Safety and Compliance Checklist

Purpose—

To identify potential environmental compliance requirements and occupational safety and health considerations for the protection of University personnel during construction and after commissioning. For use by University project managers, project coordinators, and professional services consultants (PSC) that perform activities on the campus.

Checklist Questions—

Questions in Sections A, B, and C address those activities associated with facility construction, demolition, and operations that trigger various environmental regulatory requirements.

Questions in Section D address activities related to construction activities and installations that may adversely impact University personnel during operations and maintenance after commissioning.

Instructions & Contacts—

Please make sure you are using the most current Safety and Compliance Checklist by visiting: http://www.fs.illinois.edu/services/safety-and-compliance/forms

This checklist is for informational purposes only and is to be used to assist project personnel in both the design and construction phases of University projects. Please only complete the sections applicable to the project (Sections A or B and Section D – Section C is only required if operational changes are taking place as part of the project).

Please check the boxes and respond to any follow-up question that is applicable to the project. Use the comments boxes at the end of each section to provide additional information as needed. After completing the relevant sections, please provide name, signature, position title, and date at the end of the form.

Submit the completed checklist via email to the University Project Manager. It will then be routed to the Division of Safety and Compliance for review. Safety and Compliance will provide any follow-up assistance as necessary.

Please contact Mr. David Wilcoxen (dwilcoxe@illinois.edu) for any environmental compliance related questions or oshs@illinois.edu for any occupational safety and health related questions.

Project Name: _____

Project Number: _____

Project Description:

PM Email:

SECTION A: New Facility Construction

Environmental Program Area		Y	N	Section Not Applicable
Air	1a.	☐	☐	Will a fossil fuel burning comfort-heating unit or boiler be modified, installed or removed? *If yes, provide the unit's heat input capacity and fuel type:* _____
	2a.	☐	☐	Will a permanent generator, turbine or internal combustion engine be installed with power output > 150 horsepower? *If yes, provide the unit type, fuel type and size:* _____
	3a.	☐	☐	Will refrigeration/air conditioning units be installed?
	4a.	☐	☐	Will an incinerator be installed?
Water	5a.	☐	☐	Will construction disturb soil in an area ≥1 acre?
	6a.	☐	☐	Will a sanitary service connection/sewer main, septic system or a potable water main be installed or extended? *Please specify if sanitary sewer main, septic or potable water main:* _____
	7a.	☐	☐	Will a discharge to sanitary sewer include effluent from something other than toilets and sanitary plumbing? *If yes, what material will be discharged?* _____
	8a.	☐	☐	Will a discharge to storm sewer include effluents other than storm water runoff (i.e. fertilizers, detergents, cleaning solvents, petroleum based products, etc.)? *If yes, what material will be discharged?* _____
	9a.	☐	☐	Will the project be located adjacent to any University agricultural facility or impact storm water flow south of Kirby Ave/Florida Ave?
	10a.	☐	☐	Will the project incorporate sustainable storm water practices that reduce the impact of runoff from the property?
Waste Disposal	11a.	☐	☐	Will liquid waste or an item containing liquids (including oil) be disposed?
		☐	☐	Will the waste be *disposed* by Division of Research Safety via F&S Shops?
Chemical/ Petroleum Storage	12a.	☐	☐	Will an emergency generator or other aboveground storage tank (AST) be installed, removed or relocated?
	13a.	☐	☐	Will an underground storage tank (UST) be installed, abandoned or removed?
Reporting Requirements	14a.	☐	☐	Has a Phase I Environmental Site Assessment (ESA) been conducted at the project site?
	15a.	☐	☐	Will the project include construction of a food service facility?

Comments:

SECTION B: Facility Demolitions/Renovations (Part 1 of 2)

