

## **SUMMARY OF COMMENTS/RECOMMENDATIONS**

**PROPOSER:** Manitoba Infrastructure and Transportation  
**PROPOSAL NAME:** Asphalt Plant – MES No. 50830 & No. 50831  
**CLASS OF DEVELOPMENT:** 1  
**TYPE OF DEVELOPMENT:** Transportation  
**CLIENT FILE NO.:** 5395.00 & 5399.00

### **OVERVIEW:**

On March 2 & 11, 2009, Manitoba Conservation received Proposals for the operation of two portable asphalt plants at locations throughout Manitoba. The operating hours of the facilities will be any time between sunrise and sunset in the months of May to November. The facilities produce asphalt for use in road construction and repair. There are particulate matter, VOC, NOx, odour, and other air emissions associated with the operation of an asphalt plant.

The Department, on March 13 (5395.00) and March 30 (5399.00), 2009 placed copies of the Proposals in the Public Registries located at 123 Main St. (Union Station) Main Floor, Winnipeg; the Millennium Public Library, 4<sup>th</sup> Floor, 251 Donald Street, Winnipeg; and the Manitoba Eco-Network, 3<sup>rd</sup> Floor, 303 Portage Ave., Winnipeg. Copies of the Proposals were also provided to the Technical Advisory Committee (TAC) members. A notice of the Environment Act proposal was also placed in the Winnipeg Free Press on March 14 (5395.00) and April 4 (5399.00) 2009. The newspaper and TAC notifications invited responses until April 14 (5395.00) and May 4 (5399.00), 2009.

### **COMMENTS FROM THE PUBLIC:**

No public comments were received.

#### **Disposition:**

No action needed.

### **COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:**

#### **Manitoba Intergovernmental Affairs & Trade – Provincial Planning Services**

No concerns.

#### **Disposition:**

No action needed.

## **Manitoba Science, Technology, Energy & Mines – Mines Branch**

No concerns

### **Disposition:**

No action needed.

## **Environment Canada – Environmental Protection Operations Branch**

The following comments were provided:

- Temporary (mobile) asphalt plants can emit significant amounts of fine and coarse particulates and gaseous emissions. Particulate matter less than 2.5 microns in size (PM<sub>2.5</sub>) has been declared toxic under CEPA because of human health and environmental concerns. Environment Canada has concerns regarding these types of operations, and refers the proponent to the Canada-wide Standards for Particulate Matter (PM) and Ozone that was developed by the CCME. The hot-mix asphalt sector is one industrial sector where emission reduction strategies for PM were developed as asphalt plants can emit significant amounts of PM and gases if not equipped with proper air pollution control devices or if these control devices are not operated or maintained properly.
- The proponent states that the resulting emissions include “steam”, “heat”, “minute dust particles and gases resulting from normal combustion of propane”. This does not provide sufficient information on the type of pollution control system that is installed to mitigate the emission of particulate matter and the other gaseous emissions such as VOCs, or how fugitive emissions will be controlled. The potential impacts of these emissions need to be considered as part of the environmental impact assessment.
- EC recommends that Manitoba Conservation require portable/temporary/mobile asphalt plants to install secondary air emission controls to reduce their particulate and gaseous emissions. Emission control technology is readily available for mobile plants and is required in some provinces in Canada. Requiring mobile asphalt plants to install secondary controls will greatly reduce asphalt plant emissions.
- EC also recommend that the proponent be required to implement the Best Available Techniques (BAT) as outlined in Section 4.2 of the “*Multi-pollutant Emission Reduction Analysis Foundation (MERAFA) for the Hot-Mix Asphalt Sector (September 2002)*” This report is available at [www.ccme.ca/assets/pdf/hot\\_mix\\_asphalt\\_final\\_meraf\\_e.pdf](http://www.ccme.ca/assets/pdf/hot_mix_asphalt_final_meraf_e.pdf)
- The proponent should also be aware that temporary asphalt plants are required to report under the National Pollutant Release Inventory.

### **Disposition:**

The asphalt plant includes a baghouse to control particulate matter emissions. Clauses 17 to 32 of the draft Environment Act Licence address concerns related to air emissions.

