (ON-OFF) located near the radiation source housing, if the primary beam is controlled in this manner; and (2) Shutter status (OPEN-CLOSED) located near each port on the radiation source housing, if the primary beam is controlled in this manner. Warning devices shall be labeled so that their purpose is easily identified. On equipment installed after the effective date of this Rule, warning devices shall have fail-safe characteristics. (c) Unused ports on radiation source housings shall be secured in the closed position in a manner which will prevent casual opening. (d) All analytical x-ray equipment shall be labeled with a readily discernible sign or signs bearing the radiation symbol and the words: (1) "CAUTION - HIGH INTENSITY X-RAY BEAM," or words having a similar intent, on the x-ray source housing; and (2) "CAUTION - RADIATION - THIS EQUIPMENT PRODUCES RADIATION WHEN ENERGIZED", or words having a similar intent, near any switch that energizes an x-ray tube, if the radiation source is an x-ray tube; or (3) "CAUTION - RADIOACTIVE MATERIAL", on the source housing, if the radiation source is a radionuclide. (e) On open-beam configurations installed after the effective date of this Rule each port on the radiation source housing shall be equipped with a shutter that cannot be opened unless a collimator or a coupling has been connected to the port. (f) An easily visible warning light labeled with the words "X-RAY ON" or words having a similar intent, shall be located outside each entrance into the	N/A	15A NCAC 11.0800 (for x-rays used for analytical purposes, i.e. non-healing arts) http://reports.oah.state.nc.us/ncac.asp?folderName=%5CTitle%2015A%20-%20Environment%20and%20Natural%20Resources%5CChapter%2011%20-%20Radiation%20Protection	N/A	Ongoing

Radioactive Material				
Specific Requirement	**Federal Regulation (Code of Federal Regulations)***	**State Regulation (NC Administrative Code)****	**Local Regulation*****	**Due Date**
room containing an analytical x-ray tube and shall be illuminated only when the tube is energized; or in the case of a radioactive source, shall be illuminated only when the shutter is open. On equipment installed after the effective date of this Rule, warning lights shall have fail-safe characteristics. (g) Each x-ray tube housing shall be so constructed that when all shutters are closed the leakage radiation measured at a distance of five centimeters from its surface is not capable of producing a dose in excess of 2.5 mrem in one hour. (h) Each x-ray generator shall be supplied with a protection cabinet which limits leakage radiation measured at a distance of five centimeters from its surface such that it is not capable of producing a dose in excess of 0.04 mrem in one hour. *2. Area Requirements* (a) The local components of an analytical x-ray system shall be so located and arranged and shall include sufficient shielding or access control that no radiation levels exist in any area surrounding the local component group which could result in a dose to an individual present therein in excess of the dose limits given in Rule .1611 of this Chapter. For systems utilizing x-ray tubes, these levels shall be met at any specified tube rating. (b) Surveys (1) Radiation surveys, as required by Rule .1613 of this Chapter, of all analytical x-ray systems sufficient to show compliance with Paragraph (a) of this Rule, shall be performed: (A) upon installation of the equipment; (B) following any change in the initial arrangement, number or type of local components in the system; (C) following any maintenance requiring the disassembly or removal of a local component in the system which could affect the radiation exposure to personnel; (D) radiation monitoring shall be performed during maintenance. (2) A licensee or registrant may apply to the agency for approval of procedures differing from those in Subparagraph (b)(1) of this Rule, provided that the licensee or registrant demonstrates satisfactory compliance with Paragraph (a) of this Rule. (c) Each area or room containing analytical x-ray equipment shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words "CAUTION - X-RAY EQUIPMENT", or words having a similar intent. *3. Operating Requirements* (a) Normal operating procedures shall be written and available to all analytical x-ray equipment workers. No person shall be permitted to operate analytical x-ray equipment in any manner other than that specified in the procedures unless the person has obtained written approval of the person responsible for radiation safety. (b) No person shall bypass a safety device unless the person has obtained the approval of the person responsible for radiation safety. Such approval shall be for a specified period of time. When a safety device has been bypassed, a readily discernible sign bearing the words "SAFETY DEVICE NOT WORKING", or words having a similar intent, shall be placed on the radiation source housing and the control panel during the period such bypassing is in effect. 4. *Personnel Requirements* (a) Instructions of personnel shall comply with the following: (1) No person shall be permitted to operate or maintain analytical x-ray equipment unless the person has received instruction in: (A) identification of possible radiation hazards and biological effects associated with the use of the equipment; (B) significance of the various radiation warning and safety devices incorporated into the equipment, or the reasons they have not been installed on certain pieces of equipment and the extra precautions required in these cases; (C) proper operating procedures for the equipment; (D) appropriate use and limitation of dosimetric devices; (E) proper procedures for reporting an actual or suspected exposure. (2) Each licensee or registrant shall maintain, for inspection by the agency, records of training which demonstrate that the requirements of this Rule have been met. (b) Personnel monitoring or wrist dosimetric devices shall be provided to, and shall be used by: (1) analytical x-ray equipment workers using systems having an open beam configuration and not equipped with a safety device; and (2) personnel maintaining analytical x-ray equipment if the maintenance procedures require the presence of a primary x-ray beam when any local component in the analytical x-ray system is disassembled or removed.				

