

UNIVERSITY OF WISCONSIN MILWAUKEE CAMPUS WIDE CLEAN ENERGY & ENERGY EFFICIENCY PROJECT VALIDATION & VERIFICATION REPORT



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Summary:

SCS Global Services (SCS) has performed a validation and verification of the University of Wisconsin Milwaukee Campus Wide Clean Energy & Energy Efficiency Project (“the project”) located in Milwaukee, Wisconsin, USA. This report presents the validation and verification process, the findings raised during the assessment, and the conclusions reached by the validation and verification body (VVB). This assessment covers the greenhouse gas emissions reductions reported to the Verified Carbon Standard (VCS) for the monitoring period of 01 July 2015 to 30 June 2016.

The purpose of the validation audit was to conduct an independent assessment of the project to determine whether the project complies with the VCS rules and to evaluate whether the provisions of the monitoring methodology and the monitoring plan were consistently and appropriately applied. The purpose of the verification audit was to evaluate the representations provided in the current monitoring report and assess whether the compiled data conforms to the assessment criteria, as listed in Section 1.2 of the report.

The evaluation was conducted in accordance with the VCS Program Guide, Version 3.6 (October 2016); VCS Program Standard, Version 3.6 (October 2016); VCS Approved Methodology VM0025: Campus Clean Energy and Energy Efficiency, Version 1.0 (February 2014); and VCS Approved Methodology Module VMD0038: Campus Clean Energy and Energy Efficiency: Campus-Wide Module, Version 1.0 (February 2014).

In the course of the assessment SCS verifiers developed findings which included Non-Conformity Reports (NCRs), New Information Requests (NIRs), and Observations (OBSs). During this assessment 9 findings were issued: 2 NCRs and 7 NIRs. These findings are described in Appendix A. All findings have been adequately responded to, resulting in their closure.

On the basis of the information provided and the analyses completed, SCS was able to reach a positive opinion, with a reasonable level of assurance, that the information provided in the current monitoring report meets the requirements of the VCS standards and methodologies. Furthermore, SCS has concluded that the emission reductions represented by the project proponent during the monitoring period of 1 July 2015 to 30 June 2016 are free from material misstatement and equal in number to 5,210 tCO₂e.

Table of Contents

1	Introduction	5
1.1	Objective	5
1.2	Scope and Criteria	5
1.3	Level of Assurance	6
1.4	Summary Description of the Project	6
2	Validation and Verification Process	6
2.1	Method and Criteria	7
2.2	Document Review.....	9
2.3	Documentation Provided by UWM.....	9
2.4	Interviews.....	10
2.5	Site Inspections.....	10
2.6	Resolution of Findings	10
2.6.1	Forward Action Requests	11
3	Validation Findings.....	11
3.1	Project Details.....	11
3.1.1	Project type, technologies and measures implemented, and eligibility of the project.....	11
3.1.2	Project proponent and other entities involved in the project	13
3.1.3	Project start date	13
3.1.4	Project crediting period.....	13
3.1.5	Project scale and estimated GHG emission reductions or removals.....	13
3.1.6	Project location.....	13
3.1.7	Conditions prior to project initiation	13
3.1.8	Project compliance with applicable laws, statutes and other regulatory frameworks	14
3.1.9	Ownership and other programs.....	14

3.2	Participation under Other GHG Programs.....	14
3.3	Application of Methodology.....	14
3.3.1	Title and Reference	14
3.3.2	Applicability	15
3.3.3	Project Boundary	16
3.3.4	Baseline Scenario	18
3.3.5	Additionality	20
3.3.6	Quantification of GHG Emission Reductions and Removals	20
3.3.7	Methodology Deviations.....	24
3.3.8	Monitoring Plan	24
3.4	Non-Permanence Risk Analysis	25
4	Safeguards	25
4.1	No Net Harm	25
4.2	Environmental Impact	25
4.3	Local Stakeholder Consultation.....	25
4.4	Public Comments.....	25
5	Verification Findings.....	25
5.1	Accuracy of GHG Emission Reduction and Removal Calculations.....	26
5.2	Quality of Evidence to Determine GHG Emission Reductions and Removals.....	27
6	Validation and Verification Conclusion	28
	APPENDIX A: FINDINGS ISSUED	30

1 INTRODUCTION

1.1 Objective

The objective of the validation was to evaluate:

- Conformance to the VCS program rules and assessment criteria, including the principles and requirements of relevant standards or greenhouse gas (GHG) programs within the scope of validation;
- GHG emissions reduction project planning information and documentation in accordance with the applicable VCS-approved methodology, including the project description, baseline, monitoring and reporting procedures, and quality assurance/quality control (QA/QC) procedures;
- The establishment, justification and documentation of the GHG project plan and the GHG project's planned controls; and
- The probability that implementation of the planned GHG project will result in the GHG emission reductions or removal enhancements as stated or claimed by the responsible party.

The objective of the verification was to evaluate:

- The reported GHG baseline, project emissions and emission reductions/removal enhancements, leakage assessment, and impermanence risk assessment and mitigation (if applicable);
- Any significant changes to the project procedures or criteria since the last verification;
- Conformance with applicable assessment criteria, including the principles and requirements of relevant standards or GHG programs within the scope of the verification;
- GHG project planning information and documentation, including the project, baseline, QA/QC risk management, monitoring and reporting procedures and criteria; and
- The GHG project's controls.

1.2 Scope and Criteria

The scope of this report encompasses assessment of the submitted Project Description Document (PDD) and Monitoring Rlan as well as desk and site verification activities against the assessment criteria and project documentation, including the baseline study and any related supporting documents. This assessment will incorporate the verification of the ex-post greenhouse gas (GHG) emission reductions that have occurred as a result of the registered VCS project.

SCS has conducted the validation and verification assessment of the project and project documentation against the following criteria:

- VCS Standard, Version 3.6 (October 2016)
- VCS Program Definitions, Version 3.6 (October 2016)

- VCS Program Guide, Version 3.6 (October 2016)
- The VCS-approved methodology VM0025: Campus Clean Energy and Energy Efficiency, Version 1.0, (February 2014)
- VCS Approved Methodology Module VMD0038: Campus Clean Energy and Energy Efficiency: Campus-Wide Module, Version 1.0, (February 2014)

As an ANSI accredited verification body, SCS will conduct the validation and verification against the requirements of:

- The Principles of ISO 14064-3:2006: Greenhouse Gas – Specification with guidance for the validation and verification of greenhouse gas assertions

1.3 Level of Assurance

SCS has performed the core verification activities to a reasonable level of assurance as required by the VCS. Reasonable assurance allows SCS the ability to “verify without qualification” and attest to the accuracy of the number of VCU’s being issued to the project.

1.4 Summary Description of the Project

The University of Wisconsin Milwaukee Campus Wide Clean Energy & Energy Efficiency Project is a campus-wide clean energy and efficiency project developed by the University of Wisconsin-Milwaukee (UWM). This project has been carried-out following the approved methodology VM0025 and module VMD0038, which provide a set of performance requirements for campuses to achieve Scope 1 stationary combustion reductions, by Carnegie Class, which, averaged over an additionality eligibility period, exceed specified performance benchmark (PB) standards. It should be noted that the project does not claim emission reductions from decreases in Scope 2 electricity consumption.

No single technology installation is typically relied upon when meeting the performance standard requirements for this methodology but rather a series of energy efficiency/clean energy measures, adopted campus-wide. Since this methodology requires that at least two kinds of energy efficiency measures be adopted to meet the PB performance tests (per module section 4), UWM’s activities include:

Behavior change campaigns	☒ Yes	☐ No
Cogeneration and fuel switch	☐ Yes	☒ No
Lighting Retrofits	☒ Yes	☐ No
On-Site Renewables	☒ Yes	☐ No
Boiler retrofits, central heating and cooling upgrades	☐ Yes	☒ No
Building system retro-commissioning and upgrades, including automation	☒ Yes	☐ No
Weatherization Improvements	☒ Yes	☐ No
LEED Certification/Green Buildings	☒ Yes	☐ No
Other innovative strategies	☒ Yes	☐ No

2 VALIDATION AND VERIFICATION PROCESS

2.1 Method and Criteria

The validation and verification were performed through a combination of document review, interviews with relevant personnel, and a virtual site visit, as discussed in Sections 2.2 through 2.5 of this report. At all times, the project was assessed for conformance to the criteria described in Section 1.2 of this report. As discussed in Section 2.6 findings were issued to ensure that the project was in conformance with the assessment criteria.

