RED EAGLE
JOINT VENTURE
A WARFEATHER LLC / ROSS GROUP JV

Asbestos Abatement

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        b. Gabriel Ortiz
        c. Alejandro Salas
        d. Jerry Soto
        e. Jorge Soto Jr.
        f. Roberto Rivas
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        a. NM Hauler Lic 25'
        b. NM Contractor Lic 25'
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1. Abatement Plan

Asbestos Abatement @ Rooms 102, 102B 127, 130- Mescalero Indian Hospital

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Prepared for:

RED EAGLE JOINT VENTURE

Prepared by: Border Demolition & Environmental Inc.

Key Staff Members:
Safety / Project Manager- Lisa Alarcon 915-474-2512
Estimator- Office- 915-860-8855

General Project Schedule

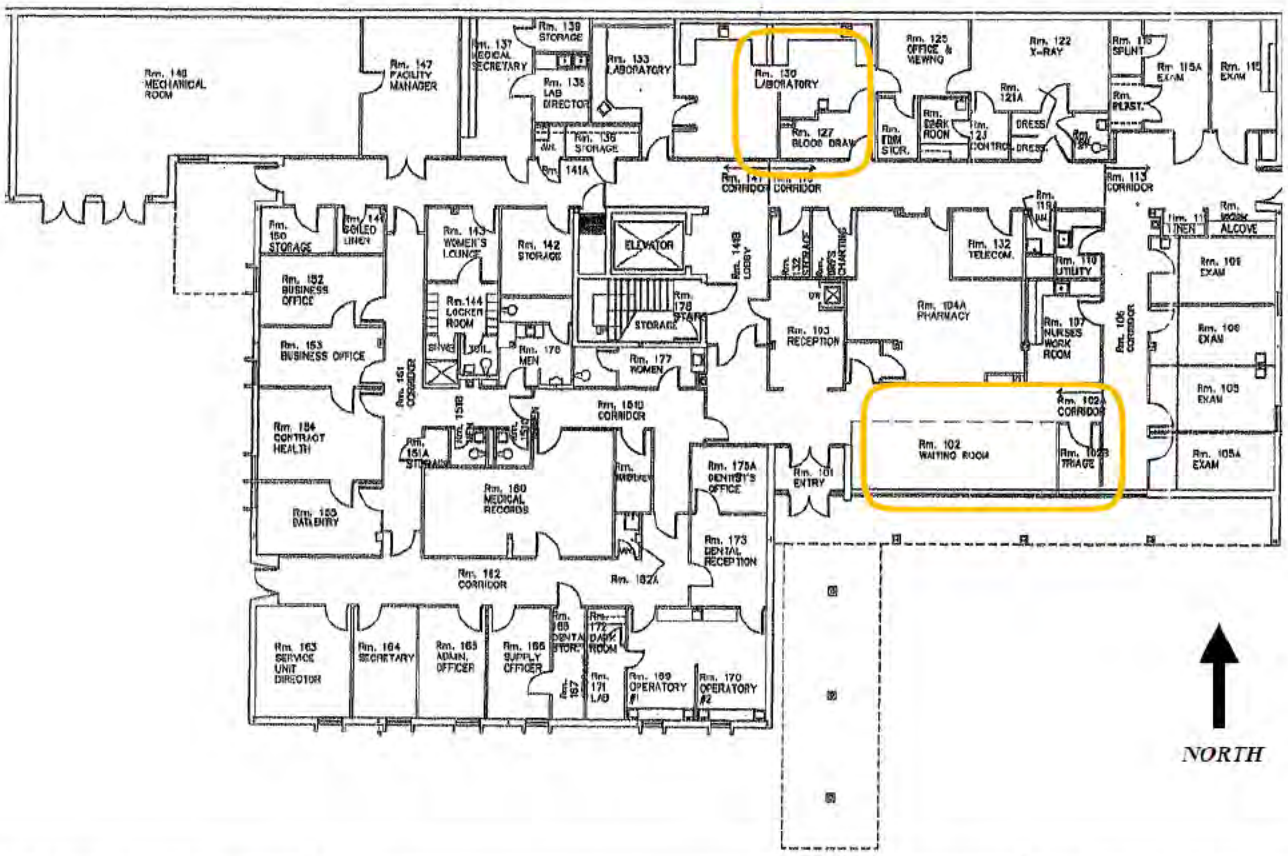
Task Name	Duration	Start	Finish
Asbestos Abatement @ Rooms 102, 102B 127, 130- Mescalero Indian Hospital	TBD	TBD	TBD

SCOPE OF WORK:

1. Removal as specified herein of the following:

Remove approx. 3,122 SF ACM flooring (Renovation Area Only)
Remove approx. 1,949 SF ACM joint compound/drywall (102,102B,127,130)
Remove approx. 369 SF ACM ceiling texture (102,102B,127)

DRAWING OF BUILDING:



U.S. Public Health Service Federal Occupational Health 2201 Sixth Avenue, M/S Rx21 Seattle, Washington 98121-2500	Project: ALBUQUERQUE AREA INDIAN HEALTH SERVICE MESCALERO SERVICE UNIT Mescalero, New Mexico	**Functional Space Map** Building 2000 Hospital First Floor Plan

PERSONAL PROTECTION:

1. CONTRACTOR acknowledges and agrees that he is solely responsible for enforcing worker protection requirements at least equal to those specified herein.

2. CONTRACTOR shall provide workers with personally issued and marked respiratory equipment approved by NIOSH and OSHA for the type of work being performed. Each worker shall be able to show, upon request, dated proof of fit testing performed by qualified personnel for the respirator being worn.

3. Provide sufficient filters for replacement as necessary by the workers, or as required by applicable NESHAP regulations.

4. Provide respiratory protection as needed from the time of the first operation involving contact with asbestos-containing materials from the time of first disturbance of the asbestos-containing materials until the acceptance of final air test results by the Air Monitor Technician. Provide a minimum of half-face dual cartridge respirators for workers during all phases of disposal of asbestos-containing waste materials, including containment removal.

5. Provide workers with sufficient sets of protective disposable clothing, consisting of full-body coveralls, head covers, gloves, and foot covers, of sizes to properly fit individual workers.

WORK AREA PREPARATION:

1. Verify, lock out and seal HVAC equipment supplying or within work areas with a minimum of two layers of six-mil plastic sheeting, individually applied, during all abatement activities. Seal the main return air vents that serve the work areas.

2. Verify and lockout all electrical power to work areas. Provide temporary power and lighting as necessary to maintain safe and comfortable work environment

3. All plastic sheeting utilized in the containment of the work area(s) shall at least six-mil true thickness for floor preparation and four-mil true thickness for walls. Floor sheeting in areas where ACBM is not in place shall extend up side-walls at least 12 inches and be sized to minimize the number of seams. No seams shall be located at wall-to-floor joints. Sealing of all floor penetrations against water leakage is mandatory. Plastic sheeting installed at walls shall be installed so as to minimize joints and shall extend beyond wall/floor joints at least 12 inches. No seams shall be located at wall-to-wall joints.

4. Apply critical seals consisting of two layers of six-mil plastic sheeting at all HVAC supply and return air vents, at doors which exit the work area, and at all windows or openings which are located at the perimeter of the work area.

5. Construct three-chamber decontamination unit in compliance with EPA guidelines concerning number, size and placement of airlocks, etc. Shower in decontamination unit shall open into airlock on both contaminated and uncontaminated sides and shall be equipped with a shower with hot and cold running water. Construct decontamination unit of appropriate materials (including plastic sheeting) to provide airtight barriers to allow continuous reduced air pressure to be maintained in work areas. Post OSHA decontamination procedures, in both English and Spanish, in clean room for duration of project.

6. Work Area enclosure must be constructed in a manner such that the site can be completely secured at the end of each work shift. Doors, windows and other openings shall be sealed with solid barriers to prevent unauthorized entry.

7. Place work areas under reduced air pressure of at least 0.02 inches water gauge, utilizing HEPA filtration systems that comply with ANSI Z9.2-79, local exhaust ventilation. Provide at least four air changes per hour within work areas. Allow no air movement system or air filtering equipment to discharge unfiltered air outside the work areas. Maintain a reduced air pressure on the work areas continuously (24 hours per day) from the first disturbance of asbestos-containing material and until the areas have been decontaminated and certified as such by the required air testing.

8. Maintain a sign in/out log in the immediate area of the clean room to be signed by every person each time upon entering and leaving the work areas.

9. Place in work areas at least one fire extinguisher with a minimum NFPA rating of 10BC (dry chemical) for every 1000 square feet, or fraction thereof, of work area.

10. Notify the Air Monitor Technician (AMT) for observation of area preparation prior to disturbance of asbestos-containing materials. No removal work can begin until preparations have been observed and accepted by AMT.

REMOVAL:

Remove and properly dispose of asbestos-containing materials indicated to be removed in accordance with federal, state, and local laws and regulations or as more stringently specified herein.

1. Removal of Asbestos-Containing Materials:

    a. Prepare work areas as previously specified.

    b. Wet the asbestos-containing materials to be removed with amended water prior to handling, stripping or tooling, to reduce fiber dispersal into the air. Accomplish wetting by a fine mist of amended water. Spray materials repeatedly during the work process to maintain a continuously wet condition throughout progress of the removal work.

c. Asbestos-containing waste material (ACWM) shall be double bagged by placing ACWM into bags of 6-mil plastic thick or equivalent. Do not allow materials to dry out. Reinforce bags with duct tape as needed to prevent tearing. Apply labeling with the appropriate wording per regulatory agencies having jurisdiction (EPA, OSHA, DOT) for transportation.

d. Provide general clean-up of work areas concurrent with the removal of asbestos-containing materials. Do not permit accumulation of debris.

e. After removal of asbestos-containing materials, all surfaces in the work areas shall be wet-cleaned to remove accumulation of residual materials. Continue wet-cleaning until surfaces are free of visible debris.

f. Alternative methods of removing asbestos-containing materials will be considered by the CONSULTANT. Do not use alternative methods until are reviewed and accepted

CLEAN-UP AND CLEARANCE TESTING:

1. Provide general clean-up of work area concurrent with the removal of all asbestos-containing materials. Do not permit accumulation of debris.

2. Standard of cleaning for Final Clearance. Consider work areas and all other decontaminated and cleaned areas clean when:

   a. Surfaces are free from dust, dirt, residue, and debris from abatement operations or other activities subordinate to these operations.

   b. Air testing performed by the AMT indicates that the air in the work area is

acceptable, as specified below.

3. Clearance Sequence for work areas.

   a. Wet clean and HEPA-vacuum all surfaces in the work areas.

   b. Clean all equipment (excluding that, which will be needed for further cleaning phases) used in the work areas and remove from work areas via the decontamination enclosure system.

   c. Replace all pre-filters in air filtration devices with clean filters.

   d. Notify for observation to determine completeness of cleaning. Work area will be observed for the presence of visible dust, dirt and debris.

e. Mist all surfaces in the work area with asbestos encapsulant. Wet all surfaces but do not allow pooling of excess encapsulant to occur.

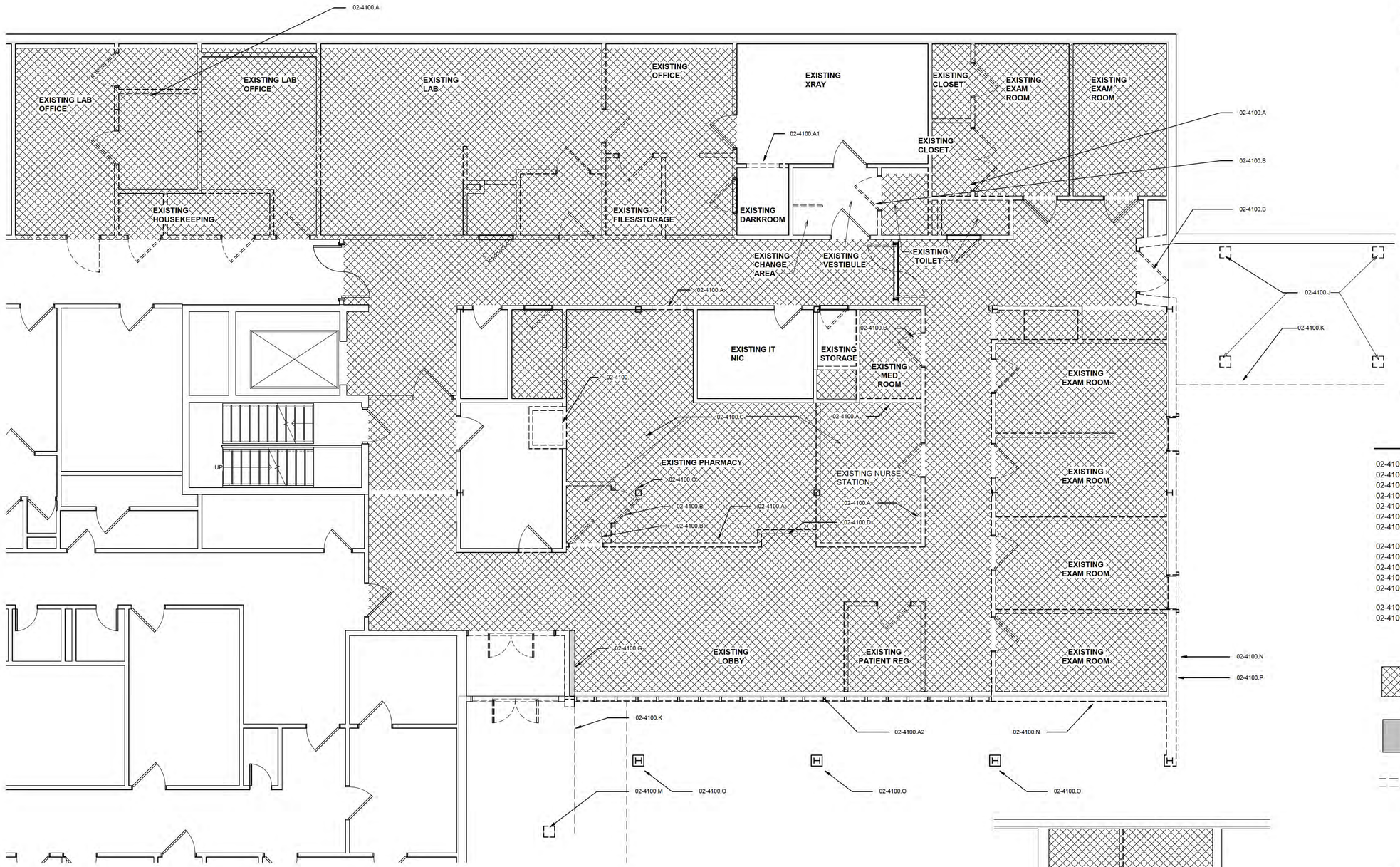
h. Final Clearance Testing: To be done by Third Party consultant.

DISPOSAL OF ASBESTOS WASTE:

1. Asbestos-containing waste, debris, and “wet waste” shall be transported to the landfill double-bagged. Used cleaning tools, towels, protective suits, and used plastic sheeting shall be treated as friable waste materials.
2. Remove sealed and labeled bags of asbestos-containing material and waste and transport them for disposal to the approved landfill.
3. Notify GC prior to removing each trailer or other waste transport from the project site.



Approved by
Border Demolition



B1 FIRST FLOOR DEMOLITION PLAN
1/4" = 1'-0"

0' 2' 4' 8'

DEMOLITION NOTES

1. EXISTING FACILITY IS KNOW TO CONTAIN HAZARDOUS MATERIAL. REFER TO ASBESTOS ABATEMENT REPORT FOR LOCATIONS AND RECOMMENDATIONS FOR REMOVAL.
2. THIS BUILDING HAS HISTORICAL SIGNIFICANCE. THERE ARE ARCHITECTURAL FEATURES THAT ARE TO BE PRESERVED AND RELOCATED AS NOTED IN THE DOCUMENTS. ADDITIONALLY, OWNER SHALL HAVE FIRST RIGHT TO ALL SALVAGEABLE ITEMS ON SITE. SALVAGE ITEMS INCLUDE ALL SINKS, LIGHT FIXTURES, AND OTHER ACCESSORIES. OTHER ITEMS TO BE SALVAGED SHALL BE IDENTIFIED FOR THE CONTRACTOR DURING PRECONSTRUCTION WALK THROUGH.
3. THE FACILITY WILL BE OPEN DURING CONSTRUCTION, ALL WORK IS TO BE CONDUCTED TO SAFEGUARD VISTIORS AND STAFF ON THE PROPERTY. SECURE INDIVIDUAL WORK AREAS FOR SAFETY AND ADHERE TO SAFETY GUIDELINES FOR THE WORKPLACE.
4. DURING CONSTRUCTION WHILE ADJACENT AREAS ARE IN USE, CONTRACTOR SHALL MAINTAIN SAFE AND CODE COMPLIANT ACCESS AND EGRESS TO AND FROM ALL OCCUPIED SPACES FOR THE ENTIRE DURATION OF THE PROJECT.
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6. CONTRACTOR SHALL PROTECT ALL EXISTING CONDITIONS TO REMAIN. ANY DAMAGE TO THESE AREAS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
7. INSPECT ALL BEAMS, FLOORS, WALLS, AND ROOF DECK FOR STRUCTURAL DAMAGE. NOTIFY OWNER AND ARCHITECT IMMEDIATELY OF ANY DAMAGE.
8. ASBESTOS ABATEMENT IS REQUIRED.

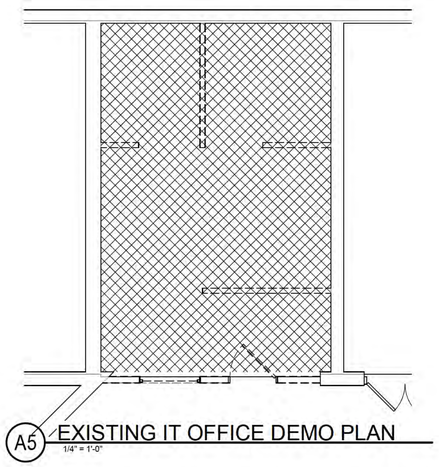
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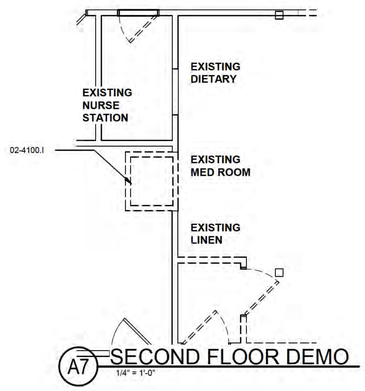
REMOVE FLOOR FINISH AND CEILINGS

MOSIAC TILE WALL, REMOVE ENTIRE WALL AND PRESERVE FOR LOCATION IN NEW WAITING ROOM SEE SHEET A-1 FOR LOCATION

DASHED LINE INDICATES ITEM TO BE REMOVED



A5 EXISTING IT OFFICE DEMO PLAN
1/4" = 1'-0"



A7 SECOND FLOOR DEMO
1/4" = 1'-0"

MARK	DATE	DESCRIPTION	ARCHITECTURAL	MECHANICAL	ELECTRICAL	PLUMBING
1	JULY 20, 2019	ISSUE FOR CONSTRUCTION				
	APRIL 09, 2021	INTERNAL REVIEW				
2	10/14/2021	AMENDMENT 2	APPROVED			

STAMP: STATE OF NEW MEXICO — TIMOTHY H. BRIGHT — NO. 9182 — REGISTERED ARCHITECT — 7/20/2018

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MESCALERO SERVICE UNIT
318 ABALONE LOOP MESCALERO, NM 86503 OTERO COUNTY
RENOVATION & ADDITION

ARCHITECTURAL - DEMOLITION PLAN

DRWN BY -
CHKD BY -
SCALE 1/4" = 1'-0"
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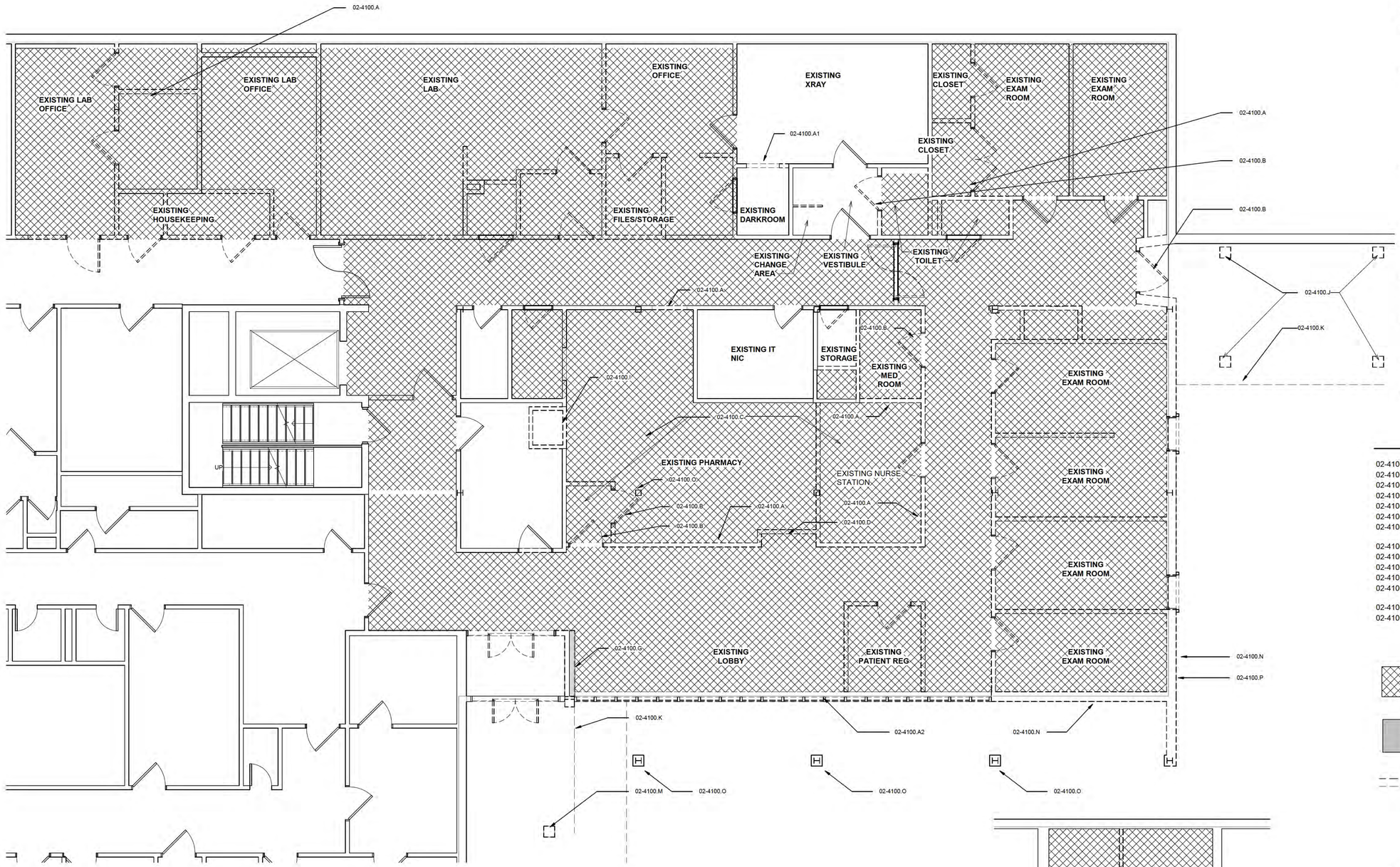
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PROJECT NUMBER 11793

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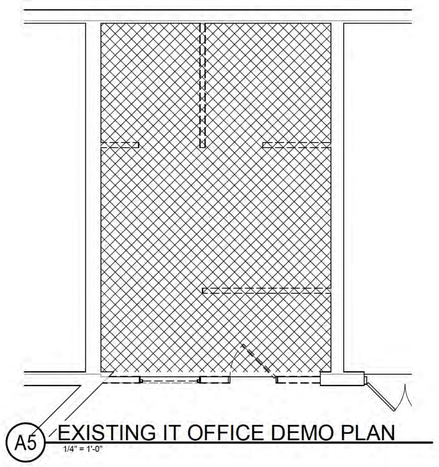
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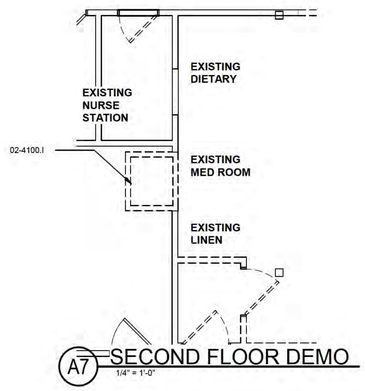
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2. Activity Hazard Analysis

Activity Hazard Analysis (AHA)

ACTIVITY/WORK TASK:	02 82 13	Overall Risk Assessment Code (RAC) (Use highest code)	M
ASBESTOS ABATEMENT		Activity #	AHA #
PWD/OICC/ROICC OFFICE			
NAME & DATE ACCEPTED BY GDA:			
CONTRACT NUMBER:			
TASK ORDER/DELIVERY #:			
PRIME CONTRACTOR:			
SUBCONTRACTOR:			
DATE OF PREPARATORY MEETING:			
DATE OF INITIAL INSPECTION:			
CONTRACTOR COMPETENT PERSON:			
SITE SAFETY and HEALTH OFFICER			

Risk Assessment Code (RAC) Matrix

Severity	Probability				
	Frequent	Likely	Occasional	Seldom	Unlikely
Catastrophic	E	E	H	H	M
Critical	E	H	H	M	L
Marginal	H	M	M	L	L
Negligible	M	L	L	L	L

ACCEPTANCE BY GOVERNMENT DESIGNATED AUTHORITY (GDA)

E = EXTREMELY HIGH (PWO/OICC/ROICC)

H = HIGH RISK (FEAD DIRECTOR)

M = MODERATE RISK (CM or ET or PAR)

L = LOW RISK (ET or PAR)

Review each **"Hazard"** with identified safety **"Controls"** and determine (RAC)

Identify the RAC (Probability/Severity) as E, H, M, or L for each "Hazard" .Place the highest RAC at the top of AHA. This is the overall risk assessment code for this activity

"Severity" is the outcome/degree if an incident, near miss, or accident did occur and identified as: Catastrophic, Critical, Marginal, or Negligible after controls are in place

"Probability" is the likelihood to cause an incident, near miss, or accident did occur and identified as: Frequent, Likely, Occasional, Seldom, or Unlikely after controls are put in place.

JOB STEPS	HAZARDS	CONTROLS	RAC
Train Asbestos Abatement Laborers	Laborers not trained in the safe execution of the task.	- Use this Activity Hazard Analysis, and other formal and informal training to train Laborers. EM 385-1-1, Sect. 6.C., Appendix B.17	L
Site-specific/Job-specific training for workers	Employees not trained in the safe execution of their tasks may harm themselves or others	- Use this Activity Hazard Analysis and other formal and informal training as a means to train workers. NOTE: If the scope of work detailed below changes in any way, contact the Safety Department and complete an AHA amendment detailing the new scope of work. EM 385-1-1, Sect., 1.B.1 - 1.B.3	L
Review the Asbestos Survey and Asbestos Abatement Plan	Not implementing the required controls for the particular hazards of the job	- Familiarize all personnel with the requirements of the job before beginning. EM 385-1-1, Sect. 6.A.02, 6.C, Appendix B.17	L

IAW EM 385 01.A.13 Contractor-Required AHA "Work will not begin until the AHA for the work activity has been accepted by the GDA"
The AHA shall be reviewed and modified as necessary to address changing site condition, operations or change of competent/qualified persons.

JOB STEPS	HAZARDS	CONTROLS	RAC
Inspect Work Area	Uneven Surface Trip Hazards Fall	- Jobsite operations, materials, and equipment involving potential exposure to hazardous or toxic agents or environments shall be evaluated by a qualified Industrial Hygienist, or equivalent competent person in Industrial Hygiene operations, to formulate a hazard control program. - The hazard evaluation shall identify all substances, agents, and environments that present a health, explosive or fire hazard to workers or visitors, the risk of the hazard, and recommend hazard control measures. - Engineering and administrative controls shall be used to control hazards; - Familiarize yourself with the contents and requirements of the Hazard Control Plan (HCP). - Look / be aware of where you are stepping. - Communicate clearly with co-workers. - Keep feet clear of pinch points / trip hazards. - Be aware / heed backup alarms. - Stay clear of moving machinery. EM 385-1-1 Sect., 6.A.02	L
Layout, communication, and preparatory instructions	Lack of coordination between workers- Mistakes, Injuries	- Before beginning each phase of work the foreman will explain to the workers what needs to be done and how the work will proceed. - All rebar which is below the level where work is ongoing onto which workers could fall must be protected with square type rebar caps. - Be aware of your surroundings while moving materials, watch where you are going. - Never move materials over or above workers. EM 385-1-1, Sect. 27.A.02	L
Receive material deliveries, shake out material	Crushing or pinching hands or feet Excessive material handling Strains and Sprains	- When moving material, keep hands and feet clear of pinch points. Stack material on stickers. - Store material in such a manner that it will not be blown or knocked over. - Stay clear of moving machinery, heed backup alarms and get out of the way. - Stage material as close to its final destination as possible. - Use safe lifting techniques. EM 385-1-1, Sect. 14.A	L
Lift and move Equipment/Material/Ductwork	Pulls and Strains from lifting Unexpected movements Materials striking and injuring workers Crushed by falling material Swinging loads striking and injuring workers	- Do not place body parts near or between pinch points. - Do not wear loose clothing that could get caught. - Be aware of how pipe may move suddenly. EM 385--1-1, Sect. 5.A, 5.B, 5.C, 5.D, 5.E, 5.F, 14.A	L

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JOB STEPS	HAZARDS	CONTROLS	RAC
Inspect electrical cords (portable flexible cords)	Electrical Shock Electrocution/Death	- Do not use electrical cords with cuts, worn insulation, or visible conductors. - All frayed, patched, oil-soaked or worn electrical cords shall be taken out of service immediately. - Use cords rated for hard or extra-hard usage. - All cords shall have a double-insulated or grounding plug. - Use factory-assembled cord sets as much as possible. Repairs must preserve the original electrical and mechanical integrity of the cord. - Electrical tape fixes are prohibited and replacement plugs must be properly sized and provided with strain relief clamps. - Check that the ground prong is intact. - GFCI protection shall be provided on all circuits serving portable electric hand tools. Use only GFCI protected circuits. - All electrical systems shall comply, with the NEC. EM 385-1-1, Sect. 11.D.05, 11.A.06	L
Inspect tools	Injury due to defective or improperly functioning power tools Electric shock from defective tools. Impact injuries, splinters Impact injuries from spinning tool	- Remove defective tools from the job site. - Wooden handles for tools are secured tightly in the tool and free of cracks and splinters. - All saws are equipped with properly functioning manufacture installed guards. - Handheld power tools (saws, drills, grinders) are equipped only with a constant pressure switch. - Pneumatic nailers have a functioning safety device on the muzzle to prevent ejection unless muzzle in contact with work surface. - Only use tools for their intended use. - GFCI protection shall be provided on all circuits serving portable electric hand tools. Use only GFCI protected outlets. - Tag defective tools and remove them from the workplace. EM 385-1-1, Sect. 11.D.05, 13.A, 13.B, 13.C, 13.D	L

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The AHA shall be reviewed and modified as necessary to address changing site condition, operations or change of competent/qualified persons.

JOB STEPS	HAZARDS	CONTROLS	RAC
Put on your personal protective equipment.	Head, foot, or eye injury Personnel being struck by equipment/trucks Hearing damage	- Workers entering the job site must wear a hard hat and Class II reflective vest AT ALL TIMES. Routinely inspect hard hats for dents, cracks or deterioration. Replace hard hat after any hard blow or electrical shock. - Safety glasses or face shields must be worn any time work operations can cause foreign objects to get into the eye. - Workers must wear safety-toed work boots with slip-resistant and puncture-resistant soles AT ALL TIMES. - Wear gloves when handling sharp objects. Gloves should fit snugly. Wear the right glove for the job. - Workers shall wear earplugs/earmuffs in high noise work areas where loud or heavy equipment is being used. Clean or replace earplugs regularly. - Do not wear clothing or jewelry that could easily get snagged or caught by equipment or machinery. EM 385-1-1, Sect. 5.A, 5.B, 5.C, 5.D, 5.E, 5.F	L
Set up barricades and caution-off area.	Entry of unauthorized personnel Knocking down power lines	- Set up warning barricades or temp. fencing and caution off area where earthwork is ongoing to prevent the entry of unauthorized personnel. - Caution tape off power poles and guy wires and be careful when operating heavy equipment near high voltage lines. EM 385-1-1, Sect. 25.B	L
Set up containment/barriers	Inadequate decontamination of workers, equipment and waste	- Decontamination chamber should have three rooms for progressive cleaning - The industrial Hygienist must do a pre-abatement check of the containment EM 385-1-1, Sect. 6.C., Appendix B.17.	L
Set up decontamination chamber	Inadequate decontamination of workers, equipment, and waste	- Decontamination chamber should have three rooms for progressive cleaning EM385-1-1,Sect.,6.C	L
Set up negative air machine	Airborne contaminants leaking out of the containment area	- Set up the negative air machine with HEPA filter along the perimeter of the containment and vent the exhaust to the exterior of the building. - Run the machine during all abatement and cleaning activities. EM 385-1-1, Sect. 6.C., Appendix B.17.	L

IAW EM 385 01.A.13 Contractor-Required AHA "Work will not begin until the AHA for the work activity has been accepted by the GDA"
The AHA shall be reviewed and modified as necessary to address changing site condition, operations or change of competent/qualified persons.

JOB STEPS	HAZARDS	CONTROLS	RAC
Post Asbestos Warning Signs	Unauthorized person entering the containment areas	- Industrial Hygienist must do a pre-abatement check of the containment. - Post warning signs stating: "Danger Asbestos, Cancer and Lung Disease Hazard, Authorized Personnel Only" at all possible entrances to the containment area. EM385-1-1, Sect. 6.A.02, 8.A.03	L
Post Asbestos Warning Signs	Unauthorized persons entering the containment area	- Post warning signs, ""Danger Asbestos, Cancer and Lung Disease Hazard, Authorized Personnel Only"" at all possible entrances to the containment area. EM 385-1-1, Sect. 6.C., Appendix B.17.	L
Put on your personal protective equipment for asbestos abatement	Asbestos inhalation Asbestos ingestion Asbestos exposure Head, Eye, and Ear Injury	- Wear the proper PPE for the concentration of airborne asbestos encountered. - All employees must have proper fit test and physical prior to operations. - The air in the containment area must be monitored daily to ensure that the protective equipment worn by the workers is sufficient for the concentration of airborne asbestos. - Hard hat, goggles, and coveralls are required at all times, ear protection needed. EM 385-1-1, Sect. 5.A.06a, 6.C., Appendix B.17.	L

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The AHA shall be reviewed and modified as necessary to address changing site condition, operations or change of competent/qualified persons.

JOB STEPS	HAZARDS	CONTROLS	RAC
Working from an elevated position	Falling- Injury, Death	- To work from an elevated position, workers must understand and follow all requirements of an approved Site-specific Fall Protection Plan. - Whenever working from an elevated location that is 6' or more above the lower level you must be protected by either a guardrail system or a personal fall arrest system. - Workers must follow the requirements of the Site-specific Fall Protection Plan at all times by wearing a full body harness and lanyard secured to a safe anchorage point, as required. This may be a bracket specifically designed for fall protection or a structural member. - If a guardrail system is implemented as part of the Site-specific Fall Protection Plan to protect workers from the leading edge hazard, workers shall NEVER proceed beyond the boundary of the guardrail without being secured to a safe anchorage point with full harness and lanyard connection. - Lines shall be checked after each move to ensure correct length. - Never allow material or tools to fall on workers below. EM 385-1-1, Sect. 21.A, B, C, H Note: It is a requirement that a Site-specific Fall Rescue Plan be developed, implemented, and reviewed daily prior to the start of work.	M

IAW EM 385 01.A.13 Contractor-Required AHA "Work will not begin until the AHA for the work activity has been accepted by the GDA"
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JOB STEPS	HAZARDS	CONTROLS	RAC
Working from a Ladder	Tipping due to uneven or unstable surfaces Falls from Struck by	- Extension ladders are set up so that the horizontal distance from the top support to the ladder base is 1/4 the working length of the ladder. - The top of the ladder is tied off and the side rails extend 36" above the landing. - Non-conductive ladders are required. - Step ladders used only in full open position. - Set up ladders on firm level footing - Don't work from a step ladder leaned against a wall. - All step and extension ladders are equipped with ladder shoes. - Don't work from the top two steps of a step ladder. - Choose the correct size of ladder for the job. - Ladders must be inspected regularly and tagged “do not use” if defective. Remove defective ladders from the job site. - Maintain 3 points of contact with the ladder at all times when ascending/descending the ladder. - Keep torso centered between ladder rails and avoid leaning our. - Do not move a ladder while you are on it. - Do not move ladder with tools on it. EM 385-1-1, Sect. 24.B	L
Remove/demolish, the asbestos- containing material (ACM)	High levels of airborne asbestos Asbestos Ingestion	- Cut, break, chip, scrape or otherwise demolish the ACM in accordance with the abatement plan and in a manner that minimizes the amount of dust created. - All dust resulting from cutting with an abrasive saw must be collected at the point of operation by a HEPA dust collector. - Do not eat, drink, smoke, and chew tobacco or gum in the containment area. See Activity Hazard Analysis on Demolition. EM 385-1-1, Sect. 6.C, Appendix B.17	L
Clean up the containment /work area	Free (airborne) hazardous materials	- Dispose of all asbestos containing waste in 6 mil plastic Hazmat bags. - All contaminated debris, dust waste cleaning supplies, filter etc.. shall be double bagged and placed in an approved Hazmat container for removal from the site. See "Abatement Plan" EM 385-1-1, Sect. 6.C., Appendix B.17.	M

IAW EM 385 01.A.13 Contractor-Required AHA “Work will not begin until the AHA for the work activity has been accepted by the GDA”
The AHA shall be reviewed and modified as necessary to address changing site condition, operations or change of competent/qualified persons.

JOB STEPS	HAZARDS	CONTROLS	RAC
Wet materials to be removed or abated	High levels of airborne asbestos	-Asbestos Recognition and Control. Before work begins where the potential exists for an exposure to asbestos containing material, an asbestos control plan shall be developed using age of the buildings, type of typical building supplies for the period and location, and any observations of debris or demolition areas. - The plan shall be written by an industrial hygienist with asbestos training or an AHERA trained supervisor or manager. - If possible, wetting the asbestos material with water or surfactant before and during the abatement process as well as during clean up, should be considered as a control mechanism and performed per the asbestos control plan. - All dust resulting from cutting with an abrasive saw must be collected at the point of operation by a HEPA dust collector. EM 385-1-1, Appendix B.17.	L
Remove asbestos containing material	High levels of airborne asbestos Asbestos ingestion	- Do not eat, drink, smoke, chew tobacco or gum in the containment areas - Do not cut, break, chip, scrape or otherwise demolish ACM in an unsafe manner EM385-1-1, Sect. 6.A.01, 6.C., Appendix B.17.	M
Post-abatement check and final air sampling	Airborne/free asbestos fibers	- The industrial hygienist for the job must conduct a final check and air sampling before the containment can be dismantled. EM 385-1-1.Sect.,6.A.03	L
Working in hot weather	Heat Stroke, Heat Exhaustion, Heat Cramps Sunburn	- Make sure you always have an adequate supply of cold water available. If your water supply is running low talk to your supervisor. - Take scheduled cool down breaks. - Provide ventilation or air cooling equipment for enclosed work areas. - Use sunscreen. - Respond quickly and decisively in case of an accident. Call 911 immediately. - Know where the emergency numbers are posted, where the first aid kit is, and who is trained in first aid. - Only persons trained in first aid should be allowed to administer first aid. EM 385-1-1, Sect. 6.J	L

IAW EM 385 01.A.13 Contractor-Required AHA "Work will not begin until the AHA for the work activity has been accepted by the GDA"
The AHA shall be reviewed and modified as necessary to address changing site condition, operations or change of competent/qualified persons.

JOB STEPS	HAZARDS	CONTROLS	RAC
Responding to an emergency	Delayed emergency response- further injury or loss of life	- Respond quickly and decisively in case of an accident. Call 911 immediately. - Know where the emergency numbers are posted, where the first aid kit is, and who is trained in first aid. - Post Project Address and ensure all employees know the project address/location. - Only persons trained in first aid should be allowed to administer first aid. EM 385-1-1, Sect. 3.A, 3.B	L
Administering First Aid	Exposure to blood-borne pathogens	- Use appropriate PPE when administering first aid such as gloves, masks, eye protection and/or resuscitation equipment especially when blood is present. - Wash after contact with blood or other body fluids. - Dispose of soiled material in a labeled leak-proof container. EM 385-1-1, Sect. 3.A, 3.B.	L

EQUIPMENT TO BE USED	TRAINING REQUIREMENTS AND COMPETENT OR QUALIFIED PERSONNEL NAME(S)	INSPECTION REQUIREMENTS
Personal Protective Equipment (PPE)	All workers will be trained in the proper donning and use of PPE before beginning work.	- Inspect ALL PPE prior to each use. Any damaged PPE will be replaced immediately.
HEPA Vacuum	Trained by competent person and authorized to use heap vacuum.	- Inspect Daily for proper operation and per manufacturer's recommendations. Inspect filters for proper type and performance prior to each use. Inspect hoses and power cords for damage.
Ladders	Field workers are trained on the proper usage of a ladder Activity Hazard Analysis Review for each worker.	- Ladders to be in good working condition. Metal conductive ladders are not allowed on job-site. - All stickers must be undamaged, clear, and legible. - Inspect daily for broken parts, loose components etc. Any ladder found defective will be tagged, taken out of service and replaced immediately.
Hand Tools	Trained by site supervisor before use.	- Inspected daily for broken parts, loose handles or components etc. Any equipment found defective will be tagged, taken out of service and replaced immediately.
Power Tools	Trained by site supervisor and authorized to use power tools.	- Inspected daily for broken parts, damaged cords etc. Any equipment found defective will be tagged, taken out of service and replaced immediately.
First Aid Kits	A MINIMUM of 2 individuals trained in CPR/First Aid will be on-site and available to render aid at all times.	- First Aid Kits will be inspected weekly for damage and/or missing items which shall be replaced immediately.

IAW EM 385 01.A.13 Contractor-Required AHA "Work will not begin until the AHA for the work activity has been accepted by the GDA"
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Competent Person		Signature	

IAW EM 385 01.A.13 Contractor-Required AHA "Work will not begin until the AHA for the work activity has been accepted by the GDA"
The AHA shall be reviewed and modified as necessary to address changing site condition, operations or change of competent/qualified persons.

Activity/Work Task: ASBESTOS ABATEMENT - 02 82 13

Contract Name:

Contract Number:

Competent Persons:

Name:	Signature:	Date:	Name:	Signature:	Date:

Meeting Attendees:

Name:	Signature:	Date:	Name:	Signature:	Date:

Pre-Construction Risk Assessment – Cover Page

Project Title:	MSU Renovation and Addition	Project/Contract #:	75H70124C00030
MSU Coordinator:		PCRA Submit Date:	
Project Conducted by:	❑Fac. Mgmt. ❑I.T. ❑Telecom ❑Clin. Eng. ❑Contractor: Red Eagle JV	Proposed Start Date:	
Staff/Cont. Name:		Est. Duration:	
Supervisor Name:	Guy Smith	Est. Complete Date:	
Telephone:	918-727-3979	Date Project Completed:	
Email:	Gsmith@warfeather.com		

Project Description: (include specific sites and tasks)	
1,100 SF expansion to the East and South of the current facility. One story. Will also renovate existing portion of building Phase 1, demolition of all existing walls,ceilings, floor coverings, MEP per demolition drawings, selective demolition of light fixtures, thermostats, glazing, door & Frames, recyclables to be separated for other materials, hazardous materials will be disposed of per all local and federal regulations.	
ICRA Classification	Class I ❑ Class II ❑ Class III* ❑ Class IV* ☑

Section 1. Initial Project Impact Review

Topic	*Will project negatively impact or involve…?*	No	Yes	Responses (If **YES** to any)
Fire Safety *Section 2A(1)*	Ceiling tile removal (less than 4 hours total)	❑	☑	Complete Above the Ceiling Access Permit (ACAP)
	Existing fire-stop; minor barrier penetrations	☑	❑	
Fire Safety *Section 2A(2)*	Fire detection/alarm/suppression systems	❑	☑	Complete Interim Life Safety Measure (ILSM) evaluation. *Check if welding off site.*
	Exit paths or fire/smoke barriers	❑	☑	
	Hot work practices	☑	❑	
	Extra fire load or flammable materials	❑	☑	
Utilities *Section 2B*	Water, sewer, electricity, steam, or HVAC (including outside air intakes)	❑	☑	Complete the Utility System Risk Assessment (USRA)
	Medical gases or vacuum	☑	❑	
	Call systems, telephones, or IT systems	❑	☑	
Environmental/ Occupational *Section 2C*	Lead or asbestos containing materials	❑	☑	Complete Env./Occ. Risk Assessment (EORA)
	Chemical hazards (i.e. mercury, volatile organics)	☑	❑	
	Exposure to infectious agents or mold	☑	❑	
Security *Section 2D*	Security systems (badge readers, cameras)	❑	☑	Complete Security Risk Assessment (SRA)
	Security processes (tours, foot/vehicle traffic)	❑	☑	
Infection Control *Section 2E*	Patient care areas or critical utilities	❑	☑	Complete an Infection Control Risk Assessment (ICRA)
	Moderate to high levels of dust, noise, vibration	❑	☑	
	More than one work shift	❑	☑	

Project Approval

Evaluator Signature & Title		Date:		*Required for: All*
Facility Manager Signature	Thomas Dodge	Date:		*Required for: All*
Safety Officer Signature	Kristin Kaydahzinne	Date:		*Required for: All*
Infection Preventionist Signature	Charlotte Briggs	Date:		*Required for: USRA and ICRA*
Supervisor (affected area)		Date:		*Required for: All*

Project Close-out

Facility Manager Signature		Date:		*Required for: All*
Safety Officer Signature		Date:		*Required for: All*
Infection Preventionist Signature	Charlotte Briggs	Date:		*Required for: ICRA-Class III & IV*
Supervisor (affected area)		Date:		*Required for: All*

Section 2A(1). Above Ceiling Permit

Project Title:	MSU Renovation and Addition	Project/Contract #:	75H70124C00030
Staff/Cont. Name:		Start Date:	
Supervisor Name:		Estimated Duration:	

Topic	Issue for Evaluation	No	Yes	Responses (If **NO** to any)	Date Completed
MSU Training	1. Have all supervisors/workers been trained on fire safety requirements	❑	x	• Schedule training with Facility Mgr or Safety Ofcr • Review policy and sign acknowledgement below.	
	2. Has supervisor read above ceiling access policy?	❑	x		
Project Plans/ Drawings	1. Has a cable routing plan been provided to Facility Manager?	❑	❑	• Provide Facility Mgr with written plan or drawing. • If req'd by Facility Mgr, request and redline Life Safety Plan drawings	
	2. Is a redlined drawing/CAD over the Life Safety Plan needed? (MSU use only)	❑	❑		
Project Details	1. Have descriptions/fire ratings for any materials to be installed been provided?	❑	❑	• Provide complete project details to Facility Manager; or utilize facility approved systems/materials.	
	2. Have additions of cables/wires to pre-existing pathways/sleeves been reviewed and found to comply with allowable loads?	❑	❑		
	3. Have descriptions of UL compliant firestop systems been provided; or will facility approved systems be used?	❑	❑		
	4. Have descriptions of approved hanger/ support systems been provided; or will facility approved systems be used?	❑	❑		
	5. Have product details for all firestop systems/materials been provided?	❑	❑		
Pre-work inspection	1. Has a pre-work inspection been conducted?	❑	❑	• Conduct pre-work inspection and notify Facility Manager of existing deficiencies.	
	2. Have any existing unprotected penetrations been identified?	❑	❑		
	3. Have existing items supported by sprinkler piping been identified?	❑	❑		
ILSM	1. Will any ceiling/tile grid, fire/smoke barrier, or firestop system be compromised for more than 4 hours or beyond the end of the work day, without a temporary code compliant protection system/ methodology?	❑	❑	• Conduct a full ILSM evaluation	

ACA Permit Approval

Facility Manager Signature		Date:	

ACA Permit Close-out

Facility Manager Signature		Date:	

ABOVE CEILING ACCESS PERMIT

PERMIT MUST BE PROMINENTLY DISPLAYED AT THE JOB SITE

NOTICE TO PERMIT HOLDER

READ CAREFULLY

Certain spaces (such as above ceiling tile grids or utility closets) are restricted to authorized personnel, and are controlled in GSU facilities.

Access to these spaces is a privilege, which may be denied for those who do not comply with the Above Ceiling Access Permit Policy. This applies to all staff, as well as vendors and contractor personnel.

This form and the preceding pages are the permit and must be displayed at all times while creating new, or accessing existing penetrations in smoke or fire barriers. It must also be displayed when working above ceiling tile grids, in utility closets or in any other space identified as CONTROLLED SPACE.

Persons found working in these spaces without a valid permit visible are in violation of the ABOVE CEILING ACCESS PERMIT POLICY, and may lose their access privileges. Chronic non-compliers will be disciplined.

SOME EXAMPLES OF POLICY VIOLATIONS:

- Accessing a controlled space without a permit
- Failure to hold and display a valid permit
- Failure to close out a permit
- Performing work outside the scope of a permit
- Providing false information to a permit issuer
- Falsifying data on a permit
- Allowing someone to work under the scope of a permit issued in another's name

All individuals performing work in a CONTROLLED SPACE shall read and be familiar with the ABOVE CEILING ACCESS PERMIT POLICY, copies of which can be obtained in Facility Management.

I have read and understand the ABOVE CEILING ACCESS PERMIT POLICY, and agree to comply with it.			
Staff/Contractor Signature		Date:	

Section 2A(2). Interim Life Safety Measure Risk Assessment

Project Title:	MSU Renovation and Addition	Project/Contract #:	75H70124C00030
Staff/Cont. Name:		Start Date:	
Supervisor Name:		Estimated Duration:	

Topic	Issue for Evaluation	No	Yes	Responses (If **YES** to any)	Date Initiated
Exits	1. Any exit access or travel distances altered/excessive?	❑	☑	• Post signage for an alternate means of egress • Train staff on alternate means of egress* • Inspect exit daily for blockage or debris • Double fire drill frequency* • Increase hazard surveys*	
	2. Any exits used by anyone other than contractors obstructed?	❑	☑		
	3. Absence of two remote exits? *Need to determine if we use stairs. Consider laboratory egress (is it allowed per code).*	❑	❑		
Emergency Access	1. Access to emergency depts. or services obstructed?	☑	❑	• Designate an alternate means of access • Notify MSU Security • Notify Mescalero Fire and Rescue	
	2. Access to construction area obstructed for emergency forces?	❑	☑		
Fire Protection	1. Fire alarm/detection (>25% in one zone) impaired >4 hrs?	❑	☑	• Submit fire watch request; o Or, use/monthly test temp. alarm/detection/ suppression system • Notify Mescalero Fire and Rescue • Double fire drill frequency* • Make affected staff aware • Increase hazard surveys*	
	2. Fire suppression impaired >10 hrs?	❑	☑		
Fire & Smoke Barriers	1. Major breaches of fire/smoke barriers (including vertical)?	☑	❑	• Construct 1-hr smoke tight temp. barrier (as needed) • Inspect exits daily • Double fire drill frequency • Train staff to compensate* • Increase hazard surveys*	
	2. Unprotected corridors or Haz. Areas?	☑	❑		
	3. Fire/smoke door maintenance/latching problem not immediately repairable?	☑	❑		
Addl. Firefighting Equipment	1. Fire load significantly increased above normal for area/building?	❑	☑	• Provide additional fire extinguishers in area	
Addl. Firefighting Training	1. Additional firefighting equipment differs from normal equipment?	☑	❑	• Train equipment staff/ contractors to use	
Combustible Load Levels	1. New/increased storage of flammable/combustible materials?	❑	☑	• Minimize debris accumulation • Increase hazard surveys	
	2. Flammable/combustible debris?	❑	☑		
Hazard Surveillance	1. Addl. hazards such as excavations,	☑	❑	• Initiate additional surveillance of area	
Facility-wide Training	1. Life safety deficiencies or hazards impaired throughout entire building?	☑	❑	• Train employees on ILSM • Notify Mescalero Fire and Rescue	

*-Need for response may be waived upon approval of Authority Having Jurisdiction based on scope and duration of project.

Describe any other life safety impacts, as well as specific actions to be implemented, for these and those above.

Evaluator signature & Title		Date:	
Facility Manager Signature		Date:	
Safety Officer Signature		Date:	
Staff/Contractor Signature		Date:	

Section 2A(3). Hot Work Permit

Project Title:	MSU Renovation and Addition	Project/Contract #:	75H70124C00030
Staff/Cont. Name:		Start Date:	
Supervisor Name:		Estimated Duration:	

WELDING and BURNING PERMIT
(Work is not permitted unless this card is filled in and posted in work area)

Date_____/_____/_____Time _____ _____AM/PM

Building _____

Department _____Floor _____

Work to be done

_____

_____

Special Precautions _____

Fire Watch Required?_____ Yes _____No

The location where work is to be done has been examined by me, the necessary precautions have been taken (see checklist), and permission is granted for this work.

Permit Expires _____/_____/_____ Time: _____AM/PM

Signed _____
Individual responsible for work authorization (Facility Manager)

Time Started _____ Time Completed _____

FINAL CHECK
(Where Fire Watch is required)

Work area, and all adjacent area where sparks might have spread, were continuously inspected during the entire time cutting, welding, or other hot work was conducted, and 30 minutes after completion. In addition, the work area was checked four (4) hours after the cutting, welding, or other hot work was completed, and no fire conditions were noted.

Signed

Return this permit, after work is completed, to Facilities Manager or designee for filing.

Required Precautions CHECK LIST

- ☐ Fire protection system(s) in service (sprinklers, CO_2, foam).
- ☐ Cutting and welding equipment I good condition.
- ☐ Floor/ground clean (and wet down when necessary).
- ☐ Combustibles at least 35 feet from welding area.
- ☐ Flammable liquids and other hazards removed from area.
- ☐ All floor and wall openings within 35 feet covered.
- ☐ Non-combustible covers used to protect nearby combustibles and equipment.
- ☐ Containers, tanks, ducts, and other enclosures cleaned and purged of flammable vapors, liquids, dusts, and other hazardous materials.
- ☐ Fire extinguishers or small standpipe fire hose provided.
- ☐ All hazardous operations discontinued in area.
- ☐ Fire watch should be present during, and at least on-half hour after, welding burning has ceased.
- ☐ Location of nearest fire alarm box identified.

When possible, do work in a non-combustible area.

An individual should generally be assigned to watch for dangerous Sparks in the area and the floor below.

Section 2B. Utility System Risk Assessment

Project Title:	MSU Renovation and Addition	Project/Contract #:	75H70124C00030
Staff/Cont. Name:		Start Date:	
Supervisor Name:		Estimated Duration:	

Will project affect?	Yes	No	Minimum Recommended Precautions: (If Yes)
Noise	☑	❑	• Review project and patient care schedules to identify least impactful times, or options to curtail or relocate patient care operations • Review how workers will access worksite and isolate from patient care as feasible • Review tools and processes to be used for reasonable, quieter alternatives; • Install sound attenuating barriers where feasible. Monitor as needed.
Vibration	☑	❑	• Review work schedules for project and work area to identify least impactful times • Review tools and processes to be used for reasonable alternatives • Assess potential impacts on sensitive patient care equipment/processes; Monitor as needed.
Water	☑	❑	• Submit ICRA and Utility Shutdown Request; Submit fire watch request per ILSM evaluation • Pre-position materials needed to respond to a water leak • Review need/options to isolate adjacent areas and equipment (i.e. lab analyzers, ice machines, HVAC appurtenances, etc.) • Flush and/or treat system if potential for residue or stagnation (See Legionella Plan)
Sewer	☑	❑	• Submit ICRA and Utility Shutdown Request • Pre-position materials needed to respond to leaks or spills, and to handle contaminated construction debris. • Review need/options to isolate adjacent areas and to curtail or alter patient care routines.
Electricity	☑	❑	• Review work schedules for project and work area to identify least impactful times • Review potential impacts to connected utility systems and electronic equipment • Submit Utility Shutdown Request
Steam	❑	☑	• Submit Utility Shutdown Request • Notify steam-based equipment users of potential impacts
Natural Gas	❑	❑	• Submit Utility Shutdown Request – Served by LPG tank **Check to see if impacted**
HVAC	☑	❑	• Submit ICRA and Utility Shutdown Request • Review work schedules for project and work area to identify least impactful times • Identify alternate environmental condition options
Medical Gas & Vacuum	❑	☑	• Submit Utility Shutdown Request • Ensure work will be done in accordance with NFPA 99 or other relevant codes • Notify patient care staff of potential impacts to prompt clinical intervention planning • Ensure that post-completion testing is completed
IT Systems	❑	☑	• Collaboratively plan project between Facility Mgmt and IT Departments • Notify patient care staff to plan for clinical process modification as needed
Telephones	☑	❑	• Collaboratively plan project between Facility Mgmt and IT Departments • Notify patient care security staff to plan for emergency response modifications
Call systems	❑	☑	• Collaboratively plan project between Facility Mgmt and IT Departments • Notify patient care staff to plan for clinical process modification as needed • Plan for alternate notification means (standalone systems, bells, etc.)
Observation Cameras	☑	❑	• Collaboratively plan project between Facility Mgmt and IT Departments • Notify patient care staff to plan for clinical process modifications as needed

Describe any specific actions to be implemented:

Evaluator Signature & Title		Date:	
Facility Manager Signature		Date:	
Safety Officer Signature	Kristin Kaydahzinne	Date:	
Staff/Contractor Signature		Date:	

Section 2C. Environmental and Occupational Risk Assessment

Project Title:	MSU Renovation and Addition	Project/Contract #:	75H70124C00030
Staff/Cont. Name:		Start Date:	
Supervisor Name:		Estimated Duration:	

Will project involve:	Yes	No	Minimum Recommended Precautions: (If Yes)
Lead-based paint *All exterior - check*	☑	❑	• Review facility lead-based paint assessment and management plan • Ensure project staff are properly trained in precautions necessary to protect facility occupants and themselves • Establish plan to implement appropriate isolation, work practices, housekeeping, and waste handling • Establish plan for required air or surface sampling
Asbestos	☑	❑	• Review facility asbestos assessment and management plan • Ensure project staff are properly trained in precautions necessary to protect facility occupants and themselves • Establish plan to implement appropriate isolation, work practices, housekeeping, and waste handling • Establish plan for required air or surface sampling
Chemical hazards	☑	❑	• Review area or initial project plan to identify hazards inherent to work area • Compile and review listing of chemicals to be used; ensure Safety Data Sheets available • Review chemicals to be used for potential impacts on areas adjacent to project
Infectious Agents	❑	☑	• Review area or initial project plan to identify hazards inherent to work area • Ensure staff have received Bloodborne Pathogen Training including exposure response processes/responsibilities • Review need for medical screening/vaccination with employee health program • Conduct Job Hazard Assessment and ensure appropriate personal protective equipment is available and used
Mold	❑	☑	• Review area or initial project plan to identify hazards inherent to work area • Consider potential risk of water damage due to compromising wall, ceiling, roof • Ensure project staff are properly trained in precautions necessary to protect facility occupants and themselves • Establish plan to implement appropriate isolation, work practices, housekeeping, and waste handling

Describe any specific actions to be implemented:

Evaluator Signature & Title		Date:	
Facility Manager Signature		Date:	
Employee Health Signature (as needed)		Date:	
Safety Officer Signature		Date:	
Staff/Contractor Signature		Date:	

Section 2D. Security Risk Assessment

Project Title:	MSU Renovation and Addition	Project/Contract #:	75H70124C00030
Staff/Cont. Name:		Start Date:	
Supervisor Name:		Estimated Duration:	

Will project affect:	Yes	No	Minimum Recommended Precautions: (If Yes)
Badge Readers	❑	☑	• Collaborative plan project with IT Department • Notify Security staff of impaired system to plan for alternative access control methods • Notify affected work area staff of alternative access control methods
Security Cameras	☑	❑	• Collaboratively plan project between Facility Mgmt and IT Departments • Notify security to plan for surveillance process modifications
Physical Barriers	☑	❑	• Review need for temporary physical barriers
Security Processes	☑	❑	• Review changes to area access with security to plan for alternate rounding paths • Review pedestrian/facility occupant foot traffic patterns to identify potential vulnerabilities • Review vehicle traffic patterns with security to ensure required access and to plan for traffic management as needed
Security sensitive areas	☑	❑	• Review project staff listing with security • Notify project staff of access control requirements • Provide identification as needed.
Emergency Response Procedures	☑	❑	• Notify external first responders/partners as appropriate • Provide training to staff regarding procedural changes • Relocate equipment and/or signage as needed • Review emergency response communications procedures/plan

Describe any specific actions to be implemented:

Evaluator Signature & Title		Date:	
Facility Manager Signature		Date:	
Security Supv. Signature		Date:	
Safety Officer Signature	Kristin Kaydahzinne	Date:	
Staff/Contractor Signature		Date:	

Section 2E. Infection Control Risk Assessment

Project Title:	MSU Renovation and Addition	Project/Contract #:	75H70124C00030
Staff/Cont. Name:		Start Date:	
Supervisor Name:		Estimated Duration:	

Building:	Floor(s):	Department Name(s):	Room Number(s) & Description(s)
Mescalero Indian Health Center	1st floor east. 2nd floor dumb waiter.		

Project Description: (include specific sites and tasks)
Will isolate East part of first floor for renovation and expansion.

Infection Control Risk Assessment
Matrix of Precautions for Construction & Renovation

Step 1: Using the following table, *identify* the Type of Construction Project Activity (Type A-D)

TYPE A	**Inspection and Non-Invasive Activities.** Includes, but is not limited to: ▪ removal of ceiling tiles for visual inspection only, e.g., limited to 1 tile per 50 square feet ▪ painting (but not sanding) ▪ wallcovering, electrical trim work, minor plumbing, and activities which do not generate dust or require cutting of walls or access to ceilings other than for visual inspection.
TYPE B	**Small scale, short duration activities which create minimal dust** Includes, but is not limited to: ▪ installation of telephone and computer cabling ▪ access to chase spaces ▪ cutting of walls or ceiling where dust migration can be controlled.
TYPE C	**Work that generates a moderate to high level of dust or requires demolition or removal of any fixed building components or assemblies** Includes, but is not limited to: ▪ sanding of walls for painting or wall covering ▪ removal of floorcoverings, ceiling tiles and casework ▪ new wall construction ▪ minor duct work or electrical work above ceilings ▪ major cabling activities ▪ any activity which cannot be completed within a single work shift.
TYPE D	**Major demolition and construction projects** Includes, but is not limited to: ▪ activities which require consecutive work shifts ▪ requires heavy demolition or removal of a complete cabling system ▪ new construction.

Step 1: _____

Step 2: Using the following table, ***identify*** **the Patient Risk Groups** that will be affected.

Low Risk	Medium Risk	Medium-High Risk	Highest Risk
▪ Office areas ▪ Nonpatient-care areas not otherwise specified (NOS)	▪ Cardiology ▪ Echocardiography ▪ Endoscopy ▪ Local Room ▪ Physical Therapy ▪ Radiology/MRI ▪ Respiratory Therapy ▪ Infusion Clinic ▪ Orthopedic Clinic	▪ Emergency Room ▪ Labor & Delivery ▪ Laboratories (specimen) ▪ Medical Units ▪ Newborn Nursery ▪ Outpatient Surgery ▪ Pediatrics ▪ Pharmacy ▪ Post Anesthesia Care Unit	▪ Any area caring for immunocompromised patients ▪ Central Sterile Supply ▪ Intensive Care Units ▪ Negative pressure isolation rooms ▪ Operating rooms including C-section rooms

If more than one risk group will be affected, select the higher risk group:
___**Medium Risk – Dental is adjoining construction area.**_____

Step 2: _____

Step 3: ***Match*** **the following**;

Patient Risk Group (***Low, Medium, High, Highest***) with the planned …
Construction Project Type (***A, B, C, D***) on the following matrix, to find the …
Class of Precautions (***I, II, III or IV***) or level of infection control activities required.

	Type of Construction			
Patient Risk Group	**Type A**	**Type B**	**Type C**	**Type D**
Low Risk Group	I	II	II	III/IV
Medium Risk Group	I	II	III	IV
Medium-High Risk Group	I	II	III/IV	IV
Highest Risk Group	I –III Consult ICP	III/IV	III/IV	IV

Class of IC Measures Class I ❑ Class II ❑ Class III* ❑ Class IV* ☑

* Note Infection Preventionist approval will be required when the Construction Activity and Risk Level indicate that Class III or Class IV control procedures are necessary.

Step 3: _____

Description of Required Infection Control Precautions by Class

	Before Construction	During Construction Project	Upon Completion of Project
CLASS I	1. Notify Department Supervisor	1. Execute work by methods to minimize raising dust from construction operations. 2. Immediately replace a ceiling tile displaced for visual inspection	1. Clean work area upon completion of task.
CLASS II	1. Notify Department Supervisor	1. Provide active means to prevent airborne dust from dispersing into atmosphere. 2. Water mist work surfaces to control dust while cutting. 3. Seal unused doors with duct tape. 4. Block off and seal air vents. 5. Place dust mat at entrance and exit of work area 6. Remove or isolate HVAC system in areas where work is being performed.	1. Wipe work surfaces with cleaner/disinfectant. 2. Contain construction waste before transport in tightly covered containers. 3. Wet mop and/or vacuum with HEPA filtered vacuum before leaving work area. 4. Upon completion, restore HVAC system where work was performed.
CLASS III	1. Contact Housekeeping Supervisor to schedule Post-work cleaning 2. Review ICRA with Department Supervisor(s)	1. Remove or Isolate HVAC system in area where work is being done to prevent contamination of duct system. 2. Complete all critical barriers i.e. sheetrock, plywood, plastic, to seal area from non-work area or implement control cube method (cart with plastic covering and sealed connection to work site with HEPA vacuum for vacuuming prior to exit) before construction begins. 3. Maintain negative air pressure within work site utilizing HEPA equipped air filtration units. 4. Contain construction waste before transport in tightly covered containers. 5. Cover transport receptacles or carts. Tape covering unless solid lid.	1. Do not remove barriers from work area until completed project is inspected by the owner's Safety Department and Infection Prevention & Control Department and thoroughly cleaned by the owner's Environmental Services Department. 2. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction. 3. Vacuum work area with HEPA filtered vacuums. 4. Wet mop area with cleaner/disinfectant. 5. Upon completion, restore HVAC system where work was performed.
CLASS IV	1. Contact Housekeeping Supervisor to schedule Post-work cleaning 2. Notify Tour Supervisor 3. Review ICRA with Department Supervisor(s)	1. Isolate HVAC system in area where work is being done to prevent contamination of duct system. 2. Complete all critical barriers i.e. sheetrock, plywood, plastic, to seal area from non-work area or implement control cube method (cart with plastic covering and sealed connection to work site with HEPA vacuum for vacuuming prior to exit) before construction begins. 3. Maintain negative air pressure within work site utilizing HEPA equipped air filtration units. 4. Seal holes, pipes, conduits, and punctures. 5. Construct anteroom and require all personnel to pass through this room so they can be vacuumed using a HEPA vacuum cleaner before leaving work site or they can wear cloth or paper coveralls that are removed each time they leave work site. 6. All personnel entering work site are required to wear shoe covers. Shoe covers must be changed each time the worker exits the work area.	1. Do not remove barriers from work area until completed project is inspected by the owner's Safety Department and Infection Prevention & Control Department and thoroughly cleaned by the owner's Environmental Services Dept. 2. Remove barrier material carefully to minimize spreading of dirt and debris associated with construction. 3. Contain construction waste before transport in tightly covered containers. 4. Cover transport receptacles or carts. Tape covering unless solid lid. 5. Vacuum work area with HEPA filtered vacuums. 6. Wet mop area with cleaner/disinfectant. 7. Upon completion, restore HVAC system where work was performed.

Step 4. Identify the areas surrounding the project area, assessing potential impact

Adjacent Area Impacts: Identify the areas surrounding the project area, to assess potential impact						
	Below	Above	Lateral	Lateral	Behind	in Front
Adjacent Unit Name		Outpatient/Pharmacy	Dental			
Patient Risk Group (per Table 1)		Medium	Medium			

Step 5. Identify specific site of activity e.g., patient rooms, medication room, etc.

Step 6. Identify containment measures, using prior assessment. What type of barriers? (E.g., solid wall barriers); Will HEPA filtration be required. Do plans allow for adequate number of isolation/negative airflow rooms? (Note: Renovation/construction area shall be isolated from the occupied areas during construction and shall be negative with respect to surrounding areas)

- Solid wall barriers between construction area and occupied areas. Maintain construction space under negative pressure.

Step 7. Consider potential risk of water damage. Is there a risk due to compromising structural integrity? (e.g., wall, ceiling, roof) – Minimal risk from activities on first floor.

Step 8. Work hours: Can or will the work be done during non-patient care hours? Yes

Step 9. Do plans allow for adequate number of isolation/negative airflow rooms? Yes

Step 10. Do the plans allow for the required number & type of handwashing sinks? Yes

Step 11. Does the infection prevention & control staff agree with the minimum number of sinks for this project? Yes

Step 12. Does the infection prevention & control staff agree with the plans relative to clean and soiled utility rooms? Need to ensure air flow meets ASHRAE 170 for new sterilization/decon area.

Step 13. Plan to discuss the following containment issues with the project team. (E.g., traffic flow, housekeeping, debris removal [how and when]).

Construction company to maintain their site to include own housekeeping and portable bathrooms.

***Appendix**: Identify and communicate the responsibility for project monitoring that includes infection prevention & control concerns and risks. The ICRA will be modified throughout the project. Revisions must be communicated to the Project Manager.*

Infection Control Construction Permit

	Permit No:
Location of Construction:	Project Start Date:
Project Coordinator:	Estimated Duration:
Contractor Performing Work	Permit Expiration Date:
Supervisor:	Telephone:

YES	NO	CONSTRUCTION ACTIVITY	YES	NO	INFECTION CONTROL RISK GROUP
		TYPE A: Inspection, non-invasive activity			GROUP 1: Low Risk
		TYPE B: Small scale, short duration, moderate to high levels	☑		GROUP 2: Medium Risk
		TYPE C: Activity generates moderate to high levels of dust, requires greater 1 work shift for completion			GROUP 3: Medium/High Risk
☑		TYPE D: Major duration and construction activities Requiring consecutive work shifts			GROUP 4: Highest Risk

CLASS I	1. Execute work by methods to minimize raising dust from construction operations. 2. Immediately replace any ceiling tile displaced for visual inspection.	3. Minor Demolition for Remodeling
CLASS II	1. Provides active means to prevent air-borne dust from dispersing into atmosphere 2. Water mist work surfaces to control dust while cutting. 3. Seal unused doors with duct tape. 4. Block off and seal air vents. 5. Wipe surfaces with cleaner/disinfectant.	6. Contain construction waste before transport in tightly covered containers. 7. Wet mop and/or vacuum with HEPA filtered vacuum before leaving work area. 8. Place dust mat at entrance and exit of work area. 9. Isolate HVAC system in areas where work is being performed; restore when work completed.
CLASS III **Date** **Initial**	1. Obtain infection control permit before construction begins. 2. Isolate HVAC system in area where work is being done to prevent contamination of the duct system. 3. Complete all critical barriers or implement control cube method before construction begins. 4. Maintain negative air pressure within work site utilizing HEPA equipped air filtration units. 5. Do not remove barriers from work area until complete project is checked by Infection Prevention & Control and thoroughly cleaned by Environmental Services.	6. Vacuum work with HEPA filtered vacuums. 7. Wet mop with cleaner/disinfectant 8. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction. 9. Contain construction waste before transport in tightly covered containers. 10. Cover transport receptacles or carts. Tape covering. 11. Upon completion, restore HVAC system where work was performed.
CLASS IV **Date** **Initial**	1. Obtain infection control permit before construction begins. 2. Isolate HVAC system in area where work is being done to prevent contamination of duct system. 3. Complete all critical barriers or implement control cube method before construction begins. 4. Maintain negative air pressure within work site utilizing HEPA equipped air filtration units. 5. Seal holes, pipes, conduits, and punctures appropriately. 6. Construct anteroom and require all personnel to pass through this room so they can be vacuumed using a HEPA vacuum cleaner before leaving work site or they can wear cloth or paper coveralls that are removed each time they leave the work site. 7. All personnel entering work site are required to wear shoe covers.	8. Do not remove barriers from work area until completed project is checked by Infection Prevention & Control and thoroughly cleaned by Environmental. Services. 9. Vacuum work area with HEPA filtered vacuums. 10. Wet mop with disinfectant. 11. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction. 12. Contain construction waste before transport in tightly covered containers. 13. Cover transport receptacles or carts. Tape covering. 14. Upon completion, restore HVAC system where work was performed.

Additional Requirements:

Date Initials	Exceptions/Additions to this permit Date.
Permit Request By:	Permit Authorized By:
Date:	Date:

****Post Completed & Signed ICRA at worksite.**

Section 2F: Project Revision Request

Project Title:	MSU Renovation and Addition	Project/Contract #:	75H70124C00030
MSU Coordinator:		Original PCRA Date:	
Project Conducted by:	❑Fac. Mgmt. ❑I.T. ❑Telecom ❑Clin. Eng. ❑Contractor: _____	Original Start Date:	
		Original Duration:	
Staff/Cont. Name:		Orig Complete Date	
Supervisor Name:		Actual Start Date:	
Telephone:		Revised Duration:	
Email:		Rev. Complete Date	

Changes to Project

Project Description: (include specific sites and tasks)

Reasons for Project Changes

Summary of Reasons:

New Areas Affected by Project:

Building:	Floor(s):	Department Name(s):	Room Number(s) & Description(s)

Changes to Initial Impact Assessment

Topic	*Will project revision affect the…?*	No	Yes	Responses (If **YES**)
Fire Safety Section 2A(1)	Above the Ceiling Access Permit (ACAP)	❑	❑	• Consult with Facility Manager
Fire Safety Section 2A(2)	Interim Life Safety Measure (ILSM) evaluation	❑	❑	• Consult with Facility Manager and Safety Officer
Utilities Section 2B	Utility Risk Assessment (URA)	❑	❑	• Consult with Facility Manager
Environmental/ Occupational Section 2C	Env./Occ. Risk Assessment (EORA)	❑	❑	• Consult with Safety Officer
Security Section 2D	Security Risk Assessment (SRA)	❑	❑	• Consult with Safety Officer
Infection Control Section 2E	Infection Control Risk Assessment (ICRA)	❑	❑	• Consult with Infection Preventionist

Project Revision Approval

Evaluator Signature & Title		Date:		*Required for: All*
Facility Manager Signature		Date:		*Required for: All*
Safety Officer Signature		Date:		*Required for: All*
Infection Preventionist Signature		Date:		*Required for: ICRA*

Section 3A. Fire Watch Request Form

Project Title:	MSU Renovation and Addition	Project/Contract #:	75H70124C00030
MSU Coordinator:		Fire Watch Start Date:	
Staff/Cont. Name:		Fire Watch Start Time:	
Supervisor Name:		Est. Complete Date:	
Telephone:		Date Project Completed:	
Email:			

Building:	Floor(s):	Department Name(s):	Room Number(s) & Description(s)

A written ILSM assessment is required on all construction projects, repairs, or other activities that will impair any part of the life safety features. Whenever the automatic fire alarm system is disabled for four (4) or more hours in a given 24-hour period, or whenever the automatic sprinkler system is disabled for ten (10) or more hours in a given 24-hour period, a Fire Watch shall be implemented in all areas affected. Project manager must send a completed copy of the ILSM assessment form along this request to the Facility Manager, Safety Officer, and Security Department Manager who will conduct the fire watch in the areas affected for the duration of impairment according to facility procedures. A fire watch log must be maintained to document each inspection.

