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Aerospace Medicine

ASBESTOS CONTROL PROGRAM

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(Lt Col R. A. Cintron-Ocasio)
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Certified by: 374 MDG/CC (Col A. L. Alford)

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This instruction implements AFD 48-1, *Aerospace Medicine Program*, 29 Code of Federal Regulation (CFR) 1910.1001, *Asbestos Standard for the General Industry*, and 29 CFR 1926.1101, *Asbestos Standard for the Construction Industry*, into the Yokota Air Base (YAB) Occupational Health Program. It is consistent with federal regulations and all applicable Air Force Occupational Safety and Health (AFOSH) Standards. It establishes requirements, responsibilities, and procedures for controlling exposures to asbestos. It specifies the minimum acceptable requirements to protect all personnel assigned or living on YAB from potentially harmful asbestos exposures. It applies to all assigned, attached, and tenant organizations at YAB.

SUMMARY OF REVISIONS

Updates all organizational designations and symbols throughout the text. Reflects changes made to the asbestos regulation by the Occupational Safety and Health Administration (OSHA). Updates definitions in paragraph 1. Deletes redundant material already covered in other publications. A bar (|) indicates revision from the previous edition.

| 1. Terms Explained:

- 1.1. *Asbestos*--A class of magnesium-silicate minerals that occur in fibrous form. Includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos and any of these minerals chemically treated or altered.
- 1.2. *Asbestos-Containing Materials (ACM)*--Any material or product which contains more than 1 percent asbestos.
- 1.3. *Clearance Sampling*--Air sampling done at the completion of an asbestos removal, renovation, or repair project to ensure the work area is free of asbestos fibers.

1.4. *Compliance Sampling*--Area sampling done outside the asbestos project work area to determine if there is any leakage of asbestos from the work area. Also, personal sampling during the project to determine employee exposure to asbestos and to indicate whether work practices are acceptable.

1.5. *Demolition*--Wrecking or taking out of any load-supporting structural member and any related razing, removing, or stripping of asbestos products.

1.6. *Fiber*--A particulate form of asbestos, 5 micrometers or longer, with a length-to-diameter ratio of at least 3 to 1.

1.7. *Friable Asbestos Material*--Any ACM material that when dry can be crumbled, pulverized, or reduced to powder by hand pressure. This includes previously nonfriable material that has become damaged, aged, worn, or weathered.

1.8. *Permissible Exposure Limit (PEL)*--A level of airborne fibers specified by the Occupational Safety and Health Administration (OSHA) as an occupation exposure standard for asbestos. It is 0.1 fibers per cubic centimeter (f/cc) of air, 8-hour time-weighted average, as measured by phase contrast microscopy. The excursion limit (EL) is 1.0 f/cc averaged over a sampling period of 30 minutes.

1.9. *Presumed Asbestos-Containing Material (PACM)*--Thermal system insulation and surfacing material found in buildings constructed no later than 1980.

1.10. *Removal*--All operations where ACM or PACM is taken out or stripped from structures or substrates, and includes demolition operations.

1.11. *Renovation*--Modification of any existing structure or portion thereof.

1.12. *Repair*--Overhauling, rebuilding, reconstructing, or reconditioning of structures or substrates where asbestos is present.

1.13. *Work Area*--Any place where workers may use, install, demolish, remove, renovate, or repair ACM.

1.14. *Worker Exposure*--Exposure to airborne asbestos that could occur if the worker does not wear proper respiratory protection equipment.

2. Scope of This Instruction. This instruction applies to all occupational exposures to asbestos, tremolite, anthophyllite, and actinolite. It also applies to all construction work as defined in 29 CFR 1926.1101, including, but not limited to, the following:

2.1. Demolition or salvage of structures where asbestos is present.

2.2. Removal or encapsulation of materials containing asbestos.

2.3. Construction, alteration, repair, maintenance, or renovation of structures, substrates, or portions thereof, that contain asbestos.

2.4. Asbestos-released incident or emergency cleanup.

2.5. Transportation, disposal, storage, or containment of asbestos or products containing asbestos on the site or location at which construction activities are performed.

3. Responsibilities Assigned:

3.1. Commanders will:

3.1.1. Ensure workers with asbestos-related duties comply with applicable asbestos health regulations as delineated in 29 CFR 1910.1001 and this instruction.

3.1.2. Ensure building custodians inform the 374th Aerospace Medicine Squadron, Bioenvironmental Engineering Flight (374 AMDS/SGPB) of any friable materials within their organizations that are suspected of containing asbestos. Ensure these materials are not disturbed in any way until proper identification is received from 374 AMDS/SGPB.

3.1.3. Notify the 374th Civil Engineering Squadron, Environmental Flight (374 CES/CEV) of all construction, renovation, repair, or self-help projects within their organizations in order to determine whether the project could disturb ACM.

3.1.4. Avoid disturbing ACM during self-help projects. If ACM is disturbed, cease work immediately and notify 374 AMDS/SGPB.

3.1.5. Ensure buildings or work areas in their organizations are not reoccupied after asbestos projects are completed until approval is received from 374 AMDS/SGPB.