During the document review, the audit team conducted a risk assessment and created a sampling plan to determine the areas with the greatest risk of material error and to identify key factors that impact the reported emission reductions and removals. The audit team then created a verification plan taking the sampling plan into account.

The sampling plan is described below:

PARAMETER	DATA REVIEWED	ASSESSMENT
GENERAL PROJECT REQUIREMENTS	VCS Project Description Document, VCS Monitoring Report, UNH Campus Carbon Calc. v.9, Campus-wide Project Evaluation and ER estimates Calculator, primary data and documentation	Reviewed project planning and monitoring documentation to confirm that the project aligns with the VCS general requirements as defined in the VCS Standard, Version 3.6 (October 2016)
APPLICABILITY CONDITIONS	VCS Project Description Document, VCS Monitoring Report, UNH Campus Carbon Calc. v.9, Campus-wide Project Evaluation and ER estimates Calculator, primary data and documentation	Reviewed project planning and monitoring documentation to confirm that the project aligns with the applicability conditions as defined in the VCS Standard, Version 3.6 (October 2016) , the VCS-approved methodology VM0025: Campus Clean Energy and Energy Efficiency, Version 1.0, (February 2014), and the VCS Approved Methodology Module VMD0038: Campus Clean Energy and Energy Efficiency: Campus-Wide Module, Version 1.0, (February 2014)
MANAGEMENT SYSTEM AND DATA TRACKING	VCS Monitoring Report, Calculation Workbooks, Personnel Interviews, communication, monitoring documentation provided by project proponent.	Reviewed monitoring documentation, and consistency of parameter values throughout documentation, data, and applicable calculation tools.

SOURCES OF EMISSION REDUCTIONS	Scope 1 and Scope 2 Calculations - as well as - emission source primary activity data	Reviewed Samples of monthly data input contributing to the sum of energy usage (Project Emissions Adjustments), Project Emissions from Scope 1 sources, and Purchased Electricity. Reviewed invoices for purchased natural gas, electricity, and coal. Due to the number of documents available for the monitoring period, only a sample of months were selected, based on a random sample.
CORRECT APPLICATION OF EMISSION FACTORS	VCS Monitoring Report, Calculation Workbooks, project documentation, and data	Reviewed UNH Campus Carbon Calculator and Campus-wide Project Evaluation and ER Estimates Calculator.
ACCURATE CALCULATION OF EMISSIONS	Scope 1 and Scope 2 Calculations - as well as - emission source primary activity data, application of correct emissions factors.	Reviewed UNH Campus Carbon Calculator and Campus-wide Project Evaluation and ER Estimates Calculator, as well as primary Scope 1 and 2 activity data.
MATERIALITY THRESHOLD	The sum of omissions, errors, and misrepresentations.	Reviewed UNH Campus Carbon Calculator and Campus-wide Project Evaluation and ER Estimates Calculator, as well as primary Scope 1 and 2 activity data.
EVIDENCE TO SUPPORT ADDITIONALITY TESTS	Campus-wide Project Evaluation and ER Estimates Calculator, changes in square feet.	Reviewed monitoring report, American College and University Presidents Climate Commitment (ACUPCC) report, Sustainability Tracking, Assessment & Rating System (STARS) report, and Campus-wide Project Evaluation and ER Estimates Calculator.
INTERNAL QA/QC	VCS Project Description Document, VCS monitoring report, initial validation report, and communication with project staff.	Reviewed monitoring documentation, and information provided by project proponent.
QUALIFICATIONS & COMPETENCY	Review project staff qualifications and experience.	Interaction and communication with UWM project Staff, review of project staff qualifications.

2.2 Document Review

SCS reviewed the Project Description Document, Monitoring Report, project calculations, and supporting documentation to assess initial conformance with the data and documentation requirements provided in the VCS rules and assessment criteria.

2.3 Documentation Provided by UWM

	DOCUMENT	FILE NAME
1	VCS Monitoring Report	20170728_UWMMR
2	VCS Project Description Document	20170724_UWMPDD
3	UNH Campus Carbon Calc. v.9	20170714FY2016 UWM GHG Calculator
4	Campus-wide Project Evaluation and ER Estimates Calculator	20170724_Scope 1 University of WisconsinMilwaukee
5	General Building Report	SPACE_GBR Worksheet 2011-12
6	General Building Report	GBR2011-12
7	LEED Certificate	ICAB LEED Scorecard
8	LEED Certificate	LEED Certification review report - UWM School of PublicHealth
9	LEED Certificate	UW-M Interdisciplinary Research Complex
10	Utility Summary	Energy Utility Data Master
11	Utility Summary	We Energies Main Campus Electric Account
12	Utility Summary	We Energies GLRF Steam_Sep14_Aug16
13	Utility Summary	Campus Gas Totals
14	Physical Boundary Map	Appendix_A_UWM Campus Map
15	Utility Usage Report	Monthly Report - (01-16)
16	Utility Usage Report	Monthly Report - (02-16)
17	Utility Usage Report	Monthly Report - (03-16)
18	Utility Usage Report	Monthly Report - (04-16)
19	Utility Usage Report	Monthly Report - (05-16)
20	Utility Usage Report	Monthly Report - (06-16)
21	Utility Usage Report	Monthly Report - (07-16)
22	Utility Usage Report	Monthly Report - (08-16)
23	Utility Usage Report	Monthly Report - (09-16)
24	Utility Usage Report	Monthly Report - (10-16)
25	Utility Usage Report	Monthly Report - (11-16)
26	Utility Usage Report	Monthly Report - (12-16)

27	Utility Invoice	April2016
28	Utility Invoice	MainAccount_Usage_Overview
29	Utility Invoice	May2016
30	Contractor Statement of Values	UWM Ph2 SOV Master 10E2T

2.4 Interviews

SCS conducted interviews with the following project personnel to confirm information about the project activities and to supplement the information provided in the project documentation. Information provided in email communications also supplemented the information obtained through telephone interviews.

DATE	NAME / ORGANIZATION	SUBJECT
05/02/17	Blake Troxel, SCS; John Gardner, UWM; Kate Nelson, UWM	• Verification Scope • Verification Process • Project Activity Changes • Data & Documentation
06/20/17	Scott Eaton, SCS; John Gardner, UWM; Kate Nelson, UWM	• Virtual Site Assessment
Throughout Audit	John Gardner, UWM	• Project Documentation • Project Calculations • Eligibility Conditions • Management Systems • QA/QC

2.5 Site Inspections

A virtual site assessment was conducted during the assessment. The supporting documentation and data, in addition to the virtual site assessment (conducted via a real-time, audio-visual, web-based meeting platform) provided sufficient detail for the project. The data included project documentation, primary data, required calculations, and fuel invoices. Through interviews with project personnel and review of primary documentation, SCS determined a reasonable level of assurance could be obtained with the use of a virtual site assessment. The focus of the virtual site assessment was a demonstration of lighting retrofit and weatherization improvements, as well as checking of additional improvements identified in the Contractor Statement of Values documentation. Several facilities were viewed, with improvements demonstrated and consistent with that described in project documentation.

2.6 Resolution of Findings

Any potential or actual material discrepancies identified during the assessment process were resolved through the issuance of findings. The types of findings issued by SCS were characterized as follows:

Non-Conformity Report (NCR): An NCR signified a material discrepancy with respect to a specific requirement. This type of finding could only be closed upon receipt by SCS of evidence indicating that the identified discrepancy had been corrected. Resolution of all open NCRs was a prerequisite for issuance of a verification statement.

