

Millar Western Forest Products Ltd.

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# Notice of Creation of Offset Credits Pulp Mill Gas Usage Reduction Initiative

January 2010




## GHG ASSERTION FOR MILLAR WESTERN'S GAS-USAGE REDUCTION INITIATIVE

## NOTICE OF CREATION OF EMISSION REDUCTION CREDITS

<b>Project Developer:</b>	
	<p>Millar Western Forest Products Ltd.</p> <p>16640 – 111 Avenue</p> <p>Edmonton, Alberta</p> <p>T5M 2S5</p>
Company Contact:	Jack Joys
Telephone:	780-486-8263
Fax:	780-486-8284
Email:	jjoys@millarwestern.com
<b>Project:</b>	
Project Name:	<b>Millar Western Gas Usage Reduction Initiative Project</b>
Project Description	<p>Millar Western began to explore ways to reduce its energy usage in 2003, starting with an energy efficiency review of its Whitecourt pulp mill. A full mill energy balance study was followed by a pinch analysis led to a gas reduction initiative composed of four elements focused on the increased use of low-grade waste heat to offset the use of natural gas in the mill's boiler and flash dryers:</p> <p><b>Element 1: Line Installation from Heat Recovery Condensate to Steam Cyclones</b> - involved the installation of new pipes from the heat recovery condensate to the steam cyclone. This modification caused less steam to condense in the cyclones and made more steam available to the steam header, thus reducing the need for make-up steam from the boiler.</p> <p><b>Element 2: Piping Change to Channel Heat to Chip Washers</b> - involved improving the use of waste heat to soften wood chips in preparation for refining. Before the element was implemented, wash water flowed to the chip washer through 621FC023 and 641FC025, with additional chip heating provided by an unmeasured steam flow at the APS 1 bin. A piping change allowed greater quantities of hot condensate to flow from the bottom of the heat recovery stack to the chip washers. The added heat eliminated the need for steam at the APS 1 bin, allowing for a reduction in steam generation from the package boiler.</p> <p><b>Element 3: Mill Effluent Heat Extraction</b> -, the pulp mill installed two additional heat exchangers to extract heat from the mill's effluent for the purposes of heating chemical dilution water and providing impregnation level make up water and boiler feed water, thus reducing demands on the</p>

	boiler.  <b>Element 4: Air Pre-heating for Flash Dryers</b> - involved adding a glycol to air heat exchanger on the make-up air on each of the mill's two flash dryers, one on each production line. The glycol is heated using low-pressure waste steam from the heat recovery stack made available by Element 3 and is used to heat dryer make up air and provide space heating. A control system was also installed to measure mill block heating requirements. Any remaining heat is made available for use by the dryer make up air pre-heater.
Project Location:	All four elements making up the pulp mill gas usage reduction initiative are located at Millar Western's bleached-chemi-therm-mechanical pulp (BCTMP) mill, located in Whitecourt, Alberta.
<b>Project Documentation:</b>	
Project Report Title:	Pulp Mill Gas Usage Reduction Initiative, Version 1
Project Report Date (GHG Assertion Date):	November 13, 2009.
<b>GHG Emission Reductions:</b>	
Emission Reduction Creation Period - dates covered by the GHG assertion and reporting, separated by each unique vintage year.	Quantity - total quantity of verified emission reductions being claimed expressed in tonnes of carbon dioxide equivalent (t CO <sub>2</sub> e)
2005	Project 1: 28 Project 2: 1,614 Project 3: 1,342 Project 4: <u>1,188</u> Total: 4,172
2006	Project 1: 138 Project 2: 4,311 Project 3: 2,489 Project 4: <u>3,257</u> Total: 10,195
2007	Project 1: 153 Project 2: 3,624 Project 3: 2,463 Project 4: <u>3,535</u> Total: 9,775
2008	Project 1: 142 Project 2: 0 Project 3: 2,323 Project 4: <u>3,391</u> Total: 5,856
2009	Project 1: 174 Project 2: 0 Project 3: 1,959 Project 4: <u>3,411</u> Total: 5,544
<b>Total Quantity of Verified Emissions for Reporting Period</b>	<b>35,542 tonnes CO<sub>2</sub> e</b>

I am a duly authorized corporate officer of the Project Developer mentioned above and have personally examined and am familiar with the information submitted in this Assertion Statement, the accompanying Project Documentation on which it is based. Based upon reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, I hereby warrant that the submitted information is true, accurate and complete to the best of my knowledge and belief, and that all matters affecting the validity of the emission reduction claim or the protocol upon which it is based have been fully disclosed. I understand that any false statement made in the submitted information may result in de-registration of credits and may be punishable as a criminal offence in accordance with provincial or federal statutes.

Date	January 13, 2010
Signature	
Name	Craig Armstrong
Title	Executive Vice-President and Chief Operating Officer