

Environmental Health & Safety Policy Manual		
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Asbestos Management Program		

1.0 PURPOSE:

To establish a program that protects LSU Health Sciences Center (HSC) employees from exposure to asbestos when contacting Asbestos Containing Material (ACM) and to provide guidelines for adequate identification, control, maintenance, removal and disposal of all ACM located at LSUHSC facilities.

2.0 SCOPE:

This procedure applies to all employees and contractors performing work for the LSUHSC. LSUHSC personnel do not perform any form of asbestos response actions or general work activities for which the potential is present to disturb or damage asbestos containing materials. Projects awarded to outside contractors shall include provisions requiring compliance with this program and the LSUHSC Construction Safety Guidebook.

3.0 RESPONSIBILITIES:

3.1 Environmental Health and Safety (EH&S) shall:

- Assess program compliance and perform six month surveillance inspections.
- Review asbestos-related work packages, to include pre-contract bid specifications and post-contract bid contractor work plans, for environmental health issues regarding the protection of employee health and environment and compliance with applicable federal, state, and local regulations.
- Submit requests for the Environmental Consulting Services contractor to perform bulk sampling and analysis of suspected ACM, as necessary.
- Submit requests for the Environmental Consulting Services contractor to perform asbestos response action project compliance monitoring.
- Assist with and review the results of the Environmental Consulting Services contractor in regards to asbestos response action pre and post-work inspections, daily work site inspections, and area and clearance air monitoring to ensure compliance with all applicable regulations.

- Maintain and update the LSUHSC Asbestos Management Plan to reflect changes and updates to the asbestos inventory.
- Provide training and maintain associated records as required by this program.

3.2 Facility Services shall:

- Ensure personnel are notified of the presence, location, and quantity of ACM before starting any work with the potential to contact ACM or suspect ACM.
- Convey information to employees of the presence, location, and quantity of newly discovered ACM.
- Ensure that employees assigned work duties with the potential to contact ACM/Presumed Asbestos Containing Material (PACM) are provided with and wear the appropriate respiratory protection.
- Ensure the completion of all required training by employees.
- Ensure that materials identified as ACM and located in routine maintenance areas are appropriately labeled.
- Manage asbestos containing floor tiles in accordance with this procedure.
- Ensure that employees know the proper procedures in reporting emergencies and mishaps in the event of an asbestos-related incident.

3.3 Director of Facility Planning shall:

- Identify ACM in the work area during the work package design phase by accessing the asbestos management plan or requesting the performance of an asbestos inspection, as needed.
- Validate that Regulated Asbestos Containing Material (RACM) that may be disturbed is tasked for removal prior to the start of construction and/or renovation related work.
- Validate that personnel preparing asbestos response action work packages that are in excess of Small Scale-Short Duration (SSSD) are Project Designer accredited in accordance with 40 CFR 763 and LAC 33.3.27.
- Submit to EH&S all draft asbestos related contract specifications for review and comment.

3.4 Director of Engineering and Construction shall:

- Coordinate with EH&S to determine the need for and request performance from the Environmental Consulting Services contractor of bulk sampling and analysis of suspected ACM.
- Coordinate with EH&S to develop scope of and to request from the Environmental Consulting Services contractor the performance of asbestos response action project compliance support and monitoring.
- Submit to EH&S the contractor-developed asbestos work plans for review and comment.

3.5 Purchasing shall:

- Ensure that contract procurements involving asbestos abatement operations require bids from Louisiana licensed asbestos contractors. Contractors performing asbestos abatement must be licensed by the Louisiana State Licensing Board for Contractors. Licensing for asbestos abatement is under the Commercial license with a specialty in Asbestos. Additional information for licensing can be found at the [Louisiana State Licensing Board for Contractors website](#) or by calling (225) 765-2301.

3.6 Employees shall:

- Comply with the policies and training requirements in this procedure.
- Know the presence, location, and quantity of ACM in their work area before they begin work.
- Not intentionally disturb or damage any suspect or confirmed ACM.
- Report any suspect damaged ACM encountered to their supervisor.
- Know the proper procedures in reporting emergencies and mishaps in the event of an asbestos-related incident.

