Landfill Project Submittal Form

Instructions: Please complete all fields as thoroughly as possible. If the project in question is still in the planning/development phase, all fields must be completed using best available data and estimates based on the proposed system design. This is an interactive Word form. Upon completion, please save this form as a PDF prior to uploading it to the Reserve. This will lock your answers and protect the document from any further changes. All fields must be completed, even if the answer is also provided elsewhere; if a field is not applicable insert N/A in the space provided. Upon approval, this form will become public.

Reserve project ID (numerical, as it appears in the Reserve software): **CAR1019**

Project crediting period (select only one):

☒ First crediting period ☐ Second crediting period*

*If the project is being submitted for a second crediting period, please send an email to reserve@climateactionreserve.org notifying the Reserve Administrator

Section 1: Project Contact Information

Project name (as it appears in the Reserve software): **LA PERSEVERANCIA BIOGAS PLANT**

Account holder (as it appears in the Reserve software): **ENERGÍA RENOVABLE DE CUAUTLA S.A. DE C.V.**

Is the account holder authorized to sign the "Attestation of Title" form? ☒ Yes ☐ No

Gas collection and control system owner: **ENERGÍA RENOVABLE DE CUAUTLA S.A. DE C.V.**

Technical consultants: **ROBERTO VILAR**

Other parties with a material interest:

Date of form completion: **09/23/2013**

Form completed by (name, organization): **ROBERTO VILAR VARELA (WASTE TO ENERGY LATINOAMÉRICA)**

Section 2: General Project Site Information

1. Name of landfill:**LA PERSEVERANCIA**
2. Project description (Please provide one to two paragraphs): **THE PROJECT CONSIST IN A 1 MW BIOGAS PLANT LOCATED IN THE LANDFILL.**

3. Project site address (including county and state):**30 DE SEPTIEMBRE S/N COL. AMPLIACIÓN HERMENEGILDO GALEANA, CUAUTLA - MORELOS (C.P. 62743) - MEXICO**

4. Owner of landfill (name and organization):**OPERADORA DE FERROCARRIL Y MANEJO DE RELLENOS SANITARIOS S.A. DE C.V.**

5. Type of landfill (sanitary, controlled, or open dump):**SANITARY**

6. Type of waste accepted (MSW, demolition debris, organic, etc.): **MSW**

7. Average annual quantity of waste accepted at landfill (metric tons): **500,000**

8. Total waste in place (WIP) at project start date (metric tons): **2,500,000**

9. Designed landfill capacity (cubic meters or tonnes): **5,000,000**

10. Year landfill opened: **1999**

11. Year landfill closed or estimated date of closure (if known): **UNKNOWN**

Section 3: Project Eligibility and Monitoring

12. Please select the project protocol under which this project is being submitted:

    ☐ U.S. Landfill Project Protocol, Version

    ☒ Mexico Landfill Project Protocol, Version **1.1 SEPTEMBER 2011**

13. Project start date (format MM/DD/YYYY):**03/01/2014**

14. First reporting period (MM/DD/YYYY):**03/01/2014** to **05/01/2014**

15. Description of the landfill gas destruction system, including number and type of destruction devices, as well as the metering and data collection systems (one to two paragraphs): **The main device is a 1MW Guáscor 4 Stroke Engine, with Miller cycle and 1800 rpm. We have also a 700 Nm3/h high temperature flare stack system. The biogas extraction system consists in 18 wells with 7 pipelines, with one analysis point (water, oxygen and methane) each. In the union of the 7 pipelines there's a pressure and flow meter and also an anylisis point of the 7 pipelines' mixture. After the pipelines there are two blowers, with temperature metering and after that blower (before the engine and the flare stack system) there are pressure meter, flow meter, and anylisis point. There's a PLC for collecting all data and register it in a PC.**

16. If the project is being submitted under U.S. Landfill Project Protocol V4.0 or above, and the landfill gas is being utilized for energy production[1]:

    a. Identify the precipitation zone of the landfill site county (refer to the U.S. Landfill Project Protocol V4.0, Appendix A): ☐ Arid ☐ Non-Arid

