NATIONAL MARINE FISHERIES SERVICE
ENDANGERED SPECIES ACT SECTION 7
LETTER OF CONCURRENCE

Title:	Letter of Concurrence on Peñuelas Technology Park, LLC Resource Conservation Recovery Act Remedial Action in the Cooling Water Canal
Consultation Conducted By:	Endangered Species Act Interagency Cooperation Division, Office of Protected Resources, National Marine Fisheries Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce
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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, MD 20910

NOV 0 7 2017

Refer to NMFS No: FPR-2017-9235

Grace Musumeci
Chief, Environmental Review Section
Sustainability and Multimedia Programs Branch
United States Environmental Protection Agency
Region 2
290 Broadway
New York, New York 10007-1866

RE: Concurrence Letter for the Peñuelas Technology Park, LLC Resource Conservation Recovery Act Remedial Action in the Cooling Water Canal

Dear Ms. Musumeci:

On February 6, 2017, the Southeast Regional Office (SERO) of the National Marine Fisheries Service (NMFS) received your request for a written concurrence under the Endangered Species Act of 1973, as amended (ESA; 16 U.S.C. 1531 et seq.) that the Resource Conservation Recovery Act (RCRA) remedial action to be undertaken by Peñuelas Technology Park LLC (PTP) is not likely to adversely affect species listed as threatened or endangered or critical habitats designated under the ESA. SERO transferred the ESA section 7 consultation to the Office of Protected Resources (OPR) on September 18, 2017. After a conference call September 25, 2017, with Environmental Protection Agency (EPA) staff and PTP's consultants, OPR initiated consultation. This response to your request was prepared by NMFS pursuant to section 7(a)(2) of the ESA, implementing regulations at 50 CFR §402, and agency guidance for preparation of letters of concurrence.

This letter underwent pre-dissemination review using standards for utility, integrity, and objectivity in compliance with agency guidelines issued under section 515 of the Treasury and General Government Appropriations Act of 2001 (Data Quality Act; 44 U.S.C. 3504(d)(1) and 3516). A complete record of this informal consultation is on file at NMFS Office of Protected Resources in Silver Spring, Maryland.

Action Agency's Effect Determinations

The EPA determined that the proposed RCRA remedial action may affect, but is not likely to adversely affect green (*Chelonia mydas*), hawksbill (*Eretmochelys imbricata*), leatherback (*Dermochelys coriacea*), and loggerhead (*Caretta caretta*) sea turtles.

Proposed Action and Action Area

In 2003, EPA issued a RCRA hazardous waste operating permit to PTP for its petrochemical complex. The permit includes several requirements pertaining to hazardous waste management, including the remediation of contaminated areas. Solid Waste Management Unit 5 (SWMU5) is a constructed open channel. The canal runs north to south along the western side of the former PTP manufacturing area and discharges in Tallaboa Bay in the Caribbean Sea. The canal is

approximately 3,000 feet (ft) long and ranges in width from 50 ft at the northern end to more than 300 ft at the southern end. Depths range from less than 3 ft at the northern end to approximately 15 ft at the canal mouth. Benthic surveys and sediment sampling performed by CH2MHill[1] found the low levels of polycyclic aromatic hydrocarbons (PAHs) near the vehicle bridge do not appear to affect the benthic community. PAH contamination south of the bridge was low to undetectable. The upper portion of the canal, north of the vehicle bridge, is the area near the original source of contamination (the former Dripolene Pond) with extremely high levels of PAHs and stormwater discharges from the closed industrial landfill. No elevated risk was found for aquatic organism exposure to surface water so the remedial action addresses only the contaminated sediments in the northern portion of the canal.

PTP is proposing the following actions due to contamination of sediment from former processing plant discharges into the canal:

- Removal of approximately 0.65 acre of red mangroves along the banks of and within the canal north of the existing vehicle bridge
- Installation of a vertical cutoff wall immediately south of the vehicle bridge to contain sediments in the northern part of the canal
- Placement of an impermeable liner over the impacted sediments in the northern portion of the canal
- Placement of backfill over the liner and contouring of the backfilled area in order to drain stormwater from the backfilled area into the lower portion of the canal and allow tidal inflows into the backfilled area
- Propagation of mangroves in the backfilled area to replace those removed as part of the remedial action
- Periodic inspections to insure performance and stability of the remedial action
- Site maintenance and institutional controls including fencing, security, and deed restrictions to prohibit activities that could compromise the integrity of the containment and capping of sediment.

