GOVERNMENT OF PUERTO RICO
PUBLIC SERVICE REGULATORY BOARD
PUERTO RICO ENERGY BUREAU

IN RE: REVIEW OF THE PUERTO RICO ELECTRIC POWER AUTHORITY´S 10-YEAR INFRASTRUCTURE PLAN – DECEMBER 2020	**CASE NO.:** NEPR-MI-2021-0002 **SUBJECT:** Motion to Submit Detailed Scope of Work for the Generation Fleet Project, No. 164988

MOTION TO SUBMIT DETAILED SCOPE OF WORK FOR THE GENERATION FLEET PROJECT, NO. 164988

TO THE HONORABLE PUERTO RICO ENERGY BUREAU:

COMES NOW GENERA PR LLC ("Genera"), as agent of the Puerto Rico Electric Power Authority ("PREPA"), through its counsels of record, and respectfully submits and prays as follows:

1. On March 26, 2021, the Energy Bureau of the Puerto Rico Public Service Regulatory Board ("Energy Bureau") issued a Resolution and Order in the instant case, through which it ordered PREPA to submit each specific capital investment project for approval to avoid potential noncompliance with the Approved Integrated Resource Plan ("IRP") and Modified Action Plan. To streamline the process, the Energy Bureau requested PREPA to submit the specific projects to the Energy Bureau at least thirty (30) calendar days before their submittal to the Puerto Rico Central Office for Recovery, Reconstruction and Resiliency ("COR3") and the Federal Emergency Management Agency ("FEMA"), and any other federal agency, and to continue reporting to the Energy Bureau and FEMA, within the next five (5) years, the progress of all ongoing efforts related to the final approval of the submitted projects not yet approved by the Energy Bureau.

2. On January 24, 2023, Genera, PREPA and P3 Authority executed the Puerto Rico LGA OMA. According to the LGA OMA, Genera is the sole operator and administrator of the Legacy Generation Assets and the exclusive entity authorized to represent PREPA before the Energy Bureau about any matter related to the performance of the Operation and Maintenance ("O&M") services provided by Genera under the LGA OMA. Further, Genera is the sole entity responsible for procuring and administering federal funds for projects related to the LGA.

3. On October 27, 2023, Genera filed a document titled *Amended Motion for Leave to Submit Amendment to Project and 406 BESS's Initial Scope of Work* ("October 27th Motion"). Genera included as Exhibit A, a document titled *BESS Equipment Project Amendment*; as Exhibit B, a document titled *BESS Project 406 Initial SOW*; and Exhibit C, a document titled *BESS Project Presentation*. Through the October 27th Motion, Genera requested the Energy Bureau to grant Genera leave to present to COR3 and FEMA the Project Amendment and the Section 406 Initial SOW. Genera also sought to continue all activities required to complete essential documentation and analysis for the Battery Energy Storage System ("BESS") Project, stating that a detailed Scope of Work ("SOW") per facility will be subsequently submitted to FEMA.

4. On November 8, 2023, the Energy Bureau issued a Resolution and Order titled *Determination on Genera's October 27, 2023, Amended Motion for Leave to Submit Amendment to Project and 406 BESS Initial Scope of Work* ("November 8th Resolution"). The Energy Bureau conditionally approved the projects in Attachment A to the November 8th Resolution, pending submission by Genera of a detailed SOW for each project. The Energy Bureau noted that the conditionally approved projects would be presented to FEMA and COR3 to finalize their approval process, contingent on the Energy Bureau's final determination based on its evaluation of the requested SOWs.

5. On February 1, 2024, after certain procedural events, including inquiries from the Energy Bureau to LUMA Energy, LLC and LUMA Energy ServCo, LLC (jointly referred to as "LUMA") regarding the impact on Genera's BESS Project, the Energy Bureau issued a Resolution and Order titled *Determination on GENERA's November 21 Motion Submitting Response in Compliance with Resolution and Order Dated November 8, 2023 and Request for a Time Extension to Provide the Detailed Scope of Work per Site* ("February 1st Resolution"). In the February 1st Resolution, the Energy Bureau approved the projects included in Attachment A, which encompassed certain BESS Projects under Section 406 Initial SOW, and noted that Genera is required to present the approved projects to FEMA and COR3 to finalize their approval process. *See* February 1st Resolution, p. 5, Attachment A.

6. On March 28, 2024, Genera filed before the Energy Bureau a document titled *Motion to Submit Scope of Work in Compliance with Resolution and Order Dated November 8, 2023* ("March 28th Motion"). In this Motion, Genera submitted the SOW for project #164988, covering the locations of Vega Baja, Cambalache, and Aguirre as Exhibit A.

7. On April 23, 2024, the Energy Bureau issued a Resolution and Order titled *Resolution and Order on Motion to Submit Scope of Work in Compliance with Resolution and Order dated November 8, 2023, filed by Genera on March 28, 2024 and Memorandum of Law in Support of Confidential Treatment of Scope of Work Submitted on March 28, 2024, in Compliance with Resolution and Order dated November 8, 2023, filed by Genera on April 8, 2024* ("April 23rd Resolution"). In the April 23rd Resolution, the Energy Bureau, among other things, approved the detailed projects SOWs in Attachment A to the April 23rd Resolution, which included the BESS capacity to be installed at the Vega Baja, Cambalache and Aguirre sites. *See* April 23rd Resolution, p. 4, Attachment A. Additionally, the Energy Bureau issued a reminder that the 430 MW BESS

projects were approved by the Energy Bureau in the February 1st Resolution with the cost related to the acquisition and installation of the units. *See id*.

8. On June 20, 2024, Genera filed a document titled *Motion to Submit an Amended Scope of Work for Project No. 164988* ("June 20th Motion"). The June 20th Motion amended the scope of work and the budgets for the Generation Fleet and the BESS Project, number 164988, compared to that provided by Genera in its Exhibit A to the March 28th Motion and contained in the October 27th Motion. Genera requested that the Energy Bureau take notice of the amended scope and budgets and accept the amended SOW for Project #164988 submitted as Exhibit A to the June 20th Motion.

9. On July 17, 2024, the Energy Bureau issued a Resolution and Order titled Genera's *Motion Requesting Acceptance of Amended Scope of Work for Battery Energy Storage System Project* ("July 17th Resolution"). Through the July 17th Resolution, the Energy Bureau determined that the BESS Project resources, whose scope and budgets were amended in Genera's June 20th Motion with accompanying Exhibit A, are critical resources for Puerto Rico and will directly support the ongoing repair and restoration of reliable electrical service to Puerto Rico customers. Additionally, the Energy Bureau reemphasized the urgency of completing all necessary steps outlined in Exhibit A to expedite the planning, preparation, procurement, demolition, permitting, and other requirements to install these resources in an accelerated manner. Consequently, the Energy Bureau ordered Genera to **expedite** the completion of all steps for this BESS Project.

10. In compliance with the Energy Bureau's July 17th Resolution and aligned with Genera's commitment to rebuilding a more resilient, cleaner, and reliable energy infrastructure in Puerto Rico, Genera hereby submits, as *Exhibit A* to this Motion, a detailed SOW for Project No. 164988, under the DR-4339-PR Public Assistance Program ("PA").

11. The detailed SOW for Project No. 164988, submitted herein as *Exhibit A*, outlines Genera's plan to modernize and replace outdated power generation equipment across several facilities in Puerto Rico, focusing on the Yabucoa, Costa Sur, Daguao, and Jobos sites. Additionally, the detailed SOW includes the construction of new BESS control rooms at the Costa Sur and San Juan Power Plants. The SOW provides an overview of the project, encompassing its scope, schedule, cost estimates, Environmental & Historical Preservation ("EHP") requirements, and proposed 406 hazard mitigation measures. By replacing outdated and inefficient peaking units with new Reciprocating Internal Combustion Engine ("RICE") units and constructing control rooms for the BESS, as specified in the detailed SOW, Genera aims to enhance the reliability and efficiency of Puerto Rico's power generation. These improvements are designed to meet the evolving energy demands of Puerto Rico's communities, delivering a more efficient and dependable energy infrastructure.

WHEREFORE, Genera respectfully requests that this Energy Bureau **take notice** of the above for all purposes and **approve** the SOW for the Generation Fleet Project, submitted as Exhibit A to this Motion.

RESPECTFULLY SUBMITTED.

In San Juan, Puerto Rico, this 2st day of October of 2024.

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CERTIFICATE OF SERVICE

We hereby certify that a true and accurate copy of this motion was filed with the Office of the Clerk of the Energy Bureau using its Electronic Filing System and that we will send an electronic copy of this motion to the PREPA's counsel, Mirelis Valle Cancel, at mvalle@gmlex.net, and Alexis Rivera, at arivera@gmlex.net; and to LUMA's counsel, Margarita Mercado, at margarita.mercado@us.dlapiper.com, and Yahaira De La Rosa, at yahaira.delarosa@us.dlapiper.com.

In San Juan, Puerto Rico, this 2nd day of October 2024

/*s/ Alejandro López-Rodríguez*
Alejandro López-Rodríguez

Exhibit A

In Re: Generation Fleet Project Detailed SOW –Version 1
Project # 164988

I. Overview

Project Name: Generation Fleet – Demolitions, Control Rooms and peakers

Project Type: 428 Detailed SOW

Project Location: Yabucoa/ Costa Sur/ Daguao / Jobos / San Juan/

GPS Latitude / Longitude: 18.106216, -65.823685 (Yabucoa)/ 18.000463, -66.753480 (Costa Sur) / 18.232114, -65.667374 (Daguao)/ 17.961105, -66.140130 (Jobos)/ 18.427720, -66.105067 (San Juan)

II. Introduction

PREPA is a public corporation of the Government of Puerto Rico created pursuant to Act No. 83 of May 2, 1941, as amended. PREPA owns the power plants for electric generation, transmission, and distribution facilities serving all of Puerto Rico. As the sole electric utility in Puerto Rico, PREPA provides electricity to approximately 3.4 million people. Genera-PR is the operator authorized under a Public-Private Partnership agreement of the thermal generation facilities of Puerto Rico. Since 2017, PREPA has performed damage assessments, studies, and evaluations to identify areas of repair and improvement. These include transmission and distribution lines, electrical substations, generation plants, mitigation, and other improvements.

On September 6, 2017, Puerto Rico's northern coastline was struck by Hurricane Irma, a Category 4 storm. Two weeks later, on September 17, Hurricane Maria tore through the island of Puerto Rico as a Category 5 storm. Subjected to 150+ mph winds and more than 25 inches of rain, 3.4 million residents lost power and a great deal of infrastructure, including critical facilities, was damaged. In particular, the electrical infrastructure suffered catastrophic impacts. In the aftermath, diligent recovery and reconstruction have been going on, not only to restore the electrical infrastructure to pre-storm function and capacity, but to take this opportunity to bring it in line with current standards and technology. With the recovery funding available, "*Everyone can be sure that we are working responsibly to achieve efficiencies, reduce costs, decommission inefficient and polluting plants, and continue to transform our electrical system for the benefit of our economy and our people*" as Governor Pedro Pierluisi said, this being an

opportunity to not just to rebuild the system but to transform it into a smarter, more resilient, and cleaner one. Puerto Rico's generation system must meet customer demand and have adequate additional capacity to comply with the reserve required by the standard operating procedures of the T&D system operator (LUMA). In terms of service continuity, the system must be reliable so that service interruptions are within the margins established in the electrical industry standards.

In 2020 the situation became more complicated when earthquakes events 4473DR-PR provoked more damages to Costa Sur Power Plant. Later, in September 2022, Hurricane Fiona 4671DR-PR also impacted Puerto Rico, destroying even more the already fragile generation assets. Unfortunately, the generation system presents critical performance metrics with a deficiency in capacity to meet the energy demand and the minimum reserve requirements. The forced outage percentage of the units is increasing while the generation capacity decreases. This combination of factors puts the continuity of the service at high risk, adversely affecting the quality of life of those who live in PR.

Pursuant to the Puerto Rico Thermal Generation Facilities Operation and Maintenance Agreement ("LGA OMA"), dated January 24, 2023, executed by and among PREPA, Genera, and the Puerto Rico Public-Private Partnerships Authority ("P3 Authority"), Genera is the sole operator and administrator of the Legacy Generation Assets (as defined in the LGA OMA) and the sole entity authorized to represent PREPA before the Energy Bureau with respect to any matter related to the performance of any of the O&M Services provided by Genera under the LGA OMA. The current fleet condition presents poor performance due to the impact of hurricanes María and Fiona. Generation capacity has been reduced to 46% of installed capacity. In addition, of the generation units in operation, about 32% (640 MW) of the units administered by Genera are disconnected monthly, causing thousands of customers to suffer interruptions in their service.

Following Presidential Disaster Declarations 4336-DR-PR (Hurricane Irma) and 4339-DR-PR (Hurricane Maria), the Federal Emergency Management Agency ("FEMA") has been working with PREPA to assist in recovery and repair efforts. In October 2020, FEMA approved Project #136271 Puerto Rico Electrical Power Authority Island Wide FEMA Accelerated Award Strategy ("FAASt") in the amount of $9.98 billion. This award is intended to allow funding for PREPA to repair and restore the Puerto Rico electric power infrastructure to industry standards, without

regard to pre-disaster condition, and to restore components not damaged by the disaster when necessary to fully effectuate restoration of the disaster-damaged components, resulting in restoration of the function of the facility or system to industry standards, as authorized by Section 20601 of the Bipartisan Budget Act of 2018 and described in FEMA Recovery Policy FP-104-009-5 Version 2 (Implementing Section 20601 of the 2018 Bipartisan Budget Act through the Public Assistance Program, September 11, 2019). The facilities provide a critical service as defined in Stafford Act Section 406. The list of specific projects that will be undertaken using the FAASt funding remains under development. To improve the system's reliability, Genera proposes to submit to COR3 and FEMA, for their respective approval, the Detailed Scope of Work ("SOW") for the project # 164988 under the DR-4339-PR Public Assistance Program ("PA"). This document provides a description of the project, including scope, schedule, and cost estimates, as well as Environmental & Historical Preservation ("EHP") requirements and proposed 406 hazard mitigation work.

On October 16, 2020, FEMA's Hazard Mitigation Grant Program (HMGP) approved phase 1 of the project 4339-0010 PREPA Simple Cycle Gas Turbines (Peaker & Black start units). On November 11th, 2022, the Puerto Rico Energy Board (PREB), approved this project in its "*Resolution and Order on PREPA's October 26 Motion and October 27 Motion*". On January 06, 2023, FEMA approved amended activities to align the project scope of work to the PREB conditional approval. FEMA's approval of the additional cost resulting from the approved amended scope is still pending. On October 16, 2023, COR3 submitted a request to FEMA to move the Simple Cycle Gas Turbines project from HMGP to PA. On December 01, 2023, FEMA responded that they must have a detailed scope of work and verify no duplation of benefits, programs, or insurance exists to consider the request. Complying with FEMA request, Genera hereby is submitting the requested detailed scope of work.

III. Project Description

Genera PR proposes the substitution of existing equipment with new and more efficient generation units on Yabucoa, Jobos, Daguao and Costa Sur and the construction of two new control rooms for Battery Energy Storage System (BESS) in PREPA's Costa Sur and San Juan Power Plants.

As approved in Phase 1 under Hazard Mitigation Grant Program (HMGP) Project 4339-0010, Simple Cycle Gas Turbines (Peaker & Black Start units) are now being installed in Yabucoa and Costa Sur, but as PA Section 406 mitigation measures.

The Section 406 mitigation measure hereby proposed in Yabucoa Site consist of two (2) 18MW each. Reciprocating Internal Combustion Engine (RICE) units will be used as Black Start.

For Costa Sur, the two (2) 18MW each Reciprocating Internal Combustion Engine (RICE) units will be used as Black Start. The Peakers on San Juan are no longer being pursued, per PREB resolution and order from July 23, 2024. An additional 18MW RICE will be installed on Costa Sur instead, as an additional 406 mitigation measure Black Start unit.

Before construction of new Peakers starts, a selective demolition of existing Peakers along with modifications to the electrical transmission system will be needed, to make the necessary space.

Genera will use existing Points of Interconnections (POI) in PREPA's Yabucoa, Costa Sur, Daguao, Jobos generation facilities to install Peaker units (RICE & Combustion turbine). RICE multi fuel engines are capable of operating with heavy fuel oil, light fuel oil, natural gas, and hydrogen with an engine speed of 500RPM. They are considered a low RPM engine, which is capable of going from start up to base load in just 5 minutes. Along with the unit comes the auxiliary equipment and systems necessary for the functionality and operation of the engine. These systems include gas/liquid fuel supply, air intake, exhaust stacks, lube oil, cooling system, starting, and instrument air. A robust Selective Catalytic Reduction (SCR) emissions control system coupled with ammonia injection will be implemented, which requires the expansion of aqueous ammonia storage and distribution. The units will be enclosed in an engine hall, which will be outfitted with fire protection, a water service system and will be connected to the Oily Water System. The control and operation of this unit will be handled through a local control room and/or the Remote-Control Operation Center that will be built in the San Juan Steam Plant Complex for Yabucoa, Daguao and Jobos and the Costa Sur Operation Center for Costa Sur Steam Plant Complex. Before construction starts, a selective demolition of non-historic properties being used as warehouses along with modifications to the electrical

transmission system will be done, to make the necessary space. These demolitions are necessary to accommodate the new RICE and combustion turbines. The equipment will maintain the same location within the same parcel of the existing structures to be demolished, because all work will be done within the boundaries of existing generation plants.

The disposal of debris generated will occur as authorized by the Puerto Rico Department of Natural and Environmental Resources (PRDNER). Specifically, all recyclable material will be diverted to permitted recycling facilities. Non-recyclable debris will be sent to authorized landfills only.

Under the Scope of Work proposed only the construction and installation of new foundations will occur. The staging areas are conceptualized to be within the boundaries of the Yabucoa, Costa Sur, Daguao, Jobos generation facilities.

Combustion turbine will be medium sized frame units with dual fuel capability to allow for flexible operation throughout various scenarios. Auxiliary systems include Gas/Liquid Fuel Supply, air intake, exhaust, lube oil, cooling system, and instrument air. Lube Oil systems will be installed with its associated heat exchangers, Lube Oil Pumps, Lube Oil Conditioning skids, reservoir tanks and interconnecting piping. Exhaust stack design, construction, and installation will allow for future Combined Cycle capability and include transitioning ducts, bypass dampers, and vertical exhaust stack sections. Dry Low Emissions Burner technology is to be applied allowing for operation in a wide load range without the need of water, steam, or any other exhaust gas emission control methods. The dual fuel system will allow for fuel changeover. Installation of both Gas and Liquid Fuel systems include Fuel Filtering/conditioning skids, Fuel Supply Pumps, Metering and Pressure regulating skids, and required valves and piping. Modification of Fuel Gas and Liquid Fuel distributions will include, but are not limited to, expansion of existing gas supply pipelines, installation of additional fuel gas metering stations, and reconfiguration of existing liquid fuel distribution pipelines.

The intention is to substitute existing units with RICE and combustion turbines to provide synchronous condenser capabilities to the grid. The existing unit's capacities are: Yabucoa 44.8 MW, Costa Sur 44.8MW, Daguao 44.8 MW and Jobos 44.8MW. No additional units will be installed, but rather a substitution of existing units will occur. The proposed equipment capacities for Yabucoa will

be 36.26MW, Costa Sur 136.48MW, Daguao 36.26M and Jobos 36.26MW. As shown, except for Costa Sur, the equipment capacity is less than the existing units. Moreover, the actual equipment is not operating efficiently and therefore the environmental effects of the currently installed units are significant. These improved Peakers are more efficient in terms of fuel consumption and air emissions. One of the main benefits of the new substitution equipment (Peaker's) is precisely the reduction on emissions, which are lower than the existing ones, representing a cumulative benefit to the environment (see attachment Genera Peaking Project Emissions & capacities Comparison 08.19.2024.pdf). Particularly in Costa Sur, the Clean Air Act Title V existing permits air emission allowances are higher than the total emissions forecasted with the new equipment to be installed. This proposed Scope of Work is a mere interchange and significantly reduces air emissions by adhering to strict manufacturing standards and higher efficiency rates. Compared to September 17, 2017, when Hurricane Maria caused the damage, the net effect in terms of air emissions will be a decrease in every single facility covered under this Scope of Work.

The Yabucoa gas turbine is situated on the eastern coast of Puerto Rico, adjacent to the town of Yabucoa. The facility comprises two oil-fired gas turbines and two oil tanks.

Costa Sur operates on the southern coast of Puerto Rico in Guayanilla and is owned by PREPA and operated by Genera. The Plant has two operational steam power generation units with a combined nameplate generation capacity of 820 megawatts (MW). There are four non-operational steam units that are no longer in service. Finally, there are two 21-MW black start capable gas turbine (GT) generators on site: GT #1.1 and GT #1.2.

