



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, REGION 2
CARIBBEAN ENVIRONMENTAL PROTECTION DIVISION
MULTIMEDIA PERMITS AND COMPLIANCE BRANCH

**NPDES Compliance Evaluation Inspection
Industrial Facility**

Owner

MUNICIPALITY OF CAROLINA

P.O. Box 8, Carolina, PR 00989

Phone Number: (787) 757-2626

Operator

LANDFILL GAS TECHNOLOGIES, LLC

P.O. Box 1322, Gurabo, Puerto Rico, 00778

Telephone Number: (787) 273-7639

<https://www.conwastepr.com>

Facility

CAROLINA MUNICIPAL SOLID WASTE LANDFILL

PR-874 Road, Hoyo Mula Ward, Carolina Puerto Rico, 00986

Coordinates: 18.32406° N; 65.10312° W (Decimal)

Statute: Sections 301(a), 308(b) and 402(p) of the Clean Water Act

NPDES Regulations: 40 C.F.R. Parts 122 and 445

NPDES ID: PRR053155

Inspection Date: July 16, 2024

Participating Personnel:

U.S. EPA:

Jaime López
Senior Physical Scientist
Clean Water Act Team

Arturo Arzón
Environmental Engineer
Clean Water Act Team

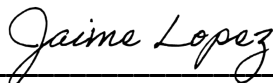
Landfill Gas Technologies, LLC:

Vilka Rivera, Landfill Operation Manager
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Municipality of Carolina:

Keneth Hernández, Landfill Supervisor

Inspection Report Prepared by:



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10-8-2024

Date

ARTURO
ARZON

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Arturo Arzón
Environmental Engineer
Clean Water Act Team
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Date

JOSE
RIVERA

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Inspection Report
Approving Officer:

José A. Rivera, BSCE
Lead Environmental Engineer
Clean Water Act Team
Multimedia Permits and Compliance Branch
Tel.: (787) 977-5842; Email: rivera.jose@epa.gov

Date

1. **INTRODUCTION**

On July 16, 2024, Mr. Jaime López (“Inspector López”), Senior Physical Scientist, and Mr. Arturo Arzón, Environmental Engineer (“Inspector Arzón”), from the United States Environmental Protection Agency (“EPA”), Region 2, Caribbean Environmental Protection Division (“CEPD”), conducted a National Pollutant Discharge Elimination System (“NPDES”) Compliance Evaluation Inspection (the “Inspection”) at the Carolina Municipal Solid Waste Landfill (“Landfill”) in Carolina, Puerto Rico. The purpose of the Inspection was to determine Landfill Gas Technologies, LLC’s (“LGT”) compliance with the 2021 NPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (“2021 MSGP”).¹

Upon showing of credentials to Mrs. Vilka Rivera, Landfill Operations Manager, and Keneth Hernández, Municipality of Carolina (“MOC”) Landfill Supervisor, the Inspection was performed pursuant to the inspection authority under Section 308(b) of the Federal Water Pollution Control Act (“CWA” or the “Act”), as amended. The Inspection consisted of an entry meeting to discuss the purpose of the Inspection; a walkthrough to evaluate implementation and maintenance of Best Management Practices (“BMPs”) concerning stormwater; compliance evaluation of 2021 MSGP’s conditions and requirements; and a closing meeting to discuss preliminary observations, findings and areas of concern resulting from the Inspection.

This Inspection Report includes findings and observations resulting from the Inspection.

2. **GENERAL INFORMATION CONCERNING OWNER OF THE LANDFILL**

The Municipality of Carolina (“MOC”) was created under the laws of the Commonwealth of Puerto Rico and is located on the northeast coastal region of the island, neighboring with the municipalities of San Juan to the west, Loiza to the northeast, Canóvanas to the east and Trujillo Alto to the south.

3. **GENERAL INFORMATION CONCERNING THE OPERATOR OF THE LANDFILL**

LGT is a for-profit corporation organized under the laws of the Commonwealth of Puerto Rico (“PR”). LGT was established on January 1, 2015, and is registered in the Puerto Rico Department of State (“DOS”) under registration number 105905. LTA’s Vice-President is Mr. Carlos Contreras, Esq.

LGT has a contract with the Municipality of Carolina for the management, operation and administration of the Carolina Municipal Landfill. LGT operates the Landfill since on or about December 17, 2021.

