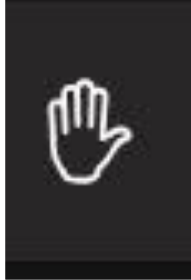


Enviva Pellets Greenwood, LLC PUBLIC HEARING



All lines will be muted to avoid echo or feedback



Opportunity for comments following presentation



Meeting will be recorded to share as a resource

Option to Call In

If you are experiencing audio problems, join the virtual meeting by phone:

Phone number: **1 864-558-7311**

Access Code: **634342648#**



Exits the meeting. (If you accidentally exit the meeting, you can rejoin.)



Be smart. Stay 6 feet apart.

Stop the Spread of COVID-19



Wash
hands often



Stay home
while sick



Cover coughs
and sneezes



Clean
surfaces often



South Carolina Department of Health and Environmental Control

Enviva Pellets Greenwood, LLC

Draft Air Permit

PUBLIC HEARING

August 20, 2020

Public Hearing Agenda

- Instructions for participating remotely
- Introductions and Opening Remarks
- Overview of Proposed Project
- Public Comments
- Next Steps and Closing Remarks
- Hearing Adjourned

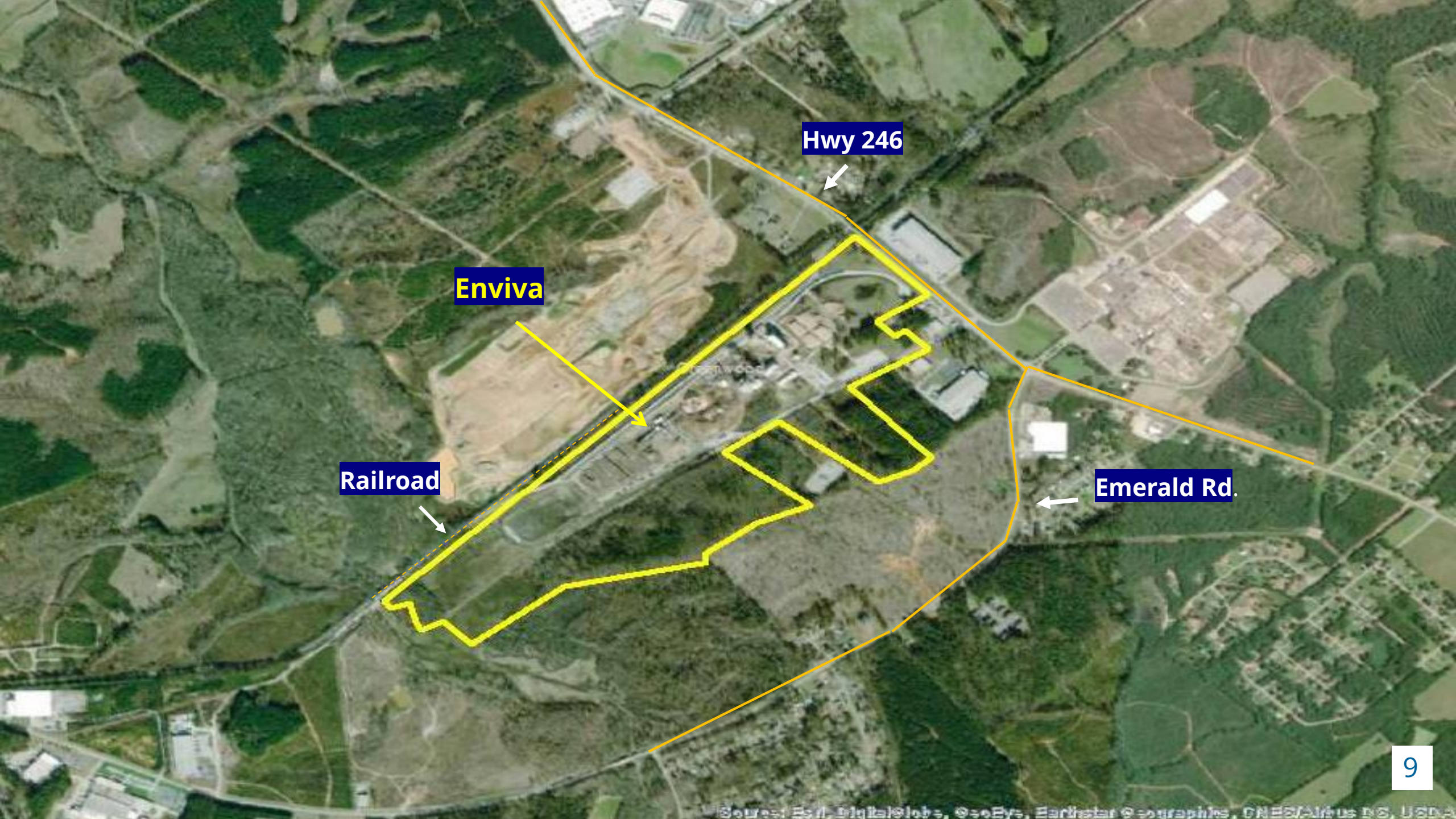
Permitting Process

- Application received and reviewed for technical completeness
- Determine type of permit required
- Draft permit
- Public Input
- Final Permit Decision

Site Overview

- Originally built and operated by Colombo Energy
 - September 22, 2016
- Enviva Pellets Greenwood, LLC
 - Purchased and began operating the facility on March 7, 2018
 - Wood pellet manufacturing facility
 - Produces wood pellets that are used for fuel in industrial boilers





Hwy 246

Enviva

Railroad

Emerald Rd.

Proposed Project Overview

- Reduce particulate matter (dust) emissions
 - More efficient process equipment
 - Pollution control device upgrades
 - New additional particulate control equipment
- Increase production to 660,000 oven-dried tons per year (25% increase)

Dry Hammermills



Example of horizontal dry hammermills (existing)



Example of a hammer inside a vertical dry hammermill (proposed)

New Vertical Dry Hammermills

- Particulate matter (PM) emissions will be decreased
 - Improved efficiency for reducing the wood chips size
 - Existing Wet Electrostatic Precipitator (WESP) will replace specific Cyclofilters
 - Addition of a second PM control device (Bin Vent Filter)
- Volatile Organic Compounds (VOCs) emissions will be decreased
 - Existing Regenerative Thermal Oxidizer (RTO)

New Pelletizers

- Addition of three pelletizers
- Addition of one pellet cooler
- Addition of PM control device (Baghouse)



Green Hammermill

- Emissions controlled by existing equipment
 - PM emissions controlled by wet electrostatic precipitator (WESP)
 - VOC emissions controlled by regenerative thermal oxidizer (RTO)

Summary of Proposed Changes

Equipment and explanation

How emissions will be controlled

Vertical Dry Hammermills

- Replace (5) existing dry hammermills with (36) new dry hammermills
- Improve efficiency for reducing the wood chips size

- Route dry hammermills emissions to existing Wet Electrostatic Precipitator (WESP) to control particulate matter (PM) and to existing Regenerative Thermal Oxidizer (RTO) to control volatile organic compounds (VOCs) emissions
- Addition of second PM control device (Bin Vent Filter)

Pelletizers

- Add three pelletizers and one pellet cooler

Addition of New PM control device (Baghouse)

Green Hammermill

- Add one green hammermill

Existing pollution control equipment

- PM control device (WESP) and
- VOC destruction device (RTO)

Enviva's Pollution Control Equipment

- Particulate Matter Removal
 - Wet Electrostatic Precipitator (WESP)
 - Baghouses, Baghouses with integrated Cyclones, Cyclone, Bin Vent Filters
- Volatile Organic Compounds (VOCs) destruction
 - Regenerative Thermal Oxidizer (RTO)
 - Regenerative Thermal Oxidizer / Regenerative Catalytic Oxidizers (RCO)

Air Quality Analysis

Air Pollutant	Max Predicted Concentration (µg/m ³)	Background Concentration (µg/m ³)	Total Concentration (µg/m ³)	State/Fed. Standard (µg/m ³)	Meets Standard?
PM ₁₀ 24-hr	33.2	60	93	150	Yes
PM _{2.5} 24-hr	16.0	16.4	32	35	Yes
PM _{2.5} Annual	2.5	8.3	11	12	Yes

Compliance was also demonstrated for all other emitted, regulated pollutants.

Draft Air Construction Permit Regulatory Requirements

Applicable State Regulations	Applicable Federal Regulations
<ul style="list-style-type: none"> • SC Regulation 61-62.1, Section II. E • SC Regulation 61-62.1, Section IV • SC Regulation 61-62.5, Standard No. 1 • SC Regulation 61-62.5, Standard No. 3 • SC Regulation 61-62.5, Standard No. 4 • SC Regulation 61-62.5, Standard No. 5.2 • SC Regulation 61-62.6 – Fugitive Dust 	<ul style="list-style-type: none"> • 40 CFR 63 Subpart IIII • 40 CFR 63 Subpart ZZZZ

Draft Air Construction Permit Limits

Criteria Pollutants

- PM
- PM₁₀
- PM_{2.5}
- VOCs

Limited to less than 250.0 tons per year each

Hazardous Air Pollutants (HAPs)

Limited to less than 10.0 tons per year (each) and less than 25.0 tons per year (total)

Total Production

Limited to 660,000 oven-dried tons per year

Draft Air Construction Permit Requirements

- Maintain current permitted production rate until all control device upgrades and additions have been completed
- Conduct periodic source tests
- Maintain records and submit reports
- Follow the dust control plan

Dust Control Plan

- Includes steps to minimize fugitive particulate matter (dust) generated on site from going beyond facility property boundaries
- Minimum requirements include:
 - Written procedures, training plans, and a maintenance schedule for all particulate matter control equipment and process systems
 - Use of water truck on onsite roads
- Required to be updated when needed

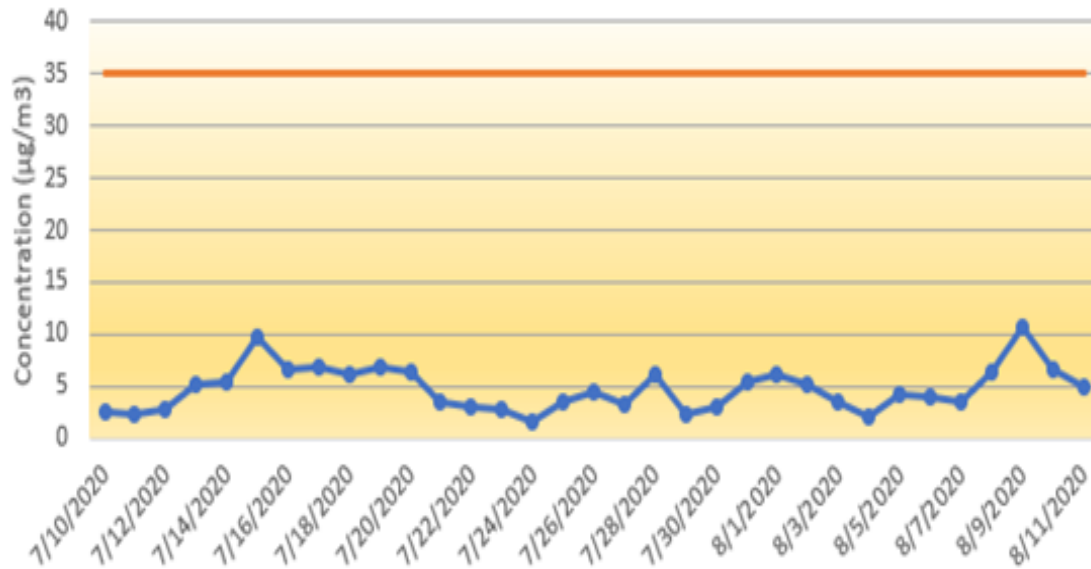
Ambient Sensors

- Two (2) Air Sensors in the community to monitor PM_{2.5} trends
 - Requested by community members
- Air Sensors are small, inexpensive, and easy to install
 - Not federally regulated



Ambient Sensor Data

Air Sensor #1 Daily Average



Air Sensor #2 Daily Average



Trends from both sensors are below the air quality PM Standard

Compliance Status

- **December 2018 – March 2019**
 - Several stack tests
 - In compliance with the emission limits
- **2019**
 - Several inspections
 - Several permit and regulatory violations
- **2020**
 - **January:** Notice of Alleged Violation and Notice of Enforcement Conference
 - **July:** Consent Order included civil penalty

Next Steps

- Review all comments received
- Provide written responses to all comments
- Make a final decision
- Final decision date begins 15-day appeal period

DHEC Contacts

Central office

Air Permitting Division
Attn: **Jo Anna Cunningham**
2600 Bull St.
Columbia, SC 29201
(803) 898-4123
cunninja@dhec.sc.gov

Local office

Upstate EA Greenwood Office
Attn: **Samuel Madden**
(864) 227-5915
maddensi@dhec.sc.gov

www.scdhec.gov/Enviva

How to Comment

Submit comments by mail or email through

August 27, 2020 to:

**BAQ Public Notice Coordinator
DHEC/BAQ**

**2600 Bull Street
Columbia, SC 29201**

AirPNcomments@dhec.sc.gov

*Application and draft permit can be found at:
www.scdhec.gov/Enviva*

Provide Official Comment For The Record



Unmute to indicate you would like to speak



Unmuted lines will be called on to speak



Click the Hand Raise icon to be called on to speak



Hand Raise
(click this icon to
indicate you would like
to speak)



Muted
(no one in the meeting
can hear you)



Unmuted
(everyone in the
meeting can hear you)



Call in option

Phone number: **1 864-558-7311** | Access Code: **634342648#**

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