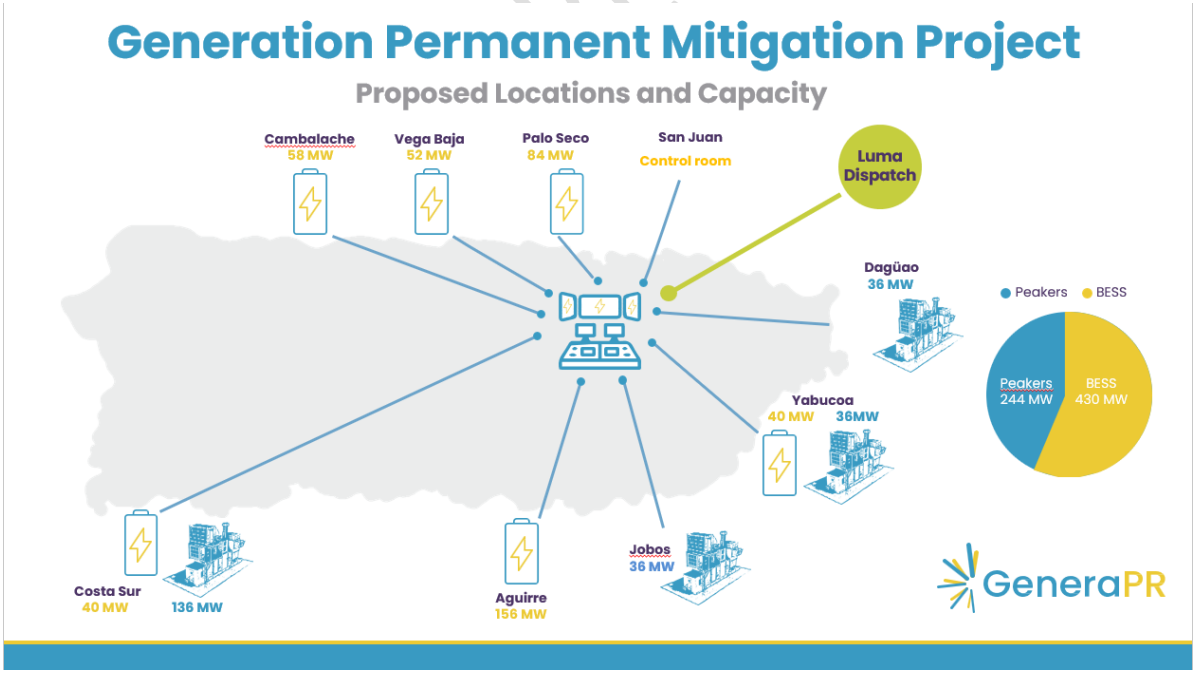
The Daguao gas Turbine Power Block (PREPA Daguao) is situated in the eastern part of Puerto Rico near the town of Ceiba (PR-3, KM 58.3) and it is used to produce electric energy. The Power Block Consist of two combustion turbines or gas turbines which uses No. 2 fuel oil to generate electricity. The No. 2 fuel oil is received by truck and pumped into a fuel storage tank. The fuel is pumped from the tank to the turbines.

At the Municipality of Guayama, the Jobos Turbine Power Block (PREPA Jobos) is placed (PR-3, Km 142.2) and dedicated to the production of electricity. The

Power Block consists of two combustion turbines which combust No. 2 fuel oil to generate electricity. The No. 2 fuel oil is received by truck and pumped into a fuel storage tank. The fuel is pumped from the tank to the gas turbines.

The San Juan Plant is located on the northern coast of Puerto Rico in San Juan. It consists of four thermal steam units and two combined-cycle units with a total nameplate capacity of 864 MW. The Plant has two main types of power generation units: conventional steam plants (Units 7, 8, 9, and 10) and combined-cycle power blocks (Units 5 and 6). The four conventional steam plants are fired using heavy fuel oil (HFO) and consist of a Combustion Engineering (now GE Power) natural circulation boiler, a General Electric condensing steam turbine (ST) generator and supporting auxiliary equipment. Each generator is rated for 133,689 kVA, and each unit (Units 7, 8, 9, and 10) is rated at 100 MW. Construction of the Plant began in the early 1950s and continued with Unit 7 going into commercial service in 1965 and the last thermal unit, Unit 10, beginning commercial service in 1968.

Figure 1: Project Location



IV. Code and Standards

The following will be referenced when applying specific codes, specifications, and standards to the project design:

- Consensus-based codes, per FEMA (Public Assistance Alternative Procedures (Section 428) Guide for Permanent Work FEMA-4339-DRPR, February 2020).
- Industry standards per FEMA Recovery Policy FP-104-009-5, Version 2, Implementing Section 20601 of the 2018 Bipartisan Budget Act through the Public Assistance Program.
- FEMA Recovery Interim Policy FP-104-009-11 Version 2.1, Consensus- Based Codes, Specifications, and Standards for Public Assistance.
- Rus 1730B - The referenced standards, as defined and as per their requirements,
  state every system is required to have an Emergency Restoration Plan (ERP) in the event of a major failure or storm event.
- LUMA Operation Reserve Standard - LUMA, as the T&D System Operator, is responsible for ensuring that the system has enough generation resources to function properly. This is also known as resource adequacy. To fulfill this responsibility, LUMA has set a standard for Operational Reserve Capacity.

Table 1

Formula	**Translation of Formula**
Average Maximum Unit Output MW + 300MW Generation Dispatch Reserve = Operational Reserve Capacity	380MW + 300MW = 680MW[2]

Table 2

Generation Source	Total Forecast for 2026 (MW)	Total Forecast for 2030 (MW)
PREPA Base Units	2483	2483
AES	484	484
EcoElectrica	550	550

Reserve Units	627	627
New Black start Units[3]	131	131
Mitigation Peaker Units[1]		199
Total Energy Capacity	4275	4474
Average Peak Demand Forecast	-2800	-2800
Forced and Unplanned Outages	-506	-506
Available Energy Reserve	**969[3]**	**1168**

[1] Mitigation Peaker units will provide 199 MW and synchronous condenser capabilities to the grid, will be installed in existing Points of Interconnections (POI).
[2] This will be the Generation Reserve once all schedule repairs have been successfully completed by the end of 2026.
[3] Units will provide synchronous condenser capabilities to the grid, will be installed in existing Points of Interconnections (POI).

V. Mechanism for allocation of FAASt 428 (Donor) Funds

Material and Equipment purchased using PA obligated project 673691. Due to exigent circumstances, to avoid long lead times and increase the efficiency of recovery, PREPA/Genera used FAASt 428 funds to purchase equipment that is clearly intended for the mitigation purposes described in the Peaker's initiative. Upon submittal of each Peaker's Scope of Work to FEMA, an amendment shall be created to return the 428 funds used for equipment to 136271 – Puerto Rico Electrical Power Authority Island Wide FAASt project.

VI. 428 – Yabucoa Site

Location: Carretera #3 Humacao, PR 00791
Latitude / Longitude: 18.105999, -65.823684

A. Site Description:

Genera is proposing the demolition of existing peakers installation of new generating units in replacement of non-efficient equipment at the Yabucoa Gas Turbine Power Plant, an existing gas turbine plant located in the Municipality of Yabucoa, Puerto Rico. The Project will consist of the demolition of the plant's existing mechanical workshop, main warehouse, safety & PMO offices, and several small unit shops; and the installation **of two (2) black start** of 18 MW reciprocating internal combustion engine (RICE), and associated infrastructure. The Black Start RICE installation is being planned to provide sustainable grid support.

The Yabucoa gas turbine is on the easter coast of Puerto Rico, adjacent to the town of Yabucoa and on a 7.55-acre lot, the project be in approx. 1.11 acres lot (60,926 ft²). The facility comprises two oil-fired gas turbines and two oil tanks. These turbines generate electricity by burning No. 2 fuel oil, which is delivered to the facility via trucks. In response to emergency power needs, a TM2500 mobile gas turbine was installed at the plant. This mobile gas turbine generates 25 megawatts (MW) of emergency power for the region.

On November 7, 2017, a TM2500 mobile gas turbine was installed at the Yabucoa power plant, generating 25MW emergency energy. The Yabucoa plant was already fully functional 30 days later, offering the necessary stability to the afflicted network.

The combination of 85MW in the Yabucoa plant now helps with the stabilization of the electricity grid and the restoration of fundamental and necessary electricity for thousands of homes, hospitals, schools and businesses, a vital step in the long process for the reconstruction of Puerto Rico.

For Yabucoa, Genera is accounting for the worst-case scenario, considering the entire marked footprint impacted and underground interconnection. Please

refer to the attached General Arrangement. The site is currently under design, and Genera will provide detailed information at the final design stage.

B. Boring:

Table 1: Yabucoa Site – Boring Location, Diameter, Depth, & Volume

Boring #	Latitude	Longitude	Diameter (in)	Depth (ft)	Volume (Ft^3)
B-2	18.10612	-65.82374	4	75	6.54
B-3	18.10632	-65.82368	4	100	8.73
B-4	18.10596	-65.82352	4	100	8.73
B-5	18.10607	-65.82341	4	75	6.54
B-6	18.10581	-65.82332	4	75	6.54
B-9	18.10590	-65.82308	4	100	8.73

a. Equipment: drill rig for subsurface drilling in accordance with ASTM D6151.
b. Access roads: All boring locations have access through PR-3.
c. Vegetation removal will not be required.

Figure 1: Yabucoa Site - Boring Locations

Boring's location coordinates, equipment to be utilized and access roads submitted. See supporting document:

- BORING ACCESS VEGETATION STAGING AREA PLAN - Yabucoa (Peakers).xls

C. Recovery Solution – 428

a. Permits:

i. EHP Review/ Environmental Assessment.
ii. Section 106 Consultation
iii. USFWS No Effects Determination
iv. Coastal Zone Consistency Certification
v. DNER: Lead and Asbestos Removal Permit

vi. DNER Rule 141 Environmental Documentation (construction & demo)
vii. NPDES CGP for Stormwater Discharges (construction & demo)
viii. Permiso Unico Incidental (PUI).

b. Pre-Demolition Activities

i. Perform GPR survey to identify and map existing underground utilities.
ii. Perform Topographic surveys.
iii. Perform Geotechnical Surveys
iv. Remove and clean surfaces of remaining liquid level and solids of generating units.
v. Remove liquid fuels and lubricating oils for all exposed surfaces.

c. Pre-Demolition Activities - Tanks & Dikes

i. Empty fuel oil tanks
ii. Disconnection of services such as feed and supply fuel, electricity.

d. Demolition - Mechanical - Tanks & Dikes

i. Uncouple/cut and cap water piping.
ii. Uncouple/cut and cap fuel piping.
iii. Remove fuel oil tanks.
iv. Remove water piping's and pumps.
v. Remove fuel piping's and pumps.

e. Demolition - Structural - Tanks & Dikes

i. Remove of dikes walls and concrete floors

f. Pre-Demolition Activities – Office

i. Disconnect services such as electricity, water and sanitary.

g. Demolition - Mechanical - Office & Buildings

i. Removal of HVAC System
ii. Remove piping for potable water and fire protection.

h. Demolition - Electrical - Office & Buildings

i. Remove overhead distribution lines and poles.
ii. Remove power transformer and pull out any associated underground feeders/wiring.

i. Demolition - Mechanical - Fuel Unloading Station

i. Uncouple/cut and cap fuel piping.
ii. Demolition of concrete floor

j. Demolition - Structural - Fuel Unloading Station

i. Demolition of fuel unloading building structure
ii. Demolition of concrete floor

k. Demolition - Mechanical - Generating Units

i. Dismantle generating units.
ii. Uncouple/cut and remove above ground piping (fuel oil, lube oil, air, cooling water systems)
iii. Demolish compressed gas station.
iv. Uncouple/cut and remove above ground piping for compressed air.
v. Uncouple/cut and cap underground piping for compressed air.
vi. Demolish fire protection system.
vii. Uncouple/cut and remove above ground piping for fire protection.
viii. Uncouple/cut and cap underground piping for fire protection.

l. Demolition - Structural - Generating Units

i. Dismantle structural steel frames surrounding generating units.
ii. Dismantle/demolish all generating units enclosures.
iii. Demolition and disposal of electrical/control rooms
iv. Demolition and disposal of plant battery room
v. Removal of concrete foundations

m. Demolition - Electrical - Generating Units

i. Demolition and disposal of electrical switchgear for each transformer and pull out any associated underground feeders/wiring.
ii. Removal of pad mounted transformers and pull out any associated underground feeders/wiring.
iii. Demolition and disposal of electrical/control room components and pull out any associated underground feeders/wiring.
iv. Demolition and disposal of plant battery room components and pull out any associated aboveground and underground feeders/wiring.
v. Demolition and disposal of electrical bus duct between generators and switchgear

n. Material Disposal

i. Removal and segregation of non-regulated waste materials at the designated staging area prior to transporting offsite for disposal.
ii. Transportation of non-regulated waste materials to an approved offsite disposal facility
iii. Removal and segregation of regulated waste material and transportation to an approved offsite disposal facility

o. Construction – Utilities (Non-permanent):

i. Provide and install 120V, 240V 208V 3-Phase construction power source.
ii. Provide and install stepdown transformer and distribution of 480V construction power.
iii. Provide and install temporary facilities such as bathrooms, hand washing station, breakroom, office space and internet connection.
iv. Provide and install temporary lighting.

p. Construction – Permits:

i. US EPA non-PSD Applicability Determination.
ii. PR DNER – Construction Permit for Air Emissions.
iii. US FAA – Determination of Hazard.
iv. US EPA – NPDES individual Industrial Wastewater Permit (Amendment to Existing).
v. PR DTOP – Transportation permits.

q. Construction – Mechanical (Permanent):

i. Provide and install fire protection system.
ii. Provide and install interconnections of fire protection to existing piping.
iii. Prove and install liquid fuel oil (LFO) tank. Approximate 450,000 gallons (DXH): 40FT X 48FT.
iv. Provide and install aqueous ammonia tank. Approximate 30,000 gallons (D x H) (15ft x 50 ft)
v. Provide and install aqueous ammonia piping, pump systems and accessories.
vi. Prove and install compressed air system and accessories.
vii. Prove and install piping for potable water.
viii. Provide and install interconnections of potable water to existing city water piping.
ix. Provide and Installation of RICE units.
x. Provide and install RICE cooling systems.
xi. Provide and install exhausts duct and stacks.

r. Construction – Electrical (Permanent):

i. Provide and install reconfiguration of high voltage power lines and wiring.
ii. Provide and install underground conduits.

iii. Provide and install ground grid and testing.
iv. Provide and install Aux service feeder, transformer wiring, terminations, and commissioning.
v. Provide and install transformer and switchgear.
vi. Provide cable (Wiring) and testing.
vii. Provide and install site lighting system.
viii. Provide and install an on-site control system.

s. Construction Testing & Commissioning:

i. Perform RICE 1 & 2 testing and commissioning.
ii. Perform cables and circuit testing.
iii. Perform testing of auxiliary components.
iv. Perform metering and protection system testing and commissioning.
v. SCADA and communications point to point testing
vi. Perform main power transformer testing.
vii. Perform system startup.

D. Environmental & Historic Preservation ("EHP") Requirement:

1. No construction work will commence prior to the issuance of specific expressed written FEMA approval for the specific scope of work. FEMA-required EHP compliance review will precede the execution of each proposed scope of work submitted by PREPA, through its agent Genera PR, to FEMA. PREPA, through its agent Genera PR, is aware of its responsibility for coordinating, notifying, obtaining permits, and complying with applicable federal, state, and local laws, regulations, and executive orders and understands that failure to comply with EHP requirements may jeopardize FEMA funding.
2. The following general methods of construction and list of equipment is expected to be used (Yabucoa_Peakers_GA_08.22.2024):

a) Pre-Demolition Activities

i. Perform GPR survey to identify and map existing under-ground utilities.
ii. Perform Topographic surveys.

iii. Perform Geotechnical Surveys
iv. Remove and clean surfaces of remaining liquid level and solids of generating units.
v. Remove liquid fuels and lubricating oils for all exposed surfaces.

b) Pre-Demolition Activities - Tanks & Dikes

i. Empty fuel oil tanks
ii. Disconnection of services such as feed and supply fuel, electricity and any other services associated with the tank.

c) Demolition - Mechanical - Tanks & Dikes

i. Uncouple/cut and cap water piping.
ii. Uncouple/cut and cap fuel piping.
iii. Remove fuel oil tanks.
iv. Remove water piping's and pumps.
v. Remove fuel piping's and pumps.

d) Demolition - Structural - Tanks & Dikes

i. Remove of dikes walls and concrete floors

e) Pre-Demolition Activities – Office

i. Disconnect services such as electricity, water and sanitary.

f) Demolition - Mechanical - Office & Buildings

i. Removal of HVAC System
ii. Remove piping for potable water and fire protection.

g) Demolition - Electrical - Office & Buildings

i. Remove overhead distribution lines and poles.
ii. Remove power transformer and pull out any associated underground feeders/wiring.

h) Demolition - Mechanical - Fuel Unloading Station

i. Uncouple/cut and cap fuel piping.
ii. Demolition of concrete floor

i) Demolition - Structural - Fuel Unloading Station

i. Demolition of fuel unloading building structure
ii. Demolition of concrete floor

j) Demolition - Mechanical - Generating Units

i. Dismantle generating units.
ii. Uncouple/cut and remove above ground piping (fuel oil, lube oil, air, cooling water systems)
iii. Demolish compressed gas station.

iv. Uncouple/cut and remove above ground piping for compressed air.
v. Uncouple/cut and cap underground piping for compressed air.
vi. Demolish fire protection system.
vii. Uncouple/cut and remove above ground piping for fire protection.
viii. Uncouple/cut and cap underground piping for fire protection.

k) Demolition - Structural - Generating Units

i. Dismantle structural steel frames surrounding generating units.
ii. Dismantle/demolish all generating units enclosures.
iii. Demolition and disposal of electrical/control rooms
iv. Demolition and disposal of plant battery room
v. Removal of concrete foundations

l) Demolition - Electrical - Generating Units

i. Demolition and disposal of electrical switchgear for each transformer and pull out any associated underground feeders/wiring.
ii. Removal of pad mounted transformers and pull out any associated underground feeders/wiring.
iii. Demolition and disposal of electrical/control room components and pull out any associated underground feeders/wiring.
iv. Demolition and disposal of plant battery room components and pull out any associated aboveground and underground feeders/wiring.
v. Demolition and disposal of electrical bus duct between generators and switchgear

m) Material Disposal

i. Removal and segregation of non-regulated waste materials at the designated staging area prior to transporting offsite for disposal.
ii. Transportation of non-regulated waste materials to an approved offsite disposal facility
iii. Removal and segregation of regulated waste material and transportation to an approved offsite disposal facility

n) **Construction – Utilities (Non-permanent):**
   i. Provide and install 120V, 240V 208V 3-Phase construction power source.
   ii. Provide and install stepdown transformer and distribution of 480V construction power.
   iii. Provide and install temporary facilities such as bathrooms, hand washing station, breakroom, office space and internet connection.
   iv. Provide and install temporary lighting.

o) **Construction – Permits:**
   i. US EPA non -PSD Applicability Determination.
   ii. PR DNER – Construction Permit for Air Emissions.
   iii. US FAA – Determination of Hazard.
   iv. US EPA – NPDES individual Industrial Wastewater Permit (Amendment to Existing).
   v. PR DTOP – Transportation permits.

p) **Construction – RICE - Civil (Permanent):**
   i. Preparation of site to accommodate construction equipment.
   ii. Provide and install erosion control system.
   iii. Perform excavation and backfilling, total excavations 208,424ft³ for ground disturbance.
   iv. Perform site grading for concrete foundations.
   v. Compacting and testing of equipment and road footprint
   vi. Provide and install drainage system and interconnection.

q) **Construction – RICE - Structural (Permanent):**
   i. Provide and install concrete pads for RICE 1 & 2.
   ii. Provide and install main utilities and ancillary equipment foundation and setting with 17,453.67 ft³ of disturbance area.
   iii. Reinforcing steel installation and concrete pouring.
   iv. Provide and install concreate foundations.
   v. Prove and install main power transformer structure.
   vi. Prove and install construction of engine hall building.

r) **Construction– Mechanical (Permanent):**
   i. Provide and install fire protection system.
   ii. Provide and install interconnections of fire protection to existing piping.
   iii. Prove and install liquid fuel oil (LFO) tank. Approximate 450,000 gallons (DXH): 40FT X 48FT.

iv. Provide and install aqueous ammonia tank. Approximate 30,000 gallons (D x H) (15ft x 50 ft)
v. Provide and install aqueous ammonia piping, pump systems and accessories.
vi. Prove and install compressed air system and accessories.
vii. Prove and install piping for potable water.
viii. Provide and install interconnections of potable water to existing city water piping.
ix. Provide and Installation of RICE units.
x. Provide and install RICE cooling systems.
xi. Provide and install exhausts duct and stacks.

s) Construction– Electrical (Permanent):

i. Provide and install reconfiguration of high voltage power lines and wiring.
ii. Provide and install underground conduits.
iii. Provide and install ground grid and testing.
iv. Provide and install Aux service feeder, transformer wiring, terminations, and commissioning.
v. Provide and install transformer and switchgear.
vi. Provide cable (wiring) and testing.
vii. Provide and install site lighting system.
viii. Provide and install an on-site control system.

t) Construction Testing & Commissioning:

i. Perform RICE 1 & 2 testing and commissioning.
ii. Perform cables and circuit testing.
iii. Perform testing of auxiliary components.
iv. Perform metering and protection system testing and commissioning.
v. SCADA and communications point to point testing
vi. Perform main power transformer testing.
vii. Perform system startup.

3. **Contractor Equipment to be Used**:
   a) Excavator.
   b) Crawler Crane.
   c) Semi-truck with low-bed trailer.
   d) Man lift.

e) Bucket Truck.
f) Dump Truck

4. **Removal of Vegetation**:
   a) Some maintained lawns are present on the site and will be affected during construction. The adjacent parcel is primarily landscaped with grass, small shrubs, and sparse vegetation, which will also be affected during construction.

5. **Location of Access Roads**:
   a) Entry point will be through existing Yabucoa power plant main entrance. The main access road is Road PR-3. The connecting road is PR-906. (Latitude /Longitude: 18.1060971, -65.8237465).
   b) No temporary roads will be required.
   c) Refer to the following aerial picture of the conceptual layout for the access road to the generation plant.