* All federal regulations available at: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?sid=517133bdfe784caddb39a8aeb577878c&c=ecfr&tpl=/ecfrbrowse/Title40/40tab_02.tpl

Elon University
Legal Requirements for the Environmental Management System (EMS)

** All NC Department of Environment and Natural Resources regulations available at: http://portal.ncdenr.org/web/guest/rules-policies-laws-and-regulations
*** All Alamance County regulations available at: http://www.alamance-nc.com/d/environmental-health/rules-and-regulations.html

ELON UNIVERSITY

OBJECTIVE, TARGET & ENVIRONMENTAL MANAGEMENT PROGRAM

Revision: Date:	Page of

OBJECTIVE AND TARGET

Objective:

Target:

-

EMS REPRESENTATIVE APPROVAL (sign):	PRESIDENT'S APPROVAL (sign):	DATE:

MANAGEMENT PROGRAM

PROGRAM ELEMENT / ITEM	RESPONSIBLE	TARGET DUE DATE	ACTUAL DATE
1.			
2.			
3.			
4.			
5.			

TRACKING AND CLOSE OUT

OBJECTIVE/TARGET ACHIEVED	FOLLOW UP REQUIRED

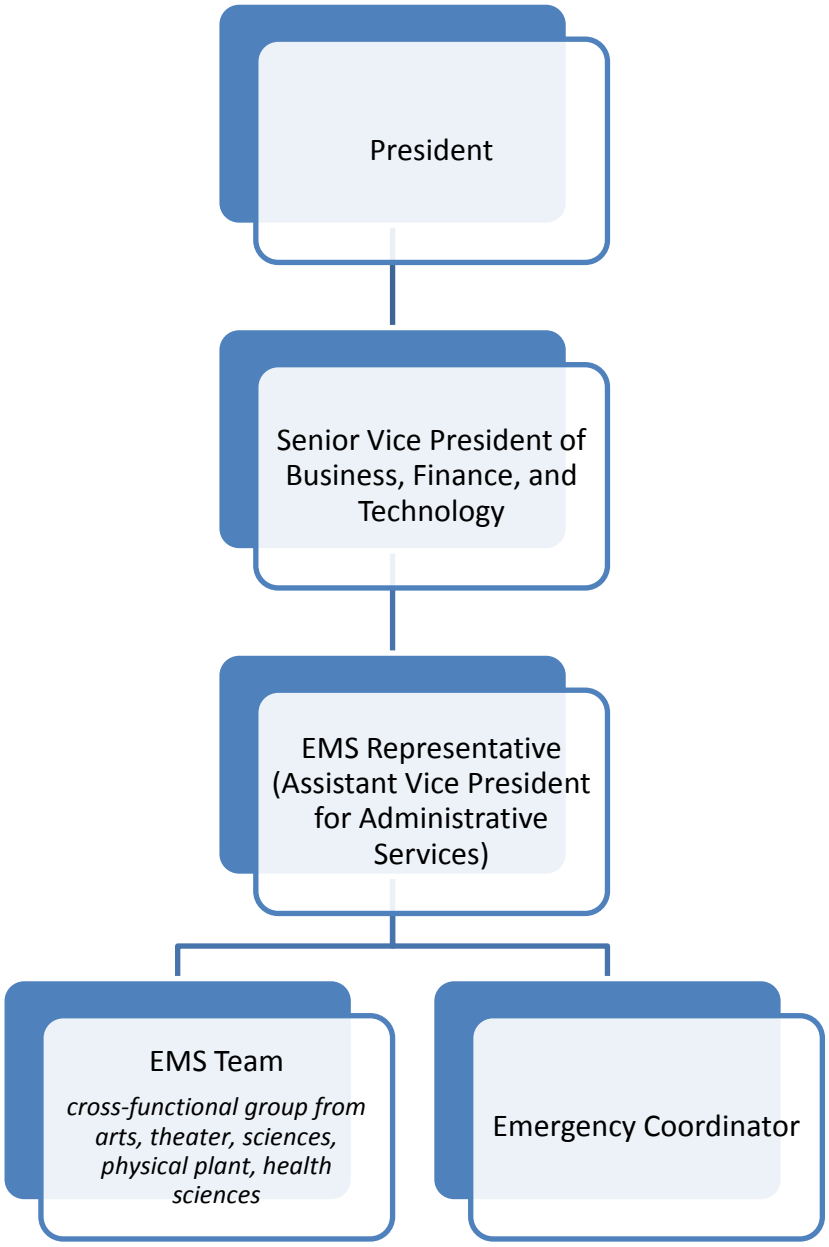
UPDATE A/I PER THIS O/T (YES/NO)

