Offset Project Verification Report
AltaGas Processing Partnership
Turin Acid Gas Injection Offset Project

Prepared for:
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For Submission to:
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Project No. 123210232
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1.0 STATEMENT OF VERIFICATION

Stantec Consulting Ltd (Stantec) was contracted by Blue Source Canada ULC (Blue Source) to conduct an independent third-party verification of the greenhouse gas (GHG) assertion provided in the AltaGas Processing Partnership (AltaGas) Turin Acid Gas Injection Offset Project Report (Project Report), dated February 6, 2013.

1.1 INTENTED USER

This report has been prepared for Alberta Environment and Sustainable Resource Development (AESRD) for the express purpose of facilitating the creation of Emission Reduction Credits (ERCs) under the *Climate Change and Emissions Management Act* and the *Specified Gas Emitters Regulation* (*SGER*).

1.2 VERIFICATION OBJECTIVE

The objective of the verification is to identify key assertions, data sources, methods, and procedures pertinent to the Project Report, and to assess conformity with the *Climate Change Emissions Management Act*, the SGER and the relevant guidance issued by AESRD.

The verification process assess whether the assertion of reported GHG reductions is materially correct and a fair representation, in accordance with the AESRD approved *Quantification Protocol Acid Gas Injection, Version 1.0, May 2008)* and the SGER.

1.3 PROJECT DETAILS

1.3.1 Location

The AltaGas Turin Acid Gas Injection (AGI) Offset Project is located near Turin, Alberta. The GHG project boundary encompasses the geographical site of the Turin Sour Gas Processing Plant, the collection wells at Enchant and Retlaw and equipment for the AGI process.

1.3.2 Description

In 2004, construction of an AGI system was completed at the Turin facility instead of installation of a Claus process unit (typical acid gas treatment process), which would have resulted in the direct emission of GHGs from stationary combustion to oxidize hydrogen sulphide in the acid gas to sulphur dioxide (SO_2) in the incineration process.

The Project began November 30, 2004 and results in a reduction of direct, specified GHG emissions at the AGI facility through:

- the geological sequestration of CO_2 contained in the acid gas stream; and
- the reduction of fossil fuel used to treat sulphur emissions.

The acid gas, containing primarily CO_2 and H_2S, is compressed and transported approximately 1.5 kilometers from the AltaGas facility via underground pipeline into the AltaGas Acid Injection well 00/03-25-012-19W4/0. The injected acid gas stream is a combined stream from Turin, Retlaw, and Enchant facilities. The acid gas from Retlaw facility was combined with the Turin's in 2007. The acid gas from Enchant facility was combined with the other two acid gas streams in 2011.

The credit start date for this Project is January 1, 2005. The Project proponent intends to claim ERCs for a period of 8 years, ending on December 31, 2012.

1.3.3 Baseline and Project Conditions

The baseline condition for this project is defined as mass of CO_2 that would be released to the atmosphere from the direct and indirect emissions of GHGs as a result of using a three-stage Claus unit in conjunction with an incinerator which is used to combust the tail gas emitted from the Claus unit. The major emission sources for baseline condition are from combustion of fuel gas and the acid gas in an incinerator. The related Sources, Sinks, and Reservoirs (SSR) included in the baseline are SSR B9: Fuel Extraction and Processing, SSR B6a: Incineration (Fuel gas), and SSR B6b: Incineration (Acid gas).

For the project condition, acid gas from the Gas Processing Plant (that would have been sent to the Claus unit, and subsequently combusted in an incinerator in an absence of the project) is compressed, transferred, and injected underground. The emission sources from the project condition are from electricity used for the equipment that operates dehydration and compression processes, and from upset flaring of fuel gas and acid gas. The related Sources, Sinks, and Reservoirs (SSR) included in the project are SSR P12: Fuel Extraction and Processing, SSR P8a: Upset flaring (Fuel gas), SSR P8b: Upset flaring (Acid gas), and SSR P6: Acid gas dehydration and compression.

1.3.4 Summary of Changes to Project since the Project Plan

Modifications made to Project compared to the Project Plan for the period of January 1, 2012 to December 31, 2012 are presented in the Project Report dated February 6, 2013. These modifications include:

- New data management system called "ZEDI" was used in place of the PROMET system.
- New meter at the injection well was installed in 2012 in order to comply with Energy Resources Conservation Board (ERCB) Directive 17 (2012).
- Use of a full acid gas composition including CO_2, CH_4, and other hydrocarbons (i.e. ethane, propane, etc.) to quantify emissions from Incineration of Acid Gas in the baseline condition

(SSR B6b) and emissions from Upset Flaring of Acid Gas in the project condition (SSR P8b). Previously, emissions from these sources were calculated based on CO_2 and CH_4 concentrations only (as per the protocol).

- Use of density of CO_2 and CH_4 as referenced in GPA Standard 2145-09 (Gas Processors Association, 2008) in the quantification of emissions from SSR B6b and SSR P8b. Previously, the CO_2 and CH_4 density was sourced from the AGI Protocol.

- Monthly Acid Gas compositions for July, August, and September 2012 were calculated manually based on daily gas analysis reports as the gas chromatography (GC) equipment experienced technical issues. The monthly compositions for the rest of the year were automatically calculated by the GC as in previous years.

- Use of Lower Heating Value (LHV) to determine fuel gas to acid gas ratio (FG: AG) per ERCB Directive 060 (ERCB, 2011). The FG: AG was previously calculated based on Higher Heating Value (HHV).

- Disaggregation of co-mingled streams was calculated based on Enchant and Retlaw inlet raw gas volumes reported to the Alberta Petroleum Registry. Previously, these volumes were obtained through the ERCB's Monthly Gas Plant Receipts, Dispositions and Process reports available on the ERCB website.

- The cooler drive system for cooling the acid gas stream following each of compression stage was included in the emissions from Acid Gas Dehydration and Compression (SSR P6).

1.3.5 Emission Reduction Credit Period

Emission reductions have been calculated and verified for the period of January 1, 2012 to December 31, 2012.

1.4 GHG ASSERTION

The fundamental assertion in the Notice of Creation (NOC) dated February 27, 2013 is that the Project generated 79,578 tonnes of carbon dioxide equivalent (t CO_2e) of ERCs during the period of January 1, 2012 to December 31, 2012. ERCs created by the Project are further detailed in Table 1.1 below.

Table 1.1 GHG Assertion-Emission Reduction Credits

Verification Period	Baseline Emissions (t CO_2e)	Project Emissions (t CO_2e)			Emission Reductions (t CO_2e)
		CO_2	CH_4	N_2O	
January 1, 2012 – December 31, 2012	86,986	7,334*	66.6	7.2	79,578

* Includes the emissions from electricity consumption (6,584 t CO_2e).

1.5 PROGRAM CRITERIA

Stantec has conducted sufficient and appropriate procedures to evaluate whether the GHG assertion, Project Plan and Project Report satisfy the requirements of:

- *Climate Change and Emissions Management Act, S.A. 2003, c. C-16.7*;
- *The Alberta Specified Gas Emitters Regulation (SGER);*
- Technical Guidance for Offset Project Developers (February 2013, V4.0); and
- *The Specified Gas Emitters Regulation Quantification Protocol for Acid Gas Injection v1.0 (May 2008).*

1.6 VERIFICATION STANDARDS

The verification was conducted in accordance with:

- *ISO 14064 Part 3 – Greenhouse Gases: Specification with Guidance for the Validation and Verification of Greenhouse Gas Assertions (ISO 14064-3),*
- *ISO 14065 - Greenhouse Gases: Requirements for greenhouse gas validation and verification bodies or use in accreditation or other forms of recognition (ISO 14065;) and*
- *Technical Guidance for Greenhouse Gas Verification at Reasonable Level of Assurance (v.1.0, January 2013).*

1.7 UNRESOLVED DESCREPANCIES

AESRD has set its materiality threshold to 5% of the total reported GHG emission reductions or removals asserted. Qualitative misstatements were at the discretion of the lead verifier. Immaterial misstatements were identified by Stantec. Some misstatements were resolved during the course of the verification. Immaterial and material misstatements detected were presented in Table 7.2 and Table 7.3, respectively.

1.8 OPINION

As required by AERSD, Stantec has conducted sufficient and appropriate procedures in order to express **a reasonable level of assurance opinion** as to whether the AltaGas Turin Acid Gas Injection Offset Project Report (dated February 6, 2013) is free from material misstatements, fairly presented and is substantiated by sufficient and appropriate evidence. Based on the procedures described in this report, it is our opinion that the AltaGas Turin Acid Gas Injection Offset Project Report (dated February 6, 2013) satisfies the material requirements of:

- *The Climate Change and Emissions Management Act, S.A. 2003, c. C-16.7;*
- *The Alberta Specified Gas Emitters Regulation (SGER);*

- *The Specified Gas Emitters Regulation Quantification Protocol for Acid Gas Injection v1.0 (May 2008); and*
- *The Specified Gas Emitters Regulation Technical Guidance for Offset Project Developers v4.0 (February 2013).*

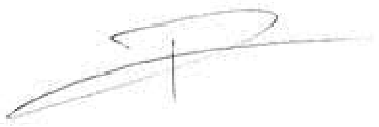
1.9 VERIFICATION CLOSURE

The findings presented herein were used to make a "reasonable level" of assurance opinion as required by AESRD.

Stantec did not conduct direct GHG emissions monitoring or other environmental sampling and analysis in conjunction with this verification.

Because of the inherent limitations in any internal control structure it is possible that fraud, error or non-compliance with other laws and regulations may occur and not be detected. Further, the verification was not designed to detect all weaknesses or errors in internal controls as the verification has not been performed continuously throughout the period and the procedures performed on the relevant internal controls were on a test basis. Any projection of the evaluation of control procedures to future periods is subject to the risk that the procedures may become inadequate because of changes in conditions, or that the degree of compliance with them may deteriorate.

