


Why Are You Here?



You need to know -

- Where there is (or may be) asbestos-containing material (ACM) in your facility?
- How to care for ACM (do's and don'ts)?
- How to recognize problems with known or suspect ACM?
- What to do if there is a problem?
- Who to notify?
- How do you get information on hazardous materials (e.g., asbestos)?

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What are we going to cover?

- Asbestos and its various uses and forms
- Health effects associated with asbestos exposure
- Locations of ACBM throughout each school building
- How to recognize damaged, deteriorated, and delaminated ACBM
- Name and telephone number of the LEA designated person **Peter Swerzenski – 554-2420**
- Availability and location of the management plan

Keep Awake – Quiz at the end!

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“Quiz” – Complete (turn-in at end of the Hazard Communications section)

- **Print (so we can read it) and sign your name**
- **If you know it, print your SAISD 7-10 digit number (if you know it)**
- **Circle the correct answer for each question**
- **Pass in the completed test at the end of the training**

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Pre-Quiz Asbestos Awareness ????

- Asbestos is made in a chemical plant.
- Bound asbestos is called “friable” and is usually not a problem.
- After you are trained you can identify asbestos-containing material (ACM).
- Health effects of asbestos usually appear a few days after exposure.
- The campus asbestos management plan (AMP) is issued to, and the property of the principal or facility manager.
- The AMP contains the results for all asbestos sampling performed at the campus.

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Pre-Quiz Asbestos Awareness

- Asbestos is made in a chemical plant. **NO – It is a mineral and occurs naturally in the soil.**
- Bound asbestos is called “friable” and is usually not a problem. **NO bound asbestos is “non-friable”.**
- After you are trained you can identify asbestos-containing material (ACM) by looking and feeling it. **NO – Asbestos fibers must analyzed following specific laboratory procedures.**
- Health effects of asbestos usually appear a few days after exposure. **NO the effects take 10 to 40 years to manifest themselves!**
- The campus asbestos management plan (AMP) is issued to, and the property of, the principal or property manager. **NO – The AMP issued to the campus and must be available upon request. It is normally kept in a red binder in the Library.**
- The AMP contains the results for all asbestos sampling performed at the campus. **YES – FINALLY!**

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Background

- "asbestos" word is Greek
 - "miracle mineral" softness, flexibility and its ability to withstand heat
- Not widely available until the late 1800s
 - major deposits were found in Canada.
- World Wars I and II
 - military used asbestos extensively
- 1970's - Voluntary reduction in the use of asbestos

You can still buy ACM products today!

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Background

- AHERA - Asbestos Hazard Emergency Response Act – 10/30/1987
 - Environmental Protection Agency (EPA) rule that regulates asbestos-containing materials (ACM) in schools
 - Texas Department of State Health Services (TDSHS)
 - State agency that oversees asbestos activity in Texas

SAISD Asbestos Designated Person:

Peter Swerzenski @ 210-554-2420 / pswerzenski@saisd.net

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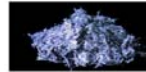
Characteristics of Asbestos

- **Fibrous, naturally occurring mineral**
 - **Colorless, Odorless, & Tasteless**
- Magnesium, silicon & other elements
- Three main types of asbestos
 - Chrysotile (white), 95% (insulation, fire & sound-proofing)
 - Amosite (brown), 3% (TSI & ceiling tile)
 - Crocidolite (blue), 2%

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ASBESTOS



Asbestos, because this group of silicate minerals can be readily separated into thin, strong fibers that are flexible, heat resistant, and chemically inert, asbestos minerals are suitable for use in fireproof fabrics, yarn, cloth, paper, paint filler, gaskets, roofing composition, reinforcing agent in rubber and plastics, brake linings, tiles, electrical and heat insulation, cement, and chemical fibers.