UPDATE LEGAL AND OTHER REQUIREMENTS PER THIS O/T (YES/NO)

UPDATE ANY WORK INSTRUCTIONS PER THIS O/T (YES/NO)

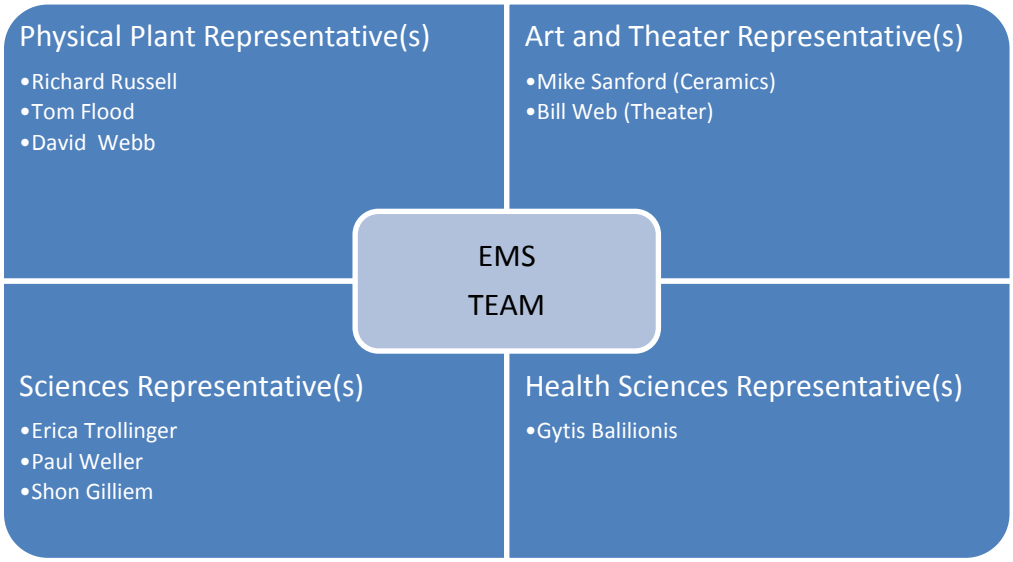
CLOSE OUT BY EMS REPRESENTATIVE (date, sign):