Environmental Program Area		Y	N	Section Not Applicable
Air	1b.	☐	☐	Will a fossil fuel burning comfort-heating unit or boiler be installed? *If yes, provide the unit's heat input capacity and fuel type:* _____
	2b.	☐	☐	Will a permanent generator, turbine or internal combustion engine be installed with power output > 150 horsepower? *If yes, provide the unit type, fuel type and size:* _____
	3b.	☐	☐	Will an incinerator be installed?
	4b.	☐	☐	Will refrigeration/air conditioning units be installed, removed or disposed?
		☐	☐	Is an F&S Shop performing the work?
	5b.	☐	☐	Will demolition be conducted as an open burning firefighting training exercise?
Water	6b.	☐	☐	Will construction disturb soil in an area ≥1 acre?
	7b.	☐	☐	Will a sanitary service connection/sewer main, septic system or a potable water main be installed or extended? *Please specify if sanitary sewer main, septic or potable water main:* _____
	8b.	☐	☐	Will a discharge to sanitary sewer include effluent from something other than toilets and sanitary plumbing? *If yes, what material will be discharged?* _____
	9b.	☐	☐	Will a discharge to storm sewer include effluents other than storm water runoff (i.e. fertilizers, detergents, cleaning solvents, petroleum based products, etc.)? *If yes, what material will be discharged?* _____
	10b.	☐	☐	Will the project be located adjacent to any University agricultural facility or impact storm water flow south of Kirby Ave/Florida Ave?
	11b.	☐	☐	Will the project incorporate sustainable storm water practices that reduce the impact of runoff from the property?
Waste Disposal	12b.	☐	☐	Will liquid waste or an item containing liquids (including oil) be disposed?
		☐	☐	Will the waste be *disposed* by Division of Research Safety via F&S Shops?
	13b.	☐	☐	Will plumbing be dismantled in teaching or research laboratories? (Mercury or other hazardous liquids may be contained in the plumbing.)
		☐	☐	Will this material be *disposed* by Division of Research Safety via F&S Shops?
	14b.	☐	☐	Will equipment containing polychlorinated biphenyls (PCBs) be removed (i.e. transformers, capacitors, hydraulic and heat transfer systems, etc.)?
		☐	☐	Will this material be disposed by Division of Research Safety via F&S Shops?
	15b.	☐	☐	Will fluorescent or HID lights be removed or disposed?
		☐	☐	Will the lights be *disposed* by F&S Shops?
	16b.	☐	☐	Will light ballasts be removed or disposed?
		☐	☐	Will the ballasts be *disposed* by F&S Shops?

SECTION B: Facility Demolitions/Renovations (Part 2 of 2)

Environmental Program Area		Y	N	Section Not Applicable
Waste Disposal	17b.	☐	☐	Will batteries be removed/disposed (lead-acid or nickel-cadmium batteries from emergency lights and other battery-powered or battery-backup items)?
		☐	☐	Will the batteries be *disposed* by F&S Shops?
	18b.	☐	☐	Will mercury-containing devices (switches, gauges, thermostats) be removed or disposed?
		☐	☐	Will these devices be *disposed* via Division of Research Safety?
	19b.	☐	☐	Will building materials containing asbestos be removed or disposed?
		☐	☐	Is this an AHERA regulated facility? (See list of AHERA buildings in comments below)
		☐	☐	Is an F&S Shop performing the work?
	20b.	☐	☐	Will any building materials be removed/disposed that contain lead, silver or chrome?
		☐	☐	Will these materials be disposed by Division of Research Safety via F&S Shops?
	21b.	☐	☐	Will any building materials be removed/disposed that are coated with lead-based paint?
		☐	☐	If yes, will lead paint activities be performed in a regulated facility?
Chemical/ Petroleum Storage	22b.	☐	☐	Will an emergency generator set or other aboveground storage tank (AST) be installed, removed or relocated?
Reporting Requirements	23b.	☐	☐	Will there be a demo of a load bearing structural member?
	24b.	☐	☐	Will the project include renovation or construction of a food service facility?

AHERA regulated facilities on the Urbana-Champaign Campus include:

- Building #0075 – Children's Research Center
- Building #0061 – University High School
- Building #0021 – Kenney Gym
- Building #0005 – Kenney Gym Annex
- Building #0063 – University High Gym

Comments:

SECTION C: Facility Operation Changes

Environmental Program Area		Y	N		Section Not Applicable
Air	1c.	☐	☐	Will printing operations occur within the facility?	
	2c.	☐	☐	Will batch, continuous or manual degreasing operations occur within the facility?	
	3c.	☐	☐	Will a coating line using volatile organic materials operate within the facility?	
	4c.	☐	☐	Will a furnace for melting metals operate within the facility?	
	5c.	☐	☐	Will the facility contain equipment to melt or apply wax?	
	6c.	☐	☐	Will adhesives be prepared within the facility?	
	7c.	☐	☐	Will degreasing or solvent cleaning operations occur within the facility?	
	8c.	☐	☐	Will the facility house extruders for metals, minerals, plastics, rubber or wood?	
	9c.	☐	☐	Will the facility house die-casting machines for metal or plastics?	
Water	10c.	☐	☐	Will drinking water be obtained from groundwater wells or a surface water body separate from University distribution system?	
Chemical/ Petroleum Storage	11c.	☐	☐	Will any oil-based materials, including lubricants, coolants, and fuels be stored in quantities > 55 gallons?	
	12c.	☐	☐	Will the new facility require bulk storage of hazardous or extremely hazardous substances? *(“Hazardous substance” means most chemicals and fuel oil. Examples of “extremely hazardous substances” include sulfuric acid, ammonia, chlorine, and lindane. A full list is located in 40 CFR Part 355, Appendix A and B.)*	
	13c.	☐	☐	Will pesticides be stored or pesticide applicators be filled at the project location (either during or after the construction process)?	