Figure 2: Yabucoa Site - Access

6. **Types of Debris**:
   a) Metal scrap, domestic waste, wood.

b) The debris will be separated and taken to an approved waste disposal facility. Location permits and supporting documentation will be provided at closeout.

7. **Description of Staging Area**:
   a) The staging area will be inside the Yabucoa Power Plant premises and will serve as an assembly point for all the materials to be installed. Occupies area in a lot of .7 acres and coordinates (18.106346, -65.822873). A temporary fence will be installed. No demolition or ground disturbance is required.

Figure 3: Yabucoa Site - Staging Area

8. **Hazardous Materials**
   a) Describe the activity and the hazardous material involved. Calculate the quantity to be generated or disposed and include the management and disposal plan.
      i. The identified materials that can potentially be found in the generation plant is asbestos, PCBs, lead, SF6 gas, oil from the transformer & breakers, diesel, and sealants. These

contaminants will be handled and disposed of as per the state and federal laws and regulations.

ii. Genera will provide actual disposal locations, permit quantities and supporting documentation as a condition of the FEMA REC.

iii. These products and their residues will be stored in special covered areas for disposal by an authorized company and provided with temporary spill controls until collected. All paint containers and curing compounds will be tightly sealed and stored when not in use. Excess paint will not be discharged to the storm system, properly disposed, according to the manufacturer's instructions.

iv. Material amounts will be provided by a certified management contractor performing a site evaluation calculation for asbestos, lead paint, and roof material.

v. Prior to the start of any demolition activities, inspections, and tests for the presence of asbestos will be conducted by a trained and certified laboratory.

vi. All asbestos waste found at the Generation Plant will be disposed of at an approved landfill designated by Puerto Rico's Department of Natural and Environmental Resources (DNER). All asbestos waste generated will be bagged and transported in accordance with all applicable State and Federal regulations. There will be no exceptions.

vii. Any asbestos spills will be cleaned up immediately to prevent the dispersal of fibers. Prudence will be exercised to avoid contamination of laboratory facilities or exposure of personnel to asbestos. Asbestos spills will be cleaned up with wet methods and/ or a High-Efficiency Particulate-Air (HEPA) filtered vacuum.

viii. The project that includes building demolition with asbestos will provide a copy of the DNER approved plan or evidence of plan submission.

ix. In case the presence of asbestos is confirmed in the building to be demolished, Genera will follow all permits protocols required by law to properly dispose of the hazardous materials from the premises. Genera will provide evidence of the plan submission as a condition of FEMA REC.

x. Disposal of damaged transformers or wood poles with creosote, Genera will include the management and disposal plan. The plan must include the final disposition site.

xi. Transformers and pole disposal will be handled as per the Waste Disposal Management Plan. Genera will provide actual disposal locations and quantities as a Condition of FEMA REC.

xii. The removal of the transformer will require testing of the existing oil for PCBs levels, drain oil, and delivery to the approved waste disposal site as per Environmental Regulations.

xiii. Removal of wood poles with creosote treatment will be handled according state and federal regulations.

9. **Water Crossings**:

a) Specify if the project will affect a waterway or body of water.

i. No.

b) Modification of a body of water or wetland: Does the project require dredging, excavation, disposal of material, adding fill material that might result in any modification of a body of water or wetland designated as "waters of the U.S."?

i. No Adverse Effect. Scope of equipment repair/substitution and potential staging areas are outside any wetland zones.

c) Does the project alter a watercourse, water flow patterns, or a drainage way, regardless of its floodplain designation?

i. No.

d) Flood zone: Is the project located in a flood zone, floodway or will it have a negative impact on the flood zone?

i. The Generation Plant is in Flood Zone A according to the ABFE. The project will have no negative impact on the flood zone.

e) In accordance with the updated version of FEMA Region II Memorandum, dated October 10, 2017, Guidance for the use of Available Flood Hazard Information for the Government of Puerto Rico in complying with FEMA Policy 104-008-2, 44 CFR Part 9, and Executive Order 11988 (Floodplain Management). All hazard mitigation proposals under alternative procedures must be

designed using the best available flood hazard data and in compliance with applicable regulations and policy.

Figure 4: Yabucoa Site - National Wetlands Inventory

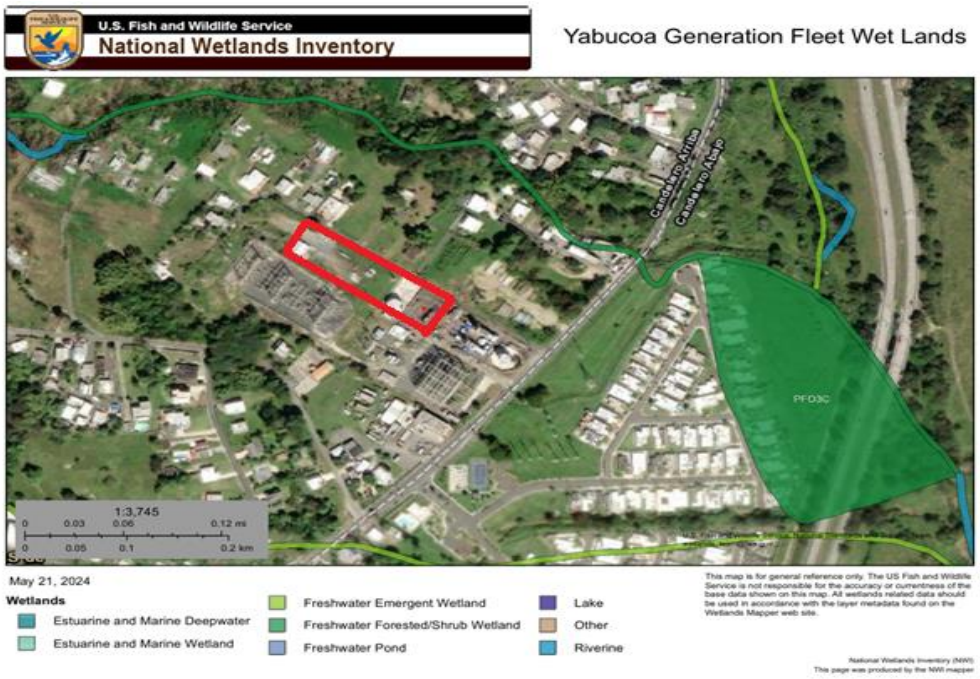
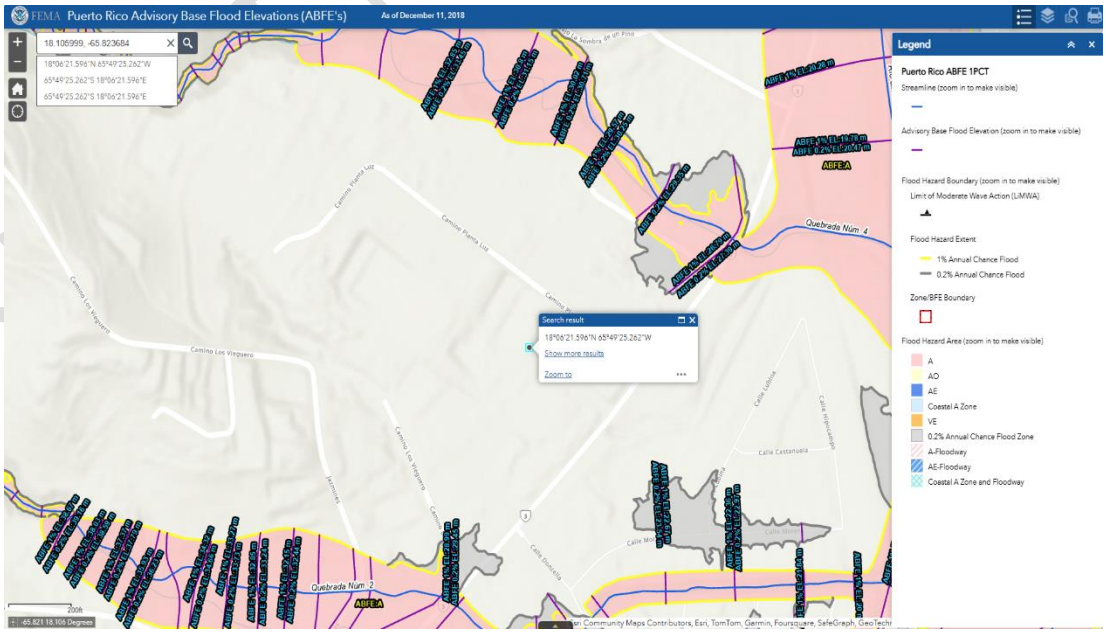


Figure 5: Yabucoa Site - ABFE



9. **Structure Age**:
    a) Provide the construction date of any buildings or structures within the project. Include those near the project.
        i. Yabucoa Gas Turbine was constructed in 1971.
        ii. The Yabucoa Gas Turbine Power Plant began operating in the 1970s. The project area is located entirely within previously disturbed areas inside the existing plant boundary. According to the OECH Interactive Map there are no registered National Historic Places within 1 mile of the site. An archaeologist has been enlisted to perform an evaluation of whether the proposed action could affect historic properties or cultural resources, work commenced in May 2024.
10. **Ground Disturbance**:
    a) Provide a description of the new ground disturbance by giving the dimensions, if any. Include an aerial photo map showing the extent of the disturbance with coordinates.
        i. Based on the current general arrangement, the proposed action is expected to disturb 2 acres of land. A majority of this land is previously disturbed land within the existing power station; however, a small portion of the project will occur on a vacant parcel adjacent to the eastern border of the existing power station. The adjacent parcel is partially disturbed, with a dirt access road, and is currently used for storage of equipment. Refer to BORING ACCESS VEGETATION STAGING AREA PLAN - Yabucoa (Peakers).xls
        ii. Genera has reviewed the Archaeological GIS layers provided by the Puerto Rico Planning Board and confirmed no previous features in the project area. Any features discovered during construction will be managed in compliance with Project Specific Programmatic agreement among FEMA, COR 3, and PREPA, 2022.

Table 2: Yabucoa Site - Ground Disturbance

Ground Disturbance	Latitude	Longitude	Depth (ft)	Volume (Ft^3)
EQUIPMENT FOUNDATIONS	18.10610	-65.82375	4	146,789.42
ELECTRICAL DUCT BANK	18.10610	-66.82375	6	17,453.67

b) The project SOW will not affect water or sewer utility services.
c) Indicate the prior/current use of the area to be impacted:
    i. Not Applicable. Area is an existing Generation Plant. 100% of the work to be completed will be within the existing and already impacted Generation Plant perimeter.
d) Explain how materials will be stockpiled and disposed of:
    i. The excess of soil material will be stockpiled temporarily onsite in the staging area or within the Generation Plant. Disposal of soil will be handled following state and federal regulations.
    ii. Genera will provide actual disposal locations, quantities and supporting documents as a condition of the FEMA REC.
e) Specify final disposition site:
    i. The disposal of materials will be in an approved facility, location, quantities and supporting documentation will be provided at closeout.

VII. Costa Sur Scope of Work 428

Location : Carretera 127 Guayanilla, PR 00656
Latitude / Longitude : 18.001478, -66.751438

A. Site Description:

Genera is proposing the demolition of existing peakers installation of new generating units in replacement of non-efficient equipment at the Costa Sur Power Station with a control room for the BESS equipment, an existing power station located in the Municipality of Guayanilla, Puerto Rico. The Project will consist of the demolition of Units 1-4 and the installation of two (2) 50-megawatt (MW) combustion turbines (CTs), two (2) 18 MW Reciprocating Internal Combustion Engine (RICE) that are the black start, and associated infrastructure. The project is being planned to provide sustainable grid support.

Costa Sur is on the southern coast of Puerto Rico in Guayanilla and is owned by PREPA and operated by Genera, which has approx. 990 acres Lot, and the project is .26 acres lot (76,423ft²). The Plant has two operational steam power generation units with a combined nameplate generation capacity of 820 megawatts (MW). There are four non-operational steam units that are no longer in service. Finally, there are two 21-MW black start capable gas turbine (GT) generators on site: GT #1.1 and GT #1.2.

Steam Units, 5 and 6, are each rated at 410 MW; they began commercial operation in 1972 and 1973, respectively. Their boilers are tangentially fired CE that were retrofitted in 2011 to burn natural gas but also still have the flexibility to burn a) a combination of natural gas and HFO or b) HFO only as originally designed. Fired with natural gas, they can meet their original maximum continuous rating (MCR) design conditions: 2,970 kilo pounds per hour (klb/hr.) main steam flow and outlet steam conditions of 2,620 psig2 and 1,005°F. The boilers also have a reheat circuit designed to provide 2,371 klb/hr. steam flow at 451 psig and 1,000°F to the intermediate pressure (IP) section of the GE turbines at the rated output of 410 MW.

For Costa Sur, Genera is accounting for the worst-case scenario, considering the entire marked footprint impacted and underground interconnection. Please

refer to the attached General Arrangement. The site is currently under design, and Genera will provide detailed information at the final design stage.

B. Boring:

Table 3: Costa Sur Site – Boring Location, Diameter, Depth, & Volume

Boring #	Latitude	Longitude	Diameter (in)	Depth (ft)	Volume (Ft^3)
B-3	18.00155	-66.75176	4	100	8.73
B-4	18.00163	-66.75114	4	100	8.73
B-5	18.00149	-66.75139	4	75	6.54
B-6	18.00123	-66.75168	4	75	6.54
B-7	18.00129	-66.75110	4	100	8.73
B-8	18.00119	-66.75134	4	75	6.54
B-9	18.00103	-66.75171	4	100	8.73
B-10	18.00155	-66.75060	4	75	6.54
B-11	18.00175	-66.75044	4	100	8.73
B-12	18.00181	-66.75009	4	75	6.54
B-13	18.00159	-66.75220	4	75	6.54

a. Equipment: drill rig for subsurface drilling in accordance with ASTM D6151.
b. Access Roads: All boring sites have access through road PR-681. PR-681 accessible through main road PR-2.
c. Vegetation removal will not be required.

Figure 6: Costa Sur Site - Boring Locations

Boring locations coordinates, equipment to be utilized and access roads submitted. See supporting document:

- BORING ACCESS VEGETATION STAGING AREA PLAN - Costa Sur (Peakers).xls

C. Recovery Solution – 428 Costa Sur Site

1. **Permits:**
    a. EHP Review/ Environmental Assessment.
    b. Section 106 Consultation
    c. USFWS No Effects Determination
    d. Coastal Zone Consistency Certification
    e. DNER: Lead and Asbestos Removal Permit
    f. DNER Rule 141 Environmental Documentation (construction & demo)
    g. NPDES CGP for Stormwater Discharges (construction & demo)
    h. Permiso Unico Incidental (PUI).
2. **Pre-Demolition Activities**
    a. Perform GPR survey to identify and map existing underground utilities.
    b. Perform Topographic surveys.
    c. Perform Geotechnical Surveys
3. **Pre-Demolition Activities - Trailers**
    a. Disconnect services such as electricity, water, sanitary and compressed air.
    b. Remove trailers.
4. **Demolition - Mechanical - Trailer Area**
    a. Disconnection of HVAC System
    b. Remove piping for potable water and fire protection.
5. **Demolition - Structural - Trailer Area**
    a. Remove Trailer Structure
6. **Demolition - Electrical - Trailer Area**
    a. Remove of overhead distribution lines and poles
    b. Remove power transformer and pull out any associated underground feeders/wiring.
7. **Pre-Demolition Activities - Fire Protection Building**
    a. Disconnect services such as electricity, water, sanitary and compressed air.

8. **Demolition - Mechanical - Fire Protection Building**
    a. Remove piping for potable water and fire protection.
    b. Removal of water pumping system
9. **Demolition - Structural - Fire Protection Building**
    a. Removal of building structure
10. **Demolition - Electrical - Fire Protection Building**
    a. Remove of overhead distribution lines and poles
    b. Remove power transformer, pump system controls, and pull out any associated underground feeders/wiring.
11. **Demolition - Structural – Parking**
    a. Concrete and asphalt pavement
12. **Material Disposal**
    a. Removal and segregation of non-regulated waste materials at the designated staging area prior to transporting offsite for disposal.
    b. Transportation of non-regulated waste materials to an approved offsite disposal facility
    c. Removal and segregation of regulated waste material and transportation to an approved offsite disposal facility
13. **Construction – Utilities (Non-permanent):**
    a. Provide and install 120V, 240V 208V 3-Phase construction power source.
    b. Provide and install stepdown transformer and distribution of 480V construction power.
    c. Provide and install temporary facilities such as bathrooms, hand washing station, breakroom, office space and internet connection.
    d. Provide and install temporary lighting.
14. **Construction – Permits:**
    a. US EPA non-PSD Applicability Determination.
    b. PR DNER – Construction Permit for Air Emissions.
    c. US FAA – Determination of Hazard.
    d. US EPA – NPDES individual Industrial Wastewater Permit (Amendment to Existing).
    e. PR DTOP – Transportation permits.
15. **Construction – RICE - Civil (Permanent):**
    a. Preparation of site to accommodate construction equipment.
    b. Provide and install erosion control system.
    c. Perform excavation and backfilling, total excavations 591,242 ft^3 for ground disturbance.

d. Perform site grading for concrete foundations.
e. Perform compacting and testing of equipment footprint.
f. Provide and install drainage system and interconnection.

16. **Construction – RICE - Structural (Permanent):**
    a. Provide concrete foundation preparation and settings.
    b. Provide and install main power transformer and ancillary equipment foundation and setting with 330,445.26 ft³ of disturbance area.
    c. Reinforcing steel installation and concrete pouring.
    d. Provide and install concreate foundations.
    e. Prove and install main power transformer structure.
    f. Prove and install construction of engine hall building.
17. **Construction– RICE - Mechanical (Permanent):**
    a. Provide and install fire protection system.
    b. Provide and install interconnections of fire protection to existing piping.
    c. Prove and install liquid fuel oil (LFO) tank. Approximate 63,000 gallons (DxH): 26x16ft.
    d. Provide and install construction of Aqueous Ammonia tank. Approximate 30,000 gallons (D x H) (15ft x 50 ft)
    e. Provide and install aqueous ammonia piping, pump systems and accessories.
    f. Prove and install compressed air system and accessories.
    g. Prove and install piping for potable water.
    h. Provide and install interconnections of potable water to existing city water piping.
    i. Provide and Installation of RICE units.
    j. Provide and install RICE cooling systems.
    k. Provide and install exhausts duct and stacks.
18. **Construction– RICE - Electrical (Permanent):**
    a. Provide and install reconfiguration of high voltage power lines and wiring.
    b. Provide and install underground conduits.
    c. Provide and install ground grid and testing.
    d. Provide and install Aux service feeder, transformer wiring, terminations, and commissioning.
    e. Provide and install transformer and switchgear.
    f. Provide cable (Wiring) and testing.

g. Provide and install site lighting system.
h. Provide and install an on-site control system.

19. **Construction RICE Testing & Commissioning:**
    a. Perform RICE testing and commissioning.
    b. Perform cables and circuit testing.
    c. Perform testing of auxiliary components.
    d. Perform metering and protection system testing and commissioning.
    e. SCADA and communications point to point testing
    f. Perform main power transformer testing.
    g. Perform system startup.
20. **Construction – Civil – CTG**
    a. Provide preparation of site to accommodate construction equipment.
    b. Provide and install erosion control system.
    c. Perform excavation and backfilling.
    d. Grading of site for concrete foundations construction
    e. Compacting and testing of equipment and road footprint
    f. Construction of drainage system and interconnection
21. **Construction – Structural – CTG**
    a. Provide and install construction of drainage system and interconnection
    b. Provide and install main power transformer and ancillary equipment foundations preparation and setting.
    c. Provide and reinforcing steel installation and concrete pouring
    d. Provide and install foundations construction.
    e. Provide and install main power transformer structure.
22. **Construction – Mechanical – CTG**
    a. Provide and install piping for fire protection.
    b. Provide and install interconnection of fire protection to existing piping.
    c. Provide and install construction LFO Tank. Approximate Main Storage Tank: 1,700,000 gallons (DxH): 85x40 ft
    d. Provide and install LNG & LFO piping, pump systems and accessories.
    e. Provide and install construction of Aqueous Ammonia tank. Approximate 30,000 gallons (D x H) (15ft x 50 ft)

f. Provide and install of Aqueous Ammonia piping, pump systems and accessories
g. Provide and install piping for Demin water.
h. Provide and install CTG unit.
i. Provide and install exhaust ducts and stacks.

23. **Construction – Electrical – CTG**
    a. Prove and install High voltage power poles and wiring.
    b. Provide and install Underground conduits.
    c. Provide and install ground grid and testing
    d. Prove and install Aux Service Feeder - transformer cable, termination, and commissioning.
    e. Provide and install transformer and switchgear.
    f. Provide and install wiring and testing.
    g. Provide and install on-site control system.
24. **Construction – Testing & Commissioning – CTG**
    a. Perform testing and commissioning.
    b. Perform cables and circuit testing.
    c. Perform testing of auxiliary components.
    d. Perform metering and protection system testing and commissioning.
    e. SCADA and communications point to point testing
    f. Perform main power transformer testing.
    g. Perform system startup.

