

Quality Assurance Project Plan
For Asbestos Abatement from
Air Force Plant 3 Building 7
Tulsa, Tulsa County, Oklahoma



Date:

February 6, 2025

Prepared By:

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for City of Tulsa
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1.0 PROJECT TITLE AND QAPP APPROVAL

This Quality Assurance Project Plan (QAPP) will be reviewed and approved by the Oklahoma Department of Environmental Quality's (DEQ's) Quality Assurance Officer, QA Coordinator, RLF Project Manager, EPA Project Officer, City of Tulsa's Consultant's Project Manager, and Consultant's Project Quality Assurance Manager prior to implementation and commencement of project activities.

Project Title	Asbestos Abatement at Air Force Plant 3 Building 7 located at the Tulsa International Airport, City of Tulsa, Tulsa County, Oklahoma	
Implementing Org.	City of Tulsa	
QAPP Effective Date:	February 6, 2025	
Approving Officials:	The City of Tulsa's Quality Assurance Manager at PartnerTulsa will have primary responsibility for project oversight and quality assurance on behalf of the City of Tulsa. DEQ's QA Officer and QA Coordinator will ensure that the QAPP is written in accordance with the EPA QAPP Standard. DEQ's RLF Project Manager will submit the QAPP to the EPA Project Officer for review and approval. The USEPA's Project Officer will ensure that the policies, goals, and objectives of the agency are met in accordance with the QAPP.	
Michelle Barnett	<i>Michelle Barnett</i>	February 6, 2025
City of Tulsa's Quality Assurance Manager	Signature	Date
Camisha Scott	<i>Camisha Scott</i>	2/24/25
USEPA's Project Officer	Signature	Date
Kasie Stambaugh	<i>Kasie Stambaugh</i>	02/14/2025
DEQ RLF Project Manager	Signature	Date
Michael Lea	<i>Michael Lea</i>	2/13/25
DEQ QA Coordinator	Signature	Date
Heather Mallory	<i>Heather Mallory</i>	2/13/25
DEQ Quality Assurance Manager	Signature	Date

2.0 QAPP DISTRIBUTION AND PROJECT ORGANIZATION

Any individual or organization participating in this project may request a copy of this QAPP. All individuals listed in Section 1.0 of this QAPP will receive a final copy of this QAPP and comprise the project organization and distribution list, as listed below:

Name	Title	Company/Agency/Entity	Project Role
Kasie Stambaugh	RLF Project Manager	DEQ	Project Manager
Heather Mallory	Quality Assurance Mngr	DEQ	Quality Assurance Mngr.
Michael Lea	DEQ QA Coordinator	DEQ	QA Coordinator in Land Protection Division
Michelle Barnett	SVP of Economic and Workforce Development	PartnerTulsa	Quality Assurance Manager at PartnerTulsa
Nia James	Real Estate Director	PartnerTulsa	Project Manager at PartnerTulsa
Camisha Scott	EPA Project Officer	US EPA	USEPA's Project Officer
Bernita Hart	ODOL Director Asbestos	ODOL	ODOL Director Asbestos
Contractor	QA Manager Project Manager	Contractor	QA Manager Project Manager

It shall be the responsibility of the the PartnerTulsa Quality Assurance Manager to distribute the QAPP to the required Project Managers, Quality Assurance Managers, and any other representatives of their groups involved in the project.

3.0 INTRODUCTION

This QAPP has been prepared to document quality assurance and quality control procedures to be implemented for Asbestos Abatement at the Former Air Force Plant 3, Building 7 located at the Tulsa International Airport, City of Tulsa, Tulsa County, Oklahoma, henceforth referenced as the Site. [Appendix A \(Project Figures\) contains a Site Map \(Figure 1\).](#)

This QAPP has been developed by PartnerTulsa in accordance with applicable USEPA protocols outlined in the USEPA's Requirements for Quality Assurance Project Plans, USEPA QA/R-5 (EPA, 2001), and USEPA Guidance for Quality Assurance Project Plans (EPA QA/G-5) (EPA, 2002).

The Asbestos Abatement Project Design has been prepared in accordance with the specific governing including but not limited to: 29 Code of Federal Regulations (CFR) 1926.1101 (OSHA Construction Industry Asbestos Standard), 29 CFR 1910.134 (OSHA Respiratory Protection), 40 CFR 61, Subpart M (Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP), and Oklahoma Asbestos Control Act (OAC) 380:50 with approved variances.

4.0 OTHER PROJECT PLANS

This QAPP incorporates the Project Plan in Appendix B as well as the DEQ's Quality Management Plan approved by EPA on December 20, 2023 and assigned QTRAK 24-079. DEQ updates it's QMP annually.

5.0 AMENDMENTS

All amendments to this QAPP and/or associated other plans (PD) will be reviewed/approved prior to implementation by the individuals identified in Section 1.0 of this QAPP. [Appendix C contains a QAPP Amendment Log Form to be completed for all such amendments. Completed Amendment Log Forms will also be kept in Appendix C or the appropriate appendix of the other associated plans, as appropriate.](#)

6.0 PROBLEM DEFINITION AND BACKGROUND

Air Force Plant 3 (AFP3) Building 7 is a 29,750 square foot building location within the AFP3 complex which is located east of the Tulsa International Airport, a total of ninety-two (92) buildings, of these four (4) are electrical power stations.

The AFP3 facility Building 7 was constructed in early 1942 to serve as a boiler house, which contained boilers and chillers for the AFP3 facilities. During the late 1990's, McDonnell Douglas – Tulsa (The Boeing Company) occupied some of the buildings, but the majority remained vacant. The facility was eventually deeded to the City of Tulsa. In 1998, McDonnell-Douglas retained A & M Engineering and Environmental Services to conduct asbestos surveys of the facility. The surveys were initiated in late 1998 and a report finalized in March 1999.

The City of Tulsa is the recipient of a subgrant from the DEQ's Brownfields Revolving Loan Fund (BRLF) Program as well as an EPA Cleanup Grant. The funding for the subgrant originates from a BRLF Infrastructure grant from EPA and the Cleanup Grant is also from EPA. These funds will be used to abate asbestos containing materials (ACM) in AFP3 Building 7, for any confirmation sampling in support of the abatement, third-party air monitoring during the abatement, and for writing supporting documents for the project (i.e., Community Relations Plan, Analysis of Brownfields Cleanup Alternatives, and Quality Assurance Project Plan). If an Asbestos Project Design is written it may be paid for with separate funding. The Oklahoma Department of Labor oversees asbestos licensing and abatements in Oklahoma. They will ensure that the asbestos abatement meets the standards set forth in the Oklahoma Asbestos Control Act 40 O.S. § 450, *et seq.* and Abatement of Friable Asbestos Materials Rules OAC 380:50.

7.0 PROJECT MANAGEMENT

Project management includes the elements and personnel in place to ensure that the project has defined goals that are understood by all participants and achieved with implementation of the designed approach. Project Managers ensure that project planning, implementation, Quality Assurance/Quality Control (QA/QC), and reporting are properly documented.

7.1 PROJECT/TASK ORGANIZATION

The individuals and organizations participating in this project along with their specific roles and responsibilities are categorized by Principal Data Users, Quality Assurance Managers, Contractors, Subcontractors, and Key Decision Makers as described below and on the following pages.

Principal Data Users

Those principal persons/representatives, companies, agencies, and/or entities that will represent principal users of the data generated during the course of this project are identified below along with their contact information:

DEQ Quality Assurance Manager	
Name:	Kasie Stambaugh
Title:	RLF Project Manager
Company/Agency/Entity:	DEQ
Mailing Address:	707 N. Robinson Ave, Oklahoma City, OK 73101
Email Address:	Kasie.stambaugh@deq.ok.gov
Phone:	(405) 702-5164
City of Tulsa's Quality Assurance Manager	
Name:	Michelle Barnett, P.E.
Title:	SVP of Economic and Workforce Development
Company/Agency/Entity:	PartnerTulsa for the City of Tulsa
Mailing Address:	175 East 2nd Street, Suite 15-041, Tulsa, Oklahoma 74103
Email Address:	mbarnett@cityoftulsa.org
Phone:	(918) 805-0292
USEPA's Project Officer	
Name:	Camisha Scott
Title:	EPA Project Officer
Company/Agency/Entity:	US Environmental Protection Agency
Mailing Address:	1201 Elm Street, Dallas, TX 75272
Email Address:	Scott.camisha@epa.gov
Phone:	(214) 665-6755
DOL Director - Asbestos	
Name:	Bernita Hart
Title:	Director – Asbestos/Alarm Locksmiths and Fire Sprinkler
Company/Agency/Entity:	Oklahoma Department of Labor
Mailing Address:	409 NE 28 th Street, 3 rd Floor; Oklahoma City, OK 73105
Email Address:	Bernita.Hart@labor.ok.gov
Phone:	(405) 521-6467
Asbestos Abatement Contractor's Project and Quality Assurance Manager	
Name:	Steven Fulps
Title:	President
Company/Agency/Entity:	Abatement Systems Inc.
Mailing Address:	P.O. Box 773, Broken Arrow, OK 74013
Email Address:	abatement2@aol.com
Phone:	(918) 251-2504

Quality Assurance Managers

City of Tulsa's Quality Assurance Manager

The City of Tulsa's Quality Assurance Manager for this project will have primary responsibility for project oversight and quality assurance on behalf of the City of Tulsa.

Their project management responsibilities include the following:

- Overall contracting and management of the grant (as applicable) and project performance.
- Development of the QAPP and other associated project plans.
- Shared responsibility of review of project plans.
- Contractor oversight including review, evaluation and decision-making regarding the contractor's recommendations.
- Impose stop work authority, whenever necessary.

Their quality assurance responsibilities include QA/QC oversight comprised of the following:

- Technical assistance to ensure environmental compliance.
- Shared responsibility for review of the QAPP and other associated project plans including subsequent revisions.
- Maintaining the official/approved QAPP and ensuring that all involved parties have the most recent version of the QAPP and receive all amendments.
- Serve as the official QA/QC contact for all intramural and extramural QA/QC activities for the City of Tulsa.
- Report directly, as a partner, to the City of Tulsa regarding all QA/QC matters.
- Review and concur with the QAPP.
- Work with the City of Tulsa personnel to take appropriate corrective action when, where, and however needed, during the proposed project activities.
- Assure that all secondary environmental data review activities are accomplished in strict compliance with QAPP requirements.
- Impose stop work authority, whenever necessary.

DEQ QA Officer

The responsibilities of the DEQ QA Officer are as follows:

- Oversees all QA activities at DEQ
- Review and approves the QAPP on behalf of DEQ
- Documents any QA issues that arise
- Works with RLF Project Manager to determine if QA issues should be reported to EPA.

DEQ QA Coordinator

The responsibilities of the DEQ QA Coordinator are as follows:

- Reviews and approves the QAPP
- Reports any QA issues to the DEQ QA Officer

USEPA's Project Officer

The USEPA's Project Officer will ensure that the policies, goals, and objectives of the project are achieved on behalf of the USEPA and implement the following:

- Assist the DEQ's RLF Project Manager and QA/QC staff.
- Shared responsibility for review/approval of the QAPP and other associated project plans including subsequent revisions.
- Provide overall resources to accomplish the implementation of the associated program.
- Routinely evaluate the relevant program's effectiveness.
- Impose stop work authority, whenever necessary.

When necessary, the DEQ Project Manager, City of Tulsa's Quality Assurance Manager and/or USEPA's Project Officer will coordinate with all appropriate State Agencies in a manner that ensures that compliance with all applicable State regulatory requirements are achieved. These agencies may include the Oklahoma Department of Environmental Quality (ODEQ), Oklahoma Department of Labor (ODOL), and/or others, as appropriate.

ODOL Director - Asbestos

The ODOL Director - Asbestos will ensure that the policies, goals, and objectives of the project are achieved on behalf of the ODOL and implement the following:

- Review and Approve the Project Design.
- Shared responsibility for review/approval of the QAPP and other associated project plans.
- Provide required regulatory inspections during the course of the project.
- Impose stop work authority, whenever necessary.
- Stop work authority is imposed, whenever necessary.

Asbestos Abatement Contractor

Asbestos Abatement Contractor's Project and Quality Assurance Manager

The Asbestos Abatement Contractor's Project and Quality Assurance Manager will work closely with the Contractor's Project Manager and Project Quality Assurance Manager to ensure that all their work plans, safety plans, and QA/QC procedures have been properly reviewed and approved prior to implementation. This close communication will also function to ensure proper implementation of the QAPP and other associated project plans as work is carried out. The Asbestos Abatement Contractor's Project and Quality Assurance Manager also has stop work authority.

Project organization has been established in order to demonstrate overall key personnel associated with this project and provide functional overview of the team that will be used to complete the scope of work, along with lines of authority. [Appendix D contains a Project Organizational Chart.](#)

Key Decision Makers

The key decision makers for this project include the following individuals representing the identified companies/agencies/entities:

DEQ Quality Assurance Manager	
Name:	Kasie Stambaugh
Title:	RLF Project Manager
Company/Agency/Entity:	DEQ
City of Tulsa's Quality Assurance Manager	
Name:	Michelle Barnett, P.E.
Title:	Deputy Chief of Economic Development
Company/Agency/Entity:	City of Tulsa
USEPA's Project Officer	
Name:	Camisha Scott
Title:	EPA Project Officer
Company/Agency/Entity:	US EPA
ODOL Director Asbestos	
Name:	Bernita Hart
Title:	Director – Asbestos/Alarm Locksmiths and Fire Sprinkler
Company/Agency/Entity:	Oklahoma department of Labor

7.2 PROJECT MEETINGS

Regularly scheduled teleconference meetings are planned for this project in order to ensure understanding and proper/safe implementation including a Pre-Work Meeting and Weekly Progress Meetings. Additionally, Called Meetings may be held (as necessary). A Project Close-Out Meeting will be held upon project completion.

Pre-Work Teleconference Meeting

A Pre-Work Meeting will be held via teleconference in order to review and resolve any uncertainties of the QAPP and other associated project plans prior to commencement of the work. All individuals on the project distribution list will be notified and invited to the meeting. This meeting will be organized and directed by the Contractor's Project Manager. A written record of the meeting discussions will also be kept by the Contractor's Project Manager.

Weekly Progress Teleconference Meetings

Weekly Progress Meetings will be held via teleconference or email distribution in order to review progress against the planned work schedule and to identify existing or anticipated problems. These meetings will also be utilized to provide updates on data acquisition and review, address safety issues, ensure maintenance of quality standards, discuss pending changes and substitutions, and discuss any other items that could affect timely completion of the work. All individuals on the project distribution list will be notified and invited to these meetings. These meetings will be organized and directed by the Contractor's Project Manager. A written record of the meeting discussions will also be kept by the Contractor's Project Manager.

Called Meetings

Called Meetings can be requested by any of the individuals listed on the project distribution list to discuss

specific concerns, problems, or deficiencies. All individuals on the project distribution list will be notified and invited to these meetings. A written record of the meeting discussions will also be kept by the Contractor's Project Manager.

Project Close-Out Meeting

A Project Close-Out Meeting will be conducted upon completion to facilitate the collection of field data, final reports, records, invoices, and any other required documentation. All individuals on the project distribution list will be notified and invited to the meeting. This meeting will be organized and directed by the Contractor's Project Manager. A written record of the meeting discussions will also be kept by the Contractor's Project Manager.

7.3 PROJECT/TASK DESCRIPTION AND PRE-WORK SITE WALK

The project has been organized into specific tasks in order to ensure accuracy and efficiency.

Task 1 Air Quality Monitoring and Project Oversight

The selected abatement Contractor will conduct the asbestos abatement at AFP3 Building 7 along with required confirmatory sampling. The Contractor will also provide Air Monitoring during the Asbestos Abatement Phase as required by OAC 380:50-11-7. The Contractor's Quality Assurance Manager will provide project oversight on its's behalf and immediately notify the City's Quality Assurance Manager of any deviations from the approved QAPP, Project Design, or safety concerns. The Contractor Project and Quality Assurance Manager will provide oversight to asbestos abatement work activity.

Task 2 Reporting

A Final Report will be compiled by the City compiling documentation of work activity during the asbestos abatement. The report will include sufficient detail to meet the requirements for recordkeeping to include but not limited to: Worker licenses, worker respirator clearances, daily logs and air monitoring data, waste manifests, Davis-Bacon documentation, ODOL or USEPA inspections, etc. A single draft report will be circulated for comments by all individuals identified on the project distribution list. Comments will then be incorporated into a final report to be re- distributed to the same individuals. The draft report will be provided in electronic Portable Document Format (PDF) only. The final report will be provided in electronic PDF format.

Task 3 Project Close-Out

A Project Close-Out Meeting will be conducted upon completion in order to confirm no outstanding items remain; to gain acknowledgment from all members of the project distribution list that the project is complete; and to facilitate invoicing. All individuals on the project distribution list will be notified and invited to the meeting.

8.0 PROJECT QUALITY OBJECTIVES, CRITERIA, AND PERFORMANCE MEASURES

In order to ensure project goals are met it is imperative that quality objectives and criteria are established and measured.

Project Quality Objectives

The data quality objectives take into account both the best practices for similar projects and the resources

available for this project. If necessary, the Contractor's Project Manager will rely upon USEPA's *Generic Guide to Statistical Aspects of Developing and Environmental Results Program* (2003) for advice in making decisions related to optimizing the following aspects of data quality for this project, including:

Precision: Precision is the measurement of agreement or reproducibility among replicate samples of the same media under prescribed similar conditions. It is normally expressed as the Relative Percent Difference (RPD) between two (2) values.

Accuracy: Accuracy is a measure of the closeness of an individual measurement or the average of a number of measurements, to the true value. Bias is the systematic or persistent distortion of a measurement process that causes error in one direction. Accuracy is normally expressed as a percent recovery.

Representativeness: Representativeness is an expression of the degree to which a sample accurately and precisely represents a characteristic of a population, parameter variations at a sampling point or an environmental condition. Representativeness is a qualitative parameter, which relies upon the proper design of a sampling program and proper laboratory protocol.

Comparability: Comparability is defined as an expression of the confidence with which one data set can be compared to another. In most instances, the proficiency of field sampling efforts will be the determining factor that affects the overall comparability of environmental measurement data. To optimize the comparability of environmental measurement data, sample collection activities should always be performed using standardized procedures whenever possible. When performing a site investigation, adhering to the quality control criteria will facilitate these efforts.

Completeness: Completeness is defined as the measurement of the amount of data obtained from a measurement system compared to the amount that was expected to be obtained under correct normal conditions. Data completeness is often expressed as the percentage of valid data obtained from a given measurement system. To consider data valid, it is customary to assess if a set of data satisfies all of the specified acceptance and performance criteria (accuracy measures, precision measures, etc.) to render a determination.

Performance Measures

To the extent that performance measures rely on the generation of data, this QAPP and other associated plans seek to verify that the project quality objectives are appropriate for the regulatory and non-regulatory decisions to be made based upon that data. Performance measures to ensure the project quality objectives are achieved include the following:

- Protection of the environment.
- Successful completion of abatement with no visible emissions or asbestos debris left behind
- Successful control of the asbestos abatement documented by air samples outside of containment less than 0.01 fibers per cubic centimeter (f/cc).
- Successful clearance of all abated spaces for re-occupancy documented by air samples outside of containment less than 0.01 f/cc.

9.0 SPECIAL TRAINING/CERTIFICATIONS

All Contractor's employees assigned to this project and will be onsite will be properly trained and licensed by the ODOL. Air monitoring analyst's performing on-site analysis of the collected air samples will have

attended a National Institute of Safety and Health (NIOSH) 582 course or an approved 582 equivalent (582e) course and will have demonstrated proficiency by successful completion in American Industrial Hygiene s (AIHA) Proficiency Analytical Program (PAT). All Asbestos Abatement Contractor's employees will hold a current ODOL asbestos worker license and be medically cleared for respirator use. All work crews will be supervised by an ODOL licensed Asbestos Abatement Supervisor. The contractor will always have a licensed supervisor onsite when asbestos work activities are being conducted. The Contractor's Supervisor will not allow anyone inside containment without proper training and licensure.

10.0 DOCUMENTATION AND RECORDS

Documents and records generated as a result of the asbestos abatement are considered quality assurance records and will be processed in accordance with the requirements of this QAPP and other project plans. Quality assurance records provide a record of events that have occurred for all aspects of the project. Their adequate generation, review, protection, and submittal are essential to the success of the process. The individuals listed in the distribution list will receive the most current copy of the approved QAPP by email from the City Quality Assurance Manager.

A Final Report containing project documentation will be prepared in accordance with Section 7.3. The Final Report including records pertaining to this project and its related work tasks will be maintained by the City for a minimum of five (5) years following the conclusion of work performed. The City of Tulsa maintains primary and secondary data storage and backup systems to ensure integrity of saved documentation in the Final Report.

11.0 PROJECT SCHEDULE

It is anticipated that the project will begin immediately upon approval of the QAPP, Project Design approval, funding, and all notifications have been made. The total estimated project duration is eleven (11) months from ODOL permitting through final closeout. If necessary, time extension notices will be submitted.

12.0 DATA SELECTION AND MANAGEMENT

Readily available data will be selected and managed in association with this project to ensure proper project knowledge and familiarity with background information.

12.1 EXISTING DATA SOURCES

The primary existing data source for this project includes the asbestos survey report prepared by A & M (dated March 1999).

