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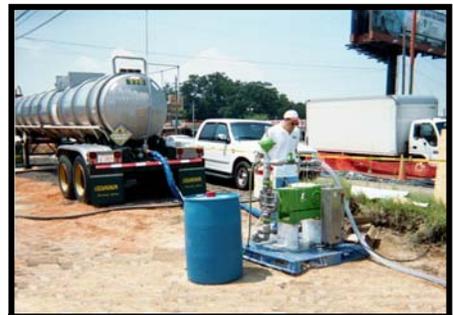
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# STATEMENT OF QUALIFICATIONS

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## *INDOOR AIR QUALITY AND ENVIRONMENTAL COMPLIANCE SERVICES*

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3203 Audley  
Houston, Texas 77098  
[www.mecx.net](http://www.mecx.net)

*Service-Disabled Veteran-Owned*

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## INTRODUCTION



MECX, LP, (MECX) is a technology-based, performance focused, team of solution providers. We are a **service disabled veteran owned business**, which is definitely opening doors within the federal arena. It also means that our company is lead by a veteran “hands on” management team that has “been there and done that” on time, on budget and most important of all, exceeding client expectations every time. We are unique in our history, corporate formation, and client service delivery system.

Through our Technology Alliance Partnership with over a dozen entrepreneurial remediation technology providers plus our “Power of X” strategic alliance partners, we have multiplied our separate unique technology niche capabilities into a full complement of outside the box solutions to our client’s most difficult problems!

MECX welcomes any opportunity to listen to your most difficult problems. Updated information regarding our latest cutting edge technology innovations and hyperlinks to the most current list of Technology Alliance Partners plus our “Power of X” strategic alliance partners can be found on our web site at [www.mecx.net](http://www.mecx.net).

### MECX VISION

To enhance or restore built and natural environments, creating exceptional value for our clients, employees, and families within communities in which we work and live.

### MISSION STATEMENT

MECX is a team of technology-driven, service-oriented professionals with client success central to our total business approach, from project concept through completion. We continually invest in, develop, and empower our results-oriented employees to maximize value by creating innovative solutions that assure project success.

# MEC<sup>X</sup> COMPANY HISTORY

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Our parent company ManTech International Corporation was established in 1968. It became a highly regarded federal contract management and innovative technology provider. For many years we operated as ManTech Environmental Corporation (MEC), a subsidiary and integral part of ManTech International. MEC was created primarily to serve as a vehicle to implement practical innovative remediation technology developed by the USEPA Kerr Research Lab in Ada, Oklahoma.

In 1992, MEC acquired the assets of Biospherics, Incorporated's Environmental and Laboratory Services Division, which provided a wealth of industrial hygiene and indoor air quality expertise and experience, including all areas of lead paint, asbestos, and mold consulting services. In February of 2002, when ManTech International went public, our solution-driven team of dedicated staff members was spun-off to form a new independent entrepreneurial small business (MEC to the "Power of X")

Today, MEC<sup>X</sup> is a service-disabled veteran-owned small business. We believe this means that our company is lead by a veteran "hands on" management team that designs and executes projects on time, on budget, and most important of all, exceeding client expectations every time. We are unique in our history, our path towards corporate formation, and most of all our approach to client service.

## **MEC<sup>X</sup> ENGINEERING SERVICES**

MEC<sup>X</sup> offers consulting, engineering, remediation and scientific services to industrial, commercial and governmental organizations. MEC<sup>X</sup> has successfully and consistently shown its commitment to excellence, responsiveness, safety and delivery of technically sound environmental solutions driven by client needs. Thus, MEC<sup>X</sup> personnel take an active interest in understanding our client's business needs.

## **MEC<sup>X</sup> REMEDIATION CAPABILITIES**

MEC<sup>X</sup> understands that thorough and careful planning and execution is critical to obtaining regulatory closure of contaminated sites. MEC<sup>X</sup> personnel have extensive experience conducting remedial investigations, performing feasibility studies, performing treatability studies/pilot tests, managing remedial design and construction projects, operating and monitoring the progress of remedial systems, negotiating site cleanup objectives and obtaining closure from regulatory agencies. MEC<sup>X</sup> has unique proven expertise in designing, installing and operating innovative remedial approaches to treat soil, sludge, groundwater and wastewater. MEC<sup>X</sup>'s specialties are in innovative oxidation designs, engineered excavations and enhance soil vapor extraction systems.

