



ASSESSMENT REPORT

SOUTHERN UTE INDIAN TRIBE GROWTH FUND

PROPOSED METHODOLOGY ELEMENT

INTERCEPTION, RECOVERY AND USE OF METHANE
FROM CBM SEEPS THAT WOULD OTHERWISE BE
RELEASED TO THE ATMOSPHERE

USA – 25111-000002.00

March 02, 2011

BUREAU VERITAS CERTIFICATION

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Client: Southern UTE Indian Tribe Growth Fund	Client ref.: Michael Huisenga
Summary: See Summary section on page 3.	

Report No.: USA – 25111-000002.00	Subject Group: VCS	
Project title: Interception, recovery and use of methane from CBM seeps that otherwise be released to the atmosphere		
Work carried out by: David R Church		
Work approved by: Flavio Gomes <i>[Signature]</i>		
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Indexing terms

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Summary

Bureau Veritas Certification (BVC) has performed the second assessment of the proposed Verified Carbon Standard (VCS) proposed methodology element *“Interception, recovery and use of methane from CBM seeps that would otherwise be released to the atmosphere”* in order to meet the requirement of the VCS Double Approval process, second assessment.

The review of the methodology element documentation and the subsequent follow-up interviews provided BVC with sufficient evidence to determine the fulfillment of the VCS criteria for methodology development. The methodology element was prepared based on the requirement of VCS 2007.1 which is designed for project proponents, validators and verifiers and provides a global standard for voluntary GHG emission reduction and removal projects and their validation and verification. At the core of this standard are the requirements in ISO 14064-2:2006, ISO 14064-3:2006 and ISO 14065:2007.

The proposed methodology element belongs to the sectoral scope of 08 and 10 (mining/mineral production and fugitive emissions from fuels (solid, oil and gas)).

The validation is an independent third party assessment of the new methodology. In particular the validation has to confirm that the baseline, the monitoring plan, and the entire methodology are in compliance with relevant VCS rules and procedures. The validation of the new methodology is done through a double approval process, according to VCS standard, and is necessary to provide assurance to stakeholders of the quality of the new methodology.

The first output of the evaluation process is a checklist of Corrective Action Requests (CARs) and Clarifications (CLs) presented in Appendix A. Taking into account this output, the project proponent made several revisions to its project design document from Version 7 to Version 10.

According to the above mentioned double approval process, a proposed VCS methodology must be available for public comments for 30 days. This happened with this methodology from June 15, 2010 through July 14, 2010 with one received comment. Project proponent has adequately responded to the issues raised.

BVC is of the opinion that the methodology element *“Interception, Recovery and Use of Methane from CBM Seeps that would otherwise be released to the Atmosphere”* as described in the methodology element document (MED) of version 10 of May 23, 2011 meets all relevant VCS requirements for VCS methodology element.



1. INTRODUCTION

The Voluntary Carbon Standard has commissioned Bureau Veritas Certification as the second approver for approval of the proposed VCS methodology element for “*Interception, Recovery and Use of Methane from CBM Seeps that would otherwise be released to the Atmosphere*” as submitted by the Southern UTE Indian Tribe Growth Fund. The first assessment process was conducted by Det Norske Veritas.

This report summarizes the findings of Bureau Veritas Certification from the second assessment of the new methodology, performed on the basis of VCS criteria in VCS 2007.1, for methodology elements to provide consistent VCS application, monitoring and reporting.

2. OBJECTIVE

The purpose of independent entity assessment report is to review the new methodology documentation and to assess whether the following issues are found appropriate and adequate:

Methodology’s applicability criteria;
Project baseline;
Additionality;
Definition of the project’s physical boundary;
Sources and types of gases included;
Estimation of baseline emissions;
Estimation of project emissions, and emission reductions;
Approach for calculating leakage;
Monitoring approach;
Monitored and not monitored data and parameters used in emissions calculations.

