

September 2012

**PROPOSED TERMS OF REFERENCE FOR
ENVIRONMENTAL ASSESSMENT OF THE
PROPOSED CAPITAL REGION RESOURCE
RECOVERY CENTRE**

EXECUTIVE SUMMARY

1.0 INTRODUCTION

This Executive Summary is being provided for convenience of stakeholders. It does not form part of the proposed TOR being submitted for approval.

The proposed Terms of Reference (TOR) is being submitted to the Ontario Minister of the Environment (the Minister) for approval under the Ontario *Environmental Assessment Act* (EAA). If approved, the TOR provides the framework for the EA studies that will follow.

1.1 Background

Taggart Miller is a joint venture formed to pursue, obtain approvals for and operate the proposed Capital Resource Recovery Centre (CRRRC). The partners are the Taggart group of companies and Miller Waste Systems Inc.

The Province of Ontario and the City of Ottawa have clearly stated objectives to significantly increase the diversion of IC&I and C&D waste materials from disposal. Taggart Miller believes it can significantly assist in achieving these objectives by developing and operating a new integrated waste management facility. The facility would primarily serve Ottawa and secondarily portions of eastern Ontario for waste materials generated by the Industrial, Commercial and Institutional (IC&I) and Construction and Demolition (C&D) sectors.

1.2 Location of Proposed CRRRC Facility

Taggart Miller has identified and secured two potential Sites for development of the proposed project. The locations of the two Alternative Sites are shown in the newspaper advertisements for submission of the proposed TOR.

One Site - the North Russell Road Site - is located in the northwest part of the Township of Russell about three kilometres east of the boundary with the City of Ottawa, about five kilometres south of Provincial Highway 417 between the Boundary Road and Vars exits, approximately three kilometres north of the Village of Russell boundary, and approximately four kilometres north of the centre of the Village.

The second Site - the Boundary Road Site - is located in the east part of the City of Ottawa just southeast of the Highway 417/Boundary Road interchange. The property is located on the east side of Boundary Road, north of Devine Road and west of Frontier Road, and east of an existing industrial park.

1.3 Approach to Environmental Assessment

The environmental assessment of the proposed CRRRC will focus on identifying the preferred Site, the configuration of the preferred Site, impact assessment of the preferred Site development concept, and leachate treatment options. The analysis of the opportunity and the assessment of Alternatives To the undertaking are summarized in the TOR and in more detail in Supporting Document #1 to the TOR.

Once a preferred site and a preferred site development concept are identified in the initial steps of the EA, Taggart Miller will assess the potential impacts associated with all components of the proposed integrated diversion and disposal facility in the Environmental Assessment (EA). In addition, an assessment of cumulative effects of the proposed project and of any existing or certain and probable planned projects in the area of the Site will be completed as part of the EA. While the applications for Environmental Protection Act (EPA) and Ontario Water Resources Act (OWRA) approval will only be submitted after EA approval, the supporting documentation package for the EA application will contain the information necessary to support the EPA and

OWRA applications, such that the reviewers have detailed information on the proposed project at the time of considering the application for EA approval.

1.4 Rationale and Alternatives To

The rationale for the undertaking and an assessment of Alternatives To the undertaking are contained in **Supporting Document #1** to the proposed TOR. The rationale for the undertaking is summarized in Section 4.0 of the TOR. The assessment of Alternatives To considered a number of options as summarized in Section 5.0 of the TOR and described in further detail in **Supporting Document #1**. Alternative 3 - establish diversion facilities on a Taggart Miller Site and manage residuals disposal by means of a new landfill on the same Site – was determined to be within the proponent’s ability, experience and expertise to implement and to provide at an affordable, competitive cost to Taggart Miller and to IC&I and C&D sector customers, and was identified as the preferred alternative.

1.5 Conceptual Description of the Undertaking

Taggart Miller will assume for the purposes of the EA that the proposed CRRRC will accept waste at a rate of approximately 1,000 to 1,500 tonnes per day. Assuming a facility that is open 300 days per year, this is equivalent to annual waste receipts of the order of 300,000 to 450,000 tonnes per year. Using the possible diversion rate of 30 to 40 % of the incoming material from disposal, a typical waste density (0.8 tonnes/m³), and a 4:1 waste to cover ratio, the corresponding landfill air space requirement to support the diversion facilities for a 30 year operating period ranges from about 8 to 14 million cubic metres (m³). For the purposes of the EA, Taggart Miller has assumed the landfill airspace requirement is likely to be in the 8 to 12 million m³ range. EA impact studies will be carried out on the landfill airspace for which EA approval is ultimately sought. The airspace will be defined by the preferred Site development concept. This will enable the diversion facilities to operate for a sufficient period of time without being prematurely limited by the availability of on-site residuals disposal.

