

**Regional Municipality of Peel
Peel Integrated Waste Management Facility**

**Continuous Improvement Fund
Project Number 566.11**

**Material Recovery Facility
QC Station Installation
Final Report**

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1. EXECUTIVE SUMMARY

The Peel Integrated Waste Management Facility (PIWMF) Blue Box Material Recovery Facility (MRF) commenced initial operations in February 2006. The MRF was designed to process single stream recyclable material at 35 tonnes per hour or 130,000 tonnes per year.

The MRF was originally constructed with no available method for performing quality control (QC) work on recovered Old Corrugated Cardboard (OCC) or recovered container material. This resulted in an inability to remove excess contamination and mis-sorted recyclables from the recovered OCC and recovered container material prior to baling. In addition, the MRF also lacked an area for the recovery of acceptable recyclable material from the residue stream, resulting in decreased revenues, decreased material diversion and increased residue management costs. In early 2010, the Region prepared a business case for installing three (3) QC sorting stations. The QC stations contemplated included a baler infeed QC station, a recovered OCC QC station and a residue recovery QC station.

The MRF QC Station Installation project focused on increasing the recovery of recyclable material at the MRF, improving the quality of the recovered material and increasing the overall revenues received for marketed material from the MRF. The Region received funding approval for CIF Project Number 566.11, Peel MRF QC Station Installation in August 2010. The projects total budget amounted to \$392,937.40, of which CIF would fund \$175,332, including all taxes. The projected project payback was expected to be just over two years.

The installation of the three QC stations resulted in a net savings of \$331,741 over a one year term. In addition to the achieved cost savings, the Region diverted an additional 1,086.36 tonnes of recyclable material from landfill, removed 708.51 tonnes of non-recyclable material from recovered material and redirected 514.45 tonnes of mis-sorted recyclables back for proper recovery.

2. BACKGROUND

The Peel Integrated Waste Management Facility Blue Box Material Recovery Facility commenced initial operations in February 2006. From February 2006 until September 2010, the MRF was operated and maintained by Waste Management of Canada Corporation. Since September 2010, Canada Fibers Ltd. (CFL) has been responsible for plant operation and maintenance. The MRF was designed to process single stream recyclable material at 35 tonnes per hour, or 130,000 tonnes per year.

2.1. MRF Process Description

Please refer to Appendix I for the PIWMF MRF Process Flow.

2.1.1. Waste Receiving Area

The MRF includes a separate receiving/tipping area capable of storing up to 1,000 tonnes of received material. The MRF receiving/tipping area has four receiving doors and can accommodate up to 30 collection trucks per hour (at peak levels).

The key functions of the tipping floor include:

- traffic control;
- material management;
- inbound load inspection; and,
- introduction of received material into the sorting process via two parallel in-feed lines.

2.1.2. Pre-sort Process

The pre-sort process consists of:

- material metering drums;
- an environmentally controlled sorting room;
- a manual pre-sort area with two in-feed lines;

- a bag breaking system that allows for the opening of bags of received material (either mechanically, manually or both);
- a dedicated film baler to bale film plastic; and,
- two material storage bunkers.

The key functions of the pre-sort process are:

- redirection of bagged material to bag breaker;
- recovery of film plastic to the film baler;
- removal of residue to a compactor for compaction, or to storage area for loose loading; and,
- recovery of larger High Density Polyethylene (HDPE) pigmented and natural containers (storage bunkers).

2.1.3. Fibre Processing

The fibre recovery process consists of:

- two parallel multiple disc screens for the main of separation of OCC;
- two parallel multiple disc screens for the main of separation of Old Newsprint (ONP) and the segregation of mixed paper;
- a V-screen that separates the remaining fibre from the container materials;
- five separate live floor type storage bunkers, primarily for fibre storage;
- two environmentally controlled fibre sorting rooms;
- sorting conveyors for manual QC of the various fibre streams;
- a recirculation line for container material;
- a provision for further film plastic recovery and storage;
- a provision for receiving and storing (or directly baling) incoming “clean” loads of fibre (i.e. a single grade of fibre material);
- two balers, each baler accessible to, and capable of baling, all fibre materials and container materials; and,
- a provision to loose load ONP direct to compacted trailers.

The key functions of the fibre recovery process are:

- QC of recovered fibre material;
- removal of OCC and mixed paper;
- secondary recovery of film plastic;
- recirculation of container material; and,
- removal of non-recyclable material.

2.1.4.Container Processing

The container recovery process consists of:

- an environmentally controlled sorting room;
- magnetic separation for the removal of steel cans (trommel magnet, magnetic head pulleys);
- screening of mixed broken glass from remaining container stream;
- an air separation system to segregate “light” and “heavy” material;
- manual glass QC line prior to mechanical glass clean up system (cyclonic system);
- an auto drum separator to remove small fibre material;
- perforator/crusher equipment;
- a two-sort Optical Sorter Technology (OST) including quality control lines, currently ejecting Polyethylene Terephthalate (PET) and polycoat containers;
- eight separate storage bunkers;
- three eddy current separators to segregate non-ferrous metals (aluminum cans); and,
- two balers, each baler accessible to, and capable of baling, all fibre materials and container materials.

The key functions of the container recovery process are:

- automated recovery of glass, ferrous and non-ferrous metals, polycoat containers and PET;

- manual recovery of PET bottles and containers not selected by OST;
- manual recovery of natural HDPE bottles, jugs and jars;
- manual recovery of pigmented HDPE bottles, jugs and jars;
- manual recovery of mixed plastic, currently tubs and lids; and,
- manual recovery of polycoat cartons not selected by OST.