The assessment was designed to determine if the methodology satisfies the VCS requirements for a VCS methodology element. Bureau Veritas provided an independent third party assessment of the methodology. The VCS Program Normative Document: *Double Approval Process, v1.0, 18 June 2009* serves as the basis of the assessment for VCS methodologies and is a requirement for approval of all VCS methodologies. It is necessary to provide assurance to stakeholders of the validity of the methodology and its intended use for future VCS projects.

VCS Program methodologies shall include (VCS, 2007.1 Section 6.1):

- Applicability criteria that defines the area of project eligibility;
- A process that determines whether the project is additional or not (based on criteria laid down in clause 6.4);
- Determination criteria for the most likely baseline scenario; and
- All necessary monitoring aspects related to monitoring and reporting of accurate and reliable GHG emission reductions or removals;



Methodologies shall be informed by a comparative assessment of the project and its alternatives in order to identify the baseline scenario (VCS, 2007.1, Section 6.1); The project proponent shall select the most conservative baseline scenario for the methodology. This shall reflect what most likely would have occurred in the absence of the project (VCS, 2007.1, Section 6.3).

In developing the baseline scenario, the project proponent shall select the assumptions, values and procedures that help ensure that GHG emission reductions or removal enhancements are not overestimated (VCS, 2007.1, Section 6.3). Based on selected or established criteria and procedures, the project proponent shall quantify GHG emissions and/or removals separately for:

- Each relevant GHG, for each GHG source, sink and/or reservoir relevant for the project; and each GHG source, sink and/or reservoir relevant for the baseline scenario;
- When highly uncertain data and information are relied upon, the project proponent shall select assumptions and values that ensure that the quantification does not lead to an overestimation of GHG emission reductions or removal enhancements (VCS, 2007.1, Section 6.5.2).

The methodology element document (MED) assessed was Version 7 through 10, the final version dated 23 May 2011.

3. ASSESSMENT SCOPE

The assessment scope is defined as an independent and objective review of the new baseline and monitoring methodology document. The information in this document is reviewed against the i) Voluntary Carbon Standard 2007.1 (VCS 2007.1) and, ii) VCS Program Normative Document: Double Approval Process, v1.0.

The assessment is not meant to provide any consultation for the client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the methodology.

The scope of this assessment, as required by the VCS Program Normative Document: Double Approval Process, v1.0 includes at a minimum, the following:

- Eligibility criteria. Assessment of whether the methodology's eligibility criteria are appropriate and adequate.
- Baseline approach: Assessment of whether the approach for determining the project baseline is appropriate and adequate.
- Additionality: Assessment of whether the approach/tools for determining whether the project is additional are appropriate and adequate.
- Project boundary: Assessment of whether an appropriate and adequate approach is provided for the definition of the project's physical boundary and sources and types of gases included.



- Emissions: Assessment of whether an appropriate and adequate approach is provided for calculating baseline emissions, project emissions and emission reductions.
- Leakage: Assessment of whether the approach for calculating leakage is appropriate and adequate.
- Monitoring: Assessment of whether the monitoring approach is appropriate and adequate.
- Data and parameters: Assessment of whether monitored and not monitored data and parameters used in emissions calculations are appropriate and adequate.
- Adherence to the project-level principles of the VCS Program: Assessment of whether the methodology adheres to the project-level principles of the VCS Program (see Section 5.1.1).

The evaluation is not meant to provide any consulting towards the client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the methodology design.

4. EVALUATION PROCESS

The overall assessment, from Bureau Veritas' Contract Review to the Assessment Report & Opinion was conducted using Bureau Veritas Certification internal procedures. The desk top review of submitted documentation was initiated on February 10, 2011.

Our process included the following phases;

- Desk Review of the new methodology document;
- Follow-up interviews with project stakeholders;
- Resolution of outstanding issues and the issuance of the final assessment report and opinion.

5. CONFLICT OF INTEREST REVIEW

Bureau Veritas Certification conducted an evaluation to identify any potential conflicts of interest associated with the project or the developer prior to beginning of the independent assessment work on the methodology. No potential conflicts were found for this project.