Elon University
EMS - Roles and Responsibilities
Organization Chart



Revision: 1
Date: September 2014

Elon University
EMS - Roles and Responsibilities
Organization Chart



Revision: 1
Date: September 2014

Elon University
EMS - Roles and Responsibilities

Responsibility (A: Approver; L: Leading Role; S: Supporting Role)	Campus Positions																			
	President	Senior VP for Business, Finance and Technology	Asst. VP for Administrative Services (EMS Representative)	EMS Team Members	Director of Physical Plant	Director of Landscaping and Grounds	Utilities Maintenance Manager	Manager of Environmental Services	Supervisor of Automotive Services	Manager of Paint Shop	Director of Campus Safety and Police	Sustainability Coordinator	Director of Auxiliary Services	Emergency Coordinator	VP of Academic Affairs/Provost	Deans	Department Chairs	Science Laboratory Managers	Faculty	Staff	Students
Define Environmental Policy	A	A	L	S																	
Identify/Update Environmental Aspects and Impacts			L	S																	
Prioritize/Update Environmental Aspects and Impacts			L	S																	
Identify Legal and Other Requirements			L	S																	
Establish Objectives/Targets/Management Programs			L	S																	
Identify Training Needs and Programs			L	S	S	S	S	S	S	S	S		S					S			
Comply with applicable regulatory requirements	L	L	L		S	S	S	S	S	S	S	S	S		L	L	L	S	S	S	S
Maintain internal and external communication records			L	S	S																
Develop operational controls (work instructions, SOPs, Checklist, etc.)			S	S	S	L	L	L	L	L	L		L				S	L	S	S	
Control EMS Documents (EMS Manual, EMS procedures, operational controls, etc.)			L	S																	
Identify potential emergencies			S	S	L	S	S	S	S	S	S		S	L				S			
Develop emergency preparedness procedures/plans			S	S	L	S	S	S	S	S	S		S	L				S			
Implement and Test Emergency Response Procedures/Plans											S			L							
Measure and Monitor SEAs Key Characteristics			S	S	S	L	L	L	L	L	L		L				S	L	S	S	
Evaluate Regulatory Compliance			L																		
Conduct EMS Internal Audits			L	S																	
Control EMS Records			S	S	S	L	L	L	L	L	L		L				S	L	S	S	
Complete Management Reviews		A	L	S																	

Revision: 2
Date: October 2015

Elon University
EMS Competence and Training

Training/Awareness Requirements														
Training Name:	**Universal Waste Training (including spill response)**	**Battery Recycling Awareness**	**Aerosol Can Policy Awareness**	**SPCC Training**	**SPCC Training (Lite/ Fueling specific)**	**Hazardous Waste Training**	**Hazardous Waste Training**	**DOT Training**	**Spill Awareness Training**	**EMS Awareness**	**Medical Waste Plan (including spill response)**	**Radiation Training**	**Silver Recovery Log Usage**
How Training Administered:	on-site conducted by Maintenance Control Manager	communication of policy/procedure via E-net/Building Manager	communication of policy/procedure via E-net/Building Manager	on-site conducted by Maintenance Control Manager	on-site conducted by Maintenance Control Manager	Off-site course	on-site conducted by Emergency Coordinator	Off-site course	On-site conducted by Emergency Coordinator	On-site conducted by EMS Team	On-site conducted on-line	On-site conducted by each laboratory manager	On-site training beginning each semester
Training Due Date:	Annually by June 1	Annually by June 1	Annually by June 1	Annually by June 1	Annually by June 1	Annually by June 1	Annually by June 1	Every 3 years	Annually by June 1	Annually by June 1	Annually by June 1	One-Time	each semester
Position/ Title Requiring Training													
Art Faculty/Staff							X		X				X
Athletics											X		
Biology Faculty/Staff							X		X		X		X
Campus Wide		X	X							X			
Chemistry Faculty/Staff							X		X		X	X (personnel specific)	X
Campus Rec											X		
Emergency Coordinator(s)	X			X		X	X	X	X				
Environmental Science Faculty/Staff							X		X				
Exercise Science Faculty/Staff											X		
Food Services (Elon will training Manager, Manager Responsible for training its staff)				X					X				
Fuel Man Card Holders					X								
Health Services											X		
IT Services	X			X									
Mail Room								X	X				
Maintenance Control Manager						X		X	X				
Physical Plant - Automotive Services	X			X			X		X				
Physical Plant - Carpentry				X					X				
Physical Plant - Electricians	X			X					X				
Physical Plant - Environmental Services	X			X			X		X		X		
Physical Plant - HVAC Shop	X			X					X				
Physical Plant - Landscaping	X			X					X				
Physical Plant - Painting				X			X		X				
Physical Plant - Plumbing				X					X		X		
Physics Faculty/Staff							X		X			X (personnel specific)	
School of Health Faculty/Staff									X		X	X (personnel specific)	
Theater Faculty/Staff							X		X				
Lab Managers							X	X (for research generated chemicals)	X		X		