¹ The inspections activities did not include the Recycling Facility located at the Site.

4. GENERAL DESCRIPTION OF THE SITE, LANDFILL AND RECYCLING FACILITY

Site

The Landfill is located at PR-874 Road, Hoyo Mula Ward, Carolina Puerto Rico (the “Site”). The Site is comprised of a parcel of land and is situated on approximately 148 acres. The areas surrounding the Site are mostly agricultural lands. **Image 1** (below) depicts an aerial imagery of the Site and its surroundings.

Image 1²



Landfill

The Carolina Landfill receives approximately 350 tons of non-hazardous municipal solid waste daily. The municipal solid wastes are first directed to the Carolina Recycling Plant (managed by Carolina Recycling Corp. (“CRC”)). At this area, the waste is sorted by type of material. The non-recyclable materials are then directed to the active area of the landfill for final disposal. The recyclable materials are segregated, compacted, and packaged for future marketing.

² The source of the aerial image is Google Earth Pro™, and the image is dated March 11, 2023.

The Landfill has an active cell of approximately 14 acres for the disposal of non-hazardous waste such as domestic waste, commercial waste, yard waste and recyclable materials generated at the Municipality of Carolina. The total estimated area of industrial activity exposed to stormwater is approximately 148 acres.

Once these solid wastes (except the recyclable materials, which are processed in the Recycling Plant), are received at the active cell, they are compacted and covered with soil material. This procedure is performed at the end of each operation day or in frequent intervals, as needed, according to the requirements of the Resource Conservation and Recovery Act (RCRA), Subtitle D, Part 258 from the US Environmental Protection Agency. The action area for Landfill's stormwater discharges extends downstream from outfalls towards different flowlines. **Image 2** (below) depicts an aerial photograph of the Landfill.

The Site has a parking lot where the collection trucks are parked. A diesel storage tank is also located within the parking lot area. A vehicle and equipment maintenance area is located at the Site, which is covered with a metal rooftop and walls.

Image 2³



³ The source of the aerial image required in the LGT RFI issued on July 10, 2024, the image is the most recent aerial photo.

Recycling Facility

The Carolina Recycling Corp. has a contract for the operation and administration of the solid waste recycling facility (the “Recycling Facility”), which is located at the Site. The Recycling Facility was designed to be a completely enclosed building. Approximately, 75 tons of recyclable materials are received daily.

Description of the Stormwater Collection, Conveyance and Discharge Systems

The following describes the stormwater collection system components and drainage areas that discharges through outfalls 001-004 established at the Site to manage runoff. The Site has berms, down chutes, storm sewer pipes, culverts, and weirs.

The stormwater runoff is collected, conveyed, and discharged through four (4) discharge outfalls, namely, Outfall 001, Outfall 002, Outfall 003, and Outfall 004.

The stormwater runoff from the drainage areas associated with Outfall 001’s discharge point is located south of the Site, near the maintenance workshop. The water flows through the vegetation and eventually discharges to a tributary flowline of the Caño Martín Peña and Río Grande de Loíza (the “River”).

The stormwater runoff from the drainage areas associated with Outfall 002’s discharge point is located north of the Site. This area collects the runoff from the active cell. The water flow through the vegetation until eventually discharging to a tributary flowline of the Caño Martín Peña and the River.

The stormwater runoff from the drainage areas associated with Outfall 003’s discharge point is located west of the Site near the Recycling Facility.

The stormwater runoff from the drainage areas associated with Outfall 004’s discharge point is located at northwest of the facility near the Recycling Facility. Due to the topography of the Site, runoff comes from the Recycling Facility and one portion of the Landfill.

Figure 1 (next page) depicts a Site Map found in the Stormwater Pollution Prevention Plan (“SWPPP”) developed for Site, including the stormwater sampling points.

5. GENERAL DESCRIPTION OF THE RECEIVING WATER

The Caño Martín Peña and the River are classified as SD waters in the Puerto Rico Water Quality Standards Regulation (“PRWQSR”) promulgated by the Puerto Rico Department of Natural and Environmental Resources (“DNER”) on November 23, 2022. **Image 2** (next page) depicts the hydrographic area surrounding the Site, including Río Grande de Loíza.