Mineral Information Institute -- www.mii.org

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Uses of Asbestos

- Thousands of asbestos-containing materials (ACM) 1945 to 1980 ACM used in buildings:
 - **Fireproofing material** -- Usually spray-applied to steel beams (**Sept 11, 2001 Twin Towers in NYC**)
 - **Insulation material** -- Usually spray-applied, trowel-applied, or manually installed after being preformed to fit surfaces such as pipes (**old pipe elbows below some MS & HS**)
 - **Acoustical or soundproofing material** -- Trowel- or spray-applied (**may include plaster ceilings & walls but to date no ACM plaster found**)
 - **Miscellaneous materials** -- roofing felts, exterior siding and roofing shingles, wallboard, pipes for water supply, combustion vents, and flues for waste gases and heat etc. (**including 9" floor tile with black glue / mastic**)

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Wizard of Oz - 1939



Hollywood – Snow!

"It's a Wonderful life" - 1946



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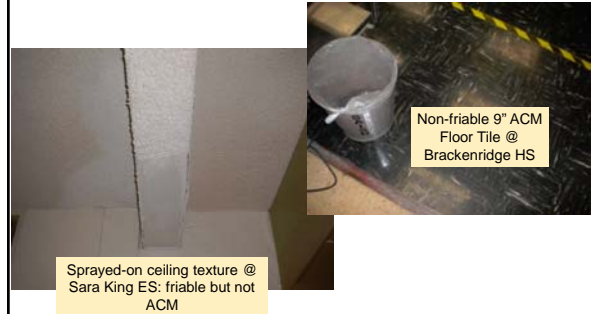
Important Definitions

- **Asbestos-Containing Material (ACM)**
 - Material / product containing > 1% asbestos fibers
- **Asbestos-Containing Building Material (ACBM)**
 - Building materials containing > 1% asbestos fibers
- **Friable ACM**
 - Any material that contains more than 1% asbestos (by weight or area) and can be crumbled, pulverized, or reduced to powder by the pressure of any ordinary human hand.

Note: Non-friable ACM may become friable when it becomes damaged to the extent that it can be crumbled, pulverized, or reduced to powder by hand pressure when dry.

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Definitions



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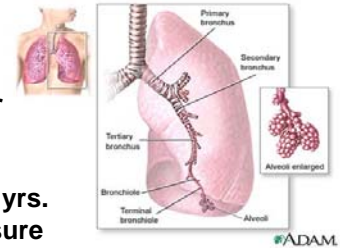
Asbestos Key Points (Terms)

- Fiber – three times as long as it is wide
 - Asbestos Fibers 0.5 micron width
 - Human hair is 100 microns in width
- Environmental Protection Agency (EPA) “clearance” asbestos limit in air
 - 0.01 fibers per cubic centimeter of air or 70 structures
- Occupational Safety and Health Administration – Occupational Rules
 - See www.osha.gov for additional information

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HEALTH EFFECTS

Fibers penetrate the deep lung tissue



Asbestosis

- Scarring of air sacs
- Not a cancer
- Effects 15-30 yrs. of high exposure

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HEALTH EFFECTS

Lung Cancer

- Cells divide without stopping
- Effects 10 plus yrs.

Mesothelioma

- Effects 20 - 40 yrs.
- Rare fatal cancer that affects the lung lining



LUNG CANCER – 50 X Increase when add Smoking + Asbestos

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EPA Policy – Asbestos Control in Schools

- Asbestos is hazardous. The risk from asbestos depends upon exposure.
- Average asbestos levels in schools are very low so the health risk is low.
- *Removal not always best. The EPA only requires asbestos removal to prevent significant public exposure to airborne asbestos fibers during building demolition or renovation activities.*
- Identified asbestos will pose little risk if it is well maintained under an O&M program.
 - EPA requires a pro-active, in-place management program whenever ACBM is discovered and is not removed.

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Asbestos In Our Older Schools



- Classroom – 9" green floor tile along with black mastic. Both are presumed asbestos - containing material (ACM)
- Classroom – 9" brown ACM/floor tile with a good coat of wax.

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Asbestos In Our Older Schools

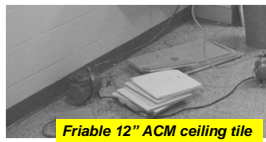
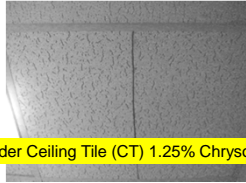
- Classrooms – ACM chalkboard and ACM black mastic used to attach the board to the wall.
- HS/MS Labs – Lab work benches containing a hard fire resistant ACM.