12.2 EXISTING DATA SOURCES INTENDED USES AND LIMITATIONS

Data from the A & M Asbestos Report will be utilized to identify the materials to be abated and their locations. A new asbestos survey report will not be conducted.

12.3 FIELD GENERATED DATA

The project will involve the field generation of data by the Contractor including primarily daily field logs, air monitoring data, and/or notes.

12.4 SAMPLING AND ANALYTICAL METHODS

Daily air monitoring will be conducted outside of containment at locations as identified in the Project Design to be developed by the Contractor. Sample pump flow rates will be checked using a calibrated rotameter at the beginning and completion of the sampling period. The rotameter will be calibrated to a primary calibrator monthly as required by OAC 380:50- 11-1(4). All daily air monitoring and analytical data will be entered onto an Air Monitoring Data Form. [A copy of the Air Monitoring Data Form is provided in Appendix E.](#)

If suspect materials are identified during the abatement, that may not have been previously sampled or for confirmation, will be collected in accordance with the method described by 40 CFR Part 763.86 (Sampling) and analyzed by Polarized Light Microscopy (PLM) using method EPA/600/R-93/116. Quality control measures will be implemented during sampling to minimize the potential for cross-contamination. All non-disposable sampling equipment will be thoroughly cleaner by removing visible contamination with a metal or nylon brush and/or high pressure water spray, washing with a non-phosphate detergent solution such as Liquinox or an equivalent, and rinsing with tap water, prior to field screening and between each monitoring well location. Field personnel will wear new disposable nitrile gloves while collecting representative samples. To maintain sample integrity and prevent chemical degradation, collected samples will be containerized into laboratory provided containers. Samples shall be labeled to indicate the location, material, and sequence of sampling. Sample Bulk samples will be shipped to a Third-Party Laboratory (TBD by Contractor) that is accredited by National Voluntary Laboratory Accreditation program (NVLAP). See Section 15.0 for how corrective action will be handled.

12.5 SAMPLE HANDLING AND CUSTODY

Sample containers will be appropriate and consistent with the analytical methods referenced in Section 12.4. Strict chain-of-custody control and field documentation will accompany the samples to the contract laboratory. Samples must be maintained under custody, in the actual physical possession of field personnel, custodian, or in a secure storage area until shipped or delivered to the laboratory. The laboratory will then maintain custody. To track the handling of the samples, a Chain-of-Custody form must be filled out and kept with the samples at all times. The form must be filled out with ink. Chain-of-Custody forms become the permanent record of all sample handling and shipping. The cooler should be sealed with a custody seal with sampler's initials and date, and place clear tape over the custody seal, so tampering can be detected.

12.6 QUALITY CONTROL

Collecting field duplicates is a quality assurance method that assesses sample representativeness. Field duplicates are by definition, equally representative of a given point in space and time and are collected for 10% of samples. Precision of the sampling methods will be verified using duplicate sample results.

12.7 EQUIPMENT/INSTRUMENT OPERATION AND CALIBRATION

Equipment (rotameters) used for calibrating air sample flow rates will be calibrated to a primary standard on a monthly basis.

The Phase Contrast Microscopy (PCM) used for analysis of collected air samples will be checked each time it is moved using the HSE test slide and centering telescope for proper optical alignment.

All electrical equipment will be protected using Ground-Fault Circuit Interrupters (GFCI).

13.0 ASSESSMENT AND OVERSIGHT

Assessment and oversight procedures are in place to assess the effectiveness of project implementation and the associated QA/QC activities. The purpose of assessment is to ensure proper implementation of the QAPP and other associated project plans.

Self-assessment and performance evaluations will be conducted weekly to evaluate the effectiveness of project implementation and determine whether QAPP and other project plan procedures are being properly implemented. The self-assessments and performance evaluations will be conducted by the Contractor's Project Manager and/or Quality Assurance Manager, whom will have the authority to stop work in the event that non-conforming conditions are identified that cannot be remedied or resolved with immediate actions in a manner that protects the validity of the information being gathered.

The Contractor's Project Manager and/or Quality Assurance Manager will review the documentation required to be maintained. A record of any significant deviations from normal procedures will be documented to ensure that corrective actions are taken to correct any noted deficiencies. Minor deviation items will be corrected on the spot. Significant deviations or recurring deviations will be recorded and addressed at the Weekly Progress Meeting.

14.0 DATA REVIEW, VERIFICATION, VALIDATION, AND EVALUATION

This QAPP and other associated project plans will govern the operation of the project at all times. responsible party listed in the project distribution list shall adhere to the procedural requirements QAPP and other associated project plans and ensure that subordinate personnel do likewise.

This QAPP and other associated project plans will be reviewed at least quarterly to ensure that the will achieve all intended purposes. All the persons listed in the distribution list shall participate review of the QAPP and other associated project plans. The Contractor's Project Quality Assurance Manager is responsible for determining that data are of adequate quality to support this project. The project will be modified as directed by the Contractor's Project Manager and/or Project Quality Assurance Manager. The Contractor's Project Manager and/or Project Assurance Manager will be responsible for the implementation of changes to the project and document the effective date of all changes made.

Initial data review, verification, and validation of all data and information acquired will be accomplished by experienced/qualified team members performing within their disciplines and practicing professional judgment. The final layer of data review, verification, and validation will be performed by the Contractor's Project Manager and Project Quality Assurance Manager during their reviews. During either phase of these reviews the data can be accepted, rejected, or qualified by any of these individuals.

15.0 USER REQUIREMENTS RECONCILIATION

The results obtained from the project will be reconciled with the requirements defined by the user and/or decision makers. The data will be analyzed to determine possible anomalies and/or departures from any assumptions made during the planning phase. The data will be analyzed by experienced/quality team members performing within their disciplines and practicing professional judgment followed by reviews performed by the Contractor's Project Manager and Project Quality Assurance Manager. The decision makers will be made aware of any limitations associated with the data information collected.

The work to be done on this project is fairly straightforward in that standard work procedures are to be used. No deviations from the QAPP or other associated project plans are anticipated at this time. Should unforeseen conditions arise that warrant a deviation from the QAPP or other associated project plans, the Contractor's Project Manager will notify the City of Tulsa's Quality Assurance Manager and a determination will be made regarding notification of the appropriate regulatory agencies and decision makers. The City of Tulsa's Quality Assurance Manager will notify the DEQ RLF Project Manager of any QAPP deviations. The DEQ RLF Project Manager will report the QAPP deviations to the EPA Project Officer, DEQ QA Coordinator, and DEQ QA Officer.

Corrective action will be taken whenever data are determined unacceptable by comparison to pre-established quality control limits. Corrective actions will be the responsibility of the Contractor's Project and Quality Assurance Manager.

Corrective action will, in general, consist of the following:

- Review of raw data and calculations
- Review of procedures to determine that appropriate abatement procedures, sample collection, and analytical methods were followed.
- Review of instrumentation operation, calibration, and maintenance.
- Other actions as deemed necessary by the USEPA.

As a result of the above, corrective action may be identified and will be pursued as necessary. This action may include:

- Stop-Work until conditions have been corrected.
- Recleaning of an area using specialized cleaning and/or abatement procedures.
- Recalibration of instrumentation/equipment.
- Instrumentation/equipment repairs.
- Additional training.
- Other action as deemed necessary by the USEPA.

A Deviation Record will be completed and approved by the individuals identified on the project distribution list. The final report will include a description of any deviations, assumptions, or limitations along with a summary of any associated reconciliation that occurred during the course of the project.

16.0 PROJECT COMPLETION AND REPORT

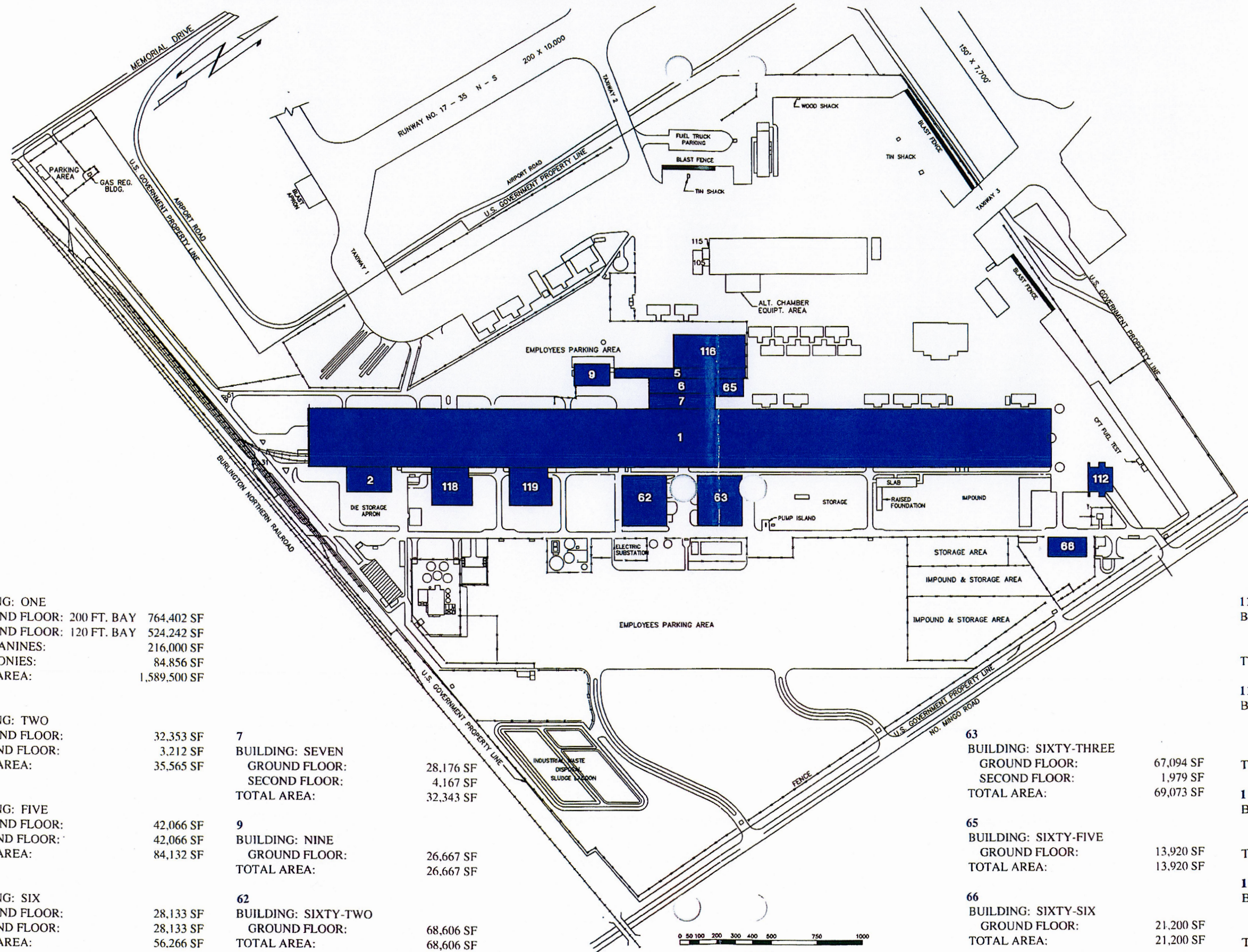
After completion of all work as outlined in this QAPP, the Contractor's Project Manager will deliver to the City of Tulsa's Quality Assurance Manager electronic PDF copies of documentation for inclusion in the Final Report including:

- List of any deviations, assumption, or limitations along with a summary of any associated reconciliation,
- Certification that all work specified in the QAPP has been completed,
- Asbestos daily records to include notes and air monitoring data,
- Agency inspection forms,
- Waste disposal manifests,
- Bacon Davis Wage compliance documentation,
- And other documentation indicated in Section 7.3.

An authorization for final payment will not be issued until the documents and data are reviewed and approved by the client representatives, and the documents are submitted in satisfactory form.

Appendix A

Project Figures



1
BUILDING: ONE
GROUND FLOOR: 200 FT. BAY 764,402 SF
GROUND FLOOR: 120 FT. BAY 524,242 SF
MEZZANINES: 216,000 SF
BALCONIES: 84,856 SF
TOTAL AREA: 1,589,500 SF

2
BUILDING: TWO
GROUND FLOOR: 32,353 SF
SECOND FLOOR: 3,212 SF
TOTAL AREA: 35,565 SF

5
BUILDING: FIVE
GROUND FLOOR: 42,066 SF
SECOND FLOOR: 42,066 SF
TOTAL AREA: 84,132 SF

6
BUILDING: SIX
GROUND FLOOR: 28,133 SF
SECOND FLOOR: 28,133 SF
TOTAL AREA: 56,266 SF

7
BUILDING: SEVEN
GROUND FLOOR: 28,176 SF
SECOND FLOOR: 4,167 SF
TOTAL AREA: 32,343 SF

9
BUILDING: NINE
GROUND FLOOR: 26,667 SF
TOTAL AREA: 26,667 SF

62
BUILDING: SIXTY-TWO
GROUND FLOOR: 68,606 SF
TOTAL AREA: 68,606 SF

63
BUILDING: SIXTY-THREE
GROUND FLOOR: 67,094 SF
SECOND FLOOR: 1,979 SF
TOTAL AREA: 69,073 SF

65
BUILDING: SIXTY-FIVE
GROUND FLOOR: 13,920 SF
TOTAL AREA: 13,920 SF

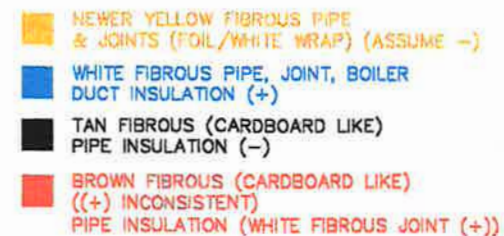
66
BUILDING: SIXTY-SIX
GROUND FLOOR: 21,200 SF
TOTAL AREA: 21,200 SF

112
BUILDING: ONE HUNDRED & TWELVE
GROUND FLOOR: 18,937 SF
MEZZANINE: 1,580 SF
TOTAL AREA: 20,517 SF

116
BUILDING: ONE HUNDRED & SIXTEEN
GROUND FLOOR: 21,789 SF
SECOND FLOOR: 70,638 SF
THIRD FLOOR: 75,723 SF
TOTAL AREA: 168,150 SF

118
BUILDING: ONE HUNDRED & EIGHTEEN
GROUND FLOOR: 43,070 SF
SECOND FLOOR: 1,455 SF
TOTAL AREA: 44,525 SF

119
BUILDING: ONE HUNDRED & NINETEEN
GROUND FLOOR: 41,836 SF
SECOND FLOOR: 1,474 SF
TOTAL AREA: 43,310 SF



NOTE: GREEN TEXT DENOTES PREVIOUS SURVEY BY GALSON TECHNICAL SERVICES, INC. IN 1991.



**A & M ENGINEERING AND
ENVIRONMENTAL SERVICES, INC.**

ENGINEERING - ENVIRONMENTAL - CONSTRUCTION

SCALE:

NTS

APPROVED BY:

JRE

DATE: _____

3/1/99

DRAWN BY:

ALB

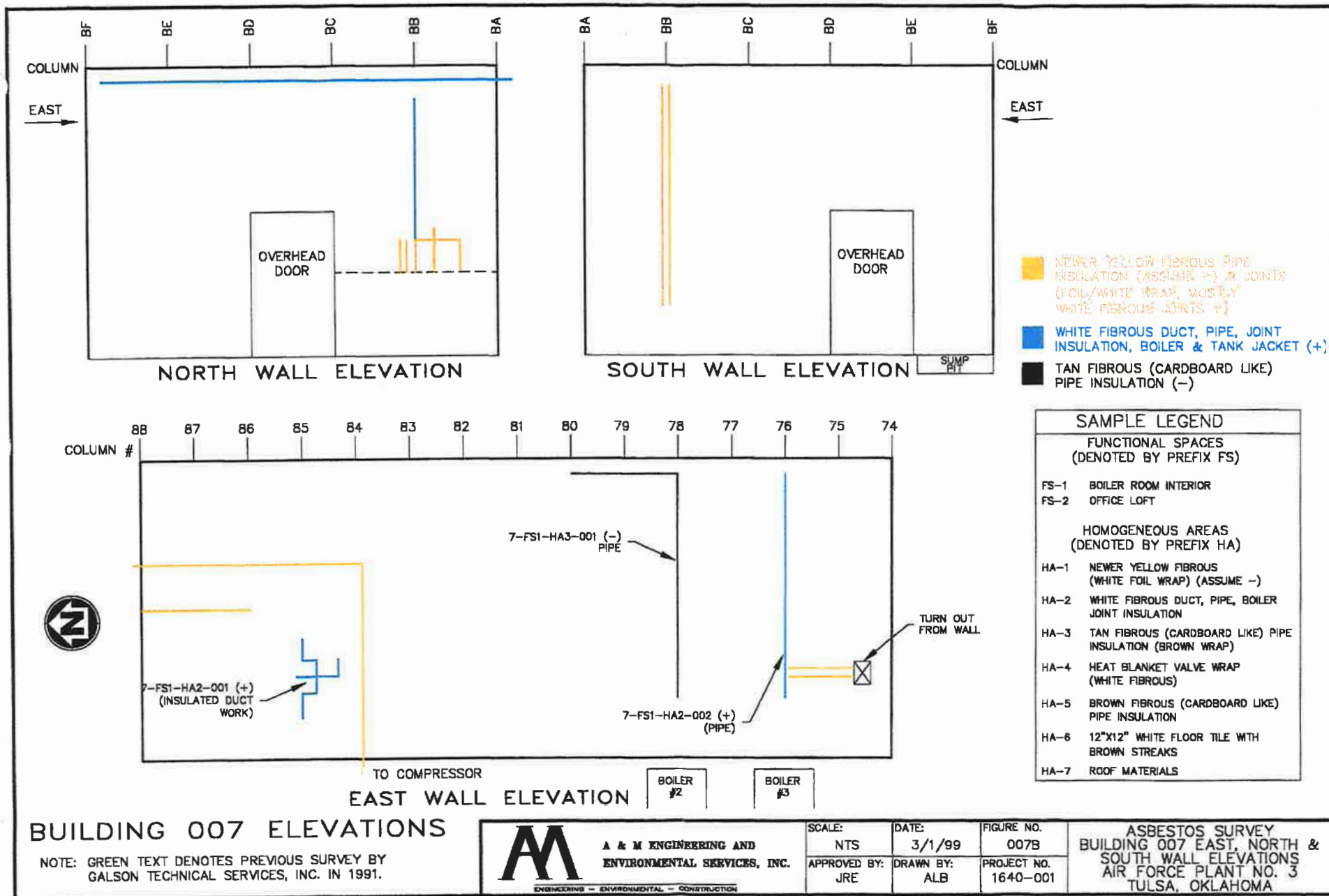
FIGURE NO.

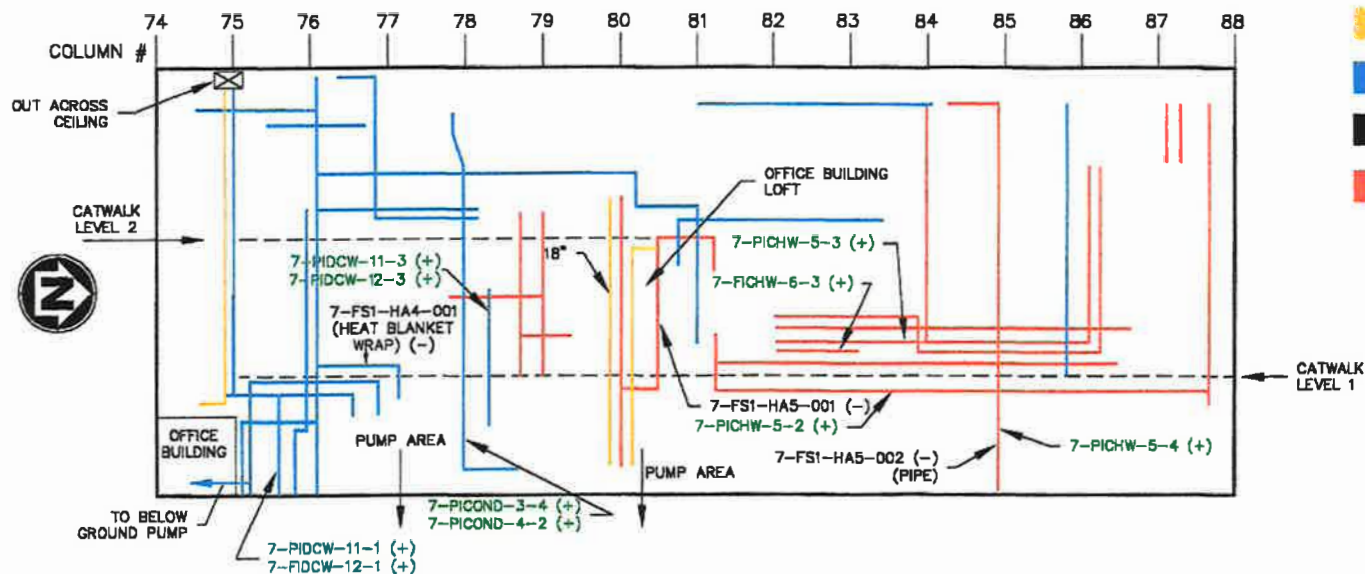
007A

PROJECT NO.	
-------------	--

1640-001

ASBESTOS SURVEY
BUILDING 007 FLOOR PLAN
BOILER ROOM
AIR FORCE PLANT NO. 3
TULSA, OKLAHOMA





BUILDING 007 ELEVATION
WEST WALL ELEVATION

- NEWER YELLOW FIBROUS PIPE & JOINTS (FOIL/WHITE WRAP) (ASSUME -)
- WHITE FIBROUS PIPE, JOINT, BOILER DUCT INSULATION (+)
- TAN FIBROUS (CARDBOARD LIKE) PIPE INSULATION (-)
- BROWN FIBROUS (CARDBOARD LIKE) (+ INCONSISTENT) PIPE INSULATION (WHITE FIBROUS JOINT (+))

SAMPLE LEGEND	
FUNCTIONAL SPACES (DENOTED BY PREFIX FS)	
FS-1	BOILER ROOM INTERIOR
FS-2	OFFICE LOFT
HOMOGENEOUS AREAS (DENOTED BY PREFIX HA)	
HA-1	NEWER YELLOW FIBROUS (WHITE FOIL WRAP) (ASSUME -)
HA-2	WHITE FIBROUS DUCT, PIPE, BOILER JOINT INSULATION
HA-3	TAN FIBROUS (CARDBOARD LIKE) PIPE INSULATION (BROWN WRAP)
HA-4	HEAT BLANKET VALVE WRAP (WHITE FIBROUS)
HA-5	BROWN FIBROUS (CARDBOARD LIKE) PIPE INSULATION
HA-6	12"x12" WHITE FLOOR TILE WITH BROWN STREAKS
HA-7	ROOF MATERIALS

NOTE: GREEN TEXT DENOTES PREVIOUS SURVEY BY GALSON TECHNICAL SERVICES, INC. IN 1991.