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# **INDUSTRIAL HYGIENE AND INDOOR AIR QUALITY**

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## **Asbestos Monitoring Services**

Asbestos containing materials (ACMs) were used in hundreds of building and construction materials until the early 1980's when the use of these materials were restricted due to health concerns. When ACMs are left undisturbed, they are relatively harmless. However, when maintenance, renovation, or demolition activities impact these materials, the asbestos fibers can be released to the air where they may cause serious health risks. The US Environmental Protection Agency (EPA), Occupational Safety and Health Administration (OSHA) and most state and local governments have implemented numerous regulations governing asbestos. In addition, building owners and managers have learned that the impacts of ACM are not just health related. These materials can significantly affect the value of the property, the insurability of the property, and ability to sell the property.

MEC<sup>X</sup> provides comprehensive consulting services relating to ACM. MEC<sup>X</sup>'s AHERA - accredited inspectors, management planners, and project designers have experience nationwide performing facility inspections for ACM. In addition to performing comprehensive site investigations, our engineers and industrial hygienists develop specifications for asbestos abatement, develop and implement asbestos operations and maintenance (O&M) programs, estimate costs of abatement options, conduct competitive bidding of abatement projects using qualified contractors, and perform construction management with contractor oversight and air monitoring during abatement.

Our team of professionals include certified industrial hygienists (CIH), certified safety professionals (CSP), scientists and technicians with an average of over 10 years experience in providing creative, cost effective solutions to asbestos problems. Our asbestos specialists maintain current EPA accreditations, are NIOSH 582 certified to perform asbestos analysis by Phase Contrast Microscopy (PCM) and participate in the Proficiency Analysis Testing (PAT) program.

## **Indoor Air Quality**

MEC<sup>X</sup> is an industry leader in monitoring and assessing indoor air quality. Our experienced industrial hygienists, engineers, and technicians, using the latest air sampling equipment, identify and define problems that affect air quality and develop recommendations to correct them. MEC<sup>X</sup> approaches every indoor air quality project by reviewing relevant factors: occupant complaints, ventilation system performance, potential sources of indoor and outdoor contaminants, and observations of air flow and circulation. Based on our observations, an air sampling strategy is designed to collect data that determines the source of the concern which enables us to offer solutions that ensure air quality control.

MEC<sup>X</sup>'s staff has unique expertise in evaluation, prevention, and remediation of microbial air contaminants including mold and mildew problems. Working with our insurance, legal, and real estate clients, MEC<sup>X</sup> is effectively applying our IAQ expertise to minimize the mold and mildew effects in buildings throughout the country. MEC<sup>X</sup> has developed an effective inspection and screening program that identifies the existence, type and source of the mold and mildew found in indoor environments. Once identified, our highly specialized staff designs appropriate remediation and prevention programs to minimize mold's propagation and destructive effects. In addition, MEC<sup>X</sup> provides environmental expert witness services for tenant-landlord and employee-employer litigation.

MEC<sup>X</sup>'s experienced mold professionals have performed over 100 mold investigations, and have designed and supervised mold remediation projects in commercial buildings, multifamily housing units, hotels and office buildings.

## **Lead-Paint Services**

Most buildings and houses constructed prior to 1978 were painted with lead-containing paint. In addition, copper plumbing and fixtures were soldered with lead solder, and lead flashing was used in roofing applications in older buildings. Deterioration of these materials results in lead dust which presents a serious health hazard, particularly to children. The US EPA, OSHA, and most state and local governments have implemented numerous regulations to reduce the risk of lead exposure.

MEC<sup>X</sup> provides a full spectrum of lead related compliance and risk reduction services. Our team of lead experts uses state of the art X-ray fluorescence (XRF) analyzers to perform lead-paint inspections. Our trained and licensed risk assessors perform lead dust wipe sampling, soil sampling, lead in drinking water testing, and prepare risk assessments to document the degree of risk to residential and commercial building occupants.

MEC<sup>X</sup> has extensive experience in designing and implementing lead-risk reduction strategies to cost-effectively ensure compliance with regulations and minimization of lead hazards. These strategies include design of lead abatement project specifications, preparation of lead operations and maintenance (O&M) plans, and providing lead hazard awareness training.

MEC<sup>X</sup>'s trained, licensed and certified professionals provide abatement and mitigation project oversight and air monitoring to ensure the safety of building occupants and workers during lead projects, and provide documentation of compliance with all federal state and local lead regulations. In addition, MEC<sup>X</sup> provides testing and characterization of lead waste and offers waste disposal consultation to advise clients of hazardous waste minimization and alternative disposal methods.