Elon University
EMS Certifications and Licensing

Certifications and Licensing								
Employee Name	**Certification/ License Description**	**Landscape Supervisor**	**HVAC Supervisor**	**Emergency Coordinator**	**PP Op Manager**	**Automotive Fleet Mechanic**	**Radiation Safety Officer**	**Campus will use certified contractors**
Refrigeration Technician	No Expiration		X			X		
DOT Haz Mat Shipper	Every 3 Years			X				
Pesticide Applicators License (not required as no Restricted Use Pesicides used on campus)	Every 5 years	X						
Radioactive Materials Registration	Annual						X	
Asbestos Inspector	Annual				X			
Lead Based Paint Inspectors/Contractor								X

Revision: 0
Date: April 2012

Elon University
EMS External Communications

EXTERNAL COMMUNICATION				
What	**Environmental Policy**	**Drain Discharges**	**Chemicals on Site**	**Sustainability Efforts**
How	Internet	Annual Campus Tour	Tier II	Internet
By Whom	Internet	Director of Physical Plant	Tier II	Internet
To Whom				
Parents and Interested Parties	**X**			**X**
POTW		**X**		
Fire Department			**X**	
County/State Emergency Responders			**X**	

Elon University
EMS Operational Control, Monitoring Measuring

	PLANNING ELEMENTS				IMPLEMENTATION ELEMENT	CHECK								
ACTIVITY	**SEA (Yes / No)**	**OBJ.**	**TARGET**	**LEGAL/OTHER REQUIREMENT**	**OPERATIONAL CONTROLS** (examples: training, SOPs, Checklists, etc.)	**MONITORING/ MEASURING METHOD**	**EQUIPMENT REQUIRED**	**REPORTING METHOD**	**FREQUENCY**	**RECORD RETENTION TIME**	**RECORD LOCATION**	**FILE NAME**	**RESPONSIBILITY**	**Check/Balance**
Maintain Refrigerant Recovery Logs	Yes	-	-	CAA - Ozone Depleting Compounds	Log Book at Physical Plant	Log Book	N/A	N/A	With each service	3 years	Physical Plant	N/A	Each Refrigeration Tech	Utilities Manager
Maintain campus wide emission inventories	-	-	-	CAA - SIP	Inventory of fuel burning equipment	Inventory	N/A	N/A	Prior to installing any new source	maintain running emissions	Physical Plant	N/A	Maintenance Control Manager/ Utilities Manager	Director of Physical Plant
Maintain record of certified engine for all new diesel generators and existing generators 10, 11, 14, 16	-	-	-	CAA - NSPS	Record Control	N/A	N/A	N/A	N/A	life of the engine	Physical Plant	N/A	Electrical Supervisor	Utilities Manager
Maintain maintenance records for all new diesel generators and existing generators 10, 11, 14, 16	-	-	-	CAA - NSPS	TMA System/ PM	Enter all info into TMA with each maintenance activity	TMA Software	N/A	With each service	life of the engine	Physical Plant	N/A	Electrical Supervisor	Utilities Manager
Purchase only low sulfur diesel fuel for all new diesel emergency generators and existing generators 10,11,14,16	-	-	-	CAA - NSPS	Record Control	N/A	N/A	N/A	with each fuel delivery	3 years	Physical Plant	N/A	Physical Plant Purchasing Agent	Director of Purchasing
Maintain Emergency Generator Run Times (non-emergency)	-	-	-	CAA - NSPS	Log Book at Physical Plant	Log Book	N/A	N/A	Monthly	3 years	Physical Plant	N/A	Electrical Supervisor	Utilities Manager
Maintain Emergency Generator Run Times (emergency)	-	-	-	CAA - NSPS	Log Book at Physical Plant	Log Book	N/A	N/A	With each emergency operation	3 years	Physical Plant	N/A	Electrical Supervisor	Utilities Manager
Ensure potential asbestos containing material is reviewed prior to renovation/ demo (Major Reno/Demo)	-	-	-	CAA - NESHAP	Standard undocumented procedure for major renovation/demolition includes pre-project asbestos survey and any necessary state pemiting/abatement	collect samples in accordance with Asbestos NESHAP	N/A	Notification of disturbing regulatory amount	With each project	3 years	Physical Plant	N/A	Project Manager	Director of Construction Management
