



KPMG Performance Registrar Inc.

Box 10426, 777 Dunsmuir Street
Vancouver BC V7Y 1K3
Canada

Telephone (604) 691-3000
(604) 691-3401
Telefax (604) 691-3031
www.kpmg.ca

Bruce Love
CEO / President
Preferred Carbon Land Management Solutions Ltd.
Box 122
16 Midlake Boulevard SE
Calgary, AB T2X 2X

March 30, 2012

Dear Mr. Love:

Re: Verification Report for the Bonavista Acid Gas Injection Project

Our Verification Report for the Bonavista Acid Gas Injection Project is attached. The verification report documents the results of the verification that took place during the period March 15, 2012 – March 30, 2012.

We value the ongoing working relationship that we have with Preferred Carbon Land Management Solutions Ltd. (Preferred Carbon), and appreciate the assistance provided to the verification team by Preferred Carbon staff during the verification process.

If you have any questions regarding the results of the verification please call me at the number listed below.

Yours truly,

Michael Armstrong, CA
Verification Team Leader
KPMG Performance Registrar Inc.
Vancouver, BC
(604) 646-6389
Email: michaelarmstong@kpmg.ca

Enc: Verification Report for the Bonavista Acid Gas Injection at South Rosevear Project.



**Verification Report for the
Preferred Carbon Land Management Solutions Ltd.
Bonavista Acid Gas Injection at South Rosevear
Project**

March 30, 2012

The information in this report is confidential and may be legally privileged. It is intended solely for the use of the intended recipients, Preferred Carbon and Alberta Environment and Water. Access to this report by anyone else is unauthorized. If you are not the intended recipient, any disclosure, copying, distribution or any action taken or omitted to be taken in reliance on it, is prohibited and may be unlawful. Any opinions contained in this report are subject to the terms and conditions expressed in the governing KPMG PRI client engagement contract.



Table of Contents

A. Verification Body Details	1
B. Client Information.....	1
C. Verification Details.....	1
D. Verification Findings	4
E. Verification Statement	9

A. Verification Body Details

Name:	KPMG Performance Registrar Inc.
Address:	777 Dunsmuir Street PO Box 10426 Vancouver BC V7Y 1K3
Contact Information:	Phone: 604 691 3088 Fax: 604 691 3031 Website: http://www.kpmg.com/Ca/en/WhatWeDo/SpecialInterests/PerformanceRegistrar/Pages/Greenhouse-Gas-Validation-and-Verification-Services.aspx
Accreditation Agency:	American National Standards Institute
Accreditation ID:	#0746
Status of Accreditation:	In good standing

B. Client Information

Client Name:	Preferred Carbon Land Management Solutions Ltd.
Client Representative and Contact Details:	Bruce Love, CEO / President Preferred Carbon Land Management Solutions Ltd. Box 122, 16 Midlake Boulevard SE Calgary, AB T2X 2X 403-454-7905 blove@preferredcarbon.com Website: http://preferredcarbongroup.ca/
Location:	The South Rosevear Gas Plant is located at LSD 16-11-54-15 W5. The acid gas injection well is located at LSD 8-11-54-15 W5.

C. Verification Details

Verification Standard:	ISO 14064 Part 3
Verification Criteria:	<ul style="list-style-type: none"> • Climate Change and Emissions Management Act • Specified Gas Emitters Regulation • Alberta Environment Technical Guidance of Offset Project Developers (Version 2.0, January 2011) • Quantification Protocol for Acid Gas Injection, Version 1, May 2008 (The Protocol)
Level of Assurance:	Limited assurance
Verification scope:	The scope of the verification is the net offset credit generation described in the Bonavista Acid Gas Injection at South Rosevear Project Report for the period January 1, 2010 to December 31, 2011. As identified in the project plan, this is a verification of the



	following pre-existing project: "Suncor South Rosevear Acid Gas Injection Offset Project, CSA Project Identifier #2959-5549" Project Start Date: March 5, 2007. Credit Start Date: March 5, 2007. Credit Duration Period: March 5, 2007 to March 4, 2015.
--	--

