ASBESTOS OPERATIONS & MAINTENANCE PROGRAM

Pursuant to Asbestos standards
OSHA: 29CFR1926.1101 Construction; & 1910.1001 General Industry;
EPA: 40CFR763.92 Training; & 763.120 Asbestos worker protection

NEW MEXICO STATE UNIVERSITY

Las Cruces, New Mexico

ENVIRONMENTAL, HEALTH & SAFETY

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TABLE OF CONTENTS
NMSU ASBESTOS OPERATIONS & MAINTENANCE PROGRAM

PREFACE

NMSU EH&S has implemented an Asbestos Operations and Maintenance Program (O&M) to ensure the safety of those who may work in the vicinity of, or who may maintain, repair, disturb, cut or remove, asbestos-containing materials (ACM) as part of their job duties, and to minimize the exposure of building occupants and maintenance and custodial personnel to airborne asbestos fibers. This O&M Program was created by Environmental Health & Safety (EH&S) in 2009 in an effort to control, limit and monitor exposures to airborne asbestos fibers. Employees at risk for exposure are provided training, access to appropriate personal protective equipment, and, if appropriate, medical examinations.

New Mexico State University
Asbestos Operations and Maintenance Program

1.0 Introduction

The principal objective of the Asbestos Operations and Maintenance Program is to minimize the exposure of building occupants and employees to airborne asbestos fibers by:

1. Surveys and inventorying of suspect and known asbestos-containing materials (ACM) in NMSU buildings.
2. Work reviews and exposure assessment of proposed operations that could disturb known ACM and potential asbestos containing materials (PACM), to help ensure that all asbestos operations are performed by qualified workers, consultants, or contractors.
3. Labeling ACM and restricting entry to areas contaminated with asbestos debris and/or airborne fibers. This is to include all area where ACM operations have occurred until the ACM is removed and exposure assessment are negative.
3. Training employees who may encounter, clean up, or disturb ACM in their work activities and ensuring that all NMSU workers that perform class II/III operations in access of 30 days are provided medical surveillance.
4. Developing work practices and procedures that will allow minor renovation and emergency maintenance to be performed safely without exposing employees, building occupants, or members of the public to airborne asbestos fibers.

This program has been designed to comply with applicable state and federal regulations pertaining to asbestos. This program shall remain in force until all ACM has been removed from all university properties.

Background information on asbestos and the health effects related to asbestos exposure is available through Environmental Health & Safety (EH&S). Interested persons may receive this information by attending NMSU Asbestos Awareness training, via the NMSU Safety website (http://safety.nmsu.edu) or by contacting EH&S at 575-646-3327.

1.1 Who Should Participate

The Asbestos O&M Program is administered by NMSU Environmental Health & Safety (EH&S). EH&S personnel will coordinate sampling of suspect ACM, maintain NMSU asbestos-related records, monitor asbestos removal operations not associated with NMSU capital projects, assess suspect and known ACM, and review proposed ACM work conducted by Office of Facilities and Services, Residential Housing and other departments.

Other Key university participants include:

- OFS Facilities Planning and Construction personnel
- NMSU Custodial staff and supervisory personnel
- NMSU Personnel involved in building renovations or demolition
- OFS Utilities personnel
- ICT and other personnel involved in the placement of communication or power cables
- NMSU Building maintenance and supervisory personnel
- Designated departmental contacts, and,
- Safety coordinators at remote research stations.

2.0 Program Elements

2.1 Allowable Asbestos Operations, Training, and Oversight Duties

2.1.1 Allowable Asbestos Operations for NMSU employees

In view of the potential health hazard, extensive training requirement, and medical surveillance obligations for asbestos workers, all asbestos operations other than small-scale, short-duration ACM projects (as noted here in) will be performed by a licensed asbestos company or consultant contracted by NMSU. As the NMSU agency charged with ensuring compliance with OSHA and EPA, EH&S shall review and determine the allowable asbestos operations that NMSU employees can perform.

2.1.2 Custodial and Maintenance Training (Class IV Asbestos Operations)

All maintenance and custodial staff who perform duties that may involve maintenance in areas with ACM, or cleanup of ACM debris but which do not involve the disturbance (cutting, breaking, crushing, pulverizing, etc) of ACM shall receive annual Asbestos Awareness training.

The Asbestos Awareness training will include (but is not limited to):

1. Asbestos characteristics and typical uses of ACM
2. Health effects of asbestos exposure and the combined effects of smoking and asbestos exposure
3. Purpose of the NMSU Asbestos O&M Program
4. Summary of known and likely locations at NMSU
4. Recognition of damaged ACM, and the response that should be made if damaged ACM or suspect ACM is found

Additional information on the identification and location of ACM, types of asbestos, and the health effects related to asbestos exposure may be obtained by attending NMSU Asbestos Awareness training, via the NMSU Safety website (http://safety.nmsu.edu) or by contacting EH&S at 575-646-3327

2.1.3 Worker Training for Class II & III Asbestos Operations involving ACM

Maintenance personnel who perform duties that involve small-scale, short-duration removal or repair of ACM, or that are required to work in environments contaminated with ACM, shall receive at least 8 hours of specialized asbestos training in addition to the 2-hour awareness training. This annual training shall include lecture and hands-on work involving at least the following:

1. Approved asbestos work practices and procedures
2. Implementation of operations, maintenance and repair programs
3. Worker protection, including use of personal protective equipment
4. Fiber release episodes
5. Each employee shall receive hands-on training covering specific procedures for the expected ACM work. This training shall:
    a. Hazard assessment, regulated area, signage, and use of respiratory protection and PPE,
    b. Setting up glove bag and/or containment, if appropriate,
    c. Area decontamination procedures
    d. Use of tools and equipment approved for asbestos operations
6. Each employee shall receive training on the Standard Work Practices and Procedures provided in the following sections
7. Recordkeeping requirements
8. A review of the requirements of 20CFR1910.1001

All personnel required to wear respiratory protection or that perform minor repair or maintenance work involving asbestos materials shall receive training on respiratory protection and approved asbestos-related work practices and procedures. The requirements of the NMSU Respiratory Protection Program may be reviewed via the NMSU Safety website (http://safety.nmsu.edu) or by contacting EH&S at 575-646-3327. (see glossary for additional details on Class II/III operations). At current time, all asbestos operations other than small-scale, short-duration ACM projects (Class IV Asbestos Operations) will be performed by a licensed asbestos company or consultant contracted by NMSU.

2.1.4 Competent Person Qualifications and Oversight Duties

All ACM projects under this O&M program will be overseen by the EH&S Asbestos Coordinators or Asbestos Consultant. The Asbestos Coordinator shall be a "competent person" and must meet the requirements as established by 29 CFR Part 761. Training of the competent person shall include an initial 3 day EPA AHERA training course or equivalent. Refresher asbestos training equivalent to 4 hour asbestos inspector and 4 hour asbestos management planner course is required annually (see glossary for additional details).

The duties and function of the Asbestos Coordinator(s) include observing and monitoring the activities of ACM projects. The coordinator(s) will perform visual inspections of the work area to determine that proper work practices are used and compliance with all federal, state and local laws and regulations is maintained. This shall include ensuring that all regulated areas are marked and entry is restricted.

The coordinator will conduct an exposure assessment immediately before or at the initiation of the operation to ascertain expected exposures during that ACM operation. The competent person shall determine if the exposure to the expected conditions is negative (NEA) or if not, what protective measures and personal protective equipment are needed to protect the workers.