The following elements must be included in all fire watch inspections:

1. Outside doors are closed and secured, and windows, fire doors are closed.
2. All waste, rags, paint residue, rubbish, and similar combustible items are removed from the building.
3. All remaining operable fire protection equipment is in place and not obstructed.
4. Ensure that all aisles are clear.
5. Confirm that all motors or machines not required to operate are turned off.
6. All unsecured offices and conference rooms are checked for unapproved smoking material that may have been carelessly discarded.
7. All unnecessary heat-producing devices are turned off in the impairment area
8. Ensure that flammable and combustible materials are properly stored in approved containers. (NOTE: Flammable compressed gas cylinders must be stored in a 1-hour fire resistance rated room.)
9. Ensure that sprinkler valves are in the open position. (NOTE: If sprinkler control valves are electronically supervised by the Automatic Fire Alarm System and are not impaired by this scope of work, then visual examination is not required.
10. Check for proper ventilation in the impaired area.
11. Ensure there are no leaks from the plumbing fixtures and piping

Individuals performing the Fire Watch will make clear precise entries on the Fire Watch Log, and immediately report any unsafe or unusual situations to the Safety Officer and Facility Manager, or their designees. At the conclusion of the Fire Watch, a copy of the Fire Watch Log must be forwarded to the Safety Officer and project file.

Fire Watch Approval

Requestor Signature & Title		Date:	
Facility Manager Signature		Date:	
Safety Officer Signature		Date:	
Security Supv. Signature		Date:	

Section 3B. Utility Shutdown Request

Project Title:	MSU Renovation and Addition	Project/Contract #:	75H70124C00030
MSU Coordinator:		Request submit date	
Staff/Cont. Name:			
Prime Contractor (if different)		Requested Shutdown Date:	
Supervisor Name:		Shutdown Time:	
Telephone:		Est. Duration:	
Email:			

NOTE: A separate utility shutdown request must be submitted for each separate work period during which the utility(ies) will be interrupted.

Utility Requested to be Shutdown	Yes	Comments
Water	❑	
Sewer	❑	
Electricity	❑	
Steam	❑	
Natural Gas	❑	
HVAC	❑	
Medical Gas & Vacuum	❑	

Evaluator Signature & Title		Date:	
Facility Manager Signature		Date:	
Utility System Manager		Date:	

Section 3C. Daily Construction Area Checklist

Project Title:	MSU Renovation and Addition	Project/Contract #:	75H70124C00030
Staff/Cont. Name:		Start Date:	
Supervisor Name:		Estimated Duration	
Telephone:		Exp. Complete Date	

Building:	Floor(s):	Department Name(s):	Room Number(s) & Description(s)

Requirements	First Check			Second Check		
	Yes	No	N/A	Yes	No	N/A
1. Entrance Doors/ ICRA Barriers properly closed and sealed. Doors secured.	❑	❑	❑	❑	❑	❑
2. Enclosures free of penetrations						
3. Holes, pipes, conduits sealed at ICRA Barrier						
4. Air vents sealed (supply and return)						
5. HVAC system isolated						
6. Unused doors taped						
7. Windows closed						
8. HEPA filtration on and running						
9. HEPA filter log up-to-date						
10. HEPA vacuum and/or coveralls available						
11. Negative pressure monitor in place and running • Negative Pressure reading: _____						
12. Hot work permit obtained						
13. Exit signs installed and lighted						
14. Fire extinguishers in place and tag up-to-date						
15. All routes of egress clear of debris						
16. Construction signs in place						
17. Dust (sticky) mats in place and clean						
18. Routine cleaning completed						
19. Surrounding areas free of dust						
20. Debris removed daily						
21. Transport carts covered and wiped down						
22. Trash in appropriate containers						
23. All workers wearing ID badges (If no – provide #): _____						
24. FIRE WATCH IN EFFECT (note time complete)						
25. Compressed Gas Cylinders Secured						

Describe any deficiencies and specific actions taken to correct:

Project Supervisor Signature – First Check		Date:		Time:	
Project Supervisor Signature – Second Check		Date:		Time:	

RED EAGLE
JOINT VENTURE
A WARFEATHER LLC / ROSS GROUP JV

3. Respiratory Protection Program

ATTACHMENT E

Respiratory Protection Program

1910.134
Respiratory Protection
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Respiratory Protection Program

I. OBJECTIVE

The Border Demolition & Environmental, Inc. Respiratory Protection Program is designed to protect employees by establishing accepted practices for respirator use, providing guidelines for training and respirator selection, and explaining proper storage, use and care of respirators. This program also serves to help the company and its employees comply with Occupational Safety and Health Administration (OSHA) respiratory protection requirements as found in 29 CFR 1910.134.

II. ASSIGNMENT OF RESPONSIBILITY

A. Employer

Border Demolition & Environmental, Inc. is responsible for providing respirators to employees when they are necessary for health protection. Border Demolition & Environmental, Inc. will provide respirators that are applicable and suitable for the intended purpose at no charge to affected employees. Any expense associated with training, medical evaluations and respiratory protection equipment will be borne by the company.

B. Program Administrator

The Program Administrator for Border Demolition & Environmental, Inc. is the project supervisor. The Program Administrator is responsible for administering the respiratory protection program. Duties of the program administrator include:

1. Identifying work areas, process or tasks that require workers to wear respirators.
2. Evaluating hazards.
3. Selecting respiratory protection options.
4. Monitoring respirator use to ensure that respirators are used in accordance with their specifications.
5. Arranging for and/or conducting training.
6. Ensuring proper storage and maintenance of respiratory protection equipment.
7. Conducting qualitative fit testing with Bittrex.
8. Administering the medical surveillance program. (Mgmt.)
9. Maintaining records required by the program. (Mgmt.)
10. Evaluating the program. (Mgmt.)
11. Updating written program, as needed. (Mgmt.)

C. Supervisors

Supervisors are responsible for ensuring that the respiratory protection program is implemented in their particular areas. In addition to being knowledgeable about the program requirements for their own protection, supervisors must also ensure that the program is understood and followed by the employees under their charge. Duties of the supervisor include:

1. Ensuring that employees under their supervision (including new hires) receive appropriate training, fit testing, and annual medical evaluation.
2. Ensuring the availability of appropriate respirators and accessories.
3. Being aware of tasks requiring the use of respiratory protection.
4. Enforcing the proper use of respiratory protection when necessary.
5. Ensuring that respirators are properly cleaned, maintained, and stored according to this program.
6. Ensuring that respirators fit well and do not cause discomfort.
7. Continually monitoring work areas and operations to identify respiratory hazards.
8. Coordinating with the Program Administrator on how to address respiratory hazards or other concerns regarding this program.

D. Employees

Each employee is responsible for wearing his or her respirator when and where required and in the manner in which they are trained. Employees must also:

1. Care for and maintain their respirators as instructed, guard them against damage, and store them in a clean, sanitary location.
2. Inform their supervisor if their respirator no longer fits well, and request a new one that fits properly.
3. Inform their supervisor or the Program Administrator of any respiratory hazards that they feel are not adequately addressed in the workplace and of any other concerns that they have regarding this program.
4. Use the respiratory protection in accordance with the manufacturer's instructions and the training received.

III. APPLICABILITY

This program applies to all employees who are required to wear respirators during normal work operations, as well as during some non-routine or emergency operations, such as a spill of a hazardous substance.

In addition, any employee who voluntarily wears a respirator when one is not required (i.e., in certain maintenance and coating operations) is subject to the medical evaluation, cleaning, maintenance, and storage elements of this program, and will be provided with necessary training. Employees who voluntarily wear filtering face pieces (dust masks) are not subject to the medical evaluation, cleaning, storage, and maintenance provisions of this program.

All employees and processes that fall under the provisions of this program are listed in Attachment D.

IV. PROGRAM

A. Hazard Assessment and Respirator Selection

The Program Administrator will select respirators to be used on site, based on the hazards to which workers are exposed and in accordance with the OSHA Respiratory Protection Standard. The

Program Administrator will conduct a hazard evaluation for each operation, process, or work area where airborne contaminants may be present in routine operations or during an emergency. A log of identified hazards will be maintained by the Program Administrator. The hazard evaluations shall include:

1. Identification and development of a list of hazardous substances used in the workplace by department or work process.
2. Review of work processes to determine where potential exposures to hazardous substances may occur. This review shall be conducted by surveying the workplace, reviewing the process records, and talking with employees and supervisors.
3. Exposure monitoring to quantify potential hazardous exposures.

The proper type of respirator for the specific hazard involved will be selected in accordance with the manufacturer's instructions. A list of employees and appropriate respiratory protection will be maintained by the Program Administrator.

B. Updating the Hazard Assessment

The Program Administrator must revise and update the hazard assessment as needed (i.e., any time work process changes may potentially affect exposure). If

an employee feels that respiratory protection is needed during a particular activity, he/she is to contact his/her supervisor or the Program Administrator. The Program Administrator will evaluate the potential hazard, and arrange for outside assistance as necessary. The Program Administrator will then communicate the results of that assessment to the employees. If it is determined that respiratory protection is necessary, all other elements of the respiratory protection program will be in effect for those tasks, and the respiratory program will be updated accordingly.

C. Training

The Program Administrator will provide training to respirator users and their supervisors on the contents of the Border Demolition & Environmental, Inc. Respiratory Protection Program and their responsibilities under it, and on the OSHA Respiratory Protection Standard. All affected employees and their supervisors will be trained prior to using a respirator in the workplace. Supervisors will also be trained prior to supervising employees that must wear respirators.

The training course will cover the following topics:

1. Border Demolition & Environmental, Inc. Respiratory Protection Program;
2. OSHA Respiratory Protection Standard (29 CFR 1910.134);
3. Respiratory hazards encountered at Border Demolition & Environmental, Inc. and their health affects;
4. Proper selection and use of respirators;
5. Limitations of respirators;
6. Respirator donning and user seal (fit) checks;
7. Fit testing;

8. Emergency use procedures;
9. Maintenance and storage; and
10. Medical signs and symptoms limiting the effective use of respirators.

Employees will be retrained annually or as needed (e.g., if they change departments or work processes and need to use a different respirator). Employees must demonstrate their understanding of the topics covered in the training through hands-on exercises and a written test. Respirator training will be documented by the Program Administrator and the documentation will include the type, model, and size of respirator for which each employee has been trained and fit tested.

D. NIOSH Certification

All respirators must be certified by the National Institute for Occupational Safety and Health (NIOSH) and shall be used in accordance with the terms of that certification. Also, all filters, cartridges, and canisters must be labeled with the appropriate NIOSH approval label. The label must not be removed or defaced while the respirator is in use.

E. Voluntary Respirator Use

The Program Administrator shall authorize voluntary use of respiratory protective equipment as requested by all other workers on a case-by-case basis, depending on specific workplace conditions and the results of medical evaluations.

The Program Administrator will provide all employees who voluntarily choose to wear the above respirators with a copy of Appendix D of the OSHA Respiratory Protection Standard. (Appendix D details the requirements for voluntary use of respirators by employees.) Employees who choose to wear a half face piece APR must comply with the procedures for Medical Evaluation, Respirator Use, Cleaning, Maintenance and Storage portions of this program.

F. Medical Evaluation

Employees who are either required to wear respirators, or who choose to wear a half face piece APR voluntarily, must pass a medical exam provided by Border Demolition & Environmental, Inc. before being permitted to wear a respirator on the job. Employees are not permitted to wear respirators until a physician has determined that they are medically able to do so. Any employee refusing the medical evaluation will not be allowed to work in an area requiring respirator use.

A licensed physician at Concentra Medical Centers or Medical Exams, where all company medical services are provided, will provide the medical evaluations. Medical evaluation procedures are as follows:

1. The medical evaluation will be conducted using the questionnaire provided in Appendix C of the OSHA Respiratory Protection Standard. The Program Administrator will provide a copy of this questionnaire to all employees requiring medical evaluations.

2. To the extent feasible, the company will provide assistance to employees who are unable to read the questionnaire. When this is not possible, the employee will be sent directly to the physician for medical evaluation.
3. Follow-up medical exams will be granted to employees as required by the Standard, and/or as deemed necessary by the evaluating physician.
4. All employees will be granted the opportunity to speak with the physician about their medical evaluation, if they so request.
5. Positive pressure air purifying respirators will be provided to employees as required by medical necessity.
6. After an employee has received clearance to wear his or her n respirator, additional medical evaluations will be provided under the following circumstances:

    a. The employee reports signs and/or symptoms related to their ability to use the respirator, such as shortness of breath, dizziness, chest pains or wheezing.
    b. The evaluating physician or supervisor informs the Program Administrator that the employee needs to be reevaluated.
    c. Information found during the implementation of this program, including observations made during the fit testing and program evaluation, indicates a need for reevaluation.
    d. A change occurs in workplace conditions that may result in an increased physiological burden on the employee.

All of Border Demolition & Environmental, Inc. asbestos abatement employees participate in a medical surveillance program.

All examinations and questionnaires are to remain confidential between the employee and the physician. The Program Administrator will only retain the physician's written recommendations regarding each employee's ability to wear a respirator.

G. Fit Testing

Employees who are required to or who voluntarily wear half-face APRs will be fit tested:

1. annually; or
2. When there are changes in the employee's physical condition that could affect respiratory fit (e.g., obvious change in body weight, facial scarring, etc.).

Employees will be fit tested with the make, model, and size of respirator that they will actually wear. Employees will be provided with several models and sizes of respirators so that they may find an optimal fit. Fit testing of powered air purifying respirators will be conducted in the negative pressure mode.

The Program Administrator will conduct fit tests in accordance with the OSHA Respiratory Protection Standard. See Appendix A.

H. General Respirator Use Procedures

1. Employees will use their respirators under conditions specified in this program, and in accordance with the training they receive on the use of each particular model. In addition, the respirator shall not be used in a manner for which it is not certified by NIOSH or by its manufacturer.

2. All employees shall conduct user seal checks each time they wear their respirators. Employees shall use either the positive or negative pressure check (depending on which test works best for them) as specified in the OSHA Respiratory Protection Standard.

    a. Positive Pressure Test: This test is performed by closing off the exhalation valve with your hand. Breathe air into the mask. The face fit is satisfactory if some pressure can be built up inside the mask without any air leaking out between the mask and the face of the wearer.

    b. Negative Pressure Test: This test is performed by closing of the inlet openings of the cartridge with the palm of your hand. Some masks may require that the filter holder be removed to seal off the intake valve. Inhale gently so that a vacuum occurs within the face piece. Hold your breath for ten (10) seconds. If the vacuum remains, and no inward leakage is detected, the respirator is fit properly.

3. All employees shall be permitted to leave the work area to go to the locker room to maintain their respirator for the following reasons:

    a. to clean their respirator if it is impeding their ability to work;
    b. to change filters or cartridges;
    c. to replace parts; or
    d. to inspect respirator if it stops functioning as intended.

    Employees should notify their supervisor before leaving the area.

4. Employees are not permitted to wear tight-fitting respirators if they have any condition, such as facial scars, facial hair, or missing dentures that would prevent a proper seal. Employees are not permitted to wear headphones, jewelry, or other items that may interfere with the seal between the face and the face piece.

5. Before and after each use of a respirator, an employee or immediate supervisor must make an inspection of tightness or connections and the condition of the face piece, headbands, valves, filter holders and filters. Questionable items must be addressed immediately by the supervisor and/or Program Administrator.

I. Air Quality

For supplied-air respirators, only Grade D breathing air shall be used in the cylinders. The Program Administrator will coordinate deliveries of compressed air with the company's vendor and will require the vendor to certify that the air in the cylinders meets the specifications of Grade D breathing air.- Currently not applicable.

The Program Administrator will maintain a minimum air supply of one fully charged replacement cylinder for each SAR unit. In addition, cylinders may be recharged as necessary from the breathing air cascade system located near the respirator storage area. – Currently not applicable

J. Change Schedules

Respirator cartridges shall be replaced as determined by the Program Administrator, supervisor(s), and manufactures' recommendations. Change schedule is a specified time period after which the chemical cartridge will be replaced. This time period may be established after consideration of the service life estimate, workplace conditions such as contaminant concentration, relative humidity, temperature, work activities, respirator use pattern (e.g., continuous or intermittent use), presence of other materials, potential for contaminant migration/desorption, health effects of the gas or vapor, and quality of warning properties, if any.

K. Cleaning

Respirators are to be regularly cleaned and disinfected at the designated respirator cleaning station. Respirators issued for the exclusive use of an employee shall be cleaned as often as necessary. Atmosphere-supplying and emergency use respirators are to be cleaned and disinfected after each use.

The following procedure is to be used when cleaning and disinfecting reusable respirators:

1. Disassemble respirator, removing any filters, canisters, or cartridges.
2. Wash the face piece and all associated parts (except cartridges and elastic headbands) in an approved cleaner-disinfectant solution in warm water (about 120 degrees Fahrenheit). Do not use organic solvents. Use a hand brush to remove dirt.
3. Rinse completely in clean, warm water.
4. Disinfect all facial contact areas by spraying the respirator with an approved disinfectant.
5. Air dry in a clean area.
6. Reassemble the respirator and replace any defective parts. Insert new filters or cartridges and make sure the seal is tight.
7. Place respirator in a clean, dry plastic bag or other airtight container.

The Program Administrator will ensure an adequate supply of appropriate cleaning and disinfection materials at the cleaning station. If supplies are low, employees should notify their supervisor, who will inform the Program Administrator.

L. Maintenance

Respirators are to be properly maintained at all times in order to ensure that they function properly and protect employees adequately. Maintenance involves a thorough visual inspection for cleanliness and defects. Worn or deteriorated parts will be replaced prior to use. No components will be replaced or repairs made beyond those recommended by the manufacturer. Repairs to regulators or alarms of atmosphere-supplying respirators will be conducted by the manufacturer.

1. All respirators shall be inspected routinely before and after each use.

2. Respirators kept for emergency use shall be inspected periodically, by the Program Administrator to assure that they are in satisfactory working order

3. Employees are permitted to leave their work area to perform limited maintenance on their respirator in a designated area that is free of respiratory hazards. Situations when this is permitted include:

    a. washing face and respirator face piece to prevent any eye or skin irritation;
    b. replacing the filter, cartridge or canister;
    c. detection of vapor or gas breakthrough or leakage in the face piece; or
    d. detection of any other damage to the respirator or its components.

M. Storage

After inspection, cleaning, and necessary repairs, respirators shall be stored appropriately to protect against dust, sunlight, heat, extreme cold, excessive moisture, or damaging chemicals.

1. Respirators must be stored in a clean, dry area, and in accordance with the manufacturer's recommendations. Each employee will clean and inspect their own air-purifying respirator in accordance with the provisions of this program, and will store their respirator in a plastic bag in the designated area. Each employee will have his/her name on the bag and that bag will only be used to store that employee's respirator.

2. Respirators shall be packed or stored so that the face piece and exhalation valve will rest in a near normal position.

3. Respirators shall not be placed in places such as lockers or toolboxes unless they are in carrying cartons.

4. Respirators maintained at stations and work areas for emergency use shall be stored in compartments built specifically for that purpose, be quickly accessible at all times, and be clearly marked.

N. Respirator Malfunctions and Defects

1. For any malfunction of an ASR (atmosphere-supplying respirator), such as breakthrough, face piece leakage, or improperly working valve, the respirator wearer

should inform his/her supervisor that the respirator no longer functions as intended, and go to the designated safe area to maintain the respirator. The supervisor must ensure that the employee either receives the needed parts to repair the respirator or is provided with a new respirator.

2. Respirators that are defective or have defective parts shall be taken out of service immediately. If, during an inspection, an employee discovers a defect in a respirator, he/she is to bring the defect to the attention of his/her supervisor. Supervisors will give all defective respirators to the Program Administrator. The Program Administrator will decide whether to:

    a. temporarily take the respirator out of service until it can be repaired;
    b. perform a simple fix on the spot, such as replacing a head strap; or
    c. dispose of the respirator due to an irreparable problem or defect.

    When a respirator is taken out of service for an extended period of time, the respirator will be tagged out of service, and the employee will be given a replacement of a similar make, model, and size.

O. Emergency Procedures

In emergency situations where an atmosphere exists in which the wearer of the respirator could be overcome by a toxic or oxygen-deficient atmosphere, the following procedure should be followed.

1. Employees who must remain in a dangerous atmosphere must take the following precautions:

    a. Employees must never enter a dangerous atmosphere without first obtaining the proper protective equipment and permission to enter from the Program Administrator or supervisor.
    b. Employees must never enter a dangerous atmosphere without at least one additional person present. The additional person must remain in the safe atmosphere.
    c. Communications (voice, visual or signal line) must be maintained between both of the individuals or all present.
    d. Respiratory protection in these instances is for escape purposes only. Border Demolition & Environmental, Inc. employees are not trained as emergency responders, and are not authorized to act in such a manner.

P. Program Evaluation

The Program Administrator will conduct periodic evaluations of the workplace to ensure that the provisions of this program are being implemented. The evaluations will include regular consultations with employees who use respirators and their supervisors, site inspections, air monitoring and a review of records. Items to be considered will include:

1. comfort;

2. ability to breathe without objectionable effort;
3. adequate visibility under all conditions
4. provisions for wearing prescription glasses;
5. ability to perform all tasks without undue interference;
6. confidence in the face piece fit.

Identified problems will be noted in an inspection log and addressed by the Program Administrator. These findings will be reported to Border Demolition & Environmental, Inc. management, and the report will list plans to correct deficiencies in the respirator program and target dates for the implementation of those corrections.

Q. Documentation and Recordkeeping

1. A written copy of this program and the OSHA Respiratory Protection Standard shall be kept in the Program Administrator's office and made available to all employees who wish to review it.

2. Copies of training and fit test records shall be maintained by the Program Administrator. These records will be updated as new employees are trained, as existing employees receive refresher training, and as new fit tests are conducted

3. For employees covered under the Respiratory Protection Program, the Program Administrator shall maintain copies of the physician's written recommendation regarding each employee's ability to wear a respirator. The completed medical questionnaires and evaluating physician's documented findings will remain confidential in the employee's file and at the location of the evaluating physician's practice.

R. Appendix A

Appendix A to § 1910.134: Fit Testing Procedures (Mandatory)

Part I. OSHA-Accepted Fit Test Protocols

A. Fit Testing Procedures -- General Requirements

Border Demolition and Environmental, Inc. shall conduct fit testing using the following procedures. The requirements in this appendix apply to all OSHA-accepted fit test methods, both QLFT and QNFT.

1. The test subject shall be allowed to pick the most acceptable respirator from a sufficient number of respirator models and sizes so that the respirator is acceptable to, and correctly fits, the user.

2. Prior to the selection process, the test subject shall be shown how to put on a respirator, how it should be positioned on the face, how to set strap tension and how to determine an acceptable fit. A mirror shall be available to assist the subject in evaluating the fit and positioning of the respirator. This instruction may not constitute the subject's formal training on respirator use, because it is only a review.

3. The test subject shall be informed that he/she is being asked to select the respirator that provides the most acceptable fit. Each respirator represents a different size and shape, and if fitted and used properly, will provide adequate protection.

4. The test subject shall be instructed to hold each chosen face piece up to the face and eliminate those that obviously do not give an acceptable fit.

5. The more acceptable face pieces are noted in case the one selected proves unacceptable; the most comfortable mask is donned and worn at least five minutes to assess comfort. Assistance in assessing comfort can be given by discussing the points in the following item A.6. If the test subject is not familiar with using a particular respirator, the test subject shall be directed to don the mask several times and to adjust the straps each time to become adept at setting proper tension on the straps.

6. Assessment of comfort shall include a review of the following points with the test subject and allowing the test subject adequate time to determine the comfort of the respirator:

(a) Position of the mask on the nose

(b) Room for eye protection

(c) Room to talk

(d) Position of mask on face and cheeks

7. The following criteria shall be used to help determine the adequacy of the respirator fit:

(a) Chin properly placed;

(b) Adequate strap tension, not overly tightened;

(c) Fit across nose bridge;

(d) Respirator of proper size to span distance from nose to chin;

(e) Tendency of respirator to slip;

(f) Self-observation in mirror to evaluate fit and respirator position.

8. The test subject shall conduct a user seal check, either the negative and positive pressure seal checks described in Appendix B-1 of this section or those recommended by the respirator manufacturer which provide equivalent protection to the procedures in Appendix B-1. Before conducting the negative and positive pressure checks, the subject shall be told to seat the mask on the face by moving the head from side-to-side and up and down slowly while taking in a few slow deep breaths. Another face piece shall be selected and retested if the test subject fails the user seal check tests.

9. The test shall not be conducted if there is any hair growth between the skin and the face piece sealing

surface, such as stubble beard growth, beard, mustache or sideburns which cross the respirator sealing surface. Any type of apparel which interferes with a satisfactory fit shall be altered or removed.

10. If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician or other licensed health care professional, as appropriate, to determine whether the test subject can wear a respirator while performing her or his duties.

11. If the employee finds the fit of the respirator unacceptable, the test subject shall be given the opportunity to select a different respirator and to be retested.

12. Exercise regimen. Prior to the commencement of the fit test, the test subject shall be given a description of the fit test and the test subject's responsibilities during the test procedure. The description of the process shall include a description of the test exercises that the subject will be performing. The respirator to be tested shall be worn for at least 5 minutes before the start of the fit test.

13. The fit test shall be performed while the test subject is wearing any applicable safety equipment that may be worn during actual respirator use which could interfere with respirator fit.

14. Test Exercises.

(a) The following test exercises are to be performed for all fit testing methods prescribed in this appendix, except for the CNP method. A separate fit testing exercise regimen is contained in the CNP protocol. The test subject shall perform exercises, in the test environment, in the following manner:

(1) Normal breathing. In a normal standing position, without talking, the subject shall breathe normally.

(2) Deep breathing. In a normal standing position, the subject shall breathe slowly and deeply, taking caution so as not to hyperventilate.

(3) Turning head side to side. Standing in place, the subject shall slowly turn his/her head from side to side between the extreme positions on each side. The head shall be held at each extreme momentarily so the subject can inhale at each side.

(4) Moving head up and down. Standing in place, the subject shall slowly move his/her head up and down. The subject shall be instructed to inhale in the up position (i.e., when looking toward the ceiling).

(5) Talking. The subject shall talk out loud slowly and loud enough so as to be heard clearly by the test conductor. The subject can read from a prepared text such as the Rainbow Passage, count backward from 100, or recite a memorized poem or song.

Rainbow Passage -
When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no

one ever finds it. When a man looks for something beyond reach, his friends say he is looking for the pot of gold at the end of the rainbow.

(6) Grimace. The test subject shall grimace by smiling or frowning. (This applies only to QNFT testing; it is not performed for QLFT)

(7) Bending over. The test subject shall bend at the waist as if he/she were to touch his/her toes. Jogging in place shall be substituted for this exercise in those test environments such as shroud type QNFT or QLFT units that do not permit bending over at the waist.

(8) Normal breathing. Same as exercise (1).

(b) Each test exercise shall be performed for one minute except for the grimace exercise which shall be performed for 15 seconds. The test subject shall be questioned by the test conductor regarding the comfort of the respirator upon completion of the protocol. If it has become unacceptable, another model of respirator shall be tried. The respirator shall not be adjusted once the fit test exercises begin. Any adjustment voids the test, and the fit test must be repeated.

B. Qualitative Fit Test (QLFT) Protocols

1. General

(a) Border shall ensure that persons administering QLFT are able to prepare test solutions, calibrate equipment and perform tests properly, recognize invalid tests, and ensure that test equipment is in proper working order.

(b) Border shall ensure that QLFT equipment is kept clean and well maintained so as to operate within the parameters for which it was designed.

2. Isoamyl Acetate Protocol

Note: This protocol is not appropriate to use for the fit testing of particulate respirators. If used to fit test particulate respirators, the respirator must be equipped with an organic vapor filter.

(a) Odor Threshold Screening

Odor threshold screening, performed without wearing a respirator, is intended to determine if the individual tested can detect the odor of isoamyl acetate at low levels.

(1) Three 1-liter glass jars with metal lids are required.

(2) Odor-free water (e.g., distilled or spring water) at approximately 25 deg. C (77 deg. F) shall be used for the solutions.

(3) The isoamyl acetate (IAA) (also known at isopentyl acetate) stock solution is prepared by adding 1 ml of pure IAA to 800 ml of odor-free water in a 1-liter jar, closing the lid and shaking for 30 seconds. A new

solution shall be prepared at least weekly.

(4) The screening test shall be conducted in a room separate from the room used for actual fit testing. The two rooms shall be well-ventilated to prevent the odor of IAA from becoming evident in the general room air where testing takes place.

(5) The odor test solution is prepared in a second jar by placing 0.4 ml of the stock solution into 500 ml of odor-free water using a clean dropper or pipette. The solution shall be shaken for 30 seconds and allowed to stand for two to three minutes so that the IAA concentration above the liquid may reach equilibrium. This solution shall be used for only one day.

(6) A test blank shall be prepared in a third jar by adding 500 cc of odor-free water.

(7) The odor test and test blank jar lids shall be labeled (e.g., 1 and 2) for jar identification. Labels shall be placed on the lids so that they can be peeled off periodically and switched to maintain the integrity of the test.

(8) The following instruction shall be typed on a card and placed on the table in front of the two test jars (i.e., 1 and 2): "The purpose of this test is to determine if you can smell banana oil at a low concentration. The two bottles in front of you contain water. One of these bottles also contains a small amount of banana oil. Be sure the covers are on tight, then shake each bottle for two seconds. Unscrew the lid of each bottle, one at a time, and sniff at the mouth of the bottle. Indicate to the test conductor which bottle contains banana oil."

(9) The mixtures used in the IAA odor detection test shall be prepared in an area separate from where the test is performed, in order to prevent olfactory fatigue in the subject.

(10) If the test subject is unable to correctly identify the jar containing the odor test solution, the IAA qualitative fit test shall not be performed.

(11) If the test subject correctly identifies the jar containing the odor test solution, the test subject may proceed to respirator selection and fit testing.

(b) Isoamyl Acetate Fit Test

(1) The fit test chamber shall be a clear 55-gallon drum liner suspended inverted over a 2-foot diameter frame so that the top of the chamber is about 6 inches above the test subject's head. If no drum liner is available, a similar chamber shall be constructed using plastic sheeting. The inside top center of the chamber shall have a small hook attached.

(2) Each respirator used for the fitting and fit testing shall be equipped with organic vapor cartridges or offer protection against organic vapors.

(3) After selecting, donning, and properly adjusting a respirator, the test subject shall wear it to the fit testing room. This room shall be separate from the room used for odor threshold screening and respirator selection, and shall be well-ventilated, as by an exhaust fan or lab hood, to prevent general room contamination.

(4) A copy of the test exercises and any prepared text from which the subject is to read shall be taped to the inside of the test chamber.

(5) Upon entering the test chamber, the test subject shall be given a 6-inch by 5-inch piece of paper towel, or other porous, absorbent, single-ply material, folded in half and wetted with 0.75 ml of pure IAA. The test subject shall hang the wet towel on the hook at the top of the chamber. An IAA test swab or ampule may be substituted for the IAA wetted paper towel provided it has been demonstrated that the alternative IAA source will generate an IAA test atmosphere with a concentration equivalent to that generated by the paper towel method.

(6) Allow two minutes for the IAA test concentration to stabilize before starting the fit test exercises. This would be an appropriate time to talk with the test subject; to explain the fit test, the importance of his/her cooperation, and the purpose for the test exercises; or to demonstrate some of the exercises.

(7) If at any time during the test, the subject detects the banana-like odor of IAA, the test is failed. The subject shall quickly exit from the test chamber and leave the test area to avoid olfactory fatigue.

(8) If the test is failed, the subject shall return to the selection room and remove the respirator. The test subject shall repeat the odor sensitivity test, select and put on another respirator, return to the test area and again begin the fit test procedure described in (b) (1) through (7) above. The process continues until a respirator that fits well has been found. Should the odor sensitivity test be failed, the subject shall wait at least 5 minutes before retesting. Odor sensitivity will usually have returned by this time.

(9) If the subject passes the test, the efficiency of the test procedure shall be demonstrated by having the subject break the respirator face seal and take a breath before exiting the chamber.

(10) When the test subject leaves the chamber, the subject shall remove the saturated towel and return it to the person conducting the test, so that there is no significant IAA concentration buildup in the chamber during subsequent tests. The used towels shall be kept in a self-sealing plastic bag to keep the test area from being contaminated.

3. Saccharin Solution Aerosol Protocol

The entire screening and testing procedure shall be explained to the test subject prior to the conduct of the screening test.

(a) Taste threshold screening. The saccharin taste threshold screening, performed without wearing a respirator, is intended to determine whether the individual being tested can detect the taste of saccharin.

(1) During threshold screening as well as during fit testing, subjects shall wear an enclosure about the head and shoulders that is approximately 12 inches in diameter by 14 inches tall with at least the front portion clear and that allows free movements of the head when a respirator is worn. An enclosure substantially similar to the 3M hood assembly, parts # FT 14 and # FT 15 combined, is adequate.

(2) The test enclosure shall have a 3/4-inch (1.9 cm) hole in front of the test subject's nose and mouth area to accommodate the nebulizer nozzle.

(3) The test subject shall don the test enclosure. Throughout the threshold screening test, the test subject shall breathe through his/her slightly open mouth with tongue extended. The subject is instructed to report when he/she detects a sweet taste.

(4) Using a DeVilbiss Model 40 Inhalation Medication Nebulizer or equivalent, the test conductor shall spray the threshold check solution into the enclosure. The nozzle is directed away from the nose and mouth of the person. This nebulizer shall be clearly marked to distinguish it from the fit test solution nebulizer.

(5) The threshold check solution is prepared by dissolving 0.83 gram of sodium saccharin USP in 100 ml of warm water. It can be prepared by putting 1 ml of the fit test solution (see (b)(5) below) in 100 ml of distilled water.

(6) To produce the aerosol, the nebulizer bulb is firmly squeezed so that it collapses completely, then released and allowed to fully expand.

(7) Ten squeezes are repeated rapidly and then the test subject is asked whether the saccharin can be tasted. If the test subject reports tasting the sweet taste during the ten squeezes, the screening test is completed. The taste threshold is noted as ten regardless of the number of squeezes actually completed.

(8) If the first response is negative, ten more squeezes are repeated rapidly and the test subject is again asked whether the saccharin is tasted. If the test subject reports tasting the sweet taste during the second ten squeezes, the screening test is completed. The taste threshold is noted as twenty regardless of the number of squeezes actually completed.

(9) If the second response is negative, ten more squeezes are repeated rapidly and the test subject is again asked whether the saccharin is tasted. If the test subject reports tasting the sweet taste during the third set of ten squeezes, the screening test is completed. The taste threshold is noted as thirty regardless of the number of squeezes actually completed.

(10) The test conductor will take note of the number of squeezes required to solicit a taste response.

(11) If the saccharin is not tasted after 30 squeezes (step 10), the test subject is unable to taste saccharin and may not perform the saccharin fit test.

Note to paragraph 3. (a): If the test subject eats or drinks something sweet before the screening test, he/she may be unable to taste the weak saccharin solution.

(12) If a taste response is elicited, the test subject shall be asked to take note of the taste for reference in the fit test.

(13) Correct use of the nebulizer means that approximately 1 ml of liquid is used at a time in the nebulizer body.

(14) The nebulizer shall be thoroughly rinsed in water, shaken dry, and refilled at least each morning and afternoon or at least every four hours.

(b) Saccharin solution aerosol fit test procedure.

(1) The test subject may not eat, drink (except plain water), smoke, or chew gum for 15 minutes before the test.

(2) The fit test uses the same enclosure described in 3. (a) above.

(3) The test subject shall don the enclosure while wearing the respirator selected in section I. A. of this appendix. The respirator shall be properly adjusted and equipped with a particulate filter(s).

(4) A second DeVilbiss Model 40 Inhalation Medication Nebulizer or equivalent is used to spray the fit test solution into the enclosure. This nebulizer shall be clearly marked to distinguish it from the screening test solution nebulizer.

(5) The fit test solution is prepared by adding 83 grams of sodium saccharin to 100 ml of warm water.

(6) As before, the test subject shall breathe through the slightly open mouth with tongue extended, and report if he/she tastes the sweet taste of saccharin.

(7) The nebulizer is inserted into the hole in the front of the enclosure and an initial concentration of saccharin fit test solution is sprayed into the enclosure using the same number of squeezes (either 10, 20 or 30 squeezes) based on the number of squeezes required to elicit a taste response as noted during the screening test. A minimum of 10 squeezes is required.

(8) After generating the aerosol, the test subject shall be instructed to perform the exercises in section I. A. 14. of this appendix.

(9) Every 30 seconds the aerosol concentration shall be replenished using one half the original number of squeezes used initially (e.g., 5, 10 or 15).

(10) The test subject shall indicate to the test conductor if at any time during the fit test the taste of saccharin is detected. If the test subject does not report tasting the saccharin, the test is passed.

(11) If the taste of saccharin is detected, the fit is deemed unsatisfactory and the test is failed. A different respirator shall be tried and the entire test procedure is repeated (taste threshold screening and fit testing).

(12) Since the nebulizer has a tendency to clog during use, the test operator must make periodic checks of the nebulizer to ensure that it is not clogged. If clogging is found at the end of the test session, the test is invalid.

4. Bitrex™ (Denatonium Benzoate) Solution Aerosol Qualitative Fit Test Protocol

The Bitrex™ (Denatonium benzoate) solution aerosol QLFT protocol uses the published saccharin test protocol because that protocol is widely accepted. Bitrex is routinely used as a taste aversion agent in household liquids which children should not be drinking and is endorsed by the American Medical Association, the National Safety Council, and the American Association of Poison Control Centers. The

entire screening and testing procedure shall be explained to the test subject prior to the conduct of the screening test.

(a) Taste Threshold Screening.

The Bitrex taste threshold screening, performed without wearing a respirator, is intended to determine whether the individual being tested can detect the taste of Bitrex.

(1) During threshold screening as well as during fit testing, subjects shall wear an enclosure about the head and shoulders that is approximately 12 inches (30.5 cm) in diameter by 14 inches (35.6 cm) tall. The front portion of the enclosure shall be clear from the respirator and allow free movement of the head when a respirator is worn. An enclosure substantially similar to the 3M hood assembly, parts # FT 14 and # FT 15 combined, is adequate.

(2) The test enclosure shall have a \3/4\ inch (1.9 cm) hole in front of the test subject's nose and mouth area to accommodate the nebulizer nozzle.

(3) The test subject shall don the test enclosure. Throughout the threshold screening test, the test subject shall breathe through his or her slightly open mouth with tongue extended. The subject is instructed to report when he/she detects a bitter taste

(4) Using a DeVilbiss Model 40 Inhalation Medication Nebulizer or equivalent, the test conductor shall spray the Threshold Check Solution into the enclosure. This Nebulizer shall be clearly marked to distinguish it from the fit test solution nebulizer.

(5) The Threshold Check Solution is prepared by adding 13.5 milligrams of Bitrex to 100 ml of 5% salt (NaCl) solution in distilled water.

(6) To produce the aerosol, the nebulizer bulb is firmly squeezed so that the bulb collapses completely, and is then released and allowed to fully expand.

(7) An initial ten squeezes are repeated rapidly and then the test subject is asked whether the Bitrex can be tasted. If the test subject reports tasting the bitter taste during the ten squeezes, the screening test is completed. The taste threshold is noted as ten regardless of the number of squeezes actually completed.

(8) If the first response is negative, ten more squeezes are repeated rapidly and the test subject is again asked whether the Bitrex is tasted. If the test subject reports tasting the bitter taste during the second ten squeezes, the screening test is completed. The taste threshold is noted as twenty regardless of the number of squeezes actually completed.

(9) If the second response is negative, ten more squeezes are repeated rapidly and the test subject is again asked whether the Bitrex is tasted. If the test subject reports tasting the bitter taste during the third set of ten squeezes, the screening test is completed. The taste threshold is noted as thirty regardless of the number of squeezes actually completed.

(10) The test conductor will take note of the number of squeezes required to solicit a taste response.

(11) If the Bitrex is not tasted after 30 squeezes (step 10), the test subject is unable to taste Bitrex and may not perform the Bitrex fit test.

(12) If a taste response is elicited, the test subject shall be asked to take note of the taste for reference in the fit test.

(13) Correct use of the nebulizer means that approximately 1 ml of liquid is used at a time in the nebulizer body.

(14) The nebulizer shall be thoroughly rinsed in water, shaken to dry, and refilled at least each morning and afternoon or at least every four hours.

(b) Bitrex Solution Aerosol Fit Test Procedure.

(1) The test subject may not eat, drink (except plain water), smoke, or chew gum for 15 minutes before the test.

(2) The fit test uses the same enclosure as that described in 4. (a) above.

(3) The test subject shall don the enclosure while wearing the respirator selected according to section I. A. of this appendix. The respirator shall be properly adjusted and equipped with any type particulate filter(s).

(4) A second DeVilbiss Model 40 Inhalation Medication Nebulizer or equivalent is used to spray the fit test solution into the enclosure. This nebulizer shall be clearly marked to distinguish it from the screening test solution nebulizer.

(5) The fit test solution is prepared by adding 337.5 mg of Bitrex to 200 ml of a 5% salt (NaCl) solution in warm water.

(6) As before, the test subject shall breathe through his or her slightly open mouth with tongue extended, and be instructed to report if he/she tastes the bitter taste of Bitrex.

(7) The nebulizer is inserted into the hole in the front of the enclosure and an initial concentration of the fit test solution is sprayed into the enclosure using the same number of squeezes (either 10, 20 or 30 squeezes) based on the number of squeezes required to elicit a taste response as noted during the screening test.

(8) After generating the aerosol, the test subject shall be instructed to perform the exercises in section I. A. 14. of this appendix.

(9) Every 30 seconds the aerosol concentration shall be replenished using one half the number of squeezes used initially (e.g., 5, 10 or 15).

(10) The test subject shall indicate to the test conductor if at any time during the fit test the taste of Bitrex is detected. If the test subject does not report tasting the Bitrex, the test is passed.

(11) If the taste of Bitrex is detected, the fit is deemed unsatisfactory and the test is failed. A different respirator shall be tried and the entire test procedure is repeated (taste threshold screening and fit testing).

5. Irritant Smoke (Stannic Chloride) Protocol

This qualitative fit test uses a person's response to the irritating chemicals released in the "smoke" produced by a stannic chloride ventilation smoke tube to detect leakage into the respirator.

(a) General Requirements and Precautions

(1) The respirator to be tested shall be equipped with high efficiency particulate air (HEPA) or P100 series filter(s).

(2) Only stannic chloride smoke tubes shall be used for this protocol.

(3) No form of test enclosure or hood for the test subject shall be used.

(4) The smoke can be irritating to the eyes, lungs, and nasal passages. The test conductor shall take precautions to minimize the test subject's exposure to irritant smoke. Sensitivity varies, and certain individuals may respond to a greater degree to irritant smoke. Care shall be taken when performing the sensitivity screening checks that determine whether the test subject can detect irritant smoke to use only the minimum amount of smoke necessary to elicit a response from the test subject.

(5) The fit test shall be performed in an area with adequate ventilation to prevent exposure of the person conducting the fit test or the build-up of irritant smoke in the general atmosphere.

(b) Sensitivity Screening Check

The person to be tested must demonstrate his or her ability to detect a weak concentration of the irritant smoke.

(1) The test operator shall break both ends of a ventilation smoke tube containing stannic chloride, and attach one end of the smoke tube to a low flow air pump set to deliver 200 milliliters per minute, or an aspirator squeeze bulb. The test operator shall cover the other end of the smoke tube with a short piece of tubing to prevent potential injury from the jagged end of the smoke tube.

(2) The test operator shall advise the test subject that the smoke can be irritating to the eyes, lungs, and nasal passages and instruct the subject to keep his/her eyes closed while the test is performed.

(3) The test subject shall be allowed to smell a weak concentration of the irritant smoke before the respirator is donned to become familiar with its irritating properties and to determine if he/she can detect the irritating properties of the smoke. The test operator shall carefully direct a small amount of the irritant smoke in the test subject's direction to determine that he/she can detect it.

(c) Irritant Smoke Fit Test Procedure

(1) The person being fit tested shall don the respirator without assistance, and perform the required user seal check(s).

(2) The test subject shall be instructed to keep his/her eyes closed.

(3) The test operator shall direct the stream of irritant smoke from the smoke tube toward the face seal area of the test subject, using the low flow pump or the squeeze bulb. The test operator shall begin at least 12 inches from the face piece and move the smoke stream around the whole perimeter of the mask. The operator shall gradually make two more passes around the perimeter of the mask, moving to within six inches of the respirator.

(4) If the person being tested has not had an involuntary response and/or detected the irritant smoke, proceed with the test exercises.

(5) The exercises identified in section I.A. 14. of this appendix shall be performed by the test subject while the respirator seal is being continually challenged by the smoke, directed around the perimeter of the respirator at a distance of six inches.

(6) If the person being fit tested reports detecting the irritant smoke at any time, the test is failed. The person being retested must repeat the entire sensitivity check and fit test procedure.

(7) Each test subject passing the irritant smoke test without evidence of a response (involuntary cough, irritation) shall be given a second sensitivity screening check, with the smoke from the same smoke tube used during the fit test, once the respirator has been removed, to determine whether he/she still reacts to the smoke. Failure to evoke a response shall void the fit test.

(8) If a response is produced during this second sensitivity check, then the fit test is passed.

C. Quantitative Fit Test (QNFT) Protocols

The following quantitative fit testing procedures have been demonstrated to be acceptable: Quantitative fit testing using a non-hazardous test aerosol (such as corn oil, polyethylene glycol 400 [PEG 400], di-2-ethyl hexyl sebacate [DEHS], or sodium chloride) generated in a test chamber, and employing instrumentation to quantify the fit of the respirator; Quantitative fit testing using ambient aerosol as the test agent and appropriate instrumentation (condensation nuclei counter) to quantify the respirator fit; Quantitative fit testing using controlled negative pressure and appropriate instrumentation to measure the volumetric leak rate of a face piece to quantify the respirator fit.

1. General

(a) Border shall ensure that persons administering QNFT are able to calibrate equipment and perform tests properly, recognize invalid tests, calculate fit factors properly and ensure that test equipment is in proper working order.

(b) Border shall ensure that QNFT equipment is kept clean, and is maintained and calibrated according to the manufacturer's instructions so as to operate at the parameters for which it was designed.

2. Generated Aerosol Quantitative Fit Testing Protocol

(a) Apparatus.

(1) Instrumentation. Aerosol generation, dilution, and measurement systems using particulates (corn oil, polyethylene glycol 400 [PEG 400], di-2-ethyl hexyl sebacate [DEHS] or sodium chloride) as test aerosols shall be used for quantitative fit testing.

(2) Test chamber. The test chamber shall be large enough to permit all test subjects to perform freely all required exercises without disturbing the test agent concentration or the measurement apparatus. The test chamber shall be equipped and constructed so that the test agent is effectively isolated from the ambient air, yet uniform in concentration throughout the chamber.

(3) When testing air-purifying respirators, the normal filter or cartridge element shall be replaced with a high efficiency particulate air (HEPA) or P100 series filter supplied by the same manufacturer.

(4) The sampling instrument shall be selected so that a computer record or strip chart record may be made of the test showing the rise and fall of the test agent concentration with each inspiration and expiration at fit factors of at least 2,000. Integrators or computers that integrate the amount of test agent penetration leakage into the respirator for each exercise may be used provided a record of the readings is made.

(5) The combination of substitute air-purifying elements, test agent and test agent concentration shall be such that the test subject is not exposed in excess of an established exposure limit for the test agent at any time during the testing process, based upon the length of the exposure and the exposure limit duration.

(6) The sampling port on the test specimen respirator shall be placed and constructed so that no leakage occurs around the port (e.g., where the respirator is probed), a free air flow is allowed into the sampling line at all times, and there is no interference with the fit or performance of the respirator. The in-mask sampling device (probe) shall be designed and used so that the air sample is drawn from the breathing zone of the test subject, midway between the nose and mouth and with the probe extending into the face piece cavity at least 1/4 inch.

(7) The test setup shall permit the person administering the test to observe the test subject inside the chamber during the test.

(8) The equipment generating the test atmosphere shall maintain the concentration of test agent constant to within a 10 percent variation for the duration of the test.

(9) The time lag (interval between an event and the recording of the event on the strip chart or computer or integrator) shall be kept to a minimum. There shall be a clear association between the occurrence of an event and its being recorded.

(10) The sampling line tubing for the test chamber atmosphere and for the respirator sampling port shall be of equal diameter and of the same material. The length of the two lines shall be equal.

(11) The exhaust flow from the test chamber shall pass through an appropriate filter (i.e., high efficiency particulate filter) before release.

(12) When sodium chloride aerosol is used, the relative humidity inside the test chamber shall not exceed 50 percent.

(13) The limitations of instrument detection shall be taken into account when determining the fit factor.

(14) Test respirators shall be maintained in proper working order and be inspected regularly for deficiencies such as cracks or missing valves and gaskets.

(b) Procedural Requirements.

(1) When performing the initial user seal check using a positive or negative pressure check, the sampling line shall be crimped closed in order to avoid air pressure leakage during either of these pressure checks.

(2) The use of an abbreviated screening QLFT test is optional. Such a test may be utilized in order to quickly identify poor fitting respirators that passed the positive and/or negative pressure test and reduce the amount of QNFT time. The use of the CNC QNFT instrument in the count mode is another optional method to obtain a quick estimate of fit and eliminate poor fitting respirators before going on to perform a full QNFT.

(3) A reasonably stable test agent concentration shall be measured in the test chamber prior to testing. For canopy or shower curtain types of test units, the determination of the test agent's stability may be established after the test subject has entered the test environment.

(4) Immediately after the subject enters the test chamber, the test agent concentration inside the respirator shall be measured to ensure that the peak penetration does not exceed 5 percent for a half mask or 1 percent for a full-face piece respirator.

(5) A stable test agent concentration shall be obtained prior to the actual start of testing.

(6) Respirator restraining straps shall not be over-tightened for testing. The straps shall be adjusted by the wearer without assistance from other persons to give a reasonably comfortable fit typical of normal use. The respirator shall not be adjusted once the fit test exercises begin.

(7) The test shall be terminated whenever any single peak penetration exceeds 5 percent for half masks and 1 percent for full face piece respirators. The test subject shall be refitted and retested.

(8) Calculation of fit factors.

(i) The fit factor shall be determined for the quantitative fit test by taking the ratio of the average chamber concentration to the concentration measured inside the respirator for each test exercise except the grimace exercise.

(ii) The average test chamber concentration shall be calculated as the arithmetic average of the concentration measured before and after each test (i.e., 7 exercises) or the arithmetic average of the concentration measured before and after each exercise or the true average measured continuously during the respirator sample.

(iii) The concentration of the challenge agent inside the respirator shall be determined by one of the following methods:

(A) Average peak penetration method means the method of determining test agent penetration into the respirator utilizing a strip chart recorder, integrator, or computer. The agent penetration is determined by an average of the peak heights on the graph or by computer integration, for each exercise except the grimace exercise. Integrators or computers that calculate the actual test agent penetration into the respirator for each exercise will also be considered to meet the requirements of the average peak penetration method.

(B) Maximum peak penetration method means the method of determining test agent penetration in the respirator as determined by strip chart recordings of the test. The highest peak penetration for a given exercise is taken to be representative of average penetration into the respirator for that exercise.

(C) Integration by calculation of the area under the individual peak for each exercise except the grimace exercise. This includes computerized integration.

(D) The calculation of the overall fit factor using individual exercise fit factors involves first converting the exercise fit factors to penetration values, determining the average, and then converting that result back to a fit factor. This procedure is described in the following equation:

$$\text{Overall Fit Factor} = \frac{\text{Number of exercises}}{1/ff_1 + 1/ff_2 + 1/ff_3 + 1/ff_4 + 1/ff_5 + 1/ff_6 + 1/ff_7 + 1/ff_8}$$

Where ff_1, ff_2, ff_3, etc. are the fit factors for exercises 1, 2, 3, etc.

(9) The test subject shall not be permitted to wear a half mask or quarter face piece respirator unless a minimum fit factor of 100 is obtained, or a full face piece respirator unless a minimum fit factor of 500 is obtained.

(10) Filters used for quantitative fit testing shall be replaced whenever increased breathing resistance is encountered, or when the test agent has altered the integrity of the filter media.

3. Ambient aerosol condensation nuclei counter (CNC) quantitative fit testing protocol.

The ambient aerosol condensation nuclei counter (CNC) quantitative fit testing (Porta count ™) protocol quantitatively fit tests respirators with the use of a probe. The probed respirator is only used for quantitative fit tests. A probed respirator has a special sampling device, installed on the respirator that allows the probe to sample the air from inside the mask. A probed respirator is required for each make, style, model, and size that the Border uses and can be obtained from the respirator manufacturer or distributor. The CNC instrument manufacturer, TSI Inc., also provides probe attachments (TSI sampling adapters) that permit fit testing in an employee's own respirator. A minimum fit factor pass level of at least 100 is necessary for a half-mask respirator and a minimum fit factor pass level of at least 500 is required for a full-face piece negative pressure respirator. The entire screening and testing procedure shall be explained to the test subject prior to the conduct of the screening test.

(a) Porta count Fit Test Requirements.

(1) Check the respirator to make sure the sampling probe and line are properly attached to the face piece and that the respirator is fitted with a particulate filter capable of preventing significant penetration by the ambient particles used for the fit test (e.g., NIOSH 42 CFR 84 series 100, series 99, or series 95 particulate filter) per manufacturer's instruction.

(2) Instruct the person to be tested to don the respirator for five minutes before the fit test starts. This purges the ambient particles trapped inside the respirator and permits the wearer to make certain the respirator is comfortable. This individual shall already have been trained on how to wear the respirator properly.

(3) Check the following conditions for the adequacy of the respirator fit: Chin properly placed; Adequate strap tension, not overly tightened; Fit across nose bridge; Respirator of proper size to span distance from nose to chin; Tendency of the respirator to slip; Self-observation in a mirror to evaluate fit and respirator position.

(4) Have the person wearing the respirator do a user seal check. If leakage is detected, determine the cause. If leakage is from a poorly fitting face piece, try another size of the same model respirator, or another model of respirator.

(5) Follow the manufacturer's instructions for operating the Porta count and proceed with the test.

(6) The test subject shall be instructed to perform the exercises in section I. A. 14. of this appendix.

(7) After the test exercises, the test subject shall be questioned by the test conductor regarding the comfort of the respirator upon completion of the protocol. If it has become unacceptable, another model of respirator shall be tried.

(b) Porta count Test Instrument.

(1) The Porta count will automatically stop and calculate the overall fit factor for the entire set of exercises. The overall fit factor is what counts. The Pass or Fail message will indicate whether or not the test was successful. If the test was a Pass, the fit test is over.

(2) Since the pass or fail criterion of the Porta count is user programmable, the test operator shall ensure that the pass or fail criterion meet the requirements for minimum respirator performance in this Appendix.

(3) A record of the test needs to be kept on file, assuming the fit test was successful. The record must contain the test subject's name; overall fit factor; make, model, style, and size of respirator used; and date tested.

4. Controlled negative pressure (CNP) quantitative fit testing protocol.

The CNP protocol provides an alternative to aerosol fit test methods. The CNP fit test method technology is based on exhausting air from a temporarily sealed respirator face piece to generate and then maintain a

constant negative pressure inside the face piece. The rate of air exhaust is controlled so that a constant negative pressure is maintained in the respirator during the fit test. The level of pressure is selected to replicate the mean inspiratory pressure that causes leakage into the respirator under normal use conditions. With pressure held constant, air flow out of the respirator is equal to air flow into the respirator. Therefore, measurement of the exhaust stream that is required to hold the pressure in the temporarily sealed respirator constant yields a direct measure of leakage air flow into the respirator. The CNP fit test method measures leak rates through the face piece as a method for determining the face piece fit for negative pressure respirators. The CNP instrument manufacturer Dynatech Nevada also provides attachments (sampling manifolds) that replace the filter cartridges to permit fit testing in an employee's own respirator. To perform the test, the test subject closes his or her mouth and holds his/her breath, after which an air pump removes air from the respirator face piece at a pre-selected constant pressure. The face piece fit is expressed as the leak rate through the face piece, expressed as milliliters per minute. The quality and validity of the CNP fit tests are determined by the degree to which the in-mask pressure tracks the test pressure during the system measurement time of approximately five seconds. Instantaneous feedback in the form of a real-time pressure trace of the in-mask pressure is provided and used to determine test validity and quality. A minimum fit factor pass level of 100 is necessary for a half-mask respirator and a minimum fit factor of at least 500 is required for a full-face piece respirator. The entire screening and testing procedure shall be explained to the test subject prior to the conduct of the screening test.

(a) CNP Fit Test Requirements.

(1) The instrument shall have a non-adjustable test pressure of 15.0 mm water pressure.

(2) The CNP system defaults selected for test pressure shall be set at -- 15 mm of water (-0.58 inches of water) and the modeled inspiratory flow rate shall be 53.8 liters per minute for performing fit tests.

(Note: CNP systems have built-in capability to conduct fit testing that is specific to unique work rate, mask, and gender situations that might apply in a specific workplace. Use of system default values, which were selected to represent respirator wear with medium cartridge resistance at a low-moderate work rate, will allow inter-test comparison of the respirator fit.)

(3) The individual who conducts the CNP fit testing shall be thoroughly trained to perform the test.

(4) The respirator filter or cartridge needs to be replaced with the CNP test manifold. The inhalation valve downstream from the manifold either needs to be temporarily removed or propped open.

(5) The test subject shall be trained to hold his or her breath for at least 20 seconds.

(6) The test subject shall don the test respirator without any assistance from the individual who conducts the CNP fit test.

(7) The QNFT protocol shall be followed according to section I.

C. 1. of this appendix with an exception for the CNP test exercises.

(b) CNP Test Exercises.

(1) Normal breathing. In a normal standing position, without talking, the subject shall breathe normally for 1 minute. After the normal breathing exercise, the subject needs to hold head straight ahead and hold his or her breath for 10 seconds during the test measurement.

(2) Deep breathing. In a normal standing position, the subject shall breathe slowly and deeply for 1 minute, being careful not to hyperventilate. After the deep breathing exercise, the subject shall hold his or her head straight ahead and hold his or her breath for 10 seconds during test measurement.

(3) Turning head side to side. Standing in place, the subject shall slowly turn his or her head from side to side between the extreme positions on each side for 1 minute. The head shall be held at each extreme momentarily so the subject can inhale at each side. After the turning head side to side exercise, the subject needs to hold head full left and hold his or her breath for 10 seconds during test measurement. Next, the subject needs to hold head full right and hold his or her breath for 10 seconds during test measurement.

(4) Moving head up and down. Standing in place, the subject shall slowly move his or her head up and down for 1 minute. The subject shall be instructed to inhale in the up position (i.e., when looking toward the ceiling). After the moving head up and down exercise, the subject shall hold his or her head full up and hold his or her breath for 10 seconds during test measurement. Next, the subject shall hold his or her head full down and hold his or her breath for 10 seconds during test measurement.

(5) Talking. The subject shall talk out loud slowly and loud enough so as to be heard clearly by the test conductor. The subject can read from a prepared text such as the Rainbow Passage, count backward from 100, or recite a memorized poem or song for 1 minute. After the talking exercise, the subject shall hold his or her head straight ahead and hold his or her breath for 10 seconds during the test measurement.

(6) Grimace. The test subject shall grimace by smiling or frowning for 15 seconds.

(7) Bending Over. The test subject shall bend at the waist as if he or she were to touch his or her toes for 1 minute. Jogging in place shall be substituted for this exercise in those test environments such as shroud-type QNFT units that prohibit bending at the waist. After the bending over exercise, the subject shall hold his or her head straight ahead and hold his or her breath for 10 seconds during the test measurement.

(8) Normal Breathing. The test subject shall remove and re-don the respirator within a one-minute period. Then, in a normal standing position, without talking, the subject shall breathe normally for 1 minute. After the normal breathing exercise, the subject shall hold his or her head straight ahead and hold his or her breath for 10 seconds during the test measurement. After the test exercises, the test subject shall be questioned by the test conductor regarding the comfort of the respirator upon completion of the protocol. If it has become unacceptable, another model of a respirator shall be tried.

(c) CNP Test Instrument.

(1) The test instrument shall have an effective audio warning device when the test subject fails to hold his or her breath during the test. The test shall be terminated whenever the test subject failed to hold his or her breath. The test subject may be refitted and retested.

(2) A record of the test shall be kept on file, assuming the fit test was successful. The record must contain the test subject's name; overall fit factor; make, model, style and size of respirator used; and date tested.

Part II. New Fit Test Protocols

A. Any person may submit to OSHA an application for approval of a new fit test protocol. If the application meets the following criteria, OSHA will initiate a rulemaking proceeding under section 6(b)(7) of the OSH Act to determine whether to list the new protocol as an approved protocol in this Appendix A.

B. The application must include a detailed description of the proposed new fit test protocol. This application must be supported by either:

1. A test report prepared by an independent government research laboratory (e.g., Lawrence Livermore National Laboratory, Los Alamos National Laboratory, the National Institute for Standards and Technology) stating that the laboratory has tested the protocol and had found it to be accurate and reliable; or

2. An article that has been published in a peer-reviewed industrial hygiene journal describing the protocol and explaining how test data support the protocol's accuracy and reliability.

C. If OSHA determines that additional information is required before the Agency commences a rulemaking proceeding under this section; OSHA will so notify the applicant and afford the applicant the opportunity to submit the supplemental information. Initiation of a rulemaking proceeding will be deferred until OSHA has received and evaluated the supplemental information.

[63 FR 20098, April 23, 1998]

ATTACHMENT E(a)

Hazard Assessment Log (used when applicable)

Hazard Assessment Log *DATE*				
Department	Contaminants	Exposure Level (8 hr. TWA*)	PEL**	Controls

* Summarized from Industrial Hygiene report provided by project supervisor.

** These values were obtained from a survey on average exposures as published in the American Journal of Industrial Hygiene.

ATTACHMENT E(b)

Record of Respirator Use (used when applicable)

Required and Voluntary Respirator Use at Border Demolition & Environmental, Inc.	
Type of Respirator	Department/Process
Filtering face piece (dust mask)	Voluntary use for demolition laborers where dust is apparent
Half-face piece APR or PAPR with P100 filter	Prep and ACM Removal-Mandatory use for asbestos workers when performing gross removal

RED EAGLE
JOINT VENTURE
A WARFEATHER LLC / ROSS GROUP JV

4. Safety Data Sheets

SAFETY DATA SHEET

Twin-Chem NO ODOR MASTIC REMOVER

Revision: 10/19/2015
Supersedes Revision: 03/06/2015

1. Product and Company Identification

Product Code: 00073A
Product Name: Twin-Chem NO ODOR MASTIC REMOVER

Company Name: TWIN-CHEMICALS, INC.
6175 Hickory Flat Highway
Suite 110-344
Canton, GA 30755

Phone Number: (800)442-4958

Web site address: www.twinchemicals.com
Email address: sales@twinchemicals.com

Emergency Contact: CERTS (Health & Environment only) (800)552-3787
Information: Sales & Information - (800)442-4958

2. Hazards Identification

Flammable Liquids, Category 3
Acute Toxicity: Skin, Category 4
Skin Corrosion/Irritation, Category 2
Aspiration Toxicity, Category 2
Acute Toxicity: Inhalation, Category 4



GHS Signal Word: **Warning**

GHS Hazard Phrases:
H226 - Flammable liquid and vapor.
H305 - May be harmful if swallowed and enters airways.
H312 - Harmful in contact with skin.
H315 - Causes skin irritation.
H332 - Harmful if inhaled.

GHS Precaution Phrases:
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P240 - Ground/bond container and receiving equipment. P233 - Keep container tightly closed.
P243 - Take precautionary measures against static discharge.
P261 - Avoid breathing mist/vapours/spray.
P264 - Wash hands thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves/protective clothing/eye protection.

GHS Response Phrases:
P301+310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P303+361+353 - IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
P331 - Do NOT induce vomiting.
P332+313 - If skin irritation occurs, get medical advice/attention.
P362 - Take off contaminated clothing and wash before re-use.

GHS Storage and Disposal Phrases:
P403+235 - Store in cool/well-ventilated place.
P501 - Dispose of contents/container to a waste facility according to local regulations.

Potential Health Effects (Acute and Chronic): Prolonged or repeated skin contact may cause defatting and dermatitis.

Chronic: May cause liver and kidney damage. Sophisticated modeling has clearly proven that 2-butoxyethanol does not build up in the body under any kinds of normal use.

Inhalation: Harmful if inhaled. May cause narcotic effects in high concentration. May cause lung damage. May cause central nervous system effects such as nausea and headache. Material is irritating to mucous membranes and upper respiratory tract.

Skin Contact: Causes skin irritation. Causes symptoms similar to those of inhalation. Skin sensitization testing with human volunteers produced negative results. A skin notation is not recommended by ACGIH, based on estimates from physiologically based pharmacokinetic models which indicate that, even in worst-case dermal-exposure scenarios, 2-butoxyethanol is not absorbed in amounts sufficient to cause red blood cell hemolysis in humans. May cause skin irritation.

Eye Contact: Causes redness and pain. Causes severe eye irritation.

Ingestion: Aspiration hazard. May cause irritation of the digestive tract. Harmful if swallowed. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

3. Composition/Information on Ingredients

CAS #	Hazardous Components (Chemical Name)	Concentration
64742-47-8	Hydrotreated light distillate (petroleum)	80.0 -90.0 %
111-76-2	Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, Glycol Ether EB}	10.0 -15.0 %
9016-45-9	Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydr {Nonylphenol Ethoxylate}	3.0 -6.0 %

4. First Aid Measures

Emergency and First Aid Procedures:

In Case of Inhalation: If inhaled, remove to fresh air. If breathing is difficult, give oxygen. Get medical aid immediately. Remove from exposure and move to fresh air immediately.

In Case of Skin Contact: In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

In Case of Eye Contact: In case of contact, immediately flush eyes with plenty of water for a t least 15 minutes. Get medical aid immediately.

In Case of Ingestion: Potential for aspiration if swallowed. Get medical aid immediately. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, have victim lean forward. Call a poison control center. If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Signs and Symptoms Of Exposure: Exposure can cause: Nausea, headache, and vomiting.

Note to Physician: None known.

5. Fire Fighting Measures

Flash Pt: 79.00 C Method Used: Cleveland Open Cup

Explosive Limits: LEL: 0.6 UEL: 7.0

Autoignition Pt: > 231.00 C

Suitable Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or appropriate foam. Suitable:

Fire Fighting Instructions: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Will burn if involved in a fire. Combustible liquid and vapor. Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s):

Flammable Properties and Hazards:

Hazardous Combustion Products:

6. Accidental Release Measures

Protective Precautions, Protective Equipment and Emergency Procedures: Hand: Compatible chemical-resistant gloves. Always use a NIOSH or European Standard EN 149 approved respirator when necessary. Eye protection is recommended.

Environmental Precautions: Do not discharge directly into the environment or into the sewer system.

Steps To Be Taken In Case Material Is Released Or Spilled: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Provide ventilation. Do not let this chemical enter the environment. PROCEDURE(S) OF PERSONAL PRECAUTION(S)
Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves. Methods for cleaning up.
Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

7. Handling and Storage

Precautions To Be Taken in Handling: Wash thoroughly after handling. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Keep away from heat, sparks and flame. Do not ingest or inhale. User Exposure: Do not breathe vapor.

Precautions To Be Taken in Storing: Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

8. Exposure Controls/Personal Protection

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
64742-47-8	Hydrotreated light distillate (petroleum)		TLV: 200 mg/m3	
111-76-2	Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, Glycol Ether EB}	PEL: 50 ppm	TLV: 20 ppm	
9016-45-9	Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydr {Nonylphenol Ethoxylate}			

Respiratory Equipment (Specify Type):	Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi- purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. Hand: Compatible chemical-resistant gloves.
Eye Protection:	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Chemical safety goggles.
Protective Gloves:	Wear appropriate protective gloves to prevent skin exposure.
Other Protective Clothing:	Wear appropriate protective clothing to prevent skin exposure.
Engineering Controls (Ventilation etc.):	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low. Use explosion-proof ventilation equipment. Use only under a chemical fume hood. Safety shower and eye bath.
Work/Hygienic/Maintenance Practices:	Wash thoroughly after handling.

9. Physical and Chemical Properties

Physical States:	[ ] Gas [X] Liquid [ ] Solid
Appearance and Odor:	Clear liquid. solvent odor.
pH:	NP
Freezing Point:	< -70.00 C
Boiling Point:	210.00 C - 288.00 C
Flash Pt:	79.00 C Method Used: Cleveland Open Cup
Evaporation Rate:	> 5 (BuAC=1)
Flammability (solid, gas):	
Explosive Limits:	LEL: 0.6 UEL: 7.0
Vapor Pressure (vs. Air or mm Hg):	.05 MM_HG
Vapor Density (vs. Air = 1):	NA
Specific Gravity (Water = 1):	0.800 - 0.820 at 20.0 C
Density:	NP
Solubility in Water:	Nil
Saturated Vapor Concentration:	NA
Octanol/Water Partition Coefficient:	
Percent Volatile:	> 94.0 % by weight.
Autoignition Pt:	> 231.00 C
Decomposition Temperature:	
Viscosity:	Water thin

10. Stability and Reactivity

Stability: Unstable [ ] Stable [X]

Conditions To Avoid - Instability: ignition sources, Incompatible materials.

Incompatibility - Materials To Avoid: Strong acids. Strong bases, Oxidizing agents.

Hazardous Decomposition or Byproducts: Carbon monoxide, oxides of sulfur.

Possibility of Hazardous Reactions: Will occur [ ] Will not occur [X]

Conditions To Avoid - Hazardous Reactions:

11. Toxicological Information

Toxicological Information: Epidemiology: No information found.
Teratogenicity: No information available. Reproductive Effects: Mutagenicity: Neurotoxicity:

Carcinogenicity/Other Information: CAS# 64742-47-8: Not listed by ACGIH, IARC, NTP, or CA Prop 65. CAS# 111-76-2:
ACGIH: A3 - Confirmed animal carcinogen with unknown relevance to humans.
California: Not listed.
NTP: Not listed.
IARC: Not listed.

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
64742-47-8	Hydrotreated light distillate (petroleum)	n.a.	n.a.	A4	n.a.
111-76-2	Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, Glycol Ether EB}	n.a.	3	A3	n.a.
9016-45-9	Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydr {Nonylphenol Ethoxylate}	n.a.	n.a.	n.a.	n.a.

12. Ecological Information

General Ecological Information: Environmental: TERRESTRIAL FATE: Based on a recommended classification scheme, an estimated Koc value of 67,, determined from an experimental log Kow and a recommended regression-derived equation, indicates that ethylene glycol mono-n-butyl ether is expected to have high mobility in soil. An estimated BCF value of 2.5 was calculated for ethylene glycol mono-n-butyl ether, using an experimental log Kow of 0.83 and a recommended regression-derived equation. According to a recommended classification scheme, this BCF value suggests that bioconcentration in aquatic organisms is low.
Physical: No information found.
Other: An estimated BCF value of 2.5,, from an experimental log Kow, suggests that ethylene glycol mono-n-butyl ether bioconcentration in aquatic organisms will be low, according to a recommended classification scheme. ELIMINATION.

13. Disposal Considerations

Waste Disposal Method: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed. Empty container may be recycled or disposed of as solid sanitary waste. Do not reuse container. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

14. Transport Information

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s (applies to single containers of more than 119 gallons - smaller containers are not regulated)
NOT REGULATED FOR DOMESTIC TRANSPORT.

DOT Hazard Class:

UN/NA Number:

LAND TRANSPORT (Canadian TDG):

TDG Shipping Name: Environmentally hazardous substance, liquid, n.o.s (applies to single containers of more than 119 gallons - smaller containers are not regulated)

AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Non-Hazardous for Air Transport: Non-hazardous for air transport.

15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
64742-47-8	Hydrotreated light distillate (petroleum)	No	No	No
111-76-2	Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, Glycol Ether EB}	No	No	Yes-Cat. N230
9016-45-9	Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydr {Nonylphenol Ethoxylate}	No	No	No

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
64742-47-8	Hydrotreated light distillate (petroleum)	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
111-76-2	Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, Glycol Ether EB}	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
9016-45-9	Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydr {Nonylphenol Ethoxylate}	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory, 8A PAIR; CA PROP.65: No

16. Other Information

Revision Date: 10/19/2015

Hazard Rating System:

HMIS:

HEALTH	1
FLAMMABILITY	2
REACTIVITY	
PPE	I

Additional Information About This Product:

Company Policy or Disclaimer: THE INFORMATION CONTAINED HEREIN is based upon available information at the time of preparation and isbelieved to be accurate but is not warranted to be so. Users are advised to confirm in advance of need that the information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or any other user proximately caused by the material if misused or if reasonable safety procedures are not adheared to as stipulated in the data sheet and on the prduct label. Furthermore, vendor assumes no responsibility for injury or damage caused by abnormal use of this material even if reasonable safety measures are followed.

Safety Data Sheet
Per GHS Standard Format

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name: Fiberset PM No. 7470 White, No. 7475 Clear & No. 7480 Blue
Recommended Use of Product: Post-Removal Surface Sealant

Information on the Supplier of the Safety Data Sheet

Manufactured For:
Fiberlock Technologies
150 Dascomb Road
Andover, MA 01810
P: 978-623-9980 F: 978-475-6205

Emergency Telephone Numbers:
CHEM TEL: (U.S.): 1-800-255-3924
(Outside the U.S.): 813-248-0585

SECTION 2: HAZARDS IDENTIFICATION

Signal Word: **WARNING**



GHS Label Statements
Hazard Statements:
Harmful if inhaled.
Causes serious eye irritation.
May cause an allergic skin reaction.
May cause cancer.

GHS Classifications
This product is considered hazardous by The 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)
Acute Toxicity-Inhalation (Vapors) Category 4
Acute Toxicity-Inhalation (Dust-mists) Category 2
Serious eye damage/eye irritation – Category 2
Skin sensitization – Category 1

PRECAUTIONARY STATEMENTS

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protection (eye protection, gloves) during application. When grinding/sanding dry films, wear respiratory protection.

Response: If on skin, wash with plenty of soap and water. If in eyes, rinse cautiously for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If inhaled, remove victim to fresh air. If exposed or concerned, get medical advice.
Storage: Keep closures tight and containers upright to prevent leakage. KEEP FROM FREEZING. Product is non-combustible.
Disposal: The coating and any contaminated diking material should be thoroughly air dried and collected into drums. The drums should be sealed and labeled and land-filled or incinerated according to local, regional and national regulations.

Hazards Not Otherwise Classified (NHOC): Not applicable
Other Information: Toxic to aquatic life with long lasting effects. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

SECTION 3: COMPOSITION INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight, %**
*Titanium dioxide	13463-67-7	10-30
Propylene glycol	57-55-6	3-7
Chlorothalonil	1897-45-6	0.1-1
Polyethylene glycol branched nonylphenyl either	68412-54-4	0.1-1
***Pathalocyanine blue	Proprietary	<.50

***Not in PM Cleartone Base #7475 or in Blue #7480**
****The exact concentration of composition has been withheld as a trade secret.**
***** Only in 7480 Blue**

SECTION 4: FIRST AID MEASURES

General Advice
Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Eye Contact
If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area.

