

SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPONENT: Mulder Construction and Materials Ltd.
PROPOSAL NAME: Asphalt Plant – Unit Terex, ES-400
CLASS OF DEVELOPMENT: 1
TYPE OF DEVELOPMENT: Transportation
CLIENT FILE NO.: 5443.00

OVERVIEW:

On January 15, 2010, Manitoba Conservation received a Proposal for the operation of a portable asphalt plant at locations throughout Manitoba. The operating hours of the facility are any time between sunrise and sunset in the months of May to November. The facility produces asphalt for use in road construction and repair. There are particulate matter, VOC, NO_x, odour, and other air emissions associated with the operation of an asphalt plant.

The Department, on January 26, 2010, placed copies of the Proposal in the Public Registries located at 123 Main St. (Union Station) Main Floor, Winnipeg; the Millennium Public Library, 4th Floor, 251 Donald Street, Winnipeg; and the Manitoba Eco-Network, 3rd Floor, 303 Portage Ave., Winnipeg. Copies of the Proposal 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 January 26, 2010. The newspaper and TAC notifications invited responses until March 1, 2010.

COMMENTS FROM THE PUBLIC:

The following is a summary of the comments that were provided to oppose approval of the proposal. Further details on the public comments submitted in opposition to the proposal are available in the public registries:

- Mulder’s “Temporary” asphalt plant application indicates “specific location are not known” however addendum clearly states “Springfield Pit”
 - *The Department responds that this asphalt plant is not proposed for operation in Springfield at this time. The addendum in which “Springfield Pit” was identified was the estimate of greenhouse gas emissions from a similar, previously licenced asphalt plant that is proposed for operation in Springfield. The asphalt plant that is the subject of this proposal is expected to have similar greenhouse gas emissions. The Department regrets the confusion that this has resulted in.*
- The agreement between Mulder and Springfield permits the operation of this plant in a continuous open ended arrangement that parallels their current lease as long as the lease of the gravel pit continues.
- There is an unacceptable risk to groundwater as one gallon of oil contaminates one million gallons of water.

- Several thin clay beds covered by rubberized liners at the site to underlay the plant are of little value as any spilled contaminants would shed and direct spillage away from the equipment.
- Gravel pits provide a direct pipeline to the aquifer as the aquifer is exposed in many locations.
- There will be thousands of gallons of petrochemicals located in a provincially designated very sensitive aquifer recharge zone (water supply to many residents of RM of Springfield, RM of East St. Paul, Oakbank, Anola and Dugald).
- There will be increased truck traffic associated with operation of the asphalt plant.
- Portable asphalt plants do not require air pollution control equipment.
- There is an increased risk to personal safety (increased traffic from heavy equipment).
- The asphalt plant will create noise, odour, and toxic fumes.
- Property values will be negatively impacted.
- Any notice of any proposal to install a temporary asphalt plant, by any company, should appear in the local newspaper of the community several days/weeks prior to the issuance of a license.
- The asphalt plant should be moved to an industrial development in Springfield or somewhere outside of the aquifer recharge zone.
- The Temporary Asphalt Plant Siting Guidelines (1996) should be updated
 - *The Department agrees and does not rely on these guidelines when evaluating proposed locations*
- Any temporary asphalt plant should use propane or natural gas for fuel and not recycled oil.
- The proposal should be elevated to a Class 2 Development.
- The proposal should be elevated to a Class 3 Development.

Disposition:

The Draft Environment Act Licence contains clauses that address the concerns expressed by the public. It is appropriate to evaluate the proposal as a Class One Development. Clause 9 of the Draft Environment Act Licence addresses notification of proposed sites. The Department will provide notification of proposed sites to any interested member of the public that requests notification.