STANTEC CONSULTING LTD.



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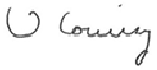

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February 27, 2013
Issued in Victoria, British Columbia

2.0 EXECUTIVE SUMMARY

Information in support of the Statement of Verification provided as Section 1 of this document is detailed in the following sections. It is intended to be read in conjunction with the Statement of Verification and the AltaGas Processing Partnership (AltaGas) Turin Acid Gas Injection Offset Project Report, dated February 6, 2013, and is not a 'standalone' report.

The project identification details for the AltaGas Turin Acid Gas Injection Offset Project are provided in Table 2.1.

Table 2.1 Project Identification Details

Project Title	AltaGas Turin Acid Gas Injection (AGI) Offset Project
Legal Land Description	The Project is located in Alberta, near Turin. LSD: 12-19-12-18 W4M (Gas Plant); 03-25-012-19 W4 (Injection Well) Latitude: 50.01327° (Gas Plant); 50.020623° (Injection Well) Longitude: -112.458632° (Gas Plant); -112.475712° (Injection Well)
Type of Greenhouse Gas Emission Reduction or Removal Project	The Project includes an AGI system that collects and geologically sequesters acid gas produced from the Sour Gas Processing Plant. The Project reduces CO_2 emissions that would have been released to the atmosphere as well as CO_2, CH_4 and N_2O emissions from fossil fuel usage to treat sulphur emissions (via incineration of tail gas following a Multi- Stage Claus process).
Key Project Dates	The Project start date is November 30, 2004. The credit start date is January 1, 2005. Offset credits have been claimed for a period of 8 years, from January 1, 2005 to December 31, 2012.
Project Contact	Helen La Blue Source Canada ULC Suite 700, 717-7th Avenue SW Calgary, Alberta T2P 3R5
Verification Objective	The objective of the verification is to identify key assertions, data sources, methods, and procedures pertinent to the Project Report, and to assess conformity with the Climate Change Emissions Management Act, the SGER and the relevant guidance issued by AESRD. The verification procedures assesses whether the assertion of reported GHG reductions is materially correct and a fair representation, in accordance with the AESRD approved *Quantification Protocol for Acid Gas Injection v1.0 (May 2008) and the SGER.*
Reporting and Verification Period	January 1, 2012 to December 31, 2012.
Program Criteria	Stantec has conducted sufficient and appropriate procedures to evaluate whether the GHG assertion, Project Plan and Project Report satisfy the requirements of: • *The Climate Change and Emissions Management Act, S.A. 2003, c. C-16.7;* • *The Alberta Specified Gas Emitters Regulation (SGER);* • *The Specified Gas Emitters Regulation Quantification Protocol for Acid Gas Injection v1.0 (May 2008); and* • *The Specified Gas Emitters Regulation Technical Guidance for Offset Project*

	Developers v4.0 (February 2013).
Verification Standards	The verification was conducted in accordance with *ISO 14064 Part 3 – Greenhouse Gases: Specification with Guidance for the Validation and Verification of Greenhouse Gas Assertions* (ISO 14064-3), *ISO 14065 - Greenhouse Gases: Requirements for greenhouse gas validation and verification bodies or use in accreditation or other forms of recognition (ISO 14065)* and the verification guidance contained within the *Technical Guidance for Greenhouse Gas Verification at Reasonable Level of Assurance (v.1.0, January 2013).*
Reporting, Monitoring, and Verification Details	The Project reports on an annual basis. Emission reductions were quantified based on metering data of injected acid gas volumes. The combined stream of acid gas from the Turin, Enchant, and Retlaw Gas Plant was metered near the injection point. Metering and measurement systems have been implemented to allow disaggregation of total emissions from each acid gas source. Acid gas was compressed and transferred approximately 1.5 km via a pipeline to the injection well. The AGI system including an acid gas compressor and cooler drive system was powered by electricity. Flaring of acid gas was performed by an open flare system, on an emergency basis only. Acid gas flared volumes were metered. Fuel gas used as an assist gas and pilot for the flare system was also metered. The monitoring processes were verified through on-site procedures (inquiry, inspection) and desktop procedures (trace, vouch) using supporting evidence. Stantec Consulting Ltd. in an independent third party. The signing authority for this report is Mr. Sana Talebi, P.Eng. who is a professional engineer registered by the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC). With respect to the technical knowledge required under 18(b)(i-iii), each member of the team has the required technical knowledge of GHG emission quantification methodologies and all have experience in completing third party GHG verifications. Cameos are appended to this report.
Level of Assurance	The verification was conducted to a ***reasonable*** level of assurance.
Materiality Threshold	The materiality threshold was set to 5% as per the AESRD guidance.
Verification Summary	As required by AERSD, Stantec has conducted sufficient and appropriate procedures in order to express **a reasonable level of assurance opinion** as to whether the AltaGas Turin Acid Gas Injection Offset Project Report (dated February 6, 2013) is free from material misstatements, fairly presented and is substantiated by sufficient and appropriate evidence. Based on the procedures described in this report, it is our opinion that the AltaGas Turin Acid Gas Injection Offset Project Report (dated February 6, 2013) satisfies the material requirements of: • *The Climate Change and Emissions Management Act, S.A. 2003, c. C-16.7;* • *The Alberta Specified Gas Emitters Regulation (SGER);* • *The Specified Gas Emitters Regulation Quantification Protocol for Acid Gas Injection v1.0 (May 2008); and* • *The Specified Gas Emitters Regulation Technical Guidance for Offset Project Developers v4.0 (February 2013).*
Verification Team members	Lead Verifier: Mr. Daniel Hegg, B.Comm. M.Sc., EMIT Peer Reviewer: Ms. Vicki Corning, P.Eng. Senior Reviewer: Ms. Lauren L. Jones B.Sc., M.B.T, EP (GHG) Verifiers: Mr. Sana Talebi, P.Eng. (Signing authority) and Ms. Orasa Webber, M.Eng.

3.0 INTRODUCTION

Stantec Consulting Ltd (Stantec) was contracted by Blue Source Canada ULC (Blue Source) to conduct an independent third-party verification of the greenhouse gas (GHG) assertion provided in the AltaGas Processing Partnership (AltaGas) Turin Acid Gas Injection Offset Project Report (Project Report), dated February 6, 2013.

3.1 PROJECT DETAILS

3.1.1 Location

The AltaGas Turin Acid Gas Injection (AGI) Offset Project is located near Turin, Alberta. The GHG project boundary encompasses the geographical site of the Turin Sour Gas Processing Plant, the collection wells at Enchant and Retlaw and equipment for the AGI process.

3.1.2 Description

In 2004, construction of an AGI system was completed at the Turin facility instead of installation of a Claus process unit (typical acid gas treatment process), which would have resulted in the direct emission of GHGs from stationary combustion to oxidize hydrogen sulphide in the acid gas to sulphur dioxide (SO_2) in the incineration process.

The Project began November 30, 2004 and results in a reduction of direct, specified GHG emissions at the acid gas injection facility through:

- the geological sequestration of CO_2 contained in the acid gas stream; and
- the reduction of fossil fuel used to treat sulphur emissions.

The acid gas, containing primarily CO_2 and H_2S, is compressed and transported approximately 1.5 kilometers from the AltaGas facility via underground pipeline into the AltaGas Acid Injection well 00/03-25-012-19W4/0. The injected acid gas stream is a combined stream from Turin, Retlaw, and Enchant facilities. The acid gas from Retlaw facility was combined with the Turin's in 2007. The acid gas from Enchant facility was combined with the other two acid gas streams in 2011.

The credit start date for this Project is January 1, 2005. The Project proponent intends to claim ERCs for a period of 8 years, ending on December 31, 2012.

3.1.3 Baseline and Project Conditions

The baseline condition for this project is defined as mass of CO_2 that would be released to the atmosphere from the direct and indirect emissions of GHGs as a result of using a three-stage Claus unit in conjunction with an incinerator which is used to combust the tail gas emitted from the Claus unit. The major emission sources for baseline condition are from combustion of fuel gas and the acid gas in an incinerator. The related Sources, Sinks, and Reservoirs (SSR) included in the baseline are SSR B9:

Fuel Extraction and Processing, SSR B6a: Incineration (Fuel gas), and SSR B6b: Incineration (Acid gas).

For the project condition, acid gas from the Gas Processing Plant (that would have been sent to the Claus unit, and subsequently combusted in an incinerator in an absence of the project) is compressed, transferred, and injected underground. The emission sources from the project condition are from electricity used for the equipment that operates dehydration and compression processes, and from upset flaring of fuel gas and acid gas. The related Sources, Sinks, and Reservoirs (SSR) included in the project are SSR P12: Fuel Extraction and Processing, SSR P8a: Upset flaring (Fuel gas), SSR P8b: Upset flaring (Acid gas), and SSR P6: Acid gas dehydration and compression.

3.1.4 Summary of Changes to Project since the Project Plan

Modifications made to Project compared to the Project Plan for the period of January 1, 2012 to December 31, 2012 are presented in the Project Report dated February 6, 2013. These modifications include:

- New data management system called “ZEDI” was used in place of the PROMET system.
- New meter at the injection well was installed in 2012 in order to comply with Energy Resources Conservation Board (ERCB) Directive 17 (2012).
- Use of a full acid gas composition including CO_2, CH_4, and other hydrocarbons (i.e. ethane, propane, etc.) to quantify emissions from Incineration of Acid Gas in the baseline condition (SSR B6b) and emissions from Upset Flaring of Acid Gas in the project condition (SSR P8b). Previously, emissions from these sources were calculated based on CO_2 and CH_4 concentrations only (as per the protocol).
- Use of density of CO_2 and CH_4 as referenced in GPA Standard 2145-09 (Gas Processors Association, 2008) in the quantification of emissions from SSR B6b and SSR P8b. Previously, the CO_2 and CH_4 density was sourced from the AGI Protocol.
- Monthly Acid Gas compositions for July, August, and September 2012 were calculated manually based on daily gas analysis reports as the gas chromatography (GC) equipment experienced technical issues. The monthly compositions for the rest of the year were automatically calculated by the GC as in previous years.
- Use of Lower Heating Value (LHV) to determine fuel gas to acid gas ratio (FG: AG) per ERCB Directive 060 (ERCB, 2011). The FG: AG was previously calculated based on Higher Heating Value (HHV).
- Disaggregation of co-mingled streams was calculated based on Enchant and Retlaw inlet raw gas volumes reported to the Alberta Petroleum Registry. Previously, these volumes were obtained through the ERCB’s Monthly Gas Plant Receipts, Dispositions and Process reports available on the ERCB website.