2.2 Occupant Awareness

2.2.1 Building Occupant Awareness

A. Occupants of buildings will be made aware of the existence of the Asbestos O&M Program, and will be provided access to this document upon request. Occupants will, in addition, be made aware that ACM may be present in their workplace, and will be cautioned that ACM is not to be damaged or disturbed except under controlled conditions by trained personnel. Occupants will be notified that additional information on the expected work practices, asbestos-related records for the building, and other health information on asbestos is available by contacting EH&S at 575-646-3327.

B. Prior to the start of any scheduled asbestos project in the public portion or which may affect the public portion of any NMSU building, notification information will be provided to building occupants that will explain the work that is to be performed, and the measures that are being employed to protect them. This notification information will be made available at least 3 days in advance of the proposed work, either by posted memo, at group meetings, by use of media resources, or a combination of the above.

2.2.3 Safety Coordinators and Building Monitor

The safety coordinators for NMSU's remote facilities and distant campuses will be provided with information of known locations of asbestos in their areas and/or building. Building monitors may also request this information for their respective buildings. The information will:

- Include known information regarding asbestos in the facility, specific locations, estimated quantity, type and percentage of asbestos content, and physical condition;

- Be kept in the possession of the safety coordinator or building monitor at a location in the building where it is readily accessible to building employees or their designated representative;
- Be updated as surveillance, test results and/or response actions are undertaken in the building.

2.2.4 ACM Work Review System

No renovation, alteration, or maintenance activity involving disturbance of any asbestos containing materials (ACM) or potentially asbestos-containing materials (PACM) shall be allowed to occur on or within NMSU buildings or properties that has not been reviewed either by EH&S or a licensed asbestos consultant. The review shall determine the possibility and consequence of such disruption of the ACM and determine the requirements to minimize the exposure of workers as well as building occupants and maintenance and custodial personnel to airborne asbestos fibers.

A. All NMSU departments shall follow the guidelines of the ACM Work Review System detailed in this document if they:
   - Conduct maintenance, renovation or repair activities involving ACM or PACM,
   - Conduct work in asbestos contaminated work environments (e.g. pipe chases, crawlspaces or other building areas where deteriorated or damaged ACM may be present),
   - Work with ACM during machinery repair (for example, during the replacement of asbestos brake shoes or clutch pads), or,
   - Conduct any work or operation that potentially impacts ACM.

B. **Distribution of Information:** Each department that conducts building repair, renovation or maintenance work as detailed above (2.2.4) shall be responsible for:

1. Requesting a review by EH&S of any proposed work that is to be conducted on or in the vicinity of known or suspect ACM
2. Requesting the sampling by EH&S of suspect ACM that will be disturbed by the work
3. Ensuring that the requirements, instructions, directions, and/or equipment necessary to minimize asbestos exposure as determined by EH&S or asbestos contractor are carried out

2.2.5 Signage, Labels and Regulated Areas

A. Signs and Labeling of Intact ACM

A labeling program will be implemented to identify known ACM in university buildings. The number and location of these signs or labels shall be sufficient to clearly identify ACM in routine maintenance areas. Labels shall conform to current OSHA standards.

Employee training and the distribution of records in accordance with this document may be substituted for signs or labels for some types of ACM. These types include: asbestos-containing floor tile and linoleum, asbestos-cement ceiling tile and ductwork, and other types of non-friable ACM maintained in good condition and repair.

The labeling provisions of this section do not apply to ACM that has been modified by a bonding agent, coating, binder or other material provided that it can be demonstrated that during any reasonably foreseeable use, handling or storage, no airborne asbestos fiber concentrations will be generated in excess of the action level and/or excursion level.

B. Regulated and Contaminated Areas

1. Signs conforming to the current OSHA standards shall be posted restricting access to regulated building areas and other locations that are contaminated with ACM debris and/or where it has been demonstrated, or can reasonably be expected, that airborne asbestos fiber concentrations will exceed the PEL (e.g. regulated area with excursion zone).

   11"x17" Danger Signs shall be posted at each entrance to the regulated area and shall conform to OSHA 1910.1001. The signs shall read:

   DANGER
   CONTAINS ASBESTOS FIBERS
   CANCER AND LUNG DISEASE HAZARD
   AUTHORIZED PERSONNEL ONLY
   RESPIRATORS AND PROTECTIVE CLOTHING
   ARE REQUIRED IN THIS AREA

   A secondary sign may also be posted that will direct the worker to contact EH&S at 575-646-3327 for information

2. Signs shall be posted restricting access to regulated building areas and other locations that
   - are contaminated with ACM debris and where airborne asbestos fiber concentrations exist but do **not** exceed the PEL or
   - where ACM operations are occurring where an negative exposure assessment has determined that airborne asbestos fiber concentrations do not and will not exceed the PEL

   11"x17" Warning Signs shall be posted at each entrance to the regulated area and shall read:

   WARNING
   CONTAINS ASBESTOS DEBRIS
   AVOID CREATING DUST
   AUTHORIZED PERSONNEL ONLY
   CONTACT EH&S at 575-646-3327 FOR INFORMATION

   Access to contaminated building and other areas may be restricted by limiting the availability of keys to these areas to personnel with appropriate asbestos-related training, who will enter only under the supervision and/or direction of trained personnel.

C. Labels on asbestos product and waste containers

Per OSHA regulations (29CFR1926.1101(k)(8) labels shall be affixed to all products containing asbestos and to all containers containing such products, including waste containers. Labels shall be printed in large, bold letters on a contrasting background. Labels shall be used in accordance with the requirements of 29 CFR 1910.1200(f) of OSHA's Hazard Communication standard, and shall contain the following information:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

2.2.6 Contractor Awareness Program

Contractors employed by the university shall be informed by the project supervisor of the location of suspect and known ACM in the work area to which they are assigned. Contractors shall, under no circumstances, damage or disturb suspect or known ACM unless they are a licensed Asbestos Abatement Contractor and have been specifically employed to perform asbestos removal.

The project supervisor or NMSU contract representative shall provide contractors with either a copy of the asbestos inspection report *specific to their work and the materials that are to be disturbed*.

The contractors shall be cautioned that they shall not proceed with any change in work that requires that a material be disturbed that has not been previously been tested (e.g. "suspect" PACM). If a change in the scope of work becomes necessary, a new review request shall be submitted to asbestos contractor or EH&S who will review the work for the potential to disturb ACM.

If ACM is present it will be the responsibility of the contractor to provide asbestos training for his/her employees and subcontractors.

2.3 Building Surveys, Inspections, and Hazard Assessments

2.3.1 General

Hazard assessments and building inspections for the presence of asbestos shall be performed in accordance with the asbestos survey standard for buildings to be renovated or demolished.

2.3.4 Capital Projects

For all capital projects, the NMSU Architects Office shall secure the services of a licensed asbestos consultant to secure samples of suspect ACM that will be damaged or disturbed by the proposed work. The report shall include an assessment of damaged or deteriorated ACM in the work area as well as ACM in other building areas that may be damaged or disturbed by the proposed work (e.g. through traffic, construction induced vibration, and so forth).

2.4 Exposure Monitoring

2.4.1 Air Samples for Work involving University Personnel

Unless objective data or historical data indicating a negative-exposure assessment is available, EH&S shall monitor and require personal air samples for asbestos related work performed by NMSU employees. These samples shall be used to ensure that the permissible eight (8) hour time weighted average (TWA) exposure and the excursion limit established by OSHA (in 29 CFR 1910.1001 and 1926.58) is not exceeded. Sampling methodology and analysis shall conform to the requirements of 29 CFR 1910.1001.