Skin Contact
Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician. May cause an allergic skin reaction.

Inhalation
Remove to fresh air. If symptoms persist, call a physician. If breathing has stopped, give artificial respiration. Get medical attention immediately. If not breathing, give artificial respiration. Do not breathe dust.

Ingestion
Do NOT induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Get medical attention.

Self-Protection of the First Aider
Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wear personal protective clothing (see section 8). Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid breathing vapors or mists.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects
Burning sensation. Coughing and/or wheezing. Difficulty in breathing. Itching. Rashes. Hives.

Indication of any immediate medical attention and special treatment needed

Notes to Physician
Treat symptomatically. May cause sensitization of susceptible persons.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media: CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical: Product is/or contains a sensitizer. May cause sensitization by skin contact.

Uniform Fire Code
Sensitizer: Liquid Toxic: Liquid

Hazardous Combustion Products: Carbon oxides

Explosion Data
Sensitivity to mechanical impact No.
Sensitivity to static impact No.

Protective Equipment and Precautions for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions: Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation. Avoid breathing vapors or mists. Avoid generation of dust.

Other Information: Refer to protective measures listed in Sections 7 & 8.

Environmental Precautions

Environmental Precautions: Refer to protective measures listed in Sections 7 & 8.

Methods and Material for Containment and Cleaning Up

Methods for Containment: Prevent further leakage or spillage if safe to do so

Methods for Cleaning Up: Immediately place absorbent material in a sealed water-filled metal container to avoid spontaneous combustion of absorbent material contaminated with this product. Pick up and transfer to properly labeled containers.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Handling: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Avoid breathing vapors or mists. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Take off contaminated clothing and wash before reuse. Keep away from contact with clothing and other combustible materials to avoid fire.

Conditions for Safe Storage, Including any Incompatibilities

Storage: Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

Incompatible Products: None known based on information supplied

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	*ACGIH TLV*	*OSHA PEL*	*NIOSH IDLH*
Titanium dioxide 13463-67-7	TWA: 10 mg/m3	TWA: 15 mg/m^3 total dust (vacated) TWA: 10 mg/m3 total dust	IDLH: 5000 mg/m3

ACGIH TLV: American Conference of Governmental Industrial Hygienists – Threshold Limit Value OSHA PEL: Occupational Safety and Health Administration – Permissible Exposure Limits NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines: Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992). See section 15 for national exposure control parameters

Appropriate Engineering Controls

Engineering Measures: Showers / Eyewash Stations / Ventilation Systems

Individual Protection Measures, such as Personal Protective Equipment

Eye/Face Protection: If splashes are likely to occur, wear safety glasses with side shields (or goggles). None required for consumer use.

Skin and body Protection: Wear protective gloves and protective clothing

Respiratory Protection: No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety practice. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Viscous liquid	**Odor:**	Very Slight
Appearance:	White	**Odor Threshold:**	No information available
Color:	No information available		

Property	**Values**	**Remarks/Method**
pH	8.5	None known
Melting/freezing point	No data available	None known
Boiling point/boiling range	No data available	None known
Flash Point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		
Upper flammability limit	No data available	None known
Lower flammability limit	No data available	None known
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Specific Gravity	No data available	None known
Water Solubility	Miscible in water	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive properties	No data available	
Oxidizing properties	No data available	

Other Information

Softening Point	No data available
VOC Content (%)	No data available
Particle size	No data available
Particle size distribution	No data available

SECTION 10: STABILITY AND REACTIVITY

Reactivity
No data available

Conditions to Avoid
Excessive heat

Chemical Stability
Stable under recommended storage conditions

Incompatible Materials
None known based on information supplied

Possibility of Hazardous Reactions
None under normal processing

Hazardous Decomposition Products
Carbon oxides

Hazardous Polymerization
Hazardous polymerization does not occur

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Product Information: Product does not present an acute toxicity hazard based on known or supplied information.

Inhalation: Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. Harmful by inhalation (based on components).

Eye Contact: Specific test data for the substance or mixture is not available. Expected to be an irritant based on components. May cause redness, itching, and pain. May cause temporary eye irritation.

Skin Contact: Specific test data for the substance or mixture is not available. May cause irritation. Prolonged contact may cause redness and irritation.

Ingestion: Specific test data for the substance or mixture is not available. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Component Information

Chemical Name	*Oral LD50*	*Dermal LD50*	*Inhalation LC50*
Titanium dioxide 13463-67-7	> 10000 mg/kg (Rat)		
Propylene Glycol 57-55-6	= 20000 mg/kg (Rat)	= 20800 mg/kg (Rabbit)	
Chlorothalonil 1897-45-6		> 10 g/kg (Rabbit)	= 310 mg/m3 (Rat) 1 h
Polyethylene glycol branched Nonylphenyl either 68412-54-4		= 1780 µL/kg (Rabbit)	

Information on Toxicological Effects

Symptoms: May cause redness and tearing of the eyes, coughing and/or wheezing, itching, rashes and hives.

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure

Sensitization: May cause sensitization of susceptible persons. May cause sensitization by skin contact.

Mutagenic Effects: No information available

Carcinogenicity: The table below indicates whether each agency has listed any ingredient as a carcinogen

Chemical Name	*ACGIH*	*IARC*	*NTP*	*OSHA*
Titanium dioxide 13463-67-7		Group 2B		X
Chlorothalonil 1897-45-6		Group 2B		X

ACGIH (American Conference of Governmental Industrial Hygienists)
A2 – Suspected Human Carcinogen
IARC (International Agency for Research on Cancer)
Group 2B – Possibly Carcinogenic to Humans
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity, STOT Single Exposure, STOT Repeated Exposure: No information available

Chronic Toxicity: Titanium dioxide has been classified by the International Agency for Research on Cancer (IARC) as possibly carcinogenic to humans (Group 2B) by inhalation. Contains a known or suspected carcinogen.

Target Organ Effects: Eyes, respiratory system, skin, gastrointestinal tract (GI) & lungs.

Aspiration Hazard: No information available

Numerical Measures of Toxicity Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)
8,711.00 mg/kg
ATEmix (dermal)
21,608.00 mg/kg (ATE)
ATEmix (inhalation-gas)
3,118.00 ppm (4hr)
ATEmix (inhalation-dust/mist)
2.41 mg/l
ATEmix (inhalation-vapor)
16.00 ATEmix

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects

Chemical Name	*Toxicity to Algae*	*Toxicity to Fish*	*Toxicity to Microorganisms*	*Daphnia Magna (Water Flea)*
Propylene Glycol 57-55-6	96h EC50: = mg/L (Pseudokirchneriella Subcapitata)	96h LC50: = 51600 mg/L (Oncorhynchus mykiss) 96h LC50: 41-47 mL/L (Oncorhynchus mykiss) 96h LC50: 51400 mg/L (Pimephales promelas) 96h LC50: = 710 mg/L (Pimephales promelas)		24h EC50: > 10000 mg/L 48h EC50: > 1000 mg/L
Chlorothalonil 1897-45-6	72h EC50: = 0.57 mg/L (Desmodesmus Subspicatus) 72h EC50: = 0.0068 mg/L (Pseudokirchneriella Subcapitata)	96h LC50: = 0.012 mg/L (Oncorhynchus mykiss) 96h LC50: 0.0076 mg/L (Oncorhynchus mykiss) 96h LC50: 0.0221-0.032 mg/L (Lepomis macrochirus) 96h LC50: 0.045-0.057 mg/L (Lepomis macrochirus)		48h EC50: 0.0342-0.143 mg/L

Persistence and Degradability: No information available

Bioaccumulation

Chemical Name	*Log Pow*
Chlorothalonil 1897-45-6	2.9
Methylchloroisothiazolinone 26172-55-4	-0.71-0.75

Other Adverse Effects: No information available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal Methods: This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging: Dispose of contents/containers in accordance with local regulations

California Hazardous Waste Codes: 331

SECTION 14: TRANSPORT INFORMATION

DOT	Not Regulated
Proper Shipping Name	Non-Regulated
Hazard Class	N/A

TDG
No data available

IATA
No data available

IMDG/IMO
No data available

SECTION 15: REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL	All components are listed either on the DSL or NDSL

TSCA – United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical Name	*CAS No.*	*Weight - %*	*SARA 313 – Threshold Values %*
Chlorothalonil	1897-45-6	0.1-1	0.1

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals:

Chemical Name	*California Proposition 65*
Titanium dioxide – 13463-67-7	Carcinogen
Chlorothalonil – 1897-45-6	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	*New Jersey*	*Massachusetts*	*Pennsylvania*	*Rhode Island*	*Illinois*
Titanium dioxide – 13463-67-4	X	X	X		
Propylene Glycol – 57-55-6	X		X		
Chlorothalonil – 1897-45-6	X	X	X	X	

International Regulations

Canada
WHMIS Hazard Class
D2A – Very toxic materials
D2B – Toxic materials



SECTION 16: OTHER INFORMATION

NFPA	Health Hazards 2	Flammability 0	Instability 0	Special Hazard
HMIS	Health Hazards 2*	Flammability 0	Physical Hazard 0	Personal Protection X

Chromic Hazard Star Legend * = Chronic Health Hazard

WARNING! If you scrape, sand or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear NIOSH-approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Information Hotline at 1-800-424-LEAD (5323) or log on to: www.epa.gov/lead

SG
SEATTLE GLOVE INC

PP25CO/PP25CB

Specification Sheet

Polypropylene coveralls offer light liquid and particulate barrier protection and superior comfort, breathability and durability at lower cost than most other competitive options.



Features:

- White polypropylene material
- Comfortable and breathable
- Elastic wrists and ankles
- Zipper front closure
- PP25CB , hood and boots
- PP25CO, no hood or boots

PP25CB



Protect Against:

- Particle matter
- Painting sprays
- Dirt, grease and grime
- Use for non hazardous environments

Specs:

- Quantity per case: 25 each
- Wrists/Ankles: Elastic
- Material: Polypropylene
- Country of Origin: China *subject to change



Size Guide

Unit CM

Size	1	2	3	4	5	6	7
L	164	2 x 62	89	26	17	75	94
XL	170	2 x 66	91	27	17	83	95
XXL	177	2 x 68	91	28	17	83	95
3XL	179	2 x 70	93	28	17	84	96
4XL	185	2 x 74	95	29	18	87	99

WWW.SEATTLEGLOVE.COM
11524 Cyrus Way Mukilteo, WA 98275 Tel 1-800-917-2020 Fax 425-493-8038

Article Information Sheet

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This Article Information Sheet is provided as a courtesy in response to a customer request. A Safety Data Sheet (SDS) has not been prepared for these product(s) because they are articles. Articles are not subject to the Occupational Safety and Health Administration's Hazard Communication Standard (29 CFR 1910.1200(b)(6)(v)). As defined in this standard: "Article" means a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical, and does not pose a physical hazard or health risk to employees.

Document Group:	08-1958-1	**Version Number:**	3.00
Issue Date:	11/12/20	**Supercedes Date:**	03/15/18

SECTION 1: Identification

1.1. Product identifier
3M™ Particulate Respirator 8210, N95

Product Identification Numbers
70-0706-1439-4, 70-0706-1440-2, 70-0706-1446-9, 70-0708-9244-6, 70-0712-8716-6, 70-0714-8617-2, 70-0716-2311-3, 70-0716-6888-6, GT-5000-3651-9, XA-0100-0044-7, XA-0100-0045-4
7100132742, 7000126162, 7100101235, 7000002229, 7010301707, 7000148537, 7010385048, 7000038242

1.2. Recommended use and restrictions on use

Recommended use
Respiratory Protection

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Personal Safety Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

This product is exempt from hazard classification according to OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt

POLYPROPYLENE	9003-07-0	40 - 60 Trade Secret *
POLY(ETHYLENE TEREPHTHALATE)	25038-59-9	20 - 30 Trade Secret *
THERMOPLASTIC ELASTOMER	Mixture	10 - 20 Trade Secret *
ALUMINUM	Mixture	5 - 10 Trade Secret *
ADDITIVES	Mixture	1 - 3 Trade Secret *
POLYURETHANE FOAM	Mixture	1 - 3 Trade Secret *
ADHESIVE FILM	Mixture	0.5 - 1.5 Trade Secret *
BLACK INK	Mixture	0 - 0.01 Trade Secret *

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
No need for first aid is anticipated.

Skin Contact:
No need for first aid is anticipated.

Eye Contact:
No need for first aid is anticipated.

If Swallowed:
No need for first aid is anticipated.

SECTION 5: Fire-fighting measures

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Not applicable.

6.2. Environmental precautions
Not applicable.

6.3. Methods and material for containment and cleaning up
Not applicable.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions.

7.2. Conditions for safe storage including any incompatibilities
No special storage requirements.

SECTION 8: Exposure controls/personal protection

This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions. No engineering controls or personal protective equipment (PPE) are necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state	Solid
Color	White, Yellow
Specific Physical Form:	Non-Woven Material
Odor	Odorless
Odor threshold	*Not Applicable*
pH	*Not Applicable*
Melting point	*No Data Available*
Boiling Point	*Not Applicable*
Flash Point	*Not Applicable*
Evaporation rate	*Not Applicable*
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Vapor Pressure	*Not Applicable*
Vapor Density	*Not Applicable*
Density	*Not Applicable*
Specific Gravity	*Not Applicable*
Solubility In Water	*Not Applicable*
Solubility- non-water	*Not Applicable*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*Not Applicable*
Decomposition temperature	*Not Applicable*
Viscosity	*Not Applicable*
Volatile Organic Compounds	*Not Applicable*
Percent volatile	*Not Applicable*
VOC Less H2O & Exempt Solvents	*Not Applicable*

SECTION 10: Stability and reactivity

This material is considered to be non reactive under normal use conditions.

SECTION 11: Toxicological information

Inhalation:
No health effects are expected

Skin Contact:
No health effects are expected

Eye Contact:
No health effects are expected

Ingestion:

No health effects are expected

Additional Information:
This product, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the product's directions for use may affect the performance of the product and may present potential health and safety hazards.

SECTION 12: Ecological information

This article is expected to present a low environmental risk either because use and disposal are unlikely to result in a significant release of components to the environment or because those components that may be released are expected to have insignificant environmental impact.

SECTION 13: Disposal considerations

Dispose of contents/container in accordance with the local/regional/national/international regulations.

SECTION 14: Transport Information

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

Chemical Inventories
This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory requirements.

SECTION 16: Other information

NFPA Hazard Classification
Health: 0 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Document Group:	08-1958-1	**Version Number:**	3.00
Issue Date:	11/12/20	**Supercedes Date:**	03/15/18

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To Our Valued Customers

CERTIFICATE OF EXEMPTION
FROM
OSHA HAZARD COMMUNICATION REGULATION
29 CFR 1910.1200

This is to certify that the North Cartridge you have purchased is an "article" as defined in 29 CFR §1910.1200(c) to which the Hazard Communications requirements of §1910.1200(a) and (b) do not apply, as specifically stated in §1910.1200(b)(6)(v).

Accordingly, no MSDS exists for this product.

North Safety Products

A.P.E. X-TREME TACK ADHESIVE

SAFETY DATA SHEET

OSHA HCS (29 CFR 1910.1200)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Chemical Name	Mixture
CAS No.	Mixture
Trade Name	A.P.E. X-TREME TACK ADHESIVE
Product Code	10-5932

Relevant identified uses of the substance or mixture and uses advised against

Identified Use(s)	Adhesive Product
Uses Advised Against	None
Company Identification	Spray Products Corporation P.O. Box 737 Norristown, PA 19404
Telephone	(610) 277-1010
Fax	(610) 277-4390
E-Mail (competent person)	sds@sprayproducts.com

Emergency telephone number

Emergency Phone No.	**Transportation Emergency:** CHEMTREC 24 hr. 1-800-424-9300 / 1 (703) 527-3887 (Collect calls accepted)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

OSHA HCS (29 CFR 1910.1200)	Flam. Aerosol 1; Liquefied gas; Eye Irrit. 2; Skin Irrit. 2; STOT SE 3; Asp. Tox. 1

Label elements

Hazard Symbol



Signal word(s): **DANGER**

Hazard Statement(s):

Extremely flammable aerosol.
Contains gas under pressure; may explode if heated.
Causes serious eye irritation.
Causes skin irritation.
May cause drowsiness or dizziness.
May be fatal if swallowed and enters airways.

Precautionary Statement(s):

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

Do not spray on an open flame or other ignition source.

Do not pierce or burn, even after use.

Avoid breathing spray.

Use only outdoors or in a well-ventilated area.

Protect from sunlight and do not expose to temperatures exceeding 50 ºC/122 ºF.

Wash hands and exposed skin after use.

Wear protective eyewear (goggles, face shield, or safety glasses).

Wear protective gloves.
Avoid release to the environment.
Keep out of reach of children.

Other hazards Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredient(s)	% wt. *	CAS No.	Hazard classification
Acetone	15-25	67-64-1	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336
Heptane, branched, cyclic, and linear	20 - 25	426260-76-6	Flam. Liq. 2; H225 Asp. Tox. 1; H304 Skin Irrit. 2; H315 STOT SE 3; H336 Aquatic Acute 2; H401 Aquatic Chronic 3; H412
Methyl Acetate	10-20	79-20-9	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336
Propane	15-25	74-98-6	Flam. Gas 1; H220 Liquefied gas; H280
Rosin ester	1 - 5	Proprietary	Not classified as hazardous for supply/use

Additional Information - None

* The exact percentage withheld as a trade secret in accordance with 29 CFR 1910.1200.

SECTION 4: FIRST AID MEASURES



Description of first aid measures

Inhalation — IF INHALED: Remove person to fresh air and keep comfortable for breathing. If breathing is labored, administer oxygen. If symptoms develop, obtain medical attention. Call a POISON CENTER/doctor if you feel unwell.

Skin Contact — Wash affected skin with soap and water. If skin irritation occurs, get medical advice/attention. Take off contaminated clothing and wash it before reuse.

Eye Contact — IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion — Do not give anything by mouth to an unconscious person. Seek medical treatment. Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed — May cause drowsiness and dizziness. Aspiration of droplets may cause pulmonary oedema.

Indication of any immediate medical attention and special treatment needed — IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

-Suitable Extinguishing Media	Extinguish with carbon dioxide, dry chemical, foam or water spray.
-Unsuitable Extinguishing Media	Do not use water jet.
Special hazards arising from the substance or mixture	Highly flammable vapor (flash point below 23°C).
Advice for fire-fighters	A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions. Keep containers cool by spraying with water if exposed to fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Take precautionary measures against static discharges. Avoid contact with skin and eyes. Avoid breathing vapors.
Environmental precautions	Prevent liquid entering sewers, basements and work pits.
Methods and material for containment and cleaning up	Cover spills with inert absorbent material. Transfer to a container for disposal or recovery.
Reference to other sections	None
Additional Information	None

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling	Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Avoid contact with skin and eyes. Use product in a well-ventilated area only.

Conditions for safe storage, including any incompatibilities

-Storage temperature	Store locked up. Keep in a cool, well ventilated place. Protect from sunlight. Store at temperatures not exceeding 50 °C / 122 °F. Keep container tightly closed.
-Incompatible materials	This product should be stored away from sources of strong heat or oxidizing chemicals.
Specific end use(s)	Adhesive Product

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

SUBSTANCE.	CAS No.	(8hr TWA) PEL (OSHA)	(8hr TWA) TLV (ACGIH)	(STEL) PEL (OSHA)	(STEL) TLV (ACGIH)	Note:
Heptane, branched, cyclic, and linear	426260-76-6	500 ppm*	1500 mg/m^3	-----	-----	*n-heptane
Acetone	64-64-1	-----		-----	-----	
Propane	74-98-6	1000 ppm	Aspyx.#	-----	-----	#

#Assure minimum oxygen content of work atmosphere.

Recommended monitoring method	NIOSH 1550 (Naphthas); NIOSH 1500 (hydrocarbons, B.P. 36 - 126 ºC); NIOSH 1300 (Ketones I).

Exposure controls

Appropriate engineering controls	Provide adequate ventilation to ensure that the occupational exposure limit is not exceeded.

Personal protection equipment

Eye/face protection 	Wear protective eyewear (goggles, face shield, or safety glasses).
Skin protection (Hand protection/ Other) 	Wear suitable gloves if prolonged skin contact is likely (Butyl rubber)
Respiratory protection 	Normally no personal respiratory protection is necessary. In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Not normally required. Use gloves with insulation for thermal protection, when needed.
Environmental Exposure Controls	None known

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Aerosol spray
Color.	Colorless
Odor	Not available
Odor Threshold (ppm)	Not available
pH (Value)	Not available
Melting Point (°C) / Freezing Point (°C)	Not available
Boiling point/boiling range (°C):	Not available
Flash Point (°C)	-104 (Propane)
Evaporation Rate	Not available
Flammability (solid, gas)	Highly flammable
Explosive Limit Ranges	2.1% - 9.5% v/v (Propane)
Vapor pressure (Pascal)	ca. 95 x 10^4 (Propane)
Vapor Density (Air=1)	ca. 1.56 @ 0ºC (Propane)
Density (g/ml)	Not available
Solubility (Water)	Not available
Solubility (Other)	Not available
Partition Coefficient (n-Octanol/water)	Not available
Auto Ignition Point (°C)	450 (Propane)
Decomposition Temperature (°C)	Not available
Kinematic Viscosity @38.7°C	0.83 mm^2/sec (Heptane, branched,cyclic, and linear)
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Other information	Not available

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Stable under normal conditions.
Chemical stability	Stable.
Possibility of hazardous reactions	None anticipated.
Conditions to avoid	Avoid contact with heat and ignition sources.

Incompatible materials — Strong oxidizing agents. Reducing agents. Acids. Bases. Chlorinated compounds. Aldehydes. Acetone may form explosive mixtures in contact with chromic anhydride, chromyl alcohol, hexachloromelamine, hydrogen peroxide,permonosulfuric acid, potassium tertbutoxide and thioglycol.

Hazardous decomposition product(s) — Forms carbon oxides under fire conditions.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes: Inhalation, Skin Contact, Eye Contact

Information on toxicological effects

Heptane, branched, cylic and linear (CAS# 426260-76-6) - By analogy with similar materials:

Acute toxicity (calculated / estimated) — Oral: LD50 >5 g/kg-bw
Dermal: LD50 >2 g/kg-bw
Inhalation: LC50 = 65 - 103 mg/L (Vapor), 4-hr. rat
May cause drowsiness or dizziness.
May be fatal if swallowed and enters airways.

Irritation/Corrosivity — Causes skin irritation. Repeated exposure may cause skin dryness or cracking. May cause eye irritation.

Sensitization — It is not a skin sensitizer.

Repeated dose toxicity — NOAEC: 12350 mg/m3 (2 yr, inhal., rat, Systemic effects)
LOAEC: 1650 mg/m3 (2 hr, inhal., rat, CNS effects)
May cause drowsiness or dizziness.

Carcinogenicity — No data. It is unlikely to present a carcinogenic hazard to man.

NTP	IARC	ACGIH	OSHA	NIOSH
No.	No.	No.	No.	No.

Mutagenicity — There is no evidence of mutagenic potential.
Reproductive toxicity — No information available

Acetone (CAS No. 67-64-1):

Acute toxicity — Oral LD50 = 5800 mg/kg (rat)
Dermal LD50 >15800 mg/kg (rabbit)
Inhalation LC50 76 mg/L (4 hour(s)) (rat) - Vapours may cause drowsiness and dizziness.

Irritation / Corrosivity — Causes serious eye irritation. Repeated exposure may cause skin dryness or cracking.

Sensitisation — It is not a skin sensitiser.

Repeated dose toxicity — Oral NOAEL = 900 mg/kg/day (rat) (90-days)
Inhalation NOAEL ≥ 19,000 ppm (rat)

Carcinogenicity — It is unlikely to present a carcinogenic hazard to man.

NTP	IARC	ACGIH	OSHA	NIOSH
No.	No.	No.	No.	No.

Mutagenicity — Negative
Toxicity for reproduction — Negative
Other information — None known.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Heptane, branched, cylic and linear (CAS# 426260-76-6) - By analogy with similar materials:

Short term	LL50 (96 hour): >13.4 mg/L (*Oncorhynchus mykiss*) EL50 (48 hour): 3 mg/l (*Daphnia magna,* mobility) EC50 (96 hour): 13 mg/l (*Pseudokirchnerella subcapitata*)
Long Term	NOELR (28 days) 1.5 mg/l *(Fish)* QSAR LOEC (21 days): 0.32 mg/l (*Daphnia magna*) NOEL (96 hour) 6.3 mg/l *(Algae)*

Acetone (CAS No. 67-64-1):

Short term	LC50 (96 hour): 5,540 mg/l (Rainbow Trout (*Oncorhynchus mykiss*)) LC50 (96 hour): 8,300 mg/l (Bluegill Sunfish (*Lepomis macrochirus*)) LC50 (48 hour(s)): 12,600 – 12,700 mg/l *(Daphnia magna)* EC50 (14 d): 3,020 mg/l (Algae (*Chlorella pyrenoidosa*) EC50 (15 min): 14,500 mg/l (Bacteria (*Photobacterium phosphoreum*)
Long Term	Not available.

Persistence and degradability	Readily biodegradable. (anaerobic) 78%; OECD 301 D
Bioaccumulative potential	Not available.
Mobility in soil	Not available.
Results of PBT and vPvB assessment	Not available.
Other adverse effects	None known.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods — Disposal should be in accordance with local, state or national legislation. Consult an accredited waste disposal contractor or the local authority for advice.

SECTION 14: TRANSPORT INFORMATION

	U.S. DOT	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN number	1950	1950	1950
Proper Shipping Name	Aerosols, flammable	Aerosols, flammable	Aerosols, flammable
Transport hazard class(es)	2.1	2.1	2.1
Packing group	Not applicable	Not applicable	Not applicable
Environmental hazards	None assigned	None assigned	None assigned
Special precautions for user	None assigned	None assigned	None assigned

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

TSCA (Toxic Substance Control Act) - Inventory Status: All components listed or polymer exempt.

Designated Hazardous Substances and Reportable Quantities (40 CFR 302.4):

Chemical Name	CAS No.	Typical %wt.	RQ (Pounds)
Acetone	67-64-1	23	5000

SARA 311/312 - Hazard Categories:

☒ Fire ☒ Sudden Release ☐ Reactivity ☒ Immediate (acute) ☐ Chronic (delayed)

SARA 313 - Toxic Chemicals (40 CFR 372):

Chemical Name	CAS No.	Typical %wt.
None	—	—

SARA 302 - Extremely Hazardous Substances(40 CFR 355):

Chemical Name	CAS No.	Typical %wt.	TPQ (pounds)

None	----	----	----

California Proposition 65 List:

Chemical Name	CAS No.	Type of Toxicity
Acetaldehyde (trace - 0.01%)	75-07-0	Cancer
Benzene (trace - 0.01%)	71-43-2	Cancer; Developmental
Cumene (trace - 0.01%)	98-82-8	Cancer
Toluene (trace - 0.01%)	108-88-3	Developmental

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1-16.
Date of preparation: January 5,2017
Hazard Statement(s) and Risk Phrases Listed in: SECTION 2:/ SECTION 3:

Hazard Statement(s)

- H220: Extremely flammable gas.
- H222: Extremely flammable aerosol.
- H225: Highly flammable liquid and vapor.
- H229: Pressurised container: May burst if heated.
- H280: Contains gas under pressure; may explode if heated.
- H304: May be fatal if swallowed and enters airways.
- H315: Causes skin irritation.
- H319: Causes serious eye irritation.
- H336: May cause drowsiness or dizziness.
- H401: Toxic to aquatic life.
- H412: Harmful to aquatic life with long lasting effects.

Training advice: None.

Disclaimer: We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

Section 1: Identification of the Substance/Mixture and of the Company Undertaking

Product Name:	**PC Series** Cloth Duct Tape
Manufacturer Name:	Shurtape Technologies, LLC
Manufacturer Address 1:	1712 8th Street Drive SE
Manufacturer City:	Hickory
Manufacturer State:	NC
Manufacturer Zip Code:	28602
Manufacturer Country:	United States
Business Phone:	828-322-2700
Creation Date:	2018-08-20

Section 2: Hazards Identification

Signal Words:	Not applicable.
GHS Class Phrases:	Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Product:

Notes from Section 2:	This adhesive tape product is a manufactured item that meets the definition of an "**article**" under the OSHA Hazard Communication Standard, which exempts articles from the requirements of the Standard, including the requirement to provide an SDS. This SDS was prepared solely for the reference of, and as a courtesy to, Shurtape's customers.

Section 3: Composition/Information on Ingredients

Ingredient Name	CAS Number	Ingredient Percent	EC Number	Comments
Polyethylene & Cloth Backing	Proprietary	20-60%		
Rubber Based Adhesive	Proprietary	40-80%		See TDS for specific adhesive type

Section 4: First Aid Measures

Inhalation:	Not applicable
Skin Contact:	Wash with soap and water. Seek medical attention if irritation develops or persists.
Eye Contact:	If wearing contact lenses, remove. Hold eyelids apart and immediately flush eyes with plenty of low-pressure water for at least 15 minutes. Get medical attention if irritation persists.
Ingestion:	Do not give anything by mouth to an unconscious person. Seek medical attention is symptoms develop.

Section 5: Firefighting Measures

Fire:	Minimal fire hazard as supplied. Polymers in the adhesive and in the backing will support combustion.
Extinguishing Media:	Foam, water spray, CO2, or dry chemical extinguisher
Fire Fighting Instructions:	Wear a self-contained breathing apparatus with a full face piece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment.
Hazardous Decomposition Byproducts:	If this product is subject to combustion it will undergo hazardous decomposition that will yield the formation and release of hazardous substances including but not limited to carbon dioxide, carbon monoxide, polycyclic organic matter, and smoke.

Section 6: Accidental Release Measures

Personnel Precautions:	Not applicable
Environmental Precautions:	Not applicable
Methods for Containment:	Not applicable
Methods for Cleanup:	Not applicable

Section 7: Handling and Storage

Handling:	Material will be tacky/sticky. Recommend washing hands after use.
Storage:	Not applicable

Section 8: Exposure Controls/Personal Protection

Eye Protection:	Safety glasses with side-shields recommended.
Skin Protection:	Normal lightweight work clothing will minimize skin contact. Use of lightweight cloth or leather gloves recommended.
Respiratory Protection:	No adverse respiratory exposure anticipated under normal use.
Notes from Section 8:	Under normal conditions of use, this product is not expected to release hazardous chemicals or pose a physical hazard or health risk.

Section 9: Physical and Chemical Properties

Physical State:	Solid
Color:	Various
Odor:	No Strong Odor
Odor Threshold:	Not applicable
pH:	Not applicable
Melting Temperature:	>100 C
Boiling Temperature:	Not applicable
Evaporation Rate:	Not applicable
Vapor Pressure:	Not applicable
Vapor Density:	Not applicable
Density:	Not applicable
Solubility In Water:	Not applicable

Solubility:	Not applicable
Partition Coefficient:	Not applicable
Decomposition Temperature:	Not applicable
Specific Gravity:	Not applicable

Section 10: Stability and Reactivity

Chemical Stability:	Stable
Conditions To Avoid:	Not applicable
Incompatible Materials:	Strong acids and oxidizing agents
Hazardous Decomposition Products:	None anticipated under normal or recommended handling, storage, and use conditions. If this product is subject to combustion it will undergo hazardous decomposition that will yield the formation and release of hazardous substances including but not limited to carbon dioxide, carbon monoxide, polycyclic organic matter and particulate matter. This is not the intended use for this product.
Hazardous Polymerization:	Not anticipated under normal or recommended handling, use, or storage conditions.

Section 11: Toxicological Information

Product:

Acute Toxicity:	Not applicable
Acute Skin Effects:	Not applicable
Acute Eye Effects:	Not applicable
Sensitization:	Not applicable
Mutagenicity:	Not applicable
IARC Carcinogen:	Not applicable
ACGIH Carcinogen:	Not applicable
NTP Carcinogen:	Not applicable
OSHA Carcinogen:	Not applicable
Reproductive Toxicity:	Not applicable

Section 12: Ecological Information

Product:

Ecotoxicity:	No data available
Biodegredation:	No data available
BioAccumulation:	No data available

Section 13: Disposal Considerations

Waste Disposal:	This adhesive tape product , as supplied, is classified as RCRA non-hazardous, based upon knowledge of ingredients and the production process. It is the responsibility of the end user to classify the waste prior to disposal, and dispose of per appropriate local , state, and/or federal regulations.

Section 14: Transport Information

DOT:	Not regulated
IMDG:	Not regulated
IATA:	Not regulated

Section 15: Regulatory Information

Regulatory - Product Based:

OSHA 29 CFR 1200:

Not regulated. This adhesive tape product meets the definition of an "article".

TSCA 8(b): Inventory Status:

The intentional ingredients of this article are listed in the TSCA Inventory.

Section 313 Toxic Release Form:

None

Section 312 Hazard Category:

None

Safe Drinking Water Act:

Please refer to the Regulatory Compliance Letter for this product.

European International Regulations:

Please refer to the Regulatory Compliance Letter for this product.

Canada DSL:

The intentional ingredients of this product are listed.

Section 16: Additional Information

Creation Date:	2018-08-20
Author:	Shurtape Technologies, LLC EHS-C Group
Disclaimer:	The information herein is presented in good faith. This information is believed to be accurate as of the effective date indicated on the SDS. No warranty is expressed or implied. Regulatory requirements are subject to change and differ from location to location. It is the responsibility of the end user to ensure compliance with all laws including federal, state and local regulations.
Notes from Section 16:	This safety data sheet (SDS) was prepared solely for the reference of, and as a courtesy to, Shurtape's customers. The adhesive tape product to which this SDS refers is a manufactured item that meets the definition of an "article" under the OSHA Hazard Communication Standard (hereinafter “the Standard"), which exempts articles from the requirements of the Standard, including the requirement to provide an SDS. Under normal conditions of use this product is not expected to release hazardous chemicals, nor pose a physical hazard or health risk, such that the Standard would require Shurtape to provide an SDS. However, failure to use this product in accordance with Shurtape's recommendations or under normal conditions could result in potential physical hazards, health risks, or other hazards.

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PRODUCT SAFETY DATA SHEET

The product referenced in this PSDS document is a consumer product. Under OSHA regulations polyethylene sheeting is considered an “article” and is not subject to OSHA Hazard Communication Standard MSDS/SDS requirements which apply for “hazardous chemicals in the workplace.” Additionally, polyethylene sheeting is considered an “article” under the Global Harmonized System and is exempted from the GHS labeling and SDS classification criteria.

Section 1 — Product and Company Identification

Product Description: Polyethylene Sheeting

Stock: Various

Formula: Various

Company: **Poly-America, LP**
2000 W Marshall Drive
Grand Prairie, TX 75051

Emergency Phone Number: 1-800-527-3322 ext. 7411

Notice: This product is not FDA, CPSC or NSF compliant. It is unsuitable for use in applications such as direct or indirect food contact, toys, medical device or pharmaceutical applications or for potable water application.

Section 2 — Composition/Information on Ingredients

	% by wt.
Polyethylene	95 -100

Section 3 — Hazards Identification

This product is an inert, non-hazardous solid article.

Exposure to vapors and fumes from heating the polymer to decomposition may cause eye, mucous membrane and respiratory irritation.

Plastic sheeting can create a suffocation hazard when placed over the nose and mouth.

KEEP OUT OF REACH OF CHILDREN

Section 4 — First Aid Measures

Swallowing: No adverse effects are expected, however, if this material is swallowed call a physician or poison control center.

Skin: No adverse effects are expected from normal contact. Molten or heated sheeting may cause serious burns. For contact with molten material, flush area with large amounts of cold water. Do not attempt to remove material that adheres to the skin. Get prompt medical attention.

Inhalation: No adverse effects are expected from normal use of this product. Breathing vapors and fumes from heating the polymer to decomposition may cause eye, mucous membrane and respiratory irritation. If exposure to decomposition of

product occurs and irritation develops, remove to fresh air. If irritation persists, seek medical attention.

Eyes: No adverse effects are expected from contact but any foreign body in the eye may cause irritation. No first aid is normally needed.

Section 5 Fire Fighting Measures

The flash point of this material is over 600º F. If a fire should occur, Carbon Monoxide (CO) and irritating smoke may be produced. Wear NIOSH approved self-contained breathing apparatus when fighting fires in enclosed areas. Fight fire with water, CO_2, or dry chemicals. Use flooding quantities of water until well after the fire is out.

Section 6 Accidental Release Measures

Clean up material promptly to avoid a slipping hazard. As a matter of good practice; prevent material from entering storm drains, surface waters. Collect for use or disposal.

Section 7 Handling and Storage

Keep sheeting away from excessive heat and flames.

Store in a cool, dry area away from excessive heat

Section 8 Exposure Controls and Personal Protection

Ventilation: General ventilation should be adequate for normal use.

Hand Protection: None needed under normal use conditions.

Eye Protection: None needed under normal use conditions.

Respiratory Protection: None needed under normal use conditions.

Section 9 Physical and Chemical Properties

Density will vary depending on color, scent, and processing components. Therefore, the product can sink or float in water depending on the properties. The product is not soluble in water and may have a fragrant odor at ambient temperature.

Section 10 Stability and Reactivity

This product is stable and non-reactive. Hazardous decomposition of products can occur if overheated or ignited.

Section 11 Ecological Information

No data is available at this time. This material is an inert plastic product. No adverse environmental effects are expected from normal use or disposal.

Section 12 Disposal Measures

Dispose in accordance with federal, state and local regulations as ordinary trash

Section 13 Transportation

This product is not a regulated substance under the Department of Transportation (DOT) regulations.

Section 14 Regulatory Information

Notice: The information herein is presented in good faith and believed to be accurate as of the effective date shown. However, no warranty, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyers' responsibility to ensure that its activities comply with federal, state, and local laws. The following specific information is made for purpose of complying with numerous federal, state and local law regulations. See other sections for health and safety information.

Sara 313 Information: To the best of our knowledge, this product contains no chemical subject to SARA Title III Section 313 supplier notification requirements.

SARA Hazard Category: This product has been reviewed according to the EPA "Hazard Categories" (SARA Title III) and is considered, under applicable conditions to meet the following categories: Not to have met any hazard category.

Toxic Substances Control Act (TSCA): All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

State Right-to-Know: This product is not known to contain any substances subject to disclosure requirements of New Jersey, Pennsylvania and California.

OSHA Hazard Communication Standard: This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Section 15 Rating

National Fire Protection Association (NFPA) ratings:

Health - 0 Flammability - 1 Reactivity – 0

Section 16 Other Information

Last Revision Date: 6/6/16

Preparation Date: 6/19/15

RED EAGLE
JOINT VENTURE
A WARFEATHER LLC / ROSS GROUP JV

5. Certifications and Licensures

TEXAS
Health and Human Services

Texas Department of State Health Services

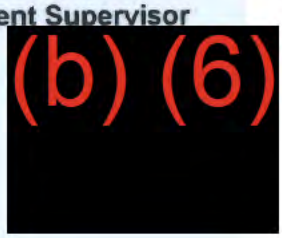
Asbestos Abatement Supervisor

GERARDO SOTO

License Number: 804942

Control Number: 101791

Expiration Date: 9-Jan-2027



SCAI TRAINING CENTER

headquarters: 1409 montana ave el paso, texas 79902-5617
(915) 533-8840 fax (915) 533-8843 e-mail: training@scaitc.com www.scaitc.com

BY THE ISSUANCE OF THIS CERTIFICATE TO

GERARDO SOTO

Certificate Number	CSR2928012525

Let it be known that said person has completed the requirements for asbestos accreditation as per Section 206 of TSCA TITLE II, 15 U.S.C. 20646
(as per approval by the State of Texas/United States Environmental Protection Agency: 40 CFR, Part 763, Subpart E, Appendix C)

EPA AHERA ASBESTOS CONTRACTOR/SUPERVISOR REFRESHER COURSE

Furthermore, let it be known that said person passed the required course examination with a score of 70% or higher.

Instructor: _____ Monica A. Acuna

Principal Officer: _____ Luis M. Acuna

Date Course Completed: 1/25/2025
Location: El Paso, Texas
Course Dates: 1/25/2025
Course Exam Date: N/A
Class ID No. CSR2928012525
Registered Sanitation No.:
Accreditation Expiration Date: 1/24/2026

8 As Approved by TDSHS for Sanitarian Continuing Education, §265.147; Professional Sanitarian Comme

SCAI TRAINING CENTER

EPA AHERA ASBESTOS CONTRACTOR/SUPER
REFRESHER COURSE

GERARDO	SOTO
www.scaitc.com	training@scaitc.com
Class ID No.	CSR2928012525
Effective:	ID No.
1/25/2025	CSR2928012525

1409 Montana Ave., El Paso, Texas 79902 (915) 533-

(b) (6)

(b) (6)

BORDER
DEMOLITION & ENVIRONMENTAL INC

RESPIRATOR ISSUANCE FORM

EMPLOYEE	SOCIAL SECURITY NUMBER	DATE
Gerardo Soto	(b) (6)	4/3/2025
JOB DESCRIPTION: ASBESTOS ABATEMENT		

APPROVED RESPIRATOR TYPE(S)

_____ SELF CONTAINED (SCUBA)
__X__ HALF FACE CARTRIDGE
__X__ POWERED AIR (PAPR)
_____ FULL FACE CARTIDGE
_____ SUPPLIED AIR (SAR)

MAKE	MODEL	STYLE SIZE
NORTH	7700 SERIES	HALF MASK
3M	6900 SERIES	POWERED AIR(PAPR)

QUALITIVE FIT TESTING

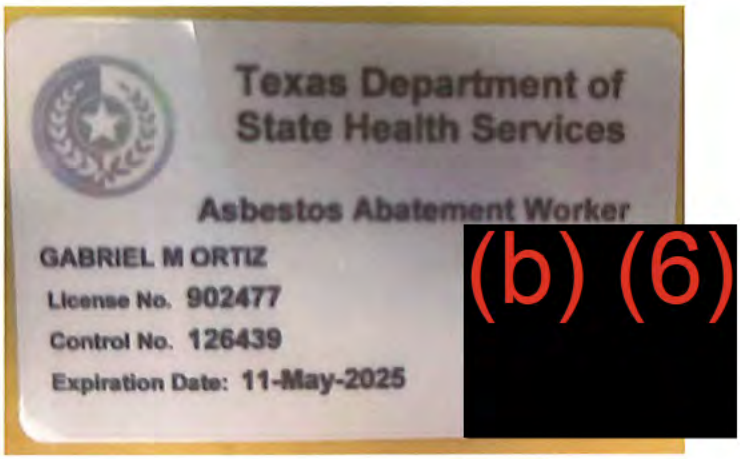
__X__ DEMONSTRATED SATISFACTORY POSITIVE SEAL CHECK
__X__ DEMONSTRATED SATISFACTORY NEGATIVE SEAL CHECK
__X__ EMPLOYEE SENSATIVE TO TESTING AGENT PRE AND POST
__X__ DEMONSTRATED SATISFACTORY QUALITIVE FIT TEST (DID NOT DETECT TESTING AGENT)

TESTING AGENT USED (E.G. IRRATANT, SMOKE, SWEETNER ETC.) SMOKE (ALLEGRO SMOKE TUBE)

COMMENTS:
NONE

EMPLOYEE SIGNATURE	DATE:
Gerardo Soto	4/3/25

ISSUED BY:	DATE:
Jerry Soto	4/3/25


Texas Department of
State Health Services
Asbestos Abatement Worker
GABRIEL M ORTIZ
License No. 902477
Control No. 126439
Expiration Date: 11-May-2025
(b) (6)

(b) (6)

Texas Asbestos
Spanish Worker Refresher
Training Course
Expiration Date: 11/22/2025

M·E·T·A
Mayhew Environmental Training Asso
INCORPORAT

Name: Gabriel Ortiz
SS#: (b) (6)

Certificate # VWQZN8P9J3

Gabriel Ortiz

has on 11/22/2024, in El Paso, TX
completed the requirements for asbestos accreditation under Section 206 of TSCA Title II, 15 USC 2646

Asbestos Spanish Worker Refresher

as approved by TX and the US EPA under 40 CFR 763 (AHERA)
from 11/22/2024 to 11/22/2024 and passed the associated exam on
11/22/2024 with a score of at least 70%

KANSAS MAYHEW EST. 1985 INC. 1987 ENVIRONMENTAL TRAINING ASSOCIATES SAFETY IN GOD ALONE

Juan Ayala
Instructor

Thomas Mayhew
President

SSN: (b) (6)
Expires: 11/22/2025

P.O. Box 786 - Lawrence, KS. 66044 - 800.444.6382
www.metaenvironmental.net

(b) (6)

BORDER
DEMOLITION & ENVIRONMENTAL INC

RESPIRATOR ISSUANCE FORM

EMPLOYEE	SOCIAL SECURITY NUMBER	DATE
Gabriel Ortiz	(b) (6)	08/17/24
JOB DESCRIPTION: ASBESTOS ABATEMENT		

APPROVED RESPIRATOR TYPE(S)

_____ SELF CONTAINED (SCUBA)
___X___ HALF FACE CARTRIDGE
___X___ POWERED AIR (PAPR)
_____ FULL FACE CARTIDGE
_____ SUPPLIED AIR (SAR)

MAKE	MODEL	STYLE SIZE
NORTH	7700 SERIES	HALF MASK
3M	6900 SERIES	POWERED AIR(PAPR)

QUALITIVE FIT TESTING

___X___ DEMONSTRATED SATISFACTORY POSITIVE SEAL CHECK
___X___ DEMONSTRATED SATISFACTORY NEGATIVE SEAL CHECK
___X___ EMPLOYEE SENSATIVE TO TESTING AGENT PRE AND POST
___X___ DEMONSTRATED SATISFACTORY QUALITIVE FIT TEST (DID NOT DETECT TESTING AGENT)

TESTING AGENT USED (E.G. IRRATANT, SMOKE, SWEETNER ETC.) SMOKE (ALLEGRO SMOKE TUBE)

COMMENTS:
NONE

EMPLOYEE SIGNATURE	DATE:
Gabriel Ortiz	08/17/24

ISSUED BY:	DATE:
[signature]	08/17/24

TEXAS
Health and Human Services

Texas Department of State Health Services

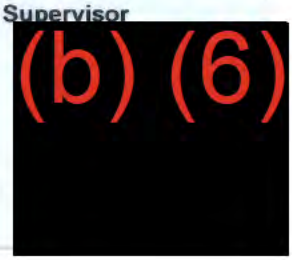
Asbestos Abatement Supervisor

ALEJANDRO SALAS

License Number: 805539

Control Number: 101635

Expiration Date: 13-Jun-2026



(b) (6)

Texas Asbestos
Supervisor Refresher
Training Course
Expiration Date: 9/17/2025

M·E·T·A

Name: Alejandro Salas-Hoyos
SS#: (b) (6)

M·E·T·A

Mayhew Environmental Training Associates
INCORPORATED

Certificate # HUG2GTRL4E

Alejandro Salas-Hoyos

has on 9/17/2024, in El Paso, TX
completed the requirements for asbestos accreditation under Section 206 of TSCA Title II, 15 USC 2646

Asbestos Supervisor Refresher

as approved by TX and the US EPA under 40 CFR 763 (AHERA)
from 9/17/2024 to 9/17/2024 and passed the associated exam on 9/17/2024
with a score of at least 70%

KANSAS EST. 1985 MAYHEW INC. 1987 ENVIRONMENTAL TRAINING ASSOCIATES SAFETY IN GOD ALONE

Juan Ayala
Instructor

Thomas Mayhew
President

SSN (b) (6)
Expires: 9/17/2025

P.O. Box 786 - Lawrence, KS. 66044 - 800.444.6382
www.metaenvironmental.net

(b) (6)

BORDER
DEMOLITION & ENVIRONMENTAL INC

RESPIRATOR ISSUANCE FORM

EMPLOYEE	SOCIAL SECURITY NUMBER	DATE
Alejandro Salas	(b) (6)	4/2/25
JOB DESCRIPTION: ASBESTOS ABATEMENT		

APPROVED RESPIRATOR TYPE(S)

_____ SELF CONTAINED (SCUBA)
__X__ HALF FACE CARTRIDGE
__X__ POWERED AIR (PAPR)
_____ FULL FACE CARTIDGE
_____ SUPPLIED AIR (SAR)

MAKE	MODEL	STYLE SIZE
NORTH	7700 SERIES	HALF MASK
3M	6900 SERIES	POWERED AIR(PAPR)

QUALITIVE FIT TESTING

__X__ DEMONSTRATED SATISFACTORY POSITIVE SEAL CHECK
__X__ DEMONSTRATED SATISFACTORY NEGATIVE SEAL CHECK
__X__ EMPLOYEE SENSATIVE TO TESTING AGENT PRE AND POST
__X__ DEMONSTRATED SATISFACTORY QUALITIVE FIT TEST (DID NOT DETECT TESTING AGENT)

TESTING AGENT USED (E.G. IRRATANT, SMOKE, SWEETNER ETC.) SMOKE (ALLEGRO SMOKE TUBE)

COMMENTS:
NONE

EMPLOYEE SIGNATURE	DATE:
Alejandro Salas	4/2/25

ISSUED BY:	DATE:
Jerri Soto	4/2/25

Texas Department of
State Health Services

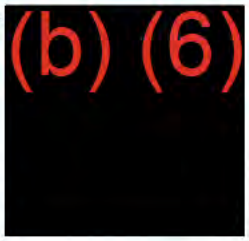
Asbestos Abatement Supervisor

JERRY SOTO

License No. 805530

Control No. 101549

Expiration Date: 25-Mar-2026



(b) (6)

Texas Asbestos
Supervisor Refresher
Training Course
Expiration Date: 9/17/2025

M·E·T·A

Name: Jerry Soto
SS#: (b) (6)

M·E·T·A

Mayhew Environmental Training Associates
INCORPORATED

Certificate # CJQ4OYR7VD

Jerry Soto

has on 9/17/2024, in El Paso, TX
completed the requirements for asbestos accreditation under Section 206 of TSCA Title II, 15 USC 2646

Asbestos Supervisor Refresher

as approved by TX and the US EPA under 40 CFR 763 (AHERA)
from 9/17/2024 to 9/17/2024 and passed the associated exam on 9/17/2024
with a score of at least 70%

KANSAS EST. 1985 INC. 1987 MAYHEW ENVIRONMENTAL TRAINING ASSOCIATES SAFETY IN GOD ALONE

Juan Ayala
Instructor

Thomas Mayhew
President

SSN: (b) (6)
Expires: 9/17/2025

P.O. Box 786 - Lawrence, KS. 66044 - 800.444.6382
www.metaenvironmental.net

(b) (6)

BORDER
DEMOLITION & ENVIRONMENTAL INC

RESPIRATOR ISSUANCE FORM

EMPLOYEE	SOCIAL SECURITY NUMBER	DATE
Jerry Soto	(b) (6)	2/24/2025

JOB DESCRIPTION: ASBESTOS ABATEMENT

APPROVED RESPIRATOR TYPE(S)

_____ SELF CONTAINED (SCUBA) ___X___ HALF FACE CARTRIDGE

___X___ POWERED AIR (PAPR) _____ FULL FACE CARTIDGE

_____ SUPPLIED AIR (SAR)

MAKE	MODEL	STYLE SIZE
NORTH	7700 SERIES	HALF MASK
3M	6900 SERIES	POWERED AIR(PAPR)

QUALITIVE FIT TESTING

____X____ DEMONSTRATED SATISFACTORY POSITIVE SEAL CHECK

____X____ DEMONSTRATED SATISFACTORY NEGATIVE SEAL CHECK

____X____ EMPLOYEE SENSATIVE TO TESTING AGENT PRE AND POST

____X____ DEMONSTRATED SATISFACTORY QUALITIVE FIT TEST (DID NOT DETECT TESTING AGENT)

TESTING AGENT USED (E.G. IRRATANT, SMOKE, SWEETNER ETC.) SMOKE (ALLEGRO SMOKE TUBE)

COMMENTS:
NONE

EMPLOYEE SIGNATURE	DATE:
Jerry Soto	2-24-2025

ISSUED BY:	DATE:
Jesus Soto	2/24/2025

TEXAS
Health and Human Services | Texas Department of State Health Services

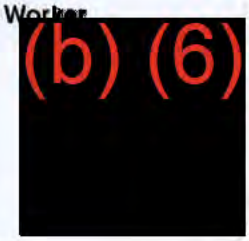
Asbestos Abatement Worker

JORGE SOTO JR

License Number: 937428

Control Number: 129412

Expiration Date: 23-Mar-2027



SCAI TRAINING CENTER

headquarters: 1409 montana ave el paso, texas 79902-5617
(915) 533-8840 fax (915) 533-8843 e-mail: training@scaitc.com www.scaitc.com

BY THE ISSUANCE OF THIS CERTIFICATE TO

JORGE SOTO

Certificate Number	WR0935030224

Let it be known that said person has completed the requirements for asbestos accreditation as per Section 206 of TSCA TITLE II, 15 U.S.C. 20646
(as per approval by the State of Texas/United States Environmental Protection Agency: 40 CFR, Part 763, Subpart E, Appendix C)

EPA AHERA ASBESTOS WORKER
REFRESHER COURSE

Furthermore, let it be known that said person passed the required course examination with a score of 70% or higher

Instructor: Monico A. Acuna

Principal Officer: Luis M. Acuna

Sun City Simple Solutions Training Center Since 1997 Analytical P.C.

Date Course Completed: 3/2/2024
Location: El Paso, Texas
Course Dates: 3/2/2024
Course Exam Date: N/A
Class ID No. WR0935030224
Registered Sanitation No.: XXXXXXXXXXXX
Accreditation Expiration Date: 3/1/2025

8 CEU As Approved by TDSHS for Sanitarian Continuing Education, §265.147; Professional Sanitarian Commercial CEU Provider, Inc. # 102-690001

(b) (6)

BORDER
DEMOLITION & ENVIRONMENTAL INC

RESPIRATOR ISSUANCE FORM

EMPLOYEE	SOCIAL SECURITY NUMBER	DATE
Jorge Soto	(b) (6)	2/24/2025

JOB DESCRIPTION: ASBESTOS ABATEMENT

APPROVED RESPIRATOR TYPE(S)

_____ SELF CONTAINED (SCUBA)
___X___ HALF FACE CARTRIDGE
___X___ POWERED AIR (PAPR)
_____ FULL FACE CARTIDGE
_____ SUPPLIED AIR (SAR)

MAKE	MODEL	STYLE SIZE
NORTH	7700 SERIES	HALF MASK
3M	6900 SERIES	POWERED AIR(PAPR)

QUALITIVE FIT TESTING

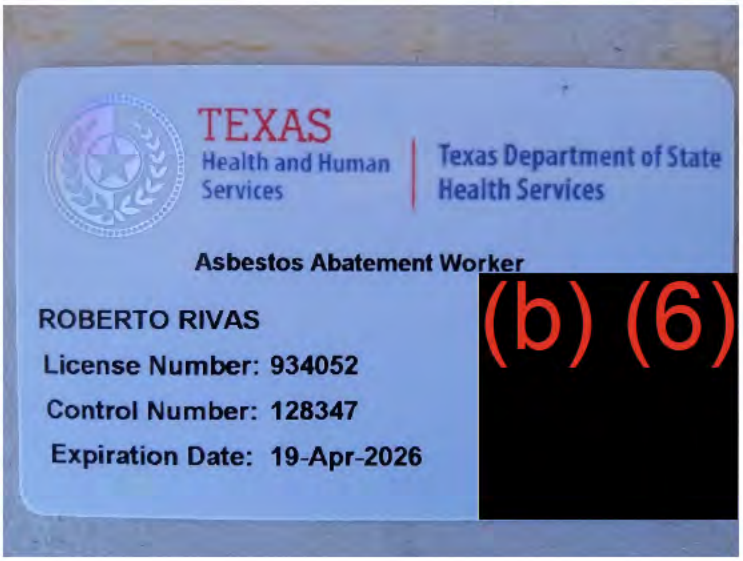
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___X___ DEMONSTRATED SATISFACTORY NEGATIVE SEAL CHECK
___X___ EMPLOYEE SENSATIVE TO TESTING AGENT PRE AND POST
___X___ DEMONSTRATED SATISFACTORY QUALITIVE FIT TEST (DID NOT DETECT TESTING AGENT)

TESTING AGENT USED (E.G. IRRATANT, SMOKE, SWEETNER ETC.) SMOKE (ALLEGRO SMOKE TUBE)

COMMENTS:
NONE

EMPLOYEE SIGNATURE	DATE:
Louis F	2-24-25

ISSUED BY:	DATE:
Jesus Soto	2/24/2025


TEXAS
Health and Human Services
Texas Department of State Health Services
Asbestos Abatement Worker
ROBERTO RIVAS
License Number: 934052
Control Number: 128347
Expiration Date: 19-Apr-2026
(b) (6)

M·E·T·A

Mayhew Environmental Training Associates

INCORPORATED

Certificate # FCBS6VAST7

Roberto Rivas

has on 2/17/2024, in El Paso, TX
completed the requirements for asbestos accreditation under Section 206 of TSCA Title II, 15 USC 2646

Spanish Worker Refresher

as approved by TX and the US EPA under 40 CFR 763 (AHERA)
from 2/17/2024 to 2/17/2024 and passed the associated exam on 2/17/2024
with a score of at least 70%

KANSAS MAYHEW INC. 1987 EST. 1985 ENVIRONMENTAL TRAINING ASSOCIATES SAFETY IN GOD ALONE

Juan Ayala
Instructor

Thomas Mayhew
President

SSN (b) (6)
Expires: 2/17/2025

P.O. Box 786 - Lawrence, KS. 66044 - 800.444.6382
www.metaenvironmental.net

(b) (6)

BORDER
DEMOLITION & ENVIRONMENTAL INC

RESPIRATOR ISSUANCE FORM

EMPLOYEE	SOCIAL SECURITY NUMBER	DATE
Roberto Rivas	(b) (6)	06/27/2024

JOB DESCRIPTION: ASBESTOS ABATEMENT

APPROVED RESPIRATOR TYPE(S)

_____ SELF CONTAINED (SCUBA)
___X___ POWERED AIR (PAPR)
_____ SUPPLIED AIR (SAR)
___X___ HALF FACE CARTRIDGE
_____ FULL FACE CARTIDGE

MAKE	MODEL	STYLE SIZE
NORTH	7700 SERIES	HALF MASK
3M	6900 SERIES	POWERED AIR(PAPR)

ALL
X

QUALITIVE FIT TESTING

___X___ DEMONSTRATED SATISFACTORY POSITIVE SEAL CHECK
___X___ DEMONSTRATED SATISFACTORY NEGATIVE SEAL CHECK
___X___ EMPLOYEE SENSATIVE TO TESTING AGENT PRE AND POST
___X___ DEMONSTRATED SATISFACTORY QUALITIVE FIT TEST (DID NOT DETECT TESTING AGENT)

TESTING AGENT USED (E.G. IRRATANT, SMOKE, SWEETNER ETC.) SMOKE (ALLEGRO SMOKE TUBE)

COMMENTS:
NONE

EMPLOYEE SIGNATURE	DATE:
Roberto Rivas	6-27-2024

ISSUED BY:	DATE:
Dennis Sch	06/27/2024

Commercial Hauler Registration

Border Demolition and Environmental Inc.

**has met the criteria of the New Mexico Solid Waste Rules, 20.9.3.31 NMAC,
and is registered as a Commercial Hauler
Certificate No. 0066269**

issued by

State of New Mexico Environment Department

July 16, 2020

Digitally signed by Joan M. Snider
Date: 2020.07.16 11:29:24 -06'00'

**Joan Snider, Chief
Solid Waste Bureau**

Expiration Date: July 16, 2025

(msw, c&d, 3, 10)

STATE OF NEW MEXICO

CONSTRUCTION INDUSTRIES DIVISION

BORDER DEMOLITION AND ENVIRONMENTAL, INC

LICENSE NUMBER

352875

EXPIRES

07/31/2025

Qualifying Party(S)

SOLIS RAUL R.

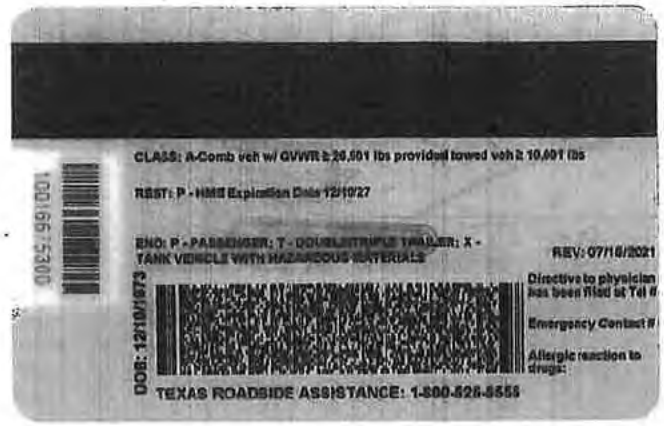
SOLIS RAUL ROGELIO

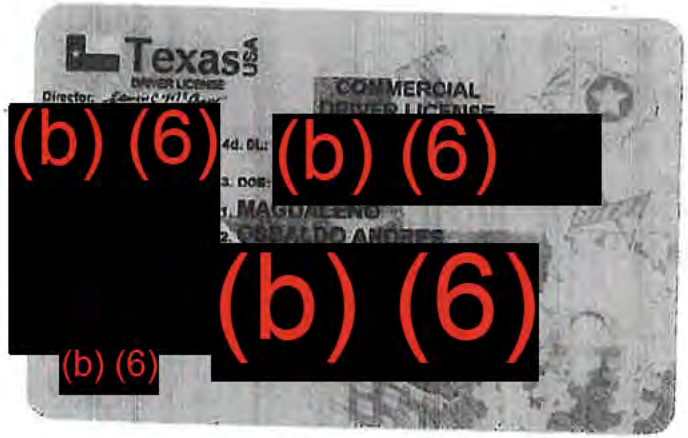
CLASSIFICATION(S)

GB98, GS05, GS29

DIRECTOR

This card is the property of the CID and shall be surrendered upon demand


CLASS: A-Comb veh w/ GVWR ≥ 26,001 lbs provided towed veh ≥ 10,001 lbs
RSTR: P - HME Expiration Date 12/10/27
END: P - PASSENGER; T - DOUBLE/TRIPLE TRAILER; X - TANK VEHICLE WITH HAZARDOUS MATERIALS
REV: 07/16/2021
DOB: 12/10/1973
Directive to physician has been filed at Tel #
Emergency Contact #
Allergic reaction to drugs:
TEXAS ROADSIDE ASSISTANCE: 1-800-525-5555


Texas
DRIVER LICENSE
COMMERCIAL
(b) (6)
(b) (6)
(b) (6)
(b) (6)

Asbestos Surveys

At

Mescalero Service Unit
Mescalero, New Mexico

For

Albuquerque Area Indian Health Service
Division of Health Facilities
5300 Homestead Road, NE
Albuquerque, New Mexico 87110

By

U.S. Public Health Service
Federal Occupational Health
2201 Sixth Avenue, M/S Rx-21
Seattle, Washington 98121-2500

September 2007

TABLE OF CONTENTS

Section	Title	Page No.
1.0	INTRODUCTION	1
2.0	DESCRIPTION OF BUILDINGS INSPECTED	1
3.0	SURVEY PROCEDURES	1
4.0	FINDINGS AND COST ESTIMATES	2
5.0	ACM DESCRIPTIONS	3
6.0	PROJECT LIMITATIONS	4

Appendices

1 FUNCTIONAL SPACE MAPS AND BULK SAMPLE LOGS
2 BULK SAMPLE RESULTS AND COST ESTIMATES
3 LABORATORY RESULTS
4 CERTIFICATIONS

Asbestos Building Inspections
Albuquerque Area Indian Health Service
Mescalero Service Unit
Mescalero, New Mexico

1.0 INTRODUCTION

As requested by the Albuquerque Area Indian Health Service, bulk sampling of suspect asbestos-containing building materials was conducted on twelve (12) buildings at the Mescalero Service Unit in Mescalero, New Mexico. Sampling occurred on August 13 – August 23, 2007. Bulk samples of suspect asbestos-containing materials (ACMs) were collected throughout the interior and exterior of each building. Non-destructive sampling practices were utilized during the inspections.

Federal Occupational Health (FOH) representatives Mr. Landon Johnson and Mrs. Suzette Numkena performed the asbestos inspections of the subject properties. Each inspector holds current Asbestos Hazard Emergency Response Act (AHERA) accreditation as Asbestos Building Inspectors. Certifications for each inspector can be found in Appendix 4.

Sampling of suspect asbestos-containing materials was conducted using procedures similar to the Environmental Protection Agency (EPA) AHERA regulation, 40 CFR 763. Samples were analyzed by Fiberquant Analytical Services in Phoenix, Arizona. Fiberquant is fully accredited by the EPA-required National Voluntary Laboratory Accreditation Program (NVLAP) for analysis of asbestos bulk samples using polarized light microscopy, and is also an American Industrial Hygiene Association (AIHA) accredited laboratory.

2.0 DESCRIPTION OF BUILDINGS INSPECTED

Eight (8) of the twelve (12) buildings inspected were residential housing units ranging between one and two stories. The residential building types included single-family and multi-family units. The residences ranged in size from single bedroom units to three bedrooms units. In addition to the residential buildings, inspectors also inspected the Mescalero Medical Center, Maintenance shop, Administration office and the Optometry office. Building floor plans for each type of structure are located in Appendix 1.

Examples of suspect building materials identified and sampled throughout each building included various floor tiles and associated mastics, sheet vinyl flooring and associated mastics, carpet mastic, ceramic tile, ceramic tile grout, residual black mastic, gypsum drywall materials, wall texture, plaster wall materials, stucco, brick mortar, stone mortar, gypsum drywall ceiling panels, fiberboard ceiling tiles, putty, fiberglass insulation, pipe elbow insulation, sink undercoating, covebase and mastic, various caulks, vapor barrier paper, roof materials, various penetration mastics.

3.0 SURVEY PROCEDURES

Each room of each building was assigned a unique functional space number. Each functional space was visually inspected for suspect asbestos-containing materials. Materials were mapped and quantified on maps provided by the IHS or hand drawn maps.

Each suspect ACM was designated as a distinct homogeneous area, which is a single material, uniform in texture and appearance, installed at one time, and unlikely to consist of more than one type or formulation of material. The inspector touched each suspect material in order to determine friability.

A sufficient number of samples were collected of each material to satisfy the Occupational Safety and Health Administration (OSHA) and the National Emission Standard for Hazardous Air Pollutants (NESHAP) regulations for the determination of asbestos content. Bulk sample logs are located in Appendix 1.

Each sample was assigned a unique sample identification number and assessed for damage and friability classifications. The samples, with Chain of Custody documentation were delivered to Fiberquant Analytical Services in Phoenix, Arizona. Fiberquant is fully accredited by the EPA-required National Voluntary Laboratory Accreditation Program (NVLAP) for analysis of asbestos bulk samples using polarized light microscopy, and is also an American Industrial Hygiene Association (AIHA) accredited laboratory. Laboratory analysis reports are located in Appendix 3.

4.0 FINDINGS AND COST ESTIMATES

Table 1 summarizes each building inspected and provides hyperlinks (electronic copy) to Bulk Sample Results & Cost Estimate Tables and Analytical Laboratory Results. The information is also located in the appendices.

Table 1: Buildings Inspected for Asbestos Containing Materials and Associated Hyperlinks ***(electronic version only)***

Location	Building Number	Unit Type *(Appendix 1)*	Asbestos Present	Bulk Sample Results and Cost Estimates *(Appendix 2)*	Analytical Laboratory Results *(Appendix 3)*
Mescalero	02000	Hospital	**Yes**	✓	☐
Mescalero	02001	3BR – SFH	**Yes**	✓	☐
Mescalero	02002	3BR – SFH	**Yes**	✓	☐
Mescalero	02003	3BR – SFH	**Yes**	✓	☐
Mescalero	02004	3BR – Duplex	**Yes**	✓	☐
Mescalero	02005	3BR – Duplex	**Yes**	✓	☐
Mescalero	02006	3BR – Duplex	**Yes**	✓	☐
Mescalero	02007	3BR – SFH	**Yes**	✓	☐
Mescalero	02008	1BR – Duplex	**Yes**	✓	☐
Mescalero	02009	Optometry	No	✓	☐
Mescalero	02010	Administration	**Yes**	✓	☐
Mescalero	02011	Maintenance Shop	**Yes**	✓	☐

The Bulk Sample Results Table (Appendix 2) provides detailed information on materials that tested positive or negative for asbestos content. A separate Bulk Sample Results Table is provided for each building inspected.

Programming Cost Estimates (Appendix 2) were developed for positive asbestos-containing materials found in each Building. The Programming Cost Estimates were derived by use of the Means Cost Guide and by consultation with experienced local contractors. The pricing reflects current industry rates. Future fluctuations in industry pricing, both natural and seasonal, may affect this estimate. In addition, Service Units outside of metropolitan areas may incur additional costs due to travel requirements on the part of abatement contractors. For purposes of this estimate, an 18% mark-up for logistical costs is included.

This estimate is for abatement contractor costs only. Additional costs, which are not included in this estimate, are those of an environmental consultant and replacement of building materials that have been removed. The total estimated cost for the removal of asbestos-containing materials from the Mescalero Service Unit is **$170,407.93.**

5.0 ACM DESCRIPTIONS

Descriptions of materials found to contain asbestos are as follows:

Floor tile is classified as a non-friable NESHAP Category I material. This material is currently in good condition and intact floor tile poses little to no health threat. Removal or disturbance to this material should be performed by appropriately trained and certified personnel. Removed flooring material should be disposed at a landfill that accepts non-friable asbestos waste. Landfills should be checked for acceptance of this material prior to disposal.

Floor tile mastic is classified as a non-friable NESHAP Category I material. This material is currently in good condition. Floor tile mastic that is beneath floor tile, i.e., inaccessible, poses little to no health threat. Removal or disturbance to this material should be performed by appropriately trained and certified personnel. Removed flooring material should be disposed at a landfill that accepts non-friable asbestos waste. Landfills should be checked for acceptance of this material prior to disposal.

Sheet vinyl flooring and associated materials are classified as friable NESHAP Regulated Asbestos-Containing Material (RACM). The material is currently in good condition and intact sheet vinyl flooring poses little to no health threat. Removal or disturbance to this material should be performed by appropriately trained and certified personnel. Removed sheet vinyl flooring and associated materials should be disposed at a landfill that is approved by the Environmental Protection Agency (EPA) for acceptance of friable asbestos waste. Landfills should be checked for acceptance of this material prior to disposal.

Joint compound is classified as a friable NESHAP Regulated Asbestos-Containing Material (RACM). The material is currently in good condition and undamaged joint compound poses little to no health threat. Removal of this material should be performed by appropriately trained and certified personnel. Removal or disturbance to this material is considered an OSHA class I removal. Removed joint compound should be disposed at a landfill that is approved by the Environmental Protection Agency (EPA) for acceptance of friable asbestos waste. Landfills should be checked for acceptance of this material prior to disposal.

Wall texture is classified as a friable NESHAP Regulated Asbestos-Containing Material (RACM). The material is currently in good condition and undamaged wall texture poses little to no health threat. Removal of this material should be performed by appropriately trained and certified personnel. Removal or disturbance to this material is considered an OSHA class I removal. Removed wall texture should be disposed at a landfill that is approved by the Environmental Protection Agency (EPA) for acceptance of friable asbestos waste. Landfills should be checked for acceptance of this material prior to disposal.

Exterior stucco is classified as a friable NESHAP Regulated Asbestos-Containing Material (RACM). The material is currently in good condition and undamaged stucco poses little to no health threat. Removal of this material should be performed by appropriately trained and certified personnel. Removal or disturbance to this material is considered an OSHA class I removal. Removed materials should be disposed at a landfill that is approved by the Environmental Protection Agency (EPA) for acceptance of friable asbestos waste. Landfills should be checked for acceptance of this material prior to disposal.

Pipe elbow/fitting insulation is classified as friable NESHAP Regulated Asbestos-Containing Material (RACM). Intact pipe insulation poses little to no health threat. Pipe insulation inside wall cavities also poses little to no health threat. Removal or disturbance to this material is considered an OSHA Class I action, and should be performed by appropriately trained and certified personnel. Removed insulation should be disposed at a landfill that is approved by the Environmental Protection Agency (EPA) for acceptance of friable asbestos waste. Landfills should be checked for acceptance of this material prior to disposal.

Duct seam mastic is classified as non-friable NESHAP Category I material. The intact duct seam poses little to no health threat. Removal or disturbance to this material should be performed by appropriately trained and certified personnel. Removed duct seam mastic should be disposed at a landfill that is approved by the Environmental Protection Agency (EPA) for acceptance of non-friable asbestos waste. Landfills should be checked for acceptance of this material prior to disposal.

Sink undercoating is classified as non-friable NESHAP Category II material. The material is currently in good condition and undamaged sink undercoating poses little to no health threat. Removal of this material typically involves the physical removal of the entire sink (whole) and should be performed by appropriately trained and certified personnel. Removed materials should be disposed at a landfill that accepts non-friable asbestos waste. Landfills should be checked for acceptance of this material prior to disposal.

Roof penetration mastic is classified as non-friable NESHAP Category I material. Removal or disturbance to this material should be performed by appropriately trained and certified personnel. Removed penetration mastic should be disposed at a landfill that accepts non-friable asbestos waste. Landfills should be checked for acceptance of this material prior to disposal.

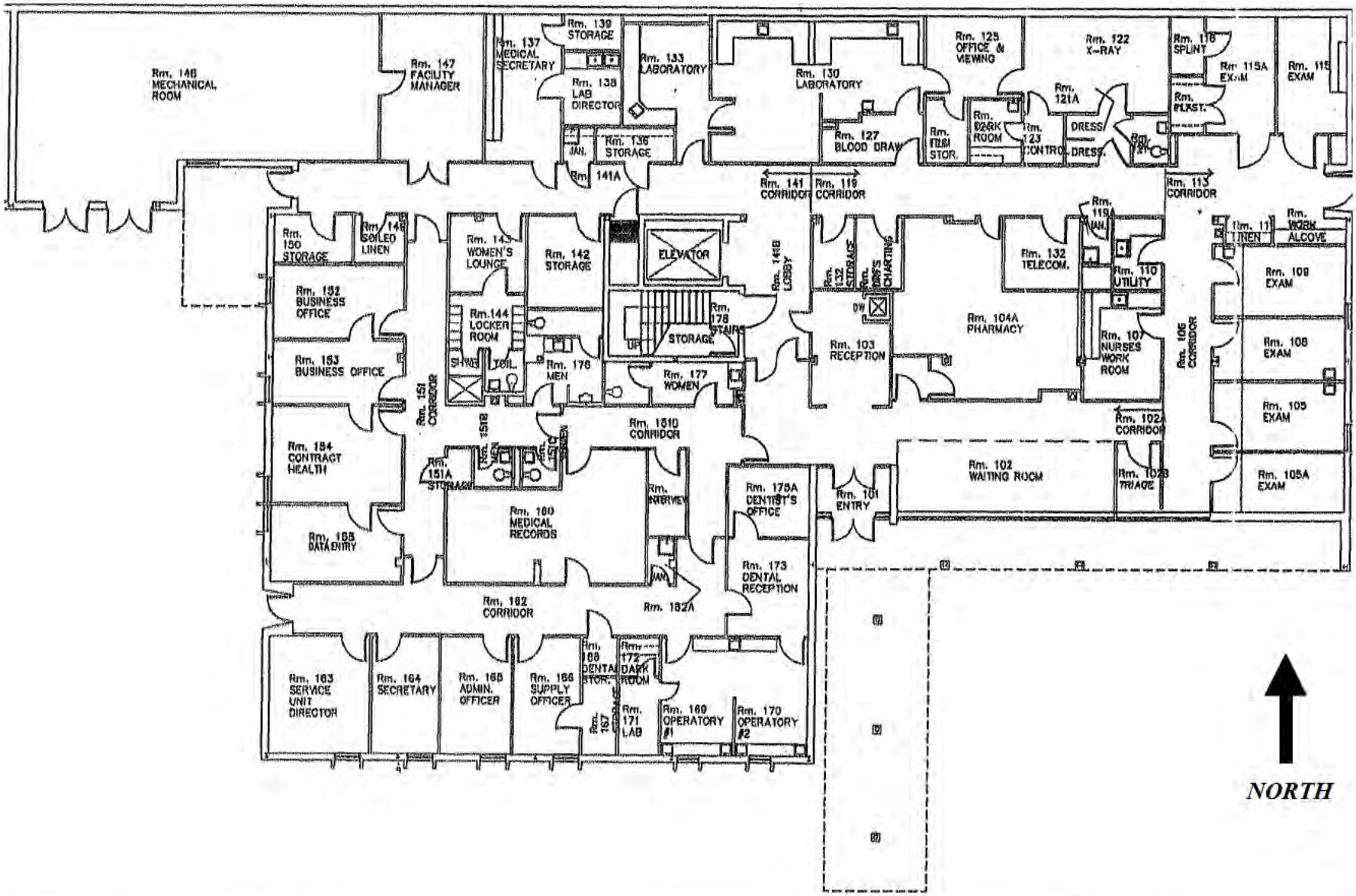
6.0 PROJECT LIMITATIONS

This Project was performed using, as a minimum, practices consistent with standards acceptable within the industry at this time, and a level of diligence typically exercised by industrial hygiene and environmental consultants performing similar services.