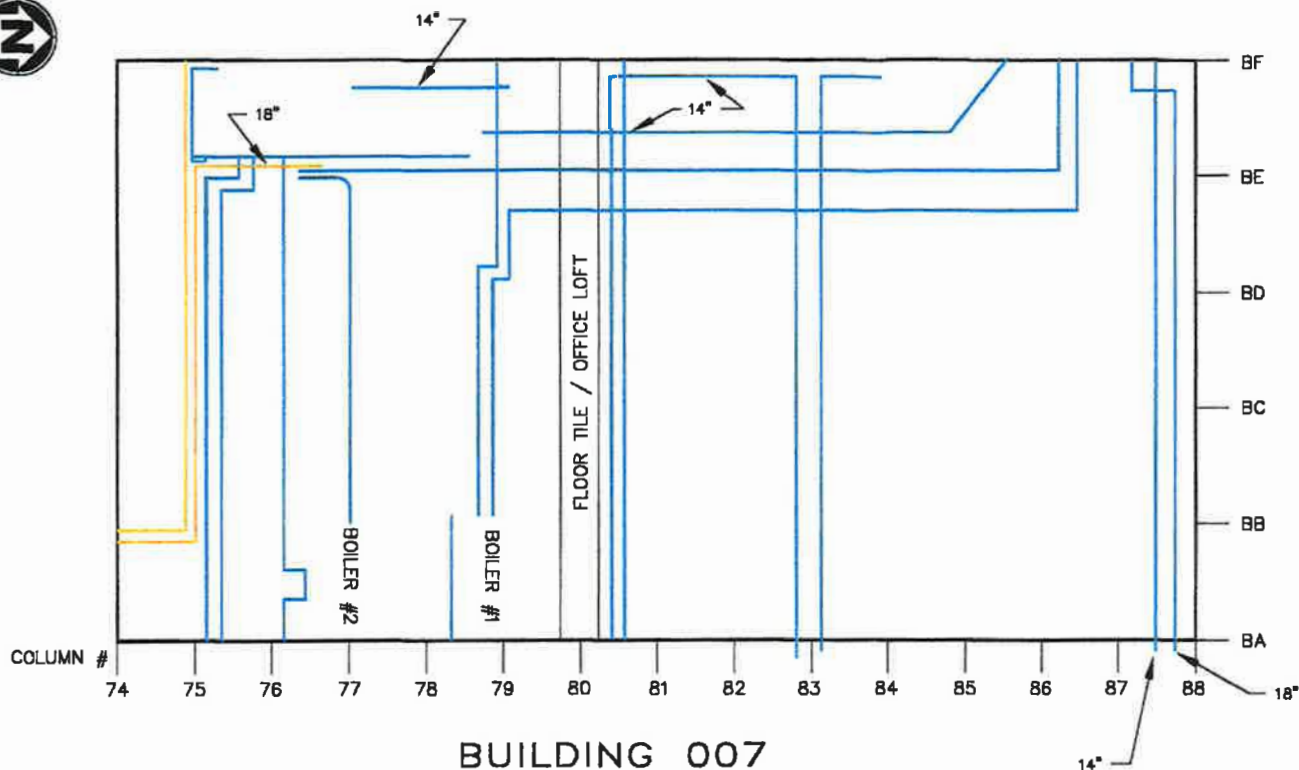


A & M ENGINEERING AND
ENVIRONMENTAL SERVICES, INC.

ENGINEERING - ENVIRONMENTAL - CONSTRUCTION

SCALE:	DATE:	FIGURE NO.
NTS	3/1/99	007C
APPROVED BY:	DRAWN BY:	PROJECT NO.
JRE	ALB	1640-001

ASBESTOS SURVEY
BUILDING 007 WEST
WALL ELEVATION
AIR FORCE PLANT NO. 3
TULSA, OKLAHOMA



BUILDING 007 CEILING PLAN LAYOUT

- 50' CEILING
- ROOF - TAR/FELT/GRAVEL (ASSUME +)
- SAME ORANGE FIBROUS INSULATION ON WALLS & CEILING WITH METAL GRATING (SAME AS OTHER BUILDINGS, ASSUME -)

- NEWER YELLOW FIBROUS PIPE & JOINTS (FOIL/WHITE WRAP) (ASSUME -)
- WHITE FIBROUS PIPE, JOINT, BOILER DUCT INSULATION (+)
- TAN FIBROUS (CARDBOARD LIKE) PIPE INSULATION (-)
- BROWN FIBROUS (CARDBOARD LIKE) (+ INCONSISTENT) PIPE INSULATION (WHITE FIBROUS JOINT (+))

SAMPLE LEGEND

FUNCTIONAL SPACES (DENOTED BY PREFIX FS)

- FS-1 BOILER ROOM INTERIOR
- FS-2 OFFICE LOFT

HOMOGENEOUS AREAS (DENOTED BY PREFIX HA)

- HA-1 NEWER YELLOW FIBROUS (WHITE FOIL WRAP) (ASSUME -)
- HA-2 WHITE FIBROUS DUCT, PIPE, BOILER JOINT INSULATION
- HA-3 TAN FIBROUS (CARDBOARD LIKE) PIPE INSULATION (BROWN WRAP)
- HA-4 HEAT BLANKET VALVE WRAP (WHITE FIBROUS)
- HA-5 BROWN FIBROUS (CARDBOARD LIKE) PIPE INSULATION
- HA-6 12"x12" WHITE FLOOR TILE WITH BROWN STREAKS
- HA-7 ROOF MATERIALS

NOTE: GREEN TEXT DENOTES PREVIOUS SURVEY BY GALSON TECHNICAL SERVICES, INC. IN 1991.



**A & M ENGINEERING AND
ENVIRONMENTAL SERVICES, INC.**

ENGINEERING - ENVIRONMENTAL - CONSTRUCTION

SCALE:

NTS

DATE:

3/1/99

FIGURE NO.

007D

APPROVED BY:

JRE

DRAWN BY:

ALB

PROJECT NO.

1640-001

**ASBESTOS SURVEY
BUILDING 007 CEILING
PLAN LAYOUT
AIR FORCE PLANT NO. 3
TULSA, OKLAHOMA**

Appendix B

Asbestos Abatement Project Design (PD)

Developed by Asbestos Services Inc.
(Contractor)

Asbestos Division

Project No: 25-0017 Date: 1.30.2025

Approved: X 409 NE 28th-3rd Floor, Oklahoma City, OK 73105

Project Designer: Daryl Lessin

Disapproved: _____

Phone - (405) 521-6467

	ITEM	ACCEPTED	REJECTED	COMMENTS
1.	A statement that DOL <u>Abatement of Friable Materials Rules</u> apply.	X		Asbestos abatement will be done using excerpts from OAC 380:50-17-4 and 17-5
2.	Sequencing and phasing of work.	X		8 phases
3.	Identification of means of egress and a fire protection plan and a diagram for emergency escape routes, and fire extinguisher placements.	X		Emergency exit will be through the decon, emergency exits shall be illuminated, fire extinguishers will be in the area within 50 feet of the workers.
4.	The quantity, type, percentage with bulk analysis unless presumed and a diagramed location of asbestos materials to be abated.	X		14,000 lf of TSI, 17,000 square feet of boiler insulation, 9,000 Square feet of duct insulation, 2500 square feet of tank and vessel insulation
5.	Abatement methods, and techniques, and numbers of containments, glove bags or mini-containments.	X		Glovebag procedures 380:50-13 for TSI, 380:50-17 procedures for boiler and tank and vessel abatement
6.	Details of personal and area air monitoring samples.	X		Area pumps in the following locations: inside area near abatement activities, one in the neg air exhaust, one outside the containment clean room, one during load out activities, one at the discretion of the ODOL. Personal monitoring of 25% of the workers, minimum of 2
7.	Numbers and locations of Clean Test samples and type of analysis to be employed.	X		Five clearance samples per phase
8.	Numbers, capacities, a diagram to identify locations, and discharge points, if any, of negative air machines.	X		Number of negative air machines for each phase is in the project design.
9.	Details of project containment(s), glove bag or mini-containments, including drawings. Details shall include all applicable subchapters, including but not limited to scaffolding and live electric isolation.	X		Drawing attached to project design
10.	Details of decontamination system(s).	X		Remote decon with a clean room, shower, and a dirty room for glovebag abatement and attached decon for full negative pressure containments.
11.	The extent to which asbestos-contaminated soils, if any, must be removed and the sampling methods of determining the efficacy of such removal.	N/A		
12.	Special materials or methods required to protect objects in the work area should be detailed, (plywood over carpeting or hardwood floors to prevent damage from scaffolds and/or falling materials.	N/A		
13.	Any variances from the <u>Abatement of Friable Asbestos Materials Rules</u> .		X	No remote decon for full containments

The Department of Labor reserves the right to require additional engineering or environmental controls consistent with the Abatement of Friable Asbestos Materials Rules which may be necessary because of discrepancies between this Project Design and field conditions or from unanticipated changes in field conditions.

REVIEWED BY:

Keith H. Hunt

DATE: 1/30/2025

REVIEWED BY:

Bumia Hunt

DATE: 1.30.2025



2/28/2025

Abatement Systems, Inc.
PO Box 773
Broken Arrow, OK 74013

To Whom It May Concern:

The discrepancy of quantities is due to multiple surveys being performed with differing quantities. We based quantities from the two surveys that we determined the most accurate quantities of current conditions. We cannot guarantee quantities of either survey since we were not the company that performed the surveys.

We utilized the quantities that you provided for the preparation of this revised design. To the best of our knowledge, these quantities should provide the abatement required to meet the project's demolition goals.

If you have any questions please feel free to contact us.

Thank you,

A handwritten signature in cursive script that reads "Daryl L. Lessin".

Daryl L. Lessin
President

Earth Tech Enterprises, Inc.
5409 E 15th St
Tulsa, OK 74112
918-712-9163

PROJECT DESIGN

FOR

ASBESTOS ABATEMENT

Building 7- AF Plant 3
Tulsa International Airport
Tulsa, OK

1/14/2025



Earth Tech Enterprises, Inc.
5409 E 15th St
Tulsa, OK 74112
918-712-9163

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Negative Air Requirements	Page 9
Project Containments	Page 10
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Confined Space Procedures	Page 11
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I. INTRODUCTION/GENERAL INFORMATION

This design is prepared for Abatement Systems, Inc. PO Box 773, Broken Arrow OK. Project Building 7, AF Plant 3, Tulsa International Airport, Tulsa, OK. All work will comply with the existing statutes and regulations governing the removal and disposal of asbestos-containing materials. It is designed to provide a prudent course of action for handling of asbestos in the best interests of the facility, employees, management, building occupants and the general public.

II. PROJECT SCOPE

- A. Removal of Approximately 14000 linear feet of pipe and associated fittings
- B. 17000 square feet of boiler insulation
- C. 9000 square feet of duct insulation
- D. 2500 square feet of tank and vessel insulation

III. REGULATORY COMPLIANCE

- A. The Oklahoma DOL Abatement of Friable Asbestos Materials Rules apply.
- B. All work on this project is for asbestos abatement, which shall be performed in complete compliance with the following state and federal regulations:
 - 1. 29 CFR 1910, General Industry Standards, latest edition, except for Section 1001(c) and (d).
 - 2. 29 CFR 1926.1101, Construction Industry Standards, latest edition.
 - 3. 40 CFR Part 61, NESHAPS, latest edition.
 - 4. ANSI Z88.2, latest edition.
 - 5. American Conference of Governmental Industrial Hygienist's Adopted Threshold Limit Values.
- 6. OAC 380.50, Abatement of Friable Asbestos Materials Rules.

IV. Project Background

A. LOCATION

Building 7 -AF Plant 3
Tulsa International Airport
Tulsa, OK

B. OWNER

City of Tulsa
175 E 2nd Street, Ste 690
Tulsa, OK 74103

C. ABATEMENT CONTRACTOR

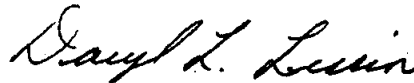
Abatement Systems, Inc.
PO Box 773
Broken Arrow, OK 74013

D. PROJECT DESIGNER

The individual below has fulfilled the requirements stipulated by the Environmental Protection Agency (EPA) and the Oklahoma Department of Labor for license as a Project Designer as defined by Asbestos Hazard Emergency Response Act (AHERA).

Mr. Daryl Lessin
5409 E 15th St
Tulsa, OK 74112
(918)712-9163

Project Designer:
License #143842



E. OCCUPANCY

The area shall be unoccupied. The abatement area will be restricted to workers only.

F. MATERIALS TO BE ABATED

1. Removal of Approximately 14000 linear feet of pipe and associated fittings

2. 17000 square feet of boiler insulation
3. 9000 square feet of duct insulation
4. 2500 square feet of tank and vessel insulation

G. METHODS OF ABATEMENT

1. Glovebag procedures
2. Full containment negative air pressure

H. PROJECT TYPE

1. Asbestos Abatement

I. NUMBER OF CONTAINMENTS

1. 8

J. PROJECT PHASES

1. Work shall be performed in 8 phases
 - a. Phase 1 Tanks and Compressors
 - b. Phase 2 North Piping
 - c. Phase 3 Chilled Water Pumps
 - d. Phase 4 Boiler Feed/Heat Exchangers
 - e. Phase 5 External Boiler Insulation Materials
 - f. Phase 6 Main Boiler Insulation
 - g. Phase 7 South Piping
 - h. Phase 8 Condensation Pit
 - j. Shed and Outside Tank

V. GENERAL SAFETY

A. FALL PROTECTION

1. All workers performing duties at elevated levels shall wear full body harnesses with shock absorbing lanyards. Additional fall protection equipment shall be available for owners representative and regulatory personnel.

C. EMERGENCY EXITS

1. All emergency exits shall be clearly marked. All workers shall be clearly instructed for emergency egress prior to beginning each phase of work. Each worker wherever he is working, must have a reasonably clear path to at least one exit and must have access to another exit if the first one cannot be used.
2. For life-threatening injury or illness, worker decontamination shall take last priority. After measures to stabilize the injured worker, remove him from the work area and secure proper medical treatment

D. FIRE EXTINGUISHERS

1. Two fire extinguishers shall be located inside each work area at all times. The fire extinguisher shall be of the dry-charge ammonium phosphate type with an Underwriters Laboratories, Inc., rating of at least 10# ABC, with a valid and current inspection tag, and must be decontaminated upon removal from the controlled area.

E. EMERGENCY LIGHTING

1. There will be backup (automatic on) emergency lighting to provide 5 candlepower to any area where a worker might be, in case the power fails. The path or route that the worker needs to take to both the decon and the emergency exit must also be so illuminated.

F. PERSONNEL PROTECTION DURING PREPARATION

1. Disturb as little asbestos as possible during prep.

G. ELECTRICAL POWER STATUS DURING PREPARATION

1. Electrical power to the area shall be disconnected and locked out.
2. GFI circuits will supply all power to the work area.

H. PREPARATION OF THE WORK AREAS AND CONTAINMENT

1. Full Containment for tanks and compressors, boiler feed/heat exchangers, boilers, south piping and outside tank.
2. Decon shall require negative pressure

I. COMMUNICATION

1. Voice communication will be utilized by workers inside the containment.

J. SAFETY EQUIPMENT

1. Safety equipment shall be in compliance with applicable rules and regulations governing work from scaffolds and ladders.
2. Fall protection shall consist of full body harnesses and shock absorbing lanyards.

K. HEAT STRESS PROTECTION

1. A botsball shall be available on-site if temperature is above 70⁰ in work area and will be utilized to indicate high heat stress problems. If risk of heat stress is indicated, it shall be regulated through work/rest methods.

VI. QUANTITY AND TYPE OF ASBESTOS

- A. 2-30% Amosite
5-80% Chrysotile
- B. Removal of Approximately 14000 linear feet of pipe and associated fittings
- C. 17000 square feet of boiler insulation
- D. 9000 square feet of duct insulation
- E. 2500 square feet of tank and vessel insulation
See Attachment A

VII. ABATEMENT PROCEDURES

A. HOURS OF OPERATION

1. Department of Labor (DOL) and Department of Environmental Quality (DEQ) shall be notified of working hours.

B. SEQUENCING OF WORK

1. Abatement shall be performed in eight (8) phases

C. WETTING METHODS

1. Amended water shall be utilized to wet materials as they are removed.

D. EMERGENCY NOTIFICATION PROCEDURES

1. In the event of an emergency, the on-site industrial hygiene firm representative shall contact the owner's representative, Office of the Oklahoma State Department of Labor, as well as the area NESHAPS representative.
2. All emergency telephone numbers shall be posted at the job

VII. AIR MONITORING/RESPIRATORY PROTECTION

A. AREA AIR MONITORING

1. At least one area sample shall be taken in the proximity of each abatement crew.
2. At least one inside area sample shall be taken
3. A sample shall be taken adjacent to the decon area.
4. Loadout sampling shall be performed during loadout activities.

B. PERSONNEL MONITORING

1. Personnel samples shall be collected on no less than 25% of the abatement workers in this project. No less than two personnel samples per work area shall be collected.

C. CLEARANCE METHODS

1. A minimum of 5 air samples with a sampling time of 2 hours at 10 liters/minute shall be utilized.
2. Fiber concentrations shall be equal to or less than 0.01 fibers/cc upper confidence limit by Phase Contrast Microscopy, Method NIOSH 7400 to determine clean air.

3. If 0.01 fiber/cc upper confidence limit is not achieved, then the clearance samples may be subject to analysis by Transmission Electron Microscopy NIOSH Method 7402 to determine clean air.

D. FINAL CLEARANCE INSPECTION

1. Oklahoma State Department of Labor Asbestos Division will perform a visual inspection prior to lockdown.

E. RESPIRATORY PROTECTION

1. Full face respiratory protection with quantitative fit testing performed on the abatement personnel.

F. AIR MONITORING FIRM/ THIRD PARTY CONSULTANT

1. Earth Tech Enterprises, Inc.
5409 E 15th St
Tulsa, OK 74112

VIII. NEGATIVE PRESSURE

The contractor shall utilize a sufficient number of functioning negative air machines equipped with HEPA filters, and which shall:

- A. Be capable of providing one work-place air change every 15 minutes.
 1. The volume of the work area (in ft³) is determined by multiplying the floor area of the containment by the ceiling height. The total air flow requirement (in ft³/min) for the work area is determined by dividing this volume by the recommended air change rate (one work place air change every 15 minutes).

$$\text{TOTAL FT}^3/\text{MIN} = \text{VOLUME OF WORK AREA (IN FT}^3\text{)} / 15 \text{ MIN}$$

2. The number of units needed for the application is determined by dividing the total ft³/min by the rated capacity of the negative air machine.

$$\text{NUMBER OF UNITS NEEDED} = [\text{TOTAL FT}^3/\text{MIN}] / [\text{CAPACITY OF UNIT (IN CFM)}]$$

3. Negative air machine flow rate shall be assumed to 90% of rated capacity. Therefore 2000 cfm rated machines shall use 1800 cfm as actual flow rate.

- B. Phase I 17,500 cubic feet 1 negative air machine
- C. Phase III 250,000 cubic feet 12 negative air machines
- D. Phase IV 332,000 cubic feet 15 negative air machines
- E. Phase V 375,000 cubic feet 17 negative air machines
- F. Phase VI 375,000 cubic feet 17 negative air machines
- G. Phase VIII 800 cubic feet 1 negative air machine

IX. PROJECT CONTAINMENTS

- A. See Drawings in Attachment B.

X. DECONTAMINATION FACILITIES AND LOADOUT

- A. All decon setups, showers, and clean rooms will comply with DOL requirements. This includes clean room size, hot water, air locks, etc. Opaque poly must be used for privacy.
See Attachment C

- B. **WATER SUPPLIES AND WASTE WATER DISPOSAL LOCATIONS**

1. Adjacent areas with water and wastewater lines will be the source locations for supply and disposal of decontamination utilities.