4.0 IMPLEMENTATION REQUIREMENTS:

4.1 Introduction

Asbestos in LSUHSC facilities exists primarily in building materials and can be found in varying conditions ranging from intact and non-friable to damaged and friable. Typically, asbestos is located in floor tiles, roofing felts, ceiling tiles, transite materials, and dry wall. Asbestos is also present in pipe and boiler insulation materials and in sprayed-on materials on beams, in crawl spaces, and between walls. The potential for ACM to release breathable fibers depends largely on its degree of friability. Generally, spray-on material used as thermal insulation or soundproofing is friable. ACM found in pipe and boiler insulation that is damaged can be friable and may create a potential health problem. Materials, such as floor tile, roofing felts, transite materials, and mastics are considered non-friable and do not emit airborne fibers unless they are damaged or disturbed. If an employee disturbs these materials by sanding, grinding, or cutting, airborne fibers can be released.

Asbestos exposure can cause disabling respiratory disease and various types of cancers. Exposure to asbestos has been shown to cause cancers of the lung, stomach, and colon; and mesothelioma. Inhalation and/or ingestion of fibers are the primary routes of exposure. Symptoms of illness typically do not appear for twenty years or more after initial exposure.

4.2 Exposure Prevention

LSUHSC personnel shall not perform any form of asbestos response action(s) or general work activities for which the potential is present to disturb or damage asbestos containing materials. Any assigned work activity that involves potentially disturbing ACM shall be reported to the employee's immediate supervisor.

LSUHSC employees who encounter suspect ACM shall not disturb or damage the material in any way. Suspect ACM/PACM that is damaged shall be avoided and immediately reported to supervision regardless of whether during or outside of standard working hours.

Any employee who feels they have been exposed to asbestos shall report the incident to their immediate supervisor. The supervisor shall refer the incident for investigation per the LSUHSC accident/incident investigation procedures.

Access to routine maintenance areas (such as boiler and mechanical rooms) containing materials identified as ACM shall be limited to authorized personnel only. The doors to all routine maintenance areas shall remain locked in between periods of authorized entry.

4.3 Material Identification

The EH&S department maintains the LSUHSC Facilities Asbestos Management Plan. The management plan provides details of the locations and conditions of identified ACM at LSUHSC facilities. Before any activity is initiated which may involve contact, disturbance, or removal of structural, mechanical, electrical, or other building components, the presence of ACM in the work area shall be determined.

A bulk survey for the material in question can be performed for suspected ACM not identified in the management plan. EH&S can request the Environmental Consulting Services contractor perform bulk sampling and analysis of suspected ACM.

LAC 33.3.51 requires the owner or operator, prior to commencement, to thoroughly inspect the affected facility or part of the facility where a demolition or renovation operation will occur for the presence of asbestos, including Category I and Category II nonfriable ACM. This regulation includes notification requirements, procedures for emission control, and processing, handling and disposal of asbestos and asbestos-containing waste. Facility Planning will identify ACM in the work area during the construction project design phase by accessing the asbestos management plan or requesting an inspection of the affected areas, as necessary, and validate that RACM that may be disturbed is

tasked for removal prior to the start of construction and/or renovation related work. ACM response actions, to include removal, will be developed and implemented in accordance with the applicable requirements of LAC 33.3.27 and 33.3.51.

In accordance with LAC 33.3.2727.A, materials identified as ACM and located in routine maintenance areas (such as boiler and mechanical rooms) shall be affixed with a "CAUTION: ABSBESTOS. HAZARDOUS. DO NOT DISTURB WITHOUT PROPER TRAINING AND EQUIPMENT" label. The label shall be prominently displayed in readily visible locations and shall remain posted until the ACBM that is labeled is removed. Identification of suspect materials which are not labeled can be accomplished by contacting EH&S for assistance.

4.4 Management Plan

LSUHSC will maintain an asbestos management plan in accordance with the requirements of LAC 33.3.27. The plan will be documented via LDEQ form AAC-8, Required Elements for Management Plans.

The management plan will be maintained by a state accredited management planner and kept with the EH&S Department and available for inspection by representatives from the EPA and state, and relevant LSUHSC employees.

Periodic surveillance will be performed every six months in accordance with LAC 33.3.2721.B. Written results of the inspection, to include observed changes in ACM, shall be maintained in the Asbestos Management Plan.

