American Carbon Registry
Validation and Verification Report (v3)
20 April 2012

Restoration of Bottomland Hardwood Forests at National Wildlife Refuges in the South Central US
Project Plan Version 1.0, 19 March 2012

Project Developed by:
Entergy Corporation
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Validation and Verification Conducted by:
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Project No. VO11012.00

ANSI ACCREDITED PROGRAM
GREENHOUSE GAS
VALIDATION AND VERIFICATION
0800

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1 Executive Summary

Environmental Services, Inc., (ESI) prepared this validation /verification report in accordance with the outlined requirements of the American Carbon Registry's (ACR) Forest Carbon Project Standard, Version 2.1 (November 2010). ESI presents validation and verification findings of the Restoration of Bottomland Hardwood Forests at National Wildlife Refuges in the South Central US Project (Restoration of NWRs) – prepared by Entergy Corporation. The project validation and verification was conducted as part of ACR's program requirements for GHG offset projects (Afforestation/Reforestation).

By ACR's definition, the Restoration of NWRs project is considered an aggregated afforestation/reforestation project (A/R). Project lands are located within the Lower Mississippi Valley. The project uses site preparation and tree planting to establish trees on lands that have been in continuous agricultural use for decades.

The GHG Project Plan validation and implementation verification included carbon sequestered through A/R in 4 separate locations spread across 23 tracts (1,164 hectares / 2,876 acres), including the 2011 vintage year. The project asserts emissions removals (sequestration) of 15,121 tCO_2e for 2011.

The Restoration of NWRs validation/verification objective included an assessment of the likelihood that implementation of the planned GHG project would result in the GHG emission removal/ enhancements as stated by the project developer (ISO 14064-3:2006). The objective was to ensure that the project was in compliance with the ACR Standard, Version 2.1 (October 2010), the ACR Verification Guideline for GHG Projects, Version 1.0 (July 2010), and the ACR Forest Carbon Project Standard, Version 2.1 (November 2010) criteria. ESI assessed the GHG emission removals of the programmatic A/R project.

ESI confirms all validation activities including objectives, scope and criteria, level of assurance and the GHG Project Plan's adherence to the Forest Carbon Project Standard (Version 2.1), as documented in this report, are complete and concludes without any qualifications or limiting conditions that the Restoration of NWRs Project meets the requirements of ACR's Standard and the Forest Carbon Project Standard Version 2.1 (November 2010)

ESI confirms all verification activities including objectives, scope and criteria, level of assurance and the project's adherence to the Forest Carbon Project Standard (Version 2.1) and the validated GHG Project Plan, as documented in this report, are complete and concludes without any qualifications or limiting conditions that the Restoration of NWRs Project meets the requirements of ACR's Standard and the Forest Carbon Project Standard Version 2.1 (November 2010).

The GHG assertion provided by the Entergy Corp and verified by ESI has resulted in the gross GHG emission removal of 15,121 tCO_2 equivalents by the project during the verification period/reporting period (08 April 2002 –December 31, 2011). After all required deductions, the net ERTs are 13,422 tCO_2 equivalents.

2 Introduction

This validation /verification report is prepared in accordance with the outlined requirements of the American Carbon Registry's (ACR), Forest Carbon Project Standard, Version 2.1 (November 2010). Environmental Services, Inc., (ESI) presents validation and verification findings of the Restoration of NWRs Project – prepared by Entergy Corp. The project validation and verification was conducted as part of ACR's program requirements for GHG offset projects (Afforestation/Reforestation). ESI is accredited by the American National Standards Institute under ISO14065:2007 for greenhouse gas validation and verification bodies including ISO 14064-3:2006, ISO 14065:2007, and validation/verification of assertions at the project level for Land Use and Forestry (Group 3) and is approved to validate/verify for ACR.

The GHG Project Plan validation and verification implementation included carbon sequestered through A/R on 4 separate locations spread across 23 tracts (1,164 hectares / 2,876 acres), including the 2011 vintage year for all tracts. The project asserts emissions removals (sequestration) of 15,121 tCO_2e for 2011 (final emission reductions reported on page 22 of 2011 Monitoring and Verification Report). This total does not include the default 10% risk deduction.

A list of the current tracts/parcels enrolled in the Restoration of NWRs Project is located in Appendix A.

2.1 Contact Information – Roles and Responsibilities

Project Owner / Project Proponent: Entergy Corporation	Steve Tullos, Manager of Environmental Initiatives stullos@ntergy.com 504-576-4538
Accredited V/V Body: Environmental Services, Inc.	• Shawn McMahon – Lead Validator/Verifier (smcmahon@esinc.cc; 330-833-9941) • Caitlin Sellers – Validation/Verification Team Member (csellers@esinc.cc; 772-834-8571) • Richard Scharf – Validation/Verification Team Member (rscharf@esinc.cc; 252-402-754) • James Moody – Validation/Verification Team Member (jmoody@esinc.cc; 904-470-2200) • Stewart McMorrow – Validator/Verifier Trainee (smcmorrow@esinc.cc; 530-412-1221) • Janice McMahon – QAQC (jmcmahon@esinc.cc; 330-880-5051)

2.2 Project Description

By ACR's definition, the Restoration of NWR's Project is considered an aggregated afforestation/reforestation project (A/R). Project lands are located within the Lower Mississippi Valley. The project uses site preparation and tree planting to establish trees on lands that have been in continuous agricultural use for decades. The U.S. Fish and Wildlife Service provided some land for planting and input on planting strategies, and it continues to provide long-term management and protection. The remainder of project lands were acquired by The Conservation

Fund and the Trust for Public Land and transferred to the USFWS. Refuge management, in collaboration with Environmental Synergy foresters with many years of experience in the LMV, determined the composition of species based on a combination of site-specific characteristics including soil type, elevation, flood regime, and the biodiversity goals of the refuges. Species planted generally included: American Plum, Bald Cypress, Bitter Pecan, Black Oak, Black Walnut, Black gum, Bur Oak, Cherrybark Oak, Chickasaw Plum, Eastern Redbud, Green Ash, Hackberry, Honey Locust, Mayhaw, Nuttall Oak, Overcup Oak, Persimmon, Pin Oak, Red Maple, Red Oak, Shumard Oak, Silky Dogwood, Southern Red Oak, Swamp Chestnut Oak, Sweet Pecan, Sweetgum, Water Hickory, Water Oak, Water Tupelo, White Oak, Willow Oak, and Yellow Poplar. Knowledge of the distribution of native forest communities relative to their position in the floodplain has served to guide the implementation of Entergy's restoration activities, by matching species to sites where they grow best.

2.3 Objective

The GHG Project Plan validation/verification objective included an assessment of the likelihood that implementation of the planned GHG project would result in the GHG emission removal/ enhancements as stated by the project developer (ISO 14064-3:2006). The objective was to ensure that the project was in compliance with the ACR Standard, Version 2.1 (October 2010), the ACR Verification Guideline for GHG Projects, Version 1.0 (July 2010), and the ACR Forest Carbon Project Standard, Version 2.1 (November 2010) criteria. ESI assessed the GHG emission removals of the aggregated A/R project.