Ensure potential asbestos containing material is reviewed prior to renovation/ demo (small projects)	-	-	-	CAA - NESHAP	Establish a small project inspection program	collect samples in accordance with Asbestos NESHAP	N/A	Notification of disturbing regulatory amount	With each project	3 years	Physical Plant	N/A	Maintenance Operations Manager	Director of Physical Plant
Obtain SW permit prior to land disturbance	-	-	-	CWA - SW	Standard undocumented procedure includes the Civil Engineer working with the city and state for necessary storm water permits	Conditions of permit followed by construction contractor	N/A	Notification and permitting required if ≥ 1 acre	With each construction project	3 years	Physical Plant	N/A	Project Manager	Director of Construction Management
Coordinate discharges with the city	-	-	-	CWA - Pretreatment	Annual Meeting with City to get an annual letter of approval	Only if city requires	N/A	No reporting, just coordination with city	Annual	3 years	Physical Plant	N/A	Director of Physical Plant	AVP of Administrative Services (EHS)
Maintain Silver Recovery Systems (Art)	-	-	-	CWA - Pretreatment	Silver Recovery Log Silver Recovery SOP Silver Recorery Training	Log sheet on clipboard to document each use and each bucket swap-out	N/A	N/A	Swap out bucket every 12 months	3 years	Art	N/A	Photography Faculty	AVP of Administrative Services (EHS)
Maintain Silver Recovery Systems (Sciences)	-	-	-	CWA - Pretreatment	Silver Recovery Log Silver Recovery SOP Silver Recorery Training	Log sheet on clipboard to document each use and each bucket swap-out	N/A	N/A	Swap out bucket every 6 months	3 years	Biology	N/A	Biology Laboratory Manager	AVP of Administrative Services (EHS)
Prevent Oil/Fuel Spills and Releases	Yes	-	-	CWA - SPCC	SPCC Plan SPCC Training SPCC Monthly Inspections								Maintenance Control Manager	Director of Physical Plant
Complete EPCRA Reports (Tier II, MSDS, etc.)	-	-	-	EPCRA	Chemical Inventories Work Order to Prompt Annual Reporting								Emergency Coordinator/ Facilities Engineer	Director of Physical Plant
Hazardous Waste: Maintain Generation Logs	Yes	Reduce to CESQG	*Generate less than 220 lbs/month *Generate less than 2.2 lbs of acutely hazardous waste per month	RCRA - Hazardous Waste	Establish Monthly Generation Log	Document actual generation of waste	N/A	Log Sheet	Monthly	3 years	Chemistry Physics Biology	N/A	Laboratory Managers	AVP of Administrative Services (EHS)
Hazardous Waste: Complete Weekly Inspections	Yes	-	-	RCRA - Hazardous Waste	Weekly Central Inspection Form								Emergency Coordinator/ Facilities Engineer	AVP of Administrative Services (EHS)
Hazardous Waste: Maintain Satellite Areas (McMichael)	Yes	-	-	RCRA - Hazardous Waste	Weekly Satellite Inspection Form								Laboratory Managers	Emergency Coordinator/ Facilities Engineer
Hazardous Waste: Document Hazardous vs. Non-hazardous Waste (Waste Stream Determinations)	Yes	-	-	RCRA - Hazardous Waste	Hazardous Waste Generation Form and Monthly Generation Log (Sciences only)	Document waste determinations on form	N/A	Log Sheet	Monthly	3 years from the date the waste was last generated	Each Department and Moodle	N/A	Laboratory Manager(s) Maintenance Control Manager Emergency Coordinator Art Faculty Theater/Scene Shop Staff	AVP of Administrative Services (EHS)

