

# Asphalt Mix – Industry Standard

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## NOTE:

This draft is intended to facilitate dialogue concerning its contents. Note that it will not become law unless it is added through an amendment to the Technical Standards publication. The content, structure, form and wording of the draft are subject to change, including change as a result of review, editing and correction by the Ministry of the Environment, Conservation and Parks.

## PART I – GENERAL

### Definitions

1. (1) For the purposes of this industry standard,
  - “Act” means the *Environmental Protection Act*;
  - “transfer point” means a location where aggregate, reclaimed asphalt pavement or other material is transferred between equipment, storage areas or vehicles;
  - “air pollution control device” means equipment used to control emissions of a contaminant by removing contaminants from a gaseous stream;
  - “asphalt mix” or “AM” means a mix of asphalt cement, aggregates and additives used for road surfacing, and includes hot mix asphalt, warm mix asphalt and cold mix asphalt;
  - “asphalt mix facility” means a facility that is part of a class identified by NAICS code 324121 and that is primarily engaged in manufacturing asphalt paving mixtures but does not include a facility that is part of a class identified by NAICS code 324121 and that is engaged in manufacturing blocks from purchased asphalt, bituminous materials or coal tar, nor does it include any part of a facility that is engaged in activities described by NAICS code 2123;
  - “AM drag conveyor” means a conveyor that transfers asphalt mix from an AM loadout to an AM storage silo transfer conveyor, AM storage silo batcher, or AM storage silo;
  - “AM loadout” means the location where asphalt mix discharges from a mixing structure;
  - “AM storage silo” means a structure that is used to store asphalt mix produced by an asphalt mix facility;
  - “AM storage silo batcher” means a structure that is directly connected to an AM storage silo and that is used to temporarily store asphalt mix so that asphalt mix conveyed by an AM drag conveyor or AM storage silo transfer conveyor is deposited in the AM storage silo associated with the structure in batches;
  - “AM storage silo transfer conveyor” means a conveyor that transfers asphalt mix from an AM drag conveyor to an AM storage silo batcher or AM storage silo;

“batch-mix process” means a process in which the materials required to complete an asphalt mix order is mixed in the mixing structure in batches;

“Best Practices Procedure” means the collection of records required to be made and maintained under section 34;

“Best Practices Table” means the table prepared and maintained in accordance with subsection 34 (3);

“certified laboratory” means a laboratory that has a current asphalt certification from the Canadian Council of Independent Laboratories or current asphalt mixture accreditation from the American Association of State Highway and Transportation Officials accreditation program;

“District Manager” means the District Manager of the appropriate local district office of the Ministry where the asphalt mix facility is located;

“drum-mix process” means a process in which the materials required to complete an asphalt mix order are continuously fed into the mixing structure;

“existing asphalt mix facility” means an asphalt mix facility for which,

- (a) construction began before July 1, 2016, or
- (b) an application for an environmental compliance approval in respect of all or part of the facility was made before July 1, 2016;

“facility” means all plants, structures, equipment, apparatuses, mechanisms or things, including surfaces and storage piles, that function as an integrated operation on a site and for which a registered person has ownership, management or control;

“highest ranking person” means the highest ranking person regularly present at the asphalt mix facility who has management responsibilities relating to the facility;

“Inspection and Maintenance Summary Table” means the table prepared and maintained in accordance with section 21;

“licensed engineering practitioner” means a person who holds a licence, limited licence or temporary licence under the *Professional Engineers Act*;

“low nitrogen oxide emitting burner” means a burner that is identified as low nitrogen oxide emitting by its manufacturer;

“management method” means the use of one or more procedures, equipment, things or techniques to prevent, minimize or reduce the discharge of a registered contaminant into the air from an originating source;

“mineral filler” means finely pulverized inert rock particles that is non-plastic as determined by the Ontario Ministry of Transportation Ontario Provincial Standard Specification titled, “Material Specification for Aggregates – Hot Mix Asphalt” index number OPSS.MUNI 1003, as amended from time to time, and that has a gradation in which 100 per cent of the material passes a 600 micron sieve and 70 per cent or more of the material passes a 75 micron sieve;

“Minister” means the Minister of the Environment, Conservation and Parks or such other member of the Executive Council as may be assigned the administration of this Act under the *Executive Council Act*;

“Ministry” means the ministry of the Minister;

“mixing structure” means a structure in which asphalt cement, aggregate and additives are mixed to form asphalt mix in a batch-mix process or a drum-mix process;

“O.Reg. 419/05” means Ontario Regulation 419/05 (Air Pollution – Local Air Quality) made under the Act;

“originating source” means a piece of equipment, place or thing that discharges a registered contaminant, whether the discharge is into the natural environment or into an enclosed building, structure, equipment or other place or thing;

“Operating Parameter Summary Table” means the table prepared and maintained in accordance with section 17;

“particulate matter” means any material, except water in an uncombined form, that is or may become suspended in air;

“portable asphalt mix facility” means an asphalt mix facility that is capable of being transported and is installed proximate to the location where the asphalt mix is used;

“registered contaminant” means a contaminant for which a registered person is registered in respect of this industry standard;

“registered person” means a person who is registered on the Ministry’s Technical Standards Registry – Air Pollution in respect of this industry standard;

“scavenging system” means a system that captures air that contains contaminants from equipment which is not located inside an enclosed building and conveys the contaminated air to an air pollution control device or to another piece of equipment;

“site” with respect to a facility, means the property or properties on which the facility is located;

“Site Plan” means the diagram set out in the Best Practices Procedure and required by subsection 34 (2);

“Visual Inspection Summary Table” means the table prepared and maintained in accordance with section 25;

“worker” has the same meaning as in the *Occupational Health and Safety Act*.

(2) For greater certainty, the definition of facility in subsection (1) includes any portable crusher or screener that is part of the integrated operation on the site and which is used at the site on a temporary basis.

(3) A reference in this industry standard to a place listed in this subsection is a reference to any point on the property on which one or more of the following places is located, unless the place is located on the same site as the asphalt mix facility:

1. A health care facility.
2. A senior citizens’ residence or long-term care facility.
3. A child care facility.
4. An educational facility.
5. A dwelling.

6. A place of worship.
7. A place specified by the Director in a written notice to the registered person as a place where discharges of a registered contaminant from the asphalt mix facility may cause a risk to human health.

(4) Before the Director gives a person a notice under paragraph 7 of subsection (3), the Director shall give the person a draft of the notice and an opportunity to make written submissions to the Director during the period that ends five business days after the draft is given.

(5) Words and expressions used in this industry standard have the same meaning as in the Act and O. Reg. 419/05, unless the context requires otherwise.

(6) In this industry standard, a reference to the Director means,

- (a) the Director appointed under section 5 of the Act in respect of the section of this industry standard in which the reference appears; or
- (b) if no Director described in clause (a) has been appointed in respect of a provision, any Director appointed under section 5 of the Act in respect of section 27.1 or paragraph 3 of subsection 11 (1) of O. Reg. 419/05.

### Application

2. (1) A registered person who is registered with respect to a facility set out in Column 1 of Table 9-2 and one or more of the contaminants listed in an Appendix set out in Column 2 of Table 9-2 opposite the facility, shall comply with the sections set out opposite the Appendix in Column 3 of Table 9-2 in respect of the facility.

(2) A person who is registered with respect to a portable asphalt mix facility may only register in respect of a contaminant listed in Appendix 9-C for the facility.

TABLE 9-2: Application

Item	Column 1 Facility Type	Column 2 Appendix	Column 3 Applicable Sections
1.	Asphalt mix facility	Appendix 9-A: All contaminants	1-3, 17-19, 21-23, 35-41
2.	Asphalt mix facility	Appendix 9-B: Volatile Organic Compounds	4-7, 9-16, 20, 24-27, 30
3.	Asphalt mix facility	Appendix 9-C: Benzo(a)pyrene	4-16, 20, 24-27
4.	Asphalt mix facility	Appendix 9-D: Metals	4-7, 9-16, 20, 24-27
5.	Asphalt mix facility	Appendix 9-E: Combustion gases	24
6.	Asphalt mix facility	Appendix 9-F: Sulphur Dioxide	28
7.	Asphalt mix facility	Appendix 9-G: Nitrogen Oxides	29

8.	Asphalt mix facility	Appendix 9-H: Suspended Particulate Matter	9, 25-27, 31-34
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**Tables, initial preparation**

3. (1) A registered person shall ensure that the first version of each of the following tables required under this industry standard are prepared no later than the date that the person is first registered in respect of this industry standard in respect of the facility.

1. The Operating Parameter Summary Table.
2. The Inspection and Maintenance Summary Table.
3. The Visual Inspection Summary Table.
4. The Required Management Methods Table.

(2) Information contained in a table required to be prepared and maintained by this industry standard shall be current to the date that the table was prepared or amended.

