Significant Environmental Aspects, Objectives, and Targets

Appendix B: Significant Environmental Aspect, Objectives and Targets
Effective Date: 12/12/05, Version 2
EMS Coordinator Responsible for Content

Aspect	Objective	Target	Performance Indicator	Responsible Party
Energy and Fuel Consumption	Reduce electrical energy and fuel consumption used to heat and cool AED buildings and power research support operations.	Reduce energy use by 2% per year over a five-year period This overall target will be accomplished by reducing energy consumption in a variety of areas including: Heating/cooling buildings Lighting buildings Miscellaneous equipment	Energy Costs for Facility	Facilities Manager
		Upgrade building control systems to improve thermostat control, ventilation rates, and room lighting levels.	Energy Costs for Facility	Facilities Manager
		Develop energy conservation program to include occupancy sensors, low energy lighting systems, etc.	Energy Costs for Facility	Facilities Manager
	Reduce amount of vehicle exhaust generated by AED boats and vehicles were practical and feasible, and reduce the amount of fuel consumed by AED boats and	Procure alternative fuel vehicles (e.g., hybrid vehicles, four-stroke outboard engines) as resources allow.	Number of fuel efficient and cleaner running vehicles available to AED staff	Facilities Manager

	vehicles were practical and feasible			
	Reduce energy used to chill buildings and seawater.	Re-design and re-commission chiller system to improve plant efficiency.	Energy Costs for Facility	Facilities Manager
	Reduce generation of green house gases and reliance on fossil fuels	Purchase kHz of grid electricity from green energy sources (renewable energy)	% of green energy purchased compared to previous years	Facilities Manager
		Purchase 200,000 gal. of "Bio-diesel" fuel for boilers.	Invoice	Facilities Manager

Aspect	**Objective**	**Target**	**Performance Indicator**	**Responsible Party**
Water Consumption	Enhance efficient use of freshwater, and reduce consumption for all AED support and research operations.	Reduce freshwater consumption by an average of 5% per year over five years	Decrease water consumption (per capita): water meter readings	Facilities Manager
	Develop a sustainable landscape program that applies the principals of xeriscape	Reduce water usage and use of fossil fuels (SEA1.0) for landscape maintenance	Decrease water consumption (per capita): water meter readings; reduced landscape maintenance costs	Facilities Manager
	Install low flow devices in laboratories and lavatories	Up to 100% installation (dependant on available resources and health and safety requirements)	Decrease water consumption (per capita): water meter readings	Facilities Manager
	Develop recirculating closed loops for cooling water applications.	Eliminate single pass cooling water by installing recirculating water cooling loops for chillers and compressors where feasible.	Decrease water consumption (per capita): water meter readings	Facilities Manager
	Provide information to staff on water conservation policies	Informed and knowledgeable staff regarding water management policies	Information (e.g. posters) distributed and training sessions attended	EMS Coordinator

Aspect	**Objective**	**Target**	**Performance Indicator**	**Responsible Party**
Waste Generation	Reduce conventional, chemical and radioactive waste generation. Develop chemical baselines.	Reduce the volume of all waste generation by 5% over the next five years	Quantity of material disposed	AED SHEM
	Insure only necessary amounts of chemicals are purchased. Keep the chemical inventory current.	Minimize amount of chemical waste generated, and eliminate stocks of redundant chemicals. Perform a chemical inventory self-audit at least annually. 100% SHEM approval of all new chemicals planned for purchase.	Chemical inventory data base available to research staff and purchasing approval by SHEM	AED SHEM
	Develop multi-year chemical waste disposal contract with regularly scheduled waste removal	Minimize quantities of chemical waste on site	Chemical waste removal contract	AED SHEM
	Reduce amount of radioactive waste, normalized to research requirements, pursue alternative analytical procedures	Reduce radioactive chemical inventory	Quantity of radioactive material disposed	AED SHEM
	Reduce formaldehyde use in sample preservation	Decrease use of formaldehyde normalized to research requirements	Quantity of formaldehyde purchased	AED SHEM
	Maintain compliance with all applicable Federal, State, and local regulations.	100% compliance with RIPDES and Narragansett sewer permitting requirements. 100% compliance with NRC license regulations including radioactive inventories, program audits, wipe tests, equipment calibration, etc.	RIPDES and Town of Narragansett Sewer Permit. NRC License	AED SHEM

	Maintain and keep current all applicable SH&E programs	Annual updates and as needed	SHEM Protocol and regulatory guideline	AED SHEM
	Perform root-cause analysis of all chemicals spills and near misses	100% Compliance with RIDEM requirements should a spill or near miss occur.	SPCC Plan	AED SHEM
	Develop to extent possible a “paperless workplace”	Reduce amount of paper usage and amount of paper in waste stream	Development E-forms applications	EMS Coordinator
	Maximize use of 100% recycled paper	Use 100% recycled paper in all copiers and printers	Invoices for paper procurement	EMS Coordinator

Aspect	**Objective**	**Target**	**Performance Indicator**	**Responsible Party**
Environmentally Responsible Field Operations	Design and conduct field research activities in an environmentally responsible manner	An educated research staff that minimizes adverse environmental impacts while conducting field research activities.	Number of trained field research staff	Field Ops Manager and Research Staff