Taggart Miller proposes the following diversion facilities/operations for the CRRRC at this time:

- Material Recovery Facility (MRF);
- C&D recycling;
- Organics processing;
- Hydrocarbon contaminated soil treatment;
- Surplus soil management;
- Drop off for separated materials or for separation of materials; and
- Leaf and yard materials composting (if there is enough material available)

2.0 ENVIRONMENTAL ASSESSMENT METHODOLOGY

Work plans for the individual environmental components/technical disciplines to be used to better define baseline conditions and for the assessment of impacts/effects from the preferred Site development concept for both of the Sites accompany the TOR in **Appendix C**. Work plans have been included for both Sites as the preferred Site has not yet been identified. The proposed methodology for the EA is summarized below.

2.1 Comparative Evaluation of Alternative Sites and Identification of Preferred Site

The first step in the EA process will be the identification of the preferred Site for the proposed diversion facilities and landfill that comprise the CRRRC. This will be done based on a comparison of information about each of the two Alternative Sites available from published information and from preliminary investigations/assessments on or in the vicinity of each of the Sites. The Alternative Sites will be compared using the components, criteria, indicators and data sources presented in **Appendix A** to the TOR. The comparative evaluation would take into account as appropriate the relative importance or ranking of the different site evaluation environmental components as established by the public consultation process, (i.e., although all are relevant, certain criteria may be considered more important than others).

The components cover the broad range of environment to be considered under the EAA. The components and criteria proposed for use in the evaluation of the Alternative Sites are as follows:

| Component | Assessment Criteria |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Atmosphere | Which site is preferred regarding potential effects due to air quality and noise? |
| Geology, Hydrogeology & Geotechnical | Which site is preferred for protection of groundwater? |
| Surface Water | Which site is preferred for protection of surface water quality? |
| Biology | Which site is preferred for protection of terrestrial and aquatic biological systems? |
| Land Use & Socio-economic | Which site is more compatible with current and proposed planned future land uses in the Site-vicinity? |
| Culture & Heritage Resources | Which site is preferred for the protection of archaeological and heritage resources, and cultural heritage landscapes? |
| Agriculture | Which site is preferred regarding potential for effects on agriculture? |
| Design and Operations | Which site is preferred regarding the anticipated amount of engineering required to assure Ministry of the Environment (MOE) groundwater quality criteria are met at the property boundary? |
| Traffic | Which site is preferred regarding potential effects from Site-related truck traffic? |

The outcome of this step will be the identification of the preferred Site for the undertaking. The EA studies and impact assessment will be undertaken for the preferred Site, following the methodology described in Section 8.0 of the TOR and below, and in **Appendix C** to the TOR. The other Site will be dropped from further consideration.

2.1.1 Additional Considerations if North Russell Road Site Identified as the Preferred Site for the CRRRC

It is recognized that it can be considered challenging to characterize and adequately monitor all potential contaminant pathways in the subsurface in fractured bedrock due to the complex fracture networks that can exist. Practicable contingency measures can also be challenging to implement in a fractured bedrock environment. **If the North Russell Road site is identified as otherwise preferred**, the following initial work is proposed:

- The geology, hydrogeology & geotechnical work plan to describe the regional setting and determine the Site-specific geological and hydrogeological characteristics would be completed ahead of all other work. The key objective of this part of the assessment will be to demonstrate that the proposed CRRRC landfill is capable of satisfying the requirements of O.Reg. 232/98 in terms of groundwater protection, monitoring and contingency planning on the North Russell Road Site. Consultation with the appropriate MOE/Government Review Team (GRT) technical reviewers on the planning and details of the technical work plans would be carried out prior to commencing the work.

The purpose of this assessment is to obtain the support of the MOE from a groundwater protection perspective to proceed with the EA on the North Russell Road Site. If concurrence is not obtained, then Taggart Miller would eliminate the North Russell Road Site from further consideration and proceed with the EA and EPA assessments on the Boundary Road Site as described in Section 8.2 of the TOR.

2.2 Assessment of the Preferred Site for the CRRRC

2.2.1 Overall Approach

Taggart Miller is proposing that the assessment of the preferred Site identified by the process described in Section 2.1 take place in three phases. The proposed phases and work consists of the following tasks:

Phase 1: EA

- Task 1: Complete Assessment of Existing Environment;
- Task 2: Identify Preferred Site Development Concept;
- Task 3: Assess Environmental Effects of Preferred Site Development Concept;
- Task 4: Assessment of Alternative Haul Routes and Identify Preferred Route;
- Task 5: Evaluate Leachate Management Options and Identify Preferred Option; and
- Task 6: Cumulative Impact Assessment.

