



Environmental Management System

Background

The Environmental Management System (EMS) is a set of policies and management processes and procedures that allow the University of Saint Francis (USF) to analyze, control, monitor and reduce the environmental impacts of campus activities. Implementation and management of the plan allows the entire campus community to become engaged in environmental awareness and perpetual progress toward sustainability. The plan assists USF in maintaining regulatory compliance, reducing costs, and protecting employee and environmental health. The overall objective is to develop continual environmental improvements that are simple, easy to use, and go beyond minimal regulatory compliance.

The creation and implementation of the EMS was initiated through a voluntary agreement with the U.S. Environmental Protection Agency (EPA). The process of developing the EMS began 27 October 2010 when Paula Avila, Laboratory Assistant in the Department of Chemistry and Trina Herber, Assistant to the Dean in the School of Arts and Sciences attended EMS Training offered through HRP Associates, Inc., coordinated through Independent Colleges of Indiana (ICI). Subsequent HRP/ICI training occurred on 06 April 2011, 01 November 2011 and 19 April 2012. Trina and Paula attended all four sessions. Teresa Sordelet, Associate Vice President attended 19 April 2012. In November 2013 Randy Troy, Director of Environmental Health, Safety and Risk Management assumed the responsibility of administering the EMS. Randy also attended the Original Environmental Compliance Bootcamp taught by the Archer Institute from 24 February 2014 through 27 February 2014.

The EMS components will be reviewed annually by members of the Risk and Safety Management Committee. A log of the dates of review and subsequent changes is maintained in the Committee internal shared electronic data drive.

Definitions

CAA – Clean Air Act

CWA – Clean Water Act

CERCLA – Comprehensive Environmental Response, Compensation and Liability Act

EHS – Extremely Hazardous Substances

EMS – Environmental Management System

EPA – United States Environmental Protection Agency

EPCRA – Emergency Planning and Community Right to Know Act

FIFRA – Federal Insecticide, Fungicide and Rodenticide Act

ICI – Independent Colleges of Indiana

NESHAP – National Emission Standards for Hazardous Air Pollutants

NPDES – National Pollutant Discharge Elimination System (permit)

POTW – Public Owned Treatment Works (i.e. sewer)

RCRA – Resource Conservation and Recovery Act

RSMC – Risk and Safety Management Committee (at USF)

SDWA – Safe Drinking Water Act

TSCA – Toxic Substances Control Act

USF – University of Saint Francis

WPS – Worker Protection Standards (related to FIFRA)

Roles, Responsibilities and Authorities

The EMS is under the purview of the Risk and Safety Management Committee at USF. Randy Troy, USF’s Director of Environmental Health, Safety and Risk Management serves as the EMS Representative. Numerous facets of the EMS require participation of additional campus constituents. These individuals or groups may be involved in development, implementation, monitoring and review of the EMS. The list, shown as Table 1 below, was reviewed and approved by Risk and Safety Management Committee August 2012, and will be reviewed annually.

Table 1: Roles and Responsibilities for EMS; L=Lead Role, S=Support Role

Responsibility	Top Management	Risk & Safety Committee; incl EMS Rep, security, operations	Business Office	Department Head or Liaison	Staff & Faculty
Develop Environmental Policy	L	L	S	S	S
Identify Environmental Aspects & Impacts	S	L	S	L	L
Prioritize Environmental Aspects & Impacts	S	L	S	L	S
Identify Legal & Other Requirements	S	L	S	S	S
Establish Objectives & Targets for Improvement	S	L	S	L	S
Develop Environmental Management Programs & Policies	S	L	S	L	S
Develop Environmental Procedures and Operation Controls (WI, SOP, checklist)	S	L	S	L	L
Develop Emergency Preparedness Plans/Procedures	S	L	S	S	S
Develop preventative actions	S	L	S	L	L
Develop and Implement Training	S	L	S	L	S
Implement and Test Emergency Response Procedures/Plans	S	L	S	L	S
Organize & Maintain Records/ Documents	S	L	S	L	S
Evaluation of Regulations	S	L	S	L	S
Internal & External Communication	S	L	S	L	S
Develop Assessment measures; Monitor & Evaluate	S	L	S	L	S
Conduct internal audits for nonconformity	S	L	S	S	S

Instate corrective and preventive actions	S	S	S	L	L
Report EMS performance	L	L	S	S	S
Complete management Review	L	L	S	S	S

A copy of the university's organizational/administrative chart is available to employees through the employee handbook found on the human resources intranet site.

Environmental Policy

The Environmental Policy is the university's overall intention for environmental performance. It is written to express the university's commitment to continual improvement and prevention of pollution while complying with legal and other requirements. It provides a framework for setting and reviewing environmental objectives and targets.

It is made available to the public through the Risk and Safety Management Committee website, <http://riskandsafety.sf.edu>. The policy is documented, implemented, maintained and communicated through Risk and Safety Management Committee, who also reviews it annually.

The Environmental Policy for the University of Saint Francis is:

The University of Saint Francis, in accordance with its mission and values, endeavors to minimize pollution, comply with applicable regulations and support continuous improvement of environmental policies and initiatives.

Adhering to the Franciscan Value to "respect creation," the University of Saint Francis will strive to:

- Use resources wisely
- Promote a culture of environmental health and safety
- Reduce the use of toxic substances
- Minimize the generation of waste

A signed copy can be found in Appendix A.

Legal and Other Requirements

This EMS applies to regulations administered by the EPA under Code of Federal Regulations, Title 40 (40CFR) – Protection of the Environment. Not all EPA regulations are applicable to USF. In some cases, USF activities fall below the threshold to trigger regulation. The 40CFR and its applicability is outlined below.

1. Safe Drinking Water Act: National Primary and Secondary Drinking Water Regulations (40 C.F.R. Part 141 and 143) – Not applicable (USF is supplied with public water by the City of Fort Wayne)
2. Comprehensive Environmental Response, Compensation and Liability Act and Emergency Planning, and Community Right-to-Know Act (Designation, Reportable Quantities, and Notification (40 C.F.R. Part 302); Emergency Planning and Notification (40 C.F.R Part 355); Hazardous Chemical Reporting: Community Right-to-Know (40 C.F.R Part 370) – Not applicable

currently (USF has no OSHA hazardous chemicals or extremely hazardous substances at reportable levels). The Risk and Safety Management Committee maintains a complete, comprehensive, campus-wide chemical inventory list, updated annually and reviewed for threshold levels. This list is stored in the committee's shared drive's Documents & Records folder.

3. Federal Insecticide, Fungicide and Rodenticide Act (Good Laboratory Practice Standards (40 C.F.R. Part 160); Worker Protection Standard (40 C.F.R. Part 170); Experimental Use Permits (40 C.F.R. Part 172); FIFRA 12(a)(2)(G), 7 U.S.C. § 136j(a)(2)(G) – Not applicable currently (USF contracts out pesticide services and does not use pesticides in the greenhouse; Dept. of Operations does place glue traps and enclosed ant baits throughout buildings as needed).