Historic sampling data may be used for the exposure assessment, if previous samples were taken during an asbestos project involving similar material types under similar material and environmental conditions. Note that the historic data must be updated annually.

2.4.2 Air Samples for Work involving Non-University Personnel

Asbestos abatement contractors shall be responsible for securing air samples for their own personnel to meet the requirements of 29 CFR 1926.58.

2.4.3 Area Air Sampling during Indoor Asbestos Projects

A. General

Unless objective data indicating a negative-exposure assessment is available the asbestos coordinator or asbestos contractor shall ensure that baseline (e.g. background) air samples are taken before the start of

the project, if necessary, and shall include air samples outside of the work area during the project. This sampling will, in addition, include a final visual inspection and will secure final clearance air samples using aggressive air sampling techniques (if required)..

The work area will be considered safe for re-occupancy if all final clearance air samples are less than 0.01 fibers per cubic centimeter (f/cc) of air sampled as determined by Phase Contrast Microscopy (PCM).

B. Capital Projects

For all capital projects, the NMSU Architect's office shall ensure that the Asbestos provides area air sampling as noted above.

2.4.4 Monitoring of Airborne Asbestos Fiber Concentrations in Buildings

EH&S will make available to university employees, upon request, documentation of the background airborne asbestos fiber levels related to asbestos abatement and other ACM projects in university buildings. EH&S will secure, if necessary, air samples to document the ambient exposure levels or may, if available, utilize existing records for this purpose.

2.5 Monitoring and Medical Surveillance for Operations Staff

A. Monitoring of Operations Staff

1. NMSU shall conduct exposure assessments on all maintenance and custodial staff who conduct O&M activities involving the disturbance of ACM.

2. Determinations of employee exposure shall be made from the breathing zone air samples that are representative of the 8-hour Time Weighted Average (TWA) and 30-minute short-term exposure of each employee subjected to the monitoring requirements.

3. NMSU shall notify employees, in writing, of the monitoring results as soon as possible following receipt of the analytical results.

4. Periodic exposure monitoring shall be conducted for all work where exposures are expected to exceed the OSHA Permissible exposure limit (PEL) of 0.1 fibers per cubic centimeter (f/cc). The monitoring shall be conducted at intervals sufficient to document the validity of the exposure prediction.

B. Medical Surveillance

1. NMSU shall institute a medical surveillance program for those employees who for a combined total of 30-days or more per year are engaged in Class II/III activity asbestos activities or that are exposed at or above the OSHA PEL.

2. The medical surveillance program shall be in compliance with OSHA's regulatory requirement in 29 CFR 1926.1101(m).

C. Medical Evaluation for personnel that use respirators

1. For employees required to wear a negative pressure respiratory, an initial medical determination shall be made to ensure employees are physical able to perform the work and wear the respirator.

2. Respirator use shall be in accordance with NMSU's written respiratory protection program.

3. All medical records for employees that have either worked with asbestos on campus, or may have been adversely exposed will be maintained by NMSU for a period of 30 years plus after employment

2.6 Recordkeeping

All records mentioned in this Asbestos O&M Program shall be retained as required by the regulations and as necessary to maintain an effective program. These records shall include:

- The written O&M plan itself, including all revisions, changes and modifications
- Building plans and drawings, with identified homogenous areas and sample locations clearly delineated
- Building plans and drawings, with areas of known ACM clearly identified
- Building sampling and survey records, and records of all re-inspections
- All asbestos project (abatement, repair, encapsulation or enclosure) records including, as appropriate, survey records, project design or abatement specifications, air sampling data, daily project monitor logs, sign-in logs, waste disposal manifests, and invoices. The building area affected and material removed shall be clearly identified on the building drawings.
- Attendance records at all awareness and training programs
- A count of the number of day per year per employee that involve class II/III activities, all employee with 30 day or more shall be enrolled in medical surveillance program
- Medical surveillance records for any NMSU employee shall be maintained for 30 years past the last date of employment for an individual employee.
- Personal air sampling data
- Correspondence
- A copy of current state and federal regulations

2.7 Management

The NMSU O&M program will be administered by the Asbestos Coordinator(s) and overseen by EH&S.

3.0 ACM Work Order Review

3.1 Purpose

The purpose of the ACM work order review system is to allow EH&S an opportunity to review all proposed **renovation, maintenance** or **repair** work that is to be completed internally by staff and/or outside contractors to insure that either:

- ACM will not be disturbed by the work
- Damaged ACM present in the work area is repaired and the area cleaned before the work begins
- Suitable precautions are taken if the work has the potential to unintentionally disturb ACM (e.g. due to the physical configuration of the area and the location of the ACM in relation to the proposed work), or,
- That ACM that will be disturbed by the work is removed either using trained university personnel or a licensed asbestos removal contractor under the supervision of EH&S or a licensed Project Monitor hired for this purpose

3.2 Work Order Method and Alternate Review Form

The OFS Work Order System will be used to notify EH&S about the expected ACM project. A work order will be submitted to EH&S for any and all proposed **renovation, maintenance** or **repair** work that may involve disturbing ACM.

Alternately NMSU department using a different work control system, may submit a ACM work review form which will details the location, extent and timing for the proposed project as well as the fund source for external charges that may be required for assessing the proposed project. An example ACM work review form is provided in the appendices.

All **suspect** and **known** ACM in the area of the work will be identified in the review. When the work involves, or will be conducted in the vicinity of, thermal system insulation (TSI), then all ACM TSI in the immediate vicinity of the work area will be clearly identified with the OSHA "Danger" warning label, and non-ACM TSI with an "Asbestos Free" label as appropriate.

3.3 Participants

A. All main campus departments that conduct work that has the potential to disturb ACM, or that work in a building area that is potentially contaminated with ACM debris, will utilize the OFS Work Order System to notify EH&S about the expected ACM project. These departments will ensure affected employees receive the appropriate training as required.

B. Capital projects under the NMSU Architects and remote campuses and facilities will abide by the regulatory requirements detailed in this document, but will not utilize the work order review system. As appropriate, the EH&S or asbestos contractor university review and make arrangements:

(1) Secure samples of **all** suspect ACM that will be damaged, disturbed, removed or otherwise impacted by the proposed work,
(2) Develop a comprehensive asbestos inspection report, and,
(3) develop asbestos removal, encapsulation and/or repair specifications.

Changes in the scope of work that require that suspect ACM be disturbed will necessitate that additional samples be analyzed.

3.4 Verbal Requests for a Review of Work-in-Progress

In the event that a verbal request is made for a review for the presence of suspect or known ACM on a project where work is in-progress, then EH&S personnel will complete all sections of the review form. The OFS section supervisor in charge of the project should provide EH&S with the work order number or other reference number for the work.

In the event of an emergency that requires that work be performed in the field prior to a review by EH&S, then suitable precautions should be taken as detailed in Section 4.0 of this document. EH&S shall be notified at the first available opportunity. If the emergency should occur after normal working hours, then the responder should notify NMSU police and request that they contact EH&S personnel for assistance.

3.5 Emergency Response Procedures - Notification to EH&S (also see Standard Work Practices)

A. In areas where suspect asbestos debris is on the floor, water or physical damaged has occurred, or there is other evidence of possible asbestos fiber release or damage to asbestos has occurred, EH&S or the Asbestos Coordinator shall be immediately notified.

B. The area shall be immediately isolated to prevent unauthorized entrance.

C. The Asbestos Coordinator shall be responsible for determining the extent of contamination and most appropriate response action.