**PART II – PERFORMANCE LIMITS**

**Performance limit, annual weighted average temperature at AM loadout – benzo[a]pyrene, VOCs, metals**

4. (1) Subject to subsections (2) and (3), a registered person shall ensure that the weighted average temperature of asphalt mix produced at the asphalt mix facility in a calendar year and calculated in accordance with section 13 does not exceed 163 degrees Celsius.

(2) Subsection (1) applies in respect of a calendar year if the registered person was registered in respect of this industry standard, the asphalt mix facility and a contaminant set out in Appendix 9-B, 9-C or 9-D on each day that the facility produced asphalt mix in the calendar year.

(3) Subsection (1) does not apply in respect of a portable asphalt mix facility.

**PART III – TECHNOLOGY SPECIFICATIONS**

**Requirement to have a scavenging system - benzo[a]pyrene, VOCs, metals**

5. (1) A registered person shall ensure that one or more scavenging systems are installed to capture registered contaminants from each AM drag conveyor, AM storage silo transfer conveyor and AM storage silo batcher at the asphalt mix facility.

(2) A registered person shall ensure that a scavenging system installed at an asphalt mix facility is operated at all times that an associated AM drag conveyor conveys asphalt mix or an associated AM storage silo is loaded with asphalt mix.

(3) Subsection (1) does not apply in respect of an existing asphalt mix facility before January 1, 2024.

(4) Despite subsection (3), if any point on an AM drag conveyor or AM storage silo batcher at an existing asphalt mix facility is 500 metres or less from a place described in subsection 1 (3), subsection (1) applies in respect of the facility on and after July 1, 2022.

(5) Despite subsection (3), if an AM drag conveyor or AM storage silo batcher is installed at an existing asphalt mix facility on or after January 1, 2020, subsection (1) applies in respect of each of the following pieces of equipment on and after the date that the AM drag conveyor is first operated or the AM storage silo batcher is first used:

1. The AM drag conveyor or AM storage silo batcher that is installed on or after January 1, 2020.
2. Each AM drag conveyor, AM storage silo transfer conveyor and AM storage silo batcher that is associated with an AM drag conveyor or AM storage silo batcher that is installed on or after January 1, 2020.

(6) For the purposes of this section, equipment is associated with other equipment if it is operationally integrated.

#### **Scavenging system, air pollution control – benzo[a]pyrene, VOCs, metals**

6. (1) A registered person shall ensure that the scavenging system required by section 4 conveys the contaminated air to,

- (a) a wet scrubber that was installed at the facility before January 1, 2020;
- (b) an air pollution control device other than a wet scrubber; or
- (c) a dryer, the discharge from which is captured and conveyed to an air pollution control device.

(2) A registered person shall ensure that the air pollution control device or dryer that a scavenging system conveys captured air to in accordance with subsection (1) is in operation at all times that the scavenging system is operated.

#### **AM conveyors, requirement to enclose – benzo[a]pyrene, VOCs, metals**

7. (1) A registered person shall ensure that each AM drag conveyor at the asphalt mix facility is covered such that, other than at the AM loadout, the AM drag conveyor is fully enclosed by an impermeable material.

(2) A registered person shall ensure that each AM storage silo transfer conveyor at the asphalt mix facility is covered such that the AM storage silo transfer conveyor is fully enclosed by an impermeable material.

(3) A registered person shall ensure that each bearing that penetrates through the material used to cover an AM drag conveyor in accordance with subsection (1) is sealed to the material with a rubber seal.

#### **Mixing structure and dryer air pollution control, drum-mix and batch-mix process – benzo[a]pyrene, SPM**

8. A registered person shall ensure that registered contaminants that would otherwise be discharged from a mixing structure or dryer located at the asphalt mix facility are captured and conveyed to,

- (a) a baghouse; or
- (b) a wet scrubber that was installed at the facility before January 1, 2020.

#### **PART IV – OPERATION AND MONITORING**

##### **AM loadout monitoring, temperature measurements – benzo[a]pyrene, VOCs, metals**

9. (1) A registered person shall ensure that the temperature of asphalt mix is measured at each AM loadout at the asphalt mix facility in accordance with this section.

(2) The temperature of asphalt mix at an AM loadout shall be measured using a thermocouple that automatically takes the required temperature measurements at a set location.

(3) If asphalt mix is produced using a batch-mix process, the temperature of asphalt mix at the AM loadout shall be measured each time that asphalt mix is discharged from the mixing structure.

(4) If asphalt mix is produced using a drum-mix process, the temperature of asphalt mix at the AM loadout shall be measured at least once every five minutes when asphalt mix is being discharged from the mixing structure.

(5) A registered person shall ensure that a record is made of each temperature measurement made in accordance with this section together with the date and time at which the temperature measurement was made.

##### **AM loadout monitoring, mass measurements – benzo[a]pyrene, VOCs, metals**

10. A registered person shall ensure that the mass of asphalt mix produced at the asphalt mix facility on each day is determined and recorded together with a description of how the mass was determined.

##### **Mix design, certified laboratory and records – benzo[a]pyrene, VOCs, metals**

11. (1) A registered person shall have a mix design from a certified laboratory for each order of asphalt mix that is produced at the asphalt mix facility.

(2) A registered person shall ensure that a record is made of the following information for each order of asphalt mix that is produced at the asphalt mix facility:

1. The date or dates that the asphalt mix was produced to fulfil the order.
2. The temperature provided by the mix design for producing the asphalt mix.
3. The temperature measurement or measurements made of the asphalt mix in accordance with section 9.

##### **AM loadout monitoring, operational adjustments – benzo[a]pyrene, VOCs, metals**

12. (1) For the purposes of this industry standard, a deviation from normal operation in respect of asphalt mix temperature has occurred if a temperature measurement taken under section 9 is equal to or greater than 170 degrees Celsius and the temperature provided by the mix design for producing the asphalt mix is below 170 degrees Celsius.

(2) If a deviation described in subsection (1) has occurred, the registered person shall ensure that,

- (a) if the asphalt mix is being produced using a drum-mix process, one or more operational adjustments are made as soon as practicable so that the temperature of the asphalt mix is reduced to below 170 degrees Celsius; or
  - (b) if the asphalt mix is being produced using a batch-mix process and another batch of asphalt mix will be produced using the same mix design, one or more operational adjustments are made so that the temperature of the asphalt mix of the next batch is reduced to below 170 degrees Celsius.
- (3) A registered person shall ensure that for each temperature measured pursuant to section 9 that is equal to or greater than 170 degrees Celsius a record is made of each operational adjustment made in response to the measurement or, if no operational adjustment was made, an explanation of why no operational adjustment was made.

### **AM loadout monitoring, weighted average temperature – benzo[a]pyrene, VOCs, metals**

**13.** (1) A registered person shall ensure that a weighted average temperature of asphalt mix produced at the asphalt mix facility in a calendar year as of the date in Column 1 of Table 9-13 is calculated in accordance with this section and recorded no later than the date set out in Column 2 of Table 9-13 set out opposite the date in Column 1 of the table.

(2) The weighted average temperature of asphalt mix produced at an asphalt mix facility is calculated by taking the following steps:

1. Subject to subsection (3), determine the average of the temperature measurements made under section 9 for each day in the calculation period.
2. Multiply each daily average asphalt mix temperature calculated in accordance with paragraph 1 by the mass of asphalt mix produced on that day as determined under section 10.
3. Sum the products calculated in accordance with paragraph 2.
4. Divide the value calculated in accordance with paragraph 3 by the total mass of asphalt mix produced at the asphalt mix facility during the calculation period.

(3) For the purposes of calculating a weighted average temperature of asphalt mix produced at the asphalt mix facility, a temperature measurement of 170 degrees Celsius shall be deemed to have been made in each of the following circumstances:

1. A temperature measurement made under section 9 was taken by a malfunctioning thermocouple.
2. A temperature measurement was required to be made under section 9 but no temperature measurement was made.

(4) If the weighted average temperature of asphalt mix produced at the asphalt mix facility calculated under subsection (1) is greater than 163 degrees Celsius, the registered person shall ensure that the weighted average temperature of asphalt mix calculated is reported to the District Manager no later than the date set out in Column 2 of Table 9-13 set out opposite the currency date of the calculation in Column 1 of the table.

(5) For each weighted average temperature of asphalt mix produced at the asphalt mix facility reported to the District Manager in accordance with subsection (4), the registered person shall provide the following information to the District Manager along with the weighted average temperature:



1. The number of temperature measurements used to calculate the weighted average temperature that were deemed to be 170 degrees Celsius in accordance with subsection (3).
2. The dates and times a temperature measurement used to calculate the weighted average temperature that was deemed to be 170 degrees Celsius in accordance with subsection (3) was made or was required to be made together with an indication as to whether the temperature was deemed to be 170 degrees Celsius in accordance with paragraph 1 or 2 of subsection (3).