Site preparation and stormwater and turbidity control installation would be completed first. Mangroves would then be removed from the portion of the channel north of the vehicle bridge. Depending on the level of contaminated sediment on mangrove roots and branches, decontamination may be done of vegetative debris prior to its disposal in a landfill. The proposed remedial action will take place in the northern portion of the canal, north of the vehicle bridge, in an area measuring approximately 400 ft long with an average width of 40 ft and depths from one to five feet (see Figure 1). The sheet pile wall will be installed once mangrove clearing is complete. Sheet pile will be installed from the vehicle bridge with a vibratory hammer. Once the sheet pile has been installed, the work area will be dewatered. Water quality testing will be performed prior to dewatering to determine whether the water needs to pass through the on-site groundwater treatment system or can be discharged into the downstream portion of the canal that will remain. Most of the construction will be done from the canal bank or the vehicle bridge. Up to three small boats measuring 14 to 18 ft in length will be used to install turbidity barriers downstream and monitor the downstream portion of the canal to be sure no sediments are

[1] CH2MHill. 2014. Benthic Study Report, Solid Waste Management Unit (SWMU) No. 5 Cooling Water Canal, Prepared for Peñuelas Technology Park LLC, Peñuelas, Puerto Rico.

escaping from the work area. The boats will be launched from one of the existing boat ramps in the action area, either in Guayanilla Bay to the west or toward Ponce to the east. The boats will then transit to the canal and moor at the existing dock in the canal when not in use. The backfilled area will be planted with mangroves and a two-year maintenance and monitoring plan will be implemented to insure the mangrove plantings are successful. All construction, including mangrove planting, will be completed in 180 days.

The interdependent activity associated with the proposed action is the operation of up to three small boats, including their transit from one of the existing boat ramps in the action area to the cooling water canal. There are no interrelated activities associated with the proposed action.

In order to avoid and minimize potential impacts to ESA-listed resources that could enter the canal or be present near the mouth of the canal during construction of the sediment containment and capping system, EPA will require implementation of the following measures during all in-water activities:

1. All field personnel will be provided training regarding identification of sea turtles and the need to avoid collisions or any form of contact during in-water construction activities including the use of boats and heavy equipment and during deployment of turbidity barriers or installation of sheet pile
2. All in-water operations, including vessel operation, must be shut down or vessel motors placed in neutral if a manatee or sea turtle comes within 50 ft of the operation. Activities will not resume until the animal has moved beyond the 50-ft radius or until 30 minutes elapse without sighting the animal again within 50 ft of operations. Animals must not be herded away or harassed into leaving.
3. Bright flagging will be placed in shoreline trees 50 ft downstream of the southernmost end of the construction area to assist in determining the location of animals in relation to the work area.
4. All vessels associated with the construction project shall operate at "Idle Speed/No Wake" at all times while in the immediate construction area and while in water where the draft of the vessel provides less than a 4-ft clearance from the bottom.
5. During project-related power boat operations elsewhere in SWMU5 or offshore, a spotter will be used to ensure that manatees or sea turtles are not within 50 ft of the vessel and if they are, the vessel motor will be shut down or placed in neutral until the animal is greater than 50 ft away.
6. All vessels will follow deep water routes whenever possible
7. All observation of manatees or sea turtles within 50 ft of the construction area, as well as implemented avoidance measures, will be documented
8. Sediment and erosion controls to minimize transport of sediment from terrestrial clearing and sediment in canal will be deployed prior to commencement of earth movement including the installation of a stone construction entrance, installation of a turbidity barrier across the canal downstream of the bridge, and installation of filter bags north of the turbidity barrier
9. Sediment and erosion controls to minimize transport of sediment out of backfilled area will also be installed including riprap filters north and south of the backfilled area and gravel on the bottom of the portion of the canal that will remain as open water to maintain red mangroves in the area.

The action area includes terrestrial portions of the PTP site that will be used for staging of equipment during construction of the containment and capping system as well as the canal itself where the existing boat dock is located and will be used during boat operations associated with construction. The action area also includes Guayanilla Bay to the west and Tallaboa Bay to the east where existing boat ramps are located in public and private facilities. One of these ramps will be used to launch and recover the small boats that will be used during project construction but the applicant has not yet determined which ramp will be used.