- C. **DECON PROCEDURES**

1. All workers (supervisors, etc.) shall remove all clothing prior to entering shower.
2. While wearing their respirators, they shall proceed to the showers and remove and thoroughly wash their respirators.
3. Workers shall shower with soap and water, thoroughly washing the skin and hair before entering the clean room to change into street clothes. This procedure is in compliance with Rules for Abatement of Friable Asbestos Materials 380:50-15-8. Decontamination procedures.

D. VENTILATION SYSTEMS

1. N/A

E. AIR FILTRATION/CIRCULATION

1. The shower shall be maintained under negative pressure.

F. SITE SECURITY

1. Abatement Contractor shall provide an outside man in the controlled area, to restrict unauthorized entries while work is in progress.
2. Building will be secured during off-shift periods.

XI. CONFINED SPACED ENTRY - NO CONFINED SPACES ARE ANTICIPATED ON THIS PROJECT.

NA

XII. LOADOUT, DISPOSAL AND TEARDOWN

A. LOADOUT PROCEDURES

1. All material must be placed in double six mil bags.
2. Materials that are not bagged shall be wrapped in two layers of six mil reinforced poly and warning labels applied.
3. Loadout shall take place often enough to avoid excessive bags in work area.
4. The bags will be stored in a covered poly lined trailer and/or dumpster for transport to disposal.

B. HAULING ARRANGEMENTS

To Be Determined

C. LANDFILL

To be determined

D. LOCKDOWN PROCEDURES/ENCAPSULANT

1. An approved encapsulant shall be applied to lock down all surfaces within the work area.

XIII. SOIL REMOVAL

NA

XIV. SPECIAL MATERIALS & PROCEDURES

NA

XV. VARIANCES

A. Remote Decon



2033 Heritage Park Drive
Oklahoma City, OK 73120
Ph. (405) 755-7272
Fax (405) 755-2058

Polarized Light Microscopy Asbestos Analysis Report

QuantEM Lab No. 0009PA845466
Date Received: 9/25/00 11:40
Received By: SH
Date Analyzed: 09/26/00
Analyzed By: E. McKittrick
Methodology: EPA 600/M4-82-020

Client: Enercon Services, Inc.
Account Number: A845
Project: AFP3-BLD 7
Project Location: Tulsa
Project Number: TA-146

QuantEM Sample ID	Client Sample ID	Composition	Color / Description	Asbestos	Non-Asbestos Fiber
001	0922000-01	Homogeneous	Grey Boiler Jacket Insulation	Asbestos Present Chrysotile 30%	N/A
002	0922000-02	Homogeneous	Grey Boiler Jacket Insulation	Asbestos Present Amosite 3%	Cellulose 15% Mineral Wool 15%
003	0922000-03	Homogeneous	White Boiler Skirt Insulation	Asbestos Present Chrysotile 80%	N/A
004	0922000-04	Homogeneous	Tan Boiler Refractory	Asbestos Not Present	N/A
005	0922000-05	Homogeneous	Tan Boiler Door Refractory	Asbestos Not Present	N/A
006	0922000-06	Homogeneous	Grey Boiler Fan Housing Insulation	Asbestos Present Chrysotile 15% Amosite 2%	Mineral Wool 25%

B. Peltz

Reviewed and Approved

09/26/00

Date of Report

Note: Structures denoted as being "<5µ" refer to the structures whose length is from 0.5µm to 4.9µm.
QuantEM is a service provided by TEM and PLM Laboratory, Inc. (QTEM). This report relates only to the specific items tested.



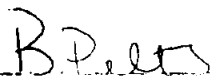
2033 Heritage Park Drive
Oklahoma City, OK 73120
Ph. (405) 755-7272
Fax (405) 755-2058

Polarized Light Microscopy Asbestos Analysis Report

Quantem Lab No. 00092A845581
Date Received: 9/28/00 17:41
Received By: SH
Date Analyzed: 10/01/00
Analyzed By: B. Pelts
Methodology: EPA 600/M4-82-020

Client: Enercon Services, Inc.
Account Number: A845
Project: AFP3-Bldg. 7
Project Location: Tulsa
Project Number: TA146

Quantem Sample ID	Client Sample ID	Composition	Color / Description	Asbestos	Non-Asbestos Fiber
001	092700-07	Homogeneous	Grey 8" Boiler Liner Insulation	Asbestos Present Chrysotile 10%	N/A
002	092700-08	Homogeneous	Brown/Grey 20" Chilled Water Line	Asbestos Not Present	Cellulose 95%
003	092700-09	Homogeneous	Brown/Grey CW Receiver Tank Insulation	Asbestos Present Chrysotile 60%	Cellulose 20%
004	092700-10	Homogeneous	Yellow/Blue 6" CW Line Insulation	Asbestos Not Present	Mineral Wool 90%
005	092700-11	Homogeneous	Yellow/Blue 10" CW Line Insulation	Asbestos Not Present	Cellulose 15% Fibrous Glass 80%
006	092700-12	Homogeneous	Yellow/Grey 12" Steamliner Insulation	Asbestos Not Present	Cellulose 40% Fibrous Glass 40%
007	092700-13	Homogeneous	Grey "S" Duct	Asbestos Present Chrysotile 60%	Cellulose 10%
008	092700-14	Homogeneous	Grey 24" Chilled Water Line	Asbestos Present Chrysotile 40%	Cellulose 40%


Reviewed and approved

10/02/00
Date of Report

Note: Structures denoted as being "<5µ" refer to the structures whose length is from 0.5µm to 4.9µm.
Quantem is a NVLAP-accredited TEM and PLM laboratory (Lab Code 101959). This report relates only to the specific items tested.
NVLAP accreditation applies only to AHERA analysis (40 CFR Ch. I (1-1-87 ed.) Part 763, Appendix A to Subparts E and F).
This report was prepared for the use of the U.S. Government.



2033 Heritage Park Drive
Oklahoma City, OK 73120
Ph. (405) 755-7272
Fax (405) 755-2058

Polarized Light Microscopy Asbestos Analysis Report

Quantem Lab No.	0010PAS45018	Client:	Enercon Services, Inc.
Date Received:	10/2/00 10:34	Account Number:	A845
Received By:	A. Malone	Project:	AFP3-Bldg 7
Date Analyzed:	10/02/00	Project Location:	Tulsa
Analyzed By:	Sandy Baker	Project Number:	TA-146
Methodology:	EPA 600/M4-82-020		

Quantem Sample ID	Client Sample ID	Composition	Color / Description	Asbestos	Non-Asbestos Fiber
001	092900-15	Homogeneous	White Ceiling Tile	Asbestos Not Present	Cellulose 30% Mineral Wool 30% Perlite 30%
002	092900-16	Layered	Black Roofing Material	Asbestos Not Present	Cellulose 5%
002a	092900-16	Layered	Silver Roofing Tar	Asbestos Present Chrysotile 50%	Cellulose 5% Mineral Wool 1%
003	092900-17	Homogeneous	Tan Stack Insulation	Asbestos Present Chrysotile 30% Amosite 30%	N/A
004	092900-18	Homogeneous	White Insulation	Asbestos Present Chrysotile 5%	Mineral Wool 30% Perlite 30%
005	092900-19	Homogeneous	Tan Insulation	Asbestos Not Present	Cellulose 30% Mineral Wool 30% Perlite 30%
006	092900-20	Homogeneous	Tan Insulation	Asbestos Not Present	Cellulose 30% Mineral Wool 30% Perlite 30%
007	092900-21	Homogeneous	Gray Cement Material	Asbestos Not Present	Mineral Wool 50%

Note: Structures denoted as being "<5µ" refer to the structures whose length is from 0.5µm to 4.9µm.
Quantem is a NVLAP-accredited TEM and PLM laboratory (Lab Code 101959). This report relates only to the specific items tested.
NVLAP accreditation applies only to AHERA analysis (40 CFR Ch. I (1-1-87 ed.) Part 763, Appendix A to Subparts E and F)
This report may not be used to claim credit or enforcement by NVLAP or any other agency of the U.S. Government.



Page 2 of 2

2033 Heritage Park Drive
Oklahoma City, OK 73120
Ph. (405) 755-7272
Fax (405) 755-2058

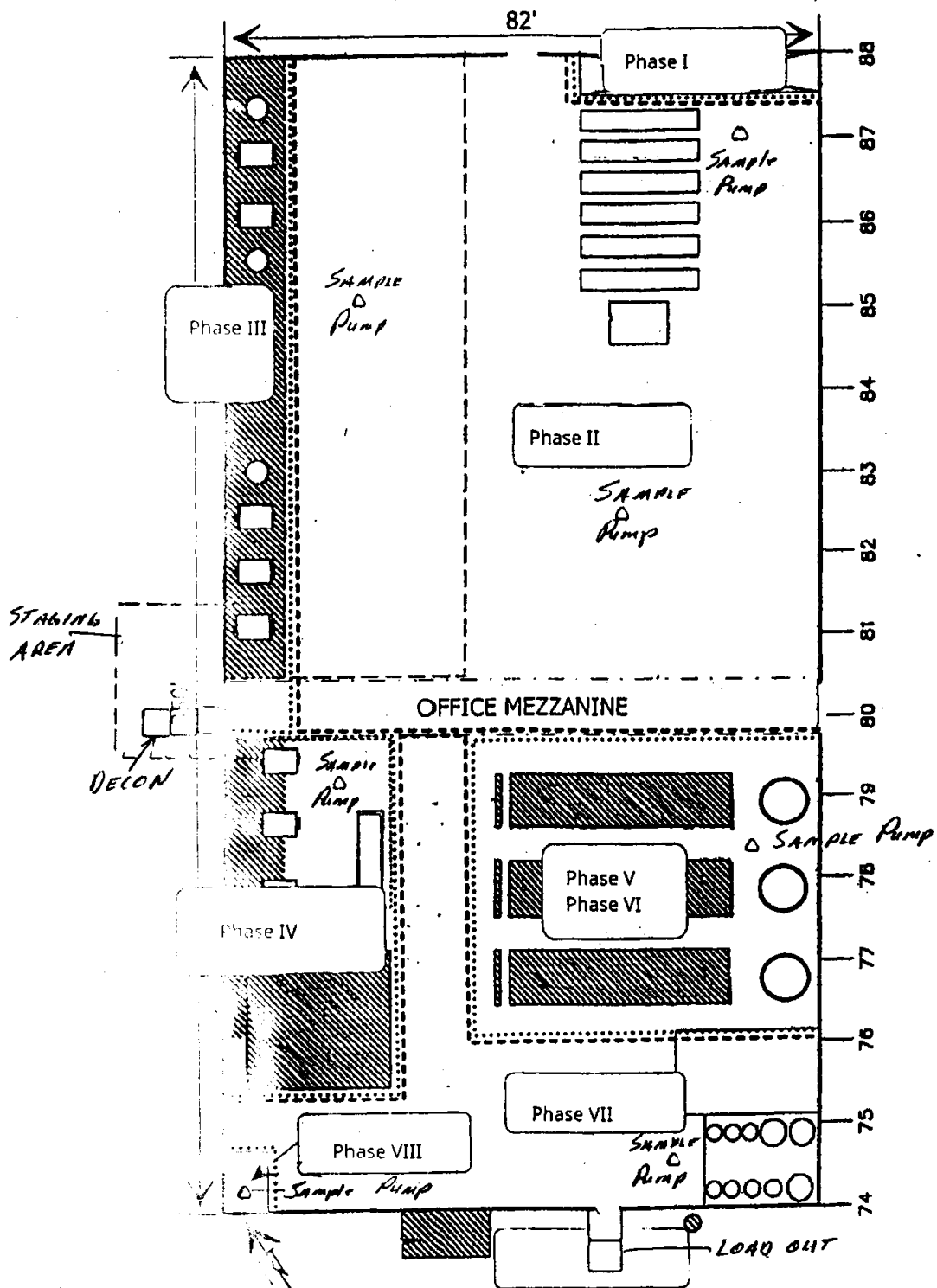
Polarized Light Microscopy Asbestos Analysis Report

Quantem Lab No.	001018A845018	Client:	Enercon Services, Inc.
Date Received:	10/02/00 10:34	Account Number:	A845
Received By:	A. J. Jones		
Date Analyzed:	10/02/00	Project:	AFP3-Bldg 7
Analyzed By:	Sandy Baker	Project Location:	Tulsa
Methodology:	EPA 600/M4-82-020	Project Number:	TA-146

Quantem Sample ID	Client Sample ID	Composition	Color / Description	Asbestos	Non-Asbestos Fiber
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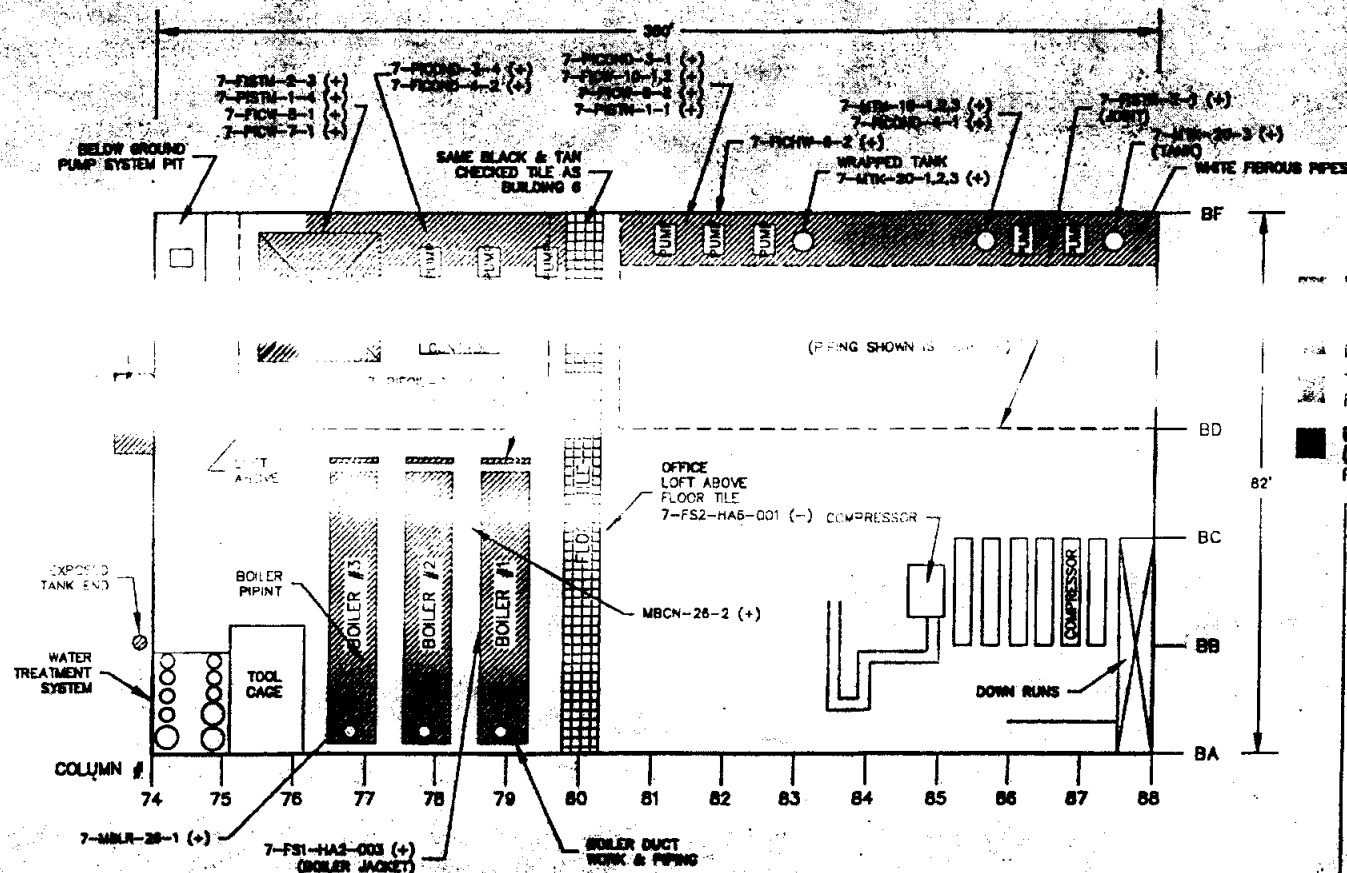
Sandy Baker
Reviewed and Approved

10/03/00
Date of Report



NOT TO SCALE

AFP-3 BUILDING 7 SKETCH 1



BUILDING 007 FLOOR PLAN (BOILER ROOM)

- PIPES RANGE FROM 3" TO 18"
- CHILLER LOFT - NEW PIPING INSTALLED APPROX. 1990 (NEWER YELLOW FIBROUS) (NO SACOM - CHILLER LOFT)
- BOILERS ARE INSULATED WITH WHITE FIBROUS INSULATION JACKETS INSIDE

NOTE: GREEN SHADING DENOTES PREVIOUS SURVEY BY
BALSON TECHNICAL SERVICES, INC. IN 1991.



A-E ENGINEERING AND
ENVIRONMENTAL SERVICES, INC.

SCALE:
NTS
APPROVED BY:
JRE

DATE:
3/1/99
DRAWN BY:
ALB

FIGURE NO.
007A
PROJECT NO.
1640-001

ASBESTOS SURVEY
BUILDING 007 FLOOR PLAN
BOILER ROOM
AIR FORCE PLANT NO. 3
TULSA, OKLAHOMA

- NEWER YELLOW FIBROUS PIPE
WHITE FIBROUS PIPE JOINT INSULATION
DUCT INSULATION (+)
TAN FIBROUS (CARDBOARD LIKE)
PIPE INSULATION (-)
BROWN FIBROUS (CARDBOARD LIKE)
((+)) INCONSISTENT
PIPE INSULATION (WHITE FIBROUS JOINT (+))

SAMPLE LEGEND

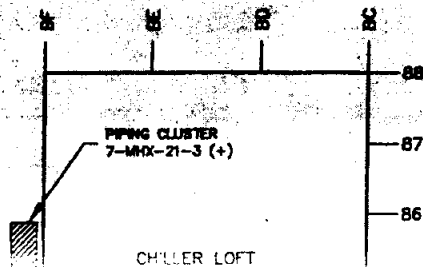
FUNCTIONAL SPACES (DENOTED BY PREFIX FS)

- FS-1 BOILER ROOM INTERIOR
FS-2 OFFICE LOFT

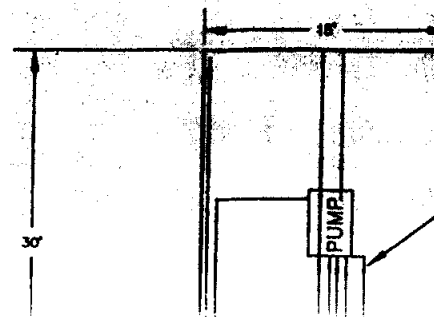
HOMOGENEOUS AREAS (DENOTED BY PREFIX HA)

- HA-1 NEWER YELLOW FIBROUS
(WHITE FOIL WRAP) (ASSUME -)
HA-2 WHITE FIBROUS DUCT, PIPE, BOILER,
JOINT INSULATION
HA-3 TAN FIBROUS (CARDBOARD LIKE) PIPE
INSULATION (BROWN WRAP)
HA-4 HEAT BLANKET VALVE WRAP
(WHITE FIBROUS)
HA-5 BROWN FIBROUS (CARDBOARD LIKE)
PIPE INSULATION
HA-6 6" X 6" WHITE FLOOR TILE WITH
BROWN STAIN

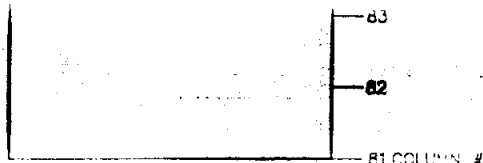
CHILLER LOFT



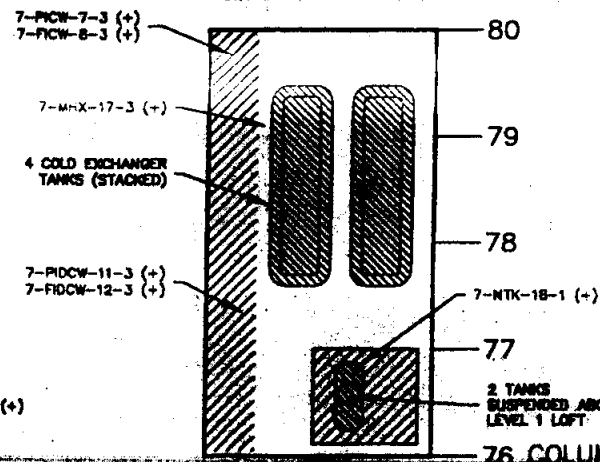
PUMP PIT (SOUTHWEST CORNER)



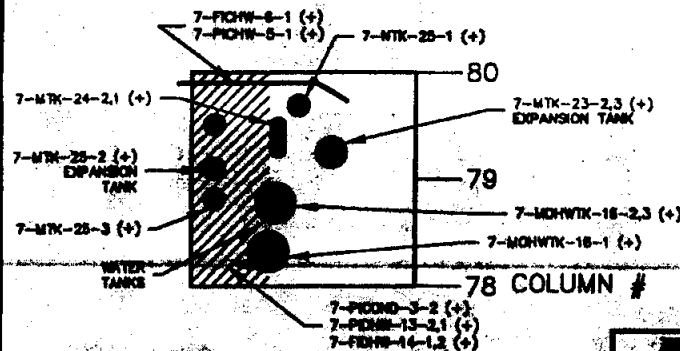
7-FIBOL-26-1 (WHITE FIBROUS JOINT) (+)
7-FIBOL-27-1 (+)