(6) If a weighted average temperature required to be reported to the District Manager under subsection (4) is of the asphalt mix produced at the facility as of December 31 in a calendar year, the registered person shall ensure that the highest ranking person regularly present at the asphalt mix facility who has management responsibilities relating to the facility signs a report with this information and the signed report is provided to the District Manager. (7) For the purposes of this section, “calculation period” means the period of time for which a weighted average temperature is being calculated.

TABLE 9-13: Reporting dates for AM loadout weighted average temperature

<b>Item</b>	<b>Column 1 Currency date of record</b>	<b>Column 2 Record deadline</b>
1.	May 31	July 1
2.	August 31	October 1
3.	December 31	January 31 of the following calendar year

**Requirement to keep closed asphalt cement storage tank hatches**

14. A registered person shall ensure that each hatch on a storage tank used to store asphalt cement is closed at all times that the storage tank contains asphalt cement except when asphalt cement is being added to the storage tank.

**Asphalt cement storage tank monitoring – benzo[a]pyrene, VOCs, metals**

15. (1) On and after July 1, 2022, a registered person shall ensure that the temperature of asphalt cement stored in each storage tank at the asphalt mix facility is measured in accordance with this section.

(2) The temperature of asphalt cement stored in a storage tank shall be measured using a device that allows for continuous measurement and electronic storage of data.

(3) The temperature of asphalt cement stored in a storage tank shall be measured at least one time each day.

(4) On and after July 1, 2022, a registered person shall ensure that a record is made of the following information for each storage tank at the asphalt mix facility that stores asphalt cement:

1. The date range during which each type of asphalt cement stored in the storage tank was stored and the range of temperatures specified by the supplier of the type of asphalt cement as the temperature range at which to store the asphalt cement.

2. The date on which each temperature measurement required to be taken under subsection (1) was taken and the value of the temperature measurement.

### **Asphalt cement storage tank monitoring, operational adjustments – benzo[a]pyrene, VOCs, metals**

16. (1) For the purposes of this industry standard, a deviation from a normal operating range in respect of asphalt cement stored in a storage tank has occurred if a temperature measurement taken under section 15 exceeds the upper end of the range of temperatures specified by the supplier of the asphalt cement as the temperature range at which to store the asphalt cement.

(2) If a deviation described in subsection (1) has occurred, the registered person shall ensure that one or more operational adjustments are made such that the operational adjustments stop the deviation from continuing.

(3) If an operational adjustment is required to be made under this section the registered person shall ensure that a record is made containing the following information:

1. The date, time and duration of the deviation.
2. An explanation of the suspected cause of the deviation.
3. A description of each operational adjustment required to be made under subsection (2) and the date each operational adjustment was completed.
4. The position title of each person who assigned a person to make an operational adjustment described in paragraph 3.

### **Operating Parameter Summary Table**

17. (1) A registered person shall ensure that a table titled “Operating Parameter Summary Table” is prepared and maintained in accordance with this section.

(2) Column 1 of the table shall separately list each air pollution control device in use at the asphalt mix facility that is described in Column 1 of Table 9-17.

(3) Column 2 to 6 of the Operating Parameter Summary Table shall contain the following information in respect of each air pollution control device listed in Column 1 of the table:

1. The originating sources to which the air pollution control device relates.
2. The operating parameters to be used to assess the effectiveness of the air pollution control device.
3. The measurement frequency for each operating parameter.
4. The measurement locations for each operating parameter.
5. The normal operating range for each operating parameter within which the air pollution control device is considered to be operating normally.

(4) The information required to be set out in the Operating Parameter Summary Table by subsection (3) shall be determined in accordance with the text contained in Columns 2 through 6 of Table 9-17 that is set out opposite the related category of air pollution control equipment in Column 1 of that Table.

(5) Where Table 9-17 requires that an operating parameter, measurement frequency for an operating parameter, measurement location for an operating parameter or a normal operating range for an

operating parameter be determined in accordance with a recommendation from a source set out in this subsection, the operating parameter, measurement frequency, measurement location or normal operating range shall be determined by using one of the following sources:

1. An operating and maintenance manual prepared by the related equipment manufacturer.
2. Written instructions provided by the related equipment supplier or related equipment manufacturer.
3. Written advice from a licensed engineering practitioner that has relevant experience with respect to the subject matter of the recommendation, together with the rationale for the advice.

(6) If an operating parameter, measurement frequency, measurement location or normal operating range set out in Operating Parameter Summary Table is determined in accordance with a recommendation from a source set out in subsection (5), the source of the recommendation used shall also be set out in the Operating Parameter Summary Table.

(7) If an operating parameter, measurement frequency, measurement location or normal operating range set out in the Operating Parameter Summary Table is determined in accordance with a recommendation from a source set out in subsection (5), the Director may order the registered person in writing to amend the Operating Parameter Summary Table to substitute an operating parameter, measurement frequency, measurement location or normal operating range set out in the order if the Director is of the opinion that the amendment is appropriate to assess the effectiveness of the air pollution control device.

(8) A registered person shall ensure that where there has been a change to the operation of the asphalt mix facility that would necessitate an amendment to the Operating Parameter Summary Table if subsection (2) were applied, that the Table is updated in accordance with this section within,

- (a) 30 days of the change if the facility is not a portable asphalt mix facility; or
- (b) two weeks of the change if the facility is a portable asphalt mix facility.

(9) The information in the Table shall be updated to reflect any changes in the use or operation of air pollution control devices listed in Column 1 of the table that would affect the information in the table, including a change to a source described in subsection (5), no later than five days after the change is made.

(10) Despite any other requirement of this section, the table shall be amended and maintained in accordance with an order made under subsection (7).

TABLE 9-17: Operating Parameter Summary Table

Item	Column 1 Air pollution control device	Column 2 Originating source	Column 3 Operating parameter	Column 4 Measurement frequency for the operating parameter	Column 5 Measurement location for the operating parameter	Column 6 Normal operating range for the operating parameter
1.	Baghouse used in respect of a registered contaminant	Associated originating sources	The operating parameter is pressure differential	The operating parameter shall be measured daily when the baghouse is in use	The measurement locations for the operating parameter are the baghouse inlet and the baghouse outlet	The normal operating range for the operating parameter shall be determined in accordance with a recommendation from a source set out in subsection 17 (5)
2.	Wet Scrubber used in respect of a registered contaminant	Associated originating sources	The operating parameters are the scrubbing liquid flow rate and pressure differential	The operating parameters shall be measured daily when the wet scrubber is in use	The measurement location for the operating parameters shall be determined in accordance with a recommendation from a source set out in subsection 17 (5)	The normal operating range for the operating parameters shall be determined in accordance with a recommendation from a source set out in subsection 17 (5)
3.	Activated carbon canister used in respect of a registered contaminant	Associated originating sources	The operating parameter is pressure drop	The operating parameter shall be measured daily when the activated carbon canister is in use	The measurement location for the operating parameter shall be determined in accordance with a recommendation from a source set out in subsection 17 (5)	The normal operating range for the operating parameter shall be determined in accordance with a recommendation from a source set out in subsection 17 (5)
4.	Air pollution control device used in respect of a registered contaminant that is not otherwise described in items 1 through 3	Associated originating sources	The operating parameter shall be determined in accordance with a recommendation from a source set out in subsection 17 (5)	The measurement frequency shall be determined in accordance with a recommendation from a source set out in subsection 17 (5)	The measurement location for the operating parameter shall be determined in accordance with a recommendation from a source set out in subsection 17 (5)	The normal operating range for the operating parameter shall be determined in accordance with a recommendation from a source set out in subsection 17 (5)

## **Measurement of operating parameters**

**18.** (1) A registered person shall ensure that the operating parameters set out in Column 3 of the Operating Parameter Summary Table are measured at the frequency and location set out for the operating parameter in Columns 4 and 5 of the table.

(2) A registered person shall ensure that a record is made containing the following information for each measurement required to be taken under subsection (1):

1. The date on which the measurement was taken.
2. The value of the measurement.

(3) A measurement required by this section in respect of a baghouse shall be taken when the baghouse is not in a bag cleaning cycle.

## **Deviations from normal operating range, operating parameters**

**19.** (1) For the purposes of this industry standard, a deviation from the normal operating range in respect of the operation of an air pollution control device listed in the Operating Parameter Summary Table has occurred if a measured value of the operating parameter taken under subsection 18 (1) is outside of the normal operating range as set out in Column 6 of the table.

(2) If a deviation described in subsection (1) has occurred, the registered person shall ensure that one or more operational adjustments are made in respect of the air pollution control device as soon as practicable such that the operational adjustments stop the deviation from continuing or prevent a future deviation from occurring.