6. ASSESSMENT TEAM

The validation team consists of the following personnel:

David R Church	
Bureau Veritas Certification	Team Leader, Climate Change Verifier
Flavio Gomes	
Bureau Veritas Certification,	Internal Technical Reviewer



7. CORRECTIVE ACTION AND CLARIFICATION REQUESTS

The team requested clarification and supplemental information as well as several corrective actions during the validation. The corrective action, clarifications, forward actions requests, supplemental information and the responses provided are summarized in Annex A for transparency reasons.

8. ASSESSMENT RESULTS: EVALUATION OF THE PROPOSED NEW METHODOLOGY BY THE DESK REVIEWER

The results of the three phases of our methodology are summarized below.

Review of Documents

The client submitted the following documents for use in the methodology assessment process:

1. Draft Baseline and monitoring methodology “Interception, recovery and use of methane from CBM seeps that would otherwise be released to the atmosphere” Version 6, 21 September 2010, version 7, January 14, 2011, version 9 dated February 28, 2011 and version 10 dated May 23, 2011.
2. 1st Approver Report: Det Norske Veritas VCS Methodology Element Assessment Report, dated 11 November 2010
3. Suit Picket Fence Conceptual Model, dated 6/28/2010
4. Review of the CDM approved methodologies ACM0008, v7.0 and AM0009, v4.0.

Other documentation referenced in the assessment included:

1. VCSA, VCS Program Normative Document: Double Approval Process, v1.0, 18 June 2009
2. CDM EB, “Combined tool to identify the baseline scenario and demonstrate additionality”, version 2.2, EB 28 Report Annex 14.
3. VCSA, Voluntary Carbon Standard 2007.1, 18 November 2008.

The desktop reviewer observed the proposed methodology is similar to, and draws heavily from the approved consolidated CDM methodology ACM0008, v7.0 – *“Consolidated methodology for coal bed methane, coal mine methane and ventilation air methane capture and use for power (electrical or motive) and heat and/or destruction through flaring or flameless oxidation”*.

Follow-up Interviews

On February 25, 2011 and February 28, 2011 Bureau Veritas Certification performed interviews with the project manager to confirm selected information and to resolve issues identified in the document review. A representative of WSP Environment & Energy was interviewed (see References). The main topics of the interviews are summarized in Table 1.

**Table 1 Interview topics**

Interviewed organization	Interview topics
WSP Environment & Energy -	Revisions to the MED v6, reference to ACM0008 v7,
WSP Environment & Energy	Revisions to Equation 12 in the MED v8, revisions to definitions of terms in Equation 12, revisions to text in “Combustion emissions from use of captured methane” on page 18 of the MED v9.

Resolution of Clarification and Corrective Action Requests

The objective of this phase of the assessment is to raise the requests for corrective actions and clarification and any other outstanding issues that needed to be clarified for Bureau Veritas Certification positive conclusion on the proposed methodology.

Corrective Action Requests (CAR) are issued where:

- (a) The methodology contains errors that will influence the ability of the project activity to achieve real, measurable additional emission reductions;
- (b) The VCS requirements have not been met;
- (c) There is a risk that readers may be confused by information in the methodology.

The validation team may also use the term Clarification Request (CL), if information is insufficient or not clear enough to determine whether the applicable VCS requirements have been met.

To guarantee the transparency of the approval process, the concerns raised are documented in more detail in Appendix A.

Conclusions of the Evaluation:

The proposed methodology is adequate to address project activities which would avoid emissions from coal bed methane seeps that would otherwise be released to the atmosphere.

- 8.1** Coverage of the Voluntary Carbon standard 2007.1 new methodology sections are outlined in the applicable guidelines.
- 8.2** The language is sufficiently transparent, precise and unambiguous to undertake a full assessment.
- 8.3** The proposed methodology reflects methodology-specific information and not project specific information.
- 8.4** The baseline methodology is internally consistent i.e., the applicability conditions, project boundary, baseline emissions estimation procedure, project emission estimation procedure, leakage, and monitoring.
- 8.5** The baseline scenario identification has a clear and concise presentation of methodological steps to identify baseline scenario and baseline emissions.
- 8.6** The additionality section has clear and concise presentation of methodological steps to assess additionality.