BELOW GROUND PIT



SOUTH LOFT LEVEL 2



SAMPLE LEGEND

FUNCTIONAL SPACES (DENOTED BY PREFIX FS)

- FS-1 BOILER ROOM INTERIOR
- FS-2 OFFICE LOFT

HOMOGENEOUS AREAS (DENOTED BY PREFIX HA)

- HA-1 NEVER YELLOW FIBROUS (WHITE FOIL WRAP) (ASSUME -)
- HA-2 WHITE FIBROUS DUCT, PIPE, BOILER JOINT INSULATION
- HA-3 TAN FIBROUS (CARDBOARD LIKE) PIPE INSULATION (BROWN WRAP)
- HA-4 HEAT BLANKET VALVE WRAP (WHITE FIBROUS)
- HA-5 BROWN FIBROUS (CARDBOARD LIKE) PIPE INSULATION
- HA-6 12"X12" WHITE FLOOR TILE WITH BROWN STREAKS
- HA-7 ROOF MATERIALS

BUILDING 007

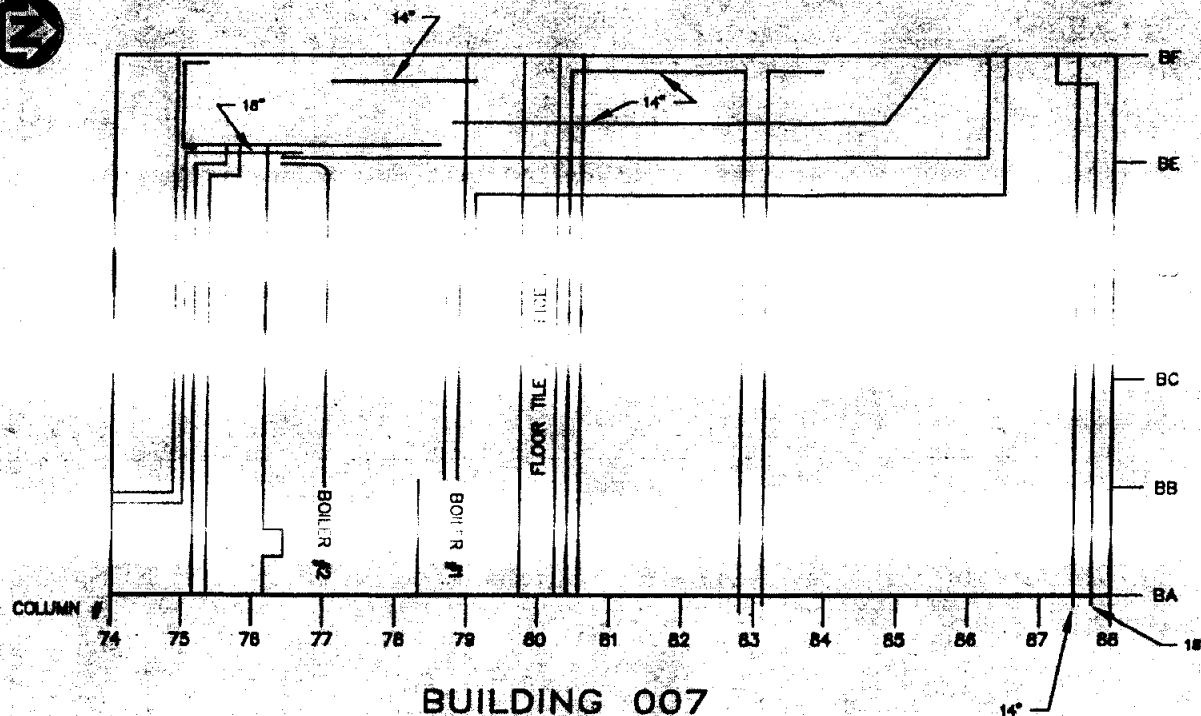
NOTE: GREEN TEXT DENOTES PREVIOUS SURVEY BY GALSON TECHNICAL SERVICES, INC. IN 1981.



A & M ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

SCALE	DATE	FIGURE NO.
MTS	3/1/89	007E
APPROVED BY:	DRAWN BY:	PROJECT NO.
JRE	ALB	1640-001

ASBESTOS SURVEY
BUILDING 007
PUMP PIT & LOFTS
AIR FORCE PLANT NO. 3
TULSA, OKLAHOMA



BUILDING 007 CEILING PLAN LAYOUT

- 50' CEILING
- ROOF - TAR/ FELT/ GRAVEL (ASSUME +)
- SAME ORANGE FIBROUS INSULATION ON WALLS & CEILING WITH METAL GRATING (SAME AS OTHER BUILDINGS, ASSUME -)

- NEWER YELLOW FIBROUS PIPE JOINT INSULATION (ASSUME -)
- DUCT INSULATION (+)
- TAN FIBROUS (CARDBOARD LIKE)
- BROWN FIBROUS (CARDBOARD LIKE) (+ INCONSISTENT)
- PIPE INSULATION (WHITE FIBROUS JOINT (+))

SAMPLE LEGEND	
FUNCTIONAL SPACES (DENOTED BY PREFIX FS)	
FS-1	BOILER ROOM INTERIOR
FS-2	OFFICE LOFT
HOMOGENEOUS AREAS (DENOTED BY PREFIX HA)	
HA-1	NEWER YELLOW FIBROUS (WHITE FOL WRAP) (ASSUME -)
HA-2	WHITE FIBROUS DUCT, PIPE, BOILER JOINT INSULATION
HA-3	TAN FIBROUS (CARDBOARD LIKE) PIPE INSULATION (BROWN WRAP)
HA-4	HEAT BLANKET VALVE WRAP (WHITE FIBROUS)
HA-5	BROWN FIBROUS (CARDBOARD LIKE) PIPE INSULATION
HA-6	12"x12" WHITE FLOOR TILE WITH BROWN STREAKS
HA-7	ROOF MATERIALS

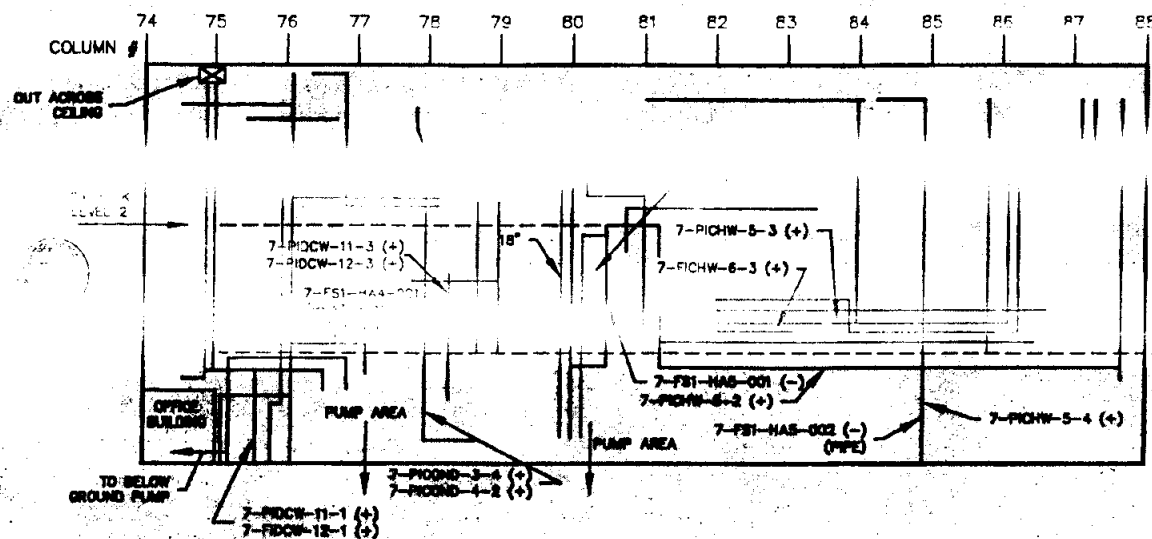
NOTE: GREEN TEXT DENOTES PREVIOUS SURVEY BY GALSON TECHNICAL SERVICES, INC. IN 1991.



A & M ENGINEERING AND
ENVIRONMENTAL SERVICES, INC.

SCALE:	DATE:	FIGURE NO.
NTS	3/1/99	007D
APPROVED BY:	DRAWN BY:	PROJECT NO.
ONE	ALB	1840-001

ASBESTOS SURVEY
BUILDING 007 CEILING
PLAN LAYOUT
AIR FORCE PLANT NO. 3
TULSA, OKLAHOMA



BUILDING 007 ELEVATION
WEST WALL ELEVATION

- NEWER YELLOW FIBROUS PIPE & JOINTS (POLY/WHITE WRAP) (ASSUME -)
- WHITE FIBROUS PIPE, JOINT, BOILER DUCT INSULATION (+)
- TAN FIBROUS (CARDBOARD LIKE) PIPE INSULATION (-)

(+ INCONSISTENT)
PIPE INSULATION (WHITE FIBROUS JOINT (+))

SAMPLE LEGEND	
FUNCTIONAL SPACES (DENOTED BY PREFIX FS)	
FS-1	BOILER ROOM INTERIOR
FS-2	OFFICE LOFT
HOMOGENEOUS AREAS (DENOTED BY PREFIX HA)	
HA-1	NEWER YELLOW FIBROUS (WHITE POLY WRAP) (ASSUME -)
HA-2	WHITE FIBROUS DUCT, PIPE, BOILER JOINT INSULATION
HA-3	TAN FIBROUS (CARDBOARD LIKE) PIPE INSULATION (BROWN WRAP)
HA-4	HEAT BLANKET VALVE WRAP (WHITE FIBROUS)
HA-5	BROWN FIBROUS (CARDBOARD LIKE) PIPE INSULATION
HA-6	GLASS WHITE FLOOR TILE WITH BROWN STREAKS
HA-7	ROOF MATERIALS

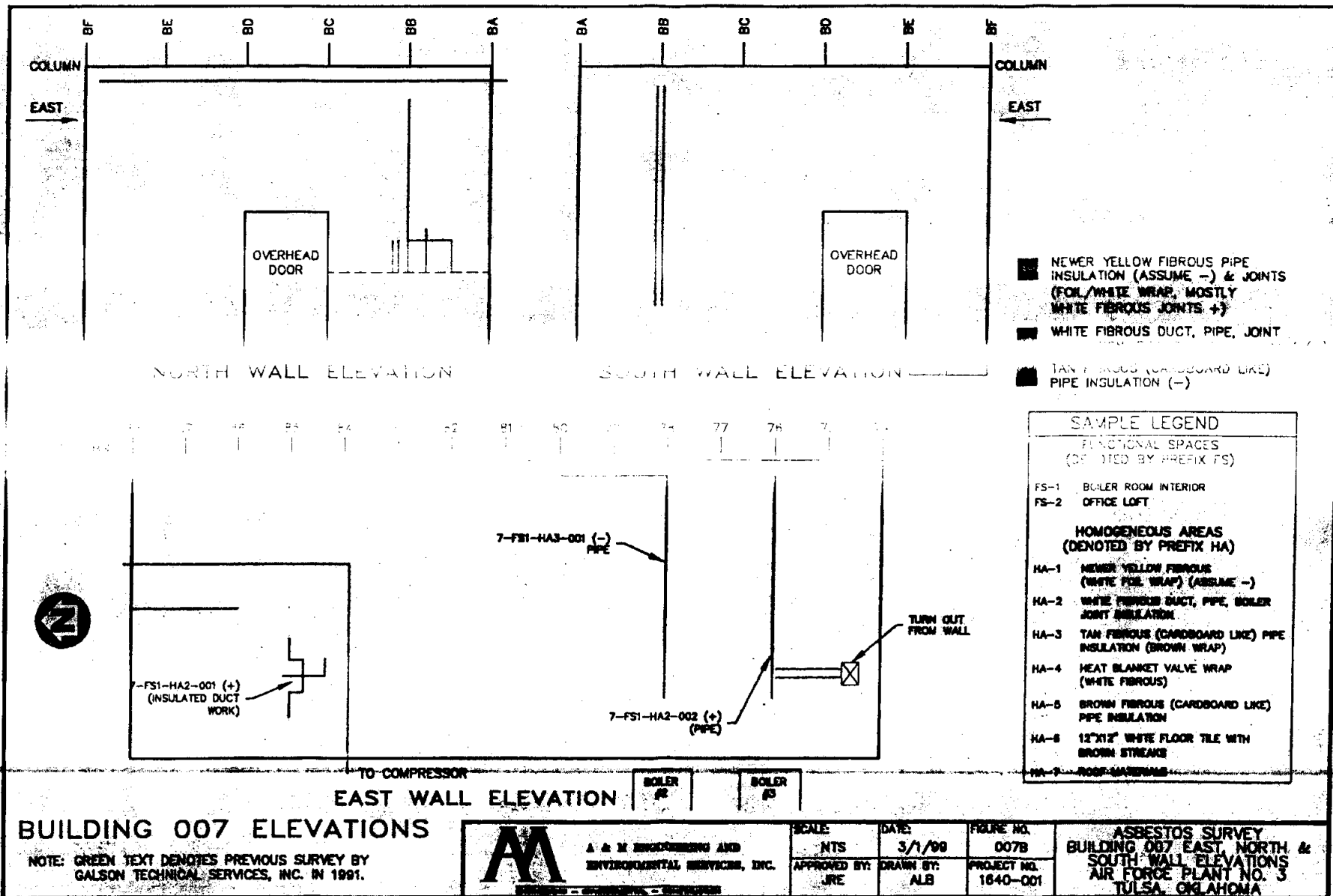
NOTE: GREEN TEXT DENOTES PREVIOUS SURVEY BY GALSON TECHNICAL SERVICES, INC. IN 1991.



A & M ENVIRONMENTAL SERVICES, INC.

DATE	3/1/99
APPROVED BY:	DRANN BY: AEB
FIGURE NO.	007C
PROJECT NO.	1840-001

ASBESTOS SURVEY
BUILDING 007 WEST
WALL ELEVATION
AIR FORCE PLANT NO. 3
TULSA, OKLAHOMA



Attachment "C"

Work Area

Dirty Room

Air Lock

Shower

Air Lock

Air Lock

Air Lock

Air Lock

Clean Room



Asbestos Project Checklist

☐ Initial Notification

☒ Revised Notification

☐ Emergency Notification

	NAME	ADDRESS	CITY	PHONE
Job Site:	Air Force Plant 3, Bldg 7	7777 E. Apache St.	Tulsa, OK	(918) 805-0292
Contractor:	Abatement Systems, Inc	PO Box 773	Broken Arrow, 74013	(918)251-2504
Site Owner:	Air Force Plant 3, Bldg 7	7777 E. Apache St.	Tulsa, OK	(918) 805-0292
Gen. Contractor:	Abatement Systems, Inc	PO Box 773	Broken Arrow, 74013	(918)251-2504
Project Designer:	Earth Tech Ent. Inc.	5409 E 15th St.	Tulsa, OK 74112	(918)712-9163
Air Monitoring Firm:	Earth Tech Ent. Inc.	5409 E 15th ST.	Tulsa, OK 74112	(918)712-9163
Air Monitoring Firm:				
Landfill:	Quarry Landfill	13720 E. 46th St. N.	Tulsa 74116	(918)437-7773
Hauler:	Abatement Systems, Inc.	PO Box 773	Broken Arrow 74013	(918)251-2504

MOBILIZATION DATE: 02/05/2025 SCHEDULED DATE OF ASBESTOS REMOVAL: 02/12/2025

PROJECT COMPLETION DATE: 12/31/2025 RENOVATION: ☒ DEMOLITION: ☐ EMERGENCY: ☐

TYPE AND PERCENTAGE ASBESTOS (ATTACH LAB REPORTS): 3% - 60% Chrysotile, 2%-30% Amosite, Bulk Samples with PLM.

AMOUNT OF ASBESTOS TO BE ABATED: 14,000 L.F. of Piping Insulation, 26,000 S.F. Boilers, Ducts and Vessels.

ABATEMENT TECHNIQUES: Gross removal inside negative pressure containments with wet methods, HEPA VACC and Glove Bags

SUBMITTALS NECESSARY BEFORE ABATEMENT MAY BEGIN. CHECK OFF ONLY THOSE ATTACHED TO THIS CHECKLIST OR WHICH ARE ON FILE AT THE OKLAHOMA DEPARTMENT OF LABOR.

☐ NESHAPS Notification (Copy)

Variances

☐ Project Specifications

☐ Bonds and/or Insurance Certificates

☐ Plans for Decontamination Facilities

☐ Respirator Program

☐ Employee Physicals

☐ Permission from owner for all rented vehicles/trailers used to haul asbestos-containing material.

_____ # of Mini-containments

_____ # of Glovebags

_____ # of Containments

_____ # of Phases

FEES

* \$1000.00 per containment

* \$350.00 per project not part of a definite containment

* \$350.00 per project with multiple glovebags or mini-containments,
plus \$10.00 per such glovebag or mini-containment

Comments: _____

Contractor/Responsible Party Signature

01/31/2025
Date



NOTIFICATION OF DEMOLITION AND RENOVATION

Date Received					
I. Type of Notification (O=Original R=Revised C=Canceled) R					
II. FACILITY INFORMATION (Identify owner, removal contractor, and other operator)					
Owner Name: City of Tulsa- Tulsa- Tulsa International Airport- AFP 3, Building 7					
Address: 7777 E. Apache St.					
City: Tulsa		State: OK		Zip:	
Contact: Michelle Barnett				Tel: 918-805-0292	
Removal Contractor: ABATEMENT SYSTEMS, INC.					
Address: P.O. BOX 773					
City: BROKEN ARROW		State: OK		Zip: 74013-0773	
Contact: Steve Fulps				Tel: 918-251-2504	
Other Operator:					
Address:					
City:		State:		Zip:	
Contact:				Tel:	
III. TYPE OF OPERATION (D=Demo O= Ordered Demo R=Renovation E=Emer. Renovation) R					
IV. IS ASBESTOS PRESENT? (Yes/No) Y					
V. FACILITY DESCRIPTION (Include building name, number and floor or room number)					
Bldg. Name: Air Force Plant 3 Building 7					
Address: 7777 E. Apache St.					
City: Tulsa		State: OK		County: Tulsa	
Site Location: Tulsa					
Building Size: 350 FT long X 82 FT wide		# of Floors: 2		Age (in years): 62	
Present Use: Vacant		Prior Use: Steam Plant			
VI. PROCEDURE, INCLUDING ANALYTICAL METHOD, IF APPROPRIATE, USED TO DETECT THE PRESENCE OF ASBESTOS MATERIAL:					
VII. NAME OF ACCREDITED INSPECTOR WHO PERFORMED INSPECTION AND SAMPLING, OKLAHOMA DOL LICENSE NUMBER: Daryl Lessin, AHA Lab #101358					
VIII. APPROXIMATE AMOUNT OF ASBESTOS INCLUDING:		Non-friable Asbestos Material To Be Removed		Indicate Unit of Measurement Below	
1. Regulated ACM to be Removed 2. Category I ACM Not Removed 3. Category II ACM Not Removed					
		RACM To Be Removed		UNIT	
Pipes		14,000 LF		LnFt: 14,000	Ln M:
Surface Area		26,000 SF		SqFt: 26,000	Sq M:
Vol. RACM Off Facility Component				CuFt:	Cu M:
IX. SCHEDULED DATES ASBESTOS REMOVAL (MM/DD/YY) Start:			Complete:		
X. SCHEDULED DATES DEMO/RENOVATION (MM/DD/YY) Start:			Complete:		

XI. DESCRIPTION OF PLANNED DEMOLITION OR RENOVATION WORK, AND METHOD(S) TO BE USED:

Gross removal inside negative pressure containments with wet methods, HEPA VACC, and Glove Bags.

XII. DESCRIPTION OF WORK PRACTICES AND ENGINEERING CONTROLS TO BE USED TO PREVENT EMISSIONS OF ASBESTOS AT THE DEMOLITION OR RENOVATION SITE:

Wet Methods, Containments, and HEPA VACC

XIII. WASTE TRANSPORTER #1

Name:

Address:

City:

State:

Zip:

Contact Person:

Tel:

WASTE TRANSPORTER #2

Name:

Address:

City:

State:

Zip:

Contact Person:

Tel:

XIV. WASTE DISPOSAL SITE

Name:

Address:

City:

State:

Zip:

Tel:

XV. IF DEMOLITION ORDERED BY A GOVERNMENT AGENCY, PLEASE IDENTIFY THE AGENCY BELOW:

Name:

Title:

Authority:

Date of Order (MM/DD/YYYY):

Date Ordered to Begin (MM/DD/YYYY):

XVI. FOR EMERGENCY RENOVATIONS:

Date and Hour of Emergency (MM/DD/YY):

Description of the sudden unexpected event:

Explanation of how the event caused unsafe conditions or would cause equipment damage or an unreasonable financial burden:

XVII. DESCRIPTION OF PROCEDURES TO BE FOLLOWED IN THE EVENT THAT UNEXPECTED ASBESTOS IS FOUND OR PREVIOUSLY NONFRIABLE ASBESTOS MATERIAL BECOMES CRUMBLD, PULVERIZED, OR REDUCED TO POWDER:

XVIII. I CERTIFY THAT AN INDIVIDUAL TRAINED IN THE PROVISIONS OF THIS REGULATION (40 CFR PART 61, SUBPART M) WILL BE ONSITE DURING THE DEMOLITION OR RENOVATION, AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON WILL BE AVAILABLE FOR INSPECTION DURING NORMAL BUSINESS HOURS.