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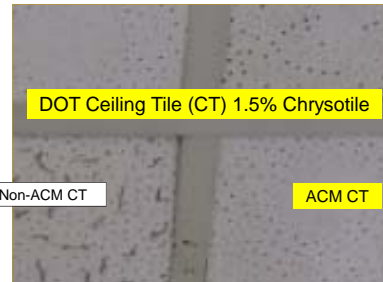
Asbestos In Our Older Schools

- Ceiling Tile – Purchasing and Transportation Offices 4' by 2' tile ACM (1.25 % identified Nov 2010 and Oct 2013 respectively)
- Ceiling Tile – ACM 1' by 1' or 2' tongue and groove with white edges (*All ACM ceiling tile was removed from Pfeiffer prior to 2013*)



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Milam / Transportation 2013 Re-Inspection



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Asbestos In Our Older Schools



- Mechanical Rooms - Gasket between access panel and the boiler.
- Mechanical Rooms – Damaged thermal system insulation (TSI) located on a boiler air chamber. Abated

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Asbestos in Our Older Schools



- Transite / ACM pipe heater exhaust that discharged to the roof. Abated
- Laboratory hood with interior fire resistant PACM. Abated

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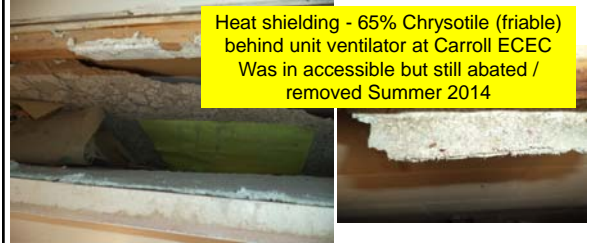
Asbestos – Lanier High School



2. White Pipe Mastic – 4% Chrysotile
*Above ceilings, behind walls, mechanical rooms,
 and crawlspace*

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Carroll ECEC – 2013 Re-inspect.



Heat shielding - 65% Chrysotile (friable)
 behind unit ventilator at Carroll ECEC
 Was in accessible but still abated /
 removed Summer 2014

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Asbestos in Our Older Schools

- Auditorium - Fire retardant PACM curtains located at the auditorium stage (e.g., Jeff HS - fall 2008)
- Auditorium Foyer – Sprayed-on ceiling texture. Not ACM based on testing.



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Asbestos in Our Older Schools

- Auditorium – Sprayed-on ceiling leading up to the balcony. Known damaged ACM. Abated
- Classroom – Water damaged plaster ceiling (not ACM based on testing)



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Asbestos in Our Older Schools



- Suspect ACM exterior metal window glazing.
- Interior metal window with similar PACM glazing along the window panes. Abated

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Asbestos in Our Older Schools



- Thin insulation beneath the lights in this older light fixture.
- Suspect ACM pipe insulation at a stair entrance.

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Asbestos in Our Older Schools



Non-Friable asbestos-containing Transite® panels

- Transite® paneling under outdoor overhangs



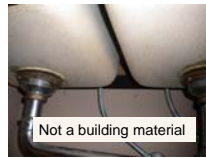
- Transite® paneling along an interior hallway

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Asbestos in Our Older Schools



- Some older roofing materials (especially parapet and penetration mastics) are ACM



Not a building material

- Sink under-coating (especially older black material) may be ACM

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Asbestos in Our Older Schools - Demolition



Old Margil ES Building-Summer 2011
Floor Tile & Mastic
TSI Piping Elbows
HVAC System Mastic
Exterior Waterproofing

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Asbestos Near Our Schools



- Asbestos siding being removed from a house that was going to be demolished.



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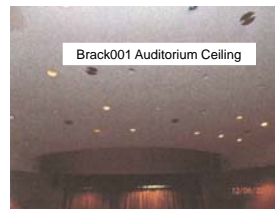
RECOGNIZING DAMAGE AND DETERIORATION

- Friable (TSI/Surfacing) vs. Non-friable
- Sources of Damage
 - Impact, Exposure, Vibration, Chemicals, Fans and Blowers
- Report Damaged ACBM
- Hazard Communication
 - Inventory
 - Notification Methods
 - Labels, Management Plan



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SAISD Removed Most of the High Risk Friable Asbestos in the Late 80's and 90's