(3) If an operational adjustment is required to be made under this section the registered person shall ensure that a record is made containing the following information:

1. The operating parameter to which the operational adjustments relate.
2. The air pollution control device for which the operating parameter was measured.
3. The normal operating range for the operating parameter.
4. The measurements that were outside of the normal operating range.
5. The date, time and duration of the measurements that were outside of the normal operating range.
6. An explanation of the suspected cause of measurements that were outside of the normal operating range.
7. A description of each operational adjustment made and the date each operational adjustment was completed.
8. The position title of each person who assigned a person to make an operational adjustment described in paragraph 7.

## **PART V – INSPECTION AND MAINTENANCE**

## **Backup thermocouples, requirement – benzo[a]pyrene, VOCs, metals**

**20.** A registered person shall ensure that at least one spare thermocouple per thermocouple required by this industry standard is stored at the asphalt mix facility at all times.

### **Inspection and Maintenance Summary Table**

**21.** (1) A registered person shall ensure that a table titled “Inspection and Maintenance Summary Table” is prepared and maintained in accordance with this section.

(2) Column 1 of the Inspection and Maintenance Summary Table shall separately list each piece of equipment in use at the asphalt mix facility that is described in Column 1 of Table 9-21 opposite an appendix set out in Column 4 of Table 9-21 that lists a registered contaminant.

(3) Columns 2 and 3 of the Inspection and Maintenance Summary Table shall contain the following information in respect of each piece of equipment listed in the table:

1. The inspection frequency.
2. The maintenance objectives taken from Table 9-21 that are set out opposite the related category of equipment or place.

(4) The information required to be set out in the Inspection and Maintenance Summary Table by paragraph 1 of subsection (3) shall be determined by applying the text contained in Column 2 of Table 9-21 that is set out opposite the related category of equipment in Column 1 of that Table.

(5) Where an inspection frequency may be determined in accordance with a recommendation from a source set out in this subsection, the frequency shall be taken from one of the following sources:

1. An operating and maintenance manual prepared by the related equipment manufacturer.
2. Written instructions provided by the related equipment supplier or related equipment manufacturer.
3. Written advice from a licensed engineering practitioner that has relevant experience with respect to the subject matter of the recommendation, together with the rationale for the advice.

(6) If an inspection frequency set out in the Inspection and Maintenance Summary Table is determined in accordance with a recommendation from a source set out in subsection (5), the Director may order a registered person to amend the Inspection and Maintenance Summary Table to substitute an inspection frequency or maintenance objective set out in the order if the Director is of the opinion that the amendment is necessary to,

- (a) prevent, minimize or reduce the discharge of a registered contaminant from a piece of equipment;  
or
- (b) ensure the normal operation of any equipment described in Column 1 of Table 9-21.

(7) A registered person shall ensure that where there has been a change to the operation of the asphalt mix facility or the application of this industry standard to the asphalt mix facility that would necessitate an amendment to an Inspection and Maintenance Summary Table if subsection (2) or (3) were applied, that the Table is updated in accordance with this section within,

- (a) 30 days of the change if the facility is not a portable asphalt mix facility; or

(b) two weeks of the change if the facility is a portable asphalt mix facility.

(8) Despite any other requirement of this industry standard, a registered person shall ensure that an Inspection and Maintenance Summary Table is amended and applied in accordance with an order made under subsection (6).

TABLE 9-21: Inspection and Maintenance Summary Table

Item	Column 1 Equipment / Place	Column 2 Inspection Frequency	Column 3 Maintenance Objective	Column 4 Appendix
1.	Wet Scrubber	The inspection frequency is monthly or may be determined in accordance with a recommendation from a source set out in subsection 21 (5)	<ul style="list-style-type: none"> <li>i. No fan housing drain is clogged</li> <li>ii. No solids build-up or erosion on any fan</li> <li>iii. No leaks anywhere in the wet scrubber system</li> </ul>	Appendix 9-H
2.	Wet scrubber	The inspection frequency is annually and, if the facility is a portable asphalt mix facility, before production begins following set up of the facility	The wet scrubber is operating in accordance with the manufacturer's specifications	Appendix 9-A
3.	Baghouse	The inspection frequency is weekly	No visual evidence of abnormal discharge	Appendix 9-H
4.	Baghouse	The inspection frequency is daily	Dust hopper is not likely to overflow	Appendix 9-H
5.	Baghouse	The inspection frequency is at least once in every six-month period or may be determined in accordance with a recommendation from a source set out in subsection 21 (5)	<ul style="list-style-type: none"> <li>i. No visual evidence of damaged bags, cleaning mechanism components or dampers</li> <li>ii. Spare parts are available</li> </ul>	Appendix 9-H
6.	Baghouse	The inspection frequency is annually or may be determined in accordance with a recommendation from a source set out in subsection 21 (5)	<ul style="list-style-type: none"> <li>i. No sign of corrosion on any weld, joint or seal</li> <li>ii. All fasteners are tightly in place</li> <li>iii. All welds, joints and seals are clean and painted to avoid rusting</li> </ul>	Appendix 9-H
7.	Baghouse	The inspection frequency is annually and, if the facility is a portable asphalt mix	The baghouse is operating in accordance with the manufacturer's specifications	Appendix 9-A

		facility, before production begins following set up of the facility		
8.	Dryer burner	The inspection frequency is annually or shall be determined in accordance with a recommendation from a person referred to in subsection 22 (3) if the recommended inspection frequency is more frequent than annually	<ul style="list-style-type: none"> <li>i. The ratio of fuel to air used by the dryer burner is consistent with the specifications of the manufacturer of the dryer burner</li> <li>ii. Dryer is operating in accordance with manufacturer's specifications</li> </ul>	Appendix 9-E,9-F and 9-G
9.	Activated carbon canister	The inspection frequency shall be determined in accordance with a recommendation from a source set out in subsection 21 (5)	There is no breakthrough of contaminants	Appendix 9-B, 9-C, and 9-D
10.	Activated carbon canister	The inspection frequency is annually and, if the facility is a portable asphalt mix facility, before production begins following set up of the facility	The activated carbon canister is operating in accordance with the manufacturer's specifications	Appendix 9-A
11.	Hot oil burner	The inspection frequency is annually or shall be determined in accordance with a recommendation from a person referred to in subsection 22 (3) if the recommended inspection frequency is more frequent than annually	<ul style="list-style-type: none"> <li>i. The ratio of fuel to air used by the hot oil burner is consistent with the specifications of the manufacturer of the hot oil burner</li> <li>ii. Hot oil burner is operating in accordance with manufacturer's specifications</li> </ul>	Appendix 9-E, 9-F and 9-G
12.	Thermocouple used to take a measurement required by this industry standard	The inspection frequency is daily or may be determined in accordance with a recommendation from a source set out in section 21 (5)	<ul style="list-style-type: none"> <li>i. The thermocouple housing is intact and free of damage</li> <li>ii. The thermocouple is free of accumulation of asphalt mix</li> </ul>	Appendix 9-B, 9-C, and 9-D
13.	Thermocouple used to take a	The inspection frequency is shall be	The thermocouple is calibrated in accordance with the manufacturer's	Appendix 9-B, 9-C, and 9-D



	measurement required by this industry standard	determined in accordance with a recommendation from a source set out in section 21 (5) and, if the facility is a portable asphalt mix facility, before production begins following set up of the facility	specifications	
14.	Thermocouple used to take a measurement required by this industry standard	The inspection frequency is annually and, if the facility is a portable asphalt mix facility, before production begins following set up of the facility	The thermocouple is operating in accordance with the manufacturer's specifications	Appendix 9-A
15.	A monitoring device used to take a measurement required by this industry standard that is not described in items 12 to 14	The inspection frequency shall be determined in accordance with a recommendation from a source set out in section 21 (5)	Monitoring device is measuring accurately	Appendix 9-A
16.	A monitoring device used to take a measurement required by this industry standard that is not described in items 12 to 14	The inspection frequency is annually and, if the facility is a portable asphalt mix facility, before production begins following set up of the facility	The monitoring device is operating in accordance with the manufacturer's specifications	Appendix 9-A

### Inspection and maintenance activities

22. (1) A registered person shall ensure that each piece of equipment set out in Column 1 of the Inspection and Maintenance Summary Table is inspected at the frequency set out for the equipment in the Table to confirm whether the maintenance objectives set out for the equipment or place set out in the Table have been met.

(2) A registered person shall ensure that the following inspections required under subsection (1) are performed before the asphalt mix facility begins production for the year or, if more than one inspection is required annually, one inspection is performed before the asphalt mix facility begins production for the year:

1. An inspection of a wet scrubber to determine whether the maintenance objectives set out in item 2 of Table 9-21 have been met.