### **Fisheries and Oceans Canada**

- The following request for additional information regarding water use was made:
- The general watercourse types, names and locations where water withdrawal will likely take place.
- The duration and time of withdrawal. Please be advised that no in-water work should occur between April 1 and June 15 of any given year. I note that the proposal indicates that paving season normally starts in May. If water withdrawal will be required prior to June 15, DFO will need to be notified in order to make further assessment for this specific request.
- A description of the route to be paved, the proximity to water, location of bridges (if any) and where chemicals will be applied.
- Confirmation that the pump hose and screen meet the requirements as outlined in the "Freshwater Intake End-of-Pipe Fish Screen Guidelines"
- [http://www.dfo-mpo.gc.ca/oceans-habitat/habitat/water-eau/pipe/index\\_e.asp](http://www.dfo-mpo.gc.ca/oceans-habitat/habitat/water-eau/pipe/index_e.asp)
- The locations where equipment, materials and chemicals will be stored. Please note that shoreline clearing for camps should be avoided and camps should be established at previously disturbed sites whenever possible.
- Confirmation that no in-water work is required and all refueling and storage of fuel will transpire at least 100 meters from the shoreline of any watercourse.

### **Disposition**

The request for additional information was forwarded to the proponent. It is the proponent's responsibility to comply with federal legislation.

### **Manitoba Water Stewardship**

The following comments were provided:

- *The Water Rights Act* indicates that no person shall control water or construct, establish or maintain any "water control works" unless he or she holds a valid licence to do so. "Water control works" are defined as any dyke, dam, surface or subsurface drain, drainage, improved natural waterway, canal, tunnel, bridge, culvert borehole or contrivance for carrying or conducting water, that temporarily or permanently alters or may alter the flow or level of water, including but not limited to water in a water body, by any means, including drainage, OR changes or may change the location or direction of flow of water, including but not limited

to water in a water body, by any means, including drainage. If a proposal advocates any of the aforementioned activities, an application for a Water Rights Licence to Construct Water Control Works is required. Application forms are available from any office of Manitoba Water Stewardship.

- The proponent needs to be informed that if the proposal in question advocates any construction activities, erosion and sediment control measures should be implemented until all of the sites have stabilized.
- The Department may provide comments pertaining to hazard lands at a later date. Currently, the Department's hazard land personnel are seconded to the emergency flood coordination efforts.
- The *Environment Act* Proposal noted that Temporary Asphalt Plant Siting Guidelines will be used in the operations of the plants. Although the Temporary Asphalt Plant Siting Guidelines (1996) note "asphalt oil is a by-product of petroleum and in itself is environmentally neutral", the Department does not fully agree with this statement. Owners/operators of plants should not become complacent on environmental protection measures based upon this statement. Petroleum products can have a variety of contaminants such as polycyclic aromatic hydrocarbons and these types of contaminants only need to be in very low parts per billion concentrations to have detrimental effects to aquatic life. Use of binders and additives for viscosity adjustment in the asphalt production phase could add other potential contaminants of concern if spills or unintended releases entered water. Hardened asphalt road materials may generally be considered to have little ecological effect, but it is the hot asphalt oil phase where appropriate care and handling is required.
- The *Environment Act* Proposal indicates adherence to the Manitoba Heavy Construction Associations "Temporary Asphalt Siting Guidelines" (1996), these guidelines do not address locating adjacent to water bodies/watercourses.
  - The Department recommends to include the following in an *Environment Act* Licence:
    - The Manitoba Heavy Construction Association 1999 document entitled "Best Environmental Management Practice: Asphalt Plants" may have some outdated contact information such as Manitoba Environment instead of Manitoba Conservation. The operator shall ensure that all needed contact information is updated, especially for emergency response procedures and this document could be used as a reference on-site;
    - On-site spill kits are in place for accidental spills; and,

- Temporary asphalt plants are located 100 m away from any surface water and at minimum a 30 metre riparian area of undisturbed native vegetation is maintained between the perimeter of the asphalt site and the surface water:
  - A functioning riparian area of undisturbed native vegetation helps stabilize banks, provides aquatic and wildlife habitat and protects water quality. In circumstances where native vegetation is limited or absent, re-establishment of this vegetation should occur through natural succession or assisted through planting of vegetation native to the area.
  - Alteration within this undisturbed native vegetation area is limited to a maximum of 25 % of the shoreline length (for example: 25 metres per 100 metres of shoreline length) of each lot for a boat house, path, dock, etc.; and,
  - Alteration within this undisturbed native vegetation area (including the removal of near shore or stream aquatic habitat) shall not occur unless an activity conforms to a Department of Fisheries and Oceans Canada Operational Statement or an activity is reviewed by the Department of Fisheries and Oceans Canada.

Disposition:

Clause 10 of the Environment Act Licence addresses the siting of asphalt plants and clause 39 addresses emergency response. Existing Provincial and Federal Regulations address the remaining expressed concerns.