(Signature of Owner/Operator)

(Print Name)

Steve Fulps, Vice-President

(Date) 1/9/25

XIX. I CERTIFY THAT THE ABOVE INFORMATION IS CORRECT:

(Signature of Owner/Operator)

(Print Name)

Steve Fulps, Vice-President

(Date) 1/9/25

Tulsa Health Department
Environmental Health Services
Asbestos Permit Section
5051 S. 129th E. Ave.
Tulsa, OK 74134
Telephone (918) 595-4200
Fax (918) 595-4359

Permit Number _____
Fee Paid Yes _____ No _____
Fee Waived Yes _____ No _____
Check Number _____
Receipt Number _____
Date Received _____

PERMIT APPLICATION TO OPERATE AN ASBESTOS DEMOLITION / RENOVATION PROJECT

Abatement Systems, Inc. purposes an asbestos demolition / renovation project at the following facility: Tulsa International Airport-Air Force Plant 3, Building 7 located at 7777 E Apache St. Tulsa, OK and, as required by the referenced regulations, hereby applies for a Permit to Operate this project. The work will be performed in accordance with 40 CFR Subpart M (NESHAP) and / or as specified in the enclosed attachments.

The asbestos demolition / renovation will be performed by Abatement Systems, Inc. under **Oklahoma State License Number** 110006 (copy filed). The projected start date for the asbestos removal is 2/3/2025 with completion expected by 12/31/2025

This application shall be signed at (1) by the Owner of the facility or his designated legally responsible Representative (*not the Contractor*), and at (2) by the licensed Contractor / Firm / Company responsible for the demolition / renovation project which involves the asbestos.

Signature:	(1) <u>Roger Acebo</u>	(2) <u>Steve Fulps</u>
Name:	<u>Roger Acebo</u>	<u>Steve Fulps</u>
Title:	<u>Facility Representative</u>	<u>Vice President</u>
Company:	<u>City of Tulsa</u>	<u>Abatement Systems, Inc.</u>
Address:	<u>100 Cincinnati Ave., Ste. 6</u>	<u>P.O. Box 773</u>
	<u>Tulsa, OK 74103</u>	<u>Broken Arrow, OK 74013-0773</u>
Telephone:	<u>918-805-0292</u>	<u>(918) 251-2504</u>

REFERENCES: City of Tulsa Clean Air Code, Title 17, Chapter 7, Section 712. County of Tulsa Clean Air Code, Section 712 (Under Authority of Title 63, Oklahoma Statutes).

**TULSA CITY-COUNTY HEALTH DEPARTMENT
PERMIT TO OPERATE AN ASBESTOS DEMOLITION / RENOVATION PROJECT**

This information must be submitted along with the "Permit Application to Operate an Asbestos Demolition/Renovation Project". You must **provide in detail, all requested information** before the Permit will be issued. Failure to comply will result in a Notice of Deficiency (NOD). You may not start your project until you have a Permit issued by this office. Failure to comply will result in a Notice of Violation (NOV) and possibly further legal action.

1. **Indicate Type of Project:** Demolition [] Renovation [☒] Planned Reno / O & M []

2. **Location (Facility/Building)** where project will occur:

Name of Facility/Building: Air Force Plant 3, Building 7

Street Address: 7777 S. Apache St.

City and Zip Code: Tulsa, OK

3. **Name of Facility/Building Owner:** City of Tulsa/ Air Force Plant 3, Building 7

Street Address (if different from 2): Same

City, Zip Code, and Phone: _____

4. **Contractor/Firm/Company performing asbestos demolition/renovation project:**

Name: ABATEMENT SYSTEMS, INC. Contact: Steve Fulps

Street Address: P.O. BOX 773

City, Zip Code, and Phone: BROKEN ARROW, OK 74013 (918) 251-2504

Oklahoma Department of Labor License Number: 110006

A copy of this license must be filed with the Tulsa city-County Health Department and updated yearly.

5. **Date project is to start:** 2/3/2025 **Date to be completed:** 12/31/2025

* *This is the date of the actual asbestos demolition/renovation. The removal may not start on any other date unless a written update is submitted no later than the original start date.*

6. **Description of Facility/Building/Structure** where project will occur (include dimensions, # floors, age current, and last use).

Building # 7, Air Force Plant # 3, Tulsa International Airport
350 Ft. Long X 82 Ft Wide- 2 Stories, 62 years old, vacant, former steam plant.

7. Describe, in detail, the method(s) to be used for the asbestos removal / demolition project (e.g. gross removal, scraping, etc.).

Gross removal inside negative pressure containments with wet methods, HEPA VACC
and Glove Bags.

8. List the type(s) and amount(s) of asbestos containing material(s) (ACM) present and describe how this (these) measurement(s) was (were) made:

Piping Insulation- 14,000 L.F. Boilers, Ducts, and Vessels 26,000 S.F.

3%-60% Chrysotile 2%-30% Amosite Bulk Samples with PLM

9. Describe the procedures which will be used to comply with the NESHAP requirements (e.g. adequate wetting, containment, etc.).

Wet Methods, Containments, HEPA VACC

10. Describe how the ACM will be collected and transported (e.g. placed in bags, containers, boxes, wrapped, closed truck, etc.).

ACM will be placed in double 6 mil sbestos labeled bags and placed in a lined, enclosed container.

11. Name, address, and phone of licensed ACM waste Hauler (if other than contractor listed previously).

N/A

12. Name, address, and phone of authorized and licensed waste disposal site:

QUARRY LANDFILL

4041 N. 141ST. E. AVE. - TULSA, OK 74116

(918) 437-7773

Oklahoma Department of Labor



Abatement Systems Inc

Know Ye That Abatement Systems Inc has filed in the office of the Commissioner of Labor of the State of Oklahoma an Application to Remove Friable Asbestos Material in accordance with Title 40 OS 1982 Section 451 thru 456.

Now, Therefore, The Commissioner of Labor of the State of Oklahoma by virtue of the Power vested in and the duties imposed upon him by law, does hereby authorize and License said Abatement Systems Inc to operate as an Asbestos Contractor at P O Box 773 in the City of Broken Arrow State of Oklahoma.

LICENSE NO: 110006

EXPIRES: October 31, 2025

In Testimony Whereof, the Commissioner of Labor has caused the seal of said Department to be affixed. Done at Oklahoma City, Oklahoma, on October 31, 2024.

Leslie Osborn

Leslie Osborn

Commissioner of Labor

This license is valid only when asbestos abatement is being performed under the responsibility of Steve Fulp & Jon Summers.

Certificate of Training

OKLAHOMA ASBESTOS TRAINING INSTITUTE

2301 S. SHERIDAN ROAD, SUITE #B
TULSA, OK 74129 (918) 749-3390

This is to certify that

Jon M. Sumners
7437

has completed the

Asbestos Inspector Refresher Course
(4 hour course)

and has passed all applicable and practical examinations
for the requisite training for asbestos accreditation under TSCA Title II



Course Director

October 23, 2024

Exam Date

October 23, 2024

Course Date

October 23, 2025

Expiration Date

1023202401



Certificate of Training

OKLAHOMA ASBESTOS TRAINING INSTITUTE

2301 S. SHERIDAN ROAD, SUITE #B
TULSA, OK 74129 (918) 749-3390

This is to certify that

Jon M. Sumners
7437

has completed the

Asbestos Inspector Refresher Course
(4 hour course)

and has passed all applicable and practical examinations
for the requisite training for asbestos accreditation under TSCA Title II



Course Director

October 23, 2024

Course Date

1023202401

October 23, 2024

October 23, 2025

Exam Date

Expiration Date



M·E·T·A

Mayhew Environmental Training Associates

I N C O R P O R A T E D

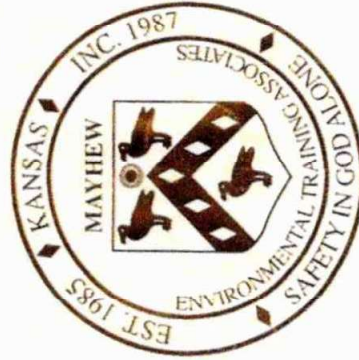
Certificate # CZM0RDHQV5

Jon M. Sumners

has on 10/18/2024, in Lawrence, KS via Zoom completed the requirements for asbestos accreditation under Section 206 of TSCA Title II, 15 USC 2646

Asbestos Supervisor Refresher

as approved by KS & the US EPA under 40 CFR 763 (AHERA)
on 10/18/2024 - 10/18/2024 and passed the associated exam on 10/18/2024 with a score of at least 70%



Thomas Brennan
Instructor

SSN: XXX-XX-7437

Expiration: 10/18/2025

P.O. Box 786 - Lawrence, KS. 66044 - 800.444.6382

www.metaenvironmental.net

Thomas Mayhew
President

Certificate of Training

OKLAHOMA ASBESTOS TRAINING INSTITUTE

2301 S. SHERIDAN ROAD, SUITE #B
TULSA, OK 74129 (918) 749-3390

This is to certify that

Jon M. Sumners
7437

has completed the

Asbestos Contractor/Supervisor Refresher Course
(8-hour course)

and has passed all applicable and practical examinations
for the requisite training for asbestos accreditation under TSCA Title II

October 7, 2024

Course Date

October 7, 2025

Expiration Date

1007202401

Course Director

October 7, 2024

Exam Date



Certificate of Training

OKLAHOMA ASBESTOS TRAINING INSTITUTE

2301 S. SHERIDAN ROAD, STE B
TULSA, OK 74129

This is to certify that

Steve Fulps
1612

has completed the

Asbestos Project Designer Refresher Course
(8 hour course)

and has passed all applicable and practical examinations
for the requisite training for asbestos accreditation under TSCA Title II



Course Director

October 8, 2024

Course Date

1008202401

October 8, 2024

Exam Date

October 8, 2025

Expiration Date



Certificate of Training

OKLAHOMA ASBESTOS TRAINING INSTITUTE

2301 S. SHERIDAN ROAD, SUITE #B
TULSA, OK 74129 (918) 749-3390

This is to certify that

Steve Fulps
1612

has completed the

Asbestos Contractor/Supervisor Refresher Course
(8-hour course)

and has passed all applicable and practical examinations
for the requisite training for asbestos accreditation under TSCA Title II



Course Director

October 7, 2024

Exam Date

October 7, 2024

Course Date

October 7, 2025

Expiration Date

1007202402



Certificate of Training

OKLAHOMA ASBESTOS TRAINING INSTITUTE

2301 S. SHERIDAN ROAD, SUITE #B
TULSA, OK 74129 (918) 749-3390

This is to certify that

Tyler J. Fulps
9977

has completed the

Asbestos Contractor/Supervisor Refresher Course
(8-hour course)

and has passed all applicable and practical examinations
for the requisite training for asbestos accreditation under TSCA Title II



Course Director

December 5, 2024

Course Date

1205202401

December 5, 2024

Exam Date

December 5, 2025

Expiration Date



Oklahoma Department of Labor



Leslie Osborn
COMMISSIONER OF LABOR

Abatement Systems
P.O. Box 773
Broken Arrow, OK 74013-0773

Licensee **Tyler Fulps**
License Number **403155**
Fee **\$50.00**

Enclosed is your Asbestos Card. It is issued in accordance with Title 40 Oklahoma Statutes 1993, Sections 450 through 456 and the Rules thereto.

- ⌘ Worker/Supervisor Abatement license can only be used under the direction of a licensed Contractor.
- ⌘ Worker/Supervisor Abatement or Inspector license must be carried on your person (i.e. immediately available) while on the job site.

You will not be notified prior to its expiration. It is renewable in person or by mail. You must provide an application, training certificate, a copy of your driver's license and social security card, along with a check or money order, unless you are exempt from fee. Photographs will be taken every 10 years, at that time you must return to the Oklahoma Department of Labor office.

Respectfully,

Licensing Division
Oklahoma Department of Labor

Oklahoma Department of Labor Asbestos License

This certifies that **Tyler Fulps**
has successfully met the certification requirements under
the Oklahoma Asbestos Control Act 40 O.S. § 450, et seq.
Abatement of Friable Asbestos Materials Rules OAC
380:50 in the following:

Supervisor

Leslie Osborn
Leslie Osborn
Labor Commissioner



License #: 403155

Expires: 12/05/2025

Issued: 12/20/2024

Not intended for identification purposes

Certificate of Training

OKLAHOMA ASBESTOS TRAINING INSTITUTE

2301 S. SHERIDAN ROAD, SUITE #B
TULSA, OK 74129 (918) 749-3390

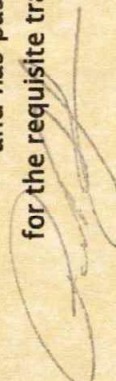
This is to certify that

Joe Stevenson Jr.
2717

has completed the

Asbestos Contractor/Supervisor Refresher Course
(8-hour course)

and has passed all applicable and practical examinations
for the requisite training for asbestos accreditation under TSCA Title II



Course Director

November 4, 2024

Course Date

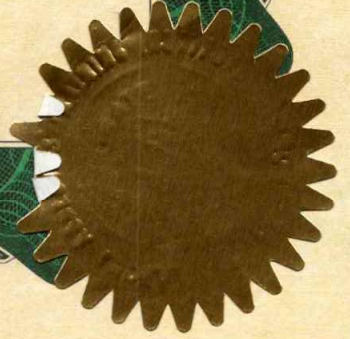
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November 4, 2024

Exam Date

November 4, 2025

Expiration Date



Oklahoma Department of Labor



Leslie Osborn
COMMISSIONER OF LABOR

Abatement Systems Inc
P O Box 773
Broken Arrow, OK 74013-

Licensee	Joe Stevenson, Jr.
License Number	264027
Fee	\$50.00

Enclosed is your Asbestos Card. It is issued in accordance with Title 40 Oklahoma Statutes 1993, Sections 450 through 456 and the Rules thereto.

- ⌘ Worker/Supervisor Abatement license can only be used under the direction of a licensed Contractor.
- ⌘ Worker/Supervisor Abatement or Inspector license must be carried on your person (i.e. immediately available) while on the job site.

You will not be notified prior to its expiration. It is renewable in person or by mail. You must provide an application, training certificate, a copy of your driver's license and social security card, along with a check or money order, unless you are exempt from fee. Photographs will be taken every 10 years, at that time you must return to the Oklahoma Department of Labor office.

Respectfully,

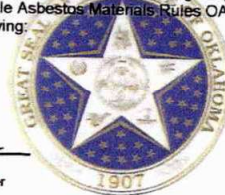
Licensing Division
Oklahoma Department of Labor

Oklahoma Department of Labor Asbestos License

This certifies that **Joe Stevenson, Jr.**
has successfully met the certification requirements under
the Oklahoma Asbestos Control Act 40 O.S. § 450, et seq.
Abatement of Friable Asbestos Materials Rules OAC
380:50 in the following:

Supervisor

Leslie Osborn
Leslie Osborn
Labor Commissioner



License #: 264027

Expires: 11/04/2025

Issued: 11/06/2024

Not intended for identification purposes

Health & Safety Program

FOR

**CITY OF TULSA
175 E. 2ND ST., SUITE 1300
TULSA, OK 74103**

**PROJECT: TULSA INTERNATIONAL AIRPORT-
AIR FORCE PLANT 3- BUILDING 7 CLEAN-UP
P.O. #252014**

**ABATEMENT SYSTEMS, INC.
2400 EAST COLLEGE
P.O. BOX 773
BROKEN ARROW, OK. 74013
(918) 251-2504 / (800) 256-2096**

ABATEMENT SYSTEMS, INC.

Health and Safety Program (HASP) Project Overview:

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Health and Safety Program (HASP) Project Overview:

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ABATEMENT SYSTEMS, INC.

Health and Safety Program (HASP) Project Overview:

The intent of Abatement Systems, Inc. is to maintain a safe work place for the employee. Due to the variety and hazardous nature of most of ASI's projects and the associated health risks, safety is the primary concern on all projects.

All ASI management and supervision will make safety their first priority. Each project will be individually evaluated for hazards and risks. Based on this evaluation, the best safety plan possible will be developed. Each safety program will be continually evaluated and refined as site information is developed.

This health and safety program is an ongoing project. As new technology and methods are developed, they will be evaluated and added as applicable. Safety and training will be stressed to all employees on a daily basis.

1.0: Respiratory Protection.

The complete respiratory protection program as required by OSHA regulations is contained under a separate cover. The intent of the respiratory protection program is to provide the employee with the maximum protection from airborne contaminants. A general guide for the use of the respiratory protection program is set forth below.

- 1.1 Each work site will be evaluated for respiratory health hazards.
- 1.2 An appropriate level of respiratory protection will be selected based on site evaluation.
- 1.3 Where insufficient site information exists, worst case will be used for the selection process.
- 1.4 Levels of protection will be adjusted based on daily site environmental and personal monitoring.
- 1.5 All personnel wearing a respirator will be medically evaluated for ability to wear a respirator. The medical evaluation will include a complete medical history, pulmonary function test, chest x-ray and a physician's opinion on the employee's ability to wear a respirator.
- 1.6 Medical evaluation will be repeated on a yearly basis. At the end of employment, the employee will be provided with a final medical evaluation.

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2.0 Standard Operating Procedures. (SOP)

2.1 Overview: The following SOPs are intended to provide a general outline of the standard methods used to provide a safe work place for Abatement Systems, Inc.'s employees. Generally, a site specific procedure will be developed which will take into account specific site conditions, hazards and required remediation goals. In some instances, SOPs are contained in a separate cover due to the depth and breadth of the remediation methods involved.

2.2 Asbestos. Asbestos containing material (ACM) may be encountered in many varying locations in hundreds of varying materials. There are a large number of remediation methods available for dealing with ACM. The standard operating procedures are contained in a separate manual (see the Asbestos Project Design). The following SOP will be used should unexpected ACM be encountered.

2.2.1. Upon encountering unexpected ACM, employees will notify the site safety officer immediately. The ACM will not be disturbed until a hazard assessment is made and a course of action determined.

2.2.2. Where ACM is spilled, damaged or disturbed, employees wearing appropriate personal protective equipment and air purifying respirators will wet the ACM with amended water. Appropriate engineering controls will be implemented and the material cleaned up.

2.2.3. Where ACM is left in place, appropriate warning signs or tapes will be posted. All employees will be advised of the location of the material and the level of hazard.

2.3 Leaking Underground Storage Tanks. (LUSTs)

The LUST problem presents a multiple set of problems. The two primary problems are the contamination from the vessel and the removal of the vessel itself. No vessel removal will be done until the type and extent of contamination is determined. The following steps will be used to develop a site specific work plan.

2.3.1. Define the problem.

2.3.2. Define potential solutions.

2.3.3. Evaluate potential solutions.

2.3.4. Selection of the best solution.

2.3.5. Develop a site specific work plan.

2.3.6. Implement the work plan.

2.4 Tank Removal Protocol.

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Removal of the vessel must be carefully planned due to the serious health and safety hazards posed by contaminated soil. Most hydrocarbons are carcinogenic. Most will explode at relatively low levels in air. All are capable of displacing sufficient oxygen in air to render it unbreathable. The following steps will be used to safely remove a vessel.

- 2.4.1 Open the tank vents and access ports.
- 2.4.2 Drain the tank.
- 2.4.3 Purge the tank with inert gas.
- 2.4.4 If access to the inside can be safely gained, enter the tank and clean out all contaminants using proper personal protective equipment for access to confined spaces.
- 2.4.5 Determine the appropriate personal protective equipment for site personnel.
- 2.4.6 Don PPE and carefully excavate the soil surrounding the vessel.
- 2.4.7 Pull the vessel and dispose of.
- 2.4.8 Implement the predetermined site clean-up plan.
- 2.4.9 Close the site or install new vessels.

2.5 Soil Clean Up.

A site clean-up program is generally developed from site evaluation data. There are a number of remediation technologies available based on the type and level of contamination and the desired level of clean-up. The following procedure will be used to develop a site clean-up plan.

- 2.5.1 Define the problem.
- 2.5.2 Perform a site evaluation and required environmental testing.
- 2.5.3 Evaluate site information and analytical results.
- 2.5.4 Define potential solutions.
- 2.5.5 Evaluate potential solutions.
- 2.5.6 Select the best solution.

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2.5.7 Develop a site specific work plan.

2.5.8 Implement the work plan.

2.6 PCB Spills.

Occasionally an electrical component will break spilling a quantity of PCB containing materials. In such cases health risks are associated with the ingestion rather than the inhalation of the material. Therefore this type of PCB spill is not inherently dangerous. The following procedure is designed for small scale spills.

2.6.1 Wearing protective clothing and a respirator, employees will stop the flow of material using dry absorbent or sand to soak up the oil.

2.6.2 Care should be taken with outdoor spills to minimize overland run off or contamination of water bodies. In wet weather the spill should be quickly stabilized then covered with polyethylene sheeting. Indoor spills should be kept away from sewer openings and floor drains.

2.6.3 The absorbent material will be gathered into a 30mil plastic bag. Care will be taken not to overfill the bag. The neck of the bag will be twisted shut and taped. The sealed bag will be placed in a second bag and sealed.

