

## PREVIOUS EXPERIENCE

### PROJECT NO. 4

#### Lambert – St. Louis International Airport

Professional Environmental Engineers, Inc. (PE) was contracted by the Lambert - St. Louis International Airport to conduct comprehensive environmental services in conjunction with everyday airport operations as well as the Lambert – St. Louis International Airport Expansion Program.



PE has collected, transported, disposed/recycled all household and commercial hazardous waste located within structures to be demolished as part of the Airport Expansion Program. This project has consisted of developing a waste management plan including a hazard and exposure assessment, health and safety plan and emergency contingency plan for the safe handling, storage, packaging and transportation to disposal/recycling facility for over 1000 residential and commercial structures containing household and commercial wastes.

Typical items to be disposed / recycled include mercury switches, fluorescent light bulbs, fluorescent light ballasts, used oils, paints, solvents, caustics and fire extinguishers. PE performs all storm water discharge sampling on all storm water outputs in compliance with the NPDES permitting requirements. PE personnel collect all discharge samples and coordinate with the laboratory to assure analytical QA/QC requirements are followed

In addition, PE personnel are currently performing the Lambert – St. Louis International Airport yearly Emissions Inventory Questionnaire, Annual Certification Report in compliance with the Federal Clean Air Act and State of Missouri Intermediate Operating Permit in compliance with the St. Louis County Air Pollution Control Program Office.

### Additional Project Information

#### Work Plans

The primary scope of work with the Lambert – St. Louis International Airport involves the inventory, classification, sampling, transport and disposal of all household/commercial hazardous wastes located within over 1000 commercial and residential structures to be demolished as part of the Lambert – St. Louis International Airport Expansion Program. Work plans were developed to outline the transporters, disposal/recycling facilities, personnel training requirements, emergency contingency plans, spill prevention programs, packaging, on-site storage requirements, organizational charts, sampling and waste characterization evaluations, QA/QC requirements and standard operating procedures.

A detailed site specific health and safety plan was developed in accordance with Federal Aviation Administration requirements detailing the proper handling procedures for commercial/household hazardous wastes, sampling protocols, standard personnel protective equipment, QA/QC Programs, hazardous communication requirements and temporary storage procedures.

Inspections of individual commercial and residential structures are conducted to inventory potential hazardous materials to be removed before building demolition. PE personnel are provided with a list of structures that are scheduled for demolition in which to initiate household hazardous material removal. At the time of the on-site removal of these materials, inventories are adjusted to reflect any variance in the inventories. Materials are transported to a central area for temporary storage. Any waste characterization samples are collected to determine the specific type of waste (recyclable material, universal, special and/or hazardous waste). Items are then categorized and packaged before final transport to the appropriate facility.



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The data quality objective of this project is to produce a structure specific “Household Hazardous Waste Inventory Sheet”, appropriate waste shipment record (uniform hazardous and non-hazardous waste manifests, bill of lading and/or certificate of recycle) and a flow chart for each address detailing the destination of each item.

All personnel involved with this project receive a minimum training of the OSHA 29 CFR 1910.120 - Hazardous Waste Site Operations and Emergency Response (40-hour). Site-specific training as outlined within the health and safety work plan consists of procedures for handling commercial/household hazardous wastes, sampling procedures, personnel protective equipment, hazardous communication and temporary storage procedures.

#### Investigation and Field Studies

Field inspections of these structures are conducted to inventory potential hazardous materials to be removed before building demolition. These inventories are verified during the on-site removal of the items and a “Household Hazardous Waste Inventory Sheet” is developed for each structure.

On-site testing for NPDES discharge permitting requires extensive analytical testing of the storm water discharges. PE personnel collect all discharge samples and coordinate with the laboratory to assure analytical QA/QC requirements are met. Detailed health and safety procedures are followed for the safe collection and handling of samples, labeling, shipment, chain of custody and QA/QC protocols.

Sampling performed for emissions inventory questionnaire are performed in accordance with the Clean Air Act under strict protocols concerning the required sample collection, packaging, labeling, chain of custody, sample preparation and analysis.

The Missouri Department of Natural Resources is the primary regulatory agency governing the handling, transport and disposal of the household hazardous wastes. Additional agencies include United States Environmental Protection Agency, United States Department of Transportation, Federal Aviation Administration and the St. Louis County – Department of Health.

#### Engineering Support and Remedial Design

Engineering design plans were developed to outline the all transporters requirements, waste characterization/disposal, facilities, personnel training requirements, emergency contingency plans, spill prevention programs, packaging, on-site storage requirements, QA/QC requirements and standard operating procedures.

*QA/QC Practice:* Any sampling conducted for waste characterization/NPDES permitting are placed within sample jars with the proper preservation and sealed. Sample labels are filled out indicating sample location, sample times, depth, project number and sample identification number. Chain of custody are completed indicating the pertinent information and details of sample analysis. Sample jars along with chain of custody are packaged, sealed and shipped to a qualified laboratory for analysis.



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All field sampling activities relative to sample collection, documentation, preparation, labeling, storage, shipment and security, quality assurance and quality control shall be performed in accordance with “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods” (SW-846), Vol. One, Ch. One (Quality Control) and Vol. Two (Field Manual) incorporated by references at Section 740.125. Collection of appropriate amount of QA/QC and Field Blanks in accordance with the “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods” (SW-846), Vol. One, Ch. One (Quality Control) and Vol. Two (Field Manual) incorporated by references at Section 740.125.

#### Response Actions, Removals, and Operations and Maintenance

PE personnel are cross-trained in a minimum AHERA asbestos contractor/supervisor, lead abatement and OSHA 40-hour Hazardous Waste Operations and Emergency Response. Due to the diverse training of the personnel, PE have performed numerous on-site remediation projects including asbestos abatement, lead abatement, hydraulic cylinder removal and contaminated soils removal/coordination.

In addition, PE personnel have responded to numerous emergency responses at the Airport including initial containment of petroleum releases into a creek running underneath the airport runways. These containment/removal actions included skimming petroleum product from the water surface, washing residue petroleum from creek bed and setting up a boom system to catch surface petroleum over an extended period of time. Initial containment and cleanup efforts resulted in a weekly maintenance schedule to check/replace booms as needed to contain surface petroleum products. All waste items were characterized and disposed of in accordance with applicable regulations.