4. Toxic Substances Control Act

- Pre-manufacture Notification (40 C.F.R Part 720.36) – Not applicable (USF does not generate chemicals from research)
- Polychlorinated Biphenyls (“PCBs”) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions; (40 C.F.R Part 761) – Not applicable currently (USF owns dry transformers only)
- Asbestos (40 C.F.R Part 763) – Not applicable (USF is not a primary or secondary school)
- Good Laboratory Practice Standards (40 C.F.R. Part 792) – not applicable (for research/studies conducted for the EPA for health & environmental effects and chemical fate)
- Lead-Based Paint Poisoning Prevention (40 C.F.R Part 745) – The University of Saint Francis must disclose to a lessee in “target housing” (RA apartments, not dorms, constructed prior to 1978):
 - The presence of any known lead-based paint and/or lead-based paint hazards;
 - Provide available records and reports; Provide the purchaser or lessee with a lead hazard information Pamphlet (i.e. Protect Your Family From Lead in Your Home, EPA #747-K-94-001);
 - Attach specific disclosure and warning language to the sales or leasing contract before the purchaser or lessee is obligated under a contract to purchase or lease target housing.

This required communication is handled by the Director of Resident Life. Guidelines can be found in Appendix B.

5. Resource Conservation and Recovery Act: Hazardous Waste Management System, Used Oil Handling, Underground Storage Tanks (40C.F.R. Parts 260-266, 268, 273, 279, 280).

- Underground Storage Tanks – not applicable currently (There are no longer any underground storage tanks on campus)
- Electronic Waste (containing toxic metals) – To remain exempt from regulations, USF should keep less than 46,000 pounds e-waste at one time.
- Universal Waste (used batteries exhibiting a 40CFR Part261, Subpart C, hazard; mercury containing lamps and equipment, and cancelled, suspended or unused pesticides)
 - Universal wastes must be labeled, dated and managed in a manner that prevents release of components. Accumulation cannot exceed one year. No written plan required.

- Used oil – not applicable currently (all vehicle servicing and grounds management is outsourced)
- Medical Waste (regulated by the Indiana State Department of Health; Title 16 of Indiana state statutes). Medical (biological) waste must be segregated, labeled, secured and disposal documentation maintained.
- Hazardous Waste: All waste must be characterized to determine if hazardous. Waste generation must be tracked to determine generator status (large, small or exempt). Disposal is required using a permitted facility. Reporting is required at the large and small status level. USF is a Conditionally Exempt Small Quantity Generator (CESQG) generating less than 100kg/month of hazardous waste and 1kg/month of acutely hazardous waste; and accumulating less than 1000kg of hazardous waste and 1kg acutely hazardous waste at any time. As a CESQG, container requirements do not apply. USF maintains a complete list of all waste streams on campus along with complete characterization profiles and listing of contracted waste vendors. An example characterization profile can be found in Appendix C.

6. Clean Air Act

- Standards of Performance for New Stationary Sources (40 C.F.R. Part 60) – based on emissions potential
- Applicable State Implementation Plans (SIPs), including New Source Review Regulations (40 C.F.R Part 52; 40 C.F.R 51.160 et seq.)
- Title V Permits (40 C.F.R. 70, 71) – not applicable currently (USF not at threshold for emissions)
- National Emission Standards for Hazardous Air Pollutants (40 C.F.R. Part 61) – not applicable currently (USF not at threshold for emissions)
- Chemical Accident Prevention Provisions (40 C.F.R. Part 68) – not applicable (USF does not meet substance threshold quantity for a stationary source)
- Acid Rain Program Provisions (40 C.F.R. Part 72) – not applicable (USF does not hold an air permit)
- National Emission Standards for Hazardous Air Pollutants for Source Categories (40 C.F.R. Part 63) – notification, record keeping, disposal requirements for asbestos abatement activity apply to renovation projects of particular size
- Protection of Stratospheric Ozone (40 C.F.R. Part 82) – technicians handling CFCs, HCFCs, halons and some chlorinated solvents must be licensed, prevent release of refrigerants, maintain servicing records on equipment containing 50+ lbs refrigerant (date, type of service, amount and type added)

7. Clean Water Act:

- Spill Prevention, Control, and Countermeasures (40 C.F.R. Part 112) – not applicable currently (USF does not store 1320+ gallons oil in 55gal + sized containers)
- The National Pollutant Discharge Elimination System Permits including storm water management (40 C.F.R. Part 122) – Rule 6 not applicable to USF (not an industry); Rule 5 applicable for construction disturbing 1+ acre; Rule 13 applicable through MS4 permit with City of Fort Wayne in which USF agrees to comply with construction ordinances. provide reports and report on educational efforts.

- General Pretreatment Regulations (40 C.F.R. Part 403) – not applicable (USF discharges do not require pretreatment)
- Compliance with City of Fort Wayne sewer ordinance and report hazardous waste discharges that exceed 15kg (33lbs)

Updates for changes to federal requirements are obtained through EPA website and webinars available through HRP, ICI, Summit Training, JKeller and MSDS Online subscriptions and other partners.

Evaluate and Ensure Compliance with Regulations

The agreement with the EPA on the creation and implementation of this EMS applies to regulations under the purview of the EPA. The section on Legal and Other Requirements covers which regulations in particular apply to USF. It is the responsibility of the personnel in the department related to the regulation to ensure compliance. The Risk and Safety Management Committee is charged with oversight of all the regulations and will communicate pertinent changes as needed.

- Changes to federal regulations within the last 90 days can be found at <http://www.regulations.gov>. Search comment period: closed, document type: rule, agency: EPA. Individual regulations in their entirety can be found at <http://www.epa.gov>. Either select “Laws and Regulations” from the menu or type the regulation title of interest in the search box.
- Changes to Indiana regulations can be found at <http://www.in.gov/idem/4087.htm>.
- City of Fort Wayne Sewer Ordinance: http://www.cityoffortwayne.org/utilities/images/stories/docs/utility_rules_and_regulations/Sewer_Rules_and_Regs_3-1-12.pdf
- City of Crown Point Sewer Ordinance: <http://www.crownpoint.in.gov/docs/ordinance/Crown%20Point%20Code%20of%20Ordinance.pdf> (see section V, chapter 51)

The Risk and Safety Management Committee maintains a list of Department Liaisons. The Committee interacts with these individuals as needed, at least once per year, to request updates of activities, review documentation, discuss policies and procedures, provide training and perform scheduled or unplanned periodic audits. See Table 2 below for rotation of planned audits.

Table 2: Rotation of Audits

Target Area	Time for Audit
Physician Assistant lab and storage Physical Therapy lab and storage	January
Athletic storage spaces	February
Nursing labs and storage	March
Miscellaneous spaces	April
Technology closets and storage Call to liaisons for annual chemical inventory	May
Operations spaces including boiler rooms, elevator rooms, mechanical rooms, workshops and storage spaces	June
Custodial supply closets	July
Food Services	August
Creative Arts studios, kilns and workshops	September

Biology Department lab and storage spaces	October
Surgical Technology lab and storage Radiologic Technology x-ray/imaging	November
Chemistry Department lab, stockroom and storage spaces	December

Communication

The Risk and Safety Management Committee maintains a website that posts policies, plans and procedures for campus activities that impact the environment. This website is open to external parties as well as faculty, staff and students. Campus personnel are apprised of the site through presentations at campus meetings such as Staff Forum, Faculty Forum and Town Hall. Often the committee communicates directly to department supervisors, who pass information to the staff or faculty. Departments of key concern may be visited by committee members during a departmental meeting. Additionally, the committee communicates through USF's internal portal, My Cougar Connection. The committee maintains a group page on the site and occasionally posts announcements.

Students access information through safety and information sessions in their classes, prior to their work study assignments and through the website.

