


Asbestos and Health Presentation

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# Asbestos Handling Methods Within Johns-Manville

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AFD CUSTOMER PRESENTATIONS

DON HILLIER: ASBESTOS HANDLING METHODS WITHIN JOHNS-MANVILLE

GENTLEMEN, I'M SURE ONE OF THE OUESTIONS YOU HAD ON YOUR MIND WHEN YOU CAME HERE TODAY WAS: CAN ASBESTOS FIBER BE SAFELY HANDLED AND USED?

THE ANSWER IS YES.

JOHNS-MANVILLE HAS BEEN IN THE BUSINESS OF HANDLING ASBESTOS FIBER AND CONTROLLING ASBESTOS DUST -- AS WELL AS MANY OTHER TYPES OF DUST -- FOR MANY YEARS...AND WE ARE CONTINUALLY DEVELOPING AND IMPLEMENTING BETTER METHODS TO ACCOMPLISH OUR GOALS. SO, OUR YES ANSWER IS NOT JUST WISHFUL THINKING.

SO FAR THIS MORNING, YOU'VE HEARD ABOUT THE BIOLOGICAL ASPECTS OF THE ASBESTOS-HEALTH SITUATION...ABOUT THE DUST CONTROL STANDARDS OF OSHA AND EPA --
AND THE STEPS J-M HAS TAKEN TO INSURE DUST FREE SHIPMENTS TO OUR CUSTOMERS.

NOW, LET ME TACKLE THE MORE ABSTRACT AREA OF WHAT YOU CAN DO TO CONTROL DUST PROBLEMS IN YOUR OPERATIONS. I SAY ABSTRACT, BECAUSE IT IS IMPOSSIBLE FOR ME TO KNOW WHAT PROBLEMS YOU HAVE. IT'S QUITE POSSIBLE YOU HAVE NONE...OR YOU MAY HAVE ONES THAT ARE EASILY SOLVED BY

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EXISTING EQUIPMENT AND TECHNOLOGY...OR MAYBE YOUR PROBLEM IS UNIQUE ENOUGH TO REQUIRE SOMETHING THAT DOESN'T YET EXIST. WHATEVER THE CASE, THE MOST IMPORTANT TASK FACING EACH OF YOU IS TO IDENTIFY THOSE PROBLEM AREAS, IF ANY, AND THEN DO SOMETHING ABOUT THEM.

TO HELP YOU ACHIEVE THAT GOAL, I AM GOING TO OUTLINE SOME OF THE METHODS WE ARE FOLLOWING IN J-M PLANTS TO HANDLE, STORE, AND USE ASBESTOS FIBER. THEN, I'LL TELL YOU HOW JOHNS-MANVILLE CAN HELP YOU IF YOU HAVE SIMILAR PROBLEMS.

NOW, AS I DESCRIBE SOME OF THE THINGS WE HAVE DONE WITHIN OUR PLANTS, I URGE YOU TO VIEW THEM NOT AS SYSTEMS YOU HAVE TO HAVE TO SOLVE A PROBLEM, BUT AS PRINCIPLES AND EXAMPLES OF HOW THINGS CAN BE DONE. ALTHOUGH THESE SYSTEMS AND METHODS MEET OUR NEEDS AND MAY NOT MEET YOURS, THE POINT TO REMEMBER IS THAT THE TECHNOLOGY IS THERE... IT CAN BE SCALED UP -- SCALED DOWN -- OR ALTERED TO MEET YOUR PARTICULAR NEEDS.

I'LL BEGIN AT THE BEGINNING...WITH THE UNLOADING OF ASBESTOS FIBER FROM BOX CARS. (SLIDE NO. 1). AS NOEL HENDRY NOTED, EV EFFORT IS BEING MADE TO OBTAIN MORE LEASED RAIL CARS WITH LARGE DOUBLE DOORS SO THAT FIBER CAN BE SHIPPED 100% ON PALLETS WITH INFLATED DUNNAGE...AND THEN UNLOADED AT THE DESTINATION POINT ENTIRELY BY FORK TRUCKS.

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THERE ARE FOUR BASIC RULES THAT SHOULD BE APPLIED TO UNLOADING OPERATIONS, WHETHER IT BE FROM RAILROAD BOX CARS, OR FROM OTHER MODES OF TRANSPORT.

NUMBER 1. UPON ARRIVAL OF SHIPMENT, CHECK TO DETERMINE IF THERE IS ANY LOOSE FIBER ON THE BAGS OR ON THE FLOOR. IF THERE IS, THE AREA SHOULD BE VACUUM CLEANED.