2.1.5.Recovered Material Storage Area

The following components make up the storage area:

- an indoor storage area, capable of storing up to two days of baled inventory;
- indoor storage bunkers with bay doors for mixed broken glass;
- three bay doors for shipping; and,
- shipping and receiving desk with door for drivers to enter storage area away from lift-truck traffic.

2.1.6.MRF Amenities

The following features are also part of the MRF:

- separate lunch room for MRF personnel;
- first aid room;
- full washroom facility (including lockers & showers);
- separate maintenance room;
- quality assurance/quality control (QA/QC) audit room;
- building reception area;
- limited office space for MRF management personnel; and,
- dedicated IT and phone lines available for MRF personnel.

2.1.7.Throughput and Processing Flexibility

The system has incorporated some flexibility into the equipment design and layout, including but not limited to:

- pause lines throughout system;

- provisions to recover additional recyclable material;
- the ability to selectively use the bag breaker system for material that requires debagging; and,
- the use of reversing conveyors and by-pass systems to redirect material during periods of equipment maintenance or repairs.

2.2. Proposed Quality Control Station Installations

The MRF was originally constructed with no available method for performing QC work on recovered OCC or recovered container material. This resulted in an inability to remove excess contamination and mis-sorted recyclables from the recovered OCC and recovered container material prior to baling. In addition, the MRF also lacked an area for the recovery of acceptable recyclable material from the residue stream, resulting in decreased revenues, decreased material diversion and increased residue management costs.

In early 2010, the Region prepared a business case for installing three (3) QC sorting stations. The QC stations contemplated included a baler infeed QC station, a recovered OCC QC station and a residue recovery QC station.

The proposed baler QC station would increase the overall quality of the recovered material. Removing the mis-sorted recyclable material and non-recyclable material would result in a better quality of recovered material, mis-sorted recyclables being directed into the proper recyclable stream and non-recyclable material being directed to the residue stream. Overall, this would result in increased revenues for recovered material; however, with removing non-recyclable material from the recovered material the residue management costs would also increase.

The proposed OCC QC station would decrease the amount of contamination in the OCC and allow this material to be redirected into the appropriate recovery areas. Recyclable fibre material other than OCC would be redirected

to either an ONP bunker or a mixed paper bunker. Mis-sorted recyclables and non-recyclable material would be redirected to the residue stream where the mis-sorted recyclables would be recovered. Removing the mis-sorted recyclable material and non-recyclable material from the recovered OCC would result in a better quality recovered material. Redirecting the mis-sorted recyclable material would result in increased volumes and increased revenues for the recovered material, while removing non-recyclables from the recovered OCC would result in increased residue management costs.

The proposed residue QC station would allow for the recovery of recyclable material initially missed when processed through the MRF. The missed recyclable material would then be directed back into the MRF for recovery in the proper area. This station has the potential to improve recovery rates and decrease the amount of residue shipped; thereby, increasing recovered material tonnages and revenues, and also reducing the residue management costs.

The business case identified a potential cost savings of \$139,147 per year by installing the three (3) QC stations. Please see Table 1: MRF QC Station Business Case.

Table 1: MRF QC Station Business Case

Proposed QC Station	Changes In Costs		
	Residue Disposal	Processing	Revenues
Baler QC	\$ 24,952	\$ (22,349)	\$ 95,502
OCC QC	\$ 25,500	\$ (35,000)	\$ 9,500
Residue QC	\$ (125,308)	\$ 112,237	\$ (224,181)
Total Cost	\$ (74,856)	\$ 54,888	\$ (119,179)
Savings per Year (\$54,888 - \$74,856 - \$119,179)			\$ (139,147)

The Region received funding approval for CIF Project Number 566.11, Peel MRF QC Station Installation in August 2010. The projects total budget amounted to \$392,937.40, of which CIF would fund \$175,332. The projected

project payback was expected to be just over two years. Please refer to Appendix II for the CIF Project Grant for CIF Project Number 566.11.

3. PROJECT MONITORING

The project was monitored through the results of numerous material composition audits measuring the performance of each QC station. A comparison of the pre-upgrade and post-upgrade material compositions, material recovery rates, costs and revenues will be utilized to measure the success of the project. The business case anticipated a cost savings of \$139,147 per year.

4. FINDINGS

The QC station installations at the PIWMF MRF were completed in November 2010. Analysis of actual recovered material compositions, residue management costs and material recovery rates both pre-upgrade and post-upgrade show the cost savings exceeded the Region's initial business case estimate. In addition, the QC stations have increased the Region's overall waste tonnage diverted from landfill.

4.1. Baler QC Station

During a 12 month period after completion of the baler QC station installation, January 2012 to December 2012, 22,573.80 tonnes of recovered material passed through the baler QC station. Utilizing one (1) sorter, 283.80 tonnes of non-recyclable material were removed from the recovered material and 43.47 tonnes of mis-sorted material were removed and redirected back for proper recovery. The 283.80 tonnes of non-recyclable material increased residue management costs by \$18,669 while revenues decreased by \$23,102. The redirection of this material to residue also resulted in the overall processing costs decreasing by \$24,822. In addition to the non-recyclable material, 43.47 tonnes of mis-sorted recyclable material were recovered and directed back for proper recovery. This resulted in increased revenues of \$8,676. Please see Table 2: Baler QC Station Analysis.