Comments:

Information pertaining to waste disposal:

- The University is responsible for proper waste disposal and reporting, even if a contractor is doing the work.
- If F&S Shops are not used to dispose of these materials, the disposal contractor MUST prepare a Waste Disposal Plan and have this plan approved by the Division of Research Safety (DRS) to ensure EPA compliant disposal and reporting. DRS will review all Waste Disposal Plans. The appropriate F&S Shop used for disposal of the material is responsible for contacting DRS to coordinate disposal of regulated wastes.
- DRS requires a minimum of two weeks lead-time to assist with disposal of most items. More time may be required if testing of the material(s) is needed prior to disposal.
- DRS contact information: 217-333-2436 or email: drs@illinois.edu
- Completing this form does not constitute notification to DRS.

- - - - - - - - - - - - Please continue to complete Section D. - - - - - - - - - - - -

SECTION D: Design Considerations for Protection of University Personnel Who Will Be Tasked with Operation and Maintenance upon Commissioning (Part 1 of 3)

	Y	N	
1.	☐	☐	Will laboratory exhaust systems/chemical fume hoods be removed or modified (Facility Standard 11 53 13)? *Is there a possibility for perchlorate contamination or other highly hazardous material? If yes, construction documents shall require evaluations of the hoods and associated systems, and development and implementation mitigation plan. Results of the evaluations and the mitigation plan must be submitted to OSH. Modified hoods/hood systems must meet UofI commissioning requirements including ASHRAE 110 testing as-installed. Contact OSH for certification materials and provide ASHRAE 110 testing report to OSH upon commissioning.*
2.	☐	☐	Will new chemical fume hoods be installed (Facility Standard 11 53 13)? *If yes, newhoods/hood systems must meet UofI commissioning requirements including ASHRAE 110 testing as-installed. Contact OSH for certification materials and provide ASHRAE 110 testing report to OSH upon commissioning*
3.	☐	☐	Will new biological safety cabinets be installed (Facility Standard 11 53 53)? *If yes, the construction documents shall require the manufacturer to arrange for certification of cabinets after installation in accordance with N.S.F. Standard #49 with certification firm approval by the Division of Research Safety Biological Safety Section.*
4.	☐	☐	Will new equipment in mechanical rooms create noise hazards (>85 dB)? *If yes, construction documents shall require that signage be placed at the room entrance and an earplug dispenser placed just inside each entrance in accordance with OSHA General Industry Standards and Facility Standards (10 14 01, 10 14 03, and General Requirements Safety & Compliance). S&C must be also notified of the location.*
5.	☐	☐	Will cranes or hoists be installed? *If yes, construction documents shall require for preparation and submittal of routine maintenance schedules, inspection schedules, and inspection checklists to the operating unit in accordance with OSHA General Industry Standards and Facility Standard 14 60 00 (to be created).*
6.	☐	☐	Will fixed ladders be installed for access to catwalks or other elevated work platforms? *If yes, construction documents shall ensure design is in accordance with OSHA regulations and Facility Standard 11 24 29 and includes appropriate measures (e.g., proper clearances, rest platforms, gates at platforms, etc.) to protect against fall hazards.*
7.	☐	☐	Will catwalks, platforms, docks, or other elevated surfaces that are to be accessed by University personnel be elevated 4 feet or more above a lower level? *If yes, construction documents shall require standard railing (top rail, mid rail, and toe board) to protect against fall and falling object hazards in accordance with OSHA regulations and Facility Standard 11 24 29. If it is determined that standard railing is infeasible,* *alternative fall protection measures, such as safety nets and engineered personal fall protection systems, can be installed..*
8.	☐	☐	Will roof work be completed and will the roof need to be accessed for routine maintenance or research operations? *If yes, the construction documents shall require installation of an appropriate protection system including construction of a parapet of at least 42 inches in height, guardrails installed in accordance with OSHA General Industry Standard, or permanent anchor points be designed by a licensed SE and tested upon installation to meet OSHA load ratings? All fall prevention/protection systems must be in* *accordance with OSHA regulations and Facility Standard 11 24 29.*

SECTION D: Design Considerations for Protection of University Personnel Who Will Be Tasked with Operation and Maintenance upon Commissioning (Part 2 of 3)