## **Mold and Mildew**

Often times, moisture or flood damage can cause growth of mold and mildew inside of buildings. MEC<sup>X</sup> conducts air sampling to determine whether airborne fungal contaminants are present inside the building. If significant fungal contaminants levels are present, MEC<sup>X</sup>'s industrial hygienists evaluate costs of abatement options, develop specifications for abatement, and help evaluate the qualifications of prospective abatement contractors. MEC<sup>X</sup> also conducts the on-site contractor oversight and air monitoring during the abatement.

MEC<sup>X</sup> typically performs the following tasks during the mold abatement:

- Conducted daily project oversight throughout the work areas;
- Conducted pre, during and post inspections of the negative air containments according to specifications;
- Conducts final clearance sampling according to specifications

# **ENVIRONMENTAL COMPLIANCE AND DUE DILIGENCE**

## **Environmental Compliance**

MEC<sup>x</sup> performs facility compliance assessments for our clients because it is an effective tool for defining responsibilities, developing guidelines and establishing operating standards for the management of hazardous materials and wastes. An effective pollution prevention program also serves as an integral part of our clients' organizational policy because its implementation results in identifying hazards, establishing training programs and providing a means to reduce costs that detract from organizational functions and objectives. There are also potential health and safety considerations, namely the potential for exposure of personnel to hazardous materials that could result in lost time due to illness or injury. Ultimately, minimization or possible elimination, of hazardous materials and wastes leads to a more safe, productive and efficient work place for client personnel.

The pollution prevention process involves establishing a baseline inventory to identify the waste streams generated and the hazardous material usage at all locations at the client facility, and to determine the source (location or process) from which each waste stream originates. Major sources of each waste type are identified which, in turn, allows for a more narrow focus on the larger waste streams, sources of waste and waste generators. Based on the results of a waste audit, MEC<sup>x</sup> identifies pollution prevention alternatives for each major waste stream and for the waste management practices at client facilities. This is accomplished through the identification of technological, operational and managerial pollution prevention alternatives. Pollution prevention alternatives that pass preliminary screening are evaluated further for both their technical and economic feasibility. We also consider the potential for improvements in working conditions and worker safety during screening of pollution prevention alternatives, and our economic analysis involves comparing potential reductions in treatment and disposal costs with the estimated costs of implementing the recommended change in the operation or activity that produced the waste.

## **Spill Prevention, Control, and Countermeasures (SPCC) Plans**

MEC<sup>x</sup> prepares SPCC plans in accordance with Part 112 (Oil Pollution Prevention) Title 40, of the Code of Federal Regulations (40 CFR) for various manufacturing facilities. The SPCC Plans are amended whenever there is a change in facility design, construction, operation or maintenance which materially affects the potential for discharge of oil into or upon the navigable waters of the U.S. or adjoining shorelines. Facilities are subject to SPCC regulations if the total aboveground aggregate oil storage capacity exceeds 1,320 gallons, and due to its location, the facility could reasonably be expected to discharge oil of quantities that may be harmful into or upon the navigable waters of the United States, adjoining shorelines or affect certain natural resources.

SPCC Plans consist of the following elements and/or tasks:

- A site inspection by a Licensed Professional Engineer and interview key site personnel. The interviews are intended to identify past and current operating practices at the site.
- Obtain a listing of Emergency Contacts for the facility, including name, title, phone number (work), phone number (cell or home), Emergency Response Contractor, and all appropriate agency contacts in the event of a release.
- Identify discharge prevention measures, including truck or rail loading/unloading, spill cleanup kits, and personnel protective equipment.
- Identify drainage controls and diversion measures to be utilized and predict potential discharge direction, volumes, and rates in the event of a release.
- Identify countermeasures, including administrative controls, leak detection monitoring,

and emergency shut-off valves.

- Identify proper disposal of recovered materials.
- Identify discharge reporting information and procedures.
- Identify routine inspection scope, frequency, and record-keeping procedures.
- Identify personnel training procedures, frequency, and record keeping procedures.
- Identify security provisions and issues at the site.
- Determine conformance with State regulations.
- Take photographs of the facility and spill prevention equipment used at the site and include them in the SPCC Plan report.

