











Date Revised:	March 2021	Overall Task Risk Rating:	Before Controls	A	After Controls	B
Description:	<p>From about the early 1960's to the mid 1980's, asbestos was put in some asphalt mixes used in road paving and curbing to improve durability. The products contained one to two percent chrysotile asbestos by weight. This product does not present a hazard where the paving material remains intact and is not abraded or ground up. There may be a potential hazard where the asphalt is resurfaced or processed. Several diseases are associated with exposure to asbestos such as asbestosis, mesothelioma, cancer of the lung and other asbestos-related cancers.</p> <p>The grinder/milling machine is used. Behind the grinder, other crew members sweep and shovel, and check for the required grade. A mechanical sweeper is typically used to sweep the grindings. Asphalt grindings are loaded into dump trucks.</p>					
Location(s):	Construction Projects					
Associated Documents: Asphalt Milling & Paving WTS, Hazardous Agents WTS, Noise WTS, Traffic Control WTS, Night Work WTS, Manual Material Handling WTS, Housekeeping WTS						

RED FLAGS (HOLD WORK UNTIL CORRECTED):

Note:

- Inadequate or missing PPE
- If a worker is not trained, do not commence work
- Lacking equipment for Post Work Washing

PERSONAL PROTECTIVE EQUIPMENT (CSA APPROVED)

									
Head Protection	Foot Protection	High-Vis Protection	Hearing Protection	Hand Protection	Eye Protection	Respiratory Protection	Skin Protection	Face Protection	Fall Protection
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional PPE: Duct Tape

Note:

- Additional PPE requirements specific to hazardous products will be stated in the SDS
- Respiratory protection shall consist of a cartridge type respirator equipped with P100 cartridges
- Protective clothing shall consist of a disposable coverall type garment with a built-in hood; the material shall be of a Tyvec® type that is impermeable to asbestos fibres
- High visibility clothing/vest shall be worn outside of coveralls, and disposed of at the end of the work day
- Gloves shall be rubberized
- Duct tape shall be used to cover the laces of work boots, seal protective clothing and to repair any holes or damage in protective clothing

SAFE WORK PRACTICES (SWP)

General Asbestos Milling Practices:

- The Foreman/Superintendent is to complete the GAZZ card and communicate potential hazards and controls with the workers
- A copy of the SDS for asbestos and this Asbestos Milling WTS are to be laminated and a copy kept in the work bins used during asbestos milling
- The Foreman / Superintendent will lead a brief discussion on the Hazards associated with the task & Controls that are to be implemented when working around asbestos
- Signage will be posted stating WARNING and communicating requirements such as 'Access Restricted to Personnel Wearing Protective Respirators and Protective Clothing'
- All dump trucks shall be labelled with signage as follows "Asphalt contains Asbestos 0.5 minimum"
- All dump truck drivers shall remain in trucks with window rolled up.

Traffic Control:

- Where possible the street should be closed to vehicular and pedestrian traffic
- Traffic protection measures shall be implemented in accordance with Ontario Traffic Manual Book 7
- Refer to the Traffic Control WTS for more information

Night Work:

- Ensure lighting is adequate for visibility of the workers and for the workers to complete the task at hand
- Lighting used to illuminate the worksite shall not be aimed at drivers (making it more difficult for them to see their intended path)
- Refer to Night Work WTS for more details

Manual Material Handling:

- Sweeping and shovelling can result in a Repetitive Strain Injuries (RSI) - when possible workers should rotate between repetitive job tasks

WHMIS:

- Consult the SDS for specific material considerations (ensure SDS are present for every hazardous product onsite)

Dust Control:

- Amended water (containing soap) will be used in the milling machine, water truck and street sweeper
- The grinder will be set to apply the maximum amount of water
- The goal is to have little to no dust

Environmental Considerations:

- Workers dressed in impermeable protective clothing are more prone to heat stress as the body is unable to cool itself effectively
- Workers shall take frequent breaks
- Outdoor work in hot environments with extra PPE (Tyvek Suits and Respirators) can contribute to heat related illnesses
- For more information consult the Hazardous Agents WTS

Housekeeping:

- Workers will not remove their PPE in the work area
- Workers will not eat, drink or smoke until they have completely removed their PPE and washed
- Upon completing the work all equipment will be washed and all **disposable** PPE will be disposed of

Inspections:

- A pre-operational safety inspection is to be completed prior to using equipment
- Do not use defective equipment or machinery, inform your foreman / superintendent - they will arrange for the equipment to be serviced
- Before starting machines or equipment, ensure guards and safety devices are in place, adjusted and functioning properly

Training:

- Employee Orientations (including roles, responsibilities, applicable workplace task standards, WHMIS, etc.)
- Only trained, authorized personnel are allowed to operate vehicles / machinery / equipment
- Only trained, authorized personnel are allowed to perform maintenance / repairs
- Workers exposed to, required to work with, or required to clean up / dispose of WHMIS controlled hazardous products, must be trained in WHMIS and have supplemental task specific training.
- All workers involved in asbestos milling must have Asbestos Awareness Training

PPE:

- Workers on construction projects must wear, at a minimum, head, foot, eye and high visibility PPE
- Wear the appropriate personal protective equipment for the job at hand (i.e. hearing protection, etc...)
- All workers using Chemical or Biological Agents, must wear the required personal protective equipment set out in its SDS
- All employees shall wear the appropriate PPE where the potential exposure of a designated substance cannot be reduced below the occupational exposure limit
- When there is likelihood of site exposure, appropriate PPE will be provided with instructions covering use, care and maintenance
- No modification or removal of the specified PPE will be tolerated inside identified area

JOB HAZARD AND RISK ANALYSIS		RISK RATING SYSTEM	
TASK HAZARDS	RATING BEFORE CONTROLS	TASK CONTROLS	RATING AFTER CONTROLS
• Airborne Dust	A	<ul style="list-style-type: none"> Use Soap and Water to Wet the Material Milling machine and sweeper will apply amended water in quantities necessary to prevent airborne dust Workers will wear appropriate PPE 	C
• Mobile Equipment and Vehicles / Lack of Spotter	A	<ul style="list-style-type: none"> Use signal persons for backing & setup work as a drive through operation, where possible, to avoid backing up 	B
• Traffic	B	<ul style="list-style-type: none"> Book 7 Traffic control measures will be implemented. A full closure is utilised when necessary. 	C
• High Noise Levels	B	<ul style="list-style-type: none"> Workers exposed to high noise levels must use hearing protection (CSA approved Ear plugs / Ear muffs) Workers shall wear appropriate hearing protection where the potential exposure of noise cannot be reduced below the occupational exposure limit of 85 dBA over an 8-hour period 	C
• Heat Stress	A	<ul style="list-style-type: none"> Drink water throughout the day (don't wait until you're thirsty) Taking rest breaks as needed (in a cool, shady spot) When possible, do the heaviest work at the coolest times Use the Buddy System – watch for signs of heat related illnesses in your co-workers If you think someone has heat stroke or heat exhaustion: call 911, inform the Foreman /Superintendent and begin First Aid 	B
• Lack of, or Improper, Training and Education	C	<ul style="list-style-type: none"> All workers involved in asbestos milling must have Asbestos Awareness Training 	C
• Poor Housekeeping	C	<ul style="list-style-type: none"> Keep a clean working area Ensure proper clean up / wash procedures followed 	C
• Musculoskeletal disorders (MSD) & Repetitive Strain Injuries (RSI)	C	<ul style="list-style-type: none"> When possible workers should rotate between repetitive job tasks 	C
• Lack of Inspection	C	<ul style="list-style-type: none"> A pre-operational safety inspection is to be completed Do not use defective equipment or machinery, inform your foreman / superintendent 	C

SAFE JOB PROCEDURES (SJP)
<p>Pre-Task Commencement:</p> <ol style="list-style-type: none"> Gather and wear the required PPE for the task - Workers who may be exposed to dust will put on 'Tyvek type' coveralls that have a hood and booties. Workers will place duct tape over laces on boots and seal any other openings. The minimum respiratory protection used will be a half mask respirator equipped with a P100 filter. Workers will inspect their respirator prior to use to ensure it functions and a good seal can be achieved. The Superintendent/Foreman will complete the Daily GAZZ Card and conduct a crew huddle to review with all workers the shift's tasks and any associated hazards and control strategies Ensure all workers understand the GAZZ Card contents, and sign off in acknowledgement Ensure controls are in place prior to commencing work so hazards are mitigated / eliminated

5. Ensure that traffic protection measures are in place in accordance with Ontario Traffic Manual Book 7 and communicate the hazards and controls to workers when workers have the potential to be endangered by traffic (refer to Traffic Control WTS for more detail)
6. When traffic control / protection is undertaken by Gazzola the Superintendent / Foreman will complete a Traffic Protection Form
7. Determine what equipment / machinery / tools and material, are required for the completion of the task
8. Inspect all equipment / machinery / tools prior to use and document the inspections on appropriate forms when required
9. Ensure preventative maintenance activities have been completed where required, prior to using equipment / machinery / tools
10. If equipment / machinery / tools are observed to be damaged, remove it from use and notify the Foreman / Superintendent
11. Install fencing and hoarding where needed
12. Locate utilities – Call Before You Dig (when necessary)
13. Overhead hazards (i.e. powerlines) will be identified, signs posted and a signal person appointed as required
14. Signage should be posted at all entrances to the work area stating WARNING, Asbestos Dust Hazard, Access Restricted to Personnel Wearing Protective Respirators and Protective Clothing. Caution tape may be used as needed to further limit access.
15. All dump trucks shall be labelled with the following signage “CAUTION ASPHALT CONTAINS ASBESTOS FIBRES”
16. Training and instruction is required for any employee likely to work in close proximity to and who may disturb Asbestos Containing Material (ACM). The training will consist of Asbestos Awareness program as well as company procedures, and will include the following information: the hazards of asbestos exposure; the use, care and disposal of protective equipment, clothing and respirators to be used and worn when doing the work; the work practices and procedures to be used in doing the work as prescribed by Regulation; and the personal hygiene to be observed when doing the work. The work will be treated as Type 2 under the Asbestos Regulation.