Table 2: Baler QC Station Analysis

Recovered Material		Cost Impact		
Final Location	Tonnage	Residue Disposal	Processing	Revenues
Residue	283.80	\$ 18,669	\$ (24,822)	\$ 23,102
Marketed	43.47	\$ -	\$ -	\$ (8,676)
Totals	327.27	\$ 18,669	\$ (24,822)	\$ 14,425

Savings per Year (\$18,669 - \$24,822 + \$14,425)	\$ 8,273
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The baler QC station resulted in increased costs of \$8,273 in 2012, primarily due to the increased residue management costs and the loss of revenue that resulted when the non-recyclables were removed from the recovered recyclable material. The original business case for the baler QC station did project an increase in cost; however, the actual increase was significantly less than originally projected. The baler QC station has been successful and has given the Region the ability to market better quality recovered material with less contamination.

4.2. OCC QC Station

During a 12 month period after completion of the OCC QC station installation, January 2012 to December 2012, 15,836.22 tonnes of recovered OCC material passed through the OCC QC station. Utilizing one (1) sorter, 424.71 tonnes of non-recyclables were removed from the recovered material and 470.98 tonnes of mis-sorted recyclable material were removed and redirected back for proper recovery. The 424.71 tonnes of non-recyclable material increased the residue management costs by \$27,937 and decreased revenues by \$34,571. The redirection of this material to residue also resulted in the overall processing costs decreasing by \$37,145. In addition to the removal of the non-recyclable material, 470.98 tonnes of mis-sorted recyclables were recovered and directed back for proper recovery. This

resulted in increased revenues of \$20,814. Please see Table 3: OCC QC Station Analysis.

Table 3: OCC QC Station Analysis

Recovered Material		Cost Impact		
Final Location	Tonnage	Residue Disposal	Processing	Revenues
Residue	424.71	\$ 27,937	\$ (37,145)	\$ 34,571
Marketed	470.98	\$ -	\$ -	\$ (20,814)
Totals	895.69	\$ 27,937	\$ (37,145)	\$ 13,757
Savings per Year (\$27,937 - \$37,145 + \$13,757)				\$ 4,549

The OCC QC station resulted in increased costs of \$4,549 in 2012, primarily due to the increased residue management costs and the loss of revenue that resulted when the non-recyclables were removed from the recovered OCC material. The original business case for the OCC QC station projected a neutral cost impact, which is consistent with the actual observed cost impact for the OCC QC station. The OCC QC station has been successful and has given the Region the ability to market better quality OCC material with less contamination.

4.3. Residue QC Station

During a 12 month period after completion of the residue QC station installation, January 2012 to December 2012, 12,223.94 tonnes of residue passed through the residue QC station. Utilizing one (1) sorter, 1,797.87 tonnes of recyclable material were removed and redirected back for proper recovery. The recovery of 1,794.87 tonnes of recyclable material resulted in decreased residue management costs of \$118,067 and increased processing costs of \$156,980. The recovery of this material to also resulted in revenues increasing by \$383,476. Please see Table 4: Residue QC Station Analysis.

Table 4: Residue QC Station Analysis

Recovered Material		Cost Impact		
Final Location	Tonnage	Residue Disposal	Processing	Revenues
Marketed	1,794.87	\$ (118,067)	\$ 156,980	\$ (383,476)
Totals	1,794.87	\$ (118,067)	\$ 156,980	\$ (383,476)

Savings per Year (\$156,980 - \$118,067 - \$383,476)	\$ (344,563)
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The residue QC station resulted in overall cost savings of \$344,563 in 2012, primarily due to the decreased residue management costs and increased revenues. The original business case for the residue QC station projected a cost savings of \$237,252, which is approximately \$100,000 less than the actual cost savings achieved from the residue QC station. The residue QC station has been successful since its installation. The QC station has resulted in increased material diversion and a significant cost savings.

5. EVALUATION AND CONCLUSION

Overall, the MRF QC station installation project has been successful. MRF operations have improved in a number of areas including lower residue management costs, increased revenues and increased material diversion.

