

SBP

Sustainable Biomass Partnership

PricewaterhouseCoopers LLP Evaluation of Enviva Pellets Ahoskie Compliance with the SBP Framework: Public Summary Report

www.sustainablebiomasspartnership.org



Completed in accordance with the CB Public Summary Report Template Version 1.0

*For further information on the SBP Framework and to view the full set of documentation see
www.sustainablebiomasspartnership.org*

Document history

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1 Overview

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Primary contact for SBP: Mike Harris, Practice Leader, 604-806-7711, mike.harris@ca.pwc.com

Report completion date: 14/Dec/2016

Report authors: Cheryl Woode and Bruce Eaket

Certificate Holder: Enviva Pellets Ahoskie, 142 NC-561, Ahoskie, North Carolina, United States

Producer contact for SBP: Don Grant, Franklin, VA, United States, 1-757-304-5080, don.grant@envivabiomass.com

Certified Supply Base: Mid-Atlantic regional supply base in Virginia and North Carolina

SBP Certificate Code: SBP-03-06

Date of certificate issue: 17/Feb/2017

Date of certificate expiry: 16/Feb/2022

Indicate where the current audit fits within the certification cycle				
Main (Initial) Audit	First Surveillance Audit	Second Surveillance Audit	Third Surveillance Audit	Fourth Surveillance Audit
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2 Scope of the evaluation and SBP certificate

Certification scope: Production of wood pellets, for use in energy production, at Enviva Pellets Ahoskie and transport to the Port of Chesapeake, Virginia for storage, aggregation, vessel loading and shipping.

SBP certificate: SBP-03-06

3 Specific objective

The primary objectives of the assessment were:

- Collecting assessment information;
- Confirming that information and comparing it to the Sustainable Biomass Partnership (SBP) Standards 1,2,4,5, (V1.0) (the “Standards”), the Client’s documented processes and public documents, and PwC’s requirements (the “Requirements”);
- Generating assessment findings; and
- Preparing the Assessment report and SBP Public Summary.

4 SBP Standards utilised

4.1 SBP Standards utilised

The following SBP Standards were utilized:

- Standard 1: Feedstock Compliance Standard. Version 1.0. 26 March 2015
- Standard 2: Verification of SBP – Compliant Feedstock. Version 1.0. 26 March 2015
- Standard 4: Chain of Custody. Version 1.0. 26 March 2015
- Standard 5: Collection and Communication of Data. Version 1.0. 26 March 2015

The above Standards can be accessed or requested from SBP at the following website:
www.sustainablebiomasspartnership.org

4.2 SBP-endorsed Regional Risk Assessment

Not applicable - No SBP endorsed Regional Risk Assessment was used for this assessment.

5 Description of Biomass Producer, Supply Base and Forest Management

5.1 Description of Biomass Producer

Enviva, LP (“Enviva”) was founded in 2004 to develop a cleaner energy alternative to fossil fuels. More than a decade later, Enviva has become the world’s largest producer of wood pellets. Enviva owns and operates six plants that are strategically located in the south eastern United States and that produce about 2.3 million metric tons of wood pellets annually. Pellets are primarily to power plants in the United Kingdom and Europe that previously were fuelled by coal, enabling them to reduce their carbon footprint by about 80 percent.

Enviva’s flagship Ahoskie facility was announced in December, 2010 and began manufacturing pellets in November of 2011. It was built on the site of a former Georgia Pacific sawmill with new infrastructure purpose-built for wood pellet production. Enviva Pellets Ahoskie has a production capacity of approximately 370K metric tons and operates 24 hours a day, seven days a week.

The wood pellets made at the facility are transported to and stored at Enviva’s deep water port terminal in Chesapeake, VA until they are shipped internationally to European utilities.

5.2 Description of Biomass Producer’s Supply Base

Enviva LP operates 3 mills in its Mid-Atlantic region: Enviva Pellets Southampton, in Franklin, VA, Enviva Pellets Northampton in Garysburg, NC and Enviva Pellets Ahoskie in Ahoskie, NC. Each mill has an average catchment area of 120 km, which overlap. As such, Enviva treats the supply regions for each mill as one large supply area, with the potential for each mill to obtain fiber from any portion of the area. This Mid-Atlantic regional supply base includes portions of the states of Virginia and North Carolina.

The land ownership patterns in the Mid-Atlantic are typical for the southern United States: approximately ninety-three percent of the timberland is privately held (approximately 5 million hectares). In North Carolina, about 60% of the private landownership is non-industrial; and in Virginia 66% is also non-industrial. An estimated 54% of the Mid-Atlantic region is forested, 22% is in agriculture, 10% is developed and 8% is wetlands. These four categories comprise 94% of the land cover.

Ahoskie procures all of their feedstock from primary and secondary sources in the mid-Atlantic supply base area. Their internal fiber procurement group is responsible for the implementing the voluntary standards including the Sustainable Forestry Initiative® (SFI) Fiber Sourcing and Chain of Custody (CoC) Standards, the Programme for the Endorsement of Forest Certification (PEFC™) CoC Standards, the Forest Stewardship Council™ (FSC) CoC and Controlled Wood Standards and the SBP Standards. Feedstock is sourced primarily direct from the forest in the form of roundwood or wood chips from primary suppliers, all of whom are vetted and qualified prior to delivering. Fiber cannot be delivered to the mill until a contract is signed with the supplier. The contract requires suppliers to use trained loggers during harvest, follow Best Management Practices (BMP’s) for water quality, and to avoid controversial sources of fiber, such as illegal logging, wood harvested in violation of traditional and civil rights, wood harvested in forests where high conservation values are threatened by management activities, wood harvest in forests being converted to plantations or non-forest use, and wood from forests in which genetically modified trees are planted. Enviva foresters confirm trained logger status and ensures that loggers delivering fiber maintain their continuing education as required. Enviva uses forest residues, such as tree tops, limbs, deformed trees and any other wood produced during harvested that is otherwise unacceptable to other wood users in the area. Enviva does not use sawlogs in the production of pellets, nor does the plant use any construction debris, treated wood, or post-consumer material.

Enviva also sources secondary feedstock from a variety of sawmill and wood industry suppliers. Sawmills source high-quality logs from the forest and mill them into products like two-by-fours. Wood industry suppliers use the products created by sawmills to produce products such as furniture or other assembled wood products. These feedstocks are most commonly in the form of sawdust or shavings and may be green or kiln-dried.

Additional detail is provided in Enviva Pellets Mid-Atlantic Supply Base Report (SBR), which can be found on their website at the following address: <http://www.envivabiomass.com/sustainability/>.

5.3 Detailed description of Supply Base

The total Supply Base area for the entire Mid-Atlantic region is 14.4 million hectares of forestland. Hardwoods comprise 69% of the forested hectares and the remaining 31% of forests are softwood.

The total annual volume of primary feedstock procured by Ahoskie is approximately 600,000-800,000 metric tonnes of which is primary feedstock. Approximately 88.6% of the primary feedstock is not certified to a SBP-approved Forest Management Scheme and the remaining 11.4% is certified to the PEFC Standard.

The total annual volume of secondary feedstock procured by Ahoskie is approximately 23.9% of the total sourced delivered as chips and dust or pine chips, dust or shavings.

The total annual volume of tertiary feedstock is 0% of the total.

A quantitative description of the Supply Base can be found in Enviva's Supply Base Report.

5.4 Chain of Custody system

Enviva has a management system and documented procedures that are fully capable of determining feedstock compliance. Enviva is utilizing the Program for the Endorsement of Certification Chain of Custody system already in place to track SBP compliant and SBP controlled feedstock. All wood fiber is tracked through the process from the District of Origin through the mill to the final bill of sale.

Enviva uses a database to gather and control information related to the feedstock such as supplier name, scale tickets, fibre type, certification, and district of origin. Enviva has appropriate control mechanisms to calculate output volumes, claims and trademark/logo approval. Additionally, Enviva conducts an annual Management Review of the commitments, programs and procedures to evaluate the overall effectiveness of the SBP management system.

6 Evaluation process

6.1 Timing of evaluation activities

Evaluation Activity	Date / Location	Persons Involved	Approx. Duration
Pre-Assessment / Document Review	August 6, 2015. Off-site from PwC's office.	Cheryl Woode, SBP Team Leader, PwC	6 hours
Initial Assessment	September 29-30, 2015. On-site in Ahoskie, NC and surrounding area.	Bruce Eaket, SBP Lead Auditor, PwC Cheryl Woode, SBP Team Leader, PwC Jim Runyan, Subject Matter Expert, PwC Contractor Allison Gratz, Director of Sustainability, Enviva Don Grant, Manager of Certification, Enviva Kim Cesafsky, Greenhouse Gas Specialist, Enviva Shawn Cook, Sustainability Forester, Enviva Maris Zudrags, SBP Witness Auditor, SBP Supplier Assessments: <ul style="list-style-type: none"> 6 primary feedstock suppliers - harvest sites 	12 hours
	October 1, 2015. On-site at Port of Chesapeake.	Cheryl Woode, SBP Team Leader, PwC Jim Runyan, Subject Matter Expert, PwC Contractor Allison Gratz, Director of Sustainability, Enviva Don Grant, Manager of Certification, Enviva Kim Cesafsky, Greenhouse Gas Specialist, Enviva Shawn Cook, Sustainability Forester, Enviva Aaron Boyd, Fiber Supply Manager, Enviva Tammara Baker, Logistics, Enviva Chris Wardwell, Director Logistics Port of Chesapeake, Enviva Maris Zudrags, SBP Witness Auditor, SBP	4 hours
PwC Stakeholder Consultation	October 5 – November 5, 2015. Off-site from PwC's office.	Bruce Eaket, SBP Lead Auditor, PwC Cheryl Woode, SBP Team Leader, PwC	2 hours
PwC Stakeholder Conference Call	June 21, 2016	Bruce Eaket, PwC SBP Lead Auditor Cheryl Woode, PwC SBP Team Leader	1 hour
Audit Closure and PwC Certification Decision	December 14, 2016. Off-site from PwC's office.	Bruce Eaket, SBP Lead Auditor, PwC Shawn Ellsworth, Qualified SBP Lead Auditor, PwC Peer Reviewer James Lucas, Qualified SBP Lead Auditor, PwC Peer Reviewer Mike Harris, PwC Certification Decision Maker, PwC Practice Leader	4 hours

6.2 Description of evaluation activities

PwC completed the initial SBP assessment in four phases, with the most significant phase being the on-site assessment.

Pre-Assessment / Document Review (DRR):

The purpose of the DRR Assessment was to evaluate if the requirements of the Standards had been met, in particular those requirements that must be documented. In addition, PwC evaluated the Chain of Custody process/management system to ensure that it had been through a complete Plan-Do-Check-Act (PDCA) cycle; including internal audit and management review or that these activities have been scheduled to occur prior to the Initial Assessment. Enviva completed their SBE Risk Assessment with significant reliance on their existing management systems and procedures designed to meet the voluntary standards discussed above and the applicable laws and regulations. Time during this phase of the assessment was focused on reviewing the SBP requirements that are unique from the other standards, such as Greenhouse Gas (GHG) data and collection and SBE.

Initial Assessment:

PwC conducted the Initial Assessment on-site at Enviva Pellets Ahoskie through observations, reviewing records and conducting interviews with staff and management. A thorough review of the CoC processes, GHG data and collection, and fiber input and output were conducted. Critical control points such as the log/wood chip weigh station, quality testing lab, control room, and truck loadout were included in the Assessment. PwC also observed Ahoskie's monitoring system for supplier sustainable forest management practices being implemented at a sample of their primary fiber suppliers.

Additionally, PwC conducted a site visit to the Port of Chesapeake. Pellets produced at Ahoskie are transported by truck to Enviva's Port of Chesapeake in Chesapeake, VA for storage, handling and export to customers. A thorough review of the CoC processes, GHG data and collection, and storage and handling of the pellets was conducted.

PwC Stakeholder Consultation:

PwC received comments from the stakeholders and they are discussed below in Section 6.3 of this Public Summary.

Audit Closure and PwC Certification Decision:

PwC provided the draft Non-conformities and Opportunities for Improvement to Enviva Pellets Ahoskie at the closing meeting of the Initial Assessment. Enviva Pellets Ahoskie responded with their Root Cause Analysis/Action Plans and if appropriate, provided PwC with revised management system procedures and templates, forms, etc. Once the Lead Auditor accepted Enviva's changes and closed the audit findings, the PwC Lead Auditor's working papers including protocols/checklists and evidence of conformance was reviewed by a peer Lead Auditor. The complete file was then reviewed by the PwC Practice Leader who made the final PwC certification recommendation to SBP decision.

6.3 Process for consultation with stakeholders

Enviva completed two stakeholder consultations for its initial SBP certification audit for the mid-Atlantic Supply Base Evaluation. The first consultation was held from August 15th, 2015 – September 15, 2015 and was based on SBP Standard #1: Feedstock Compliance Standard. During the first consultation, Enviva asked stakeholders to provide any data or resources they believed would help properly complete the mid-Atlantic Supply Base evaluation based on the Indicators in Standard #1. Two comments were received at that time. Enviva's second consultation was completed between January 8 and February 2, 2016 as a result of the Non-conformity raised by PwC regarding Locally Applicable Verifiers (LAVs). This consultation focused on the LAVs used to support the risk designations for the mid-Atlantic Supply Base Evaluation. Stakeholders were asked to comment on the LAVs Enviva chose and their applicability to indicators in

Standard #1. Enviva received one additional set of comments from one stakeholder during the second consultation.

Enviva combined the stakeholder procedures, comments received, and responses into one publically available document (ENV-SBP-07 Stakeholder Consultation) which is available on their website at, <http://www.envivabiomass.com/wp-content/uploads/ENV-SBP-07-Stakeholder-Consultation.pdf>.

PwC conducted its 30-day stakeholder consultation from October 5 – November 5, 2015 after the on-site audit of Enviva. PwC used the stakeholder list that Enviva used in its first consultation and stakeholders were informed of the consultation via email and/or mail. The list included 66 stakeholders in total with representation from 9 Government officials, 29 Environmental Non-Governmental Organizations (ENGOS), 25 forestry workers, 1 Association, 2 Post-secondary education institutions and 8 forest industry companies. Stakeholders were invited to comment on the Supply Base Evaluation process.

Relevant stakeholders for Enviva's Southampton, Northampton, Ahoskie, Amory, Wiggins and Cottondale facilities were included in the PwC consultation as the SBE's were completed concurrently for each of the mills. PwC conducted an additional consultation via conference call on June 21, 2016 to evaluate whether stakeholder responses were adequately addressed by Enviva. Stakeholders had the opportunity to present their points of view to the auditor(s) in confidence. The results of the stakeholder consultation is described in section 7.5 below.

7 Results

7.1 Main strengths and weaknesses

This summary of strengths and weaknesses should be read in conjunction with the summary of the SBE Risk Assessment in Section 8 and the summary of the Initial Assessment findings in Section 10 of this public summary. The strength of Enviva's SBP program is their integration of the SBP requirements with their existing fiber procurement management system and procedures designed to meet the requirements of applicable laws and regulations in the Supply Base Area (SBA) and the requirements of voluntary standards including SFI/PEFC/FSC CoC, FSC Controlled Wood and SFI Fiber Sourcing. As a result of operating in a region that has a well-established forest products industry and existing laws and regulations that align with the majority of the SBP requirements and the commitment to other voluntary standards, Enviva and their staff have developed a strong knowledge of local forestry industry practices conducted through the SBA and have a good awareness of the suppliers operating in the region.

Enviva has documented procedures to address risks in their supply base evaluation; however, PwC noted non-conformities and opportunities for improvement for additional systems and procedures to reduce the risk of procuring both primary fiber and secondary fiber from forests and other areas with High Conservation Value in the Supply Base.

PwC has concluded that Enviva has the organizational capability to systematically meet the performance objectives and the requirements of the SBP Standards based on the elements of the SBP Standards that were tested, with the exception of nonconformities that were identified which have since been addressed by Enviva and closed by the Lead Auditor.

7.2 Rigour of Supply Base Evaluation

Enviva has developed a detailed SBE including a clear description of their Supply Base Area. The geographical scope of the SBE is the states of North Carolina and Virginia to ensure that fiber is not received from outside the SBE scope area.

The SBE was developed internally by qualified personnel using credible third party data sources and their existing management and monitoring systems implemented to meet other voluntary standards and designed to ensure compliance with applicable laws and regulations.

Risk was designated low for all core Indicators, with the exception of 4 Indicators which were designated as specified risk. However subsequent to the initial SBP audit, Enviva developed additional controls and mitigation measures to reduce these 4 Indicators to low risk.

PwC has reviewed the SBE process and conclude that it meets the SBP standard requirements.

7.3 Compilation of data on Greenhouse Gas emissions

During the initial on-site assessment PwC:

- Confirmed the greenhouse gas (GHG) sources for feedstock input from the forest, production at the facility, transportation to the port and storage and handling at the port;
- Reviewed how the input data was measured;
- Conducted interviews with operations personnel on the overview of the operations at the facility, historical operations, changes to operations, procedures and processes used to maintain the facility, and procedures and processes used to ensure data quality;

- Where appropriate, we obtained a sample of records to support the evidence provided in these interviews;
- Reviewed procedures and records on how and when emissions were calculated; and
- Inquired about controls on data collection and records.

PwC concluded that Enviva Pellets Ahoskie has the competency to analyse and accurately report the required data on Greenhouse Gas emissions.

7.4 Competency of involved personnel

The SBE was completed by Enviva’s in-house fiber procurement group who has local forestry experience and knowledge of ecological and social values associated with the supply base, applicable laws and regulations, business management practices, operation of suppliers, and the local forest resource.

Enviva’s management and control systems for SBP are the same as those used to meet the SFI/PEFC/FSC Chain of Custody and FSC Controlled Wood requirements, which have been in place since 2012. Key personnel tasked with implementing and maintaining the management and control systems relating to SBP compliance are well trained and competent. Enviva assigned management with appropriate skills and competency to implement and execute the management and control systems relating to SBP compliance. Management interviewed during the assessment were found to be knowledgeable of the SBP requirements.

Enviva engaged a qualified third party auditor, Scott Berg, President, R.S. Berg & Associates, Inc. to review the SBE. Scott Berg has many years of experience in auditing forestry certification programs and in the creation of supply base evaluations/risk assessments for chain of custody systems. Scott Berg also attended an SBP training session in January 2015.

7.5 Stakeholder feedback

PwC launched their initial stakeholder consultation from October 5 – November 5, 2015 off-site from PwC’s Vancouver office. In response to a finding raised during the on-site audit, Enviva conducted a second stakeholder consultation in January to February, 2016 to seek comments on the LAV development process. PwC then conducted an additional consultation on June 21, 2016 to evaluate whether stakeholder responses were adequately addressed by Enviva. Stakeholders had the opportunity to present their points of view to the auditor(s) in confidence.

PwC received the following relevant comments from stakeholders about the forest management and fiber sourcing of raw material for Enviva’s operating facilities in Ahoskie, NC, Garysburg, NC, Franklin, VA, Amory, MS, Cottondale, FL, and Wiggins, MS.

Stakeholder Comments:	PwC Follow-up Action:
1. Enviva wood pellet sourcing - concerns with Enviva operations in bottomland hardwood forests; and concerns that Enviva is sourcing trees from High Conservation Value Forests.	PwC raised a Major Non-conformity to the BP. As a result, Enviva revised their fiber sourcing procedures for both primary and secondary feedstock and created the Enviva Forest Conservation Fund.
2. Enviva sourcing whole trees and classifying it as 'Forest Residue'.	The comment was forwarded to Enviva who recognizes that this definition is broad and vaguely worded. However, at the time of audit Enviva’s product classifications aligned with SBP’s definitions. As these programs mature, Enviva has the proper tracking systems in place to ensure proper reporting against product definitions, as defined by SBP.

<p>3. Risk determined by Enviva is not sufficient.</p>	<p>The mid-Atlantic SBE was revised to increase the risk rating of 4 indicators. However, mitigation measures were taken to address the specified risks in the initial SBE.</p>
<p>4. Insufficient Stakeholder Consultation - Enviva did not appear to adhere to Stakeholder Consultation requirements for the SBE as outlined in the SPB standard (“Standard 2: Verification of SBP-compliant feedstock”).</p>	<p>PwC raised a Major Non-conformity to the BP. As a result, Enviva re-launched their public stakeholder consultation and increased the Supply Base Evaluation risk profile of sourcing from bottomland hardwoods and from sourcing secondary fiber.</p>
<p>5. Air permits and equipment at Enviva's facilities may be a factor in the high percentage of hardwood used in pellet production.</p>	<p>PwC requested copies of air permits from Enviva and verified that Enviva BPs are operating within the annual thresholds and are therefore in compliance.</p>
<p>7. Stakeholders requested a copy of the draft Enviva Mid-ATL Supply Base Evaluation (SBE) that was sent to Enviva's identified stakeholders during their January 8 to February 8 public consultation period.</p>	<p>PwC requested permission from Enviva to share the mid-ATL SBE with Stakeholders. Enviva agreed that PwC could share this. PwC sent the mid-ATL SBE to Stakeholders in an email.</p>

7.6 Preconditions

PwC issued three preconditions to Enviva Ahoskie during this evaluation. As discussed in Section 10 of this Public Summary, there were three non-conformities that had to be closed before a final report and certificate could be issued.

Additional preconditions were required to be closed before the final report and certificate could be issued. The following preconditions were: Enviva Ahoskie SBR shall be posted onto the BP website and Enviva shall sign the SBP Trademark License Agreement.

8 Review of Biomass Producer’s Risk Assessments

PwC assessed the risk for each Indicator using the guidance in Section 11 of SBP Framework Standard 2: Verification of SBP-compliant Feedstock and evaluated risk at both regional and the individual forest level. When completing their Risk Assessment, Enviva primarily relied on their existing management and monitoring systems implemented to meet other voluntary standards and designed to ensure compliance with applicable laws and regulations. As a result of Enviva’s Risk Assessment approach, PwC was able to assess risk for the indicators using a desk review of the documents referenced in the Risk Assessment as well as interviewing staff and suppliers and observing Enviva’s BMP compliance monitoring system being applied at supplier harvesting locations during the on-site portion of the SBP assessment.

Each criterion was evaluated and measured against Enviva’s existing forest certification and chain of custody programs. Enviva identified four criteria which has “specified risk”; however, via associated mitigation measures and controls Enviva subsequently designated all indicators as “low risk”.

Table 1. Final risk ratings of Indicators as determined after the SVP and any mitigation measures.

Indicator	Risk rating (Low or Specified)	
	Producer	CB
1.1.1	Low	Low
1.1.2	Low	Low
1.1.3	Low	Low
1.2.1	Low	Low
1.3.1	Low	Low
1.4.1	Low	Low
1.5.1	Low	Low
1.6.1	Low	Low
2.1.1	Low	Low
2.1.2	Low	Low
2.1.3	Low	Low
2.2.1	Low	Low
2.2.2	Low	Low
2.2.3	Low	Low
2.2.4	Low	Low
2.2.5	Low	Low
2.2.6	Low	Low
2.2.7	Low	Low
2.2.8	Low	Low
2.2.9	Low	Low
2.3.1	Low	Low
2.3.2	Low	Low

Indicator	Risk rating (Low or Specified)	
	Producer	CB
2.3.3	Low	Low
2.4.1	Low	Low
2.4.2	Low	Low
2.4.3	Low	Low
2.5.1	Low	Low
2.5.2	Low	Low
2.6.1	Low	Low
2.7.1	Low	Low
2.7.2	Low	Low
2.7.3	Low	Low
2.7.4	Low	Low
2.7.5	Low	Low
2.8.1	Low	Low
2.9.1	Low	Low
2.9.2	Low	Low
2.10.1	Low	Low

9 Review of Biomass Producer's mitigation measures

The following mitigation measures were taken to address the specified risks in the initial SBE.

Indicator 2.1.1: The Biomass Producer has implemented appropriate control systems and procedures for verifying that forests and other areas with high conservation value in the Supply Base are identified and mapped.

Mitigation measure: In the US, Federal and State legislation such as the Endangered Species Act and the Clean Water Act are policed effectively. Enviva and its third-party suppliers, require through contracts, that all suppliers of raw material adhere to all applicable laws and regulations and employ BMPs during harvest. Enviva also requires the use of trained loggers, which have completed training on local BMPs, Threatened and endangered species, identification of special sites, and more. Enviva and its third party suppliers will not contract with companies exhibiting poor performance. Enviva sends yearly correspondence to all suppliers with verbiage explaining the commitment to avoid High Conservation Value (HCV) areas and the expectation to comply with Enviva policies and procedures.

In addition, the US has a strong network of protected areas through its National Park System, National & State forests, designated wildlife refuges and the US Fish and Wildlife Service. All of the South-eastern States have Forestry Assessments and Strategies, as well as Wildlife Action Plans. These agencies and others have publicly available mapping software to use in identifying HCV areas. Enviva also utilizes various web GIS data sources and web mapping tools to compile pertinent data for internal use.

Enviva engaged the US Endowment for Forestry and Communities to evaluate the mid-Atlantic catchment area to determine other areas of high conservation value. The Endowment consulted with leading independent academics and environmental organizations and identified four specific bottomland priority forest types; Cypress-tupelo swamps, Atlantic white cedar stands, Pocosins and Carolina bays. The Enviva Forest Conservation Fund website (<http://envivaforestfund.org/about-the-enviva-forest-conservation-fund/about-bottomland-forests/>) contains information regarding each bottomland forest type. Enviva has committed five million dollars over a ten year period to fund conservation efforts targeting these forest types. The fund is administered by the US Endowment for Forestry and Communities.

Purchased stumpage tracts are assessed prior to bid to identify any areas of concern. Monitoring audits are performed on all purchased stumpage tracts. Enviva maintains maps developed using Natural Heritage databases, the Enviva Forest Conservation Fund data and other credible sources to identify any areas of potential concern. Where research indicates that a G-1 or G-2 species, community or sensitive bottomland forests is known to exist in close proximity to the tract, company foresters will assess whether the species or community is actually present on the tract and notify the landowner prior to harvesting. All stumpage and vendor/producer tracts in bottomland areas are assessed using the Enviva Forest Conservation Program HCV Tract Approval process to ensure conformance to the bottomland priority forest type policy.

Indicator 2.1.2: The Biomass Producer has implemented appropriate control systems and procedures to identify and address potential threats to forests and other areas with high conservation values from forest management activities.

Mitigation Measure:

Primary Feedstock

All stumpage and vendor/producer tracts in bottomland areas are assessed using the Enviva Forest Conservation Program High Conservation Value Tract Approval process to ensure Enviva's procurement is not negatively affecting potential HCV sites. This process requires a site visit to conduct a field assessment to any potential source tract that meets the criteria described above. After the site assessment, Enviva will only agree to accept fiber from that source tract if it is determined that harvesting is the best possible

outcome for that tract. This policy exceeds the minimum requirements for any CoC or DDS certification Enviva operates.

Vendors/producers are contractually required to implement appropriate BMP's. Enviva utilizes a proprietary Track & Trace Program to monitor tract information such as; BMP implementation rates, age, forest type, remaining woody ground cover, forest direct district of origin compliance and other valuable information concerning its wood supply. North Carolina and Virginia have active Divisions of Forestry that inspect harvesting sites to assist operators in implementing proper controls as well. Logger training programs also educate in the identification and protection of certain HCV areas.

Secondary Feedstock

Enviva sources fiber from a number of sawmills and wood industry suppliers at all of their mills. In the mid-Atlantic supply base, there are both sawmill and wood industry suppliers which may supply either hardwood or pine residues to Enviva. Enviva has gathered data from all its secondary suppliers and has mapped their supply base within their mid-Atlantic SBE, through a rigorous district of origin process with all saw mill and wood industry suppliers that collects specific information such as; catchment radius, raw material species, certification information and other related information. This information is collected through the Residual Supplier Reporting Form. The supplier's responses are mapped and compared to Enviva's mid-Atlantic Supply Base Evaluation to ensure Enviva has included the area with its supply base. Each supplier is provided a map depicting the counties within their catchment area that may contain high conservation value areas and information regarding each high conservation value type. Suppliers are encouraged to share this educational information with their suppliers.

With this information, in addition to internal expertise and knowledge of the location of the mill and the products it produces, Enviva can evaluate each supplier's ability to provide fiber that meets the SBP Feedstock Standard. Enviva works with its secondary suppliers to ensure the data they have provided is complete and accurate, and will regularly check to ensure they are providing the material they have reported. In addition to an initial visit before signing a contract with a secondary supplier to verify their operations and products are as-stated, Enviva can monitor the incoming products to ensure they are consistent with the data submitted annually in the Residual Supplier Data Sheet. Further, this data collection and monitoring process is now a part of Enviva's SBP implementation program, and thus is checked annually during audits. Currently, all of Enviva's secondary suppliers have returned completed Residual Supplier Data Forms, and so Enviva has all the data to properly assess each suppliers supply chain, and to incorporate their source area into its SBE. Enviva will work proactively with its suppliers that fall into the "Controlled" category to achieve SBP-Compliant status via outreach, through the Enviva Forest Conservation Program, mitigation measures when appropriate, and other measures as identified. Further, if a supplier is unwilling to provide Enviva with the data required to properly assess the risk of their supply chain, then Enviva may cease to purchase fiber from those sawmills in the future.

In the mid-Atlantic supply base area, the potential for specified risk that may affect the secondary feedstock comes from those suppliers who cannot provide data showing that they do not use material from bottomland forests Enviva has identified to be of high conservation value (HCV), based on internal policies. Thus Enviva must categorize some of the secondary feedstock as SBP-Controlled, instead of SBP-Compliant.

Enviva evaluates each supplier, based on knowledge of their operations, internal HCV evaluation procedures, PEFC due diligence system (DDS), and the data collected through the Residual Supplier Data Form to assess whether their fiber is SBP-Compliant or SBP-Controlled.

If Enviva identifies and sources of fiber that do not meet the SBP standards for controlled sources, Enviva will eliminate them from the fiber supply.

SBP-Compliant Sources are:

- The proportion of sawmill and wood industry material received at Enviva with FSC/PEFC/SFI certified content claims (only the proportion of certified fiber is SBP-Compliant).
- Other areas deemed low risk as per the assessment of this SBE. Specifically, residues from sawmills that only use commercial pine species, or suppliers where it can be verified that they do not operate in or use species from bottomland forests.

SBP-Controlled Sources are:

- Fiber delivered to Enviva with PEFC/FSC controlled claims
- Any other fiber delivered to Enviva that meets the requirements of our third-party certified PEFC due diligence system (DDS):
 - Enviva maintains a valid PEFC DDS that excludes controversial sources from the supply chain
 - The DDS assesses the risk of obtaining controversial sources, as defined by PEFC. As all indicators are “low risk” in our PEFC DDS, the fiber we procure is considered “controlled.”

If Enviva identifies any sources of fiber that are out of compliance with the DDS Enviva will eliminate them from the supply chain.

Indicator 2.2.3: The Biomass Producer has implemented appropriate control systems and procedures to ensure that there are key ecosystems and habitats are conserved or set aside in their natural state (CPET S8b).

Mitigation Measure: Four of the key eco-systems in the mid-Atlantic region catchment area are of concern to the wood supply system: Cypress-tupelo swamps; Atlantic white cedar stands; Pocosins; and Carolina bays. Though many acres of these habitats are protected under various conservation easements, and federal or state ownership there is still significant portions that are controlled by private landowners. There are water quality laws in place to address run off and sedimentation concerns. In addition, the Federal Threatened and Endangered Species Act provides significant protection for listed species. Conservation efforts and support for the conservation of these habitats is an area of concern.

In conjunction with the US Endowment for Forestry and Communities Enviva has created the Enviva Forest Conservation Fund (<http://envivaforestfund.org/>) that establishes a \$5 million, 10 year program designed to protect tens of thousands of acres of bottomland forests in North Carolina and southeast Virginia. Further, Enviva has made the commitment to not purchase feedstock from these for habitat types.

Indicator 2.2.4: The Biomass Producer has implemented appropriate control systems and procedures to ensure that biodiversity is protected (CPET S5b).

Mitigation Measure: Enviva engaged the US Endowment for Forestry and Communities to develop science-based working group to develop enhanced forestry practices for working bottomland forests. The working group will recommend specific additional measures to define and protect sensitive areas which Enviva will incorporate into its wood supply practices.

Enviva has implemented the Enviva Forest Conservation Program High Conservation Tract Approval process for all Enviva controlled and supplier tracts. Tracts with potential biodiversity concerns must be evaluated using this tool to ensure Enviva does not compromise its commitment to protect special places. See detailed description of the Enviva HCV assessment process under the mitigation measures for Indicator 2.1.2.

According to the FSC US Controlled Wood National Risk Assessment – DRAFT (v0.1) the following biodiversity concerns exist in the supply region;

- Montane longleaf pine: Habitats occur in steep rolling topography historically maintained by fire, mostly outside of or on the edge of the Coastal Plain. Biodiversity values are driven in part by the understory plant community. Biodiversity values are potentially harmed via conversion of longleaf to other pine types, and the use of herbicides or other management techniques that inhibit native understory communities.
 - Specified risk: These habitat types are generally located on south and southwestern slopes and ridges up to about 2000 feet in elevation in northern Alabama and Georgia. These regions are outside of the mid-Atlantic supply base and are considered to not be of risk to be found in the Enviva regional supply chain.
 - Mitigation measures: There are no measures required.

- Karst Habitat: There are numerous areas of high aquatic and terrestrial biodiversity in the karst habitats of the Appalachians. The aquatic resources include fresh water mussels, fish and insects. The karst systems are rich with endemic and globally rare fish species, insects and cave invertebrates. The Clinch, Powell and Duck rivers are just a few of the nationally important river systems in the region. Sediment from poor logging practices and improperly constructed and maintained roads are the primary potential forestry related threats.
 - Specified risk: In the mid-Atlantic supply region these sites are largely controlled by national and state agencies and are located close to the western fringe supply area and generally fall outside of an economic hauling radius. The potential impact of a poorly executed harvest could be high but the likelihood of a raw material delivery from a karst site reaching an Enviva mid-Atlantic facility is low.
 - Mitigation measures: Stands that are harvested under the control of Enviva will be managed to preserve diversity and structure. A portion will be left protected to preserve late successional elements. Enviva will provide education and assistance to any supplier harvesting on a mesic site. In either case state forest BMP's will be followed. There are known Karst habitats outside of the Appalachian Eco region and in the Enviva mid-Atlantic supply base. Proper forestry BMP's are required by contract and as such these areas are considered low risk.
- Red cockaded woodpecker: These birds nest in cavities of living pine trees in the southeastern US. They are dependent on pine woodlands and savannahs that have pine trees large enough to provide nesting habitat. They will nest in any southern yellow pines but prefer longleaf pine. Foraging habitat requires open woodlands with herbaceous groundcover.
 - Specified risk: There are known sightings of red cockaded woodpeckers in the Enviva mid-Atlantic supply region. The potential raw material could be delivered to a mill is moderate given the preferred habitat description.
 - Mitigation measures: Enviva stumpage tracts are surveyed to identify the existence of protected species. Appropriate measures to protect a red cockaded habitat will be employed if the species is found on a tract including the maintenance of an open structure and mature nesting trees of at least 12" DBH.
- Gopher tortoise: A keystone species native to longleaf pine forests of the southeastern US and is listed as threatened in the western portion of its range generally due to development.
 - Specified risk: Though the gopher tortoise range is in the Appalachian Eco-region it is outside of the Enviva mid-Atlantic supply base.
 - Mitigation measures: None

Overall, PwC concludes that the identification and mitigation measures for each of the four indicators are reasonably designed to address the identified risks.

10 Non-conformities and observations

The details of the Non-conformities and Opportunities for Improvement raised during the evaluation are provided in the tables below:

- Nonconformities**

PwC Reference Number	SBP Requirement	Finding Details	Status
466-IA-NC-01-MAJOR Nonconformity	Sustainable Biomass Partnership (SBP) Standard 1 (V1.0) @ 2.5 requires that the BP develop systems and procedures to ensure that all indicators are low risk in the SBE.	<p>Enviva has completed their Risk Assessment for each of the indicators in the Mid-Atlantic SBE and all indicators are classified as low risk based on Enviva's systems and procedures. However, Enviva's current systems and procedures for verifying that forests and other areas with high conservation value in the Supply Base are identified and mapped (Criterion 2.1, Indicator 2.1.1) and for identifying and addressing potential threats to forests and other areas with high conservation values from forest management activities (Criterion 2.1, Indicator 2.1.2), are not sufficient to bring the risk of these indicators to "low". Based on feedback from the public consultation process, including newspaper articles, Enviva was aware that additional systems and procedures were required for both the direct procurement of primary fiber and the procurement of secondary fiber. During the assessment Enviva described the additional systems and procedures they are in the process of developing. However, these additional systems and procedures have not yet been implemented and approved by management, so the risk of Indicators 2.1.1 and 2.1.2 should have been higher than "low risk".</p> <p>Enviva was given 60 days to resolve the issue and has subsequently provided PwC with an acceptable action plan and evidence of implementation.</p>	CLOSED
466-IA-NC-02-MAJOR Nonconformity	Sustainable Biomass Partnership (SBP) Standard 2 (V1.0) @ 13.4 requires that relevant stakeholders shall be informed of the SBE at least one month prior to the end of the evaluation. Stakeholders shall be provided with adequate information as a basis for informed comment.	<p>Enviva completed a 30-day public stakeholder consultation prior to the completion of its SBE process and prior to the beginning of its certification audit. The consultation process included an email announcement to stakeholders. Stakeholders were encouraged to read the standard and provide information to Enviva which will inform the SBE for each of its mills. The information had to be a) relevant to one or more indicators in the SBP Standard #1 (for both primary and secondary feedstock) and b) relevant to the raw material supply base (typically within 75 miles of the mill) of Enviva's Pellet mill. Enviva did not share with the stakeholders the means of verification in determining risk of each indicator in Standard 1.</p>	CLOSED

		Enviva was given 60 days to resolve the issue and has subsequently provided PwC with an acceptable action plan and evidence of implementation.	
466-IA-NC-03-Minor nonconformity	CoC Management System requires that all supplier contracts be signed.	<p>A sample of supplier contracts were reviewed for signatures and it was found that one contract was signed by the supplier but not by Enviva. A contract is not legally binding until both parties sign.</p> <p>Enviva was given 60 days from October 1, 2015 to resolve the issue and has subsequently provided PwC with an acceptable action plan and evidence of implementation.</p>	CLOSED

• Opportunities for Improvement

PwC Reference Number	SBP Requirement	Finding Details	Status
466-IA-OFI-01	Sustainable Biomass Partnership (SBP) Standard 1 (V1.0) @ Indicator 2.2.7 requires that the biomass producer has implemented appropriate control systems and procedures for verifying that air quality is not adversely affected by forest management activities	<p>Enviva has determined there is a low risk of purchasing wood fiber from areas without appropriate controls to protect air quality water quality by forest management impacts.</p> <p>Enviva may wish to consider adding the Track and Trace program as a means of verification.</p>	OPEN
466-IA-OFI-02	Sustainable Biomass Partnership (SBP) Standard 1 (V1.0) @ Indicator 2.3.2 requires that adequate training is provided for all personnel, including employees and contractors.	<p>Enviva has determined there is a low risk of wood fiber purchases and harvesting occurring by personnel without appropriate training.</p> <p>Enviva may wish to consider adding dates to staff qualifications spreadsheet.</p>	CLOSED
466-IA-OFI-03	Sustainable Biomass Partnership (SBP) Standard 1 (V1.0) @ Indicator 2.3.3 requires that analysis shows that feedstock harvesting and biomass production positively contribute to the local economy including employment.	<p>Enviva has determined there is a low risk of wood fiber purchases negatively impacting the local economy and employment.</p> <p>Enviva may wish to consider adding more description about their supply chain to this indicator in the SBE.</p>	CLOSED

PwC Reference Number	SBP Requirement	Finding Details	Status
466-IA-OFI-04	Sustainable Biomass Partnership (SBP) Standard 4 (V1.0) @ 5.2.1 requires that the BP shall be responsible for determining the compliance of feedstock inputs with all relevant SBP requirements.	Enviva may wish to consider adding an additional instruction note for the foresters when they are checking the certification of a supplier to not only check the status of the certificate but also the scope of the suppliers' certificate.	OPEN

11 Certification decision

PwC has concluded that the Enviva Pellets Ahoskie has the organizational capability to systematically meet the performance objectives and the requirements of the Standards based on the evaluation process described in Section 6 of this public summary. PwC's Practice Leader recommends certification of Enviva Pellets Ahoskie as of December 14, 2016. The next assessment should be completed prior to September 30, 2016.