Brack001 Auditorium Ceiling



Highlands HS 005 Tunnel - Abated

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Campus Asbestos Management Plan

Red Binder – Library or Administration Offices

- Tab 1: AMP notifications
- Tab 2: Latest 3-year inspection
- Tab 3: Six-month surveillance reports
- Tab 4: Asbestos sample reports / log
- Tab 5: O&M training certificates
- Tab 6: Response activities
- Tab 7: A CD with the all old documentation

Updated by the Environmental
(Call Rick or Pete @ 554-2420)

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Comps #	Building	Asbestos-Containing Material (ACM) Description	Material Category	Material Location	Asbestos Content	Quantity	Units	Status as of 2015
116	1915, 1923 and 1956 bldgs.	9" x 9" Brown Floor Tile & Black Floor Mastic underneath	Misc	Room A211, Under Chair Vents, Second floor Classroom under 12" Tan Drop Floor Tile with Berms and 9" x 9" Spk	3-7%	4,250	SF	Good
116	1915, 1923 and 1956 bldgs.	12" x 12" Tan Drop Floor Tile with Berms and White Spk and Black Mastic underneath	Misc	Over 9" x 9" Floor Tile on the Second Floor and Over Wood Subflooring in Majority of Class Room	2%	13,800	SF	Good
116	1915, 1923 and 1956 bldgs.	Black Moisture Barrier	Not AHERA	Behind Exterior Walls	Assumed	12,000	SF	Good
116	1915, 1923 and 1956 bldgs.	Black Vinyl Chairboards	Misc	Main Original Building Only - One Classroom on the First Floor and All Classrooms on the Second Floor	N/A	750	SF	Good
116	1915, 1923 and 1956 bldgs.	Chalk Board Mastic	Misc	All Other Class Rooms including Most Original Building	Assumed	1,470	SF	Good
116	1915, 1923 and 1956 bldgs.	Window Glazing	Misc	Window Frames (East Yard Side)	2%	1,200	LF	Good

Notes:
 1. Abatement (Since 2012):
 On 11/6/2014 abated 720 SF of 12" x 12" tile on masonry in Room 203
 Between 3/7/14 and 6/11/14 abated 3400 SF of 12" x 12" tile on masonry from rooms 109, 106, A112 and A113

ACM: Asbestos-containing material (ACM) is defined by the EPA as containing more than 1% asbestos (as determined by Polarized Light Microscopy).
Assumed: The material is suspected for assumed to contain asbestos (above 5%).
Chrysotile: Most common
LF: Linear feet
Misc: EPA's material
N/A: Not asbestos
PC: Point Counting (PC) is reliance on EPA Method 8000-R-03/116 and 800/NAA-82-020 for further quantifying the amount of asbestos in a sample
SF: Square feet
Unit: Unknown (quantity, status, location, etc.)

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Prohibited Actions – On CD – Tab 7 (Chapter 12 of original AMP)

DO NOT

- Do not drill holes in, or sand / cut on ACM (e.g., 9" floor tile and/or black mastic)
- Do not hang plants/pictures on ACM covered structures
- Do not sand asbestos-containing floor tile
- Do not install curtains, drapes, or dividers in a way that may damage ACM

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Prohibited Actions (continued)

Do Not

- Do not dust floors, ceilings, moldings or other surfaces in an asbestos contaminated environment.
- Do not use an ordinary vacuum to clean up asbestos debris
- Do not remove ventilation system filters dry
- Do not shake ventilation system filters.



Asbestos HEPA Filter Vacuum

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Management Plan – You Can

Remove suspect or known ACM roofing material using normal demolition protocols and safeguards

You can...

- The ACM must be kept wet and no visible emissions are permitted
- Work must be performed under the direction of an on-site NESHAP trained competent person



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Management Plan – You Can

You can...

- Apply adhesive over black mastic (suspect ACM)
- Install non-asbestos floor tile
- Remove loose or broken tile
 - Contact Rick Pena or Pete Swerzenski (@ 554-2420)



Call???

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Care of Asbestos Containing Flooring

- Stripping finishes
 - low abrasion pads
 - wet methods
 - speeds below 300 rpm
- Burnishing or dry buffing
 - Floor must have sufficient finish

You can...



