ASBESTOS AWARENESS

OFFICE OF ENVIRONMENTAL HEALTH AND SAFETY

UNIVERSITY OF ARKANSAS
WHAT IS IT?

- Fibrous mineral
- Naturally occurring
- Silica based
- Heat resistant
- Several types
CHRYSOTILE

- “WHITE ASBESTOS”
- SPIRAL SHAPED FIBERS
- LESS LIKELY TO BE INHALED DUE TO SHAPE
- RELATIVELY “SAFE”
- STILL USED IN US
- LONG TERM EXPOSURE CAN CAUSE HEALTH PROBLEMS
AMOSITE

- “BROWN ASBESTOS”
- BROWN OR GRAY FIBERS
- ONCE THE SECOND MOST COMMONLY USED
- COMMERCIAL USE HAS DECREASED DUE TO HAZARD
- BANNED IN SOME COUNTRIES
- TIGHTLY REGULATED IN US
CROCIDOLITE

- “BLUE ASBESTOS”
- MOST DANGEROUS TYPE
- VERY FINE, SHARP FIBERS
- EASILY BROKEN AND INHALED
- LEAST COMMONLY USED IN US
- WEAKER, LESS FLAME RESISTANT
TREMOLITE

- LARGE DEPOSITS IN CANADA AND US
- DANGEROUS, BUT NOT COMMONLY USED
- HAS BEEN FOUND IN HOUSEHOLD PRODUCTS SUCH AS TALCUM POWDER
ANTHOPHYLLITE

• NOT AS DURABLE AS OTHERS
• NOT AS MANY USES
• MOSTLY PAINTS AND SEALANTS
• MINERS, PAINTERS, SHIPYARD WORKERS AT RISK
ACTINOLITE

- SIMILAR TO TREMOLITE
- WHITE TO GREEN IN COLOR
- NOT A LONG HISTORY OF INDUSTRIAL USE
- FOUND IN TWO FORMS
- FIBROUS FORM DANGEROUS
- NON-FIBROUS, NOT AS MUCH
USED SINCE NEOLITHIC TIMES

FIRST RECORDED USE IN 2500 BC

WOVEN INTO CLOTH FOR SHROUDS, NAPKINS, TABLECLOTHS

GREEKS USED ASBESTOS LAMP WICKS
DANGERS HAVE NOT ALWAYS BEEN RECONIZED
DOES NOT BURN

HEAT SHIELDS

HEATED VESSELS

FIRE CURTAINS
USED EXTENSIVELY IN THE... BUILDING TRADES
WHY BE CONCERNED?
MESOTHELIOMA
GREEK GEOGRAPHER STRABO NOTED “SICKNESS IN THE LUNGS” OF SLAVES WHO WOVE ASBESTOS CLOTH
ASBESTOS FIBERS

MACROPHAGE CELL

MESOTHELIOMA
EXACERBATED BY SMOKING

KENT’S FAMOUS FILTERS CONTAINED ASBESTOS
PARTICLE SIZE MATTERS!

IMPORTANT!
PARTICLES MUST BE SMALL ENOUGH TO REACH THE LUNGS

100 um OR GREATER
TYPICALLY NOT INHALED

10 – 100 um
TRAPPED AND EXPELLED BY UPPER RESPIRATORY SYSTEM

LESS THAN 10 um
MAY REACH LUNG
EASILY CRUMBLED OR PULVERIZED

FRIABILITY MAY RESULT IN RESPIRABLE PARTICLES

FRIABLE
FRIABLE ASBESTOS MUST BE REMOVED OR ENCAPSULATED

REMOVAL OR ABATEMENT OF FRIABLE ASBESTOS REQUIRES NEGATIVE AIR CONTAINMENT
IS THERE ASBESTOS IN UNIVERSITY OF ARKANSAS BUILDINGS?  YES

- Ceilings
- Floor tiles
- Pipe wrap

SHOULD I BE CONCERNED?  NOT NECESSARILY
THE UNIVERSITY MAINTAINS A DATA BASE OF ASBESTOS LOCATIONS.

FACILITIES MANAGEMENT HAS A CREW OF CERTIFIED ASBESTOS WORKERS.
FRIABLE ASBESTOS IS REMOVED OR ENCAPSULATED
NON-FRIABLE MATERIAL IS REMOVED AS FEASIBILITY PERMITS
ASBESTOS IS REMOVED DURING RENOVATIONS
ALL ABATEMENT IS PERFORMED BY CERTIFIED PERSONNEL
ALL WORK IS PERFORMED UNDER APPROPRIATE CONTAINMENT*

* note negative pressure
SCIENCE AND ENGINEERING BUILDING

- BUILT PRIOR TO 1978
- RENOVATED 2002

FRIABLE MATERIAL ABATEMENT WORK IS PERFORMED UNDER CONTAINMENT

CROSS SECTION OF ASBESTOS CONTAINING ACOUSTIC CEILING
FLOOR TILE DOES NOT BECOME FRIABLE UNLESS SUBJECTED TO OPERATIONS SUCH AS BURNISHING, SAWING, OR SANDING. ORDINARY REMOVAL METHODS DO NOT CALL FOR NEGATIVE AIR CONTAINMENT.
THERE IS SOME EVIDENCE THAT THE RISKS OF ASBESTOS EXPOSURE MAY HAVE BEEN OVERSTATED IN THE PAST, PERHAPS CAUSING UNWARRANTED ANXIETY.

HOWEVER...
AS WITH OTHER HAZARDS,

UA PREFERENCES TO EXERCISE . . .
The End