[1] For the definition of a landfill gas-to-energy project, refer to the Glossary of Terms, Landfill Project Protocol V4.0.

b. What is the estimated date that the landfill will cross the relevant WIP threshold (2.17 MMT for arid counties and 0.72 MMT for non-arid counties)?:

17. Has this project been submitted to another registry or program? If so, has the project been accepted (listed, approved, pre-approved, etc.) by the other registry or program? **NO SUBMITTED**

18. Have any GHG reduction tonnes from the project ever been registered with or claimed by another registry or program prior to registering with the Reserve?

☐ Yes ☒ No

If yes, you must complete and return a "Project Transfer" form.

19. Have any GHG reductions from the project ever been sold directly to a third party (i.e. sold without being registered with or claimed by another registry or program) prior to registering with the Reserve? (If yes, please describe): **NO**

20. Is the landfill subject to NSPS Regulation (greater than 2.5 million tonnes capacity)?

☐ Yes ☒ No

21. If applicable, date of most recent Tier I or Tier II NMOC test (format MM/DD/YYYY): **NO APPLICABLE**

a. NMOC emissions per year (Mg/year):

b. Date at which landfill did or is expected to exceed 50 Mg NMOC per year (format MM/DD/YYYY):

22. Description and citation of all local and state air and water quality, explosive gas, or other regulations pertinent to the landfill or landfill gas destruction project:

- The 1917 Political Constitution of the Mexican United States. In Article 115 it enumerates the responsibilities and attributions of the municipalities and indicates that these are responsible for providing the required services for cleaning, collection, transference, treatment and final disposal of urban waste. In the same article, the Constitution indicates that the municipalities should comply with the norms and regulations issued by the Federation.

- **General Law of Ecological Equilibrium and Environmental Protection. Published in January 1988 and with entry into force after three months, this law states that waste should be controlled as it constitutes the main source of soil contamination. In addition, it establishes the need to prevent and reduce the solid, municipal and industrial waste generation; to incorporate techniques and procedures for its re-use and recycling, as well as to regulate its efficient management and final disposal.**

- **General Law for Solid Waste Prevention and Integral Management; published in October 2003, and with entry into force in January 2004. This law classifies waste in three categories: hazardous, of special management, and urban waste. This law promotes waste recovery as well as the development of by-products**

markets under the criteria of economic, technological and environmental efficiency, and adequate financing schemes.

• Mexican Official Standard NOM-083-SEMARNAT-2003, with entry into force in December 2004. The standard provides specifications for environmental protection related to the site selection, design, construction, monitoring, closure and complementary works of a final disposal site for urban solid waste and of special management.

- Law of solid waste for the State of Morelos, published in October 2007

23.

24. Is this project being implemented and maintained as the result of any law, statute, regulation, court order, or other preexisting legally binding mandate?

☐ Yes ☒ No

If yes, please explain.

25. Has a detailed monitoring plan been developed for this project? If not, by what date will a monitoring plan be in place? **MARCH 2014**

Section 4: Baseline Destruction Information

26. Did the landfill ever collect and destroy landfill gas using a non-qualifying destruction device (e.g. passive flares)?

☐ Yes ☒ No

If yes:

a. What date was this system operational (MM/DD/YYYY):

b. Please describe (number of wells, destruction devices, etc.): **,**

c. What deduction (scfm) will be taken to account for this baseline destruction?

d. What methodology will be used to quantify this deduction?

27. Did the landfill ever collect and destroy landfill gas using a qualifying destruction device (e.g. candlestick flare, engine)?

☐ Yes ☒ No

If yes:

a. What date was this system operational (MM/DD/YYYY):

b. Please describe (number of wells, destruction devices, etc.):

c. What deduction (scfm) will be taken to account for this baseline destruction?

d. What methodology will be used to quantify this deduction?

28. Additional information (if any):

End of form