Phase 2: EPA & OWRA

- Task 7: Complete EPA/OWRA Level Assessments for the Proposed CRRRC. (EPA and OWRA formal applications will only be submitted following EA approval).

Phase 3: Documentation and Submission

- Task 8: Finalize and Submit EAA/EPA/OWRA Documentation.

2.2.2 Environmental Components

The environmental components proposed for use in the assessment of environmental impacts of the preferred Site are as follows:

- Atmosphere;
- Geology, Hydrogeology & Geotechnical;
- Surface Water;
- Biology;
- Land Use & Socio-economic;
- Cultural & Heritage Resources;
- Agriculture;
- Design and Operations; and
- Traffic.

2.2.3 Study Areas

Data for the site-specific components of the EA has been and will be collected and analyzed for three study areas, as follows:

- Site – the lands secured by Taggart Miller for the proposed Capital Region Resource Recovery Centre at the preferred site (“the Site”);
- Site-vicinity – the lands in the vicinity of the Site (generally within 500 m of the Site boundaries, but may be enlarged as determined appropriate for specific environmental components¹); and
- Haul Routes – the main haul/access route(s) to the Site from Highway 417.

2.2.4 Preferred Site Development Concept

Alternative site development concepts are different ways that the CRRRC project, i.e., diversion facilities, residual disposal landfill cells and other project components, can be implemented on the preferred Site.

Based on Taggart Miller’s current understanding of the conditions on and adjacent to each of the Alternative Sites, it is expected that at least two alternative Site development concepts will be presented for public consultation.

¹ For example, for the surface water component, the Site-vicinity study area would be enlarged to the sub-watershed boundaries.

Each of the alternative Site development concepts will be described at a sufficient level of detail (i.e., conceptual designs) in terms of design and operational characteristics so that the individual environmental components that could potentially be affected can be identified. This will include a site plan and cross-sections, and an appropriate level of detail on the various project components. Public, Aboriginal community and MOE input will be sought on the alternative site development concepts and in particular on the basis for preferring one concept over another. Subject to input received on the concepts and other considerations, it is envisioned that the primary criterion used to determine the preferred Site development concept will be land use compatibility with neighbouring properties.

The outcome of this step will be the identification of the preferred Site development concept.

2.2.5 Assess Environmental Effects of Preferred Site Development Concept

Using the methodology described for the preferred Site in the work plans in **Appendix C** to the TOR, the project team members will assess the effects of the preferred Site development concept (i.e., the combined effects of the diversion facilities, the residuals disposal landfill and associated activities, including in-design mitigation measures) on the environment.

2.2.6 Haul Route Assessment Methodology

A haul route assessment will be conducted as summarized below:

- Describe the existing road network along the alternative haul routes from the applicable Highway 417 interchange(s) to the Site (number and type of intersections, number and direction of turns, existing road width, existing road condition and drainage, existing pavement structure as applicable depending on which Site has been selected as preferred(using available information or if necessary by drilling investigation));
- Establish potential Site access locations applicable to the Site, i.e., from Frontier Road or Boundary Road for the Boundary Road Site; from each of North Russell and Eadie Roads for the North Russell Road Site;
- Describe the land use along each of the alternative haul routes to the Site, i.e., existing land use, number of properties, number of residences and businesses;
- Establish the existing traffic patterns and road/intersection performance along the alternative haul route(s) that use existing roads;
- Predict the expected volume and distribution of Site-related traffic and assess its effect on the alternative haul route(s), e.g., required road and intersection improvements and/or new construction, additional safety measures; number of residences; and
- For the North Russell Road Site, compare the results of the assessment and select the preferred haul route using the indicators provided in **Appendix B** to the TOR titled Alternative Haul Route and Leachate Treatment Assessment Criteria. The potential impacts associated with Site-related traffic and any required mitigation measures would be identified for the preferred haul route once confirmed as described below.

For the Boundary Road Site, as there is only one primary haul route to the Site (off Highway 417 at the Boundary Road exit), the results of this assessment will focus only on potential traffic impacts associated with Site-related traffic, and identify any required mitigation measures associated with traffic.

For the North Russell Road Site, the results of this comparative assessment will identify the preferred haul route and site access location from Highway 417 to this Site.