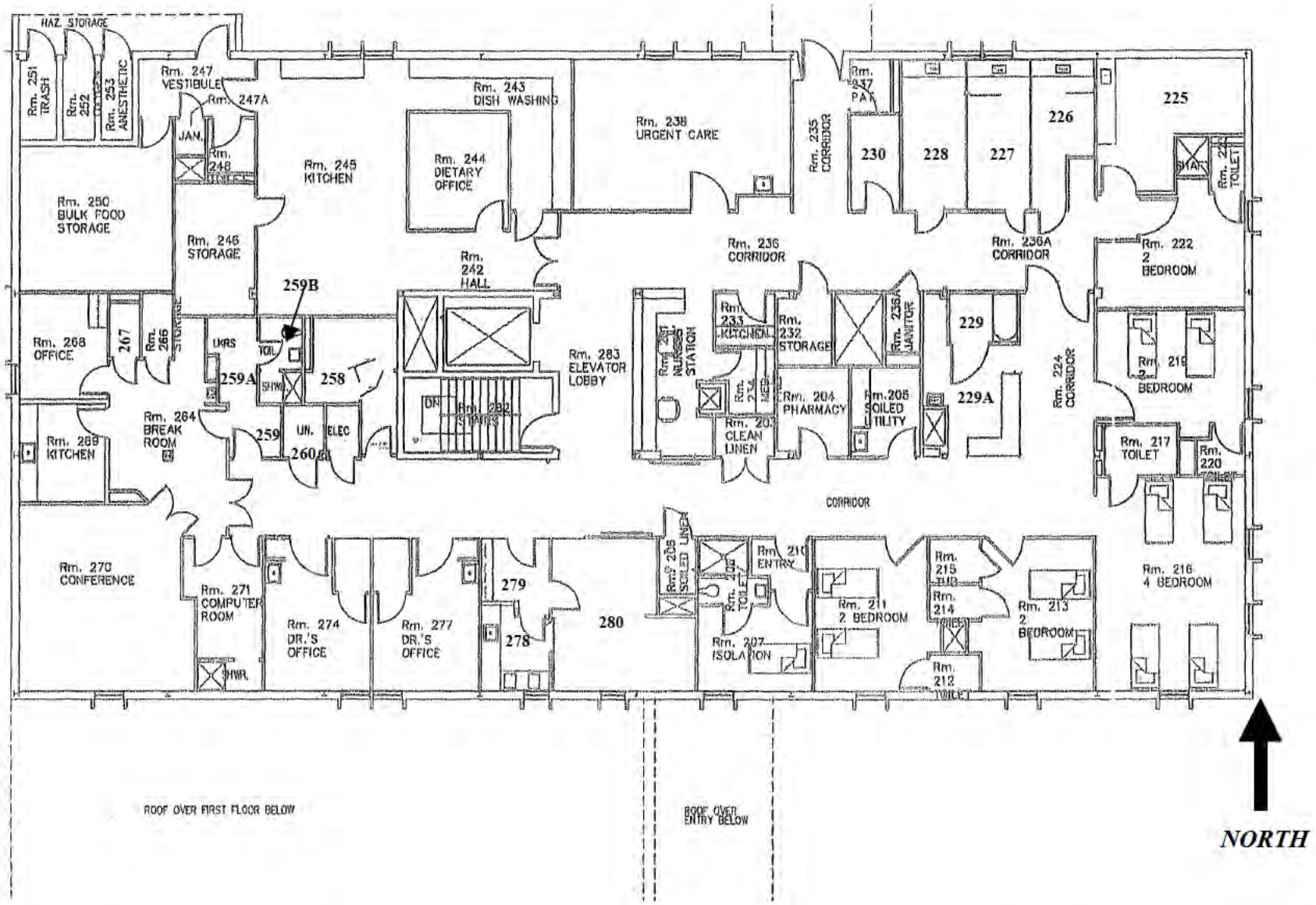
The procedures used in this investigation attempt to establish a balance between the competing goals of limiting investigative and reporting costs and time, and reducing the uncertainty about unknown conditions. Therefore, because the findings of this report were derived from the scope, costs, time, and other limitations, the conclusions should not be construed as a guarantee that all environmental or occupational hazards have been identified and fully evaluated. Where sample collection and testing have been performed, FOH's professional opinions are based in part on the interpretation of data from discrete sampling locations that may not represent conditions at non-sampled locations. FOH assumes no responsibility for omissions or errors resulting from inaccurate information, or data, provided by sources outside of FOH or from omissions or errors in public records.

Furthermore, it is emphasized that the final decision on how much risk to accept always remains with the client since FOH is not in a position to fully understand all of the client's needs. Clients with a greater aversion to risk may want to take additional actions while others, with less aversion to risk, may want to take no further action.

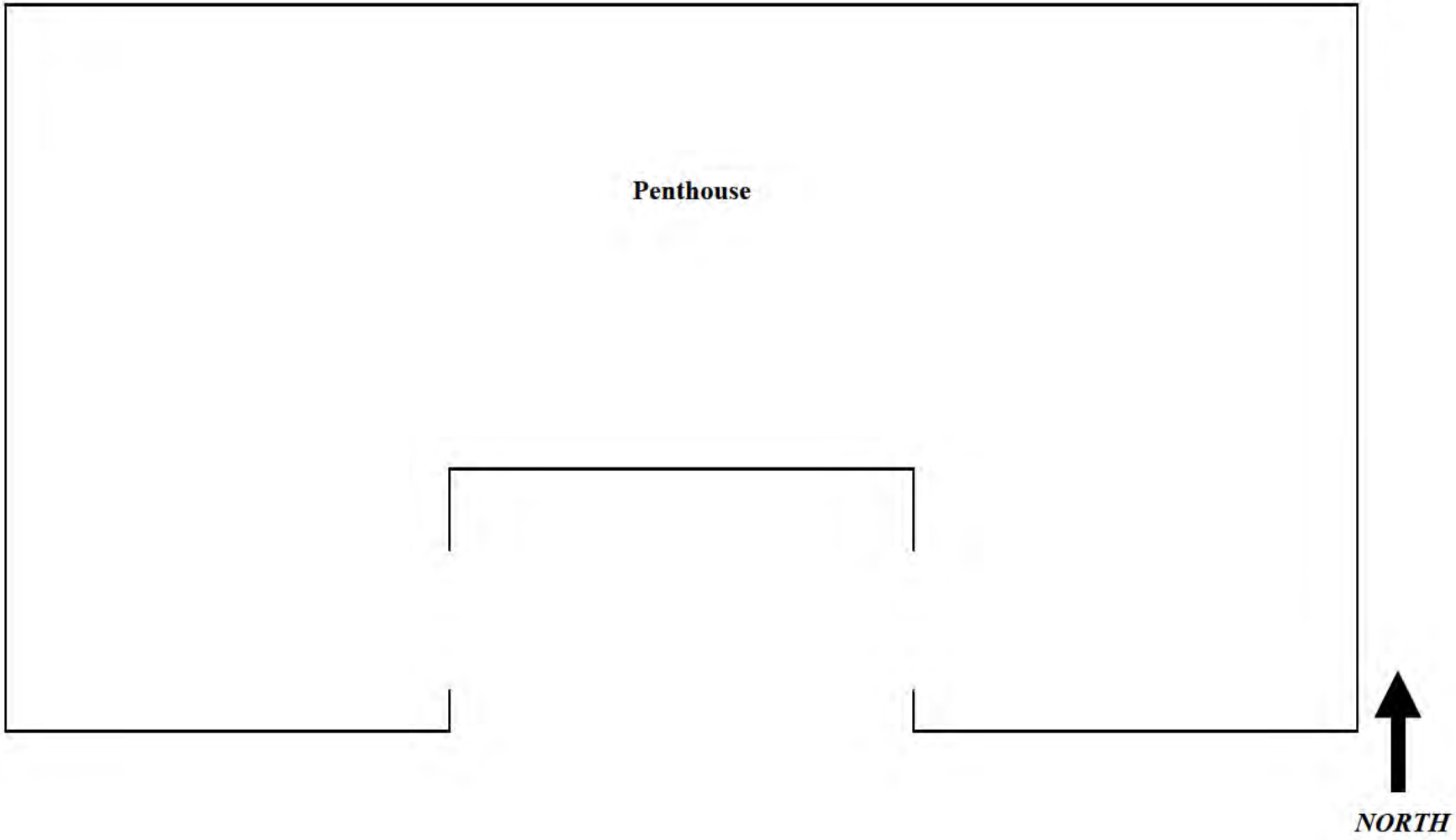
APPENDIX 1
Functional Space Maps
Bulk Sample Logs



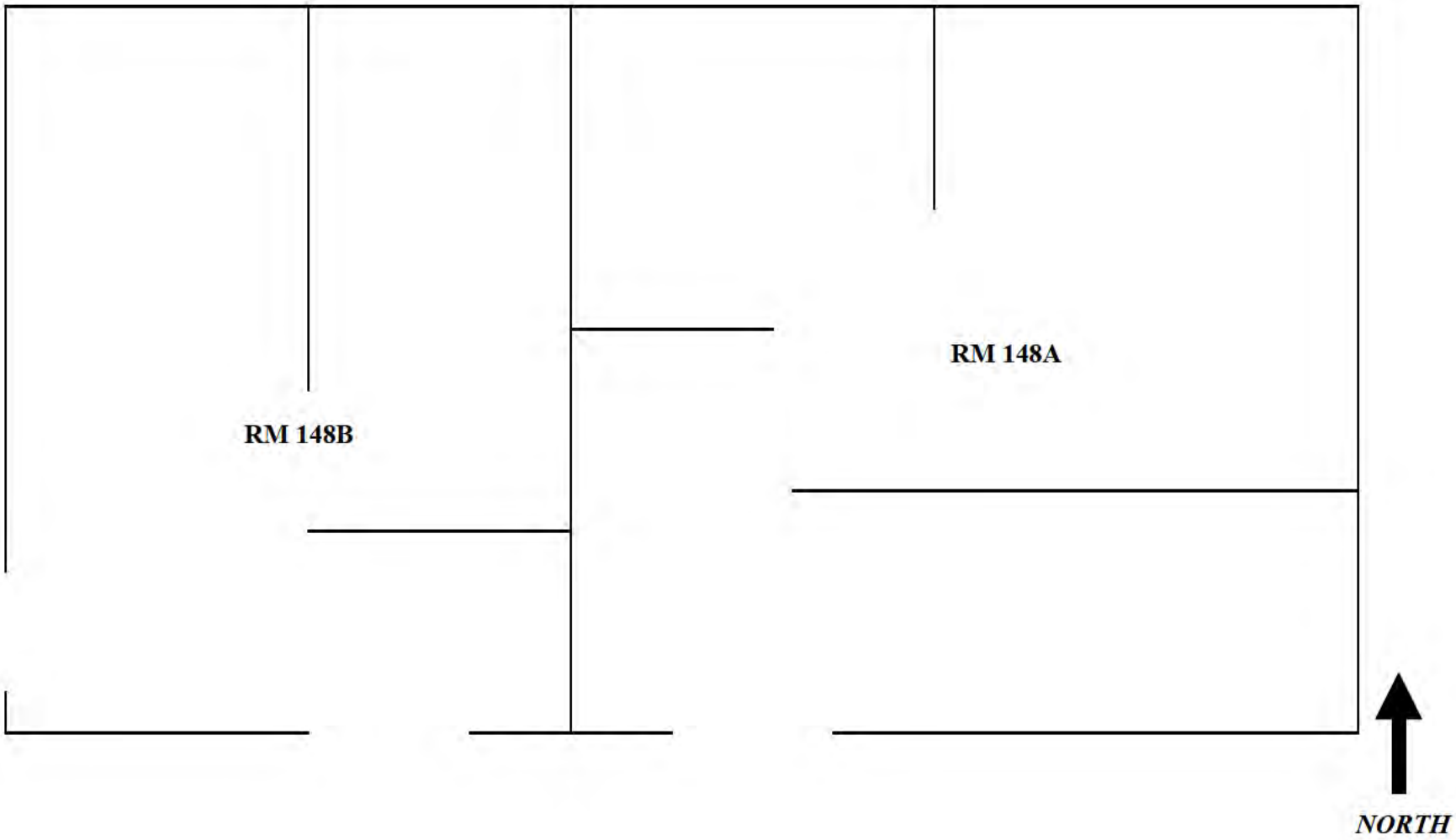
U.S. Public Health Service Federal Occupational Health 2201 Sixth Avenue, M/S Rx21 Seattle, Washington 98121-2500	Project: ALBUQUERQUE AREA INDIAN HEALTH SERVICE MESCALERO SERVICE UNIT Mescalero, New Mexico	**Functional Space Map** Building 2000 Hospital First Floor Plan



U.S. Public Health Service Federal Occupational Health 2201 Sixth Avenue, M/S Rx21 Seattle, Washington 98121-2500	Project: ALBUQUERQUE AREA INDIAN HEALTH SERVICE MESCALERO SERVICE UNIT Mescalero, New Mexico	**Functional Space Map** Building 2000 Hospital Second Floor Plan



U.S. Public Health Service Federal Occupational Health 2201 Sixth Avenue, M/S Rx21 Seattle, Washington 98121-2500	Project: ALBUQUERQUE AREA INDIAN HEALTH SERVICE MESCALERO SERVICE UNIT Mescalero, New Mexico	**Functional Space Map** Building 2000 Hospital Penthouse Floor Plan



U.S. Public Health Service Federal Occupational Health 2201 Sixth Avenue, M/S Rx21 Seattle, Washington 98121-2500	Project: ALBUQUERQUE AREA INDIAN HEALTH SERVICE MESCALERO SERVICE UNIT Mescalero, New Mexico	**Functional Space Map** Building 2000 Hospital Room 148 A and B

APPENDIX 2
Bulk Sample Results and
Cost Estimates

Building 2000
Bulk Sample Results
Mescalero Service Unit
September 05, 2007

HA #	Material	Functional Space	ACM	Condition	Quantity
1A	**Beige Pebble Sheet Vinyl Flooring**	**Throughout Except: 102A, 103, 104, 104A, 107, 110, 121, 122, 125, 131, 138, 144, 147, 148, 148A, 148B, 177, 178, 204, 205, 208, 212, 215, 225, 226, 227, 228, 229, 229A, 230, 242, 243, 245, 246, 247, 247A, 250, 258, 259B, 270, 278, 279**	**Yes: 5-10% Chrysotile**	**Good**	**9,951 sf**
1B	12”x12” Dark Brown/Tan Floor Tile & Mastic	147	No	Good	361 sf
1C	Blue Grout	144, 259B	No	Good	40 sf
1D	Blue Pattern Ceramic Tile Grout	107, 110, 204, 205, 215	No	Good	317 sf
1E	12”x12” Beige Square Pattern Floor Tile & Grout	138	No	Good	90 sf
1F	White Sheet Vinyl Flooring	121, 122	No	Good	258 sf
1G	12”x12” Maroon Floor Tile & Mastic	125	No	Good	156 sf
1H	Beige Grout	123, 124	No	Good	92 sf
1I	Gray Grout	177, 178, 208, 212, 242, 243, 244, 245, 246, 247, 247A, 250, 259B, 278, 279	No	Good	2,237 sf
1J	**Tan Carpet Mastic**	**102A, 103, 270**	**Yes: 2-5% Chrysotile**	**Good**	**1,090 sf**
1K	**12”x12” White/Gray Floor Tile & Mastic**	**104, 104A, 131, 230, 258**	**Yes: 1-2% Chrysotile Mastic Only**	**Good**	**596 sf**
1L	12”x12” Light Brown Floor Tile & Mastic	225, 226, 227, 228	No	Good	496 sf
1M	12”x12” Blue Floor Tile & Mastic	229, 229A	No	Good	180 sf

HA #	Material	Functional Space	ACM	Condition	Quantity
2A	Gypsum Drywall	102, 102B, 127, 130, 147, 148, 148A, 148B, 149, 151D Corridor, Interview Room, 204, 225, 226, 227, 228, 229A, 230, South Corridor 2nd Floor, 269, 279	No	Good	5,551 sf
2B	**Joint Compound**	**102, 102B, 127, 130, 147, 148, 148A, 148B, 149, 151D Corridor, Interview Room, 204, 225, 226, 227, 228, 229A, 230, South Corridor 2nd Floor, 269, 279**	**Yes: 1-2% Chrysotile**	**Good**	**5,551 sf**
2C	**Texture 1**	**102, 102B, , 127, 147, 148, 149, 150, 161, 151D Corridor, 225, 229A, 258, 269, 279**	**Yes: 1-2% Chrysotile**	**Good**	**1,702 sf**
2D	Texture 2	148A, 226, 227, 228, 230	No	Good	1,980 sf
2E	Skim Coat	Throughout	No	Good	65,485 sf
2F	Brown Coat	Throughout	No	Good	65,485 sf
2G	Stucco	Exterior	No	Good	232 sf
2H	Brick	148 & Exterior	No	Good	3,777 sf
2I	Mortar	148 & Exterior	No	Good	3,777 sf
2J	Texture 3	Exterior	No	Good	600 sf
2K	White Ceramic Wall Tile Grout	102, 107, 110, 144, 177, 178, 204, 205, 208, 215, 217, 243, 258, 259B	No	Good	3,229 sf
2L	1/2”x1/2” Decorative Ceramic Wall Tile	102, 175A	No	Good	139 sf
2M	Stone Mortar	Exterior	No	Good	15,000 sf
3A	2’x4’ White Fissured & Pinhole Ceiling Tile	Throughout Except: 102B, 106, 117, 118, 138, 155, 169, 170, 171, 211, 213, 219, 238, 242, 244, 245, 264, 259, 259A	No	Good	8,700 sf
3B	2’x4’ White Pinhole Ceiling Tile	102B, 106, 138, 155, 169, 170, 171, 211, 213, 219, 259, 259A	No	Good	1,471 sf
3C	2’x4’ Fiberboard	117, 118, 238, 242, 244, 245, 264	No	Good	1,340 sf

HA #	Material	Functional Space	ACM	Condition	Quantity
5A	**TSI Hard Pack Elbow (Old)**	**Plenum Throughout**	**Yes: 2-5% Chrysotile**	**Good**	**255 Elbows**
5B	TSI Hard Pack (New)	148	No	Good	10 sf
7A	Brown Covebase Mastic	130, 138, 147, 225	No	Good	261 sf
7B	Beige Covebase Mastic	104A, 229A, 230	No	Good	585 sf
7C	White Ceramic Tile Window Grout	105, 108, 109, 152, 153, 154, 155, 207, 211, 213, 216, 219, 222, 227, 228, 238, 245, 268, 270, 274, 277, 279, 280	No	Good	170 sf
7D	Interior Door Caulk	113	No	Good	10 sf
7E	**Black Mastic**	**Penthouse Plenum (On Duct Seams)**	**Yes: 10-20% Chrysotile**	**Good**	**2,100 sf**
7F	**White Sink Undercoat**	**133, 166**	**Yes: 1-2% Chrysotile**	**Good**	**3 sinks**
7G	**Black Sink Undercoat**	**107, 169, 170, 171, 205, 269**	**Yes: 10-20% Chrysotile**	**Good**	**8 sinks**
7H	White Interior Caulk	107, 117, 130, 205, 214, 215, 217, 243, 269, Elevator	No	Good	159 sf
7I	Expanding Caulk	Exterior	No	Good	140 sf
7J	White Exterior Caulk	Exterior	No	Good	170 sf
7K	Black Exterior Caulk (Door Frame)	Exterior	No	Good	10 sf
8A	Roof Core	Exterior	No	Good	4,339 sf
8B	Black Penetration Mastic	Exterior	No	Good	70 sf

Building 2000
Programming Cost Estimate
Mescalero Service Unit

Asbestos-Containing Material	Quantity of Material (sf)	Unit Cost (per sf)	Logistical Markup	Price
Beige Pebble Sheet Vinyl Flooring	9,951 sf	$4.50	18%	$52,839.81
12”X12” White/Gray Floor Tile & Mastic	596 sf	$3.00	18%	$2,109.84
Tan Carpet Mastic	1,090 sf	$3.50	18%	$4,501.70
Joint Compound	5,551 sf	$3.00	18%	$19,650.54
Texture 1	1,702 sf	$3.00	18%	$6,025.08
TSI Hard Pack Elbow (Old)	255 Elbows	$25.00	18%	$7,522.50
Black Mastic	2,100 sf	$3.50	18%	$8,673.00
White Sink Undercoat	3 sinks	$200.00	18%	$708.00
Black Sink Undercoat	8 sinks	$200.00	18%	$1,888.00
Total				**$103,918.47**

APPENDIX 3
Laboratory Results

FIBERQUANT ANALYTICAL SERVICES

Polarized Light Microscope (PLM) Analysis for Asbestos

JobNumber: 200707426

Client: IHI ENVIRONMENTAL

(PHOENIX OFFICE)
4527 N 16th ST STE 105
PHOENIX, AZ 85016-0000
Office Phone: (602) 776-0300
FAX: (602) 776-0301

 # Samples: 144 PLM **Rec:** 8/28/2007 **Method:** Interim (EPA/600/M4-82-020) PLM analysis for asbestos in bulk smp
Client Job: IHS-Mescalero Bldg# 2000 **PO Number:** 07P-3031
Report Date: 10/1/2007 **Date Analyzed:** 9/27/2007 **Routing Number:** -

Method and Analysis Information: **Fiberquant Internal SOP:** PLMi

Each bulk sample is first dissected under a 7-30x magnification stereo-microscope. This examination is used to determine the general type of sample, how many and what type of layers it has, and initial estimates of fiber types and quantities. Second, liquid media mounts are made of each layer - such mounts may be of selected fibers (used solely for identification purposes) or may be representative of the layer as a whole (used for quantitation purposes). The mounts may be made in a synthetic Canadian balsam, one of several solvents, or in refractive index oils (media of known refractive index). Generally, a variety of different mounts are made: some optimized for fiber visibility, some optimized for fiber identification, and some optimized for fiber quantitation. The mounted slides are then examined at 50-400x magnification on a Nikon Labphot-pol microscope. Optical characteristics are used to identify each observed fiber type; the optical data are contained for each sample on its detail analysis sheet, attached.

Current EPA, NESHAP and OSHA regulations designate a result of <=1 % asbestos as "negative" and >1 % asbestos as "positive". Samples containing layers that have been determined to be "positive" may have to be handled differently during a renovation or demolition than samples whose layers have been determined to be "negative."

The method of fiber analysis and identification is the EPA Interim Method (EPA Method 600/M4-82-020). The method of fiber quantitation is an estimation technique in which the analysts quantitation is routinely calibrated by reference quantitation standards, and which has been shown to be equivalent in precision and accuracy to point counting. Friability is estimated for the purposes of deciding when to point count. Friabilities determined in the field take precedence over those determined in the laboratory. Those sample layers which are friable and estimated by the analyst to contain <= 1% asbestos are point counted using 400 points, and the results listed on the detail analysis sheet. Such point counting is required by NESHAP (National Emission Standards for Hazardous Air Polutants, Nov. 1990) in order to rely on analytical results that are <= 1%. The coefficient of variation for the estimation quantitation technique is 100% in the range 0-5%. This means that PLM analysis is not capable of conclusively determining whether a layer containing close to 1% asbestos is actually "positive" or "negative". For this reason, Fiberquant refers to results where asbestos was detected but <= 1% as "borderline negative", and results where asbestos was >1 % but <= 2% as "borderline positive" to indicate the uncertainty in assigning a "positive" or "negative" label. In the sample summary, a "ND" means that no asbestos was detected during the analysis. A "Tr" or "Trace" of asbestos is defined for our purposes as the detection of several asbestos asbestos fibers during the analysis; an amount essentially at the limit of detection for the method. The limit of detection (the smallest % of asbestos that can be detected) varies greatly depending on the matrix in which the asbestos is found. As little as 0.001% asbestos can be detected in favorable samples, while detection in unfavorable samples may approach the detection limit of 1% stated in the method. During the analysis, the analyst, for Fiberquant identification purposes only, determines the "apparent sample type" and "apparent layer types." It must be emphasized that these types are only what is apparent. Often, different materials appear similar or identical after sampling, so the analyst may assign a type other than what was sampled.

Floor tiles present a special problem for PLM asbestos analysis. Floor tile can contain chrysotile fibers so thin that they cannot be resolved by optical methods. In such a case, we may observe a percentage of asbestos which is lower than the actual percentage, or not observe asbestos at all when some is present. For this reason, floor tiles reported as negative should be confirmed to be negative using transmission electron microscope (TEM) analysis. Likewise, vermiculite insulation materials containing traces of asbestiform asbestos present a problem for routine PLM analysis - the amphiboles are sometimes present in trace amounts inhomogeneously distributed. We recommend a hydro-separation technique for such samples.

Vermiculite-containing samples may contain trace amounts of asbestiform amphibole that may or may not be detected during routine PLM analysis. For this reason, loose vermiculite samples reported as negative should be confirmed to contain no amphibole using hydroseparation techniques.

The samples were analyzed under the following ongoing quality assurance program: Blank samples are routinely analyzed to maintain contamination-free materials. Each analyst is a degreed geologist or mineralogist, and has also completed extensive training specific to asbestos analysis for 1-3 months before being allowed to analyze client samples. Qualitative reference samples are routinely analyzed to assure that analysts can identify asbestos and asbestos-look-alike fibers. Quantitative reference samples are routinely analyzed to calibrate and characterize the estimation procedure. Microscope alignment is checked each day. Refractive index oils are calibrated at least monthly. At least 10% of client samples are re-analyzed from scratch by a different analyst than the original, and any discrepancies are resolved for the sample and similar sample types before the results are reported. All quality checks performed for these samples were in control except as detailed in the "Analytical Notes" below. All analysts participate in interlab round robins and proficiency testing to assure competence. Fiberquant is accredited by NVLAP (#101031) for the analysis of bulk samples for asbestos using PLM. Accreditation does not imply endorsement by the EPA, any other United States governmental agency or any private agency or association. Each lab analysis refers only to the sample tested, and may not, due to the sampling process, be

representative of the material sampled. This report may not be reproduced except in full, without the approval of Fiberquant Analytical Services.

The "Analysis Results" below are the averages for all layers of each sample listed. The "+ Layer" column indicates whether any of the layers in the sample were >1% asbestos. Please refer to each detailed analysis sheet to determine which layer(s) of a sample was(were) positive.

Some results may have been calculated using client supplied data, such as volume or area sampled, for which Fiberquant assumes no liability for accuracy.

Job Analysis Notes:

Single layer sample analysis as per client request. Any material or layer other than that indicated on the chain of custody was not analyzed, even if a suspect material.
The samples listed as 1I1-25, 1I2-26… to 1M3-39 on the COC were labelled 1I1-24, 1I2-25…to 1M3-38 on the sample bags.

PLM Analysis Summary: **Job Number: 200707426** IHS-Mescalero Bldg# 2000

Sample Number / Layer	Color	Apparent Layer Type *	Lab Number	Apparent Sample Type * / *Asbestos Results*	Positive Layer Yes or No
Sample # **IHS-M-2000-1A1-1**			2007-07426- 1	Flooring	Positive Layer? Yes
Layer # 1	off-white	sheet floor		*2-5% chrysotile asbestos*	
Sample # **IHS-M-2000-1A2-2**			2007-07426- 2	Flooring	Positive Layer? Yes
Layer # 1	off-white	sheet floor		*5-10% chrysotile asbestos*	
Sample # **IHS-M-2000-1A3-3**			2007-07426- 3	Flooring	Positive Layer? Yes
Layer # 1	off-white	sheet floor		*2-5% chrysotile asbestos*	
Sample # **IHS-M-2000-1B1-4**			2007-07426- 4	Flooring	Positive Layer? No
Layer # 1	Tan	floor tile		*no asbestos detected*	
Layer # 2	Yellow	mastic		*no asbestos detected*	
Sample # **IHS-M-2000-1B2-5**			2007-07426- 5	Flooring	Positive Layer? No
Layer # 1	Tan	floor tile		*no asbestos detected*	
Layer # 2	Yellow	mastic		*no asbestos detected*	
Sample # **IHS-M-2000-1B3-6**			2007-07426- 6	Flooring	Positive Layer? No
Layer # 1	Tan	floor tile		*no asbestos detected*	
Sample # **IHS-M-2000-1C1-7**			2007-07426- 7	Cementitious	Positive Layer? No
Layer # 1	White	grout		*no asbestos detected*	
Sample # **IHS-M-2000-1C2-8**			2007-07426- 8	Cementitious	Positive Layer? No
Layer # 1	White	grout		*no asbestos detected*	
Sample # **IHS-M-2000-1C3-9**			2007-07426- 9	Cementitious	Positive Layer? No
Layer # 1	White	grout		*no asbestos detected*	
Sample # **IHS-M-2000-1D1-10**			2007-07426- 10	Cementitious	Positive Layer? No
Layer # 1	Gray	grout		*no asbestos detected*	
Sample # **IHS-M-2000-1D2-11**			2007-07426- 11	Cementitious	Positive Layer? No
Layer # 1	Gray	grout		*no asbestos detected*	
Sample # **IHS-M-2000-1D3-12**			2007-07426- 12	Cementitious	Positive Layer? No
Layer # 1	Gray	grout		*no asbestos detected*	
Sample # **IHS-M-2000-1E1-13**			2007-07426- 13	Flooring	Positive Layer? No
Layer # 1	White	floor tile		*no asbestos detected*	
Layer # 2	Clear	mastic		*no asbestos detected*	
Sample # **IHS-M-2000-1E2-14**			2007-07426- 14	Flooring	Positive Layer? No
Layer # 1	White	floor tile		*no asbestos detected*	
Layer # 2	Clear	mastic		*no asbestos detected*	
Sample # **IHS-M-2000-1E3-15**			2007-07426- 15	Flooring	Positive Layer? No
Layer # 1	White	floor tile		*no asbestos detected*	
Layer # 2	Clear	mastic		*no asbestos detected*	
Sample # **IHS-M-2000-1F1-16**			2007-07426- 16	Flooring	Positive Layer? No
Layer # 1	White	sheet floor		*no asbestos detected*	
Sample # **IHS-M-2000-1F2-17**			2007-07426- 17	Flooring	Positive Layer? No
Layer # 1	White	sheet floor		*no asbestos detected*	
Sample # **IHS-M-2000-1F3-18**			2007-07426- 18	Flooring	Positive Layer? No
Layer # 1	White	sheet floor		*no asbestos detected*	
Sample # **IHS-M-2000-1G1-19**			2007-07426- 19	Cementitious	Positive Layer? No
Layer # 1	Gray	grout		*no asbestos detected*	
Sample # **IHS-M-2000-1G2-20**			2007-07426- 20	Cementitious	Positive Layer? No
Layer # 1	Gray	grout		*no asbestos detected*	
Sample # **IHS-M-2000-1G3-21**			2007-07426- 21	Cementitious	Positive Layer? No
Layer # 1	Gray	grout		*no asbestos detected*	
Sample # **IHS-M-2000-1H1-22**			2007-07426- 22	Flooring	Positive Layer? No
Layer # 1	Red	floor tile		*no asbestos detected*	
Layer # 2	Yellow	mastic		*no asbestos detected*	
Sample # **IHS-M-2000-1H2-23**			2007-07426- 23	Flooring	Positive Layer? No
Layer # 1	Red	floor tile		*no asbestos detected*	
Sample # **IHS-M-2000-1H3-24**			2007-07426- 24	Flooring	Positive Layer? No
Layer # 1	Red	floor tile		*no asbestos detected*	
Layer # 2	Yellow	mastic		*no asbestos detected*	
Sample # **IHS-M-2000-1I1-24**			2007-07426- 25	Cementitious	Positive Layer? No
Layer # 1	Gray	grout		*no asbestos detected*	

Sample #	**IHS-M-2000-1I2-25**		2007-07426- 26	Cementitious		Positive Layer? No
Layer # 1	Gray	grout	*no asbestos detected*			
Sample #	**IHS-M-2000-1I3-26**		2007-07426- 27	Cementitious		Positive Layer? No
Layer # 1	Gray	grout	*no asbestos detected*			
Sample #	**IHS-M-2000-1J1-27**		2007-07426- 28	Adhesive/caulk		Positive Layer? No
Layer # 1	Various	mastic	*no asbestos detected*			
Sample #	**IHS-M-2000-1J2-28**		2007-07426- 29	Adhesive/caulk		Positive Layer? Yes
Layer # 1	Various	mastic	*2-5% chrysotile asbestos*			
Sample #	**IHS-M-2000-1J3-29**		2007-07426- 30	Adhesive/caulk		Positive Layer? No
Layer # 1	Yellow	mastic	*no asbestos detected*			
Sample #	**IHS-M-2000-1K1-30**		2007-07426- 31	Flooring		Positive Layer? No
Layer # 1	off-white	floor tile	*no asbestos detected*			
Layer # 2	Yellow	mastic	*no asbestos detected*			
Sample #	**IHS-M-2000-1K2-31**		2007-07426- 32	Flooring		Positive Layer? Yes
Layer # 1	off-white	floor tile	*no asbestos detected*			
Layer # 2	Black	mastic	*>1-2% chrysotile asbestos*			
Sample #	**IHS-M-2000-1K3-32**		2007-07426- 33	Flooring		Positive Layer? Yes
Layer # 1	off-white	floor tile	*no asbestos detected*			
Layer # 2	Black	mastic	*>1-2% chrysotile asbestos*			
Layer # 3	Yellow	mastic	*no asbestos detected*			
Sample #	**IHS-M-2000-1L1-33**		2007-07426- 34	Flooring		Positive Layer? No
Layer # 1	off-white	floor tile	*no asbestos detected*			
Layer # 2	Yellow	mastic	*no asbestos detected*			
Layer # 3	Black	mastic	*no asbestos detected*			
Sample #	**IHS-M-2000-1L2-34**		2007-07426- 35	Flooring		Positive Layer? No
Layer # 1	off-white	floor tile	*no asbestos detected*			
Layer # 2	Yellow	mastic	*no asbestos detected*			
Layer # 3	Black	mastic	*no asbestos detected*			
Sample #	**IHS-M-2000-1L3-35**		2007-07426- 36	Flooring		Positive Layer? No
Layer # 1	off-white	floor tile	*no asbestos detected*			
Layer # 2	Yellow	mastic	*no asbestos detected*			
Layer # 3	Black	mastic	*no asbestos detected*			
Sample #	**IHS-M-2000-1M1-36**		2007-07426- 37	Flooring		Positive Layer? No
Layer # 1	Blue	floor tile	*no asbestos detected*			
Layer # 2	Tan	mastic	*no asbestos detected*			
Sample #	**IHS-M-2000-1M2-37**		2007-07426- 38	Flooring		Positive Layer? No
Layer # 1	Blue	floor tile	*no asbestos detected*			
Layer # 2	Tan	mastic	*no asbestos detected*			
Sample #	**IHS-M-2000-1M3-38**		2007-07426- 39	Flooring		Positive Layer? No
Layer # 1	Blue	floor tile	*no asbestos detected*			
Layer # 2	Tan	mastic	*no asbestos detected*			
Layer # 3	Black	mastic	*no asbestos detected*			
Sample #	**IHS-M-2000-2A1-40**		2007-07426- 40	Wall System		Positive Layer? No
Layer # 1	White	powder	*no asbestos detected*			
Sample #	**IHS-M-2000-2A2-41**		2007-07426- 41	Wall System		Positive Layer? No
Layer # 1	White	powder	*no asbestos detected*			
Sample #	**IHS-M-2000-2A3-42**		2007-07426- 42	Wall System		Positive Layer? No
Layer # 1	White	powder	*no asbestos detected*			
Sample #	**IHS-M-2000-2B1-43**		2007-07426- 43	Wall System		Positive Layer? Yes
Layer # 1	white	texture/joint compound	*>1-2% chrysotile asbestos*			
Sample #	**IHS-M-2000-2B2-44**		2007-07426- 44	Wall System		Positive Layer? No
Layer # 1	white	texture/joint compound	*no asbestos detected*			
Sample #	**IHS-M-2000-2B3-45**		2007-07426- 45	Wall System		Positive Layer? No
Layer # 1	white	texture/joint compound	*no asbestos detected*			
Sample #	**IHS-M-2000-2C1-46**		2007-07426- 46	Wall System		Positive Layer? Yes
Layer # 1	white	texture/joint compound	*>1-2% chrysotile asbestos*			
Sample #	**IHS-M-2000-2C2-47**		2007-07426- 47	Wall System		Positive Layer? No
Layer # 1	white	texture/joint compound	*no asbestos detected*			
Sample #	**IHS-M-2000-2C3-48**		2007-07426- 48	Wall System		Positive Layer? No
Layer # 1	white	texture/joint compound	*no asbestos detected*			
Sample #	**IHS-M-2000-2C4-49**		2007-07426- 49	Wall System		Positive Layer? No
Layer # 1	white	texture/joint compound	*no asbestos detected*			
Sample #	**IHS-M-2000-2C5-50**		2007-07426- 50	Wall System		Positive Layer? No
Layer # 1	white	texture/joint compound	*no asbestos detected*			
Sample #	**IHS-M-2000-2D1-51**		2007-07426- 51	Wall System		Positive Layer? No
Layer # 1	white	texture/joint compound	*no asbestos detected*			
Sample #	**IHS-M-2000-2D2-52**		2007-07426- 52	Wall System		Positive Layer? No
Layer # 1	white	texture/joint compound	*no asbestos detected*			
Sample #	**IHS-M-2000-2D3-53**		2007-07426- 53	Wall System		Positive Layer? No
Layer # 1	white	texture/joint compound	*no asbestos detected*			
Sample #	**IHS-M-2000-2D4-54**		2007-07426- 54	Wall System		Positive Layer? No
Layer # 1	white	texture/joint compound	*no asbestos detected*			
Sample #	**IHS-M-2000-2D5-55**		2007-07426- 55	Wall System		Positive Layer? No
Layer # 1	white	texture/joint compound	*no asbestos detected*			

Sample #	**IHS-M-2000-2E1-56**	2007-07426- 56	Wall System		Positive Layer? No
Layer # 1	White	plaster (top coat)	*no asbestos detected*		
Sample #	**IHS-M-2000-2E2-57**	2007-07426- 57	Wall System		Positive Layer? No
Layer # 1	White	plaster (top coat)	*no asbestos detected*		
Sample #	**IHS-M-2000-2E3-58**	2007-07426- 58	Wall System		Positive Layer? No
Layer # 1	White	plaster (top coat)	*no asbestos detected*		
Sample #	**IHS-M-2000-2E4-59**	2007-07426- 59	Wall System		Positive Layer? No
Layer # 1	White	plaster (top coat)	*no asbestos detected*		
Sample #	**IHS-M-2000-2E5-60**	2007-07426- 60	Wall System		Positive Layer? No
Layer # 1	White	plaster (top coat)	*no asbestos detected*		
Sample #	**IHS-M-2000-2E6-61**	2007-07426- 61	Wall System		Positive Layer? No
Layer # 1	White	plaster (top coat)	*no asbestos detected*		
Sample #	**IHS-M-2000-2E7-62**	2007-07426- 62	Wall System		Positive Layer? No
Layer # 1	White	plaster (top coat)	*no asbestos detected*		
Sample #	**IHS-M-2000-2F1-63**	2007-07426- 63	Wall System		Positive Layer? No
Layer # 1	Tan	plaster (scratch coat)	*no asbestos detected*		
Sample #	**IHS-M-2000-2F2-64**	2007-07426- 64	Wall System		Positive Layer? No
Layer # 1	Tan	plaster (scratch coat)	*no asbestos detected*		
Sample #	**IHS-M-2000-2F3-65**	2007-07426- 65	Wall System		Positive Layer? No
Layer # 1	Tan	plaster (scratch coat)	*no asbestos detected*		
Sample #	**IHS-M-2000-2F4-66**	2007-07426- 66	Wall System		Positive Layer? No
Layer # 1	Tan	plaster (scratch coat)	*no asbestos detected*		
Sample #	**IHS-M-2000-2F5-67**	2007-07426- 67	Wall System		Positive Layer? No
Layer # 1	Tan	plaster (scratch coat)	*no asbestos detected*		
Sample #	**IHS-M-2000-2F6-68**	2007-07426- 68	Wall System		Positive Layer? No
Layer # 1	Tan	plaster (scratch coat)	*no asbestos detected*		
Sample #	**IHS-M-2000-2F7-69**	2007-07426- 69	Wall System		Positive Layer? No
Layer # 1	Tan	plaster (scratch coat)	*no asbestos detected*		
Sample #	**IHS-M-2000-2G1-70**	2007-07426- 70	Wall System		Positive Layer? No
Layer # 1	Gray	stucco	*no asbestos detected*		
Sample #	**IHS-M-2000-2G2-71**	2007-07426- 71	Wall System		Positive Layer? No
Layer # 1	Gray	stucco	*no asbestos detected*		
Sample #	**IHS-M-2000-2G3-72**	2007-07426- 72	Wall System		Positive Layer? No
Layer # 1	Gray	stucco	*no asbestos detected*		
Sample #	**IHS-M-2000-2H1-73**	2007-07426- 73	Cementitious		Positive Layer? No
Layer # 1	Gray	brick	*no asbestos detected*		
Sample #	**IHS-M-2000-2H2-74**	2007-07426- 74	Cementitious		Positive Layer? No
Layer # 1	Gray	brick	*no asbestos detected*		
Sample #	**IHS-M-2000-2H3-75**	2007-07426- 75	Cementitious		Positive Layer? No
Layer # 1	Gray	brick	*no asbestos detected*		
Sample #	**IHS-M-2000-2I1-76**	2007-07426- 76	Cementitious		Positive Layer? No
Layer # 1	Gray	mortar	*no asbestos detected*		
Sample #	**IHS-M-2000-2I2-77**	2007-07426- 77	Cementitious		Positive Layer? No
Layer # 1	Gray	mortar	*no asbestos detected*		
Sample #	**IHS-M-2000-2I3-78**	2007-07426- 78	Cementitious		Positive Layer? No
Layer # 1	Gray	mortar	*no asbestos detected*		
Sample #	**IHS-M-2000-2J1-79**	2007-07426- 79	Wall System		Positive Layer? No
Layer # 1	White	plaster (top coat)	*<=1% chrysotile asbestos*		
Sample #	**IHS-M-2000-2J2-80**	2007-07426- 80	Wall System		Positive Layer? No
Layer # 1	White	plaster (top coat)	*<=1% chrysotile asbestos*		
Sample #	**IHS-M-2000-2J3-81**	2007-07426- 81	Wall System		Positive Layer? No
Layer # 1	White	plaster (top coat)	*<=1% chrysotile asbestos*		
Sample #	**IHS-M-2000-2K1-82**	2007-07426- 82	Cementitious		Positive Layer? No
Layer # 1	White	grout	*no asbestos detected*		
Sample #	**IHS-M-2000-2K2-83**	2007-07426- 83	Cementitious		Positive Layer? No
Layer # 1	White	grout	*no asbestos detected*		
Sample #	**IHS-M-2000-2K3-84**	2007-07426- 84	Cementitious		Positive Layer? No
Layer # 1	White	grout	*no asbestos detected*		
Sample #	**IHS-M-2000-2L1-85**	2007-07426- 85	Cementitious		Positive Layer? No
Layer # 1	White	grout	*no asbestos detected*		
Sample #	**IHS-M-2000-2L2-86**	2007-07426- 86	Cementitious		Positive Layer? No
Layer # 1	White	grout	*no asbestos detected*		
Sample #	**IHS-M-2000-2L3-87**	2007-07426- 87	Cementitious		Positive Layer? No
Layer # 1	White	grout	*no asbestos detected*		
Sample #	**IHS-M-2000-2M1-88**	2007-07426- 88	Cementitious		Positive Layer? No
Layer # 1	Gray	mortar	*no asbestos detected*		
Sample #	**IHS-M-2000-2M2-89**	2007-07426- 89	Cementitious		Positive Layer? No
Layer # 1	Tan	mortar	*no asbestos detected*		
Sample #	**IHS-M-2000-2M3-90**	2007-07426- 90	Cementitious		Positive Layer? No
Layer # 1	Tan	mortar	*no asbestos detected*		
Sample #	**IHS-M-2000-3A1-91**	2007-07426- 91	Ceiling Tile		Positive Layer? No
Layer # 1	off-white	ceiling tile	*no asbestos detected*		
Sample #	**IHS-M-2000-3A2-92**	2007-07426- 92	Ceiling Tile		Positive Layer? No
Layer # 1	off-white	ceiling tile	*no asbestos detected*		

Sample #	**IHS-M-2000-3A3-93**	2007-07426- 93	Ceiling Tile			Positive Layer?	No
Layer # 1	off-white	ceiling tile	*no asbestos detected*				
Sample #	**IHS-M-2000-3B1-94**	2007-07426- 94	Ceiling Tile			Positive Layer?	No
Layer # 1	Tan	ceiling tile	*no asbestos detected*				
Sample #	**IHS-M-2000-3B2-95**	2007-07426- 95	Ceiling Tile			Positive Layer?	No
Layer # 1	Tan	ceiling tile	*no asbestos detected*				
Sample #	**IHS-M-2000-3B3-96**	2007-07426- 96	Ceiling Tile			Positive Layer?	No
Layer # 1	Tan	ceiling tile	*no asbestos detected*				
Sample #	**IHS-M-2000-3C1-97**	2007-07426- 97	Miscellaneous			Positive Layer?	No
Layer # 1	Tan	fiber-board	*no asbestos detected*				
Sample #	**IHS-M-2000-3C2-98**	2007-07426- 98	Miscellaneous			Positive Layer?	No
Layer # 1	Tan	fiber-board	*no asbestos detected*				
Sample #	**IHS-M-2000-3C3-99**	2007-07426- 99	Miscellaneous			Positive Layer?	No
Layer # 1	Tan	fiber-board	*no asbestos detected*				
Sample #	**IHS-M-2000-5A1-100**	2007-07426- 100	Insulation			Positive Layer?	Yes
Layer # 1	Off-white	insulation	*2-5% chrysotile asbestos*	*<=1% crocidolite asbestos*			
Sample #	**IHS-M-2000-5A2-101**	2007-07426- 101	Insulation			Positive Layer?	Yes
Layer # 1	Off-white	insulation	*2-5% chrysotile asbestos*	*<=1% crocidolite asbestos*			
Sample #	**IHS-M-2000-5A3-102**	2007-07426- 102	Insulation			Positive Layer?	Yes
Layer # 1	Off-white	insulation	*2-5% chrysotile asbestos*	*<=1% crocidolite asbestos*			
Sample #	**IHS-M-2000-5B1-103**	2007-07426- 103	Insulation			Positive Layer?	No
Layer # 1	White	insulation	*no asbestos detected*				
Sample #	**IHS-M-2000-5B2-104**	2007-07426- 104	Insulation			Positive Layer?	No
Layer # 1	White	insulation	*no asbestos detected*				
Sample #	**IHS-M-2000-5B3-105**	2007-07426- 105	Insulation			Positive Layer?	No
Layer # 1	White	insulation	*no asbestos detected*				
Sample #	**IHS-M-2000-7A1-106**	2007-07426- 106	Adhesive/caulk			Positive Layer?	No
Layer # 1	Gray	mastic	*no asbestos detected*				
Sample #	**IHS-M-2000-7A2-107**	2007-07426- 107	Adhesive/caulk			Positive Layer?	No
Layer # 1	Brown	mastic	*no asbestos detected*				
Sample #	**IHS-M-2000-7A3-108**	2007-07426- 108	Adhesive/caulk			Positive Layer?	No
Layer # 1	Brown	mastic	*no asbestos detected*				
Sample #	**IHS-M-2000-7B1-109**	2007-07426- 109	Adhesive/caulk			Positive Layer?	No
Layer # 1	Tan	mastic	*no asbestos detected*				
Sample #	**IHS-M-2000-7B2-110**	2007-07426- 110	Adhesive/caulk			Positive Layer?	No
Layer # 1	Tan	mastic	*no asbestos detected*				
Sample #	**IHS-M-2000-7B3-111**	2007-07426- 111	Adhesive/caulk			Positive Layer?	No
Layer # 1	Tan	mastic	*no asbestos detected*				
Sample #	**IHS-M-2000-7C1-112**	2007-07426- 112	Cementitious			Positive Layer?	No
Layer # 1	White	grout	*no asbestos detected*				
Sample #	**IHS-M-2000-7C2-113**	2007-07426- 113	Cementitious			Positive Layer?	No
Layer # 1	White	grout	*no asbestos detected*				
Sample #	**IHS-M-2000-7C3-114**	2007-07426- 114	Cementitious			Positive Layer?	No
Layer # 1	White	grout	*no asbestos detected*				
Sample #	**IHS-M-2000-7D1-115**	2007-07426- 115	Adhesive/caulk			Positive Layer?	No
Layer # 1	white	caulk	*no asbestos detected*				
Sample #	**IHS-M-2000-7D2-116**	2007-07426- 116	Adhesive/caulk			Positive Layer?	No
Layer # 1	white	caulk	*no asbestos detected*				
Sample #	**IHS-M-2000-7D3-117**	2007-07426- 117	Adhesive/caulk			Positive Layer?	No
Layer # 1	white	caulk	*no asbestos detected*				
Sample #	**IHS-M-2000-7E1-118**	2007-07426- 118	Adhesive/caulk			Positive Layer?	Yes
Layer # 1	Black	mastic	*10-20% chrysotile asbestos*				
Sample #	**IHS-M-2000-7E2-119**	2007-07426- 119	Adhesive/caulk			Positive Layer?	Yes
Layer # 1	Black	mastic	*10-20% chrysotile asbestos*				
Sample #	**IHS-M-2000-7E3-120**	2007-07426- 120	Adhesive/caulk			Positive Layer?	No
Layer # 1	Black	mastic	*no asbestos detected*				
Sample #	**IHS-M-2000-7F1-121**	2007-07426- 121	Insulation			Positive Layer?	Yes
Layer # 1	White	coating	*>1-2% chrysotile asbestos*				
Sample #	**IHS-M-2000-7F2-122**	2007-07426- 122	Insulation			Positive Layer?	No
Layer # 1	White	coating	*no asbestos detected*				
Sample #	**IHS-M-2000-7F3-123**	2007-07426- 123	Insulation			Positive Layer?	No
Layer # 1	White	coating	*no asbestos detected*				
Sample #	**IHS-M-2000-7G1-124**	2007-07426- 124	Insulation			Positive Layer?	Yes
Layer # 1	Black	coating	*10-20% chrysotile asbestos*				
Sample #	**IHS-M-2000-7G2-125**	2007-07426- 125	Insulation			Positive Layer?	Yes
Layer # 1	Black	coating	*10-20% chrysotile asbestos*				
Sample #	**IHS-M-2000-7G3-126**	2007-07426- 126	Insulation			Positive Layer?	Yes
Layer # 1	Black	coating	*10-20% chrysotile asbestos*				
Sample #	**IHS-M-2000-7H1-127**	2007-07426- 127	Adhesive/caulk			Positive Layer?	No
Layer # 1	white	caulk	*no asbestos detected*				
Sample #	**IHS-M-2000-7H2-128**	2007-07426- 128	Adhesive/caulk			Positive Layer?	No
Layer # 1	white	caulk	*no asbestos detected*				
Sample #	**IHS-M-2000-7H3-129**	2007-07426- 129	Adhesive/caulk			Positive Layer?	No
Layer # 1	white	caulk	*no asbestos detected*				

Sample #	**IHS-M-2000-7I1-130**		2007-07426- 130	Adhesive/caulk		Positive Layer? No
Layer # 1	Gray	caulk	*no asbestos detected*			
Sample #	**IHS-M-2000-7I2-131**		2007-07426- 131	Adhesive/caulk		Positive Layer? No
Layer # 1	Gray	caulk	*no asbestos detected*			
Sample #	**IHS-M-2000-7I3-132**		2007-07426- 132	Adhesive/caulk		Positive Layer? No
Layer # 1	Gray	caulk	*no asbestos detected*			
Sample #	**IHS-M-2000-7J1-133**		2007-07426- 133	Adhesive/caulk		Positive Layer? No
Layer # 1	Tan	caulk	*no asbestos detected*			
Sample #	**IHS-M-2000-7J2-134**		2007-07426- 134	Adhesive/caulk		Positive Layer? No
Layer # 1	Tan	caulk	*no asbestos detected*			
Sample #	**IHS-M-2000-7J3-135**		2007-07426- 135	Adhesive/caulk		Positive Layer? No
Layer # 1	Gray	caulk	*no asbestos detected*			
Sample #	**IHS-M-2000-7K1-136**		2007-07426- 136	Adhesive/caulk		Positive Layer? No
Layer # 1	Black	caulk	*no asbestos detected*			
Sample #	**IHS-M-2000-7K2-137**		2007-07426- 137	Adhesive/caulk		Positive Layer? No
Layer # 1	Black	caulk	*no asbestos detected*			
Sample #	**IHS-M-2000-7K3-138**		2007-07426- 138	Adhesive/caulk		Positive Layer? No
Layer # 1	Black	caulk	*no asbestos detected*			
Sample #	**IHS-M-2000-8A1-139**		2007-07426- 139	Roofing		Positive Layer? No
Layer # 1	Gray	surface	*no asbestos detected*			
Layer # 2	White	foam	*no asbestos detected*			
Sample #	**IHS-M-2000-8A2-140**		2007-07426- 140	Roofing		Positive Layer? No
Layer # 1	Gray	surface	*no asbestos detected*			
Layer # 2	Black	roof ply	*no asbestos detected*			
Layer # 3	White	foam	*no asbestos detected*			
Sample #	**IHS-M-2000-8A3-141**		2007-07426- 141	Roofing		Positive Layer? No
Layer # 1	Gray	surface	*no asbestos detected*			
Layer # 2	Black	roof ply	*no asbestos detected*			
Layer # 3	White	foam	*no asbestos detected*			
Sample #	**IHS-M-2000-8B1-142**		2007-07426- 142	Roofing		Positive Layer? No
Layer # 1	Black	caulk	*no asbestos detected*			
Sample #	**IHS-M-2000-8B2-143**		2007-07426- 143	Roofing		Positive Layer? No
Layer # 1	Black	caulk	*no asbestos detected*			
Sample #	**IHS-M-2000-8B3-144**		2007-07426- 144	Roofing		Positive Layer? No
Layer # 1	Black	caulk	*no asbestos detected*			

* Apparent Sample Types and Apparent Layer Types are as they appeared to the analyst. Since many types of materials appear similar after sampling damage, the apparent type of material may not be the actual type of material.

Sample IHS-M-2000-1A1-1 **Lab Number** 2007-07426- 1 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 2
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet floor	100	off-white	2	2-5%	2-5%	-	-	-	-
	Total %	100		**Average %**	2-5%	2-5%	-	-	-	-
				Fiber Identification:	chrysotile asbestos	cellulose fiber				

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2	cellulose fiber	W	F	N	N	H	+	U					
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-1A2-2 **Lab Number** 2007-07426- 2 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 2
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet floor	100	off-white	2	5-10%	5-10%	-	-	-	-
	Total %	100		**Average %**	5-10%	5-10%	-	-	-	-
				Fiber Identification:	chrysotile asbestos	cellulose fiber				

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2	cellulose fiber	W	F	N	N	H	+	U					
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-1A3-3 **Lab Number** 2007-07426- 3 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 2
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet floor	100	off-white	2	2-5%	2-5%	-	-	-	-
	Total %	100		**Average %**	2-5%	2-5%	-	-	-	-
				Fiber Identification:	chrysotile asbestos	cellulose fiber				

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2	cellulose fiber	W	F	N	N	H	+	U					
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-1B1-4 **Lab Number** 2007-07426- 4 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	95	Tan	1	n.d.	-	-	-	-	-
2	mastic	5	Yellow	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-1B2-5 **Lab Number** 2007-07426- 5 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	95	Tan	1	n.d.	-	-	-	-	-
2	mastic	5	Yellow	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-1B3-6 **Lab Number** 2007-07426- 6 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	100	Tan	1	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-1C1-7 **Lab Number** 2007-07426- 7 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	White	2	>1-2%	-	-	-	-	-
	Total %	100		**Average %**	>1-2%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-1C2-8 **Lab Number** 2007-07426- 8 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	White	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-1C3-9 **Lab Number** 2007-07426- 9 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	White	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-1D1-10 **Lab Number** 2007-07426- 10 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-1D2-11 **Lab Number** 2007-07426- 11 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-1D3-12 **Lab Number** 2007-07426- 12 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-1E1-13 **Lab Number** 2007-07426- 13 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	99	White	1	n.d.	-	-	-	-	-
2	mastic	1	Clear	1	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-1E2-14 **Lab Number** 2007-07426- 14 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	White	1	n.d.	-	-	-	-	-
2	mastic	2	Clear	1	<=1%	-	-	-	-	-
	Total %	100		**Average %**	<=1%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-1E3-15 **Lab Number** 2007-07426- 15 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	White	1	n.d.	-	-	-	-	-
2	mastic	2	Clear	1	<=1%	-	-	-	-	-
	Total %	100		**Average %**	<=1%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-1F1-16 **Lab Number** 2007-07426- 16 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet floor	100	White	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-1F2-17 **Lab Number** 2007-07426- 17 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet floor	100	White	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-1F3-18 **Lab Number** 2007-07426- 18 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet floor	100	White	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-1G1-19 **Lab Number** 2007-07426- 19 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-1G2-20 **Lab Number** 2007-07426- 20 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-1G3-21 **Lab Number** 2007-07426- 21 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-1H1-22 **Lab Number** 2007-07426- 22 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	99	Red	1	n.d.	-	-	-	-	-
2	mastic	1	Yellow	1	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-1H2-23 **Lab Number** 2007-07426- 23 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	100	Red	1	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-1H3-24 **Lab Number** 2007-07426- 24 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	99	Red	1	n.d.	-	-	-	-	-
2	mastic	1	Yellow	1	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-1I1-24 **Lab Number** 2007-07426- 25 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	>1-2%	-	-	-	-	-
	Total %	100		**Average %**	>1-2%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-1I2-25 **Lab Number** 2007-07426- 26 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-1I3-26 **Lab Number** 2007-07426- 27 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-1J1-27 **Lab Number** 2007-07426- 28 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Various	1	>1-2%	-	-	-	-	-
	Total %	100		**Average %**	>1-2%	-	-	-	-	-
				Fiber Identification:	synthetic fiber (extr					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	synthetic fiber (extruded)	W	E	N	N	H	+	P					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-1J2-28 **Lab Number** 2007-07426- 29 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Various	1	2-5%	>1-2%	-	-	-	-
	Total %	100		**Average %**	2-5%	>1-2%	-	-	-	-
				Fiber Identification:	chrysotile asbestos	synthetic fiber (extr				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	pb/r	1.556	1.549
2	synthetic fiber (extruded)	W	E	N	N	H	+	P					
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-1J3-29 **Lab Number** 2007-07426- 30 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Yellow	1	>1-2%	-	-	-	-	-
	Total %	100		**Average %**	>1-2%	-	-	-	-	-
				Fiber Identification:	synthetic fiber (extr					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	synthetic fiber (extruded)	W	E	N	N	H	+	P					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-1K1-30 **Lab Number** 2007-07426- 31 **Sampled:** 8/14/2007 **Condition:** acceptable

Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid

Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6

Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber					
					Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	99	off-white	1	n.d.	-	-	-	-	-
2	mastic	1	Yellow	1	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-1K2-31 **Lab Number** 2007-07426- 32 **Sampled:** 8/14/2007 **Condition:** acceptable

Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid

Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 5

Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber					
					Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	99.5	off-white	1	n.d.	n.d.	-	-	-	-
2	mastic	0.5	Black	1	>1-2%	<=1%	-	-	-	-
	Total %	100		**Average %**	<=1%	<=1%	-	-	-	-
				Fiber Identification:	chrysotile asbestos	cellulose fiber				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2	cellulose fiber	W	F	N	N	H	+	U					
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-1K3-32 **Lab Number** 2007-07426- 33 **Sampled:** 8/14/2007 **Condition:** acceptable

Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid

Homogeneous No **# Layers** 3 **Pos Layer?** Yes **# Sub-Samples** 8

Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber					
					Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	99	off-white	1	n.d.	n.d.	-	-	-	-
2	mastic	0.5	Black	1	>1-2%	<=1%	-	-	-	-
3	mastic	0.5	Yellow	1	n.d.	>1-2%	-	-	-	-
	Total %	100		**Average %**	<=1%	<=1%	-	-	-	-
				Fiber Identification:	chrysotile asbestos	cellulose fiber				

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2	cellulose fiber	W	F	N	N	H	+	U					
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-1L1-33 **Lab Number** 2007-07426- 34 **Sampled:** 8/14/2007 **Condition:** acceptable

Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid

Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 9

Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber					
					Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98.5	off-white	1	n.d.	-	-	-	-	-
2	mastic	1	Yellow	1	<=1%	-	-	-	-	-
3	mastic	0.5	Black	1	>1-2%	-	-	-	-	-
	Total %	100		**Average %**	<=1%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-1L2-34 **Lab Number** 2007-07426- 35 **Sampled:** 8/14/2007 **Condition:** acceptable

Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid

Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 9

Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber					
					Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	97	off-white	1	n.d.	-	-	-	-	-
2	mastic	1	Yellow	1	<=1%	-	-	-	-	-
3	mastic	2	Black	1	>1-2%	-	-	-	-	-
	Total %	100		**Average %**	<=1%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-1L3-35 **Lab Number** 2007-07426- 36 **Sampled:** 8/14/2007 **Condition:** acceptable

Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid

Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 9

Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber					
					Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98.5	off-white	1	n.d.	n.d.	-	-	-	-
2	mastic	0.5	Yellow	1	<=1%	n.d.	-	-	-	-
3	mastic	1	Black	1	>1-2%	<=1%	-	-	-	-
	Total %	100		**Average %**	<=1%	<=1%	-	-	-	-
				Fiber Identification:	cellulose fiber	synthetic fiber (extr				

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2	synthetic fiber (extruded)	W	E	N	N	H	+	P					
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-1M1-36 **Lab Number** 2007-07426- 37 **Sampled:** 8/14/2007 **Condition:** acceptable

Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid

Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6

Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber					
					Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	Blue	1	n.d.	-	-	-	-	-
2	mastic	2	Tan	1	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-1M2-37 **Lab Number** 2007-07426- 38 **Sampled:** 8/14/2007 **Condition:** acceptable

Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid

Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6

Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber					
					Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	99	Blue	1	n.d.	-	-	-	-	-
2	mastic	1	Tan	1	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-1M3-38 **Lab Number** 2007-07426- 39 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 8
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98.5	Blue	1	n.d.	-	-	-	-	-
2	mastic	1	Tan	1	n.d.	-	-	-	-	-
3	mastic	0.5	Black	1	<=1%	-	-	-	-	-
	Total %	100		**Average %**	<=1%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2A1-40 **Lab Number** 2007-07426- 40 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	powder	100	White	4	>1-2%	-	-	-	-	-
	Total %	100		**Average %**	>1-2%	-	-	-	-	-
				Fiber Identification:	cellulose					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2A2-41 **Lab Number** 2007-07426- 41 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	powder	100	White	4	>1-2%	-	-	-	-	-
	Total %	100		**Average %**	>1-2%	-	-	-	-	-
				Fiber Identification:	cellulose					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2A3-42 **Lab Number** 2007-07426- 42 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	powder	100	White	4	>1-2%	-	-	-	-	-
	Total %	100		**Average %**	>1-2%	-	-	-	-	-
				Fiber Identification:	cellulose					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2B1-43 **Lab Number** 2007-07426- 43 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 4
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	>1-2%	-	-	-	-	-
	Total %	100		**Average %**	>1-2%	-	-	-	-	-
				Fiber Identification:	chrysotile asbestos					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2B2-44 **Lab Number** 2007-07426- 44 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2B3-45 **Lab Number** 2007-07426- 45 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1 none												
2												
3												
4												
5												
6												

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2C1-46 **Lab Number** 2007-07426- 46 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 2
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	>1-2%	-	-	-	-	-
	Total %	100		**Average %**	>1-2%	-	-	-	-	-
				Fiber Identification:	chrysotile asbestos					

Fibers	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1 chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	pb/r	1.556	1.549
2												
3												
4												
5												
6												

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2C2-47 **Lab Number** 2007-07426- 47 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1 none												
2												
3												
4												
5												
6												

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2C3-48 **Lab Number** 2007-07426- 48 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.
Note: sample size was too small - analysis may not be representative of whole.

Sample IHS-M-2000-2C4-49 **Lab Number** 2007-07426- 49 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2C5-50 **Lab Number** 2007-07426- 50 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.
Note: sample size was too small - analysis may not be representative of whole.

Sample IHS-M-2000-2D1-51 **Lab Number** 2007-07426- 51 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2D2-52 **Lab Number** 2007-07426- 52 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.
Note: sample size was too small - analysis may not be representative of whole.

Sample IHS-M-2000-2D3-53 **Lab Number** 2007-07426- 53 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2D4-54 **Lab Number** 2007-07426- 54 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent. Note: sample size was too small - analysis may not be representative of whole.