LSUHSC will provide notification of the availability of the management plan for inspection to all relevant employees on an annual basis in accordance with LAC 33.3.2723.E4. A description of the method to provide notification and a copy of the notification will be maintained within the management plan.

4.4.1 Response Actions

As necessary, based on the results of periodic surveillance, the performance of construction and/or renovations activities, or as a result of asbestos disturbance or emergency, the need for the performance of response actions (i.e., O&M program activities, removal, repair, enclosure) will be determined.

Appropriate procedures shall be followed to ensure the protection of students, employees and visitors during performance of asbestos response actions at LSUHSC owned or leased facilities. Contracts issued directly through the LSUHSC for the performance of asbestos response actions in excess of SSSD shall require the contractor to submit a written project specific work plan for review by the Director of Construction and Engineering and EH&S prior to the

commencement of work. The work plan shall be submitted for review at or prior to the initial pre-construction meeting. A notice for work to proceed shall follow the receipt of a work plan containing the minimum elements as follows:

- On multi-employer work sites, the contractor's competent person performing the response action work shall:
 - Ensure that the project coordinator has informed other employers' managers or safety representatives on the job site about the nature of the asbestos work prior to the commencement of work, in accordance with the work plan.
 - Discuss with the other employers' managers or safety representatives the existence of and requirements pertaining to regulated areas, and the measures taken to ensure that employees are not exposed to asbestos prior to starting the job.
 - Take steps on a daily basis to ascertain the integrity of the enclosure and/or the effectiveness of the control method relied on to assure that asbestos fibers do not migrate to adjacent areas.
- All OSHA Class I, II, and III asbestos activities shall be conducted within a demarcated, regulated area supervised by a competent person and accessible only by authorized personnel.
- Engineering controls and work practices to include HEPA vacuum cleaners, wet methods, and prompt clean up and disposal shall be implemented for all asbestos activities. Local exhaust ventilation equipped with HEPA filtration, enclosure/isolation, ventilation of the regulated area to move airborne contaminants toward a HEPA filtered collection device, and other approved methods shall be implemented to inhibit the spread of released fibers.
- Employees are required to decontaminate prior to leaving the work area when conducting Class I, II, III, and IV work activities. Contractors shall be made to comply with the decontamination procedures and hygiene practices provided in the specific ACM abatement work plan.
- HEPA filtered vacuums shall be used where vacuuming methods are required. Asbestos waste, scrap, debris, bags, containers, equipment, and contaminated clothing shall be collected and disposed of by trained asbestos workers in sealed, labeled, impermeable bags or other similar containers. Dust and debris in an area containing visibly deteriorated ACM/PACM shall be promptly cleaned up and disposed of by trained asbestos workers using proper procedures.
- The contractor's competent person shall be made to conduct frequent and regular inspections of job sites, materials, and equipment to facilitate ensuring the effective containment of work area and potential spread of released fibers.
- Copies of LDEQ asbestos contractor/supervisor and worker accreditations for all employees with the potential to perform the subject asbestos related work duties.

4.4.2 Operations and Maintenance

As part of a comprehensive management plan, an O&M program will be maintained while ACM remains within facilities that it leases or owns. All ACM, friable and non-friable, will be included in the scope of the program.

4.4.2.1 Cleaning

- Cleaning shall be performed by a state licensed asbestos contractor before the initiation of response actions in areas containing friable ACBM or as a result of the written recommendation of an accredited management planner
- Cleaning shall be in accordance with the requirements of LAC 33.3.2719.C and include the following procedures:
 - HEPA vacuum or steam cleaning all carpets
 - HEPA vacuum or wet cleaning all floors and horizontal surfaces
 - Disposing of all debris, filters, mop heads and clothes in sealed, leak tight containers

4.4.2.2 Care of Asbestos Containing Floor Tiles

- Care of asbestos containing floor tiles shall comply with the requirements provided in 29 CFR 1910.1001 General Industry Asbestos Standard as follows:
 - Sanding of asbestos containing flooring material is prohibited.
 - Stripping of finishes shall be conducted using low abrasion pads at speeds lower than 300 revolutions per minute (rpm) and utilizing wet methods.
 - Burnishing or dry buffing may be performed only on flooring that has sufficient finish so that the pad cannot contact the asbestos containing flooring material.
 - Custodial and maintenance staff who maintain ACM floors should be trained to safely operate the machines, pads, and floor care chemicals used in the process and shall complete the two hour hazard awareness training in accordance with section 5.0 of this procedure.