3.1.6. Maintain copies of all records pertaining to asbestos indefinitely (HQ USAF/JA/DA message 021400Z May 84).

3.2. The 374th Contracting Squadron (374 CONS) will:

3.2.1. Ensure contract specifications prohibit the use of new or salvaged ACM for construction, renovation, or repair projects.

3.2.2. Release contractors who perform asbestos removal, renovation, or demolition projects only after they have met the responsibilities covered by the project specifications concerning results of clearance sampling and 374 AMDS/SGPB determines the work area is safe for reoccupancy.

3.3. 374 CES/CEV will:

3.3.1. Maintain a master registry of ACM detailing the locations of ACM in all buildings at YAB and associated sites. Routinely inspect and monitor ACM in facilities and indicate any changes in status of ACM in the master registry.

3.3.2. Review real property records and the master registry of ACM, and perform asbestos project surveys defined in AFI 32-1052, *Facility Asbestos Management*, if necessary, before the preliminary design of any construction, demolition, renovation, or repair project. Determine whether the project could disturb ACM. Certify the presence or absence of ACM by sample collection and analysis. If the possibility exists for the release of asbestos fibers during the project, ensure the contractors comply with 29 CFR 1926.1101. Ensure the Technical Representative of the Contracting Officer (TRCO), 374 CES, Contracts Element (374 CES/CECC) informs contractors not to disturb any ACM or PACM outside the scope of work of the project.

3.3.3. Identify to 374 CONS those construction, demolition, renovation, or repair projects that could disturb ACM and result in asbestos fiber release. Ensure contract specifications are written to prohibit the use of new or salvaged ACM for construction, renovation, or repair projects.

3.3.4. Ensure contractors perform asbestos removal, renovation, or demolition projects that could disturb ACM per 29 CFR 1926.1101. Also, ensure contractors designate a competent person to fulfill the following responsibilities:

3.3.4.1. Establish a negative-pressure enclosure, ensure its integrity, and control entry to and

exit from it.

3.3.4.2. Supervise compliance and clearance sampling required by 29 CFR 1926.1101.

3.3.4.3. Ensure all workers within the enclosure wear the appropriate personal protective equipment, are trained in the use of appropriate methods of exposure control, and use the hygiene facilities and decontamination procedures specified in 29 CFR 1926.1101.

3.3.4.4. Ensure engineering controls in use are in proper operating condition and functioning properly.

3.3.4.5. Post asbestos warning signs during the period of contract.

3.3.4.6. Decontaminate the work area prior to the final visual inspection and then perform clearance sampling (see [Attachment 1](#)).

3.3.4.7. Provide the result of clearance sampling to 374 AMDS/SGPB for determining whether personnel can safely reoccupy the work area.

3.3.4.8. Do not use ACM in new construction, renovation or repair projects.

3.3.5. Perform a final visual inspection of the work area after project completion (see [Attachment 1](#)).

3.3.6. Notify 374 AMDS/SGPB prior to asbestos renovation and repair projects performed in-house so compliance and clearance sampling required by 29 CFR 1926.1101 is conducted in a timely manner.

3.3.7. Coordinate emergency cleanup of asbestos-released incidents. Asbestos releases typically occur during renovation, repair, or self-help projects that disturb ACM not previously identified.

3.4. The 374th Medical Group Commander (374 MDG/CC) will:

3.4.1. Provide the medical surveillance program specified in 29 CFR 1910.1001 for those Air Force workers likely to be routinely exposed above the PEL.

3.4.2. Ensure records of worker exposures, work area monitoring, medical examinations, and respirator training are maintained per 29 CFR 1910.1001.

3.5. The Chief, Bioenvironmental Engineering Flight (374 AMDS/SGPB) will:

3.5.1. Advise commanders on asbestos-related problems. Provide necessary guidance on engineering control measures, work practices, respirators, protective clothing, housekeeping procedures, hygiene facilities, decontamination procedures, emergency procedures, waste disposal procedures, and worker training.

3.5.2. Investigate all reports of friable materials suspected to contain asbestos. Take bulk samples if necessary and forward them to Detachment 3, Armstrong Laboratory (Det 3, AL), Kadena AB, APO AP 96368-5213, for analysis. Inform organizations with suspected friable ACM of the bulk sampling results and whether they can disturb the material or not.

3.5.3. Certify buildings are safe for reoccupancy after the completion of asbestos removal, renovation, or repair projects based on clearance sampling. Notify 374 CES/CECC that the facility is safe to reoccupy for those projects accomplished by contractors.

3.5.4. Maintain a copy of the master registry of ACM.

3.6. The Chief, Public Health Flight (374 AMDS/SGPM) will provide technical guidance and assistance to supervisors of workers with asbestos-related duties regarding the health effects of asbestos exposure, when requested.

