APPENDIX A

TERMS OF REFERENCE

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ADDENDUM
TO THE

ENVIRONMENTAL STUDY REPORT

FOR THE EXPANSION

OF THE HALIBURTON SEWAGE TREATMENT PLANT

PREAMBLE

HISTORY

The Village of Haliburton is presently served by a sewage treatment plant constructed in 1975.

In 1983, a Feasibility Study was carried out to determine if a number of resorts on the north shore of Lake Kashagawigamog could be served by the sewage treatment plant. This, in turn, resulted in the need to assess the capacity of the sewage plant.

Since it was determined that the existing plant would require an expansion, an Environmental Study Report (ESR) was authorized. Funding eligibility for this project, under the Direct Grant Program, was based upon the commercial resort establishments along the north shore of Lake Kashagawigamog connecting into a Municipal Sewage Collection System and abandonment of their existing treatment systems.

The resulting ESR was not, however, accepted by the Ministry of the Environment (MOE) as complete because of a lack of water quality data for the receiving waterbody.

Sewage flow data shall also be reviewed and corrected if necessary, and a determination made as to its effect, if any, on the water quality reports.

Only those portions of the 1989 ESR that are affected by the change in flow data, and the results of the Water Quality Studies shall be altered and included in the Addendum.

The major tasks, following the report review, are as follows:

- Review the existing alternate solutions based on the new data available since the ESR was published.
- Establish effluent criteria.
- Review the environmental impacts of the alternate solutions in light of the new data.
- Confirm the existing preferred alternative, or if necessary, establish a new preferred alternative.
- Present the preferred alternative to the liaison committee, and to the Ministry.
- Address the need for further public consultation.
- Produce an Addendum to the final ESR such that the Addendum and the ESR together will meet the requirements of the Environmental Assessment Act and allow a Certificate of Approval to be issued.

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ADDITIONAL INFORMATION

Since the ESR was published in 1989, additional information, in the form of two modelling studies and a water quality study, has been prepared.

Current metering data at the existing sewage plant indicates a significant increase in flows since the ESR was published. Also, the 1992 Inspection Report prepared by the Regional Inspection Unit indicates a concern with the location of the metering equipment. This, combined with flow surges, may result in unreliable data, even if the metering equipment is correctly calibrated. Accuracy of the flow data must be confirmed.

CONSULTANTS TASKS

The following documents shall be reviewed in light of the additional information:

a) October 1989 ESR on the Haliburton Sewage Treatment Plant expansion by Totten Sims Hubicki Associates (NOTE: this review is not an eligible expense under the Direct Grant Program).

b) October 1991 Report on the Dysart et al Sewage Treatment Plant expansion by B. Neary, Water Resources Branch, MOE.

c) October 1992 Report on the Dysart et al Sewage Treatment Plant expansion by Dr. N. J. Hutchinson, Water Resources Branch, MOE.

d) February 1993 Drag River System Evaluation, Water Quality and Sewage Treatment Plant expansion, prepared for the Municipality of Dysart et al by Michael Michalski Associates.

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GENERAL REQUIREMENTS

The following Work Program to be carried out by the consultant is based on the original ESR Terms of Reference. They have been altered to address the new data now available.

This Work Program will follow the original numbering scheme, however, only those items requiring review and/or updating are included herein. Therefore, those items excluded do not require additional review.

WORK PROGRAM FOR PHASE 1 & 2

1.1.0 Meet with the MOE Project Supervisor, Municipality, Central Region Environmental Quality Assessment, and MOE District Office to review the revised Terms of Reference and Work Program.

1.2.0 Review all previous reports and other pertinent data, including the Water Quality Reports and recent plant flow data. Ensure that the current flow data is accurate and does not significantly affect recent Water Quality Report findings.

1.3.0 Confirm the problems to be addressed, namely;

- the capacity of the existing S.T.P. facility to accommodate additional sewage flows from future developments within the Village and from existing and future developments in the resort areas north of Kashagawigamog Lake.

1.3.1 Determine whether further information is required to finalize the problem definition and obtain concurrence through the Project Supervisor.

2.1.0 Identify if the alternative solutions outlined in the October 1989 ESR are still valid, and if necessary, present additional alternative solutions.

2.1.1 Update preliminary construction costs for the alternative solutions if significant changes to the alternatives have been made.

2.1.3 Establish the criteria for Sewage Treatment facility effluent quality and have this criteria accepted by the MOE, Environmental Quality Assessment Section, Central Region and Regional Approvals Supervisor. This shall be done by a combination of literature review, flow and water quality measurements upstream and downstream of proposed treatment facility locations.