4.4.3 Potential Asbestos Disturbances or Emergencies

In the event of asbestos related disturbance where a release of airborne asbestos fibers has or is likely to occur it shall be immediately reported to the employee's supervisor regardless of whether during or outside of standard working hours. The supervisor shall contact EH&S to coordinate the appropriate response action as follows:

- The clean-up resulting from all asbestos release episodes (both minor and major releases) shall be managed by a Louisiana Licensed Asbestos Abatement contractor and be performed in accordance with the requirements of LAC 33.3.2719.

- The response action associated with major fiber releases episodes shall be designed by an accredited project designer.
- Isolate the area associated with a major fiber release, to include the shutting down or temporary modification of the HVAC system supplying the area, immediately following release and restrict access to all unauthorized personnel.
- Prompt notification to the State POC, in accordance with LAC 33.1.3923, shall be made within 24 hours of the discovery of a major release episode, and, in accordance with LAC 33.1.3925, in writing within seven calendar days after the initial notification. Verbal notification can be made by calling the Department of Environmental Quality (DEQ) Hotline at (225) 342-1234. The DEQ-SPOC phone line is manned during working hours (M-F, 8:00 am – 4:30 pm). The DEQ-SPOC office line is (225) 219-3640. If calls are made after hours, leave a voice mail. Online Incident Reporting can be made at <http://www.deq.louisiana.gov/apps/forms/irf/forms/spill/spillForm.asp>. A direct email may be used to contact the DEQ with the necessary information at SPOC@LA.GOV. Provide the following information to SPOC:
 - Organization: LSU Health Sciences Center
 - Mailing address: 450A South Claiborne Avenue, New Orleans, LA 70112
 - Point of Contact telephone number(s)
 - Parish: Orleans
 - The name of the responsible party
 - The physical address/location of the incident
 - The date that the release occurred
 - The times when the release began and ended
 - The product released and an estimated amount
 - Description of how the product was released and any information on remedial actions
 - Directions on how to reach incident location.
- Within seven working days, EH&S will send a written report to:
 - Louisiana Department of Environmental Quality
 - Attention: Emergency and Radiological Services Division – SPOC
 - “Unauthorized Discharge Notification Report”
 - Post Office Box 4312
 - Baton Rouge, LA 70821-4312

4.4.4 Above Ceiling Access Guidelines

Operations and maintenance activities conducted above drop ceilings shall be performed using the following access guidelines. These guidelines are to be employed by personnel when work is to be performed above drop ceilings with a potential for asbestos (or other potential or identified hazardous material) debris contamination. Due to the potential for personnel exposure to asbestos and

possible facility contamination, all unnecessary activities involving the removal of ceiling tiles should be avoided.

Prior to removing/disturbing ceiling tiles at LSUHSC, identify the presence of ACM above the ceiling tiles (see section 4.3). Based on the Management Plan or results of the bulk sample analysis, one of the three situations and appropriate response actions listed below shall apply:

- *No ACM is present* - There are no restrictions to ceiling space entry. When no ACM/PACM is present in the subject ceiling space, the ceiling entry guidelines are not required. If suspect ACM is encountered during work above a ceiling and it was not previously identified, work shall be stopped immediately and contact EH&S to evaluate the material and assess the potential for a health hazard. If the material was disturbed then follow section 4.4.3 guidelines to report the incident.
- *Friable or damaged ACM is present* - Access/entry restricted. Areas that have been identified as containing damaged or friable asbestos shall not be accessed. Work that requires ceiling entry where friable or damaged ACM or debris is present shall not precede pending development of a written work plan by EH&S or implementation of clean-up or decontamination activities.
- *ACM is present in good/non-friable condition* - Areas that are identified as containing ACM that is in good/undamaged or non-friable condition should not pose an inhalation hazard to personnel provided the identified ACM remains undisturbed. The ceiling entry guidelines as shown below shall be implemented to ensure the ACM is currently in an undamaged/unchanged condition as noted in the management plan.