### **Storm Water Pollution Prevention Plans (SWPPP)**

MEC<sup>X</sup> prepares SWPPPs to fulfill Federal NPDES requirements. The SWPPP must be revised whenever there is a change in design, construction, operation, or maintenance that has a significant effect on the potential for the discharge of pollutants or if the SWPPP proves to be ineffective in eliminating or minimizing pollutants from sources identified in the SWPPP. The SWPPP is prepared in accordance with the current storm water permit requirements of the U.S. Environmental Protection Agency under the Clean Water Act and (if applicable) Caltran's General NPDES Permit for construction activities. The SWPPP will consist of the following elements:

- A site inspection will be conducted to interview key site personnel. The interviews are intended to identify specific construction activities and locations at the site.
- Prepare a listing of contacts for the facility, including name, title, phone numbers, and all appropriate agency contacts.
- Identify drainage controls and diversion measures to be required and predict potential discharge directions, volumes, erosion potential, and sedimentation rates in the event of a storm.
- Identify Best Management Practices (BMPs) for any mobile operations and stationary construction operations such as asphalt recycling, concrete mixing, crushing, and storage of materials.
- Identify routine inspection scope, frequency, and record-keeping procedures.
- Identify personnel training procedures, frequency, and record-keeping procedures.
- The Final SWPPP report will be prepared under the direction of and stamped by a California licensed Professional Engineer.

### **Due Diligence Services**

MEC<sup>X</sup> provides a full range of environmental due diligence services (Phase I and Phase II ESAs) for our clients, which include corporations, law firms, lending institutions, insurance companies, industrial facilities and governmental entities. Our services range from conducting due diligence assessments in conjunction with mergers, acquisitions, divestitures and other business transactions to acting as an overall program manager for comprehensive compliance audits of multiple commercial or industrial facilities.

Our scientists and engineers have performed environmental due diligence assessments at a variety of sites ranging from undeveloped properties to complex industrial facilities. We understand the need for fast turnaround, and rapid selection and assignment of appropriate teams of technical experts to address each client's specific environmental requirements. MEC<sup>X</sup> has seasoned

professionals with expertise in performing environmental compliance audits for companies in highly regulated industry segments. We provide independent, objective and comprehensive audits to verify that corporate procedures are being implemented, regulations are being complied with and the correct priorities for improvement are being identified.

MEC<sup>X</sup> conducts all work in accordance with the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (E1527). Additional services that can be provided with the Environmental Site Assessments are:

- **Perchlorate Research** – review records for the Site to determine the potential for the Site to have been affected by perchlorate contamination from on- or off-site facilities;
- **Asbestos Survey** – conduct a comprehensive or limited asbestos survey using AHERA Protocols;
- **Lead in Drinking Water** – collect water samples for total lead analysis per the Safe Drinking Water Act, Lead and Copper Rule.
- **Radon** – conduct radon surveys using short-term and/or long-term activated-charcoal screen kits;
- **Mold Inspection** – conduct visual inspections to determine if a water intrusion problem currently exists or if a situation exists which could lead to future water intrusion issues;
- **Lead-Based Paint Survey** - conduct lead-based-paint inspections of facilities using XRF, wipes and bulk sampling techniques to assess painted building materials;
- **Property Condition Assessment** – conduct visual inspections of the existing physical condition of all facility systems including, architectural, structural, mechanical, electrical and civil; and
- **Insurance Vehicles** - implement insurance vehicles to help mitigate risks identified during Environmental Site Assessments.

### **Site Investigations**

MEC<sup>X</sup> provides site investigation and closure services to corporations, law firms, lending institutions, industrial facilities and governmental entities.

MEC<sup>X</sup> personnel have expertise in regulatory driven site cleanups/closures for hazardous waste sites, industrial waste sites and petroleum storage tank sites. MEC<sup>X</sup> has vast experience in application of Resource Conservation and Recovery Act (RCRA) regulations, Texas Commission on Environmental Quality (TCEQ) Risk Reduction Rules (RRR), TCEQ's Petroleum Storage Tank Division Closure Guidance Documents, TCEQ's Texas Risk Reduction Program (TRRP) and Innocent Owner Program (IOP). MEC<sup>X</sup> has applied these regulations within the TCEQ's Voluntary Cleanup Program (VCP), Industrial and Hazardous Waste Program (IHWP) and Petroleum Storage Tank (PST) Division.

Our technical depth enables us to optimize site investigation services to meet client financial and transactional needs and regulatory-driven requirements. Many of these projects have focused on obtaining data for evaluating property transfers, identifying contaminant source areas, developing remedial action plans and obtaining site closure. MEC<sup>X</sup> provides and combines the following site characterization services to ensure the project-specific goals are achieved:

- Developing work plans;
- Utilizing intrusive (i.e., conventional rotary drilling, Direct-push technology) assessment techniques;
- Employing non-intrusive Membrane Interface Probe System<sup>®</sup> and geophysical assessment techniques;
- Modeling contaminant source, fate and transport;
- Reviewing, validating and managing data;
- Identifying and evaluating site remediation alternatives; and,
- Negotiating with environmental regulatory agencies.

