Date Revised:	March 2021	Overall Task Risk Rating:	Before Controls	B	After Controls	C
Description:	All activities that occur at the asphalt plan.					
Location(s):	Asphalt Plant including Asphalt Lab					
Associated Documents: Housekeeping WTS, Hazardous Agents WTS, Noise WTS, Driving and Vehicle Operation WTS, Equipment and Machinery Operation WTS, Hoisting and Rigging WTS						

RED FLAGS (HOLD WORK UNTIL CORRECTED):

Note:

- Electrical, pneumatic, mechanical, hydraulic energy not controlled by Lock Out Tag Out as required during maintenance
- Guards removed while equipment is operating
- Guardrails removed without fall protection measures being used
- Confined space work that is not following the SWP
- Failure to follow manufacturer's safety instructions and/or warnings
- Untrained/certified workers performing working at heights tasks.

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
☒	☒	☒	☐	☐	☒	☐	☐	☐	☐

Note:

- While within the Asphalt Plant Scale building is a PPE free zone
- While within the Asphalt Lab building foot protection must be worn and workers mus wear all PPE listed in the MSDS / SDS for the specific hazardous products that they are to handle
- Additional PPE such as hand protection (i.e. gloves) and respiratory protection (i.e. a full face respirator) may be required depending on the task.
- The noise level exceeds 85 dB in the production area. Hearing protection should be worn during prolonged exposure.
- Fall protection or travel restraint equipment must be worn when guardrails are removed and in the PEWP.
- A face shield, arm protection (e.g. long sleeve shirt) and heat resistant gloves are required when transferring hot tack coat and hot asphalt cement.
- Workers must wear all PPE listed in the MSDS / SDS for the specific hazardous products that they are to handle

SAFE WORK PRACTICES (SWP)

Asphalt Plant Key Practices:

- Start the work only when you are certain that you understand the work, the hazards and you have implemented the appropriate controls
- Unsafe conditions and situations must be reported to Foreman/Superintendents immediately (and stop work until the hazard is controlled)
- Minimize high repetitions, high loads, and awkward postures when working
- Visitors must report to the plant office and sign in and out

Guarding:

- Ensure all moving components are guarded during operations
- Ensure guarding is in adequate condition
- Ensure guarding is present at all pinch points and beneath conveyors

Hoisting and Rigging:

- Ensure chains and slings are labelled, rated, in good repair and are stored properly
- Ensure a competent signal person is used when required
- Ensure come along chains and safety latches on hooks are in good repair

Aggregate Pile Management:

- Freezing/thawing, changing moisture content and other conditions can affect pile stability
- Piles shall be kept at the 'angle of repose' and not be 'undercut'
- Pile stability will be maintained using excavators and bulldozers as required
- Pile haul roads and ramps must have berms or barriers to prevent vehicle tipping
- Pile dumping areas should be kept level to prevent truck tipping when dumping

Access / Egress:

- All walkways, stairways, access / egress points, and access to emergency equipment are to be kept clean and free of obstructions at all times (remove any build of up debris or snow / ice that may accumulate)
- Keep walkways, halls and stairs clear of tripping hazards (i.e. electrical cords, hoses)
- "Authorized Entry Only" "Danger" & "Warning" Signs as required

Vehicles / Equipment / Machinery/Traffic:

- Maximum speed limit while on the asphalt property is 10 kph
- All trucks must follow signage and ensure one way travel in designated areas
- Ensure back up alarms are functioning (sound horn twice before reversing)
- Signalers are required for backing vehicles when the operator's view of the path of travel is obstructed
- Signallers are required when the dump truck with a raised box is within the 3 meters of overhead powerlines/structures
- Use three points of contact when mounting and dismounting the machine
- Workers and equipment operators will follow the Safe Limit of Approach – not entering within 10 metres of mobile equipment
- One-way traffic signage is in place and must be followed. Trucks will give way for front end loaders

Path of Travel:

- Be aware of the sequence of operation and stay out of the Path of Travel of moving vehicles and equipment

Confined Space Entry:

- Only confined space entry trained personnel are permitted to enter the confined space.
- Confined spaces must have signage indicating the hazard and be secured from access.
- Refer to the Confined Space WTS for more details