NUMBER 2. IMMEDIATELY SEAL ANY BROKEN OR TORN BAGS BEFORE UNLOADING.

NUMBER 3. FOR MANUAL UNLOADING, CLEAN PALLETS SHOULD BE USED, AND, AFTER USE, THE PALLETS SHOULD BE CLEANED BY VACUUM OR WASHED DOWN WITH WATER.

NUMBER 4. ALL BROKEN BAGS -- AFTER RESEALING -- SHOULD BE TAKEN TO THE POINT OF USAGE -- AVOID PLACING THEM INTO INVENTORY.

(PAUSE)

THESE RULES MIGHT APPEAR TO REQUIRE AN EXCESSIVE AMOUNT OF TIME AND EFFORT AT FIRST. BUT, THAT'S NOT THE CASE. AFTER ALL, IT'S NOT REALLY ANYTHING MORE THAN PLAIN GOOD HOUSEKEEPING, WHICH, IN A WELL-OPERATED PLANT, WOULD BE A DAILY REQUIREMENT. ALL YOU HAVE TO DO IS MAKE SURE THAT IF DUST IS CREATED, CLEAN IT UP IMMEDIATELY.

SLIDE NO. 2

HERE YOU'LL SEE THE REDUCTION IN FIBER COUNT WE ATTAINED IN UNLOADING RAIL CARS AT J-M PLANTS.

(READ SIGNIFICANT ONES, USING POINTER)

IN ALL THESE EXAMPLES, THE IMPROVEMENT IN FIBER COUNT WAS ACCOMPLISHED BY ADHERENCE TO THE JUST MENTIONED RULES AND GOOD HOUSEKEEPING PRACTICES.

SLIDE NO. 3

HERE YOU SEE THE METHOD OF STORING ASBESTOS FIBER IN ONE OF OUR PLANTS. IF YOU SEE NOTHING UNIQUE IN THIS METHOD, IT'S BECAUSE THERE ISN'T ANY. IT'S THE SAME METHOD USED TO STORE MANY OTHER MATERIALS. IN FACT, BECAUSE OF THE PRESSURE PACKING OF ASBESTOS BEFORE IT IS SENT TO YOU, MORE POUNDS OF MATERIAL CAN BE STORED PER SQUARE FOOT OF SPACE THAN IS THE CASE WITH OTHER PRODUCTS. THE PLASTIC COVERS YOU SEE HERE ARE FOR LONG-TERM STORAGE -- ANOTHER METHOD THAT MAY BE SUITABLE FOR YOU.

SLIDE NO. 4

HERE WE HAVE ANOTHER METHOD OF FIBER STORAGE. NOTICE THE CORNER PROTECTORS AND THE SEALING OF BROKEN BAGS. FROM INVENTORY, THE BAGS OF FIBER ARE TRANSPORTED TO THE POINTS OF USAGE.

NOW AT POINT OF USAGE, OUR PLANTS ARE USING SPECIALLY CONSTRUCTED BAG OPENING DEVICES WHERE BAGS ARE OPENED AND THE FIBER CHARGED INTO THE BINS, BEATERS, HYDRAPULPER, MIXERS AND OTHER BLENDING DEVICES. HERE, THE IMPORTANT THING IS TO PROVIDE PROPER DUST REMOVAL FACILITIES SO THAT THE OPERATOR IS NOT EXPOSED TO ASBESTOS FIBER DUST. SUCH BAG OPENING DEVICES MAY BE AUTOMATIC -- WHICH IS RELATIVELY COSTLY BUT WORTH IT IF YOU HANDLE LARGE VOLUMES OF MATERIAL -- OR A SIMPLE BAG OPENING STATION WHERE THE BAG IS OPENED AND THE EMPTY BAG FED INTO ANOTHER PAPER OR PLASTIC BAG. THESE DISCARDED BAGS CAN THEN BE USED IN A PAPER OR FELT MILL AND/OR BURIED IN A LANDFILL AREA.

HERE ARE SEVERAL DIFFERENT TYPES OF BAG OPENING DEVICES DESIGNED FOR PARTICULAR NEEDS FROM SIMPLE TO SOPHISTICATED.

SLIDE NO. 5

THIS IS A SIMPLE OPENING DEVICE THAT PROTECTS THE OPERATOR AS THE BAG IS OPENED UNDER A HOOD WITH NEGATIVE PRESSURE. NOTE THE BAG IS ASIDED THROUGH A CHUTE INTO AN EMPTY BAG.

SLIDE NO. 6

HERE IS ANOTHER VIEW OF THE SAME TYPE OF BAG OPENING DEVICE AT ANOTHER J-M LOCATION.