2. An inspection of a baghouse to determine whether the maintenance objective set out set out in item 7 of Table 9-21 has been met.
3. An inspection of a dryer burner to determine whether the maintenance objectives set out in item 8 of Table 9-21 have been met.
4. An inspection of an activated carbon canister to determine whether the maintenance objective set out in item 10 of Table 9-21 has been met.
5. An inspection of a hot oil burner to determine whether the maintenance objectives set out in item 11 of Table 9-21 have been met.
6. An inspection of a thermocouple used to take a measurement required by this industry standard to determine whether the maintenance objectives set out in items 13 or 14 of Table 9-21 has been met.
7. An inspection of a monitoring device to determine whether the maintenance objective set out in item 16 of Table 9-21 has been met.

(3) A registered person shall ensure that an inspection of a dryer burner or hot oil burner required under subsection (1) is performed a person who holds a valid certificate from the Technical Standards and Safety Authority that authorizes the certificate holder to do the work involved in the inspection.

(4) A registered person shall ensure that a report is obtained from the person performing an inspection of a dryer burner or hot oil burner required under subsection (1) that details the inspection performed and actions that were or are required to be taken to ensure that the inspection objectives are met.

(5) A registered person shall ensure that a record is made containing the following information in respect of each inspection conducted for the purposes of subsection (1):

1. The equipment that was inspected
2. The date of the inspection.
3. Whether the inspection occurred within the required frequency.
4. The maintenance objectives that were not met, if any.
5. If the inspection was of a dryer burner or hot oil burner, the name of the individual who performed the inspection and the basis of their qualification under subsection (3) to perform the inspection.
6. If the inspection was of equipment other than a dryer burner or hot oil burner, the position title of each person who assigned a person to perform the inspection.

(6) Subject to subsection (7), at least once in every six month period a registered person shall ensure that the record required by subsection (5) is reviewed to determine if each inspection required by this section to have been performed in the preceding six month period was performed at the required frequency.

(7) Instead of performing the review referred to in subsection (6) at least once in every six month period, a person registered in respect of a portable asphalt mix facility shall ensure that the review is performed during the period following the end of production at a site and before the start of production at another site, and the review shall cover the period of time in which the facility was located at the former site.

(8) A registered person shall ensure that a record is made containing the following information in respect of each review conducted for the purposes of subsection (6):

1. The date of the review.
2. The results of the review.
3. For each inspection that was not performed at the required frequency, the following information:
  - i. A description of the inspection that was to be performed, including the equipment that was to be the subject of the inspection.
  - ii. The date on which the inspection was to be performed.
  - iii. The reason the inspection was not performed at the required frequency.
  - iv. A description of the actions to be taken to ensure future inspections will be performed at the required frequency.
  - v. The position title of each personnel who assigned a person to take an action mentioned in subparagraph iv.

### **Deviations – inspection and maintenance**

**23.** (1) If a maintenance objective listed in the Inspection and Maintenance Summary Table is found to have not been met during an inspection required under section 22, the registered person shall ensure that one or more actions are taken without delay until the maintenance objective is met.

(2) If an action is required to be taken under subsection (1) the registered person shall ensure that a record is made containing the following information in respect of each action taken:

1. The date of the inspection.
2. The maintenance objective that was not met.
3. The reason the maintenance objective was not met.
4. A description of each action taken, and that will be taken if applicable, to ensure the maintenance objective or objectives is met.
5. The date on which each action mentioned in paragraph 4 was or will be taken.
6. The position title of each person who required another person to take an action that was taken or will be taken.

### **Inspection, valves and connections**

**24.** (1) A registered person shall ensure that a leak inspection of the asphalt mix facility is performed in accordance with this section,

- (a) if the facility is not a portable asphalt mix facility, at least one time in each calendar year; or
- (b) if the facility is a portable asphalt mix facility, before the facility begins production for the year and before production begins following set up of the facility at a new site.

(2) A leak inspection required by subsection (1) shall consist of a visual inspection of each valve and each connection at the facility to determine whether the following inspection objectives are met:

1. The valve or connection does not show any signs of deterioration.
2. No indications of a gaseous or liquid leak at the valve or connection.
3. No deposition of particulate matter at the valve or connection.

(3) If an inspection required under this section finds that an inspection objective is not met for a valve or connection, the registered person shall ensure that one or more actions are taken as soon as practicable so that the inspection objective is met.

(4) A registered person shall ensure that a record is made containing the following information in respect of each leak inspection conducted for the purposes of this section:

1. The date or dates that the leak inspection was performed.
2. An indication of which valves or connections failed to meet an inspection objective and which inspection objective was not met.
3. A description of each action taken in accordance with subsection (3) so that the valve or connection meets the inspection objective.
4. The date on which each action mentioned in paragraph 3 was taken.

(5) For the purposes of this section,

“connection” means a flanged, screwed or other joined fitting used to connect two pipes or a pipe and a piece of equipment.

### **Visual Inspection Summary Table**

**25.** (1) A registered person shall ensure that a table titled “Visual Inspection Summary Table” is prepared and maintained in accordance with this section.

(2) Column 1 of the Visual Inspection Summary Table shall separately list each originating source at the asphalt mix facility that is described in Column 1 of Table 9-25 opposite an appendix set out in Column 4 of Table 9-25 that lists a registered contaminant.

(3) Columns 2 and 3 of the Visual Inspection Summary Table shall contain the following information in respect of each originating source listed in the table:

1. The inspection frequency taken from Table 9-25 that is set out opposite the related category of originating source.
2. The inspection objectives taken from Table 9-25 that are set out opposite the related category of originating source.

(4) A registered person shall ensure that where there has been a change to the operation of the asphalt mix facility that would necessitate an amendment to the Visual Inspection Summary Table if subsections (2) were applied, that the Table is updated in accordance with this section within,

- (a) 30 days of the change if the facility is not a portable asphalt mix facility; or
- (b) two weeks of the change if the facility is a portable asphalt mix facility.

TABLE 9-25: Visual Inspection Summary Table

Item	Column 1 Originating source	Column 2 Inspection Frequency	Column 3 Inspection Objective	Column 4 Appendix
1.	AM loadout where asphalt mix is transferred onto an AM drag conveyor	Daily each day that the AM drag conveyor is operated	No visible discharge of contaminants to air	Appendix 9-B, 9-C and 9-D
2.	AM drag conveyor cover	Once each week that the AM drag conveyor is operated	No visible discharge of contaminants to air from where the material used to cover the AM drag conveyor is joined	Appendix 9-B, 9-C and 9-D
3.	A crusher or screener used to crush or screen aggregate material or reclaimed asphalt pavement	At the end of each day on which the crusher or screener has been operated	The area around the crusher or screener is free of loose aggregate or reclaimed asphalt pavement	Appendix 9-H
4.	A crusher or screener used to crush or screen aggregate material or reclaimed asphalt pavement	Daily when the crusher or screen is operating	No visible discharge of particulate matter to the air	Appendix 9-H
5.	A transfer point where aggregate is transferred that is not enclosed in a structure with at least three sides and a roof	Daily	The ground around the transfer point is free of loose aggregate	Appendix 9-H
6.	Entrances and exits to the site	Daily	Entrance or exit is clear of loose aggregate or particulate matter	Appendix 9-H
7.	Area below an AM storage silo	Daily	Area is free of loose particulate matter	Appendix 9-H
8.	Paved road segments	Daily	The road segment is free of loose aggregate or reclaimed asphalt pavement	Appendix 9-H
9.	Unpaved road segments	Daily	No visible discharge of particulate matter to the air beyond the road	Appendix 9-H

### Visual inspection activities

26. (1) A registered person shall ensure that each originating source set out in Column 1 of the Visual Inspection Summary Table is inspected at the frequency set out for the source in the Table to confirm whether the inspection objectives set out for the source in the Table are met.

(2) A registered person shall ensure that a record is made containing the following information in respect of each inspection conducted for the purposes of subsection (1):

1. The originating source that was inspected.
2. The date of the inspection.
3. The inspection objectives that were not met, if any.
4. Other than in respect of an inspection of an originating source described in items 3 and 5 of Table 9-25, the following information:
  - i. Whether the inspection occurred within the required frequency.
  - ii. The position title of each person who assigned a person to perform the inspection.

(3) On or before the fifth day of each month, a registered person shall ensure that the record required by subsection (2) is reviewed to determine if each inspection required by this section to have been performed in the preceding month was performed at the required frequency.

(4) A registered person shall ensure that a record is made containing the following information in respect of each review conducted for the purposes of subsection (3):

1. The date of the review.
2. The results of the review.
3. For each inspection that was not performed at the required frequency, the following information:
  - i. A description of the inspection that was to be performed.
  - ii. The date on which the inspection was to be performed.
  - iii. The reason the inspection was not performed at the required frequency.
  - iv. A description of the actions to be taken to ensure that future inspections will be performed at the required frequency.
  - v. The position title of each person who assigned a person to take an action described in subparagraph iv.

### **Deviations – visual inspections**

27. (1) If an inspection objective listed in the Visual Inspection Summary Table is confirmed to have not been met during an inspection required under section 26, the registered person shall ensure that one or more actions are taken forthwith until the inspection objective is met.