- The cooler drive system for cooling the acid gas stream following each of compression stage was included in the emissions from Acid Gas Dehydration and Compression (SSR P6).

3.2 GHG ASSERTION

The fundamental assertion in the Notice of Creation (NOC) dated February 27, 2013 is that the Project generated 79,578 tonnes of carbon dioxide equivalent (t CO_2e) of ERCs during the period of January 1, 2012 to December 31, 2012. ERCs created by the Project are further detailed in Table 3.1 below.

Table 3.1 GHG Assertion-Emission Reduction Credits

Verification Period	Baseline Emissions (t CO_2e)	Project Emissions (t CO_2e)			Emission Reductions (t CO_2e)
		CO_2	CH_4	N_2O	
January 1, 2012 – December 31, 2012	86,986	7,334*	66.6	7.2	79,578

* Includes the emissions from electricity consumption (6,584 t CO_2e).

4.0 VERIFICATION METHODOLOGY

4.1 VERIFICATION OBJECTIVES

The purpose of this verification was to assess key assertions, data sources, methods, and procedures pertinent to the Project Report for conformity with the SGER and the relevant guidance issued by AERSD.

4.2 LEVEL OF ASSURANCE

AERSD requires the verifier to conduct sufficient procedures to deliver a **reasonable level of assurance**. The verification was planned and executed accordingly.

4.3 PROGRAM CRITERIA

Stantec has conducted sufficient and appropriate procedures to evaluate whether the GHG assertion, Notice of Creation and Project Report satisfy the requirements of:

- *The Climate Change and Emissions Management Act, S.A. 2003, c. C-16.7;*
- *The Alberta Specified Gas Emitters Regulation (SGER);*
- *The Specified Gas Emitters Regulation Quantification Protocol for Acid Gas Injection v1.0 (May 2008); and*
- *The Specified Gas Emitters Regulation Technical Guidance for Offset Project Developers v4.0 (February 2013).*

4.4 VERIFICATION STANDARDS

The verification was conducted in accordance with:

- *ISO 14064 Part 3 – Greenhouse Gases: Specification with Guidance for the Validation and Verification of Greenhouse Gas Assertions (ISO 14064-3),*
- *ISO 14065 - Greenhouse Gases: Requirements for greenhouse gas validation and verification bodies or use in accreditation or other forms of recognition (ISO 14065;) and*
- *Technical Guidance for Greenhouse Gas Verification at Reasonable Level of Assurance (v.1.0, January 2013).*

4.5 VERIFICATION SCOPE

The verification is for the emission reductions of the AltaGas Turin Acid Gas Injection Offset Project, located near Turin, Alberta for the period of January 1, 2012 to December 31, 2012.

5.0 ROLES AND RESPONSIBILITIES

Stantec was contracted by Blue Source to verify the AltaGas' GHG assertion included in the Offset Project Report, dated February 6, 2013. The Project Plan, Report and calculators used for the Project were completed on behalf of AltaGas (Project proponent) by Blue Source. AltaGas was responsible for data collection, calculation methodology review and approval of the Project Plan and Report. Contact information for the Project proponent is provided on the title page of this report.

The Stantec verification team, including roles and responsibilities are listed in Table 5.1 below. Appendix A contains the Statement of Qualifications for the team.

Table 5.1 Verification Team

Name	Role	Responsibilities
Daniel Hegg, B.Comm. M.Sc., EMIT	Lead Verifier	Lead and delegate verification duties. Review verification deliverables and assist with financial project inquiries. Daniel also conducted the site visit.
Vicki Corning, P.Eng.	Peer Review	Review verification deliverables for consistency with Stantec templates, adherence to ISO 14064-3, AESRD compliance and technical soundness.
Lauren L. Jones B.Sc., M.B.T, EP (GHG)	Senior Review	Review verification deliverables for adherence to ISO 14064-3 and regulatory compliance as well as technical soundness.
Sana Talebi, P.Eng.	Verifier	Assist with verification activities including desktop review, Verification Plan, and Verification Report. Signing Authority on verification documents such as the external Verification Plan and Verification Report.
Orasa Webber, M.Eng	Verifier	Assist with verification activities including desktop review, Verification Plan, and Verification Report.

6.0 VERIFICATION PROCEDURES

6.1 RISK ASSESSMENT

Overall risk assessment is a process conducted by the Stantec verification team based on an assessment of inherent risk, control risk, and detection risk. In this case, the overall risk has been assessed as **medium**[1] based on our preliminary assessment (details of this assessment are included in Appendix C: Verification Plan). Stantec assessed risk throughout the verification and adjusted our verification plan and sampling plan accordingly to meet the assurance requirements of the verification and maintain an acceptable level of risk. However, based on the verification activities conducted after issuing the Verification Plan, we discovered the following inherent risk. Control risk and detection risk remain the same as in the Verification Plan.

- Emissions from Incineration of Acid Gas in the baseline (SSR B6b) and project (SSR P8b) condition were calculated based on a full acid gas composition including CO_2, CH_4, and other hydrocarbons (*i.e.* ethane, propane, etc.). This methodology is considered as an alternative methodology other than described in the AGI Protocol and has not been approved by AESRD (high risk); and

- There is a risk of the acid gas leakage from the sequestration well. However, it is indicated in the Project Plan that regular pressure surveys are conducted to ensure that the injected gas is being contained within the well. The operational permits from the ERCB provide assurance that the required measurement and monitoring programs are in place and followed (medium risk).

6.2 VERIFICATION ACTIVITIES

The Stantec verification team reviewed, recalculated, and re-aggregated data where deemed necessary, and reviewed the calculation methodologies for consistency with the requirements of AESRD. In addition, the verification team reviewed the supporting documentation and records for the reductions quantified, including calibration records, process flow diagrams, electricity generation reporting, electricity consumption reporting, gasoline purchase receipts, the Project Report, and the Project Plan. The operational procedures and quality management procedures applied to the data streams were also reviewed.

For each key parameter, the specific verification procedures followed and the subsequent results are summarized in Table 7.1.

Upon completion of the tasks described above, Stantec summarized the initial findings and completed an internal peer review and quality management assessment of our work in this Verification Report. The peer reviewed draft report was then forwarded to Blue Source. This provided Blue Source with the opportunity to provide any additional or clarifying information to address any outstanding discrepancies prior to finalizing the Verification Report.

[1] Possible risk ratings are “high”, “medium” and “low”. These are based on inherent, control and detection risks as evaluated by the project team prior to engaging in validation or verification activities.

Table 6.1 summarizes the verification activities and the timing of these activities over the course of the verification. Italics indicate future dates.

Table 6.1 Verification Activities and Schedule

Activity	Date
Kick-off Call with Blue Source	November 22, 2012
Receive Blue Source Documentation	November 22, 2012 – February 19, 2013
Internal Conference Call –Desktop Assessment Review	November 29, 2012
Site Visit	December 10, 2012
Initial Desktop Review	November 22, 2012 – January 28, 2013
Provide Verification Plan to Blue Source (including additional data requests)	February 1, 2013
Review additional information	February 1-27, 2013
Draft Verification Report	February 26, 2013
Address Follow-up Items	February 27, 2013
Finalize Verification Report, SOQ, SOV, COI form	February 27, 2013

6.2.1 Site Visit

A site visit was conducted as part of the verification process in accordance with the requirements of AESRD. A list of required information was made available to Blue Source prior to the site visit as part of the Verification Plan (Appendix C). The Verification Plan was supplied in order to ensure that the appropriate data and personnel were available to help complete the task efficiently and ensure availability of required personnel and documentation.

The facility visit to the Turin facility was conducted on December 10, 2012 by Mr. Daniel Hegg (Lead Verifier). The following individuals were interviewed:

- Jason Fleck (Intermediate Operations Engineer, AltaGas)
- Judy Wiest (Administrator, AltaGas)
- Mark Stitt (Commercial Lead, AltaGas)
- Derek Jensen (Operations Manager, AltaGas).

6.3 CONFIRMATIONS

Documentation of confirmations done as part of the verification process is included in Table 6.2.