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Preventing Exposure

- Know where the ACM is in your school
 - **Asbestos Management Plan (Tab 2)** – *Red binder in library / admin.* (or ?)
- Know what tasks are performed on or near ACM / ACMB
- Report Damaged ACM to your Supervisor

Questions: Call 210-554-2420

- **Peter Swerzenski - SAISD Designated Person**
- **(Ismael) Rick Pena – SAISD Asbestos Technician**

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Mechanical Room – Asbestos Labeling

Warning labels are posted on pipes or at entrances to areas that contain ACBM

Check the AMP (in the campus library) before disturbing any Pipe Insulation



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Six Month Surveillance Report

- Head Custodian (HC) performs check
 - **April 13th**, and **October 13th**
 - Visually inspect all accessible areas (check AMP)
 - Create work orders for damaged or broken ACM
- HC record findings on *Six Month Surveillance Report*
 - Complete the form (include areas, work order #s, etc.)
 - Damaged areas *must* include a Work Order #
 - Do **NOT** include IAQ issues!!!
- HC signs, sends and files report
 - E-mail or Fax copy to Rick Pena or Pete Swerzenski @ 210-271-3330
 - Place original completed report in campus AMP, Tab 3

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Brackenridge HS - 6 Month Asbestos Surveillance Report

Survey Date: _____

Building / Room #: Main 1972 Bldg. Basement Chiller: TSI on pipes

OBSERVABLE CHANGES: YES NO

Building / Room #: Main 1972 Bldg. mechanical rooms and above ceiling: white mastic on fiberglass insulated pipes

OBSERVABLE CHANGES: YES NO

AMP Tab 3
 - Specific inspection form for each campus
 - Can modify form to suit campus needs

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IAQ Issues *Not* Included... **BUT**

- Ensure Routine IAQ Checks Are Performed
 - Walk-through all spaces: storage rooms, **PORTABLE BUILDINGS**, unused spaces, storage / remote blgs. closets, shower & locker areas, known problem areas, **MECHANICAL ROOMS**, etc.
 - High humidity, condensation, leaks?
 - Disconnect hoses from sinks (including RTUs)
 - Portable AC units, heaters, fans, etc. and lights off
 - Areas secured
- Call-in IAQ / Mold Issues to **Dispatch 354-9305**
 Stop water source / dry area ASAP




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Back to Asbestos: What Can You Expect?


- Response Activities
 - Operations & Maintenance
 - Contract Asbestos Work
 - Asbestos abatement and management contractors, TDH inspectors, and us!



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What Can You Expect (continued)

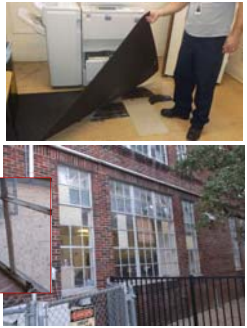
- RFCI removal method
 - Approved for small floor tile and mastic work
 - Approved for demolition tile and mastic work
- RFCI requirements
 - Containment & PPE not required
 - Wet methods, bag waste, DSHS not.. for larger jobs



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2016 - Asbestos Abatement Activities


- YMLA (WW White) boiler - June 2016
- Navarro Windows - June - July 2016
- Lamar ES Windows - March 2016
- Longfellow MS 4 CR FT - Summer 2016
- Madison ES 2 CR FT - Summer 2016
- Graebner ES 1 CR FT - Summer



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2015 - Bond Asbestos Abatement & Demolition Activities

- Jefferson HS
- Longfellow MS



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What did we cover?

- Asbestos and its various uses and forms
- Health effects of asbestos exposure
- Locations of ACM at our Campuses
- Recognition of damaged ACM
- The SAISD Designated Person:
 - Pete Swerzenski @ 554-2420
- Each school's asbestos management plan
 - In the campus library
- Recent Asbestos Activity

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Questions or Immediate Issues???



SAISD Asbestos Designated Person -
Peter Swerzenski →

← SAISD Asbestos Technician
- (Ismael) Rick Pena



Call Environmental @ 554-2420

Hazardous Materials / IAQ Coordinator - →
Eddie Pena

Call dispatch @ 299-2685



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Break Time!

YOU MEANT TO TELL ME



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