Training

Awareness, regulatory and competence training is provided to faculty and staff by the Risk and Safety Management Committee. Awareness training of the Emergency Management System is provided through various avenues including staff or faculty forums and town hall meetings, as well as information posted on the intranet and internet. Depending on the training needed by individuals or groups based on their job functions, the training may be offered through an online course, classroom-style instruction or face-to-face one-on-one. USF utilizes Summit Training to provide on-line training and relies on internal and external sources for face-to-face training. USF has identified the personnel in need of training in Table 3 below.

Table 3: EMS Training Requirements

Topic	Trainee	Type of Training	Frequency
Lead Based Paint Poisoning Protection	Director of Resident Life Select Student Life and Residence Life Staff and Supervisors	Regulatory & Competency Awareness	Annually Annually
Universal Waste Handling	Custodial Staff Operations Staff Technology Services	Regulatory & Competency Regulatory & Competency Regulatory & Competency	Annually Annually Annually
Medical Waste Handling	Custodial Staff Staff and Faculty in the Department of Biology and School of Health Sciences Athletic Trainer(s)	Awareness Regulatory & Competency Regulatory & Competency	Annually Annually Annually
Hazardous Waste Handling	Department of Security	Regulatory & Competency Regulatory & Competency	Annually Annually

	Staff and Faculty in the Departments of Chemistry and Studio Art		
NESHAP Asbestos	Director of Operations	Regulatory & Competency	As needed
Protection of Stratospheric Ozone	Operations staff handling refrigerant	Regulatory & Competency	As needed
NPDES Rule 5 & 13	Director of Operations	Regulatory & Competency	As needed
City of Ft. Wayne Sewer Ordinance	Director of Operations	Regulatory & Competency	Annually
	Operations Staff	Awareness	
	Creative Arts Faculty and Staff	Regulatory & Competency	Annually
	Chemistry Faculty and Staff	Regulatory & Competency	Annually
Environmental Management Systems	All faculty and staff	Awareness	Annually

Documents and Records

Hard copies of pertinent documents and records are controlled by a few members on campus. Additionally, at least annually, all documents will be collected campus-wide and stored electronically in a central location, the network shared drive of the Risk and Safety Management Committee. It is the responsibility of the Risk and Safety Management Committee to ensure documents continue to be stored electronically in this location. The Operations Department and the Business Office will provide the documentation normally received by that departments. The Director of Campus Safety and Security serves on the committee as well, and will provide documents handled by that department. The Committee will contact the Director of Residential Life and University Technology Services at least annually to obtain copies of necessary documents.

Table 4: Control of Records

Type of Record	Retenti on Time	Storage Location	Controller	Disposal Method
Hazardous Waste Disposal	Forever	Hard Copy: Office of Security; File Cabinet Back Up: RSMC Shared Drive (Documents & Records folder)	Safety & Security Supervisor	None
Waste Determination	Until the waste stream no longer exists	RSMC Shared Drive (Documents & Records; Inventories sub-folder)	Risk and Safety Management Committee	Delete e-file
Chemical Inventory for Dept. of Chemistry	1 Year	School of Liberal Arts and Sciences shared drive; Chemistry Department; Equipment and Safety; Inventory subfolder	Laboratory Assistant in Chemistry	Overwrite e-file

Chemical Inventory for rest of campus	1 Year	RSMC Shared Drive (Documents & Records folder)	Risk and Safety Management Committee	Delete e-file
Universal Waste Lamps Disposal	Forever	Hard Copy: Office of Security; File Cabinet Back Up: RSMC Shared Drive (Documents & Records folder)	Safety & Security Supervisor	None
Universal Waste Batteries Disposal	Forever	Hard Copy: Office of Security; File Cabinet Back Up: RSMC Shared Drive (Documents & Records folder)	Safety & Security Supervisor	None
Universal Waste Electronics Disposal	Forever	Office of University Technology Services; Electronic file Back Up: RSMC Shared Drive (Documents & Records folder)	Director of User Support Services	None
Universal Waste Training	Forever	RSMC Shared Drive (Training folder)	Risk and Safety Management Committee	None
Biohazard Waste Disposal	Forever	Hard Copy: Office of Security; File Cabinet Back Up: RSMC Shared Drive (Documents & Records folder)	Safety & Security Supervisor	None
Chemical Spill	Forever	Hard Copy: Office of Security; File Cabinet Back Up: RSMC Shared Drive (Documents & Records folder)	Safety & Security Supervisor	None
Sewer Discharge	Forever	Hard Copy: Office of Security; File Cabinet Back Up: RSMC Shared Drive (Documents & Records folder)	Safety & Security Supervisor	None
Asbestos Abatement	Forever	Hard Copy: Office of Director of Operations; File Cabinet Back Up: RSMC Shared Drive (Documents & Records folder)	Operations Department	None
NPDES Rule 5 (Construction)	Forever	Hard Copy: Office of Director of Operations; File Cabinet Back Up: RSMC Shared Drive (Documents & Records folder)	Operations Department	None
MS4 Stormwater Permit	Forever	Hard Copy: Office of Director of Operations; File Cabinet Back Up: RSMC Shared Drive (Documents & Records folder)	Operations Department	None
Refrigerant Licenses	Forever	Hard Copy: Office of Director of Operations; File Cabinet Back Up: RSMC Shared Drive (Documents & Records folder)	Operations Department	None

Pesticide Licenses	Forever	Hard Copy: Office of Director of Operations; File Cabinet Back Up: RSMC Shared Drive (Documents & Records folder)	Operations Department	None
Lead Based Paint Poisoning Protection	Forever	Hard Copy: Office of Director of Resident Life; File Cabinet Back Up: RSMC Shared Drive (Documents & Records folder)	Director of Resident Life	None
EMS Objectives & Targets Reports	10 years	Embedded in EMS Document	Risk and Safety Management Committee	Delete from document
EMS Internal Audit Reports	10 years	RSMC Shared Drive (Documents & Records folder)	Risk and Safety Management Committee	Delete e-files
EMS Non-Conformity Reports	10 years	RSMC Shared Drive (Documents & Records folder)	Risk and Safety Management Committee	Delete e-files
EMS Training Records	3 years	RSMC Shared Drive (Training folder)	Risk and Safety Management Committee	Delete e-files

Environmental Aspects

To determine areas for improvement, the aspects of the university's relationship to the environment are identified. This includes use of resources and production of waste. Environmental Aspects diagrams are created to simply identify the environmental aspects of each building on campus. These documents are to be reviewed annually by the Risk and Safety Management Committee and amended as activities, products and services change as well as when buildings are added, removed or remodeled on campus. Note that data for the five buildings of the Rolland complex are consolidated as the Rolland Complex. Environmental Aspects diagrams are located in Appendix D.