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SLIDE NO. 8

THIS VIEW IS OF A FIBER BAG OPENING REFEED STATION INTO A MOODY FIBER FLUFFER. WHEN THIS PICTURE WAS TAKEN THERE WAS NO PROVISION FOR SIDING THE EMPTY BAG. HOWEVER, THIS FEATURE CAN BE EASILY ADDED.

SLIDE NO. 9

HERE IS A MORE SOPHISTICATED BAG OPENING DEVICE AT THE MANVILLE TEXTILE OPERATION WHERE LONG FIBER ASBESTOS IS USED.

SLIDE NO. 10 AND 11

THIS IS ANOTHER VIEW OF THE SAME UNIT. THIS VIEW SHOWS AN OPERATOR BREAKING UP A CUBE OF FIBER.

SLIDE NO. 12

THIS SHOWS HOW THE EMPTY BAG IS ASIDED AND THIS VIEW SHOWS A CLOSEUP OF THE WASTE BAG CONTAINER.

IF IN YOUR OPERATION THERE IS A PROBLEM WITH DUST GENERATION, ADEQUATE DUST CONTROL FACILITIES SHOULD BE DESIGNED AND INSTALLED. IT IS IMPORTANT THAT YOU PROTECT YOUR EMPLOYEES FROM ASBESTOS FIBER DUST JUST AS YOU WOULD ENDEAVOUR TO PROTECT THEM FROM EXCESSIVE HEAT, FUMES, TOXIC CHEMICALS, OR DOZENS OF OTHER MATERIALS.

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I WOULD LIKE TO SHOW YOU SEVERAL TYPICAL EXAMPLES OF SPECIALLY DESIGNED DUST COLLECTING SYSTEMS FOR PARTICULAR OPERATIONS.

SLIDE NO. 13

YOU WILL NOTE THE DUST COLLECTING HOOD HERE ON AN ASBESTOS SHINGLE PUNCH PRESS.

SLIDE NO. 14 (TRANSITE PIPE MACHINE)

HERE'S ANOTHER EXAMPLE OF HOW WE DESIGNED A DUST COLLECTOR FOR AN OPERATION. HERE WE MACHINE THE ENDS OF LARGE TRANSITE PIPE.

WHAT IS NECESSARY IN DUST CONTROL IS PROPER DUCT SIZES (A MINIMUM DIAMETER OF 4 TO 5 INCHES AND PROPER AIR DUCT VELOCITIES -- 4,000 TO 4,500 FEET PER MINUTE).

SLIDE NO. 15 (MACHINING SMALL TRANSITE PIPE)

HERE WE ARE MACHINING SMALL TRANSITE PIPE. NOTE THE DUST COLLECTION FACILITIES, THE HOODING AND DUCTS. PROPER HOODING IS ESSENTIAL, WITH FACE VELOCITIES ACROSS THE WORK STATION OF 200 TO 250 FEET PER MINUTE.

SLIDE NO. 16 (MACHINING BLOCK INSULATION)

HERE'S A DUST COLLECTION SYSTEM SPECIALLY DESIGNED FOR MACHINING BLOCK INSULATION. (POINT TO COLLECTOR & SHOW AIR FLOW).

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SLIDE NO. 17 (DRILLING HEAVY DUTY BRAKE BLOCK)

DRILLING HEAVY DUTY BRAKE BLOCKS ALSO REQUIRED DUST CONTROL, AND A SPECIAL SYSTEM WAS DESIGNED TO DO THE JOB.

SLIDE NO. 18 (SURFACE DISC BRAKE SEGMENTS)

THE SAME WAS THE CASE HERE, WHERE WE WORKED WITH DISC BRAKE SEGMENTS. (POINT TO DUST EQUIPMENT). THE DUST COLLECTION SYSTEM HERE ENCOMPASSES THE WHOLE OUTER CIRCLE.

SLIDE NO. 19 (CLOTH COLLECTOR AT WAUKEGAN)

AND HERE WE HAVE A TYPICAL CLOTH COLLECTOR AS USED IN THE TRANSITE PIPE DEPARTMENT AT OUR WAUKEGAN, ILLINOIS PLANT. IT'S SUFFICIENT TO DO THE DUST COLLECTING JOB THAT'S NECESSARY. SUCH EQUIPMENT CAN BE SCALED UP OR DOWN, DEPENDING UPON MAGNITUDE OF JOB. IT IS IMPORTANT THAT THE PROPER CLOTH COLLECTOR BE USED WITH AIR TO CLOTH RATIO OF NO MORE THAN 3 TO 1 FOR A SHAKER TYPE OF COLLECTOR.