Verification date:	Verification planning and document review: March 15 to 19, 2012 On-site Verification: March 20 to 21, 2012 Verification Completion and Reporting: March 22 to 30, 2012
Materiality:	Alberta Environment has set a quantitative materiality of 5% of the reported offset credit.
Verification procedures:	<p>The main elements of our examination were as follows:</p> <p>In relation to project eligibility and ownership:</p> <ul style="list-style-type: none"> • Review data supporting project start date and eligibility in the project plan; and, • Review applicable operating permits. • Review agreements and documentation supporting ownership of the offsets. <p>In relation to quantification of GHG emission reductions:</p> <ul style="list-style-type: none"> • Comparison of baseline and project emission calculations to the required methodologies in the protocol; • Agreement of a sample of emission factors to supporting documentation to ensure conformance with the relevant methodology; • Tracing data disclosed in the project report back to the associated source records; • Review meter calibration records ; and, • Re-performance of a sample of calculations to ensure conformance with relevant methodology.
Site Visit Details:	<p>The on-site portion of this verification occurred March 21, 2012 at the Bonavista Acid Gas Plant at South Rosevear, AB.</p> <p>During the site visit, KPMG toured the gas plant. In addition, KPMG reviewed the operating system and tracking processes with management for this project.</p>
Multi-site sampling:	N/A
Inherent limitations in our report:	<p>Greenhouse gas emissions data are subject to inherent limitations. Differing measurement techniques and assumptions associated with fuel use can result in materially different emission reduction estimates. The Quantification Protocol for Acid Gas Injection (Version 1, May 2008) provides prescribed methods for calculating emissions based on assumptions and available estimates.</p> <p>Our verification was designed to assess the project report against the requirements of the protocol and any inherent uncertainty in the protocol assumptions remains outside the scope of the verification.</p>

Verification team:	Lead verifier: Michael Armstrong Team member: Phil Ludvigsen Team member: Myriame Gabay Technical Reviewer: Chris Ridley-Thomas
Report distribution:	<ul style="list-style-type: none"> • Preferred Carbon Land Management Solutions Ltd. • Alberta Environment and Water • KPMG PRI verification files Any further distribution of the verification statement by Preferred Carbon must include the complete verification statement and associated greenhouse gas assertion.
Confidentiality requirements:	Except as required by law, a legal or judicial process, a professional duty and the requirements of our accreditation, KPMG, will treat as strictly confidential any information which comes into the possession of its officers, directors, employees or agents in the course of conducting the verification of Preferred Carbon Land Management Solutions Ltd.'s Greenhouse Gas assertion.

D. Verification Findings

Project eligibility

KPMG assessed the eligibility of the project against the Alberta offset eligibility criteria. Key findings were:

Eligibility Criterion	Findings
<i>Result from actions taken on or after January 1, 2002</i>	The project condition was implemented after January 1, 2002.
<i>Real, demonstrable, and quantifiable</i>	The resulting emission reductions are demonstrably quantified in the Project Report.
<i>Only counted once for compliance purposes</i>	This project and the resulting emission offsets are unique, apply to specific years, and will only be listed once.
<i>Have clearly established ownership.</i>	Preferred Carbon has established clear and legal ownership of all GHG emission reductions created during the period covered by the project report.
<i>Project approval received from the ERCB.</i>	The ERCB granted approval originally to Suncor Energy Inc, Approval No. 10738. This approval was subsequently transferred to Bonavista Energy Corp via Transfer Approval No. 1353-02-00. Throughout the project, acid gas has been injected in accordance with the requirements of the permit into the single well located at LSD 8-11-54-15 W5 and uniquely identified as 00/08-11-054-15W5/2. All breakthrough at producing wells have been identified and reported in accordance with regulations and permit requirements.
<i>The installation of an acid gas injection</i>	The South Rosevear Gas Plant commenced