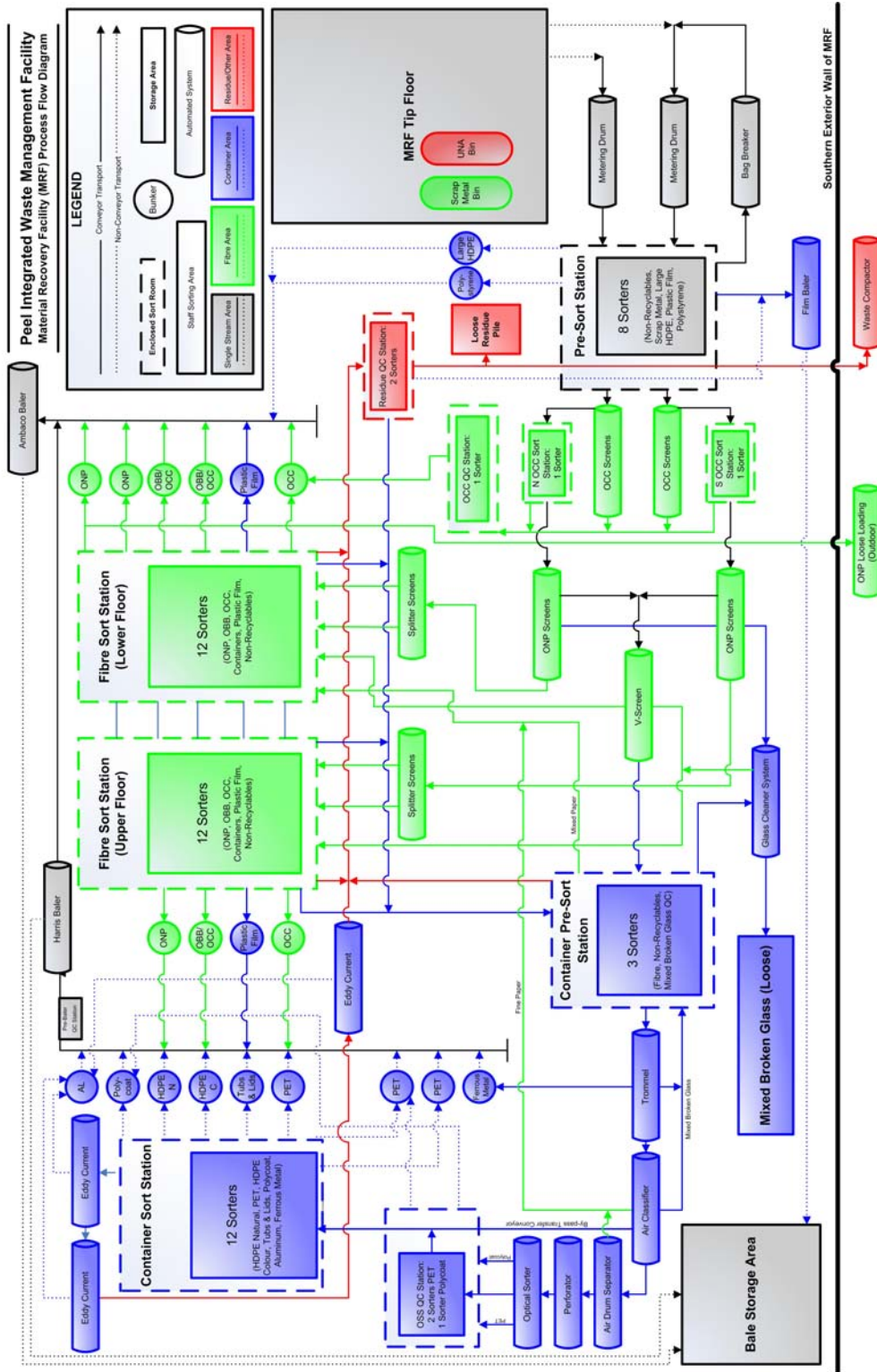
During a 12 month period after completion of the Residue QC station installation, January 2012 to December 2012, the Region marketed an additional 1,086.36 tonnes of recyclable material from the MRF and redirected 514.45 tonnes of mis-sorted recyclable material for proper recovery. This resulted in increased revenues of \$412,966 and decreased residue management costs of \$118,067. In addition, 708.51 tonnes of non-recyclables were removed from other recovered material and redirected to the residue stream. The redirection of this non-recyclable material resulted in increased residue management costs of \$46,606 and decreased revenues of \$57,673. Please see Table 5: QC Station Analysis Summary.

Table 5: QC Station Analysis Summary

Recovered Material		Cost Impact		
Final Location	Tonnage	Residue Disposal	Processing	Revenues
Residue	708.51	\$ 46,606	\$ (61,967)	\$ 57,673
Marketed	2,309.32	\$ (118,067)	\$ 156,980	\$ (412,966)
Totals	3,017.83	\$ (71,461)	\$ 95,013	\$ (355,293)
Savings per Year (\$95,013 - \$71,461 - \$355,293)				\$ (331,741)

Overall, the MRF QC station installation project resulted on a 12 month cost savings of \$331,741. Based on the total project cost of \$392,937.40, the payback for the Residue compactor upgrade project was just over one year and two months.

APPENDIX I – PIWMF MRF Process Flow



APPENDIX II - CIF Project Grant, CIF Project Number 566.11

August 24, 2010

Norman Lee, Director
Waste Management Division
Region of Peel
10 Peel Centre Dr., Suite "A"
Public Works, 4th Fl.
Brampton, ON L6T 4B9

Dear Norman,

**RE: Continuous Improvement Fund Project Approval, Project #566.11 (Best Practices)
Peel MRF QC Station Installation**

This is to inform you that your application to the Continuous Improvement Fund (CIF) for the design and installation of three quality control stations in the Peel Region materials recycling centre has received approval for funding.

The CIF will fund 49% of the project value up to a maximum of \$172,232 (plus 1.8% in lieu of non refundable HST).

A draft of the project agreement is attached for your review and comment. Once you have reviewed the draft agreement, forward any comments to Mike Birett, Manager, who will then provide a final agreement for signing. Please note that the final project agreement will have to be completed and executed prior to the distribution of any funding for the project and that the CIF withholds 25% of the funding until the final report is submitted and approved.

If you have any questions in regards to this project, please feel free to contact Mike Birett at 905.936.5661 or mbirett@wdo.ca.

Sincerely,



Andy Campbell, P.Eng.
Director, CIF

c: Mike Birett, Manager, CIF
Glenda Gies, Waste Diversion Ontario
Frank Daniel, Controller, Stewardship Ontario

CIF PROJECT GRANT

CIF Project Number 566.11

Peel MRF QC Station Installation

TO: The Regional Municipality of Peel (the “Recipient”)

WHEREAS:

A. Waste Diversion Ontario, a corporation incorporated by the *Waste Diversion Act, 2002* (Ontario) (“WDO”), maintains a fund known as the Continuous Improvement Fund, comprised of a portion of the fees paid by stewards under the Blue Box Program Plan, which funds improvements in recycling practices by Ontario municipalities.

B. The Continuous Improvement Fund (“CIF”) is a committee of Waste Diversion Ontario, and has been established through an agreement among the Associations of Municipalities of Ontario, the City of Toronto, Stewardship Ontario and WDO under the Blue Box Program Plan.

C. Stewardship Ontario, a corporation continued under the *Waste Diversion Act, 2002* (Ontario), as custodian of the CIF monies is to provide funding to the Recipient.