New Information Request (NIR): An NIR signified a need for supplementary information in order to determine whether a material discrepancy existed with respect to a specific requirement. Receipt of an NIR did not necessarily indicate that the project was not in compliance with a specific requirement. However, resolution of all open NIRs was a prerequisite for issuance of a verification statement.

Observation (OBS): An OBS indicated an area that should be monitored or ideally, improved upon. OBS's were considered to be an indication of something that could become a non-conformity if not given proper attention, and were sometimes issued in the case that a non-material discrepancy was identified. OBS's were considered to be closed upon issuance.

As part of the validation and verification, 2 NCRs and 7 NIRs were issued. All findings issued by the audit team during the assessment process have been adequately responded to, resulting in their closure. In accordance with Section 5.3.6 of the VCS Standard, all findings issued during the validation and verification process, and the inputs for their closure, are described in Appendix A of this report.

2.6.1 Forward Action Requests

No forward action requests were raised during the verification, for the current monitoring period.

3 VALIDATION FINDINGS

3.1 Project Details

The audit team can confirm, as further justified below, that the description in the PDD is accurate, complete, and provides an understanding of the nature of the project.

3.1.1 Project type, technologies and measures implemented, and eligibility of the project

This project exists under sectoral Scope 1 (energy industries [renewable/non-renewable sources]) and scope 3 (energy demand). Reductions under emissions scope 1 (combustion) were achieved and verified.

UWM's adoption of this project was driven by the Energy Matters – Comprehensive Energy Efficiency and Awareness program. The UWM Facility Services Department and Office of Sustainability partners with an energy service company to develop the project and focused on improving campus space and service, pilot innovative technology and programs, and reduce

energy consumption. The project took a “cellar-to-ceiling” phased approach addressing one million square feet at a time – 4,046,526 square feet total were under the boundary of the project.

UWM identified the campus’ energy-intensive buildings and implemented energy conservation measures, focusing on including lighting improvements and occupancy-based heating and cooling load improvements. UWM also focused on improving energy usage by improving fume hood use to properly shut them when not in use. Additionally, UWM adopted multiple energy efficiency and clean energy measures campus-wide. UWM’s campus-wide activities include:¹

- **Behaviour Change Campaign/ Communications:** Along with the communications focusing on laboratory space and properly using fume hoods, UWM has implemented behaviour communications for on-campus energy use, and student energy use competitions. The Office of Sustainability has run energy and water use competitions between residence halls as well as between academic buildings as part of in-house competitions and through Campus Conservation Nationals. In addition, the Office of Sustainability has conducted staff trainings for 23 departments within Student Affairs and 15 departments within Finance & Administrative Affairs on energy efficiency and conservation as part of UWM’s Green Office Certification program.
- **Lighting Retrofits:** UWM replaced lighting with high efficiency fixtures, and occupancy sensors. Lamps and ballasts were standardized across campus with 5,000K 25-watt bulbs.
- **On-Site Renewables:** Energy savings coupled with outside grants enabled UWM to build a large green roof lined with solar photovoltaic panels on the Golda Meir Library. The 50,000-square-foot green roof features a 29.4kW solar PV system (a ballasted system tilted at a 35° angle consisting of 120, 245-watt modules). The PV system is designed to overlay with the green roof to optimize the green roof’s cooling effect.
- **Building System Retro-Commissioning & Upgrades Including Automation:** Investment-grade audits were conducted for campus buildings before solutions were proposed. Improvements to the energy management system and controls were coordinated with improvements to variable speed drives/ventilation control, steam trap replacements, lighting system improvements, plumbing improvements, and building envelope improvements for optimal performance.
- **Weatherization Improvements-Building envelope improvements:** Buildings were inspected visually and a smoke puffer was used to identify the location and severity of leakage paths within individual buildings. Doors and windows received weather-stripping.
- **LEED Certification/Green Buildings:** UW-Milwaukee built three LEED certified buildings between 2011-2016. The Zilber School of Public Health is a five-story LEED-Gold facility

¹ The following information describing the campus-wide activities was provided in the University of Wisconsin Milwaukee Campus Wide Clean Energy & Energy Efficiency Project Project Description Document.

within the LEED-ND Platinum Brewery development in downtown Milwaukee. The building features historic reuse as well as new building construction and over 95% of construction waste was diverted from landfill. The UWM Innovation Accelerator facility achieved LEED silver certification in 2015. The building features a 25W PV solar array, a green roof, exterior sunshades, and foam-in-place wall insulation. Building labs and offices were positioned for even lighting and controlled solar gain. The Kenwood Interdisciplinary Research Center, on UWM's Kenwood campus, was completed in 2016 and achieved LEED Gold certification as well. The building features water efficient landscaping, enhanced commissioning, exterior sunshades, and a high-reflective white (cool roof) adhered membrane.

- Innovative Strategies: UV lighting was installed on several heating and cooling coils in order to kill the bacteria that cling to them. This not only makes the air handlers run more efficiently but it also in turn improves the indoor air quality, a sustainability factor not as easily quantified in a bottom line payback.

3.1.2 Project proponent and other entities involved in the project

The project proponent is the Board of Regents of the University of Wisconsin System, for the University of Wisconsin Milwaukee (UWM).

3.1.3 Project start date

The project start date is 1 July 2015, as confirmed by SCS.²

3.1.4 Project crediting period

The project crediting period is 1 July 2015 to 30 June 2025, meeting the 10 year maximum.

3.1.5 Project scale and estimated GHG emission reductions or removals

The project falls under the project category for reductions under 300,000 tCO₂e per year. For this project, an estimated total 31,561 tCO₂e will be reduced over the 10-year crediting period, with an average of 3,156 tCO₂e reduced per year.

3.1.6 Project location

The project is located at the University of Wisconsin-Milwaukee in Milwaukee, Wisconsin, 53201

3.1.7 Conditions prior to project initiation

² According to Section 3.7.6 of the VCS Standard, projects applying a standardized method for determining additionality shall initiate the project pipeline listing process set out in VCS document *Registration and Issuance Process* within the project validation timelines set out in Sections 3.7.1 – 3.7.5. Validation may be completed any time thereafter.

As described in the Project Design Document, the conditions prior to the project year 1 are based on historical emissions information, as consistent with the methodology's specifications.

3.1.8 Project compliance with applicable laws, statutes and other regulatory frameworks

The project's energy efficiency measures are in compliance with local regional and national laws, as confirmed by SCS.

3.1.9 Ownership and other programs

The Board of Regents of the University of Wisconsin System, for the University of Wisconsin Milwaukee (UWM) owns the land and buildings in which the project equipment has been installed and the project activities have been carried out, and therefore has the right of use of the equipment that generated the project GHG emission reductions. There are no existing regulatory limits on GHG emission in Wisconsin or other regulatory or planning requirements to implement energy efficiency measure. UWM does participate in The American College & University Presidents' Climate Commitment (ACUPCC), which is a voluntary scheme managed by Second Nature.

3.1.9.1 Project ownership

UWM holds the rights to the equipment and processes that generate GHG emissions reductions, and has no contracts with other parties for generation purposes.

3.1.9.2 Emissions trading programs and other binding limits

There is no carbon cap or binding limit in the campus' region, as confirmed by SCS.

3.1.9.3 Other forms of environmental credit sought or received and eligible to be sought or received

UWM has not sought or received any other form of environmental credit, as confirmed by SCS.

3.1.9.4 Participation and rejection under other GHG programs

UWM has not participated or been rejected by any other GHG program, as confirmed by SCS.

3.2 Participation under Other GHG Programs

This project has only been registered with VCS and has not been registered with any other approved GHG Program.