Fire Safety:

- Cold mix asphalt can be made with cutback asphalt and these mixes will catch fire at much lower temperatures than hot mix asphalt and are highly susceptible to ignition
- Fire extinguishers will be readily available during hot work
- Propane, Oxygen and Acetylene cylinders, regulators, valves, connections and hoses shall be regularly inspected to ensure proper function and that there are no leaks
- Bag house fires are most commonly caused by unburned fuel and liquid asphalt. The unburned fuels can accumulate in the baghouse and explode when a spark or flame enters the bag house or due to the fuel reaching its flashpoint temperature

Loading/Unloading Trucks:

- Truck drivers must remain in the cab of the truck and visible to the loader operator at all times during loading.

Working at Heights:

- Only use ladders that are in adequate condition
- Ensure Cat-Walks and Ramps have adequate fall protection in place
- Guard Rails must have a toe board, mid rail and top rail and be securely fastened in place
- Refer to the Working at Heights WTS for more information

Hazardous Agents:

- Follow SWP's when working on or near plant electrical. Lock Out Tag Out must be used

- Use GFCIs in outdoors / damp locations

Environmental Considerations:

- Ensure puddles / sitting water due to rain or flooding is dealt with
- Ensure salt is used in areas where ice can build up potentially causing a trip hazard
- Ensure adequate lighting (functional lights for night work)

Storage:

- Keep designated storage areas free from clutter. Keep stacked items accessible
- Ensure material is stored so that it cannot topple or fall (and is protected from wind if outside)

Extension Cords:

- There must not have any cuts or exposed wires
- The ground pin on the plug must be intact

WHMIS:

- Ensure all chemicals are stored correctly and identified (i.e. away from overhead powerlines &/or trenches)
- Consult SDS for specific material considerations (ensure SDS present for every hazardous product onsite)
- Have an appropriate spill kit ready and available for use
- Refer to Hazardous Agents SWP for more detail

Dust Control:

- Silica dust is hazardous
- Airborne dust is controlled using waster distributed by the mister machine, water tank trucks and wet sweeping

Housekeeping:

- Housekeeping shall be ongoing during operations
- Each employee is responsible for maintaining and cleaning their work area on a daily basis (or more frequently if necessary)
- Aggregate fallout shall not be allowed to accumulate to the point of becoming a hazard
- Refer to Housekeeping WTS for more detail

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 **&** note the defect on the Equipment Inspection Form
- Before starting machines or equipment, ensure guards and safety devices are in place, adjusted and functioning properly
- Before using Working at Heights PPE, inspect it for defects / wear-and-tear – do not use unless it is in adequate condition

Training:

- Employee Orientations (including roles, responsibilities, applicable workplace task standards, WHMIS, etc.)
- 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
- Workers exposed to fall hazards, must be trained in 'Working at Heights' by an MOL approved training provider
- All workers must be trained in the use and maintenance of any PPE they are required to wear including fall protection
- Ensure workers entering a confined space have adequate training and that the rescue workers are trained in confined space rescue, and on how to operate the rescue equipment
- Only trained, authorized personnel are allowed to operate or perform maintenance on vehicles / machinery / equipment

Personal Protective Equipment:

- Mandatory minimal PPE to be worn at the Asphalt Plant includes head, foot, eye and high visibility protection
- The noise level exceeds 85 dB in the production area. Hearing protection should be worn during prolonged exposure
- Additional PPE required when filling the Tack Coat Truck includes a face shield and long sleeve shirt
- Eye protection is required when completing tasks that may cause debris / objects to dislodge or become airborne
- Workers must adhere to all requirements of legislated regulations when handling specific designated substances
- Workers must wear all PPE listed in specific materials MSDS / SDS

JOB HAZARD AND RISK ANALYSIS

RISK RATING SYSTEM

A	High risk of injury or equipment / property damage.
B	Medium risk of injury or equipment / property damage.
C	Low risk of injury or equipment / property damage.