Ceiling Entry Guidelines are as follows:

- Employees who are required to remove or disturb ceiling tiles with the potential of containing asbestos contaminated debris, shall receive the asbestos training as described in Section 5.0 of this procedure.
- The work area shall be cleared of unprotected personnel a minimum of 25 feet from the ceiling access point.
- The area beneath the ceiling entry shall be covered with minimum 3-mil polyethylene sheeting to contain any falling debris.
- Employees who are required to disturb the ceiling tiles shall wear respiratory protection. At a minimum, an N-95 mask must be worn during the initial access above the ceiling. Eye protection (goggles) shall also be worn.
- Upon removing the ceiling tile and prior to performing work in the ceiling plenum, perform a visual check for changed or new conditions. If changed or new conditions are present, stop work, leave your area controls in place and notify your supervisor and EH&S. If no change or new conditions exist, the required above ceiling work may proceed as normal provided you do not damage or disturb any identified ACM/PACM, which may be present.

- After completion of work in the ceiling space, the ceiling tile(s) shall be put back in place and the work area below the ceiling entry shall be wet wiped of any residual ceiling dust. Provided that no ACM were accidentally disturbed or damaged, all polyethylene and used cleaning materials shall be bagged and removed from the work area for disposal. If ACM were accidentally disturbed or damaged, see section 4.4.3 for the appropriate management actions.

5.0 EMPLOYEE TRAINING AND EDUCATION:

5.1 Initial Training

Employees, such as custodians, electricians, HVAC mechanics, plumbers; personnel from other maintenance-performing shops; personnel performing six month periodic surveillance and those responsible for planning projects that will require asbestos operations shall be provided initial two-hour OSHA compliant hazard awareness training.

New employees shall be trained within 60 days after commencement of employment.

5.2 Refresher Training

Refresher training will be provided when there is reason to believe that there are deviations from or inadequacies in the employee's knowledge of the procedures.

5.3 Training Elements

Two hour hazard awareness training will consists of:

- Information regarding asbestos and its various uses and forms;
- Information on the health effects associated with asbestos exposure;
- Location of ACBM identified throughout the each building;
- Recognition of damage, deterioration, and delamination of ACBM;
- Housekeeping requirements;
- Precautions to prevent or minimize personal exposures; and
- Name and telephone number of the person designated to carry out state government responsibilities under LAC 33.3.2705 and the availability and location of the management plan.

6.0 RECORD KEEPING:

Detailed written records of each preventative measure or response action, training, periodic surveillance and fiber release episode shall be developed and maintained in accordance with the requirements of LAC 33.3.2725.

All records shall be permanently kept as part of the management plan.

7.0 INSPECTION AND PROGRAM REVIEW:

The Industrial Hygienist will ensure implementation of this procedure and revisions to this procedure based on changes to referenced documents or a determination of deficiencies in work processes, procedures, and/or behavior.

The Industrial Hygienist will complete an audit of the training and general program effectiveness on an annual basis.

8.0 REFERENCE DOCUMENTS:

29 CFR 1910.1001	General Industry
29 CFR 1926.1101	Construction Industry
40 CFR 61 Subpart M	Environmental Protection Agency, National Emission Standards for Hazardous Air Pollutants (NESHAPS)
40 CFR 763	Environmental Protection Agency, Asbestos Hazard Emergency Response Act (AHERA)
LAC 33.3.27	Louisiana Administrative Code (LAC), Asbestos Containing Materials in Schools and State Buildings
LAC 33.3.51	Louisiana Administrative Code, Comprehensive Toxic Air Pollutant Emission Program, Asbestos

9.0 DEFINITIONS:

ACBM - Asbestos Containing Building Material; surfacing ACM, thermal system insulation ACM, or miscellaneous ACM that is found in or on the interior structural members or other parts of a building.

ACM - Asbestos Containing Material; any material containing more than one percent asbestos for the purposes of this procedure this term includes PACM as defined below.

Asbestos - A class of magnesium-silicate minerals that occur in the fibrous form. This group includes chrysotile, amosite, crocidolite, tremolite asbestos; anthophyllite asbestos, actinolite asbestos, and any other of these minerals that has been chemically treated and/or altered. This term also includes PACM as defined in this procedure.