	Y	N	
9.	☐	☐	Will a roof hatch be installed? *If yes, the construction documents shall require installation of standard railing and a self-closing gate around the hatch to protect against falls while the hatch is open meeting OSHA General Industry Standards and Facility Standard 11 24 29. If access through the hatch is via a ladder an adjustable extension must be installed on the ladder or integral to the railing/gate system that extends at least 3 feet above the top of the hatch curb.*
10.	☐	☐	Does the configuration of accesses to mechanical spaces and roofs with equipment requiring routine maintenance allow for safe access while carrying tools, replacement parts, filter boxes, etc.? Preference of access equipment shall be in the following order: elevator, standard industrial stairs, ships ladder, fixed industrial ladder. *If no, consider including the installation of dumbwaiters, gantry cranes, hoists, or other conveyance equipment in the construction documents. Ships ladders are only allowed if standard industrial stairs are infeasible.*
11.	☐	☐	Will new equipment/equipment systems be installed that have multiple energy sources? *If yes, the construction documents shall require preparation and submittal of equipment-specific energy control procedures in accordance with Facilities Standard 07 78 23.*
12.	☐	☐	Will new vaults, tunnels, manholes, structures, or equipment be installed that meet the definitions of confined space or permit required confined space? *If yes, the construction documents shall require that these spaces be evaluated, labeled, and secured in accordance with OSHA General Industry Standards and Facility Standards (10 14 01, 10 14 03, and General Requirements Safety & Compliance). Evaluations must be submitted to S&C.*
13.	☐	☐	Will new electrical vaults and tunnels be installed that meet the definition of an enclosed space? *If yes, the construction documents shall require that these spaces be evaluated, labeled, and secured in accordance with OSHA General Industry Standards and Facility Standards (10 14 01, 10 14 03, and General Requirements Safety & Compliance). Evaluations must be submitted to S&C.*
14.	☐	☐	Will new electrical protective devices (breakers/fuses) be installed (OSHA General Industry Standards, NFPA 70, NEC)? *If yes, construction documents shall require* • *electrical fault and coordination study must be completed and submitted to ensure equipment interrupting rating will not be exceeded and new devices will coordinate with existing upstream and downstream protective devices.* • *arc flash study must be completed and submitted to determine how system alterations will impact incident energy.* • *appropriate electrical hazard labels must be applied in accordance with the current revision to the NEC.* • *electrical installation working space must be in accordance with the current revision to the NEC.* • *egress requirements for electrical installations must be in accordance with the current revision to the NEC.*

SECTION D: Design Considerations for Protection of University Personnel Who Will Be Tasked with Operation and Maintenance upon Commissioning (Part 3 of 3)

	Y	N	
15.	☐	☐	Will routine maintenance equipment and devices such as valves, gauges, and access doors be installed (Facility Standard General Requirements Safety & Compliance)? *If yes, construction documents shall require that they be installed, to the extent practical, in a manner that:* • *they can be reached without the use of ladders, scaffolds, or lifts.* • *employees have clearance in all directions to perform routine maintenance activities without contacting other equipment or requiring awkward and/or static body postures (see notes below).* • *access doors are free to open fully without obstruction and meet applicable clearance requirements noted in OSHA and other national consensus standards.*
16.	☐	☐	Will newly installed equipment restrict access to existing routine maintenance devices, equipment, or areas (Facility Standard General Requirements Safety & Compliance)? *If yes, construction documents shall require that they be installed, to the extent practical, in a manner that minimizes access to existing routine maintenance devices, equipment, or areas. Minimize clearance distances must be in accordance with those notes in OSHA regulations and other national consensus standards.*

Notes:

1. Awkward postures refer to positions of the body (limbs, joints, back) that deviate significantly from the neutral position while job tasks are being performed. For example, when a person's arm is hanging straight down (perpendicular to the ground) with the elbow close to the body, the shoulder is said to be in a neutral position. However, when employees are performing overhead work such as installing or repairing equipment or grasping objects from a high shelf, their shoulders are far from the neutral position.
2. "Static work" refers to the musculoskeletal effort required to hold a certain position, even a comfortable one. Static force or effort refers to the amount of tension our muscles generate. For example, tilting your head forward or backward from a neutral, vertical position quadruples the amount of force acting on your lower neck vertebra.

Please sign below to verify that the information in this document is accurate and complete to the best of your knowledge. **Submit completed form via email to the University Project Manager.**

Professional Services Consultant:

Company:_____

Name:_____

X

Professional Services Consultant

University Project Manager:

Name: _____

X

University Project Manager

University Project Coordinator:

Name: _____

X

University Project Coordinator