3.3 Application of Methodology

3.3.1 Title and Reference

This project has applied the following:

- The VCS-approved methodology VM0025: Campus Clean Energy and Energy Efficiency, Version 1.0, (February 2014)

- VCS Approved Methodology Module VMD0038: Campus Clean Energy and Energy Efficiency: Campus-Wide Module, Version 1.0, (February 2014)

The audit team confirmed, through review of the respective web resources for the above methodologies³ that the version of each methodology referenced above was valid at the time of validation, as required by the VCS rules.

3.3.2 Applicability

The assessment of the project's compliance with the applicability criteria of VM0025 and VMD0038 are documented in detail in the table below. In summary, the project meets the applicability criteria as a degree-granting institution of higher education located in the US. Accordingly, the university applied the Campus-Wide module appropriately.

APPLICABILITY CRITERIA	ASSESSMENT
The project includes an existing campus in the United States?	UWM is located in Milwaukee, Wisconsin in the United States.
The campus must meet with one of the following ACUPCC Carnegie classifications: four year (Doctoral, Masters, and Baccalaureate), two year (Associate) and Special colleges and universities?	UWM is a four year Doctoral granting university listed by the Carnegie foundation (http://carnegieclassifications.iu.edu/lookup/lookup.php)
The campus reports (and has reported) GHG emissions through ACUPCC, STARS, The Climate Registry or another third-party GHG reporting program (see definition for third-party GHG reporting program) for at least project year 1 and one of the baseline years. Where GHG emissions have been reported through a third-party GHG reporting program besides ACUPCC, STARS or The Climate Registry, the project proponent must provide justification that such program meets with the definition for a third-party GHG reporting program in Section 3 (e.g., with respect to providing public, transparent and credible GHG reporting)?	UWM, under management by Second Nature, reported to the ACUPCC platform, a third party GHG reporting program and to the STARS program for fiscal year 2016. (https://stars.aashe.org/institutions/university-of-wisconsin-milwaukee-wi/report/2016-05-31/)(http://reporting.secondnature.org/institution/detail/4242##4242)

³ <http://database.v-c-s.org/methodologies/campus-clean-energy-and-energy-efficiency>,
<http://database.v-c-s.org/methodologies/campus-clean-energy-efficiency-campus-wide-module>

The project must demonstrate that it has achieved the required substantial reductions in GHG emissions by implementing at least two of the activities listed in the module?	UWM has implemented seven of the possible nine project activities. SCS has verified the implementation status of the activities via a remote site assessment and review of applicable project documentation, reports, and invoices.
This module is not applicable to K-12 schools?	UWM is an institution of higher education (undergraduate and graduate) and is accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools. (https://www.hlcommission.org/component/redirect/?Action=ShowBasic&Itemid=&instid=2026&lang=en)
The spatial extent of the project boundary must be consistent with the boundary used to report to the relevant third-party GHG reporting program (eg, ACUPCC, STARS). The boundary can be comprised of either the entire campus (all college facilities) or a campus which represents a standalone entity within the university system, provided that this is consistent with the campus's reporting for the relevant third-party GHG reporting program.	UWM reports to ACUPCC and asserts that the Consolidation methodology used to determine organizational boundaries are the Operational control approach. Appendix A of the PDD delineates the operational boundary of UWM as the buildings owned and operated by the university. The Project Boundary documentation provided was reviewed by the audit team and found to be valid and consistent with the third-party GHG reports.

3.3.3 Project Boundary

The identified boundary of the project is all of the main campus of the UWM and all facilities sites as reported to ACUPCC, and selected sources and gases are justified for the project activity. The validation of the project activity did not reveal other greenhouse gas emissions occurring within or outside the project boundary as a result of the implementation of the proposed project activity.

Emissions (Baseline and Project)	Source	Gas	Included / Excluded	Assessment
Scope 1	Stationary Combustion	CO ₂	Included	This is the only scope 1 source of emissions relating to renewable energy and energy efficiency targeted by this module. CO ₂ emissions constitute the most significant source of emissions. CH ₄ and N ₂ O are included
		CH ₄	Optional Included? Check if yes ☒	

Scope 2		N ₂ O	Optional Included? Check if yes ☒	in ACUPCC reporting but differentials are small. Where included, they must be included in both baseline and project case.
	Mobile Combustion	CO ₂	Excluded	Transportation fleet improvements are not eligible project activities.
		CH ₄		
		N ₂ O		
	Fugitive	CO ₂	Excluded	Not relevant to energy-based GHG emissions
		CH ₄		
		N ₂ O		
	Process	CO ₂	Excluded	Not relevant to energy-based GHG emissions
		CH ₄		
		N ₂ O		
	Purchased Electricity	CO ₂	Included	93 to 97 percent of the campus' scope 2 emissions are from purchased electricity based on GHG emissions data reported to ACUPCC. CO ₂ emissions constitute the most significant source of emissions. CH ₄ and N ₂ O are included in ACUPCC reporting but differentials are small. Where included, they must be included in both baseline and project case.
		CH ₄	Optional Included? Check if yes ☒	
		N ₂ O	Optional Included? Check if yes ☒	
	Purchased Heat	CO ₂	Conditional Included? Check if yes ☐ Check N/A if non purchased N/A ☒	This source has a relatively small contribution to a campus' energy performance. This source is conservatively excluded from the quantification of baseline and project emissions except where adjustment technologies may impact this source of emission as described in the project emissions adjustment section.
		CH ₄		
		N ₂ O		
	Purchased Cooling	CO ₂	Conditional Included? Check if yes ☐ Check N/A if non purchased	This source has a relatively small contribution to a campus' energy performance. This source is conservatively excluded from the quantification of baseline and project emissions except where adjustment technologies may impact this source of emission as described in the project emissions adjustment section.
		CH ₄		
		N ₂ O		

			N/A ☒	
	Purchased Steam	CO ₂	Conditional Included? Check if yes ☒ Check N/A if non purchased N/A ☐	This source has a relatively small contribution to a campus' energy performance. This source is conservatively excluded from the quantification of baseline and project emissions except where adjustment technologies may impact this source of emission as described in the project emissions adjustment section.

The spatial extent of the project boundary was reviewed through UWM campus maps, parcel data, tax information, and deed documentation for property owned by the Board of Regents of the University of Wisconsin System. Additionally, the audit team conducted a virtual site visit and reviewed primary activity data, invoices, and monitoring and verification reports to corroborate the greenhouse gas sources included in the project boundary as identified in the table above. As a result of this review the audit team has reasonably determined that the spatial extent of the project boundary and the GHG sources included in the project boundary are consistent with the boundary used to report to the relevant third-party GHG reporting programs as required by the verification criteria.

3.3.4 Baseline Scenario

The baseline scenario comprises the historical campus-wide scope 1 stationary combustion emissions prior to the project start date for reductions in stationary combustion emissions, in which the project need only meet the applicability conditions and apply the pre-defined criteria set out in the performance method for the demonstration of additionality.

UWM used five years of data prior to the start of the project (FY2011-2015) to develop the baseline emissions estimates as described in the methodology. During that time, there was no need to adjust the baseline for changes in the area (square footage) of the university buildings.

Baseline emissions must be determined over a three- to five-year period using data that meets the following conditions:

CRITERIA	ASSESSMENT
Data must be from a baseline period which includes project year 0 and three to five consecutive years prior to project start date. The baseline period must be justified relative to the data that most accurately reflects historical emissions that are comparable to the campus conditions during project crediting period	The university uses five years of data to develop the baseline emissions estimates. The data included the project start year (FY2016) as described in the methodology and the five years prior to the start of the project (FY2011-2015)

(eg, similar square footage and enrollment).	
Where reductions are sought for both stationary combustion emissions and scope 2 electricity emissions, the same baseline period does not have to be used for both.	The project is only requesting credits for Scope 1 stationary combustion emission reductions.
Data for project year 1 and at least one of the years in the baseline period must have been reported through ACUPCC, STARS or another third-party GHG reporting program.	UWM has reported GHG data for the ACUPCC program from 2008 - 2015.
The choice of annual reporting periods (eg calendar, fiscal, other) must be consistent through the project crediting period and the baseline period. The reporting period should be consistent with that selected for public reporting to the relevant third-party GHG program.	The initial project reporting period is consistent with internal accounting procedures at the university and with ACUPCC fiscal year reporting (1 July to 30 June).
Where the project requires adjustments for square footage, as determined in Test 2 of Section 7.1, the square footage-adjusted baseline emissions, as determined in Section 7.3.2, must be applied for both the additionality tests in Section 7 and quantification of baseline emissions in Section 8.13	No square footage adjustments were required for the current reporting period.