Table 6.2 Documentation of Confirmations

File	Brief Description	Date Received
Altagas 2012 OPR_v2_January 18, 2013.pdf	Project report dated January 18, 2013	January 18, 2013
AltaGas GHG Calculator 2012_v2_Jan 18, 2013.xlsx	Master Calculation spreadsheet	January 18, 2013
Enchant Split_AltaGas GHG Calculator	Calculation spreadsheet for Enchant	January 18, 2013

File	Brief Description	Date Received
2012_v2_January 18, 2013.xlsx		
Retlaw Split_AltaGas GHG Calculator 2012_v2_January 18, 2013.xlsx	Calculation spreadsheet for Retlaw	January 18, 2013
Turin Split_AltaGas GHG Calculator 2012_v2_January 18, 2013.xlsx	Calculation spreadsheet for Turin	January 18, 2013
2012 Jan-July Acid Gas.pdf	Acid gas composition for January - July 2012	January 18, 2013
2012 Aug Acid Gas.pdf	Acid gas composition for August 2012	January 18, 2013
2012 Sept-Dec Acid Gas.pdf	Acid gas composition for September - December 2012	January 18, 2013
C1, C2, C3, C4 Calibration Reports.pdf	Calibration reports	January 18, 2013
A1 Monthly Analysis for Meter 24414 Fuel (assoc. to meter 24413).pdf	Fuel gas composition	January 18, 2013
A2 - Enchant Monthly Analysis.xls	Inlet gas composition for Enchant	January 18, 2013
A3 - R1 Retlaw Inlet Analysis.pdf	Inlet gas composition for Retlaw	January 18, 2013
P1-P10 - 3A, 3B meter 24416 charts and hours - Acid Gas.pdf	Gas volumes statement for P1 to P10	January 18, 2013
P2-P3 - S30 Reports.pdf	Gas volumes statement for P2 –P3	January 18, 2013
P4 - Fuel to Flare Meter 151.pdf	Gas volumes statement for fuel to flare meter (P4)	January 18, 2013
P5-P6 - Inlet Gas for Retlaw and Enchant.pdf	Gas volumes report for P5 and P6	January 18, 2013
Altagas 2012 OPR_v2_January 21, 2013.pdf	Project report dated January 21, 2013	January 21, 2013
AltaGas GHG Calculator 2012_v2_Jan 21, 2013.xlsx	Master Calculation spreadsheet dated January 21, 2013	January 21, 2013
Turin Split_AltaGas GHG Calculator 2012_v2_January 21, 2013.xlsx	Calculation spreadsheet for Turin dated January 21, 2013	January 21, 2013
Enchant Split_AltaGas GHG Calculator 2012_v2_January 21, 2013.xlsx	Calculation spreadsheet for Enchant dated January 21, 2013	January 21, 2013
Retlaw Split_AltaGas GHG Calculator 2012_v2_January 21, 2013.xlsx	Calculation spreadsheet for Retlaw dated January 21, 2013	January 21, 2013
A2 - Enchant Monthly Analysis.xls	Inlet gas composition for Enchant	January 21, 2013
December_2012_Data.pdf	Gas volume report for December 2012.	January 21, 2013
Taylor_processflow_Page_1.jpg	Process flow diagram	December 10, 2012
Taylor_site_Page_1.jpg	Process flow diagram	December 10, 2012
Ownership Agreement_provided for previous ver.pdf	Ownership agreement provided for the 2011 verification	January 2012
Acid gas approval_provided for previous ver.pdf	Acid gas approval provided for the 2011 verification	January 2012
prcoess_flow_diagram_taylor.pdf	Process Flow Diagram for Turin facility	December 10, 2012
S30_2012_oct.pdf	October S-30 report	December 10, 2012
s30_submission_2012_oct.pdf	S-30 submission	December 10, 2012
taylor_calibration_cert_2012.pdf	Calibration Certificate for meter 3B	December 10, 2012
taylor_sceen_shot_2012_dec.pdf	Screen shot of DCS	December 10, 2012
vortex_meter_inspection.pdf	Meter inspection for vortex meter	December 10, 2012
20130204_RE_Verification Plan - AltaGas Turin AGI Offset Project.pdf	Response #1 to information request (Verification Plan) from Blue Source.	February 6, 2013
20130206_RE_ Verification Plan - AltaGas Turin AGI Offset Project.pdf	Response #2 to information request (Verification Plan) from Blue Source.	February 6, 2013
20130206-2RE_Verification Plan - AltaGas Turin AGI Offset Project.pdf	Response #3 to information request (Verification Plan) from Blue Source.	February 6, 2013
Altagas_Turin_OPP_final_March 16, 2012.pdf	OPP for 2012 verification period	February 6, 2013
Altagas 2012 OPR_v2_February 4, 2013.pdf	OPR dated February 4, 2013	February 6, 2013
Altagas 2012 OPR_v3_February 6, 2013.pdf	OPR dated February 6, 2013	February 6, 2013
NOC AltaGas Turin 2012_v2_Feb 4, 2013.pdf	Notice of creation for Turin offset credits dated	February 6, 2013

File	Brief Description	Date Received
	February 4, 2013	
IT backup procedure v3-0 2013_01_08.pdf	IT backup procedure	February 6, 2013
Document Retention Policy v1-3_2013_01_08.pdf	Document Retention Policy	February 6, 2013
Fan_Motor_Engineering_Specs.pdf	Fan motor specification	February 6, 2013
Fan_Motor_kW_rating.pdf	Fan motor kW rating	February 6, 2013
Original Verification Flare Fuel Calculation_Claus April 21.pdf	Excerpt from Engineering Report showing Heating Value of Tail Gas	February 6, 2013
Acid_Gas_Flare_Reports_2012_Flare_stack_only.pdf	Acid gas flare report showing acid gas flared volumes	February 6, 2013
Turin_PFD_AGI.PDF	P&ID confirming kW rating of the acid gas compressor	February 6, 2013
Vortex and 3B readings.pdf	Vortex and 3B meter readings	February 6, 2013
2012-01_S30_Turin.xls	A sample of S-30 report for January in Excel form	February 6, 2013
AltaGas GHG Calculator 2012_v3_Feb 6, 2013.xlsx	Calculator dated February 6, 2013 for AltaGas emission reduction calculation (combined stream)	February 6, 2013
Enchant Split_AltaGas GHG Calculator 2012_v3_Feb 6, 2013.xlsx	Calculator dated February 6, 2013 for AltaGas emission reduction calculation (Enchant Split stream)	February 6, 2013
Retlaw Split_AltaGas GHG Calculator 2012_v3_Feb 6, 2013.xlsx	Calculator dated February 6, 2013 for AltaGas emission reduction calculation (Retlaw Split stream)	February 6, 2013
Turin Split_AltaGas GHG Calculator 2012_v3_Feb 6, 2013.xlsx	Calculator dated February 6, 2013 for AltaGas emission reduction calculation (Turin Split stream)	February 6, 2013
AG_Compressor_Name_Plate.jpg	Name plate for acid gas compressor (1000 HP)	February 6, 2013
20130219AltaGas Turin Follow up Questions.pdf	Response from Blue Source dated February 19, 2013 to Stantec's request #2	February 19,2013
Acid gas approval.pdf	Approval to install the AGI system at Turin facility	February 19,2013
List of Turin Bantry Princess Producers.xlsx	List of gas producers	February 19,2013
RET3253.pdf	Sample contract from a gas producer (Wolf Coulee Resources Inc.)	February 19,2013
RET3278.pdf	Sample contract from a gas producer (Iteration Energy)	February 19,2013
RET3326.pdf	Sample contract from a gas producer (Venturion Natural Resources Limited)	February 19,2013
AESRD_AGI_Protocol_Deviation_Approval_Feb_26_2013.pdf	Approval from AESRD to use a full gas compositions to quantify B6b and P8b	February 26,2013
Altagas 2012 OPR__Final_February 6, 2013_unsigned.pdf	Updated Project Report	February 26,2013
NOC AltaGas Turin 2012_Feb 27, 2013_unsigned.pdf	Updated NOC	February 27,2013
AltaGas GHG Calculator 2012_Final_Feb 26, 2013.xlsx	Updated GHG Calculator	February 27,2013
Enchant Split_AltaGas GHG Calculator 2012_Final_Feb 27, 2013.xlsx	Updated Echant Calculator	February 27,2013
Retlaw Split_AltaGas GHG Calculator 2012_Final_Feb 27, 2013.xlsx	Updated Retlaw Calculator	February 27,2013
Turin Split_AltaGas GHG Calculator 2012_Final_Feb 27, 2013.xlsx	Updated Turin Calculator	February 27, 2013

7.0 VERIFICATION FINDINGS

The verification procedures included, but was not limited to, a review of natural gas invoices, gasoline receipts, electricity consumption and electricity generation reports, and electricity meter calibration records. The lead verifier discussed data management, record keeping, training and QA/QC procedures for consistency with the Project Plan and to better understand the scope of the project.

A summary of the procedures and results is provided in Table 7.1.

Table 7.1 Verification Sampling Plan Procedures and Results

Parameter	Procedure	Result
Boundaries, Methodology and Emission Factors	Discussed the project boundaries with Blue Source and AltaGas Reviewed the calculation methodology and the emission factors. Reviewed the Project Plan, Project Report, and Notice of Creation.	**Satisfactory** Stantec reviewed calculation methodologies used by Blue Source to calculate emission reductions resulting from the injection of acid gas and determined they are free from material misstatements in accordance with the criteria outlined in Section 1.5. Emissions from Incineration of Acid Gas in the baseline (SSR B6b) and project conditions (SSR P8b) were calculated based on a full acid gas composition including CO_2, CH_4, and other hydrocarbons (*i.e.* ethane, propane, etc.). This methodology is considered as an alternative methodology other than described in the AGI Protocol. Blue Source received a formal approval to use this methodology from AESRD. As such this is noted as satisfactory. Stantec confirmed the Project Report aligned with the boundaries and methodologies identified in the Protocol.
Project Eligibility	Reviewed the Project Report, Project Plan, signed attestations, calculation methodologies, project boundaries and emission factors.	**Satisfactory** Based on the procedures conducted, the project offset eligibility requirements are met; including: • Emission reductions and removals are generated after January 01, 2002. • Emission reductions and removals are generated, in Alberta within the allowable credit duration period. • Emission reductions and removals are real, demonstrable and quantifiable. • Ownership of emission reductions and removals is clear and documented. • Emission reductions and removals are not required by law. • Emission reductions and removals are only counted once. • Emission reductions and removals have been verified by a qualified third party.