2.4 Criteria

The criteria followed by ESI included ISO 14064-3, ISO 14065, and the validation/verification guidance documents provided by ACR located at *http://www.americancarbonregistry.org/carbon-accounting*. These documents included:

- ACR Standard, October 2010 – v2.1
- ACR Forest Carbon Project Standard, November 2010 – v2.1
- ACR Verification Guidelines for GHG Projects, July 2010 – v1.0

2.5 Scope

The scope of the validation/verification generally included the GHG Project Plan and eligibility requirements; GHG project and baseline scenarios; physical infrastructure, activities, technologies and processes of the GHG project; GHG sources, sinks and/or reservoirs; types of GHG's; and time periods covered. The geographic scope was defined by the project boundary, which included multiple properties/project lands (programmatic approach), the carbon reservoir types, management activities, growth and yield models, inventory program, and contract periods. The scope of the Restoration of NWRs Project in the Lower Mississippi Valley is defined below.

Baseline Scenario	Baseline 0- contiguous agriculture (cropland or pasture/managed grassland)
Activities/Technologies/ Processes	Afforestation/Reforestation (A/R)
Sources/sinks/Reservoirs	**Carbon Pools:** Above-ground Below-ground Dead-wood Soil organic carbon

	Sources considered insignificant: Fertilizer application Removal of herbaceous vegetation Transportation emissions Collection of wood from non-renewable sources Nitrous-oxide
GHG Type	CO_2
Project locations	Federal lands of the Lower Mississippi Valley in Arkansas and Louisiana, including Overflow National Wildlife Refuge, Pond Creek National Wildlife Refuge, Red River National Wildlife Refuge, and Tensas River National Wildlife Refuge
Project Boundary and Time Period	Overflow National Wildlife Refuge (Ashley County, Arkansas) 108.4 ha, planted 2009); Pond Creek National Wildlife Refuge (Sevier County, Arkansas) 36.3 ha, planted 2009; Red River National Wildlife Refuge (Natchitoches Parish, Louisiana) 232.3 ha, planted 2002 and 2003; and Tensas River National Wildlife Refuge (Madison Parish, Louisiana) 786.7 ha, planted in 2004 and 2005.

2.6 Level of Assurance

The level of assurance was used to determine the depth of detail that the validator/verifier (ESI) placed in the validation and verification plan to determine if there are any errors, omissions, or misrepresentations (ISO 14064-3:2006). ESI selected samples of data and information to be verified to provide reasonable assurance and to meet the materiality requirements of the A/R project (ACR Verification Guideline for GHG Projects v1.0, July 2010). ACR considers verification to be a risk-based process where the verifier examines a sufficient amount of data and uses the verifier's professional judgment to provide a reasonable assurance.

2.7 Materiality

Materiality is a concept that the individual or aggregation of errors, omissions, and misstatements could affect the GHG assertion and the decisions of the intended users. Materiality was also used as part of the verification sampling plan design, to determine the type of verification processes used by ESI to minimize the risk of not detecting a material misstatement. ACR's materiality threshold is +/-5% of the GHG project's emission reductions or removal enhancements. In other words, ACR requires that any differences between emission reductions/removals claimed by the project proponent and estimated by the verifier be immaterial (less than +/- 5%). Individual or aggregation of errors or omissions greater than the ACR materiality threshold of +/-5% require re-stating before verification statements can be accepted by ACR.

3 Validation Process and Findings

3.1 Validation Process

The validation process closely followed the guidance provided by The American Carbon Registry, Forest Carbon Project Standard (Version 2.1), the Verification Guideline for GHG

Projects (Version 1.0), ISO14064-3, ISO 14065, and the ESI Management System and Management System Manual (v12), Section V.5.

As defined by ISO 14064-3:2006 €, "validation is the systematic, independent and documented process for the evaluation of a greenhouse gas assertion in a GHG project plan against agreed validation criteria". Specifically the project validation included the review of the requirements outlined in the Forest Carbon Project Standard, Version 2.1 (November 2010). The assessment included the following items: eligibility criteria, baseline approach, additionality, project boundary, emissions, leakage, selected methodology, data and parameters, monitoring plan design, and environmental impacts.

3.2 GHG Project Plan

The Restoration of NWRs Project's GHG Project Plan was found to be in compliance with ACR's Forest Carbon Project Standard, Version 2.1.

3.2.1 ACR Standard Requirements/Eligibility

Prior to the initiation of the project validation, ACR first conducts its own assessment of meeting all applicable requirements and issues a certification letter. ACR issued the certification on November 11, 2011 for the Restoration of NWRs Project. Copy of Certification is located in Appendix B.

The Restoration of NWRs project was found to be in compliance with ACR's project eligibility requirements set forth in ACR's Forest Carbon Project Standard, Version 2.1 [Chapter 1 (D) and Chapter 7 (F)]. Specifically, the GHG Project Plan outlined and described the following aspects of the project:

- The project started in 2002, which is after the earliest allowable start date of 01 November, 1997.
- Entergy Corp. commits to a minimum project term of 40 years, meeting the ACR project term requirement.
- Only direct emission mitigation is counted.
- Ownership of offsets is clear.
- Ownership titling of land is clear.
- Project lands are eligible because they were not converted from forest within 10 years before the project start date.
- Project lands were not forest at the project start date.
- The project uses site preparation and planting to establish forest.

3.2.2 Approved Methodology

The Restoration of NWRs Project utilized the following methodology and tools:

- Clean Development Mechanism (CDM) afforestation/ reforestation methodology AR-ACM0001 "Afforestation and reforestation of degraded land" – Version 5.0, together with the following procedures and tools:
- Approved CDM "Tool for the identification of degraded or degrading lands for consideration in implementing CDM A/R project activities, Version 1"

- Approved CDM tool "Estimation of the increase in GHG emissions attributable to displacement of pre-project agricultural activities in A/R CDM project activity, Version 1"
- Approved CDM "Tool for estimation of change in soil organic carbon stocks due to the implementation of A/R CDM project activities, Version 1.1" and
- Approved CDM "Combined tool to identify the baseline scenario and demonstrate the additionality in A/R CDM project activities, Version 1"

ESI confirms that the project meets the applicability requirements of the methodology under which the project was validated and verified:

- The project is implemented on degraded lands that are expected to remain degraded. Project lands meet the eligibility requirements of the CDM "Tool for the identification of degraded or degrading lands for consideration in implementing CDM A/R project activities" by satisfying the requirements of both section III€(ii) that soil organic matter has declined and topsoil litter and debris is scarce, and III€ (iv) there is a reduction in plant cover due to land management practices. These declines have been caused by repeated plowing. Agricultural use was continuing prior to the project start, and would have continued in the absence of the project.
- The project is not implemented on organic soils.
- The project is implemented on lands that prior to the start of the project would be classified as croplands under IPCC guidelines.
- Litter remains on the site and is not removed.
- Plowing, ripping or scarification is done in accordance with conservation practices and only occurs at the initial site preparation of each parcel and is not repeated within 20 years.

3.3 Validation Findings and Conclusions

The ESI validation team identified 25 non-conformity reports (NCRs) and clarifications (CLs). All were addressed satisfactorily by Entergy Corp., during the project validation process. These NCR's and CL's provided needed clarity to ensure that the GHG Project Plan was in compliance with ACR's Standard (Versions 2.1, October 2010) and Forest Carbon Project Standard (Version 2.1, November 2010).

The complete list of validation finding and resolutions has been compiled and located in Appendix C.

ESI confirms all validation activities including objectives, scope and criteria, level of assurance and the GHG Project Plan's adherence to the Forest Carbon Project Standard (Version 2.1), as documented in this report, are complete and concludes without any qualifications or limiting conditions that the Restoration of NWRs Project meets the requirements of ACR's Standard and the Forest Carbon Project Standard Version 2.1 (November 2010).