8.7 The emission reductions calculation section has relevant formula provided and all variables used are adequately explained.

8.8 All the issues raised in the methodology desk review are addressed and are sufficiently and properly explained.

8.9 The baseline methodology is internally consistent with the monitoring methodology, which is clearly documented in accordance with applicable guidelines.

9. CHANGES NEEDED TO IMPROVE THE METHODOLOGY DURING THE PRELIMINARY ASSESSMENT AND SUBSEQUENT REVIEWS

9.1 The second assessment resulted in no major changes to improve the methodology. Appendix A lists the Corrective Action Requests and the Clarifications from the second assessment which included two CARs and two CLs.

9.2 According to VCS methodology double approval process, a proposed VCS methodology has to be available for public comments for 30 days. This happened with this methodology from June 15, 2010 to July 14, 2010 and received one comment from Verdeo Group with requests for ten changes and/or clarifications of the proposed methodology. The methodology developer responded to all comments and made appropriate changes.

9.3 Issues raised during the assessment of the first validator were addressed appropriately and changes made by the methodology developer. One CR and sixteen CLs were documented.

10. DETAILS OF THE EVALUATION OF THE PROPOSED NEW METHODOLOGY

10.1 Eligibility Criteria:

The applicability of the methodology is clearly stated and we agree with the description of the gas sources. The methodology is limited to gas wells that intercept gas seeps between coal seam outcroppings and identified down dip CBM wells. The stated criteria are appropriate and adequate to enable a project developer to understand the applicability of this MED.

Figure 1 in the MED is relevant and appropriate to describe the methodology and demonstrate gas flow direction and recovery areas. The extraction processes are clearly defined and illustrated in the MED.

The MED defines gas destruction scenarios for three options:

1. Flaring of captured methane,
2. On-site electricity production or thermal energy production using captured methane,
3. Off-site utilization of captured methane by end users through a gas distribution grid.

The methodology clearly defines which project activities are not applicable.



10.2 Baseline Approach

The MED was prepared using the CDM EB “Combined tool to identify the baseline scenario and demonstrate additionality” as the basis of the analysis.

The Baseline methodology is appropriately described and found to be consistent with other relevant and similar CDM methodologies, including ACM0008 v7.0 which has been accepted by VCSA.

Three emissions sources are identified in the baseline scenario including:

1. Fugitive methane from coal bed methane seeps;
2. CO₂ emissions from methane destruction in the baseline, and;
3. CO₂ emissions from the production of heat and power replaced by project activity.

The baseline scenario used the guidance from the CDM Executive Board approved tool: “*Combined tool to identify the baseline scenario and demonstrate additionality*”. We agree with the analysis of the baseline scenario. Baseline emissions are identified correctly and the calculations are clearly defined and appropriate.

BVC confirms that:

- (a) All the assumptions and data used by the methodology developer are listed in the MED, including their references and sources;
- (b) All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the MED, referencing Equation 1.
- (c) Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable,
- (d) The baseline methodology has been correctly applied to identify the most reasonable baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed VCS project activity.
- (e) The baseline methodology is consistent with previously approved CDM consolidation methodologies including ACM0008 v7.0.
- (f) Baseline emissions are properly described in Equations 2-9 in the MED..

10.3 Additionality

The MED was prepared using the CDM EB “*Combined tool to identify the baseline scenario and demonstrate additionality*” as the basis of the analysis. Bureau Veritas is satisfied that the MED reflects the correct approach to additionality.

10.4 Project Boundary

Project activity emissions are clearly identified and include emissions from methane combustion due to flaring, operating equipment, power plants and heat generation. We agree that these emissions are reasonable and expected for any project activity using this methodology.

Baseline emissions are described accurately. These include the existing fugitive methane emissions for the coal bed methane seeps, CO₂ emissions from destruction of



methane in the baseline scenario, and CO₂ emissions from the production of heat and power replaced by project activity. We agree with the identified baseline emissions for any project using this methodology.

The spatial extent of the project boundaries using this methodology are inclusive of all relevant equipment, processes, and uses of the recovered gases. This is illustrated in the hypothetical project schematic in Figure 2 of the MED.