The various Environmental Aspects are designated as related to (1) energy, (2) materials, (3) waste, (4) releases or (5) other. The Aspects are assigned a code number of:

- 1.1 Electric energy use
- 1.2 Natural gas energy use
- 1.3 Wood energy use
- 1.4 Diesel energy use
- 1.5 Gasoline energy use
- 2.1 Water use
- 2.2 Raw materials use
- 2.3 Transportation of goods
- 3.1 Water discharge
- 3.2 Municipal refuse disposal
- 3.3 Recyclable materials
- 3.4 Universal waste disposal
- 3.5 Biohazard waste disposal
- 3.6 Hazardous waste disposal

- 3.7 Transportation of wastes
- 3.8 Use of volatiles
- 3.9 Laundering of oily cloths
- 3.10 Air emissions from fume hoods
- 3.11 Air emissions from paint booths
- 4.1 Accidental disposal to trash
- 4.2 Accidental disposal to POTW
- 4.3 Accidental spill
- 5.1 Other

The above codes are used to identify the Aspect, aligning Aspects campus-wide. For the purpose of assessment, the Aspects are then grouped into broader categories of:

- Energy Utilization (natural gas, electricity, propane, diesel & gasoline)
- Natural Resources Utilization (land & water)
- Raw Materials Utilization (chemicals, furniture, paper)
- Water Discharges (ground, POTW, storm water, surface water)
- Air Emissions
- Solid Waste Generation (waste kitchen grease, furniture, appliances, equipment, air filters, toner cartridges, etc.)
- Recyclable Materials Generation (glass, paper, cardboard, metal and other materials)
- Universal Waste Generation (bulbs, batteries (emergency lighting, lead-acid, rechargeable), mercury-containing devices)
- Biomedical Waste Generation
- Hazardous Waste Generation
- Accidental Releases (spills, equipment failure)
- Noise

Environmental Impacts

From the Environmental Aspects diagrams and categorization designations, detailed Environmental Impacts tables are created for each building on campus. Impacts include various avenues in which the university impacts the natural environment through its use of energy and materials, production of waste and possible accidental releases.

Categories for Impacts include:

- Depletion of Energy Resources
- Depletion of Natural Resources
- Depletion of Raw Material Resources
- Water Contamination (Surface water, POTW, storm water)
- Contamination of Land/Groundwater
- Air Quality Reduction
- Recycling of Raw Materials
- Neighbor/Community Disturbance

Detailed tables for each campus building are stored in the RSMC shared internal e-drive.

Environmental Impact Prioritization

Using data from the Aspects-Impacts tables, Environmental Impacts are scored and prioritized. Ratings are based on four criteria (severity, frequency, quantity/volume and degree of control), with four degrees associated with each:

Severity – toxicity of material and ease of remediation; impact to surroundings including campus, city, state resources

5 = Low – non-toxic, biodegradable; negligible impact to air/water/land; clean-up quick/easy

10 = Moderate – non-hazardous (possibly toxic); low potential impact to air/water/land; clean-up requires some resources

15 = High – toxic with chronic exposure; moderate potential impact to air/water/land; clean-up requires immediate response and may require specialized services or equipment

20 = Critical – acutely toxic; high potential to impact air/water/land; clean-up requires immediate response and specialized services or equipment

Frequency – How often the activity occurs

5 = Occurs two times per year or less (on average)

10 = Occurs monthly to quarterly

15 = Occurs weekly to monthly

20 = Occurs daily

Quantity/Volume - used to further define frequency as needed; may be in terms of square footage, per capita use, therms, BTUs, gallons, kilowatt hours, etc. per month

5 = <10,000ft², <10,000gal H₂O, <5000kwh; <5lbs hazardous or biohazardous materials

10 = 10,000-29,999ft², 10,000-49,999gal H₂O, 5000-19,999kwh; 5-15 lbs hazardous or biohazardous materials

15 = 30,000-55,000ft², 50,000-100,000gal H₂O, 20,000-40,000kwh; 15-30lbs hazardous or biohazardous materials

20 = >55,000ft², >100,000gal H₂O, <40,000kwh; >30lbs hazardous or biohazardous materials

For quantity/volume:

- item 1.1 is based on kilowatt hours used as recorded on the university's electric bills obtained from the Department of Operations. Some data are estimated in cases where multiple buildings share a meter.
- item 1.2, 2.2, 2.3, 3.2, 3.3, 3.4, and 3.7 are based on the building's square footage
- item 2.1 and 3.1 are based on the university's City Utilities bill obtained from the Department of Operations.
- item 3.5, 3.6, 3.8, 3.9, 3.10, 3.11, 3.12, 4.1, 4.2, 4.3 are based on the waste shipping manifests obtained from the Department of Safety and Security.
- item 1.3, 1.4, 1.5 are based on general knowledge.
- The university has buildings on separate gas meters, therefore natural gas use was preliminarily determined by building square footage. Efficiency measurements should be conducted.

Degree of Control – regulation at the college, local, state, federal level

5 = No government policy/procedure; possible University policy/procedure

10 = Regulated by local, state, federal agency

15 = Reporting to government agencies required

20 = Permit or license required

Scores were designated for each impact for each building. The Impact Score was established using the formula:

Impact Score = Severity + Frequency + Quantity/Volume + Degree of Control

The Threshold for Significance is set at an Impact Score of 65. A Significant Rating Matrix reveals that air emissions from natural gas and electricity use along with use of solvents and generation of hazardous waste pose the most significant negative environmental impacts. Environmental Impact spreadsheets and Scores are stored in the RSMC shared internal e-drive.

These documents are to be reviewed annually and amended as activities, products and services change as well as when buildings are added, removed or remodeled on campus.

Environmental Objectives and Targets

Initial Environmental Objectives and Targets are established for implementation in Fall 2013. Objectives are overall environmental goals consistent with the Environmental Policy. Targets are detailed performance requirements set to achieve the Objectives.

Generation of hazardous waste was eliminated from current consideration for a goal as the overall production is minimal due to conscious efforts over recent years to reduce inventory and use of hazardous materials. The university remains a conditionally exempt small quantity generator, producing less than 70 pounds per month on average, as well as less than 10 pounds monthly of biohazard waste. Concurrently, the logic holds for the relatively low use of volatile chemicals. Universal waste reduction is likely to be a future objective.

The initial objective agreed upon is to focus on air emissions from natural gas usage. To increase return of environmental benefit per action, it was determined to be wisest to focus on buildings that were less efficient, rather than buildings that score high in the Significant Rating Matrix due to their size. Additionally, structures slated for renovation or demolition within the next several years were eliminated from consideration. This includes Achatz, Trinity, and buildings 5, 6, and 7. Doermer and Pope John Paul II, although scoring high, were not considered as objectives to target due to their recent construction (2000 and 2006 respectively). Utility records indicated that natural gas consumption in Rolland B/18 (0.078 therm/sqft) Rolland Annex (0.088 therm/sqft) are much higher than the overall campus average (0.043 therm/sqft) and should be the first objectives.

EMS Improvement Plan, Operational Controls and Preventative Action

Based on the Environmental Aspects and Impacts evaluation, the first environmental improvement effort implemented through the EMS is to reduce natural gas consumption through a three part plan as identified in Appendix E. Phase one involves determining building efficiency campus-wide. Phase two and three address action to reduce natural gas use in two buildings of the Rolland complex. As a result of these initiatives, the university developed an Energy Conservation Plan (Appendix F).

Future objectives can focus on natural gas efficiency in other campus buildings as well as waste reduction, electricity conservation and water conservation.

Emergency Response Planning, Preparedness, Training, Implementation and Testing

Effective planning and preparation can protect faculty, staff, students, the community, the environment and the university's assets from risk. USF's Emergency Response Plan assesses the potential for emergencies, plans for an effective response that prevents and/or mitigates various possible impacts. The publically viewable Emergency Response Plan can be found at the Risk and Safety website. The plan its entirety including training and testing can be found in the Risk and Safety Management Committee shared drive.