4 Verification Process, Findings, and Conclusions

The verification process closely followed the guidance provided by The American Carbon Registry, Forest Carbon Project Standard (Version 2.1), the Verification Guideline for GHG

Projects (Version 1.0), ISO14064-3 and ISO 14065, and the ESI Management System and Management System Manual (v12), Section V.5.

As defined by ISO 14064-3:2006 €, "verification is the systematic, independent and documented process for the evaluation of a greenhouse gas assertion in a GHG project plan against agreed verification criteria." Specifically, the project verification included the review of the requirements outlined in the Forest Carbon Project Standard, Version 2.1 (November 2010). The assessment included the following items: eligibility criteria, baseline approach, additionality, project boundary, emissions, leakage, quantification of GHG reductions/removals, monitoring, data and parameters, and adherence to the project-level principals (relevance, completeness, consistency, accuracy, transparency, conservativeness).

ESI's verification was generally broken down into four parts: desktop assessment, site visit, quantitative review, and meetings/interviews.

4.1 Desktop Assessment

ESI reviewed the Restoration of NWRs Project Plan to assess conformance with the requirements of the Forest Carbon Project Standard (Version 2.1). Key factors that impacted the reported emissions reductions were identified and a Verification and Sampling Plan was created to focus on the critical elements presenting potential risk for errors in reported data. These elements included:

- Implementation of appropriate and adequate eligibility criteria, by reviewing documentation and field conditions indicative of the pre-project conditions of the project area, and compliance with all eligibility requirements of the Forest Carbon Project Standard.
- Implementation of appropriate and adequate baseline approach, by reviewing documentation and field conditions indicative of the most-likely without-project scenario.
- Implementation of appropriate and adequate approach/tools for additionality, by reviewing documentation and field conditions which reflect the most-likely without-project scenario, as it deviates from the with-project scenario.
- Implementation of appropriate and adequate approach to project boundary definitions, by reviewing documentation of project boundaries and ownership status, and field conditions relative to clearly delineated ownership extents and control over management activities within the project area.
- Implementation of appropriate and adequate approach to baseline emissions calculations, by reviewing documentation and field conditions which reflect the most-likely without-project scenario and the emissions resulting from that scenario.
- Implementation of appropriate and adequate approach to inventory calculations and modeling, by reviewing documentation, reviewing conversion factors, and re-running selected calculations and modeling
- Implementation of appropriate and adequate monitoring, by confirming the application of approved/acceptable monitoring practices in the field, and the appropriate handling and analysis of field data once collated.

- Implementation of appropriate and adequate approach to data and parameters, by reviewing data handling practices, and reviewing documentation at each step of the data analysis procedure.
- Implementation and adherence to project-level principles, by reviewing documentation and discussing the application of project-level principles with core staff.

A complete list of documents received and reviewed is located in Appendix D.

4.2 Site Visit

Following the initial desk review, ESI conducted an on-site assessment of the project lands on January 10-12, 2012. The site visit was used to review project records with representatives of Entergy Corp., discuss the calculation of carbon pools and sinks, visit random portions of the ownership for reconnaissance and ground-truth of the submitted data, and to conduct a field review of the Restoration of NWRs Project site preparation, planting methodology, and monitoring approach. The verification sample size included approximately 10% of the newly enrolled parcels.

During the site visit, the target field review area was 50% (approximately 580 hectares) of total enrolled acreage in the pool, which included visual observation as well as reviewing 5-10% of sampling plots. The inventory methodology included the sampling of approximately 37 clusters of 5 plots each. The verifier revisited and re-measured 5- 10% of the clusters (2-4 clusters; 10-20 plots) in the Tensas River National Wildlife Refuge, as approximately 80% of the plots were located there. In addition, the verifier visited Overflow National Wildlife Refuge (Ashley County, Arkansas) and completed a visual inspection of the project area.

NWR	Specific Sites/Plots Assessed
Overflow NWR	ENT-001, ENT-002, ENT-003, ENT-004
Tensas NWR	TR0015, TR0023, TR003, TR008, TR009, TR002, TR020, TR001, TR010, TR004, TR006, TR011, and TR019

Field review included the following aspects:

- pre-project conditions, as evidenced by condition of adjacent or nearby non-project areas, by evidence of site-preparation activities, and related.
- current project conditions, including reported tree species, reported planting density, reported current density, reported growth characteristics (diameter, height, or similar), reported biomass volume (above- and/or below-ground), implementation of management plan (historical and contemporary), and related.

Direct field measurement of tree density (both planting and current) and growth characteristics was performed on limited instances, with a detailed review of field measurement methodologies occurring at a minimum of one plot on each tract, sufficient to satisfy the professional discretion of the Lead Verifier and do achieve reasonable assurance.

4.3 Quantitative Review

ESI focused on the quantitative analyses undertaken by the Project Proponent to assess the carbon pools accounted for by the project [above-ground biomass, below-ground biomass,

deadwood (initially no, but later yes), and soil organic carbon]. ESI's review included an assessment of the primary quantitative data supporting the GHG assertion including the direct sampling of biomass carbon and the use of modeling, as well as the project proponents use of allometric methods and equations for calculating tree biomass, soil organic carbon, and the calculation of ERTs.

4.4 Meetings/Interviews

During the course of the project verification, ESI and Entergy Corp., held multiple meetings. All other correspondence occurred via email. The details of the meetings are briefly described in the table below.

Date	Attendees	Topics Discussed
22 November 2011	Brent Dorsey (Entergy) James Eaton (TerraCarbon) Shawn McMahon (ESI) Janice McMahon (ESI)	Opening Meeting, preliminary review of verification and sampling plan, review of travel logistics, project timeframes and deadlines.
10 January 2012	Steve Tullos (Entergy) James Eaton (TerraCarbon) Shawn McMahon (ESI)	Field verification Opening Meeting - opening meeting for the site assessment including: general introductions, review of verification and sampling plan if modifications are necessary, discussion of verification finding/resolutions to date, - review of reforestation parcels, site preparation activities, planting activities, etc.
30 March 2012	Steve Tullos (Entergy) James Eaton (TerraCarbon) Shawn McMahon (ESI)	Closing Meeting - Review of draft validation/verification report - Next steps - Request feedback on process

4.5 Verification Milestones

Project/Verification Activity	Date
ESI Internal Conflict of Interest (COI) process completed and approved (no issues).	September 22, 2011
ACR approval of ACR-Specific COI Form	September 26, 2011
ACR issues Certification	November 11, 2011
Validation/Verification Opening Meeting with Entergy Corp.	November 22, 2011
Submission of Validation Plan to Entergy Corp., for approval	November 22, 2011
Receipt of signed Validation Plan from Entergy Corp.	November 28, 2011
Submission of Verification and Sampling Plan to Entergy	December 19, 2011

Corp., for approval	
Receipt of signed Verification and Sampling Plan from Entergy Corp.	March 08, 2012
Field Verification	January 09-12, 2012
Corrective actions/clarification submitted	January 31, 2012
ESI completes Review	March 20, 2012
Draft verification report submitted to Entergy Corp., for review	March 22, 2012
Closing Meeting with Entergy Corp.	March 30, 2012
ESI finalizes report and submits to ACR and Entergy Corp.	March 30, 2012
Revised Report submitted to ACR and Entergy Corp.	April 20, 2012

4.6 ACR Forest Carbon Project Standard Requirements

4.6.1 Eligibility Requirements

The Restoration of NWRs Project is an A/R project that is intended to create additional carbon stocks in the project area through establishing tree cover on land that has been in agricultural for decades. The Restoration of NWRs Project is in compliance with ACR's project eligibility requirements set forth in ACR's Forest Carbon Project Standard, Version 2.1 [Chapter 1 (D) and Chapter 7 (F)]. Specific details are located in the Validation portion of this report.