TASK HAZARDS	RATING BEFORE CONTROLS	TASK CONTROLS	RATING AFTER CONTROLS
• Poor Housekeeping and Site Planning	C	• Packaging and debris must not conceal dangerous hazards underneath such as protruding nails, faulty wiring or damaged flooring	C
• Improper Disposal of Hazardous Materials	C	• All hazardous waste materials must be correctly disposed of with accordance to Provincial Regulations. • Never pour chemicals down drains, onto the ground or into sewers. • Consult MSDS / SDS for specific material considerations	C
• Material Exposure to Weather	C	• Tying down material for securement whenever leaving site where conditions dictate.	C
• Improper Storage	C	• Store and/or stack material in such a manner as to prevent tipping • Products such as diesel will be stored in appropriate containers and labelled indicating the contents	C
• Poor Housekeeping in vehicles	C	• Trucks and company vehicles should be cleared daily of any garbage so as not to obstruct brakes, accelerator pedals, stick shifts or windows.	C
• Lack of / Improper PPE	C	• Ensure any PPE as mandated by the MSDS / SDS is worn while handling the respective hazardous product • A CSA approved full body harnesses and shock absorbing lanyard, must be worn at heights of 10 feet (or more), unless properly protected (by scaffolding, guardrails or floor covers)	C
• Lack of, or Improper, Training and Education	C	• Machine Operators must be authorized and trained • Only trained and competent personnel are permitted to perform maintenance	C
• Lack of Spotter	B	• Signalers are required for backing vehicles when the operator's view of the path of travel is obstructed • Signallers are required when equipment is within the safe limits of approach to overhead powerlines	C
• Lack of Inspection	C	• A pre-operational safety inspection is to be completed • Do not use defective equipment or machinery, inform your foreman / superintendent	C
• Electrocution	B	• All energy containing devices, must be Locked-out and Tagged-out prior commencing the task • Removing a fuse, closing a valve or turning a switch is not an acceptable isolation from the energy source	C

SAFE JOB PROCEDURES (SJP)

Pre-Task Commencement:

1. For plant operation the plant operator/foreman performs a daily plant equipment walk around looking for unfinished maintenance and hazards.
2. All workers gather in the scale house and are accounted for prior to plant start up.
3. Plant foreman briefs the workers on the planned production and delegates the work for the day. No work is to be started prior to the arrival of the plant operator/foreman.

During Task:

1. Plant operator starts and zeroes the conveyors remotely from the scale house.
2. The burner and blower are started remotely. Operator ensures that there are no 'troubles' or limit switches activated.
3. Start the bucket elevator for the batch plant remotely.
4. Turn on and warm the dryer to operating temperature drum remotely.
5. Start the cold feed bin gathering conveyors remotely.
6. Start the augers serving the bag house, cyclone and dust silo).
7. Start the coater and silo drags.
8. Loader operator then begins loading the cold feed bins according to instructions from the plant operator/foreman
9. Trucks to be loaded with asphalt are directed verbally and/or with lights and signage. Trucks park under the silo indicated. The scale master sets the quantity to be loaded. The safety doors are opened and then the chute doors open to fill the truck.
10. The Scale Master then allows the correct mix to be dispensed into the truck
11. The driver exits their vehicle (wearing the required PPE) and enters the scale house.
12. The Scale Master gives the driver the ticket
13. The driver walks back to their truck
14. The driver then exits the premises

In the event of a Bag House Fire:

1. Oils from liquid asphalt cement can distill off and accumulate on the bags which can then ignite from a spark or flame
2. Notify all workers of the emergency and order an evacuation to the muster point
3. The plant operator is to shut off the burners and exhaust fan to stop the flow of heat and oxygen
4. Close all the baghouse inlet and outlet dampers to isolate the fire (do not attempt to fight the fire by opening any baghouse doors)
5. Stop the flow of liquid asphalt and recycled asphalt product
6. Continue to flow aggregate into the drum and continue drum rotation to absorb heat
7. After the fire department confirms that the fire is extinguished and the area is clear of danger, start the exhaust fan to purge hazardous gases (combustible gases or materials may explode or burn when exposed to air)
8. Use extreme caution when opening access doors or distributing dust following a fire

Task Completion:

1. The Foreman/Plant Operator shuts down the equipment safely
2. Ensure all equipment / machinery / tools are maintained and stored appropriately in the designated locations
3. Implement any housekeeping or maintenance as required