Figure 1

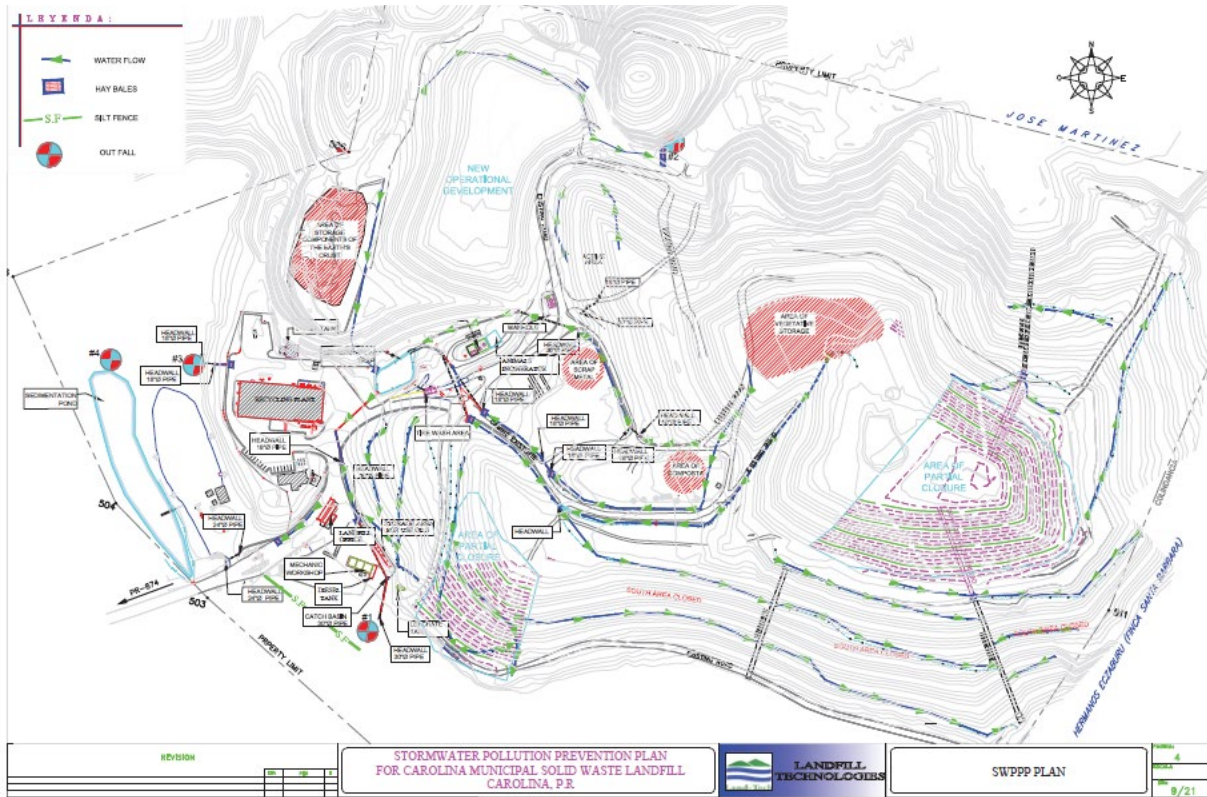
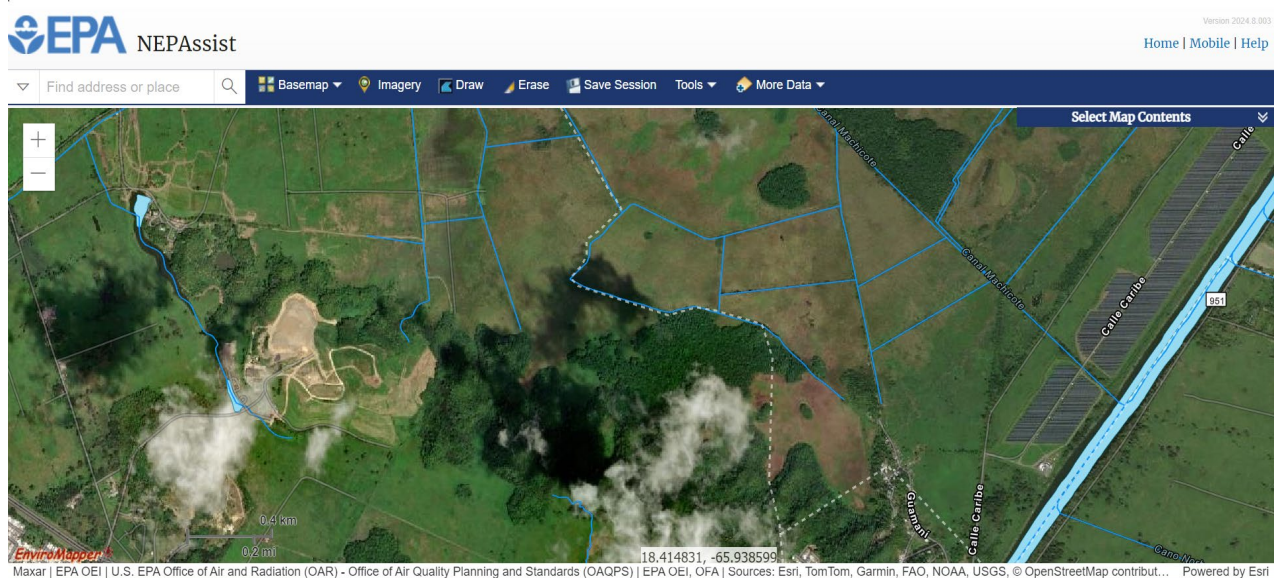