4.6.2 Additionality

ESI confirms that the Restoration of NWRs Project conducted the proper additionality analysis and conforms to both the CDM A/R methodological Tool "Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities," Version 01, as outlined in ACR's Methodology for "Afforestation and Reforestation of Degraded Land," Version 1.0, March 2011, and ACR's Three-Prong Additionality Test. The project proponent sufficiently demonstrated in the GHG Project Plan and through the verification process that as of the project start date that the project activities exceed enforced laws and regulations, exceed common practice in the geographic region and forest type and faced a financial implementation barrier.

4.6.3 Permanence and Risk Mitigation

Entergy Corp., commits to a 40-year agreement with ACR. For the Restoration of NWRs Project, the project proponent utilized the ACR-approved risk assessment tool. As of November 2011, the only approved tool was the Verified Carbon Standard's *AFOLU Non-Permanence Risk Tool, Version 3.0*. ESI reviewed and assessed the implementation and outputs of the tool provided by the project proponent 22 November 2011, and ESI agrees with the risk rating of 4.75

(sum of internal, external, and natural risk totals), which equates to a default buffer withholding of 10%.

4.6.4 Baseline and Leakage

ESI confirms the project baseline as the continuation of the pre-project agricultural activities, with the existence of no woody biomass growth.

ESI confirms the leakage assertions made within the GHG Project Plan. According to the Forest Carbon Project Standard, Version 2.1, A/R projects do not generally need to account for market leakage. However, leakage due to displacement of agricultural activities was calculated using the approved CDM A/R Methodological Tool, "Estimation of the increase in GHG emissions attributable to displacement of pre-project agricultural activities in A/R CDM project activity" and estimated to be 187 tCO_2.

4.6.5 Monitoring and Contractual Requirements

ESI confirmed the appropriateness and implementation of the Restoration of NWRs 2011 Monitoring and Verification Report, which details monitored data and parameters, measurements, timing, and date storages.

ESI confirmed contractual requirements land ownership documentation as described in the GHG Project Plan. Entergy Corp., performs credit and title checks on each landowner before signing the landowner contract that gives Entergy Corp., carbon rights and places restrictive covenants on the lands as it pertains to carbon rights. The contracts are then recorded in the official records of land ownership with state or local government agencies.

4.6.6 Community and Environmental Impacts

ESI confirms the project's net positive community and environmental impacts and co-benefits such as providing sustainable income to low-income landowners, job stimulation, water quality, reduction of soil erosion, and increased biodiversity.

4.6.7 Stakeholders Comments

As the project occurs on Federal lands, no formal stakeholder meetings were held, as the project is in the general interest of the public. In August of 2010, the U.S. Fish and Wildlife Service confirmed that no formal stakeholder consultations were required in advance of the project.

4.6.8 GHG Emissions Reduction and Removal Enhancements (ERTs)

GHG Reductions or Removals	Deductions	Totals (Post Deductions)
Gross GHG emission reductions/removals (tCO_2e)	Uncertainty Deduction Included*	15,121 tCO_2-e
Baseline Emissions / Reductions	0 tCO_2-e**	15,121 tCO_2-e
Project Emissions	0 tCO_2-e***	15,121 tCO_2-e
Risk Buffer Deduction (10%)	1,512 tCO_2-e	13,609 tCO2-e
Leakage Deduction	187 tCO_2-e	13,422 tCO2-e

2011 Net GHG Emission Reductions/Removals (All Deductions Applied)	n/a	13,422 tCO2-e
Total Emission Reduction Tonne(s) (ERTs)	**n/a**	**13,422 ERTs**

*Uncertainty deduction rate of 56.6% is included in total for biomass calculations. As approved by ACR this total does not include an uncertainty deduction in soils.

** Conservative assumption that baseline change in stocks and emissions are zero.

*** As per the CDM Executive Board decision in September 2008 (CDM EB 42, Paragraph 35)

4.7 Verification Findings

The ESI verification team identified 4 non-conformity reports (NCRs) and clarifications (CL). All were addressed satisfactorily by Entergy Corp during the project validation process. These NCR's and CL's provided needed clarity to ensure that the project was implemented in accordance to the validated GHG Project Plan and was in compliance with ACR's Standard (Versions 2.1, October 2010) and Forest Carbon Project Standard (Version 2.1, November 2010).

The complete list of verification finding and resolutions has been compiled and located in Appendix E.

4.8 Verification Results/Conclusions

ESI confirms all verification activities including objectives, scope and criteria, level of assurance and the project's adherence to the Forest Carbon Project Standard (Version 2.1) and the validated GHG Project Plan, as documented in this report, are complete and concludes without any qualifications or limiting conditions that the Restoration of NWRs Project meets the requirements of ACR's Standard and the Forest Carbon Project Standard Version 2.1 (November 2010).

The GHG assertion provided by the Entergy Corp and verified by ESI has resulted in the gross GHG emission removal of 15,121 tCO_2 equivalents by the project during the verification period/reporting period (08 April 2002 –December 31, 2011). After all required deductions, the net ERTs are 13,422 tCO_2 equivalents.

Report Submitted to:	Entergy Corp American Carbon Registry
Report Submitted by:	Environmental Services Inc. Corporate Office 7220 Financial Way, Suite 100 Jacksonville, Florida 32257
ESI Lead Validator/Verifier Name and Signature:	 Shawn McMahon

	Lead Verifier
ESI Regional Technical Manager Name and Signature	 Janice McMahon Vice President and Forestry, Carbon and GHG Division Regional Technical Manager
Date:	20 April 2012

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Appendix A – List of Current Tracts/Parcels Enrolled in Restoration of NWRs Project

Tract ID	Tract Name	Contract GPS Hectares	County	State	Planting Year	Series
ENT-001-ENT-004	Overflow National Wildlife Refuge	108.4	Ashley County	Arkansas	2009	
ENT-005-ENT007	Pond Creek National Wildlife Refuge	36.3	Sevier County	Arkansas	2009	
ENT-008-ENT-017	Red River National Wildlife Refuge	232.3	Natchitoches Parish	Louisiana	2002, 2003	
ENT-018-ENT-023	Tensas River National Wildlife Refuge	786.7	Madison Parish	Louisiana	2004, 2005	

Appendix B – ACR Certification

November 11, 2011

Brent Dorsey
Director of Corporate Environmental Programs
Entergy Corporation
639 Loyola Avenue, L-ENT-13D New
Orleans, Louisiana 70113

Dear Brent,

The American Carbon Registry (ACR) has reviewed the GHG Project Plan for *Restoration of Bottomland Hardwood Forests at National Wildlife Refuges in the South Central US* (Version 1.0, 07 November 2011). Attached is our review, against the *ACR Forest Carbon Project Standard v2.1* and the ACR-approved CDM methodology AR-ACM0001 "Afforestation and reforestation of degraded land," version 5.

We find that the revised 07 November 2011 GHG Project Plan complies with all applicable requirements of the standard and methodology. All requested clarifications and corrections from our earlier review have been addressed. This letter constitutes ACR's certification, as defined in the *ACR Standard*, of the GHG Project Plan.

Entergy now has the option of listing the project on ACR, pending later verification and ERT issuance. If you wish to exercise this option, a project webpage will be created and the GHG Project Plan will be posted. Please notify me if you wish to exercise this option.

Please note that our internal review and certification does not take the place of, nor reduce the scope of, the required independent third-party validation and verification.