**ATTACHMENT A**  
**PROJECT DESCRIPTIONS**

**ENVIRONMENTAL COMPLIANCE AUDITING SERVICES  
U.S. VETERANS ADMINISTRATION  
HOSPITAL AND MEDICAL FACILITIES  
MULTIPLE LOCATIONS, SOUTH AND MIDWEST U.S.**



MEC<sup>x</sup>, LP (MEC<sup>x</sup>) has performed over 25 environmental compliance audits at U.S. Veterans Administration (VA) medical facilities across the southern and midwestern U.S. MEC<sup>x</sup> provided teams of professional environmental compliance auditors to provide 3<sup>rd</sup> party auditing of VA hospital facilities as part of the VA's GEMS program. MEC<sup>x</sup> provided these services for ten VA hospitals in Kansas and Missouri (VISN 15) and another fifteen facilities in Texas, Florida, Mississippi, Louisiana, Arkansas, and Oklahoma (VISN 16). Mr. Bruce Oliver (MEC<sup>x</sup> Vice President) served as the project manager for the MEC<sup>x</sup> team. The audits included air programs, water programs, pesticide programs, solid and hazardous wastes, hazardous substances and chemicals, environmental response, emergency planning and community Right-to-Know programs, HazMat Transportation, and toxic substances.

All audit findings, root causes and recommendations for the VHA facilities were documented using the VHA audit webware CPTrack (Compliance and Processes Tracking). Compliance audits followed the audit methodology guidance found in ISO 19011, Guidelines for Quality and Environmental Management Systems Auditing. Additionally, audits were based on the U.S. TEAM Guide and its State Supplements as produced by the Engineering Research and Development Center (ERDC), Construction Engineering Research Laboratory (CERL) of the Army Corp of Engineers.

## **ENVIRONMENTAL COMPLIANCE AND REMEDIATION SERVICES UNITED STATES GYPSUM COMPANY**



MEC<sup>X</sup> is providing environmental consulting and remediation services to the United States Gypsum Company at their La Mirada, California facility. In March 2005, after seven years of operation of a combined SVE and pump and treat system, MEC<sup>X</sup> was retained to expedite final closure of the site. MEC<sup>X</sup> is implementing two in-situ chemical oxidation (ISCO) treatment technologies to clean up separate groundwater plumes beneath the site. To expedite closure of the Site, MEC<sup>X</sup> has (or will be) performed the following tasks:

- Renewal of the existing National Pollutant Discharge Elimination System (NPDES) Permit to allow for continued short-term operation of the pump and treatment system (completed)
- Sampling of “confirmation soil borings” to confirm

whether sufficient removal of VOCs has been attained by operation of the SVE system. Vapor intrusion modeling and a Health Risk Assessment is being performed to determine whether some limited contaminated soil can be safely left in-place (partially completed).

- Obtaining an Encroachment Permit from Los Angeles County to allow for installation of application wells in the street (completed).
- Prepare ISCO design specifications and submit a Work Plan to the LARWQCB for ISCO treatment of the two groundwater plumes (completed). The ISCO Work Plan was approved by the LARWQCB in October 2005 and implementation of the ISCO field work is scheduled for January 2006. The approval by the LARWQCB constitutes the 4<sup>th</sup> and 5<sup>th</sup> MEC<sup>X</sup> ISCO project that has been approved by this agency (three ISCO projects have already been completed).
- Implement ISCO treatment of the benzene plume using catalyzed hydrogen peroxide and activated sodium persulfate (scheduled for January 2006)
- Implement ISCO treatment of the TCE plume using potassium permanganate (scheduled for March 2006). A Pilot Test treatment using potassium permanganate has previously been performed at the site and shown to be highly successful.
- Post treatment groundwater monitoring and sampling for six months
- Negotiation of site closure with Los Angeles Regional Water Quality Control Board
- Abandonment of over 90 SVE, groundwater extraction, monitoring wells, and application (injection) wells located at the site and decommissioning of SVE and pump and treat system and equipment.