3.6 Recordkeeping

All ACM project records, and asbestos related information will be incorporated into EH&S ACM and asbestos building records. At the completion of each project where the disturbance of ACM has occurred, copies of all relevant documents including bulk sampling analysis, air monitoring reports, waste disposal manifests, clearance reports and the like will be sent to the EH&S Asbestos Coordinator for filing.

4.0 SWP Standard Work Practices and Procedures for Asbestos-related projects

4.1 Introduction

Standard work practices and procedures (SWP) provide specific guidelines for certain asbestos-related maintenance work activities. Adherence to SWP will minimize the production of airborne asbestos fibers and will protect the worker and building occupants.

A small-scale, short-duration operation (SS/SD) is further defined as only those demolition, renovation, repair, maintenance or removal operations which are non-repetitive, affect small surfaces or volumes of ACM, will be completed within one work day, and are not expected to expose other employees to significant amounts of friable asbestos. In SS/SD projects, the removal of ACM is not the primary goal of the job; if the purpose of the SS/SD project is maintenance, repair or renovation of the equipment or space behind or covered by the ACM, then these provisions shall apply.

4.2 Personal and Work Area Air Monitoring

Personal and work area air monitoring will be used to evaluate the effectiveness of the work practices, to document exposure conditions, and to provide justification for the personal protective equipment used. Personal air samples will be secured for each individual for each type of SWP until there is sufficient historic or objective data available to meet the OSHA requirements. Once historic or objective data is available, it will no longer be necessary to secure air samples **except:**

- Final clearance samples will **always** be secured for any asbestos project that is not small-scale, short-duration.
- Personal air samples will be secured on a periodic basis by EH&S to provide continuing documentation that the personal protective equipment required by the SWP conforms to the OSHA requirements.

4.3 Providing Notice under NESHAPS to NMED

In New Mexico under EPA's regulations, National Emission Standards for Hazardous Air Pollutants, aka NESHAP (40 CFR Part 61.140-156) a 10 (ten) day notice for a permit must be submitted to the NMED for all projects involving:

- Any and all demolitions, whether asbestos is present or not.
- For renovations when the quantity of Regulated Asbestos Containing Material (RACM) is greater than 260 linear feet, 160 square feet or 35 cubic feet.

Regulated Asbestos Containing Material (RACM) means (a) Friable asbestos material, (b) Category I non-friable ACM that has become friable, (c) category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material expected in the course of demolition or renovation operations

Violators may be subject to civil action in district court for appropriate relief, including temporary or permanent injunction, pursuant to the New Mexico Air Quality Control Act Section 74-2-12, NMSA 1978 and/or the assessment of civil penalties of up to $15,000 per violation for each day of noncompliance, pursuant to the same section.

Notification of less than 10 days may be allowed in case of an emergency involving protection of life, health or property. This includes, but is not limited to: leaking or ruptured pipes; asbestos that has been accidentally damaged or that has fallen that could expose non-asbestos workers or the public; unplanned

mechanical outages; or, repairs essential to a work process that require asbestos removal and that could only be removed safely during the mechanical outage.

Note: *Lack of planning or inspection for asbestos before commencement of a renovation, demolition or maintenance activity does NOT constitute an emergency.*

4.4 Equipment

All equipment used for O&M work practices or response actions shall be approved for use in asbestos operations. In general, some or all of the following materials and/or equipment may be required for asbestos work:

Respirators: Respiratory protection shall conform to the requirements of OSHA 1910.1001. Respirator selection, use and maintenance shall conform to the requirements of the university's Respiratory Protection Program.

11"x17" Danger Signs: Danger signs shall be posted at each entrance to an asbestos regulated area. Signs shall conform to OSHA 1910.1001.

Barrier Tape: Barrier tape specific to asbestos-related work shall be used to demarcate a regulated area when the work area is not isolated by physical boundaries (e.g. walls with lockable doors).

Six mil polyethylene sheeting: Poly is used to construct critical barriers, to protect finishes, and to contain the release of airborne asbestos from the work area. The poly is generally attached using spray glue and duct tape.

HEPA-Filtered Vacuum: Such vacuums, designed to be used with a HEPA filter, are available in various sizes and capacities, and can be used with attachments on drills, saws and other tools.

Wetting Agent: A chemical wetting agent added to water that is used to soak ACM. This amended water penetrates more effectively than normal water, and permits more thorough soaking of the ACM prior to removal or disturbance.

Airless Sprayer: Airless sprayers are used to apply amended water to ACM.

Portable Shower: Portable showers are used in conjunction with a clean and dirty change room for personnel decontamination on larger asbestos projects. A portable shower may be appropriate for some types of SS/SD projects.

Disposable Coveralls: Disposable, impervious coveralls, equipped with head and foot covers, that are used on asbestos projects to prevent gross contamination from contacting the worker.

Asbestos Disposal Bags: 6-mil Polyethylene bags that are-printed or labeled with the following: "Danger; Contains Asbestos Fibers; Avoid Creating Dust; Cancer and Lung Disease Hazard; Breathing Airborne Asbestos Fibers is Hazardous to Your Health"; and "RQ Hazardous Substance; Solid, NOS (ASBESTOS); NA 9188; (ORM-E)".

4.5 Development of SWP's [Standard Work Practices]

The departments shall, with the assistance of EH&S, develop SWP's specific to the asbestos-related work that they perform. Copies of these SWP's shall be:

- Made available to EH&S,
- Maintained with the departmental copy of the O&M program, and,
- Provided to supervisors and employees who conduct work covered by the SWP.

Ensuring compliance with the SWP shall be the responsibility of the individual employee, the employees' supervisor, and the department. Copies of SWP's that are based upon an industry standard, or that were developed with the assistance of various departments, may be found at the end of this section.

APPENDICES

Appendix A Glossary of ACM O&M Terms

Abatement: Work that involves the physical removal of asbestos. Work must be performed by trained personnel under the supervision of a competent person as defined by the Environmental Protection Agency (EPA).

Aggressive Final Clearance Air Sampling: The act of aggressively agitating the air in an asbestos removal area using fans and/or a leaf blower while final clearance air samples are being taken.

Amended Water: Water that has been mixed (amended) with a chemical wetting agent, or surfactant, to improve penetration and wetting ability.

Asbestos: A generic name given to a number of naturally occurring minerals that possess a unique crystalline structure and are separable into fibers. Asbestos includes the asbestiform varieties of chrysotile, crocidolite and amosite.

Asbestos-containing Material (ACM): Any material containing more than 1.0% asbestos by area as determined using Polarized Light Microscopy.

Asbestos Project: An activity involving job set-up for containment, removal, enclosure, encasement, renovation, repair, demolition, construction or alteration of an asbestos-containing material.

CFR: Code of Federal Regulations

Class I Asbestos Work - Work activities involving the removal of thermal system insulation (TSI) and surfacing ACM and presumed asbestos containing material (PACM), as defined by OSHA.

Class II Asbestos Work - Work activities that involve the removal of ACM, which is not TSI or surfacing ACM. This includes, but not limited to the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles and construction mastics, as defined by OSHA.

Class III Asbestos Work - Means repair and maintenance operations where "ACM", including TSI and surfacing ACM and PACK is likely to be disturbed, as defined by OSHA. In no event shall the amount of ACM or PACM so disturbed exceed that which can be contained in one glove bag or waste bag which shall not exceed 60 inches in length and width.

Class IV Asbestos Work - means maintenance and custodial activities during which employees contact but do not disturb ACM or PACM and activities to clean up dust, waste and debris resulting from Class 1, II or III activities, as defined by OSHA.