SLIDE NO. 20 (JEFFREY SYSTEM)

THIS IS ONE OF THE LARGEST CLOTH COLLECTORS IN THE WORLD. IT'S LOCATED AT OUR ASBESTOS MINE AND MILL AT JEFFREY, CANADA. THIS SYSTEM ENCOMPASSES THE ENTIRE TOP FLOOR OF A 12-STORY BUILDING WHICH IS UNDER NEGATIVE PRESSURE. THERE ARE 80,000 BAGS IN THIS COLLECTOR AND 32-350 H.P. MOTORS DRIVING FANS THAT GENERATE 5 MILLION CUBIC FEET PER MINUTE.

THE FIBER COUNTS AT ALL OF THESE STATIONS AND OTHER SIMILAR ONES ARE WELL BELOW THE FIVE FIBER PER CC THRESHOLD LIMIT VALUE, AND MOST ARE DOWN TO TWO FIBERS PER CC

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SLIDE NO. 21

LET ME SAY A FEW WORDS ABOUT THE PERFORMANCE OF J-M PLANTS IN LINE WITH THE OSHA STANDARDS OF 5 FIBER PER CC AND THE PROPOSED 2 FIBER PER CC STANDARD WHICH WILL BECOME EFFECTIVE JULY 1, 1976.

AT THE PRESENT TIME, J-M HAS 943 ASBESTOS FIBER WORK STATIONS IN U. S. PLANTS WHERE WE MONITOR ASBESTOS FIBER DUST COUNTS ON A REGULAR BASIS.

OF THESE STATIONS, 860, OR 91% OF THEM ARE AT OR BELOW FIVE FIBERS PER CC. WE ARE CURRENTLY WORKING ON ALL OF THE BALANCE OF THESE STATIONS TO BRING THEM BELOW THE FIVE FIBERS PER CC TLV.

OF THE 943 FIBER STATIONS MONITORED, THERE ARE 545, OR ABOUT 58%, WHERE WE ARE BELOW TWO FIBERS PER CC. HERE WE HAVE MORE OF A JOB TO DO AND OUR PLANS CALL FOR MEETING THE OSHA PERFORMANCE STANDARDS WELL BEFORE 1976. THIS IS TO BE ACCOMPLISHED BY:

1. IMPROVED HOUSEKEEPING
2. IMPROVED METHODS
3. CHANGES IN OUR PROCESSES
4. INSTALLATION OF IMPROVED DUST CONTROL FACILITIES

SLIDE 22 (J-M LOGO)

NOW, YOU MAY BE WONDERING WHAT ALL I HAVE SAID AND SHOWN YOU HAS TO DO WITH YOU AS USERS OF ASBESTOS FIBER. FRANKLY, J-M HAS SPENT

MILLIONS OF DOLLARS TO CONTROL ASBESTOS FIBER DUST...AS WELL AS OTHER DUSTS...ALL TO PROTECT THE HEALTH OF OUR EMPLOYEES. BUT, AFTER ALL, WE ARE A LARGE COMPANY...WE USE ABOUT 160,000 TONS OF ASBESTOS FIBER EACH YEAR.

AS I SAID INITIALLY, WHAT WE HAVE DONE IN J-M TO CONTROL DUST SHOULD BE VIEWED AS PRINCIPLES TO WORK FROM--NOT EQUIPMENT YOU MUST HAVE IN ORDER TO SOLVE YOUR DUST PROBLEMS.

OVER THE PAST 30 YEARS, J-M HAS DEVELOPED EXPERTISE IN THE HANDLING OF ASBESTOS FIBER NOT ONLY FOR PROCESS REASONS, BUT FOR DUST CONTROL. WE HAVE LEARNED THROUGH EXPERIENCE THE EQUIPMENT BEST SUITED TO HANDLE A PARTICULAR TASK OR SOLVE A PARTICULAR DUST PROBLEM.

WE HAVE JUST AS MANY, IF NOT MORE, LITTLE OPERATIONS AS YOU HAVE.

GENTLEMEN, JOHNS-MANVILLE CAN HELP YOU. OUR RECOMMENDATIONS ARE THESE.

1. IF YOUR INDIVIDUAL PLANTS OR WORKSHOPS REQUIRE A GOOD JOB OF HOUSEKEEPING, THEN THIS IS THE FIRST STEP. A GOOD INDUSTRIAL VACUUM CLEANER SHOULD BE USED.
   IF YOUR PLANT ALREADY HAS DUST CONTROL FACILITIES, WE STRONGLY RECOMMEND THE USE OF A VACUUM CLEANING SYSTEM AS A TAKE-OFF FROM THE PRESENT DUST SYSTEM BY INSTALLATION OF A BOOSTER FAN AND A SMALL CYCLONE. J-M WILL BE GLAD TO PROVIDE YOU WITH A TYPICAL LAYOUT AND SCHEMATIC OF SUCH A SYSTEM.