Parameter	Procedure	Result
Negligible Emissions	Reviewed the Project Plan and quantification methodologies	**Satisfactory** The project emissions sources required by the quantification protocol were included with the exception of those noted below. The following emission sources have been excluded from quantification as per the Project Plan (where rationale for exclusion is provided): Emissions from Liquid Redox Process (SSR B5a). Emissions from this source have been excluded from quantification as a Multi-Stage Claus Unit has been used as the sulphur recovery unit for the purposes of calculating the baseline condition. Emissions from fuel gas consumed by the Multi-Stage Claus Unit (SSR B5b) have been excluded. This is conservative. Emissions from tail gas have been quantified under emissions from Incineration (SSR B6). Emissions from Injection Unit Operation (SSR P9) have also been excluded from quantification. This has been identified as acceptable as emissions from the electric compressor have already been quantified under acid gas dehydration and compression (SSR P6). Emissions from Recycled Gas (SSR P10) have been excluded from quantification since the producing wells and the injection wells have been confirmed to be distinct entities. Recycling of acid does not occur at this facility.
Total Emissions Reduction Credits (ERCs)	Reviewed data for baseline and project emissions and net reductions.	**Satisfactory** Stantec found that the baseline and project emissions were accurately calculated and supported by sufficient evidence.
Quality Assurance / Quality Control	Reviewed AltaGas and Blue Source's quality assurance and quality control practices	**Satisfactory** The site team was able to review the QA/QC procedures used by AltaGas and Blue Source. Calibration records for meters metering GHG data were also reviewed by Stantec. No issues were detected. AltaGas' and Blue Source's GHG QA/QC practices are free of material misstatements.
General Procedures	Reviewed management of GHG information system and records retention control.	**Satisfactory** Record keeping procedures in the Project Plan include maintaining written logs of operations and maintenance of project system. This includes notation of shut-downs, start-ups and process adjustments. Project Records (both hard copy and electronic) are retained by AltaGas indefinitely. Electronic records are accessible both on site and at head office in Calgary. AltaGas' and Blue Source's GHG information system and records retention control are free of material misstatements.

The discrepancies identified during the course of the verification are identified in Table 7.2 and Table 7.3.

Table 7.2 Identified Discrepancies and Resolutions

Identified Discrepancy	Resolution
Immaterial Qualitative Misstatement As per Stantec's understanding based on the previous verification, the baseline condition for the Project is the emissions from incineration of the tail gas emitted from a Claus unit. The 3-stage Claus unit was assumed for the purpose of emission quantification for the baseline. However, the OPR dated January 21, 2013 does not state clearly if the 3-stage Claus unit is assumed for the baseline condition. The justification of using the 3-stage Clause unit should also be provided as per page 2 of AGI Protocol ("*The appropriate technology for the baseline condition is based on the concentration of H_2S in the acid gas stream*."). Stantec requested the justification of the assumption above.	**Resolved** The assumption of using a 3-stage Claus unit was included in the Offset Project Report dated February 6, 2013.
Potential Material Quantitative Misstatement According to the previous Offset Project Plan (p.17), emissions from SS P9 have been excluded from the quantification since the acid gas injection system only utilizes an electric compressor and no other equipment (the emissions are quantified under P6), therefore there were no direct GHG emissions from the operation of the AGI system as no fossil fuels are combusted to operate the system. However, the site visit staff found that there are five compressors handling the low pressure and the medium pressure lines. These compressors run on fuel gas (metered by the meter #13) (see SF1.3). Blue Source to justify why the emissions from these compressors were not included in SS P9.	**Resolved** There are 5 inlet compressors (K-2, K-6, K-20, K-30 and K-34) at Turin that operate on fuel gas as monitored by Meter No. 13 which are confirmed by the facility's PFD.
Potential Immaterial Quantitative Misstatement Acid gas disposal volumes used in the emission calculation were from the S-30 reports (acid gas injection volumes). The S-30 reports indicate that the acid gas disposal volumes were obtained from Vortex meter readings for January to October and from 3B meter reading from November to December. Please confirm if the Vortex meter and the 3B meter are the same meter.	**Resolved** Vortex (3A) and 3B meter was not the same meter. However, the calibration records for both meters were provided.
Immaterial Qualitative Misstatement The updated Offset Project Report dated February 6, 2013 indicates the emission reduction of 79,578 tCO_2e for the 2012 calendar year. The Offset Project Plan (Section 1) does not indicate the emission reductions for the 2012.	**No resolution**
Immaterial Qualitative Misstatement The operating hours of acid gas compressors from ZEDI Gas Volume Statements do not match the values used in the emission calculation. The project emissions were approximately 1.6 tCO_2e overestimated. Therefore, the emission reductions were about 1.6 tCO_2e overstated (account for 0.002% overstated).	**Resolved** Blue Source updated the operating hours of acid gas compressors to match hours in ZEDI Gas Volume Statement. Calculator, Offset Project Report, and NOC were updated. Stantec reviewed and confirmed the offsets reported in the calculator, Offset Project Report, and NOC. As such this is satisfactory.

Table 7.3 Identified Material Misstatement

Identified Discrepancy	Resolution
Material Qualitative Misstatement The Notice of Creation (NOC) dated February 4, 2013 was reviewed by Stantec. The NOC is for the credits of **79,747 t CO_2e** for Turin facility. The claimed period shown in NOC match the Offset Project Report (OPR); however, the **credits claimed in the NOC do not match the credits shown in the OPR v.3 dated February 6, 2013 and in the calculator (79,577 tCO_2e)**. Stantec requested Blue Source to confirm the amount of credits being claimed for 2012. Blue Source confirmed that the emission reductions have decreased as a result of including equipment under SSR P6, specifically the fan motor which runs off of grid electricity. Stantec agreed with this response. However, Blue Source has not provided an update NOC showing the correct credits.	**Resolved** NOC was updated. Stantec reviewed and confirmed the offsets reported in the NOC with the calculator and Offset Project Report. As such this is satisfactory.

8.0 OPINION

8.1 OPINION

Stantec has conducted sufficient and appropriate procedures in order to express a reasonable level of assurance opinion as to whether the AltaGas Turin Acid Gas Injection Offset Project Report (dated February 6, 2013) is free from material misstatements, fairly presented and is substantiated by sufficient and appropriate evidence. Based on the procedures described in this report, it is our opinion that the AltaGas Turin Acid Gas Injection Offset Project Report (dated February 6, 2013) satisfies the material requirements of:

- *The Climate Change and Emissions Management Act, S.A. 2003, c. C-16.7;*
- *The Alberta Specified Gas Emitters Regulation (SGER);*
- *The Specified Gas Emitters Regulation Quantification Protocol for Acid Gas Injection v1.0 (May 2008); and*
- *The Specified Gas Emitters Regulation Technical Guidance for Offset Project Developers v4.0 (February 2013).*

8.2 SUBMISSION DOCUMENTS

The verification documents for submission are in Appendix B and include: Statement of Compliance with the SGER and a Conflict of Interest Checklist.

CLOSURE

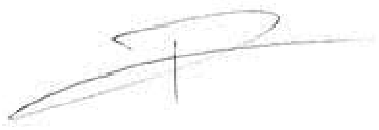
Stantec has undertaken all assignments in its role as an environmental engineering consulting firm using professional effort consistent with the *Technical Guidance for Offset Project Developers (February 2013 V4.0) and The SGER Quantification Protocol for Acid Gas Injection (May, 2008 V1). Stantec has assessed the GHG assertion for AltaGas' GHG Reduction Offset Report using adequately ascertainable information, as defined by ISO 14064-3, obtained from a review of operational and regulatory records and available literature and documents.*

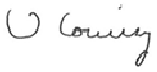
The assessment represents the conditions in the subject area at the time of the assessment. Stantec did not conduct direct GHG emissions monitoring or other environmental sampling and analysis in conjunction with this verification.

Because of the inherent limitations in any internal control structure it is possible that fraud, error, or non-compliance with other laws and regulations may occur and not be detected. Further, the verification was not designed to detect all weaknesses or errors in internal controls as the verification has not been performed continuously throughout the period and the procedures performed on the relevant internal controls were on a test basis. Any projection of the evaluation of control procedures to future periods is subject to the risk that the procedures may become inadequate because of changes in conditions, or that the degree of compliance with them may deteriorate. Per our Project Agreement with Blue Source Canada ULC Stantec's liability is limited to the amount of Stantec's fees for undertaking this verification. Stantec disclaims liability for use by any other party and for any other purpose.

This report, entitled, "Offset Project Verification Report AltaGas Processing Partnership Turin Acid Gas Injection Offset Project" for ERC's created for January 1, 2012 to December 31, 2012 was produced by:

STANTEC CONSULTING LTD.





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February 27, 2013
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Issued in Victoria, British Columbia

Appendix A

Statement of Qualification

STATEMENT OF COMPLIANCE WITH THE *SGER*

Sana Talebi, is a professional engineer registered by the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC). Sana will be the signing authority for the report and thus satisfy Section 18(a)(ii)(A) of the *SGER*. With respect to the technical knowledge required under Section 18(b)(i-iii), each member of the team has the required technical knowledge of GHG emission quantification methodologies and all have experience in completing third party GHG verifications, please refer to the team cameos below for details.

TEAM QUALIFICATION AND EXPERIENCE

Daniel Hegg, B.Comm., M.Sc., EMIT - Lead Verifier/Project Manager

Daniel is a Senior Sustainability Specialist and Western Canada Regional Discipline Lead for Climate and GHG Services. Daniel's work focuses on triple bottom line business case development, quantification and verification of GHG baselines and GHG management planning and strategic deployment, carbon market policy, and carbon investment/purchase transaction support. He has developed these capabilities in the following sectors: land-use, buildings, forestry and urban ecosystems, transportation and mobility, renewable energy, oil and gas, and infrastructure.

Daniel has developed and verified over 40 organizational and facility GHG inventories and offset projects for clients in a wide range of sectors. He has also provided strategy, policy advice, and has prepared a number of guidance documents on GHG and carbon related topics to a number of public and private sector organizations including the Federation of Canadian Municipalities (FCM), the Union of BC Municipalities (UBCM), the British Columbia Climate Action Secretariat, the Pacific Carbon Trust (PCT), Bell Alliant, Total E&P Canada, BC Transit, amongst others. Daniel has recently been accepted to as a CSA Committee Member on the Environment & Climate Change Technical Committee.