Elon University
EMS Operational Control, Monitoring Measuring

ACTIVITY	SEA (Yes / No)	OBJ.	TARGET	LEGAL/OTHER REQUIREMENT	OPERATIONAL CONTROLS (examples: training, SOPs, Checklists, etc.)	MONITORING/ MEASURING METHOD	EQUIPMENT REQUIRED	REPORTING METHOD	FREQUENCY	RECORD RETENTION TIME	RECORD LOCATION	FILE NAME	RESPONSIBILITY	Check/Balance
Management of Universal Waste (Batteries)	Yes	-	-	RCRA - Universal Waste	Monthly Inspections								Maintenance Control Manager	Director of Physical Plant
Management of Universal Waste (Lamps)	Yes	-	-	RCRA - Universal Waste	Monthly Inspections								Maintenance Control Manager	Director of Physical Plant
Management of Used Oil	-	-	-	RCRA - used oil	Scheduled Pick Up SPCC Plan Monthly Inspection (SPCC)								Maintenance Control Manager/ Automotive Supervisor	Director of Physical Plant
Complete backflow prevention checks	-	-	-	SDWA	Notified by city/state Annual Inspection								Utilities Manager	Director of Physical Plant
Complete Lead-based Paint Notifications - no dorms have apartments or suites that are subject - Maynard House - Trollinger House - Munoz House	-	-	-	TSCA - LBP	Lead Based Paint Disclosure Form	N/A	N/A	N/A	With each lease term	3 years from the departure of the resident	Director of Residential Life and AVP of Finance	N/A	Director of Residential Life and AVP of Administrative Services	AVP of Administrative Services (EHS)
Complete LBP-RRP notifications PRIOR to any renovation, repair or painting in: - Maynard House - Trollinger House - Munoz House	-	-	-	TSCA - RRP	Construction Management Program to be established Establish a small project inspection program	N/A	N/A	Notify residents prior to activity	With each project	3 years	Physical Plant	N/A	Maintenance Operations Manager/ Project Manager	Director of Physical Plant/ Director of Construction Management
Use only approved/certified/trained renovation, repair, painting firms in: - Maynard House - Trollinger House - Munoz House	-	-	-	TSCA - RRP	Construction Management Program to be established Establish a small project inspection program	N/A	N/A	N/A	With each project	3 years	Physical Plant	N/A	Maintenance Operations Manager/ Project Manager	Director of Physical Plant/ Director of Construction Management
Notify all employees using or handling a research generated chemical of any health risks associated with the chemical. Additionally, the chemical must be used by or directly under the supervision of a technically qualified individual.	-	-	-	TSCA - PMN	Establish operational procedures and training					3 years			Individual Faculty engaged in R&D	Laboratory Manager
Management of Medical Waste	-	-	-	State Medical Waste	Establish operational procedures and training								Laboratory Manager(s) Head Athletic Trainer	AVP of Administrative Services (EHS)
Management of Radioactive Materials	-	-	-	State Radioactive Materials	Establish operational procedures and training								Laboratory Manager(s)	AVP of Administrative Services (EHS)

Potential Emergency/Accident Situation	Potential Environmental Impact	Emergency Plan/Procedure to Address Emergency/Accident	Plan/Procedure Owner
Fuel/Oil Spill	Water/soil	SPCC Plan	Maintenance Control Manager
Chemical Spill (EHS and/or CERCLA Hazardous Material) - See EPCRA Requirements	Air/Water/Soil	Need to update Section 5.12 Hazardous Materials Plan to include EPCRA Emergency Notification requirements for EHS/CERCLA spills in excess of RQ	Director of Physical Plant
Hazardous Waste Spill/Release	Air/Water/Soil	Required to post info by phone and EU - Contingency Plan for Incidents Involving Hazardous Materials and Waste	Chemistry Laboratory Manager
Fire	Air/Water/Soil	Emergency Management Plan	Director of Physical Plant
Mercury Spill	Air/Water/Soil	Minor Mercury Spill Procedure	Chemistry Laboratory Manager
Spill/Release Universal Waste (example: broken lamps)	Air/Water/Soil	Incorporate in Universal Waste Training	Maintenance Control Manager
Spill/Release Universal Waste (example: leaking batteries)	Air/Water/Soil	Incorporate in Universal Waste Training	Maintenance Control Manager