Competent Person - in addition to the definition in 29 CFR 1926.32(1), means a person who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, and who has the authority to take prompt corrective action to eliminate or mitigate the hazard, in addition, one who is specifically trained in a training course that meets the criteria of EPA's Model Accreditation Plan (40 CFR part 763, see Appendix A) for supervision, training for component class II work shall be in accordance with the Occupational Safety and Health Administrations (OSHA) for Class II training, and for Class III and IV work who is trained in a manner consistent with AHERA requirements for training of local education agency maintenance and custodial staff as set forth in AHERA at 40 CFR 763.92(a)(2).

Control Measure: A measure used to control the generation of airborne asbestos fibers until a permanent solution can be implemented. These measures include encapsulation, repair, encasement and enclosure.

Delamination: Physical separation of one layer from another.

Encapsulation: The application of a sealant over the surface of the asbestos-containing material to prevent the release of asbestos fibers.

Enclosure: The construction or installation over or around the ACM of any solid or flexible covering, which will not deteriorate or decompose for a period of time, so as to conceal the ACM, contain ACM fibers, and render the ACM inaccessible.

EPA; The United States Environmental Protection Agency

Excursion Limit: The employer shall ensure that no employee is exposed to an airborne asbestos fiber concentration in excess of 1.0 f/cc of air as averaged over a sampling period of thirty (30) minutes; the concentration of 1.0 f/cc is defined as the excursion limit.

Fiber Release Episode: The unintentional disturbance of ACM resulting either from accidental contact or that is a result of other factors, such as pipe leaks or roof leaks, where the ACM has been physically dislodged and the potential for asbestos fibers to have become airborne as a result of this disturbance is high.

Friable: Material which is capable of being crumbled, pulverized or reduced to powder by hand pressure when dry, or which under normal use or maintenance emits or can be expected to emit fibers into the air.

HEPA: High Efficiency Particulate Air (HEPA). HEPA filtered equipment must be capable of trapping and retaining 99.97% of all particles larger than 0.3 microns.

Homogenous: Materials of the same age, physical appearance, texture and color, used for a similar application. A separate homogenous sampling area shall be defined for each type of homogenous material on each floor of a building.

Miscellaneous ACM: Interior ACM that is not surfacing or thermal system insulation, such as some floor tile, ceiling tile, wire insulation, asbestos cement products and so forth.

Operations & Maintenance Program: Specific procedures and practices developed for the interim control of asbestos-containing materials in buildings until it is removed.

OSHA: Occupational Health and Safety Administration, administered in New Mexico by the NM Environmental Division (NMED)).

Permissible Exposure Limit (PEL): The highest allowable level of exposure to airborne asbestos fibers that an employee may have, without using respiratory protection, as stated by OSHA.

Personal Protective Equipment: Any material or device worn to protect a worker from exposure to, or contact with, any harmful material or force. PPE should be used only if engineering or administrative controls are insufficient to protect against a hazard.

Regulated Area: An area established to demarcate areas where debris is present, ACM operations are occurring, and/or airborne asbestos fiber are present. Danger or warning signage is required depending on whether the airborne asbestos fiber concentrations exceed or are below, respectively, the permissible exposure limit or if .

Renovation: Altering, in any way, one or more facility components.

Repair: Returning damaged ACM to an undamaged condition or to an intact state so as to prevent fiber release.

Respiratory Protection: A device worn to either purify the air, or that provides clean air from another source to the wearer. All respirator users must be evaluated for medical satisfaction, have received appropriate training on respirator use, care, and maintenance, and be fit tested for the respirator in use.

Response Action: Repair of damage or deterioration to asbestos materials, or the removal of asbestos or asbestos debris, undertaken to alleviate a hazard to building occupants.

Small-scale, Short-duration ACM Projects: For the purposes of this document, in-house workers may only conduct small-scale, short-duration removal or repair response actions, the cleaning/removal of asbestos debris, and cleaning/removal operations associated with an asbestos fiber release episode.

Asbestos work other than small-scale, short duration must be performed by either an in-house person who has Asbestos Worker equivalent training, or by a licensed asbestos consultant contractor.

Small-scale, short-duration (SS/SD) renovation and maintenance activities include, but are not limited to: minor cutting and maintenance on ACM transite pipe; installation or removal of small sections of drywall; installation or electrical conduit proximate to, or through, ACM; or the removal of small sections of ceiling tile, friable (e.g. damaged) flooring, or unbounded ACM flooring where the work is non-repetitive, and can be completed within an eight (8) hour work shift. The purpose of SS/SD projects is maintenance, repair or renovation where the removal of ACM is not the primary goal of the job. A person with the training and experience required by the OSHA who meets the qualifications of "competent person" as established by per 40 CFR 761. .

Surfacing ACM: ACM sprayed or troweled on surfaces, such as some acoustical plasters, hard wall or ceiling plasters, and fireproofing.

Thermal System Insulation: Thermal system insulation (TSI), is ACM applied to pipes, fittings, boilers, breaching, tanks, ducts or other structural- components to prevent heat loss or gain or water condensation.

Appendix B1 **Standard Work Controls**

Asbestos Class II operations (indoor work only) Reference: OSHA

Competent person for Asbestos (per 40 CFR 761**) shall determine use if there is a question of application of following:**

Critical barriers/isolation methods are required if
- lack Negative Exposure Assessment
- if likely to exceed a PEL
- non-intact removal
- Impermeable drop cloths required

For removal of vinyl and asphalt flooring materials
- No sanding
- HEPA vacuum
- Wet methods
- No dry sweeping
- Any mechanical chipping must be done in negative-pressure enclosure
- Intact removal if possible
- Dry heat removal allowed
- Assume contains asbestos without an analysis

For removal of roofing materials
- Intact removal if possible
- Wet methods if feasible
- Cutting machine misting
- HEPA-vacuum debris
- Lower to ground as soon as possible but no later than day's end
- Control dust of unbagged material
- Prevent intake of airborne asbestos through roof vent system Class II

For removal of cement-like siding, shingles, or transite panels
- Intact removal if possible
- Wet Methods
- Lower to ground via dust-tight chute, crane, or hoist immediately or place in an impervious waste bag or wrap in plastic sheeting and lower to ground by day's end
- Cut nail heads For removal of gaskets
- Use glove bags if not intact
- Wet removal
- Prompt disposal
- Wet scraping

Additional requirements
- Wet methods
- Intact removal if possible
- Cutting, abrading, or breaking prohibited

Generally Required Work Practices and Engineering Controls
- Wet methods
- HEPA vacuum
- Prompt cleanup/disposal

Prohibited Work Practices and Administrative Controls
- High-speed abrasive disc saws without HEPA
- Compressed air without capture device
- Dry sweeping/shoveling

Appendix B1 **Standard Work Controls**

Asbestos Class III operations per OSHA

Competent person for Asbestos (per 40 CFR 761**) shall determine use if there is a question of application of following:**

Critical barriers required

- If no NEA
- > PEL via monitoring
- Impermeable drop cloths required
- Local HEPA exhaust required

Note: Enclosure or isolation of operation required if TSI or SM is drilled, cut, abraded, sanded, sawed, or chipped

Generally Required Work Practices and Engineering Controls

- Wet methods
- HEPA vacuum
- Prompt cleanup/disposal

Prohibited Work Practices and Administrative Controls

- High-speed abrasive disc saws without HEPA
- Compressed air without capture device
- Dry sweeping/shoveling

Employee and Equipment Decontamination - If > PEL or no NEA

- Equipment room/area required
- Impermeable drop cloths required
- Area must accommodate cleanup
- Must clean work clothes with HEPA vacuum before removal
- Must Decontaminate all PPE
  Must enter regulated area through equipment room/decon area
- Must enter regulated area through equipment room/decon area
- NEA must vacuum
- No smoking in work area

Appendix C1 **Standard Work Practices (SWP)**

Emergency Response (for asbestos incidents)

The EH&S Asbestos Coordinator, or designee, will promptly investigate all reported asbestos disturbances and will act to protect the safety and health of the university community. Incidents will be documented and the abatement procedures and activities employed appropriately recorded. All asbestos projects will be completed in accordance with applicable federal, state and local laws.