Table 1 in the MED lists the baseline and project emissions associated with the methodology and the justifications for including or excluding each source. We agree with the conclusions.

10.5 Emissions

Baseline emissions have been properly identified as noted above and are defined in Equations 1-9. These emissions use the same approach followed in CDM ACM0008 v7.0. The MED properly describes the processes used to quantify baseline emissions of CH₄ avoided by project activity.

Project emissions are properly identified and calculated using Equations 10-13 and are consistent with the project emission calculations found in CDM ACM0008 v7. These include the combustion from additional energy for methane capture and use, combustion emissions from use of captured methane, and uncombusted methane from project activities.

Emission reductions are calculated in Equation 16 and are consistent with CDM ACM0008 v7.0. These emissions are represented as the baseline emissions minus the project emissions.

10.6 Leakage

The MED indicates no known sources of emission leakage caused by the project type. Bureau Veritas concurs.

10.7 Monitoring

The MED properly describes a monitoring methodology which includes data collection, archiving, and calibration requirements. The MED lists all data and parameters that are to be monitored.

10.8 Data and Parameters and Data Quality Management

Based on the above assessment, Bureau Veritas confirms that:

1. All assumptions and data used appropriate and are listed in the MED, including their references and sources;
2. All values used in the MED are considered reasonable in the context of the proposed VCS project activity;
3. The MED outlines adequate controls and processes to ensure data quality.



10.9 Adherence to the project level principles of the VCS Program

The MED is aligned with the project level principles outlined in VCS 2007 and with the VCSA Double Approval Process. Bureau Veritas is satisfied the MED meets the stated requirements.

10.10 Comments by Stakeholders

The proposed MED was posted on the VCS website for solicitation of public comments from June 15, 2010 through July 14, 2010.

Comments were received from one organization, the Verdeo group, Inc. on July 14, 2010. The project manager provided appropriate response to these comments. The assessment team took due account of these comments and the respective responses while making the assessment opinion. The details of the comments received, responses by the project participant/s and the explanation of how due account of these is taken by the validation team are available on the VCS website.

11. INTERNAL TECHNICAL REVIEW

The assessment report underwent an Internal Technical Review (ITR) before submission of the report to VCS.

The ITR is an independent process performed to examine thoroughly that the assessment has been carried out in conformance with the requirements of VCS as well as internal Bureau Veritas Certification procedures.

The Lead Verifier provides a copy of the assessment report to the reviewer, including any necessary validation documentation. The reviewer reviews the submitted documentation for conformance with the VCS requirements. This will be a comprehensive review of all documentation generated during the assessment process.

When performing an Internal Technical Review, the reviewer ensures that:

1. The assessment activity has been performed by the team by exercising utmost diligence and complete adherence to the VCS rules and requirements.
2. The review encompasses all aspects related to the methodology which includes baseline, additionality, monitoring plans and emission calculations, review of the stakeholder comments and responses, closure of CARs, CLs and FARs during the assessment exercise, review of sample documents, and a review of the 1st Approver report.

The reviewer compiles clarification questions for the Lead Verifier and discusses these matters with Lead Verifier.

After the acceptance of responses on the 'Clarification Request' from the Lead Verifier, the finalized assessment report is accepted for further processing.



12. ASSESSMENT CONCLUSIONS

The findings from the desk review of the MED and the findings from interviews during the follow up visit are described in the in Appendix A.

The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in Appendix A. The assessment of the methodology resulted in two Corrective Action Requests (CARs) and two Clarification Requests (CLs).

The CARs and CLs were closed based on adequate responses from the client which meet the applicable requirements. They have been reassessed before their formal acceptance and closure. The last reviewed draft of the MED is version 10, dated 23 May 2011.

13 ASSESSMENT OPINION

Bureau Veritas Certification has performed an assessment of the proposed methodology element for “*Interception, Recovery and Use of Methane from CBM Seeps that would otherwise be released to the Atmosphere.*” The assessment was performed on the basis of VCS criteria for the double approval process.