Congratulations on Entergy's leadership in this area over many years. We are very encouraged to see this project registered on ACR and look forward to working with you and TerraCarbon through the validation/verification and issuance process.

Sincerely,

Nicholas Martin
Chief Technical Officer, American Carbon Registry

2121 Crystal Drive, Suite 500
Arlington, Virginia 22202

www.americancarbonregistry.org

Appendix C – ESI's Validation Findings

Project: Restoration of Bottomland Hardwood Forests at National Wildlife Refuges in the south central US					
Item Number	**ACR Standard Version 2.1 October 2010**	**Applicability**	**Requirement**	**Location in PD or Supporting**	**NCR/CL/OFI**
1	ACR requires community and environmental impacts to be positive overall. The difference in community impacts between the 'with' and 'without' project scenarios (i.e., the community benefit) shall be positive in order for the project to qualify for registration.	Y	N	Pages 74-77, Section F	Please complete a "with" and "without" project assessment for community impacts.

2	Project Proponents shall include in their GHG Project Plan a credible estimate of impacts of the project on communities and the environment in the immediate project area. This should include changes in community wellbeing due to project activities and an evaluation of any negative impacts on community groups. Project Proponents shall base these estimates on defined and defensible assumptions about how project activities will alter social and economic well-being, including potential impacts of changes in natural resources and ecosystem services identified as important by the communities over the duration of the project.	Y	N	Pages 74-77, Section F	Although it is likely the project will cause net positive impacts to the community as indicated in the Project Plan, a more thorough assessment is required by ACR, as discussed in Chapter 7. Please complete the analysis ensuring changes in community wellbeing due to project activities and an evaluation of any negative impacts on community groups are included. In addition, please base these estimates on defined and defensible assumptions about how project activities will alter social and economic well-being, including potential impacts of changes in natural resources and ecosystem services identified as important by the communities over the duration of the project.
Item Number	**ACR Forest Carbon Project Standard Version 2.1 November 2010**	**Applicability to the Project (Y or N/**	**Requirement Met (Y, N or N/**	**Location in PP or Supporting Documents**	**NCR/CL/OFI**
3	ACR accepts any forest project applying an ACR-approved methodology and meeting all requirements of the ACR Forest Carbon Project Standard and ACR Standard. ACR-approved methodologies include.	Y	N	Page 32, Section B2.2	Page 32 lists AR-ACM0001 Version "3," but Page 28 states the project meets the applicability conditions of Version "5." Please clarify the version the project is utilizing and revise the PDD the indicate the correct version.
4	Aggregated projects shall apply these guidelines at the level of the project overall, not at the level of each individual landholding in the project. When designing initial inventory, measurement and monitoring plans, the Project Proponent (here aggregator) should pursue the ±10% of the mean at 90% confidence precision target at the level of the aggregated project.	Y	N	Page 53, Section D1.1.1	Please clarify in the Project Plan how the target level will be applied (tract-by-tract or at the level of the project overall).

5	A GHG source, sink or pool may be excluded from accounting if any of the following is demonstrated:	Y	N	Page 34, Section B4	Please reference the most current version of CDM AR-ACM0001 (Version 5.2.0).
6	For AR projects, Project Proponents shall provide documented evidence in the GHG Project Plan that no project areas have been cleared of trees within the ten (10) years prior to the project Start Date in order to establish an AR project; or if project lands have experienced loss of forest cover within the last ten years, this loss was caused by fire or natural disturbance. Loss of forest cover due to fire or natural disturbance does not disqualify an AR project. Some reforestation projects require removal of non-tree vegetation in order to prepare the site and establish trees. An example is the removal of brush from areas where brush has invaded after fire and prevented or significantly slowed the return of trees due to competition, water limitations, lack of a nearby seed source or other factors. Brush removal for site preparation does not disqualify a reforestation project. Emissions from brush removal must be accounted for in the GHG Project Plan if they exceed the de minimis threshold.	Y	N	Pages 10-12, Figures A3-A5.	Based on the 1992 National Land Cover Database data, Pond Creek (ENT-006, 007) and Red River (ENT-016) appears to have had deciduous and mixed forests on-site. Please clarify if these are currently present or were cleared prior to the start date.

7	Project Proponents shall assess general and project-specific risk factors using an ACR-approved risk assessment tool. Project Proponents shall conduct their risk assessment using the ACR Tool for Risk Analysis and Buffer Determination (in development). Project Proponents shall mitigate reversal risk by contributing ERTs from the project itself to the ACR buffer pool; contributing ERTs of another type or vintage to the ACR buffer pool; providing evidence of sufficient insurance coverage with an ACR approved insurance product to recover any future reversal; or using another ACR-approved risk mitigation mechanism.	Y	N	Pages 38-45; Section B8	Financial Viability should demonstrate a cash-flow analysis, as there is not an exclusion or exception mentioned in the VCS tool. Also, it appears a risk score of 2 would need to be taken for "Land Ownership and Resource Access/Use Rights" category b, as Entergy is the Project Proponent and and the land is owned by USFWS. For Community Engagement, please demonstrate how it was determined that households were not reliant on the crops produced previously in the project areas, as required by the risk tool (household surveys, participatory rural appraisal, etc.). Please note Risk scores and mitigation will be further reviewed and confirmed during verification. For project longevity, the PP states in this section that the "Land managers are contractually obligated to keep project lands in forest for 70 years" and "in practice...to perpetuity", however the requirement is for contractual commitment of 100 years or more. In addition the H68language in the MOA states a commitment of 99 years. Please discuss the discrepancies.
8	**Programmatic Project Development Approach** A programmatic aggregated project is treated as a single project with an overall baseline and monitoring/verification plan. The methodology for such projects shall establish applicability conditions and procedures for the addition of new lands to the program, so that it does not become necessary to re-define the baseline each time a new landholding is added.	Y	N	N/A	Please clarify if new lands will ever be added to the project.

Item Number	CDM Methodology - Afforestation and Reforestation of Degraded Land, Version 5.2.0, November 25th, 2011	Applicability	Requirement	Location in PD or Supporting	NCR/CL/OFI
9	This methodology is applicable to afforestation and reforestation CDM project activities that are implemented on degraded lands.	Y	N	Page 28, Section B1	Please ensure the project is utilizing/referencing the most up-to-date version of the tool.
10	**For baseline net GHG removals by sinks**. It will usually be sufficient to stratify according to area of major vegetation types because baseline removals for degraded (or degrading) land are expected to be small in comparison to project removals;	Y	N	Page 34, Table B2, Page 55, Section D1.1.3	The Project Plan states that project is stratified based on location/age cohort. The PP further states that there are 4 strata, however the table on page 34 lists 5 (planting year/location). Additionally, why was sampling limited to only 2 of the 4 stated strata?
11	PPs should treat the part of the project area which contains organic soils, if any, as a separate stratum and ensure that applicability condition 4(b) of this methodology is met in this stratum.	Y	N	Page 69, E6.3, Table E5	What criteria/source was used to confirm organic soils did not exist onsite?
12	Carbon stock in living trees and shrubs at the start of the project activity is estimated as provided in the tool “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities.”	Y	N	N/A	Please clarify if the tool “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities," was utilized for the project.