Assessing, Evaluating, Correcting

The Risk and Safety Management Committee will review the EMS annually. Additionally, the committee will interact with individuals involved with the EMS as needed, at least once per year, to request updates of activities, review documentation, discuss policies and procedures, provide training and perform scheduled or unplanned periodic internal audits.

Instances of non-conformance will be discovered generally through internal audits. Internal audits will be conducted monthly within various targeted departments on campus. No area will be audited more than once in a 12 month period. A comprehensive list of areas of campus of interest to audit are maintained on the Risk and Safety Management shared drive. Audits will be conducted by personnel either trained through the original June 2008 Environmental Compliance Peer Audit Training conducted by HRP Associates, or other personnel that those individuals train to conduct the audits. Individuals trained in June 2008 include Paula Avila (Dept. Chemistry), Joe Harkins (Dept. of Operations), Trina Herber (School of Arts and Sciences), Tim McIntyre (School of Creative Arts), and Dick Robbins (Dept. of Security). Internal audits will be conducted using the worksheets located in Appendix G. Non-conformance to USF's EMS, including EPA regulations, will be summarized with a report and follow-up meeting with personnel within the department which was the focus of the audit.

Immediate investigation into the cause of non-conformance will be initiated. Action will be taken to resolve the non-conformance. Preventative action will be identified and later assessed to determine effectiveness. Non-Conformance will be documented using the form in Appendix H and then become permanent records of the Risk and Safety Management Committee.

Through appointment as EMS Representative as well as Chairperson of the Risk and Safety Management Committee, Randy Troy will report EMS progress and performance with top management semi-annually via communication with Vice President for Administration, Teresa Sordelet.

Topics for discussion, if applicable, include:

- Continued relevancy of the Environmental Policy
- Progress in meeting commitments outlined by the regulations and improvement objectives/targets
- Proposal of upcoming objectives/targets
- Pending changes to regulations that will impact the EMS
- Communication of the EMS to all campus personnel and external parties
- Allocation of resources to sustain the EMS (objectives/targets)
- Non-conformities identified; effectiveness of correction action and subsequent prevention measures
- Review of emergencies that may have occurred; was response appropriate and effective?

Record of items discussed and resulting action items will be recorded in Appendix I. Randy Troy will report back to the Risk and Safety Management Committee and tasks will be assigned to address needs.

Teresa Sordelet, in consultation with the President and other Vice Presidents will determine the

- suitability of the EMS to the University mission
- adequacy of the EMS to meet upper administration expectations
- effectiveness of the EMS
- need for improvement

and report back to Randy Troy, who will forward communication to the Risk and Safety Management Committee. Additionally, presentations by Randy Troy to President's Cabinet and the Board of Trustees will occur as needed.

Appendix A

Approved & Signed USF Environmental Policy

University of Saint Francis

Environmental Policy

The University of Saint Francis, in accordance with its mission and values, endeavors to minimize pollution, comply with applicable regulations and support continuous improvement of environmental policies and initiatives.

Adhering to the Franciscan Value to “respect creation,” the University of Saint Francis will strive to:

- Use resources wisely
- Promote a culture of environmental health and safety
- Reduce the use of toxic substances
- Minimize the generation of waste

Sister M. Elise Kriss

Sr. M. Elise Kriss, President

4-30-12

Approved February 28, 2012 by the President's Cabinet

Reviewed May 15, 2013 by the Risk and Safety Management Committee

Appendix B

USF Office of Residential Life

Environmental Protection Agency Toxic Substances Control Act - Lead Based Paint

Target housing means any housing constructed prior to 1978, except housing for the elderly or persons with disabilities (unless any child who is less than 6 years of age resides or is expected to reside in such housing) or any 0-bedroom dwelling. Housing that is rented for any period of time, with or without payment, under a formal or informal lease arrangement is “leased housing.” Residence halls do not meet the standard for leased housing under the federal rules, but apartments and single-family houses do meet that standard providing that a sleeping area, bathroom and food preparation area exist in the dwelling.

The University of Saint Francis must disclose to a lessee in “target housing”:

- The presence of any known lead-based paint and/or lead-based paint hazards (let the occupant know that although the room has been repainted with non-lead based paint, there may be lead-based paint underneath since the building was constructed prior to 1978 when lead-based paint was commonly used);
- Provide available records and reports. If there are no such reports, it must be clearly indicated (In the contract state “Analytical testing has not been conducted to verify the presence of lead-based paint. The University cautiously suspects lead-based paint is present in underlying layers of paint. There are no records or reports to confirm or deny the presence of lead-based paint.”);
- Provide the purchaser or lessee with a lead hazard information pamphlet (Protect Your Family From Lead in Your Home, EPA #747-K-94-001 found at <http://www.epa.gov/lead/pubs/leadpdf.pdf>); and
- Attach (or imbed) specific disclosure and warning language to the sales or leasing contract before the purchaser or lessee is obligated under a contract to purchase or lease target housing.

Specifically state:

1. the Lead Warning Statement, which is:
 - a. “Housing built before 1978 may contain lead-based paint. Lead from paint, paint chips and dust can pose health hazards if not taken care of properly. Lead exposure is especially harmful to young children and pregnant women. Before renting pre-1978 housing, landlords must disclose the presence of known lead-based paint and lead-based paint hazards in the dwelling. Tenants must also receive a Federally approved pamphlet on lead poisoning prevention.”
2. “University of Saint Francis is disclosing the presence of known or suspected lead-based paint hazards”.

The contract must include:

1. signatures and dates of the agents (lessor and lessee) certifying the accuracy of the lead disclosure statements.
2. a statement by the lessee affirming receipt of information on lead hazards (aforementioned pamphlet). See <http://www.landlordsassociation.com/National/LeadWarningStatement.html> for an example of a form.

Additionally, the University must:

- Retain completed copies of disclosure records for no less than three years.

Lead Warning Statement

Housing built before 1978 may contain lead-based paint. Lead from paint, paint chips and dust can pose health hazards if not taken care of properly. Lead exposure is especially harmful to young children and pregnant women. Before renting pre-1978 housing, landlords must disclose the presence of known lead-based paint and lead-based paint hazards in the dwelling. Tenants must also receive a Federally approved pamphlet on lead poisoning prevention. University of Saint Francis is disclosing the presence of suspected lead-based paint hazards.

Lessor's Disclosure (initial)

(a) Presence of lead-based paint or lead-based paint hazards (choose one below)

_____ Known or suspected lead-based paint and/or lead-based paint hazards are present in the housing (explain): The facility was constructed prior to 1978; Analytical testing has not been conducted to verify the presence of lead-based paint. The University cautiously suspects lead-based paint is present in underlying layers of paint. There are no records or reports to confirm or deny the presence of lead-based paint.

_____ Lessor has no knowledge of lead-based paint and/or lead-based paint hazards in the housing.

(b) Records and reports available to the lessor (choose one below):

_____ Lessor has provided the lessee with all available records and reports pertaining to lead-based paint and/or lead-based paint hazards in the housing (list documents below)

_____ Lessor has no reports or records pertaining to lead-based paint and/or lead-based paint hazards in the housing.

Lessee's Acknowledgment (initial)

_____ (c) Lessee has received copies of all information listed above.

_____ (d) Lessee has received the pamphlet Protect Your Family from Lead in Your Home

Agent's Acknowledgment (initial)

_____ (e) USF Resident Life Staff has informed the lessor of the lessor's obligations under 42 U.S.C.4852(d) and is aware of his/her responsibility to ensure compliance.