The assessment consisted of the following three phases: i) a desk review of the methodology design and the baseline and monitoring plan; ii) follow-up interviews with project managers; iii) the resolution of outstanding issues and the issuance of the assessment report and opinion.

The review of the methodology, the subsequent follow-up interviews, and the prompt response to our CARs and CRs have provided Bureau Veritas Certification with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project correctly applies and meets the relevant VCS requirements for methodology elements. Bureau Veritas Certification recommends approval of the methodology element by VCS.



APPENDIX A

Corrective Action Requests (CAR) and Clarification Requests (CL)

Clarification or Corrective Action Request	Developer Response	Assessor Conclusion
<p>CAR #1</p> <p>The MED incorrectly references CDM ACM0008, v6 as the approved baseline methodology as a key source document. This version was replaced by v7 in August of 2010.</p>	<p>Developer acknowledged v7 is the current valid version of ACM0008 and revised the MED accordingly. Checked to ensure that no changes to v7 affected the MED.</p>	<p>MED revised. CAR closed.</p>
<p>CAR #2</p> <p>Equation 12 was revised in MED v9 to include CM_{MECH} as an additional parameter. Changes to equation 12 resulted in an error in the terminology. (MD_{FL} was changed to CM_{FL})</p>	<p>Developer acknowledged the error and revised Equation 12 as requested.</p>	<p>MED revised. CAR closed.</p>



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<p>CL #1</p> <p>The wording on page 18 under “Combustion emission from use of captured methane” now includes “mechanical power generation equipment” in the narrative describing Equation 12. This phrase is inconsistent with the defined term CM_{MECH} and may be confusing to the reader.</p>	<p>Developer agrees the wording is inconsistent and changes the phrase to “mechanical power generation equipment”.</p>	<p>Clarification in the MED is accepted.</p>
<p>CL #2</p> <p>In Equation 14 the term PE_{flare} in the formula is inconsistent with the term PE_{FL} in the definitions. PE_{flare} is also used in Equation 15 and defined there appropriately.</p>	<p>Developer acknowledges the inconsistency in the terms and revised the definitions to PF_{FLARE} for Equations 14 and 15.</p>	<p>Clarification in the MED is accepted.</p>



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Dave Church – *Program Manager, Greenhouse Gas*
30+ Years of Experience

Education & Registration

M.B.A., Business Administration
B.S., Economics
United States Air Force Academy
California Polytechnic State University
Penn State University

Key Registrations

- ✓ Greenhouse Gas Lead Validator/Verifier
- ✓ Sustainability Reporting Assurance/ Verification Professional
- ✓ ISO 14001 Senior Lead Auditor

RAB/QSA Environmental Management Systems Lead Auditor #E052188
OHSAS 18001 Health & Safety Systems Lead Auditor (BVQI)
BVC Certified Quality Systems Lead Auditor
California Climate Action Registry Lead Verifier (GHG)
Chicago Climate Exchange approved Lead Verifier (GHG)
TAPA FSR Lead Auditor (Security)
California Air Resources Board approved Lead Verifier (GHG)
IRCA Lead Auditor Training – Senior Instructor
AA1000 Lead Assuror
Assurance of Sustainability Reports - Lead Assuror

Professional Summary

Prior to joining Bureau Veritas, Mr. Church began his career in 1973 in the oil and gas industry in the northwest Pennsylvania, western New York and northeast Ohio fields. He was the managing partner of 4C's Drilling Company and the Field Superintendent of Gas & Oil Management



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Associates for 15 years. He oversaw the drilling and development of more than 400 oil and gas wells and managed the production operations. He was responsible for the design and construction of oil and gas wells, the operation and maintenance of wells, and the eventual de-construction/abandonment of wells. He operated and maintained natural gas compression stations, gas stripping operations, and gas pipelines. He managed oil/gas drilling operations over abandoned coal mine sites and developed mitigation plans for fugitive gas emissions from those fields.

Mr. Church provide consulting services for the oil/gas industry and various manufacturing companies from 1989-1995, including three years as the chief operating officer of W.J. Smith & Associates, Inc., a firm specialized in environmental, health and safety consultation and remediation services.