## **DUE DILIGENCE AND ENVIRONMENTAL COMPLIANCE SERVICES UBS REALTY INVESTORS**

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MEC<sup>X</sup>, LP (MEC<sup>X</sup>) has performed over 400 Phase I ESAs Phase II investigations, Indoor Air Quality Assessments, and Property Condition Assessments (PCAs) for UBS Realty Investors across the U.S. over the past 9 years. Many of the properties that MEC<sup>X</sup> has investigated have been multi-tenant properties, such as shopping centers, large industrial complexes, and commercial

buildings which have required extensive investigation into historic usage of the property.

MEC<sup>X</sup> provides UBS Realty with a wide variety of environmental services to support UBS Realty's Environmental Risk Management Program. UBS Realty is responsible for real estate investments for numerous pension funds, which require an Environmental Risk Management Program for all of the commercial and residential properties in which they have an interest. MEC<sup>X</sup> provides all levels of environmental support to UBS Realty in acquiring, divesting, and operating their business property holdings. MEC<sup>X</sup> identifies and manages UBS Realty's environmental liabilities on existing properties owned by UBS Realty's clients and on potential acquisitions by performing due diligence activities. MEC<sup>X</sup> staff helped UBS Realty develop and standardize their Environmental Risk Protocols for the following areas:

- **Asbestos**
- **Radon**
- **Lead Paint**
- **Lead in Drinking Water**
- **Phase I ESAs**
- **Mold**
- **Hazardous Waste**



MEC<sup>X</sup> provides structural evaluations and inspections that include identifying and sampling for asbestos-containing materials, lead paint, and mold contamination. In addition to these business risk issues, environmental liabilities associated with the properties owned by UBS Realty clients may include hazardous waste sites resulting from historic land use including dry cleaning operations and petroleum releases from underground storage tanks. In addition, MEC<sup>X</sup> provides all of the consulting services required to achieve closure for identified soil and/or groundwater contamination problems including on-site compliance and operational

inspections, site-specific work plan development, site characterization, regulatory reporting, remedial feasibility evaluations, and full-scale design of remedial systems. MEC<sup>X</sup> designed and implemented, via design/build methods, the following remediation technologies at UBS Realty's properties: in-situ chemical oxidation, soil vapor extraction, and excavation. MEC<sup>X</sup> prepares asbestos, lead paint, and mold specifications for contractors to perform abatement, and Operation and Maintenance (O&M) plans to manage materials in place and/or prevent indoor air quality issues.

## ***DUE DILIGENCE AND ENVIRONMENTAL COMPLIANCE SABRE REALTY MANAGEMENT***



MEC<sup>X</sup> has partnered with Sabre Realty Management (Sabre) as their sole environmental consultant since 1996 to provide a wide variety of environmental services to support Sabre's business operations as a property owner and manager of numerous active shopping centers. MEC<sup>X</sup> provides all levels of environmental

support to Sabre for identifying, remediating, and getting regulatory closure for their business property holdings. MEC<sup>X</sup> identifies and manages Sabre's environmental liabilities by performing due diligence activities and compliance evaluations/inspections. MEC<sup>X</sup> protocols are more comprehensive than recommended by ASTM standards ensuring that potential areas of environmental concern and environmental liabilities are identified.

MEC<sup>X</sup> staff helped Sabre Realty develop and standardize their Environmental Risk Protocols for the following areas:

- **Asbestos**
- **Radon**
- **Lead Paint**
- **Lead in Drinking Water**
- **Phase I ESAs**
- **Mold**
- **Hazardous Waste**



Environmental liabilities associated with the Sabre-owned properties typically include hazardous waste sites resulting from dry cleaning operations, petroleum releases resulting from underground storage tank sites, the presence of asbestos-containing materials, and mold contamination. Prior to performing remodeling on Sabre properties, MEC<sup>X</sup> performs asbestos surveys and, if necessary, prepares abatement specifications. After Sabre selects an abatement contractor, MEC<sup>X</sup> performs on-site air monitoring to ensure containment is effective. After the abatement is complete, MEC<sup>X</sup> collects clearance samples and prepares the

necessary abatement report.

As part of Sabre's Risk Management Program, MEC<sup>X</sup> developed guidelines for Sabre to pre-screen potential dry cleaning tenants prior to committing to leases. The guidelines included the evaluation of various types of solvents to avoid the introduction of hazardous materials within newly leased spaces. For sites where soil and/or groundwater contamination is suspected, MEC<sup>X</sup> performs on-site compliance and operational inspections to identify likely sources of contamination. Subsequently, MEC<sup>X</sup> develops a site-specific work plan to perform invasive site characterization activities. MEC<sup>X</sup> then selects appropriate laboratory analyses to comply with regulatory requirements. MEC<sup>X</sup> thoroughly evaluates the results of the site characterization activities and performs all necessary regulatory reporting. When remediation is necessary, MEC<sup>X</sup> performs remedial feasibility evaluations and full-scale design of remedial systems for Sabre's impaired properties. MEC<sup>X</sup> has designed and implemented, via design/build methods, remedial approaches for many of Sabre's sites.