During Task - Milling:

1. At no time should respirators or other personal protective equipment be removed while in the work area. No eating, drinking or smoking is allowed in the work area.
2. Dish soap should be added to the water tank of the grinder in a ratio of approximately 80 to 1. A five-gallon (approximately 20 litre) pail will create 1600 litres of ‘amended water’. Therefore, mix one pail of soap for every 1600 litres of water.
3. If a street sweeper is used, soap should be added to the water tank of the sweeper. It may be necessary to use the water truck to further wet the grindings to prevent dust.
4. The surface of the roadway should be pre-wet with amended water, soap solutions, using the water truck.
5. The grinder should be set to apply the maximum amount of water. It may be necessary to go at a slower speed to ensure that the grindings are adequately wet so as to prevent the creation of dust.
6. The goal is to have little and preferably NO airborne dust. If dust is being created then more water should be used.
7. Dump truck drivers are to remain in trucks with window rolled up.
8. The milling machine will be positioned in line with the asphalt surface needing to be milled
9. The empty dump truck will back up to the milling machine following the directions of a Signaler
10. The milling machine will begin forward movement milling the asphalt surface.
11. The milled asphalt is thrown from the milling machine conveyor chute into the back of the dump truck.
12. The dump truck moves forward keeping pace with the milling machine, with the direction of the Signaler
13. When the truck is loaded the Signaler directs the truck to leave and a new truck backs up to the milling machine.
14. Street sweepers are used to clean up debris

Disposal of Asbestos Containing Asphalt Grindings and Refuse:

1. The dump site must be licensed by the Ministry of the Environment for asbestos waste. The carrier/hauler must be licensed by the M.O.E.
2. Trucks used should have signage indicating an asbestos hazard as follows
 - Both sides of every vehicle used for the transportation of asbestos waste and every container referred to must display thereon in large, easily legible letters that contrast in colour with the background the word “CAUTION” in letters not less than ten centimetres in height and the words: “ASPHALT CONTAINS ASBESTOS FIBRES”
 - Avoid Creating Dust and Spillage
 - Asbestos May be Harmful to Your Health
 - Wear Approved Protective Equipment.
3. Truck drivers must stay in their trucks with the windows up while in the work area.
4. Drivers should be trained regarding the hazards of asbestos, safe work procedures and what to do in the event of a spill.
5. Dump trucks must use a tarp.

Asbestos waste being transported from the location at which it is generated:

1. Shall be transported,
 - o By a driver trained in the management of asbestos waste,
 - o As directly as practicable to the waste disposal site at which disposal of the asbestos waste is intended to take place,
2. Shall be transported to a waste disposal site that is subject to an environmental compliance approval that specifically authorizes acceptance and processing of asbestos waste,
3. Shall not be transported with any other cargo in the same vehicle,
4. Shall not be transported in a compaction type waste haulage vehicle,
5. Where it is being transported in cardboard boxes, shall be in an enclosed vehicle
6. Shall be properly secured and covered with a suitable tarpaulin or net if it is transported in a vehicle that is not enclosed, and
7. Shall be transported only in vehicles equipped with emergency spill cleanup equipment including a shovel, a broom, wetting agent, protective clothing, a supply of six-mil polyethylene bags, bag closures and personal respiratory equipment.

Task Completion:

1. For breaks or to service equipment, all P.P.E. should be damp wiped prior to removal to prevent the spread of dust. P.P.E. can then be removed. Protective suits should be disposed of in the same trucks going to the landfill. New suits should be put on. Hands and face should be washed with soap and clean water in the basins provided. This will occur every time P.P.E. is removed.
2. Upon completion of all work, all equipment must be washed down with soap and water to remove all grindings and prevent the spread of asbestos outside the project.
3. Ensure all tools are cleaned and stored appropriately in the designated locations
4. Implement any housekeeping or maintenance as required
5. Ensure equipment is properly shut down, secured from movement and parked in a safe location off the travelled portion of the road where possible or clearly marked by traffic control devices to ensure safe movement of traffic.