(2) Subject to subsection (3), if an action is required to be taken under subsection (1), the registered person shall ensure that a record is made containing the following information in respect of each action taken:

1. The date of the inspection.
2. The inspection objective or objectives that were not met.
3. The suspected reason the inspection objective or objectives were not met.

4. A description of each action taken, and that will be taken if applicable, to ensure the inspection objective or objectives are met.
5. The date on which each action mentioned in paragraph 4 was or will be taken.
6. The title of each person who assigned a person to take an action that was taken or will be taken.

(3) If an action is required to be taken under subsection (1) following an inspection of an originating source described in items 3 or 5 of Table 9-25, the registered person shall ensure that a record is made of the following information instead of the information set out in subsection (2):

1. The action taken to meet the inspection objective.
2. The date on which the action mentioned in paragraph 1 was taken.

## **PART VI – FUEL REQUIREMENTS**

### **Fuel type, requirements – sulphur dioxide**

**28.** (1) A registered person shall ensure that only gaseous fuel or a liquid fuel are used to power any dryer, hot oil burner or generator at the asphalt mix facility.

(2) A registered person shall ensure that air pollution control device is used to remove sulphur dioxide from emissions generated by the combustion of a liquid fuel used at the asphalt mix facility in accordance with subsection (1) if the liquid fuel has a sulphur content greater than or equal to 0.5 per cent.

### **Low nitrogen oxide burner – nitrogen oxides**

**29.** (1) A registered person shall ensure that each dryer burner or hot oil burner installed at the asphalt mix facility on or after January 1, 2022 is a low nitrogen oxide emitting burner.

## **PART VII – ODOUR MANAGEMENT BEST PRACTICES**

### **Odour management plan, requirement to prepare – VOCs**

**30.** (1) A registered person shall ensure that a record titled “Odour Management Plan” is prepared and implemented at the asphalt mix facility if a place listed in subsection 1 (3) is located 500 metres or less from the site boundary of the asphalt mix facility.

(2) The record required by subsection (1) shall include the following information:

1. A list of the sources of odour emissions at the facility.
2. Potential causes of high odour emissions from each source identified in accordance with paragraph 1.
3. Preventative and control measures that are or may be used at the facility to minimize the likelihood of high odour emissions from each source identified in accordance with paragraph 1, together with an indication as to whether the control measure is in use at the facility or identified for consideration for future use at the facility.

4. Inspection and maintenance procedures that will be used to ensure effective implementation of any preventative and control measures that are used at the facility.
5. Monitoring activities that will be used to monitor the effectiveness of the implementation of any preventative and control measures.
6. An implementation schedule for the preventative and control measures, inspection and maintenance procedures and monitoring activities identified in the Odour Management Plan.
7. A list of comments on the Odour Management Plan received by the facility from the Ministry, if any, and an explanation of how the comment was addressed in the Odour Management Plan.

(3) A registered person shall ensure that each worker at the asphalt mix facility receives training on the implementation of the Odour Management Plan at least one time each calendar year before the facility begins production for the year.

(4) A registered person shall ensure that a record is made of the following information with respect to the training provided in accordance with subsection (3):

1. The name of each person who has received the training.
2. Each date each person received the training.
3. The name of the person who provided the training to each person.

(5) The Odour Management Plan shall be reviewed and updated on or before March 31 in a calendar year if the facility received any odour complaints in the preceding calendar year.

(6) When reviewing the Odour Management Plan in accordance with subsection (5), the registered person shall consider implementing additional prevention and control measures.

## **PART VIII – PARTICULATE MATTER MANAGEMENT BEST PRACTICES**

### **Stored material, signage – suspended particulate matter**

**31.** A registered person shall ensure that all aggregate or reclaimed asphalt pavement that is stored at the asphalt mix facility is labelled with a sign identifying the material including, if the material is an aggregate, whether the aggregate contains mineral filler.

### **Crushing and screening – suspended particulate matter**

**32.** A registered person shall not crush or screen or cause or permit the crushing or screening of material at the asphalt mix facility which is not intended to be used in the production of asphalt mix at the site.

### **Best practices, minimum requirements – suspended particulate matter**

**33.** (1) A registered person shall ensure that water or chemical dust suppressant is applied to stored aggregate that contains mineral filler at least once each day.

(2) A registered person shall ensure that each time water or chemical dust suppressant is applied to storage aggregate for the purposes of subsection (1) a record is made containing the date, time and location of the application.



(3) A registered person shall ensure that aggregate that contains mineral filler is not handled at the asphalt mix facility unless the wind speed is less than the maximum wind speed set out in the Best Practices Procedure for the location.

(4) Subsection (3) does not apply to crushing or screening of aggregate.

(5) A registered person shall ensure that sufficient water or chemical dust suppressant is applied to aggregate that is being crushed to prevent the discharge of particulate matter into the air.

(6) A registered person shall ensure that aggregate and reclaimed asphalt pavement is not crushed or screened at an asphalt mix facility unless the wind speed is less than the maximum wind speed set out in the Best Practices Procedure for the location and the material being crushed or screened.

(7) A registered person shall ensure that one or more signs are posted indicating the maximum speed that a vehicle may travel on a road at the asphalt mix facility.

(8) A registered person shall ensure that a vehicle using a road at the asphalt mix facility does not exceed the speed limit indicated on a sign required under subsection (7).

### **Particulate matter management, Best Practices Procedure**

**34.** (1) A registered person shall ensure that a record titled “Best Practices Procedure” is prepared, maintained and implemented in accordance with this section.

(2) The Best Practices Procedure shall include a site plan diagram drawn to scale that shows the following:

1. The boundaries of the site.
2. Roads and the portions of those roads that are paved or unpaved.
3. Natural and artificial wind barriers on the site.
4. Conveyors on the site other than AM drag conveyors and AM storage silo transfer conveyors.
5. Areas on the site where aggregate or reclaimed asphalt pavement is stored, handled, crushed or screened.
6. Each originating source on the site.
7. All structures, including buildings and fences.
8. Each place listed in subsection 1 (3) that is located within one kilometre of the site boundary.
9. The minimum distance from each place described in paragraph 6 and the boundary of the site.
10. The identifiers required to be included in the Best Practices Table.
11. The information contained in paragraphs 1 to 10 for every asphalt mix facility that is located on a property that has been deemed by subsection 4 (2) of O.Reg. 419/05 to be a single property that includes the property upon which the asphalt mix facility in respect of which the registered person is registered is located.

(3) The Best Practices Procedure shall include a table titled “Best Practices Table” that contains the following information:

1. Column 1 of the table shall separately list each originating source at the asphalt mix facility that is described in Column 1 of Table 9-34.
2. For each originating source listed in Column 1 of the table, Column 2 of the table shall set out the following information:
  - i. A unique identifier for each originating source described in rows 1, 3, 4 and 5 of Table 9-34.
  - ii. The text “Not Applicable” for each originating source described in row 2 of Table 9-34.
3. Column 3 of the table shall set out following information:
  - i. The information described in Column 3 of Table 9-34 in respect of each related originating source described in rows 1, 3 and 5 of Table 9-34.
  - ii. The text “Not Applicable” for the originating source described in rows 2 and 4 of Table 9-34.
4. Column 4 of the table shall set out the management methods described in Column 4 of Table 9-34 in respect of each originating source described in Column 1 of the table.

TABLE 9-34: Best Practices Table

Item	Column 1 Originating source	Column 2 Unique identifier	Column 3 Information about originating source	Column 4 Management methods
1.	Areas where aggregate or reclaimed asphalt pavement is stored	Unique identifier	A description of the storage area and the material stored, including whether any aggregate that contains mineral filler is stored in the storage area	<ol style="list-style-type: none"> <li>i. For each material stored in the storage area, if water or chemical dust suppressant is applied to the stored material, the minimum frequency with which water or chemical dust suppressant is applied to the stored material, and if chemical dust suppressant is applied, the type of chemical dust suppressant.</li> <li>ii. A description of any other management methods used with respect to each storage area</li> </ol>
2.	Transfer points where aggregate or reclaimed asphalt pavement is transferred	Not applicable	Not applicable	<ol style="list-style-type: none"> <li>i. A description of how the height from which material is dropped is minimized</li> <li>ii. A description of any other management methods used with respect to each transfer point</li> </ol>
3.	Areas where aggregate is handled	Unique identifier	The type of aggregate handled in the area	<ol style="list-style-type: none"> <li>i. The maximum wind speed beyond which aggregate that contains mineral filler will not be handled in the area in accordance with subsection 33 (2), together with a rationale for the wind speed</li> </ol>

Item	Column 1 Originating source	Column 2 Unique identifier	Column 3 Information about originating source	Column 4 Management methods
				ii. A description of any other management methods used with respect to the area
4.	Conveyors other than AM drag conveyors and AM storage silo transfer conveyors	Unique identifier	Not applicable	A description of any management methods used with respect to the conveyor
5.	Areas where aggregate or reclaimed asphalt pavement is crushed or screened	Unique identifier	The material processed in the area	i. If crushing takes place in the area, a description of how the requirements of subsection 33 (4) are met ii. The maximum wind speed beyond which aggregate or reclaimed asphalt pavement will not be crushed or screened at the location in accordance with subsection 33 (5), together with a rationale for the wind speed iii. A description of any other management methods used with respect to the area

(4) A maximum wind speed for the purpose of the Best Practices Table is one that, when the related activity is engaged in, it is not likely to cause a visible discharge of particulate matter beyond the area in which the activity takes place.