13	Under the applicability conditions of this methodology: • Changes in carbon stock of above-ground and below-ground biomass of non-tree vegetation may be conservatively assumed to be zero for all strata in the project scenario.	Y	N	Section B4	Please clarify if the inclusion of above and below-ground biomass includes tree, non-tree, or both.
14	The actual net GHG removals by sinks shall be estimated using the equations in this section. When applying these equations for the ex ante calculation of actual net GHG removals by sinks, PPs shall provide estimates of the values of those parameters that are not available before the start of the project. PPs should retain a conservative approach in making these estimates.	Y	N	Pages 68-73, Section E6	Please clarify if the required equations from the selected Methodology were utilized for the ex-ante estimations.
15	All data collected as part of monitoring should be archived electronically and be kept at least for two years after the end of the last crediting period. One hundred percent of the data should be monitored if not indicated otherwise in the tables below. All measurements should be conducted according to relevant standards. In addition, the monitoring provisions in the tools referred to in this methodology apply.	Y	N	Page 58, D1.4.3	Although the project is planned to be perpetual, please provide a statement committing to archiving the data for at least two years after the end of the last crediting period, in case the project ends after 40 years.
16	The ex post stratification shall be updated because of the following reasons: • Unexpected disturbances occurring during the crediting period (e.g. due to fire, pests or disease outbreaks), affecting differently various parts of an originally homogeneous stratum; • Forest management activities (cleaning, planting, thinning, harvesting, coppicing, re-replanting) that are implemented in a way that affects the existing stratification. Established strata may be merged if reasons for their establishing have disappeared.	Y	N	N/A	Please specifically state in the Project Plan if stratification will be the same in the ex ante and ex post instances.

17	Maximum allowable relative margin of error of the mean for estimation of tree biomass is ± 10% at 90% confidence level.	Y	Y	Page 54, D1.1.1	The methodology selected specifically states that the "Maximum allowable relative margin of error of the mean for estimation of tree biomass is ± 10% at 90% confidence level." however the Project Plan states that "The monitoring plan is designed to produce biomass stock estimates with a precision level of +/-20% of the mean with 90% confidence at the first measurement, with precision expected to improve over time as the stands mature and become more homogeneous." Please clarify.
18	Table 3 provides a list of the data and parameters that are required in order to apply this methodology. PPs should refer to the tools used in this methodology for full description of the data and parameters. For ex ante calculation of net anthropogenic GHG removals by sinks, PPs shall provide transparent estimations for the parameters that are monitored during the crediting period. These estimations shall be based on existing published data where possible, using a conservative approach.	Y	N	Pages 59-61	The data and parameters listed in the methodology under "Table 3: Data and parameters required under the methodology" do not appear the same as the ones listed in the Project Plan. Please clarify.
19	While applying this methodology the PPs shall ensure that "Guidelines on conservative choice and application of default data in estimation of the net anthropogenic GHG removals by sinks" are followed for addressing uncertainty.	Y	N	N/A	Please ensure the "Guidelines on conservative choice and application of default data in estimation of the net anthropogenic GHG removals by sinks" are followed for addressing uncertainty.
Item Number	**A/R Methodological tool "Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities" (Version 01) (19 October 2007)**	**Applicability to the**	**Requirement Me**	**Location in PD or Supporting Documents**	**NCR/CL/OFI**

20	9. Identify realistic and credible land-use scenarios that would have occurred on the land within the proposed project boundary in the absence of the afforestation or reforestation project activity under the clean development mechanism (CDM). The scenarios should be feasible for the project participants or similar project developers taking into account relevant national and/or sectoral policies and circumstances, such as historical land uses, practices and economic trends. The identified land use scenarios shall at least include:	Y	N	Pages 36 & 37, Section B5; Page 47, Section C	Please clarify if any other uses were considered for the baseline (recreation, hunting, etc.) and why they were not considered viable.
21	10. For identifying the realistic and credible land-use scenarios; land use records, field surveys, data and feedback from stakeholders, and information from other appropriate sources, including Participatory rural appraisal (PRA) may be used as appropriate. If the baseline approach selected is 22b or c, then the project shall perform a survey of local experts or land owners/users on their plans for land management/investments during the period to the project start.	Y	N	N/A	Please clarify if "realistic and credible land-use scenarios; land use records, field surveys, data and feedback from stakeholders, and information from other appropriate sources, including Participatory rural appraisal (PRA)" were utilized to determine the baseline scenarios.
22	**Outcome of Sub-step 1a**: List of credible alternative land use scenarios that would have occurred on the land within the project boundary of the A/R CDM project activity.	Y	N	Page 36, Section B5	If the list of alternative land use scenarios will change based on the above NCRs, please revise in the Project Plan.
23	**Outcome of Sub-step 1b**: List of plausible alternative land use scenarios to the A/R CDM project activity that are in compliance with mandatory legislation and regulations taking into account the their enforcement in the region or country and EB decisions on national and/or sectoral policies and regulations.	Y	N	Page 47, Section C	If the list of alternative land use scenarios will change based on the above NCRs, please revise in the Project Plan.
Item Number	**Tool for estimation of change in soil organic carbon stocks due to the implementation of A/R CDM project activities (Version 01.1.0)**	**Applicability**	**Requirement**	**Location in PD or Supporting**	**NCR/CL/OFI**

24	(a) Site preparation and planting take place within a year of each other;	Y	N	N/A	Please clarify if site preparation and planting have taken or will take place within 1 year of each other.
25	(c) The increase in SOC content in the project scenario takes place at a constant rate over a period of 20 years from the year of planting.	Y	N	N/A	Please clarify if the anticipated increase in SOC content in project scenario will take place at a constant rate over a period of 20 years from the year of planting.

Response from Client	ESI Comments	CAR/CL/OFI Satisfied (Y or N)
The following text will be added to section F1 of the PD to assess "with" and "without" project community impacts. Project lands are to be restored to natural forested conditions and will provide a public benefit for the community. Reforestation of the region (i.e. the with project case) is well received due to the recreational benefits derived from improved habitat for game animals like deer, turkey and waterfowl. This stands in contrast to continuation of agriculture (i.e. the without project case or baseline case) which only community benefit is short term periodic employment of staff involved in farming the land. A vast majority of the public support reforestation of agricultural lands in general (Ray Aycock, USFWS, pers. comm. August 2010). Further, this project helps generate public benefits by incorporating new lands into the National Wildlife Refuge system. The Tensas River comprehensive conservation plan summarizes these benefits at the federal level as below: "In Fiscal Year 2006, 34.8 million people visited refuges, most to observe wildlife in their natural habitats (Caudell and Carver 2007) . Their spending generated almost $1.7 billion in sales in regional economies. As this spending flowed through the economy, nearly 27,000 people were employed, and $542.8 million in employment income was generated. About 82 percent of total expenditures are generated by non-consumptive activities on refuges. Fishing accounted for 12 percent and hunting 6 percent. Local residents accounted for 13 percent of expenditures while visitors coming from outside the local area accounted for 87 percent (Caudell and Carver 2007)."	Entergy has sufficiently demonstrated that there is a positive community benefit over that of the without project case.	Y

Please see the response to NCR 1 in conjunction with the content in Section F of the project GHG plan.	See response to NCR 1	Y
Response from Client		**CAR/CL/OFI Satisfied (Y or N)**
The version number of the utilized CDM methodology, CDM AR-ACM0001, has been checked and updated to Version 5.0, when necessary, throughout the project GHG plan.	Addressed	Y
The clarifying phrase "at the level of the project" has been added to Section "D1.1.1 Precision target."	Addressed	Y