Sample IHS-M-2000-2D5-55 **Lab Number** 2007-07426- 55 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2E1-56 **Lab Number** 2007-07426- 56 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (top coat)	100	White	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2E2-57 **Lab Number** 2007-07426- 57 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (top coat)	100	White	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2E3-58 **Lab Number** 2007-07426- 58 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (top coat)	100	White	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2E4-59 **Lab Number** 2007-07426- 59 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (top coat)	100	White	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2E5-60 **Lab Number** 2007-07426- 60 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (top coat)	100	White	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2E6-61 **Lab Number** 2007-07426- 61 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (top coat)	100	White	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2E7-62 **Lab Number** 2007-07426- 62 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (top coat)	100	White	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2F1-63 **Lab Number** 2007-07426- 63 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (scratch coat)	100	Tan	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2F2-64 **Lab Number** 2007-07426- 64 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (scratch coat)	100	Tan	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2F3-65 **Lab Number** 2007-07426- 65 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (scratch coat)	100	Tan	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2F4-66 **Lab Number** 2007-07426- 66 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (scratch coat)	100	Tan	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2F5-67 **Lab Number** 2007-07426- 67 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (scratch coat)	100	Tan	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2F6-68 **Lab Number** 2007-07426- 68 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (scratch coat)	100	Tan	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2F7-69 **Lab Number** 2007-07426- 69 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (scratch coat)	100	Tan	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2G1-70 **Lab Number** 2007-07426- 70 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	Gray	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-2G2-71 **Lab Number** 2007-07426- 71 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	Gray	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-2G3-72 **Lab Number** 2007-07426- 72 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	Gray	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-2H1-73 **Lab Number** 2007-07426- 73 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	brick	100	Gray	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-2H2-74 **Lab Number** 2007-07426- 74 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	brick	100	Gray	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-2H3-75 **Lab Number** 2007-07426- 75 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	brick	100	Gray	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-2I1-76 **Lab Number** 2007-07426- 76 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mortar	100	Gray	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-2I2-77 **Lab Number** 2007-07426- 77 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mortar	100	Gray	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-2I3-78 **Lab Number** 2007-07426- 78 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mortar	100	Gray	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-2J1-79 **Lab Number** 2007-07426- 79 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (top coat)	100	White	2	<=1%	-	-	-	-	-
	Total %	100		**Average %**	<=1%	-	-	-	-	-
				Fiber Identification:	chrysotile asbestos					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2J2-80 **Lab Number** 2007-07426- 80 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (top coat)	100	White	2	<=1%	-	-	-	-	-
	Total %	100		**Average %**	<=1%	-	-	-	-	-
				Fiber Identification:	chrysotile asbestos					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2J3-81 **Lab Number** 2007-07426- 81 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (top coat)	100	White	2	<=1%	-	-	-	-	-
	Total %	100		**Average %**	<=1%	-	-	-	-	-
				Fiber Identification:	chrysotile asbestos					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2K1-82 **Lab Number** 2007-07426- 82 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	White	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-2K2-83 **Lab Number** 2007-07426- 83 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	White	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-2K3-84 **Lab Number** 2007-07426- 84 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	White	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-2L1-85 **Lab Number** 2007-07426- 85 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	White	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-2L2-86 **Lab Number** 2007-07426- 86 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	White	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-2L3-87 **Lab Number** 2007-07426- 87 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	White	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-2M1-88 **Lab Number** 2007-07426- 88 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mortar	100	Gray	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-2M2-89 **Lab Number** 2007-07426- 89 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mortar	100	Tan	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-2M3-90 **Lab Number** 2007-07426- 90 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mortar	100	Tan	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-3A1-91 **Lab Number** 2007-07426- 91 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Ceiling Tile Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): perlite, filler, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	ceiling tile	100	off-white	3	30-40%	2-5%	-	-	-	-
	Total %	100		**Average %**	30-40%	2-5%	-	-	-	-
				Fiber Identification:	cellulose fiber	glass fiber				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2	glass fiber	CL	D	Y									
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-3A2-92 **Lab Number** 2007-07426- 92 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Ceiling Tile Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): perlite, filler, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	ceiling tile	100	off-white	3	30-40%	2-5%	-	-	-	-
	Total %	100		**Average %**	30-40%	2-5%	-	-	-	-
				Fiber Identification:	cellulose fiber	glass fiber				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2	glass fiber	CL	D	Y									
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-3A3-93 **Lab Number** 2007-07426- 93 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Ceiling Tile Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): perlite, filler, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	ceiling tile	100	off-white	3	30-40%	2-5%	-	-	-	-
	Total %	100		**Average %**	30-40%	2-5%	-	-	-	-
				Fiber Identification:	cellulose fiber	glass fiber				

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2	glass fiber	CL	D	Y									
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-3B1-94 **Lab Number** 2007-07426- 94 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Ceiling Tile Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, glass, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	ceiling tile	100	Tan	3	20-30%	20-30%	-	-	-	-
	Total %	100		**Average %**	20-30%	20-30%	-	-	-	-
				Fiber Identification:	cellulose fiber	glass fiber				

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2	glass fiber	CL	D	Y									
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-3B2-95 **Lab Number** 2007-07426- 95 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Ceiling Tile Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, glass, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	ceiling tile	100	Tan	3	20-30%	20-30%	-	-	-	-
	Total %	100		**Average %**	20-30%	20-30%	-	-	-	-
				Fiber Identification:	cellulose fiber	glass fiber				

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2	glass fiber	CL	D	Y									
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-3B3-96 **Lab Number** 2007-07426- 96 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Ceiling Tile Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, glass, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	ceiling tile	100	Tan	3	20-30%	20-30%	-	-	-	-
	Total %	100		**Average %**	20-30%	20-30%	-	-	-	-
				Fiber Identification:	cellulose fiber	glass fiber				

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2	glass fiber	CL	D	Y									
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-3C1-97 **Lab Number** 2007-07426- 97 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Miscellaneous Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, glass, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	fiber-board	100	Tan	3	10-20%	40-50%	-	-	-	-
	Total %	100		**Average %**	10-20%	40-50%	-	-	-	-
				Fiber Identification:	cellulose fiber	glass fiber				

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2	glass fiber	CL	D	Y									
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-3C2-98 **Lab Number** 2007-07426- 98 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Miscellaneous Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, glass, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	fiber-board	100	Tan	3	10-20%	40-50%	-	-	-	-
	Total %	100		**Average %**	10-20%	40-50%	-	-	-	-
				Fiber Identification:	cellulose fiber	glass fiber				

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2	glass fiber	CL	D	Y									
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-3C3-99 **Lab Number** 2007-07426- 99 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Miscellaneous Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, glass, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	fiber-board	100	Tan	3	10-20%	40-50%	-	-	-	-
	Total %	100		**Average %**	10-20%	40-50%	-	-	-	-
				Fiber Identification:	cellulose fiber	glass fiber				

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2	glass fiber	CL	D	Y									
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-5A1-100 **Lab Number** 2007-07426- 100 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Insulation Fibrous Mat
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, glass, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	Off-white	3	2-5%	<=1%	30-40%	-	-	-
	Total %	100		**Average %**	2-5%	<=1%	30-40%	-	-	-
				Fiber Identification:	chrysotile asbestos	crocidolite asbesto	glass fiber			

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	db/ly	sb/o	1.556	1.553
2	crocidolite asbestos	BL	C	N	Y	L	-	P	1.700			<1.70	>1.70
3	glass fiber	CL	D	Y									
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-5A2-101 **Lab Number** 2007-07426- 101 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Insulation Fibrous Mat
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, glass, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	Off-white	3	2-5%	<=1%	30-40%	-	-	-
	Total %	100		**Average %**	2-5%	<=1%	30-40%	-	-	-
				Fiber Identification:	chrysotile asbestos	crocidolite asbesto	glass fiber			

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	db/ly	sb/o	1.556	1.553
2	crocidolite asbestos	BL	C	N	Y	L	-	P	1.700			<1.70	>1.70
3	glass fiber	CL	D	Y									
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-5A3-102 **Lab Number** 2007-07426- 102 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Insulation Fibrous Mat
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, glass, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber					
					Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	Off-white	3	2-5%	<=1%	30-40%	-	-	-
	Total %	100		**Average %**	2-5%	<=1%	30-40%	-	-	-
				Fiber Identification:	chrysotile asbestos	crocidolite asbesto	glass fiber			

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	db/ly	sb/o	1.556	1.553
2	crocidolite asbestos	BL	C	N	Y	L	-	P	1.700			<1.70	>1.70
3	glass fiber	CL	D	Y									
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-5B1-103 **Lab Number** 2007-07426- 103 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Insulation Fibrous Mat
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber					
					Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	White	3	5-10%	>1-2%	<=1%	-	-	-
	Total %	100		**Average %**	5-10%	>1-2%	<=1%	-	-	-
				Fiber Identification:	cellulose fiber	synthetic fiber (extr	glass fiber			

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2	synthetic fiber (extruded)	W	E	N	N	H	+	P					
3	glass fiber	CL	D	Y									
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-5B2-104 **Lab Number** 2007-07426- 104 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Insulation Fibrous Mat
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber					
					Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	White	3	5-10%	>1-2%	<=1%	-	-	-
	Total %	100		**Average %**	5-10%	>1-2%	<=1%	-	-	-
				Fiber Identification:	cellulose fiber	synthetic fiber (extr	glass fiber			

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2	synthetic fiber (extruded)	W	E	N	N	H	+	P					
3	glass fiber	CL	D	Y									
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-5B3-105 **Lab Number** 2007-07426- 105 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Insulation Fibrous Mat
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	White	3	5-10%	>1-2%	<=1%	-	-	-
	Total %	100		**Average %**	5-10%	>1-2%	<=1%	-	-	-
				Fiber Identification:	cellulose fiber	synthetic fiber (extr	glass fiber			

	Fibers	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2	synthetic fiber (extruded)	W	E	N	N	H	+	P					
3	glass fiber	CL	D	Y									
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7A1-106 **Lab Number** 2007-07426- 106 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Gray	1	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

	Fibers	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7A2-107 **Lab Number** 2007-07426- 107 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Brown	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

	Fibers	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7A3-108 **Lab Number** 2007-07426- 108 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Brown	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7B1-109 **Lab Number** 2007-07426- 109 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Tan	1	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7B2-110 **Lab Number** 2007-07426- 110 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Tan	1	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7B3-111 **Lab Number** 2007-07426- 111 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Tan	1	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7C1-112 **Lab Number** 2007-07426- 112 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	White	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7C2-113 **Lab Number** 2007-07426- 113 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	White	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7C3-114 **Lab Number** 2007-07426- 114 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	White	2	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7D1-115 **Lab Number** 2007-07426- 115 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	10-20%	-	-	-	-	-
	Total %	100		**Average %**	10-20%	-	-	-	-	-
				Fiber Identification:	synthetic fiber (shr					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	synthetic fiber (shredded)	W	A	N	N	H	+	P					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7D2-116 **Lab Number** 2007-07426- 116 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	10-20%	-	-	-	-	-
	Total %	100		**Average %**	10-20%	-	-	-	-	-
				Fiber Identification:	synthetic fiber (shr					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	synthetic fiber (shredded)	W	A	N	N	H	+	P					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7D3-117 **Lab Number** 2007-07426- 117 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	10-20%	-	-	-	-	-
	Total %	100		**Average %**	10-20%	-	-	-	-	-
				Fiber Identification:	synthetic fiber (shr					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	synthetic fiber (shredded)	W	A	N	N	H	+	P					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7E1-118 **Lab Number** 2007-07426- 118 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 2
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Black	1	10-20%	-	-	-	-	-
	Total %	100		**Average %**	10-20%	-	-	-	-	-
				Fiber Identification:	chrysotile asbestos					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	db/ly	sb/o	1.561	1.553
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7E2-119 **Lab Number** 2007-07426- 119 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 2
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Black	1	10-20%	-	-	-	-	-
	Total %	100		**Average %**	10-20%	-	-	-	-	-
				Fiber Identification:	chrysotile asbestos					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	db/ly	sb/o	1.561	1.553
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7E3-120 **Lab Number** 2007-07426- 120 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Black	1	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7F1-121 **Lab Number** 2007-07426- 121 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Insulation Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 4
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	White	1	>1-2%	-	-	-	-	-
	Total %	100		**Average %**	>1-2%	-	-	-	-	-
				Fiber Identification:	chrysotile asbestos					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7F2-122 **Lab Number** 2007-07426- 122 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Insulation Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	White	1	5-10%	-	-	-	-	-
	Total %	100		**Average %**	5-10%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7F3-123 **Lab Number** 2007-07426- 123 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Insulation Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	White	1	5-10%	-	-	-	-	-
	Total %	100		**Average %**	5-10%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7G1-124 **Lab Number** 2007-07426- 124 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Insulation Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 2
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	Black	1	10-20%	-	-	-	-	-
	Total %	100		**Average %**	10-20%	-	-	-	-	-
				Fiber Identification:	chrysotile asbestos					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7G2-125 **Lab Number** 2007-07426- 125 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Insulation Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 2
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	Black	1	10-20%	-	-	-	-	-
	Total %	100		**Average %**	10-20%	-	-	-	-	-
				Fiber Identification:	chrysotile asbestos					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7G3-126 **Lab Number** 2007-07426- 126 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Insulation Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 2
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	Black	1	10-20%	-	-	-	-	-
	Total %	100		**Average %**	10-20%	-	-	-	-	-
				Fiber Identification:	chrysotile asbestos					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7H1-127 **Lab Number** 2007-07426- 127 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7H2-128 **Lab Number** 2007-07426- 128 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7H3-129 **Lab Number** 2007-07426- 129 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber					
					Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7I1-130 **Lab Number** 2007-07426- 130 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber					
					Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Gray	1	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7I2-131 **Lab Number** 2007-07426- 131 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber					
					Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Gray	1	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7I3-132 **Lab Number** 2007-07426- 132 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Gray	1	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7J1-133 **Lab Number** 2007-07426- 133 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Tan	1	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7J2-134 **Lab Number** 2007-07426- 134 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Tan	1	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7J3-135 **Lab Number** 2007-07426- 135 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Gray	1	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7K1-136 **Lab Number** 2007-07426- 136 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Black	1	5-10%	-	-	-	-	-
	Total %	100		**Average %**	5-10%	-	-	-	-	-
				Fiber Identification:	synthetic fiber (shr					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	synthetic fiber (shredded)	W	A	N	N	H	+	P					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7K2-137 **Lab Number** 2007-07426- 137 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Black	1	5-10%	-	-	-	-	-
	Total %	100		**Average %**	5-10%	-	-	-	-	-
				Fiber Identification:	synthetic fiber (shr					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	synthetic fiber (shredded)	W	A	N	N	H	+	P					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7K3-138 **Lab Number** 2007-07426- 138 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Black	1	5-10%	-	-	-	-	-
	Total %	100		**Average %**	5-10%	-	-	-	-	-
				Fiber Identification:	synthetic fiber (shr					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	synthetic fiber (shredded)	W	A	N	N	H	+	P					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-8A1-139 **Lab Number** 2007-07426- 139 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Roofing Rubbery
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): polymer foam, filler, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	surface	15	Gray	1	n.d.	-	-	-	-	-
2	foam	85	White	1	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-8A2-140 **Lab Number** 2007-07426- 140 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Roofing Rubbery
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 9
Non-Fibrous Components (in approx. decreasing order): polymer foam, bitumen, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	surface	10	Gray	1	n.d.	-	-	-	-	-
2	roof ply	15	Black	1	60-70%	-	-	-	-	-
3	foam	75	White	1	n.d.	-	-	-	-	-
	Total %	100		**Average %**	5-10%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-8A3-141 **Lab Number** 2007-07426- 141 **Sampled:** 8/14/2007 **Condition:** acceptable

Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Roofing Rubbery

Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 9

Non-Fibrous Components (in approx. decreasing order): polymer foam, bitumen, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	surface	10	Gray	1	n.d.	-	-	-	-	-
2	roof ply	15	Black	1	60-70%	-	-	-	-	-
3	foam	75	White	1	n.d.	-	-	-	-	-
	Total %	100		**Average %**	5-10%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-8B1-142 **Lab Number** 2007-07426- 142 **Sampled:** 8/14/2007 **Condition:** acceptable

Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Roofing Sticky

Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3

Non-Fibrous Components (in approx. decreasing order): filler, bitumen, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Black	1	n.d.	-	-	-	-	-
	Total %	100		**Average %**	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-8B2-143 **Lab Number** 2007-07426- 143 **Sampled:** 8/14/2007 **Condition:** acceptable

Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Roofing Sticky

Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3

Non-Fibrous Components (in approx. decreasing order): filler, bitumen, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Black	1	10-20%	-	-	-	-	-
	Total %	100		**Average %**	10-20%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-8B3-144 **Lab Number** 2007-07426- 144 **Sampled:** 8/14/2007 **Condition:** acceptable

Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Roofing Sticky

Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3

Non-Fibrous Components (in approx. decreasing order): filler, bitumen, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber					
					Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Black	1	10-20%	-	-	-	-	-
	Total %	100		**Average %**	10-20%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Fr=Friability: 1=very non-friable; 2= non-friable; 3=friable; 4=highly friable
Colors: B=black;BL=blue;BR=brown;CL=clear;G=Green;GY=gray;OR=orange;OW=off-white;PN=pink;PU=purple;R=red;TN=tan;W=white;Y=yellow;V=various
Fiber Morphology: A=fine fibers/bundles, white, sinewy, flexible; B=fine fibers/bundles, w-br, straight, broomed ends; C=fine fibers/bundles, blue, straight, broomed ends; D=fine to coarse fibers, CL-B, brittle; E=coarse fibers,CL or dyed, striated; F=coarse fibers or splinters, W-BR, ribbon-like; G=lath-like or shards, low aspect ratio, may taper
Iso=isotropism - may be yes or no; Pleo=pleochroism - may be yes or no; Bi=birefringence - may be None, Low, Medium or High
Elg=sign of elongation - may be + or -; Ext=extinction - may be Parallel, Oblique, None or Undulating; Oil=medium used to for dispersion staining
Col Par=dispersion staining colors parallel to the fiber (fiber/halo): b/w=black/white; dg/py=dark gray/pale yellow; vg/y=violet gray/yellow; db/ly=dark blue/lemon yellow; vb/g= vivid blue/gold; sb/o=sky blue/orange; pb/r=pale blue/red; gb/dr=gray blue/dark red; w/b=white/black. Col Perp=same only perpendicular to fiber.
RI Par=refractive index parallel to fiber; RI Perp=refractive index perpendicular to fiber

Uwe Steimle

Analyst: UWE .. STEIMLE

Printed: 01-Oct-07

Original Print Date: 29-Sep-07

Larry S. Pierce

Larry S. Pierce, Approved Accreditation Signatory

APPENDIX 4
Certifications
Landon Johnson
Suzette Numkena

D 9383

THE ASBESTOS INSTITUTE

Certifies that

Landon Johnson

has attended the EPA approved course

AHERA Refresher
Building Inspector
February 2, 2007

and successfully passed the competency exam.

Date of Examination: ***February 2, 2007***

Date of Expiration: ***February 2, 2008***

Director

Approved Instructor

THE ASBESTOS INSTITUTE
8102 North 23rd Avenue
Suite A
Phoenix, AZ 85021-4962
602-864-6564

This training meets all requirements for asbestos accreditation under TSCA Title II.

D 10406

THE ASBESTOS INSTITUTE

Certifies that

Suzette Numkena

has attended the EPA approved course

AHERA Refresher
Building Inspector
June 29, 2007

and successfully passed the competency exam.

Date of Examination: ***June 29, 2007***

Date of Expiration: ***June 29, 2008***

Director

Approved Instructor

THE ASBESTOS INSTITUTE
8102 North 23rd Avenue
Suite A
Phoenix, AZ 85021-4962
602-864-6564

This training meets all requirements for asbestos accreditation under TSCA Title II.

1.0 Summary

For the Mescalero Indian Hospital Expansion & Renovation Project, asbestos materials are located in the structures to be disturbed. Red Eagle JV will utilize Border Demolition (Border Demo) to execute the removal of identified asbestos-containing materials in accordance with the work specified herein. Border Demo is a Texas-licensed asbestos abatement company qualified to remove asbestos-containing building materials (ACBM/ACM). A copy of Border Demo's Abatement License is included in Attachment A. Additionally, Red Eagle JV will utilize AnE Consulting, Inc. to conduct surveys and perform all air monitoring activities. A copy of AnE's State License is also present in Attachment A.

Border Demo shall employ competent persons trained, knowledgeable, and qualified in the techniques of removal, handling, of asbestos-containing and other regulated materials. Border's employees shall comply with all applicable Federal, State, and Local regulations and shall perform the work in accordance with the technical approach outlined below.

Table 1 below lists the proposed work sites included in this project and the types of ACM that are present requiring abatement prior to expansion & renovation:

Table 1. Types of ACM located in Structure Rooms slated for Expansion & Renovation

Room Name/No.	Floor Tile & Mastic	Wall and Ceiling Joint Compound	Ceiling Texture
Laboratory Rm. 130	X	X	
Blood Draw Rm. 127	X	X	X
Triage Rm. 102B	X	X	X
Waiting Room Rm. 102	X	X	X

During the abatement operations, there are several operations that will remain the same during abatement of all types of ACM. In order to reduce redundancy; these are described in Table 2 below.

Table 2. General Information Applicable to Overall Abatement Operations

Controls
Since all of the rooms to be abated are part of a larger structure that is occupied and in use by personnel, each containment/room will be posted as a regulated abatement area during all abatement operations. Only authorized personnel are allowed to enter during while the containment/room is posted. The controls to be used to maintain a safe work area are outlined in Section C below.

Table 2. General Information Applicable to Overall Abatement Operations	
Crew Size	**Job Responsibilities**
Supervisors (1+)	• Perform oversight of all work • Ensure work is conducted in accordance with regulatory requirements and approved methods • Ensure all areas are posted properly prior to work • Ensure all workers hold proper accreditation at the federal and state level • Ensure all works are properly trained • Ensure all workers have donned proper PPE and that all PPE was inspected and is appropriate for use • Ensure that all workers have been trained to Respiratory Protection, have a current medical and fit test and are approved to wear a respirator • Competent Person for Asbestos Abatement work for the project • Ensure all abated ACM waste is placed into approved containers and disposed properly to the correct landfill
Workers (2+)	• Perform abatement in accordance with approved plans, procedures and applicable regulatory practices • Ensure training is maintained and current • Inspect all appropriate PPE prior to use and wear as required • Follow the directions of the Project Safety and Asbestos Competent Person • Notify the Supervisor if any issues or incidents as soon as they occur • Package all asbestos waste in the appropriate containers for disposal
Maintenance Practices	
The following maintenance practices will be followed throughout the course of the abatement work at each site: • Every site will be kept free of accumulated waste, rubbish and/or construction debris • Smoking will not be permitted within the work site • All work areas will be secured at the end of each working day • Coordinate work schedule with Red Eagle JV and Border Demo at the end of each day so work can be planned appropriately and communicated to employees as needed • All equipment (i.e. Negative Air) will be inspected daily to ensure proper working order. All tools and equipment used by workers for abatement will also be inspected each day. • Areas will be wet-wiped down at the end of each shift where abatement has occurred. Areas will be secured and locked (if possible) to avoid intrusion by unauthorized personnel	
Tools and Equipment - General	
Area Postings	• Warning Signs • Asbestos Barrier Tape
Installation of Negative Containments	• Polyethylene Sheeting • Duct Tape • High Efficiency Particulate Air (HEPA) Vacuum w/Hose, Attachments and proper HEPA Filters • Negative Pressure Machine (HEPA Filtered Exhaust Fan) w/Manometer
Personal Air Monitoring	• Air Monitoring Pumps, Cassettes and Calibration Equipment • Extension Cords (OSHA compliant)
General Abatement	• Proper Negative Air Personal Air Filtration System (Half-Face and/or Full-Face) with P-100 HEPA Filter Cartridges • Full-Body Paper Suits • Rubber Boots • Gloves • Utility Knives • Hand Tools (to include Hammers, Crow Bars, etc.) • Hoses

Table 2. General Information Applicable to Overall Abatement Operations	
	• GFCIs • Temporary Work Lights (if needed) • Ladders (if needed) • Absorbent Cloth Rags • Amended Water and/or Removal Encapsulant (Mastic Remover) • Buffers (Electrical and/or Manual) • Polyethylene Bags (6-mil)

A) Description of Activities Where ACM will be Disturbed

The following outlines the methods and additional required information that will be conducted for each type of abatement for the ACM sources listed above. Identified locations of ACM in the buildings listed in Table 1 are provided in Attachment B.

A.1) Floor Tile and Mastic

- OSHA Class: II

  Category II non-friable asbestos-containing material will be abated in a series of full containments in accordance with applicable regulations and these specifications. Remove floor tiling and properly dispose in double-bagged 6-mil polyethylene bags. Spray asbestos-containing material with amended water or removal encapsulant. Allow time for amended water or removal encapsulant to saturate the material. Do not over saturate to cause excess dripping. The asbestos containing materials will be removed from the associated substrate. If amended water is used, spray material repeatedly during the work process to maintain a continuously wet condition. If a removal encapsulant is used, apply in strict accordance with manufacturer's written instruction. The use of mechanical methods for removal will not be permitted. The clean surfaces will be encapsulated after passing a visual inspection conducted by an AnE representative.

- Equipment to be used during removal: hoses, garden sprayer, amended water, mechanical or manual scrapers, buffer, polyethylene bags, tape.

  - Method of Removal: Wet Method (wet scrapping & wet wiping) - Flooring materials shall be removed utilizing manual or mechanical scrappers. All ACM shall be double bagged in six (6) mil polyethylene bags, goosed necked and labeled for transport and disposal.

A.2) Flooring Mastic

- OSHA Class: II
- Following floor tile removal, the mastic will be removed from the substrate. If mastic remover is used it will have a flash point greater than 140 degrees Fahrenheit. The mastic will be removed using a mopping action or with the use of low-speed buffers. The tile will be disposed of as asbestos waste. The clean surfaces will be encapsulated after passing a visual inspection conducted by an AnE representative.
- Equipment to be used during removal: utility knives, duct tape, polyethylene bags,

mechanical or manual scrapers, buffer, garden sprayer, hoses, amended water.

- Method of Removal: Wet methods (wet scrapping & wet wiping) - Flooring materials shall be removed utilizing manual or mechanical scrappers. All ACM shall be double bagged in six (6) mil polyethylene bags, goosed necked and labeled for transport and disposal.

A.3) Wall Joint Compound & Drywall/Plaster

- OSHA Class: II

Category II friable non-surfacing asbestos-containing materials will be abated in a series of enclosures in accordance with applicable regulations and these specifications. Spray asbestos-containing materials with amended water or removal encapsulant to keep dust particulate down and out of the containment air as much as possible. Allow time for amended water or removal encapsulant to saturate the material. Do not over saturate to cause excess dripping. The remaining cleaned building structure surfaces will be encapsulated after passing a visual inspection conducted by an AnE representative.

- Equipment to be used during removal: Hand tools, polyethylene bags, hoses, garden sprayer with amended water.

    - Method of Removal: Wet Method (wet scrapping & wet wiping). All ACM shall be double bagged in six (6) mil polyethylene bags, goosed necked and labeled for transport and disposal.

A.4) Ceiling Texture

- OSHA Class: I

Category I friable surfacing asbestos-containing materials will be abated in a series of full enclosures in accordance with applicable regulations and these specifications. Spray asbestos containing materials with amended water or removal encapsulant. Allow time for amended water or removal encapsulant to saturate the material. Do not over saturate to cause excess dripping. Material will be carefully scrapped utilizing non-aggressive methods in order to keep particulate matter down as much as possible. The cleaned building structure surfaces will be encapsulated after passing a visual inspection conducted by an AnE representative.

- Equipment to be used during removal: Hand tools, polyethylene bags, hoses, garden sprayer with amended water.

    - Method of Removal: Wet Method (wet scrapping & wet wiping). All ACM shall be double bagged in six (6) mil polyethylene bags, goosed necked and labeled for transport and disposal.

B) Methods of Notification of Other Employers at the Worksite

By regulation, since the hospital renovation project will require asbestos abatement, we are required to inform any other employers onsite of the following:

- Nature of the work,
- Regulated area requirements, and

- Measures taken to protect onsite employees.

The following means of notification will be used during asbestos abatement work:

- Red Eagle JV will provide a copy of the accepted Asbestos Abatement Plan to the Mescalero Indian Hospital administration.
- Red Eagle JV will communicate prior to start, and weekly, all scheduled asbestos abatement work with the hospital administration to ensure that they have time to notify and inform the appropriate entities regarding the work.
- Prior to abatement work, each building will be posted as a regulated area with proper Warning Signs. Requirements will be discussed with the hospital administration and competent person(s) on site.
- Measures to protect onsite employees will consist of chain link fencing around the work areas if necessary (locked during off-shift), postings and other such physical barriers.

C) Description of Regulated Areas, Types of Containments, Decontamination Unit and Engineering Controls

C.1 Regulated Areas

Regulated areas are marked-off site where employees work with asbestos, including any adjoining areas where debris and waste from asbestos work accumulates or where airborne concentrations of asbestos exceed, or can possibly exceed, the Permissible Exposure Limits (PEL). Federal regulations require that Class I, II and III asbestos work, or any other operations where airborne asbestos exceeds the PEL, must be performed within regulated areas. Only persons permitted by an employer and required by work duties to be present in regulated areas may enter a regulated area. The designated competent person supervises all asbestos work performed in this area.

All of the proposed abatement areas and nearby adjoining spaces listed in Table 1 above will be designated as Regulated Areas prior to abatement being performed. Red Eagle JV will ensure that our abatement subcontractor, Border Demo, marks off each area in such a manner that minimizes the number of persons within the area and protects persons outside the area from exposure to airborne asbestos. This will be done by use of critical barriers (i.e., polyethylene plastic sheeting placed over all openings to the work area to prevent airborne asbestos from migrating to an adjacent area) and/or negative pressure enclosures to mark off a regulated area. Additional measures will be proper warning postings and "ASBESTOS" danger tape.

Red Eagle JV will ensure that Border Demo supplies a properly-fitted respirator to all workers entering regulated areas. Employees shall not eat, drink, smoke, chew (tobacco or gum), or apply cosmetics in regulated areas.

Border Demo, as the abatement contractor creating or controlling the source of asbestos contamination, must abate any and all hazards. Red Eagle JV will ensure Border Demo assesses daily the enclosure's integrity or the effectiveness of control methods to prevent airborne asbestos from migrating, and communicate any required information to Subcontractors or

Employers with employees working near regulated areas.

As the prime contractor, Red Eagle JV must oversee *all* asbestos work, even though Border Demo will employ the asbestos-designated *Competent Person*. As the supervisor of the entire project, Red Eagle JV will ensure that AnE complies with the standards and ensures that any problems are immediately corrected.

C.2 Types of Containments

The following types of containments will be used on the Mescalero Indian Hospital Expansion & Renovation project:

C.2.a Critical Barriers - Critical Barriers will be installed as follows:

- Clean surfaces by wet cleaning methods and/or HEPA vacuum prior to installation of critical barriers.
- All work areas shall be completely separate from other non-ACM area(s) by installing 6-mil plastic sheeting across doorways, windows, and other areas from floor to ceiling and from wall-to-wall.
- Barrier tape will be placed along the length of the publicly accessible surfaces.
- Locked windows and doorways will be completely covered with sheet plastic barriers at least 4-mil in thickness and sealed with adhesive tape.
- Floor penetrations shall be sealed with expendable foam in accordance with manufacture's specifications prior to installation of floor barrier.

C.2.b Primary Containment Barriers for Category I & II ACM - Primary containment barriers will be established for all interior regulated work areas for the building slated for abatement as follows:

- Stairs or ramps shall not be with unsecured sheet plastic. Where stairs or ramps are uncovered with plastic, provide treads securely held in place, over plastic.
- Do not cover rungs or rails with any type of protective materials.
- Border Demo shall post a sign approximately 20-in. x 14-in. at each entrance to the Work Area displaying the following general legend with letter sizes and styles of a visibility required by 29 CFR 1926.1101:

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

The following measures will also apply to Containment Construction:

C.2.c Flooring for Category II ACM - Where no ACM floor materials will be removed, floors will be covered with minimum of two sheet plastic barriers with a minimum of 6-mil in thickness, sealing with adhesive tape, attach floor plastic to wall up to the height of at least 12-inches above floor, and in locations where the wall will be removed during the abatement, the floor barrier only needs to extend up to the height of 12-inches. For exterior abatement floors shall be covered with a minimum of sheet of 6-mil in thickness from the wall extending six (6) feet. At the end of each abatement shift, drop cloths will be disposed. The cloths will be folded toward the center and packed in disposable bags. The material on the sheets will be kept wet until properly bagged.

View Window: Where feasible, when containment walls which exceed 260 linear feet must be constructed, a viewing window will be included in the wall for each 260 linear feet or fraction of that distance which will permit the viewing of at least 51% of the abatement work area. The window shall be constructed of Plexiglass which measures approximately 18" x 18". In Work Areas where resilient flooring (Category I ACM) is the only ACM is scheduled for removal, cover walls with at least one layer of 6-mil plastic from the floor to a height of six (6) feet. AnE shall install walkways of 6-mil plastic between active removal areas and decontamination units to protect ground surface from tracked material. Additionally, walkways will be installed at the beginning of and removed at the end of each work shift.

C.2.d Wall System for Category II ACM - For Category II abatement, the walls shall be covered with a minimum of two layer of 4-mil plastic sheeting. Each sheet shall overlap the adjoining floor and wall sheets by a minimum of 12-inches.

- Ceiling System (if Required): While not expected to be needed since abatement will take place in individual rooms, the need for a ceiling barrier (inverted prep) shall be determined by Border Demo. If an inverted prep is required, Border Demo shall install at least two layers of 4-mil plastic sheeting.
- Extension of Work Area: If the containment barrier is breached in any manner that could allow the passage of ACM debris or airborne fibers, Border Demo shall add an Impact Area to the Work Area and provide temporary containment required decontaminate the new Work Area as previously described.

C.3 Decontamination Unit: Border Demo shall provide a personnel decontamination unit consisting of a Changing Area, Shower and Equipment Area. All abatement workers, without exception, are required to pass through decontamination before entering and exiting from the Work Area for any reason. Air locks will be present on both sides of the Shower Area. There shall not be any parallel routes for entry or exit. All personnel must decontaminate prior to leaving Work Area.

The Personal Decontamination Unit shall be constructed using a minimum of two layers of 6-mil polyethylene sheeting to cover the floors in the Changing and Decontamination Areas. An additional layer will be added for every shift. Only clear plastic sheeting will be used cover floors.

If the Decontamination Area is immediately adjacent to and within view of occupied areas, Border shall provide a visual barrier of opaque polyethylene sheeting at least 4-mil in thickness so that worker privacy is maintained and work procedures are not visible to building occupants.

C.4 Engineering Controls: For all covered work, Border Demon and AnE will use the following control methods to comply with the PEL and STEL:

- Local exhaust ventilation equipped with HEPA-filter dust collection systems (a high-efficiency particulate air [HEPA] filter is capable of trapping and retaining at least 99.97 percent of all mono-dispersed particles of 0.3 micrometers in diameter).
- Enclosure or isolation of processes producing asbestos dust.
- Ventilation of the regulated area to move contaminated air away from the employees' breathing zone and toward a filtration or collection device equipped with a HEPA filter.
- Feasible engineering and work practice controls to reduce exposure to the lowest possible levels, supplemented by respirators to reach the PEL or STEL or lower.

The following engineering controls and work practices for all operations will be in place regardless of exposure levels during abatement:

- Vacuum cleaners equipped with HEPA filters to collect all asbestos-containing or presumed asbestos-containing debris and dust.
- Wet methods or wetting agents to control employee exposures except when infeasible (e.g., due to the creation of electrical hazards, equipment malfunction, and slipping hazards).
- Prompt cleanup and disposal in leak-tight containers of asbestos-contaminated wastes and debris.

At the site, the following work practices and engineering controls are *prohibited* for all asbestos-related work or work that disturbs asbestos or PACM regardless of measured exposure levels or the results of initial exposure assessments:

- High-speed abrasive disc saws not equipped with a point-of-cut ventilator or enclosure with HEPA-filtered exhaust air.
- Compressed air to remove asbestos or ACM unless the compressed air is used with an enclosed ventilation system.
- Dry sweeping, shoveling, or other dry cleanup of dust and debris.

D) Air Monitoring Plan

This section describes air monitoring services that will be carried out by the third-party independent firm, AnE Consulting Inc. (AnE), to verify that the abatement is performed in compliance with all requirements, and that the building areas beyond the Work Area and the outside environment remain uncontaminated. AnE shall be conducting air monitoring throughout the course of the Work. Airborne filter levels both inside and outside the Work area as actions levels are also defined as well as the action required by AnE if an action level is met or exceeded.

D.1) Personal Monitoring

AnE will perform air monitoring as required to meet OSHA Requirements for maintenance of Time Weighted Averaged (TWA) fiber counts for types of respiratory protection provided. They

will maintain adequate protective equipment and procedures for all abatement employees during the project. Workers with be provided with personally-issued and marked respiratory equipment, approved by NIOSH and suitable for the anticipated asbestos exposure level in the work areas in general accordance with OSHA Standard CFR Title 29, Parts 1910 and 1926. Workers will be provided respiratory protection from the time the first operation involved in the project requires disturbance of asbestos-containing material, debris or dust until completion of the removal and cleaning activities. Respiratory protection during asbestos removal activities will be, at a minimum, half-face, negative pressure respirators equipped with P-100 HEPA filter cartridges.

D.2) Environmental Monitoring

- Baseline Fiber Counts

  Baseline air sampling will be conducted by AnE prior to initiation of abatement work in order to establish background levels of airborne contamination.

- Work Area Isolation

  The purpose of air monitoring will be to isolate potential faults in the Work Area such as:

  - Contamination of the building outside the Work Area with airborne asbestos fibers.
  - Failure of filtration or rupture in the negative pressure system.

Should any of the above occur, Red Eagle JV will ensure that AnE immediately ceases asbestos abatement activities until the fault is corrected. Work will not recommence until authorized by the Red Eagle JV Site Superintendent and Border Demo Asbestos Competent Person.

- Work Area Airborne Fiber Counts

  AnE will monitor airborne fiber counts in the work area while performing abatement. The purpose of the air monitoring will be to detect airborne fiber counts which may significantly challenge the ability of the work area isolation procedures to protect the balance of the building or outside of the building from contamination by airborne fibers. Personal air monitors will be used and worn by all abatement personnel. The Asbestos Supervisor(s) will be responsible for collection and packaging of the sampling media at the end of each shift and for shipping to the laboratory for analysis.

D.3 Clearance

After abatement is complete in a Work Area, AnE shall conduct final clearance air sampling.

- Airborne Fiber Counts

  a. Inside Work Area: Where an enclosure is used, AnE will maintain an average airborne count in the work area of less than 1.0 fibers per cubic centimeter. If the fiber count rises above this figure for any sample taken, the work procedures will be revised to lower fiber counts. If the Time Weighted Average (TWA) fiber count for any work shift or 8-hour period exceeds 0.2 fibers per cubic centimeter, work will be stopped, and the negative air system left in operation. AnE personnel will continue to periodically mist the atmosphere within the work area with amended water and notify RED EAGLE JV. Work will not recommence work until authorized in writing by the Asbestos Competent Person.

  b. If airborne fiber counts exceed 0.2 fibers per cubic centimeter for any period of time,

work will be ceased until the fiber counts fall below 0.1 fibers per cubic centimeter. AnE will notify Red Eagle JV of the exceedance; and work will not be recommenced until authorized in writing by the Asbestos Competent Person.

c. Outside Work Area: If any air sample taken outside of the work area exceeds the action level of 0.01 fibers per cubic centimeter, all work will immediately and automatically be stopped. If the air sample was taken inside the building and outside of critical barriers around the work area, AnE personnel will immediately erect new critical barriers as set forth in Section 3.0 to isolate the affected area from the balance of the building. The following will be performed:

- Erect Critical Barriers at the next existing structural isolation of the involved space (e.g., wall, ceiling, and floor).
- Decontaminate the affected area in accordance with accepted industry standards.
- Respiratory protection as set forth in Section 1.0 shall be worn in affected area until area is cleared for occupancy.
- Leave Critical Barriers in place until completion of work and insure that the operation of the negative pressure system in the work area results in a flow of air from the balance of the building into the affected area.
- If the exit from the clean room of the personnel decontamination unit enters the affected area, establish a new decontamination facility.
- After certification of visual inspection in the work area remove critical barriers separating the work area from the affected area. Final air samples will be taken within the entries area.

- Fiber Type Dispute
  The following procedure will be used to resolve any disputes regarding fiber types when the Work has been stopped due to excessive airborne fiber counts:
  - Air samples will be secured in the same area for analysis by Transmission Electron Microscopy and classified as re-tests.
- Analytical Methods
  The following methods will be utilized in collecting and analyzing air samples:
  - Mixed Cellulose ester filters will be analyzed using NIOSH 7400 method. An AnE representative who has successfully completed a NIOSH 582 course or equivalent and is licensed Air Monitoring Technician will carry out this analysis at a Texas Licensed laboratory located off the job site or onsite.
  - PCM mixed Cellulose ester filters will be used for analysis of samples collected for the duration of the project, including but not limited to clearance sampling.
- Sample Protocols
  The number and volume of air samples taken by the AnE during abatement will generally be in accordance with the abatement schedule. Sample quantities, locations, volumes, and methodologies may vary depending upon the analytical method, project layout and procedures utilized.

D.4 Schedule of Air Samples

Before start of work, AnE will secure the following air samples to establish a baseline before work begins as shown in Tables below.

Table 3. Schedule of Air Samples to be Collected to Establish the Baseline					
Location Sampled	# of Samples	Filter Media 25mm	Detection Limit (Fibers/CC)	Minimum Volume	Rate (LPM)
Outside Abatement Area	1	Cellulose Ester	0.01	1250	2-15
Abatement Area	3	Cellulose Ester	0.01	1250	2-15

The Baseline is an action level expressed in fibers per cubic centimeters that is the highest actual result from the background sampling process. The baseline samples may be collected and archived if deemed necessary by AnE.

During abatement, AnE will provide inspections and air sampling at the areas being abated at Ft. Bliss throughout the course of the project. The number of air samples may vary according building and on authorization of the onsite Project Manager.

Table 4. Schedule of Air Samples to be Collected During Asbestos Abatement					
Location Sampled	Min # of Samples	Filter Media 25mm	Detection Limit (Fibers/CC)	Minimum Volume	Rate (LPM)
Inside Work Area	1/day	Cellulose Ester	0.01	500	2-9.5
Outside Work Area	1/day	Cellulose Ester	0.01	500	2-9.5
Output Negative Pressure System	1/day	Cellulose Ester	0.01	500	2-9.5
Clean Room	1/day	Cellulose Ester	0.01	500	2-9.5

If airborne fiber counts exceed allowed limits, additional samples will be taken as necessary to monitor fiber levels and confirm source(s).

Interior Clearance Samples: Upon successful completion of visual inspection of interior abatement areas performed by the Ft. Bliss Environmental Asbestos and Lead Program Manager, followed by encapsulation of the abatement area and a drying period, AnE will take the following samples:

Table 5. Schedule of Air Samples to be Collected After Asbestos Abatement				
Location Sampled	Min # of Samples	Filter Media 25mm	Minimum Volume	Rate (LPM)
Each Enclosure	4	Cellulose Ester	1,250	2-15

Clearance will be given to a Work Area, when all samples collected and analyzed by PCM are equal to or below 0.01 fibers per cubic centimeter.

Laboratory Testing:
AnE shall arrange for laboratory analysis or perform field analysis of the collected air samples. A field laboratory will be setup at the project site so that verbal reports on air sample analysis can be obtained immediately after collection.

Reports will be provided to Red Eagle JV for review. These will include air monitoring data and relevant information on work being conducted such as work hours, number of workers, procedures utilized, discrepancies and corrective measures, and containment methods and construction.

E) PPE

E.1) Respiratory Protection

Border Demo shall instruct and train each worker involved in asbestos abatement proper use of respirators and shall require that each worker always wear a respirator and follow the respiratory protection program in accordance with § 1910.134 (b) through (d) (except (d)(1)(iii)), and (f) through (m), which covers each employee required to use a respirator. Each worker shall have a current medical and fit test for the respirator they wear. The Red Eagle JV SSHO shall ensure that the respirators properly fit on the face of each worker. Respirators shall be worn in the work area from the start of any abatement operation which may cause airborne asbestos fibers particles until the work area is completely decontaminated. All Border Demo personnel shall use respiratory protection appropriate for the fiber concentration encountered in the work place or as required for other toxic or oxygen-deficient situations encountered.

The minimum respiratory protection for removal of ACM within the structures shall be half-face air purifying respirators (APR) for Category I and Powered Air Purifying Respirators (PAPRs) for Category II. No reduction of the minimum specified respiratory protection will be considered. Certification that the workers have been fit tested in accordance with current OSHA guidelines will be provided as part of the Worker Documentation. Border Demo shall provide, at a minimum, P100 HEPA filters cartridges with NIOSH and MSHA Certification for "Radionuclides, Radon Daughters, Mists, Dust, Fumes, including Asbestos-Containing Dusts and Mists" and color coded in accordance with ANSI Z228.2 (1980). In this case, cartridges that have each section of the combination canister labeled with the appropriate color code and NIOSH/MSHA Certification shall be provided.

E.2) Protective Clothing

During abatement activities, Border Demo shall provide abatement workers with full-body coveralls, footwear, disposable head covers, hard hats, full eye protection, and gloves and require they be worn in the work area. Additionally, a sufficient number of all PPE shall be provided for required changes. Border Demo shall provide additional protective supplies and equipment as required by applicable regulations. AnE shall require abatement workers to decontaminate through a three-chambered, wet decontamination unit which is constructed as part of the containment after abatement work is complete before they leave the site.

F) Housekeeping Procedures

To ensure that no contamination spreads beyond the posted areas during abatement, Border Demo will conduct the following:

F.1) Wet Cleaning

Proper housekeeping and cleaning will involve the use of wet cleaning or wet-wiping practices to pick up asbestos fibers. Dry sweeping or dusting can result in asbestos fibers being re-suspended

into the building's air and therefore should not be used. Once wet cloths, rags, or mops have been used to pick up asbestos fibers, they should be properly discarded as asbestos waste while still wet. They should not be allowed to dry out, because the collected fibers might be released at some later time when disturbed. All cleaning material will be placed in plastic bags after use.

F.2) Use of HEPA Vacuums

The use of special vacuum cleaners, commonly referred to as HEPA (high efficiency particulate air) vacuums, may be preferable to wet cleaning in certain situations. These vacuums are equipped with filters designed to remove very small particles or fibers—such as asbestos—by filtering those particles from the air passing through the vacuum. Because the exhaust air from an ordinary vacuum cleaner is not filtered sufficiently, it is possible for tiny asbestos fibers to pass through the filter and back into the building air.

It is important for O&M workers to use caution when emptying HEPA vacuums and changing the filters because exposures could result from such activities. Before emptying the HEPA vacuums, workers should move the HEPA vacuum to a physically isolated area of the facility and put on proper personal protective equipment before emptying the dust and debris into properly labeled, sealed, and leak-tight containers for disposal as asbestos-containing waste. When custodial workers are not trained to work with ACM, trained maintenance workers can be used to empty the HEPA vacuums and change their filters.

G) Hygiene Facilities and Practices

During abatement activities, Border shall provide a personnel decontamination unit consisting of a Changing Area, Shower and Equipment Area. All abatement personnel, without exception, are required to pass through this decontamination unit as they enter and exit the Work Area for any purpose. The units will have air locks on both sides of the Shower Area. No parallel routes for entry or exit shall be allowed. All personnel must decontaminate prior to leaving Work Area. Removed PPE will be double bagged in provided disposal bins within these areas for subsequent disposal.

H) Competent Person and Employee Training

H.1) Asbestos Competent Person Training

Border shall provide the asbestos competent for supervision of the asbestos abatement work at Ft. Bliss. The Competent Person shall have received training in a comprehensive course for Supervisors that meets the criteria of EPA's Model Accredited Plan in accordance with 40 CFR part 763, Subpart E, Appendix C. This person shall hold the following training applicable to Class I and II work:

- Training to all aspects of Asbestos removal and handling, including:
  - Abatement
  - Installation, removal and handling containments
  - Contents of the OSHA Standard and proof of training
  - Identification of asbestos
  - Removal procedures
  - Practices for hazard reduction

H.2) Employee Training:

- All abatement personnel will be training to the accepted Asbestos Abatement Plan, and hold the required training as provided during accreditation by the Texas Department of State Health Services (TDSHS). Such course shall include "hands-on" training and shall take at least 8 hours.
- All employees shall be trained prior to work, provide evidence of training, and maintain training annually.
- For the Class I and II work that will be performed on the project, personnel training will include the use of critical barriers (or equivalent isolation methods) and/or negative pressure enclosures in line with the required EPA Model Accreditation Map asbestos abatement workers training (40 CFR Part 763, Subpart E, Appendix C).
- Any other additional training that is required for Class II work (applicable to Ft. Bliss structures).
- Abatement of flooring material will occur during the course of the project; therefore, personnel training shall include:
  - Methods of recognizing asbestos
  - Health effects associated with asbestos exposure
  - Relationship between smoking and asbestos in producing lung cancer
  - Nature of operations that could lead to an exposure and the necessary controls
  - The purpose, proper use, fit instructions and limitations of respirators
  - Appropriate work practices
  - Medical surveillance program requirements
  - Applicable OSHA standard
  - POC for the Public Health organizations that provide programs to stop smoking
  - Requirements of postings and labeling

I) Medical Surveillance

Border Demo maintains a medical surveillance program for all its employees in accordance with OSHA requirements (i.e. engage in 30 or more days of Class I, II, and/or III work or are exposed at or above a PEL). RED EAGLE JV will obtain verification of the Border Demo asbestos workers medical surveillance and fit test records to ensure compliance, including verification that the program is being administered under the supervision of a licensed physician, at no cost to the employee. Records will be provided, if requested.

J) Waste Generation, Containerization, Transportation, Disposal (including Recordkeeping)

Asbestos-containing waste and contaminated debris generated from abatement activities at the site will be placed directly into double-lined transport containers. Asbestos-containing waste and contaminated debris generated from all buildings will be bagged or wrapped using 6-mil polyethylene disposal bags or six-mil polyethylene sheeting. Red Eagle JV will ensure the bags are not overfilled and are securely sealed via "goose necking" to prevent accidental opening or leakage during handling prior to and during disposal. Bags will be placed in a dumpster that has been lined with 6-mil polyethylene sheeting or a pre-fitted liner for transportation to the landfill. Bagged and wrapped materials will be removed from the regulated work area(s) daily.

Containerized waste will be carefully loaded in fully-enclosed trucks or other appropriate containers

for transport. Care will be exercised before and during transport to ensure that no unauthorized persons have access to the waste material. The roll-off containers will be provided by and be transported by Border Demo. Disposal of asbestos containing waste shall be at:

Facility Name – Otero-Greentree Regional Landfill
4285 Highway 54 S, Alamogordo, NM 88310

Border will generate all required documentation generated on the project including the amount, type and location of ACM abated, packaging and labeling information, as well as transportation and disposal records. These will be turned over to the Red Eagle JV Site Superintendent for inclusion into the Final Waste Recycling and Diversion Report to be prepared and submitted at the end of the project.

K) Security, Fire and Medical Emergency Response

The following contact information shall be posted in the event of an emergency or security issue during the abatement work at the site:

- BIA Law Enforcement (Mescalero Police Department): (575) 464-4451
- Mescalero Fire Department: (575) 464-3473

Medical Emergency Response: In the event of a personnel emergency, site personnel shall call 911. Red Eagle JV shall notify employees of any medical emergency or situation within 15-minutes of the incident, and provide all required incident response in accordance with Red Eagle JV Health and Safety Incident Management process.

ATTACHMENT A

STATE LICENSES
(BORDER DEMO AND AnE CONSULTING)

Texas Department of State Health Services

ANE CONSULTING INC

is certified to perform as an

Asbestos Consultant Agency

in the State of Texas and is hereby governed by the rights, privileges and responsibilities set forth in Texas Occupations Code, Chapter 1954 and Title 12, Texas Administrative Code, Chapter 295 relating to Texas Asbestos Health Protection, as long as this license is not suspended or revoked.

License Number: 100441

Expiration Date: 02/01/2027

Jennifer Shuford, MD, MPH,
Commissioner of Health

Control Number: 97734

(Void After Expiration Date)

VOID IF ALTERED NON-TRANSFERABLE

SEE BACK

Texas Department of State Health Services

ANE CONSULTING INC

is certified to perform as an

Asbestos Laboratory

PCM

in the State of Texas and is hereby governed by the rights, privileges and responsibilities set forth in Texas Occupations Code, Chapter 1954 and Title 12, Texas Administrative Code, Chapter 295 relating to Texas Asbestos Health Protection, as long as this license is not suspended or revoked.

License Number: 300407

Expiration Date: 12/01/2026

Jennifer Shuford, MD, MPH,
Commissioner of Health

Control Number: 96864

(Void After Expiration Date)

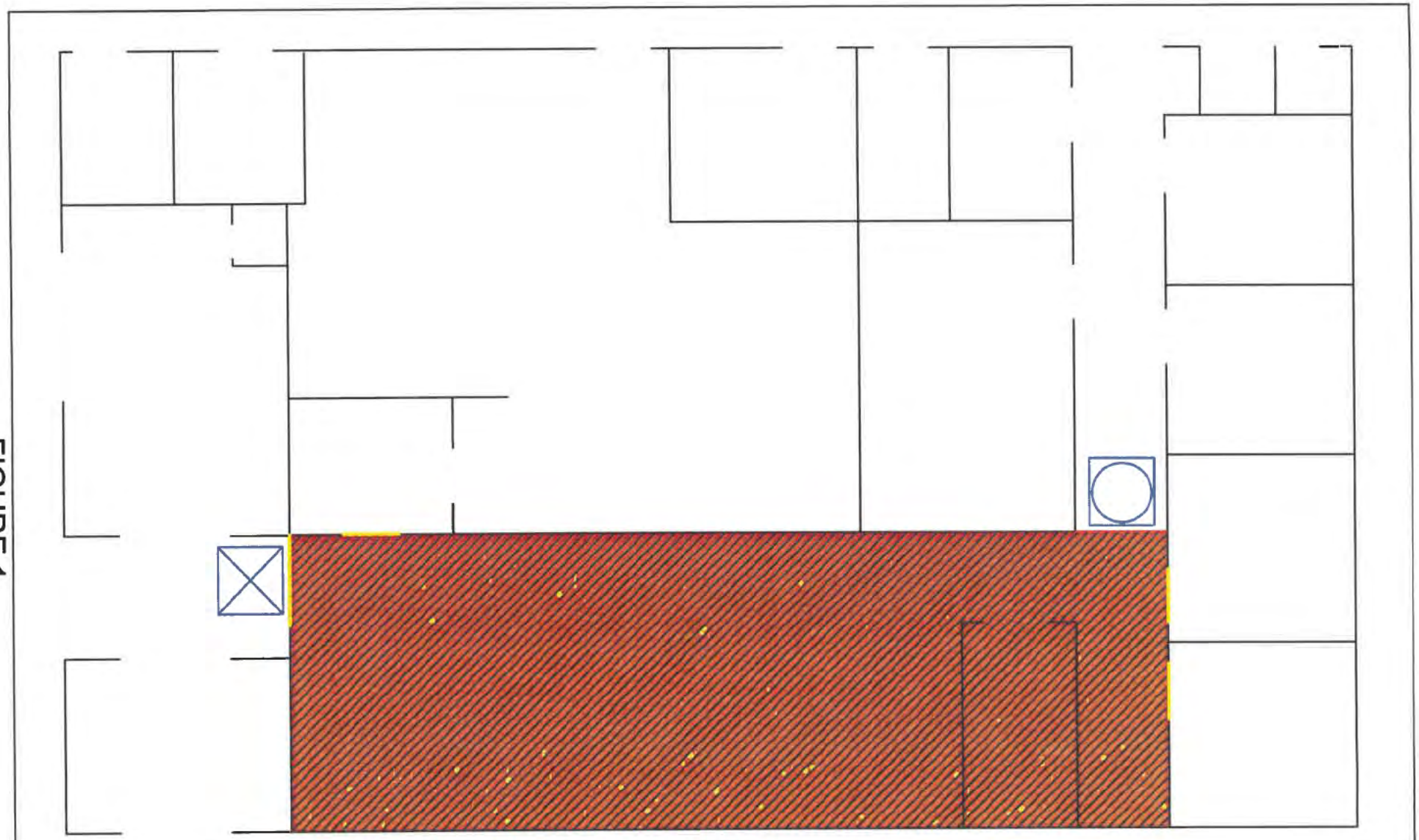
VOID IF ALTERED NON-TRANSFERABLE

SEE BACK

ATTACHMENT B

Identified ACM Locations in the Structures at the Mescalero Indian Hospital (Information taken from previously completed Surveys provided)

FIGURE 1



LEGEND

OVERVIEW - AREA OF ABATEMENT

- Area of Abatement
- Critical Barrier
- Decontamination Unit with Shower/Clean Room
- HEPA Exhaust Filtration System

ANE Consulting Inc

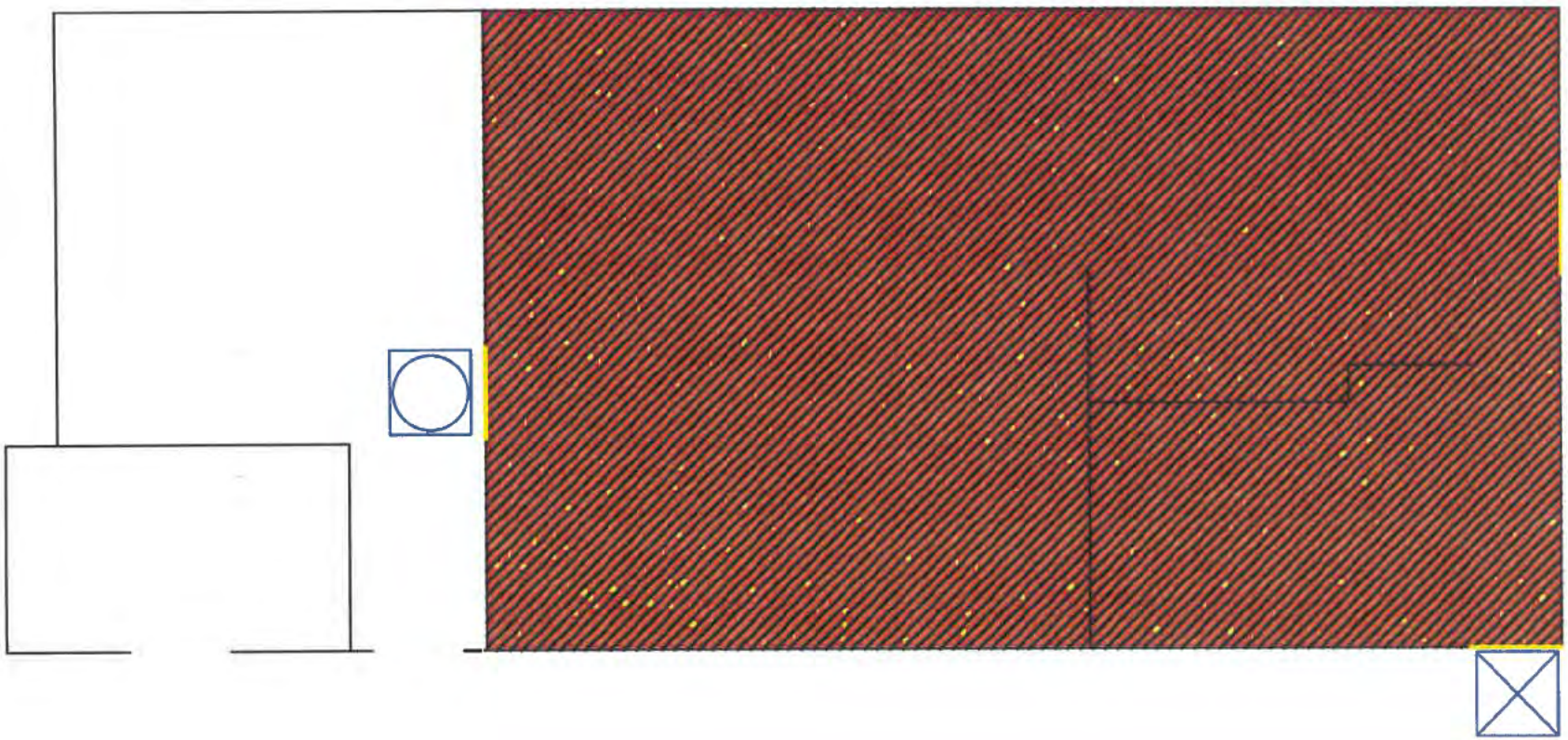
6595 Strahan Road
El Paso, TX 79932
PH. 915-243-7088
FAX 915-243-7089

Project
Mescalero Indian Hospital
Room 102/102A/102B - 1st Floor
Expansion & Renovation Project

ASBESTOS ASSESSMENT

SCALE: Zoomed Section	DRAWN BY: C.ESCAJEDA	DATE: 04/29/2025
DWG:	REV. 00/00/00	SHEET 1 OF 2

FIGURE 2



LEGEND

OVERVIEW - AREA OF ABATEMENT

- Area of Abatement
- Critical Barrier
- Decontamination Unit with Shower/Clean Room
- HEPA Exhaust Filtration System

ANE Consulting Inc

6595 Strahan Road
El Paso, TX 79932
PH. 915-243-7068
FAX 915-243-7089

Project
Mescalero Indian Hospital
Room 127/130 - 1st Floor
Expansion & Renovation Project

ASBESTOS ASSESSMENT

SCALE: Zoomed Section	DRAWN BY: C.ESCAJEDA	DATE: 04/29/2025
DWG:	REV. 00/00/00	SHEET 2 OF 2

RED EAGLE JOINT VENTURE
A WARFEATHER LLC / ROSS GROUP JV

4-Week Lookahead Schedule

Starting Date (Monday): 5/19/2025

06467.172 Mescalero Indian Hospital Expansion &

			Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
	Temporary Wall Systems(TWS)	**On site % Complete**	5/18	5/19	5/20	5/21	5/22	5/23	5/24	5/25	5/26	5/27	5/28	5/29	5/30	5/31	6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14
1	TWS Install ICRA Panels	100.00%																												
		0.00%																												
		0.00%																												
	Border Demolition		Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
			5/18	5/19	5/20	5/21	5/22	5/23	5/24	5/25	5/26	5/27	5/28	5/29	5/30	5/31	6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14
2	On site to begin set up for Abatement	0.00%				X	X	X																						
	Begin Abatement	0.00%										X	X	X	X			X	X	X	X	X								
	Begin Demo	0.00%																							X	X	X	X	X	
	Abate Security/148A	0.00%													X	X	X	X	X	X	X	X								
	Stone Electric		Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
			5/18	5/19	5/20	5/21	5/22	5/23	5/24	5/25	5/26	5/27	5/28	5/29	5/30	5/31	6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14
3	Abatement Prep/Make-Safe	100.00%																												
	Begin Demo	10.00%																							X	X	X	X	X	
		0.00%																												
	Total Mecnanical, Inc.		Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
			5/18	5/19	5/20	5/21	5/22	5/23	5/24	5/25	5/26	5/27	5/28	5/29	5/30	5/31	6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14
3	Prep for Abatement/Make-Safe	100.00%																												
	Plumbing and Mechanical Prep	100.00%		X																										
	Begin Mechanical Demo	0.00%																							X	X	X	X	X	
	Begin Plumbing Demo	0.00%																							X	X	X	X	X	
	Alliance Fire Protection		Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
			5/18	5/19	5/20	5/21	5/22	5/23	5/24	5/25	5/26	5/27	5/28	5/29	5/30	5/31	6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14
4	Install Sprinkler Cages	100.00%				X																								
		0.00%																												
		0.00%																												

RED EAGLE
JOINT VENTURE
A WARFEATHER LLC / ROSS GROUP JV

DAILY CONSTRUCTION PROGRESS

Unclassified

Description
Begin Placing ICRA

Taken Date
05/17/2025 at 09:00 am

Upload Date
05/18/2025 at 08:50 am

Uploaded By
Guy Smith

File Name
20250517_090046.jpg



Unclassified

Description
Icra Panel @ Corridor 141.
User Side

Taken Date
05/17/2025 at 08:59 am

Upload Date
05/18/2025 at 08:50 am

Uploaded By
Guy Smith

File Name
20250517_085918.jpg



Unclassified

Description
Icra Panel @ Security and Main Entrance

Taken Date
05/17/2025 at 08:59 am

Upload Date
05/18/2025 at 08:50 am

Uploaded By
Guy Smith

File Name
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Unclassified

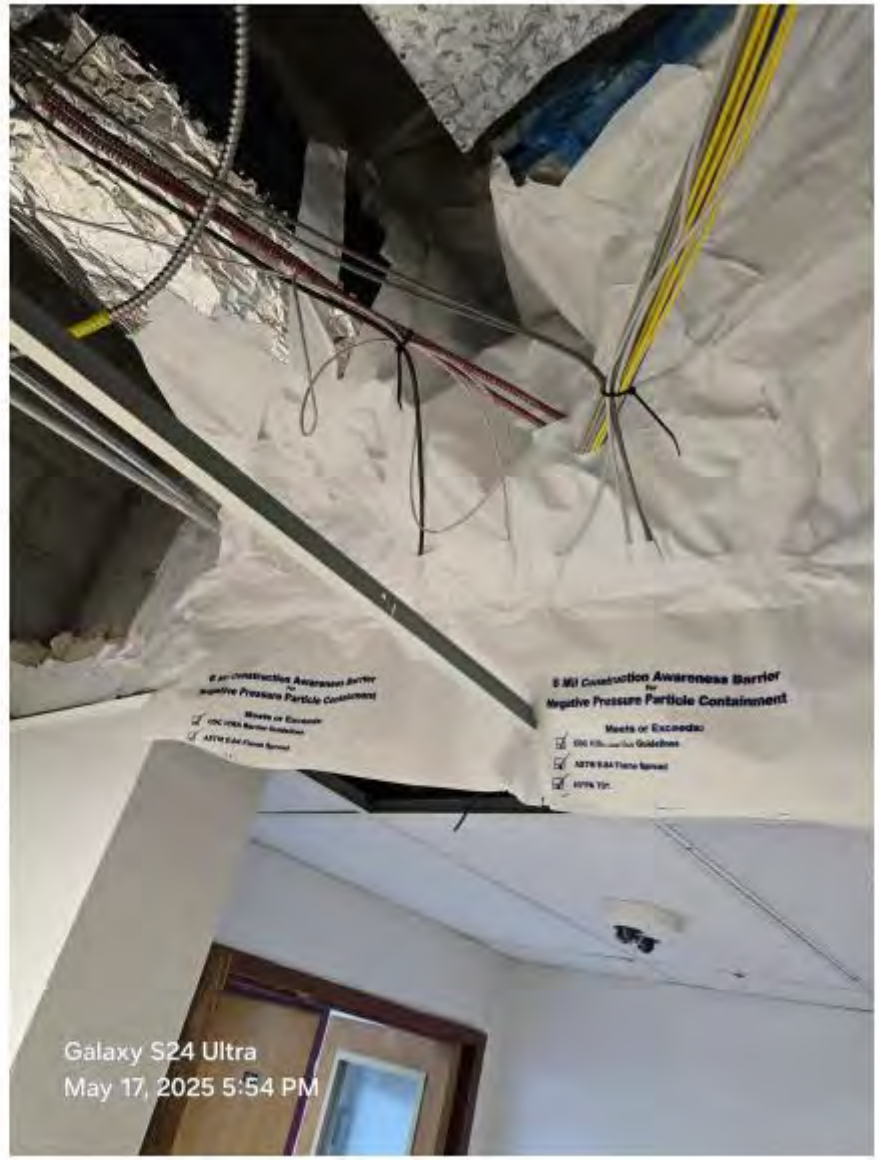
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Taken Date
05/17/2025 at 05:54 pm

Upload Date
05/18/2025 at 08:47 am

Uploaded By
Guy Smith

File Name
20250517_175433.jpg



Unclassified

Description

Taken Date
05/17/2025 at 06:23 pm

Upload Date
05/18/2025 at 08:47 am

Uploaded By
Guy Smith

File Name
20250517_182332.jpg



HVAC

Description
Cover Vents with 6mil Plastic

Taken Date
05/20/2025 at 07:05 am

Upload Date
05/20/2025 at 08:06 am

Uploaded By
Guy Smith

File Name
IMG_2025_05_20_07_05...

Location
Corridor 106



HVAC

Description
Cover Vents with 6mil Plastic

Taken Date
05/20/2025 at 07:06 am

Upload Date
05/20/2025 at 08:34 am

Uploaded By
Guy Smith

File Name
IMG_2025_05_20_07_06...

Location
105a



HVAC

Description
Cover Vents with 6mil Plastic

Taken Date
05/20/2025 at 07:08 am

Upload Date
05/20/2025 at 08:19 am

Uploaded By
Guy Smith

File Name
IMG_2025_05_20_07_08...

Location
105



HVAC

Description
2000CFM Air scrubber/neg Air machine

Taken Date
05/20/2025 at 07:10 am

Upload Date
05/20/2025 at 08:31 am

Uploaded By
Guy Smith

File Name
IMG_2025_05_20_07_10...

Location
108



HVAC

Description
Attach 12" hose to machine and place in cutout in window to vent Outside

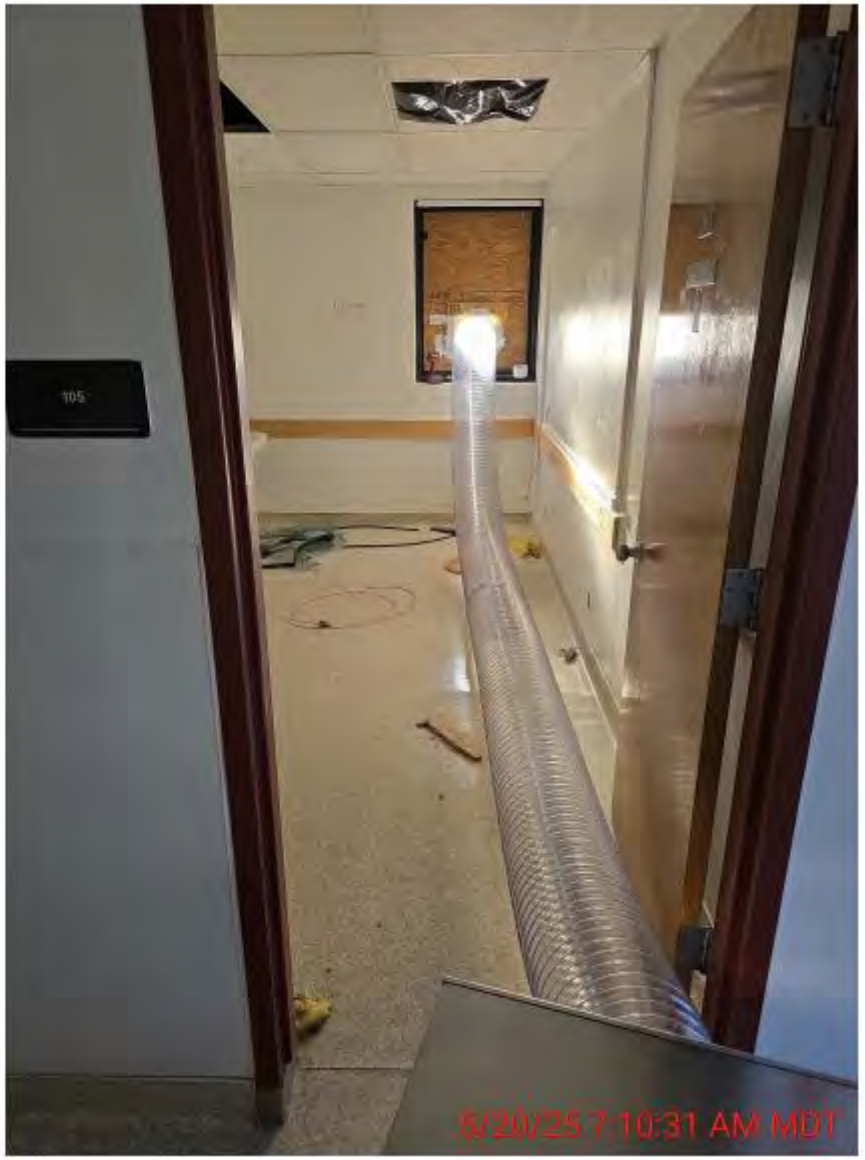
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05/20/2025 at 07:10 am

Upload Date
05/20/2025 at 08:31 am

Uploaded By
Guy Smith

File Name
IMG_2025_05_20_07_10...

Location
105



Unclassified

Description
Protecting sprinkler heads fro Damage during Abatement and Demo

Taken Date
05/21/2025 at 01:41 pm

Upload Date
05/21/2025 at 03:32 pm

Uploaded By
Guy Smith

File Name
20250521_134157.jpg



Unclassified

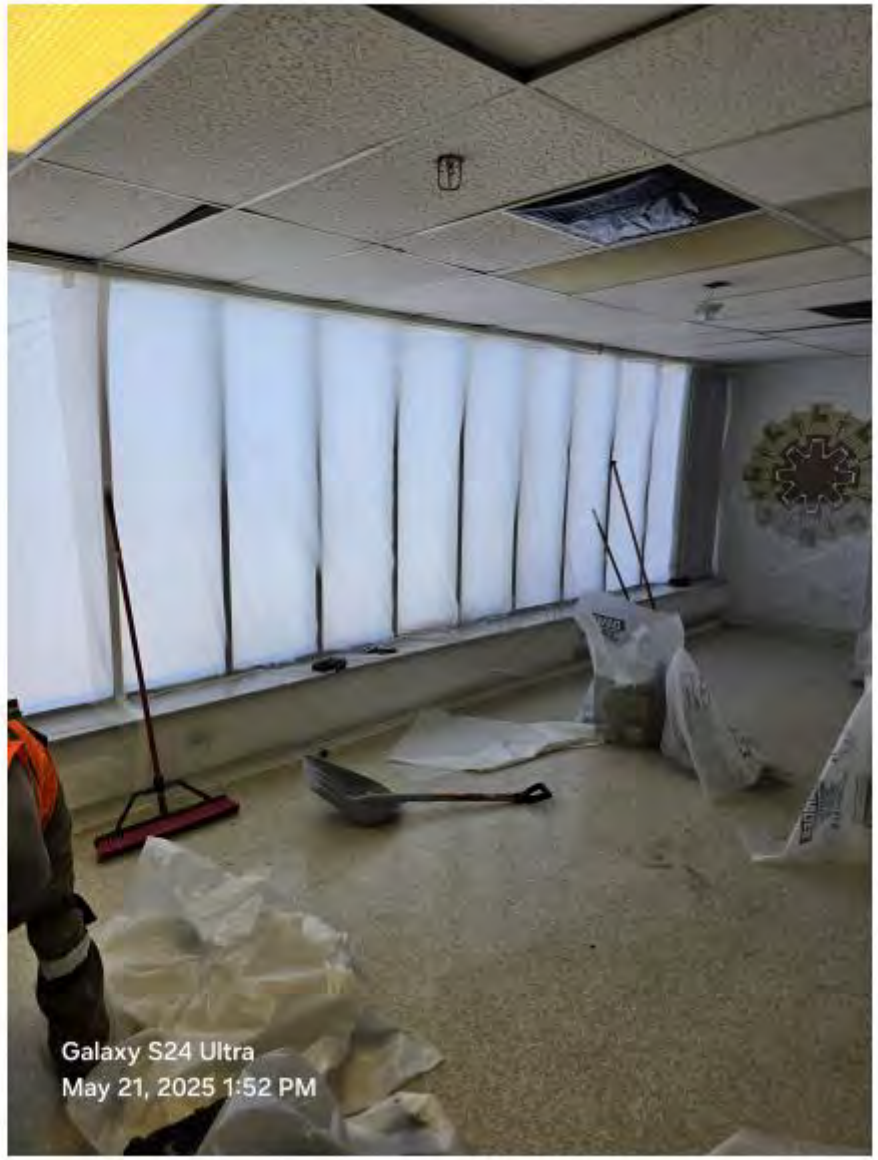
Description
Beginning prep for Abatement

Taken Date
05/21/2025 at 01:52 pm

Upload Date
05/21/2025 at 03:32 pm

Uploaded By
Guy Smith

File Name
20250521_135233.jpg



Unclassified

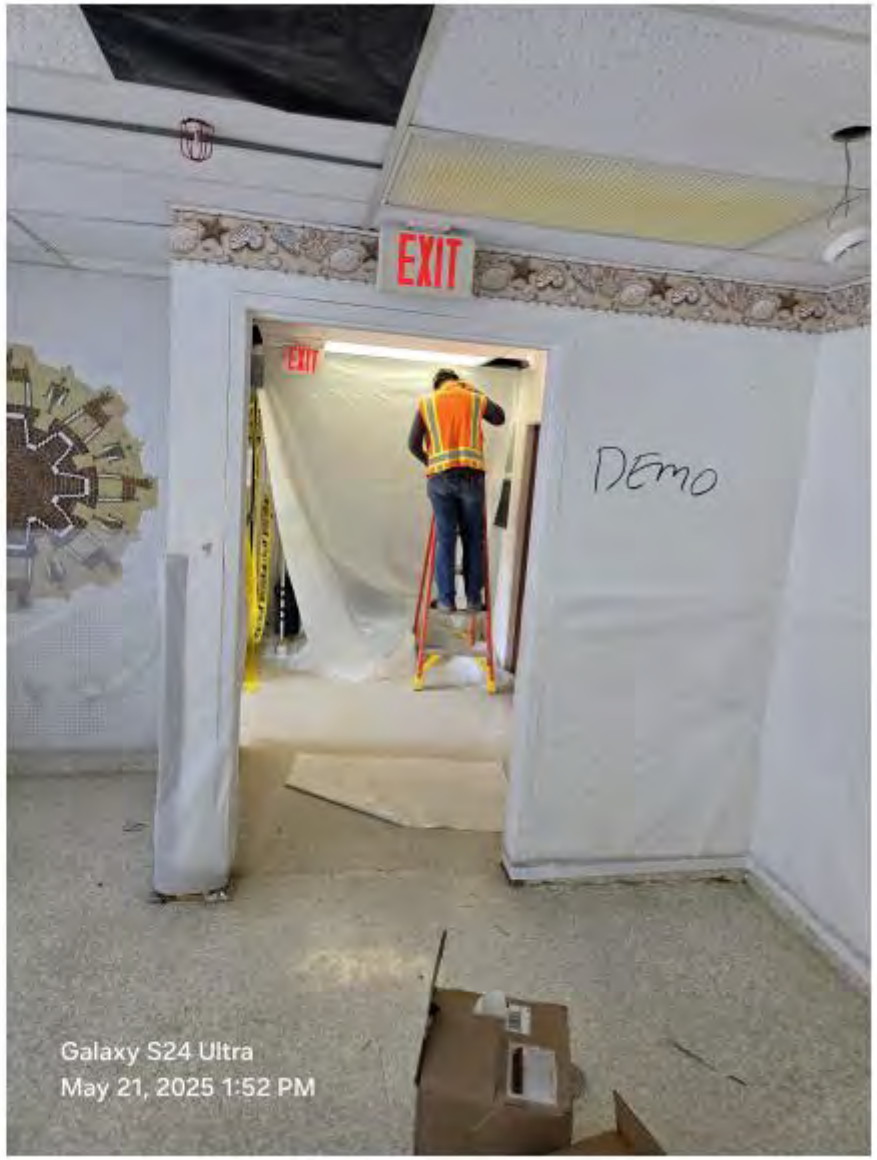
Description
Beginning prep for Abatement

Taken Date
05/21/2025 at 01:52 pm

Upload Date
05/21/2025 at 03:32 pm

Uploaded By
Guy Smith

File Name
20250521_135240.jpg



Unclassified

Description
Beginning prep for Abatement

Taken Date
05/21/2025 at 01:52 pm

Upload Date
05/21/2025 at 03:32 pm

Uploaded By
Guy Smith

File Name
20250521_135259.jpg



Outlook

Fw: Notice of Disruption: Asbestos Abatement

From Parker, Brandon (IHS/ALB/MSU) <Brandon.Parker@ihs.gov>
Date Mon 6/9/2025 10:18 AM
To MSU - ALL <MSU-ALL@ihs.gov>
Cc McClain, Robert (IHS/DES) <Robert.McClain@ihs.gov>

UPDATE:

Asbestos abatement work is 100% complete for the Expansion and Renovation project. The stairs and elevators are available for full and free use.

Contractors have conducted final post-abatement air sampling and have submitted results to the IHS.

Results analyzed were at Acceptable levels.

Thank you and have a nice week.

Brandon

From: Parker, Brandon (IHS/ALB/MSU) <Brandon.Parker@ihs.gov>
Sent: Friday, May 30, 2025 8:04 AM
To: MSU - ALL <MSU-ALL@ihs.gov>
Cc: Dodge, Thomas E. (IHS/ALB) <Thomas.Dodge@ihs.gov>; Tsosie, Gretchen L. (IHS/ALB) <gretchen.tsosie@ihs.gov>
Subject: Re: Notice of Disruption: Asbestos Abatement

Good Morning,

Re-sending this Notice with corrected dates. Weekend abatement work / closure of the stairs and elevator will commence at **3 PM on Friday, June 6, 2025.**

Thank you and have a safe and enjoyable weekend.

Brandon
x136

From: Parker, Brandon (IHS/ALB/MSU)
Sent: Friday, May 23, 2025 9:13 AM
To: MSU - ALL <MSU-ALL@ihs.gov>
Cc: Dodge, Thomas E. (IHS/ALB) <Thomas.Dodge@ihs.gov>; Tsosie, Gretchen L. (IHS/ALB)

<gretchen.tsosie@ihs.gov>
Subject: Notice of Disruption: Asbestos Abatement

Notice of Disruption:

Begin Asbestos Abatement

Location(s)	1st Floor Remodel Area (Building 2000); Room 148A (Biomed)
Date(s)	Tuesday, May 27, 2025 to Friday, June 6, 2025
Time(s)	8:00 AM to 5:00 PM
Look Ahead	On Monday, June 9, 2025, 1st Floor Remodel Area standard demolition scheduled to start.

Asbestos Removal Notice:

Asbestos abatement contractors will be removing certain non-friable asbestos containing materials (ACM) in the 1st Floor "remodel" construction area & Room 148A (Biomed). The work will be completed by trained & licensed abatement contractors. All proper work practices, safety, & engineering controls will be followed in accordance with State & Federal asbestos regulations. A certified third-party consultant will be on-site to conduct oversight to ensure abatement work is conducted properly.

*****UPDATE*** Weekend Abatement Work/Stair & Elevator Closure:**

Starting at 3 PM on Friday, June 6, 2025 & concluding NLT 12 PM on Monday, June 9, 2025, the stairs & elevator will be closed to allow abatement contractors to remove non-friable ACM on the 1st Floor elevator/stair landing area.

On the morning of Monday, June 9, 2025, please use the 1st Floor west entrance doors to access 1st Floor patient care and administrative areas.

Primary Control Measures:
Removal to occur in enclosed, negative pressure environment; solid barriers installed; warning signs posted; wet removal methods practiced; bagging of material prior to leaving work area; HEPA vacuuming when work is complete; HVAC system in work area 100% isolated from rest of Building 2000; final clearance testing post-abatement work.

Varying levels of intermittent construction noise/vibration may be heard.

If you have questions or concerns regarding this notice please contact Brandon Parker, Safety Officer at x136 or Brandon.Parker@ihs.gov.