D. Environmental & Historic Preservation ("EHP") Requirement:

1. Other than design, planning and non-destructive due diligence studies, no construction work will commence prior to the issuance of specific expressed written FEMA approval for the specific scope of work. FEMA- required EHP compliance review will precede the execution of each proposed scope of work submitted by PREPA, through its agent Genera PR, to FEMA. PREPA, through its agent Genera PR, is aware of its responsibility for coordinating, notifying, obtaining permits, and complying with applicable federal, state, and local laws, regulations, and executive orders and understands that failure to comply with EHP requirements may jeopardize FEMA funding.
2. The following general methods of construction and list of equipment is expected to be used (Costa Sur_Peakers_GA_08.22.2024):
    a. **Construction – Utilities (Non-permanent):**
        i. Provide and install 120V, 240V 208V 3-Phase construction power source.
        ii. Provide and install stepdown transformer and distribution of 480V construction power.
        iii. Provide and install temporary facilities such as bathrooms, hand washing station, breakroom, office space and internet connection.
        iv. Provide and install temporary lighting.
    b. **Construction – Permits:**
        i. US EPA non-PSD Applicability Determination.
        ii. PR DNER – Construction Permit for Air Emissions.
        iii. US FAA – Determination of Hazard.
        iv. US EPA – NPDES individual Industrial Wastewater Permit (Amendment to Existing).
        v. PR DTOP – Transportation permits.
    c. **Construction – RICE - Civil (Permanent):**
        i. Preparation of site to accommodate construction equipment.
        ii. Provide and install erosion control system.
        iii. Perform excavation and backfilling, total excavations 591,242 ft^3 for ground disturbance.
        iv. Perform site grading for concrete foundations.
        v. Perform compacting and testing of equipment footprint.

vi. Provide and install drainage system and interconnection.

d. Construction – RICE - Structural (Permanent):

i. Provide concrete foundation preparation and settings.
ii. Provide and install main power transformer and ancillary equipment foundation and setting with 330,445.26 ft³ of disturbance area.
iii. Reinforcing steel installation and concrete pouring.
iv. Provide and install concreate foundations.
v. Prove and install main power transformer structure.
vi. Prove and install construction of engine hall building.

e. Construction– RICE - Mechanical (Permanent):

i. Provide and install fire protection system.
ii. Provide and install interconnections of fire protection to existing piping.
iii. Prove and install liquid fuel oil (LFO) tank. Approximate 63,000 gallons (DxH): 26x16ft.
iv. Provide and install aqueous ammonia tank.
v. Provide and install aqueous ammonia piping, pump systems and accessories.
vi. Prove and install compressed air system and accessories.
vii. Prove and install piping for potable water.
viii. Provide and install interconnections of potable water to existing city water piping.
ix. Provide and Installation of RICE units.
x. Provide and install RICE cooling systems.
xi. Provide and install exhausts duct and stacks.

f. Construction – RICE - Electrical (Permanent):

i. Provide and install reconfiguration of high voltage power lines and wiring.
ii. Provide and install underground conduits.
iii. Provide and install ground grid and testing.
iv. Provide and install Aux service feeder, transformer wiring, terminations, and commissioning.
v. Provide and install transformer and switchgear.
vi. Provide cable (Wiring) and testing.
vii. Provide and install site lighting system.
viii. Provide and install an on-site control system.

g. Construction – RICE - Testing & Commissioning:

i. Perform RICE testing and commissioning.
ii. Perform cables and circuit testing.
iii. Perform testing of auxiliary components.
iv. Perform metering and protection system testing and commissioning.
v. SCADA and communications point to point testing
vi. Perform main power transformer testing.
vii. Perform system startup.

h. Construction – Civil - CTG:

i. Provide preparation of site to accommodate construction equipment.
ii. Provide and install erosion control system.
iii. Perform excavation and backfilling.
iv. Grading of site for concrete foundations construction
v. Compacting and testing of equipment and road footprint
vi. Construction of drainage system and interconnection

i. Construction – Structural – CTG

i. Provide and install construction of drainage system and interconnection
ii. Provide and install Main power transformer and ancillary equipment foundations preparation and setting.
iii. Provide and reinforcing steel installation and concrete pouring
iv. Provide and install foundations construction.
v. Provide and install Main power transformer structure.

j. Construction – Mechanical – CTG

i. Provide and install piping for fire protection.
ii. Provide and install interconnection of fire protection to existing piping.
iii. Provide and install construction LFO Tank. Approximate Main Storage Tank: 1,700,000 gallons (DxH): 85x40 ft
iv. Provide and install LNG & LFO piping, pump systems and accessories.
v. Provide and install construction of Aqueous Ammonia tank.
vi. Provide and install Aqueous Ammonia piping, pump systems and accessories.
vii. Provide and install piping for Demin water.
viii. Provide and install CTG unit.

ix. Provide and install exhaust ducts and stacks.

k. Construction – Electrical – CTG

i. Prove and install High voltage power poles and wiring.
ii. Provide and install Underground conduits.
iii. Provide and install ground grid and testing.
iv. Prove and install Aux Service Feeder - transformer cable, termination, and commissioning.
v. Provide and install transformer and switchgear.
vi. Provide and install wiring and testing.
vii. Provide and install on-site control system.

l. Construction – Testing & Commissioning – CTG

i. Perform testing and commissioning.
ii. Perform cables and circuit testing.
iii. Perform testing of auxiliary components.
iv. Perform metering and protection system testing and commissioning.
v. SCADA and communications point to point testing
vi. Perform main power transformer testing.
vii. Perform system startup.

m. Miscellaneous Civil Works

i. Work includes isolated repairs or maintenance activities for pads and drainage systems.

n. Concrete Foundation Work

a) Work includes all work related to the installation of concrete foundations, including:
1. Cast-in-place shallow and deep foundations.
2. Prefabricated concrete foundations.
3. Supply of third-party concrete testing

o. Contractor Equipment to be Used:

i. Excavator
ii. Crawler Crane
iii. Semi-truck with low-bed trailer
iv. Man lift.
v. Bucket Truck
vi. Dump Truck

p. Removal of Vegetation

i. Not applicable to this project.

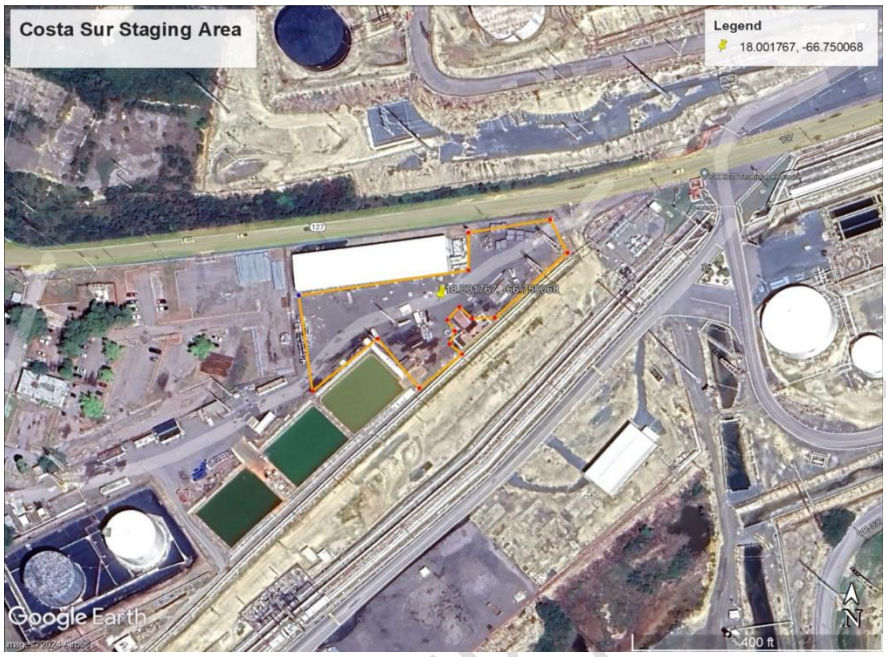
3. Location of Access Roads:

a) Entry point through existing Costa Sur Power Plant Main Gate. PR-127 access road. (18.00221, -66.75429)
b) No temporary roads will be required.
c) Refer to the following aerial picture of the conceptual layout for the access road to the plant.

Figure 7: Costa Sur Site - Access

4. **Types of Debris**:
   a) Metal scrap, domestic waste, wood.
   b) The debris will be separated and taken to an approved waste disposal facility. Location permits and supporting documentation will be provided at closeout.
5. **Description of Staging Area**:
   a) The staging area will be located inside the premises of the Costa Sur Power Plant and will serve as an assembly point for all the materials to be installed. Occupies area in the northeast part of the property in a lot of 1.06 acres and coordinates (18.001767, -66.750068). A temporary fence will be installed. No demolition or ground disturbance is required.

Figure 8: Costa Sur Site - Staging Area



6. **Hazardous Materials**:
   a) Describe the activity and the hazardous material involved. Calculate the quantity to be generated or disposed and include the management and disposal plan.
      i. The identified materials that can potentially be found in the Generation Plant are asbestos, PCBs, lead, SF6 gas, oil from the transformer & breakers, diesel, and sealants. These contaminants will be handled and disposed of as per the state and federal laws and regulations.
      ii. Genera will provide actual disposal locations, permit quantities and supporting documentation as a Condition of FEMA REC.
      iii. These products and their residues will be stored in special covered areas for disposal by an authorized company and provided with temporary spill controls until collected. All paint containers and curing compounds will be tightly sealed and stored when not in use. Excess paint will not be discharged to the storm system, properly disposed, according to the manufacturer's instructions.

iv. In the case of project includes building demolition with asbestos, Genera will provide a copy of the EQB approved plan or evidence of plan submission.
v. No demolition works will be performed.
vi. In the case of project includes disposal of damaged transformers or wood poles with creosote, include the management and disposal plan. The plan must include the final disposition site.
vii. Transformers and pole disposal will be handled as per the Waste Disposal Management Plan. Genera will provide actual disposal locations and quantities as a Condition of FEMA REC.
viii. The removal of the transformer will require testing of the existing oil for PCB's levels, drain oil, and delivery to the approved waste disposal site as per environmental regulations.
ix. Removal of wood poles with creosote treatment will be handled according state and federal regulations.

7. **Water Crossings**:
   a) The project will not affect a waterway or body of water.
   b) The project site is located adjacent to Mar Caribe approximately 1.8 miles. Ground disturbances will not take place in wetland areas.

Figure 9: Costa Sur Site - Project Location Relative to Mar Caribe

c) codification of a body of water or wetland: The project does not require dredging, excavation, disposal of material, adding fill material that might result in any modification of a body of water or wetland designated as "waters of the U.S."

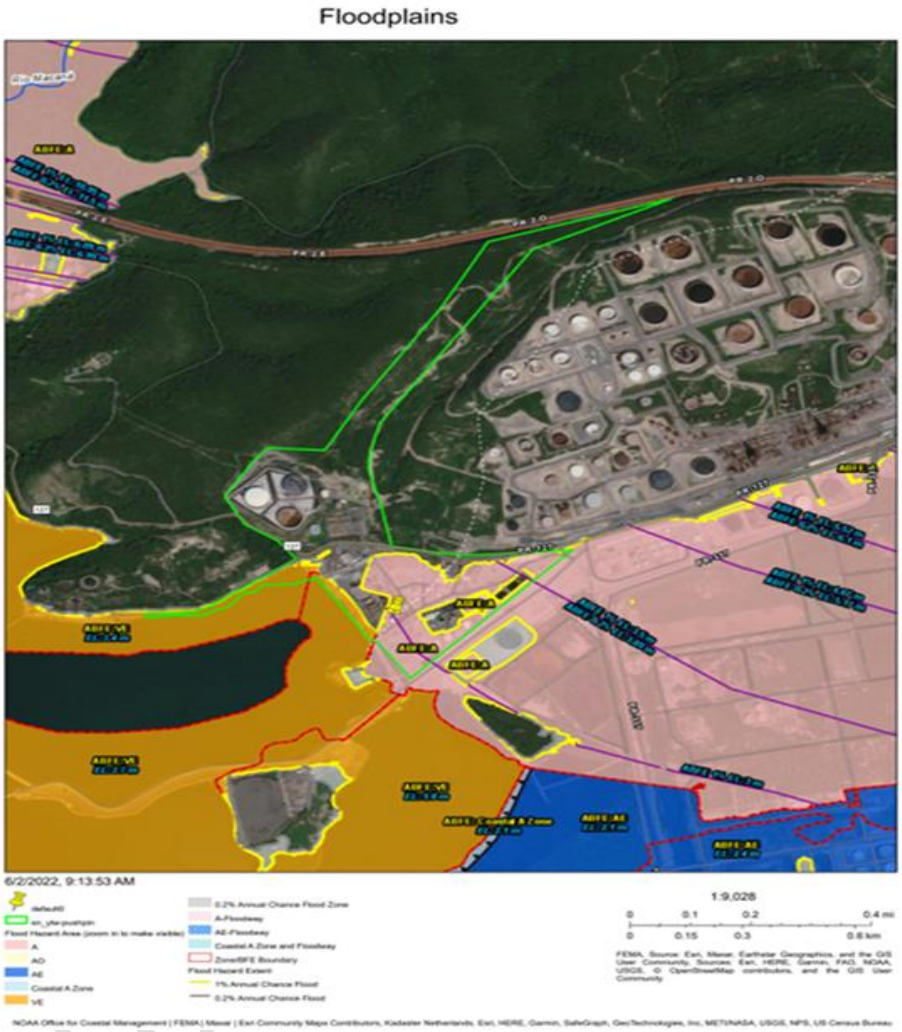
d) This project does not alter a watercourse, water flow patterns, or a drainage way, regardless of its floodplain designation

e) Flood zone: Is the project located in a flood zone, floodway or will it have a negative impact on the flood zone?

   i. The Generation Plant is in Flood Zone A according to the ABFE.
   ii. As mitigation, the site concrete pad will be elevated 2ft above flood water level.

f) In accordance with the updated version of FEMA Region II Memorandum, dated October 10, 2017, Guidance for the use of Available Flood Hazard Information for the Government of Puerto Rico in complying with FEMA Policy 104-008-2, 44 CFR Part 9, and Executive Order 11988 (Floodplain Management). All hazard mitigation proposals under alternative procedures must be designed using the best available flood hazard data and in compliance with applicable regulations and policy.

Figure 10: Costa Sur Site - Flood Zone Map



8. **Structure Age**:
   a) Provide the construction date of any buildings or structures within the project. Include those near the project.
      i. No structures are impacted by the project.
   b) The Costa Sur Power Plant began operating in the late 1950s. The project area is located entirely within previously disturbed areas inside the existing plant boundary. According to the OECH Interactive Map there are no registered National Historic Places within 1

mile of the site. The OECH Interactive map indicates that a Section 106 Consultation was performed at the Costa Sur Power Station (near the southern property boundary) in 2014, which concluded that no historical properties were located in the area. An archaeologist has been enlisted to perform an evaluation of whether the proposed action could affect historic properties or cultural resources. Work for this effort commenced in May 2024.

9. **Ground Disturbance**:
   a) Provide a description of the new ground disturbance by giving the dimensions if any. Include a map showing the extent of the disturbance with coordinates.
      i. The project is expected to disturb 2.5 acres of land. All of this land has been previously disturbed and does not extend outside of the existing plant boundaries. Refer to BORING ACCESS STAGING AREA PLAN - Costa Sur (Peakers).
   b) Genera has reviewed the Archaeological GIS layers provided by the Puerto Rico Planning Board and confirmed no previous features in the project area. Any features discovered during construction will be managed in accordance with Section 106 Project a Specific Programmatic Agreement among FEMA, SHPO, COR3, and PREPA.

Table 4: Costa Sur Site - Ground Disturbance

Ground Disturbance	Latitude	Longitude	Depth	Volume (Ft^3)
EQUIPMENT FOUNDATIONS	18.00042	-66.75322	4	190,821.50
Electrical Duck Bank	18.00042	-66.75322	10	330,445.26

   c) The project SOW will not affect water or sewer utility services.
   d) Indicate the prior/current use of the area to be impacted:

i. Not applicable. Area is an existing Generation Plant. 100% of the work to be completed will be within the existing and already impacted Generation Plant perimeter.

e) Explain how materials will be stockpiled and disposed of.
   i. The excess of soil material will be stockpiled temporarily onsite in the staging area or within the Generation Plant. Disposal of soil will be handled as per the Waste Management Plan.
   ii. Genera will provide actual disposal locations and quantities as a Condition of FEMA REC.

f) Specify final disposition site:
   i. The disposal site will be in an approved location. according to state and federal laws and regulations in an approved facility. Location, quantities, and documentation will be provided at closeout.

g) Soil stabilization measures are not applicable to this project.

VIII. 428 – Daguao Site

Location: Carretera #3 Km 58.3 Ceiba, PR 00735
Latitude / Longitude: 18.232114, -65.667374

A. Site Description:

PREPA Daguao gas turbine Power Block (PREPA Daguao) is located in the eastern part of Puerto Rico adjacent to the town of Ceiba (PR-3 KM 58.3) and it is used to produce energy. The power block consists of two combustion turbines or gas turbines which combust No. 2 fuel oil to generate electricity. The No. 2 fuel oil is received by truck and pumped into a fuel storage tank. The fuel is pumped from the tank to the gas turbines.

Genera is proposing the installation of new generating units at the Daguao Gas Turbine Power Plant. The Project will consist of the installation of two (2) 18 MW reciprocating internal combustion engines (RICE), and associated infrastructure. The RICE installation is being planned to provide sustainable grid support.

For Daguao, Genera is considering the worst-case scenario, considering the entire marked footprint impacted and underground interconnection. Please refer to the attached General Arrangement. The site is currently under design, and Genera will provide detailed information at the final design stage.

B. Boring

Table 5: Daguao Site – Boring Location, Diameter, Depth, & Volume

Boring No.	Latitude	Longitude	Diameter (in)	Depth (ft)	Volume (Cubic feet)
B-1	18.23193	-65.66703	4	75	6.54
B-2	18.23208	-65.66774	4	75	6.54
B-3	18.23224	-65.66748	4	100	8.73
B-4	18.23198	-65.66734	4	100	8.73
B-5	18.23175	-65.66718	4	100	8.73
B-6	18.23238	-65.66665	4	100	8.73
B-7	18.23248	-65.66721	4	75	6.54
B-8	18.23268	-65.66704	4	75	6.54

1. Equipment: drill rig for subsurface drilling in accordance with ASTM D6151.
2. Access roads: All borings have access through road PR-3 Km 58.3 accessible through main road PR-53.
3. Vegetation removal will not be required.

Figure 11: Daguao Site - Boring Locations

Boring locations coordinates, equipment to be utilized, and access roads submitted. See supporting document:

- BORING ACCESS VEGETATION STAGING AREA PLAN - Daguao (Peakers).xls

C. Recovery Solution

1. **Permits:**
   a. EHP Review/ Environmental Assessment.
   b. Section 106 Consultation
   c. USFWS No Effects Determination
   d. Coastal Zone Consistency Certification
   e. DNER: Lead and Asbestos Removal Permit
   f. DNER Rule 141 Environmental Documentation (construction & demo)
   g. NPDES CGP for Stormwater Discharges (construction & demo)
   h. Permiso Unico Incidental (PUI).
2. **Pre-Demolition Activities**
   i. Perform GPR survey to identify and map existing underground utilities.
   j. Perform Topographic surveys.
   k. Perform Geotechnical Surveys
   l. Remove and clean surfaces of remaining liquid level and solids of generating units.
   m. Remove liquid fuels and lubricating oils for all exposed surfaces.
3. **Pre-Demolition Activities - Tanks & Dikes**
   a. Empty fuel oil tanks
   b. Disconnection of services such as feed and supply fuel, electricity.
4. **Demolition - Mechanical - Tanks & Dikes**
   a. Uncouple/cut and cap water piping.
   b. Uncouple/cut and cap fuel piping.
   c. Remove fuel oil tanks.
   d. Remove water piping's and pumps.
   e. Remove fuel piping's and pumps.
5. **Demolition - Structural - Tanks & Dikes**
   a. Remove of dikes walls and concrete floors
6. **Pre-Demolition Activities – Office**
   a. Disconnect services such as electricity, water and sanitary.
7. **Demolition - Mechanical - Office & Buildings**
   a. Removal of HVAC System
   b. Remove piping for potable water and fire protection.
8. **Demolition - Electrical - Office & Buildings**
   a. Remove overhead distribution lines and poles.

b. Remove power transformer and pull out any associated underground feeders/wiring.

9. **Demolition - Mechanical - Fuel Unloading Station**
    a. Uncouple/cut and cap fuel piping.
    b. Demolition of concrete floor
10. **Demolition - Structural - Fuel Unloading Station**
    a. Demolition of fuel unloading building structure
    b. Demolition of concrete floor
11. **Demolition - Mechanical - Generating Units**
    a. Dismantle generating units.
    b. Uncouple/cut and remove above ground piping (fuel oil, lube oil, air, cooling water systems)
    c. Demolish compressed gas station.
    d. Uncouple/cut and remove above ground piping for compressed air.
    e. Uncouple/cut and cap underground piping for compressed air.
    f. Demolish fire protection system.
    g. Uncouple/cut and remove above ground piping for fire protection.
    h. Uncouple/cut and cap underground piping for fire protection.
12. **Demolition - Structural - Generating Units**
    a. Dismantle structural steel frames surrounding generating units.
    b. Dismantle/demolish all generating units enclosures.
    c. Demolition and disposal of electrical/control rooms
    d. Demolition and disposal of plant battery room
    e. Removal of concrete foundations
13. **Demolition - Electrical - Generating Units**
    a. Demolition and disposal of electrical switchgear for each transformer and pull out any associated underground feeders/wiring.
    b. Removal of pad mounted transformers and pull out any associated underground feeders/wiring.
    c. Demolition and disposal of electrical/control room components and pull out any associated underground feeders/wiring.
    d. Demolition and disposal of plant battery room components and pull out any associated aboveground and underground feeders/wiring.
    e. Demolition and disposal of electrical bus duct between generators and switchgear

14. **Material Disposal**
    a. Removal and segregation of non-regulated waste materials at the designated staging area prior to transporting offsite for disposal.
    b. Transportation of non-regulated waste materials to an approved offsite disposal facility
    c. Removal and segregation of regulated waste material and transportation to an approved offsite disposal facility
15. **Construction – Utilities (Non-permanent):**
    a. Provide and install 120V, 240V 208V 3-Phase construction power source.
    b. Provide and install stepdown transformer and distribution of 480V construction power.
    c. Provide and install temporary facilities such as bathrooms, hand washing station, breakroom, office space and internet connection.
    d. Provide and install temporary lighting.
16. **Construction – Permits:**
    a. US EPA non-PSD Applicability Determination.
    b. PR DNER – Construction Permit for Air Emissions.
    c. US FAA – Determination of Hazard.
    d. US EPA – NPDES individual Industrial Wastewater Permit (Amendment to Existing).
    e. PR DTOP – Transportation permits.
17. **Construction – RICE - Civil (Permanent):**
    a. Preparation of site to accommodate construction equipment.
    b. Provide and install erosion control system.
    c. Perform excavation and backfilling, total excavations 170,808.82 ft^3 for ground disturbance.
    g. Perform site grading for concrete foundations.
    h. Perform compacting and testing of equipment footprint.
    f. Provide and install drainage system and interconnection
18. **Construction – RICE - Structural (Permanent):**
    a. Provide concrete foundation preparation and settings.
    b. Provide and install main power transformer and ancillary equipment foundation and setting with 330,445.26 ft^3 of disturbance area.
    c. Reinforcing steel installation and concrete pouring.
    d. Provide and install concreate foundations.
    e. Prove and install main power transformer structure.
    f. Prove and install construction of engine hall building.