## **ASBESTOS AIR MONITORING SERVICES OFFICE BUILDING DALLAS, TEXAS**

MEC<sup>x</sup>, LP (MEC<sup>x</sup>) performed comprehensive consulting services relating to asbestos-containing materials (ACM) at a 230,000 ft<sup>2</sup> office building complex in Dallas, Texas. During the comprehensive site inspection for ACM, thermal system insulation (TSI) and floor tiles were identified throughout the hallways of the building. The building owner determined that the HVAC system needed to be replaced but the building had to remain fully functional, including no loss of the HVAC system during working hours.

MEC<sup>x</sup> worked closely with a construction manager and developed a plan to completely replace the HVAC system of the building complex during a 9 month period with the HVAC system out-of-operation only on the weekends. The asbestos abatement portions of this project were closely coordinated with the other contractors on the project and conducted on a nightly basis along side the renovation activities. MEC<sup>x</sup>'s industrial hygienists developed specifications for asbestos abatement, estimated costs of abatement options and conducted competitive bidding of the abatement project using qualified contractors. MEC<sup>x</sup> also conducted the on-site project management with contractor oversight and air monitoring during the abatement throughout the hallways of the building. After all abatement was completed, MEC<sup>x</sup> developed and implemented an asbestos operations and maintenance (O&M) program to manage the remaining ACM.



MEC<sup>x</sup> performed the following tasks during the abatement:

- Conducted daily air monitoring through out the work areas;
- Conducted on-site phase contrast microscopy (PCM) analysis of daily air samples;
- Conducted pre, during and post inspections of the negative air containments according to TDH regulations;
- Conducted final clearance PCM sampling according to TDH regulations;
- Conducted personal air sampling on the asbestos-trained workers performing the removal;

MEC<sup>x</sup> performed these services for the facility to ensure that the exposure of asbestos for asbestos workers, other contractors and building tenants was below the TDH, EPA and OSHA regulations.

**INDOOR AIR QUALITY  
SERVICES  
PROJECT OVERSIGHT  
DURING HVAC RENOVATIONS  
APARTMENT COMPLEX  
AUSTIN, TEXAS**

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MEC<sup>x</sup>, LP (MEC<sup>x</sup>) performed indoor air quality (IAQ) consulting services and project oversight during HVAC renovations of an apartment complex in Austin, Texas. Numerous tenant complaints led to a thorough IAQ investigation which determined that the fan coil units of the HVAC system were improperly insulated and

poorly installed. MEC<sup>x</sup> discovered that air was leaking from the poorly sealed junction between the fan coils and the supply air mixing box. This conditioned air was blowing directly onto the drywall the fan coil unit was attached to and causing condensation which led to mold growth. The resulting mold spores were then being drawn into the fan coil units and distributed throughout the vents and into the apartment units. MEC<sup>x</sup>'s industrial hygienists developed specifications for abatement, evaluated costs of abatement options and the qualifications of prospective contractors. MEC<sup>x</sup> also conducted the on-site project management with contractor oversight and air monitoring during the abatement.

MEC<sup>x</sup> worked closely with a construction manager and developed a plan to completely dismantle, clean, reinsulate and reinstall the fan coil units with minimal disruption to the tenants. Various degrees of mold abatement were also conducted on the ductwork and affected drywall materials. The abatement portions of this project were closely coordinated with the other contractors on the project and conducted alongside the HVAC renovation activities.

MEC<sup>x</sup> performed the following tasks during the abatement:

- Conducted daily project oversight throughout the work areas;
- Conducted pre, during and post inspections of the negative air containments according to specifications;
- Conducted final clearance sampling according to specifications;

MEC<sup>x</sup> performed these services for the facility to ensure that the exposure of mold for workers, other contractors and tenants was below outside levels.