2. IF IN YOUR OPERATIONS YOU HANDLE AND USE ASBESTOS FIBER AND YOU HAVE NO DUST CONTROL FACILITIES, THEN I CAN ASSURE YOU THAT YOU HAVE A PROBLEM AND PROBABLY A TWO-FOLD ONE...ONE BEING THE EXPOSURE OF EMPLOYEES TO ASBESTOS DUST (OSHA)... THE OTHER BEING EXHAUSTING ASBESTOS DUST LADEN AIR OUT OF YOUR BUILDING (EPA).

   I DO NOT ADVISE YOUR SPENDING ANY MONEY TO HIRE J-M OR ANY OTHER COMPANY TO COME INTO YOUR PLANT AND MAKE AN INDUSTRIAL HYGIENE SURVEY. ALL THIS WILL ACCOMPLISH IS TO GIVE YOU NUMBERS FOR PROBLEMS YOU ALREADY HAVE.

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RATHER THAN EMPLOY THE SERVICES OF AN INDUSTRIAL HYGIENIST, WE RECOMMEND YOU ARRANGE FOR AN ENGINEERING SURVEY WHICH IS GENERALLY QUITE REASONABLE IN COST. SUCH A SURVEY WILL RESULT IN A REPORT TO YOU WITH SCHEMATICS (DETAILED DRAWINGS, IF SPECIFIED) AND RECOMMENDATIONS ON HOW TO CORRECT YOUR DUST PROBLEMS BOTH INSIDE AND OUTSIDE YOUR PLANT.

THE SURVEY WILL BE ADEQUATE ENOUGH TO PERMIT YOU TO OBTAIN FIRM QUOTES ON THE COST OF THE PROJECT.

JOHNS-MANVILLE CONDUCTS ENGINEERING SURVEYS AND WILL PERFORM SUCH SERVICE ON A FEE BASIS, THE SAME AS A NUMBER OF OTHER RELIABLE ENGINEERING FIRMS.

3. FURTHER, JOHNS-MANVILLE IS EQUIPPED TO HANDLE THE PURCHASING AND INSTALLATION OF DUST CONTROL FACILITIES ON TURN KEY BASIS, IF SUCH WORK IS DESIRED. IN FACT, WE ARE IN THE BUSINESS OF SELLING ENGINEERING SERVICES, THE SAME AS OTHER ENGINEERING FIRMS. THERE ARE MANY GOOD ONES IN THE FIELD.

4. THE REAL TIMES FOR INDUSTRIAL HYGIENE SURVEYS ARE:

   A. IF YOU ALREADY HAVE DUST CONTROL FACILITIES, YOU SHOULD ARRANGE FOR A HYGIENE SURVEY SO YOU WILL KNOW HOW WELL YOUR FACILITIES ARE PERFORMING AND WHETHER OR NOT YOU MEET OSHA STANDARDS.

   B. IF AFTER AN ENGINEERING SURVEY, YOU INSTALL FACILITIES, THEN AN INDUSTRIAL HYGIENE SURVEY SHOULD BE A PART OF THE INSTALLATION AGREEMENT TO ESTABLISH THE RELIABILITY OF THE EQUIPMENT INSTALLED AND WHETHER OR NOT THE STANDARDS HAVE BEEN MET.

IN CLOSING, GENTLEMEN, LET ME AGAIN EMPHASIZE THAT ASBESTOS DUST PROBLEMS-- IF YOU HAVE THEM-- CAN BE CONTROLLED. THE MEANS TO CONTROL DUST IS ONLY AS FAR AWAY AS DECIDING TO DO SOMETHING ABOUT IT...AND I DON'T THINK YOU WOULD BE HERE TODAY IF YOU DIDN'T FEEL IT WAS IMPORTANT TO FIND THOSE SOLUTIONS.

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AND, I HOPE YOU'LL AGREE THAT WE WOULDN'T BE HERE TODAY IF WE WEREN'T SINCERE IN OUR DESIRE TO HELP YOU IN YOUR EFFORTS.

(PAUSE)

NOW, I'LL TURN THE ROSTRUM BACK TO JACK SOLON, WHO HAS A FEW CLOSING COMMENTS BEFORE YOUR QUESTIONS.

JRTC B)

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