

**BY ORDER OF THE COMMANDER
OKLAHOMA CITY AIR LOGISTICS
COMPLEX**



**OKLAHOMA CITY AIR LOGISTICS
COMPLEX INSTRUCTION 32-8**

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Civil Engineering**

**EQUIPMENT O&M ASBESTOS
MANAGEMENT PROCEDURES**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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(Mr. David Goss)

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This instruction establishes Oklahoma City Air Logistics Complex (OC-ALC) policies for providing protection against asbestos hazards which may be encountered in equipment in the workplace and addresses responsibilities for sampling, testing, labeling, operations and maintenance (O&M) removal, disposition, and recordkeeping. This instruction supplements Occupational Safety and Health Administration (OSHA) construction standards contained in 29 Code of Federal Regulations (CFR) Part 1926, Safety and Health Regulations for Construction, Air Force Instruction (AFI) 91-302, *Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) Standards*, Air Force Manual (AFMAN) 48-155, *Occupational and Environmental Health Exposure Controls*, AFI 32-1052, *Facility Asbestos Management and the Tinker Air Force Base (AFB), Asbestos Management Plan*, February 2011. This instruction identifies OC-ALC specific requirements associated with equipment that may have asbestos-containing materials (ACM). Refer recommended changes and questions about this publication to the office of primary responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Form 847 from the field through the appropriate functional chain of command, then through the OC-ALC publications/forms managers. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with (IAW) AFMAN 33-363, *Management of Records*, and disposed IAW the Air Force Records Disposition Schedule (RDS) located at <https://www.my.af.mil/afirms/afirms/afirms/rims.cfm>. Each group within OC-ALC will ensure compliance with this instruction within the scope of their respective organizations.

SUMMARY OF CHANGES

This instruction has been updated to reflect administrative changes of 576 MXSS/MXDEB to 776 MXSS/MXDEB nomenclatures.

1. General Information. It is the goal of the OC-ALC to provide a safe and healthful environment for all its employees. In the industrial shop work setting, safety is a primary concern. Supervisors will ensure this instruction is understood and complied with by all employees. This instruction primarily addresses ACM and presumed asbestos containing material (PACM) that could potentially be found in various pieces of equipment and facility components. PACM is to be treated the same as ACM.

1.1. Equipment Containing Asbestos. ACM in pieces of equipment at Tinker AFB does not pose an inherent hazard. ACM is only hazardous when disturbed or damaged to the extent that it could cause the material to break up into individual fibers and become dispersed into the breathing environment. However, there is a presumption that all damaged ACM is hazardous because of its potential to release airborne asbestos fibers. As a result, all damaged ACM must be eliminated either by maintenance personnel, if the ACM is non-friable, or by contractor personnel if the ACM is friable.

1.2. Asbestos Removal. ACM must be removed when it poses a threat to release airborne asbestos fibers and it cannot be managed in place (i.e., cannot be reliably maintained, isolated, or encapsulated). When budgetary considerations permit, complete removal of ACM is desirable.

1.3. Asbestos Managed in Place. A decision to manage asbestos in place will be based on the degree of health risk to equipment operators, equipment maintenance personnel, facility occupants, use of equipment, and cost effectiveness. Existing ACM should be removed from equipment and replaced with a suitable substitute material at opportune times during repairs. ACM must not be allowed to deteriorate, become damaged, or be disturbed by workers or occupants unless precautions have been taken to prevent exposure to airborne asbestos fibers. Contact the by 72d Aerospace Medicine Squadron (72 AMDS) Bioenvironmental Engineering Flight (BEF) (72 AMDS/SGPB), 734-7844 for guidance on required precautions.

1.4. OC-ALC Visual Aid (VA) 32-8, *Asbestos Operational Checklist*. OC-ALC VA 32-8, will be posted in all areas where asbestos is present (Attachment 2, Figure A2.1.).

2. Roles And Responsibilities.

2.1. OC-ALC Group Commanders will:

2.1.1. Ensure initial and annual awareness training is provided to all personnel that may come in contact with ACM. Training shall be documented in employees training records.

2.1.2. Contact the base asbestos program manager in the 72d Air Base Wing, Civil Engineering Directorate, Environmental Compliance Office (72 ABW/CEIE) for guidance in determining potential contact with ACM.

2.1.3. Coordinate sampling and testing with 72 ABW/CEIE for planned activities that may disturb PACM, prior to initiating actions. A courtesy copy of the test analysis shall be provided to the Environmental and Occupational Health Flight (776 MXSS/MXDEB).