A. Dislodging of Non-friable ACM (example –loose ACM floor tile

1. Notify the EH&S Asbestos Coordinator of the location and nature of disturbance.
2. The EH&S Asbestos Coordinator will ensure that the area is regulated so as to minimize the potential exposure to occupants.
3. The EH&S Asbestos Coordinator will then notify appropriately trained and licensed personnel.
4. Cleanup will be conducted as follows:
    a. Access to the area will be immediately and properly restricted;
    b. All debris will be saturated with amended water;
    c. All debris will be placed in six-mil Polyethylene asbestos disposal bags;
    d. All areas beneath the point of release will be HEPA vacuumed and wet wiped;
    e. The damaged ACM will be repaired;
    f. At the completion of clean-up activities, final clearance air monitoring will be conducted in the area to determine if airborne fiber concentrations are within acceptable limits; and
    g. Once the air quality has been determined to be acceptable, the remaining barriers will be removed and the work area will be authorized for reentry.

B. Dislodging of friable ACM:

1. Notify the EH&S Asbestos Coordinator of the location and nature of the disturbance.
2. The EH&S Asbestos Coordinator will ensure that the procedures listed below will be followed:
    a. Access to the area will be immediately and properly restricted;
    b. The air handling system will be shut down or modified to restrict air movement through the affected area;
    c. The EH&S Asbestos Coordinator will coordinate the appropriate response action with appropriately trained and licensed personnel;
    d. At the completion of abatement activities, final clearance air monitoring will be conducted in the area to determine if airborne fiber concentrations are within acceptable limits; and
    a. Once the air quality has been determined to be acceptable, the remaining barriers will be removed and the work area will be authorized for reentry.

Appendix C2 **Standard Work Practices (SWP)**

Cutting/Removal of transite water pipe (Asbestos Cement Pipe)
Depending on the volume of pipe to be repaired or removed this work activity is identified as a Class III repair or Class III removal asbestos operation by OSHA (29 CFR 1926.1101). Competent person per 40 CFR 761 will complete an Initial Exposure Assessment (IEA) prior to the operation.

Preparation
1. Establish a regulated work area (RWA) using barricade tape, regardless whether is negative exposure assessment (NEA) or not. If not NEA then respirator (must have current respirator fit tested certification) and protective clothing (e.g. full body tyvex) are required inside regulated area.
2. Post asbestos-warning signs at the RWA entry point.
3. If not NEA then provide a hand/face wash station at the entry point to the RWA.
4. Establish a waste load-out area attached to the RWA.
5. Once RWA is established and work begins, no access should be permitted without the required personal protective equipment.

Air Monitor and Sample for Exposure to Airborne Asbestos
As the work begins the competent person will conduct and record objective data to confirm the IEA, and that the specific job-site work activity confirms the findings of the IEA, and that the PELS are not being exceeded for this work activity.

Excavation
1. Machine excavate around the ACM pipe to permit cutting .
2. Hand excavate areas under pipe where cuts/breaks are planned.
3. Excavation operations should be carefully executed so that pipe damage does not occur prior to removal.

Pipe Removal
1. Protective clothing and equipment shall consist of at a minimum…steel toe boots, hard hats, safety glasses, rubber or leather gloves. If not NEA then all workers within the RWA shall wear respirator (must have current respirator fit tested certification) and protective clothing (e.g. full body tyvex).
2. All pipe cutting or breaking operations require adequate wetting with potable water to prevent ACM pipe materials from being crumbled by hand pressure and the asbestos fibers becoming air-borne (friable).
3. Plan pipe cuts/breaks as necessary to accommodate the size/weight of pipe being removed.
4. If needed, make an initial cut to penetrate the pipe and drain off residual liquids.
5. If pipe is connected with joint collar, remove the pipe sections by breaking the collar, or cutting them with a water drenched concrete saw or soil-pipe cutter.

ACM transport/disposal
1. All damaged, crumbling ACM pipe and debris shall be enclosed in glove bags or other containment devices before removal from the work site.
2. If the ACM material is not sent directly for disposal, intact ACM pipe lengths and enclosed/contained ACM are to be transported to temporary storage in the OFS or other secure NMSU area to await proper disposal.
3. Unless cleaned for reuse or otherwise accounted for, contaminated PPE should be sent for disposal.

_____

Additional details for Enclosures for outside ACM projects is available at
http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=26001

Appendix C3 **Standard Work Practices (SWP)**

ACM Tiles and General Custodial Maintenance

1. Floor buffing on ACM tile should only be done with low-abrasion pads and at speeds less than 300 RPM.

2. Allow provide sufficient floor finish for burnishing or buffing so the ACM tile has sufficient floor finish and you are not buffing the bare floor.

3. Take care when removing ventilation filters dry or shaking ventilation filters in HVAC system.

Automotive & mechanic Shop (SWP)
Any and all mechanic, automotive or farm shop work that performs work on **more than five brake or clutch jobs per week**, require the use of one of the following work practices or an equivalent method such as the spray can/solvent system.

1. **Negative-Pressure Enclosure/HEPA Vacuum System Method** This type of enclosure and vacuum system has a special box with clear plastic walls or windows, which fits tightly around a brake or clutch assembly to prevent asbestos exposure.

2. **Low Pressure/Wet Cleaning Method** This specially designed low-pressure spray equipment wets down the brake assembly and catches the runoff in a special basin to prevent airborne brake dust from spreading in the work area.

If you work in a commercial automotive shop that performs work on **no more than five brake or clutch jobs per week**, OSHA regulations allow the following method instead:

1. **Wet Wipe Method** This method involves using a spray bottle or other device capable of delivering a fine mist of water, or amended water (water with a detergent), at low pressure to wet all brake and clutch parts. The brakes can then be wiped clean with a cloth.

Appendix C1 Standard Work Practices (SWP)

1. Equipment use at ACM operations

All equipment used for O&M work practices or response actions will be approved for use in asbestos operations.

In general, some or all of the following materials and/or equipment may be required for asbestos work:

b. 11"x17" Warning or Danger Signs: As determined by sampling, the appropriate signs will be posted at each entrance to an asbestos regulated area. Signs will conform to OSHA 1910.1001.
c. Airless Sprayer: Airless sprayers are used to apply amended water to ACM.
a. Asbestos Disposal Bags: Six-mil Polyethylene bags Bags will, in addition, utilize the hazard label currently required by Department of Transportation.
b. Barrier Tape: Barrier tape specific to asbestos-related work will be used to demarcate a regulated area when the work area is not isolated by physical boundaries such as walls with lockable doors.
c. Disposable Coveralls: Disposable, impervious coveralls, equipped with head and foot covers, that are used on asbestos projects to prevent gross contamination from contacting the worker.
d. HEPA-Filtered Vacuum: Such vacuums, designed to be used with a HEPA filter, are available in various sizes and capacities, and can be used with attachments on drills, saws and other tools.
e. Portable Shower: Portable showers are used in conjunction with a clean and dirty change room for personnel decontamination on larger asbestos projects. A portable shower may be appropriate for some types of SS/SD projects.
f. Respirators: Respiratory protection will conform to the requirements of OSHA 1910.1001. Respirator selection, use and maintenance will conform to the requirements of the university's Respiratory Protection Program.
g. Six-mil polyethylene sheeting: Poly is used to construct critical barriers, to protect finishes, and to contain the release of airborne asbestos from the work area. The poly is generally attached using spray glue and duct tape.
h. Wetting Agent: A chemical wetting agent added to water that is used to soak ACM. This amended water penetrates more effectively than normal water and permits more thorough soaking of the ACM prior to removal or disturbance.