3.7. Supervisors of workers with asbestos-related duties will provide worker information and training on the health hazards of asbestos. Conduct the training before a worker's initial exposure to asbestos and annually thereafter. Training will consist of the following:

3.7.1. Health effects associated with asbestos.

3.7.2. Relationship between smoking and exposure to asbestos in producing lung cancer.

3.7.3. Specific nature of the operation which could result in exposure to asbestos and the importance of necessary protective controls to minimize exposure that include, as applicable, engineering controls, work practices, respirators, protective clothing, housekeeping procedures, hygiene facilities, decontamination procedures, emergency procedures, waste disposal procedures, and any necessary instruction in the use of these controls and procedures.

3.7.4. Appropriate work practices associated with the asbestos-related duties.

3.7.5. Specific procedures implemented to protect workers from exposure to asbestos, such as appropriate work practices, emergency and cleanup procedures, and personal protective equipment required.

3.7.6. Purpose, proper use, and limitations of respirators and protective clothing.

3.7.7. Purpose and description of the medical surveillance program required by 29 CFR 1910.1001.

EDWARD L. LAFONTAINE, Colonel, USAF
Commander

Attachment 1

FINAL VISUAL INSPECTION AND CLEARANCE SAMPLING

A1.1. Performing Agencies. For asbestos projects accomplished by contractors, 374 CES/CEV will perform the final visual inspection and the contractor will do the clearance sampling. For projects accomplished in-house, 374 AMDS/SGPB will perform both the final visual inspection and clearance sampling.

A1.2. Final Visual Inspection:

A1.2.1. Conduct the inspection before any containment barrier is taken down, but after the plastic sheets are cleaned with a damp cloth or high-efficiency particulate vacuum.

A1.2.2. Check for the completeness of removal, enclosure, or encapsulation of ACM.

A1.2.2.1. Enter all areas where asbestos was removed and inspect all surfaces at close range for residue.

A1.2.2.2. Check pipes, beams, and irregular surfaces which may have corners and other places difficult to reach.

A1.2.2.3. Check for tightness of construction if ACM was enclosed.

A1.2.2.4. Inspect all encapsulated surfaces to ensure the proper amount of sealant was used and properly applied, and is not removable by scraping or brushing.

A1.2.2.5. Indicate locations of asbestos residue or needed additional repairs by marking the drawings or the area with paint.

A1.2.3. Ensure the work area has been adequately cleaned.

A1.2.3.1. Inspect all plastic on walls and floors with a high-intensity flashlight for residue or dust.

A1.2.3.2. Inspect all other surfaces for dust and debris. Pay close attention to the following:

A1.2.3.2.1. Overhead surfaces such as tops of beams and suspended light fixtures, folds in plastic, taped seams, and other areas where debris can accumulate.

A1.2.3.2.2. Barriers between the removal area and other parts of the work area, if applicable.

A1.2.3.2.3. Floor tiles loosened by contaminated water.

A1.2.3.2.4. Carpeting, especially if plastic was torn or loosened at the seams at any time during the removal.

A1.2.3.2.5. Cleanliness of the floor.

A1.2.4. Check for damage resulting from the abatement work. Things to look for include: Warped wood floors caused by water leaking through the plastic barriers; loose or missing floor tiles caused by water leaks; peeled paint from removal of containment barriers; and damaged light fixtures.

A1.3. Clearance Sampling:

A1.3.1. Conduct the clearance sampling only after the site passes the visual inspection.

A1.3.2. Remove plastic sheeting covering the walls, floors, and other surfaces prior to testing. However, leave in place barriers separating the work area from the rest of the building and sheeting covering doors, windows, and vents until the clearance sampling is complete.

A1.3.3. Continue to operate the negative air pressure ventilation system if used during the asbestos project.

A1.3.4. Ensure the clearance sampling is performed only by a qualified professional trained in asbestos abatement work and only after the work area is dry (at least 24 hours after cleaning).

A1.3.5. Use the following "aggressive sampling" procedure:

A1.3.5.1. Before starting the sampling pumps, direct the exhaust from a 1 horsepower leaf blower against the walls, ceilings, floors, and other surfaces in the work area to dislodge any free fibers that may remain. This should take approximately 5 minutes per 1,000 square feet of floor.

A1.3.5.2. Place 20-inch stationary fans on 2-meter-high stands in locations which will not interfere with the air monitoring equipment. Use one fan per 10,000 cubic feet of work area space. Place the fans on slow speed and point them toward the ceiling.

A1.3.5.3. Start the sampling pumps and draw a minimum of 3,000 liters of air through a 25-millimeter, 0.8-micron mixed cellulose ester filter at a rate of 2 to 12 liters per minute. Collect at least five samples per work area or one per room, whichever is greater.

A1.3.5.4. Turn off the pumps and then the fans when sampling is complete.

A1.3.6. Measure the asbestos on each filter with the phase contrast microscopy (PCM) method using National Institute for Occupational Safety and Health (NIOSH) 7400 procedures. Include at least one field blank and one laboratory blank per asbestos project for quality control purposes.

A1.3.7. Release the contractor after final clearance air sampling shows that fiber levels are no more than at the start of the project or meet a required level of 0.01 f/cc. If any of the sample levels is above the prescribed level, clean the entire work area again and repeat the sampling.