2.1.4. Ensure equipment and associated piping which is verified to contain ACM/PACM, and determined not to be real property, is properly labeled IAW 29 CFR 1926.1101(k)(8)(iii). See Attachment 3, Figure A3.1 for a list of equipment that has been identified with ACM. **Note: In building 3001, all pipe insulation in the shop areas south of the 81 column line should be considered PACM.**

2.1.5. Request assistance from 76th Maintenance Support Squadron (76 MXSS) Equipment Engineering Flight (76 MXSS/MXDEA) as needed to evaluate equipment cost and maintenance history to determine cost effectiveness of performing equipment O&M work/abatement versus replacement of equipment.

2.1.6. Provide procurement personnel, if purchasing replacement or new equipment, with terminology that prohibits ACM in replacement or new equipment unless the government specifically approves purchasing equipment that has ACM integral to the equipment. If non-ACM replacement equipment is not available, the requesting organization will work with the procurement personnel for the granting of approval for the purchase of equipment with ACM.

2.2. 76th Maintenance Support Group (76 MXSG) Maintenance and Installation Personnel will:

2.2.1. Use the Facility Equipment Maintenance System (FEMS) database to document the presence of ACM in equipment. This includes all information pertinent to the equipment including the removal of the ACM or disposal of the equipment. This information must be forwarded to 72 AMDS/SGPB annually.

2.2.2. Review available information in the FEMS database, equipment labeling, and original equipment manufacturer (OEM) maintenance data prior to beginning work on equipment to assess whether ACM has been determined to be present or not present. If there is any doubt that ACM is present in equipment, contact 72 ABW/CEIE.

2.2.3. Contact 776 MXSS/MXDEB prior to performing maintenance work on equipment containing ACM. 776 MXSS/MXDEB in conjunction with 72 ABW/CEIE will determine whether proposed work can be performed using the OSHA expanded standards for non-friable ACM, or if asbestos abatement needs to be performed by an abatement contractor. **OC-ALC personnel will not remove friable ACM.** Prior to any removal or disruption of ACM/PACM, contact 72 AMDS/SGPB for personal protective equipment (PPE) and/or exposure control requirements.

2.2.4. Attend and successfully complete annually asbestos awareness training, course MTEMAS0069741CB, *TAFB Asbestos Awareness Training*.

2.2.5. Coordinate needed asbestos sampling and testing with the 72 ABW/CEIE and 72 AMDS/SGPB for suspected ACM. **NOTE: 72 AMDS/SGPB only performs personal air sampling to determine asbestos exposures to government employees.**

2.3. 76th Propulsion Maintenance Group (76 PMXG) Process and Facility Personnel will:

2.3.1. Attend and successfully complete annually asbestos awareness training, course MTEMAS0069741CB, *TAFB Asbestos Awareness Training*, attend additional training as required by the OSHA classification of work being performed. At least one individual

must have the Asbestos Supervisor training to meet the OSHA competent person requirement.

2.3.2. Coordinate needed asbestos sampling and testing with the 72 ABW/CEIE and 72 AMDS/SGPB for suspected ACM. **Note: 72 AMDS/SGPB only performs personal air sampling to determine asbestos exposures to government employees.**

2.3.3. When non-friable ACM work is anticipated, initiate corrective actions by AF Form 332, *Base Civil Engineer Work Request*, and Air Force Materiel Command (AFMC) Form 299, *Safety, Fire and Health Review*, for each piece of equipment or facility component where ACM has been identified.

2.3.4. If ACM is confirmed to be present, immediately notify supervisor for further guidance.

2.3.5. Properly utilize protective clothing and equipment during maintenance activities as directed by 72 AMDS/SGPB.

2.3.6. Ensure that all PPE and ACM are properly placed in sealed impermeable bags or other closed, impermeable containers, and labeled.

2.3.7. Contact base asbestos program manager for proper disposal procedures for contaminated PPE and asbestos waste.

2.4. 72AMDS/SGPB:

2.4.1. Provides consultant services to OC-ALC on matters concerning health effects and exposure control requirements related to asbestos.

2.4.2. Provides air monitoring and analysis of airborne concentration of asbestos fibers for government employee work.

2.4.3. Maintains air monitoring documentation IAW AF requirements.

2.5. 72 ABW/CEIE:

2.5.1. Determines training requirements and work methods IAW OSHA standards.

2.5.2. Provides coordination of the disposal of ACM and PPE used during asbestos removal.

2.5.3. Samples and tests suspected ACM and report findings to 76 MXSS representatives and to the affected group shop supervisor or management chain.

2.5.4. Assists in identifying engineering controls and work methods to reduce worker exposure levels.

2.5.5. Assists in determining whether proposed work can be performed using the OSHA asbestos expanded standards, or asbestos abatement needs to be performed by a licensed abatement contractor.