D. The Recipient made an application to the CIF, a copy of which is attached hereto as Schedule “A” (the “Application”), for a grant to assist in the cost of installation of a MRF QC Station (the “Project”).

E. The Waste Diversion Ontario and Stewardship Ontario has agreed to provide the grant to the Recipient to assist in financing the cost of the Project as set out below:

1. **Grant**

Based on the Application, WDO and Stewardship Ontario hereby agree to provide an unconditional grant from the CIF to the Recipient in the aggregate amount of 49% of the Project costs up to a maximum of \$175,332, inclusive of any applicable taxes, government levies or governmental imposts of any kind (the “Grant”), to be applied by the Recipient toward the cost of the Project.

The Project shall be carried out by the Recipient in consultation with the Director CIF. The Recipient shall devote a sufficient amount of staff time and other resources to carry out the Project in accordance with the timelines, budget and other parameters set out in the appendices hereto.

2. **Budget**

The Grant is based upon the budget for the development and implementation of the Project set out in Schedule “B” hereto.

3. **Disbursement of Grant**

The Grant will be disbursed by the CIF to the Recipient as the Project progresses, in accordance with the schedule set out in Schedule "C" hereto. The Recipient shall make a written request to the CIF for each disbursement of a portion of the Grant not less than thirty (30) days prior to the proposed disbursement date and will provide such documentation to substantiate each such request as the CIF may reasonably require. Disbursement requests are to be addressed to the Director of the Continuous Improvement Fund at the address noted below. The final disbursement will be issued once the final report for the Project is completed and accepted by the CIF.

4. **No Transfer or Encumbrance of the Project**

The Recipient shall not sell, assign or transfer the Project to a third party nor mortgage, charge or otherwise encumber the Project without the prior written approval of the CIF or repayment of the Grant.

5. **Repayment of Grant**

In the event of any material breach by the Recipient of the terms of the Application which is not remedied within thirty (30) days following written notice by the CIF to the Recipient, the Recipient shall repay all payments received on account of the Grant and WDO and Stewardship Ontario shall be relieved of any obligation to disburse any remaining unutilized portions of the Grant.

6. **Notices**

All notices, requests, demands or other communications (collectively "Notices") by the terms hereof required or permitted to be given by one party to any other party, or to any other person shall be given in writing by personal delivery or registered mail (postage prepaid), by facsimile transmission, or by email to such other party as follows:

Waste Diversion Ontario
4711 Yonge Street, Suite 1102
Toronto, ON M2N 6K8
Attention: Executive Director
Tel: (416) 226-5113 Fax: (416) 226-1368

With a copy to:

Continuous Improvement Fund
92 Caplan Avenue, Suite 511
Barrie, ON L4N 0Z7
Attention: Mr. Andy Campbell, Director CIF
Tel: (705) 719-7913 Fax: (866) 472-0107 Email: andycampbell@wdo.ca

To Stewardship Ontario at:

Stewardship Ontario

1 St. Clair Avenue West, 7th Floor

Toronto, On M4V 1K6

Attention: Mr. Lyle Clarke, VP Policy and Programs

Tel: (416)323-0101 ext. 154 Fax: (416) 323-3185 Email: lclarke@stewardshipontario.ca

To the Recipient at:

The Regional Municipality of Peel

10 Peel Centre Drive, Suite "A"

Brampton, ON L6T 4B9

Norman Lee, Director, Waste Management Division

Tel: (905)791-7800 ext. 4703 Fax: (905) 791-2398 Email: norman.lee@peelregion.ca

Or at such other address as may be given by any such person to the other Parties hereto in writing from time to time.

7. General

- (a) The Parties recognize the importance of making information about the Project available for public use. The Recipient shall cooperate in providing reasonable information on the Project, as directed by the Director CIF, for publication by the CIF on websites, at conferences and in newsletters.
- (b) It is understood and agreed that neither WDO nor Stewardship Ontario has any ownership interest in the Project and neither WDO nor Stewardship Ontario has any responsibility for or liability with respect to the operations of the Project.
- (c) There is no relationship of partnership, agency, joint venture or independent contractor between or among WDO, Stewardship Ontario and/or the Recipient and none of them has any right to bind any of the others to any contractual obligation.

DATED this ____ day of _____, 2011.

STEWARDSHIP ONTARIO

By: _____
Name: Lyle Clarke
Title: VP Operations and Planning

WASTE DIVERSION ONTARIO

By: _____
Name:
Title: Executive Director

ACKNOWLEDGEMENT AND AGREEMENT

The undersigned hereby acknowledges and accepts the Grant on the terms set out above. The undersigned further agrees to indemnify and hold WDO and Stewardship Ontario harmless in respect of any losses, costs, claims, damages or expenses incurred by either of them in respect of the funding or operation of the Project.

DATED this ____ day of _____, 2011.