**Manitoba Conservation – Pollution Prevention**

The following comments were provided:

1. There is insufficient information provided in the proposals to technically evaluate the potential impacts to air quality associated with air emissions from these facilities. The proposal generally qualitatively summarizes releases to the atmosphere to be “steam from moisture naturally contained within the sand and/or stone”, “heat”, “dust particles from the aggregate”, and “particulate matter and other gas emissions”. This list of releases omits the odorous volatile organic compounds (VOCs) that would be released by the heated asphalt.
2. There is no quantification of the mass of the substances to be released. Releases need to be quantified based on acceptable technical measurements, and impacts to air quality of the residual releases need to be estimated using dispersion models.

3. The Air Quality Section commissioned the modelling of the emissions of particulate matter (total suspended particulate - TSP and sized particulate matter of 10 micrometres or smaller - PM10). The screening-level modelling indicates that PM and PM10 releases from portable asphalt plants with controls (e. g., baghouses) are not likely to cause air quality concerns. To prevent exceedances of the PM criterion of  $120 \mu\text{g}/\text{m}^3$ , a controlled portable asphalt plant would need to be sited at least 300 meters from the nearest residence or other critical receptor.
4. It is recommended that the air pollutant requirements be addressed in the Licences for all facilities by:
  - Releases through the PM control device (baghouse) to meet a particulate matter emission limit of 0.23 grams per cubic metre
  - Maintenance of the dust pollution control device to ensure that it is working properly at all times
  - Adherence to a Code of Practice such as the Ontario Hot Mix Asphalt Plants - Environmental Practices Guide to ensure that fugitive releases such as road dust from on-site traffic and wind-swept dust from storage areas are properly managed
  - Development and implementation of an odour management plan to address VOC releases, especially from the processing of recycled asphalt materials
  - Addition of odour and noise nuisance clauses
  - Dryer stack testing (one survey test within two years of Licence to ensure the facility is meeting PM emission limits and, thereafter, as may be requested by the Director)
  - Ambient monitoring requirements (as may be requested by the Director)

Disposition:

The asphalt plant includes a baghouse to control particulate matter emissions. Clauses 17 to 32 of the draft Environment Act Licence address concerns related to air emissions.

**Manitoba Conservation – Sustainable Resource & Policy Management Branch**

The Sustainable Resource & Policy Management Branch would like to point out that in our opinion, the guidelines are incomplete and the Branch is not prepared to offer blanket approval for applications that do not provide a specific location which can be evaluated for concerns relevant to the Branch.

Of major concern are the lands set aside under the Protected Areas Initiative. Protected areas have been set aside for a variety of purposes, uses, and visitor experiences and have different sensitivities to appropriate nearby developments. It is not possible to give a “one-size-fits all” buffer. Each application has to be evaluated on its specific location and surroundings to determine what impact may occur.

Disposition:

Clause 9 of the Draft Environment Act requires the proponent to provide Manitoba Conservation with advanced notice of proposed operating sites.

## **Manitoba Conservation – Parks and Natural Areas Branch**

The following comments were provided:

The asphalt plants are proposed to be operated between May and October, which is also the peak season for visitor use of provincial parks. As per point (i) under the Description of the Development, Parks Branch would like the opportunity to review the proposed location of the asphalt plant, each time it is relocated. The Branch would like to review the proposed locations of the asphalt plant to ensure that odors and noise from the plant to not negatively impact visitor experiences in Manitoba's provincial parks. The Branch would also like to review the proposed locations of the asphalt plant to ensure that it is not proposed to be located in an ecologically sensitive area, like adjacent to an ecological reserve.

### **Disposition:**

Clause 9 of the Draft Environment Act requires the proponent to provide Manitoba Conservation with advanced notice of proposed operating sites.

## **Manitoba Culture, Heritage, Tourism and Sport – Historic Resources Branch**

The following comment was provided:

No concerns with regard to this project's potential to impact heritage resources. If at any time however, significant heritage resources are recorded in association with these lands during development, the Historic Resources Branch may require that an acceptable heritage resource management strategy be implemented by the developer to mitigate the effects of development on the heritage resources.

### **Disposition:**

No action necessary.

## **PUBLIC HEARING:**

A public hearing is not recommended.

## **RECOMMENDATION:**

The Proponent should be issued Licences for the operation of an asphalt plant in accordance with the specifications, terms and conditions of the attached draft Licence. Enforcement of the Licence should be retained by the Environmental Assessment and Licencing Branch until January 1, 2010 at which time it should be assigned to Regional Operations.

A draft environment act licence is attached for the Director's consideration.

Prepared by:

Ryan Coulter, M.Sc., P.Eng.  
Environmental Engineer  
Municipal, Industrial, and Hazardous Waste Section  
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Telephone: (204) 945-7023  
Fax: (204) 945-5229  
E-mail Address: [ryan.coulter@gov.mb.ca](mailto:ryan.coulter@gov.mb.ca)