Lauren L. Jones, B.Sc., M.B.T, EP(GHG) – Senior Review

Ms. Jones is a career GHG specialist, with over a decade of senior consulting experience. Ms. Jones was an expert to the ISO technical working groups for GHG Standards, including ISO14064 Part 3 and ISO14065, having negotiated internationally on behalf of both Canada and Australia. She is a member of the Environmental Careers Organization of Canada committee for the certification of GHG professionals. She was the first woman in Canada to attain the professional designation of Environmental Professional (GHG) and has the full suite of specialties within that designation, namely: team leader, quantification expert and audit expert. Lauren is the lead trainer and primary author of the CSA ISO14064-3 training course. Over her career, Lauren has conducted hundreds of validations, verifications and GHG advisory engagements for clients in most industry sectors. Her clients include some of Alberta's premier oil and gas companies e.g. Shell and Nexen Inc. In addition, Lauren is the Managing Leader for Stantec's Building Engineering department in Calgary.

Vicki Corning, P.Eng. – Peer Reviewer

Ms. Corning has a degree in chemical engineering and has since gained technical and management expertise in many environmental services including: regulatory activities (environmental impact

assessments, responses to technical review committees, environmental protection plans, environmental monitoring plans, Alberta Greenhouse Gas Baseline and Compliance Application Verifications, Alberta NO_X and SO_2 Credit Application Verifications); source emissions testing; ambient air quality monitoring; emissions inventories; pollutant dispersion modelling (AERMOD, ISC); ambient sound quality assessments; noise attenuation modelling; landfill gas testing and utilization; and National Pollutant Reporting Inventory preparation. Ms. Corning has experience in public and stakeholder relations, having participated in several open houses as an air and sound quality specialist on projects undergoing environmental assessment. Ms. Corning has worked with clients in a variety of different industries in Canada and the US including: gas processing plants, oil refineries, pipeline operations, electrical generating stations (coal, gas, co-generation), manufacturing plants construction projects, and pulp mills.

Sana Talebi, P.Eng. - Verifier

Mr. Talebi is a Professional Engineer in the Province of Ontario and British Columbia with extensive experience in conducting GHG verifications and validations, and developing emission inventories. In 2009, he received his CSA ISO 14064-3 and since acted as Lead Verifier and Verifier on GHG Offset and Compliance Reports in Alberta and GHG Reports in British Columbia and Ontario. These projects have included linear natural gas pipelines, upstream oil and gas processing facilities, power generation facilities, pulp and paper operations, chemical manufacturing plants, acid gas injection facilities, ore drying operations, and biomass diversion operations. He also specializes in air quality assessments. He has project managed, and reported in areas of Environmental Compliance Approvals (Air and Noise) Applications, Odour Assessments, and National Pollutant Release Inventory (NPRI) reporting. He has worked on environmental projects for a wide range of sectors including manufacturing, aviation, health care, power generation, transportation, and government (municipal, provincial, and federal). Mr. Talebi's technical knowledge of air quality regulations and programs greatly strengthens his understanding of atmospheric sciences and how they affect GHG emissions.

Orasa Webber, M.Eng. - Verifier

Ms. Webber has completed her Master's Degree in chemical engineering from McGill University and brings over nine years of industrial experience from a variety of fields including ambient air quality monitoring, greenhouse gas (GHG) verification, GHG inventory, quality control of oil refinery products, polymer characterization, processing and design of plastic products, and petroleum contaminated water testing under Atlantic Risk-Based Corrective Action (RBCA) guidelines. Ms. Webber has completed the ISO-14064-3 training. She has experience on GHG verification projects under Alberta's Specified Gas Emitters Regulation, Alberta's Offset Credit, British Columbia Reporting Regulation, Ontario Regulation, and The Climate Registry. The GHG verification projects have included oil and gas production and processing facilities, petrochemical production facilities, natural gas pipeline systems, a Steam Assisted Gravity Drainage (SAGD) facility, power generation/transmission and distribution facilities, and nitrous oxide abatement from nitric acid production project.

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Appendix B

Conflict of Interest Checklist

CONFLICT OF INTEREST CHECKLIST

Question	Yes	No
1. Can the verifying organization or the verification team members directly benefit from a financial interest in the Project Developer or the Project Developer's Project? For example: • owning shares of the Project Developer; • having a close business relationship with the Project Developer; • contingent fees relating to the results of the engagement; • potential employment with the Project Developer; or • undue concern about the possibility of losing the verification or other fees from the Project Developer.	☐	☒
2. Can the verifying organization or verification team members be in a position of assessing their own work? For example: • provided greenhouse gas consultation services to the project; • provided validation for the project; • if providing non-greenhouse gas work for the company, consideration needs to be given as to how potential and perceived conflict of interests can be managed; or • a member of the verification team was previously employed with the company.	☐	☒
3. Does the verifying organization or a member of the verification team, or a person in the chain of command for the verification, promote or be perceived to promote, a project developer's position or opinion to the point that objectivity may, or may be perceived to be, compromised? For example: • dealing in, or being a promoter of, greenhouse gas credits on behalf of a project developer; or • acting as an advocate on behalf of the project developer in litigation or in resolving disputes with third parties.	☐	☒
4. Is one or more of the verification team too sympathetic to the project developer's interests by virtue of a close relationship with a project developer, its directors, officer or employees? For example: • a person on the verification team has a close personal relationship with a person who is in a senior greenhouse gas compilation role at the project developer; or • the verification team or a person of influence on the verification team has accepted significant gifts or hospitality from the project developer.	☐	☒
5. Is a member of the verification team or a person in the chain of command is deterred from acting objectively and exercising professional skepticism by threats, actual or perceived, from the directors, officers or employees of the Project Developer. For example: • the threat of being replaced as a third party verifier due to a disagreement with the application of an greenhouse gas quantification protocol; • fees from the project developer represent a large percentage of the overall revenues of the verifying organization; • the application of pressure to inappropriately reduce the extent of work performed in order to reduce or limit fees; or • threats of litigation from the project developer.	☐	☒

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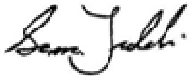

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February 27, 2013
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Appendix C

Verification Plan

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February 1, 2013
File: 123210232

VIA EMAIL – <Helen@bluesourceCAN.com>

Ms. Helen La
Carbon Services Project Analyst
Blue Source Canada ULC
Suite 700, 717 – 7th Avenue SW
Calgary, Alberta, T2P 0Z3

Dear Ms. La,

Reference: VERIFICATION PLAN FOR THE ALTAGAS TURIN ACID GAS INJECTION OFFSET PROJECT

Stantec Consulting Ltd. ("Stantec") was retained by Blue Source Canada ("Blue Source") to verify the Turin Acid Gas Injection Offset Project (the "Project"), dated January 21, 2013. The Blue Source Offset Project Report (the "Project Report") provides a description of emission removal activities attributed to the geological sequestration of carbon dioxide (CO_2) and avoidance of fossil fuel combustion in equipment used to control sulphur emissions in Alberta. The Project Report is being submitted under the Alberta Environment and Sustainable Resource Development's (AESRD) *Specified Gas Emitters Regulation* (*SGER*).

Stantec has completed the initial desktop review of the Project Report. The scope of the engagement and the planned verification procedures for the Project, based on the desktop review and site visit, has been included in this Verification Plan.

VERIFICATION OBJECTIVES

The purpose of the Verification Plan is to identify key assertions, data sources, methods, and procedures pertinent to AESRD's *Quantification Protocol for Acid Gas Injection (Version 1, May 2008)*. The objective of the Verification Plan is to facilitate the assessment of the completeness, conservativeness, consistency, accuracy, and transparency of the Blue Source's GHG information and assertions.

VERIFICATION CRITERIA

The verification will be performed in accordance with the requirements and criteria prescribed in the following documents:

- *The Climate Change and Emissions Management Act, S.A. 2003, c. C-16.7;*
- *The Alberta Specified Gas Emitters Regulation (SGER);*
- *The Specified Gas Emitters Regulation Quantification Protocol for Acid Gas Injection v1.0 (2008);*
- *The Specified Gas Emitters Regulation Technical Guidance for Offset Project Developers v3.0 (2012); and*
- *Technical Guidance for Greenhouse Gas Verification at Reasonable Level of Assurance (Draft for Comment, October 2012).*

Reference: VERIFICATION PLAN FOR THE ALTAGAS TURIN ACID GAS INJECTION OFFSET PROJECT

TEMPLATE VERSION 1.0, FEBRUARY 2013

VERIFICATION STANDARDS

The verification will be performed in accordance with:

- *ISO 14064 Part 3 – Greenhouse Gases: Specification with guidance for the validation and verification of greenhouse gas assertions; and*
- *ISO 14065 – Greenhouse Gases: Requirements for greenhouse gas validation and verification bodies for use in accreditation and other forms of recognition.*

SCOPE

The verification is for the period of January 1, 2012 to December 31, 2012. Please note that the accuracy of the following project description is subject to review as part of this verification.

This acid gas injection (AGI) project occurs at Turin Sour Gas Processing Plant (Turin facility), located near Turin, Alberta. The injected acid gas stream is a combined stream from Turin, Retlaw, and Enchant facilities. The acid gas from Retlaw facility was combined with the Turin's in 2007. The acid gas from Enchant facility was combined with the other two acid gas streams in 2011.

The project condition includes the AGI process that captures and permanently sequesters the entire acid gas stream instead of flaring and incinerating the acid gas. The captured acid gas is compressed, transported approximately 1.5 kilometers via a pipeline system, and injected into a depleted natural gas reservoir. This process reduces the quantity of CO_2 that would have been released to the atmosphere. Additionally, the AGI process indirectly reduces flaring emissions from the process required for safe disposal of the hydrogen sulfide (H_2S) contained within the acid gas stream.