Image 2⁴



⁴ EPA NEPA assist database.

The River has been identified as impaired water but does not have an established Total Maximum Daily Load.

6. NPDES REGULATIONS AND PERMITTING FOR THE SITE

NPDES Stormwater Permit Application Regulations

Pursuant to the NPDES stormwater permit application regulations in 40 C.F.R. § 122.26, the activities at the Site meet the definition of industrial activity. The industrial activity definition at 40 C.F.R. § 122.26(b)(14)(v) includes landfills, land application sites, and open dumps that receive or have received any industrial wastes (waste that is received from any of the facilities described under this subsection) including those that are subject to regulation under Subtitle D of Resource Conservation and Recovery Act. The industrial activity definition at 40 C.F.R. § 122.26(b)(14)(vi) includes Scrap Recycling and Waste Recycling Facilities.

NPDES Permitting for the Site

On January 15, 2021, EPA issued the 2021 Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (the “2021 MSGP”). The 2021 MSGP became effective on March 1, 2021. The 2021 MSGP was modified on September 29, 2021. The 2021 MSGP expires on February 28, 2026. Part 8.L of 2021 MSGP includes additional requirement for landfills, land application sites and open dumps and recycling facilities. Part 8.N of the 2021 MSGP includes additional requirements for scrap recycling and waste recycling facilities.

On July 15, 2024, Inspector López conducted a review of the EPA Notice of Intent (“NOI”) database found at <https://permitsearch.epa.gov/epermit-search/ui/search>, and found that:

- a. LTA submitted an electronic Notice of Intent (“eNOI”) form on May 29, 2021, seeking coverage under the 2021 MSGP for its operations at the Landfill.
- b. On June 28, 2021, EPA granted LTA with 2021 MSGP coverage for the Landfill under NPDES ID Number PRR053155.
- c. LGT listed three outfalls.
- d. Stormwater is discharge into a flowline identified as PREE13A3, that eventually discharge into the Caño Martín Peña and the River.
- e. An eNOI has not been filed by Carolina Recycling Corp. for the stormwater discharges from the industrial activities conducted at the Recycling Facility, instead they included it as a collocated activity in the renewal application eNOI .

7. ARRIVAL AT THE FACILITY

At approximately 1:10 p.m., the EPA Inspectors arrived at an area of the Recycling Facility where an administrative office is located. Thereafter, the EPA Inspectors met with Ms. Rivera and Mr. Hernández and showed their EPA credentials.

8. ENTRY MEETING AND REVIEW OF RECORDS

Approximately between 1:20 p.m. and 1:45 p.m., the EPA Inspectors, Ms. Rivera and Mr. Hernández met and discussed the purpose of the Inspection and the areas where the EPA Inspectors will conduct a walkthrough. Inspector López informed Ms. Rivera that the Inspection would not include a review of records because EPA received records, such as the SWPPP, Employee Training, Corrective Actions, and Inspection Reports, which LGT submitted in response to the request for information (“RFI”) that EPA issued on July 10, 2024. Inspector López verified that the documents were kept on-Site and indicated that the review of such records would be performed offsite.