2.2.7 Evaluate Leachate Management Options and Identify Preferred Option

Based on existing leachate management and treatment being provided at other disposal sites and the current regulatory approvals requirements, it is expected to be possible to construct an on-Site leachate treatment facility, which will achieve a high quality effluent to allow discharge into the local surface water system. It is proposed to use this on-Site treatment approach as a basis for comparison with any other off-site alternatives available to Taggart Miller (e.g., municipal sewage treatment facilities).

2.2.8 Cumulative Impact Assessment

The net effects of the proposed CRRRC project, as determined by the assessment of environmental effects described above, will be combined with the predicted effects of other existing and identified certain and probable projects in the area of the Site, where the effects would overlap. The evaluation would consider potential effects on the various components of the environment as were used for the CRRRC assessment to determine if there are any unacceptable predicted cumulative impacts, as measured against applicable regulatory standards.

2.3 Proposed Consultation Program for EA

Following approval of the TOR and during preparation of the EA, a consultation program will be continued for the public, Aboriginal communities, government agencies and other interested parties in the EA process. Input will be solicited through a number of consultation activities as proposed below. In addition to the consultation activities described below, consultation specific to Aboriginal communities will also be carried out. The results of the consultation program conducted by Taggart Miller during preparation of the EA will be presented in the EA Study Report.

The proposed consultation activities for the EA are as follows:

- **Open House #3** will present a more detailed description of the proposed CRRRC diversion and landfill components, the results of the comparative evaluation of the alternative sites and the rationale for identification of the preferred Site for the CRRRC project;
- **Open House #4** will present the results of the studies to define the existing environmental conditions to that point in the study and the alternative Site development concepts to be considered on the preferred Site;
- **Open House #5** will present the assessment of environmental effects associated with the preferred Site development concept together with proposed mitigation measures, monitoring and contingency measures; the results of the alternative haul routes/Site access assessment, the results of the leachate treatment assessment, the results of the cumulative impact assessment, an outline of the proposed EA/EPA documentation package, and an overview of the proposed schedule for submissions and the Ministry decision making process. Participants at this Open House will be informed of the plans regarding distribution of the draft EA for review;
- **Meetings** with smaller groups such as the Township of Russell EAC-SC, and the Carlsbad Springs and Vars Community Association executives will be held as necessary or appropriate to enable discussions of issues in greater detail than is possible in the Open House format. The meetings may consist of an informal presentation and discussion of results and questions/answers, or simply meetings to discuss particular topics, such as community benefits programs or initiatives;

- **Special Workshops or Technical Sessions** may be held to discuss specific topics for an invited group in more detail. At this point, it is contemplated that there will be one or more workshops on groundwater protection in particular;
- **Project Website** (www.crrrc.ca) to inform the public on the EA process and public consultation activities and solicit comments from the public; and
- **Circulation of Draft EA** for public comment prior to finalization and submission to the MOE.

2.3.1 Aboriginal Communities

Following approval of the TOR, Taggart Miller will contact the identified Aboriginal communities and invite discussions on the work plans and EA process to ensure that Aboriginal community concerns and input are received and incorporated. These concerns and inputs would be identified in the EA, and any measures required to be developed and implemented to mitigate these issues would be incorporated into the proposed undertaking and described in the EASR.

3.0 ENVIRONMENTAL ASSESSMENT SCHEDULE

EA Timelines are dependent on the Minister's decision on the TOR. A decision on the approval of the TOR is anticipated by late 2012. The EA is expected to be completed by the end of 2013.

4.0 OTHER APPROVALS

A number of approvals will be required for the CRRRC in addition to the EA approval. Approvals will also be required under the EPA and OWRA. As noted above, the documentation for EA approval and the documentation to support EPA/OWRA applications will be submitted jointly in one submission. The EPA/OWRA applications will be formally submitted after EA approval.

Other approvals will or may be required under other statutory requirements such as the *Planning Act*.

5.0 COMMITMENTS

The environmental assessment (and more specifically, the EA Study Report) will include a comprehensive list of commitments made by Taggart Miller during the EA process (including these TOR).

For the proposed CRRRC project, Taggart Miller is proposing to provide a Property Value Protection Plan to property owners within a certain distance from the property and to engage the community to develop the details of the plan during the EA process. The basic premise is that if the owner of a property wishes to sell, they are entitled to receive fair value for their property as if the waste management facility was not present. If there is a reduction in property value from its otherwise fair market value, the difference will be made up by Taggart Miller. In this way, the value of the property is protected.

There may also be other components of an overall community benefits plan to be determined through discussion with the local community during the EA process;