(5) A minimum frequency for the purposes of the Best Practices Table is one that, when an activity is engaged in, the frequency of the activity is one that is likely to prevent a visible discharge of particulate matter.

(6) The Best Practices Procedure shall be updated at least once in each year on or before March 31 and shall be reflective of the operation of the asphalt mix facility to at least December 31 in the preceding year.

(7) When updating the Best Practices Procedure, the registered person shall consider any updates as may be required to:

1. Address complaints received in respect of the asphalt mix facility during the preceding year.
2. Meet the inspection objectives set out in the Visual Inspection Summary Table.
3. Actions taken during the preceding year in accordance with section 27 as a result of an inspection objective not being met.

(8) Any changes to the Best Practices Procedure shall be documented together with the rationale for the change, and shall include a description of,

- (a) any changes made to the Site Plan and the reason for the change; and

(b) any changes made to the Best Practices Table and the reason for the change.

(9) A registered person shall ensure that each worker at the asphalt mix facility receives training on the implementation of the Best Practices Procedure at least one time each calendar year before the facility begins production for the year.

(10) A registered person shall ensure that a record is made of the following information with respect to the training provided in accordance with subsection (9):

1. The name of each person who has received the training.
2. Each date each person received the training.
3. The name of the person who provided the training to each person.

## **PART IX – REQUIREMENT TO CONTINUE THE USE OF MANGEMENT METHODS TO MANAGE EMISSIONS**

### **Requirement to continue the management of originating sources**

**35.** (1) This section applies in respect of management methods used at the asphalt mix facility that are required to be listed in the Operating Parameter Summary Table and the Best Practices Table if the management method is not required to comply with Part III, Part VI or section 33 of this industry standard.

(2) The registered person shall ensure that a table titled “Required Management Methods Table” that contains the following information is prepared:

1. Column 1 of the table separately lists the management methods described in subsection (1).
2. Column 2 of the table sets out the originating sources that relate to the management method in set out opposite in Column 1.

(3) A registered person shall ensure that the use of a management method listed in the Required Management Methods Table is not discontinued unless,

- (a) the related originating source or sources no longer exist; or
- (b) the Director has authorized the discontinuance in writing.

(4) A Director may provide an authorization described in clause (3) (b) in the following situations:

1. Any discharges that would be attributable to the originating source would be negligible if the use of the management method were discontinued.
2. The likelihood of an adverse effect being caused by discharges from the originating source would not be increased if the use of the management method were discontinued.
3. The management method to be discontinued will be replaced by another method or methods that are at least as effective as or better at reducing, minimizing or preventing the discharge of the related registered contaminant.
4. The management method to be discontinued will be replaced by another method or methods that are comparable in effectiveness at reducing, minimizing or preventing the discharge of the related registered contaminant.

- (5) The table required by subsection (2) shall be updated to reflect any changes made,
  - (a) to the Best Practices Table;
  - (b) to the Operating Parameter Summary Table; and
  - (c) in accordance with subsection (3).

### **Management methods for new originating sources**

**36.** A registered person shall ensure that all new originating sources established at the asphalt mix facility are managed using one or more management methods that are as effective as or better than the methods that are used for similar sources listed in the Required Management methods Table.

## **PART X – COMPLAINTS, ANNUAL SUMMARY REPORTS AND RECORDS**

### **Complaint procedure**

**37.** (1) A registered person shall ensure that the following steps are taken in response to each complaint received in respect of the asphalt mix facility that relates to a matter in this industry standard that the facility is required to comply with:

1. A prompt response is provided to the complainant, unless the person requests that a response not be made or fails to provide contact information.
2. Appropriate actions are taken to address the cause of the complaint.
3. A written record of the complaint is made that includes the following information about the complaint and the event that is suspected to have led to the complaint:
  - i. A description of the complaint.
  - ii. The date and time that the complaint was received.
  - iii. If the complaint relates to a discharge of a contaminant to air, the date, time and suspected cause of the complaint, including any originating source that may have contributed to the event.
  - iv. If the complaint relates to a discharge of a contaminant to air, ambient temperature and approximate wind direction and speed at the time of the discharge to which the complaint relates and other general weather conditions.
  - v. A description of any actions taken to address the matter to which the complaint relates and the date each action was completed.
  - vi. A description of any actions taken to prevent a future complaint of a similar nature and the date each action was completed.

vii. An indication of whether the complaint was in relation to a place referred to in subsection 1 (3) and, if so, any source of a registered contaminant located 500 metres or less from the place.

(2) If a complaint mentioned in subsection (1) relates to the discharge of a contaminant to air from the asphalt mix facility, the registered person shall ensure that the Ministry's Spills Action Centre is notified of the complaint as soon as practicable after the complaint is made.

(3) No later than five days after notification is required to be given under subsection (2), the registered person shall ensure that the record mentioned in paragraph 3 of subsection (1) is submitted to a provincial officer.

### **Summary Reports**

**38.** (1) A registered person shall ensure that annual summaries for each calendar year are made in accordance with this section.

(2) The annual summaries shall be completed by March 31 in a year and contain information in respect of the previous calendar year.

(3) The annual summaries required under this section are the following:

1. A table titled "Implementation Summary Table" containing a summary of the provisions of this industry standard that apply to the asphalt mix facility, in accordance with section 2, and the following information for each provision that applies:
  - i. The date on which the provision first applied to the asphalt mix facility.
  - ii. If compliance with the provision has been achieved, the date on which compliance was achieved.
2. A table titled "Performance Summary Table" containing the following information:
  - i. An indication of whether the weighted average temperature of asphalt mix produced in the calendar year calculated in accordance with section 13 exceeds 163 degrees Celsius contrary to section 4.
  - ii. An indication of whether any orders were given to the registered person under section 17 in respect of an amendment to the Operating Parameter Summary Table or under section 21 in respect of an amendment to the Inspection and Maintenance Summary Table.
3. A summary containing the information required in a record prepared for the purposes of subsection 34 (8) in respect of any changes to the Best Practices Procedure.
4. A summary of any changes made to the Operating Parameter Summary Table.
5. A summary of any changes made to the Inspection and Maintenance Summary Table.
6. A record titled "Summary of Deviations" containing the following information:
  - i. A summary of the information contained in the following records:
    - B. A record made under subsection 12 (3) relating only to deviations from normal operation in respect of asphalt mix temperature.

- C. A record made under subsection 16 (3) in relation to operational adjustments made in respect of a deviation.
  - D. A record made under subsection 19 (3) in relation to operational adjustments made in respect of a deviation.
  - E. A record made under subsection 22 (8) in relation to inspections that were not performed at the required frequency.
  - F. A record made under subsection 23 (2) in relation to actions taken in respect of maintenance objectives that were not met.
  - G. A record made under subsection 24 (4) in relation to valves and connectors that failed to meet an inspection objective.
  - H. A record made under subsection 26 (4) in relation to inspections that were not performed at the required frequency,
  - I. A record made under subsection 27 (2) in relation to actions taken in respect of visual inspection objectives that were not met.
- ii. The number of deviations described in subsection 12 (1) that occurred during the year, the number of deviations requiring an operational adjustment to have been made under section 16, the number of deviations requiring an operational adjustment to have been made under section 19, the number of time that one or more actions were required to be taken under section 23 because a maintenance objective was not met, the number of valve or connectors that failed to meet an inspection objective during an inspection required by section 24 and the number of time that one or more actions were required to be taken under section 27 because an inspection objective was not met.
  - iii. A comparison between the numbers reported under subparagraph ii and the numbers reported in the Summary of Deviations prepared under this section for the previous year.
  - iv. Whether any one of the events described in subparagraph ii warrant an assessment of whether further action by the registered person is required.
  - v. An assessment of whether one or more of the events described in subparagraph ii and any events that occurred in previous years are indicative of underlying chronic operational issues that need to be addressed and any actions taken to address those issues.
- 7. A record titled “Annual Summary of Changes to Source Information” that contains information on any changes made during the previous year in respect of air pollution control devices and other management methods employed at the asphalt mix facility and listed in the Required Management Methods Table.
  - 8. A table titled “Complaint Summary Table” that sets out the total number of complaints received under section 37 in respect of the asphalt mix facility in the year and in the preceding year.