Through its review, SCS has confirmed that the assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence, and can be deemed reasonable.

3.3.5 Additionality

The methodology VM0025 uses a standardized approach and performance method for determination of additionality. The complete set of four steps must be followed during validation, using data from project year 1 and the relevant additionality eligibility period. The university established a five year (FY2011-2015) additionality eligibility period. The university used the UNH CAMPUS CARBON CALC. V.9 calculator to calculate emissions estimates, using facility data from the Facilities Management division.

Per the criteria, there were four main additionality performance tests performed that ensured that the project:

1. Was not mandated by law
2. Avoided square foot declines (2c) and/or grew at less than 5% annually during the baseline period (2b); or, failing this Test 2, put forward the project for certification on a square foot adjusted basis as specified in the methodology.
3. Achieved absolute declines in the combined total of stationary 1 plus scope 2 electricity based GHG emissions between the first year of the selected additionality eligibility period and project year 1
4. Achieved or exceeded the annual average percentage reduction rate specified in the methodology as the performance benchmark (PBS/PBE) appropriate to the campus' Carnegie classification given the scope of GHG's (for stationary 1 (PBS) and/or for scope 2 electricity based (PBE)) for which credits are sought

The university demonstrated that the Project followed and completed the four step benchmark approach to determine additionality, per the criteria as indicated in the Campus-wide Project Evaluation and ER estimates Calculator and the UWM Monitoring Report.

3.3.6 Quantification of GHG Emission Reductions and Removals

SCS has verified that UWM is reporting GHG information to both the ACUPCC and STARS program. Additionally UWM has been providing GHG data reports to the ACUPCC program from 2008 - 2016.

UWM uses the University of New Hampshire "Campus Carbon Calculator" to calculate the tCO₂e GHG values that are then used as input values into the "Campus-wide Project Evaluation and ER Estimates" Calculator. SCS has verified that these are the same values that are used as inputs for the ACUPCC and STARS Program.

UWM uses the "Campus-wide Project Evaluation and ER Estimates" Calculator as the preferred/approved means of determining CO₂e emissions for VM0025 and VMD0038. The "Campus-wide Project Evaluation and ER Estimates" Calculator was originally created for the Chevrolet Campus Clean Energy Campaign universities program which developed VM0025 and VMD0038.

The table below describe the steps taken to validate the quantification methods, including all data and parameters used in the equations and the project description.

PARAMETER	ASSESSMENT
PBS _c	Stationary combustion additionality performance benchmark for Carnegie class c (percent). This percentage is based on the University Carnegie Class, which has been confirmed through the http://carnegieclassifications.iu.edu website and indicates that UWM is a Doctoral University and according Table 2 of the Module is applied a PBS _c value of 5.68%.
B	Baseline period includes the project year 0 and three to five consecutive years prior to the project start date. All of the baseline emissions data was publicly-available through the ACUPCC third-party GHG reporting program, and was confirmed by the audit team through review of primary data sources for stationary combustion and purchased electricity GHG emission sources during the baseline period.
SCAP	The stationary combustion additionality eligibility period includes project year 0 and one to five consecutive years prior to the project start date. The audit team reviewed the formulae in the Campus-wide Project Evaluation and ER Estimates Calculator to ensure the proper application of the SCAP value.
SF _{b=x}	Total campus-wide square footage in the baseline was confirmed through the campus' historical GHG inventory reports for FY2011 – FY2015 and accessed through the ACUPCC and STARS third-party GHG reporting program.
SF _{p=y}	Total campus-wide square footage in project year 1 was confirmed through the campus' historical GHG inventory report for FY2106 and accessed through the ACUPCC and STARS third-party GHG reporting program.
F _{b=x, i}	Stationary combustion emissions in each applicable baseline year for all fuel types were reviewed in each years' UNH Campus Carbon Calculator. The audit team also reviewed primary consumption documentation to corroborate the emissions data reported to the ACUPCC third-party GHG reporting program.
F _{p=y, i}	Stationary combustion emissions in project year 1 for all fuel types were reviewed in the project years' UNH Campus Carbon Calculator. The audit team also reviewed primary consumption documentation to corroborate the emissions data reported to the ACUPCC third-

	party GHG reporting program.
$E_{b=x}$	Scope 2 electricity emissions in each applicable baseline year were reviewed in each years' UNH Campus Carbon Calculator. The audit team also reviewed primary consumption documentation to corroborate the emissions data reported to the ACUPCC third-party GHG reporting program.
$E_{p=y}$	Scope 2 electricity emissions in project year 1 were reviewed in the project years' UNH Campus Carbon Calculator. The audit team also reviewed primary consumption documentation to corroborate the emissions data reported to the ACUPCC third-party GHG reporting program.
y	y is the project year determined by counting the number of years since the project start date. The project start date is linked to the campus' fiscal calendar year and the reporting of its GHG emissions to third party GHG reporting programs. While there is no single date at which each of the individual project activities were all simultaneously initiated, the project start date reasonably represents a point at which sufficient measures have been implemented to allow the project's performance to meet the additionality performance benchmarks required by the methodology and module.
ΔE_y	ΔE_y must be calculated by multiplying the change in electricity consumed due to any adjustments in stationary combustion technologies in project year y by the appropriate grid emissions factor in project year y , then adding the incremental units of purchased heat, cooling and/or steam consumed due to stationary combustion adjustment technologies in project year y multiplied by an appropriate emissions factor. Monthly invoices detailing electricity consumption, and monthly invoices and reports of purchased heat were reviewed and compared against summary reports for the relevant years. The monthly values are compared against annual subtotals, which were checked for consistency against the values and units of measurement input into the UNH Campus Carbon Calculator CACP Calculator and Campus-wide Project Evaluation and ER Estimates Calculator. Emissions factors and global warming potentials included in the CACP calculator were appropriately applied, with recalculations of GHG values demonstrating immaterial differences.
$PSH_{b=x}, PSH_{p=y}$	Scope 2 emissions from purchased steam in the applicable year were assessed through review of monthly invoices from Constellation. These purchased amounts were compared with summaries of steam consumption prepared by UWM. The annual subtotal recalculated was consistent with the the values and units of measurement input into the UNH Campus Carbon Calculator CACP Calculator and Campus-wide Project Evaluation and ER Estimates Calculator. Emissions factors and global warming potentials