19. Construction– RICE - Mechanical (Permanent):

a. Provide and install fire protection system.
b. Provide and install interconnections of fire protection to existing piping.
c. Prove and install liquid fuel oil (LFO) tank. Approximate 450,000 gallons (DXH): 40FT X 48FT.
d. Provide and install aqueous ammonia tank. Approximate 30,000 gallons (D x H) (15ft x 50 ft)
e. Provide and install aqueous ammonia piping, pump systems and accessories.
f. Prove and install compressed air system and accessories.
g. Prove and install piping for potable water.
h. Provide and install interconnections of potable water to existing city water piping.
i. Provide and Installation of RICE units.
j. Provide and install RICE cooling systems.
k. Provide and install exhausts duct and stacks.

20. Construction– RICE - Electrical (Permanent):

a. Provide and install reconfiguration of high voltage power lines and wiring.
b. Provide and install underground conduits.
c. Provide and install ground grid and testing.
d. Provide and install Aux service feeder, transformer wiring, terminations, and commissioning.
e. Provide and install transformer and switchgear.
f. Provide cable (Wiring) and testing.
g. Provide and install site lighting system.
h. Provide and install an on-site control system.

21. Construction RICE - Testing & Commissioning:

a. Perform RICE testing and commissioning.
b. Perform cables and circuit testing.
c. Perform testing of auxiliary components.
d. Perform metering and protection system testing and commissioning.
e. SCADA and communications point to point testing
f. Perform main power transformer testing.
g. Perform system startup.

E. Environmental & Historic Preservation ("EHP") Requirement:

1. No construction work will commence prior to the issuance of specific expressed written FEMA approval for the specific Scope of Work. FEMA-required EHP compliance review will precede the execution of each proposed Scope of Work submitted by PREPA, through its agent Genera PR, to FEMA. PREPA, through its agent Genera PR, is aware of its responsibility for coordinating, notifying, obtaining permits, and complying with applicable federal, state, and local laws, regulations, and executive orders and understands that failure to comply with EHP requirements may jeopardize FEMA funding.
2. See the following for general methods of construction and list of equipment to be used (Daguao_Peakers_GA_08.22.2024):

a. Pre-Demolition Activities

i. Perform GPR survey to identify and map existing underground utilities.
ii. Perform Topographic surveys.
iii. Perform Geotechnical Surveys
iv. Remove and clean surfaces of remaining liquid level and solids of generating units.
v. Remove liquid fuels and lubricating oils for all exposed surfaces.

b. Pre-Demolition Activities - Tanks & Dikes

i. Empty fuel oil tanks
ii. Disconnection of services such as feed and supply fuel, electricity and any other services associated with the tank.

c. Demolition - Mechanical - Tanks & Dikes

i. Uncouple/cut and cap water piping.
ii. Uncouple/cut and cap fuel piping.
iii. Remove fuel oil tanks.
iv. Remove water piping's and pumps.
v. Remove fuel piping's and pumps.

d. Demolition - Structural - Tanks & Dikes

i. Remove of dikes walls and concrete floors

e. Pre-Demolition Activities – Office

i. Disconnect services such as electricity, water and sanitary.

f. Demolition - Mechanical - Office & Buildings

i. Removal of HVAC System
ii. Remove piping for potable water and fire protection.

g. Demolition - Electrical - Office & Buildings

i. Remove overhead distribution lines and poles.
ii. Remove power transformer and pull out any associated underground feeders/wiring.

h. Demolition - Mechanical - Fuel Unloading Station

i. Uncouple/cut and cap fuel piping.
ii. Demolition of concrete floor

i. Demolition - Structural - Fuel Unloading Station

i. Demolition of fuel unloading building structure
ii. Demolition of concrete floor

j. Demolition - Mechanical - Generating Units

i. Dismantle generating units.
ii. Uncouple/cut and remove above ground piping (fuel oil, lube oil, air, cooling water systems)
iii. Demolish compressed gas station.
iv. Uncouple/cut and remove above ground piping for compressed air.
v. Uncouple/cut and cap underground piping for compressed air.
vi. Demolish fire protection system.
vii. Uncouple/cut and remove above ground piping for fire protection.
viii. Uncouple/cut and cap underground piping for fire protection.

k. Demolition - Structural - Generating Units

i. Dismantle structural steel frames surrounding generating units.
ii. Dismantle/demolish all generating units enclosures.
iii. Demolition and disposal of electrical/control rooms
iv. Demolition and disposal of plant battery room
v. Removal of concrete foundations

l. Demolition - Electrical - Generating Units

i. Demolition and disposal of electrical switchgear for each transformer and pull out any associated underground feeders/wiring.
ii. Removal of pad mounted transformers and pull out any associated underground feeders/wiring.
iii. Demolition and disposal of electrical/control room components and pull out any associated underground feeders/wiring.

iv. Demolition and disposal of plant battery room components and pull out any associated aboveground and underground feeders/wiring.
v. Demolition and disposal of electrical bus duct between generators and switchgear

m. Material Disposal

i. Removal and segregation of non-regulated waste materials at the designated staging area prior to transporting offsite for disposal.
ii. Transportation of non-regulated waste materials to an approved offsite disposal facility
iii. Removal and segregation of regulated waste material and transportation to an approved offsite disposal facility

n. Construction – Utilities (Non-permanent):

i. Provide and install 120V, 240V 208V 3-Phase construction power source.
ii. Provide and install stepdown transformer and distribution of 480V construction power.
iii. Provide and install temporary facilities such as bathrooms, hand washing station, breakroom, office space and internet connection.
iv. Provide and install temporary lighting.

o. Construction – Permits:

i. US EPA non -PSD Applicability Determination.
ii. PR DNER – Construction Permit for Air Emissions.
iii. US FAA – Determination of Hazard.
iv. US EPA – NPDES individual Industrial Wastewater Permit (Amendment to Existing).
v. PR DTOP – Transportation permits.

p. Construction – RICE - Civil (Permanent):

i. Preparation of site to accommodate construction equipment.
ii. Provide and install erosion control system.
iii. Perform excavation and backfilling, total excavations 170,808.82 ft^3 for ground disturbance.
iv. Perform site grading for concrete foundations.
v. Perform compacting and testing of equipment footprint.
vi. Provide and install drainage system and interconnection.

q. Construction – RICE - Structural (Permanent):

i. Provide concrete foundation preparation and settings.
ii. Provide and install main power transformer and ancillary equipment foundation and setting with 330,445.26 ft³ of disturbance area.
iii. Reinforcing steel installation and concrete pouring.
iv. Provide and install concreate foundations.
v. Prove and install main power transformer structure.
vi. Prove and install construction of engine hall building.

r. Construction– RICE - Mechanical (Permanent):

i. Provide and install fire protection system.
ii. Provide and install interconnections of fire protection to existing piping.
iii. Prove and install liquid fuel oil (LFO) tank. Approximate 450,000 gallons (DXH): 40FT x 48FT.
iv. Provide and install aqueous ammonia tank. Approximate 30,000 gallons (D x H) (15ft x 50 ft)
v. Provide and install aqueous ammonia piping, pump systems and accessories.
vi. Prove and install compressed air system and accessories.
vii. Prove and install piping for potable water.
viii. Provide and install interconnections of potable water to existing city water piping.
ix. Provide and Installation of RICE units.
x. Provide and install RICE cooling systems.
xi. Provide and install exhausts duct and stacks.

s. Construction–RICE - Electrical (Permanent):

i. Provide and install reconfiguration of high voltage power lines and wiring.
ii. Provide and install underground conduits.
iii. Provide and install ground grid and testing.
iv. Provide and install Aux service feeder, transformer wiring, terminations, and commissioning.
v. Provide and install transformer and switchgear.
vi. Provide cable (Wiring) and testing.
vii. Provide and install site lighting system.
viii. Provide and install an on-site control system.

t. Construction RICE - Testing & Commissioning:

i. Perform RICE testing and commissioning.

ii. Perform cables and circuit testing.
iii. Perform testing of auxiliary components.
iv. Perform metering and protection system testing and commissioning.
v. SCADA and communications point to point testing
vi. Perform main power transformer testing.
vii. Perform system startup.

u. Contractor Equipment to be Used:

i. Excavator.
ii. Crawler Crane.
iii. Semi-truck with low-bed trailer.
iv. Man lift.
v. Bucket Truck.
vi. Dump Truck

3. **Removal of Vegetation**:

a. Some maintained lawns are present on the site and will be affected during construction. The adjacent parcel is primarily landscaped with grass, small shrubs, and sparse vegetation, which will also be affected during construction.

4. **Location of Access Roads**:

a. Entry point through existing Daguao power plant main entrance. The main access road is Road PR-53. The connecting road is PR-3 KM 58.3. (Latitude /Longitude: 18.231978, -65.666845).
b. No temporary roads will be required.
c. Refer to the following aerial picture of the conceptual layout for the access road to the generation plant.

Figure 12: Daguao Site - Access

5. **Type of Debris**:

   a. Metal scrap, domestic waste, wood.
   b. The debris will be separated and taken to an approved waste disposal facility. Location permits and supporting documentation will be provided at closeout.

6. **Description of Staging Area**:

   a. The staging area will be inside the Daguao Power Plant premises and will serve as an assembly point for all the materials to be installed. Occupies area in a lot of .2 acres and coordinates (18.232345, -65.666699). A temporary fence will be installed. No demolition or ground disturbance is required.

Figure 13: Daguao Site - Staging Area

7. **Hazardous Materials**:
   a. Describe the activity and the hazardous material involved. Calculate the quantity to be generated or disposed and include the management and disposal plan.
      i. The identified materials that can potentially be found in the Generation Plant are asbestos, PCBs, lead, SF6 gas, oil from the transformer & breakers, diesel, and sealants. These contaminants will be handled and disposed of as per the state and federal laws and regulations.
      ii. Genera will provide actual disposal locations, permit quantities and supporting documentation as a Condition of FEMA REC.
      iii. These products and their residues will be stored in special covered areas for disposal by an authorized company and provided with temporary spill controls until collected. All paint containers and curing compounds will be tightly sealed and stored when not in

use. Excess paint will not be discharged to the storm system, properly disposed, according to the manufacturer's instructions.

iv. Material amounts will be provided by a certified management contractor performing a site evaluation calculation for asbestos, lead paint, and roof material.

v. Prior to the start of any demolition activities, inspections, and tests for the presence of asbestos will be conducted by a trained and certified laboratory.

vi. All asbestos waste found at the Generation Plant will be disposed of at an approved landfill designated by Puerto Rico's Department of Natural and Environmental Resources (DNER). All asbestos waste generated will be bagged and transported in accordance with all applicable State and Federal regulations. There will be no exceptions.

vii. Any asbestos spills will be cleaned up immediately to prevent the dispersal of fibers. Prudence will be exercised to avoid contamination of laboratory facilities or exposure of personnel to asbestos. Asbestos spills will be cleaned up with wet methods and/ or a High-Efficiency Particulate-Air (HEPA) filtered vacuum.

viii. The project that includes building demolition with asbestos will provide a copy of the DNER approved plan or evidence of plan submission.

ix. In case the presence of asbestos is confirmed in the building to be demolished, Genera will follow all permits protocols required by law to properly dispose of the hazardous materials from the premises. Genera will provide evidence of the plan submission as a condition of FEMA REC.

x. Disposal of damaged transformers or wood poles with creosote, Genera will include the management and disposal plan. The plan must include the final disposition site.

xi. Transformers and pole disposal will be handled as per the Waste Disposal Management Plan. Genera will provide actual disposal locations and quantities as a condition of FEMA's REC.

xii. The removal of the transformer will require testing of the existing oil for PCB's levels, drain oil, and delivery to the approved waste disposal site as per Environmental Regulations.

xiii. Removal of wood poles with creosote treatment will be handled according state and federal regulations.

8. **Water Crossings**:
    a. The project will not affect a waterway or body of water.
    b. Modification of a body of water or wetland: Project don't require dredging, excavation, disposal of material, adding fill material that might result in any modification of a body of water or wetland designated as "waters of the U.S."?
    c. Alterations to watercourse, water flow patterns, or a drainage way are not applicable to this project, regardless of its floodplain designation?
    d. Flood zone: The project isn't located in a flood zone, floodway or will it have a negative impact on the flood zone
    e. In accordance with the updated version of FEMA Region II Memorandum, dated October 10, 2017, Guidance for the use of Available Flood Hazard Information for the Government of Puerto Rico in complying with FEMA Policy 104-008-2, 44 CFR Part 9, and Executive Order 11988 (Floodplain Management). All hazard mitigation proposals under alternative procedures must be designed using the best available flood hazard data and in compliance with applicable regulations and policy.

Figure 14: Daguao Site - National Wetlands Inventory

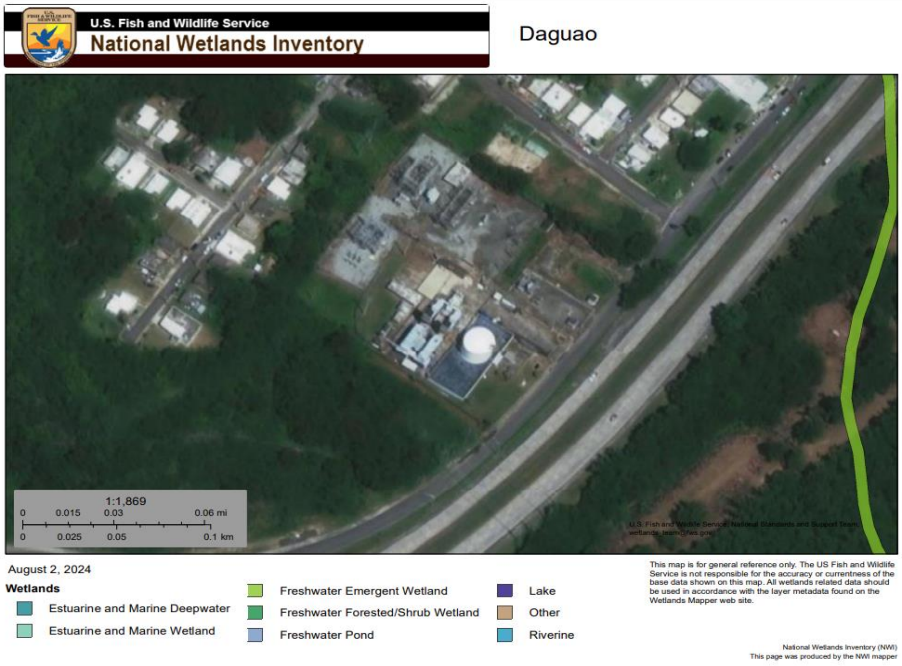
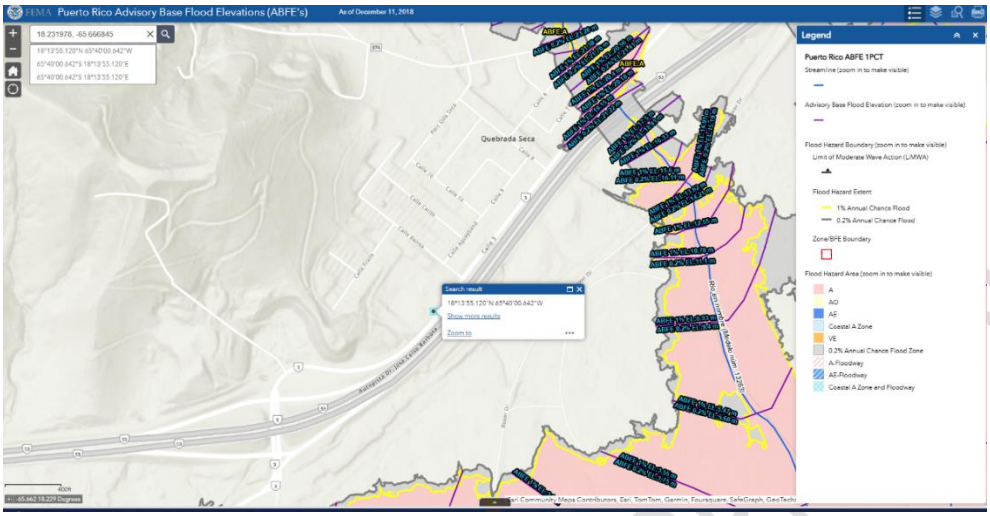


Figure 15: Daguao Site - ABFE



9. **Structure Age**:
    a. Provide the construction date of any buildings or structures within the project. Include those near the project.
        i. Daguao Gas Turbine was constructed approximately in 1970s.
        ii. The Daguao Gas Turbine Plant began operating in the 1970s. The project area is located entirely within previously disturbed areas inside the existing plant boundary. According to the OECH Interactive Map there are no registered National Historic Places within 1 mile of the site. An archaeologist has been enlisted to perform an evaluation of whether the proposed action could affect historic properties or cultural resources, work commenced in May 2024.
10. **Ground Disturbance**:
    a. Provide a description of the new ground disturbance by giving the dimensions, if any. Include an aerial photo map showing the extent of the disturbance with coordinates.
        i. Based on the current general arrangement, The project is expected to disturb approximately 3 acres of land. The majority of this land has been previously disturbed. Refer to BORING ACCESS VEGETATION STAGING AREA PLAN - Daguao (Peakers).xls

ii. GENERA has reviewed the Archaeological GIS layers provided by the Puerto Rico Planning Board and confirmed no previous features in the project area. Any features discovered during construction will be managed in compliance with the Project Specific Programmatic agreement among FEMA, COR3 and PREPA, 2022.

Table 6: Daguao Site - Ground Disturbance

Ground Disturbance	Latitude	Longitude	Depth (ft)	Volume (Ft^3)
EQUIPMENT FOUNDA-TIONS	18.23232	-65.66727	4	132,876.47
ELECTRICAL DUCT BANK	18.23232	-66.66727	10	37,932.35

b. The project SOW will not affect water or sewer utility services.
c. Indicate the prior/current use of the area to be impacted:
   i. Not applicable to this project. Area is an existing Generation Plant. 100% of the work to be completed will be within the existing and already impacted Generation Plant perimeter.
d. Explain how materials will be stockpiled and disposed of:
   i. The excess of soil material will be stockpiled temporarily onsite in the staging area or within the Generation Plant. Disposal of soil will be handled following state and federal regulations.
   ii. Genera will provide actual disposal locations, quantities and supporting documents as a Condition of FEMA REC.

11. Specify final disposition site:

i. The disposal of materials will be in an approved facility, location, quantities and supporting documentation will be provided at closeout.

IX. 428 – Jobos Site

Location: Carretera #3 Km 58.3 Ceiba, PR 00735
Latitude / Longitude: 18.232114, -65.667374

A. Site Description:

Genera is proposing the installation of new generating units at the Jobos Gas Turbine Power Plant, an existing gas turbine plant located in the Municipality of Guayama, Puerto Rico. The Project will consist of the installation of two (2) 18 MW reciprocating internal combustion engines (RICE) and associated infrastructure. The RICE installation is being planned to provide sustainable grid support.

The Jobos Turbine Power Block (PREPA Jobos) is located in the south of Puerto Rico at the Municipality of Guayama (PR-3, Km 142.2) and it is dedicated to the production of electricity. The Power Block consists of two combustion turbines which combust No. 2 fuel oil to generate electricity. The No. 2 fuel oil is received by truck and pumped into a fuel storage tank. The fuel is pumped from the tank to the gas turbines.

For Jobos, Genera is presenting for the worst-case scenario, considering the entire marked footprint impacted and underground interconnection. Please refer to the attached General Arrangement. The project is currently under design, and Genera will provide detailed information at the final design stage.

B. Boring

Table 7: Jobos Site – Boring Location, Diameter, Depth, & Volume

Boring No.	Latitude	Longitude	Diame-ter (in)	Depth (ft)	Volume (Cubic feet)
B-1	17.9614492	-66.140147	4	75	6.54
B-2	17.9615038	-66.1402182	4	50	4.36
B-3	17.9616200	-66.1405432	4	50	4.36
B-4	17.9608416	-66.1393338	4	75	6.54
B-5	17.9616719	-66.1402553	4	75	6.54
B-6	17.9608292	-66.1402769	4	75	6.54
B-7	17.9609691	-66.1398767	4	100	8.73
B-8	17.9609740	-66.1395314	4	75	6.54

Boring No.	Latitude	Longitude	Diame-ter (in)	Depth (ft)	Volume (Cubic feet)
B-9	17.9606915	-66.1402426	4	100	8.73
B-10	17.9606525	-66.1399549	4	75	6.54
B-11	17.9604837	-66.1394603	4	50	4.36
B-12	17.9602946	-66.1400303	4	100	8.73
B-13	17.9605763	-66.1405564	4	50	4.36
B-14	17.9612037	-66.1402676	4	75	6.54

a. Equipment: drill rig for subsurface drilling in accordance with ASTM D6151.
b. Access roads: All boring sites have access through the main access road is PR-3. Enter on road 7707.
c. Vegetation removal will not be required.

