MEMORANDUM

TO Rick Li, Senior Waste Engineer MOECC EAB **DATE** September 17, 2015

CC Andrew Evers, Project Officer MOECC EAS; T. Edmond, Golder; D. Thomson

FROM Paul Smolkin **PROJECT No.** 1211250045/13000

WASTE DIVERSION PROTOCOL, PROPOSED CRRRC FACILITY, OTTAWA

PURPOSE OF MEMO

The proposed CRRRC is an integrated waste management facility; that is, a facility that has numerous waste recovery processes as well as a waste disposal facility on a single site. This will be the first such a facility of this sort and on this scale in Ontario and, we believe, in Canada.

The purpose of this memorandum is to provide additional information to the MOECC on the ways that Taggart Miller will work with waste generators and operate the proposed CRRRC facilities to maximize the diversion of waste over time. Taggart Miller is taking a bold step in making a significant up-front capital investment of many tens of millions of dollars in the diversion facilities at the proposed CRRRC. Miller Waste Services' primary business is in waste diversion- operation of diversion facilities and development of end markets for recyclables. As such, it has considerable practical experience and expertise with respect to the diversion components of the proposed CRRRC. Miller will operate the CRRRC on behalf of Taggart Miller.

OFF-SITE AND ON-SITE PROTOCOLS TO MAXIMIZE DIVERSION

Off-Site

Success in achieving high levels of diversion will require the cooperation of waste generators and haulers, given the current lack of provincial requirements regarding commercial waste diversion.

The success of recycling of the Ontario residential waste stream is in large part due to the programs put in place for and made available to the residents by the municipalities, as a result of provincial regulations mandating residential diversion. At present, there are no such comparable regulations for commercial waste, which is the focus of the proposed CRRRC. The proposed CRRRC will be the first facility in Ontario to focus on integrated waste management services for the IC&I and C&D sector. An important element to maximize the diversion performance of the CRRRC over time will be to work with the IC&I and C&D generators and haulers who use the facility by implementing the practices set out below. As with any new or changing operational procedure, achieving the desired results will necessarily happen over a period of time. The main components of this program will be as follows:

- Work with generators on identifying recoverable materials and organics in their waste stream and facilitate appropriate source separation of same. The program would consist of the following components:

  For Taggart Miller customers:

  - Documented audits of the customer's waste stream followed by recommendations on how best to effectively source separate;

- Delivery of the appropriate number and type of containers for various streams;
- Workshop with customer employees regarding effective source separation (to include brochures and printed guidelines);
- Auditing of incoming material at the CRRRC MRF; and,
- Follow up workshops/meetings as required to promote appropriate source separation/diversion practices.

For 3rd party haulers:

- Workshops/meetings on how to educate and work with their customers regarding effective source separation (to include brochures and printed guidelines);
- Guidelines regarding appropriate types of containers for various types of recoverable materials (Miller is prepared to source suppliers of these containers);
- Auditing of incoming material at the CRRRC MRF; and,
- Follow up workshops/meetings to promote appropriate source separation/diversion practices.

These initiatives would be implemented prior to commencing operations of the CRRRC in the case of customers and for 3rd party haulers that Taggart Miller has signed on prior to start-up. When new customers/haulers are subsequently acquired, Taggart Miller will endeavour to provide the education program before first delivery of their waste to the CRRRC.

- Establish dedicated collection routes as appropriate for source separated materials; and,
- Work with government (including MOEEC) and industry associations (including OWMA) to promote regulations and policies to favour diversion over disposal.

In addition, it is noted that the introduction of new regulations mandating increased IC&I and C&D diversion by the Province, which are anticipated, will further motivate/require IC&I and C&D generators and haulers within the CRRRC service area to take actions to increase diversion, and should over time increase both the utilization of the CRRRC diversion facilities and the CRRRC diversion rate.

On-site Operational Protocols

Volume IV of the EA submission package provides the Design & Operations (D&O) Report for the proposed CRRRC and for each of its components. For each of the diversion facilities, operational procedures for inspection and verification of acceptance of various types of materials for diversion are described. The operational practices in Volume IV focus, in part, on determination of the suitability of the incoming loads for processing. This is a critical consideration because sending inappropriate loads to the diversion facilities can adversely affect the operational and even economic efficiency of the diversion facilities and adversely affect (contaminate) the quality of the recoverable materials and render them potentially unacceptable for the end markets. Additional information on the proposed operations and on diversion expectations are provided below:

- C&D processing facility: Appendix D, Section 3.1. It is anticipated that C&D materials will be received in roll off bins directly from construction sites. Their contents will be apparent and they will be sent directly to the C&D processing building. It is expected that C&D recycling facilities will readily achieve a relatively high diversion rate. As shown in Table 9.1 of EA Volume I, the ultimate target C&D diversion rate at the CRRRC is 70%.