2.5.6. Ensures that damaged friable ACM found in equipment is removed by a licensed abatement contractor.

2.5.7. Solicits contractual support, reviews/approves asbestos abatement contractor's abatement submittal prior to start of work and provide contractor oversight.

2.5.8. Reviews contractor abatement sampling results and maintains copies of contractor clearance sampling results.

3. Program Documentation.

3.1. The Production Acceptances Control Scheduling System (PACSS) and/or Training Schedule System (TSS) shall be used to document the initial and annual awareness and specialized asbestos training.

3.2. The FEMS database shall be used to document the presence or absence of ACM in equipment when sampling and testing is performed.

DONALD E. KIRKLAND, Brig Gen, USAF
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

29 CFR [Part 1910](#), *Occupational Safety and Health Standards*, 1 July 2013

29 CFR [Part 1910.1001](#), *Asbestos; General Industry*, 1 July 2013

29 CFR [Part 1926.1101](#), *Asbestos; Construction*, 1 July 2013

AFI 32-1052, *Facility Asbestos Management*, 4 January 2013

AFI 91-302, *Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) Standards*, 25 July 2013

AFMAN 48-155, *Occupational and Environmental Health Exposure Controls*, 16 April 2010

Tinker AFB Asbestos Management Plan, February 2011

Adopted Forms

AFMC Form 299, *Safety, Fire and Health Review*

AF Form 332, *Base Civil Engineer Work Request*

Abbreviations and Acronyms

72 ABW/CEIE—72d Air Base Wing/Civil Engineering Directorate, Environmental Compliance Office

72 AMDS/SGPB—72d Aerospace Medicine Squadron/Bioenvironmental Engineering Flight

76 MXSG—76th Maintenance Support Group

76 MXSS—76th Maintenance Support Squadron

76 PMXG—76th Propulsion Maintenance Group

76 MXSS/MXDEA—76th Maintenance Support Squadron/Equipment Engineering Flight

776 MXSS/MXDEB—776th Maintenance Support Squadron/Environmental and Occupational Health Flight

ACM—Asbestos-Containing Material(s)

AF—Air Force

AFB—Air Force Base

AFI—Air Force Instruction

AFMC—Air Force Materiel Command

AFOSH—Air Force Occupational and Environmental Safety, Fire Protection, and Health

CFR—Code of Federal Regulations

FEMS—Facility Equipment Maintenance System

OC—ALC —Oklahoma City Air Logistics Complex

OEM—Original Equipment Manufacturer (Owner’s Manual)

O&M—Operations and Maintenance

OMF—Occupational Medicine Flight

OSHA—Occupational Safety and Health Administration

PACM—Presumed Asbestos-Containing Material(s)

PACSS—Production Acceptances Control Scheduling System

PPE—Personal Protective Equipment

RPIE—Real Property Installed Equipment

TSS—Training Schedule System

Terms

Asbestos Containing Material (ACM)—Any material that contains more than one percent asbestos.

Expanded Standards—Sections of 29 CFR 1910 Subpart Z following 29 CFR 1910.1000.

Each of these OSHA standards discusses a specific substance and has specific requirements that apply where these substances are used.

Friable ACM—Material when dry that may be crumbled, pulverized, or reduced to powder by hand pressure, releasing fibers into the air.

Non—friable ACM—Material when dry that cannot be crumbled, pulverized, or reduced to powder by hand pressure (damage and deterioration increases the friability of asbestos-containing material; water damage, continued vibration, aging, and physical impact such as drilling, grinding, cutting, sawing, or striking can break the material making fiber release more likely).

Operations and Maintenance Equipment—All industrial production equipment (non-RPIE), and steam condensate chilled water supply/return lines back to the first valve off the main is the responsibility of 76 MXSS Industrial Plant Equipment Maintenance Flight.

Operations and Maintenance Activities—Those tasks such as, but not limited to, replacement of asbestos-containing gaskets on valves, installation of wiring or electrical conduits through or proximate to asbestos-containing materials, or minor repairs to damaged thermal system insulation (provided such activities are required in the performance of other repair or maintenance activities not intended as asbestos abatement). Work to be conducted under this definition will be performed on a case by case basis.