Figure 16: Jobos Site - Boring Locations

Boring location coordinates, equipment to be utilized, and access roads submitted. See supporting document:

- BORING ACCESS VEGETATION STAGING AREA PLAN - Jobos (Peakers).xls

C. Recovery Solution

1. **Permits:**
   a. EHP Review/ Environmental Assessment.
   b. Section 106 Consultation
   c. USFWS No Effects Determination
   d. Coastal Zone Consistency Certification
   e. DNER: Lead and Asbestos Removal Permit
   f. DNER Rule 141 Environmental Documentation (construction & demo)
   g. NPDES CGP for Stormwater Discharges (construction & demo)
   h. Permiso Unico Incidental (PUI).

2. **Pre-Demolition Activities**
   a. Perform GPR survey to identify and map existing underground utilities.
   b. Perform Topographic surveys.
   c. Perform Geotechnical Surveys
   d. Remove and clean surfaces of remaining liquid level and solids of generating units.
   e. Remove liquid fuels and lubricating oils for all exposed surfaces.

3. **Pre-Demolition Activities - Tanks & Dikes**
   a. Empty fuel oil tanks
   b. Disconnection of services such as feed and supply fuel, electricity.

4. **Demolition - Mechanical - Tanks & Dikes**
   a. Uncouple/cut and cap water piping.
   b. Uncouple/cut and cap fuel piping.
   c. Remove fuel oil tanks.
   d. Remove water piping's and pumps.
   e. Remove fuel piping's and pumps.

5. **Demolition - Structural - Tanks & Dikes**

a. Remove of dikes walls and concrete floors

6. **Pre-Demolition Activities – Office**
   a. Disconnect services such as electricity, water and sanitary.

7. **Demolition - Mechanical - Office & Buildings**

a. Removal of HVAC System
b. Remove piping for potable water and fire protection.

8. **Demolition - Structural - Office & Buildings**
   a. Remove building structures.
   b. Remove asphalt pavement.

9. **Demolition - Electrical - Office & Buildings**
   a. Remove overhead distribution lines and poles.
   b. Remove power transformer and pull out any associated underground feeders/wiring.

10. **Demolition - Mechanical - Fuel Unloading Station**
    a. Uncouple/cut and cap fuel piping.
    b. Demolition of concrete floor

11. **Demolition - Structural - Fuel Unloading Station**
    a. Demolition of fuel unloading building structure
    b. Demolition of concrete floor

12. **Pre-Demolition Activities - Annex Warehouse**
    a. Disconnect services such as electricity, water, sanitary and compressed air.
    b. Empty warehouse of all stored items and relocate to another permanent or temporary location.

13. **Demolition - Mechanical - Annex Warehouse**
    a. Remove piping for potable water, fire protection and compressed air.

14. **Demolition - Structural - Annex Warehouse**
    a. Remove of warehouse building
    b. Remove of asphalt and concrete

15. Demolition - Electrical - Annex Warehouse

a. Remove of overhead distribution lines and poles
b. Remove power transformer and pull out any associated underground feeders/wiring.

16. Pre-Demolition Activities - Abandoned Gas Station

a. Disconnect services such as electricity, water and sanitary.
b. Installation of spill control system

17. Demolition - Mechanical - Abandoned Gas Station

a. Remove piping for potable water, fuel, and fire protection.
b. Remove fuel pumps and equipment.
c. Remove fuel tanks.

18. Demolition - Structural - Abandoned Gas Station

a. Remove of building structure
b. Remove of asphalt and concrete

19. Demolition - Electrical - Abandoned Gas Station

a. Remove of overhead distribution lines and poles
b. Remove power transformer and pull out any associated underground feeders/wiring.

20. Demolition - Mechanical - Generating Units

a. Dismantle generating units.
b. Uncouple/cut and remove above ground piping (fuel oil, lube oil, air, cooling water systems)
c. Demolish compressed gas station.
d. Uncouple/cut and remove above ground piping for compressed air.
e. Uncouple/cut and cap underground piping for compressed air.
f. Demolish fire protection system.
g. Uncouple/cut and remove above ground piping for fire protection.
h. Uncouple/cut and cap underground piping for fire protection.

21. Demolition - Structural – CTG (Combustion Turbine Generators)

a. Dismantle structural steel frames surrounding generating units.
b. Dismantle structural steel frames surrounding generating units.

c. Demolition and disposal of electrical/control rooms
d. Demolition and disposal of plant battery room
e. Demolition and disposal of plant battery room

22. Demolition - Electrical – CTG

a. Demolition and disposal of electrical switchgear for each transformer and pull out any associated underground feeders/wiring.
b. Removal of pad mounted transformers and pull out any associated underground feeders/wiring.
c. Demolition and disposal of electrical/control room components and pull out any associated underground feeders/wiring.
d. Demolition and disposal of plant battery room components and pull out any associated aboveground and underground feeders/wiring.
e. Demolition and disposal of electrical bus duct between generators and switchgear

23. Material Disposal

a. Removal and segregation of non-regulated waste materials at the designated staging area prior to transporting offsite for disposal.
b. Transportation of non-regulated waste materials to an approved offsite disposal facility
c. Removal and segregation of regulated waste material and transportation to an approved offsite disposal facility

24. Construction – Utilities (Non-permanent):

a. Provide and install 120V, 240V 208V 3-Phase construction power source.
b. Provide and install stepdown transformer and distribution of 480V construction power.
c. Provide and install temporary facilities such as bathrooms, hand washing station, breakroom, office space and internet connection.
d. Provide and install temporary lighting.

25. Construction – Permits:

a. US EPA non-PSD Applicability Determination.
b. PR DNER – Construction Permit for Air Emissions.
c. USFAA – Determination of Hazard.
d. US EPA–NPDES individual Industrial Wastewater Permit (Amendment to Existing).

e. PR DTOP – Transportation permits.

26. Construction – RICE - Civil (Permanent):

a. Preparation of site to accommodate construction equipment.
b. Provide and install erosion control system.
c. Perform excavation and backfilling, total excavations 187,928.11 ft³ for ground disturbance.
d. Perform site grading for concrete foundations.
e. Perform compacting and testing of equipment footprint.
f. Provide and install drainage system and interconnection.

27. Construction – RICE - Structural (Permanent):

a. Provide concrete foundation preparation and settings.
b. Provide and install main power transformer and ancillary equipment foundation and setting with 44,684.17 ft³ of disturbance.
c. Reinforcing steel installation and concrete pouring.
d. Provide and install concreate foundations.
e. Prove and install main power transformer structure.
f. Prove and install construction of engine hall building.

28. Construction– RICE - Mechanical (Permanent):

a. Provide and install fire protection system.
b. Provide and install interconnections of fire protection to existing piping.
c. Prove and install liquid fuel oil (LFO) tank. Approximate 450,000 gallons (DXH): 40FT X 48FT.
d. Provide and install aqueous ammonia tank. Approximate 30,000 gallons (D x H) (15ft x 50 ft)
e. Provide and install aqueous ammonia piping, pump systems and accessories.
f. Prove and install compressed air system and accessories.
g. Prove and install piping for potable water.
h. Provide and install interconnections of potable water to existing city water piping.
i. Provide and Installation of RICE units.
j. Provide and install RICE cooling systems.
k. Provide and install exhausts duct and stacks.

29. Construction– RICE - Electrical (Permanent):

a. Provide and install reconfiguration of high voltage power lines and wiring.

b. Provide and install underground conduits.
c. Provide and install ground grid and testing.
d. Provide and install Aux service feeder, transformer wiring, terminations, and commissioning.
e. Provide and install transformer and switchgear.
f. Provide cable (Wiring) and testing.
g. Provide and install site lighting system.
h. Provide and install an on-site control system.

30. Construction - RICE - Testing & Commissioning:

a. Perform RICE testing and commissioning.
b. Perform cables and circuit testing.
c. Perform testing of auxiliary components.
d. Perform metering and protection system testing and commissioning.
e. SCADA and communications point to point testing
f. Perform main power transformer testing.
g. Perform system startup.

D. Environmental & Historic Preservation ("EHP") Requirement:

1. No construction work will commence prior to the issuance of specific expressed written FEMA approval for the specific scope of work. FEMA- required EHP compliance review will precede the execution of each proposed scope of work submitted by PREPA, through its agent Genera PR, to FEMA. PREPA, through its agent Genera PR, is aware of its responsibility for coordinating, notifying, obtaining permits, and complying with applicable federal, state, and local laws, regulations, and executive orders and understands that failure to comply with EHP requirements may jeopardize FEMA funding.
2. The following general methods of construction and list of equipment is expected to be used (Jobos_Peakers_GA_08.22.2024):

i. Control room Construction Methodology ground disturbance. The work includes the following activities:

a. **Construction – Utilities (Non-permanent):**
a. Provide and install 120V, 240V 208V 3-Phase construction power source.

b. Provide and install stepdown transformer and distribution of 480V construction power.
c. Provide and install temporary facilities such as bathrooms, hand washing station, breakroom, office space and internet connection.
d. Provide and install temporary lighting.

b. **Construction – Permits:**
   a. US EPA non -PSD Applicability Determination.
   b. PR DNER – Construction Permit for Air Emissions.
   c. US FAA – Determination of Hazard.
   d. US EPA – NPDES individual Industrial Wastewater Permit (Amendment to Existing).
   e. PR DTOP – Transportation permits.

c. **Construction – RICE - Civil (Permanent):**
   a. Preparation of site to accommodate construction equipment.
   b. Provide and install erosion control system.
   c. Perform excavation and backfilling, total excavations 187,928.11 ft^3 for ground disturbance.
   d. Perform site grading for concrete foundations.
   e. Perform compacting and testing of equipment footprint.
   f. Provide and install drainage system and interconnection.

d. **Construction – RICE - Structural (Permanent):**
   a. Provide concrete foundation preparation and settings.
   b. Provide and install main power transformer and ancillary equipment foundation and setting with 44,684.17 ft^3 of disturbance.
   c. Reinforcing steel installation and concrete pouring.
   d. Provide and install concreate foundations.
   e. Prove and install main power transformer structure.
   f. Prove and install construction of engine hall building.

e. **Construction– RICE - Mechanical (Permanent):**
   a. Provide and install fire protection system.
   b. Provide and install interconnections of fire protection to existing piping.
   c. Prove and install liquid fuel oil (LFO) tank. Approximate 450,000 gallons (DXH): 40FT X 48FT.
   d. Provide and install aqueous ammonia tank. Approximate 30,000 gallons (D x H) (15ft x 50 ft)

e. Provide and install aqueous ammonia piping, pump systems and accessories.
f. Prove and install compressed air system and accessories.
g. Prove and install piping for potable water.
h. Provide and install interconnections of potable water to existing city water piping.
i. Provide and Installation of RICE units.
j. Provide and install RICE cooling systems.
k. Provide and install exhausts duct and stacks.

f. **Construction– RICE - Electrical (Permanent):**
   a. Provide and install reconfiguration of high voltage power lines and wiring.
   b. Provide and install underground conduits.
   c. Provide and install ground grid and testing.
   d. Provide and install Aux service feeder, transformer wiring, terminations, and commissioning.
   e. Provide and install transformer and switchgear.
   f. Provide cable (Wiring) and testing.
   g. Provide and install site lighting system.
   h. Provide and install an on-site control system.
g. **Construction – RICE - Testing & Commissioning:**
   a. Perform RICE testing and commissioning.
   b. Perform cables and circuit testing.
   c. Perform testing of auxiliary components.
   d. Perform metering and protection system testing and commissioning.
   e. SCADA and communications point to point testing
   f. Perform main power transformer testing.
   g. Perform system startup.
h. **Contractor Equipment to be Used**:
   a. Excavator.
   b. Crawler Crane.
   c. Semi-truck with low-bed trailer.
   d. Man lift.
   e. Bucket Truck.
   f. Dump Truck
i. **Removal of Vegetation**:

a. Some maintained lawns are present on the site and will be affected during construction. The adjacent parcel is primarily landscaped with grass, small shrubs, and sparse vegetation, which will also be affected during construction.

j. **Location of Access Roads**:
   a. Entry point through existing Jobos power plant main entrance. The main access road is PR-3. Enter through road 7707. (Latitude /Longitude: 17.960110, -66.140153).
   b. No temporary roads will be required.
   c. Refer to the following aerial picture of the conceptual layout for the access road to the Generation Plant:

Figure 17: Jobos Site - Access

k. **Type of Debris**:
   a. Metal scrap, domestic waste, wood.
   b. The debris will be separated and taken to an approved waste disposal facility. Location permits and supporting documentation will be provided at closeout.

l. **Description of Staging Area**:

a. The staging area will be inside the Jobos Power Plant premises and will serve as an assembly point for all the materials to be installed. Occupies area in two lost total of 1.1 acres and coordinates (17.960691, -66.139330). A temporary fence will be installed. No demolition or ground disturbance is required.

Figure 18: Jobos Site - Staging Area

m. **Hazardous Materials**

a. Describe the activity and the hazardous material involved. Calculate the quantity to be generated or disposed and include the management and disposal plan.

1. The identified materials that can potentially be found in the Generation Plant are asbestos, PCBs, lead, SF6 gas, oil from the transformer & breakers, diesel, and sealants. These contaminants will be handled and disposed of as per the state and federal laws and regulations.
2. Genera will provide actual disposal locations, permit quantities and supporting documentation as a Condition of FEMA REC.

3. These products and their residues will be stored in special covered areas for disposal by an authorized company and provided with temporary spill controls until collected. All paint containers and curing compounds will be tightly sealed and stored when not in use. Excess paint will not be discharged to the storm system, properly disposed, according to the manufacturer's instructions.
4. Material amounts will be provided by a certified management contractor performing a site evaluation calculation for asbestos, lead paint, and roof material.
5. Prior to the start of any demolition activities, inspections, and tests for the presence of asbestos will be conducted by a trained and certified laboratory.
6. All asbestos waste found at the Generation Plant will be disposed of at an approved landfill designated by Puerto Rico's Department of Natural and Environmental Resources (DNER). All asbestos waste generated will be bagged and transported in accordance with all applicable State and Federal regulations. There will be no exceptions.
7. Any asbestos spills will be cleaned up immediately to prevent the dispersal of fibers. Prudence will be exercised to avoid contamination of laboratory facilities or exposure of personnel to asbestos. Asbestos spills will be cleaned up with wet methods and/ or a High-Efficiency Particulate-Air (HEPA) filtered vacuum.
8. The project that includes building demolition with asbestos will provide a copy of the DNER approved plan or evidence of plan submission.
9. In case the presence of asbestos is confirmed in the building to be demolished, Genera will follow all permits protocols required by law to properly dispose of the hazardous materials from the premises. Genera will provide evidence of the plan submission as a condition of FEMA REC.
10. Disposal of damaged transformers or wood poles with creosote, Genera will include the management and

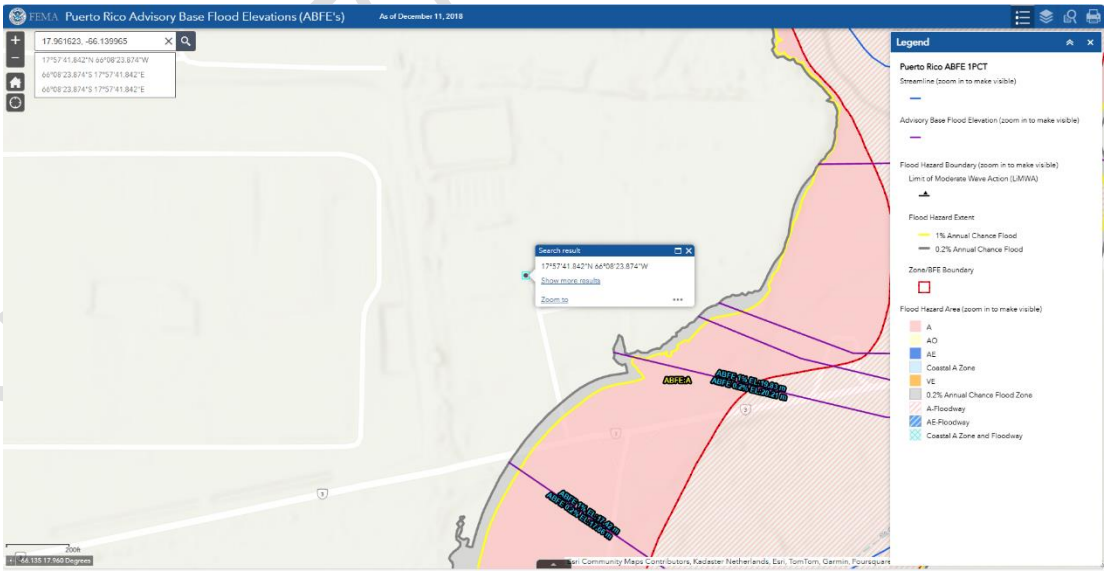
disposal plan. The plan must include the final disposition site.

11. Transformers and pole disposal will be handled as per the Waste Disposal Management Plan. Genera will provide actual disposal locations and quantities as a Condition of FEMA REC.
12. The removal of the transformer will require testing of the existing oil for PCB's levels, drain oil, and delivery to the approved waste disposal site as per Environmental Regulations.
13. Removal of wood poles with creosote treatment will be handled according state and federal regulations.

n. **Water Crossings**:
   a. The project will not affect a waterway or body of water.
   b. Modification of a body of water or wetland: Does the project require dredging, excavation, disposal of material, adding fill material that might result in any modification of a body of water or wetland designated as "waters of the U.S."?
      1. No Adverse Effect. Scope of equipment repair/substitution and potential staging areas are outside any wetland zones.
   c. The project does not alter a watercourse, water flow patterns, or a drainage way, regardless of its floodplain designation.
   d. Flood zone: The project located outside the flood zone, floodway and will not have a negative impact on the flood zone
   e. In accordance with the updated version of FEMA Region II Memorandum, dated October 10, 2017, Guidance for the use of Available Flood Hazard Information for the Government of Puerto Rico in complying with FEMA Policy 104-008-2, 44 CFR Part 9, and Executive Order 11988 (Floodplain Management). All hazard mitigation proposals under alternative procedures must be designed using the best available flood hazard data and in compliance with applicable regulations and policy.

Figure 19: Jobos Site - National Wetlands Inventory

Figure 20: Jobos Site - ABFE



o. **Structure Age**:
   a. Jobos Gas Turbine was built approximately in 1970s.
   b. The Jobos Gas Turbine Power Plant began operating in 1973. The project area is located entirely within previously disturbed areas inside the existing plant boundary. According to the OECH Interactive Map there are no registered National Historic Places within 1 mile of the site. An archaeologist has been enlisted to perform an evaluation of whether the proposed action could affect historic properties or cultural resources, with work scheduled to commence in May 2024.

p. **Ground Disturbance**:
   a. Provide a description of the new ground disturbance by giving the dimensions, if any. Include an aerial photo map showing the extent of the disturbance with coordinates.
      1. Based on the current general arrangement, the proposed action is expected to disturb approximately 10 acres of land, all of which is within the existing plant boundary and has been previously disturbed. Refer to BORING ACCESS VEGETATION STAGING AREA PLAN - Jobos (Peakers).xls
   b. GENERA has reviewed the Archaeological GIS layers provided by the Puerto Rico Planning Board and confirmed no previous features in the project area. Any features discovered during construction will be managed in compliance with the Project Specific Programmatic agreement among FEMA, COR3 and PREPA, 2022.

Table 8: Jobos Site - Ground Disturbance

Ground Disturbance	Latitude	Longitude	Depth (ft)	Volume (Ft^3)
EQUIPMENT FOUNDATIONS	17.96083	-66.14022	4	187,928.11
ELECTRICAL DUCT BANK	17.96083	-66.14022	10	44,684.17

   c. The project SOW will not affect water or sewer utility services.
   d. Indicate the prior/current use of the area to be impacted:

i. Area is an existing Generation Plant. 100% of the work to be completed will be within the existing and already impacted Generation Plant perimeter.

e. Explain how materials will be stockpiled and disposed of:
   i. The excess of soil material will be stockpiled temporarily onsite in the staging area or within the Generation Plant. Disposal of soil will be handled following state and federal regulations.
   ii. Genera will provide actual disposal locations, quantities and supporting documents as a Condition of FEMA REC.
f. Specify final disposition site:
   i. The disposal of materials will be in an approved facility, location, quantities and supporting documentation will be provided at closeout.

X. 428 Costa Sur Scope of Work - RCC (Remote Control Centers)

Location : Carretera 127 Guayanilla, PR 00656
Latitude / Longitude : 18.001478, -66.751438

A. Site Description:

Costa Sur is on the southern coast of Puerto Rico in Guayanilla and is owned by PREPA and operated by Genera. The property has approx. 990 acres, and the project is .26 acres (76,423ft²). The Plant has two operational steam power generation units with a combined nameplate generation capacity of 820 megawatts (MW). There are four non-operational steam units that are no longer in service. Finally, there are two 21-MW black start capable gas turbine (GT) generators on site: GT #1.1 and GT #1.2.