The construction of the AGI system was completed in 2004. The credit start date for this project is January 1, 2005. AltaGas intends to claim offset credits for a period of 8 years, from January 1, 2005 and ending on December 31, 2012. Offset credits to be verified for this verification are for the period of January 1, 2012 to December 31, 2012.

The baseline condition for this project is defined as mass of CO_2 that would be released to the atmosphere from the direct and indirect emissions of greenhouse gases (GHGs) as a result of using a 3-stage Claus unit in conjunction with an incinerator which is used to combust the tail gas emitted from the Claus unit. The major emission sources for baseline condition are from combustion of fuel gas and the acid gas in an incinerator.

For the project condition, acid gas from the Gas Processing Plant (that would have been sent to the Claus unit, and subsequently combusted in an incinerator in an absence of the project) is compressed, transferred, and injected underground. The emission sources from the project condition are from electricity used for the equipment that operates dehydration and compression processes, and from upset flaring of fuel gas and acid gas.

ASSERTION

The fundamental assertion to be verified is the quantification of **79,747** tonnes of carbon dioxide equivalents (t CO_2e) for the period of January 1, 2012 to December 31, 2012 resulting from AGI to the Turin Acid Gas Injection Well: 03-25-012-19 W4.

Specific verification procedures are based on the assessment of the above assertions, as well as the assessment of any missing data or information, or unclear or questionable methods.

Reference: VERIFICATION PLAN FOR THE ALTAGAS TURIN ACID GAS INJECTION OFFSET PROJECT

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LEVEL OF ASSURANCE

The verification has been planned and conducted in order to express a ***reasonable level of assurance*** opinion as required by AESRD.

MATERIALITY

AESRD has set the quantitative materiality threshold at 5%. Qualitative discrepancies are at the discretion of the lead verifier.

VERIFICATION SCHEDULE

The proposed verification schedule is presented in Table 1.

Table 1: Verification Schedule

Activity	Responsible Party	Date
1. Kick-off Call with Blue Source	Stantec / Blue Source	November 22, 2012
2. Receive Blue Source Documentation	Blue Source	November 22, 2012 - Present
3. Internal Conference Call –Desktop Assessment Review	Stantec	November 29, 2012
4. Site Visit	Stantec / Blue Source	December 10, 2012
5. Desktop Review	Stantec	November 22, 2012 – January 28, 2013
6. Provide Verification Plan to Blue Source (including additional data requests)	Stantec	January 31, 2013
7. Review additional information	Stantec / Blue Source	*January 31 – February 15, 2013*
8. Draft Verification Report	Stantec	*February 18, 2013*
9. Address Follow-up Items	Blue Source	*February 18-19, 2013*
10. Finalize Verification Report, SOQ, SOV, COI form	Stantec	*February 21, 2013*

** Italics denote estimated completion dates based on the proposed schedule.*

VERIFICATION TEAM

The verification team is outlined below in Table 2.

Table 2: Verification Team

Name	Role	Responsibilities
Daniel Hegg, B.Comm, MSc, EMIT	Lead verifier	Lead and delegate verification duties. Review verification deliverables and assist with financial project inquiries.
Vicki Corning, P.Eng.	Peer Review	Review verification deliverables for consistency with Stantec templates, adherence to ISO 14064-3, AESRD compliance and technical soundness. Signing Authority on verification documents including the Verification Plan and Verification Report.
Lauren L. Jones B.Sc., M.B.T, EP (GHG)	Senior Review	Review verification deliverables for adherence to ISO 14064-3 and regulatory compliance as well as technical soundness.
Sana Talebi, P.Eng.	Verifier	Assist with verification activities including desktop review.
Orasa Webber, M.Eng.	Verifier	Assist with verification activities including desktop review, preparation of the verification plan and verification report.

TEAM CAMEOS

Lead Verifier - Daniel Hegg, B.Comm, MSc, EMIT

Daniel is a Senior Sustainability Specialist and Western Canada Regional Discipline Lead for Climate and GHG Services. Daniel's work focuses on triple bottom line business case development, quantification and verification of GHG baselines and GHG management planning and strategic deployment, carbon market policy, and carbon investment/purchase transaction support. He has developed these capabilities in the following sectors: land-use, buildings, forestry and urban ecosystems, transportation and mobility, renewable energy, oil and gas, and infrastructure. Daniel has developed and verified over 35 organizational and facility GHG inventories and offset projects for clients in a wide range of sectors. He has also provided strategy, policy advice, and has prepared a number of guidance documents on GHG and carbon related topics to a number of public and private sector organizations including the Federation of Canadian Municipalities (FCM), the Union of BC Municipalities (UBCM), the British Columbia Climate Action Secretariat, the Pacific Carbon Trust (PCT), Bell Alliant, Total E&P Canada, BC Transit, amongst others.

Peer Review - Vicki Corning, P.Eng.

Ms. Corning has a degree in chemical engineering and has since gained technical and management expertise in many environmental services in the field of atmospheric emissions. Ms. Corning is a GHG & Climate Services Regional Discipline Leader for Canada East with the responsibility for growth and continuous improvement of the service line. She has been involved in over 60 verifications for organizational inventories and GHG offset projects in western Canada, Ontario and the United States.

Ms. Corning has worked with clients in a variety of different industries in Canada and the US including: gas processing plants, oil refineries, SAGD facilities, pipeline operations, electrical generating stations (coal, gas, co-generation), manufacturing plants, chemical processing facilities, construction projects and pulp mills. Ms. Corning has managed the preparation of several policy reports on renewable energy for the New Brunswick Department of Energy, and authored technical content on carbon capture systems for coal facilities as part of an environmental report for Carbon Capture Nova Scotia. Ms. Corning has developed Stantec's internal GHG program competency training process and has also delivered course material on GHG verification, inventory and data management techniques through a contract with the Canadian Standards Association.

Senior Review - Lauren L. Jones B.Sc., M.B.T, EP (GHG)

Ms. Jones is a career GHG specialist, with over a decade of senior consulting experience. Ms. Jones was an expert to the ISO technical working groups for GHG Standards, including ISO14064 Part 3 and ISO14065, having negotiated internationally on behalf of both Canada and Australia. She is a member of the Environmental Careers Organization of Canada committee for the certification of GHG professionals. She was the first woman in Canada to attain the professional designation of Environmental Professional (GHG) and has the full suite of specialties within that designation, namely: team leader, quantification expert and audit expert. Lauren is the lead trainer and primary author of the CSA ISO14064-3 training course. Over her career, Lauren has conducted hundreds of validations, verifications and GHG advisory engagements for clients in most industry sectors. Her clients include some of Alberta's premier oil and gas companies e.g. Shell and Nexen Inc. In addition, Lauren is the Managing Leader for Stantec's Building Engineering department in Calgary.

Verifier - Sana Talebi, P.Eng.

Mr. Talebi is a Professional Engineer in the Province of Ontario with extensive experience in conducting GHG verifications and validations, and developing emission inventories. In 2009, he received his CSA ISO 14064-3 and since acted as Lead Verifier and Verifier on GHG Offset and Compliance Reports in Alberta and GHG Reports in British Columbia and Ontario. These projects have included linear natural gas pipelines, upstream oil and gas processing facilities, power generation facilities, pulp and paper operations, chemical manufacturing plants, acid gas injection facilities, ore drying operations, and biomass diversion operations. He also specializes in air quality assessments. He has project managed, and reported in areas of Environmental Compliance Approvals (Air and Noise) Applications, Odour Assessments, and National Pollutant Release Inventory (NPRI) reporting. He has worked on environmental projects for a wide range of sectors including manufacturing, aviation, health care, power generation, transportation, and government (municipal, provincial, and federal). Mr. Talebi's technical knowledge of air quality regulations and programs greatly strengthens his understanding of atmospheric sciences and how they affect GHG emissions.

Verifier - Orasa Webber, M.Eng.

Ms. Webber has completed her Master's Degree in chemical engineering from McGill University and brings over nine years of industrial experience from a variety of fields including ambient air quality monitoring, GHG verification, GHG inventory, quality control of oil refinery products, polymer characterization, processing and design of plastic products, and petroleum contaminated water testing under Atlantic Risk-Based Corrective Action (RBCA) guidelines. Ms. Webber has completed the ISO-14064-3 training. She has experience on GHG verification projects under Alberta's Specified Gas Emitters Regulation, Alberta's Offset Credit, British Columbia Reporting Regulation, Ontario Regulation, and The Climate Registry. The GHG verification projects have included oil and gas production and processing facilities, petrochemical production facilities, natural gas pipeline systems, a Steam Assisted Gravity Drainage (SAGD) facility, power generation/transmission and distribution facilities, and nitrous oxide abatement from nitric acid production project.

RISK ASSESSMENT

Overall risk assessment is a process conducted by the Stantec validation team based on an assessment of inherent risk, control risk, and detection risk. In this case, the overall risk has been assessed as **medium**[1]**,** based on our preliminary assessment. Stantec assesses risk throughout the validation and will adjust our validation plan and sampling plan accordingly to meet the assurance requirements of the validation and maintain an acceptable level of risk. The rationale for the assessment of overall risk as medium is provided in the following sections.

INHERENT RISK

Inherent risk is the risk of error that occurs as a result of the lack of capacity by staff; the size/complexity of the organization or GHG project; the industrial sector; and/or, the technologies or processes being applied in the organization or GHG project. We regard this risk as **medium** due to:

- The AGI Protocol is undergoing review by AESRD to address known risks in the protocol (medium risk);

[1] Possible risk ratings are "high", "medium" and "low". These are based on inherent, control and detection risks as evaluated by the project team prior to engaging in validation or verification activities.