Class I - Activities involving the removal of thermal system insulation (TSI) and surfacing ACM and PACM.



Class II - Activities involving the removal of ACM that is not TSI or surfacing material. This includes wallboard, floor tile and sheeting, roofing and siding shingles, mastics and other materials.

Class III - Repair and maintenance operations where ACM, including TSI and surfacing ACM and PACM, is likely to be disturbed. Class III work cannot exceed more than one glovebag of material.

Class IV - Maintenance and custodial activities during which employees contact but do not disturb ACM or PACM and activities to clean up dust, waste, and debris from Class I, II, and III activities. This kind of work may be treated as an urgent request in accordance with Appendix 2 and do not require a work plan.

Competent person - An employee who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, has the authority to take prompt corrective measures to eliminate them, and has completed required training and certification in accordance with this procedure.

Construction work - Demolition, removal, alteration, repair, maintenance, installation, clean up, transportation, disposal, and storage, including painting and decorating.

Disturbance - Refers to activities that disrupt the matrix of ACM or PACM, crumble or pulverize ACM or PACM, or generate visible fibers from ACM or PACM. For the purposes of this procedure, this term includes major and minor fiber release episodes.

EH&S – Environmental Health & Safety Department

Employee - Includes all permanent and temporary LSUHSC employees and Major Sub-contractor employees.

Encapsulation - Refers to the treatment of ACM by applying a penetrating or bridging sealant to prevent the release of fibers.

Enclosure - Refers to an airtight, impermeable, permanent barrier around ACM to prevent the release of asbestos fibers into the air.

EPA - Environmental Protection Agency

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

Friable - Refers to material that when dry, may be crumbled or pulverized by hand pressure. It includes material that was previously non-friable and has become damaged to the extent that when dry it may be crumbled or pulverized by hand pressure.

HEPA - High Efficiency Particulate Air; a filter with a particle removal efficiency of no less than 99.97% for all mono-dispersed particles with a 0.3 micron diameter or larger.

LAC – Louisiana Administrative Code

LDEQ – Louisiana Department of Environmental Quality

Major Fiber Release Episode - Involves the disturbance of more than three square or linear feet of friable ACBM.

Minor Fiber Release Episode - Involves the disturbance of three square or linear feet or less of friable ACBM.

Non-friable - Means a material that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Operations and Maintenance Program – A set of specific procedures and practices applied to building cleaning, maintenance, renovation and general operations to maintain the building as free of asbestos contamination as possible. Operation and maintenance activities are synonymously referred to as “preventative measures”.

OSHA - Occupational Safety and Health Administration

PACM - Presumed Asbestos Containing Material; thermal system insulation and surfacing material found in buildings constructed no later than 1980.

Periodic Surveillance - Visual inspection/assessment of already identified ACM to determine any changes in the condition of the material(s).

RACM - Regulated Asbestos Containing Material refers to:

a) friable asbestos material, b) Category I (non-friable ACM packings, gaskets, resilient floor covering, and asphalt roofing products containing more than one percent asbestos) or c) Category II (includes any other non-friable ACM except Category I) material that will be or has been subjected to sanding, grinding, cutting, or abrading, or non-friable ACM that has a high probability of becoming or has become crumbled, pulverized or reduced to powder by the means utilized during a demolition or renovation.

Regulated Area - A demarcated area where all Class I, II and III asbestos work shall take place. It restricts the access of unauthorized personnel and it shall be supervised by a competent person. Smoking, chewing tobacco or gum, eating, drinking and applying cosmetics are prohibited activities in a regulated area. Warning signs shall be posted as described in this procedure.

Removal - Refers to all operations where ACM is taken out or stripped from structures or substrates. This term includes demolition operations.

Repair - Refers to the method used to bring damaged ACM to an undamaged condition or to an intact state to prevent fiber release.

Response Action - Involves a method, including removal, encapsulation, enclosure, repair, and operation and maintenance, that protects human health and the environment from friable ACM.

Small Scale-Short Duration (SSSD) – Tasks that involve less than or equal to three square feet or three linear feet of asbestos containing material.

TSI - Thermal System Insulation. ACM applied to pipes, fittings, boilers, tanks, air conditioning ductwork, or other structural components to prevent heat loss or gain.