For Costa Sur, Genera is proposing in this document the worst-case scenario, considering the entire marked footprint impacted and underground interconnection. Please refer to the attached General Arrangement. The site is currently under design, and Genera will provide detailed information at the final design stage.

B. Boring:

Geotech Studies SOW

Boring #	Latitude	Longitude	Diameter(in)	Depth (ft)	Volume (Ft³)
B-13	18.00159	-66.75220	4	75	6.54

a. Equipment: drill rig for subsurface drilling in accordance with ASTM D6151.
b. Access Roads: All boring have access through road PR-681. PR-681 accessible through main road PR-2.
c. Vegetation Removal will not be required.

Figure 18 (Boring location in red dot)

d. Boring's location coordinates, equipment to be utilized and access roads submitted. See supporting document:
    - BORING ACCESS VEGETATION STAGING AREA PLAN - Costa Sur RCC.xls

C. Recovery Solution – 428 Costa Sur Site - RCC

a. Permits

i. NEPA: EHP Review / Environmental Assessment (construction & demo)
ii. Section 106 Consultation
iii. USFWS No Effects Determination
iv. Coastal Zone Consistency Certification
v. DNER: Lead and Asbestos Removal Permit
vi. DNER Rule 141 Environmental Documentation (construction & demo)

vii. NPDES CGP for Stormwater Discharges (construction & demo)
viii. Permiso Unico Incidental (PUI) for demolition activities

b. Pre-Demolition Activities

i. Perform GPR survey.
ii. Perform Topographic surveys.
iii. Perform Geotechnical Surveys.

c. Pre-Demolition Activities - Multi Sectional Warehouse

i. Disconnect services such as electricity, water, sanitary and compressed air.
ii. Empty warehouse of all stored items and relocate to another permanent or temporary location.
iii. Perform Geotechnical Surveys

d. Pre-Demolition Activities - Multi Sectional Warehouse

i. Disconnect services such as electricity, water, sanitary and compressed air.
ii. Empty warehouse of all stored items and relocate to another permanent or temporary location.

e. Demolition - Mechanical - Multi Sectional Warehouse

i. Disconnect services - electricity, water, sanitary and compressed air.
ii. Empty warehouse of all stored items and relocate to another permanent or temporary location.

f. Demolition - Structural - Multi Sectional Warehouse

i. Remove of warehouse building
ii. Remove of asphalt pavement

g. Demolition - Electrical - Multi Sectional Warehouse

i. Remove of overhead distribution lines and poles
ii. Remove any associated underground feeders/wiring.

h. Pre-Demolition Activities - Building and Offices

i. Disconnect services - electricity, water and sanitary.

i. **Demolition - Mechanical - Building and Offices**
    i. Removal of HVAC System
    ii. Remove piping for potable water and fire protection.

j. **Demolition - Structural - Building and Offices**
    i. Demolition - Structural - Building and Offices
    ii. Remove of asphalt parking

k. **Demolition - Electrical - Building and Offices**
    i. Remove of overhead distribution lines and poles
    ii. Remove any associated underground feeders/wiring.

l. **Pre-Demolition Activities – Guardhouse**
    i. Disconnect services - electricity, water and sanitary.

m. **Demolition - Mechanical – Guardhouse**
    i. Removal piping for potable water, fire protection and compressed air

n. **Demolition - Structural – Guardhouse**
    i. Removal of guardhouse building
    ii. Demolition of asphalt pavement

o. **Demolition - Electrical – Guardhouse**
    i. Removal of overhead distribution lines and poles
    ii. Removal of power transformer and pull out any associated underground feeders/wiring.

p. **Material Disposal**
    i. Removal and segregation of non-regulated waste materials at the designated staging area prior to transporting offsite for disposal.
    ii. Transportation of non-regulated waste materials to an approved offsite disposal facility
    iii. Removal and segregation of regulated waste material and transportation to an approved offsite disposal facility

q. Construction Utilities Temporary

i. Provide and install 120V, 240V, 208V 3-Phase construction power source.
ii. Provide and install Step down and distribution of 480V construction power.
iii. Provide and install Temporary facilities -bathrooms, hand washing stations, breakrooms.
iv. Provide and install Lighting, Office space and Internet connection.

r. Construction – Obtain Permits

i. DNER Amendment to Construction Permit for Air Emissions
ii. PUI for construction activities

s. Construction – Civil – RCC

i. Site preparation to accommodate construction equipment.
ii. Provide and Install erosion control system.
iii. Perform Excavation and backfilling.
iv. Perform Grading of site for concrete foundations construction
v. Provide and install entrance road construction and parking.
vi. Provide and install construction of drainage system and interconnection.

t. Construction – Structural – RCC

i. Perform Concrete foundations preparation and setting.
ii. Perform Back-up Generator (Diesel Powered or Battery Load Cell) and ancillary equipment foundations preparation and setting.
iii. Provide and install reinforcing steel and concrete pouring.
iv. Provide and install foundation construction.
v. Provide and install building structure construction.
vi. Provide and install architectural cladding system construction.
vii. Provide and install interior architectural finishing, glazing and furniture construction.

u. Construction – Mechanical – RCC

i. Provide and install piping for potable water, fire protection and plumbing.
ii. Provide and install interconnection of potable water and fire protection to existing.
iii. Provide and install HVAC and ventilation equipment.
iv. Provide and install elevator.

v. Construction – Electrical – RCC

i. Provide and install ground grid installation.
ii. Provide and install fiber optic cable installation.
iii. Provide and install main power transformer and wiring.
iv. Provide and install building electrical systems, overhead and underground distribution lines.
v. Provide and install back-up generator.
vi. Provide and install network/DCS communication racks.

w. Construction – Testing and Commissioning – RCC

i. Perform Back-up generator testing and commissioning.
ii. Perform Cables and circuits testing.
iii. Perform Testing of auxiliary components
iv. Perform SCADA and communications point to point testing.
v. Perform remote control center commissioning with BESS sites.

E. Environmental & Historic Preservation ("EHP") Requirement:

1. Other than design, planning and non-destructive due diligence studies, no construction work will commence prior to the issuance of specific expressed written FEMA approval for the specific Scope of Work. FEMA- required EHP compliance review will precede the execution of each proposed Scope of Work submitted by PREPA, through its agent Genera PR. PREPA, through its agent Genera PR, is aware of its responsibility for coordinating, notifying, obtaining permits, and complying with applicable federal, state, and local laws, regulations, and executive orders and understands that failure to comply with EHP requirements may jeopardize FEMA funding.
2. See the following for general methods of construction and list of equipment to be used:
    a. Control room Construction Methodology ground disturbance. The work includes the following activities:
        i. Pre-Demolition Activities
            a. Perform GPR survey.
            b. Perform Topographic surveys.
            c. Perform Geotechnical Surveys.
        ii. Pre-Demolition Activities - Multi Sectional Warehouse
            a. Disconnect services such as electricity, water, sanitary and compressed air.
            b. Empty warehouse of all stored items and relocate to another permanent or temporary location.
            c. Perform Geotechnical Surveys
        iii. Pre-Demolition Activities - Multi Sectional Warehouse
            a. Disconnect services such as electricity, water, sanitary and compressed air.
            b. Empty warehouse of all stored items and relocate to another permanent or temporary location.
        iv. Demolition - Mechanical - Multi Sectional Warehouse
            a. Disconnect services - electricity, water, sanitary and compressed air.
            b. Empty warehouse of all stored items and relocate to another permanent or temporary location.
        v. Demolition - Structural - Multi Sectional Warehouse
            a. Remove of warehouse building

b. Remove of asphalt pavement

vi. Demolition - Electrical - Multi Sectional Warehouse
   a. Remove of overhead distribution lines and poles
   b. Remove any associated underground feeders/wiring.

vii. Pre-Demolition Activities - Building and Offices
   a. Disconnect services - electricity, water and sanitary.

viii. Demolition - Mechanical - Building and Offices
   a. Removal of HVAC System
   b. Remove piping for potable water and fire protection.

ix. Demolition - Structural - Building and Offices
   a. Demolition - Structural - Building and Offices
   b. Remove of asphalt parking

x. Demolition - Electrical - Building and Offices
   a. Remove of overhead distribution lines and poles
   b. Remove any associated underground feeders/wiring.

xi. Pre-Demolition Activities – Guardhouse
   a. Disconnect services - electricity, water and sanitary.

xii. Demolition - Mechanical – Guardhouse
   a. Removal piping for potable water, fire protection and compressed air

xiii. Demolition - Structural – Guardhouse
   a. Removal of guardhouse building
   b. Demolition of asphalt pavement

xiv. Demolition - Electrical – Guardhouse
   a. Removal of overhead distribution lines and poles
   b. Removal of power transformer and pull out any associated underground feeders/wiring.

xv. Material Disposal
   a. Removal and segregation of non-regulated waste materials at the designated staging area prior to transporting offsite for disposal.
   b. Transportation of non-regulated waste materials to an approved offsite disposal facility
   c. Removal and segregation of regulated waste material and transportation to an approved offsite disposal facility

xvi. Construction Utilities Temporary
   a. Provide and install 120V, 240V, 208V 3-Phase construction power source.
   b. Provide and install Step down and distribution of 480V construction power.
   c. Provide and install Temporary facilities -bathrooms, hand washing stations, breakrooms.
   d. Provide and install Lighting, Office space and Internet connection.

xvii. Construction – Obtain Permits
   a. DNER Amendment to Construction Permit for Air Emissions
   b. PUI for construction activities

xviii. Construction – Civil – RCC
   a. Site preparation to accommodate construction equipment.
   b. Provide and Install erosion control system.
   c. Perform Excavation and backfilling.
   d. Perform Grading of site for concrete foundations construction
   e. Provide and install entrance road construction and parking.
   f. Provide and install construction of drainage system and interconnection.

xix. Construction – Structural – RCC
   a. Perform Concrete foundations preparation and setting.
   b. Perform Back-up Generator (Diesel Powered or Battery Load Cell) and ancillary equipment foundations preparation and setting.
   c. Provide and install reinforcing steel and concrete pouring.
   d. Provide and install foundation construction.
   e. Provide and install building structure construction.
   f. Provide and install architectural cladding system construction.
   g. Provide and install interior architectural finishing, glazing and furniture construction.

xx. Construction – Mechanical – RCC
   a. Provide and install piping for potable water, fire protection and plumbing.
   b. Provide and install interconnection of potable water and fire protection to existing.
   c. Provide and install HVAC and ventilation equipment.
   d. Provide and install elevator.

xxi. Construction – Electrical – RCC
   a. Provide and install ground grid installation.
   b. Provide and install fiber optic cable installation.
   c. Provide and install main power transformer and wiring.
   d. Provide and install building electrical systems, overhead and underground distribution lines.
   e. Provide and install back-up generator.
   f. Provide and install network/DCS communication racks.

xxii. Construction – Testing and Commissioning – RCC
   a. Perform Back-up generator testing and commissioning.
   b. Perform Cables and circuits testing.
   c. Perform Testing of auxiliary components
   d. Perform SCADA and communications point to point testing.

e. Perform remote control center commissioning with BESS sites.

xxiii. Concrete foundations complete all work related to the installation of concrete foundations. The work includes the following activities:
   a. Cast-in-place shallow and deep foundations.
   b. Prefabricated concrete foundations.
   c. Supply of third-party concrete testing.

3. List of Contractor Equipment to be used are the following:
   a. Excavator
   b. Crawler Crane
   c. Semi-truck with low-bed trailer
   d. Man lift.
   e. Bucket Truck
   f. Dump Truck

4. Location of access roads (Figure 3):
   a. Entry point through existing Costa Sur Power Plant Main Gate. PR-127 access road. (18.00221, -66.75429) is located in an industrial area.

Figure 19 (LOCATION OF ACCES TO ACCES ROADS)

Note: No temporary road will be required for this project.

5. Type of debris:

    a. The type of debris that can be found:
        i. metal scrap,
        ii. domestic waste,
        iii. recyclables,
        iv. wood.
    b. The debris will be separated and taken to an approved waste disposal, or recycling facility, as applicable. Final disposal site permits and supporting documentation will be provided at close-out.

6. Description of Staging Area:

    a. The staging area will be located inside the premises of the Costa Sur Power Plant and will serve as an assembly point for all the materials to be installed. Occupies area in the north part of the property (Figure 20) has a lot of 1.6 acres and coordinates (18.001767, -66.750068). A temporary fence will be installed. No demolition or ground disturbance is required.

Figure 20 (staging area)

Figure 21 Temporary Fence (example)

7. Hazardous Material:
    a. Activities, quantity to be generated or disposed, and management and disposal plan.
        i. The identified materials that can potentially be found in the Generation Plant are asbestos, PCBs, lead, SF6 gas, oil from the transformer & breakers, diesel, and sealants. These contaminants will be handled and disposed of as per the State and federal laws and regulations.
        ii. GENERA will provide actual disposal locations, permits quantities and supporting_documentation as a Condition of FEMA Record of Environmental Considerations
        iii. These products and their residues will be stored in special covered areas for disposal by an authorized company and provided with temporary spill controls until collected. All paint containers and curing compounds will be tightly sealed and stored when not in use. Excess paint will not be discharged to the storm system, properly disposed, according to the manufacturer's instructions.
    b. In the case of project includes building demolition with asbestos, Genera will provide a copy of the EQB approved plan or evidence of plan submission.

i. No demolition works will be performed.

c. In the case of project includes disposal of damaged transformers or wood poles with creosote, include the management and disposal plan. The plan must include the final disposition site.

8. Water Crossings:
   a. The project will not affect a waterway or body of water.
   b. The project site is located adjacent to Mar Caribe (shown in Figure 22) approximately 1.8 miles. Ground disturbances will not take place in wetland areas.

Figure 22 Location of the project footprint in relation to Costa Sur

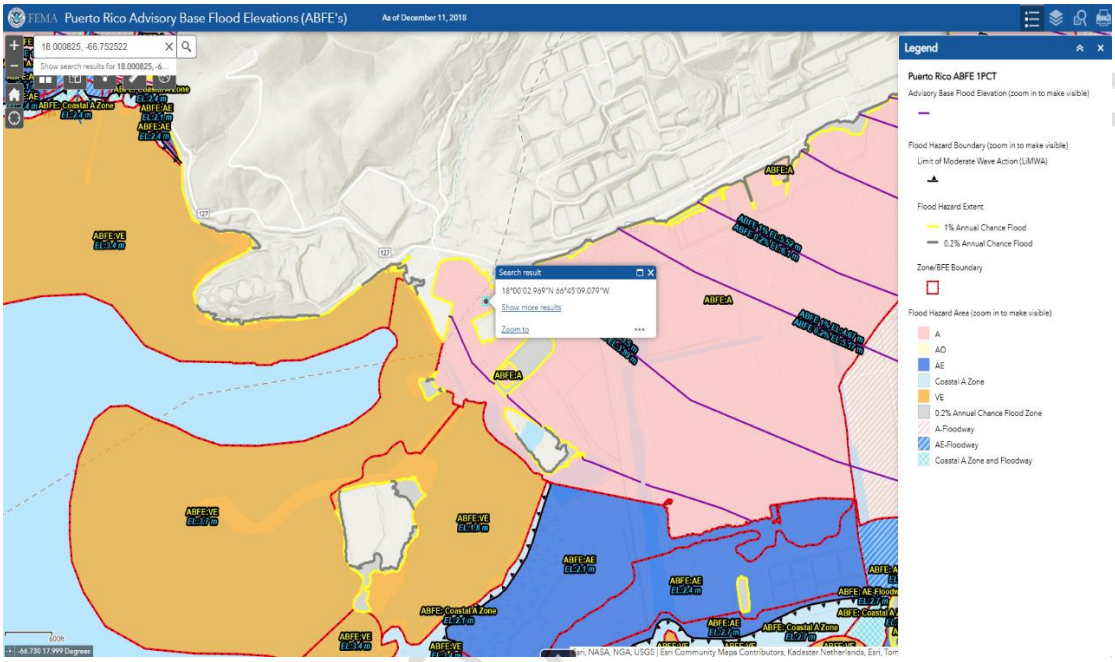
Scope of equipment repair/replacement and potential staging areas are outside any wetland zones.

   c. Modification of a body of water or wetland: the project doesn't require dredging, excavation, disposal of material, adding fill material that might result in any modification of a body of water or wetland designated as "waters of the U.S."
   d. Project do not alter a watercourse, water flow patterns, or a drainage way, regardless of its floodplain designation

9. Flood zone: Is the project located in a flood zone, floodway or will it have a negative impact on the flood zone? (Figure 23)

a. The Generation Plant is in Flood Zone A according to the ABFE.
b. As a mitigation site concrete pad will be elevated 2ft above flood water level.

Figure 23 (Flood Zone)



c. Memorandum with the updated version of FEMA Region II Memorandum, dated October 10, 2017, Guidance for the use of Available Flood Hazard Information for the Government of Puerto Rico in complying with FEMA Policy 104-008-2, 44 CFR Part 9, and Executive Order 11988 (Floodplain Management). All hazard mitigation proposals under alternative procedures must be designed using the best available flood hazard data and in compliance with applicable regulations and policy.

10. Structure Age:
    a. Provide the construction date of any buildings or structures within the project. Include those near the project.
        i. No structures are impacted by the project.
        ii. The Costa Sur Power Plant began operating in the late 1950s, as

such, some buildings affected by the Project may be greater than 50 years in age. The Project Area is located entirely within previously disturbed areas inside the existing plant boundary. According to the OECH Interactive Map there are no registered National Historic Places within 1 mile of the site. The OECH Interactive map indicates that a Section 106 Consultation was performed at the Costa Sur Power Station (near the southern property boundary) in 2014, which concluded that no historical properties were located in the area.

11. Ground Disturbance:
    a. Provide a description of the new ground disturbance by giving the dimensions if any. Include a map showing the extent of the disturbance with coordinates.
        i. The project is expected to disturb .5 acres of land. All of this land has been previously disturbed and does not extend outside of the existing plant boundaries. Refer to BORING ACCESS VEGETATION STAGING AREA PLAN - Costa Sur RCC.xls.

Ground Disturbance	Latitude	Longitude	Depth	Volume (Ft^3)
EQUIPMENT FOUNDA-TIONS	18.00042	-66.75322	4	40,591.50
Electrical Duck Bank	18.00042	-66.75322	10	90,288.75

        ii. GENERA has reviewed the Archaeological GIS layers provided by the Puerto Rico Planning Board and confirmed no previous features in the project area. Any features discovered during construction will be managed in accordance with Section 106 Project a Specific Programmatic Agreement among FEMA, SHPO, COR3 and PREPA.
    b. The project SOW will not affect water or sewer utility services.
    c. Indicate the prior/current use of the area to be impacted:
        i. No. Area is an existing Generation Plant. 100% of the work to be completed will be within the existing and already impacted Generation Plant perimeter.
    d. Explain how materials will be stockpiled and disposed of:
        i. The excess of soil material will be stockpiled temporarily

onsite in the staging area or within the Generation Plant. Disposal of soil will be handled as per the Waste Management Plan.

ii. GENERA will provide final disposal locations and quantities as a Condition of FEMA Record of Environmental Considerations (REC).

e. Specify final disposition site:
   i. The disposal site will be in an approved location, or recycling facility, according to state and federal laws and regulations. Specific site location, quantities, and documentation will be provided at close out.

f. Soil Stabilization measures: The project does not involve any soil stabilization measures

VII. 428 – San Juan Site - RCC

Location: Mercado Central Avenue, Zona Portuaria Road PR-28, Puerto Nuevo PR 00920

Latitude / Longitude: 18.427720, -66.105067

A. Site Description:

The San Juan Plant is located on the northern coast of Puerto Rico in San Juan. It consists of four thermal steam units and two combined-cycle units with a total nameplate capacity of 864 MW. The Plant has two main types of power generation units: conventional steam plants (Units 7, 8, 9, and 10) and combined-cycle power blocks (Units 5 and 6). The four conventional steam plants are fired using heavy fuel oil (HFO) and consist of a Combustion Engineering (now GE Power) natural circulation boiler, a General Electric condensing steam turbine (ST) generator and supporting auxiliary equipment. Each generator is rated for 133,689 kVA, and each unit (Units 7, 8, 9, and 10) is rated at 100 MW. Construction of the Plant began in the early 1950s and continued with Unit 7 going into commercial service in 1965 and the last thermal unit, Unit 10, beginning commercial service in 1968.

For San Juan, Genera is presenting in this proposal the worst-case scenario, considering the entire marked footprint impacted and underground interconnection. Please refer to the attached General Arrangement. The site is currently under design, and Genera will provide detailed information at the final design stage.

B. Boring

Boring No.	Latitude	Longitude	Diameter(in)	Depth (ft)	Volume (Cu. ft)
B-2	18.42581	-66.10557	4	75	6.54
B-14	18.42553	-66.10519	4	100	8.73
B-16	18.42581	-66.10506	4	75	6.54

1. Equipment: drill rig for subsurface drilling in accordance with ASTM D6151.
2. Access Roads: All boring have access thru existing San Juan powerplant adjacent lot access gate on PR-28 road.
3. Vegetation Removal will not be required.