The Regional Municipality of Peel

By: _____
Name: _____
Title: _____

By: _____
Name: _____
Title: _____

SCHEDULE "A" APPLICATION FOR GRANT

Request for Expressions of Interest for CIF Funding for Priority Projects – FORM 1

FORM 1: APPLICANT GENERAL INFORMATION

Municipality or Program Name:	Region of Peel, Waste Management Division
Project Contact (name and title):	Dave Gordon, Manager
Mailing Address:	10 Peel Centre Drive, Suite A Public Works 4th Floor Brampton, Ontario L6T 4B9
Email Address:	dave.gordon@peelregion.ca
Phone Number:	905-791-7800 ext 4816
Fax Number:	905-791-2398
URL (if applicable):	www.peelregion.ca/waste

Check which project(s) you are applying for:

Best Practices	
<input type="checkbox"/> Waste recycling plans FORM 2	<input type="checkbox"/> Energy efficiency in WM facilities FORM 6
<input checked="" type="checkbox"/> Large curbside containers FORM 3	<input type="checkbox"/> Public space recycling FORM 7
<input checked="" type="checkbox"/> Multi-residential capacity FORM 4	<input checked="" type="checkbox"/> MRF upgrades FORM 11
<input type="checkbox"/> Co-operative marketing FORM 5	<input type="checkbox"/> Transfer station upgrades FORM 11
Innovation	
<input type="checkbox"/> Automated collection FORM 11	<input type="checkbox"/> Multi-residential FORM 9
<input type="checkbox"/> Polystyrene densification FORM 8	<input type="checkbox"/> Small municipality FORM 10

Work through the Form(s) to fill in as many details as you can. Contact a CIF staff member, if/as needed to complete remaining portions. Be sure to review the Form(s) and that you have filled in every field not marked as "Optional" and that all information is complete and correct. Please check which (if any) supporting documentation is attached to this submission that will help describe or support your project.

Request for Expressions of Interest for CIF Funding for Priority Projects – FORM 1

Supporting documentation attached:

- | | |
|---|---|
| <input type="checkbox"/> Collection records | <input type="checkbox"/> Energy Efficiency Report |
| <input type="checkbox"/> Processing records | <input type="checkbox"/> Staff reports (to Council, etc.) |
| <input type="checkbox"/> Contracts, agreements | <input type="checkbox"/> Council resolutions |
| <input type="checkbox"/> WM planning documents | <input type="checkbox"/> Other – please specify |
| <input type="checkbox"/> Other – please specify | <input type="checkbox"/> Other – please specify |
-

Dated at Brampton this 22 day of March .2010.

I/We have the authority to bind the Corporation

Norman Lee
(Name of Respondent)


(Signature of Authorized Signing Officer)

Director, Waste Mgmt
(Position)

FORM 11

Work through the Form to fill in as many details as you can. Contact a CIF staff member, if/as needed to complete remaining portions.

Section 1 – Form 11 Details

1. Which CIF priority project is being applied for (choose one)?

- MRF Upgrade
- Transfer Station
- Automated Collection

2. Project Description: What are the key features of the project? How will it increase system efficiency and/or effectiveness? (Tip: Add your initial thoughts, then complete the remainder of the Form, and come back to finish this response.)

The Peel Integrated Waste Management Facility (PIWMF) MRF Upgrades projects consists of three smaller projects:

1. Installation of a Residue Quality Control Station
The Residue QC station will allow the contractor to achieve the recovery rates set out in the contract, which will then decrease amount of residue shipped and lowering Peel's overall cost. This platform would have 2 blowers, one for film plastic which would be sent directly to the dedicated baler, and the other for the remaining container material which would be blown to a conveyor that feeds into the trommel.
2. Installation of a OCC Quality Control Station
The OCC QC will decrease the amount of (cross) contamination in the OCC and allow the cross contamination to be directed into the appropriate area –either the ONP bunker or Residue line, where there is further recovery mentioned above.
3. Installation of a Baler Quality Control Station
The Baler QC would increase the quality of our material, possibly allowing for increased revenues, and directing the cross contamination back onto the tip floor and the non-recyclable material into the residue. This would not a full time position, this would be utilized when certain products (i.e. aluminium) was being baled.

3. Which element(s) of your recycling program does this project address (pick up to 2)?

- Single family
 - Multi-family
 - All residential
 - Best Practices
 - Innovation
 - Technology/Capital Efforts
 - Hard-to-Market/New Materials
 - Other (please specify):
-

Request for Expressions of Interest for CIF Funding for Priority Projects – FORM 11

Section 2 – Blue Box Program Costs & Cost-Effectiveness

When this project is fully implemented (i.e. completely operational), how will it affect your blue box program costs and costs per tonne?

1. When the project described in this form is complete, how will this affect your net annual blue box program costs (choose one)?

- Increase
- Decrease
- Stay the same

2. How much will your program costs change as measured in \$/year?

For the Residue Quality Control Station only, program costs will be reduced by approximately \$175,000/year.

3. When the program described in this Form is complete, how will it affect your blue box program's cost-effectiveness (i.e. cost per tonne of marketed recyclables) on an annual basis (choose one)?

- Increase
- Decrease
- Stay the same

4. How will you monitor and measure project effects on your program's cost-effectiveness?

The projects effects on the program's cost-effectiveness will be monitored by conducting pre and post implementation material audits of affected process streams in conjunction with revenues received for the affected marketed materials.

Comments (optional):

Section 3 – Blue Box Diversion

What effect will this project have on your program's overall blue box diversion (i.e. tonnes of blue box materials sent to market)?

1. When the project described in this Form is complete, what will happen to your blue box program's diversion (choose one)?

- Increase
- Decrease
- Stay the same

Request for Expressions of Interest for CIF Funding for Priority Projects – FORM 11

2. Please state the expected change in the volume of material marketed as a result of the project.

It is estimated that an additional 2,000 tonnes/year of materials will be marketed as a result of the project.

Comments (optional):

Section 4 – Program Improvements and Regionalization Benefits

What other effects will this project have on your program or on other communities? Use this section to describe whether you plan to work with other communities to develop and deliver the project, how the costs/savings might compare with other similar undertakings.

1. Will the proposed project (please select all that apply):

- help your program adapt to changes in the material mix (i.e. manage seasonability, prepare for future materials)?
- process new materials?
- be transferable to other communities?
- none of the above

2. What other effects will this project have (optional)?

3. Will you work with other municipalities/partners to develop and deliver this project?

- Yes No

If no, please explain why not:

This project is specific to the Peel MRF and does not require other municipalities to develop it. It is an implementation of well-known best practices.