The version number of the utilized CDM methodology, CDM AR-ACM0001, has been checked and updated to Version 5.0, when necessary, throughout the project GHG plan.	Although Version 5.0 is no longer available on the CDM website, according to the internal review and certification of ACR, as well as verbal conversations with ACR and Entergy, it is satisfactory to utilize Version 5 of the CDM tool. Addressed.	Y
No forest was present in the project area directly prior to the start date. The green pixels depicting forest cover at Pond Creek are limited to the parcel boundary. Rather than depicting forest cover within the project boundary, these pixel are a relict of the pixel size and inaccuracies in land cover maps which can arise along sharp "edges" in land cover, such as forest and agriculture. Further, during the course of field monitoring, several parcels containing trees which would have been present in the baseline were identified at Red River. The areas where these trees occurred, including parcel ENT-016, have since been removed from the project area.	The explanation provided by Entergy is sufficient to explain the few instances where preexisting forested areas where shown.	Y

Financial Viability All project start-up funding related to land acquisition and planting was paid for with upfront funding provided by Entergy (and was not dependent on delayed project income), hence project cash flow in the first year of the project is equal to zero (i.e. breakeven point is year 1). Per the VCS AFOLU Risk Tool, the risk score is zero for the financial viability risk component where "project cash flow breakeven point is less than 4 years from the current risk assessment." As stated in the PD, ongoing land management costs are covered under the operational budget of the USFWS. Costs related to monitoring and verification will be covered by Entergy. As all project lands are part of the USFWS refuge system, they are under the permanent management and protection of the USFWS and will remain as forest, therefore financial viability is not relevant to assessing nonpermanence risk of the project. Opportunity Cost Similarly, an NPV analysis of the baseline scenarios and opportunity cost analysis is not relevant to assessing project nonpermanence risk, as all project lands are currently part of the NWR system and by mandate the USFWS is tasked to protect these lands, including preventing their conversion to another land use. Effectively, opportunity cost analysis following the VCS AFOLU Risk Tool would yield a risk score of zero, (d) "NPV from the most profitable alternative land use activity is expected to be between 20% more than and up to 20% less than from project activities" because opportunity cost of the baseline agricultural land use was paid for through the initial land purchase enabled through Entergy's project start-up funding, i.e. NPV with project (including land payment)	Financial viability addressed by Nick Martin in an email dated 1-31-12 and further supported by Entergy's discussion. Addressed. Land ownership has been sufficiently addressed through the discussion provided. The discussion provided by Entergy sufficiently demonstrates that the community is not reliant upon the project areas. Addressed. Project longevity addressed by Nick Martin in an email dated 1-31-12 and further supported by Entergy's discussion. Addressed.	Y
No new lands will be added to the project.	Addressed.	Y

Response from Client		CAR/CL/OFI Satisfied (Y or N)
The most up-to-date version of each tool has been specified in section B1.	The Project is utilizing the latest version of each tool, which have been added to the Project Plan. Addressed.	Y
The project plan has been revised to stipulate that the project area will be stratified on the basis of “location and/or age”. Sampling was limited to only two strata as only two strata were expected to have trees larger than the minimum dbh measured, 5 cm.	Addressed.	Y
All sites have a history of cropping and/or pasture, which as practiced in the region occurs on mineral soils. James Eaton has confirmed the lack of organic soils at each planting location during the course of field work monitoring.	Verifier utilized the USDA website to confirm no organic soils were located onsite. Addressed.	Y
As stipulated in the CDM tool, Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities, “this tool can be used for estimation of carbon stocks and change in carbon stocks of trees and shrubs in the baseline and project scenarios of an A/R CDM project activity.” While the above tool is not specifically mentioned in the project GHG plan, Section E6.4 makes use of the tool to estimate projected carbon sequestered.	Addressed	Y

The phrase "does not include non-tree biomass" has been added to Table B3.	Addressed.	Y
While the equations in section 5 of the CDM methodology are not specifically mentioned in the project GHG plan, Section E6.4 makes use of these equations to estimate projected carbon sequestered.	Addressed	Y
Section D1.4.3 has been updated with the following sentence: "All project data will be archived for at least two years after the end of the last crediting period."	Addressed.	Y
We anticipated that ex-post stratification will be the same as ex-ante stratification, however CDM permits changing stratification as necessary.	Addressed.	Y

The quoted text in this finding refers to version 5.2 of the CDM methodology AR-ACM0001 while the project utilizes version 5.0. Version 5.0 states "The targeted precision level for biomass estimation shall be ± 10% of the mean at a 90% confidence level." It is likely that this precision level will be attained once all stands are age 20 or greater. As allowed by the ACR, an uncertainty deduction can be used when the required precision target is not achieved. As stated in the GHG project plan, "in the event that monitoring of biomass yields a precision of the estimates (at the level of the project) exceeding ± 10% of the mean at a 90% confidence level, uncertainty will be discounted as per the ACR Standard, by "the mean minus the lower bound of the 90% confidence interval."	Although Version 5.0 is no longer available on the CDM website, according to the internal review and certification of ACR, as well as verbal conversations with ACR and Entergy, it is satisfactory to utilize Version 5 of the CDM tool. Addressed.	Y
We have specified in an attached excel sheet which variables are included in the PD and justified when variable were not included.	In the file "Data and Parameters 2012.02.01.xls," the Project Developer has provided all data and parameters included and excluded from the project (based on Table 3 in the methodology), and provided a thorough and acceptable justification for why or why not. Addressed.	Y
The CDM tool "Guidelines on conservative choice and application of default data in estimation of the net anthropogenic GHG removals by sinks" was consulted to limit uncertainty by ensuring the use of conservative default values when calculating net GHG emission reductions.	Addressed.	Y
Response from Client		**CAR/CL/OFI Satisfied (Y or N)**

No other land use scenarios, outside those addressed in the project document, were considered. Among the land uses considered, which include agriculture, commercial tree planting, WRP/CRP enrollment, philanthropic financing of restoration of NWR lands, the highest value land use (agriculture) is considered in the financial barriers analysis, and hence consideration of any lower value land uses (e.g. hunting or recreation, which usually occur in combination with WRP/CRP) would not change the outcome of the assessment of additionality.	The tool requires "realistic and credible" alternative land-use scenarios. The land-uses described in the Project Plan are the most likely alternative uses, and therefore the verifier accepts the exclusion of the lower-valued land uses from the baseline assessment. Addressed.	Y
All realistic land uses, including agriculture, commercial tree planting, WRP/CRP enrollment, philanthropic financing of restoration of NWR lands, identified in consultation with local experts and refuge personnel, as well as deep regional experience of TerraCarbon staff, were included in the assessment.	As the information presented is derived from "data and feedback from stakeholders," the issued is addressed.	Y
See response to 21.	Addressed	Y
See response to 21.	Addressed	Y
Response from Client		**CAR/CL/OFI Satisfied (Y or N)**

The following statement was added to section A4. "Site preparation and planting occurred within one year of each other."	Addressed.	Y
Section E6.3 states the constant SOC accumulation rate for cropland and pasture and mentioned accumulation will take place for a period of 20 years.	Addressed	Y

Appendix D – List of Documents Received and Reviewed by ESI

11/15/2011 (via email)

- Restoration of NWRs 2011.11.07.doc
- ACR 2nd review of Entergy GHG Project Plan 11-11-11.pdf"
- ACR certification of Entergy LMV plantings GHG Project Plan 11-11-11.pdf"

11/22/2011 (via email)

- Entergy Monitoring and Verification Report 2011.11.22.doc"

12/12/2011 (via email)