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:

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_{2.5}) has been declared toxic under CEPA because of human health and environmental concerns. (A good fact sheet outlining environmental

and health effects of PM is available at: http://www.ec.gc.ca/air/p-matter_e.html) 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 stated that the stack emissions include “steam”, “heat”, “minute dust particles and gases resulting from normal combustion of recycled oil or 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 proponent has not also provided any information on the constituents of the recycled oil that is proposed to be used as fuel for the asphalt plant. Burning of used oil can result in the emission of heavy metals and other harmful constituents. The potential impacts of these emissions need to be considered as part of the environmental impact assessment.
- EC recommends that Manitoba Conservation require 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
- The proponent should also be aware that temporary asphalt plants are required to report under the National Pollutant Release Inventory.

Disposition:

Clauses 18 to 33 of the draft Environment Act Licence address concerns related to air emissions and clause 17 addresses acceptable fuel types.

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.

- A contact person is Mr. Geoff Reimer C.E.T., Senior Water Resource Officer, Water Control Works and Drainage Licensing, Manitoba Water Stewardship, Box 4558, Stonewall, Manitoba R0C 2Z0, telephone: (204) 467-4450, email: geoff.reimer@gov.mb.ca.
- 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.
- An *Environment Act* Proposal notes that the proponent will adhere to the Temporary Asphalt Siting Guidelines developed by the Manitoba Heavy Construction Association. However, these guidelines do not address implementing mitigation measures for asphalt plants located adjacent to surface water.
- The Department recommends an *Environment Act* Licence to include the following requirements:
 - If a self-supplied water source is used in the industrial process, the proponent may require authorization under *The Water Rights Act*. The proponent's contractor would have to contact Manitoba Water Stewardship's Water Use Licensing Section at least 2 weeks in advance of the anticipated usage date.
 - A contact person is Mr. Rob Matthews, Manager, Water Use Licensing Section, Manitoba Water Stewardship, telephone: 945-6118.
 - The siting of a temporary asphalt plant shall be located at least 100 metres from any surface water and at minimum a 30 metres buffer of natural vegetation is maintained between the perimeter of the asphalt site and the surface water.
 - Any contaminated liquid generated on site (i.e. cleaning of truck boxes, fuel spillage) must be contained and all efforts to ensure the protection of groundwater and surface water resources should be implemented.
 - The proponent shall develop and implement an Emergency Response Plan.

Disposition:

Clauses 9 and 10 of the draft Environment Act Licence addresses the siting of asphalt plants and clause 40 addresses emergency response. Existing Manitoba regulations address the remaining expressed concerns.

Fisheries and Oceans Canada

The following comments were provided:

- Based on the information provided, we have concluded that the project is not likely to cause significant adverse effects on fish and fish habitat after taking into account implementation of mitigation measures. The following measures, if incorporated into the project, should ensure that any potentially adverse effects on fish and fish habitat will be mitigated:
 - The deposit of deleterious substances into water frequented by fish is prohibited under the *Fisheries Act*. Appropriate precautions must therefore be taken to ensure that potentially deleterious substances (such as fuel, hydraulic fluids, oil, hydrocarbons, sediment etc.) do not enter any water body.
 - If water withdrawal is required for dust-suppression activities, incorporate the following measures in order to avoid negative impacts to fish and fish habitat caused by flow alterations, reduction in water levels, or entrainment/impingement at water pump intakes.
 - No in-water work will be conducted
 - No water withdrawal occurs between April 1 and June 15 of any given year
 - Whenever feasible, withdraw water from non-fish bearing water bodies only.
 - If fish-bearing water bodies cannot be avoided, use only larger streams of lakes and avoid small water bodies.
 - Ensure water withdrawal volumes do not impact fish or fish habitat. Withdrawals from fish-bearing waters should not result in any noticeable change in water level or downstream flows, particularly during sensitive life stages (e.g., by dewatering spawning or egg incubation areas).
 - For any multiple or simultaneous water withdrawals, consider the cumulative impact of the total withdrawal volume on fish habitat by all water users.
 - Ensure water pump intakes are designed and operated in a manner that prevents streambed disturbance and fish mortality. Guidelines to determine the appropriate design for intake screens may be obtained from DFO (e.g., Freshwater Intake End-of-Pipe Fish Screen Guideline (1995), available at www.dfo-mpo.gc.ca/Library/223669.pdf).
 - Fisheries and Oceans Canada will be notified through electronic mail or letter at least ten days prior to project commencement on the legal description of the areas where the asphalt plant is proposed to be located and intend to withdraw water from natural sources.
 - Water will not be withdrawn from water bodies frequented by SARA species (www.sararegistry.gc.ca)

