

# Eddy Current Sorting System CIF Project #138 - 3

## Phase 1



Placing Eddy Current into plant  
June 19, 2009



Delivery of DINGS 91 Series  
Eddy Current  
June 17, 2009



New UBC Bunker  
June 10, 2009



Cutting hole for garbage conveyor  
June 19, 2009



Placement of garbage  
conveyor  
June 19, 2009



Garbage conveyor and bin  
June 22, 2009



Eddy Current in place and running  
June 22, 2009



Overhead view of Eddie Current in operation



Above shows the additional conveyor for steel. Originally the steel was to drop into these bins which would be located next to the Eddie Current machine. Due to lack of space, this conveyor was added to the project.

## CIF Project #138 Cost Analysis

	<u>Budget</u>	<u>Actual</u>	<u>Additional Costs to Project: (above budgeted)</u>	
Eddie Current Machine	58,405.00	90,266.40	Aluminum Conveyor	\$8,856.00
Labour to install Eddie Current	36,195.00	24,341.89	Steel Conveyor	\$6,971.40
Modification to existing building	17,000.00	25,643.36	Steel Bunker	\$4,800.00
Total	<u>\$111,600.00</u>	<u>\$140,261.65</u>		

*These two conveyors had to be added to the project because of the size and space available for the Eddie Current machine.*

## Phase 2

### CIF Project #138 Cost Savings

#### Final Review of Eddy Current Machine -

-Reduction in Labour (annual) - 1 person less for sorting	\$32,385.60
-Processing Savings - 2 people, 1 hr to bale UBC to 1 person 10 min to bale	\$ 8,994.03
1 person, 1 hr-garbage off each bale UBC	\$ 5,580.00
loading time from 1.5 hrs to .75 hr	\$ 210.00
	<u>\$47,169.63</u>

- The belt on eddie current was had to be replaced due to a manufacturer's defect (warranty item)
- Down time while belt was being replaced was 1 day
- There are no health and safety concerns related to the operation of the Eddy Current
- Maintenance Required for machine - routine greasing and inspection



Above shows the bunker built to keep rain and snow off steel.

# Phase 3

## *CIF Project #138 Summary*

### Background Information

The purpose for applying for this funding was to improve the quality of the UBC (used beverage containers) being processed at our MRF. The previous system was very labour intensive, which resulted in having an extra person on our sort system. When the UBC was to be baled, two people would spend an hour sorting out garbage that was missed on the sort line, then 1 person would have to inspect each bale as it was loaded on the trailer and pick off any garbage that was missed from the sort system and the two people picking it out on the way to the baler. High quality for our UBC is vital to our organization. Revenue received from this product accounts for 23% of our total commodity revenues while it is only 2.5% of total tonnes collected.

### Monitoring Sessions Results:

The following are the results of the monitoring sessions:

1. One less person required on the sort line
2. Baling UBC went from 2 people for 1 hour per bale to one person for 10 minutes per bale;
3. Loading time was reduced from 1.5 hrs to .75 hr
4. The elimination of one person for one hour picking off garbage as the material is loaded on the trailer to be sent to the end market.

### Summary

Overall, this has been a worthwhile project for the operations and quality of the material processed at the MRF. The quality of both the UBC and Steel has improved tremendously. The speed of processing the recyclable material has increased. The Eddie Current has enabled increased production levels. Without the CIF project, we may not have been able to do the modifications for the MRF. We would like to thank the CIF and the WDO for their assistance with this project.