Certification of Accuracy

The following parties have reviewed the information above and certify, to the best of their knowledge, that the information provided by the signatory is true and accurate.

Lessee (Tenant)

Date

Lessor (Landlord)

Date

Appendix C

Waste Profile

UNIVERSITY of SAINT FRANCIS

2701 Spring Street
Fort Wayne, IN 46808
260-399-7700

Location: _____

Stream Name: _____

Contact: _____

Process Generating Waste: _____

Is this a process traditionally known to produce EPA Hazardous Process Wastes (a K-code waste)?

 Yes No (See the EPA List of Lists for complete listing)

Volume per time (i.e. 1 quart per month): _____

Composition/Ingredients

1. _____ %	6. _____ %
2. _____ %	7. _____ %
3. _____ %	8. _____ %
4. _____ %	9. _____ %
5. _____ %	10. _____ %

Is the waste flammable? Yes NoIs the flashpoint below 140°F? Yes No**Is the waste corrosive?** Yes NoWhat is the pH? ≤2 2.1-5.9 6-12 12-12.4 ≥12.5 NA**Is the waste reactive** (i.e. radioactive, explosive, spontaneously combustible, temperature sensitive, air or water reactive, capable of polymerization, containing sulfides or cyanides, capable of liberating gas)? Yes No**Does the waste contain any of the following at or above the indicated concentrations?** No

<input type="checkbox"/> Arsenic – 5 ppm	<input type="checkbox"/> Lead – 5 ppm	if yes, mark the metal
<input type="checkbox"/> Barium – 100 ppm	<input type="checkbox"/> Mercury – 0.2 ppm	
<input type="checkbox"/> Cadmium – 1 ppm	<input type="checkbox"/> Selenium – 1 ppm	
<input type="checkbox"/> Chromium – 5 ppm	<input type="checkbox"/> Silver – 5 ppm	

Does the waste contain ammonia, benzene, halogens, hydrocarbons, phenol, pesticides, ozone depleting chemical or oxygen depleting chemical? Yes No

Does the waste contain PCBs? Yes No

If so, is it <5ppm 5-50ppm 51-500ppm >500ppm

Is this an EPA Characteristic or Listed Waste per 40 CFR 261? Yes No

If so, identify hazardous waste codes (see the EPA List of Lists): _____

Does the waste contain asbestos? Yes No

If yes, is it friable? Yes No

Does the waste contain materials that are biohazardous or infectious/pathogenic? Yes No

Does the waste contain fats, oils or greases? Yes No

If so, is it <200ppm >200ppm

Is this a waste water? Yes No

If so, does the waste contain any of the following at or above indicated concentrations? No

- | | | |
|--|--|------------------------------|
| <input type="checkbox"/> Arsenic – 0.1 ppm | <input type="checkbox"/> Mercury – 0.1 ppm | if yes, mark the constituent |
| <input type="checkbox"/> Cadmium – 0.7 ppm | <input type="checkbox"/> Nickel – 3 ppm | |
| <input type="checkbox"/> Copper – 2 ppm | <input type="checkbox"/> Phenol – 1 ppm | |
| <input type="checkbox"/> Cyanide – 1.2 ppm | <input type="checkbox"/> Silver – 0.3 ppm | |
| <input type="checkbox"/> Lead – 0.6 ppm | <input type="checkbox"/> Zinc – 6 ppm | |
| <input type="checkbox"/> Hexavalent Chromium – 0.5 ppm | | |

Is this waste suitable for discharge to City of Fort Wayne Public Owned Treatment Works (POTW)?

Yes No

Is this a Universal Waste (i.e. electronics, mercury lamps, batteries, mercury devices)? Yes No

Is this information based on:

- Analytical data (please attach all relevant analysis)
- Generator knowledge: (check all that apply)
 - Knowledge of the process generating the waste
 - Material safety data sheet(s) for the material(s)
 - Knowledge of waste regulations

Profiler name: _____ Profiler signature: _____ Date: _____

Department Representative assisting Profiler: _____

Appendix D

Environmental Aspects Diagrams



Environmental
Aspects Diagrams

Appendix E

Environmental Targets and Plans

Reduce natural gas consumption

1. Determine natural gas consumption for all main campus buildings and the Performing Arts Center at the downtown campus (currently separate meters exist for Rolland #18/B, Rolland #19/C, Rolland Annex, North Campus, Clare Hall, Wane Lane, Bass Rd. Farm, houses on Leesburg Rd. only)
 - a) Determination of natural gas consumption for building that are on a shared meter – arranged by Operations Department (Dept. of Operations or outside contractor?); by June 30, 2014
 - b) Energy audits of small buildings (4,6,7,10,12,13,16,25) on campus (visual inspections, using doorway blower units) – Paul Schmidt; by June 30, 2014
 - c) Thermal imaging of small buildings (4,6,7,10,12,13,16,25) on campus – Paul Schmidt; by June 30, 2015
 - d) Determine buildings to focus on for future natural gas conservation – Risk & Safety Management Committee

2. Reduce natural gas use in Rolland Annex by 5% between July 1, 2014 and June 30, 2015 as evidenced by thermal imaging
 - a) Audit of natural gas waste through heating loss evidenced by thermal imaging – arranged by Operations using outside contractor; roof evaluated by Aug. 31, 2014; remainder of building by January 31, 2015
 - b) Corrective action: add insulation, repair areas of leaks, etc. – completed by maintenance personnel as assigned by Rex Bercot in consultation with Rich Beinz; by June 30, 2015
 - c) Communicate energy conservation efforts to employees housed in Rolland – Randy Troy; by August 31, 2015
 - d) Follow up thermal imaging to document remaining heat loss (must be done on a day of similar outdoor & indoor temperature) – arranged by Operations using outside contractor; roof evaluated by Aug. 31, 2015; remainder of building by January 31, 2016
 - e) Comparative analysis of pre & post imaging (i.e. surface area per image color) as well as natural gas utility use (monthly readings in terms of therms) – Randy Troy, Paula Avila and Rich Beinz; March 31, 2016
 - f) Show results of energy conservation efforts to employees housed in Rolland and discuss other energy conservation techniques – Randy Troy; August 31, 2016
 - g) Monitor natural gas consumption over next two years to ensure efficiency is maintained. Re-evaluate by June 30, 2016 and June 30, 2017.

3. Reduce natural gas use in Rolland Building #18/B by 5% between July 1, 2014 and June 30, 2015 as evidenced by thermal imaging
 - a) Calculate energy use of natural gas fired kilns.
 - b) Audit of natural gas waste through heating loss evidenced by thermal imaging – arranged by Operations using outside contractor; roof evaluated by Aug. 31, 2014; remainder of building by January 31, 2015. Communicate energy conservation efforts to employees housed in Rolland – Randy Troy; November 30, 2014
 - c) Corrective action: add insulation, repair areas of leaks, etc. – completed by maintenance personnel as assigned by Rex Bercot in consultation with Rich Beinz; by June 30, 2015

- d) Communicate energy conservation efforts to employees housed in Rolland – Randy Troy; by August 31, 2015
- e) Follow up thermal imaging to document remaining heat loss (must be done on a day of similar outdoor & indoor temperature) – arranged by Operations using outside contractor; roof evaluated by Aug. 31, 2015; remainder of building by January 31, 2016.
- f) Comparative analysis of pre & post imaging (i.e. surface area per image color) as well as natural gas utility use (monthly readings in terms of therms) – Randy Troy, Paula Avila and Rich Bienz; March 31, 2016
- g) Show results of energy conservation efforts to employees housed in Rolland and discuss other energy conservation techniques – Randy Troy; August 31, 2016
- h) Monitor natural gas consumption over next two years to ensure efficiency is maintained. Re-evaluate by June 30, 2016 and June 30, 2017.