Disposition

Clauses 9 and 10 of the draft Environment Act Licence addresses the siting of asphalt plants. Existing federal legislation addresses the remaining expressed concerns

Manitoba Conservation – Pollution Prevention

The following comments were provided:

- 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.
- There is no quantification of the mass of the substances to be released with the exception of GHGs (CO₂ and Methane). 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.
- Also, since the proposal is using similar “template” as past EA applications for portable asphalt plants, attached is the previous comments made to previous applications.

Disposition

Clauses 9 and 10 of the Environment Act Licence address siting of the asphalt plants and clauses 18 – 33 address concerns related to air emissions

Manitoba Conservation – Sustainable Resource and Policy Management/Protected Areas Initiative

The following comments were provided:

- Protected areas are lands closed to logging, mining, electric development and any other activities that could adversely or significantly affect habitat. The current network of protected areas is not complete, and the PAI is also conducting planning exercises in various areas of the province. Some of the activities listed in the application could harm ecologically sensitive environments. To ensure that any temporary asphalt plant activity does not pose a hazard to protected lands, or lands proposed for protection, we recommend that:
 - Any licence that may be issued should be conditional that no portable asphalt plant will be set-up or operated prior to Manitoba Conservation

reviewing and approving the specific site location(s) proposed for the plant.

- The list of proposed specific site locations should be forwarded to the Director, Sustainable Resource and Policy Management Branch for review by Manitoba Conservation.

Disposition

Clause 9 of the draft Environment Act Licence requires the Licencee to provide advance notification of proposed sites. The Department will complete an evaluation of each individual site once location is known.

Manitoba Conservation - Parks and Natural Areas

The following comments were provided:

- This proposal does not list any proposed locations for the operation of this asphalt plant. The Branch recommends that all proposed locations, when known, are forwarded to Manitoba Conservation for review and approval.
- The Branch also recommends that the following conditions to be incorporated into the Environment Act Licence:
 - No asphalt plant without a pollution control device is to be operated within 3km of any developed area of a provincial park (hiking trails, canoe routes, campgrounds etc.) to reduce disturbance to park visitors.
 - No asphalt plant is to be operated within 1.5 km of an ecological reserve or protected area within a provincial park to maintain the ecological integrity of these sites.
 - No asphalt plant without a pollution control device is to be operated within 3km of any ecological reserve or protected area within a provincial park to maintain the ecological integrity of these sites.

Disposition

Clause 9 of the draft Environment Act Licence requires the Licencee to provide advance notification of proposed sites. The Department will complete an evaluation of each individual site once location is known.

Manitoba Conservation – Wildlife and Ecosystem Protection

The following comment was provided:

- The Wildlife and Ecosystem Protection Branch has received this proposal for review. I realize the plant is temporary but we are not in a position to comment on the plant without having a legal description identifying the proposed location

for the plant. Once we have the location we could comment on what species might be impacted by the plant

Disposition

Clause 9 of the draft Environment Act Licence requires the Licencee to provide advance notification of proposed sites. The Department will complete an evaluation of each individual site once location is known.

PUBLIC HEARING:

A public hearing is not recommended.

RECOMMENDATION:

The Proponents 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 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
March 19, 2010

Telephone: (204) 945-7023
Fax: (204) 945-5229
E-mail Address: ryan.coulter@gov.mb.ca