2. Notification of ACM events

a. Notification shall be provided to EH&S on all campus work involving abatement, disturbance or maintenance of asbestos (ACM and PACM). This may be provided via a work request or memo.
b. The following information is required:
    - Work order or WO number if abatement is necessary to the project
    - Building/facility name/description/size/age and use
    - Location
    - Nature of work, if abatement, details on removal/enclosure/encapsulation/demolition
    - Amount (square or linear feet to be abated)
    - Scheduled start/completion date

Asbestos Refresher/Awareness Training Class Summary

The purpose of the Asbestos Awareness Training Program is to inform employees of the presence, locations and hazards of asbestos containing building materials (ACM) in buildings

OSHA's regulation (1926.1101 (k) (9) references Environmental Protection Agency (EPA) 40 CFR 763.92 Subpart E, which states, the employer shall ensure that all maintenance and custodial employees who may work in a building that contains asbestos containing building materials (ACM) receive awareness training of at least two hours, whether or not they are required to work with (ACM). New custodial and maintenance employees shall be trainee within 60 days after commencement of employment. Annual refresher training is also required.

To meet regulatory requirements this training must include:

1) Information regarding asbestos and its various uses and forms.
2) Information on the health effects associated with asbestos exposure.
3) Locations of asbestos containing material (ACM)
4) Recognition of ACM
5) Contact information regarding asbestos related questions.

This class is intended to be an annual refresher training session. If there are people who have not had the initial training, they need to remain for the entire 2 hours to qualify for the initial training. The initial training will go into more detail on the topics. The annual refresher is not that much different in content. The class will last approximately 1 1/2 - 2 hours.

Overview of Training Content of the Class

1) Basic regulatory requirements regarding asbestos
2) Uses of asbestos in building materials
3) Health effects of asbestos
4) Types of building materials that may contain asbestos and how to recognize it
5) Location of ACM within the university
6) Activities that may release asbestos fibers
7) How to handle spills of ACM
8) General maintenance procedures for ACM so releases of asbestos fibers are minimized
9) Common signs and labels
10) Review
11) Questions and answers.

Asbestos Related Guidelines

Do's and Don'ts

Don'ts

1) Never sweep asbestos

2) Do not beat, cut, sand, grind, drill or break suspect asbestos containing material

3) Do not disturb a suspect asbestos material

4) Never use an ordinary vacuum cleaner to clean up asbestos

5) Do not discard asbestos in the trash

6) Do not blast asbestos with water or compressed air

7) Do not lift ceiling tile where asbestos fireproofing is sprayed above

8) Do not demolish, drill or punch holes into walls, ceiling or flooring materials without prior knowledge that the subject material has been checked by EH&S 646-3327

9) When performing house-cleaning duties such as vacuuming carpet, do not bang vacuum cleaner into pipe risers

Do's

1) If an asbestos disturbance has occurred, stop work immediately and notify EH&S 646-3327

2) Stop or re-route traffic around an asbestos spill in order to avoid spreading or tracking it

3) When possible, mist fallen asbestos with water, but make sure it can be contained

4) Always lift ceiling tiles gently before working above a ceiling

5) Be careful around old air handlers. Many have the asbestos pipe, block and flex tape insulation on the units

6) Report illegal or improper asbestos removal work promptly to EH&S 646-3327

7) When unsure about asbestos issues, call EH&S 646-3327

ASBESTOS CONTAINING BUILDINGS (ALL 1981 OR OLDER)

	I&G Building Name	Bldg#	Year Built	ACM
I&G pre82	Air Test Facility	343	1977	ALL
I&G pre82	Animal Care Facility	347	1978	ALL
I&G pre82	Astronomy Building	225	1959	ALL
I&G pre82	Beef Office	241	1963	ALL
I&G pre82	Biological Control Insec	329	1973	ALL
I&G pre82	Biology Annex	82	1941	ALL
I&G pre82	Biology Greenhouses, E & W	137-140	1966	ALL
I&G pre82	Branson Library	278	1951	ALL
I&G pre82	Breland Hall	184	1954	ALL
I&G pre82	Bull Barn	193	1957	ALL
I&G pre82	Campus Police/Ag Institute	30	1930	ALL
I&G pre82	Chemistry Building	187	1957	PART
I&G pre82	Clara Belle Williams Hall	364	1981	ALL
I&G pre82	Computer Center	126	1966	ALL
I&G pre82	Dan W. Williams Hall	60	1938	ALL
I&G pre82	Dove Hall	56	1936	ALL
I&G pre82	Educational Services Center	338	1978	ALL
I&G pre82	Engineering Complex I	363	1980	ALL
I&G pre82	Farm Residence	199	1953	ALL
I&G pre82	Fire Station	267	1965	ALL
I&G pre82	Garcia Annex	154	1949	ALL
I&G pre82	Gardiner Hall	188	1957	ALL
I&G pre82	Gerald Thomas Hall	244	1963	ALL
I&G pre82	Goddard Hall	10	1913	ALL
I&G pre82	Guthrie Hall	288	1968	ALL
I&G pre82	Hadley Hall	172	1953	ALL
I&G pre82	Hardman Hall	323	1974	ALL
I&G pre82	Herschell Zohn Theatre	249	1963	ALL
I&G pre82	Horse Farm Office	54	1935	ALL
I&G pre82	Hort Farm Greenhouses	351	1978	ALL
I&G pre82	Hort Farm Implement Shed	168	1955	ALL
I&G pre82	Hort Farm Office & Lab	158	1949	ALL
I&G pre82	Hort Farm Office Seed	157	1948	ALL
I&G pre82	Hort Farm Restrooms	374	1981	ALL
I&G pre82	Hort Farm Storage She	28	1902	ALL
I&G pre82	J. Gordon Watts Entomology Labs	359-361, 432	1978	ALL
I&G pre82	Jacobs Hall	250	1963	ALL
I&G pre82	James B. Delamater Activity Center	321	1973	ALL
I&G pre82	Jett Hall & Annex	189 & 190	1956	ALL
I&G pre82	Kent Hall	33	1929	ALL
I&G pre82	Knox Hall	368	1981	ALL
I&G pre82	Livestock Judging Pavil	195	1957	ALL
I&G pre82	Livestock Office	166	1952	ALL
I&G pre82	Memorial Tower	161	1950	ALL

ASBESTOS.CONTAINING.BUILDINGS.(ALL.1981.OR.OLDER)