Thank you,

Brandon Parker, MSPH, REHS
LCDR, U.S. Public Health Service

Safety and Occupational Health Specialist
Mescalero Service Unit
Office: 575-464-3836
(b) (6)
brandon.parker@ihs.gov

RED EAGLE JOINT VENTURE
A WARFEATHER LLC / ROSS GROUP JV

4-Week Lookahead Schedule

Starting Date (Monday): 5/26/2025

06467.172 Mescalero Indian Hospital Expansion &

			Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
	Temporary Wall Systems(TWS)	**On site % Complete**	5/25	5/26	5/27	5/28	5/29	5/30	5/31	6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14	6/15	6/16	6/17	6/18	6/19	6/20	6/21
1	TWS Install ICRA Panels	100.00%																												
		0.00%																												
		0.00%																												
	Border Demolition		Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
			5/25	5/26	5/27	5/28	5/29	5/30	5/31	6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14	6/15	6/16	6/17	6/18	6/19	6/20	6/21
2	On site to begin set up for Abatement	90.00%													X															
	Begin Abatement	40.00%			X	X	X	X			X	X			X	X	X	X												
	Begin Demo	20.00%																	X	X	X	X			X	X	X	X	X	
	Abate Security/148A	0.00%																												
	Stone Electric		Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
			5/25	5/26	5/27	5/28	5/29	5/30	5/31	6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14	6/15	6/16	6/17	6/18	6/19	6/20	6/21
3	Abatement Prep/Make-Safe	100.00%																												
	Begin Demo	20.00%											X	X	X				X	X	X	X			X	X	X	X	X	
		0.00%																												
	Total Mecnanical, Inc.		Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
			5/25	5/26	5/27	5/28	5/29	5/30	5/31	6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14	6/15	6/16	6/17	6/18	6/19	6/20	6/21
3	Prep for Abatement/Make-Safe	100.00%																												
	Plumbing and Mechanical Prep	100.00%																												
	Begin Mechanical Demo	0.00%											X	X	X				X	X	X	X			X	X	X	X	X	
	Begin Plumbing Demo	0.00%											X	X	X				X	X	X	X			X	X	X	X	X	
			Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
			5/25	5/26	5/27	5/28	5/29	5/30	5/31	6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14	6/15	6/16	6/17	6/18	6/19	6/20	6/21
4																														
		0.00%																												
		0.00%																												

Daily Log

Client: Red Eagle Joint V Project: Mezcalero IHS

Contractor: Border ATE Date: 05-27-2025

Arrived at jobsite Border Crew consisting of supervisor Alex Salas and 5 workers. Also on site Angel Marquez, Air Monitor Tech and Project Manager from AnE as well as Armando Bustamante SS/HO from Red Eagle Joint Venture.
Border crew prepping throughout area.
9:00 Prep continues. Area, Ambient and Personal pumps set up and calibrated. I relieved Angel Marquez from Air Monitoring activities and Project Management of Asbestos.
11:00 I made a visual inspection of abatement area. Splash guards already set up. Negative Air Machines running and operational. Manometer reading within the Negative Pressure Enclosure at -0.75 inches water column.
12:30 Crew suit up. Visual inspection Ok.
Manometer reading -0.45 in W.C. I started monitoring air flow Area, Ambient and Personal pumps, 200 HEPA Manometer reading -0.40 in W.C.
4:00 Floor tile removal progress about 50%.
HEPA pressure at -0.70 in W.C. All pumps maintain calibration.
5:00 30 min personal sample performed.
5:30 Border stopped activities for the day. I checked pumps calibration and collected sample
6:00 Finished paperwork and done for the day.

Project Manager/Air Monitoring Tech: Juan M. Manjarrez

ANE Consulting Inc

Air Sampling Log/Chain of Custody

Project Name: Mezcalero IHS Client: Red Eagle JV Contractor: Border D+E Date: 05-27-2025

Sample No.	Pump Type	Sample Location/Name	Time On	Flow Rate (LPM)	Time Off	Flow Rate (LPM)	Total Time (MIN)	Average Flow Rate (LPM)	Total Volume	Fibers/ Fields	Fibers/ mm²	Results f/cc
1-AMH-01	A	NPE Clean Room	1250	4.2	1720	4.2	270	4.2	1134	15		0.004
1-AMH-02	AM	NAM Exhaust	1255	4.2	1725	4.2	270	4.2	1134	6		0.002
1-AMH-03	A	Hallway by Room 114	1300	4.2	1730	4.2	270	4.2	1134	21		0.009
1-AMH-04	A	Hallway by Room 137	1305	4.2	1735	4.2	270	4.2	1134	25		0.010
1-FMH-01	FB									1	0.13	
1-FMH-02	FB									3	0.38	

Pump Type (A – Area, AM- Ambient, B - Baseline, C – Clearance, E – Excursion, FB- Field Blank, P – Personnel)

Sampled By: Juan M Manjarrez

Relinquished By: _____ Date: 5-27-25

Received By: _____ Date: _____

Analyzed By: J Manjarrez Date: 5-27-25

ANE Consulting Inc

Air Sampling Log/Chain of Custody

Project Name: Mezcalera IHS Client: Red Eagle JV Contractor: Border D&E Date: 5-27-25

Sample No.	Pump Type	Sample Location/Name	Time On	Flow Rate (LPM)	Time Off	Flow Rate (LPM)	Total Time (MIN)	Average Flow Rate (LPM)	Total Volume	Fibers/ Fields	Fibers/ mm^2	Results f/cc
1-PMH-01	P	Rico Arambula	1250	2.1	1700	2.1	250	2.1	525	12	/	0.01
1-PMH-02	E	Rico Arambula	1700	2.1	1730	2.1	30	2.1	63	18	/	0.14
1-FEB-01	FB									3	0.38	/

Pump Type (A – Area, AM- Ambient, B - Baseline, C – Clearance, E – Excursion, FB- Field Blank, P – Personnel)

Sampled By Juan M Manjarrez

Relinquished By: Date: 5-27-25

Received By: Date:

Analyzed By: Juan Manjarrez Date: 5-27-25

RED EAGLE
JOINT VENTURE
A WARFEATHER LLC / ROSS GROUP JV

DAILY CONSTRUCTION PROGRESS

Daily Progress Photos

Description
Abatement foreman measuring walls prior to abatement

Taken Date
05/27/2025 at 09:07 am

Upload Date
05/27/2025 at 10:46 am

Uploaded By
Armando Bustamante

File Name
BAED602A-4CE5-48EE-B...

Location
Mescalero IHS



Daily Progress Photos

Description
Abatement worker prepping walls before abatement

Taken Date
05/27/2025 at 09:07 am

Upload Date
05/27/2025 at 10:46 am

Uploaded By
Armando Bustamante

File Name
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Location
Mescalero IHS



Daily Progress Photos

Description
Negative air exhaust going out southside window

Taken Date
05/27/2025 at 09:08 am

Upload Date
05/27/2025 at 10:46 am

Uploaded By
Armando Bustamante

File Name
9F964E35-03FE-4F58-9...

Location
Mescalero IHS



Daily Progress Photos

Description
Negative air exhaust going out southside window

Taken Date
05/27/2025 at 09:08 am

Upload Date
05/27/2025 at 10:46 am

Uploaded By
Armando Bustamante

File Name
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Location
Mescalero IHS



Unclassified

Description
Asbestos signage and tape posted around exterior of Abatement work area to notify personell of ongoing Abatement work.

Taken Date
05/27/2025 at 03:29 pm

Upload Date
05/27/2025 at 05:47 pm

Uploaded By
Guy Smith

File Name
20250527_152958.jpg



Unclassified

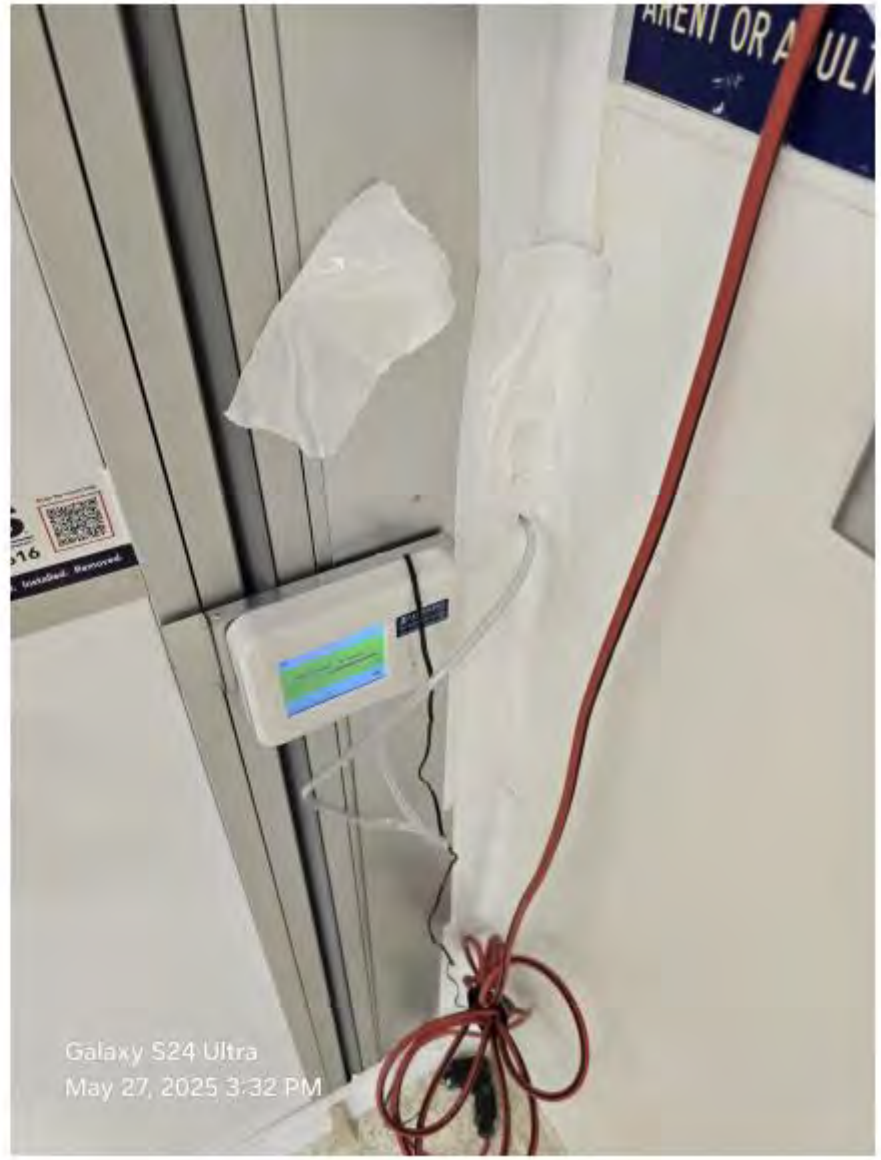
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Air Pressure monitoring system.

Taken Date
05/27/2025 at 03:32 pm

Upload Date
05/27/2025 at 05:46 pm

Uploaded By
Guy Smith

File Name
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Daily Progress Photos

Description
Flooring Abatement

Taken Date
05/27/2025 at 05:16 pm

Upload Date
05/28/2025 at 10:27 am

Uploaded By
Armando Bustamante

File Name
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Location
Mescalero IHS



Unclassified

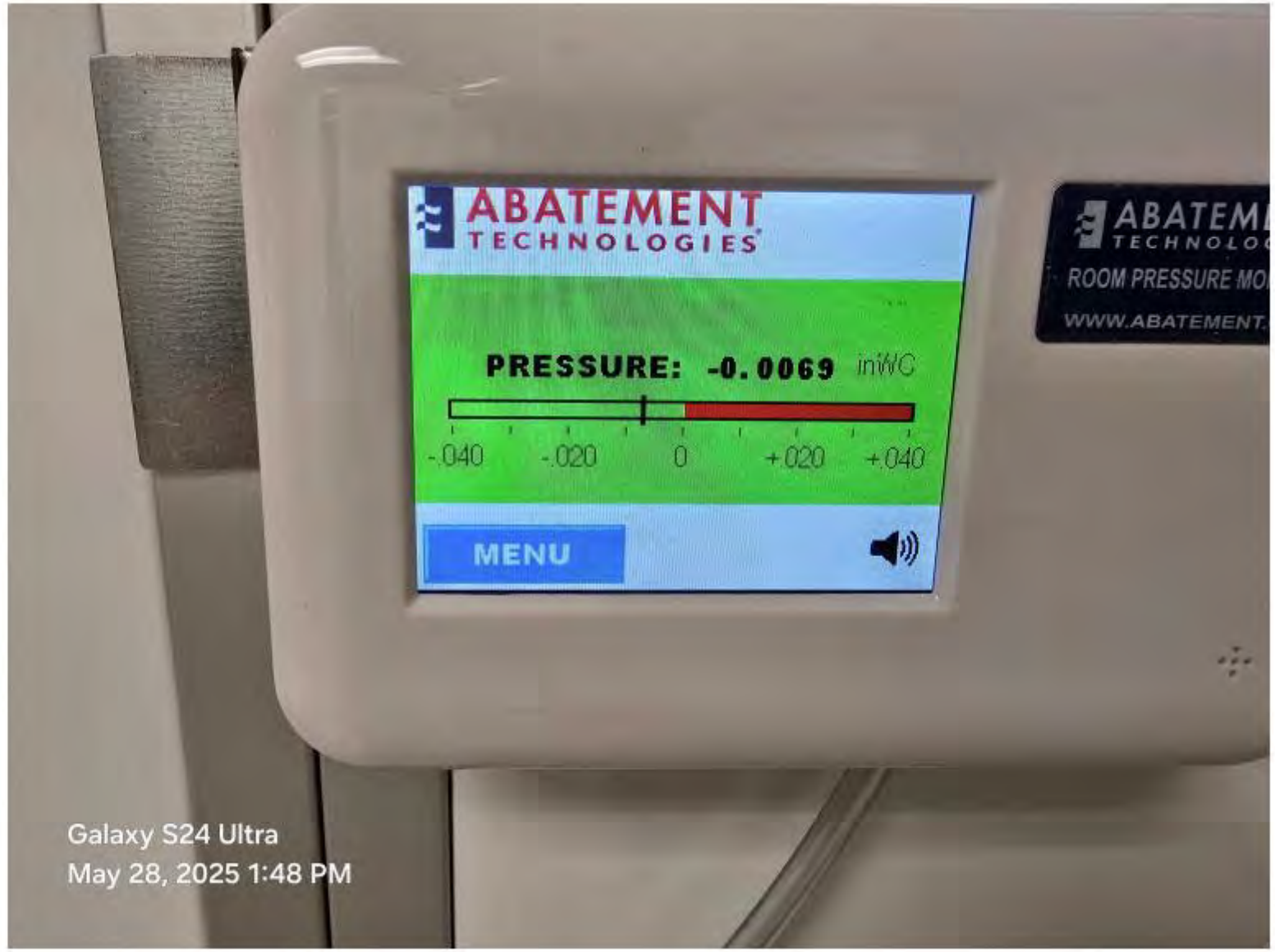
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05/28/2025 at 04:40 pm

Uploaded By
Guy Smith

File Name
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Unclassified

Description

Taken Date
05/28/2025 at 01:48 pm

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05/28/2025 at 04:40 pm

Uploaded By
Guy Smith

File Name
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Unclassified

Description

Taken Date
05/28/2025 at 02:39 pm

Upload Date
05/28/2025 at 04:40 pm

Uploaded By
Guy Smith

File Name
20250528_143933.jpg



RED EAGLE
JOINT VENTURE
A WARFEATHER LLC / ROSS GROUP JV

SITE SAFETY PRORESS

SITE SAFETY ORIENTATION/TOOLBOX TALK

Weekly Safety Meeting

Description

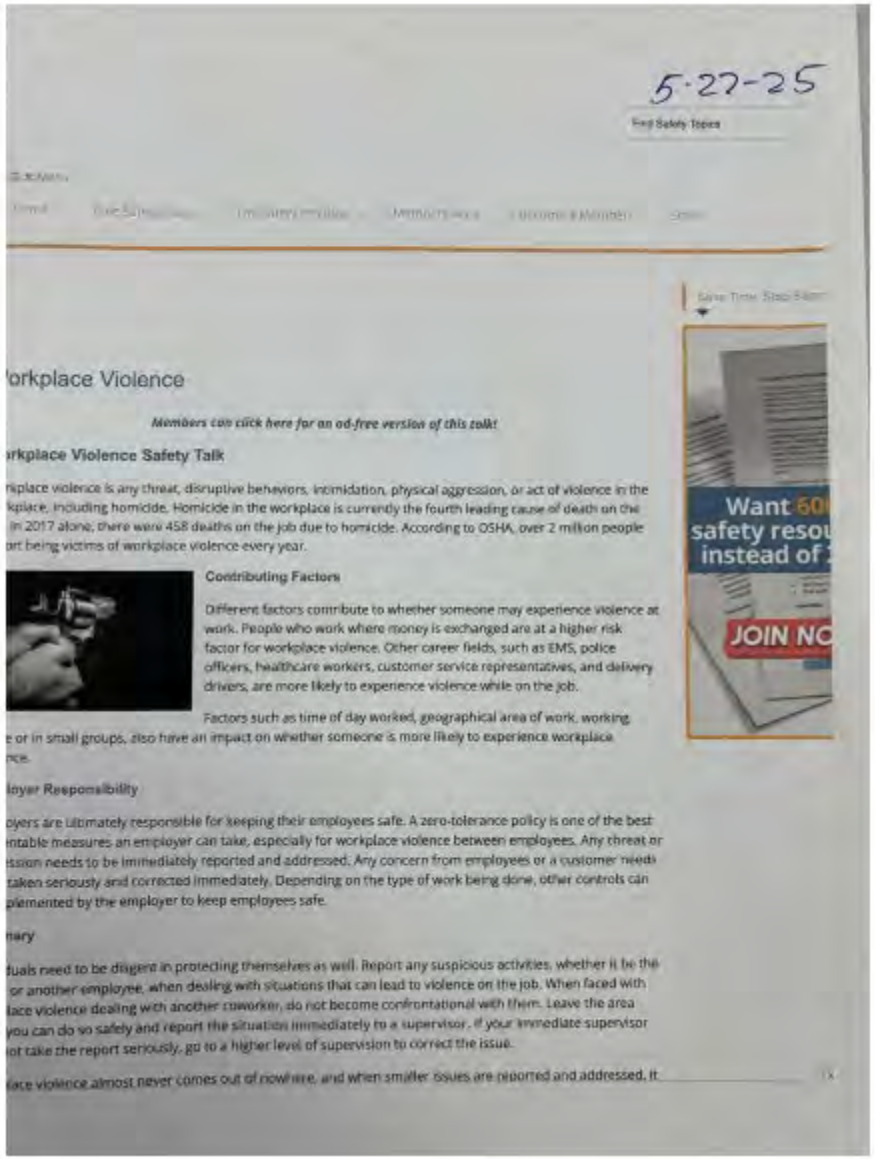
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05/27/2025 at 10:44 am

Uploaded By
Armando Bustamante

File Name
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Location
Mescalero IHS



5-27-25

Tool Safety Topics

orkplace Violence

Members can click here for an ad-free version of this talk!

rkplace Violence Safety Talk

iplace violence is any threat, disruptive behaviors, intimidation, physical aggression, or act of violence in the kplace, including homicide. Homicide in the workplace is currently the fourth leading cause of death on the in 2017 alone, there were 458 deaths on the job due to homicide. According to OSHA, over 2 million people rt being victims of workplace violence every year.

Contributing Factors

Different factors contribute to whether someone may experience violence at work. People who work where money is exchanged are at a higher risk factor for workplace violence. Other career fields, such as EMS, police officers, healthcare workers, customer service representatives, and delivery drivers, are more likely to experience violence while on the job.

Factors such as time of day worked, geographical area of work, working e or in small groups, also have an impact on whether someone is more likely to experience workplace nce.

loyer Responsibility

oyers are ultimately responsible for keeping their employees safe. A zero-tolerance policy is one of the best ntable measures an employer can take, especially for workplace violence between employees. Any threat or ssion needs to be immediately reported and addressed. Any concern from employees or a customer needs taken seriously and corrected immediately. Depending on the type of work being done, other controls can plemented by the employer to keep employees safe.

nary

tuals need to be diligent in protecting themselves as well. Report any suspicious activities, whether it be the or another employee, when dealing with situations that can lead to violence on the job. When faced with lace violence dealing with another coworker, do not become confrontational with them. Leave the area you can do so safely and report the situation immediately to a supervisor. If your immediate supervisor ot take the report seriously, go to a higher level of supervision to correct the issue.

lace violence almost never comes out of nowhere, and when smaller issues are reported and addressed, it

Weekly Safety Meeting

Description

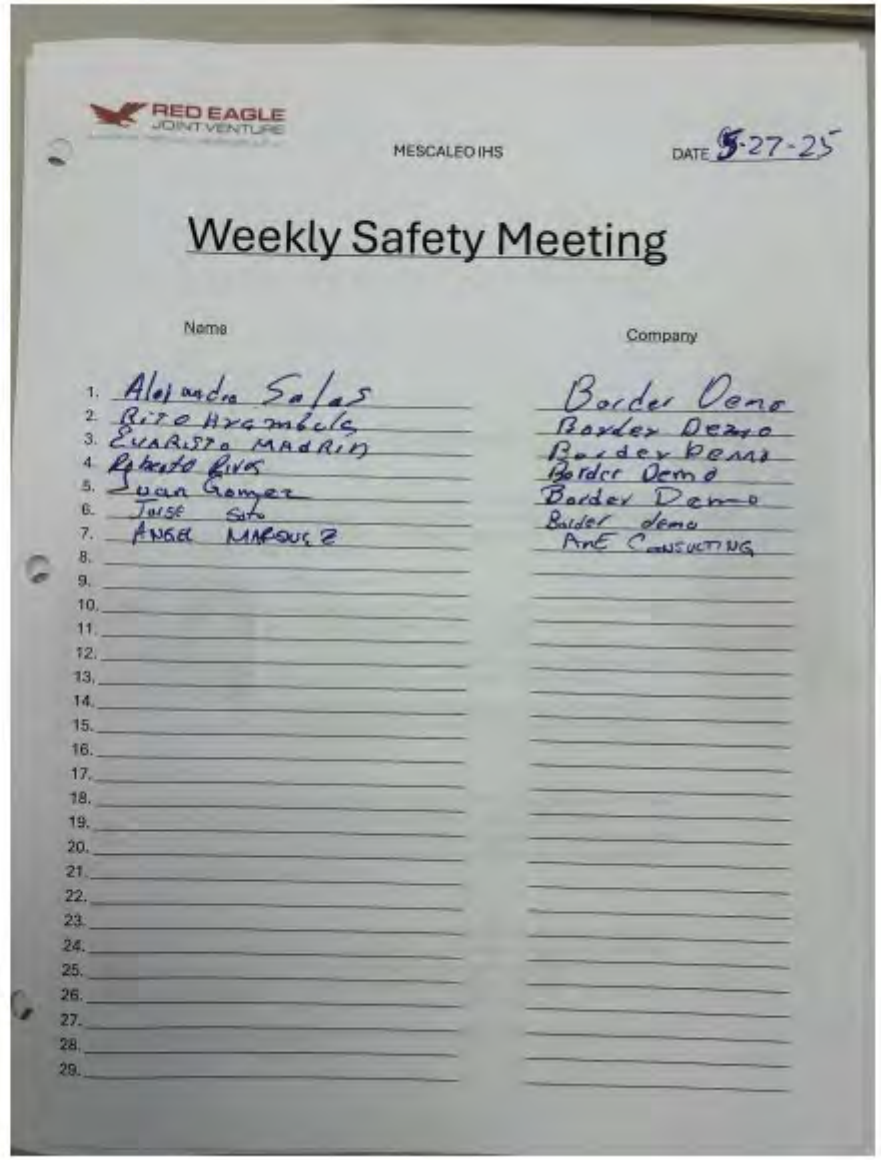
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05/27/2025 at 09:25 am

Upload Date
05/27/2025 at 10:44 am

Uploaded By
Armando Bustamante

File Name
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Location
Mescalero IHS



RED EAGLE JOINT VENTURE

MESCALEO IHS

DATE 5-27-25

Weekly Safety Meeting

	Name	Company
1.	Alejandro Salas	Border Demo
2.	Rito Arambula	Border Demo
3.	Evaristo Madrid	Border Demo
4.	Roberto Rios	Border Demo
5.	Juan Gomez	Border Demo
6.	Jose Soto	Border demo
7.	Angel Marquez	Pine Consulting
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		
21.		
22.		
23.		
24.		
25.		
26.		
27.		
28.		
29.		

Daily Progress Photos

Description
Abatement worker prepping area for abatement

Taken Date
05/22/2025 at 08:20 am

Upload Date
05/22/2025 at 09:24 am

Uploaded By
Armando Bustamante

File Name
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Location
Mescalero IHS



Daily Progress Photos

Description
Abatement worker prepping area for abatement

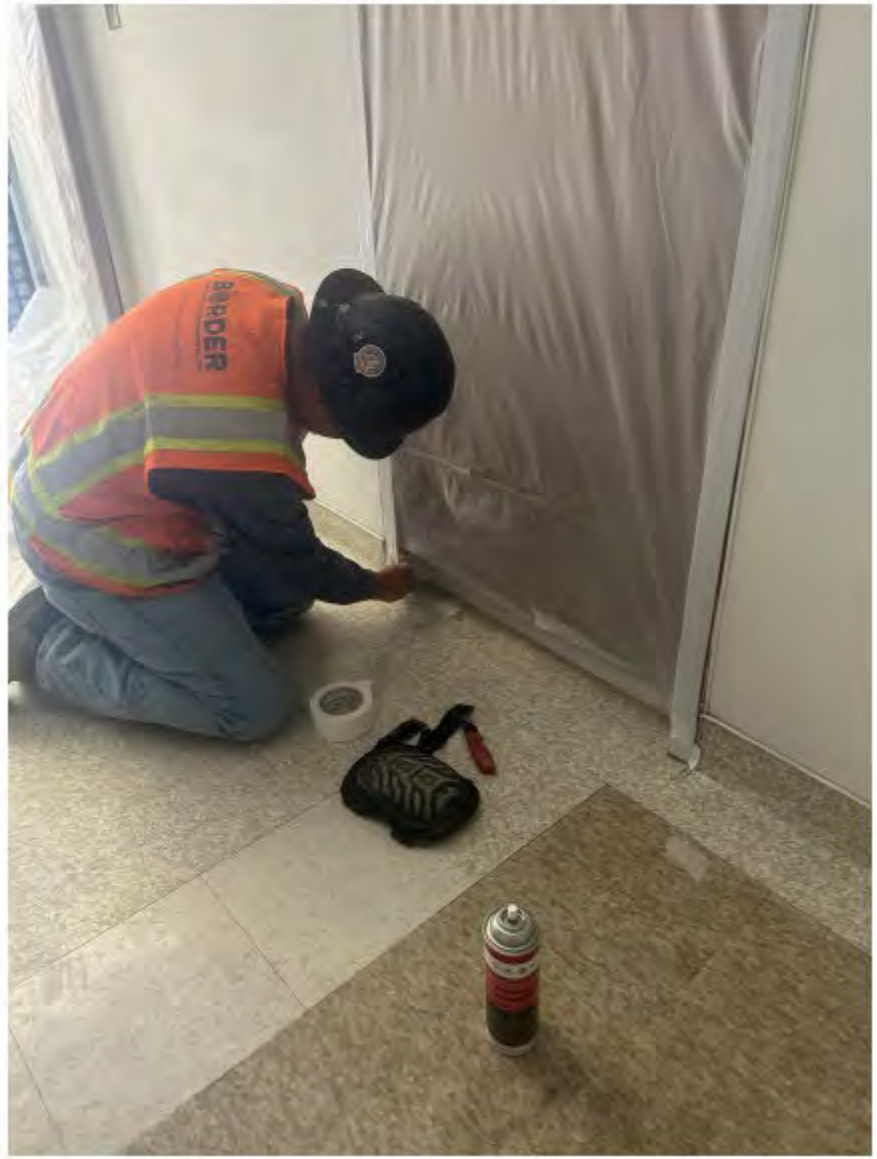
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Uploaded By
Armando Bustamante

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Location
Mescalero IHS



Daily Progress Photos

Description
Negative air exhaust going out southside window

Taken Date
05/27/2025 at 09:08 am

Upload Date
05/27/2025 at 10:46 am

Uploaded By
Armando Bustamante

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Location
Mescalero IHS



Daily Progress Photos

Description
Negative air machine exhaust going out eastside window

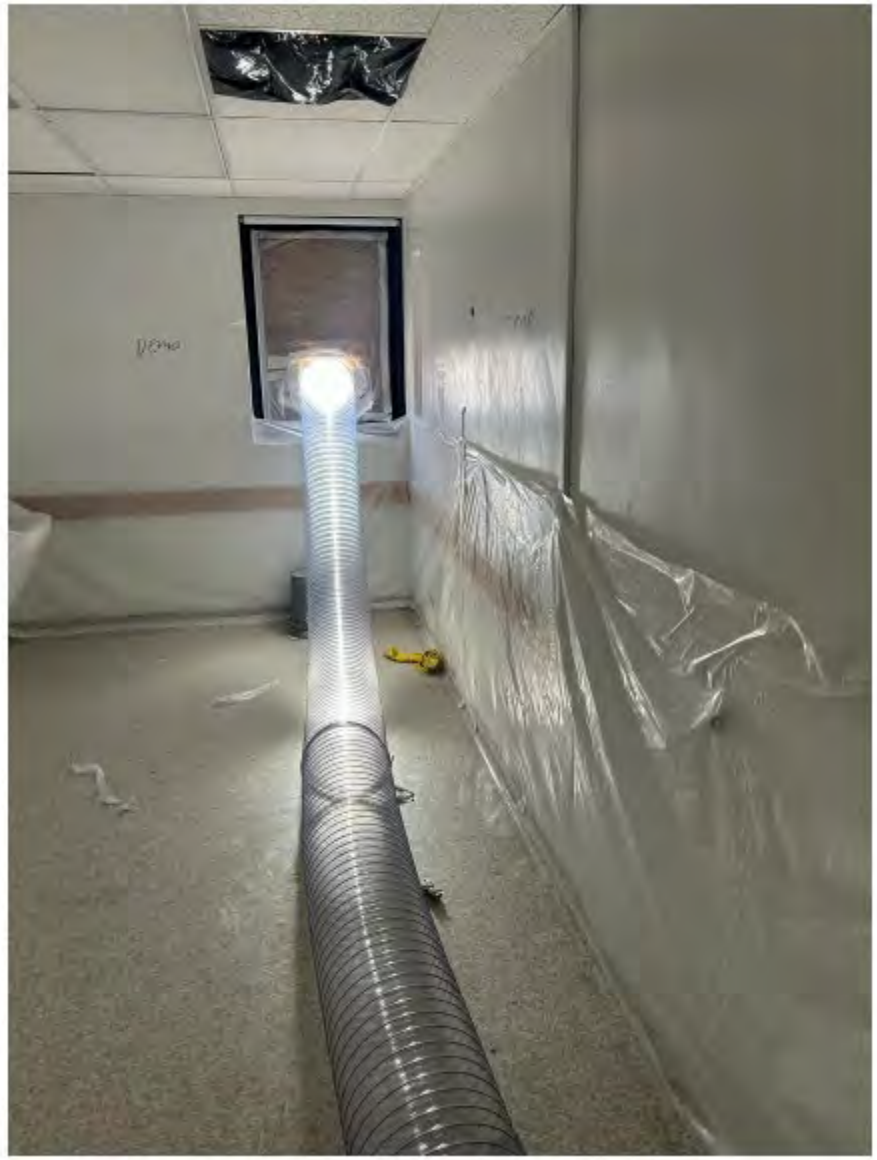
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Armando Bustamante

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Location
Mescalero IHS



Daily Progress Photos

Description

Taken Date
05/27/2025 at 05:16 pm

Upload Date
05/28/2025 at 10:27 am

Uploaded By
Armando Bustamante

File Name
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Location
Mescalero IHS



Daily Progress Photos

Description

Taken Date
05/27/2025 at 05:17 pm

Upload Date
05/28/2025 at 10:27 am

Uploaded By
Armando Bustamante

File Name
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Location
Mescalero IHS





Daily Log

Client: Red Eagle Joint V Project: Mezcalera IHS

Contractor: Border A+E Date: 05-28-2025

7:00 Arrived at jobsite. Border crew consisting of Sup. Alex Salas and 5 workers. We all signed in at Red Eagle office trailer per previous instructions by SSHO Armando Bustamante
7:30 Crew suit up. Proper PPE worn: ½ face N95 respirator, eye protection, HEPA filters P100 cartridges. Manometer reading -0.40 in w.c. Air, Ambient and Personal pumps were calibrated and operational. No issues to report.
9:30 Floor tile removal continues, both mechanically and manually. Manometer -0.15 in w.c. Pumps Ok.
10:45 NPE Manometer -0.35 in w.c. No issues
11:15 Ran a 30 min sample.
11:45 Crew breaking for lunch. NPE @ -0.45 in w.c.
12:30 2nd roll-off on site to dispose of non ACM demolition debris. Border crew loading it up.
2:00 Non ACM load out continues. NPE @ -0.45
3:30 Floor tile removal continues, as well as plaster in designated areas. No issues to report
4:45 Wet methods used. NAMs all operational. NPE pressure at -0.70 in w.c.
5:15 Started collecting samples. Border crew stopped activities. Supervisor Alex Salas and 2 workers left site.
5:45 Finished paperwork. All done for the day.

Project Manager/Air Monitoring Tech: Jon M Manjarrez

ANE consulting inc

Air Sampling Log/Chain of Custody

Project Name: Mezcalero IHS Client: Red Eagle VI Contractor: Border AHE Date: 05-28-2025

Sample No.	Pump Type	Sample Location/Name	Time On	Flow Rate (LPM)	Time Off	Flow Rate (LPM)	Total Time (MIN)	Average Flow Rate (LPM)	Total Volume	Fibers/ Fields	Fibers/ mm²	Results f/cc
2-PMH-01	P	Madrid Evaristo	0710	2.1	1115	2.1	245	2.1	514.5	15		0.048
2-AMH-02	E	Evaristo Madrid	1115	2.1	1145	2.1	30	2.1	63	10		0.08
2-PFB-01	FB									2	0.005	
2-PFB-03	P	Evaristo Madrid	1235	2.1	1725	2.1	290	2.1	609	18		0.014
2-PFB-02	FB									2	0.005	

Pump Type (A – Area, AM- Ambient, B - Baseline, C – Clearance, E – Excursion, FB- Field Blank, P – Personnel)

Sampled By: Juan M. Magarez

Relinquished By: _____ Date: 5-28-25

Received By: _____ Date: _____

Analyzed By: J. Magarez Date: 5-28-25

ANE Consulting Inc

Air Sampling Log/Chain of Custody

Project Name: Mezcalero IHS Client: RedEagle JV Contractor: Border AT&E Date: 05-28-2025

Sample No.	Pump Type	Sample Location/Name	Time On	Flow Rate (LPM)	Time Off	Flow Rate (LPM)	Total Time (MIN)	Average Flow Rate (LPM)	Total Volume	Fibers/ Fields	Fibers/ mm²	Results f/cc
2-AMH-01	A	NPE Clean Room	0715	4.2	1145	4.2	270	4.2	1134	7		0.003
2-AMH-02	AM	NAM Exhaust	0718	4.2	1148	4.2	270	4.2	1134	4		0.002
2-AMH-03	A	Hallway by Room 130	0720	4.2	1150	4.2	270	4.2	1134	27		0.012
2-AMH-04	A	Hallway by Room 136	0722	4.2	1152	4.2	270	4.2	1134	19		0.008
2-FMH-01	FB									2	0.005	
2-FMH-02	FB									1	0.0025	
2-AMH-05	A	NPE Clean Room	1222	4.2	1717	4.2	285	4.2	1197	8		0.003
2-AMH-06	AM	NAM Exhaust	1234	4.2	1719	4.2	285	4.2	1197	5		0.002
2-AMH-07	A	Hallway by Room	1236	4.2	1721	4.2	285	4.2	1197	29		0.012
2-AMH-08	A	Hallway by Room	1238	4.2	1723	4.2	285	4.2	1197	30		0.012

Pump Type (A – Area, AM- Ambient, B - Baseline, C – Clearance, E – Excursion, FB- Field Blank, P – Personnel)

Sampled By: Juan M. Manjarrez

Relinquished By: JMM Date: 5-28-25

Received By: _____ Date: _____

Analyzed By: J. Manjarrez Date: 5-28-25

ANE Consulting Inc

Daily Log Rain, hail, wind

Client: Red Eagle Joint V. Project: Mescalero IHS

Contractor: Border ANE Date: 05-29-25

7:00 Arrived at jessite. New Border Supervisor Gerardo Soto and crew of 3 signed in.
730 Brief safety meeting with crew. Airless water sprayer used to control dust and mitigate concentrations. Pumps set up and Calibrated. NPE-0.40
8:30 Crew bagging off. Wet methods used. NPE@-0.30 Roll-off dumpster lined with two layers of poly sheeting. Bags goose-necked and labeled one by one.
9:30 Wall and ceiling abatement started. Pumps calibrated and operational.
10:15 NPE @-0.35 Wall abatement approximately 10%. Wet methods used. Material promptly bagged and segregated to designated storage area.
10:50 No change. No issues.
11:45 Collected samples. Crew showering out. Breaking for lunch. NPE at -0.50 in wc
12:30 New samples in all pumps. Calibration checked OK. Crew suit up to continue plaster abatement. NPE at -@-0.60 in w.c.
2:30 No change. Plaster removal ~25% Rain starting
2:30 Rain, hail and wind. NPE not compromised. Manometer reading -@-0.40. Crew bagging plaster and staging it. Pumps calibration Ok.
5:15 crew finished for the day. Bagging stopped. Checked pumps calibration and collected air cassettes.
5:45 finished paperwork. secured area. Done for the day

Project Manager/Air Monitoring Tech: Juan M. Manjarrez

ANE Consulting Inc

Air Sampling Log/Chain of Custody

Project Name: Mezcalero IHS Client: RedEagle LV Contractor: Borderline E Date: 05-29-2025

Sample No.	Pump Type	Sample Location/Name	Time On	Flow Rate (LPM)	Time Off	Flow Rate (LPM)	Total Time (MIN)	Average Flow Rate (LPM)	Total Volume	Fibers/ Fields	Fibers/ mm²	Results f/cc
3-PMH-01	P	Juan Gomez	0715	2.1	1155	2.1	280	2.1	588	16		0.013
3-PMH-02	E	Juan Gomez	1240	2.1	1310	2.1	30	2.1	63	16		0.124
3-PMH-03	P	Juan Gomez	1310	2.1	1725	2.1	255	2.1	535.5	20		0.018
3 EMH-01	FB									2	0.004	

Pump Type (A – Area, AM- Ambient, B - Baseline, C – Clearance, E – Excursion, FB- Field Blank, P – Personnel)

Sampled By: Juan M. Manjarrez Received By: _____ Date: _____

Relinquished By: _____ Date: 5-29-25 Analyzed By: J. Manjarrez Date: 5-29-25

ANE Consulting Inc

Air Sampling Log/Chain of Custody

Project Name: Mezcalero IHS Client: Red Eagle JV Contractor: Border DTE Date: 05-29-25

Sample No.	Pump Type	Sample Location/Name	Time On	Flow Rate (LPM)	Time Off	Flow Rate (LPM)	Total Time (MIN)	Average Flow Rate (LPM)	Total Volume	Fibers/ Fields	Fibers/ mm²	Results f/cc
3-AMH-01	A	NPE Clean Room	710	4.2	1150	4.2	280	4.2	1176	28		0.012
3-AMH-02	AM	NAM Exhaust	712	4.2	1152	4.2	280	4.2	1176	23		0.010
3-AMH-03	A	Hallway by Room 104	714	4.2	1154	4.2	280	4.2	1176	28		0.012
3-AMH-04	A	Hallway by Room 114	715	4.2	1155	4.2	280	4.2	1176	31		0.013
3-AMH-05	A	Hallway by Room 104	1235	4.2	1715	4.2	280	4.2	1176	17		0.007
3-AMH-06	AM	Hallway by Room 114	1237	4.2	1717	4.2	280	4.2	1176	19		0.008
3-AMH-07	A	NAM Exhaust	1239	4.2	1719	4.2	280	4.2	1176	9		0.004
3-AMH-08	A	NPE Clean Room	1245	4.2	1721	4.2	276	4.2	1159	8		0.003
3-AMH-01	FB									2	0.004	
3-AMH-02	FB									2	0.004	

Pump Type (A – Area, AM- Ambient, B - Baseline, C – Clearance, E – Excursion, FB- Field Blank, P – Personnel)

Sampled By Juan M. Mojarrez

Received By: _____ Date: _____

Relinquished By: _____ Date: 05-29-25

Analyzed By: _____ Date: 2-29-25

ANE Consulting Inc

Daily Log

Client: Red Eagle Joint V. Project: Mescalero IHS

Contractor: Border D+E Date: 05-30-25

Slip, Trip and Falls Briefing (STF)
7:00 Arrived at gossite. Border crew consisting of Sup Gerardo Soto and 3 workers. Sign in. Warmed up and calibrated pumps. Crew briefed on activities for today: plaster removal & bagging. UPE @ -0.35 in w.c.
7:45 Pumps running. ACM crew double bagging. STF briefing.
9:45 Border crew bagging out. UPE @ -0.15
ACM double-bagged, taped, and goose-necked. Wet methods used and good housekeeping.
10:00 Baggout concluded. Plaster removal continued. NPE @ -0.45 ACM debris promptly bagged and staged. Pumps Calibration OK.
11:30 Abatement about 50%. Wet methods used via airless water sprayer. GFCI's in place and operational. NAMs pre-filter changed. Crew bagging ACM debris. Running 30 min personal sample.
12:00 Crew breaking for lunch. UPE -0.45 in w.c.
1:30 Plaster removal almost completed. Manometer reading -0.50 in w.c.
2:30 Crew double-bagging & labeling, and bagging out. UPE manometer reading -0.50 in w.c.
4:00 Crew doing good housekeeping, staging and clean-up.
5:30 Border crew done for the day. Assessed the area all doors locked, NAMs running. Secured equipment. Collected Samples and finished paperwork.
5:45 Done for the day.

Project Manager/Air Monitoring Tech: Juan M. Manjarrez

ANE Consulting Inc

Air Sampling Log/Chain of Custody

Fri

Project Name: Mescalero IHS Client: Red Eagle JV Contractor: Border D&E Date: 05-30-25

Sample No.	Pump Type	Sample Location/Name	Time On	Flow Rate (LPM)	Time Off	Flow Rate (LPM)	Total Time (MIN)	Average Flow Rate (LPM)	Total Volume	Fibers/ Fields	Fibers/ mm²	Results f/cc
4-AMH-01	A	NPE Clean Room	7:13	4.2	1153	4.2	280	4.2	1176	4		<0.002
4-AMH-02	AM	NAM Exhaust	7:15	4.2	1154	4.2	279	4.2	1172	4		<0.002
4-AMH-03	A	Hallway by Room 105	7:17	4.2	1156	4.2	279	4.2	1172	17		0.007
4-AMH-04	A	Hallway by Room 115	7:20	4.2	1157	4.2	277	4.2	1163	19		0.008
4-AMH-05	A	NPE Clean Room	1305	4.2	1713	4.2	248	4.2	1042	9		0.004
4-AMH-06	AM	NAM Exhaust	1306	4.2	1715	4.2	249	4.2	1046	7		0.003
4-AMH-07	A	Hallway by Room 105	1308	4.2	1718	4.2	250	4.2	1050	30		0.014
4-AMH-08	A	Hallway by Room 115	1310	4.2	1721	4.2	251	4.2	1054	28		0.013
4-FMH-01	FB									1	<0.002	
4-FMH-02	FB									1	<0.002	

Pump Type (A – Area, AM- Ambient, B - Baseline, C – Clearance, E – Excursion, FB- Field Blank, P – Personnel)

Sampled By: Juan M. Magjarrez

Relinquished By: _____ Date: 5-30-25

Received By: _____ Date: _____

Analyzed By: J. Magjarrez Date: 5-30-25

ANE Consulting Inc

Air Sampling Log/Chain of Custody

Friday

Project Name: Mescalero IHS Client: Red Eagle JV Contractor: Border JV HS Date: 05.30.25

Sample No.	Pump Type	Sample Location/Name	Time On	Flow Rate (LPM)	Time Off	Flow Rate (LPM)	Total Time (MIN)	Average Flow Rate (LPM)	Total Volume	Fibers/ Fields	Fibers/ mm²	Results f/cc
4-PMH-01	P	Rito Arambula	7:15	2.1	11:28	2.1	253	2.1	510	12	/	0.012
4-PMH-02	E	Rito Arambula	11:20	2.1	11:50	2.1	30	2.1	63	15	/	0.116
4-PMH-03	P	Rito Arambula	1302	2.1	1715	2.1	253	2.1	531	16	/	0.015
4-FMH-01	FB	—								1	<0.002	/

Pump Type (A – Area, AM- Ambient, B - Baseline, C – Clearance, E – Excursion, FB- Field Blank, P – Personnel)

Sampled By: Juan M Manjarrez

Relinquished By: _____ Date: 5-30-25

Received By: _____ Date: _____

Analyzed By: J. Manjarrez Date: 5.30.25

ANE Consulting Inc

Rainy Mon

Daily Log

Client: RedEagle I/U Project: Mezcalero EHS

Contractor: Border MHE Date: 6-02-2025

7:20 Arrived at jobsite. Safety meeting w/ Border crew consisting of Sup. Gerardo Soto and 3 workers. Amended water, electrical safety, Slips, trips, falls. 7:45 set up pumps, warm up, and calibrated. Rainy weather. Good housekeeping procedures. NPE 0-0.15 in W.C. Crew changing NAM pre-filters. 9:45 Crew blading floor with buffer and vacuuming debris. Wet methods used. NPE manometer-0.15 W.C.
11:10 Low odor mastic remover used to break down black mastic. Extension cords using GFCI's. Proper ventilation used. 3 NAMs running full capacity. NPE reading -0.40 in W.C.
11:45 Collected a 30 min. sample. Crew breaking for lunch. No issues to report.
1:30 Crew about 40% with mastic removal. detail work to be done tomorrow.
2:00 Very small amount of mastic remover seeped through under the door in the security area, and was quickly addressed by Border Supervisor. Cleaned up and disposed of it properly.
3:30 Crew almost done with gross mastic removal.
4:00 I was asked to grab some bulk samples from Rm 148. Checked pumps DP NPE: -0.15
5:00 Rushed bulk samples to FedEx. Border crew stopped activities. Collected Area + Personal Samples.

Project Manager/Air Monitoring Tech: Juan M. Manjarrez

ANE Consulting Inc

Air Sampling Log/Chain of Custody

Mon Rainy

Project Name: Mescalero IHS Client: RedEagle JV Contractor: Border Ops Date: 06-02-25

Sample No.	Pump Type	Sample Location/Name	Time On	Flow Rate (LPM)	Time Off	Flow Rate (LPM)	Total Time (MIN)	Average Flow Rate (LPM)	Total Volume	Fibers/ Fields	Fibers/ mm²	Results f/cc
S-AMH-01	A	NPE Clean Room	747	4.2	1145	4.2	238	4.2	997	5		0.002
S-02	AM	NAM Exhaust	7:48	4.2	1148	4.2	240	4.2	1008	3		<0.002
S-03	A	Hallway by Room 108	7:50	4.2	1152	4.2	242	4.2	1016	12		0.006
S-04	A	Hallway by Room 131	7:52	4.2	1156	4.2	244	4.2	1025	15		0.007
S-05	A	NPE Clean Room	1237	4.2	1655	4.2	258	4.2	1084	4		0.002
S-06	AM	NAM Exhaust	1240	4.2	1654	4.2	256	4.2	1075	3		<0.002
S-07	A	Hallway by Room 131	1242	4.2	1658	4.2	256	4.2	1075	13		0.006
S-AMH-08	A	Hallway by Room 108	1245	4.2	1700	4.2	255	4.2	1071	13		0.006
S-FMH-01	FB									1	<0.002	
S-FMH-02	FB									1	<0.002	

Pump Type (A – Area, AM- Ambient, B - Baseline, C – Clearance, E – Excursion, FB- Field Blank, P – Personnel)

Sampled By: Juan M. Manjarrez

Relinquished By: [signature] Date: 6-2-25

Received By: _____ Date: _____

Analyzed By: J. Manjarrez Date: 6-2-25

ANE Consulting Inc

Air Sampling Log/Chain of Custody

Rainy

Project Name: Mescalero I/S Client: Red Eagle I V Contractor: Border Ote Date: 06-02-25

Sample No.	Pump Type	Sample Location/Name	Time On	Flow Rate (LPM)	Time Off	Flow Rate (LPM)	Total Time (MIN)	Average Flow Rate (LPM)	Total Volume	Fibers/ Fields	Fibers/ mm²	Results f/cc
5-PMH01	P	Rito Arambula	7:45	2.1	11:15	2.1	210	2.1	441	22		0.024
5-PMH02	E	Rito Arambula	11:17	2.1	11:47	2.1	30	2.1	63	20		0.156
5-PMH-03	P	Rito Arambula	12:35	2.1	17:00	2.1	265	2.1	557	18		0.016
5-FMH-01	FB									2	<0.002	

Pump Type (A – Area, AM- Ambient, B - Baseline, C – Clearance, E – Excursion, FB- Field Blank, P – Personnel)

Sampled By: Juan M. Manjarrez

Relinquished By: _____ Date: 6-2-25

Received By: _____ Date: _____

Analyzed By: J. Manjarrez Date: 6-2-25

BORDER ENVIRONMENTAL SERVICES

Awards this certificate to

JUAN MANUEL MANJARREZ

For completion of the

Airborne Asbestos Sampling and Laboratory Analysis

40-hour NIOSH 582E
CERTIFICATION COURSE

463-43-4097
Certificate Number

May 5-10, 2003
Issue Date

INSTRUCTOR

ANE Consulting Inc

Daily Log

Tue

Client: RedEagle J.V. Project: Mescalero IHS

Contractor: Border A+E Date: 6-3-2025

7:00 Arrived at Jobsite. Border crew instructed to start detail black mastic removal.
7:30 Pumps setup & calibrated, NPE -0.15 in W.C.
9:30 Detail work continues. Floor buffed with water to remove residual mastic. NPE -0.10 in W.C.
11:00 RedEagle Superintendent Guy Smith was informed that the areas under the wall partitions were inaccessible for abatement. Border will work on the demolition crew competent person to inform that those walls were removed and allow for the abatement crew to do the removal of tile + Mastic.
12:30 Final visual requested. Areas of concern were quickly addressed by Border crew.
1:00 Visual inspection passed. Pumps were re-calibrated and clearance sampling started
2:45 Collected Clearance Samples and drove out of jobsite to analize.
3:30 Informed Border Supervisor that it was OK to tear-down HPE. Clearances passed. continued with paperwork.
5:00 I was contacted by SSHO Armando A verbal was given to him that it was OK to go back into the abated area, and paperwork with confirmation will be provided later.

Project Manager/Air Monitoring Tech: Juan M Manjarrez

ANE Consulting Inc

Air Sampling Log/Chain of Custody

TVC

Project Name: Mescalero IHS Client: Red Eagle IV Contractor: Border DRE Date: 06-03-25

Sample No.	Pump Type	Sample Location/Name	Time On	Flow Rate (LPM)	Time Off	Flow Rate (LPM)	Total Time (Min)	Average Flow Rate (LPM)	Total Volume	Fibers/ Fields	Fibers/ mm²	Results f/cc
6-PMH-01	P	Evaristo Madrid	714	2.1	1230	2.1	316	2.1	664	10	/	0.007
6-PMH-02	E	Evaristo Madrid	1230	2.1	1300	2.1	30	2.1	63	7	/	0.054
6-PMH-03	FB	—								1	<0.002	/

Pump Type (A – Area, AM- Ambient, B - Baseline, C – Clearance, E – Excursion, FB- Field Blank, P – Personnel)

Sampled By: Juan M. Manjarrez

Relinquished By: [signature] Date: 6-3-25

Received By: _____ Date: _____

Analyzed By: Juan Manjarrez Date: 6-3-25

ANE Consulting Inc

Air Sampling Log/Chain of Custody

Tue

Project Name: Mescalero IHS Client: Red Eagle IV Contractor: Border DTE Date: 06-03-2025

Sample No.	Pump Type	Sample Location/Name	Time On	Flow Rate (LPM)	Time Off	Flow Rate (LPM)	Total Time (MIN)	Average Flow Rate (LPM)	Total Volume	Fibers/ Fields	Fibers/ mm²	Results f/cc
6-AMH-01	A	NTF Clean Room	717	4.2	1244	4.2	321	4.2	1348	17		0.006
6-AMH-02	AM	NAM Exhaust	719	4.2	1246	4.2	321	4.2	1348	18		0.007
6-AMH-03	A	Hallway by Room 105	720	4.2	1248	4.2	328	4.2	1378	15		0.005
6-AMH-04	A	Hallway by Room 136	723	4.2	1250	4.2	327	4.2	1373	19		0.007
6-FMH-01	FB									1	<0.002	
6-FMH-02	FB									1	<0.002	

Pump Type (A – Area, AM- Ambient, B - Baseline, C – Clearance, E – Excursion, FB- Field Blank, P – Personnel)

Sampled By: Juan M. Manjarrez

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Analyzed By: J. Manjarrez Date: 6-3-25

ANE Consulting Inc

Air Sampling Log/Chain of Custody

Tue

Project Name: Mescalero IHS Client: Red Eagle JV Contractor: Border 9 + D Date: 6-03-25

Sample No.	Pump Type	Sample Location/Name	Time On	Flow Rate (LPM)	Time Off	Flow Rate (LPM)	Total Time (MIN)	Average Flow Rate (LPM)	Total Volume	Fibers/ Fields	Fibers/ mm^2	Results f/cc
6-CMH-01	C	Hallway by Room 114	1300	9.6	1425	9.4	125	9.6	1200	4	0.0064	
6-CMH-02	C	Hallway by Room 131	1303	9.6	1428	9.4	125	9.6	1200	2	0.0008	
6-CMH-03	C	Hallway by Room 105	1306	9.6	1431	9.4	125	9.4	1200	3	0.0012	
6-FMH-01	FB	—								1	< 0.002	/
6-FMH-02	FB	—								1	< 0.002	/

Pump Type (A – Area, AM- Ambient, B - Baseline, C – Clearance, E – Excursion, FB- Field Blank, P – Personnel)

Sampled By: Juan M. Manjarrez

Relinquished By: _____ Date: 6-3-25

Received By: _____ Date: _____

Analyzed By: J. Manjarrez Date: 6-3-25

SBAR – Safety Department

Quality Division

Date: June 5, 2025

To: All MSU Staff

SITUATION:

Chemically related indoor air quality complaints and concerns.

BACKGROUND:

On 06/03/2025, a chemical odor migrated throughout the entire clinic (Building 2000) from the 1st Floor construction and renovation area (outpatient clinic). The point-source for this indoor air quality event was related to the "mastic remover" that was applied to the construction area mastic flooring on 06/02/2025 by the construction contractor(s).

ASSESSMENT:

During the "tear down" phase of the 06/03/2025 asbestos abatement work, loss of indoor atmospheric negative pressure occurred in the construction area. The contractor "unsealed" the exterior envelope of the negative pressure containment system that inadvertently caused a loss of negative pressure in the construction area. Due to the temporary failure of this engineering control, chemical odors migrated outside of the construction area into other spaces in Building 2000. This led to multiple employee health and safety concerns.

Multiple employee complaints have been reported via phone and/or email to the Safety Department related to this event, however, as of 12:00 PM on 06/05/2025, other than the Safety Officer who filed EVENT-119053, there have been no other I-STAR incident reports filed.

RECOMMENDATIONS:

Employees who have experienced health complaints from this event are encouraged to file a report in the I-STAR system. Guidance on filing an I-STAR can be obtained by referring to the *MSU Accident and Incident Report Policy* (PolicyStat ID: 14967623) or by contacting LCDR Brandon Parker, Safety Officer at x136 or by visiting the Safety Department in Room 164.

Daily Log

Client: RedEagle JV Project: Mescalero IHS

Contractor: Border D+E Date: 06-06-2025

3:15 Arrived at job site. Border Sup Gerardo Soto and 3 workers unloading material to start prep. I calibrated pumps and started collecting Baseline Samples.
5:00 Re-calibrated pumps and grabbed cassette ~~Clearances~~ Baselines.
5:45 Done for the day. Job site area locked up. Paperwork finished. Prep work done, and abatement starts tomorrow at 7:00 AM.

Project Manager/Air Monitoring Tech: Juan M. Manjarez

ANE consulting inc

Air Sampling Log/Chain of Custody

Project Name: Mescalero IHS Client: Red Eagle JV Contractor: Border AKE Date: 06-06-25

Sample No.	Pump Type	Sample Location/Name	Time On	Flow Rate (LPM)	Time Off	Flow Rate (LPM)	Total Time (MIN)	Average Flow Rate (LPM)	Total Volume	Fibers/ Fields	Fibers/ mm²	Results f/cc
7-BMH-01	B	Hallway by Elevators	1528	9.6	1658	9.6	130	9.6	1248	7	/	0.003
7-BMH-02	B	Hallway by Security Office	1530	9.6	1700	9.6	130	9.6	1248	8	/	0.003
7-FMH-01	FB									1	<0.002	/
7-FMH-02	FB									1	<0.002	/

Pump Type (A – Area, AM- Ambient, B - Baseline, C – Clearance, E – Excursion, FB- Field Blank, P – Personnel)

Sampled By: Juan M. Manjarrez

Relinquished By: _____ Date: 6-6-25

Received By: _____ Date: _____

Analyzed By: J. Manjarrez Date: 6.6.25

Outlook

Re: Mescalero Service Unit odor complaint response 6-6-2025

From Patricio, Patrick (IHS/ALB/ASU) <Patrick.Patricio@ihs.gov>
Date Mon 6/9/2025 9:18 PM
To Frazier, Rayana (IHS/ALB/MSU) <Rayana.Frazier@ihs.gov>; Steen, David (IHS/ALB/AO) <David.Steen@ihs.gov>
Cc Box, Michael (IHS/ALB/AO) <Michael.Box@ihs.gov>; Parker, Brandon (IHS/ALB/MSU) <Brandon.Parker@ihs.gov>; Cook, Keith (IHS/ALB/AO) <Keith.Cook2@ihs.gov>

Yes, louvers have been adjusted to 50% open, adjustments will be made throughout the week, once confirmed odor has dissipated, AHU's will be put back to normal conditions.
Thank you.
Patrick Patricio

Get Outlook for iOS

From: Frazier, Rayana (IHS/ALB/MSU) <Rayana.Frazier@ihs.gov>
Sent: Monday, June 9, 2025 4:59:56 PM
To: Steen, David (IHS/ALB/AO) <David.Steen@ihs.gov>; Patricio, Patrick (IHS/ALB/ASU) <Patrick.Patricio@ihs.gov>
Cc: Box, Michael (IHS/ALB/AO) <Michael.Box@ihs.gov>; Parker, Brandon (IHS/ALB/MSU) <Brandon.Parker@ihs.gov>; Cook, Keith (IHS/ALB/AO) <Keith.Cook2@ihs.gov>
Subject: RE: Mescalero Service Unit odor complaint response 6-6-2025

Good evening,

Was there confirmation that the louvers were adjusted? If not, I can check with Facilities in the morning.

Rayana

From: Parker, Brandon (IHS/ALB/MSU) <Brandon.Parker@ihs.gov>
Sent: Monday, June 9, 2025 12:09 PM
To: Frazier, Rayana (IHS/ALB/MSU) <Rayana.Frazier@ihs.gov>; Steen, David (IHS/ALB/AO) <David.Steen@ihs.gov>; Cook, Keith (IHS/ALB/AO) <Keith.Cook2@ihs.gov>
Cc: Box, Michael (IHS/ALB/AO) <Michael.Box@ihs.gov>; Patricio, Patrick (IHS/ALB/ASU) <Patrick.Patricio@ihs.gov>
Subject: Re: Mescalero Service Unit odor complaint response 6-6-2025

Good Morning,

I don't smell the odor on the second floor but I detect a very low odor on the 1st floor.

I too have not received any new staff odor complaints.

I'm in support of adjusting the louvers.

Thanks,

Brandon Parker, MSPH, REHS

LCDR, U.S. Public Health Service
Safety and Occupational Health Specialist
Mescalero Service Unit
Office: 575-464-3836
Cell: (b) (6)
brandon.parker@ihs.gov

From: Frazier, Rayana (IHS/ALB/MSU) <Rayana.Frazier@ihs.gov>
Sent: Monday, June 9, 2025 11:16 AM
To: Steen, David (IHS/ALB/AO) <David.Steen@ihs.gov>; Cook, Keith (IHS/ALB/AO) <Keith.Cook2@ihs.gov>; Parker, Brandon (IHS/ALB/MSU) <Brandon.Parker@ihs.gov>
Cc: Box, Michael (IHS/ALB/AO) <Michael.Box@ihs.gov>; Patricio, Patrick (IHS/ALB/ASU) <Patrick.Patricio@ihs.gov>
Subject: RE: Mescalero Service Unit odor complaint response 6-6-2025

Good morning CDR Steen,

As far as I can tell, there is minimal trace of odor in the facility. I walked through the first and second floors this morning before 08:00 am. There have been no complaints submitted from personnel that I have been made aware of.

What is the typical setting of the louvers?

Thanks, Rayana

From: Steen, David (IHS/ALB/AO) <David.Steen@ihs.gov>
Sent: Monday, June 9, 2025 10:34 AM
To: Frazier, Rayana (IHS/ALB/MSU) <Rayana.Frazier@ihs.gov>; Cook, Keith (IHS/ALB/AO) <Keith.Cook2@ihs.gov>; Parker, Brandon (IHS/ALB/MSU) <Brandon.Parker@ihs.gov>
Cc: Box, Michael (IHS/ALB/AO) <Michael.Box@ihs.gov>; Patricio, Patrick (IHS/ALB/ASU) <Patrick.Patricio@ihs.gov>
Subject: RE: Mescalero Service Unit odor complaint response 6-6-2025

Rayana / Brandon,
I wanted to follow up to see if there is any perceived odor this morning.
As noted by Keith Cook, the outdoor air louvers for all air handler units were left fully open over the weekend. If there is not a concern of odor or other issues now, I am recommending that the air louvers not longer be kept fully open.
I had a discussion with Keith and Michael Box on Friday and their recommendation is that that louvers be kept open between 15-20% for at least today. Having them fully open essentially wastes a lot of the cooled air out the window.

Thanks,

CDR David Steen, P.E., CHFM
Acting Director, Division of Health Facilities
Albuquerque Area Indian Health Service
4101 Indian School Road, NE, Suite 225
Albuquerque, NM 87110
SFSU Acting Facility Engineer
Office: 505-256-6804
Cell: (b) (6)

From: Frazier, Rayana (IHS/ALB/MSU) <Rayana.Frazier@ihs.gov>
Sent: Sunday, June 8, 2025 2:23 PM

To: Cook, Keith (IHS/ALB/AO) <Keith.Cook2@ihs.gov>; Parker, Brandon (IHS/ALB/MSU) <Brandon.Parker@ihs.gov>
Cc: Steen, David (IHS/ALB/AO) <David.Steen@ihs.gov>; Box, Michael (IHS/ALB/AO) <Michael.Box@ihs.gov>; Patricio, Patrick (IHS/ALB/ASU) <Patrick.Patricio@ihs.gov>
Subject: RE: Mescalero Service Unit odor complaint response 6-6-2025

Thank you, Sir, for coming onsite to assist. I will follow-up with LCDR Parker for further questions, if any.

From: Cook, Keith (IHS/ALB/AO) <Keith.Cook2@ihs.gov>
Sent: Friday, June 6, 2025 12:54 PM
To: Frazier, Rayana (IHS/ALB/MSU) <Rayana.Frazier@ihs.gov>; Parker, Brandon (IHS/ALB/MSU) <Brandon.Parker@ihs.gov>
Cc: Steen, David (IHS/ALB/AO) <David.Steen@ihs.gov>; Box, Michael (IHS/ALB/AO) <Michael.Box@ihs.gov>; Patricio, Patrick (IHS/ALB/ASU) <Patrick.Patricio@ihs.gov>
Subject: Mescalero Service Unit odor complaint response 6-6-2025

Greetings,

I arrived at MSU around 8:00 a.m. on Friday, June 6, 2025 to help assess odor complaints. Based on a discussion I had with LCDR Parker on Thursday, the complaints apparently arose after use of a mastic remover (SDS attached) for an asbestos abatement project on the first floor. According to the reports I received, the complaints initially started on Tuesday, June 3. The purpose of this e-mail is to report what I found on Friday, June 6. Please contact LCDR Parker for further details regarding the number of complaints, severity of complaints and more details surrounding the asbestos abatement project.

In summary, I did not find levels of concern for the chemicals used in the attached mastic remover on the second or first floor of the MSU clinic during my assessment on Friday. Below, I have summarized the methodology I used to arrive at this conclusion.

As of the writing of this e-mail, I have verified that the air handling units (AHU) for the clinic are set at 100% outdoor air. Verified with both Mr. Patrick Patricio and CDR David Steen. Both gentlemen have confirmed the clinic will remain at 100% outdoor air for the weekend. I have also left the instrumentation I used with LCDR Parker so he can use it this weekend or early next week as necessary. I confirmed that all four portable HEPA units that are exhausting air to the outside for the project area are maintaining the project area under negative pressure. The dumb waiter at the 2nd floor nurses station was sealed and was obviously under negative pressure.

Methodology: The two chemicals of concern in the attached SDS (64742-47-8 Hydrotreated light distillate (petroleum) and 111-76-2 Ethanol, 2-Butoxy-) have ionization potentials that allow them to be measured by the photoionization detector (PID) in the GrayWolf Sensing Solutions probe (model DSII-8, manufacturer calibrated on July 29, 2024). The PID appropriately responded to calibration gas on the day of the assessment using both zero gas and 8.0 ppm isobutylene. After review of the chemicals ionization potential, occupational exposure limits and Agency for Toxic Substances and Disease Registry MINIMAL RISK LEVELS (MRLs), it was determined a PID reading of 1.0 ppm or less would have minimal risk for both patients and staff. There was minimal detectable odor by me on the 2nd floor. The construction area had a perceptible but not strong odor. The odor threshold for 111-76-2 is very low (less than 1.0 ppm). No readings of the PID during assessments of both the first and second floor exceeded 1.0 ppm.

The PID readings in addition to use of actual odor indicate there is minimal risk to both patients and staff.

There is planned use of the mastic remover this Saturday (June 7, 2025). LCDR Parked and I talked to the onsite construction safety officer to ensure the area will be appropriately contained and cleaned. Keeping the outdoor air at 100% over the weekend and the abatement area under negative pressure should limit vapor intrusion outside the abatement area. LCDR Parker does have the GrayWolf if it is determined further measurements are needed.

Keith

Keith Cook, REHS, CIH, MPH
Institutional Environmental Health Officer
Albuquerque Area Indian Health Service
W: 505-256-6790
C: (b) (6)
keith.cook2@ihs.gov

ANE
Consulting Inc

Daily Log

Sat.

Client: Red Eagle J.V. Project: Mescalero IHS

Contractor: Border ATE Date: 06-07-2025

7:00 Arrived at jobsite. Border Guy Gerardo Soto and crew of 3 checking out on NPE integrity. I warmed up and calibrated pumps and signed in. 7:30 Personal, Air, and Ambient pumps running. Red Eagle took pictures of setup. Crew will concentrate on vinyl floor removal by hand. NPE manometer reading -0.30 inches W.C. Run a 30 min excursion sample.
9:15 Floor removal ≈ 75%. Crew working fast. 9:45 Crew blading floor with buffer. Wet methods used. Debris bagged and staged to one corner. NPE -0.45 in W.C.
10:20 No Odor mastic remover used to soften black mastic. Liquid residue picked-up and bagged. Debri/ Work started. Pumps OK NPE -0.25 in W.C.
11:30 Final visual inspected. Minor details addressed by crew. Inspection passed. collected cassettes, 12:00 calibrated pumps and started clearance samples
1:45 Collected clearances and analyzed them. Clearances passed. Informed both Superintendent Guy Smith and Sup Gerry Soto. OK to tear down NPE.
2:00 Done for the day.

Project Manager/Air Monitoring Tech: Juan M. Manjarrez

ANE Consulting Inc

Air Sampling Log/Chain of Custody

Sat.

Project Name: Mezcalero IHS Client: RedEagle IV Contractor: Border AYE Date: 06-07-2025

Sample No.	Pump Type	Sample Location/Name	Time On	Flow Rate (LPM)	Time Off	Flow Rate (LPM)	Total Time (MIN)	Average Flow Rate (LPM)	Total Volume	Fibers/ Fields	Fibers/ mm^2	Results f/cc
8-CMH-01	C	Outside Security	1145	9.6	1325	9.6	130	9.6	1248	14		0.005
8-CMH-02	C	Elevator Hallway	1150	9.6	1320	9.6	130	9.6	1248	12		0.0047
8-FMH-01	FB									1	<0.002	
8-RMH-02	FB									1	<0.002	

Pump Type (A – Area, AM- Ambient, B - Baseline, C – Clearance, E – Excursion, FB- Field Blank, P – Personnel)

Sampled By: Juan M. Manjarrez

Relinquished By: _____ Date: 6-7-25

Received By: _____ Date: _____

Analyzed By: J. Manjarrez Date: 6-7-25

ANE Consulting Inc

Air Sampling Log/Chain of Custody

Project Name: Mescalero IHS Client: Red Eagle Contractor: Border AHE Date: 6-7-25 Sept.

Sample No.	Pump Type	Sample Location/Name	Time On	Flow Rate (LPM)	Time Off	Flow Rate (LPM)	Total Time (MIN)	Average Flow Rate (LPM)	Total Volume	Fibers/ Fields	Fibers/ mm²	Results f/cc
8-PAMH-01	E	Rito Arambula	730	2.1	800	2.1	30	2.1	63	11	/	0.09
8-PMH-02	P	Rito Arambula	8:02	2.1	11:30	2.1	208	2.1	437	18		0.020
8-FMH-01	FB	~							~	1	<0.002	/

Pump Type (A – Area, AM- Ambient, B - Baseline, C – Clearance, E – Excursion, FB- Field Blank, P – Personnel)

Sampled By: Juan M. Manjarrez

Relinquished By: _____ Date: 6-7-25

Received By: _____ Date: _____

Analyzed By: Juan Manjarrez Date: 6-7-25

ANE Consulting Inc

Air Sampling Log/Chain of Custody

SoA.

Project Name: Mesa del Sol ITS Client: Red Eagle JV Contractor: Bohler A+E Date: 6-7-25

Sample No.	Pump Type	Sample Location/Name	Time On	Flow Rate (LPM)	Time Off	Flow Rate (LPM)	Total Time (MIN)	Average Flow Rate (LPM)	Total Volume	Fibers/ Fields	Fibers/ mm²	Results f/cc
8-AMH-01	A	NDE Clean Room	730	5.8	1135	5.8	245	5.8	1421	25		0.009
8-AMH-02	AM	NAM Exhaust	732	5.8	1137	5.8	245	5.8	1421	31		0.011
8-AMH03	A	Outside Security	734	5.8	1139	5.8	245	5.8	1421	26		0.009
8-FMH-01	FB									1	<0.002	
8-FMH-02	FB									1	<0.002	

Pump Type (A – Area, AM- Ambient, B - Baseline, C – Clearance, E – Excursion, FB- Field Blank, P – Personnel)

Sampled By Juan M Manjarrez

Relinquished By: _____ Date: 6-7-25

Received By: _____ Date: _____

Analyzed By: J. Manjarrez Date: 6-7-25

CITY OF ALAMOGORDO

1376 EAST 9TH STREET
ALAMOGORDO, NEW MEXICO 88310-6795
(575) 921-9201 or 415-1347

Driver #D

WASTE MANIFEST for SHIPMENT OF ASBESTOS WASTE to

OTERO/GREENTREE REGIONAL LANDFILL

Located 24 Miles South on Highway 54 from Alamogordo, New Mexico

TRACKING NO.: _____

All applicable blanks MUST BE COMPLETED, including signatures

SWM109102 (SP)

PART I GENERATOR

A generator must sign and keep a copy of each manifest signed in accordance with CFR 40 262.23 (a-1) and retain a hand signed copy from the designated facility which received the waste. In accordance with CFR 40 262.40, this manifest must remain on file for a period of three years. Only HAND SIGNED copies are legal documents for generators.

PROJECT NAME: Mescalero Hospital
ADDRESS: 318 Abalone, st
CITY/STATE/ZIP: Mescalero, NM 88340
PHONE: _____

GENERATOR NAME: Indian Health Service
ADDRESS: 918 Abalone, st
CITY/STATE/ZIP: Mescalero, NM 88340
PHONE: (575) 464-4441

Brandon Parker — Name of Authorized Agent
Brandon Parker — Signature
6/12/2025 — Date Received

PART II CONTRACTOR

NAME OF CONTRACTOR: Border Demolition & Environmental
ADDRESS: 1004 Diesel, Dr
CITY/STATE/ZIP: El Paso, TX 79907 **PHONE:** (915) 860-8855
RESPONSIBLE AGENCIES:
RQ Hazardous Substance, Solid, N.O.S., ORM-E,
RQ Asbestos, 9, Na2212, III

DOT Code of Federal Regulations
The CFR 49 of Transportation Regulations for asbestos are as follows: 171.2, 171.3, 172.10, 172.101, 172.205, 173.1090, 173.1300 and CFR 40-260, 261, 262.22 (60 Part III), 61.

CERTIFICATION

"I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations and are not a hazardous waste as defined by CFR 40, Part 261."

Friable _____
Non-Friable ✓
Blue, Brown(2212) _____
White(2590) _____
Bags 514
Barrels _____
Weight _____
Cu.Yds. 26

SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION: _____

Gerardo Soto / Border Demolition — Name of Authorized Agent
Gerardo Soto — Signature
06/07/25 — Date Received

PART III TRANSPORTER

NAME OF TRANSPORTER #1: ACT ENVIRO **PERMIT#:** 0066562
ADDRESS: 511 Hwy 213 **TRUCK #:** 381
CITY/STATE/ZIP: CHAPARRAL, NM 88081 **PHONE:** 575-824-0164

NAME OF TRANSPORTER #2: _____ **PERMIT #:** _____
ADDRESS: _____ **TRUCK #:** _____
CITY/STATE/ZIP: _____ **PHONE:** _____

The following statement must be signed by the truck driver prior to unloading at the OTERO/GREENTREE REGIONAL LANDFILL facility: "I certify that no other material has been placed in this truck since the container(s) described in Part I of the form was/were loaded."