	included in the CACP calculator were appropriately applied, with recalculations of GHG values demonstrating immaterial differences.
Quantification of baseline emissions	Baseline emissions were calculated as required in VMD0038 for all baseline years (FY2011-2015). The audit team confirmed the accuracy of the baseline emissions calculations by re-tracing the calculation process in the Campus-wide Project Evaluation and ER Estimates Calculator. The values for electricity and steam consumed and generated in previous years described in the project documentation and Campus-wide Project Evaluation and ER Estimates Calculator are consistent with annual reports from the relevant baseline years.
Quantification of project emissions	Project emissions were calculated as required in VMD0038 for the initial project year (FY2016). The audit team confirmed the accuracy of the project emissions calculations by re-tracing the calculation process in the Campus-wide Project Evaluation and ER Estimates Calculator.
Quantification of leakage	Leakage was evaluated during the development of the methodology and associated modules and is set to zero for this project type.
Summary of net GHG emission reductions or removals	The net GHG emission reductions were recalculated by the audit team and compared against the reported emission reductions calculated using the Campus-wide Project Evaluation and ER Estimates Calculator. The audit team found that the project under reported emission reductions by 0.27% which is within the allowable materiality threshold.
Uncertainties associated with the calculation of emissions	The UNH Campus Carbon Calculator has been in use by many universities over many years as the official GHG calculator for the ACUPCC and STARS emission reporting platforms. The UNH calculator has gone through several iterations and has been reviewed for accuracy with respect to applicable formula and emissions factors by the audit team. The risk of calculation error less than the risk associated with a proprietary calculation tool, and therefore the uncertainty associated with calculation error is low.
Documentation used as the basis for assumptions and sources of data	Much of the basis for assumptions and sources of data comes from the UNH Campus Carbon Calculator and Campus-wide Project Evaluation and ER Estimates Calculator. These calculators provide a systematic and transparent means of calculating GHG emissions reductions and appropriately applying the methodology. Data provided by utilities is assessed by the project team and input into these calculators. The audit team has reviewed the contents of these calculators and determined them to be accurate, and the inputs included in them has been done so appropriately.
All relevant assumptions and data are listed in the project description, including their references and sources.	The project description includes appropriate references to UNH Campus Carbon Calculator and Campus-wide Project Evaluation and ER Estimates Calculator, which provide the basis for assumptions and data. The data described in the project description

	is consistent with the primary documentation (invoices and reports) of electricity consumption, steam purchased, natural gas consumed, and other data such as square footage. The references and sources described in this report are familiar to the audit team from previous assessments and provide a standardized approach. The project documentation includes references where appropriate.
All data and parameter values used in the project description are considered reasonable in the context of the project.	The data and parameter values used in the project description are consistent with what is required by the audit criteria. In the context of the project, which appropriately describes project activities as consistent with the methodology, all descriptions data and parameter values were reviewed by the project team and deemed reasonable.
All estimates of the baseline emissions can be replicated using the data and parameter values provided in the project description.	These baseline emission values were able to be replicated using the data and parameter values in the project description, as well as supporting energy consumption and purchase documentation provided for the relevant years.

The project includes appropriate references to UNH Campus Carbon Calculator and Campus-wide Project Evaluation and ER Estimates Calculator, which provide the basis for assumptions and data. These tools allow the input of data in a relatively straightforward manner, with parameters clearly described and consistent with the methodology requirements. Each of the parameters has been described in the context of the project in a consistent manner, and in a similar manner to other projects developed by Second Nature. The baseline emissions, project emissions, leakage, and net GHG emissions reductions have all been assessed by the audit team and have been determined to be appropriately calculated through the use of the tools referenced, and with appropriate sources and data.

3.3.7 Methodology Deviations

There are no methodology deviations applied to this project during the current reporting period.

3.3.8 Monitoring Plan

The Office of Sustainability at the University of Wisconsin-Milwaukee operates under Facilities, Planning, and Management. The Office is headed by Chief Sustainability Officer. The Office of Sustainability also has a Program and Policy Analyst; a position dedicated to energy and emissions reporting. The Program and Policy Analyst works in conjunction with all utility accounting representatives as well as facility and space reporting. Data is collected from utility bills received from Facility Services Accounting. The UWM Office of Sustainability compiles all relevant campus data for the GHG inventory, and the Program and Policy Analyst manages and executes completion of the yearly GHG inventory.

SCS confirmed that the monitoring data was drawn from the relevant third-party GHG reporting program reports and that the project proponent used an established reporting calculator that is consistent with the selected third-party GHG reporting program guidance. SCS also confirmed that comparable data quality management procedures were applied as are required for reporting under ACUPCC, STARS or The Climate Registry through review of supporting documentation used to generate the GHG inventory reports submitted to the relevant third-party GHG program ensuring that the information used to develop the GHG inventory conforms to the third-party GHG program guidance and reflects campus-wide energy consumed.

Specific methods and procedures for measuring, recording, storing, and reporting the data on monitored parameters, as well as, for internal auditing and quality assurance and quality control are discussed in Appendix C of the PDD.

3.4 Non-Permanence Risk Analysis

Non-permanence risk analysis is not relevant for this project.

4 SAFEGUARDS⁴

4.1 No Net Harm

As described in the PDD, the project does not generate any significant potential negative environmental or socio-economic impacts.

4.2 Environmental Impact

As described in the PDD, there were no environmental impact assessments required by the methodology.

4.3 Local Stakeholder Consultation

As described in the PDD, stakeholder comments were incorporated into the development of the methodology, including the tests for additionality.

4.4 Public Comments

No public comments were made on this project at the time of assessment.

5 VERIFICATION FINDINGS

⁴ As consistent with the update to VCS Standard, v3.6, the requirements for assessment of no net harm and local stakeholder consultation are not effective, due to contracting for validation prior to 19 April 2017. (<http://database.v-c-s.org/sites/vcs.benfredaconsulting.com/files/VCS%20Program%20Update%20Catalogue%2C%2019%20OCT%202016.pdf>).

5.1 Accuracy of GHG Emission Reduction and Removal Calculations

The approved VCS Methodology Module VMD0038 employs a series of parameters to calculate the project emissions reductions. The parameters are calculated using primary activity data from the University operations and are used in multiple equations throughout the methodology module for both performance tests and emissions reductions calculations. SCS reviewed primary data sources and selected samples of data for comparison in order to confirm the accuracy of the emissions reductions calculations.

The UNH Campus Carbon Calculator version 9.0 was used to generate GHG emissions outputs based on the university's aggregate energy consumption data for the reporting period. These outputs were directly entered into the Campus-wide Project Evaluation and ER Estimates Calculator template to conduct the applicable performance tests, and to calculate the baseline emissions (BE), project emissions (PE), and emissions reductions (ER) for the monitoring period. The UNH Campus Carbon Calculator outputs are also reported publicly to ACUPCC and STARS programs, which include a stakeholder review process to establish and maintain procedures for accountability. This standardized approach controls for errors in GHG reporting and reduces the risk of ER calculation errors.

SCS conducted a manual recalculation of a sample of UWM's primary energy consumption data to crosscheck the values input into the UNH Campus Carbon Calculator. The audit team then crosschecked the inputs into the Campus-wide Project Evaluation and ER Estimates Calculator template to identify transposition errors between datasets. Additionally, the audit team performed a sample of checks to confirm the accuracy of spreadsheet formulae, conversions and aggregations, and consistent use of data and parameters across the calculation worksheets.

The data and parameters required at validation include those provided in the table below:

Parameter	Included in Project	
PBSc	☒ Yes	☐ No
PBE _c	☐ Yes	☒ No
B	☒ Yes	☐ No
HDD _{p=y}	☐ Yes	☒ No
CDD _{p=y}	☐ Yes	☒ No
SCAP	☒ Yes	☐ No
E2AP	☐ Yes	☒ No

The data and parameters required for annual monitoring include those provided in the table below:

Parameter	Included in Project	
SF _{b=x}	☒ Yes	☐ No
SF _{p=y}	☒ Yes	☐ No
F _{b=x, i}	☒ Yes	☐ No
F _{p=y, i}	☒ Yes	☐ No

$E_{b=x}$	☒ Yes	☐ No
$E_{p=y}$	☒ Yes	☐ No
y	☒ Yes	☐ No
ΔE_y	☒ Yes	☐ No
$AT_{y,i}$	☐ Yes	☒ No
$PSH_{b=x}$	☒ Yes	☐ No
$PSH_{p=y}$	☒ Yes	☐ No
$PC_{b=x}$	☐ Yes	☒ No
$PC_{p=y}$	☐ Yes	☒ No
$\Delta F_{y,i}$	☐ Yes	☒ No

Through review of the documentation and information provided by UWM, it was concluded that the GHG emissions reductions have been quantified correctly in accordance with the PDD and the applied methodology. Materiality calculation checks were conducted for each Fiscal Year portion of the monitoring period, as well as for the total monitoring period. The Net GHG emission reductions or removals recalculated by the audit team were found to have a less than 5% difference from the value reported. Therefore, the audit team concludes with a reasonable level of assurance that the emission reductions calculations are accurate within the applicable materiality threshold.