I

&G pre82	Metabolism & Physiolog	372	1981	ALL
I&G pre82	Milton Hall	83	1941	ALL
I&G pre82	Nason House	36	1918	ALL
I&G pre82	Natatorium	251	1962	ALL
I&G pre82	Neale Hall	164	1951	ALL
I&G pre82	Nematology Lab	2	1890	ALL
I&G pre82	NMDA bldg	330	1975	ALL
I&G pre82	OFS Carpentry Shop	220	1960	ALL
I&G pre82	OFS Central Heating Plant	269	1966	ALL
I&G pre82	OFS Construction	254	1962	ALL
I&G pre82	OFS Custodial Quonse	152	1948	ALL
I&G pre82	OFS Grounds	223	1959	ALL
I&G pre82	OFS Lock Shop	218	1960	ALL
I&G pre82	OFS Motor Pool	373	1981	ALL
I&G pre82	OFS Office	221	1960	ALL
I&G pre82	OFS Shops/Boiler Roo	237	1960	ALL
I&G pre82	OFS Storage Quonset	153	1949	ALL
I&G pre82	OFS Warehouse	222	1960	ALL
I&G pre82	O'Loughlin House	179	1953	ALL
I&G pre82	Passive Solar	348	1978	ALL

ASBESTOS.CONTAINING.BUILDINGS.(ALL.1981.OR.OLDER)

I&G pre82	PE Restrooms/Track Fi	314	1970	ALL
I&G pre82	Photovoltaic Center	369	1980	ALL
I&G pre82	Photovoltaic Labs	514	1980	ALL
I&G pre82	President's Residence	366	1979	ALL
I&G pre82	Regents Row	248	1962	ALL
I&G pre82	Rentfrow Gym	211	1958	ALL
I&G pre82	Sheep Barn	194	1957	ALL
I&G pre82	Small Animal Research	246	1962	ALL
I&G pre82	Speech Building	365	1981	ALL
I&G pre82	Stucky Hall	282	1970	ALL
I&G pre82	Sugerman Space Grant	212	1958	ALL
I&G pre82	Tejada Building, Extens	245	1962	ALL
I&G pre82	Thomas & Brown Hall	301	1972	ALL
I&G pre82	Tombaugh Observatorys	317-319	1971	ALL
I&G pre82	VERL Farm, Shop	428	1979	ALL
I&G pre82	VERLOffice/Lab	367	1980	ALL
I&G pre82	Walden Hall	276	1966	ALL
I&G pre82	Wells Hall	355	1978	ALL
I&G pre82	William B. Conroy Honors	35	1907	ALL
I&G pre82	Young Hall	32	1928	ALL
I&G pre82	12 Observatory A Mt	264	1964	ALL
I&G pre82	24 Observatory A Mt	283	1967	ALL

NON I&G- HOUSING

	Building Name	Bldg#	Year Built	ACM
non -I&G pre82	Cole Village	270	1966	ALL
non-I&G pre82	Garcia Residence Hall	275	1968	ALL
non-I&G pre82	Greek Complex	271-274	1966	ALL
non-I&G pre82	Monagle Residence Ha	260	1965	ALL
non-I&G pre82	Rhodes-Garrett-Hamiel	79, 80, 185	1941	ALL
non-I&G pre82	Sutherland Village	206	1958	ALL
non-I&G pre82	Tom Fort Village	214	1959	ALL

NON I&G- AUX

	Building Name	Bldg#	Year Built
non-I&G pre82	Campus Health Center	261	1965
non-I&G pre82	Corbett Center	285	1968
non-I&G pre82	Frenger Food Court	262	1965
non-I&G pre82	Memorial Stadium Lock	342	1978
non-I&G pre82	Pan American Center	284	1968
non-I&G pre82	PSL Solar Building	242	1969

	Building Name	Bldg#	Year Built
ASBESTOS.CONTAINING.BUILDINGS.(ALL.1981.OR.OLDER)			
	NON.I&G..ACAD		
non-I&G pre82	VERL FLY FARM	459	1979

ASBESTOS.CONTAINING.BUILDINGS.(ALL.1981.OR.OLDER)			
non-I&G pre82	NON I&G- PSL		
non-I&G pre82	Building Name	Bldg#	Year Built
non-I&G pre82	PSL, Clinton P. Anderson Hall	263	1965
non-I&G pre82	PSL Annex	243	1961
non-I&G pre82	PSL Antenna Range C	520	1962
non-I&G pre82	PSL Antenna Range M	518	1962
non-I&G pre82	PSL Antenna Range N	521	1962
non-I&G pre82	PSL Antenna Range So	519	1962
non-I&G pre82	PSL Astro Hut	523	1969
non-I&G pre82	PSL Central Control Bu	259	1958
non-I&G pre82	PSL Fabrication Shop	280	1966
non-I&G pre82	PSL Garage/Carpentry/	279	1966
non-I&G pre82	PSL Guard House, Ant	228	1969
non-I&G pre82	PSL Guard House/Main	281	1966
non-I&G pre82	PSL High Bay/Antenna	256	1962
non-I&G pre82	PSL Machine Shop	216	1959
non-I&G pre82	PSL Receiver-North/An	257	1962
non-I&G pre82	PSL Receiver-South/An	258	1962

NMSU Asbestos Awareness Quiz

Name _____ Date _____

Department _____

Circle the best possible answer to the following questions:

1)Generally, a good indication a pipe might contain asbestos insulation is

A) Insulation is soft
B) Asbestos insulation has an odor
C) Insulation is hard
D) All asbestos pipe insulation is white

2)The best way to control an asbestos spill is to

A) Sweep it up as quickly as possible
B) Mist the area down with water
C) Use the nearest vacuum cleaner to clean it up
D) Open up as many windows in the area as possible

3)Out of the four materials listed below which is least likely to contain asbestos

A) Concrete
B) Pipe insulation
C) Interior lining or walls of fume hood
D) Floor tile

4)To classify a material as non-asbestos a person must

A) Be a construction manager
B) Be an Industrial Hygienist
C) Must have knowledge of building materials and construction techniques
D) Be a certified asbestos inspector and take a bulk sample of the material and have it analyzed at an approved laboratory

5)If ACM is disturbed or friable asbestos is found, you should

A) Contact Student Health Center
B) Call the Engineering Dean
C) Notify the Office of Facilities and Services Training and Safety
D) Call NMSU Fire Section

6) Individuals working where they disturb or create friable asbestos must be trained at least

A) Monthly
B) Once
C) Every five years
D) Annually

7) Asbestos is a health hazard because

A) When it gets on skin it causes a skin rash
B) If inhaled into the lungs it can lead to cancer or other respiratory diseases
C) If swallowed it can destroy your stomach
D) If it gets in your eyes it may cause blindness

Please mark T for True or F for False to answer the following questions.

8) _____ An OSHA approved paper dust mask is adequate protection when working with asbestos

9) _____ A person must be certified with the state to remove asbestos from a commercial or industrial workplace

10) _____ Asbestos fibers can always be seen

11) _____ Any person illegally removing asbestos can be prosecuted

12) _____ All asbestos material may be taken and disposed at any landfill

13) _____ Asbestos is found only in sprayed-on insulation

14) _____ A friable material is more likely to be airborne than a non-friable material if disturbed

15) _____ You have to work directly with asbestos to be at risk from exposure to airborne fibers

16) _____ Floor finishes are always stripped by wet methods, using low-abrasion pad at speeds lower than 300 R.P.M. to avoid creating an asbestos disturbance

17) _____ Never burnish or dry-buff asbestos-containing flooring unless it has sufficient finish so that the pad cannot contact the bare floor

18) _____ According to OSHA, building materials in buildings constructed prior to January 1, 1981 are considered asbestos containing unless proved otherwise by an Asbestos Inspector

19) _____ Asbestos is an acute health hazard which can cause brain tumors or blindness

20) _____ Friable asbestos can be swept up and discarded in the trash