The foregoing receiving water assessment procedures must be technically sound and acceptable to the Ministry. Technical Advise and guidance on procedures will be provided by the Ministry's Water Resources Branch, Central Region's Environmental Quality Assessment Unit, and published procedures such as, "Stream Water Quality Assessment Procedures Manual", March 1980, Ministry of the Environment, Water Resources Branch.

The effluent quality criteria should be consistent with the requirements outlined in the MOE publication "Water Management Goals, Policies, Objectives and Implementation Procedures", the "Canada - Ontario Agreement on Great Lakes Water Quality" and applicable Ontario policies.

2.3.1 Review and update population projections, flow and waste loading projections associated with the existing/new works and identify constraints. Validate existing flow and waste loading data.

2.3.2 Review and update the main sewage pumping station capacity if current flow data dictates.

2.3.4 Review and update sewage pumping station(s) and forcemain(s) alternatives if current flow data dictates.

2.3.5 Review and update alternative sewage treatment methods, based on effluent criteria developed in 2.1.1., to be evaluated including sludge management program, buffer zone requirements, etc. Include for phasing in of additional treatment facility components, if practicable. Define extent of the evaluation, and impact of the alternative on the natural, social and economic environment, if alternatives are changed.

2.4.0 Review and update the additional information and data required to identify the impact of the alternatives on the environment in order to adequately evaluate the alternatives identified in 2.3.2. to 2.3.5, complete with work schedule and costs for each component.

2.12.0 Confirm the existing preferred solution(s), or select a new preferred solution(s).

NOTE: If the preferred alternative(s) has changed, the consultant shall return to stage 2.6.0 of the original Terms of Reference and follow each stage thereafter to develop the new preferred solution(s) through a new ESR.

WORK PROGRAM FOR PHASE 3 & 4

NOTE: This revised work program shall be followed only if the original preferred solution(s) has been maintained.

3.1.1 If the review conducted under state 2.3.2 resulted in a capacity change, conduct a detailed comparison for main sewage pumping station design alternatives.

3.1.2 If the review of current flow data and the water quality reports dictate a change to the original sewage treatment plant design, conduct a detailed comparison for sewage treatment facility design alternatives of preferred solution(s) based on effluent discharge criteria/sludge management program/buffer zone requirements, etc.

3.1.3 Review and update impact on environment for each alternative design.

3.2.0 Review and update preliminary selection of preferred alternative design concept.

3.2.2 Review and update a summary of the design parameters utilized in sizing of the main sewage pumping station and forcemain. These parameters should include but not be limited to the existing and design population, the design sewage flow from domestic, commercial, industrial, institutional and other users, and allowance for inflow/infiltration.

3.2.5 Review and update a summary of the design parameters utilized in sizing the expansion of the sewage treatment facility. These parameters should include but not be limited to the existing and design population(s), design sewage flows, sludge management program, buffer zone requirements, effluent discharge criteria and methods of discharge. Comment on phased construction of the facility components.

3.2.6 Review and update a preliminary layout of the proposed sewage treatment facility alternative design concept.

3.2.7 Review and update detailed capital and operating cost estimates on the preferred alternative design concept.

3.2.8 Consider current financial implication of project with respect to the servicing areas as follows:

Within the Village Limits:

- available subsidies
- proposed discharge rates
- proposed operating expenses
- revenue and expenditure statement.

3.3.0 Identify any new mandatory contacts based on the preferred alternative design concept that have to be made, especially with the public.

3.3.1 Present the following information to the MOE staff through the Project Supervisor for review.

- servicing details
- details of the expansion of the main sewage pumping station and forcemain including impacts on environment
- details of the expansion of the sewage treatment facility including impacts on environment
- financing of project

3.3.2 Present the preceding information to Municipal Council.

3.3.3 Notify review agencies, new mandatory contacts and public previously involved with public information meeting or open house to discuss:

- servicing details

- details of expansion of the main sewage pumping station and forcemain including impacts on environment
- details of expansion of the sewage treatment facility including impacts on environment
- financing of projects

3.3.4 Evaluate feedback from 3.3.0 to 3.3.3 and discuss with MOE staff and Liaison Committee through Project Supervisor.

3.4.0 Finalize preliminary design for preferred alternative design concept.

3.5.0 Finalize Addendum and Environmental Study Report (ESR).

3.6.0 Submit Addendum and ESR to Project Supervisor (15 copies) for comment and approval to release ESR for 30-day public review.

4.1.0 Place Addendum and ESR in the "Public Record File".

4.2.0 Notify review agencies and public still involved in the project of the start of the 30 day public review period.

4.3.0 Discuss feedback from the 30 day public review with MOE staff through Project Supervisor and with the Liaison Committee.

4.4.0 In case of no "bump-up" forward ESR and Application for Works to MOE to obtain Conditional Certificate of Approval for preferred design solution(s).