5.2 Quality of Evidence to Determine GHG Emission Reductions and Removals

PARAMETER	EVIDENCE PROVIDED	EVALUATION METHOD	ASSESSMENT
$SF_{B=X}; SF_{P=Y}$	ACUPCC & STARS GHG Reports; Campus Map	These documents were reviewed, along with the monitoring report, and affirm that there is no material change in square footage from the previous verification. The square footage value was consistent with ACUPCC/STARS reporting. The campus map was compared with the previous documentation and with aerial imagery. The project proponent also confirmed in a telephone interview that the project boundary had not changed, and that the utility meters associated with these facilities have not changed.	The evidence and affirmations provided are of sufficient quality and detail to be verifiable with a reasonable level of assurance, and are in conformance with the verification criteria.
$F_{B=X,I}; F_{P=Y,I}$	Natural Gas Utility Invoices;; Plant Production Reports; Campus-wide Project Evaluation	The energy use summary and supporting primary evidence sampled for these fuel sources was reviewed for consistency with the Monitoring Report and calculator worksheets. This information is detailed	The evidence provided is of sufficient quality and detail to be verifiable with a reasonable level of assurance, and in

	and ER Estimates Calculator; UNH Campus Carbon Calculator	and demonstrates the reporting documentation is derived from the relevant invoices, and conforms to the defined monitoring procedures. Natural gas purchase information is straightforward, as is delineation of resulting project emissions.	conformance with the verification criteria.
E_B=X; E_P=Y ΔE_Y; PEΔ	Electricity Utility Invoices; Campus-wide Project Evaluation and ER Estimates Calculator; UNH Campus Carbon Calculator	The energy purchase evidence and computing facility energy consumption evidence provided were reviewed for consistency with the Monitoring Report and calculator worksheets. This information is detailed and demonstrates the reporting documentation is derived from the relevant invoices and monitoring sources, and conforms to the defined monitoring procedures. The process for aggregation of the utility information and computing facility was also discussed via phone interview in greater detail to ensure competency and understanding of the flow of information.	The evidence provided is of sufficient quality and detail to be verifiable with a reasonable level of assurance, and in conformance with the verification criteria.

The audit team has evaluated the overall quantity and quality of the evidence used to determine the GHG reductions and removals for this verification period and determined that it is appropriately rigorous and thorough. Similar to what has been described above in regards to the appropriate application of methodological tools, the availability of sources of data and evidence which contribute to those tools allows for relatively straightforward GHG reductions calculations. The project proponent has demonstrated that aggregation of monthly invoices by the project team and input of the relevant information into the methodological tools forms the basis for calculations, and that these calculations are supported by sufficient primary corroborating evidence.

6 VALIDATION AND VERIFICATION CONCLUSION

SCS Global Services has performed the validation and verification of the project activity for the University of Wisconsin Milwaukee Campus Wide Clean Energy & Energy Efficiency Project during the monitoring period from 1 July 2015 to 30 June 2016, in accordance with the VCS rules. The objective of the validation was to assess the project design, including assessing the project's baseline and monitoring plan, and ensuring compliance with the relevant assessment criteria as defined in Section 1.2. The objective of the verification is to conduct an independent assessment of the ex-post GHG emission reductions that have occurred as a result of the project. The scope of the assessment incorporated the set of activities, detailed in this report, required to verify the ex-post GHG emission reductions that occurred as a result of the campus-wide energy efficiency project activities during the monitoring period. SCS verified the adequacy and accuracy of the historical information provided in the monitoring report, confirming that the document meets the requirements of the assessment criteria.

Verification period: From 1 July 2015 to 30 June 2016

Verified GHG emission reductions and removals in the above verification period:

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
1 July 2015 to 30 June 2016	31,155	25,945	0	5,210
Total	31,155	25,945	0	5,210

APPENDIX A: FINDINGS ISSUED

NCR 1 Dated 18 May 2017

Standard Reference: VCS Standard, Version 3.6, 19 October 2016: Section 3.16.6 & 3.19.1

Document Reference: 20170504_UWMPDD; 20170504_UWMMR

Finding: The VCS Standard states that "The project description describes the project's GHG emission reduction or removal activities. The project proponent shall use the VCS Project Description Template...and adhere to all instructional text within the template." Additionally, the VCS Standard states "The project proponent shall use the VCS Monitoring Report Template or the VCS Joint Project Description & Monitoring Report Template and adhere to all instructional text within the template." Furthermore, the VCS Standard states that "This document will be updated from time-to-time and readers shall ensure that they are using the most current version of the document. Where external documents are referenced, such as the IPCC 2006 Guidelines for National GHG Inventories, and such documents are updated, the most recent version of the document shall be used."

Upon initial review it appears that the project team is not using the most recent version of the Project Description Template and the Monitoring Report Template (found here: <http://database.v-c-s.org/program-documents>) and is not adhering to all instructional text within the templates.

Project Personnel Response: The project team updated the Project Description Document and Monitoring Report to align with the most recent VCS Templates, and to comply with all instructions in the templates. We also clarify that the methodology VM0025 has accompanying templates for Project Description Document and Monitoring Report, which outline requirements specific to this campus-based methodology. The project team used these VM0025-specific templates as well as the generic VCS templates to ensure that all methodology requirements are included in project documentation.

Auditor Response: The PDD and MR have been updated to use the most recent applicable templates (v3.3 and v3.4 respectively). As such, this finding is closed.

NCR 2 Dated 18 May 2017

Standard Reference: Approved VCS Methodology Module VMD0038, Version 1.0, 12 February 2014; Section 6

Document Reference: 20170504_UWMMR

Finding: Section 6 of the Module states that "The choice of annual reporting periods (e.g., calendar, fiscal, other) must be consistent through the project crediting period and the baseline period. The reporting period should be consistent with that selected for public reporting to the relevant third-party GHG program."

The date indicated on the current version of the Monitoring Report indicates the end of the monitoring period being 31 June 2016. However, there are only 30 days in the month of June.

Project Personnel Response: This error has been corrected to read June 30 and the Monitoring Report updated. The monitoring period is July 1, 2015 to June 30, 2016.

Auditor Response: The MR has been updated to include the correct monitoring period end date. As such, this finding is closed.

NIR 3 Dated 18 May 2017

Standard Reference: Approved VCS Methodology Module VMD0038, Version 1.0, 12 February 2014; Section 6

Document Reference: <http://reporting.secondnature.org/ghg/ghg-public!4218>

Finding: Section 6 of the Module states that, "Baseline emissions must be determined over a three- to five-year period using data that meets the following conditions: Data must be from a baseline period which includes project year 0 and three to five consecutive years prior to project start date."

Please provide a copy of the 2014 Campus Carbon Calculator in order for the audit team to confirm the Baseline Emissions calculations.

Project Personnel Response: The 2014 Campus Carbon Calculator has been uploaded to Second Nature's reporting website 5/24/17.

Auditor Response: The audit team has reviewed the 2014 Campus Carbon Calculator and confirmed that the Baseline Emissions reported are consistent with those reported in the calculation documents. This finding is closed.

NIR 4 Dated 18 May 2017

Standard Reference: Approved VCS Methodology Module VMD0038, Version 1.0, 12 February 2014; Section 4

Document Reference: 20170504_UWMPDD

Finding: The Module states that, "The project must demonstrate that it has achieved the required substantial reductions in GHG emissions by implementing at least two of the following activities: Behavior change campaigns; Cogeneration and fuel switch; Lighting retrofits; On-site renewables; Boiler retrofits, central heating and cooling upgrades; Building system retro-commissioning and upgrades, including automation; Weatherization improvements; LEED certification/green building;

Other innovative strategies.