If yes, what municipalities will you work with and how will they benefit?

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4. What stage are you at in planning your work with other municipalities? Please select your choice below to respond.

- | | |
|--|--|
| <input type="checkbox"/> preliminary discussions | <input type="checkbox"/> awaiting council approval |
| <input type="checkbox"/> draft agreement | <input type="checkbox"/> agreement in place |
| <input type="checkbox"/> other: _____ | |

Comments (optional):

Section 5 – Project Costs and Payback Period

How much will it cost to implement the project and how long is its expected payback period?

1. What is the total cost of completing the proposed project? \$240,000
2. What is the total funding request to CIF? \$120,000
3. What is the project payback period for CIF support (in years)? 1 year

Comments (optional):

Section 6 – Project Management and Implementation

In this section, provide as much information as you can about project management, timing and monitoring.

1. Please identify staff and consultants who will be responsible for this project.

Project Manager

Name: Kevin Mehlenbacher

Title: Supervisor, Waste Collection and Processing

Affiliation: Region of Peel

Role in project: Project Manager

Related experience: _____

2. Additional project team members: please identify key staff/consultants, their roles and related experience (optional).

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3. Project Timing: Upon project approval, how soon can this project be ready to start-up? Please select your choice below to respond.

- budget approved by council & project underway
- budget approved by council; project not yet started
- awaiting budget and/or council approval
- Other, please describe: _____

Comments (optional):

4. How many months will it take to complete the proposed project from start to finish? 5 months

**SCHEDULE "B"
BUDGET**

Carr Industrial Inc.
493 Elgin Street, Units 1&2
Brantford, Ontario N3S 7X3

July 19, 2010

Waste Management
7795 Torbram Road
Brampton, Ontario L6T 0B6
Fax (905) 799-7351

Attention: Mr. Bill Waddell

Quote # 8718

Thank you for the opportunity to quote on this project.

The following is a Quotation to Fabricate one (1) OCC Quality Control Platform.

Quality control platform to be accessed by a ladder from existing walkway. Hand railing to be cut and ladder installed down to quality control platform area. One 8" step to lower working platform to reach a work friendly elevation. Conveyor side skirt cut out and all edges capped. A 24" wide x 42' long goose neck conveyor installed at work station to transfer news to # A bunker. All railing to match existing. One tie-off point included.

Electrical
Included:

- Install 1 new E-stop push button to conveyor 9B circuit
- Install 2 new florescent lights complete with switch- with option of enclosure
- Install 1 new dedicated 120 VAC receptacle back to new Pony Panel
- Install over load breaker and starter in MCC2 c/w interlocks for conveyor motor
- Install wiring back to MCC2 to control quality take away conveyor

Enclosure

Supply and install one new 4 sided enclosure measuring 5' x 10' x 10' high consisting of Kingspan polyurethane panels KS45-2 3/4" clad in 26 gauge galvanized steel baked enamel SMP white complete with:

- 1 x galvanized hollow metal doors with passage hardware
- 2 x 5/8" O.A. tempered thermal pane window

Total Quotation\$ 66,875.00

- Installation is based on at overtime rate
- Quote is valid for 30 days
- All applicable sales taxes are extra
- Terms Net 30 days, 2% on overdue accounts, 24% per annum
- Payment options: cheque or direct deposit

Carr Industrial Inc.
493 Elgin Street, Units 1&2
Brantford, Ontario
N3S 7X3

June 9, 2010

Waste Management
7795 Torbram Road
Brampton, Ontario
L6T 0B6
Fax (905) 799-7351

Attention: Mr. Bill Waddell

Quote # 8676

Thank you for the opportunity to quote on this project.

The following is a quotation to Fabricate one (1) Harris Baler Feed Conveyor – Quality Control Platform.

Platform to be installed on south side of feed conveyor accessible from lower platform area. Catwalk leading to first sort station on incline section with small elevation ladder to access second sort station. Conveyor side skirting modified to allow for access doors for both stations. Each sort station to include one E-stop push button from existing conveyor E-stop circuit and one tie off point to meet safety regulations. Each sort station also complete with one 12” x 18” chute leading down to lower area with rubber extension skirting. All structure primed and painted to match and all structure engineered with stamped drawings provided. Installation and CP programming included.

Total Quotation\$ 26,150.00

- Detailed layout drawings must be approved if project is awarded
- Installation is based at overtime rate
- Quote is valid for 30 days
- All applicable sales taxes are extra
- Terms Net 30 days, 2% on overdue accounts, 24% per annum
- Payment options: cheque or direct deposit

Carr Industrial Inc.
493 Elgin Street, Units 1&2
Brantford, Ontario
N3S 7X3

August 5, 2010

Waste Management
7795 Torbram Road
Brampton, Ontario
L6T 0B6

Attention: Ms. Leigh-Anne Marquis

Quote # 8738

Thank you for the opportunity to quote on this project.

The following is a Budget Quotation to Fabricate one (1) Residue Quality Control Platform and Design.

Quality control sort station to be installed on residue conveyor between Ambaco feed conveyor and second sort bunk. Structure designed to allow lift truck traffic through to mezzanine area beneath. Access to sort room off existing walkway. Removing section of handrail to access stairs down to catwalk section to enter sort room station. Sort room designed for four sorters picking film and recycling material. Two conveyors required to move recycling material back to system for re-run. Pneumatic conveyor with two suction hoods to move film to bunker area.