- MRF: Appendix E, Section 3.1. Given the broad range of IC&I sources, it is expected that the general IC&I waste stream has the greatest likelihood of being received as mixed waste loads and require the greatest attention to determine whether or not the load is suitable for processing through the MRF. It is this portion of the waste stream that will require the greatest efforts by Taggart Miller in working with generators and haulers, as described above, to maximize diversion over time. The business and operational plan for the CRRRC does not contemplate that Taggart Miller will operate a "dirty" MRF.

  For those generators that are direct customers of Taggart Miller, Taggart Miller will work directly with them as described above to increase source separation, such that it will be possible to maximize the quantity of material received that can be sent directly to the appropriate on-site diversion facility. For these same generators it will also be possible to provide financial incentives in the contract to source separate. It is anticipated that it will be possible, with time, to get Taggart Miller's commercial waste customers to the point where the majority of these loads can be sent to the MRF.

  The financial incentives will include a reduced lift rate (relative to the lift rate for non-recoverable waste) and/or rebates for a portion of the market value of the recoverable commodity. The rate or rebate would be negotiated with the customer and will vary depending on the volume, the value of the recoverable material, the amount of labour required to source separate and the distance to the CRRRC.

  For those generators that use other waste management contractors to pick up their wastes, Taggart Miller does not have direct contact with or influence on the generators (other than active promotion and education in the general market). However, Taggart Miller can offer similar financial incentives for source separation as for their own customers, as described above, which may promote this activity. In addition, Taggart Miller proposes to implement an on-site operating procedure for waste generators who are not Taggart Miller's customers, as follows:

  - Because it will take time to identify the composition of the waste being brought to the CRRRC site from specific generators and their contracted haulers, the hauler will be asked to fill out a form that estimates the percentage of recoverable materials in the load. Based on Miller's extensive experience in MRF operations, if a load does not contain over 50 % recoverable materials, it cannot be practically processed by the MRF given current technology and end markets. If the percentage of recoverable materials in the incoming load is reported to be 50 % or greater, the load will be taken to the MRF tipping floor and examined to determine the actual amount, types and quality (e.g., degree of contamination) of recoverable materials, and the practicality of separating them out with the processing equipment. This would be done for the first 10 to 20 loads received at the CRRRC from individual haulers along specific haul routes, so that the waste stream composition can be reasonably characterized. If the percentage of recoverable materials is confirmed to be at least 50 %, the loads would be processed through the MRF. If the estimated and confirmed percentage of recoverable materials is less than 50%, or if the recoverable materials are found to be excessively contaminated,

Taggart Miller would work with the hauler to encourage their customers to modify their waste generation and source separation process to increase the source separation and the quantity and quality of the recoverable materials.

- A number of employees working in the landfill area will also be trained to spot loads that would be suitable for processing through the recovery facilities. In instances where a load with a high level of recoverable recyclables is unintentionally dumped at the landfill, the load will not be landfilled. It will be pushed aside and back-hauled to the MRF using the trailers that deliver processing residues to the landfill. Any waste set aside in this manner will be removed as soon as practical, but in any case before the end of the day. The affected hauler will also be advised and requested to properly characterize their loads from that route for future deliveries.

- Organics: Appendix F, Section 3.6.1. The waste acceptance procedure described is that source separated organics will be sent directly to the organics facility for processing. As described above, Taggart Miller will work with generators and haulers to increase source separation. Mixed IC&I wastes that have a sufficiently high organic fraction (generally greater than 50% organics) will also be sent to the organics processing facility, which is designed specifically to be able to handle both source separated and mixed organics. The ultimate target organics diversion rate at the CRRRC is 70%, as described in Table 9.1 of EA Volume I.

Reporting

A description of the activities undertaken by Taggart Miller on implementing this waste diversion protocol, the diversion achieved and the progress made on diversion compared to previous years will be provided to the MOECC in the annual report for the CRRRC facility.

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