Attachment 2

ASBESTOS OPERATIONAL CHECKLIST

Figure A2.1. OC-ALC Visual Aid 32-8, Asbestos Operational Checklist



Asbestos Operational Checklist



1. If you believe you have encountered asbestos, **IMMEDIATELY** vacate the area and restrict access to the affected area.
2. Call CE service desk, 734-3117
 - ❖ IF IN DOUBT, CALL!
 - ❖ Provide the location of the affected area.
3. Do not damage, disturb or remove the suspect material.
4. Contact your supervisor if you see improper cleaning or maintenance activities involving materials that may contain asbestos.
5. Contact Bioenvironmental Engineering, 734-7844, if you have any questions concerning health risks related to asbestos.
6. If you feel you have been exposed to asbestos report to OMF at B3334.
7. Refer to OC-ALCI 32-8, *Equipment O&M Asbestos Management Procedures*, if asbestos is found inside equipment.

EMERGENCY CONTACTS:

CE Service Desk : 734-3117

Asbestos Program Manager: 734-4557

Bioenvironmental Engineering Flight: 734-7844

OC-ALC MOC: 736-2500

OC-ALCVA 32-8 (Per OC-ALCI 32-8)


 U.S. AIR FORCE

Attachment 3
ACM EQUIPMENT LIST

Figure A3.1. ACM Equipment List

ASSET NUMBER	DESCRIPTION	LOCATION
OC0294	OVEN ELECTRIC	3001, L76
OC0402	OVEN ELECTRIC E 8	3001, K73
505489	FURNACE #19	3001, HT19
811416	FURNACE 15 S 10	3001, HT15
801251	FURNACE #20 HT NW5	3001, K7
830462	FURNACE 11 HT SE15	3001, J8
OC1089	OVEN GAS	2101, D1
OC0871	FURNACE N20 E3	3001, R31
OC0930	FURNACE GAS N 15	3001, S33
OC2619	OVEN DRYER CLN RM	3001, N53
OC4009	SYSTEM HOT WATER CIRCULATING RM 119W	2280
OC12212	OVEN N20	3001, N97
OC2690	FURNACE 10 HTS10E20	3001, J6
OC2691	FURNACE 09	3001, J6
OC2692	FURNACE 08 S19 E2	3001, F85
OC2253	VAT HOT OIL WEST 30	3001, Y72
OC3528	FURNACE #18	3001, F79
OC4220	FURNACE 05 HEATTRT	3001, J5
OC4221	FURNACE 07 HT 7	3001
OC4240	FURNACE #26	3001, K91
OC4328	FURNACE 13 NE HT	3001, J8
OC4484	FURNACE #32 (HT E8)	3001, J10
OC4487	UNIT AIR HEATER PURGING	1055, C2
OC4866	OVEN ELECTRIC 15'S	9001, G24
OC3136	OVEN ELECTRIC	3221, K8
OC3155	OVEN ELECTRIC	3001, U45
OC4727	VAT HOT OIL S3 W41	3001, L97
OC2103	OVEN ELECTRIC N 25	3001, K95
OC3411	OVEN STEAM N 25	3001, N56
OC1548	HEATER INDUCTION	230, K22
OC4517	FURNACE #28 N5	3001, J10
OC4520	OVEN ELECTRIC N15 W15	3001, U106
OC2758	OVEN GAS N30 E9	3001, U39
OC2760	OVEN GAS N34 E9	3001, U39
OC4749	OVEN ELECTRIC E9 S3	3001, S61
OC4750	OVEN ELECTRIC S3 W2	3001, S61
OC1549	HEATER INDUCTION	230, K22
OC1665	OVEN ELECTRIC N12	3221, C1
OC1738	FURNACE #27 HT E 10	3001, J7
OC2776	HEATER N2 W4	3001, O53
OC4819	OVEN ELECTRIC (NORTH 20 WEST 5)	3001, M75
OC6579	OVEN ELECTRIC NW 3'	9001, G33
OC6247	TANK HOT WAX N 3	3001, A81
OC6472	OVEN ELECTRIC	3001, Y79
OC6479	OVEN ELECTRIC	3001, I99
OC6514	OVEN ELECTRIC	3001, J97
OC14086	OVEN, THERMAL DRYING ELECTRIC	3001, X86
OC5740	MACHINE FINISHING N5 E20	3221, A16
OC16025	OVEN CONVECTION ELECTRIC (NORTH 10)	3001, M75
OC15824	OVEN CONVECTION ELECTRIC	3221, A5
OC15825	OVEN CONVECTION ELECTRIC	3221, E3
OC15826	OVEN CONVECTION ELECTRIC	3221, A3
OC16126	OVEN CONVECTION ELECTRIC	3001, T85
OC1029	OVEN ELECTRIC RM 144	3708
OC1001	OVEN ELECTRIC ROOM 158 EAST WALL	3707, RM158
OC6476	VAT HOT OIL W50 N12	3001, Y72