SIGNATURE OF TRANSPORTER #1: _____ **DATE:** 06/12/25
SIGNATURE OF TRANSPORTER #2: _____ **DATE:** __/__/__

PART IV DISPOSAL SITE OFFICIAL

This is to certify that the OTERO/GREENTREE REGIONAL LANDFILL, Operating under USEPA Permit No. 84607 has been approved for the dispossal of Asbestos Waste, has received the above indicated waste (except for noted discrepancies) and has disposed of it as follows:

DISCREPANCY EXPLANATION: _____
Cell #:___ **Cell Grid #:** _____ **Depth From:**___ **To:**___

_____ __/__/__
uthorized Signature **Date Received**

ANIFEST NO.: _____

Responsible Agency:
NM Environmental Dept.
Air Quality Bureau
525 Camino de los Marquez,
Suite 1
Santa Fe, NM 87505-1816
(505) 476-4300

Bennett Printing, Inc. – Alamogordo D2428 (334 3-Part) Nov. 201

RED EAGLE JOINT VENTURE
A WARFEATHER LLC / ROSS GROUP JV

4-Week Lookahead Schedule

06467.172 Mescalero Indian Hospital Expansion &

Starting Date (Monday): 7/28/2025

	NYZ Construction/ Framing	**On site % Complete**	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
			7/27	7/28	7/29	7/30	7/31	8/1	8/2	8/3	8/4	8/5	8/6	8/7	8/8	8/9	8/10	8/11	8/12	8/13	8/14	8/15	8/16	8/17	8/18	8/19	8/20	8/21	8/22	8/23
1																														
	Preliminary Layout	50.00%									X	X	X																	
	Framing Installation	0.00%											X	X	X			X	X	X	X				X	X	X	X		
		0.00%																												
	Border Demolition		Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
			7/27	7/28	7/29	7/30	7/31	8/1	8/2	8/3	8/4	8/5	8/6	8/7	8/8	8/9	8/10	8/11	8/12	8/13	8/14	8/15	8/16	8/17	8/18	8/19	8/20	8/21	8/22	8/23
2	Demo Interior walls/Change										X	X	X	X																
	Abate Hard Pack Elbows			X	X	X	X	X																						
	Continue Demo	65.00%									X	X	X	X																
	Testing Lab **On Hold**	0.00%																								X	X	X	X	
	Demo Fuel Tank/ ON HOLD FOR WAIVER/EF	0.00%																									X	X		
	Stone Electric		Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
			7/27	7/28	7/29	7/30	7/31	8/1	8/2	8/3	8/4	8/5	8/6	8/7	8/8	8/9	8/10	8/11	8/12	8/13	8/14	8/15	8/16	8/17	8/18	8/19	8/20	8/21	8/22	8/23
3	Preparatory Meeting MEP	50%																												
	Continue Demo	90.00%									X	X	X	X																
	Begin In Wall Rough	0.00%																X	X	X	X				X	X	X	X		
	Low Voltage Demo/Meet w/IHS Data	90.00%																												
	Total Mecnanical, HVAC		Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
			7/27	7/28	7/29	7/30	7/31	8/1	8/2	8/3	8/4	8/5	8/6	8/7	8/8	8/9	8/10	8/11	8/12	8/13	8/14	8/15	8/16	8/17	8/18	8/19	8/20	8/21	8/22	8/23
4	Begin Above Ceiling rough	0.00%											X	X				X	X	X	X				X	X	X	X		
	Make up new Duct Trunk Lines	0.00%		X	X	X	X	X																						
	Continue Mechanical Demo	80.00%									X	X																		
		0.00%																												
	Total Mechanical, Plumbing		Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
			7/27	7/28	7/29	7/30	7/31	8/1	8/2	8/3	8/4	8/5	8/6	8/7	8/8	8/9	8/10	8/11	8/12	8/13	8/14	8/15	8/16	8/17	8/18	7/1	7/2	7/3	7/4	7/5
5	Inspect/investigate existing line /layout new	100.00%																												
	Begin New Plumbing In wall Rough	0.00%																							X	X	X	X		
	Underground rough in	0.00%											X	X				X	X	X	X				X	X	X	X		
	Cut Concrete	0.00%									X	X	X	X				X	X	X	X									
	Plumbing Demo Plan	20.00%		X	X	X																								
	Put back Concrete	0.00%																X	X	X	X	X			X	X	X	X	X	

CITY OF ALAMOGORDO

1376 EAST 9TH STREET
ALAMOGORDO, NEW MEXICO 88310-6795
(575) 921-9201 or 415-1347

WASTE MANIFEST for SHIPMENT OF ASBESTOS WASTE to

OTERO/GREENTREE REGIONAL LANDFILL

Located 24 Miles South on Highway 54 from Alamogordo, New Mexico

TRACKING NO.: _____

All applicable blanks MUST BE COMPLETED, including signatures

SWM109102 (SP)

PART I — GENERATOR

A generator must sign and keep a copy of each manifest signed in accordance with CFR 40 262.23 (a-1) and retain a hand signed copy from the designated facility which received the waste. In accordance with CFR 40 262.40, this manifest must remain on file for a period of three years. Only HAND SIGNED copies are legal documents for generators.

PROJECT NAME: Mescalero Hospital
ADDRESS: 318 Abalone Loop
CITY/STATE/ZIP: Mescalero, NM 88340
PHONE: (575)

GENERATOR NAME: Indian Health Hospital
ADDRESS: 318 Abalone, Loop
CITY/STATE/ZIP: Mescalero, NM 88340
PHONE:

Brandon Parker — Name of Authorized Agent
Signature — 7/29/25 Date Received

PART II — CONTRACTOR

NAME OF CONTRACTOR: Border Demolition & Environmental
ADDRESS: 1004 Diesel Dr
CITY/STATE/ZIP: El Paso, TX 79907 PHONE: 860-8805

RESPONSIBLE AGENCIES:

RQ Hazardous Substance, Solid, N.O.S., ORM-E,
RQ Asbestos, 9, Na2212, III

DOT Code of Federal Regulations
The CFR 49 of Transportation Regulations for asbestos are as follows: 171.2, 171.3, 172.10, 172.101, 172.205, 173.1090, 173.1300 and CFR 40-260, 261, 262.22 (60 Part III), 61.

CERTIFICATION

"I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations and are not a hazardous waste as defined by CFR 40, Part 261."

Friable ✓
Non-Friable
Blue, Brown(2212)
White(2590)
Bags 21
Barrels
Weight
Cu.Yds. 2.0

SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION: _____

Gerardo Soto/Border Demolition — Signature — 07/29/2025 Date Received
Name of Authorized Agent

PART III — TRANSPORTER

NAME OF TRANSPORTER #1: _____ PERMIT#: _____
ADDRESS: _____ TRUCK #: _____
CITY/STATE/ZIP: _____ PHONE: _____

NAME OF TRANSPORTER #2: _____ PERMIT #: _____
ADDRESS: _____ TRUCK #: _____
CITY/STATE/ZIP: _____ PHONE: _____

The following statement must be signed by the truck driver prior to unloading at the OTERO/GREENTREE REGIONAL LANDFILL facility: "I certify that no other material has been placed in this truck since the container(s) described in Part I of the form was/were loaded."

SIGNATURE OF TRANSPORTER #1: _____ DATE: ____/____/_____
SIGNATURE OF TRANSPORTER #2: _____ DATE: ____/____/_____

PART IV — DISPOSAL SITE OFFICIAL

This is to certify that the OTERO/GREENTREE REGIONAL LANDFILL, Operating under USEPA Permit No. 84607 has been approved for the dispossal of Asbestos Waste, has received the above indicated waste (except for noted discrepancies) and has disposed of it as follows:

DISCREPANCY EXPLANATION: _____
Cell #:___ Cell Grid #: _____ Depth From:___ To:___

_____ ____/____/_____
Authorized Signature — Date Received

MANIFEST NO.: _____

Responsible Agency:
NM Environmental Dept.
Air Quality Bureau
525 Camino de los Marquez,
Suite 1
Santa Fe, NM 87505-1816
(505) 476-4300

Bennett Printing, Inc. – Alamogordo D2428 (334 3-Part) Nov. 2019

Outlook

Fw: Abatement of Hardpack Elbows

From Parker, Brandon (IHS/ALB/MSU) <Brandon.Parker@ihs.gov>
Date Wed 8/6/2025 2:24 PM
To Briggs, Charlotte cb (IHS/ALB) <Charlotte.Briggs@ihs.gov>

FYSA

Brandon

From: Parker, Brandon (IHS/ALB/MSU) <Brandon.Parker@ihs.gov>
Sent: Thursday, July 31, 2025 11:18 AM
To: Frazier, Rayana (IHS/ALB/MSU) <Rayana.Frazier@ihs.gov>; McClain, Robert (IHS/DES) <Robert.McClain@ihs.gov>
Subject: Fw: Abatement of Hardpack Elbows

FYSA.

Brandon Parker, MSPH, REHS
LCDR, U.S. Public Health Service
Safety and Occupational Health Specialist
Mescalero Service Unit
Office: 575-464-3836
(b) (6)
brandon.parker@ihs.gov

From: Armando Bustamante <armando.bustamante@withrossgroup.com>
Sent: Thursday, July 31, 2025 11:17 AM
To: Parker, Brandon (IHS/ALB/MSU) <Brandon.Parker@ihs.gov>
Subject: Re: Abatement of Hardpack Elbows

Thank you

Sent from my T-Mobile 5G Device
Get Outlook for Android

From: Parker, Brandon (IHS/ALB/MSU) <Brandon.Parker@ihs.gov>
Sent: Thursday, July 31, 2025 11:08:08 AM
To: Armando Bustamante <armando.bustamante@withrossgroup.com>
Subject: Re: Abatement of Hardpack Elbows

Good Morning,

I appreciate the notice about the completed plenum asbestos abatement work. Attaching the 2 manifest just in case you need them for record keeping purposes.

Thanks,

Brandon Parker, MSPH, REHS
LCDR, U.S. Public Health Service
Safety and Occupational Health Specialist
Mescalero Service Unit
Office: 575-464-3836
(b) (6)
brandon.parker@ihs.gov

From: Armando Bustamante <armando.bustamante@withrossgroup.com>
Sent: Thursday, July 31, 2025 9:48 AM
To: Parker, Brandon (IHS/ALB/MSU) <Brandon.Parker@ihs.gov>
Subject: Re: Abatement of Hardpack Elbows

Good Morning Mr Parker, the construction area is now clear for continuing construction work, abatement of hardpack elbows was finished on tuesday,

Get Outlook for iOS

From: Armando Bustamante
Sent: Tuesday, July 29, 2025 9:01:19 AM
To: 'Brandon.Parker@ihs.gov' <Brandon.Parker@ihs.gov>
Subject: Abatement of Hardpack Elbows

Good Morning Mr. Parker, just letting you know that we began abatement of hardpack elbows yesterday, we should be done by EOD today, if not at the latest tomorrow. I will send you a notification as soon as we are done.

[External]: Please use proper judgment and caution when opening attachments, clicking links, or responding to this email.

Progress Photos

Description

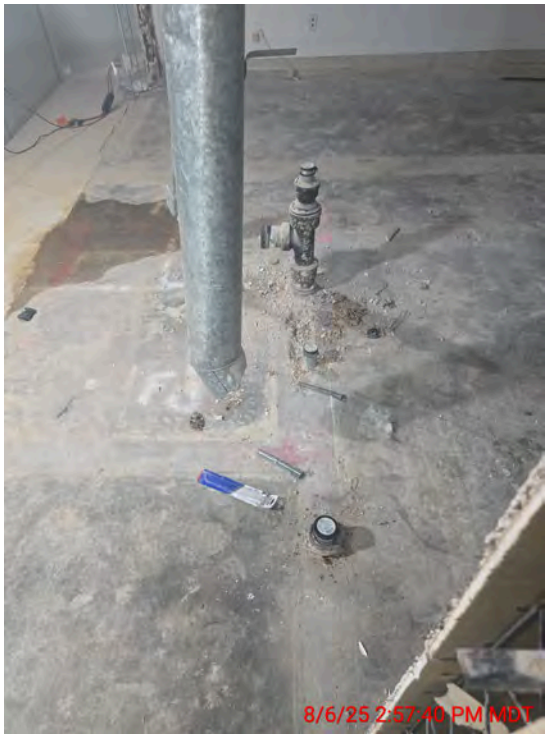
Taken Date
08/06/2025 at 02:57 pm

Upload Date
08/06/2025 at 04:16 pm

Uploaded By
Guy Smith

File Name
IMG_2025_08_06_14_57...

Location
Abatement/Demo Area



Progress Photos

Description

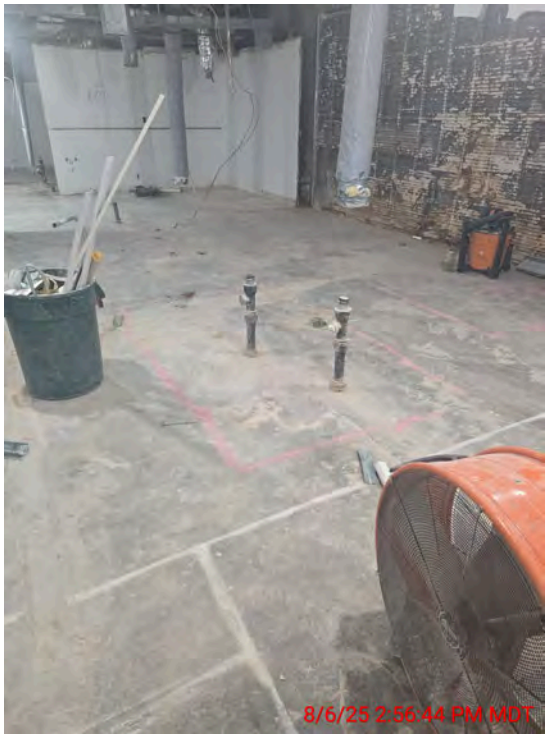
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08/06/2025 at 02:56 pm

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08/06/2025 at 04:16 pm

Uploaded By
Guy Smith

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Location
Abatement/Demo Area



Progress Photos

Description

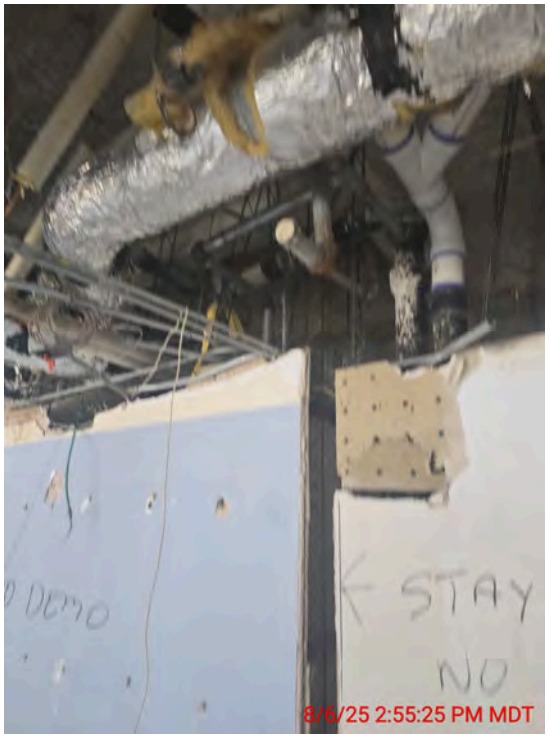
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08/06/2025 at 02:55 pm

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08/06/2025 at 04:15 pm

Uploaded By
Guy Smith

File Name
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Location
Abatement/Demo Area



Progress Photos

Description

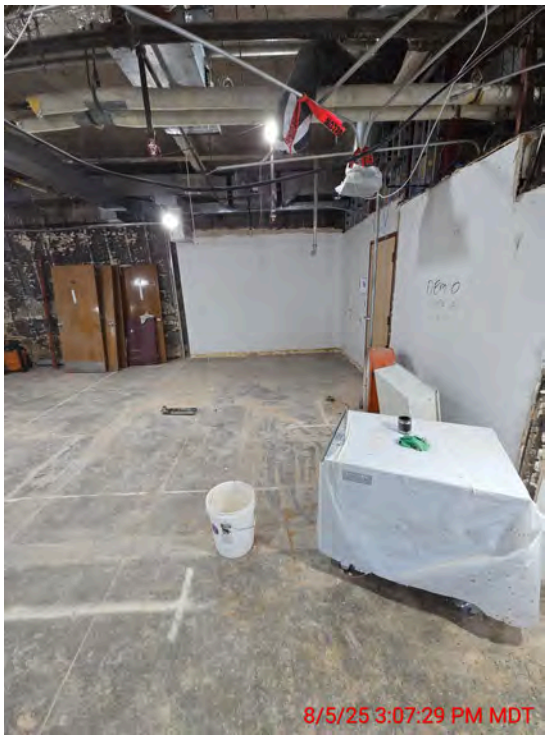
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08/05/2025 at 03:07 pm

Upload Date
08/05/2025 at 05:22 pm

Uploaded By
Guy Smith

File Name
IMG_2025_08_05_15_07...

Location
Abatement/Demo Area



Progress Photos

Description

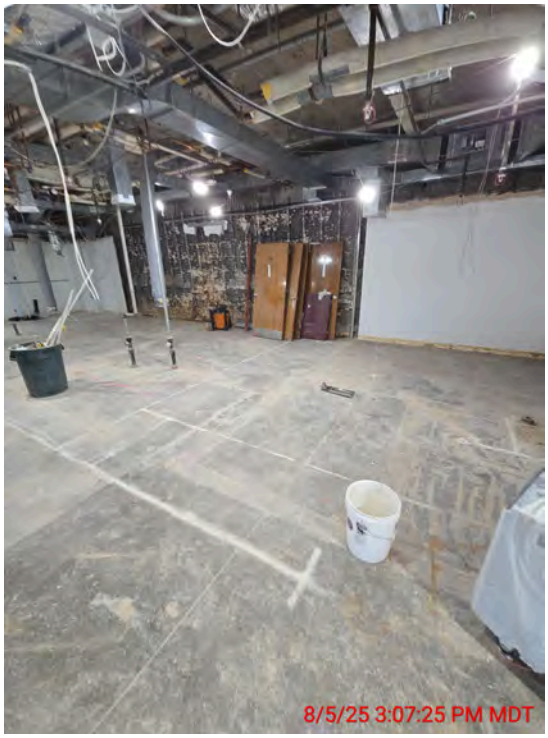
Taken Date
08/05/2025 at 03:07 pm

Upload Date
08/05/2025 at 05:22 pm

Uploaded By
Guy Smith

File Name
IMG_2025_08_05_15_07...

Location
Abatement/Demo Area



Progress Photos

Description

Taken Date
08/05/2025 at 03:07 pm

Upload Date
08/05/2025 at 05:21 pm

Uploaded By
Guy Smith

File Name
IMG_2025_08_05_15_07...

Location
Abatement/Demo Area



Progress Photos

Description

Taken Date
08/05/2025 at 03:05 pm

Upload Date
08/05/2025 at 04:06 pm

Uploaded By
Guy Smith

File Name
IMG_2025_08_05_15_05...

Location
Abatement/Demo Area



Progress Photos

Description

Taken Date
08/05/2025 at 05:52 am

Upload Date
08/05/2025 at 06:58 am

Uploaded By
Guy Smith

File Name
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Location
122 xray



Progress Photos

Description

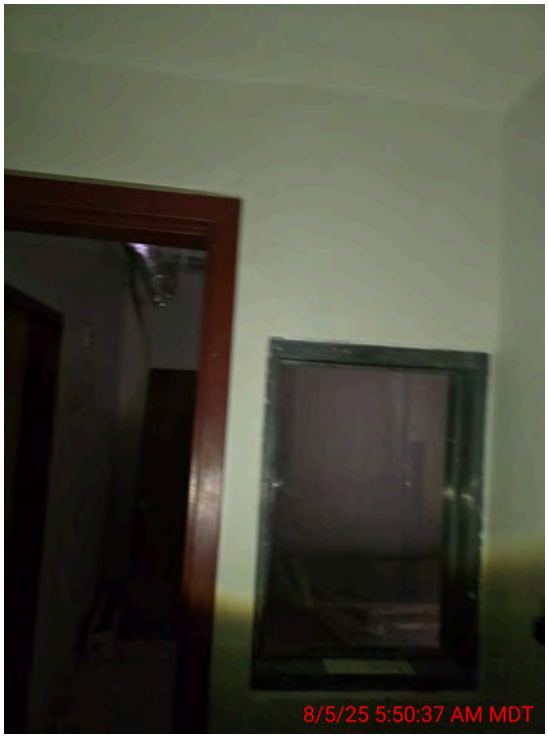
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08/05/2025 at 05:50 am

Upload Date
08/05/2025 at 06:57 am

Uploaded By
Guy Smith

File Name
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Location
122 xray



Progress Photos

Description

Taken Date
08/05/2025 at 05:49 am

Upload Date
08/05/2025 at 06:57 am

Uploaded By
Guy Smith

File Name
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Location
122 xray



Progress Photos

Description

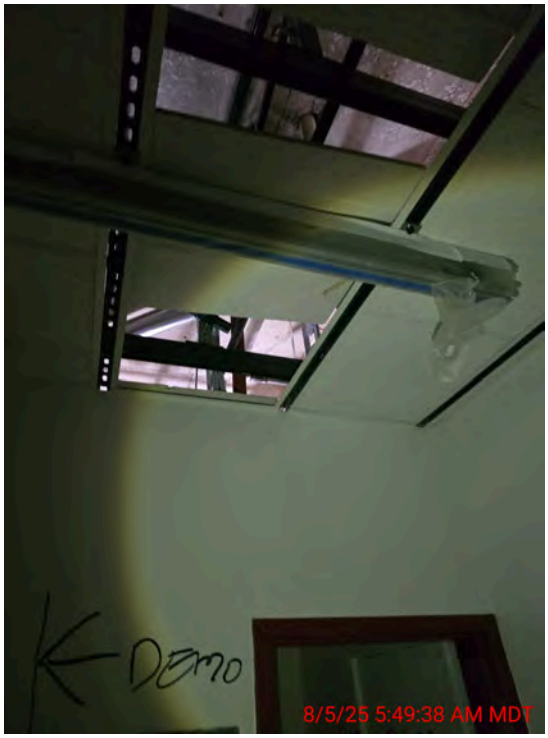
Taken Date
08/05/2025 at 05:49 am

Upload Date
08/05/2025 at 06:57 am

Uploaded By
Guy Smith

File Name
IMG_2025_08_05_05_49...

Location
122 xray



Progress Photos

Description

Taken Date
08/05/2025 at 05:49 am

Upload Date
08/05/2025 at 06:57 am

Uploaded By
Guy Smith

File Name
IMG_2025_08_05_05_49...

Location
122 xray



RED EAGLE JOINT VENTURE
A WARFEATHER LLC / ROSS GROUP JV

4-Week Lookahead Schedule

06467.172 Mescalero Indian Hospital Expansion & Renc

Starting Date (Monday): 11/30/2025

		On site % Complete	Sun 11/30	Mon 12/1	Tue 12/2	Wed 12/3	Thu 12/4	Fri 12/5	Sat 12/6	Sun 12/7	Mon 12/8	Tue 12/9	Wed 12/10	Thu 12/11	Fri 12/12	Sat 12/13	Sun 12/14	Mon 12/15	Tue 12/16	Wed 12/17	Thu 12/18	Fri 12/19	Sat 12/20	Sun 12/21	Mon 12/22	Tue 12/23	Wed 12/24	Thu 12/25	Fri 12/26	Sat 12/27	Sun 12/28	Mon 12/29	Tue 12/30	Wed 12/31	Thu 1/1	Fri 1/2	Sat 1/3	Sun 1/4	Mon 1/5	Tue 1/6	Wed 1/7	Thu 1/8	Fri 1/9	Sat 1/10
1	**NYZ Construction/ Framing**																																										
	Layout	0.00%																																									
	Framing Installation	0.00%																																									
		0.00%																																									
2	**Border Demolition**		Sun 11/30	Mon 12/1	Tue 12/2	Wed 12/3	Thu 12/4	Fri 12/5	Sat 12/6	Sun 12/7	Mon 12/8	Tue 12/9	Wed 12/10	Thu 12/11	Fri 12/12	Sat 12/13	Sun 12/14	Mon 12/15	Tue 12/16	Wed 12/17	Thu 12/18	Fri 12/19	Sat 12/20	Sun 12/21	Mon 12/22	Tue 12/23	Wed 12/24	Thu 12/25	Fri 12/26	Sat 12/27	Sun 12/28	Mon 12/29	Tue 12/30	Wed 12/31	Thu 1/1	Fri 1/2	Sat 1/3	Sun 1/4	Mon 1/5	Tue 1/6	Wed 1/7	Thu 1/8	Fri 1/9	Sat 1/10
	All Demo Interior/Exterior	80.00%																																									
	Demo Rm 148A	0.00%																																									
	Abatement for Hall flooring and demo	0.00%						X	X	X																																	
	Clear abatement and reset ICRA Panels	0.00%							X	X																																	
	MOVE Icra panels	0.00%						X																																			
3	**Stone Electric**		Sun 11/30	Mon 12/1	Tue 12/2	Wed 12/3	Thu 12/4	Fri 12/5	Sat 12/6	Sun 12/7	Mon 12/8	Tue 12/9	Wed 12/10	Thu 12/11	Fri 12/12	Sat 12/13	Sun 12/14	Mon 12/15	Tue 12/16	Wed 12/17	Thu 12/18	Fri 12/19	Sat 12/20	Sun 12/21	Mon 12/22	Tue 12/23	Wed 12/24	Thu 12/25	Fri 12/26	Sat 12/27	Sun 12/28	Mon 12/29	Tue 12/30	Wed 12/31	Thu 1/1	Fri 1/2	Sat 1/3	Sun 1/4	Mon 1/5	Tue 1/6	Wed 1/7	Thu 1/8	Fri 1/9	Sat 1/10
	Preparatory Meeting MEP	50%																																									
	Dig For secondary piping to Mech Rm	0.00%																																									
	Above Ceiling Secondary/ core existing	50.00%																																									
	Heat Trace at Ramp Floor																																										
4	**Total Mecnanical, HVAC**		Sun 11/30	Mon 12/1	Tue 12/2	Wed 12/3	Thu 12/4	Fri 12/5	Sat 12/6	Sun 12/7	Mon 12/8	Tue 12/9	Wed 12/10	Thu 12/11	Fri 12/12	Sat 12/13	Sun 12/14	Mon 12/15	Tue 12/16	Wed 12/17	Thu 12/18	Fri 12/19	Sat 12/20	Sun 12/21	Mon 12/22	Tue 12/23	Wed 12/24	Thu 12/25	Fri 12/26	Sat 12/27	Sun 12/28	Mon 12/29	Tue 12/30	Wed 12/31	Thu 1/1	Fri 1/2	Sat 1/3	Sun 1/4	Mon 1/5	Tue 1/6	Wed 1/7	Thu 1/8	Fri 1/9	Sat 1/10
	Begin Above Ceiling rough	0.00%																																									
	Make up new Duct Trunk Lines	80.00%																																									
	Continue Mechanical Demo	80.00%																																									
		0.00%																																									
5	**Total Mechanical, Plumbing**		Sun 11/30	Mon 12/1	Tue 12/2	Wed 12/3	Thu 12/4	Fri 12/5	Sat 12/6	Sun 12/7	Mon 12/8	Tue 12/9	Wed 12/10	Thu 12/11	Fri 12/12	Sat 12/13	Sun 12/14	Mon 12/15	Tue 12/16	Wed 12/17	Thu 12/18	Fri 12/19	Sat 12/20	Sun 12/21	Mon 12/22	Tue 12/23	Wed 12/24	Thu 12/25	Fri 12/26	Sat 12/27	Sun 12/28	Mon 12/29	Tue 12/30	Wed 12/31	Thu 1/1	Fri 1/2	Sat 1/3	Sun 1/4	Mon 1/5	Tue 1/6	Wed 1/7	Thu 1/8	Fri 1/9	Sat 1/10
	Adjust floor sinks New building			X	X	X	X																																			
	Begin New Plumbing In wall Rough	0.00%		On Hold																																							
	Underground rough in Interior	70.00%																																									
	Pour interior concrete	35.00%																																									
6	**EMERITUS**		Sun 11/30	Mon 12/1	Tue 12/2	Wed 12/3	Thu 12/4	Fri 12/5	Sat 12/6	Sun 12/7	Mon 12/8	Tue 12/9	Wed 12/10	Thu 12/11	Fri 12/12	Sat 12/13	Sun 12/14	Mon 12/15	Tue 12/16	Wed 12/17	Thu 12/18	Fri 12/19	Sat 12/20	Sun 12/21	Mon 12/22	Tue 12/23	Wed 12/24	Thu 12/25	Fri 12/26	Sat 12/27	Sun 12/28	Mon 12/29	Tue 12/30	Wed 12/31	Thu 1/1	Fri 1/2	Sat 1/3	Sun 1/4	Mon 1/5	Tue 1/6	Wed 1/7	Thu 1/8	Fri 1/9	Sat 1/10
	Pour Canopy Footings	100.00%																																									
	Form walls and Stair	0.00%																																									
	Pour Walls	0.00%																																									
	Rebar for footings and Anchor bolts	100.00%																																									
	Rebar for walls	0.00%																																									
	Interior Rebar for plumbing trenches	35.00%																																									
	Pour back concrete interior trenches	0.00%																																									
4	**Larrance Steel**		Sun 11/30	Mon 12/1	Tue 12/2	Wed 12/3	Thu 12/4	Fri 12/5	Sat 12/6	Sun 12/7	Mon 12/8	Tue 12/9	Wed #####	Thu #####	Fri #####	Sat #####	Sun #####	Mon #####	Tue #####	Wed 12/17	Thu 12/18	Fri ######	Sat 12/20	Sun ######	Mon 12/22	Tue 12/23	Wed 12/24	Thu 12/25	Fri 12/26	Sat 12/27	Sun 12/28	Mon 12/29	Tue 12/30	Wed 12/31	Thu 1/1	Fri 1/2	Sat 1/3	Sun 1/4	Mon 1/5	Tue 1/6	Wed 1/7	Thu 1/8	Fri 1/9	Sat 1/10
	Mobilize on site																	X																									
	Shake out steel										X	X	X	X																													
	Erect Columns																	X	X	X	X	X	X		X	X						X	X	X								
	Steel delivery										X	X	X	X																													
	Preparatory Meeting Division- Metals																	X																									
5																																										

Outlook

RE: Disruption Notice - Corridor 141

From McClain, Robert (IHS/DES) <Robert.McClain@ihs.gov>
Date Thu 12/4/2025 2:02 PM
To Parker, Brandon (IHS/ALB/MSU) <Brandon.Parker@ihs.gov>
Cc Frazier, Rayana (IHS/ALB/MSU) <Rayana.Frazier@ihs.gov>

Thanks Brandon
Hopefully the abatement and clean up go well and don't affect operations
I'll try to touch base with Guy Sunday and let you know if there are issues.

It should be fairly strait forward. They did it in the corridors before so there shouldn't be any surprises.

I'll be onsite the week of December 15th (probably Wednesday) if you want to touch base on anything.

Robb McClain
Project Manager, Architect, COR
Indian Health Service
Division of Engineering Services-Dallas
1301 Young St., Suite 106-840
Dallas, Texas 75202-5433
469-978-5009

From: Parker, Brandon (IHS/ALB/MSU) <Brandon.Parker@ihs.gov>
Sent: Thursday, December 4, 2025 2:47 PM
To: MSU - ALL <MSU-ALL@ihs.gov>
Cc: McClain, Robert (IHS/DES) <Robert.McClain@ihs.gov>; Benally, Karlisa (IHS/ALB/ASU) <Karlisa.Benally@ihs.gov>; Cook, Keith (IHS/ALB/AO) <Keith.Cook2@ihs.gov>
Subject: Disruption Notice - Corridor 141

Dear MSU Staff,

Notice of Disruption

Corridor 141 Demo & Asbestos Abatement

Location(s)	Main Clinic 1st Floor Corridor 141. See attached map.
Date(s)	Staring at noon on Friday, December 5, 2025 Ending Sunday, December 7, 2025
Time(s)	12/05: Noon to 7 PM; 12/06: 7 AM to 7 PM; 12/07: 7 AM to 5:00 PM

Look Ahead	Structural Steel is scheduled to arrive on 12/11 and will begin erection on 12/12.

Asbestos Removal Notice:

Asbestos abatement contractors will be demolishing laminate flooring and abating non-friable asbestos containing mastic (floor adhesive) in Corridor 141. This work will be completed by trained & licensed abatement contractors. All proper work practices, safety, & engineering controls will be followed in accordance with State & Federal asbestos regulations. A certified third-party consultant will be on-site to conduct oversight to ensure abatement work is conducted properly.

Starting at Noon on Friday, December 5, 2025 & concluding on Sunday, December 7, 2025, access to Corridor 141 will be closed to ALL staff. Please plan accordingly.

See attachment for a map of the work area.

1st Floor occupants: In the event of an emergency, please evacuate the 1st floor through the southwest exit (CEO office) or use the stairs by Security.

If you have questions or concerns regarding this notice please contact Brandon Parker, Safety Officer at x136 or Brandon.Parker@ihs.gov.

Daily Report

Day of Week Friday	Subcontractor A&E Consulting Inc.
Date 11/5/2025	Trade Air Monitoring
Project Name Mesclero Indian H	Phone (915)777-8708

WEATHER: Clear (X) Overcast ( ) Rain ( ) Temp High ( ) Temp Low ( )

SAFETY

Was A Job Safety Meeting Held Today? YES ( ) NO ( ) If yes, attach copy

Were there any injuries to crew members today? YES ( ) NO (X) If yes, attach report

Were there any near miss incidents today? YES ( ) NO (X) If yes, please explain

TIER SUBCONTRACTOR INFORMATION (Tier subcontractors must fill out their own daily)

Do You Have A Tier Sub on Site Today? YES ( ) NO ( ) If Yes, List Tier's Names, Trade & Phone Numbers

Tier Subcontractor Names	Trade	Phone Number

Are You A Tier Sub? YES ( ) NO ( ) If Yes, List Subcontractor Name That You Are Working For

Subcontractor Name	Trade	Phone Number

MATERIAL RECEIVED TODAY (attach copy of invoice / receipt)

Material Received	Vendors Name	Material Received	Vendors Name

EQUIPMENT UTILIZED TODAY (List Make, Model and attach copy of equipment checklist)

DO YOU OWN X OR RENT YOUR EQUIPMENT

Qty.	Make	Model	Hours Used	Supplier's Name (If Rented)
3	EMS		1 hr 37 min	N/A

The undersigned herein certifies that a visual inspection was performed this date on all equipment utilized.

WORK PERFORMED TODAY

Name	Classification	Hours	Location and Description of work performed
Baseline	Air monitoring	12:00-15:48	on the lower level of the Mescalero Indian Hospital, there's a containment for Asbestos containing material, I am to monitor the Asbestos particles in the air, today presenting Baselines for 90-92 mins at a flow rate of 16 lpm to collect 1470-1440 L in Volume

Remarks

Signature: Date: 11/5/2025

ANE Consulting Inc

Daily Log

Client: Red Eagle

Project: Pescalero Indian Hospital

Contractor: Border Demolition

Date: 12/5/2025

12:00 - Arrived on site along with border demolition, but workers were going to head to lunch, beginning prep upon return

13:10 - workers return from lunch and commence prep, Guy Smith and I inspect the Area needed to be prepped.

13:30 - workers have now done advancement of prep work and I will proceed to run baseline procedures on the site

13:40 - At this time baselines are running.

15:10 - Baselines have finished and will proceed to turn them off.

15:25 - Pumps and Samples are properly collected and stored.

Project Management/Air Monitoring Tech: Jesus Pongilio

ANE Consulting Inc

Air Sampling Log/Chain of Custody

Project Name: Mescalero Indian Hospital Client: Red Eagle Contractor: Border Demolition Date: 12/5/2025

Sample No.	Pump Type	Sample Location/Name	Time On	Flow Rate (LPM)	Time Off	Flow Rate (LPM)	Total Time (MIN)	Average Flow Rate (LPM)	Total Volume	Fibers/ Fields	Fibers/ mm²	Results f/cc
MIH-B1	B	Baselines @ North	13:38	16	15:10	16	92	16	1,472.0			
MLH-B2	B	Baselines @ South	13:39	16	15:10	16	91	16	1,456.0			
MIH-B3	B	Baselines @ East	13:40	16	15:10	16	90	16	1,440.0			
MLHFB1	FB	Field Blank	N/A	—	—	—	—	—	—			
MIH-FB2	FB	Field Blank	N/A	—	—	—	—	—	—			

Pump Type (A – Area, AM- Ambient, B - Baseline, C – Clearance, E – Excursion, FB- Field Blank, P – Personnel)

Sampled By Jesus Ponvillo

Relinquished By: _____ Date: 12/5/2025

Received By: _____ Date: _____

Analyzed By: _____ Date: _____

Mescalero Indian Health Service

Notice of Disruption:

1st Floor Corridor 141 Demo & Asbestos Abatement

Location(s)	Main Clinic 1st Floor Corridor 141. See attached map.
Date(s)	Starting at Noon on Friday, December 5, 2025 Ending Sunday, December 7, 2025
Time(s)	12/05: Noon to 7 PM; 12/06: 7 AM to 7 PM; 12/07: 7 AM to 5:00 PM
Look Ahead	Structural Steel is scheduled to arrive on 12/11 and will begin erection on new slab on 12/12

Asbestos Removal Notice:

Asbestos abatement contractors will be demolishing laminate flooring and abating non-friable asbestos containing mastic (floor adhesive) in Corridor 141. This work will be completed by trained & licensed abatement contractors. All proper work practices, safety, & engineering controls will be followed in accordance with State & Federal asbestos regulations. A certified third-party consultant will be on-site to conduct oversight to ensure abatement work is conducted properly.

Starting at Noon on Friday, December 5, 2025 & concluding on Sunday, December 7, 2025, access to Corridor 141 will be closed to staff. Please plan accordingly.

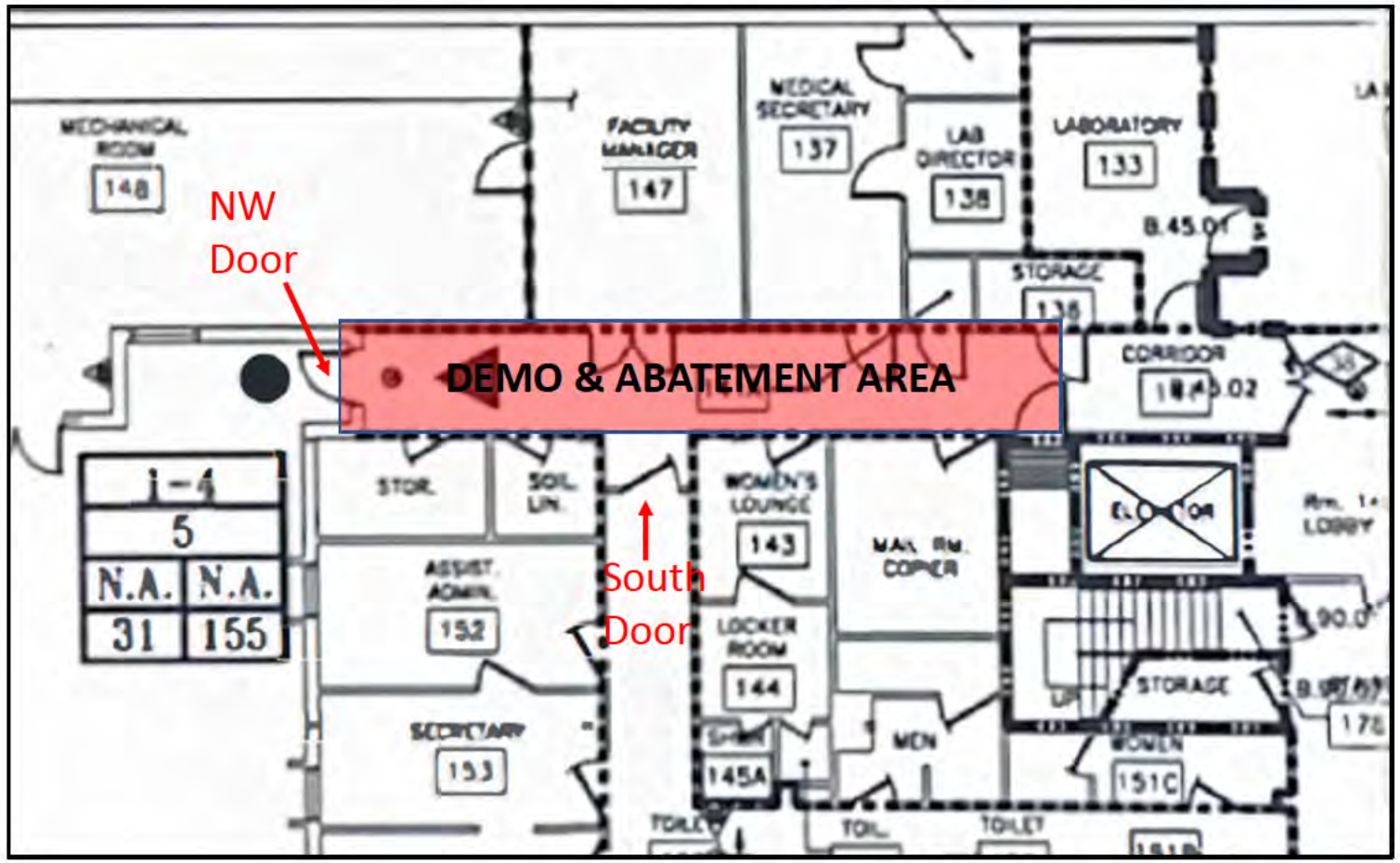
1st Floor occupants: In the event of an emergency, please evacuate the 1st floor through the southwest exit (CEO office) or use the stairs by Security.

If you have questions or concerns regarding this notice please contact Brandon Parker, Safety Officer at x136 or Brandon.Parker@ihs.gov.

1st Floor Corridor 141

Scope: Demo Flooring & Asbestos Abatement

- Dates:
  - START - 12/05 at Noon to 7 PM
  - 12/06 at 7 AM to 7 PM
  - ENDS - 12/07 at 7 AM to 5:00 PM
- Work Plan:
  - 12/05: Prep Work ONLY
  - 12/06: Demo and Abate Floor
  - 12/07: Clean and Re-Install Barriers
- NW Door: No staff access starting at Noon on 12/05
  - Contractors to use NW Door to access worksite
- South Door: No staff access starting at Noon on 12/05
- SW Door (CEO Door): Staff access/exit to 1st Floor still permitted
- 1st Floor Stairs: Staff access/exit for 1st Floor stairs still permitted



Corridor 141

Description

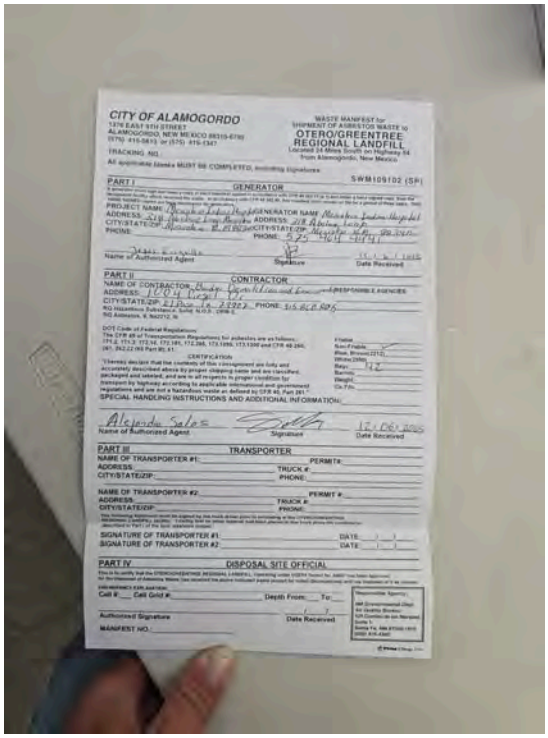
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12/06/2025 at 04:24 pm

Uploaded By
Guy Smith

File Name
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Location
Corridor 141>Abatement on west end corridor flooring



Asbestos Abatement

Description

Taken Date
12/06/2025 at 11:47 am

Upload Date
12/06/2025 at 12:51 pm

Uploaded By
Guy Smith

File Name
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Location
Corridor 141>Abatement on west end corridor flooring



Asbestos Abatement

Description

Taken Date
12/06/2025 at 11:47 am

Upload Date
12/06/2025 at 12:50 pm

Uploaded By
Guy Smith

File Name
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Location
Corridor 141>Abatement on west end corridor flooring



Daily Report

Day of Week Saturday	Subcontractor A&E Consulting Inc.
Date 11/6/2025	Trade Air Monitoring
Project Name Hexcelero Indian H	Phone (915) 777-2708

WEATHER: Clear (X) Overcast ( ) Rain ( ) Temp High ( ) Temp Low ( )

SAFETY

Was A Job Safety Meeting Held Today? YES ( ) NO ( ) If yes, attach copy

Were there any injuries to crew members today? YES ( ) NO (X) If yes, attach report

Were there any near miss incidents today? YES ( ) NO (X) If yes, please explain

TIER SUBCONTRACTOR INFORMATION (Tier subcontractors must fill out their own daily)

Do You Have A Tier Sub on Site Today? YES ( ) NO ( ) If Yes, List Tier's Names, Trade & Phone Numbers

Tier Subcontractor Names	Trade	Phone Number

Are You A Tier Sub? YES ( ) NO ( ) If Yes, List Subcontractor Name That You Are Working For

Subcontractor Name	Trade	Phone Number

MATERIAL RECEIVED TODAY (attach copy of invoice / receipt)

Material Received	Vendors Name	Material Received	Vendors Name

EQUIPMENT UTILIZED TODAY (List Make, Model and attach copy of equipment checklist)

DO YOU OWN (X) OR RENT YOUR EQUIPMENT

Qty.	Make	Model	Hours Used	Suppliers Name (If Rental)
4	EMS			N/A
1				N/A

The undersigned herein certifies that a visual Inspection was performed this date on all equipment utilized.

WORK PERFORMED TODAY

Name	Classification	Hours	Location and Description of work performed
Areas	Air monitoring	7:00-7:45	Arrived to the site, began inspecting area as well as Calibrating pumps to true flow rate of 4.36 to Collect are samples, 1 personnel pump also provided & 1 Excursion, placed ACM pumps and turned on for monitoring fibers levels during Abatement
		10:45	no issues up to this point, Area pumps appropriately running
		11:30	At this point I set up Clearances to run up to Collect a total Volume above 1,250.00 at a flow rate of 16 lpm
		13:30	by this time Clearances have passed and teardown of the Containment has been approved

Remarks

Signature: [signature] Date: 11/6/2025

ANE Consulting Inc

Daily Log

Client: Red Eagle Project: Mescalero Indian Hospital

Contractor: Border Demolition Date: 12/6/2025

7:00 - Arrived to site along with Border Demolition, which still has a bit of prepping to do before Commencing abatement. Supervisor of Contractor crew is Alejandro Salas with a crew size of 3 additional workers. Mr. Guy Smith was already on site upon arrival.

7:30 - At this time minor details are Concluded and workers are preparing to enter Containment and will now begin placing pumps in appropriate locations.

7:45 - At this time pumps are Calibrated and running, negative pressure is @ -0.024, and workers have begun the Abatement of linoleum sheet w/ Black Mastic and are inside the Containment. Personnel pump handed to Roberto Rivas

9:42 - Pumps are still working correctly, workers are wearing their PPE appropriately, Containment shows no sign of damage and is correctly sealed

11:20 - Supervisor informed me that Abatement was Concluded for the mentioned material, I have Callibrated pumps to Commence Clearances and will begin Shortly

11:30 - Clearances are now running

13:00 - At this point Clearances are Concluded and Sampled Casettes stored Safely, I will return to my hotel to give results, for teardown of Containment area today if Clearances passed

13:40 - Containment has passed Containment Clearances and have informed Supervisor at this point.

Project Management/Air Monitoring Tech: Jesus Rangel

ANE Consulting Inc

Air Sampling Log/Chain of Custody

Project Name: Mescalero Indian Hospital Client: Red Eagle Contractor: Border Demolition Date: 12/6/2025

Sample No.	Pump Type	Sample Location/Name	Time On	Flow Rate (LPM)	Time Off	Flow Rate (LPM)	Total Time (MIN)	Average Flow Rate (LPM)	Total Volume	Fibers/ Fields	Fibers/ mm²	Results f/cc
MIH-C1	C	Clearances @ North	11:27	16	12:57	16	90	16	1,440	12/100	15.28	0.004
MIH-C2	C	Clearances @ South	11:28	"	12:58	"	90	"	1,440	11/100	14.01	0.003
MIH-C3	C	Clearances @ East	11:28	"	12:58	"	90	"	1,440	12/100	15.28	0.004
MIH-FB1	FB	Field Blank	N/A	—	—	—	—	—	—			

Pump Type (A – Area, AM- Ambient, B - Baseline, C – Clearance, E – Excursion, FB- Field Blank, P – Personnel)

Sampled By Jesus Ronquillo

Relinquished By: _____ Date: 12/6/2025

Received By: _____ Date: _____

Analyzed By: Jesus Ronquillo Date: 12/6/2025

ANE Consulting Inc

Air Sampling Log/Chain of Custody

Project Name: Mescalero Indian Hospital Client: Red Eagle Contractor: Border Demolition Date: 12/6/2025

Sample No.	Pump Type	Sample Location/Name	Time On	Flow Rate (LPM)	Time Off	Flow Rate (LPM)	Total Time (MIN)	Average Flow Rate (LPM)	Total Volume	Fibers/ Fields	Fibers/ mm²	Results f/cc
MIH-IA1	IA	Inside Containment	7:41	4.36	11:20	4.86	219	4.36	954.84	31/100	39.49	0.01590
MIH-IA2	IA	HEPA @ Exhaust	7:41		11:20		219		954.84	22/100	28.02	0.01128
MIH-IA3	IA	Decon @ Clean room	7:42		11:21		219		954.84	25/100	31.84	0.01282
MIH-IA4	IA	Outside Containment	7:45		11:24		219		954.84	21/100	26.75	0.01077
MIH-FB1	FB	Field Blank	N/A									
MIH-FB2	FB	Field Blank	N/A									

Pump Type (A – Area, AM- Ambient, B - Baseline, C – Clearance, E – Excursion, FB- Field Blank, P – Personnel)

Sampled By Jesus Ronquillo

Relinquished By: _____ Date: 12/6/2025

Received By: _____ Date: _____

Analyzed By: Jesus Ronquillo Date: 12/6/2025

ANE Consulting Inc

Air Sampling Log/Chain of Custody

Project Name: Mescalero Indian Hospital Client: Red Eagle Contractor: Border Demolition Date: 12/6/2025

Sample No.	Pump Type	Sample Location/Name	Time On	Flow Rate (LPM)	Time Off	Flow Rate (LPM)	Total Time (MIN)	Average Flow Rate (LPM)	Total Volume	Fibers/ Fields	Fibers/ mm²	Results f/cc
MLH-P1	P	Personnel @ Roberto Rivas	7:46	7.24	11:25	7.24	219	7.24	490.56	5/100	6.36	0.004
MLH-E2	E	Excursion @ Roberto Rivas	10:30	"	11:00	"	30	"	67.2	5/100	6.36	0.0364
MLH-FB1	FB	Field Blank	N/A	—	—	—	—	—	—			

Pump Type (A – Area, AM- Ambient, B - Baseline, C – Clearance, E – Excursion, FB- Field Blank, P – Personnel)

Sampled By Jesus Ronquillo

Relinquished By: _____ Date: 12/6/2025

Received By: _____ Date: _____

Analyzed By: Jesus Ronquillo Date: 12/6/2025

Photos From Inspections

Description

Taken Date
12/06/2025 at 11:47 am

Upload Date
12/09/2025 at 09:25 am

Uploaded By
Mario Prieto

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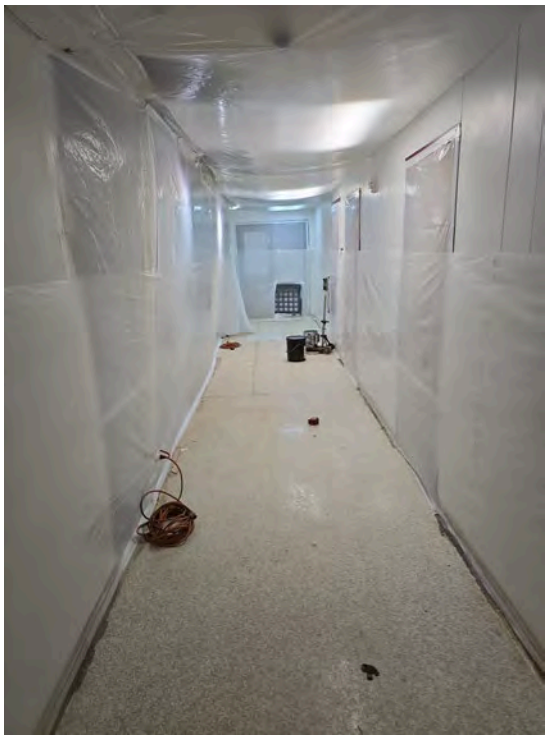
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Uploaded By
Mario Prieto

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Asbestos Abatement

Description

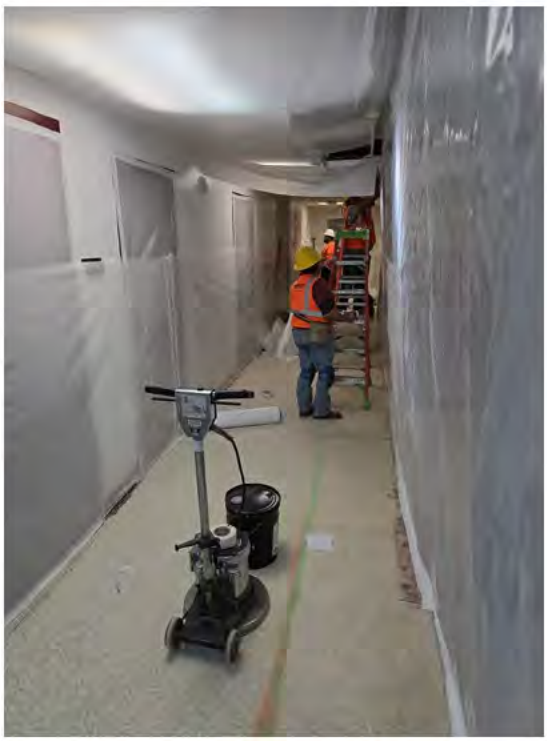
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12/05/2025 at 05:54 pm

Uploaded By
Guy Smith

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Location
Abatement/Demo Area



Photos From Inspections

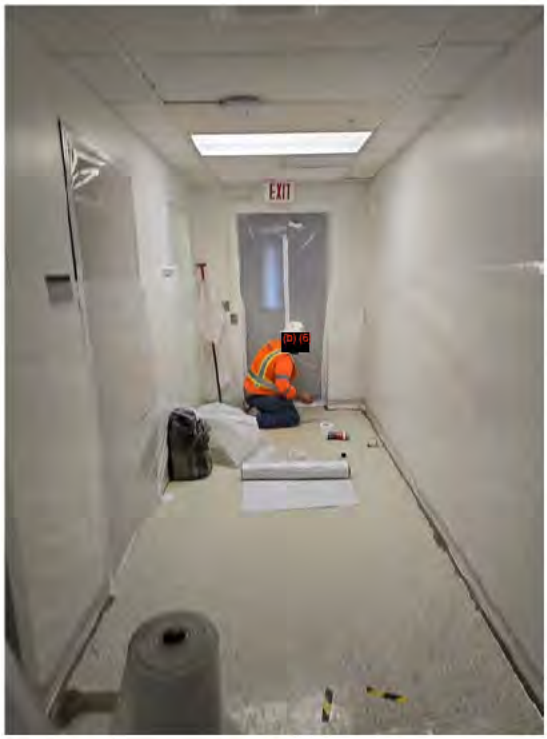
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Uploaded By
Mario Prieto

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Asbestos Abatement

Description

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12/05/2025 at 03:26 pm

Upload Date
12/05/2025 at 04:29 pm

Uploaded By
Guy Smith

File Name
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Location
Abatement/Demo Area



Asbestos Abatement

Description

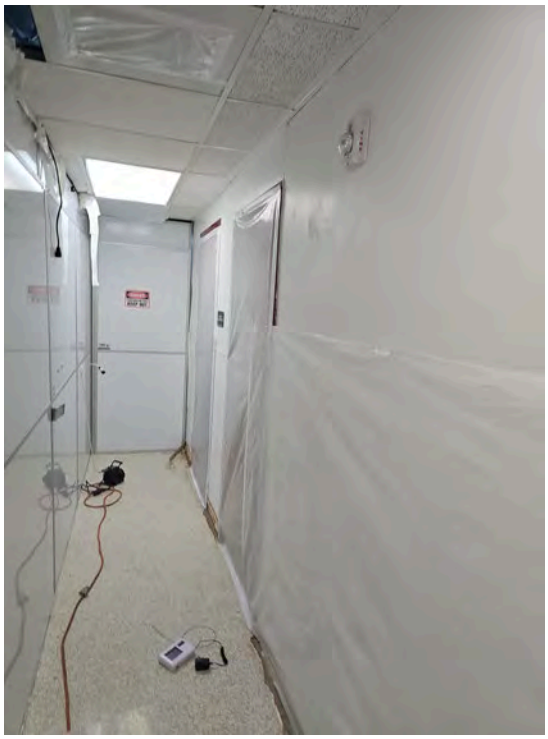
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Uploaded By
Guy Smith

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Location
Abatement/Demo Area



Photos From Inspections

Description

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12/05/2025 at 02:37 pm

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12/08/2025 at 04:24 pm

Uploaded By
Mario Prieto

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Photos From Inspections

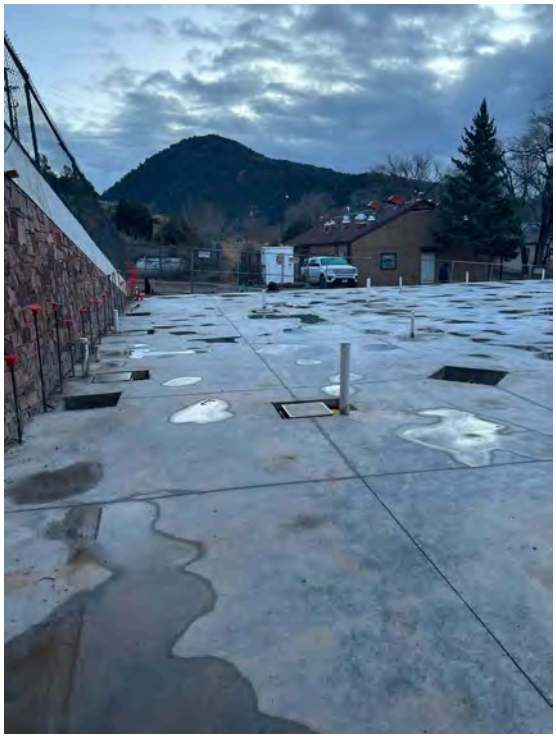
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12-04-25

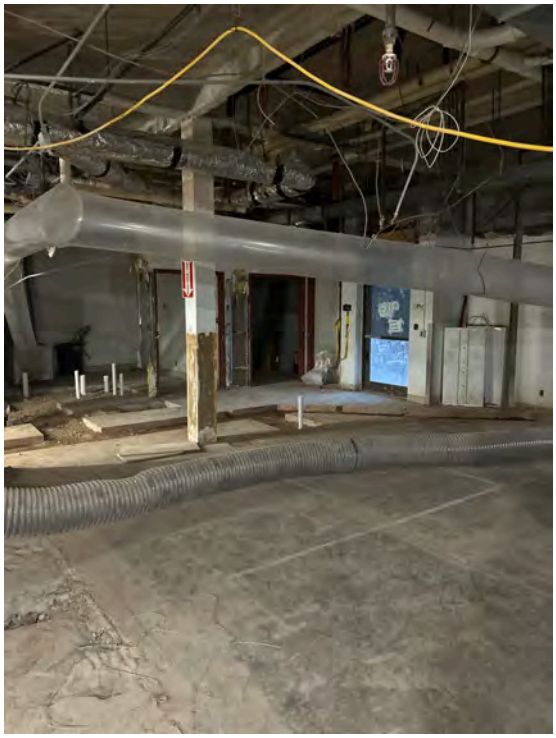
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12/04/2025 at 07:48 am

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Description

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U.S. Department of Labor

Occupational Safety and Health Administration
El Paso Area Office
4849 North Mesa, Suite 200
El Paso, TX 79912

August 21, 2025

Brandon Parker
Mescalero Service Unit Indian Health Service
318 Abalone Loop
Mescalero, NM 88340

RE: OSHA Complaint No. 2334676

Dear Mr. Parker:

This is to advise you that based on the information that you have provided to this office, the complaint referenced above will be officially closed unless the information is disputed by the complainant.

Please feel free to contact me at (915) 534-6251 if you have any questions or concerns or visit www.osha.gov, which contains OSHA's standards, letters of interpretation, publications, and other information related to occupational safety and health. Thank you for your cooperation with this inquiry and your continued interest in safety and health.

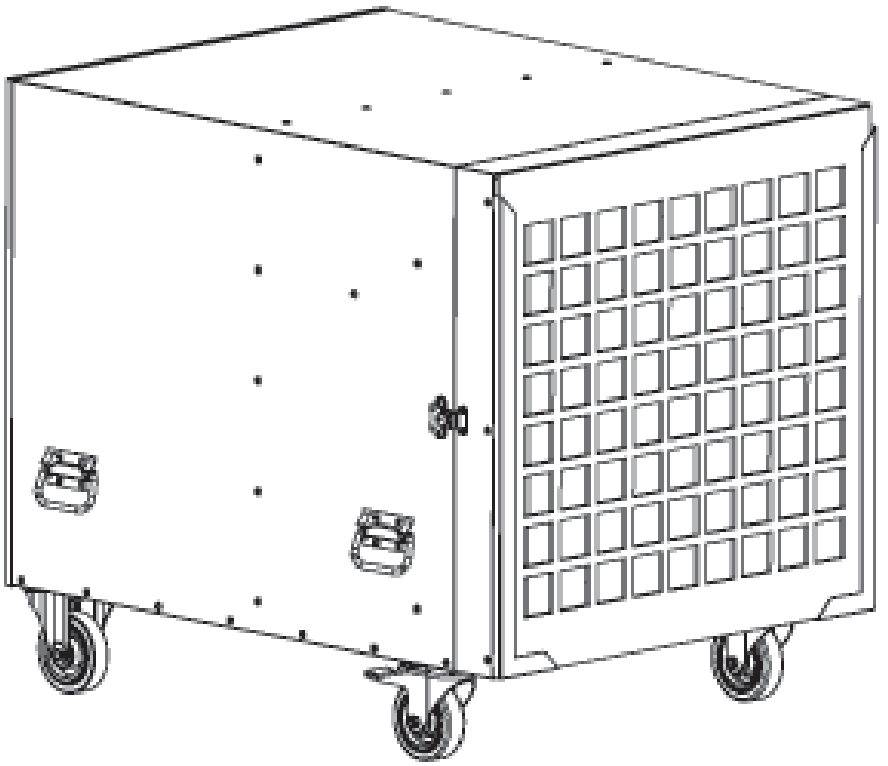
Sincerely,

for Gabriel Noluso

Diego Alvarado Jr.
Area Director

HEPA-AIRE® Portable Air Filtration Unit

H2KM and H2KMA



Instruction Manual

Abatement Technologies

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READ AND SAVE THESE INSTRUCTIONS!

Note:

1. **Read and understand all operating instructions before using the portable air filtration unit.**
2. **Save this manual for future reference.**

This instruction manual provides important information on operation of the HEPA-AIRE® Portable Air Filtration Unit. These instructions must be carefully followed in order to operate the units safely and correctly. If you have any questions regarding the use or care of this equipment, call Abatement Technologies at +1 800 634 9091 (U.S.) or +1 905 871 4720 (Canada) for assistance or to request a digital copy of this manual.

Abatement Technologies strongly recommends users of the room air filtration units and accessories to follow the most recent guidelines and/or standards published by the: Occupational Safety and Health Administration, Centers for Disease Control and Prevention, Environmental Protection Agency, American Society of Heating, Refrigerating and Air Conditioning Engineers, and all other federal, state, provincial and local regulations.

Note: The U.S. Environmental Protection Agency's publication "Guidance for Controlling Asbestos-Containing Materials in Buildings", EPA 560/5-85-024, includes helpful information on air filtration systems. Abatement Technologies strongly urges anyone performing asbestos abatement to read the most recent edition of this EPA publication before using any air filtration system.

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SAFETY INSTRUCTIONS

REQUIREMENTS FOR SAFE OPERATION

1. Never allow unauthorized individuals or children to operate the unit at any time.
2. Abatement Technologies urges anyone operating HEPA-AIRE® Portable Air Filtration Units to wear the proper personal protective equipment and follow safe work practices in accordance with federal, state, local, provincial and employer regulations.
3. Check the condition of power cord(s) before using them. Damaged cords can cause fatal electric shock and/or motor and blower assembly failure.
4. Power cord(s) should never be exposed to water, heat, and/or sharp or abrasive objects. In addition, they should never be kinked or crushed. Avoid tightly wrapping the cords to prevent kinking of the internal wires. Always replace damaged power cords immediately.
5. Never pull the unit by the power cord.
6. Avoid running over power cords with utility equipment and vehicles.

⚠ If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

IMPORTANT SAFETY INSTRUCTIONS

a. Do not operate any unit with a damaged cord or plug. Discard unit or return it to an authorized service facility for examination and/or repair.
b. Do not run cord under carpeting. Do not cover cord with throw rugs, runners, or similar coverings. Do not route cord under furniture or appliances. Arrange cord away from traffic area and where it will not be tripped over.

⚠ **Caution:** As with any piece of electrical equipment, always make sure that the unit is turned “off” prior to connecting the power cord to an electrical outlet or disconnecting it from an electrical outlet. Failure to do so will cause “arcing”, and could result in personal injury, fire hazards and/or damage to the unit. Do not disconnect the power cord from supply receptacle while the unit is operating.

⚠ **Warning:** To reduce risk of electrical shock, do not expose this unit to water or rain. Do not touch the electrical outlet or power cord(s) with wet hands or while standing on a wet or damp surface.

⚠ **Warning:** Risk of electrical shock! Can cause injury or death! Turn unit “off” and disconnect power cord from supply receptacle before replacing the HEPA filter and before cleaning or servicing the unit.

⚠ **Warning:** To reduce the risk of fire, electric shock, or injury to person observe the following: Use this unit only in the manner intended by Abatement Technologies. If you have questions, contact Abatement Technologies at +1 800 634 9091 (U.S.) or +1 905 871 4720 (Canada).

⚠ **Warning:** This unit is equipped with an automatic restart motor and blower assembly that will restart without warning after a temporary power interruption or recovery from a thermal overload (over-heating) condition. Keep clear of the motor and blower assembly at all times to reduce the risk of injury.

⚠ **Warning:** To reduce risk of fire or electrical shock, do not use this unit with any solid-state speed control device. Do not use in a cooking area.

⚠ **Warning:** Do not position the unit so that it is difficult to operate the disconnecting device. The disconnecting device is the power cord plug.

⚠ **Caution:** This unit is designed for indoor use only.

⚠ **Caution:** For General Ventilating Use Only. Do Not Use To Exhaust Hazardous Or Explosive Materials And Vapors.

⚠ **Warning:** ABATEMENT TECHNOLOGIES® air filtration systems are not intrinsically safe for use in hazardous environments. Always consult a certified industrial hygienist before using them. Do NOT use this equipment in any atmosphere that is or may be immediately dangerous to life or health (IDLH), combustible, flammable, explosive, oxygen deficient, and/or contains odors, vapors, gases or particulates that exceed permissible exposure levels. Such atmospheres may require the use of intrinsically safe equipment, specific engineering controls, and personal protective equipment in accordance with Occupational Safety and Health Administration (OSHA), Environmental Protection Agency (EPA), Canadian Standards Association (CSA), and other federal, state, provincial and local regulations.

⚠ **Warning:** This equipment is not classified as “intrinsically safe” and should not be used in the following hazardous locations as defined by the Underwriters Laboratories: Class I Division 1, Class I Division 2, Class I Zone 0, Class I Zone 1, Class I Zone 2, Class II Division 1, Class II Division 2, Class III Division 1, Class III Division 2. Refer to https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.449.

⚠ **Warning:** Do not use this unit near sparks, open flames or other possible sources of ignition.

GENERAL INFORMATION

The H2KM and H2KMA Portable Air Filtration Units are multi-use air filtration devices, equipped with pre-filters and a HEPA filter that are capable of filtering many airborne contaminants. An alternative carbon pre-filter for capturing low concentrations of odors, vapors, gases, and volatile organic compounds, collectively known as OVG, is also available.

Types of contaminants captured by particulate pre-filters, HEPA filter, or carbon filters:

- Dirt
- Dust
- Drywall dust
- Saw dust
- Lung-damaging particles
- Metal fumes
- Smoke
- Low concentrations of OVG
- Low concentrations of Volatile Organic Compounds (VOC)
- Unpleasant nuisance odors

Note: To capture low concentrations of OVG, a VAPOR-LOCK® carbon filter must be used.

The H2KM and H2KMA Portable Air Filtration Units are capable of providing particulate and odor, vapor, gas filtration with final stage filtration through a High Efficiency Particulate Air (HEPA) filter. These units incorporate a series of particulate filters that successively remove larger size to smaller size particles from the air. In addition to providing HEPA filtration, the H2KM and H2KMA units are primarily used in a negative pressure or recirculation mode. A negative pressure condition is created in order to confine contaminated airborne particles. This condition exists when the static pressure inside the room containing the unit is lower relative to the pressure of the environment outside the room. The static pressure differential is created and maintained by continuously exhausting air out of a given room at a faster rate than air enters the room from all other sources. In the recirculation mode, all of the filtered air is exhausted back into the room containing the unit.

STANDARD AIR FILTER STAGES (SUPPLIED WITH THE UNIT)

The H2KM and H2KMA come equipped with three progressively efficient particulate filters. The first and second stage filters mount in the pre-filter access door channel and the final stage HEPA filter is located inside the cabinet:

- First stage. 1" coarse particulate poly-pad is designed to capture particles 100 microns or larger (P/N: H2001).
- Second stage. 2" deep, pleated pre-filter is designed to capture up to 85% of particles 3-10 microns or larger (P/N: H2002).
- Final stage. HEPA filter is tested and certified to capture at least 99.97% (9,997 out of 10,000) 0.3-micron particles (P/N: H242406-99).

Note: The particulate filters included with this unit do not remove odors, vapors or gases, including volatile organic compounds.

⚠ **Caution: Do not use this unit unless all ABATEMENT TECHNOLOGIES® pre-filters and the HEPA filter are installed.** Operation without all filters installed may damage the unit and voids all related performance claims and product warranties.

ALTERNATIVE FILTERS (PURCHASED SEPARATELY)

There are two alternative filters that can be used in both the H2KM and H2KMA:

- Second stage. 2" deep, VAPOR-LOCK® pleated high-capacity carbon filter for capturing OVG and particles 10 microns or larger. This mounts in the pre-filter channel (P/N: VL2024).
- Final stage. 12" deep, galvanized steel frame HEPA filter tested & certified to capture at least 99.97% of 0.3-micron particles (P/N: H2010M).

Filters can be used in any combination as long as one first stage, one second stage, and one final stage filters are installed during operation. Operation without all filters installed may damage the unit and voids all related performance claims and product warranties.

VAPOR-LOCK® pleated, high-capacity, carbon filters (P/N: VL2024) are available for capturing OVG. This two-inch-deep filter can be used as an alternative second stage pre-filter to reduce airborne OVG by chemically bonding the OVG molecules to the surface area of the carbon granules via a process known as adsorption. The VL2024 filters also provide a similar level of particulate filtration efficiency to the H2002 pre-filter.

Effective carbon adsorption is dependent upon the amount of carbon & exposed carbon granule surfaces, and the dwell (contact) time the OVG molecules have with the carbon granules. Operating the unit at lower speed settings to increase dwell time can therefore improve OVG adsorption, though it is highly unlikely that all of the OVG will be removed in one pass of air through the unit. Operating the unit in the recirculation mode can increase effectiveness, by exposing OVG particles to multiple passes through the VAPOR-LOCK® filter.

It is almost impossible to provide accurate estimates to two commonly asked questions: "how much time will it take to capture all of the OVG?", and "how do I know when a carbon filter should be replaced?" Unfortunately, unknown factors – such as concentration levels, fresh-air intake volume, temperature, and humidity – prevent establishment of any more accurate 'rule of thumb' than one's sense of smell. Since off-gassing of adsorbed OVG can occur when the adsorption capacity of the filter is reached, replace the carbon filter as soon as odor breakthrough is sensed. More detailed information on carbon adsorption can be found in an article titled: "Activated Carbon: How Is It Used? How Does It Work?" which can be found on the Abatement Technologies website, www.abatement.com.

DETERMINING THE REQUIRED NUMBER OF AIR FILTRATION DEVICES (AFD)

1. Calculate the total air volume (V) in cubic feet (ft^3) within the enclosed containment area by multiplying the length (L) x the width (W) x the height (H), all in feet:
   $$V = L \times W \times H.$$
2. Determine the minimum number of air changes per hour (ACH) specification. When no ACH number is specified, most users target at least 6 ACH for construction areas. A good practice is to build in a safety factor to compensate for filter loading, duct losses, reduced voltage, and other factors that can reduce actual installed airflow. For example, if 6 ACH is the objective, enter 7.5 ACH for a 25% safety factor, enter 9 ACH for a 50% safety factor, or enter 10.5 for a 75% safety factor.
3. Select an ABATEMENT TECHNOLOGIES® AFD model and determine the peak airflow rating for that model in cubic feet per minute (CFM).
4. Determine the total number of AFD required using the following formula:
   $$\text{Quantity} = (V \times \text{Design ACH}) / (\text{AFD Rating} \times 60)$$
5. Always round up to the next whole number. For example, if the total number of AFD required is 1.32, two units are recommended, not one.

Example: How many air filtration devices (each with 2,000 CFM rated airflow) would be required to provide 6 ACH plus a 25% safety factor in a 48' x 50' x 8' containment area?

1. $V = 48\ ft \times 50\ ft \times 8\ ft = 19{,}200\ ft^3$
2. Design ACH = 7.5
3. Quantity of AFD required = $(19{,}200\ ft^3 \times 7.5\ ACH) / (2{,}000\ CFM \times 60)$
   $= 144{,}000/120{,}000 = 1.2$ units
4. 1.2 units → 2 units required.

MODES OF OPERATION

1. **Negative Pressure** – used to help ensure that airborne contaminants do not escape from a contained area by maintaining negative (lower) air pressure within that area compared to adjacent areas. Any air leakage will be an inflow of external air, not an outflow of contaminated air. To ensure that the proper pressure differential is

maintained, the volume of HEPA-filtered air exhausted from the containment area must be the greater of 10% or 100 CFM higher than the volume of air entering. This pressure differential can be established by:

   a. placing the unit inside the containment area and using it to push air out of the containment area. Attach flex duct at the outlet collar and exhaust the HEPA-filtered air outside of the containment area according to regulations – outdoors or another location within the building.
   b. placing the unit outside of containment area and using it to pull air out of the area. Attach flex duct between the inlet collar (sold separately, P/N: H2080P) and the containment area.

2. **Recirculation** – used to reduce concentrations of airborne contaminants in a room or area by continuously cleaning the air and exhausting it back into the same room or area.
3. **Positive Pressure** – used to help prevent airborne contaminants from entering a containment area by maintaining positive (higher) pressure within that area compared to adjacent areas. Any air leakage will be an outflow of clean air, not an inflow of external air. To ensure that the proper pressure differential is maintained, the volume of HEPA-filtered air supplied to the area must be the greater of 10% or 100 CFM higher than the volume of air exhausted. This pressure differential can be established by:

   a. placing the unit inside the containment area and using it to pull air into the containment area. Attach flex duct between the inlet collar (sold separately, P/N: H2080P) and a location outside of the containment area.
   b. placing the unit outside of containment area and using it to push HEPA-filtered air into the area. Attach flex duct at the outlet collar and exhaust the HEPA-filtered air inside of the containment area.

If the room air filtration units are being used to create and maintain a negative/positive pressure condition, the pressure differential between the negative/positive room and the environment outside the room should be monitored with a calibrated instrument as per OSHA/CDC requirements. The ABATEMENT TECHNOLOGIES® Portable Pressure Monitors are recommended to ensure that requirements are being met.

Important Note: Do not operate the unit unless the pre-filter(s) and HEPA filter are installed and the filter access door and panel are in place and closed. Operation without all filters installed may damage the unit and voids all related performance claims and product warranties.