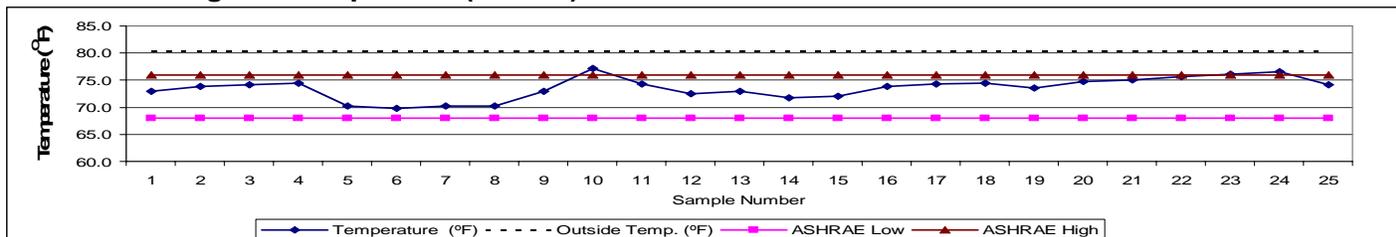
## INDOOR AIR & WATER QUALITY ASSESSMENT ANNUAL INDOOR ASSESSMENTS 150 BANKING FACILITIES SOUTHERN U.S.



MEC<sup>x</sup>, LP (MEC<sup>x</sup>) performed indoor air and water quality consulting services during annual assessments of 150 banking facilities throughout the southern United States. Information concerning the facilities was acquired through samples collected, the visual inspection of the HVAC system, and review of laboratory results.

To determine the quality of indoor air at the Site, various locations were selected from the occupied areas inside of the building for air testing. One additional outdoor air sample location also was chosen so that exterior air concentrations could be compared to interior air concentrations. Air samples were measured with handheld direct measuring devices and sampled for:

- carbon dioxide (CO<sub>2</sub>);
- carbon monoxide (CO);
- temperature;
- relative humidity;
- airborne particulates;
- total volatile organic compounds (TVOCs)



To determine the quality of water at the Site with respect to inorganic chemicals and biological contaminants, water samples were collected from a domestic drinking water source and from a domestic hot water source. Drinking water samples were collected from a tap most likely to be used by persons in the building and analyzed for:

- pH;
- copper (Cu);
- lead (Pb);
- cadmium (Cd);
- iron (Fe);
- total coliform;
- fecal coliform (including *Escherichia coli* (*E. coli*) bacteria).

Domestic hot water samples were collected from a tap closest to the hot water heater and analyzed for *Legionella pneumophila* (*L. pneumophila*) bacteria. Water samples were also collected from the cooling towers and analyzed for *Legionella* bacteria.

To determine the condition and operation of the HVAC system, a visual inspection was conducted of readily accessible areas throughout the interior of the building and on the roof, along with interviews with the building engineer. The inspection consisted of observing all mechanical equipment areas (central rooms or roof mounted units) and the associated fan systems servicing the area tested. Visual observations were made for at least two of the units and associated air distribution systems as well as filters, condensate drip pans, heating and cooling coils, and outside air intakes for normal operation and maintenance practices.

## **INDOOR AIR QUALITY SERVICES OFFICE BUILDING HOUSTON, TEXAS**

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Abatement Area

MEC<sup>x</sup>, LP (MEC<sup>x</sup>) performed an indoor air quality (IAQ) assessment of a large multi-story office building in Houston, Texas which was flooded in June 2000 from tropical storm Allison. During a thorough IAQ investigation, MEC<sup>x</sup> determined that the flood damage had affected drywall walls located behind a granite façade in the main lobby and determined that elevated levels of airborne fungal contaminants were present inside the walls of the building. The

building owner determined that the granite façade needed to be removed, but could not be replaced and had to be cleaned and reused. Additionally, the building had to remain fully functional, including constructing a barrier around the work area and no construction during working hours.

MEC<sup>x</sup> worked closely with a construction manager and developed a plan to completely dismantle and reuse the granite façade and replace the affected drywall with all work being conducted on the weekends. The abatement portions of this project were closely coordinated with the other contractors on the project and conducted alongside the renovation activities. MEC<sup>x</sup>'s industrial hygienists developed specifications for abatement, estimated costs of abatement options and conducted competitive bidding of the abatement project using qualified contractors. MEC<sup>x</sup> also conducted the on-site project management with contractor oversight and air monitoring during the abatement.

MEC<sup>x</sup> performed the following tasks during the abatement:

- Conducted daily air monitoring through out the work areas;
- Conducted pre, during and post inspections of the negative air containments according to specifications;
- Conducted final clearance spore trap sampling according to specifications;

MEC<sup>x</sup> performed these services for the facility to ensure that the exposure of mold for workers, other contractors and building tenants was below outside levels.



Cleaning of Granite Façade Inside