Figure 24 (Boring Location)

C. Recovery Solution – 428 San Juan Site- RCC

a. Permits
   i. NEPA: EHP Review / Environmental Assessment (construction & demo)
   ii. Section 106 Consultation
   iii. USFWS No Effects Determination
   iv. Coastal Zone Consistency Certification
   v. DNER: Lead and Asbestos Removal Permit
   vi. DNER Rule 141 Environmental Documentation (construction & demo)
   vii. NPDES CGP for Stormwater Discharges (construction & demo)
   viii. Permiso Unico Incidental (PUI) for demolition activities

b. Pre-Demolition Activities - Multi Sectional Warehouse
   i. Disconnect services such as electricity, water, sanitary and compressed air.

ii. Empty warehouse of all stored items and relocate to another permanent or temporary location.
iii. Perform Geotechnical Surveys

c. Pre-Demolition Activities - Multi Sectional Warehouse
   i. Disconnect services such as electricity, water, sanitary and compressed air.
   ii. Empty warehouse of all stored items and relocate to another permanent or temporary location.

d. Demolition - Mechanical - Multi Sectional Warehouse
   i. Disconnect services - electricity, water, sanitary and compressed air.
   ii. Empty warehouse of all stored items and relocate to another permanent or temporary location.

e. Demolition - Structural - Multi Sectional Warehouse
   i. Remove of warehouse building
   ii. Remove of asphalt pavement

f. Demolition - Electrical - Multi Sectional Warehouse
   i. Remove of overhead distribution lines and poles
   ii. Remove any associated underground feeders/wiring.

g. Pre-Demolition Activities - Building and Offices
   i. Disconnect services - electricity, water and sanitary.

h. Demolition - Mechanical - Building and Offices
   i. Removal of HVAC System
   ii. Remove piping for potable water and fire protection.

i. Demolition - Structural - Building and Offices
      i. Demolition - Structural - Building and Offices
      ii. Remove of asphalt parking

j. Demolition - Electrical - Building and Offices
   i. Remove of overhead distribution lines and poles
   ii. Remove any associated underground feeders/wiring.

k. Material Disposal
   i. Removal and segregation of non-regulated waste materials at the designated staging area prior to transporting offsite for disposal.
   ii. Transportation of non-regulated waste materials to an approved offsite disposal facility
   iii. Removal and segregation of regulated waste material and transportation to an approved offsite disposal facility

l. Construction Utilities Temporary
   i. Provide and install 120V, 240V, 208V 3-Phase construction power source.
   ii. Provide and install Step down and distribution of 480V construction power.
   iii. Provide and install Temporary facilities -bathrooms, hand washing stations, breakrooms.
   iv. Provide and install Lighting, Office space and Internet connection.

m. Construction – Obtain Permits
   i. DNER Amendment to Construction Permit for Air Emissions
   ii. PUI for construction activities

n. Construction – Civil – RCC
   i. Site preparation to accommodate construction equipment.
   ii. Provide and Install erosion control system.
   iii. Perform Excavation and backfilling.
   iv. Perform Grading of site for concrete foundations construction
   v. Provide and install entrance road construction and parking.
   vi. Provide and install construction of drainage system and interconnection.

o. Construction – Structural – RCC
   i. Perform Concrete foundations preparation and setting.
   ii. Perform Back-up Generator (Diesel Powered or Battery Load Cell) and ancillary equipment foundations preparation and setting.
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   i. Provide and install piping for potable water, fire protection and plumbing.
   ii. Provide and install interconnection of potable water and fire protection to existing.
   iii. Provide and install HVAC and ventilation equipment.
   iv. Provide and install elevator.

q. Construction – Electrical – RCC
   i. Provide and install ground grid installation.
   ii. Provide and install fiber optic cable installation.
   iii. Provide and install main power transformer and wiring.
   iv. Provide and install building electrical systems, overhead and underground distribution lines.
   v. Provide and install back-up generator.
   vi. Provide and install network/DCS communication racks.

r. Construction – Testing and Commissioning – RCC
   i. Perform Back-up generator testing and commissioning.
   ii. Perform Cables and circuits testing.
   iii. Perform Testing of auxiliary components
   iv. Perform SCADA and communications point to point testing.
   v. Perform remote control center commissioning with BESS sites.

D. Environmental & Historic Preservation ("EHP") Requirement:

1. Other than design, planning and non-destructive due diligence studies, no construction work will commence prior to the issuance of specific expressed written FEMA approval for the specific Scope of Work. FEMA- required EHP compliance review will precede the execution of each proposed Scope of Work submitted by PREPA, through its agent Genera PR. PREPA, through its agent Genera PR, is aware of its responsibility for coordinating, notifying, obtaining permits, and complying with applicable federal, state, and local laws, regulations, and executive orders and understands that failure to comply with EHP requirements may jeopardize FEMA funding.

2. See the following for general methods of construction and list of equipment to be used:

    a. Permits
        i. NEPA: EHP Review / Environmental Assessment (construction & demo)
        ii. Section 106 Consultation
        iii. USFWS No Effects Determination
        iv. Coastal Zone Consistency Certification
        v. DNER: Lead and Asbestos Removal Permit
        vi. DNER Rule 141 Environmental Documentation (construction & demo)
        vii. NPDES CGP for Stormwater Discharges (construction & demo)
        viii. Permiso Unico Incidental (PUI) for demolition activities

    b. Pre-Demolition Activities - Multi Sectional Warehouse
        i. Disconnect services such as electricity, water, sanitary and compressed air.
        ii. Empty warehouse of all stored items and relocate to another permanent or temporary location.
        iii. Perform Geotechnical Surveys

    c. Pre-Demolition Activities - Multi Sectional Warehouse
        i. Disconnect services such as electricity, water, sanitary and compressed air.

ii. Empty warehouse of all stored items and relocate to another permanent or temporary location.

d. Demolition - Mechanical - Multi Sectional Warehouse
   i. Disconnect services - electricity, water, sanitary and compressed air.
   ii. Empty warehouse of all stored items and relocate to another permanent or temporary location.

e. Demolition - Structural - Multi Sectional Warehouse
   i. Removal of warehouse building.
   ii. Remove asphalt pavement.

f. Demolition - Electrical - Multi Sectional Warehouse
   i. Remove of overhead distribution lines and poles
   ii. Remove any associated underground feeders/wiring.

g. Pre-Demolition Activities - Building and Offices
   i. Disconnect services - electricity, water and sanitary.

h. Demolition - Mechanical - Building and Offices
   i. Removal of HVAC System
   ii. Remove piping for potable water and fire protection.

i. Demolition - Structural - Building and Offices
   i. Demolition - Structural - Building and Offices
   ii. Remove of asphalt parking

j. Demolition - Electrical - Building and Offices
   i. Remove of overhead distribution lines and poles
   ii. Remove any associated underground feeders/wiring.

k. Material Disposal
   i. Removal and segregation of non-regulated waste materials at the designated staging area prior to transporting offsite for disposal.
   ii. Transportation of non-regulated waste materials to an approved offsite disposal facility

iii. Removal and segregation of regulated waste material and transportation to an approved offsite disposal facility

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   i. Provide and install 120V, 240V, 208V 3-Phase construction power source.
   ii. Provide and install Step down and distribution of 480V construction power.
   iii. Provide and install Temporary facilities -bathrooms, hand washing stations, breakrooms.
   iv. Provide and install Lighting, Office space and Internet connection.

m. Construction – Obtain Permits
   i. DNER Amendment to Construction Permit for Air Emissions
   ii. PUI for construction activities.

n. Construction – Civil – RCC
   i. Site preparation to accommodate construction equipment.
   ii. Provide and Install erosion control system.
   iii. Perform Excavation and backfilling.
   iv. Perform Grading of site for concrete foundations construction
   v. Provide and install entrance road construction and parking.
   vi. Provide and install construction of drainage system and interconnection.

o. Construction – Structural – RCC
   i. Perform Concrete foundations preparation and setting.
   ii. Perform Back-up Generator (Diesel Powered or Battery Load Cell) and ancillary equipment foundations preparation and setting.
   iii. Provide and install reinforcing steel and concrete pouring.
   iv. Provide and install foundation construction.
   v. Provide and install building structure construction.
   vi. Provide and install architectural cladding system construction.
   vii. Provide and install interior architectural finishing, glazing and furniture construction.

p. Construction – Mechanical – RCC
   i. Provide and install piping for potable water, fire protection and plumbing.
   ii. Provide and install interconnection of potable water and fire protection to existing.
   iii. Provide and install HVAC and ventilation equipment.
   iv. Provide and install elevator.

q. Construction – Electrical – RCC
   i. Provide and install ground grid installation.
   ii. Provide and install fiber optic cable installation.
   iii. Provide and install main power transformer and wiring.
   iv. Provide and install building electrical systems, overhead and underground distribution lines.
   v. Provide and install back-up generator.
   vi. Provide and install network/DCS communication racks.

r. Construction – Testing and Commissioning – RCC
   i. Perform Back-up generator testing and commissioning.
   ii. Perform Cables and circuits testing.
   iii. Perform Testing of auxiliary components
   iv. Perform SCADA and communications point to point testing.
   v. Perform remote control center commissioning with BESS sites.

s. Miscellaneous Civil works. The work includes the following activities:
   i. Isolated repairs or maintenance activities for pads, drainage systems.

t. Concrete foundations, complete all required work related to the installation of concrete foundations. The work includes the following activities:

   i. Cast-in-place shallow and deep foundations.
   ii. Prefabricated concrete foundations.
   iii. Supply of third-party concrete testing.

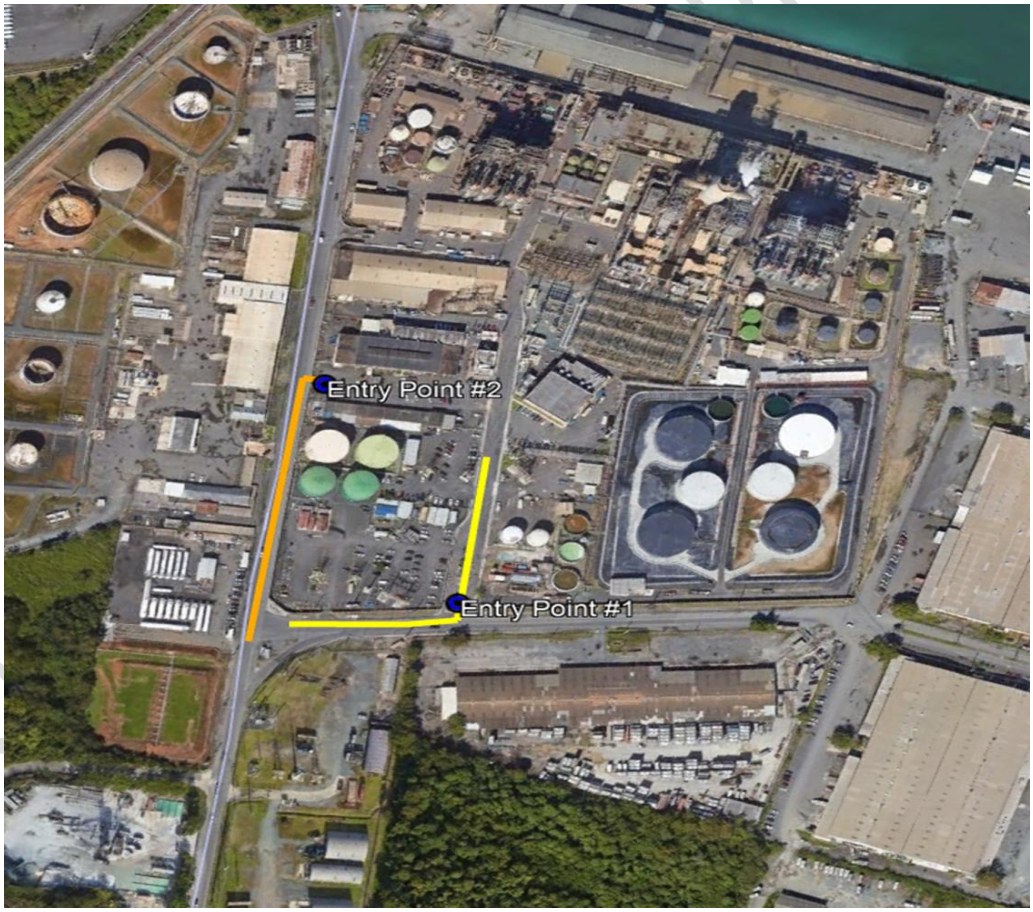
1. List of Contractor Equipment to be used are following:
   i. Excavator
   ii. Crawler Crane

iii. Semi-truck with low-bed trailer
iv. Man lift.
v. Bucket Truck
vi. Dump Truck

3. Removal of vegetation
    a. Not Applicable.

4. Location of access roads:
    i. Entry point through existing San Juan Power plant main entrance. Main access road entry point thru existing San Juan powerplant adjacent lot access gate on PR-28 road. (Figure 25)

Figure 25 (access road)



Note: No temporary road will be required for this project.

5. Type of debris:
   a. The type of debris that may be found:
      i. in the process of demolition are concrete,
      ii. metal scrap,
      iii. domestic waste,
      iv. recyclables,
      v. wood.
   b. The debris will be separated and taken to an approved waste disposal or recycling facility, as applicable. Final disposal site permits and supporting documentation will be provided at close-out.

6. Description of Staging Area: The staging area will be located inside the premises of the San Juan Power Plant and will serve as an assembly point for all the materials to be installed. (Figure 26) in a lot of 1 acre and coordinates (18.422195, -66.101775). A temporary fence will be installed. No demolition or ground disturbance is required. If an additional temporary staging area is required, it will be informed and reported accordingly.

Figure 26 Location of Staging area.

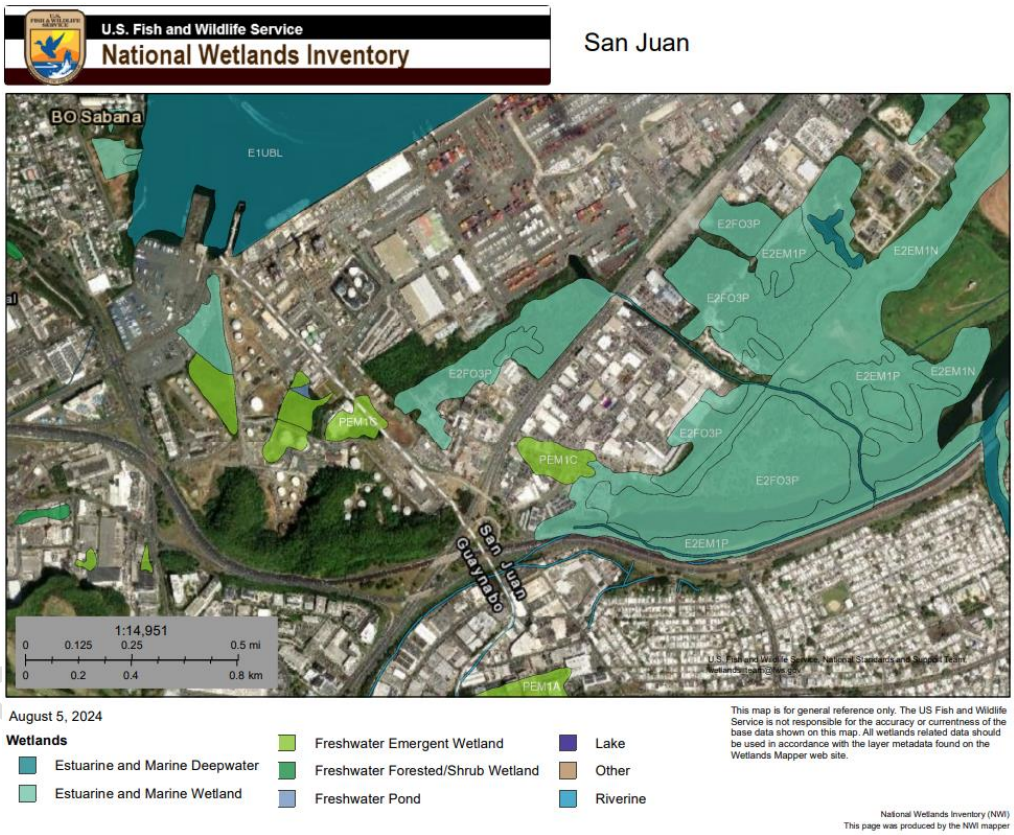
Figure 27 Temporary Fence (example)

7. Hazardous Material:
    a. Activity, quantity to be generated or disposed and management and disposal plan:
        i. The identified materials that can potentially be found in the Generation Plant are asbestos, PCBs, lead, SF6 gas, oil from the transformer & breakers, diesel, and sealants. These contaminants will be handled and disposed of as per the State and federal laws and regulations.
        ii. GENERA will provide actual disposal locations, permit quantities and supporting_documentation as a Condition of FEMA Record of Environmental Considerations (REC).
        iii. These products and their residues will be stored in special covered areas for disposal by an authorized company and provided with temporary spill controls until collected. All paint containers and curing compounds will be tightly sealed and stored when not in use. Excess paint will not be discharged to the storm system, properly disposed, according to the manufacturer's instructions.

b. The project that includes building demolition with asbestos will provide a copy of the DNER approved plan or evidence of plan submission.
    i. In case the presence of asbestos is confirmed in the building to be demolished, GENERA will follow all permits protocols required by law to properly dispose of the hazardous materials from the premises. GENERA will provide evidence of the plan submission as a condition of FEMA Record of Environmental Considerations (REC).
    ii.

8. Water Crossings:
    a. Project will not affect a waterway or body of water (figure 28).

Figure 28



No Adverse Effect. Scope of equipment repair/replacement and potential staging areas are outside any wetland zones.

b. No modification of a body of water or wetland: The project doesn't require dredging, excavation, disposal of material, adding fill material that might result in any modification of a body of water or wetland designated as "waters of the U.S."?

c. The project doesn't alter a watercourse, water flow patterns, or a drainage way, regardless of its floodplain designation

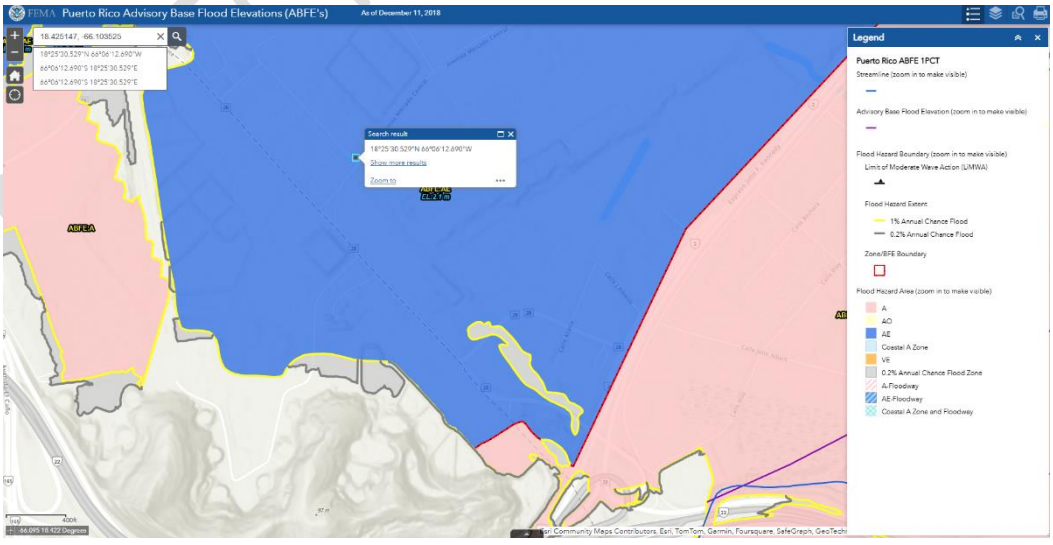
d. Flood zone: Is the project located in a flood zone, floodway or will it have a negative impact on the flood zone?

   i. The Generation Plant is in Flood Zone AE according to the ABFE. The project will have no negative impact on the flood zone. (See Figure 29)

   ii. As a mitigation measure for this site, a concrete pad will be elevated 2ft above flood water level.

   iii. In accordance with the updated version of FEMA Region II Memorandum, dated October 10, 2017, Guidance for the use of Available Flood Hazard Information for the Government of Puerto Rico in complying with FEMA Policy 104-008-2, 44 CFR Part 9, and Executive Order 11988 (Floodplain Management). All hazard mitigation proposals under alternative procedures must be designed using the best available flood hazard data and in compliance with applicable regulations and policy.

Figure 29 (ABFE Zone)



9. Structure Age:
    a. San Juan Power Plant was built approximately in 1950's.

10. Ground Disturbance:
    a. Top-soil stripping will occur within the construction area.
    b. See Palo Seco BESS boring plan – Refer BORING ACCESS VEGETATION STAGING AREA PLAN - San Juan RCC.xls
    c. Cable trenching will occur within the Generation site up to 10ft deep. The underground will require 380,707.30 CU.FT. of excavation. Refer to BORING ACCESS STAGING AREA PLAN – San Juan RCC.xls
    d. Ground disturbance will occur at 4 feet deep for the construction of concrete pads requiring 39,935.63 CU.FT. of excavation. For details of construction, refer to BORING ACCESS STAGING AREA PLAN – San Juan RCC.xls

Ground Disturbance	Latitude	Longitude	Depth (FT)	Volume (FT^3)
BESS Equipment Pads	18.42553	-66.10519	4	39,935.63
Electrical Duct Bank	18.42580	-66.10536	10	380,707.30

    e. GENERA has reviewed the Archaeological GIS layers provided by the Puerto Rico Planning Board and confirmed no previous features in the project area. Any features discovered during construction will be managed in accordance with Section 106 Project Specific Programmatic agreement among FEMA, COR 3 and PREPA.

11. The project SOW will not affect water or sewer utility services.

12. Explanation on how materials will be stockpiled and disposed of:

a. The excess of soil material will be stockpiled temporarily onsite in the staging area or within the Generation Plant. Disposal of soil will be managed as per state and federal laws and regulations.
b. GENERA will provide final disposal locations and quantities as a Condition of FEMA Record of Environmental Considerations (REC).

13. Specify disposition site:
    a. The disposal of materials will be managed as per the State and federal regulations. Final disposal site's location, Permits and support documentation will be provided to FEMA at close-out.

14. Soil Stabilization measures: The project does not involve any soil stabilization measures.