Natural Gas Conservation Program – Operational Controls for Rolland Annex

- If overhead doors are open, turn off heat and/or air conditioning
- When air conditioning or heating are in use, ensure:
 - Overhead doors are tightly closed and locked
 - Regular entry doors are closed tightly
 - Only university-approved space heaters may be used in a manner consistent with university policy on space heaters (Department of Operations)
- Report air leaks (cold air entering) to professor or studio director, who shall complete a Work Order to Operations
- Report any falling/missing insulation to professor or studio director, who shall complete a Work Order to Operations

Natural Gas Conservation Program – Operational Controls for Rolland B/#18

- Allow all doors to close; do not prop open doors to hallways, stairways, etc.; do not leave open double doors at the woodshop
- Run gas-fired kilns for large batches only
- Only university-approved space heaters may be used in a manner consistent with university policy on space heaters (Department of Operations)
- Report air leaks (cold air entering) to professor or studio director, who shall complete a Work Order to Operations

Reduce Electrical Use In Selected Building On Campus.

1. The University will take advantage of Incentive Offer programs offered by AEP (Indiana Michigan Power) to reschedule the air handlers in the following buildings: Pope John Paul II Building, Doermer Building, North Campus Building, and the Achatz Building.
 - a) The estimated cost of rescheduling the air handlers is \$31,856.00 all of which will be paid for by the incentives being offered by AEP.
 - b) The estimated energy saving is approximately 1,248,091 kWh per year.
 - c) The projects will be completed by March 31, 2014 in order to qualify for the AEP Incentive program.
 - d) Monitor electrical use in affected buildings over the next year to ensure efficiency is obtained and maintained.

- e) Show results of energy conservation efforts to employees housed in the affected buildings and discuss other energy conservation techniques – Randy Troy March 31, 2015.
2. The University will replace incandescent bulbs use in the art galleries located in the Rolland Arts Building and the North Campus Building.
 - a) The incandescent bulbs used 75 watts per bulb and had an average life of 2,500 hours of use, (replaced once a year on average), at a cost of \$6.00 per bulb.
 - b) The new LED bulbs use 8 and 12 watts per bulb and have an average life of 50,000 hours of use each, (over 15 years of use at 8 hours a day), at a cost of \$28.80 and \$32.38 per bulb.
 - c) The initial cost of the bulbs will be \$9430.16 with an annual energy savings of \$8709.52. The University will see a total return on investment in less than 1 and $\frac{1}{4}$ years.
 - d) All bulbs in the art galleries will be replaced by January 2014.

Appendix F

ENERGY CONSERVATION PLAN UNIVERSITY OF SAINT FRANCIS

I. BACKGROUND/PURPOSE

The University of Saint Francis (USF) recognizes that to fulfill its mission in learning, leadership and service, energy must be consumed. Facilities, equipment, materials and supplies conducive to quality learning are necessary and integral components of instruction at USF. Notwithstanding, USF is committed to energy conservation. Through numerous and varied efforts, USF is confident in its declaration that the resources entrusted by God are not squandered, but are employed wisely and efficiently.

Decisions that impact energy consumption are scrutinized through a lens of sustainability, incorporating the basic needs to fulfill USF's mission coupled with economic, environmental and societal considerations. As a result, heating, cooling, and lighting are provided at conservative, yet sufficient, levels. Technology and power for classroom, laboratory, studio and other academic endeavors are provided at levels to support outstanding education. Energy for additional support services is used judiciously.

To assist all stakeholders in energy-related decision-making, the following Guiding Principles, Goals, Strategies and Operational Standards have been established.

II. DEFINITIONS

Guiding Principle – an overarching value to be embraced by all campus constituents

Goal – an objective that can be obtained through strategic planning, communication and allocation of necessary resources

Strategy – a tactical approach to accomplish a goal

Operational Standard – basic minimal set of procedures that should be executed by all campus constituents in daily functions

III. METHODS

Guiding Principles	
1. Efforts will be made to reduce energy consumption in all areas of the university where practical	Implement best management practices
	Install energy saving devices
	Replace failing equipment with more efficient models
	Incorporate energy saving components in renovation and construction projects
2. The University will make campus constituents aware of the need for and efforts to conserve energy	Explain purpose and importance of energy conservation
	Communicate energy conservation methodologies occurring on campus
	Propose ideas on how students, faculty and staff can conserve energy

Energy Conservation Goals
1. Minimize carbon emissions resulting from electricity and natural gas consumption
2. Identify opportunities for conservation and develop plans to address them
3. Promote energy conservation awareness campus-wide

Strategies
1. Act on all energy conservation projects that have an expected return on investment of five years or less.
2. Contract an energy service company to conduct an energy assessment of facilities.
3. Replace/retrofit T-12 lighting and magnetic ballasts with T-8, T-5 or LED lighting with electronic ballasts
4. Install additional occupancy sensors where feasible.
5. Install accurate sub-meters for each utility for each individual facility.
6. Conduct energy audits, including maintaining energy consumption data.
7. Pursue energy efficient design (i.e. LEED items) in all renovation and new construction
8. Seek federal, state or local source grants for energy conservation projects

Operational Standards	
Ventilation	Keep all exterior building windows and doors closed.
	Use weather stripping to close gaps around windows and doors.
	Keep all supply and return air vents unobstructed at all times.
	Check systems annually for leaks and clogs.
Heating	“Occupied” heating level of 70°F are set Monday through Friday, 8am to 9pm. Evening classes, indoor athletic events, and other regularly occurring events routinely occur during “occupied” time. Areas with individual room temperature control panel, will have a range of control of +/- 2°F only.
	“Unoccupied” heating levels of 60°F are employed during off-hours (evening, weekends and holidays). Special events, weekend lectures, recruitment or alumni events, occurring during “unoccupied” time must be communicated to the Operations Department by the Facilities Department. When multiple off-hours events occur on the same day, they should be located within the same facility if possible.
	Heating levels are set to 55°F in all buildings when the University is closed for an extended period (i.e. Christmas Eve through New Years Day). Heating levels in residence halls are set to 55°F over the extended Christmas break.
	Areas of special circumstances, such as technology server rooms, spaces with temperature-sensitive instrumentation or temperature-dependent laboratory spaces will maintain specific required temperature settings.
	Transition to smaller, staged boilers
Heating	The use of personal space heaters is allowed only by permission and is restricted to times when the heating system is undergoing repair or in areas where the heating equipment is determined to be inadequate by the Operations Department. Personal space heaters must meet criteria defined by the Operations Department.
	Heat will not be used in buildings that are not in use.
	Report overheated spaces using a Department of Operations Work Order via USF Connect.
	Maintain hot water heater settings at the lowest possible temperature to meet needs; temperature shall be hotter in areas of Food Services and residences.
	Insulate all hot water pipes.
	Use pumps to force hot water from source to faucet, so it is readily available