- USFWS 2008 Red River CCP.pdf"
- USFWS 2009 Tensas River CCP.pdf"
- GHG Project Plan.zip"
- GIS Data.zip"
- Monitoring and Verification Report.zip"
- Ownership.zip"
- Risk.zip"
- Supporting Documents (ACR, CDM, VCS).zip"
- EntergyForestInventory2011_2.PDF"
- EntergyForestInventory2011_3.pdf"
- EntergyForestInventory2011_1.PDF"
- Entergy 2011 Monitoring Data.xls"
- ACR certification of Entergy LMV plantings GHG Project Plan 11-11-11.pdf"
- ACR 2nd review of Entergy GHG Project Plan 11-11-11.pdf"
- 2009.07.08 MOA USFWS-TCF-Entergy signed.PDF"
- 2002.03.28 Agreement ENT-TCF.PDF"
- 2004.06.23 MOA USFWS-TPL-Entergy signed.pdf"
- 2005.03.05 MOA USFWS-TPL-Entergy signed.pdf"
- CDM 2010 Tool for estimation of change in soil organic carbon stocks.pdf"
- CDM Combined tool to identify the baseline scenario and demonstrate additionality.pdf"
- CDM Tool for the identification of degraded lands for AR project.pdf"
- VCS AFOLU Non-Permanence Risk Tool - v3.0.pdf"
- ACR Forest Carbon Project Standard v2.1 November 2010.pdf"
- ACR Standard v2.1 Oct 2010.pdf"
- AR-ACM0001 AR of degraded land AR-ACM0001 AR of degraded land V5.2.pdf"
- CDM 2009 Estimation increase GHG emissions attributable to displacement in AR.pdf"

01/26/2012 (via email)

- Entergy Monitoring and Verification Report 2011.11.22.doc"
- Copy of Entergy Leakage and Ex Ante 2012 01 23.xls"

02/02/2012 (via email)

- Entergy Leakage and Ex Ante 2012.01.23.xls"
- Restoration of NWRs 2012.02.01.doc"
- Data and Parameters 2012.02.01.xls"
- Entergy ACR Validation NCR's Round 1 2012.02.01.xlsx"

02/23/2012 (via email)

- EXHB A-Tensas 1500ac 2004.jpg"
- RR-Entergy 617 ac planted 02 and 03.jpg"
- Entergy 2011 Monitoring Data Calculations 2012.02.14.xls"
- Entergy ACR Verification NCR's Round 1 TC response 2012.02.22.xlsx"

03/20/2012 (via email)

- Restoration of NWRs 2012.03.19.doc

Appendix E – ESI's Verification Findings

Project: Restoration of Bottomland Hardwood Forests at National Wildlife Refuges in the south central US
Project Proponent: Entergy
Protocol: American Carbon Registry Verification
Verifier: Environmental Services, Inc.
Non-Conformity Report Round 2
23 February 2012

Item Number	ACR Standard Version 2.1 October 2010	Applicability to the Project (Y or N/A)	Requirement Met (Y or N)	Location in PD or Supporting Documents	NCR/CL/OFI	Response from Client	NCR/CL/OFI/Final ESI Comment	CAR/CL/OFI Satisfied (Y or N)
1	For U.S. projects, Project Proponent shall provide land ownership documentation and attestation of clear, unique, and uncontested land title.	Y	N	N/A	For the agreement between Entergy and the Conservation fund (dated 3/28/2002) please provide any maps or exhibits supporting the agreement. For the MOA between USFWS & Trust for Public Land & Entergy Services dated (6/23/2004) please provide the referenced "exhibit a" (aka "Phase 1a").	While no maps or exhibits are specifically mentioned in the agreement, the attached map is an early map of the acreage originally reforested at the Red River National Wildlife Refuge. Please find "exhibit a" attached. This map details the areas planted in 2004 at Tensas River NWR.	Maps have been received. NCR is satisfied.	Y
Item Number	**ACR Forest Carbon Project Standard Version 2.1 November 2010**	**Applicability to the Project (Y or N/A)**	**Requirement Met (Y, N or N/A)**	**Location in PD or Supporting Documents**	**NCR/CL/OFI**	**Response from Client**		**CAR/CL/OFI Satisfied (Y or N)**
2	ACR requires that the 90% statistical confidence interval of sampling be no more than 10% of the mean estimated amount of emission reduction/removal. If the Project Proponent cannot meet the targeted ±10% of the mean at 90% confidence, then the reportable amount shall be the mean minus the lower bound of the 90% confidence interval, **applied to the final calculation of emission reductions/removal enhancements.** The precision target is applied across the project, not within particular carbon pools or strata.	Y	N	Entergy Monitoring and Verification Report 2011.11.22.doc, Section 4.2, Table 4.2	Section 4.2 indicates that the deduction of 56.6% was applied just to the above ground and below ground biomass, however the requirement in the FPP states that the deduction is to be "applied to the final calculation of emission reductions/removal enhancements" which would include soil carbon. Please adjust this in the calculations.	While the guidance on this issue appears to be clear, it does not make logical sense to apply a monitoring uncertainty deduction to pools which are not monitored, but rather are default values determined through the use of a CDM tool. As such we have requested clarification from ACR. ACR's response supports our conclusion, whereby when ACR "approve[s] a default approach (i.e. the CDM tool for soil carbon) there is no reason why we should put a deduction on it if they fail to meet the tree precision…[ACR personnel] believe[s] [this] means the deduction does not need to be applied to SOC estimated through use of the CDM tool."	Email response from ACR received and NCR is satisfied.	Y
Item Number	**Afforestation and Reforestation of Degraded Land, Version 5.0, November 25th, 2011**	**Applicability to the Project (Y or N/A)**	**Requirement Met (Y, N or N/A)**	**Location in PD or Supporting Documents**	**NCR/CL/OFI**	**Response from Client**		**CAR/CL/OFI Satisfied (Y or N)**
3	Under the applicability conditions of this methodology: • Changes in carbon stock of above-ground and below-ground biomass of non-tree vegetation may be conservatively assumed to be zero for all strata in the project scenario.	Y	N	Restoration of Bottomland Hardwood Forests at National Wildlife Refuges in the south central US, Table B3	Please clarify if the inclusion of above and below-ground biomass includes tree, non-tree, or both.	The following text, "does not include non-tree biomass" has been added to Table B3 to clarify that only live tree biomass is included as part of the carbon pools.	Statement added to PDD. NCR is satisfied.	Y
4	**For actual net GHG removals by sinks.** The stratification for ex ante estimations shall be based on the project planting/management plan. The stratification for ex post estimations shall be based on the actual implementation of the project planting/management plan. If natural or anthropogenic impacts (e.g. local fires) or other factors (e.g. soil type) add variability to the growth pattern of the biomass in the project area, then the ex post stratification shall be revised accordingly.	Y	N	Entergy Monitoring and Verification Report, Table 3.7, 5.1	No spreadsheet was located that showed the steps coverting raw data to average total biomass carbon stock estimates by stratum. Please provide. Additionally, using table 5.1 in the Entergy Monitoring and Verification Report (column for cluster level biomass carbon), ESI calculated an average from these figures equaled to 0.15, instead of the 0.16 indicated. Please discuss.	Please see the attached excel spreadsheet entitled "Entergy 2011 Monitoring Data Calculations 2012.02.14" detailing the calculations coverting raw data into total biomass stocks. Calculations of the average biomass stock using the data from Table 5.1 are also detailed in the spreadsheet mentioned above. We presume the difference is related to a rounding error, where the the data in Table 5.1 was truncated and does not show all the decimal points actually present. Untruncated data can be found in the attached excel spreadsheet. Please also note that the mean 0.16 t C/ha is not the true mean but the mean weighted by individual strata area.	Calculations spreadsheets received. Calculations for biomass were found to be appropriate as well as use of biomass equations. Calculation of weighted mean was confirmed. NCR is satisfied.	Y