In 1995 Mr. Church began participating in the TC-207 committee to develop the ISO 14000 series of standards. As a member of the ANSI committee on EMS and has helped write many of the ISO standards for environmental management, greenhouse gas, and auditing performance.

Since joining Bureau Veritas in 1996, Mr. Church has managed programs for ISO 14001, OHSAS 18001, SFI and FSC forestry certification, Responsible Care, SQF, Corporate Social Responsibility, TAPA Security, Green House Gas verification under the Chicago Climate Exchange, California Climate Action Reserve, The Climate Registry and EPA Climate Leaders.

He was a lead instructor for the US Navy's EMS implementation program and provided instruction on management systems and auditor training for Navy staff in the US and Singapore.

He created certification programs and secured accreditations for Responsible Care, SFI and FSC, CCAR, CCX, TAPA and ANSI. He has over 1000 days of auditing experience, primarily to the ISO 14001 standard and in GHG verification. He has been an instructor for the ISO 14001 Lead Auditor course and has taught over 700 students how to audit management systems.

In his current role, Mr. Church is Program Manager for development of Greenhouse Gas Validation/Verification and Sustainability Assurance services. He has worked directly with clients to provide assurance and verification for Hewlett Packard, Genentech, Newmont Mining, Barrick Gold and RJ Reynolds and has supported Bureau Veritas assurance projects for Sony and Seiko-Epson. Mr. Church also provided AA1000 assurance for British American Tobacco.

He has worked with Sony to develop internal GHG measurement and reporting protocols for Sony's global EMS. He also worked with Hewlett Packard to design the World Economic Forum GHG program for HP's GHG and EMS reporting. Mr. He was directly responsible for achieving BV's ANSI accreditation under ISO 14065 and ISO 14064-3. He has worked directly with Newmont Mining and Barrick Gold in the assessment of their conformance to the International Council on Mining and Metals (ICMM) protocols and has contributed to the development of the ICMM assurance protocols.



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David has completed a total of 4 weeks of advanced training in GHG Validation/Verification from Future Perfect for The Climate Registry and again for the California Air Resources Board. He has completed training under the Bureau Veritas CDM Validator/Verifier program and the EU ETC Aviation program. He completed 2 weeks of training under the Bureau Veritas Assurance of Sustainability program and is qualified to conduct all aspects of Climate Change Services for Bureau Veritas.

Relevant Project Experience**IBM**

Lead Auditor and Program Manager for IBM's global ISO 14001 certification. Conducted over 50 audits of IBM globally. Also served as Lead Auditor for IBM's global OHSAS 18001 certification.

Shell EP Americas

Lead Auditor and Program Manager for Shell's ISO 14001 certification for the Americas including all offshore and onshore sites.

Sony

Lead Auditor and Americas Program Coordinator for all Sony sites in the Americas certified to ISO 14001.

Rolls Royce

Lead Consultant for Rolls Royce aircraft engine facilities in North America. Designed and implemented ISO 14001 management system to be certified by 3rd party.

Ashland Chemical

Lead Auditor and Program Manager for Ashland's ISO 14001 and RC14001 certification in North America.

General Dynamics

Lead Auditor and Program Manager for several divisions of the company for ISO 14001 and OHSAS 18001.

Hewlett Packard



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Lead Auditor and internal audit trainer for HP's global EMS. Provided training to HP's global auditing team in Singapore, Ireland, US, and Australia.

Newmont Mining

Lead Assuror to verify the Corporate Responsibility report published by the company. Supervised the team that visited foreign sites and verified corporate policies, data and stakeholder engagement. Project included assessment of conformance to the ICMM Principles, UN Global Compact and AA1000.

Barrick Gold

Lead Assuror to verify Barrick's Corporate Responsibility report and conformance to the ICMM Principles for Sustainable Development and the 5 Subject Matter areas required by ICMM. Project team visited mine sites on 4 continents. Verified GHG reduction targets and inventory data for corporate program.

Shaw Industries

Lead verifier for large North American GHG emissions inventory and reduction targets. Provided assurance for TCR reporting