(4) The information contained in the records required under subsection (3) shall be certified as having been completed in accordance with the requirements of this industry standard and that the information contained in them is complete and accurate by the highest ranking person.

### **Public Reporting**

**39.** (1) A registered person shall ensure that the following information is made available for examination by any person without charge on a website for the asphalt mix facility or available for review during the regular business hours at the asphalt mix facility:

1. The Implementation Summary Table required by paragraph 1 of subsection 38 (3).
2. The Performance Summary Table required by paragraph 2 of subsection 38 (3).

(2) A registered person shall ensure that, if a person requests a written copy of the information required under subsection (1), that it is given, without charge, to the person within 15 days of the request.

(3) A registered person shall ensure that the information required to be made public under this section is updated at least once in every 12-month period and not later than March 31 in each year.

### **Record keeping – general**

**40.** (1) Where a record is required to be made under this industry standard and a time period within which the record is required to be made is not otherwise provided for, the record shall be made with 15 days.

(2) Where a record is required to be made under this standard in respect of the taking of a sample or measurement or a calculation, or the making of an observation, the record shall be made at the same time as the event.

### **Record retention**

**41.** (1) In addition to the requirements of section 165.1 (1) of the Act, a registered person shall ensure that the following records and previous versions of the records are made available at the asphalt mix facility to a provincial officer and a Director upon request:

1. A record required by this industry standard to be made or obtained, including procedures, measurements, notifications, tables and reports;
2. A notice or order given to the registered person in respect of this industry standard.
3. Any documents related to the operation and maintenance of equipment used at the asphalt mix facility that is an originating source or monitor to which this industry standard applies.

(2) A record, notice or order described in paragraphs 1 and 2 of subsection (1) shall be retained for a minimum of five years from the date the record was created.

(3) A document described in paragraph 3 of subsection (1) shall be retained for a minimum of five years from the date the equipment to which the record relates was last used at the asphalt mix facility.

(4) If a record is retained in electronic form, the Director or provincial officer may require that a copy of it be provided to him or her on paper or electronically, or both.



## Appendix 9-A: All Contaminants

Item	CAS No.	Contaminant
1	75-07-0	Acetaldehyde
2	67-64-1	Acetone
3	107-02-8	Acrolein
4	7440-36-0	Antimony
5	7440-38-2	Arsenic and compounds
6	7440-39-3	Barium - total water soluble
7	100-52-7	Benzaldehyde
8	71-43-2	Benzene
9	50-32-8	Benzo(a)pyrene
10	7440-41-7	Beryllium and Beryllium compounds
11	74-83-9	Bromomethane
12	106-97-8	Butane
13	78-84-2	Butyraldehyde
14	7440-43-9	Cadmium and Cadmium Compounds
15	124-38-9	Carbon Dioxide
16	75-15-0	Carbon Disulfide
17	630-08-0	Carbon Monoxide
18	75-00-3	Chloroethane
19	74-87-3	Chloromethane
20	18540-29-9	Chromium Compounds (Hexavalent)
21	7440-47-3	Chromium and Chromium Compounds (Metallic, Divalent and Trivalent)
22	7440-48-4	Cobalt
23	7440-50-8	Copper
24	4170-30-3	Crotonaldehyde
25	92-82-8	Cumene
26	Not Applicable	Dioxins and Furans
27	100-41-4	Ethyl Benzene
28	74-85-1	Ethylene
29	50-00-0	Formaldehyde
30	142-82-5	Heptane
31	110-54-3	Hexane, n- (n-Hexane and Hexane isomers only)
32	66-25-1	Hexanal
33	540-84-1	Isooctane (2,2,4-trimethylpentane)
34	7439-92-1	Lead and Lead Compounds
35	7439-96-5	Manganese and Manganese Compounds
36	7439-97-6	Mercury (Hg)

37	7439-97-6	Mercury (as Hg) – alkyl compounds
38	74-82-8	Methane
39	71-55-6	Methyl chloroform
40	75-09-2	Methylene Chloride
41	78-93-3	Methyl Ethyl Ketone
42	1634-04-4	Methyl tert-butyl ether
43	7440-02-0	Nickel and Nickel Compounds
44	10102-44-0	Nitrogen Oxides
45	109-66-0	n-Pentane
46	95-47-6	o-Xylene
47	127-18-4	Perchloroethylene
48	7723-14-0	Phosphorus
49	123-38-6	Propionaldehyde
50	106-51-4	Quinone
51	7782-49-2	Selenium
52	7440-22-4	Silver
53	100-42-5	Styrene
54	7446-09-5	Sulphur Dioxide
55	Not applicable	Suspended particulate matter (< 44 µm diameter)
56	7440-28-0	Thallium
57	108-88-3	Toluene
58	79-01-6	Trichloroethene (TCE)
59	75-69-4	Trichlorofluoromethane
60	1330-20-7	Xylenes
61	7440-66-6	Zinc
62	109-67-1	1-Pentene
63	71-55-6	1,1,1-Trichloroethane
64	78-93-3	2-Butanone
65	763-29-1	2-Methyl-1-pentene
66	513-35-9	2-Methyl-2-butene
67	96-14-0	3-Methylpentane

### Appendix 9-B: Volatile Organic Compounds

Item	CAS No.	Contaminant
1	75-07-0	Acetaldehyde
2	67-64-1	Acetone
3	107-02-8	Acrolein

4	71-43-2	Benzene
5	100-52-7	Benzaldehyde
6	74-83-9	Bromomethane
7	106-97-8	Butane
8	78-84-2	Butyraldehyde
9	75-15-0	Carbon Disulfide
10	75-00-3	Chloroethane
11	74-87-3	Chloromethane
12	4170-30-3	Crotonaldehyde
13	92-82-8	Cumene
14	See Schedule 8 in O.Reg. 419/05	Dioxins, Furans and Dioxin-like PCBs
15	74-85-1	Ethylene
16	100-41-4	Ethyl Benzene
17	50-00-0	Formaldehyde
18	142-82-5	Heptane
19	66-25-1	Hexanal
20	110-54-3	Hexane, n- (n-Hexane and Hexane isomers only)
21	540-84-1	Isooctane (2,2,4-trimethylpentane)
22	74-82-8	Methane
23	75-09-2	Methylene Chloride
24	71-55-6	Methyl Chloroform
25	78-93-3	Methyl Ethyl Ketone
26	1634-04-4	Methyl tert-butyl ether
27	109-66-0	n-Pentane
28	95-47-6	o-Xylene
29	123-38-6	Propionaldehyde
30	127-18-4	Perchloroethylene
31	106-51-4	Quinone
32	100-42-5	Styrene
33	108-88-3	Toluene
34	79-01-6	Trichloroethene (TCE)
35	75-69-4	Trichlorofluoromethane
36	1330-20-7	Xylenes
37	109-67-1	1-Pentene
38	71-55-6	1,1,1-Trichloroethane
39	78-93-3	2-Butanone

40	763-29-1	2-Methyl-1-pentene
41	513-35-9	2-Methyl-2-butene
42	96-14-0	3-Methylpentane

### Appendix 9-C: Benzo(a)pyrene

Item	CAS No.	Contaminant
1	50-32-8	Benzo(a)pyrene

### Appendix 9-D: Metals

Item	CAS No.	Contaminant
1	7440-36-0	Antimony
2	7440-38-2	Arsenic and compounds
3	7440-39-3	Barium - total water soluble
4	7440-41-7	Beryllium and Beryllium compounds
5	7440-43-9	Cadmium and Cadmium Compounds
6	18540-29-9	Chromium Compounds (Hexavalent)
7	7440-47-3	Chromium and Chromium Compounds (Metallic, Divalent and Trivalent)
8	7440-48-4	Cobalt
9	7440-50-8	Copper
10	7439-92-1	Lead and Lead Compounds
11	7439-96-5	Manganese and Manganese Compounds
12	7439-97-6	Mercury (Hg)
13	7439-97-6	Mercury (as Hg) – alkyl compounds
14	7440-02-0	Nickel and Nickel Compounds
15	7723-14-0	Phosphorus
16	7782-49-2	Selenium
17	7440-22-4	Silver
18	7440-28-0	Thallium
19	7440-66-6	Zinc

### Appendix 9-E: Combustion gases

Item	CAS No.	Contaminant
1	124-38-9	Carbon Dioxide
2	630-08-0	Carbon Monoxide

**Appendix 9-F: Sulphur Dioxide**

Item	CAS No.	Contaminant
1	7446-09-5	Sulphur Dioxide

**Appendix 9-G: Nitrogen Oxides**

Item	CAS No.	Contaminant
1	10102-44-0	Nitrogen Oxides

**Appendix 9-H: Suspended Particulate Matter**

Item	CAS No.	Contaminant
1	Not applicable	Suspended particulate matter (< 44 µm diameter)