Eligibility Criterion	Findings
<p><i>project was made at one of the following:</i></p> <p>a) <i>An existing sour natural gas processing facility which commenced operations prior to July 1, 2007, which may either have an operational sulphur recovery unit (i.e. Multi-Stage Claus or Liquid Redox) or may directly incinerate the acid gas stream.</i></p> <p>b) <i>Any new natural gas processing facility constructed after July 1, 2007 with total facility GHGs output in the first year of operation, inclusive of any CO₂ that has been captured and sequestered, less than the identified coverage threshold on direct emissions as defined by the Specified Gas Emitter Regulation. Therefore acid gas injection projects applying this protocol at natural gas processing facilities commissioned after July 1, 2007 must also have total baseline emissions, calculated as per Table 2.4 of this protocol, less than the identified coverage threshold for direct emissions as defined by the Specified Gas Emitter Regulation.</i></p>	<p>operations prior to July 1, 2007 and baseline emissions are less than 100,000 tonnes CO₂e per year as set out in the SGER.</p>
<p><i>Metering of injected gas volumes takes place close to the injection point.</i></p>	<p>Metering of injected acid gas volumes occurs at the inlet side of the acid gas compressors. The acid gas compressors discharge compressed acid gas via a pipeline approximately 600 meters to the injection well. Given the extreme toxicity of H₂S, fugitive emissions are strictly monitored and controlled.</p>
<p><i>Implemented according to a Government of Alberta-approved quantification protocol.</i></p>	<p>Preferred Carbon implemented the project according to the Quantification Protocol for Acid Gas Injection (Version 1, May 2008) which is a Government of Alberta-approved quantification protocol except as noted below in the GHG Assertion section.</p>
<p><i>The sequestration project results in removal of emissions that would otherwise have been released to the atmosphere as indicated by an affirmation from the project developer and project schematics.</i></p>	<p>Preferred Carbon affirms the sequestration project results in removal of emissions that would otherwise have been released to the atmosphere in the baseline condition.</p>
<p><i>Where the entities/operations are separate and distinct, the emissions reduced are captured under the protocol and will be reported as being emitted at the source</i></p>	<p>Bonavista Petroleum who is the majority owner of the South Rosevear Gas Plant, has transferred ownership of the GHG reductions from this project to Preferred Carbon.</p>

Eligibility Criterion	Findings
<i>facility such that the emission reductions are not double counted.</i>	
<i>The consolidation or comingling of acid gas streams from multiple emitting facilities during the project's crediting period must be fully accounted for to ensure that each individual emitting facility is eligible to apply this protocol based on the above criteria. The metering and measurement systems implemented for the acid gas injection project activity should allow for disaggregation of the total baseline and project emissions back to the original emitting facilities.</i>	The South Rosevear Gas Plant does not receive any acid gas from other gas processing facilities.
<i>The quantification of reductions achieved by the project is based on actual measurement and monitoring (except where indicated in this protocol) as indicated by the proper application of this protocol.</i>	The Bonavista Acid Gas injection project follows the Protocol.
<i>Occur in Alberta</i>	The project is assured to have occurred in Alberta since all GHG offsets created are linked directly to legal surveyed descriptions (LSDs) unique to the Province.
<i>Result from actions not otherwise required by law and be beyond business as usual and sector common practices</i>	Project activities are the result of voluntary actions taken. The project condition is not required by law.
<i>Be third party verified by a qualified person(s) meeting the requirements for a third party auditor under section 18 of the Regulation</i>	Preferred Carbon has contracted KPMG PRI and confirmed their qualifications meet the requirements of the Regulation.
<i>Be registered on the Alberta Emissions Offset Registry</i>	This project and resulting emissions reductions will only be listed with Alberta Emissions Offsets Registry (AEOR).
<i>The project must meet the requirements for offset eligibility as specified in the applicable regulation and guidance documents for the Alberta Offset System</i>	The Project meets all requirements for GHG offset eligibility as set out in both regulation and project guidance.

Monitoring Process

The monitoring plan for project data information and management systems addresses input data collection, data entry, quality control and quality analysis, quantification of Project GHG emission reductions, record storage, and transparency to verifiers. KPMG performed tests over the calculation of this data. Additional information about the Preferred Carbon monitoring process can be found in Section 5.0 Monitoring Plan of the Project Plan.

Summary of GHG Calculation methods and assumptions

The GHG offset calculation follows the requirements established by Alberta Environment and Water in the *Alberta Environment Specified Gas Emitters Regulation Quantification Protocol for Acid Gas Injection, Version 1, May 2008* and related guidance documents.

The GHG project, including calculation methods, assumptions, monitoring process and process flows, is described in detail in the following documents:

- Offset Project Plan – Bonavista Acid Gas Injection at South Rosevear – January 2012
- Offset Project Report – Bonavista Acid Gas Injection at South Rosevear – March 2012

Baseline condition

The baseline condition for projects applying the *Alberta Environment Specified Gas Emitters Regulation Quantification Protocol for Acid Gas Injection, Version 1, May 2008* is defined as the mass of carbon dioxide that would be released to the atmosphere during incineration of the tail gas (acid gas) from a Liquid Redox Process or Multi-Stage Claus unit at a natural gas processing facility or from the direct incineration of this acid gas stream. In addition, emissions associated with fuel gas consumption to operate the Liquid Redox Process or Multi-Stage Claus unit, or other sulphur recovery process and the tail gas incinerator are included in the baseline emissions.