- The Turin Sour Gas Processing Plants operation process is a known and established technology, and it is similar to other sour gas plants in Alberta (low risk);
- There are some changes/adjustments to the methodologies used for 2012 (for example the use of LHV instead of HHV in order to coincide with the minimum combined net heating value stated in the ERCB Directive 060) (medium risk);
- Data collection procedures for quantification include both manual and automated processes (medium risk);
- The quantification of offset credits is completed using the Blue Source offset quantification tool, this tool has been used and verified for multiple vintage years (low risk);
- Adequate staff capacity was available during the site visit, including representatives from the AltaGas Calgary office and Blue Source, to answer questions and explain processes at the Turin Sour Gas Processing Plant (low risk).

CONTROL RISK

Control risk is the risk that the proponent's control system will not detect and rectify a discrepancy. We currently regard this risk as **medium** due to:

- Data used for emission reduction quantification consists of manually recorded data, metered data capture, circular charts to record gas flow and manual entry of monthly total averaged into the Blue Source offset quantification tool (medium risk);
- Data is collected using a combination of manual data entry and automatic download (medium risk);
- Blue Source completes an internal senior review in order to check both calculations and reports for transcription errors and omissions, correctly functioning links and formulas as part of their QA/QC (low risk).

DETECTION RISK

Detection risk is the risk that Stantec will not identify a material discrepancy. We regard this risk as **low** due to:

- **Our quality management procedures.** We are committed to providing exceptional service to Blue Source in accordance with our ISO 9001 accreditations. We believe that quality is a basic principle and that quality management is an integral part of all our work. We take systematic approach to quality management to ensure compliance with requirements and to achieve continual improvement. The cornerstone of our quality management system is an entrenched process of Senior Review which ensures all our deliverables have been vetted by the most senior and expert people in our firm (low risk).
- **Level of assurance.** The reasonable level of assurance applied in this verification mandates that Stantec perform increased sampling to meet the assurance requirements, however, the level of assurance still increases the risk to Stantec as the risk based verification approach means that not all

information can be reviewed. Stantec has designed the sampling plan to target all potentially material items in the GHG information to minimize detection risk (low risk).

VERIFICATION PROCEDURES

Upon receipt of the Notices of Creation and relevant supporting documentation, Stantec developed a verification plan and sampling plan for the verification work to be completed for the Turin Facility.

SAMPLING PLAN

The sampling plan is intended to facilitate the assessment of completeness, conservativeness, consistency, relevance, accuracy, and transparency of the GHG information and confirm the GHG assertions as identified in the Project Report. The verification team establishes and modifies the sampling plan to confirm that sufficient and appropriate evidence is available to support the information and the GHG assertion made in the Project Report. Further, any discrepancies that contribute to the GHG assertion, if they exist, would be assessed for materiality.

With regards to the magnitude of potential errors, omissions and misrepresentations, under the baseline condition incineration of fuel gas (SSR B6a) accounts for 56% and incineration of acid gas (SSR B6b) accounts for 39% of total baseline emissions. Under the project condition the emissions from electricity used for acid gas dehydration and compression processes (SSR P6) represent 78%, from upset flaring of fuel gas (SSR P8a) represent 11% and from upset flaring of acid gas (SSR P8b) represent 10% of total project emissions. These sources represent the greatest risk of material error.

Any errors, omissions or misrepresentations discovered, may result in the expansion of this sample. This would constitute a scope change and Stantec will immediately notify Blue Source.

SITE VISIT

A site visit to the Turin Sour Gas Processing Plant located near Turin, Alberta was performed on December 10, 2012 by Mr. Daniel Hegg (Lead Verifier). The site visit was conducted to review on-site raw data, aid in the assessment of the appropriateness of selected boundaries, consistency with baseline period, appropriateness of methodologies, and to observe the system controls in place at the facility for data management. A written communication was provided to Blue Source/AltaGas prior to the site visit to confirm the site visit process and documentation required for review onsite. The following individuals were interviewed:

- Jason Fleck (Intermediate Operations Engineer, AltaGas)
- Judy Wiest (Administrator, AltaGas)
- Mark Stitt (Commercial Lead, AltaGas)
- Derek Jensen (Operations Manager, AltaGas)

A tour of the site, led by AltaGas representatives with in-depth knowledge of the GHG sampling and quality protocols was conducted to identify GHG sources and locations of sampling and metering of activity data.

RECORDS REVIEW

Stantec will review, re-calculate, and re-aggregate data where deemed necessary, and will review the AESRD quantification protocol for consistency with the GHG assertions. We will review supporting documentation and records for each of the sources quantified, for example, project data records for each

motor, calibration certificates, ownership agreements, etc. In addition, the quality management techniques applied to the data streams will be reviewed. These requirements will be described in the comprehensive list, documented in the Verification Plan, provided to Blue Source after the desktop review.

REPORTING AND CLOSE OUT

Upon completion of the previous tasks, Stantec will formulate initial findings and conduct an internal peer review and quality management procedures on the work completed. At this stage, a draft verification report will be forwarded to Blue Source. The draft report provides Blue Source with the opportunity to supply any additional or clarifying information.

An audio conference will be held preceding the delivery of the draft reports to explain findings and discuss/resolve any issues. Any outstanding discrepancies may be addressed by Blue Source prior to finalizing the reports. However, any significant changes may result in additional verification procedures and work effort, and these are not included in the budget estimate.

Stantec will submit two (2) paper copies and one (1) electronic copy (in pdf format) of the verification report to Blue Source, along with two (2) copies of the Statement of Verification, Statement of Qualifications, and Conflict of Interest Checklist. All final deliverables will be submitted following the audio conference discussing the draft report, provided Blue Source supplies key documents and responses in a timely manner.

INFORMATION REQUEST

Please collate the following pieces of information for our verification team to review:

- Please provide the up-to-date Offset Project Plan (Appendix B of Offset Project Report).
- Please provide the notice of creation for 2012 GHG Offset Credits for the Turin facility.
- As per Stantec's understanding (based on the previous verification), the baseline condition for the project is the emissions from incineration of the tail gas emitted from a Claus unit. The 3-stage Claus unit was assumed for the purpose of emission quantification for the baseline. However, the Offset Project Report dated January 21, 2013 does not state clearly if the 3-stage Claus unit is assumed for the baseline condition. The justification of using the 3-stage Clause unit should also be provided as per page 2 of AGI Protocol ("The appropriate technology for the baseline condition is based on the concentration of H_2S in the acid gas stream."). Please confirm if a 3-stage Claus unit was assumed in the baseline condition and provide the justification for such assumption.
- Emissions from SS B9 and SS B6a (which are the emissions from fuel gas combustion) are calculated based on fuel gas volumes ($AG_{Flared} + P_{Disposal}$)* FG: AG. Please explain/justify how this equation represents the fuel gas volumes combusted. Please also provide the reference to this equation.
- Based on last year Offset Project Plan, SS P9 (Injection Unit Operation) was excluded from the project condition because there were no other emission sources apart from dehydration and compression equipment which were accounted for in SS P6 (Acid Gas Dehydration and Compression). However, the site visit staff observed during the site visit that there are six compressors handling the low pressure and the medium pressure lines. These compressors run on

fuel gas (metered by the meter #13). Please explain why the emissions from these compressors were not included in SS P9.

- Acid gas disposal volumes used in the emission calculation were from the S-30 reports (acid gas injection volumes). The S-30 reports indicate that the acid gas disposal volumes were obtained from Vortex meter readings for January to October and from 3B meter readings from November to December. Please confirm if the Vortex meter and the 3B meter are the same meter.

- Please confirm if the acid gas disposal volumes and acid gas flared volumes as presented in S-30 reports were a combined stream of Turin, Enchant, and Retlaw.

- Acid gas flared volumes are also sourced from S-30 reports. The S-30 report does not provide the meter number used to measure the acid gas flared volumes. Please confirm the meter number and provide related meter calibration records.

- Please provide raw meter readings to support the values of acid gas disposal volumes presented in the S-30 reports for June and December 2012.

- Please explain why the annual fuel gas volumes estimated for baseline condition in 2012 (22,439 e^3m^3) are higher than in 2011 (13,058 e^3m^3).

- Please provide the Project Engineering Reports for an appropriately sized multi-stage Claus unit containing the Tail gas composition as used in the LHV tail gas calculation.

- Please provide supporting documentation to support Acid Gas Compressor kW rating at Turin (746 kW).

- Please confirm whether alternative monitoring methodologies were used in 2012 as the Offset Project Report does not clearly discuss about this.

- According to the site visit findings, new wells were brought on line in November. This resulted in an increase in acid gas injection volumes in November and December 2012. Please confirm whether or not these wells are new producers.

- There are over 1400 wells with 40 producers feeding into the facility. Please provide samples of applicable contracts to demonstrate that ownership is being maintained.

- Please provide a written copy of standard operating procedures for record keeping and the IT backup procedures.

Reference: VERIFICATION PLAN FOR THE ALTAGAS TURIN ACID GAS INJECTION OFFSET PROJECT

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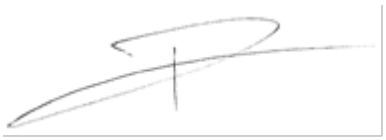
Should you have any questions or require additional information, please do not hesitate to contact the undersigned at any time.

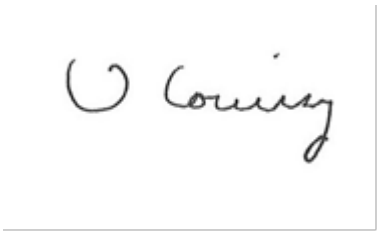
Sincerely,

STANTEC CONSULTING LTD.



Daniel Hegg
Lead Verifier
Phone: (250) 217-9729
Email: daniel.hegg@stantec.com

This verification plan has been peer reviewed by:



Vicki Corning, P.Eng.
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Appendix D

Notice of Creation