9. WALKTHROUGH OF THE SITE

After the Entry Meeting, Ms. Rivera and Mr. Hernández accompanied the EPA Inspectors to perform a walkthrough. The walkthrough began at approximately 1:50 p.m. and ended at approximately 3:05 p.m. Dry weather and sunny skies prevailed during the walkthrough.

The following includes Inspector López’s observations:

- a. Lack of stormwater erosion and sediment controls, stormwater runoff management measures, and BMPs (e.g., check dams, silt fences, velocity dissipation devices, ponds, soil stabilization measures). This finding resulted from observations at the active cell drainage ditch at slopes located on the northwest and north sides of the Landfill, and access roads⁵. Refer to Pictures 18, 20 and 23 in Attachment 1.
- b. Lack of temporary soil stabilization (e.g., temporary seeding, mulching, and placing geotextiles on the active portions of the Landfill) for the following: intermediate and final cover; active areas of the Landfill; slopes in cell areas; and Landfill areas where waste application has been completed but final vegetation has not yet been established. Refer to Pictures 16, 18, 19 and 20 in Attachment 1.
- c. The stormwater runoff from the industrial areas of the Landfill flows into corrugated pipeline down chutes and drainage ditches, which in turn convey stormwater runoff through Outfall 001, Outfall 002, Outfall 003, and Outfall 004, and further discharge into

⁵ The activities observed in these areas meet the definition of industrial activities found at 40 C.F.R. § 122.26(b)(14).

- a tributary flowline of the Caño Martín Peña and the River. Refer to Pictures 9-12, 15, in Attachment 1.
- d. Four discharge points at the Site, as described in Part 4 (*Description of the Stormwater Collection, Conveyance and Discharge System*) of this Inspection Report. Inspector López was informed that Outfall 002 will be relocated to an area opposite of the actual location. Refer to Picture 23 and Figure 1, above.
 - e. One unpermitted discharge point was observed in the area next to the repair and maintenance shop adjacent to the Outfall 001. Refer to Pictures 2-4 in Attachment 1.
 - f. An active Landfill, where trucks were seen unloading and leaving the premises through the Site entrance area. Refer to Picture 17 in Attachment 1.
 - g. A sign is found at the Site main road entrance depicting the NPDES permit ID. Refer to Picture 1 in Attachment 1.
 - h. A stormwater lagoon that collects runoff from areas of the Landfill. Refer to Pictures 10 and 11 in Attachment 1.
 - i. A fuel storage area located near the entrance of the Site without roof cover but with secondary containment for storage tanks. Refer to Picture 7 in Attachment 1.
 - j. Established vegetative cover at the closed cells on the south and southeast slopes of the Landfill. Refer to Figure 1 above.
 - k. A leachate seepage stain located at the north bottom slope face of the Landfill. No leachate flows reaching the stormwater drainage ditch were observed. Refer to Picture 19 in Attachment 1.

Mr. Arzon's participation in the Inspection was limited to taking pictures using a government-owned camera (Olympus Stylus 720 SW digital camera) to document observations. Refer to **Attachment 1** of this Inspection Report for pictures depicting the locations and additional observations. All photographs taken by Mr. Arzon during the Inspection were unaltered and transferred to an EPA computer system database (OneDrive\Carolina Solid Waste Municipal Landfill\ LGT. inspection file).

10. EXIT MEETING

After the completion of the walkthrough, the EPA Inspectors had an exit meeting with Ms. Rivera and Mr. Hernández between 1:50 p.m. and 3:05 p.m. Inspector López summarized the observations he indicated during the walkthrough of including: the lack of implementation of stormwater erosion and sediment controls; stormwater runoff management and stabilization measures; and BMPs that needed to be implemented at areas where industrial activities are conducted (i.e., slopes and drainage ditches).

The EPA Inspectors left the Site premises on or about 3:30 p.m.

End of Report

Attachment 1: Photo – Documentation

ATTACHMENT 1

Photo-log Documentation

Carolina Municipal Solid Waste Landfill
July 16, 2024, Inspection