The baseline condition for this specific Project is the continued operation of a three bed Claus unit and the direct and indirect emissions associated with its operation. The baseline is dynamic as the volume and composition of the acid gas produced varies significantly over time.

Project condition

This project is based on the GHG reductions created as a result of a change in the processing of acid gas at the South Rosevear Gas Plant. In particular, the Sulphur Recovery Unit (SRU) previously in operation at the facility was replaced with an acid gas injection scheme. The project captures and permanently sequesters the acid gas stream that previously was processed by an SRU. The project also eliminates the previous requirement to incinerate a significant amount of tail gas from the SRU, further reducing GHG emissions from the baseline.

GHG Emission Reductions

Emission reductions are created as a result of:

- Permanent sequestration of acid gas containing significant amounts of CO₂ in a well defined geological formation.
- Elimination of the requirement for incineration of the tail gas stream from the SRU resulting in significant reductions in the consumption of fuel gas and associated GHG emissions.

Flexibility Mechanisms Employed from the Quantification Protocol

Two flexibility mechanisms available in the quantification protocol were employed in the Project:

- Flexibility Mechanism 1 from the Protocol - simulation of the multi-stage Claus process and related tail gas incineration. Flexibility mechanism 1 was selected on the basis that it

would allow a more accurate and conservative calculation of GHG emission reductions in the project relative to the baseline methodology, while remaining consistent with the basis of the previous GHG offset project at the South Rosevear Gas Plant.

- Flexibility Mechanism 3 from the Protocol - site specific emission factors. Flexibility mechanism 3 was selected as it permits the generic emission factors provided in the Protocol to be replaced with site specific emission factors provided the generation of these factors is sufficiently robust to ensure reasonable accuracy. This Project calculated the site specific emission factor for the combustion of fuel gas and replaces the default Environment Canada emission factor.

A detailed description of the flexibility mechanisms used is provided in the Project Plan and their application did not change throughout the period of the Project.

GHG Assertion

Our assessment of the final GHG assertion did not identify any non-conformities.

E. Verification Statement

To Preferred Carbon Land Management Solutions Ltd. (the Company) and Alberta Environment and Water

We have been engaged by the Company to examine the greenhouse gas (GHG) emission reduction assertion of 32,425 tonnes of CO₂ equivalent for the period January 1, 2010 to December 31, 2011 presented below in Table 1 and described in the *Bonavista Acid Gas Injection at South Rosevear Project Report* dated March 15, 2012 (the Report).

Table 1. Emission reduction credits claimed by vintage year

Emission Reduction Credit Vintage Year	Emission Reduction Claimed (tonnes CO ₂ e)
2010	18,650
2011	13,775
Total	32,425

The Company is responsible for the preparation and presentation of the information within the Report. Our responsibility is to express a conclusion as to whether anything has come to our attention to suggest that the greenhouse gas emission reduction is not presented fairly in accordance with the *Specified Gas Emitters Regulation* and the *Quantification Protocol for Acid Gas Injection, Version 1, May 2008* for the project.

Our duties in relation to this report are owed solely to Preferred Carbon and Alberta Environment and Water. Accordingly we do not accept any responsibility for any loss occasioned to any third party acting or refraining from action as a result of this report.

We completed our examination in accordance with ISO 14064-Part 3 *Specification with Guidance for the validation and verification of greenhouse gas assertions*. As such, we planned and performed our work in order to provide limited, rather than absolute assurance with respect to the greenhouse gas emission reduction. Our examination criteria were based on the *Specified Gas Emitters Regulation* and the *Quantification Protocol for Acid Gas Injection, Version 1, May 2008* (together the "Criteria"). We believe our work provides a reasonable basis for our conclusion.

Based on our examination, nothing has come to our attention that causes us to believe that the greenhouse gas emission reduction presented in the Report is not, in all material respects, presented fairly in accordance with the relevant criteria.



Chris Ridley-Thomas
 President
 KPMG Performance Registrar Inc.
 Vancouver BC
 March 30, 2012



Michael Armstrong CA
 Lead Verifier
 KPMG Performance Registrar Inc.
 Vancouver BC
 March 30, 2012