2.6.4 A large enough area will be excavated to ensure that all contaminated material is removed.

2.6.5 PCB oil on non disposable surfaces will be removed using an oil solvent. Recommendations on the solvent MSDS sheet will be followed in the use of the oil solvent.

2.6.6 Should the solvent leave a residue, the residue will be removed using soap and water.

2.6.7 All solvent and soap and water will be soaked up with rags. All rags will be treated as contaminated material.

2.6.8 All bags of contaminated material will be disposed of at a licensed hazardous waste disposal site.

2.7 Confined Space Entry.

An enclosed space which is large enough and so configured that an employee can bodily enter and perform work, has limited or restricted means for entry or exit, is not designed for continuous employee occupancy, and has one or more of the following characteristics:

1. Contains a potentially hazardous atmosphere.

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2. Contains a material with the potential for suffocation of an entrant.
3. Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls, or a floor which slopes downward and tapers to a smaller cross-section.
4. Or contains any other recognized safety or health hazard.

2.7.1 No entry shall be permitted into a confined space except as outlined in this section.

2.7.2 Personnel required to enter a confined space shall be required to obtain a permit (attachment) authorizing the entry. A new permit shall be obtained at the start of each work shift during which confined space entry will be required.

2.7.3 Prior to entry, the atmosphere of the confined space shall be tested for oxygen content, explosibility, and toxic chemicals. Monitoring shall be continuously conducted while the confined space is occupied.

2.7.4 Testing and monitoring shall be conducted by a qualified person under the direction of an Industrial Hygienist.

2.7.5 Equipment required to conduct the testing and monitoring shall consist of the following:

1. Combination oxygen/combustible gas meter with monitoring capabilities for a toxic substance such as hydrogen sulfide.

2. A photo ionization detector (PID) for the monitoring of ionizable compounds.

3. Detector tubes appropriate for the suspected contaminants within the confined space.

2.7.6 A person trained in emergency rescue and assigned to remain on the outside of the confined space and to be in communication with those working inside shall be designated as the standby person and have primary responsibility to perform emergency rescue. Rescue procedures shall be specifically designed for each confined space entry and recorded on the permit.

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2.7.7 Minimum equipment required on site, while the confined space is occupied, to perform emergency rescue shall consist of the following:

1. A supplied air respirator or a self-contained breathing apparatus (SCBA).
2. A harness with attached lifeline.
3. Tripod if the confined space is more than six feet deep.

2.7.8 No person shall enter a confined space until they have been trained in the hazards associated with the confined space and informed of the emergency rescue procedures.

2.8 Small Scale Short Duration Lead Based Paint (LBP) Removal.

The goal of any lead paint abatement project is to provide an environment relatively free of lead contamination. The following protocol is designed for small scale or spot removals.

- 2.8.1** The HVAC system will be shut down and locked out in the work area.
- 2.8.2** Back ground air monitoring will be conducted to establish a base line of data.
- 2.8.3** Access to the work area will be restricted by securing doors and entry points with hazard warning barrier tape. Warning signs will be posted at all access points.
- 2.8.4** Workers wearing personal protective equipment consisting of disposable coveralls, head covering, foot coverings, rubber gloves and a air purifying respirator will enter the work area. All doors, windows and HVAC vents will be sealed with critical barriers of 6mil poly.
- 2.8.5** All surfaces in the immediate work area will be vacuumed with HEPA filtered equipment to remove any lead dust.
- 2.8.6** A chemical stripping agent such as Peel Away will be applied to the areas of LBP designated for removal.
- 2.8.7** The chemical stripping agent will be removed following the required waiting time. Care will be taken during the removal process not to create or release lead dust.
- 2.8.8** The abated surface will be vacuumed with a HEPA filtered vacuum. The surface will be washed and neutralized with soap and water.
- 2.8.9** Personal air monitoring will be conducted on each worker involved in removal work. An area sample will be taken for clearance evaluation.

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2.8.10 All barriers and signs will be removed. The HVAC will be reactivated.

2.8.11 All waste rags, disposable clothing, poly, etc. will be disposed of as contaminated material.

3.0 Responsibilities and Authority of Safety and Health Personnel.

- 3.1 Industrial Hygienist (IH): The IH shall be responsible for the oversight of the implementation of the site safety and health program (SSHP). The IH will report directly to the project administrator. Any deviation from the SSHP will be approved by the IH.
- 3.2 Site Safety and Health Officer (SSHO): The SSHO will be responsible for the implementation of the SSHP. The SSHO will oversee the site specific safety training, use of personal protective equipment, air monitoring and record keeping. Changes in the SSHP will be coordinated with the IH.
- 3.3 Designated Emergency Response Person (DERP): The DERP will be trained in first aid/CPR by the American Red Cross or equivalent agency. The DERP will be onsite during all operations. The DERP will be responsible to the SSHO.
- 3.4 Site Emergency Coordinator (SEC): The SEC will be responsible for implementing the site emergency plan should conditions arise requiring an emergency response. The SEC is responsible for evacuation, treatment, or emergency transportation as well as notification of emergency response agencies.
- 3.5 Chain of Command:

Project Administrator

Industrial Hygienist

Project Superintendent

Site Safety and Health Officer

Designated Emergency Response Person

Site Emergency Coordinator

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4.0 Hazard Analysis and Risk Analysis

Abatement Systems, Inc. encounters a wide variety of hazards due to the variety of projects undertaken. A specific analysis will be prepared for each project. A general overview is set forth below.

- 4.1 Chemical Characterization:** A variety of chemical hazards potentially exist on any project involving contaminated soil, storage vessels or drum removal. Chemicals encountered may have primary routes of entry through inhalation, ingestion or contact. Where ever possible, records of previous vessel contents or materials used will be obtained to help identify the types of material to be encountered.
- 4.2 Chemical Risk Evaluation:** It is not possible to discuss the specific toxicity or toxic action of all chemical compounds which may be encountered on a given site. An insight to the toxicity classes is given in table one. A comparison of toxicity ratings can be made to common compounds.

Table 1
Chemical Hazard Evaluation

Site Specific Compound	Threshold Limit Value (TLV)	Permissible Exposure Limit (PEL)	Route of Entry
<u>Extremely Toxic</u>			<u>Nicotine</u>
Benzine	10 ppm	1 ppm	Ih,Ig,Cn,Ab
Lead	.15 mg/m3	.05 mg/m3	Ih,Ig,Cn
<u>Highly Toxic</u>			<u>Paration</u>
<u>Moderately Toxic</u>			<u>DDT</u>
Ethyl benzine	100 ppm	100 ppm	Ih,Ig,Cn
Toluene	100 ppm	100 ppm	Ih,Ig,Cn,Ab
Xylene	100 ppm	100 ppm	Ih,Ig,Cn,Ab
<u>Slightly Toxic</u>			<u>Salt</u>
Diesel Fuel	N/A	N/A	Ih,Ig,Cn
Gasoline	300 ppm	N/A	Ih,Ig,Cn
<u>Non Toxic</u>			<u>Ethyl Alcohol</u>
<u>Harmless</u>			<u>Oil</u>

- 4.3 Biological:** A variety of biological hazards may be encountered which include insects, ticks, mosquitoes, scorpions, centipedes, poisonous snakes, and predatory sea life. All

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employees will be made aware of site specific hazards. Emergency procedures for snake bite are included as an appendix to the emergency response section.

- 4.4 Equipment:** Use of excavation and heavy equipment present inherent safety hazards. Any employee operating equipment will be fully trained in the use of that equipment. Where necessary, licenses or certifications will be required. All equipment will be inspected for mechanical condition at the beginning of each shift. Equipment found to need maintenance will be downed until the unsafe condition can be repaired.

5.0 Action Levels: will be based on the following criteria.

- 5.1 Oxygen/Explosibility:**
(I) Ten (10) percent of the lower explosive limit (LEL) for combustible gasses.
(II) Less than 19.5 percent or greater than 23 percent for oxygen.
- 5.2 Chemical:** One half the published threshold limit value (TVL) or permissible exposure limit (PEL), or a value of 10 photo ionization detector (PID) units above background when using a PID.
- 5.3 Physical:** Work/rest schedules for heat stress will be determined using the most current published American Conference of Governmental Industrial Hygienists (ACGIH) heat stress standards when wearing level D personal protective equipment.

6.0 Personnel Training:

All personnel placed on a specific project site will be required to complete the appropriate training programs. Employees on asbestos projects will complete the EPA/AHERA certified asbestos workers course. Employees will complete the OSHA 40 Hour Hazardous Waste Operations Training Program.

- 6.1 Supervisor Training:** Where required, supervisory personnel will complete the additional EPA/OSHA mandated supervisors training. All supervisors will be capable of imparting their training to subordinate personnel.
- 6.2 Field Training:** All employees placed on a site will be given site specific training for the project. Site training will include safety, emergency, site hazards, personal protective equipment requirements, project methods and procedures. Site training will be documented on the form found in the appendix section.

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7.0 Personal Protective Equipment (PPE):

The project administrator in conjunction with the site safety and health personnel will select PPE appropriate for the project. The sole purpose for PPE is to provide the maximum worker protection while allowing comfortable performance of job tasks. To this end each employee will be required to fully comply with the level of PPE specified.

- 7.1 **Supply of PPE:** The company will supply all PPE required for the project. Equipment may include hard hats, safety glasses, protective clothing including head and foot coverings and air purifying respirators.
- 7.2 **Maintenance of PPE:** Employees will be expected to maintain their PPE in good condition. Where professional maintenance is required, the company will make provision for the maintenance.

8.0 Medical Surveillance

- 8.1 **Medical Surveillance Program:** The company will provide each employee with an annual in depth physical examination. At a minimum the examination will include a medical history, pulmonary function tests, required chest x-rays, and a physicians interpretation of the employees ability to wear an air purifying respirator. As required, the examination may include blood chemistry with blood count, urinalysis, audio gram and testing for heavy metals.
- 8.2 **Medical Surveillance:** All medical surveillance will be reviewed by a licensed physician who is certified in occupational medicine by the American Board of Preventive Medicine.
- 8.3 **Certification:** Employee participation in the medical surveillance program shall be a part of their permanent medical record and will include the date of last examination, name of physician, and will be provided to any site employee upon request.

9.0 Exposure Monitoring:

- 9.1 **Asbestos Monitoring:** A site specific air monitoring protocol will be established for each asbestos project. At a minimum, background sampling will be conducted to establish baseline data. A minimum of twenty-five percent of personnel will be used for OSHA compliance personnel monitoring. Personnel monitoring will be conducted in the breathing zone.
- 9.2 **Photo Ionization Detector (PID):** A PID will be used to continuously monitor employee exposure to ionizable chemicals during any excavation or disturbance of a chemical site. All monitoring will be done in the employee breathing zone.
- 9.3 **Combustible Gas/Oxygen Deficiency:** A combination combustible gas/oxygen meter will be used to monitor for concentrations of combustible gas and oxygen content. Monitoring shall be conducted continuously in the area where employees are working.

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An action level of either 10% of the lower explosive limit or less than 19.5% or greater than 23% oxygen will require evacuation of the site.

- 9.4 **Heat Stress:** A standard mercury-in-glass thermometer or wet bulb globe thermometer (WBGT) will be used to monitor employee exposure to heat stress. An action level and work/rest regimen being based on the latest published values of the American Conference of Governmental Industrial Hygienists. Monitoring for heat stress will begin at 70 degrees F.

10.0 Site Control Measures.

- 10.1 **Site map:** Where feasible, a site specific map will be obtained.

- 10.2 **Work Zone Delineation and Access Points:** The delineation of the site and access points determinations will consist of the following.

10.2.1 **Exclusion zone:** The exclusion zone shall be established around the actual work area or equipment being used on a site specific basis as determined by the project administrator and exclusion zone will be marked with safety staff. The printed hazard tape.

10.2.2 **Control Zone:** The control zone (contamination reduction zone) will consist of a site specific work area just outside the exclusion zone. This zone is considered a non-contaminated zone.

10.2.3 **Support Zone:** The support zone is a staging area. A log book will be kept of all personnel entering or leaving the site.

10.2.4 **Communications:** A site specific form of communications will be selected for each project site. Provision will be made for immediate communications for emergency management.

10.2.5 **Site Security:** Site security will be provided on a site specific selection.

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11.0 Emergency Response Plan

11.1 Emergency Equipment and First Aid: The following items will be available on-site for immediate use in the event of an emergency.

11.1.1: First aid equipment and supplies approved by the physician responsible for medical monitoring of company personnel.

11.1.2: Emergency use respirator, SCBA, for worst case usage.

11.1.3: Spill control materials and equipment.

11.1.4: Fire extinguisher, 10 pound, type ABC.

11.2 Emergency Response and Contingency Procedures

11.2.1 Emergency Response: In the event of an incident involving the release of contaminants, fire, injury or other related occurrences, the site safety and health office will coordinate initial activities until the appropriate emergency response personnel arrive. Communications with response services will be conducted by the site safety and health office followed by notification of, as events allow, the project administrator.

11.2.2 Emergency Plan: An emergency plan is required by 29 CFR 1910.120, to be available for use and be posted in the support zone on each site. An example is included in the appendix.

12.0 Substance Abuse

12.1 Overview: It is the ongoing intent of Abatement Systems, Inc. to provide the employee with the safest work place possible. In keeping with this policy, A.S.I. feels that the use of drugs or alcohol in the work place is not conducive to worker safety. Therefore, A.S.I. will maintain the following policies.

12.2 Possession of Alcohol/Controlled Substances: No employee will possess any controlled substance or alcohol in the work place. Any employee found with a controlled substance, alcohol, or to be intoxicated/impaired in the work place will be immediately removed and placed on suspension. Corrective or disciplinary action will be taken as determined by management.

12.3 Prescription Medication: Any employee using a prescription medication is required to submit a physician's statement to his supervisor. The statement should include a description of any side effect which may affect the employee's performance.

12.4 Testing: All employees will be subject to drug testing on a random basis as determined by management. Any employee testing positive for drugs/alcohol will be placed on suspension pending management review.

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12.4.1 Any employee involved in an injury accident will be required to test for drugs/alcohol.

12.5 Employee Assistance: Should an employee voluntarily place himself on suspension due to chemical dependency and request assistance, the company will work with the employee to find placement in a chemical dependency program.

12.6 Removal From the Work Place: Any employee determined to be intoxicated/impaired will be removed from the work place. The employee will be provided transportation by the company and will be advised not to operate a vehicle.

12.7 A full copy of the Anti-Drug Program is included in the appendix.

13.0 Record Keeping

13.1 Logs: The following logs and records will be completed and submitted to the project administrator. All logs and records will become part of the permanent project record.

- Foreman's Daily Log
- Training Logs
- Safety Logs
- Employee/Visitor Logs
- Personnel and Environmental
- Sampling Logs

13.2 Reports: The following reports will be submitted as required by applicable OSHA regulations.

- All medical monitoring records of employees obtained after site work begins.
- Any OSHA reportable accident.

13.3 Record Keeping: All record keeping shall be in accordance with all applicable OSHA and EPA regulations.

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APPENDIX CONTENTS

- A) Emergency Plan
- B) Site Forms
- C) Substance Abuse Policy

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EMERGENCY PLAN

1.0 General:

Careful consideration has been given to the relative possibility to fire, explosion, or release of vapors, dusts, or gasses which may impinge on nearby facilities. The most likely off site impact from this investigation involves the potential for increased airborne contaminants as a result of intrusive activities. Control measures will be employed as necessary to preclude any possibility of off site migration of contaminants. As a result of the hazards on site and the conditions under which investigations will be conducted, the possibility of an emergency situation exists. An emergency plan is required by 29 CFR 1910.120 to be available for use and is included below.

1.1 Site Safety and Health Officer (SSHO):

The SSHO shall implement this emergency plan whenever conditions at the site warrant such action. The SSHO will be responsible for assuring the evacuation, emergency treatment, emergency transport of site personnel as necessary, and notification of emergency response units and the appropriate management staff.

1.2 Evacuation:

In the event of an emergency situation, such as fire, explosion, significant release of contaminants, etc., the Emergency Coordinator will notify all site personnel indicating the initiation of evacuation procedures. All personnel in both the restricted and non restricted areas will evacuate and assemble in the support zone or other safe area as identified by the SEC. The SEC will have authority to initiate proper action if outside services are required. Under no circumstance will incoming personnel or visitors be allowed to proceed into the area once the emergency has been identified. Once the safety of all personnel is established, the emergency response groups will be notified of the emergency. Other personnel listed in paragraph 2.1 shall then be notified.

1.3 Personnel Exposure:

In the event of personnel exposure, skin contact, inhalation, or ingestion the following procedures shall be followed:

A) Skin Contact:

Wash/rinse affected area thoroughly with copious amounts of soap and water, then provide appropriate medical attention if required. Eyes should be rinsed for at least 15 minutes following chemical contamination.

B) Inhalation:

Move to fresh air and if necessary decontaminate and transport to the nearest hospital.

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C) Ingestion:

Decontaminate and transport to the nearest hospital.

D) Puncture Wound or Laceration:

Decontaminate and transport to the nearest hospital for professional medical attention. The SEC will provide medical data sheets to appropriate medical personnel as required.

2.0 Fire or Explosion:

Immediately evacuate the site and notify the local fire and police departments, and other appropriate emergency response agencies.

<u>Agency</u>	<u>Phone</u>
Fire Department	911
Police	911
Ambulance	911

3.0 Environmental Incident:

Secure the spread of contamination if possible. Notify fire, Sheriff, police, and company management to inform them of the possible need for assistance to evacuate nearby areas. If significant release has occurred, the National Response Center should be contacted. Emergency phone numbers are located in Appendix C. Those groups will alert the National or Regional Response Teams as necessary.

4.0 Adverse Weather:

In the event of adverse weather, the SSHO will determine if work can continue without sacrificing the health and safety of site personnel. Some of the items to be considered prior to determining if work should continue are:

- Heavy rainfall
- Potential for heat/cold stress
- Tornadoes
- Limited Visibility
- Electrical storms
- Potential for accidents
- Malfunctioning of monitoring equipment

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5.0 Incident Investigation:

Upon receiving a report of an incident on the site, the SSHO will investigate the circumstances surrounding the incident.

6.0 Incident Reporting:

All serious incidents resulting in a fatality, emergency response, lost work time, or medical treatment will be reported immediately to the SSHO. A written report will be forwarded to the Project Administrator.

7.0 Snake Bite:

Normally the noise created by a person approaching a snake habitat is sufficient to frighten the snake off. However, extreme caution is necessary when exploring areas where snakes might be found, such as behind rocks, under bushes, or in holes, crevices, and abandoned pipes.

The rules to follow if bitten by a snake are:

- **Do not cut the bite area as it will exacerbate the effect of the venom.**
- **Do not apply suction to the wound as it is minimally effective in removing venom.**
- **Do not apply a tourniquet since venom is most dangerous when concentrated in a small area.**
- **Do not allow the victim to run for help as this will accelerate circulation.**
- **Do seek immediate medical attention.**
- **Do keep the victim calm and immobile.**
- **Do have the victim hold the affected extremity lower than the body while waiting for medical assistance.**

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8.0 Temperature Stress

8.1 Heat Stress: Heat produced by the body and the environmental heat together determine the total heat load. Therefore, it work is to be performed under hot environmental conditions, the workload of each job shall be established and the heat exposure limit pertinent to the workload evaluated against the applicable standard in order to protect the employee from exposure beyond the permissible limit. For the purpose of the SOP, the American Conference of Governmental Industrial Hygienist published Threshold Limit Values and Biological Exposure Indices, latest edition shall be considered the standard.

8.2 Monitoring: Since measurement of deep body temperature is impractical for monitoring the employees' heat load, the measurement of environmental factors is required which most nearly correlate with deep body temperature and other physiological response to heat. At the present time Wet Bulb Globe Temperature Index (WBGT) is the simplest and most suitable technique to measure the environmental factors. WBGT values are calculated by the following equations:

- Outdoor with solar load: $WBGT = 0.7 NWB + 0.2 GT + 0.1 DB$
- Indoors or outdoors with no solar load: $WBGT = 0.7 NWB + 0.3 GT$

Where:

WBGT = Wet Bulb Globe Temperature Index
NWB = Natural Wet-Bulb Temperature
DB = Dry-Bulb Temperature
GT = Globe Temperature

- A) The determination of WBGT requires the use of a black globe thermometer, a natural (static) wet-bulb thermometer, and a dry-bulb thermometer, such as the Reuter-Stokes, Thermo-environmental Monitor, (WIBGET).
- B) An alternative, (used only when approved by the Site Industrial Hygienist) to section 2.3 may be permissible by having employees count their pulse during a 30-second period as early as possible in a rest period. If the heart rate exceeds 110 beats per minute at the beginning of the rest period, the Safety Coordinator will shorten the following beats per minute at the next rest period, the Safety Coordinator will shorten the following work cycle by one-third. Additionally, employees should be monitored for signs of heat stress and encouraged to consume plenty of water, particularly during the hot season, i.e., one cup every 15-20 minutes.

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Table 1 - Permissible Heat Exposure Threshold Limit Values

Values are given in degrees Celsius (Fahrenheit)

Work Load

Work Rest Regimen	LIGHT	MODERATE	HEAVY
Continuous work	30.0 (86)	26.7 (80)	25.0 (77)
75% Work 25% Rest per hour	30.6 (87)	28.0 (82)	25.9 (78)
50% Work 50% Rest per hour	31.4 (89)	29.4 (85)	27.9 (82)
25% Work	32.2 (90)	31.1 (88)	30.0 (86)

Table 2 - Signs and Symptoms of Heat Stress

Heat Rash may result from continuous exposure to heat or humid air.