Please provide documentary evidence which demonstrates that UWM has implemented each of the applicable project activities.

Project Personnel Response: All files have been uploaded to a Folder titled "Finding 4." LEED certification/green building files are located in the Dropbox in the Folder titled "LEED Data." The readme file titled Finding 4 Readme has more detailed information on what is in each folder.

Auditor Response: The audit team has received documentary evidence describing the specific improvements made to campus facilities. The summary statements of contracting activities performed by Honeywell are detailed and consistent with the investment-grade audit reports, and project documentation. Additionally, a virtual site visit was conducted by the audit team, and it was demonstrated that specific improvements related to weatherization and lighting were installed. These documents and virtual site visit activities are sufficient to close this finding.

NIR 5 Dated 18 May 2017

Standard Reference: VCS Standard, Version 3.6, 19 October 2016: Section 3.11.1

Document Reference: 20170504_UWMPDD

Finding: Section 3.11.1 of the Standard states that "The project description shall be accompanied by one or more of the following types of evidence establishing project ownership accorded to the project proponent(s)...(see VCS document Program Definitions for definitions of project ownership and program ownership)...: Project ownership arising by virtue of a statutory, property or contractual right in the plant, equipment or process that generates GHG emission reductions and/or removals (where the project proponent has not been divested of such project ownership)."

Please provide documentary evidence that establishes project ownership as indicated in the VCS Standard.

Project Personnel Response: Three files have been uploaded to a Folder entitled "Finding 5." The first is a spreadsheet documenting taxkey level ownership data for all UWM properties. The second is a pdf documenting taxkey, ownership, acreage, and building name (or in the case of the Main Campus, the heading is "Main Campus") as well as a map illustrating where each parcel is located. The third file is a readme file which documents what is included in each of the other files.

Auditor Response: The "Main Campus Area" document and accompanying excel sheet provided to the audit team has descriptions of facilities and square footage consistent with other documentation provided, and with taxkey information which helps establish ownership, along with the accompanying deed for the state of Wisconsin. This evidence is sufficient to close the finding.

NIR 6 Dated 18 May 2017

Standard Reference: VCS Standard, Version 3.6, 19 October 2016: Section 3.11.3

Document Reference: 20170504_UWMPDD

Finding: Section 3.11.3 of the VCS Standards states that "Projects may generate other forms of GHG-related environmental credits, such as renewable energy certificates (RECs), though GHG emission reductions and removals presented for VCU issuance shall not also be recognized as another form of GHG-related environmental credit."

Please provide LEED Building certifications and documentation (e.g... LEED Certification Review Report, etc.).

Project Personnel Response: Three files have been uploaded to the Dropbox in a folder entitled "LEED Data." "ICAB LEED Scorecard.pdf" is the scorecard of LEED points for the Innovation Campus Accelerator building. "LEED Certification review report - UWM School of Public Health" is the LEED certification review report for the UWM School of Public Health. "UW-M Interdisciplinary Research Complex" is the LEED certification review report for the Kenwood Interdisciplinary Research Complex building.

Auditor Response: The audit team has received a LEED certification review report for the School of Public Health and Interdisciplinary Research Complex, and the ICAB LEED Scorecard for the Innovation Campus Accelerator building. These documents are applicable to the LEED buildings described in the Project Description, and are sufficient to close this finding.

NIR 7 Dated 18 May 2017

Standard Reference: VCS Standard, Version 3.6, 19 October 2016: Section 3.18.1

Document Reference: 20170504_UWMPDD

Finding: Section 3.18.1 of the VCS Standard states that "The project proponent shall ensure that all documents and records are kept in a secure and retrievable manner for at least two years after the end of the project crediting period."

Please provide further information on how the project team intends to comply with this VCS requirement.

Project Personnel Response: Additional language has been added to the PDD, see Folder PDD and MR.

Auditor Response: The updated PDD and MR describe specific information on how project documents will be secured and retrievable for at least two years following the crediting period. Documents

will be kept on UWM servers and will be duplicated on external hard drives, and will meet the university's administrative policies. As such, this finding is closed.

NIR 8 Dated 18 May 2017

Standard Reference: N/A

Document Reference: 20170504_UWMPDD

Finding: The Appendix: C of the PDD states that "Measurement and verification reports to demonstrate and monitor performance across campus are supplied by the energy service company originally responsible for the performance contracting for three years following the close-out of each phase. Quarterly and annual reports are supplied to the university based on the scale of each phase of the project. These reports track all savings and performance based on individual energy conservation measures. They provide insight into corrective measures. The Office of Sustainability receives these reports from the ESCO's M&V Specialist of the Americas M&V Services Team at their scheduled time and are reviewed as a collective."

Is the project team able to provide copies of these reports for review by the audit team?

Project Personnel Response: Files from Honeywell Measurement & Verification reports have been uploaded to the Dropbox in a folder entitled "M&V Reports" within the folder titled "Finding 8." Files include both quarterly M&V reports as well as annual reports.

Auditor Response: The audit team has been provided with these M&V Reports, which detail the activities and phases described in the project documentation. The description provided in the PDD is consistent with the report content, and as such this finding is closed.

NIR 9 Dated 18 May 2017

Standard Reference: N/A

Document Reference: 20170504_UWMPDD

Finding: The Project PDD states that "Primary data used to calculate GHG emissions is available for validation review and is consistent with data entered for ACUPCC/STAR calculations"

Can you Please provide the Primary GHG data for FY2016 (i.e. project year 1), and each of the baseline additionality eligibility periods. This will include primary information on the following:

- + Total Building Square feet
- + Distillate Oil (#1-4)

- + Natural Gas
- + Electricity
- + Steam

Project Personnel Response: Files are located in the Dropbox titled "Finding 9." The Primary GHG Data readme file details all of the files and folders included.

Auditor Response: The documents provided include invoices for natural gas used (from Constellation), electricity consumption summary evidence and statement from We Energies, a Steam usage summary document from We Energies, and monthly plant reports from the Steam facility. These steam plant reports include information on Distillate Oil consumed. Square footage documentation is provided in the form of a pdf and excel sheet detailing the specific square footage of each building, and is consistent with the ownership documentation provided. These documents are sufficient to close the finding.

NCR 10 Dated 14 Jul 2017

Standard Reference: VCS Standard v3.6, section 5.3.1

Document Reference: 20170504_UWMPDD; 20170504_UWMMR; Campus Gas Totals; MainAccount_Usage_Overview

Finding: Section 5.3.1(4) of the VCS Standard states that "The threshold for materiality with respect to the aggregate of errors, omissions and misrepresentations relative to the total reported GHG emission reductions and/or removals shall be five percent for projects and one percent for large projects".

There is a discrepancy between the value reported for gas consumed during March 2016 in the "Campus Gas Totals" spreadsheet and the accompanying Constellation summary which results in an error in the calculation of total reported GHG emissions reductions of greater than five percent. The audit team has received an invoice for this month from Constellation which supports the value noted in the Constellation summary document, but not the "Campus Gas Totals" spreadsheet. Please provide updated project documentation which includes the correct steam consumption information and resulting changes in emissions reductions.

Project Personnel Response: Data for FY2016 Scope 1 natural gas has been amended in all relevant documents (GHG Inventory and supporting document "Campus Gas Totals") All calculations including amended data has been updated in the Scope 1 Emissions Calculations worksheet, the PDD and MR, as well as data on Second Nature's website. All updated files are available in the Dropbox folder titled "20170724Update."

Auditor Response: The updated files have been reviewed by the audit team and are determined to be consistent and supported by the gas consumption evidence provided by Constellation. The updated

March 2016 value was included in the calculation for the new gas total, which was then included in the GHG emissions calculator and PDD/MRR. The resulting emissions reductions reported do not represent a material misstatement. As such, this finding is closed.