Cooling	“Occupied” levels are set at 76°F. Variations align with verbiage in “heating” above.
	“Unoccupied” levels are set at 85°F in residence halls during the summer.
	Use window shades to regulate solar heat gain.
	Install economizers where feasible
	Air conditioning will not be used in buildings that are not in use.
	Report overcooled spaces using a Department of Operations Work Order via USF Connect.
Lighting	Lights are to be turned off in all classrooms, laboratories, meeting rooms, storage areas and mechanical spaces by the last person leaving the space, no matter how short the unoccupied time frame may be.
	Use Natural lighting when possible.
	Use minimal lighting (low-lighting) in hallways and common areas when there is low or no occupancy.
	Use fluorescent lamps and LED lighting wherever possible.
Electronics	Set electronics to energy-saving operation mode (i.e. “sleep”, “stand-by”, “hibernate”)
	Turn off office and classroom electronics at the end of each day.
	Unplug non-computer appliances, such as shredders & coffee makers, when not in use.
Other Equipment	Building occupants, who are able, should use the stairs rather than elevators whenever possible.
	Turn off fume and dust hoods when not in active use.
	Turn off equipment when leaving a lab, studio or maintenance work space.
	Wait until there is a full load before running clothing or dishwashers.
	Combine refrigerator and freezer contents where possible and unplug excess units.
	Clean condenser, refrigerator and freezer coils.
	Check to ensure refrigerator and freezer seals are clean and hold a tight seal.
	Operate fume hoods with sashes at the proper height for safety.
	Use flow restrictors on faucets to conserve energy for heating water.
Report malfunctioning equipment so repairs can be made.	
Transportation	Do not leave vehicles idling.
	Purchase hybrid or electric fleet vehicles when aging fleet vehicles are in need of replacement. Use biofuels when possible.
	Encourage use of public transportation, ridesharing and bicycling to and from campus.
	Encourage walking on campus (opposed to driving between buildings); offer sufficient bicycle parking.
Product Procurement	University Technology Services is responsible for purchasing electronics that are energy efficient. The U.S. Environmental Protection Agency Energy Star products list can be used as a resource.
	Individual departments purchasing supplemental appliances (i.e. microwave) should select energy efficient models.
Renovation & Construction	Install energy efficient lighting.
	Install windows that reduce passive solar heating.
	Install reflective roofing.
	Use environmentally sustainable insulating materials.
	Install separate utility meters.
Consider alternative heating (i.e. geothermal, solar).	

Resource conservation, including energy conservation is not a recent development in the Franciscan tradition. For centuries the Sisters of Saint Francis of Perpetual Adoration have espoused the concepts of a conservative, holistic life to follow in the path of St. Francis of Assisi. Coming to Indiana from Olpe, Germany in 1875, this order of Sisters continued its vow of poverty, respect for our Earth and care for others. The Sisters hold fast to a rule of preventing waste, which emanates throughout the University.

Over the recent years, many initiatives in energy conservation, as shown in Appendix A, have materialized.

Renewable Energy

All electricity on campus is provided by Indiana and Michigan Power (I&M), a division of American Electric Power (AEP). The power generation portfolio, as of March 14, 2013, is comprised of 3595 megawatts (MW) coal generated power, 2160 MW nuclear power, 24 MW hydropower and 150 MW wind power, with 100 MW wind power to soon be added from a wind farm in Anderson, Indiana¹. USF is pleased with the current proportion of 40% clean energy in the electric supply and the accompanying rates for this utility.

The renovation of Brookside mansion afforded USF the opportunity to incorporate a geothermal cooling system, using ground water that is ultimately discharged into Mirror Lake. USF had previously used well water to raise the lake level in summer months, so this method reduces electricity use without adding a new burden to the groundwater source. USF has no immediate plans to pursue additional alternative sources of or replacement methods for electricity.

USF has transitioned boilers to natural gas, now providing nearly all campus heating via natural gas, a cleaner alternative to oil boilers of the past. Many boilers on campus are newer, more efficient models. 54 of the 73 units on campus are new since 2000, which was well into the Energy Star Program launched by the EPA in 1992 and significantly expanded in 1995. Additionally, several are staged boilers.

Electric heat is provided in Bonzel and Clare Hall dormitories to allow for more individualized comfort for residents. USF is not currently seeking alternatives to natural gas heating for student residential areas.

Most hot water heaters on campus use natural gas. Electric units are found in Padua, Building 6, Garage, Rolland buildings 19, 20, 21, Annex and the house at 1434 Leesburg Road. There is no hot water in Security building and no water at all in Buildings 5 and 7.

Natural gas generators are located at Doermer and Pope John Paul II Center. Rolland #21 has a diesel generator. Rolland complex maintains six natural gas kilns ranging from 367,000 to 800,000 Btu/hr. Additionally, a few electric kilns and a wood fired kiln are on-site.

The university is currently seeking a grant for the installation of 20-30 kW of solar PV to be located as a parking shade structure in the lot near Hutzell and Achatz.

The Risk and Safety Management Committee with the assistance of the Department of Operations maintains an inventory of all fuel burning equipment on campus, including its size, date of installation, and maximum BTU consumption. These data are available to calculate maximum potential air emissions. Since the equipment does not run 24 hours per day, 365 days per year, USF opts to gauge energy use based on therms of natural gas and kilowatt hours of electricity actually consumed as reported by utility service providers.

Support and Partnerships

The University is committed to continued monitoring and improvement in energy conservation. Support, guidance and cooperation of the Department of Operations are paramount to achieving the university's energy goals. The Risk and Safety Management Committee is integral to continual improvement in energy conservation through oversight and guidance of the University's Environmental Management System. The population size and the number of facilities in use fluctuate annually. This is taken into consideration in energy calculations.

Dissemination and Review

This is a living document and will be reviewed annually by the Green Campus Committee and Risk and Safety Management Committee. Communication of this plan to upper administration will be provided by the Executive Vice President and/or Associate Vice President. Communication of this plan to faculty and staff will be through internal and external electronic sources such as Cougar Connection and the University's website, as well as through in person venues such as Staff Forum, Faculty Forum and Town Hall. External constituents can find this plan through the University's website.

Campus constituents with suggestions to reduce energy consumption should contact the Director of Operations.

Being in accordance with the university mission, Franciscan values and economic sustainability, this plan has been approved by university administration

Randy Troy,	Date	Teresa Sordelet,	Date
Director of Environmental Health, Safety and risk Management		Vice President for Administration	

References

¹ Kim Sabrosky, Community Relations Manager, Indiana Michigan Power. Personal Communication (phone); March 14, 2013.

Appendix G Internal Audit Worksheet



Audit Worksheet

Appendix H Non-Compliance Report

Audited Building/Department:	
Audit Date: Auditor(s):	Auditees:
Description of Non-Conformance:	Root Cause Analysis:
Corrective Action:	
Date of Implementation:	
Preventative Action:	
Date of Implementation:	
Verification/Review:	
Date:	
Auditor (signature):	Date:

Appendix I EMS Management Review

Date of Review Meeting:	
Name of Attendees:	Position:
Items Reviewed	
Actions to be Taken:	Person(s) Responsible
Conclusions:	

Record of Changes and Reviews

<i>DATE</i>	<i>CHANGE/REVIEW</i>	<i>NAME</i>
30 April 2012	Approved	President's Cabinet
January 2013	Annual review and Changes	Randy Troy
January 2014	Annual Review	Randy Troy
February 2015	Annual Review and Changes	Randy Troy