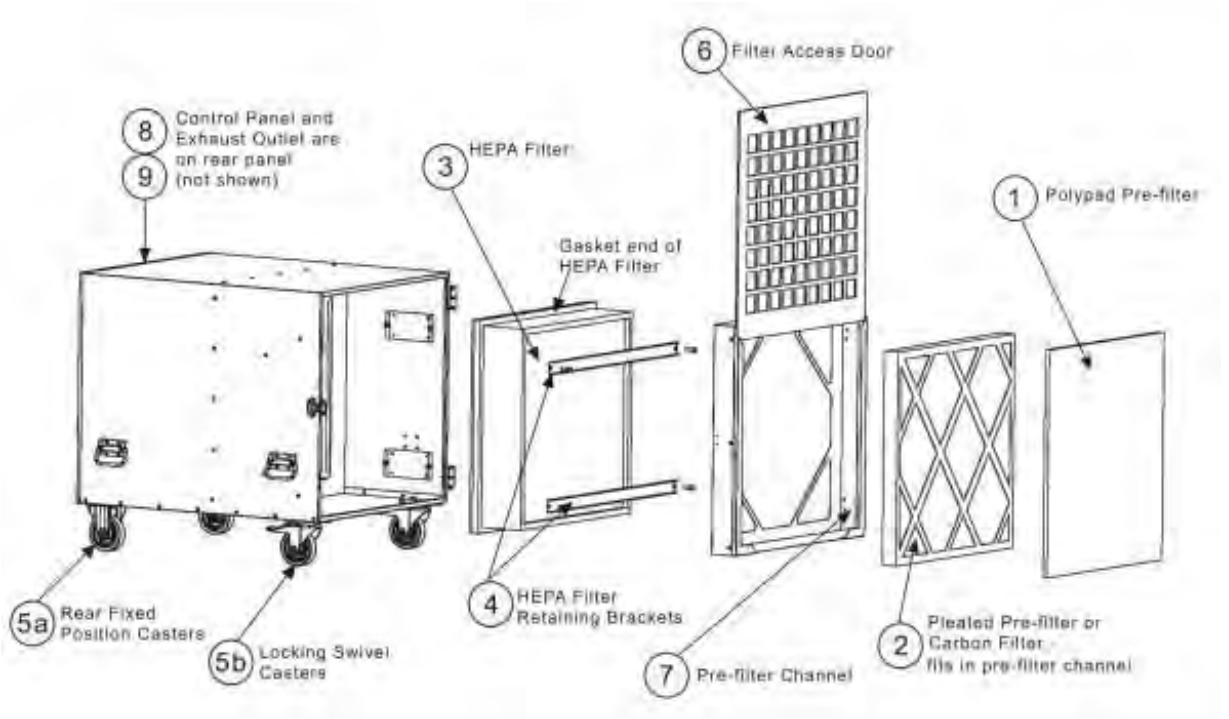
ELECTRICAL REQUIREMENTS

1. The H2KMs and H2KMAs require a minimum of 110 volts AC, 60 Hz to operate properly; however, maximum air flow performance requires 120 volts AC, 60 Hz.
2. Due to momentary start-up current surge, the unit requires a 15 amp circuit that is free of other loads.
3. If the unit is connected to a circuit that is protected by fuses, use time delay fuses.
4. Extension cords used for this unit must be UL-listed, heavy duty No. 12/3 AWG SJTW industrial grade 3-wire type. Use of larger numerical gauge (lower capacity wire) power cord(s) may result in electrical shock, fire hazards and/or damage to unit. The cord(s) must be in good condition and in continuous lengths (no splicing) and should not exceed a total of 50 feet (15 meters) in length. Make certain that

any extension cords used do not reduce power to the unit to less than 110 volts. Use of a voltmeter to confirm adequate voltage is recommended.

5. Check to ensure that any circuit to which the unit is connected is protected by a 15 amp circuit breaker.
6. The units should be connected to a three-prong, properly grounded electrical outlet equipped with a Ground Fault Circuit Interrupter (GFCI) device. A GFCI is an electrical safety device that will trip the circuit and stop the flow of electricity if leakage of current is detected.
7. To avoid personal injury, fire hazards, and/or damage to the units' electrical system and power cord, do not connect or disconnect the power cord to an electrical outlet unless the unit is switched to the "off" position.

KEY COMPONENTS



KEY COMPONENT DESCRIPTIONS

1. First Stage Filter. 1" Coarse Particulate Polypad Pre-filter (P/N: H2001).
2. Second Stage Filter.
   - 2" Pleated Particulate Pre-filter (P/N: H2002).
   - Alternative: 2" High Capacity Carbon Filter (P/N: VL2024).
3. Final Stage Filter.
   - 6" deep 99.97% HEPA filter (P/N: H242406-99).
   - Alternative: 12" deep, 99.97% HEPA filter (P/N: H2010M).
4. HEPA Filter Retaining Brackets.
5. Casters.
   - 2 each 4" fixed position casters.
   - 2 each 4" 360° swivel casters with locking feature.
6. Pre-filter Access Door.
7. Pre-filter Channel.
8. Control Panel.
9. 12" Exhaust Outlet - on rear panel of unit.

OPERATING THE UNIT

BEFORE OPERATING THE UNIT

Units should be secured in place in the location of use using the locking casters mounted on the bottom of the unit.

1. Press down on caster flange with work shoe until flange locks in downward position. Once locked, the caster will not roll or swivel.
2. Tap with work shoe to release caster from locked position.

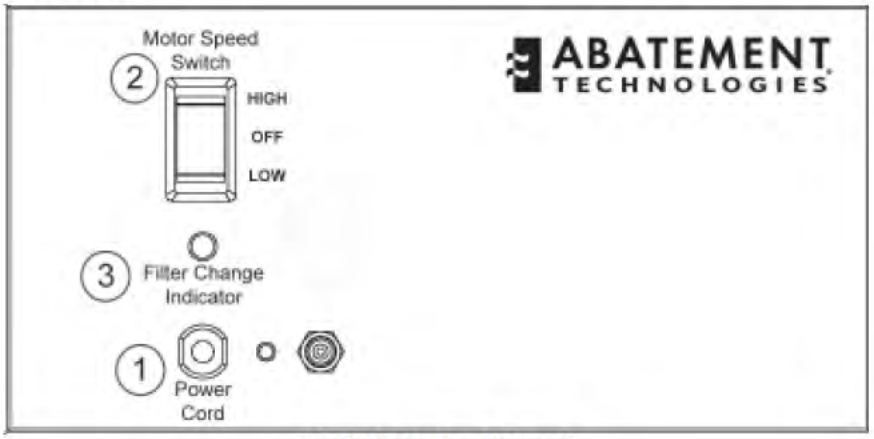
⚠ **Warning: Pinch Hazard!** Do not use hands or fingers to lock or unlock the swivel caster or personal injuries such as severe pinching or cuts could result. Use work shoe to lock and unlock caster.

Inspect and tighten any HEPA filter retaining bolts that may have loosened during transportation. Inspect the filters for any material or structural damage prior to use and replace any damaged filters before operating the unit. When removing any filters prior to operation, always put them back in place with the airflow indicator on the filter housing oriented in the proper direction (if applicable).

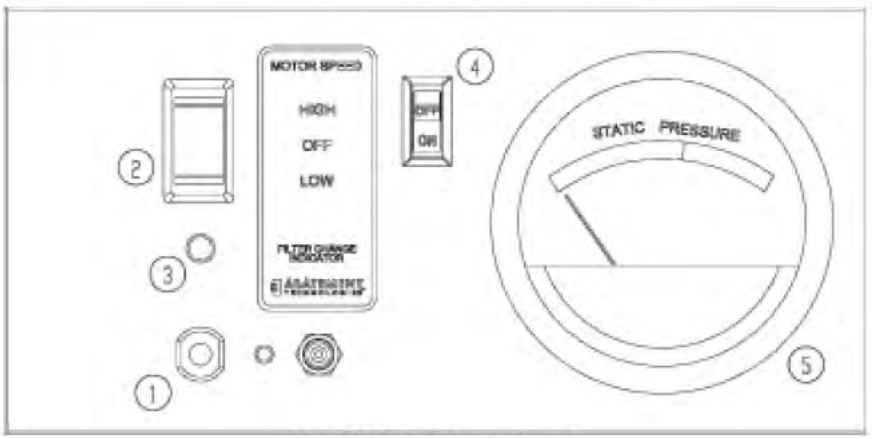
As with any air filtration system, external airflow losses not attributable to the air filtration unit will reduce the airflow of the system. The following recommendations can minimize airflow losses created by external static resistance.

1. Always use the minimum length of ducting possible with the fewest possible number of turns and bends.
2. Rigid metal ducting creates less turbulence and consequently less airflow loss than flexible ducting. Regardless of the type of ducting used, rigid, “sweep-type”, radiused connections should be used for all turns and bends.
3. If flexible ducting is used, it must be kept as taut as possible to avoid flattening.
4. Louvers, dampers, and other external control devices should be sized to provide the equivalent open area to the cross-sectional area of the exhaust duct.

CONTROL PANEL



H2KM Control Panel



H2KMA Control Panel

1. Power Cord. Hardwired, 9 ft 18/3 AWG SJTW power cord for connection to electrical outlet.
2. Motor Speed Switch. Three position switch, “high”, “off” (middle position of switch), and “low”, that controls the speed of the motor.
3. Filter Change Indicator. Amber light that indicates excessive restriction on intake or loading of the filter(s) and that filter change procedures should be followed.
   Note: Check the Filter Loading Indicator when the unit is operating on “high” speed.
4. Audio Alarm Switch (H2KMA only). Rocker-arm style switch that turns the Filter Change Audio Alarm “on” and “off”.
5. Differential Pressure Gauge (H2KMA only). Indicates total system differential pressure in inches of water column (WC). An increase in differential pressure indicates excessive restriction on intake or loading of the filter(s) and that filter change procedures should be followed. Check the gauge when the unit is operating on “high” speed. With clean filters the reading will be about 1.5" WC. The alarm will sound at a reading of about 2.2" WC. Max static/total blockage reading will be about 2.9" WC.

Not Shown - Filter Change Audio Alarm (H2KMA only). Tone that indicates excessive restriction on intake or loading of the filter(s) and that filter change procedures should be followed.

STARTING THE UNIT

1. Check to make sure that the Motor Switch is in the “off” (middle) position. Plug the power cord into a 120 volt AC, 60Hz, 15 amp supply circuit.
2. Set the Motor Speed switch to the “high” or “low” position.

Note: Refer to the chart in this instruction manual titled “H2KM and H2KMA Specifications” that lists the airflows for the H2KM and H2KMA.

Note: In the event of a power failure while the unit is running, or loss of power due to any other cause, after a brief delay this unit’s motor and blower assembly will restart when power is restored.

TRANSPORTING THE UNIT

The H2KM and H2KMA Portable Air Filtration Units should be secured to ensure that the unit does not roll during transport and transported in its normal position (resting on its casters). If extremely poor road conditions exist, or excessive shock and vibration are expected, take precautionary measures by padding the unit to provide impact absorption during transport.

⚠ **Caution:** Always use caution when moving the H2KM and H2KMA Portable Air Filtration Unit inside a building or home. The unit weighs 124 pounds (141 pounds with H2010M installed). Older structures with weakened floors or staircases may require special considerations for safe transport.

USER SERVICING INSTRUCTIONS

ABATEMENT TECHNOLOGIES® portable air filtration units are designed to be low maintenance devices and basic maintenance should be performed as follows:

- Filters should be changed as needed based on the filter change indicator light or gauge reading (H2KMA only). Follow the “Filter Change Procedure” section as described in this manual. Filters can be changed earlier, if desired, to maintain a minimum required flow rate or to meet federal, state, provincial, or facility requirements.
- The unit should be cleaned with a damp cloth or a water-based cleaner/sanitizer as needed. Do not use harsh chemicals, solvents, or detergents to clean the unit. Do not hose down the unit.

⚠ **Warning:** Keep electrical components dry as their exposure to liquids poses a safety hazard and can damage components.

FILTER REPLACEMENT

Note: Personnel responsible for changing filters, servicing units or relocating units within the facility are urged to wear the proper personal protective equipment (PPE) and follow safe work practices in accordance with federal, state, provincial, local and employer regulations. Abatement Technologies cannot recommend the type of PPE required as that will need to be determined by safety/risk assessment personnel based on various risk factors, including the type of particulates being captured by the air filtration device and the surrounding environment where the units are being used, transported, or serviced.

Note: Filters being replaced must be disposed of in accordance with federal, state, provincial, local and facility regulations.

System airflow reduction is generally the result of filter loading, blockage of the unit's inlet or use of excessive lengths of flex duct.

The size and concentration of airborne contaminants, temperature and humidity conditions, and duration of use determine how often filters need replacement. If the Filter Change Indicator on the control panel illuminates, the Filter Change Audio Alarm sounds, and/or the Differential Pressure Gauge displays a reading of 2.2" WC or higher (H2KMA only) this indicates one or more of the following: (1) pre-filter(s) are loaded, (2) the inlet is obstructed, (3) the flex duct, if attached to inlet, is too long or has too many bends, and/or (4) the HEPA filter is loaded.

If using an activated carbon filter, the method of determining when to replace this particular filter is somewhat subjective. As the odor, vapor, and/or gas filtration capacity decreases, the user will begin to sense a slight odor or taste of the contaminant, indicating that the filter should be replaced.

Note: The filters are not reusable, therefore, do not attempt to clean and reuse them.

⚠ **Caution:** ABATEMENT TECHNOLOGIES® HEPA-AIRE® Portable Air Filtration Units are designed to meet or exceed standards for high efficiency air filtration equipment. Use only ABATEMENT TECHNOLOGIES® parts, including replacement filters. **Use of non-ABATEMENT TECHNOLOGIES® parts and filters voids the product warranty and all performance claims and risks damage to the unit.**

⚠ **Warning:** To reduce the risk of fire, electrical shock or personal injury, always turn the unit "off" and disconnect the power cord from supply receptacle before replacing the HEPA filter and before cleaning or servicing the unit.

Filter Change Indicator

The Filter Change Indicator light illuminating (all models), Audible Alarm tone sounding (H2KMA only), and/or a differential pressure reading of 2.2" WC or greater on the Differential Pressure Gauge (H2KMA only), indicate one or more of the following:

1. Loaded filter(s). Refer to "Filter Change Procedure".
2. Restrictions on air intake. Refer to "Troubleshooting Guide".

Note: The Filter Change Audio Alarm can be deactivated by turning the Audio Alarm Activation Switch "off".

Filter Change Procedure

The Filter Change Indicator light located on the control panel will indicate when one or more of the filters need to be changed. This is based on a factory setting and the filters can be changed earlier, if desired, to maintain a minimum air flow requirement or to meet federal, state, provincial, or facility requirements. Since the Filter Change Indicator Light is based on the pressure drop across all of the filters, it cannot indicate specifically which filter needs to be changed. Therefore, when the Filter Change Indicator Light illuminates, the first stage filter should be changed first to see if the light turns off. If the light remains, then the second stage filter should be changed. If the light remains, then the HEPA filter should be changed.

<u>Changing the First Stage Filter:</u>

1. With the unit operating, remove the plastic door grill protecting the pre-filter chamber.

2. Remove the first stage filter and replace it with a new one.
3. Drop the access door grille back into the metal frame on the unit inlet. Make sure it is flush and fully seated in the frame.
4. If the Filter Change Indicator light remains “on”, the Filter Change Audio Alarm sounds (H2KMA only), and/or the Differential Pressure Gauge displays a reading of 2.2" WC or higher (H2KMA only), after changing the first stage filter, the second stage filter should be replaced.

Changing the Second Stage Filter:

1. With the unit operating, remove the plastic door grill protecting the pre-filter chamber.
2. Remove the second stage filter (located behind the first stage polypad filter) and replace it with a new one.
3. Return the first stage filter into place in front of the new second stage filter and replace the plastic door grill.
4. If the Filter Change Indicator light remains “on”, the Filter Change Audio Alarm sounds (H2KMA only), and/or the Differential Pressure Gauge displays a reading of 2.2" WC or higher (H2KMA only), after changing the second stage filter, the HEPA filter should be replaced.

Note: If an alternative VAPOR-LOCK® filter is being used, be sure to remove it from its poly bag before installing it in the unit. VAPOR-LOCK® filters are packaged in poly bags to preserve the integrity of the carbon granules.

Changing the H242406-99 HEPA Filter:

1. Turn the unit “off” and disconnect the unit's power cord from the electrical outlet.
2. Unlatch and open the Filter Access Door.
3. Remove the bolts that secure the HEPA filter retaining brackets in place (remove the lower bracket first, then the top bracket), set the brackets aside, and remove the HEPA filter from the cabinet.
4. Carefully install a new HEPA filter inside the cabinet, gasketed end first. Ease the filter into the cabinet until it is flush against its sealing surface. For reference purposes, the top panel of the H242406-99 filter has various labels affixed to it and the rear of the filter is the gasketed end.
5. Reattach the HEPA filter retaining brackets to secure the filter in its proper position. The top bracket should be reattached first, then the bottom bracket. The bolts should be snug but not over-tightened.
   Note: The HEPA filter is delicate and should be handled with care. When removing or reattaching the HEPA filter retaining brackets, do not touch the filter media; otherwise, damage to the filter and leakage of contaminated air could result.
6. Close and securely latch the Filter Access Door.

Changing the H2010M HEPA Filter

1. Follow the instructions above for changing the H242406-99 HEPA Filter. For the installation of this filter, note that the mounting pockets for the HEPA filter braces are located closer to the front of the cabinet to accommodate the deeper filter.

COMPONENT REPLACEMENT AND CARE OF THE UNIT

⚠ **Warning:** To reduce the risk of fire, electrical shock or personal injury, always turn the unit “off” and disconnect power cord from supply receptacle before removing the control panel, replacing the HEPA filter and before cleaning or servicing the unit. This unit is equipped with an automatic restart motor and blower assembly that will restart without warning after a temporary power interruption or recovery from a

thermal overload (over-heating) condition. Keep clear of the motor and blower assembly at all times to reduce the risk of injury.

Occasionally a defective component will cause the unit to operate improperly or not at all. Any electrical component can fail. Refer to the Wiring Diagrams and Wiring Schematics to diagnose the failure of any component. Diagnostics should only be performed by a technician qualified to service electrical equipment.

⚠ **Warning: Do Not Substitute.** Use only ABATEMENT TECHNOLOGIES® pre-filters, HEPA filters, and replacement parts. Substitute filters and parts void the warranty, jeopardize worker and environmental safety, and adversely affect engineered performance levels.

The unit should be cleaned with a damp cloth or a water-based cleaner/sanitizer. Do not use harsh chemicals, solvents, or detergents to clean the unit. Do not hose down the unit.

⚠ **Warning:** Keep electrical components dry as their exposure to liquids poses a safety hazard and can damage components.

TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	SOLUTION
No response when the power is turned “on”.	Power cord unplugged.	Plug power cord firmly into electrical outlet in wall.
	Defective power cord.	Check all connections and condition of cords. Do not operate with damaged power cord(s).
	Tripped circuit breaker.	Reset breaker for building.
	Tripped ground fault circuit interrupter or residual current device.	Reset GFCI/RCD at the power source.
	Thermal overload on the motor and blower assembly has tripped.	Turn unit “off”, wait 30 minutes and restart unit.
Circuit breaker on control panel or building “trips”.	Overloaded circuit.	Unplug any additional equipment connected to the circuit. Reset circuit breaker.
Unit rumbles when attempting to start.	Low voltage or limited amperage is supplied.	Check power supply. For maximum performance, the unit requires a 120 V, 15 amp circuit that is free of loads.
	Extension cord is too long or too high of a gauge.	Extension cord(s) should not exceed a total length of 50 ft. Use grounded 3-wire 12 gauge cord(s).
	Other machines or loads on same circuit.	Remove other loads from same circuit.
Filter change indicator is “on”.	Loaded filters.	Change in accordance with operating instructions.
	Excessive restrictions.	Reduce bends, length of flex duct, or eliminate restrictions.
	If using a carbon pre-filter, carbon filter has not been removed from polybag.	Remove carbon filter from polybag.

Note: If the unit does not start or malfunctions after carefully following the “Troubleshooting Guide”, call Abatement Technologies service department at +1 800 634 9091 (U.S.) or +1 905 871 4720 (Canada) for assistance.

H2KM AND H2KMA SPECIFICATIONS

FEATURE	SPECIFICATIONS
Net weight with filters:	124 lbs. with H242406-99 HEPA; 141 lbs. with H2010M HEPA.
Shipping weight:	141 lbs.
Unit dimensions:	35.75" L x 26" W x 30.25" H
Power supply requirements:	120 VAC, 60 Hz, 15 A
Normal operating amps:	10 amps or less
Motor:	1 HP, 2 speed motor with thermal overload protection, auto reset, 60 HZ, single phase.
Operating flow rate* (with clean filters):	Low Speed – 1,300 CFM High Speed – 2,000 CFM
Operational sound level:	70 dBA on high speed, reading taken at 5′.
Cabinet:	20 ga galvanized steel.
Transportability:	2 each removable 4", 360° swivel casters with locking feature. 2 each removable 4", fixed position casters.
Pre-filter access:	Swing out hinged door secured in place with cam latch.
First stage pre-filter:	1" coarse particulate polypad pre-filter (P/N: H2001).
Second stage pre-filter:	2" deep particulate pleated pre-filter (P/N: H2002).
Alternative second stage pre-filter:	2" deep high capacity carbon filter (P/N: VL2024)
HEPA filter:	Tested and certified to an efficiency of 99.97% or higher against 0.3 micron size particles (P/N: H242406-99)
Alternative HEPA filter:	Tested and certified to an efficiency of 99.97% or higher against 0.3 micron size particles (P/N: H2010M)
Flex duct connection (inlet):	Not included with the unit. Plastic adapter (P/N: H2080P) with a 12" nominal diameter port can be attached the intake.
Flex duct connection (outlet):	12" nominal diameter port.

Note: Specifications subject to change without notice.

Note: *Airflow rating estimates are based on factory testing with standard filters installed at 120 VAC, 60 Hz with an air straightener and a traverse of readings taken with a computing vane-anemometer. Actual results may vary up to ten percent for various reasons, including motor and blower and HEPA filter tolerances. Factors such as filter loading, reduced voltage to the motor, and inlet and outlet ducting will reduce airflow. Use the ratings as a general guideline only

CERTIFICATION OF ROOM AIR FILTRATION UNITS



ABATEMENT TECHNOLOGIES® H2KM and H2KMA air filtration units are independently tested and certified to the relevant safety requirements by TÜV SÜD.

TÜV SÜD is accredited by the U.S. Occupational Safety and Health Administration (OSHA) as a Nationally Recognized Testing Laboratory (NRTL).

LIMITED WARRANTY

Abatement Technologies (AT) warrants that goods sold to the original user shall be free from defects in material and workmanship for a period of one (1) year, except such as are commercially acceptable. This warranty does not include useful filter life. **AT does not warrant that the goods sold are merchantable or fit for any particular purpose. AT makes no warranties other than as stated in this paragraph. All other warranties, guaranties, or representations, express or implied, by operation of law or otherwise, are expressly disclaimed.** Goods found by AT to be defective or not to conform to specification shall upon return be replaced or repaired by AT without any additional charges, or, at AT's option, AT may refund the purchase price of such goods. AT will pay return transportation charges on returned goods not exceeding the transportation charges applicable to shipment from original destination unless the returned goods are free from defect and conform to specifications. Returned goods which are found by AT to be free from defect and to conform to specifications shall be held for Purchaser's shipping instructions, which instructions Purchaser shall furnish promptly upon request. **AT's liability shall in no event extend beyond replacement, repair or refund of the purchase price and AT shall not be liable under any circumstances for special, contingent or consequential damages, nor for loss, damages, or expenses directly or indirectly arising from the use of the goods, including without limitation, warehousing, labor, handling and service charges, die, equipment, or machine breakage, nor for costs, lost profits or loss of good will. The use of substitute, non-AT parts and/or filters, in any AT product, voids all warranties and performance claims. The remedies set forth herein are exclusive.**

For warranty information and assistance contact Abatement Technologies Customer Service Department at +1 800 634 9091 (U.S.) or +1 905 871 4720 (Canada).

HEPA CERTIFICATION

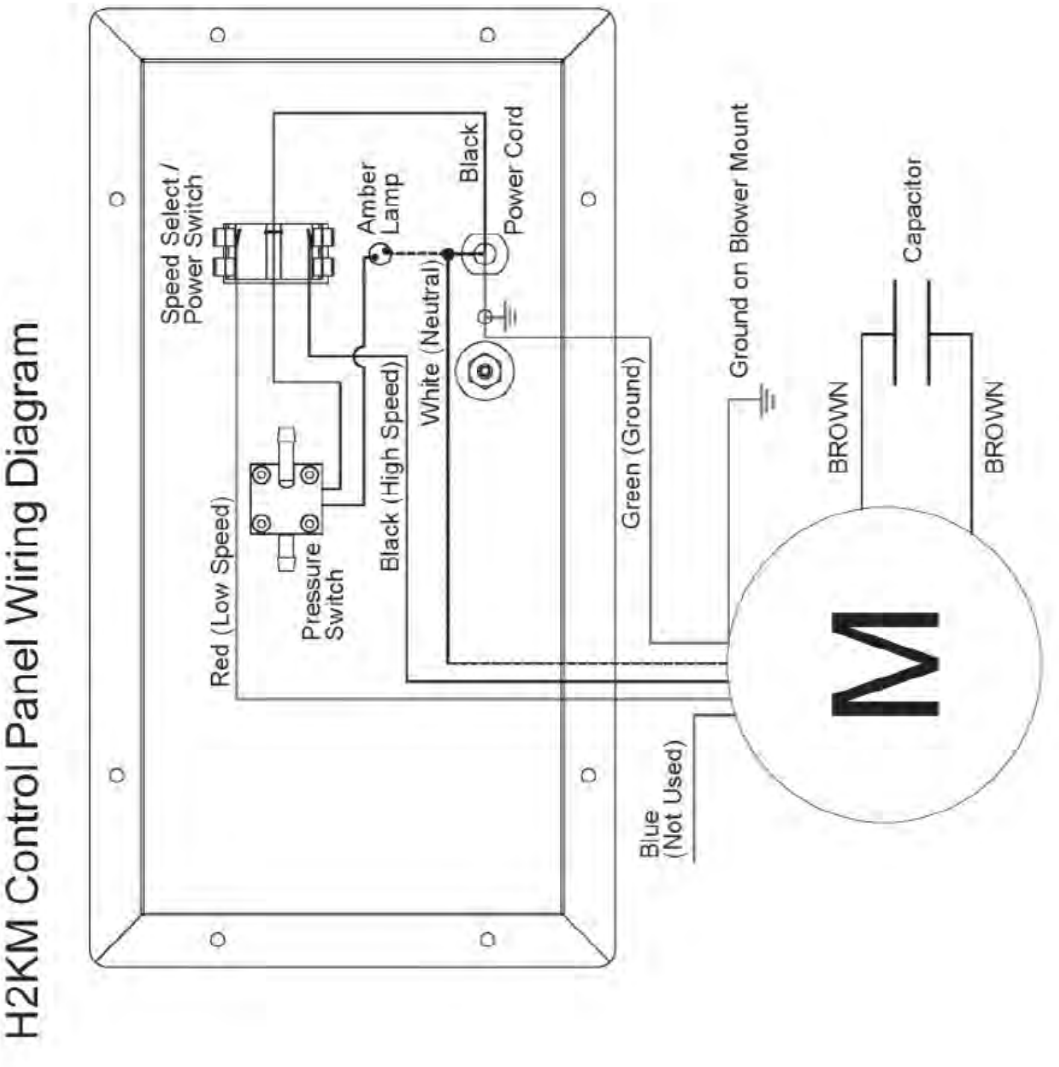
ABATEMENT TECHNOLOGIES® H2KM and H2KMA high-efficiency air filtration units are originally equipped with true HEPA (High Efficiency Particulate Air) filters designed to maximize the performance of the equipment, and to meet the following industry standards:

Institute of Environment Sciences and Technology
IEST-RP-CC001 (Type A HEPA and ULPA Filters)
IEST-RP-CC021 (Testing HEPA and ULPA Filter Media)

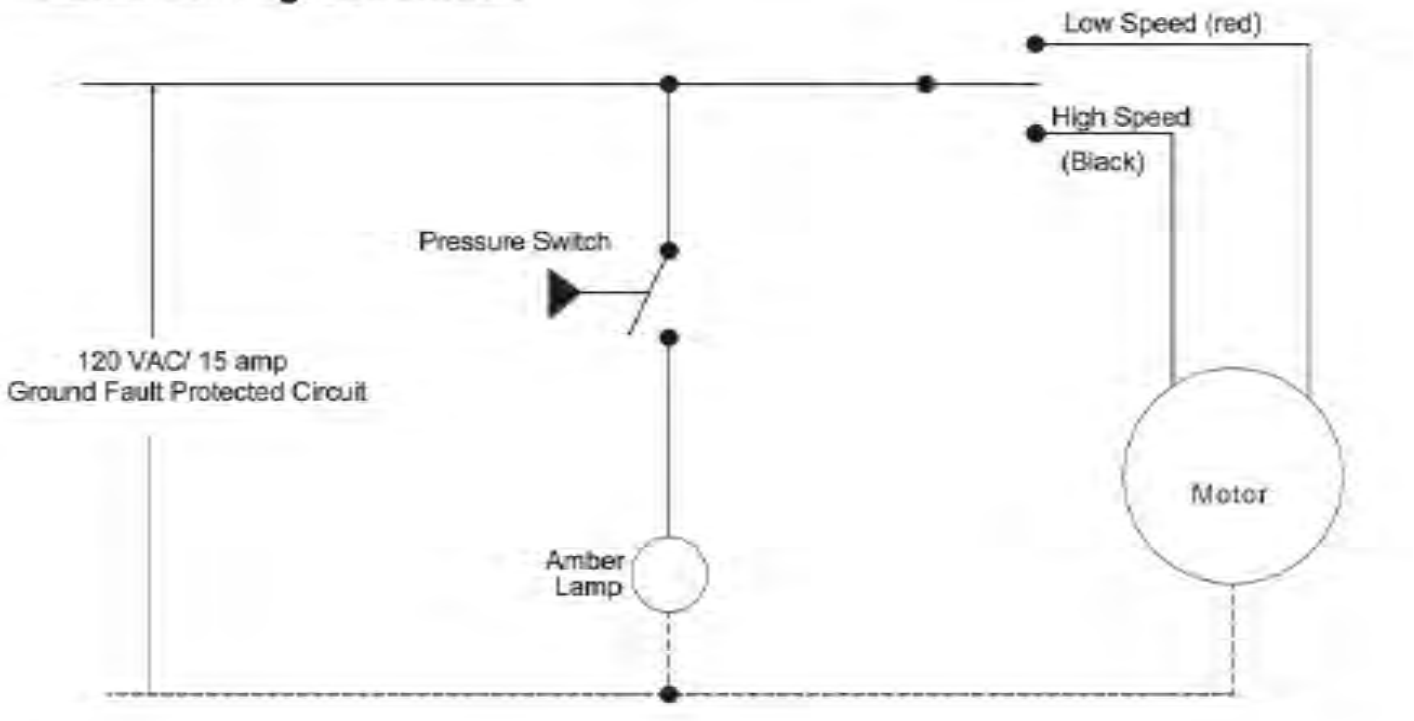
Underwriters Laboratories
UL900

100% Efficiency Tested
The equipped ABATEMENT TECHNOLOGIES® HEPA filters are individually tested and certified to ensure that the completed filter provides an overall minimum efficiency of 99.97% when challenged by a thermally generated test aerosol, 0.3-microns in size, in accordance with IEST-RP-CC007.

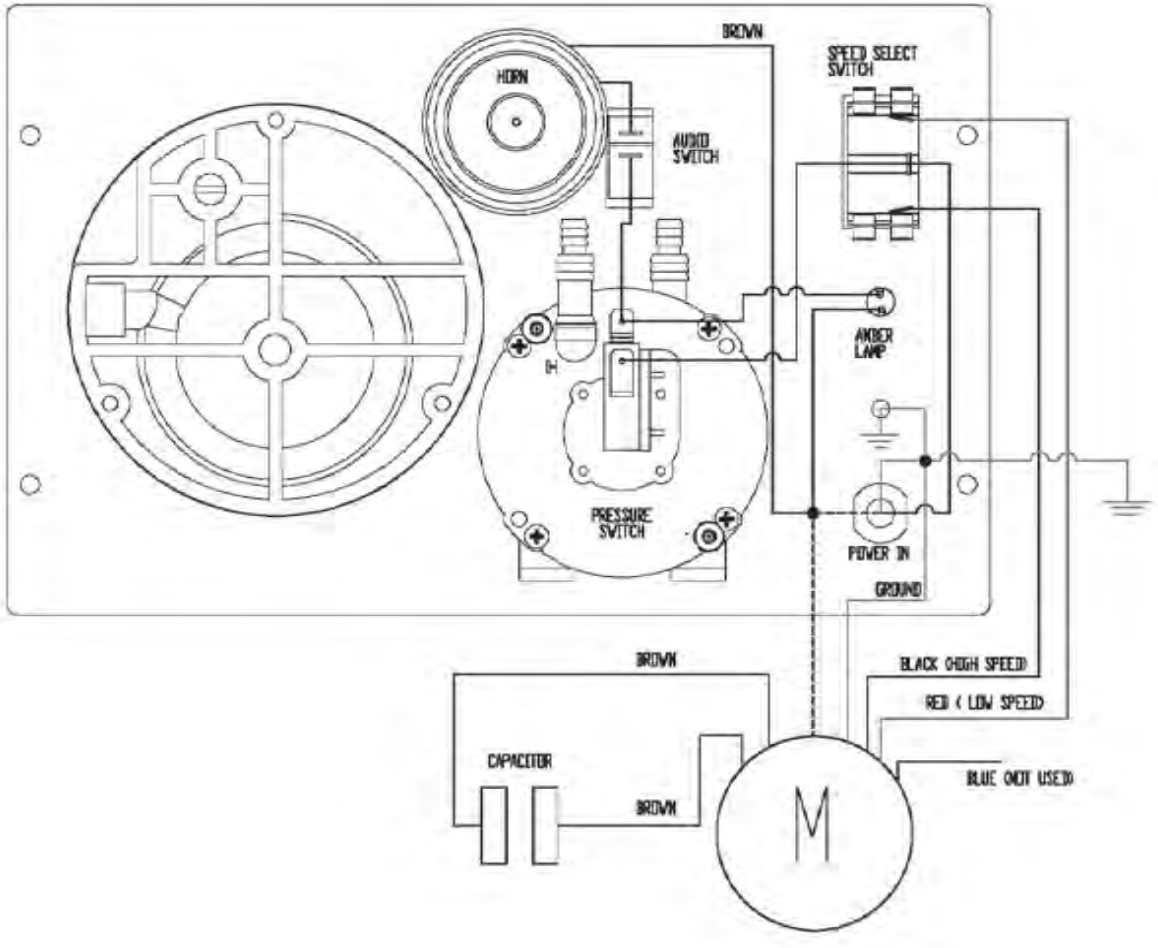
H2KM AND H2KMA DIAGRAMS



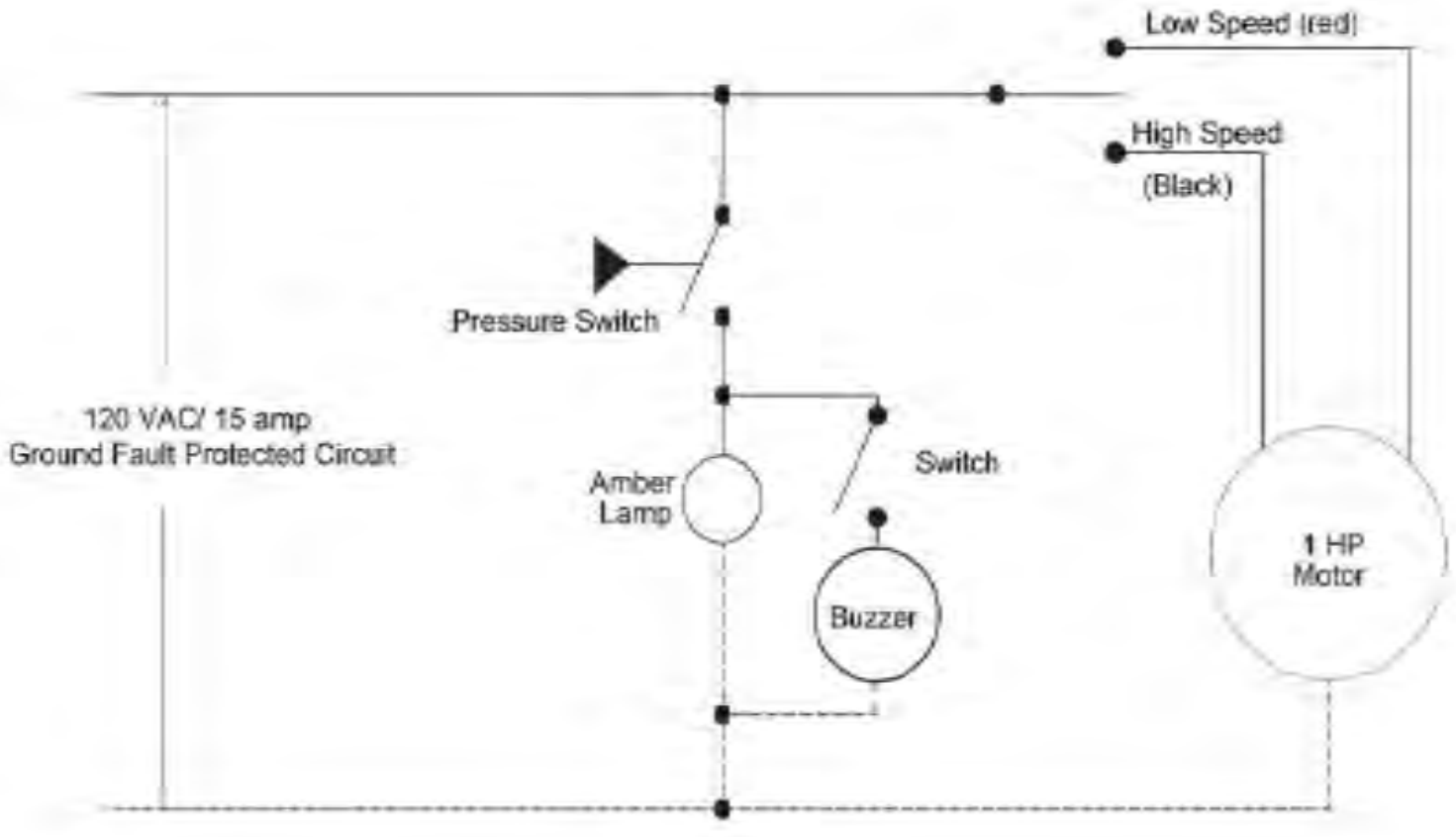
H2KM Wiring Schematic



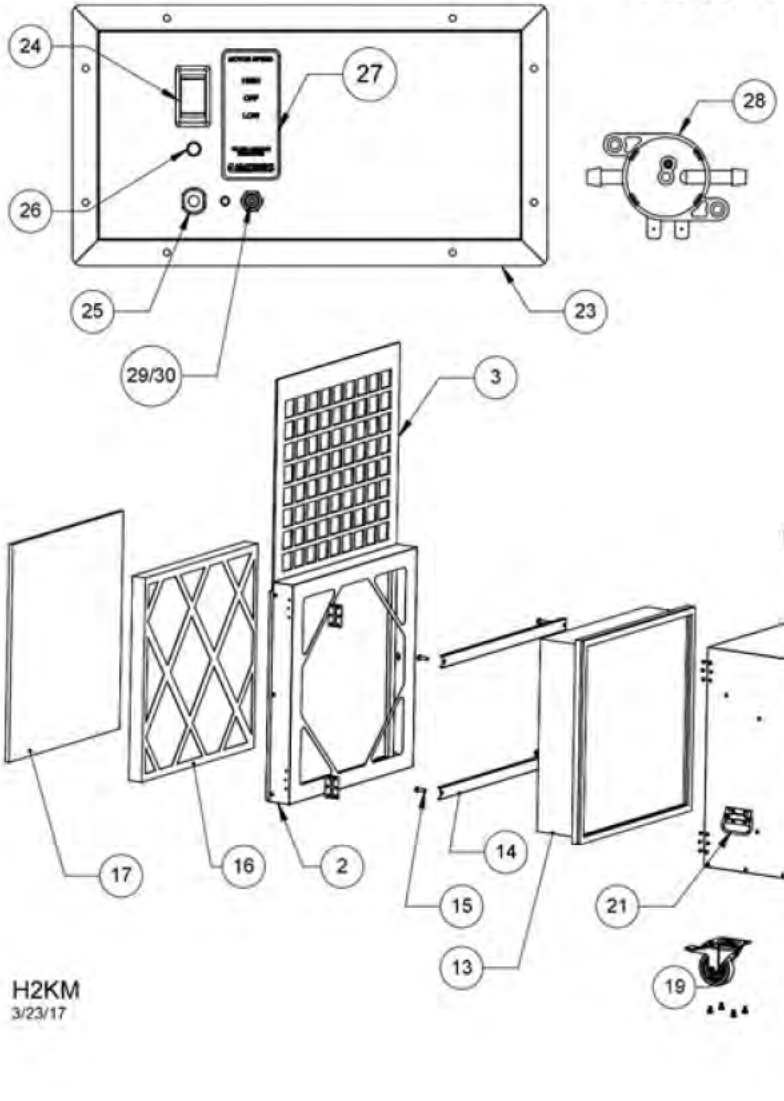
H2KMA Control Panel Wiring Diagram



H2KMA Wiring Schematic

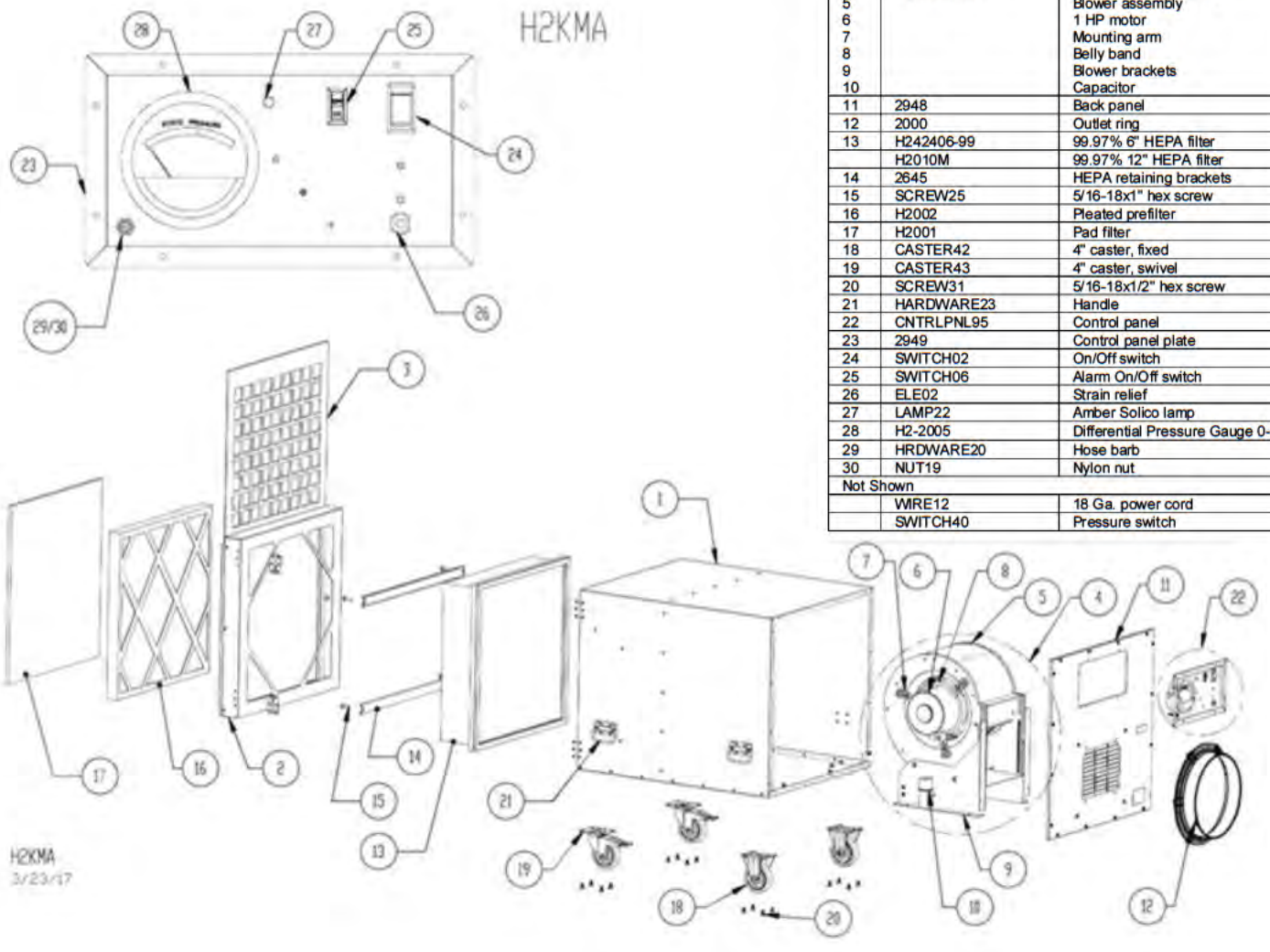


H2KM

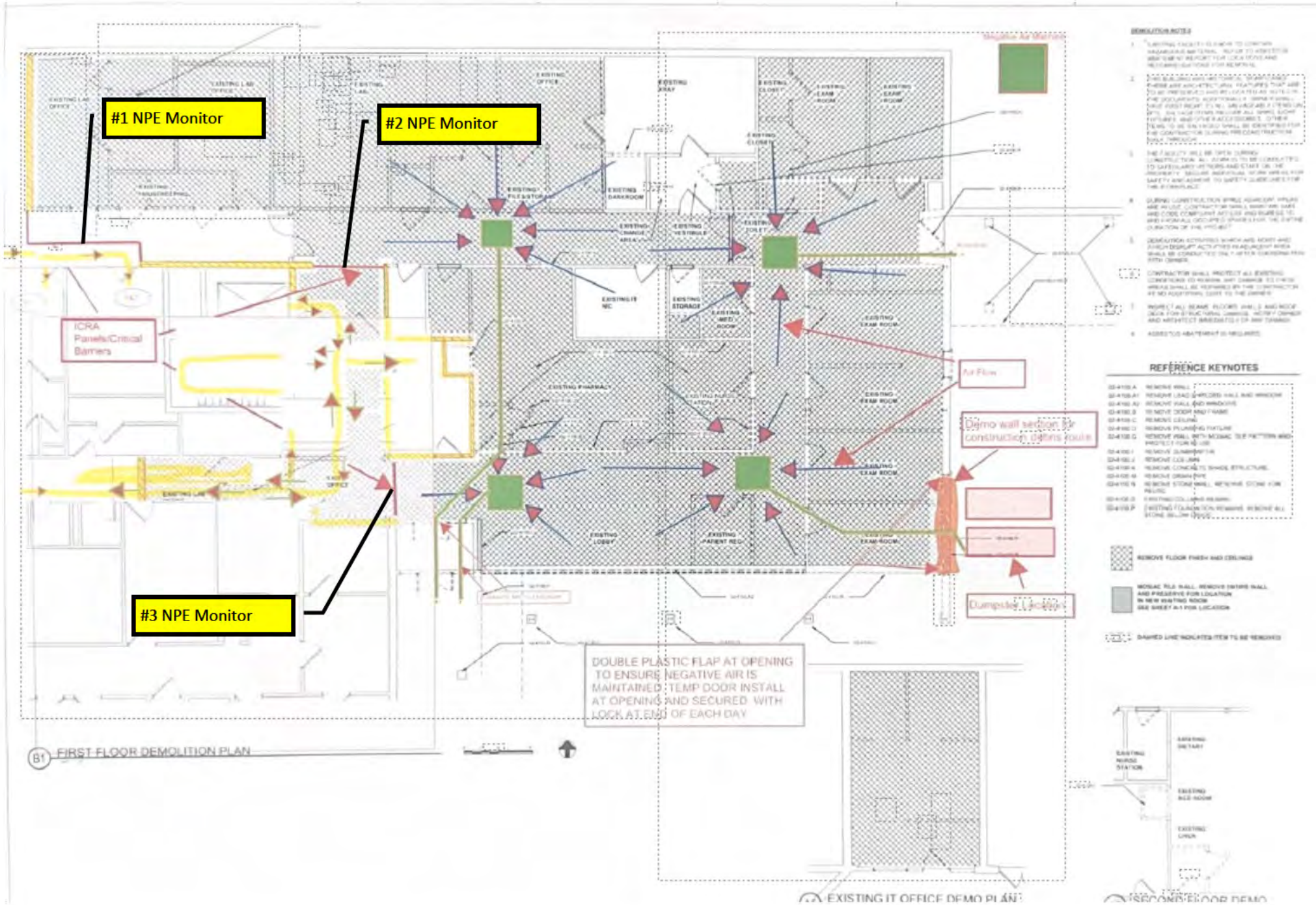


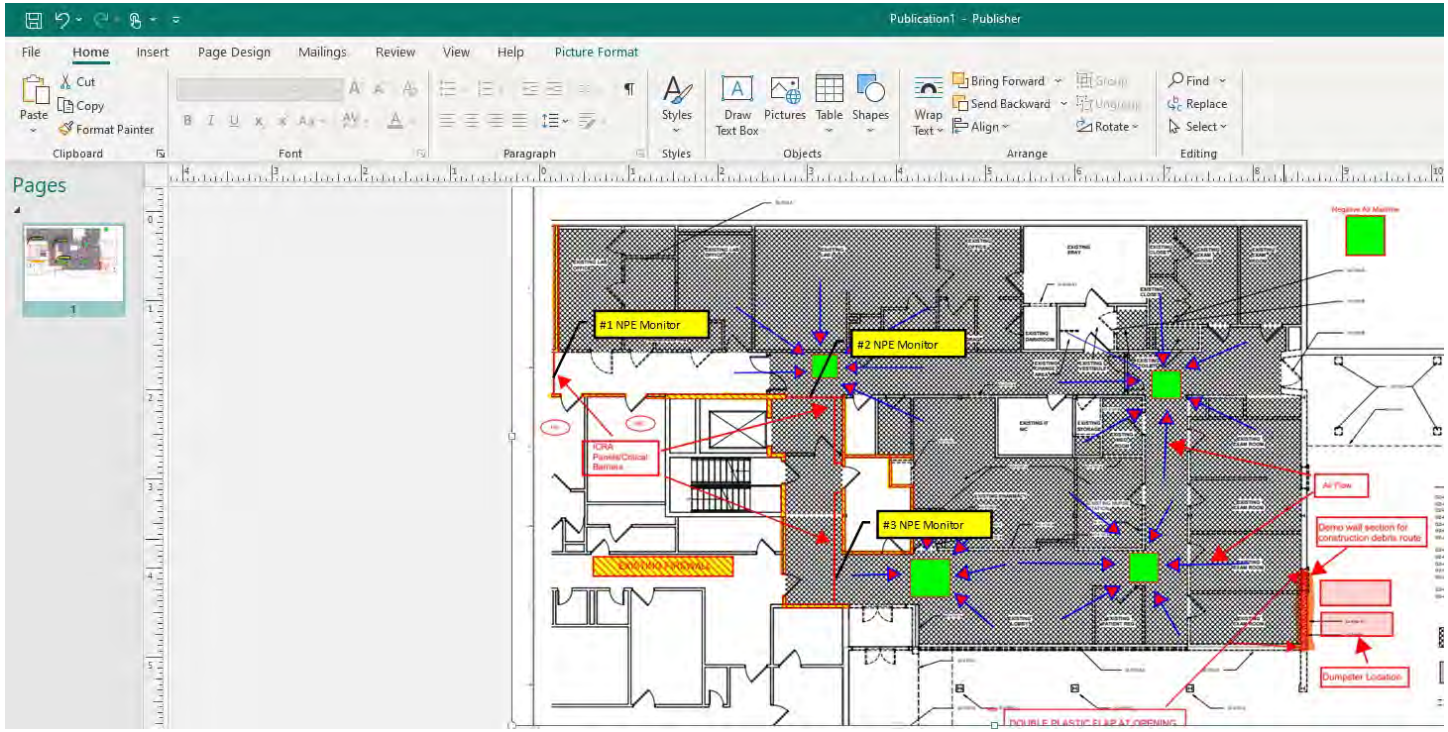
#	Part Number	Description	Qty.
1	CABINET46	Assembled cabinet	1
2	DOORASY43	Door with hinges and latches	1
3	AT3130	Drop down door	1
4	BLWRASY54	Motor blower assembly	1
5		Blower assembly	1
6		1 HP motor	1
7		Mounting arm	3
8		Belly band	1
9		Blower brackets	2
10		Capacitor	1
11	2951	Back panel	1
12	2000	Outlet ring	1
13	H242406-99	99.97% 6" HEPA filter	1
	H2010M	99.97% 12" HEPA filter	
14	2645	HEPA retaining brackets	2
15	SCREW25	5/16-18x1" hex screw	4
16	H2002	Pleated prefilter	1
17	H2001	Pad filter	1
18	CASTER42	4" caster, fixed	2
19	CASTER43	4" caster, swivel	2
20	SCREW31	5/16-18x1/2" hex screw	16
21	HARDWARE23	Handle	4
22	CNTRLPNL93	Control panel	1
23	2945	Control panel plate	1
24	SWITCH02	On/Off switch	1
25	ELE02	Strain relief	1
26	LAMP22	Amber Solico lamp	1
27	LABEL114	Control panel label	1
28	SWITCH28	Pressure switch 1.7" WC	1
29	HRDWARE20	Hose barb	1
30	NUT19	Nylon nut	1
Not Shown			
	WIRE12	18 Ga. power cord	1

H2KM
3/23/17



#	Part Number	Description	Qty.
1	CABINET46	Assembled cabinet	1
2	DOORASY43	Door with hinges and latches	1
3	AT3130	Drop down door	1
4	BLWRASY54	Motor blower assembly	1
5		Blower assembly	1
6		1 HP motor	1
7		Mounting arm	3
8		Belly band	1
9		Blower brackets	2
10		Capacitor	1
11	2948	Back panel	1
12	2000	Outlet ring	1
13	H242406-99	99.97% 6" HEPA filter	1
	H2010M	99.97% 12" HEPA filter	
14	2645	HEPA retaining brackets	2
15	SCREW25	5/16-18x1" hex screw	4
16	H2002	Pleated prefilter	1
17	H2001	Pad filter	1
18	CASTER42	4" caster, fixed	2
19	CASTER43	4" caster, swivel	2
20	SCREW31	5/16-18x1/2" hex screw	16
21	HARDWARE23	Handle	4
22	CNTRLPNL95	Control panel	1
23	2949	Control panel plate	1
24	SWITCH02	On/Off switch	1
25	SWITCH06	Alarm On/Off switch	
26	ELE02	Strain relief	1
27	LAMP22	Amber Solico lamp	1
28	H2-2005	Differential Pressure Gauge 0-5"	1
29	HRDWARE20	Hose barb	1
30	NUT19	Nylon nut	1
Not Shown			
	WIRE12	18 Ga. power cord	1
	SWITCH40	Pressure switch	1


#1 NPE Monitor
#2 NPE Monitor
#3 NPE Monitor
ICRA Panels/Critical Barriers
Air Flow
Demo wall section for construction debris route
Dumpster Location
DOUBLE PLASTIC FLAP AT OPENING TO ENSURE NEGATIVE AIR IS MAINTAINED. TEMP DOOR INSTALL AT OPENING AND SECURED WITH LOCK AT END OF EACH DAY
REFERENCE KEYNOTES
B1 FIRST FLOOR DEMOLITION PLAN
EXISTING IT OFFICE DEMO PLAN
SECOND FLOOR DEMO


Publication1 - Publisher
File
Home
Insert
Page Design
Mailings
Review
View
Help
Picture Format
Paste
Cut
Copy
Format Painter
Clipboard
Font
Paragraph
Styles
Draw Text Box
Pictures
Table
Shapes
Wrap Text
Bring Forward
Send Backward
Align
Rotate
Arrange
Find
Replace
Select
Editing
Pages
#1 NPE Monitor
#2 NPE Monitor
#3 NPE Monitor
Negative Air Machine
Air Flow
Demo wall section for construction debris route
Dumpster Location
DOUBLE PLASTIC FLAP AT OPENING

U.S. Department of Labor

Occupational Safety and Health Administration
El Paso Area Office
4849 North Mesa, Suite 200
El Paso, TX 79912

August 13, 2025

Mescalero Indian Hospital
318 Abalone Loop
Mescalero, NM 88340

RE: OSHA Complaint No. 2334676

Dear Employer:

On Aug 13, 2025 the Occupational Safety and Health Administration (OSHA) received a notice of alleged workplace hazard(s) at your worksite at:

318 Abalone Loop
Mescalero, NM 88340

A representative of your company was notified, by telephone, of alleged hazards on August 13, 2025. The specific nature of the alleged hazards are as follows:

6/3/2025 and ongoing present day
Asbestos and hazardous chemicals used for abatement of asbestos of building and known breach of negative pressure and known habitation of mice in ventilation systems.
Continued exposure and immediate adverse effects/ reactions when employees report to the building for any period of time. When staying longer than 30 minutes symptoms worsen.
Irritation of skin, breathing difficulties, and dizziness. Business is still conducted in the building and vents pumping air out from worksite into immediate outside areas near residential and other buildings. - Entire building - main building of Indian health clinic.

OSHA has not determined whether the hazards, as alleged, exist at your workplace and we do not intend to conduct an inspection at this time. However, since allegations of violations and/or hazards have been made, you are requested to immediately investigate the alleged conditions and make any necessary corrections or modifications. Please advise me in writing, no later than **August 20, 2025** of the results of your investigation. You must provide supporting documentation of your findings, including any applicable measurements or monitoring results, and photographs/video which you believe would be helpful, as well as a description of any corrective action you have taken or are in the process of taking, including documentation of the corrected condition. Please submit your documentation electronically to oshaelpaso@dol.gov.

This letter is not a citation or a notification of proposed penalty which, according to the Occupational Safety and Health Act, may be issued only after an inspection or investigation of the

workplace. It is our goal to assure that hazards are promptly identified and eliminated. Please take immediate corrective action where needed. **If we do not receive a response from you by August 20, 2025 indicating that appropriate action has been taken or that no hazard exists and why, an OSHA inspection will be conducted.** An inspection may include a review of the following: injury and illness records, hazard communication, personal protective equipment, emergency action or response, bloodborne pathogens, confined space entry, lockout, and related safety and health issues.

Please note, however, that OSHA selects for inspection some cases where we have received letters in which employers have indicated satisfactory corrective action. This is to ensure that employers have actually taken the action stated in their letters.

If you need assistance to help resolve the issues of this complaint, the State of New Mexico offers OSHA consultation services, without charge, to assist in resolving all occupational safety and health issues. The variety of services available of the scheduling of those services may be limited by the consultation project's requirement to give priority to small business in high hazard industries and by its backlog. However, you may be able to obtain similar services from your insurance carrier or private consultant in a more timely fashion. To discuss or request their services, call or write your consultation project at the following address:

OSHA Consultation
New Mexico State Occupational Health and Safety Bureau (OHSB) Consultation Program
525 Camino De Los Marquez Suite 3
Santa Fe, NM 87505
Phone: 505-476-8700
1-877-610-6742
Website: https://www.env.nm.gov/occupational_health_safety/consultation-program/

You are requested to **post a copy of this letter and your response** where it will be readily accessible for review by all of your employees and return a copy of the signed Certificate of Posting (Attachment A) to this office. In addition, you are requested to provide a copy of this letter and your response to it to a representative of any recognized employee union or safety committee if these are at your facility. Failure to do this may result in an on-site inspection. The complainant has been furnished a copy of this letter and will be advised of your response. Section 11(c) of the Occupational Safety and Health Act provides protection for employees against discrimination because of their involvement in protected safety and health activity.

If you have any questions regarding this matter, please contact the Area Office at the address in the letterhead. Your personal support and interest in the safety and health of your employees is appreciated.

Sincerely,

for Gabriel Nelson

Diego Alvarado Jr.
Area Director

Attachment A

CERTIFICATE OF POSTING
OSHA NOTIFICATION OF ALLEGED HAZARD(S)

Employer Name: Mescalero Indian Hospital
Complaint Number: 2334676

Date of Posting: _____

Date Copy Given to
an Employee Representative: _____

On behalf of the employer, I certify that a copy of the complaint letter received from the Occupational Safety and Health Administration (OSHA) has been posted in a conspicuous place, where all affected employees will have notice, or near such location where the violation occurred, and such notice has been given to each authorized representative of affective employees, if any. This notice was or will be posted for a minimum of ten (10) days or until any hazardous conditions found are corrected.

_____
Name

_____
Signature

_____
Title

If Applicable:

_____
Union Representative/Committee Name, Title, Local #

_____
Union Address

RPM-RT

RPM-RT SERIES DIFFERENTIAL PRESSURE MONITORS
STATE-OF-THE-ART TECHNOLOGY AT AN ECONOMICAL PRICE

Feature Rich. User Friendly. Advanced Technology.

Abatement Technologies® RPM series Differential Pressure Monitors provide 24/7 monitoring and recording of differential air pressure relationships between multiple rooms or areas within a healthcare facility.

These monitors are a powerful yet simple tool to measure differential pressure. With a user-friendly LCD touch screen coupled with an intuitive menu design, the RPM-RT units provide advanced capabilities at an affordable price.

PRIMARY APPLICATIONS

- Patient infectious isolation rooms
- Protective environments
- Clean rooms
- Central Sterilization / Sterile Processing Departments



RPM-RT Series Monitor



Optional Remote Sensor
(RPM-RTSENSOR)

FEATURES & BENEFITS

The RPM-RT Series units add the ability to measure temperature and relative humidity to the previous RPM series models while adding additional software features that give the user customization options. This allows the user to better control and use the device's capabilities while maintaining the familiarity of the original RPM Series. Some of the numerous features of these versatile, state-of-the-art devices include:

- RPM-RT1 monitors one room relative to a reference area
- RPM-RT2 monitors two rooms relative to a reference area.
- Optional remote sensor measures temperature and relative humidity
- Color-coded background (green, yellow, red) allows easy identification of alarm status
- Logs data for differential pressure, relative humidity, and temperature per the selected interval setting and at out-of-tolerance occurrences.
- Compatible with BACnet and N2 building automation systems without additional cost
- Dual-level password protection for operators and administrators
- Easy ordering kits available:

  RPM-RT1K kit includes 1 each pressure monitor, 1 each 25ft of clear tubing, 1 each temperature/rh sensor and 1 each 25ft Ethernet cable

  RPM-RT2K kit includes 1 each pressure monitor, 2 each 25ft of clear tubing, 2 each temperature/rh sensors and 2 each 25ft Ethernet cables

THE RPM-RT SERIES IS BEST SUITED FOR:

- PATIENT ISOLATION
- CRITICAL ENVIRONMENT PROTECTION
- HEALTH CARE FACILITIES

ABATEMENT TECHNOLOGIES®
LEADERS IN CLEAN AIR

CA: 1 800 827 6443
ABATEMENT.CA
IAQINFO@ABATEMENT.CA

US: 1 800 634 9091
ABATEMENT.COM
IAQINFO@ABATEMENT.COM

RPM-RT

RPM-RT SERIES DIFFERENTIAL PRESSURE MONITORS

STATE-OF-THE-ART TECHNOLOGY AT AN ECONOMICAL PRICE

DESCRIPTION	UNIT
Input Voltage	9-24V AC or DC
Max Power Consumption	150 mA at max display brightness
Pressure Units Displayed	Inches of Water Column (inWC), Pascal (Pa)
Range of Measurement	+/- 0.10 inWC, +/- 25 Pa
Accuracy of Measurement	+/- 3% Full Scale
Display	3.5in 262K color TFT display, 320 x 240 resolution
Display Resolution	0.001 inWC, 0.025 Pa
Alarms	Custom alarm set points from -0.1 inWC (-25 Pa) to 0.1 inWC (25 Pa) at a resolution of 0.001 inWC (0.025 Pa)
Types of Alarms	Audible internal speaker with sound pressure level of 85dB at 4 in; display warning (yellow for pre-alarm, red for alarm)
Aux Alarm Connection	Normally open and common; relay output rated at 2 amps @ 30 volts DC; no power is provided
Pressure Ports	1/8in barbs for 1/8in ID tubing
Burst Pressure	Greater than 5 atmospheres
Operating Temperature	41°F to 131°F (5°C to 55°C)
Storage Temperature	-22°F to 176°F (-30°C to 80°C)
Operating Humidity	0% - 85% relative humidity (non-condensing)
Operating Altitude	9000 feet maximum
USB Port	USB V1.0 type A for connecting USB flash drive
Data Type	Data transmitted in CSV file via USB flash drive can be imported into any text based editor
Data Storage Capacity	4 mega bits; >12000 logged events (no power or battery required)
Data Logging	Date and time are shown with a logged event. Events are: alarm condition with current pressure for a specific room; system startup; alarm reset; configuration change; archive erased; and calibration
Internal Clock	Powered by a lithium ion battery that provides years of clock operation when neither AC nor DC power is present
Physical Dimensions	5.98in L x 4.02in W x 1.11in H
Weight	0.5 lbs

Specifications and details subject to change without prior notice

ABATEMENT TECHNOLOGIES®
LEADERS IN CLEAN AIR

CA: 1 800 827 6443
ABATEMENT.CA
IAQINFO@ABATEMENT.CA

US: 1 800 634 9091
ABATEMENT.COM
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SAFETY DATA SHEET

Twin-Chem NO ODOR MASTIC REMOVER

Revision: 10/19/2015
Supersedes Revision: 03/06/2015

1. Product and Company Identification

Product Code: 00073A
Product Name: Twin-Chem NO ODOR MASTIC REMOVER

Company Name: TWIN-CHEMICALS, INC.
6175 Hickory Flat Highway
Suite 110-344
Canton, GA 30755

Phone Number: (800)442-4958

Web site address: www.twinchemicals.com
Email address: sales@twinchemicals.com

Emergency Contact: CERTS (Health & Environment only) (800)552-3787
Information: Sales & Information - (800)442-4958

2. Hazards Identification

Flammable Liquids, Category 3
Acute Toxicity: Skin, Category 4
Skin Corrosion/Irritation, Category 2
Aspiration Toxicity, Category 2
Acute Toxicity: Inhalation, Category 4



GHS Signal Word: **Warning**

GHS Hazard Phrases:
H226 - Flammable liquid and vapor.
H305 - May be harmful if swallowed and enters airways.
H312 - Harmful in contact with skin.
H315 - Causes skin irritation.
H332 - Harmful if inhaled.

GHS Precaution Phrases:
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P240 - Ground/bond container and receiving equipment. P233 - Keep container tightly closed.
P243 - Take precautionary measures against static discharge.
P261 - Avoid breathing mist/vapours/spray.
P264 - Wash hands thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves/protective clothing/eye protection.

GHS Response Phrases:
P301+310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P303+361+353 - IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
P331 - Do NOT induce vomiting.
P332+313 - If skin irritation occurs, get medical advice/attention.
P362 - Take off contaminated clothing and wash before re-use.

GHS Storage and Disposal Phrases:
P403+235 - Store in cool/well-ventilated place.
P501 - Dispose of contents/container to a waste facility according to local regulations.

Potential Health Effects (Acute and Chronic): Prolonged or repeated skin contact may cause defatting and dermatitis.

Chronic: May cause liver and kidney damage. Sophisticated modeling has clearly proven that 2-butoxyethanol does not build up in the body under any kinds of normal use.

Inhalation: Harmful if inhaled. May cause narcotic effects in high concentration. May cause lung damage. May cause central nervous system effects such as nausea and headache. Material is irritating to mucous membranes and upper respiratory tract.

Skin Contact: Causes skin irritation. Causes symptoms similar to those of inhalation. Skin sensitization testing with human volunteers produced negative results. A skin notation is not recommended by ACGIH, based on estimates from physiologically based pharmacokinetic models which indicate that, even in worst-case dermal-exposure scenarios, 2-butoxyethanol is not absorbed in amounts sufficient to cause red blood cell hemolysis in humans. May cause skin irritation.

Eye Contact: Causes redness and pain. Causes severe eye irritation.

Ingestion: Aspiration hazard. May cause irritation of the digestive tract. Harmful if swallowed. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

3. Composition/Information on Ingredients

CAS #	Hazardous Components (Chemical Name)	Concentration
64742-47-8	Hydrotreated light distillate (petroleum)	80.0 -90.0 %
111-76-2	Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, Glycol Ether EB}	10.0 -15.0 %
9016-45-9	Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydr {Nonylphenol Ethoxylate}	3.0 -6.0 %

4. First Aid Measures

Emergency and First Aid Procedures:

In Case of Inhalation: If inhaled, remove to fresh air. If breathing is difficult, give oxygen. Get medical aid immediately. Remove from exposure and move to fresh air immediately.

In Case of Skin Contact: In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

In Case of Eye Contact: In case of contact, immediately flush eyes with plenty of water for a t least 15 minutes. Get medical aid immediately.

In Case of Ingestion: Potential for aspiration if swallowed. Get medical aid immediately. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, have victim lean forward. Call a poison control center. If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Signs and Symptoms Of Exposure: Exposure can cause: Nausea, headache, and vomiting.

Note to Physician: None known.

5. Fire Fighting Measures

Flash Pt: 79.00 C Method Used: Cleveland Open Cup

Explosive Limits: LEL: 0.6 UEL: 7.0

Autoignition Pt: > 231.00 C

Suitable Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or appropriate foam. Suitable:

Fire Fighting Instructions: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Will burn if involved in a fire. Combustible liquid and vapor. Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s):

Flammable Properties and Hazards:

Hazardous Combustion Products:

6. Accidental Release Measures

Protective Precautions, Protective Equipment and Emergency Procedures: Hand: Compatible chemical-resistant gloves. Always use a NIOSH or European Standard EN 149 approved respirator when necessary. Eye protection is recommended.

Environmental Precautions: Do not discharge directly into the environment or into the sewer system.

Steps To Be Taken In Case Material Is Released Or Spilled: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Provide ventilation. Do not let this chemical enter the environment. PROCEDURE(S) OF PERSONAL PRECAUTION(S)
Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves. Methods for cleaning up.
Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

7. Handling and Storage

Precautions To Be Taken in Handling: Wash thoroughly after handling. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Keep away from heat, sparks and flame. Do not ingest or inhale. User Exposure: Do not breathe vapor.

Precautions To Be Taken in Storing: Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

8. Exposure Controls/Personal Protection

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
64742-47-8	Hydrotreated light distillate (petroleum)		TLV: 200 mg/m3	
111-76-2	Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, Glycol Ether EB}	PEL: 50 ppm	TLV: 20 ppm	
9016-45-9	Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydr {Nonylphenol Ethoxylate}			

Respiratory Equipment (Specify Type):	Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi- purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. Hand: Compatible chemical-resistant gloves.
Eye Protection:	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Chemical safety goggles.
Protective Gloves:	Wear appropriate protective gloves to prevent skin exposure.
Other Protective Clothing:	Wear appropriate protective clothing to prevent skin exposure.
Engineering Controls (Ventilation etc.):	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low. Use explosion-proof ventilation equipment. Use only under a chemical fume hood. Safety shower and eye bath.
Work/Hygienic/Maintenance Practices:	Wash thoroughly after handling.

9. Physical and Chemical Properties

Physical States:	[ ] Gas [X] Liquid [ ] Solid
Appearance and Odor:	Clear liquid. solvent odor.
pH:	NP
Freezing Point:	< -70.00 C
Boiling Point:	210.00 C - 288.00 C
Flash Pt:	79.00 C Method Used: Cleveland Open Cup
Evaporation Rate:	> 5 (BuAC=1)
Flammability (solid, gas):	
Explosive Limits:	LEL: 0.6 UEL: 7.0
Vapor Pressure (vs. Air or mm Hg):	.05 MM_HG
Vapor Density (vs. Air = 1):	NA
Specific Gravity (Water = 1):	0.800 - 0.820 at 20.0 C
Density:	NP
Solubility in Water:	Nil
Saturated Vapor Concentration:	NA
Octanol/Water Partition Coefficient:	
Percent Volatile:	> 94.0 % by weight.
Autoignition Pt:	> 231.00 C
Decomposition Temperature:	
Viscosity:	Water thin

10. Stability and Reactivity

Stability: Unstable [ ] Stable [X]

Conditions To Avoid - Instability: ignition sources, Incompatible materials.

Incompatibility - Materials To Avoid: Strong acids. Strong bases, Oxidizing agents.

Hazardous Decomposition or Byproducts: Carbon monoxide, oxides of sulfur.

Possibility of Hazardous Reactions: Will occur [ ] Will not occur [X]

Conditions To Avoid - Hazardous Reactions:

11. Toxicological Information

Toxicological Information: Epidemiology: No information found.
Teratogenicity: No information available. Reproductive Effects: Mutagenicity: Neurotoxicity:

Carcinogenicity/Other Information: CAS# 64742-47-8: Not listed by ACGIH, IARC, NTP, or CA Prop 65. CAS# 111-76-2:
ACGIH: A3 - Confirmed animal carcinogen with unknown relevance to humans.
California: Not listed.
NTP: Not listed.
IARC: Not listed.

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
64742-47-8	Hydrotreated light distillate (petroleum)	n.a.	n.a.	A4	n.a.
111-76-2	Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, Glycol Ether EB}	n.a.	3	A3	n.a.
9016-45-9	Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydr {Nonylphenol Ethoxylate}	n.a.	n.a.	n.a.	n.a.

12. Ecological Information

General Ecological Information: Environmental: TERRESTRIAL FATE: Based on a recommended classification scheme, an estimated Koc value of 67,, determined from an experimental log Kow and a recommended regression-derived equation, indicates that ethylene glycol mono-n-butyl ether is expected to have high mobility in soil. An estimated BCF value of 2.5 was calculated for ethylene glycol mono-n-butyl ether, using an experimental log Kow of 0.83 and a recommended regression-derived equation. According to a recommended classification scheme, this BCF value suggests that bioconcentration in aquatic organisms is low.
Physical: No information found.
Other: An estimated BCF value of 2.5,, from an experimental log Kow, suggests that ethylene glycol mono-n-butyl ether bioconcentration in aquatic organisms will be low, according to a recommended classification scheme. ELIMINATION.

13. Disposal Considerations

Waste Disposal Method: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed. Empty container may be recycled or disposed of as solid sanitary waste. Do not reuse container. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

14. Transport Information

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s (applies to single containers of more than 119 gallons - smaller containers are not regulated)
NOT REGULATED FOR DOMESTIC TRANSPORT.

DOT Hazard Class:

UN/NA Number:

LAND TRANSPORT (Canadian TDG):

TDG Shipping Name: Environmentally hazardous substance, liquid, n.o.s (applies to single containers of more than 119 gallons - smaller containers are not regulated)

AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Non-Hazardous for Air Transport: Non-hazardous for air transport.

15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
64742-47-8	Hydrotreated light distillate (petroleum)	No	No	No
111-76-2	Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, Glycol Ether EB}	No	No	Yes-Cat. N230
9016-45-9	Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydr {Nonylphenol Ethoxylate}	No	No	No

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
64742-47-8	Hydrotreated light distillate (petroleum)	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
111-76-2	Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, Glycol Ether EB}	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
9016-45-9	Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydr {Nonylphenol Ethoxylate}	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory, 8A PAIR; CA PROP.65: No

16. Other Information

Revision Date: 10/19/2015

Hazard Rating System:

HMIS:

HEALTH	1
FLAMMABILITY	2
REACTIVITY	
PPE	I

Additional Information About This Product:

Company Policy or Disclaimer: THE INFORMATION CONTAINED HEREIN is based upon available information at the time of preparation and isbelieved to be accurate but is not warranted to be so. Users are advised to confirm in advance of need that the information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or any other user proximately caused by the material if misused or if reasonable safety procedures are not adheared to as stipulated in the data sheet and on the prduct label. Furthermore, vendor assumes no responsibility for injury or damage caused by abnormal use of this material even if reasonable safety measures are followed.