Enclosure

Supply and install one new 4 sided enclosure measuring 9' x 15' x 10' high consisting of Kingspan polyurethane panels KS45-2 3/4" clad in 26 gauge galvanized steel baked enamel SMP white complete with:

- 1 x galvanized hollow metal doors with passage hardware
- 3 x 5/8" O.A. tempered thermal pane window
- 2 x 4' wide x 5' high cut-outs on either end

Pneumatic conveyor systems selected for project. Kongskilde Industries quoted based on engineered system provided per request of this project. Highly used in this industry please note flow drawing line.

Total price includes 2 silencers and 1 acoustic booth for MTK300 blower as shown on flow diagram.

Electrical

Included:

- Install 2 new E-stop pull cord to conveyor 9B circuit
- Install 3 new florescent lights complete with switch
- Install 3 new dedicated 120 VAC receptacles back to Pony Panel
- Install over load breaker and starter in MCC2 c/w interlocks for 3 motors
- Install lock out motor disconnect at blower motor and conveyor motors
- Install wiring back to MCC2 to control 2 conveyors and qty 1 – 30 HP for pneumatic conveyor

Included for all stations:

- Install new remote rack for Siemens PLC in MCC2 to allow programming of breaker / overload interlocks
- Install new Pony Panel beside pre-sort 120/208 3 PH panel (for receptacle installation)
- CP Manufacturing to program all changes to PLC and touch screens
- All labour quoted at overtime
- ESA inspection

Not Included:

- Any fire sprinkler system rework to meet building code

Total Budget Quotation\$ 201,087.00

- Engineered drawing will be supplied for all structural work
- Detailed layout drawings must be approved if project is awarded
- Installation is based at overtime rate
- Quote is valid for 30 days
- HST is extra
- Terms Net 30 days, 2% on overdue accounts, 24% per annum
- Payment options: cheque or direct deposit



September 27, 2010

Region of Peel
7795 Torbram Road
Brampton, Ontario
L6T 0B6

Attention: Leigh-Anne Marquis

Subject: Pricing for Continuous Improvement Construction Projects.

Dear: Leigh-Anne

As per earlier discussions and emails this letter is to confirm that Waste Management will charge the Region of Peel, Waste Managements cost from Carr Industrial plus a 20% administration fee and appropriate taxes (HST) for the above referenced work.

The expected fee to the Region of Peel will be \$398,815.87. This is broken down as follows:

- Total cost quoted for the three Quality Control Stations (quote #'s 8718,8676,8738); \$294,112.00
- 20% administration fee of \$58,822.40
- 13% HST ; \$45,881.47

Any additional work required to complete the three jobs listed above, will also be subject to a 20% administration fee plus taxes.

Yours Truly

A handwritten signature in black ink, appearing to read 'Bill Waddell', is written over the 'Yours Truly' text.

Bill Waddell
Plant Manager
Waste Management of Canada Corporation



SCHEDULE "C"
DISBURSEMENT OF GRANT

The Grant will be disbursed as follows:

Deliverables	Tasks / Description	Anticipated Completion Date	WDO Grant Contribution (including taxes)
#1 Proof of purchase	<ul style="list-style-type: none">- Documentation confirming all capital expenditures have been incurred in connection with the procurement of the associated QC stations and enclosures as outlined in Schedule B.	February 14, 2011	\$87,666 (50% of funding)
#2 Proof of Commissioning	<ul style="list-style-type: none">- Photos demonstrating substantial completion of construction of the three QC stations contemplated under this agreement.- Completion of equipment start up and performance testing.- Peel will provide documentation certifying that the QC stations commissioning meets the installation and testing specifications as per the design requirements.	February 14, 2011	\$43,833 (25% of funding)
#3 Monitoring, data analysis, final report and project evaluation	<ul style="list-style-type: none">- Completion of performance monitoring as agreed to between the CIF and Peel as noted in attached Appendix- Submission of final report summarizing Project, including performance, impact and learnings- Complete CIF project evaluation form in conjunction with WDO	February 28, 2012	\$43,833 (25% of funding)
TOTAL GRANT			\$175,332

Appendix

CIF Project #566.11 Monitoring & Reporting

1. Peel Region shall cooperate fully, at its own cost, with the CIF and its representatives in the completion of the monitoring and reporting activities outlined in this appendix.
2. Monitoring of this project will include, but not be limited, to:

Phase 1 – Construction & Monitoring

- Provision, by Peel Region, of a project schedule and budget.
- Updates to the project schedule and budget as required.
- Explanations for any deviations from the schedule and budget to the satisfaction of the CIF.

Phase 2 – Operations

- A completed report delivered to the CIF for posting on the CIF web site. The report will detail the operational activities associated with the QC stations over the first twelve (12) months of operation and shall include, but not be limited to, the following:
 - Quarterly monitoring and reporting over the first year of the new stations' operations as outlined by Peel staff (email communications: L.Marquis to M.Birett - 0941 hrs July 28, 2010) and consistent in approach and duration with Peel's existing monitoring activities. The reports will be shared with both CIF and Waste Diversion Ontario as required.
 - Additionally, each of the four monitoring sessions will include, but not be limited to, the following:
 1. Documenting any difference in labour from that initially proposed.
 2. Determining processing savings related to use of the new stations including a break down that shows the difference between budgeted and real costs for installation and operation.
 3. Identification and documentation of any materials or events that prove to be problematic.
 4. Documenting any maintenance and health and safety issues related to the operation, including lost time in the period since the last report.
 5. Reporting on feedback from markets regarding the quality and value of the materials received in the period since the last report.
 6. Other information relevant to the current effective and efficient operation of the facility.