Heat Cramps are caused by heavy sweating with inadequate electrolyte replacement. To reduce occurrence of heat cramps increase amount of water consumption. Sign and symptoms include:

- Muscle spasms
- Pain in the hands, feet, and abdomen

Heat Exhaustion occurs from increased stress on various body organs including inadequate blood circulation due to cardio-vascular insufficiency or dehydration. In the event of heat exhaustion measures need to be taken to cool the body and replace body electrolytes. Signs and symptoms include:

- Pale, cool, moist skin
- Heavy sweating
- Dizziness
- Nausea
- Fainting

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Heat Stroke is the most serious form of heat stress. Temperature regulation fails and the body temperature rises to critical levels. Immediate action must be taken to cool the body before serious injury and death occur. Competent medical attention must be obtained. Signs and symptoms are:

- Red, hot, usually dry skin
- Lack of or reduced perspiration
- Nausea
- Dizziness and confusion
- Strong, rapid pulse
- Coma
- Death

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8.3 Cold Stress: Fatal exposure to cold among workers have almost always resulted from accidental exposures involving failure to escape from low air temperatures or from immersion in low temperature water. The single most important aspect of life-threatening hypothermia is the fall in deep core temperature of the body. Employees should be protected from exposure to cold so that the deep core temperature does not fall below 36 degrees Celsius (96.8 F); lower body temperature will very likely result in reduced mental alertness, reduction in rational decision making, or loss of consciousness with the threat of fatal consequences.

8.4 Evaluation and Control: For exposed skin, continuous exposure should not be permitted when the air speed and temperature results in an equivalent chill temperature of -32 degrees Celsius. At temperatures of 2 degrees Celsius or less it is imperative that employees who become immersed in water or whose clothing becomes wet be immediately provided with a change of clothing and treatment for hypothermia. Special protection of the hands is required to maintain manual dexterity for the prevention of accidents.

A) Provisions for additional total body protection are required if work is performed at or below 4 degrees Celsius as follows:

- The employees shall wear cold protective clothing appropriate for the level of cold and physical activity.
- If the air velocity at the site is increased by wind or artificial ventilation, the cooling effect of the wind shall be reduced by shielding the work area, or by wearing a removable outer windbreak garment.
- If the available clothing does not give adequate protection to prevent hypothermia or frostbite, work shall be modified or suspended until adequate clothing is made available or until weather conditions improve.
- Employees handling evaporative liquids at temperatures below 4 degrees Celsius shall take special precautions to avoid soaking of clothing or gloves because of the added danger of cold injury due to the evaporative cooling.

B) For work practices at or below -12 degrees Celsius the following shall apply:

- The worker shall be under constant protective observation (buddy system).
- If work must be done, rest periods must be taken in heated shelters and opportunity for changing into dry clothing shall be provided.
- New employees shall not be required to work full-time in cold in the first few days until they have become accustomed to the working conditions and required protective clothing.
- The work shall be arranged in such a way that sitting still or standing for long periods is minimized.

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- The workers shall be instructed in safety and health procedures. The training program shall include as a minimum instruction in:

1. Proper rewarming procedures and appropriate first aid treatment.
2. Proper clothing practices.
3. Proper eating and drinking habits.
4. Recognition of impending frostbite.
5. Recognition signs and symptoms of impending hypothermia or excessive cooling of the body even when shivering does not occur.
6. Safe work practices.

8.5 Special Workplace Recommendations

Special caution shall be exercised when working with toxic substances and when workers are exposed to vibration. Cold exposure may require reduced exposure limits. Eye protection shall be provided to workers employed out-of-doors in snow and/or ice terrain. Trauma sustained in freezing or subzero conditions requires special attention because an injured worker is predisposed to secondary cold injury. Special provisions must be made to prevent hypothermia and secondary freezing of damaged tissues in addition to providing for first aid treatment.

Table 3
Wind Chill Equivalents

		Actual Temperature Readings (F)									
		50	40	30	20	10	0	-10	-20	-30	-40
Wind speed (MPH)	Calm										
	5	48	37	27	16	6	-5	-15	-26	-36	-47
	10	40	28	16	4	-9	-24	-33	-46	-58	-70
	15	36	22	9	-5	-18	-32	-45	-58	-72	-85
	20	32	18	4	-10	-25	-39	-53	-67	-82	-96
	25	30	16	0	-15	-29	-44	-59	-74	-88	-104
	30	28	13	-2	-18	-33	-48	-63	-79	-94	-109
	35	27	11	-4	-20	-35	-51	-67	-82	-98	-113
	40	26	10	-6	-21	-37	-53	-69	-85	-100	-116

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9.0 Thunderstorms and Tornadoes

Meteorological conditions shall be closely watched, especially in the spring, when severe thunderstorms and tornadoes are most likely to occur. Thunderstorms and tornadoes often occur late in the afternoon on hot spring days, but can occur at any time of the day in any season of the year. Tornadoes are usually preceded by severe thunderstorms with frequent lightning, heavy rainfall, and strong winds.

A severe thunderstorm watch or a tornado watch announcement on radio or television indicates that a severe thunderstorm or tornado is possible. Work may continue at the work site during severe thunderstorm or tornado watches if conditions allow. A severe thunderstorm or tornado warning signifies that a severe thunderstorm or tornado has been sighted or detected by radar and may be approaching. All work on site shall cease during a thunderstorm, severe thunderstorm, or tornado warning.

Personnel on site during a tornado shall take the following steps:

- **Evacuate office trailers or vehicles.**
- **If outdoors, lie flat in a nearby ditch.**
- **Stay away from power poles, electrical appliances, and metal objects.**
- **Do not try to outrun a tornado.**

RESPIRATOR PROGRAM

FOR

**CITY OF TULSA
175 E. 2ND ST., SUITE 575
TULSA, OK 74103**

**ABATEMENT SYSTEMS, INC.
2400 EAST COLLEGE
P.O. BOX 773
BROKEN ARROW, OK. 74013**

ABATEMENT SYSTEMS, INC.

RESPIRATOR PROGRAM

I. GENERAL COMPANY POLICY

It is the General Company Policy of **ABATEMENT SYSTEMS, INC.** to ensure the safety of its employees, associates, trainees, or anyone else involved in one of our projects. Our policy of maintaining a minimum level of airborne asbestos fibers is the priority of each abatement project.

II. PROGRAM

The responsibility and authority of the entire respirator program shall be assigned to Mr. Steve Fulps, Vice President, **ABATEMENT SYSTEMS, INC.**, hereinafter referred to as the competent person.

Mr. Fulps has had EPA training and received accreditation in the asbestos worker course, the asbestos contractor course, the inspector course, and the management planner course, all of which were passed with an above 70% grade.

The competent person is capable of identifying asbestos, ACM, ACBM, or other potential hazards in or out of the work area. Our competent person has the authority of selecting the proper respiratory equipment for each individual and each individual project of which he is also equally as skilled. Our Competent person is also responsible for making sure that all EPA rules, federal regulations (40CFR763, 29CFR1910, 29CFR1926.1101), NIOSH, DOL, state and local regulations, and owner specifications are strictly adhered to.

Mr. Steve Fulps, Vice President, **ABATEMENT SYSTEMS, INC.** has the ultimate responsibility of ensuring complete compliance with all regulations.

III. SELECTION OF THE RESPIRATOR

The competent person has the responsibility of selecting the proper respirator for each individual situation. The primary objective of proper respirator selection is to continually maintain an exposure level inside the respirator of less than 0.01 fibers per cubic centimeter.

Selection may be based on surveillance of the work area, the degree of potential employee exposure utilizing air monitoring (personal and area), or bulk and air sample analysis of the ACM as performed by an accredited laboratory. Personal samples shall be taken from a representative number of employees from each work shift. The resulting fiber counts shall play a significant role in selecting the proper respirator for each employee. The competent person always visually assesses each individual project personally.

The following chart represents the respirators that are in compliance with OSHA 1910.1101, Appendix C, and Rule 380:50-15-5(a)(2):

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MAXIMUM USE RESPIRATOR SELECTION	PROTECTION FACTOR	MAXIMUM USE CONCENTRATION
Half Mask Air-Purifying with HEPA filter	10	0.1 f/cc
Full Face Air-Purifying with HEPA filter	50 (w/Annual Quantitative Test) * 10 (w/Qualitative Test Only)	0.5 f/cc
Powered Air-Purifying (PAPR) Any tight fitting Facepiece, High Efficiency Filter	100	1.0 f/cc
Supplied Air, Pressure Demand	1000	10.0 f/cc
Full Facepiece, Supplied Air Pressure Demand with Aux. SCBA, Pressure Demand or Continuous Flow	10,000	10.00 f/cc

*Protection factors must be established upon fit test criterion and shall not be exceeded.

Other respirators approved by NIOSH that contain the appropriate HEPA filters will be used. Either (1) Half Mask HEPA Filtered Air Purifying with a protection factor of 10 for use with a maximum concentration of 0.1 f/cc may be used for loadout and disposal only, (2) Full Face HEPA Filtered Air Purifying with a protection factor of 50 for use with a maximum concentration of 0.5 f/cc shall be used (at a minimum) for all abatement activities, or (3) Full Face Pressure Demand Supplied Air (Type C), with auxiliary SCBA with a protection factor of 1,000 for use with a maximum concentration of 10.0 f/cc. This respirator will be furnished with a manual HEPA escape cartridge in addition to the required reserve air supply.

The Type C Pressure Demand Systems utilized by Abatement Systems, Inc. will provide sufficient quantities of Grade "D" air that has been processed through filtration devices similar to those described in the diagrams attached. All filtration devices shall be dated when changed so that they can be replaced at the proper time. Internal alarm devices will indicate the presence of carbon monoxide at quantities greater than 10 parts per million as well as low pressure (70 PSI at the respirator). Additionally, hydrocarbons greater than 5 milligrams per cubic meter and carbon dioxide levels greater than 1000 parts per million will not be allowed in the Type C system.

Respirators will be selected for each individual project depending on the airborne filter concentration and recommended permissible exposure limit (less than 0.01 f/cc inside the respirator).

IV. RESPIRATOR FIT TESTING

A personal step-by-step "walk through" on respirator fit will be conducted by a competent person, including tightness fit test utilizing qualitative, positive, and negative techniques, i.e. smoke or saccharin

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test, strap elasticity test, and manufacturers flaw (close visual) test. Quantitative fit testing shall be required at least annually for each employee. This test shall also be repeated immediately when an employee experiences a body weight change of 20 pounds or more, has suffered significant facial scarring in the area of the face piece seal, has undergone significant dental work including extractions, etc., any facial reconstructive or cosmetic surgery, or any other condition that may affect the face piece seal such as eyeglasses that may require special inserts.

Positive pressure fit testing shall be performed by the employee each time the respirator is donned by placing hand(s) over the exhaust port(s), the negative pressure of slight inhalation should remain constant for several seconds. Negative pressure fit testing, shall be performed by the employee each time the respirator is donned by placing hand(s) over the intake ports, the negative air pressure of slight inhalation should remain constant for several seconds. If any one fit test fails, the respirator will be immediately repaired or replaced prior to continued usage. Fit test records will be maintained at each jobsite for inspection by regulatory authorities.

V. PROCEDURES FOR DONNING & DOFFING RESPIRATORS

All donning and doffing of respiratory devices and work cloths should be accomplished utilizing the "buddy" system, involving two employees assisting each other. Prior to entering a work area, each person should be examined by his "buddy" to ensure that all connections in the respirator systems are properly made and that the disposal suits, booties, head covers/hoods, etc., are properly donned. When leaving the work area, personnel must keep their respirators on as they exit through the equipment (dirty) room and until after they have begun their showers. Only after thorough washing, the respirators may be doffed.

VI. PROCEDURES FOR CLEANING & STORING RESPIRATORS

All respirators shall be thoroughly cleaned, disinfected, dried, and the filters changed, after respirator use. The storage of respirators shall be in their manufacturer's storage bag, sealed away from moisture and a manner that will not deform the face piece or the elastic harness.

VII. COMPANY POLICY/SPECIAL PROBLEMS

No employee of **ABATEMENT SYSTEMS, INC.** will be allowed to purchase their own respirator. All respiratory equipment purchases are to be made by the competent person(s) or authorized company supervisors. Respirators will be for individual use and not to be worn by anyone else except for the person that it was assigned to. Beards nor other facial hair that interferes with proper face to respirator seal will not be allowed while wearing respiratory equipment at **ABATEMENT SYSTEMS, INC.** Since contact lenses are not allowed, specialty respirator nosepieces will be furnished to any employee requiring the use of eyeglasses. The competent person will immediately address any special respirator fit requirements such as those mentioned in Section IV above.

VIII. INSPECTION OF RESPIRATORS

Periodic inspections of employee respirators by the competent person are recommended at least once per month. **ABATEMENT SYSTEMS, INC.** will inspect all employee respirators every two weeks to ensure the health and safety of its employees. It shall inspect for the following:

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proper fit
cleanliness
elasticity of straps
cartridge fit
worn gaskets
canister fit

regulator valve setting
kinks in supply hoses
fittings and connectors
familiarization of canister color codes
breathing quality

Each employee is required to repeat the same procedure daily or with each use.

The Maintenance program for respirators used by **ABATEMENT SYSTEMS, INC.** is the responsibility of Mr. Steve Fulps and/or his designees. Any respirator used on an abatement project will pass each item on the inspection checklist or be replaced.

X. TRAINING

Each employee shall receive personal hands-on training in proper use and limitations of the respirator by the competent person(s). Training shall include familiarization with different types of respirators, usage as well as limitations, fit and/or smoke testing, cleaning techniques, proper storage procedure, and routine inspection and maintenance. Each employee has been trained in the proper procedure for the donning and doffing of respirators when entering and exiting an abatement area. A verbal examination as well as a visual assessment of the workers knowledge of respirator usage will be conducted by the competent person(s) for each employee of **ABATEMENT SYSTEMS, INC.**

Training will be repeated by the competent person each time a new employee is hired and then again every six months after that to ensure familiarization and possible regulation changes or updates.

XI. MEDICAL

Steve Fulps, the designated Respirator Program Administrator, has the responsibility of ensuring that each employee has a full physical examination to determine whether or not respirator use is permissible for that employee. **ABATEMENT SYSTEMS, INC.**'S company physician responsible for this exam is:

Concentra Medical Center
1541 N. Sheridan Rd.
Tulsa, Oklahoma 74115
(918) 836-5406

and

Holt Krock Clinic
1500 Dodson Ave.
Ft. Smith, AR 72901
(501) 782-2071

All employees present and future are required to annually complete the OSHA Medical Questionnaire before examination commences or continues.

XII. SURVEILLANCE OF THE WORK AREA

During all abatement and O & M projects, surveillance of the work area by air monitoring will be done in full accordance with State and Federal regulations with the most stringent one applying. This would ensure that the proper respiratory protective equipment is being worn. If Supplied Air (Type C) is required, either of the two systems described on the following pages will be used.

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XII. RECORDS

All records regarding asbestos projects of any type involving **ABATEMENT SYSTEMS, INC.** will be the responsibility of Mr. Steve Fulps or the project Supervisor.

Records shall include project documents, inspection records, specifications, plans, sample results, respirators utilized, fit testing and physicals. These records shall be made available on site during the duration of each project. At the close of a project, its records will then be stored at the offices of **ABATEMENT SYSTEMS, INC.**, for a minimum of 30 years. They will be stored in such a manner as to safeguard against fire, flood, deterioration, etc.

XIV. CLOSING GENERAL STATEMENT

It is the intent of Mr. Steve Fulps, Vice President, Respirator Program Administrator, Competent Person, Responsible Party, to ensure the safety of his employees by complying fully with all OSHA, EPA, Department of Labor, and Department of Environmental Quality regulations involving Asbestos Containing Materials (ACM) and to see that all personnel employed by **ABATEMENT SYSTEMS, INC.** to remove ACM, follow the guidelines as set forth in this program. This program will be continually monitored and evaluated at least annually as to its effectiveness by the management of **ABATEMENT SYSTEMS, INC.**

NAME AND ADDRESS OF CONTACT:

ABATEMENT SYSTEMS, INC.

Mr. Steve Fulps
P.O. Box 773
2400 E. College
Broken Arrow, OK 74013
(918) 251-2504
Fax(918) 251-3852

Appendix C

QAPP Amendment Log Form and Completed Forms

QAPP Amendment Log Form

**Asbestos Abatement
Air Force Plant 3, Building 7
Tulsa International Airport
City of Tulsa, Tulsa County, Oklahoma 74104**

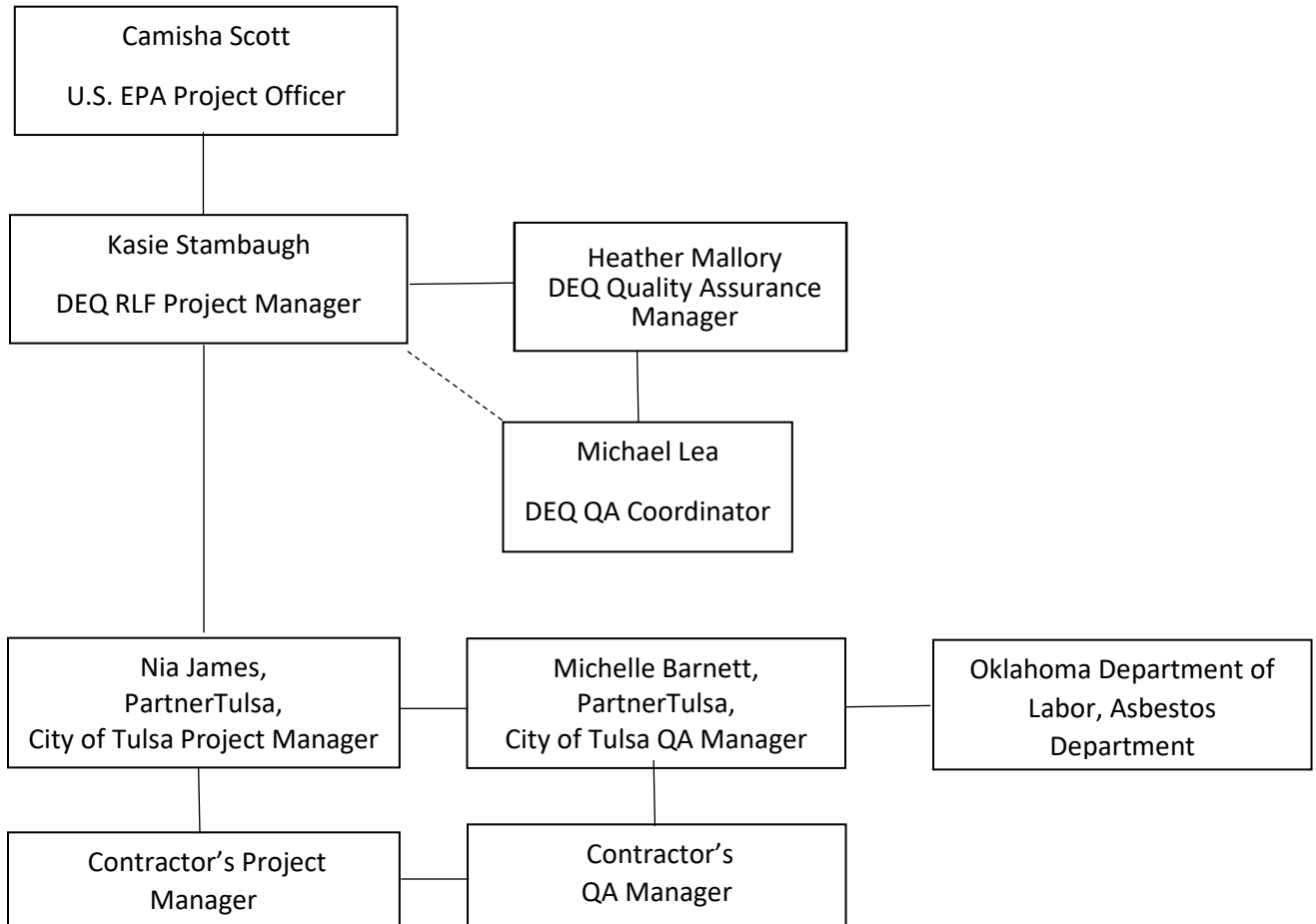
Number	Dates Completed	Descriptions	Amended By (Names)	Sections Affected	Approved by all Project Distribution Listed Individuals
1					<input type="checkbox"/> Yes
2					<input type="checkbox"/> Yes
3					<input type="checkbox"/> Yes
4					<input type="checkbox"/> Yes
5					<input type="checkbox"/> Yes
6					<input type="checkbox"/> Yes
7					<input type="checkbox"/> Yes

Please attach amendment support documentation, as necessary.

Appendix D

Project Organizational Chart

Organizational Chart for Air Force Plant 3 Building 7 Asbestos Abatement



Appendix E

Air Monitoring Data Form

Project: AFP 3 Building 7

[illegible]

I hereby certify that the above samples were collected and analyzed in compliance with applicable standards and regulations.

ANALYST PARTICIPATING IN LAB AIHA-101532

NIOSH 7400 METHOD

7/1/2010

NC = Not Counted. Reasons: 1. Overload; 2. Damaged Filter; 3. Pump Failure; 4. Missing Filter

Rotometer Number:

Calibration Date:

Air Monitoring Technician Name: _____

Location:

Contractor: