



Region 2 Caribbean Environmental Protection Division
Multimedia Permits and Compliance Branch – Air Protection Team

CAA Inspection Report

Inspection Date: March 9, 2021

Facility Name: Betterrecycling Corporation

Facility Address: PR-887 Km. 0.4 Julio N. Matos Industrial Park, Carolina PR

Coordinates: Latitude: 18.379349 Longitude: -65.968071

ICIS-Air ID #: PR0000007203100237

NAICS code: 324121 – Asphalt Paving Mixture and Block Manufacturing

Facility Contact(s): Jorge L. Diaz, President, Betterrecycling Corp, jldiaz@emdi.net
Eng. Jesús Acosta, Operations Engineer, 787-636-1249, jacosta@prasphalt.com
Eng. Mario Pérez, Environmental Health and Safety Engineer, 787-451-5832,
marioperezherrera.safety@gmail.com

EPA Inspector: Alex O. Rivera, Environmental Engineer, (787) 977-5845

State Inspector(s): Nenie Negrón; PR Department of Natural and Environmental Resources Air Inspector

Applicable Regulation: 40 CFR Part 60 Subpart I – Standards of Performance for Hot Mix Asphalt Facilities

Regulated Pollutant: Particulate Matter

I. Facility Background Information

Betterecycling Corporation operates a hot mix asphalt plant facility located in PR-887, Km. 0.4, Martín González Ward, Julio N. Matos Industrial Park, Carolina, Puerto Rico ("Facility"). Figure 1 provides an aerial view of the Facility location and other relevant information about the inspection.



Figure 1 – Aerial view of the area where Betterecycling Corp. Carolina Plant is located obtained from Google Earth Pro®

II. Regulatory Background

The Facility is subject to 40 CFR Part 60 Subpart I - Standards of Performance for Hot Mix Asphalt Facilities (“NSPS Subpart I”). 40 CFR §60.91 defines a hot mix asphalt facility as any facility used for manufacturing hot mix asphalt by heating and drying aggregate and mixing with asphalt cements.

Pursuant to the provisions of the Department of Natural and Environmental Resources (“DNER”) formerly known as Environmental Quality Board Regulations for the Control of Atmospheric Pollution and the provisions of the 40 CFR Part 60 Subpart I; the Facility is authorized to operate a stationary source of air pollutant emissions limited to the units and conditions described in DNER issued operating permit PFE-16-0613-0296-I-II-O (“Permit”), issued on July 31, 2019. The Permit expires on July 31, 2024.

III. Inspection Purpose

An unannounced inspection was conducted to assess the facility’s compliance with NSPS Subpart I; DNER’s Regulations for the Control of Atmospheric Pollution (RCAP); and overall compliance with the Facility’s Permit.

IV. Inspection Summary

Inspector’s Rivera arrived at the area where the Facility is located at approximately 5:45 AM. At the time of arrival, Inspector Rivera was able to observe trucks mobilizing in and out of the Facility. Emissions from the Facility stack and top of silos were noticeable. Inspector Rivera drove to a parking lot east of the Facility best suitable to conduct a Method 9 visible emission observation. The Inspector conducted a Method 9 reading from 6:42 AM to 7:12 AM, gray background was predominant during the observation. The highest 6 min average during the observation was 22 %. The Inspector conducted a second Method 9 reading from 7:22 AM to 7:42 AM, a light blue background was predominant during the observation. The highest 6 min average during the observation was 24 %. Both observations were conducted at the following coordinates: Latitude: 18.379328° / Longitude: -65.967409°. The Method 9 visible emissions observation forms and Inspector Rivera Method 9 observer certification can be found in Attachment 1 of this Report.

DNER air inspector Nenie Negrón arrived at approximately 7:45 AM and met with Inspector Rivera at the location where the Method 9 readings were conducted. Inspector Rivera informed Inspector Negrón about the Method 9 readings performed and agreed to access the Facility. Inspector Rivera and Inspector Negrón accessed the Facility at 7:55 AM and were received by Engineer Mario Pérez, Environmental Health and Safety Coordinator and José Colón, Plant Manager. Inspector Rivera informed the Facility operator about the purpose of the visit and showed the enforcement officer credentials. Inspector Rivera also informed the Facility representatives about the Method 9 observations conducted earlier in the morning. Eng. Pérez and Mr. Colón agreed on providing a tour of the Facility. Inspector Rivera used a copy of the Facility Permit to verify the operational status of each of the Facility emission units included in the Permit. The following is a summary of the Facility walkthrough:

- a. According to the Permit the Facility has one 30,000 gallons tank for liquid asphalt storage (hot mix). The Facility representatives showed the 30,000 gallons storage tank used for hot mix liquid asphalt storage and an additional 20,000 gallons tank located next to the hot mix liquid asphalt tank, used for warm mix liquid asphalt storage. The 20,000 gallons tank is not included in the Permit.

- b. The Facility Permit indicates that the Facility operates three (3) asphalt storage silos. The Facility representatives showed the location of the three (3) silos, confirmed that the Facility does not have any additional silos and stated that each silo has a capacity to store 175 tons of asphalt.
- c. The Facility representatives confirmed that the Facility operates seven (7) hoppers and four (4) transport belts used for the regular asphalt operations and one (1) additional hopper plus three (3) transport belts for the reclaimed asphalt pavement (“RAP”) process operations. The Permit allows the Facility to operate eight (8) hopper and seven (7) belts.
- d. The Facility representatives showed and confirmed the location of the Facility drum mixer and baghouse described in the Permit. The Permit limits the production of asphalt to a maximum of 400,000 tons per year.
- e. The Facility has one (1) emergency power engine that is not currently in the Permit. According to the Facility representatives, the engine was installed as a result of Hurricane Maria but has not been used since the Facility started getting power from the Puerto Rico Electric and Power Authority. The engine was manufactured by Detroit Diesel, model number 71637305.
- f. The inspectors were escorted by the Facility representatives to the liquid asphalt tanks area to verify the operational status of the tanks’ gases control filter and pressure meters. Both pressure meters were found out of operation and showing a reading of zero inches of water. Mr. Ramiro Perdomo (Maintenance Coordinator) stated that both meters were in operation until recently. The calibration seal was unreadable for both meters.
- g. The inspectors were escorted by the Facility representatives to the baghouse to verify the unit back-pressure meter. The inspectors confirmed that the baghouse back-pressure meter was in operation and according to the calibration seal, the meter was calibrated on November 6, 2020. Inspector Rivera asked the Facility representatives about the most recent maintenance activity conducted to the baghouse. Mr. Perdomo indicated that around a year ago the unit was taken out of service for maintenance.
- h. Inspector Rivera asked the Facility representatives about the silos operation and maintenance. Mr. Perdomo indicated that the silos pressure valves and gates are inspected in a daily basis and once per year for structural integrity. Inspector Rivera asked if the inspections are documented. Mr. Perdomo stated that he conducted the most recent integrity inspection on January 2021, but the inspections are not being documented. Inspector Rivera recommended Mr. Perdomo to document every maintenance or inspection activity in a standard form or a logbook.
- i. Inspector Rivera asked the Facility representatives about the operations being conducted in the property. The Facility representatives stated that two (2) additional companies operate within the property. Petroleum Emulsion Manufacturing Company (PEMCO) produces the emulsion or primer that is applied to the surface prior to the asphalt; and the other operator is Ruben Martinez Oil Collection System, that collects and recycles used oil. Betterrecycling Corp. buys Ruben Martinez’s the oil used in the drum mixer (50% used oil / 50 % kerosene).
- j. The Facility owner is Betterrecycling Corp. and is operated by Puerto Rico Asphalt. Puerto Rico Asphalt owner is Jorge Arturo Diaz. The owner of Betterrecycling Corp. is Jorge Luis Diaz. Jesus Acosta is Puerto Rico Asphalt’s Operations Director.

- k. According to Mr. Colón, the Facility operation hours are from 7 AM to 4 PM, but can operate at earlier times depending on the clients needs. The Facility has six (6) employees.
- l. Inspector Rivera asked about the water spraying capabilities of the Facility. Eng. Pérez indicated that the Facility has six (6) water spraying points in the aggregate materials piling area. Eng. Pérez added that the Facility also has a 2,000 gallons water truck that is unavailable because is at the mechanic shop.
- m. The inspectors were escorted to the Facility control room. The Facility operator stated that the Facility ceased operations for the day at 9:05 AM and processed 516 tons of asphalt and used 1,131 gallons of fuel. The Facility operator showed the inspectors that the baghouse back pressure meter, which showed a measurement of 0.25 inches of water. According to the operator, the baghouse back-pressure should not exceed 0.5 inches of water, any pressure over such measurement indicates operational issues with the baghouse unit. The Facility control room has a computer to monitor the drum mixer and baghouse units. The Facility operator stated that Puerto Rico Asphalt has been operating the Facility since 2018 and that its asphalt production has increased since 2020. The operator also informed that the baghouse is inspected in a monthly basis and that an inspection and maintenance for is used by operators to document the Facility daily and monthly inspection and maintenance activities. The operator showed the inspectors the form that is used to document the Facility daily production registry in a daily basis.

The inspectors concluded the Facility walkthrough and agreed to meet with the Facility representatives at Betterecycling Corp. conference room to complete the documentation review aspect of the inspection. Puerto Rico Asphalt owner Jorge Arturo Diaz; Betterecycling/PEMCO owner Jorge Luis Diaz; and Eng. Jesús Acosta joined the inspection and the inspectors informed them about the purpose of the inspection. The inspectors asked the Facility representatives to show and provide copies of documentation for review to evaluate compliance with the Permit requirements. The following is a summary of the discussions held during the review:

- a. Eng. Pérez provided a copy of the monthly fuel consumption reports files corresponding to the month of February 2021 dated March 3, 2021.
- b. Inspector Rivera informed the Facility representatives about the Method 9 visible emissions observations conducted early in the morning that confirmed that the Facility baghouse emissions were over the 20% opacity (6-minute average).
- c. Inspector Rivera asked the Facility representatives about the performance tests required by the Permit and the NSPS Subpart I. The Facility representatives confirmed that such tests have not been performed at the Facility and informed that Betterecycling Corp. recently conducted the tests at one of their plants located in the Municipality of Caguas. Inspector Rivera showed the Facility representatives where such tests are requested in the Permit and the NSPS Subpart I which testing methods are required.
- d. The Facility representatives informed that Betterecycling Corp. also owns asphalt plants in the municipalities of Salinas and Barranquitas.
- e. Inspector Rivera asked the Facility representatives about the Method 9 test required to be conducted at the RAP crusher unit and showed that such requirement is included in paragraphs 71 and 72 of the Permit. The Facility representatives confirmed that such test has not been conducted.

- f. Eng. Pérez showed copies of the calibration forms of the asphalt tanks pressure meters which according to the forms were calibrated in November 2020.
- g. Eng. Pérez showed a copy of the baghouse filter inspection form from the month of January 2021. The form does not have the name of the person who completed the inspection nor any comments about the findings and activities performed. The form identified the filters that were replaced as a result of the inspection.
- h. Inspector Negrón asked the Facility to provide copies of the RAP material processed daily registry required in paragraph 68 of the Permit. Engs. Acosta and Pérez confirmed that such registry is not being documented.
- i. Inspector Rivera informed Engs. Acosta and Pérez that according to Mr. Perdomo the silos are being inspected in an annual basis as required by paragraph 80 of the Permit, but such inspections are not being documented in a registry as requested by paragraph 81 of the Permit.
- j. Mr. Jorge Luis Diaz contacted the consultant that conducted the tests in Betterecycling Corp. Caguas Plant to verify his availability to conduct the tests at the Facility. The consultant confirmed his availability to assist the Facility with the project. Mr. Jorge Luis Diaz also requested the consultant to conduct the same tests at Betterecycling Barranquitas and Salinas facilities.
- k. Eng. Acosta confirmed that he ordered the operators to cool down the baghouse to inspect the unit filters and verify if there are filters to be replaced. Eng. Acosta and Mr. Jorge Luis Diaz confirmed that the Facility will conduct a more detailed inspection of the unit during the weekend and will inform the inspectors about the findings and actions to be taken.

V. Closing Meeting

The inspectors concluded the documentation review part of the inspection and proceeded with the closing meeting on which the Facility was represented by Mr. Jorge L. Diaz and Engs. Pérez and Acosta. The following is a summary of the action items discussed during the closing meeting:

- a. Method 9 and 5 tests requested in paragraph 40 of the Permit.
- b. Operational status of the asphalt storage tanks differential pressure meters.
- c. Baghouse filter inspection forms improvement.
- d. Method 9 test at RAP crusher and monthly registry of RAP material processed.
- e. Silos annual inspections registry.
- f. Jorge L. Diaz confirmed the inspectors that the company already approved the hiring of a second employee to assist with the Facility Environmental Health and Safety Department.


The inspectors expressed gratitude to the Facility representative for the assistance during the inspection and concluded the inspection at 12:05 PM. The inspectors left the Facility at 12:15 PM.

Inspection Plan Sign-off

Inspector's Name: Alex O. Rivera

**ALEX
RIVERA**  Digitally signed by
ALEX RIVERA
Date: 2021.03.23
10:27:41 -04'00'

Supervisor's Name: Nancy Rodríguez

**NANCY
RODRIGUEZ**  Digitally signed by
NANCY RODRIGUEZ
Date: 2021.03.23
11:47:41 -04'00'

Attachment 1

EPA VISIBLE EMISSION OBSERVATION FORM 1

Method Used (Circle One)
 Method 9 203A 203B Other: _____

Form Number EPA 02 Page 1 of 1
 Continued on VEO Form Number _____

Company Name
RECYCLING CORP.

Facility Name
CAROLINA PLANT

Street Address

City CAROLINA State P.R. Zip _____

Process
ASPHALT PLANT Unit # _____ Operating Mode _____

Control Equipment
PAGEHOUSE Operating Mode _____

Describe Emission Point
SQUARED PAGEHOUSE STACK

Height of Emiss. Pt.
 Start 25 ft End SAME Height of Emiss. Pt. Rel. to Observer
 Start 26 ft End SAME

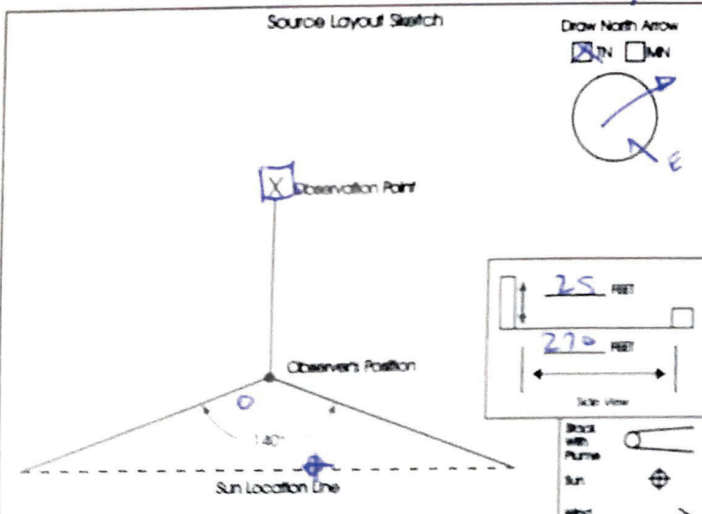
Distance to Emiss. Pt.
 Start 270 ft End SAME Direction to Emiss. Pt. (Degrees)
 Start 296 NW End SAME

Vertical Angle to Obs. Pt.
 Start _____ End _____ Direction to Obs. Pt. (Degrees)
 Start 110 E End SAME

Distance and Direction to Observation Point from Emission Point
 Start 270 ft End SAME

Describe Emissions
 Start _____ End _____
 Emission Color Start WHITE End SAME Water Droplet Plume
 Attached Detached None

Describe Plume Background
 Start GRAY End LIGHT BLUE
 Background Color Start GRAY End BLUE Sky Conditions Start partly cloudy End SAME
 Wind Speed Start 2 mph End SAME Wind Direction Start EAST End SAME
 Ambient Temp. Start 77 F End 78 F Wet Bulb Temp. _____ RH Percent 82%



Longitude 107 22 22 W Latitude 65 53 50 N Declination _____

Additional Information
107 22 22 W 65 53 50 N 035
APR 5/9/21 LONG. -65.967409° P. INT.

Min	Sec				Comments
	0	15	30	45	
1	15	20	20	25	LIGHT GRAY PUFF
2	20	20	20	15	"
3	20	20	20	20	LIGHT BLUE PUFF
4	20	20	25	25	"
5	25	25	25	25	"
6	25	20	20	20	"
7	25	25	20	25	"
8	20	20	20	20	"
9	20	25	20	25	"
10	25	20	20	25	"
11	25	20	20	20	"
12	20	20	25	25	"
13	25	20	20	25	"
14	20	15	25	20	"
15	20	30	25	25	"
16	25	25	25	30	"
17	25	25	30	20	"
18	25	20	20	30	"
19	25	20	20	25	"
20	20	20	25	20	"
21					6 MIN. AVE. 24
22					
23					
24					
25					
26					
27					
28					
29					
30					

Observer's Name (Print)
ALEX REJERA

Observer's Signature
[Signature] Date 3/9/21

Organization
USEPA REGION 2

Certified By
EPA Date 1/27/2021

EPA VISIBLE EMISSION OBSERVATION FORM 1

Method Used (Circle One)
 Method 9 203A 203B Other: _____

Company Name
BETTER RECYCLING CORP.

Facility Name
CAROLINA PLANT

Street Address

City CAROLINA State P.R. Zip

Process
ASPHALT PLANT Unit # Operating Mode

Control Equipment
BAGHOUSE Operating Mode

Describe Emission Point
SQUARED BAGHOUSE STACK

Height of Emiss. Pt. Height of Emiss. Pt. Rel. to Observer

Start 25 ft End 25 ft Start 26 ft End 26 ft

Distance to Emiss. Pt. Direction to Emiss. Pt. (Degrees)

Start 270 ft End SAME Start 296 NW End SAME

Vertical Angle to Obs. Pt. Direction to Obs. Pt. (Degrees)

Start End Start 110 E End SAME

Distance and Direction to Observation Point from Emission Point

Start 270 ft End SAME

Describe Emissions

Start End Emission Color Water Droplet Plume

Start WHITE End SAME Attached Detached None

Describe Plume Background

Start GRAY CLOUDS End LIGHT BLUE

Background Color Sky Conditions

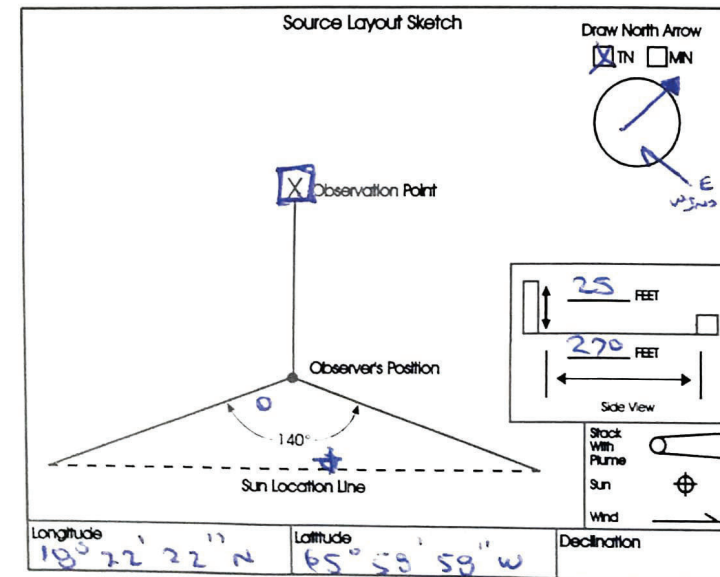
Start GRAY End LIGHT BLUE Start CLOUDY End PARTLY SUNNY

Wind Speed Wind Direction

Start 3 mph End SAME Start EAST End SAME

Ambient Temp. Wet Bulb Temp. RH Percent

Start 75°F End 77°F 83%



Additional Information

GRS. POINT - LAT. 18.379328°

LONG. -65.967409°

Form Number EPA 011 Page 1 Of 1

Continued on VEO Form Number

Observation Date	Time Zone	Start Time	End Time		
<u>3/9/21</u>	<u>AST</u>	<u>6:42</u>	<u>7:12</u>		
Sec Min	0	15	30	45	Comments
1	15	15	15	15	
2	15	15	20	15	GRAY CLOUD
3	20	15	15	15	
4	15	15	20	15	
5	15	15	15	20	
6	15	15	10	10	
7	10	15	15	15	
8	15	15	15	20	
9	20	20	15	15	
10	20	20	15	15	LIGHT GRAY BAGG
11	15	15	20	15	
12	10	10	10	10	
13	15	15	10	10	
14	15	15	15	10	
15	15	10	15	10	
16	15	15	10	15	
17	15	15	15	20	LIGHT BLUE BAGG
18	15	15	15	15	
19	15	15	15	20	
20	15	15	20	25	
21	25	25	20	20	
22	20	25	20	20	
23	20	20	20	20	
24	20	20	20	25	
25	20	20	25	25	
26	20	25	20	20	
27	20	20	20	25	
28	20	20	20	20	
29	20	20	25	20	
30	25	25	25	25	6 MIN AVE. 21.9

Observer's Name (Print)
ALEX RIVERA

Observer's Signature
[Signature] Date 3/9/21

Organization
USEPA REGION 2

Certified By
ETA Date 1/27/2021



VISIBLE EMISSIONS EVALUATOR

Alex Rivera

This is to certify that the above named observer has met the specifications of Federal Reference Method 9 and is qualified as a visible emissions evaluator. Maximum deviation on white and black smoke did not exceed 7.5% opacity and no single error exceeding 15% opacity was incurred during the certification test conducted by Eastern Technical Associates, Inc. of Raleigh, N.C. This certificate is valid for six months from date of issue.

473874

Certificate #

RIV215215

Student ID Number

1/27/2021

Date of Certification

San Juan, PR

Location

7/29/2021

Certification Expiration Date

1/10/2017

Last Lecture

Jody Monk

General Manager