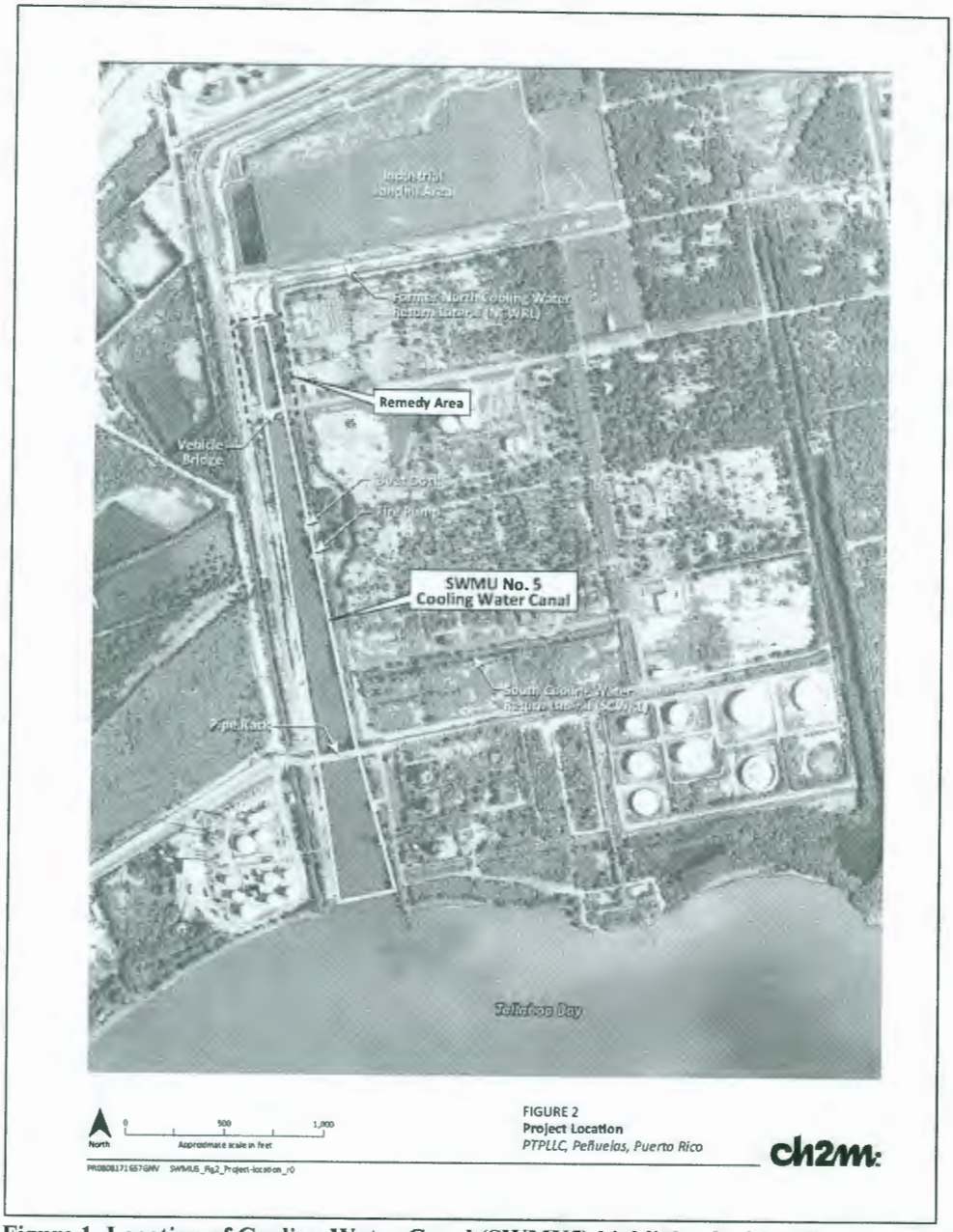


Figure 1. Location of Cooling Water Canal (SWMU5) highlighted with yellow lines with area where remedial action will take place outlined in red.

Affected ESA-listed Species

ESA-listed species the action agency or NMFS believes may be affected by the proposed action

Species	ESA Status – Listing Rule	Recovery Plan
Nassau grouper (*Epinephelus striatus*)	T – 81 FR 42268	----
Green sea turtle (*Chelonia mydas*), North Atlantic Distinct Population Segment (DPS)	T – 81 FR 20057	63 FR 28359
Green sea turtle (*Chelonia mydas*), South Atlantic DPS	T – 81 FR 20057	63 FR 28359
Hawksbill sea turtle (*Eretmochelys imbricata*)	E – 35 FR 8491	12/1993
Leatherback sea turtle (*Dermochelys coriacea*)	E – 61 FR 17	63 FR 28359
Loggerhead sea turtle (*Caretta caretta*), Northwest Atlantic Ocean DPS	T – 76 FR 58868	63 FR 28359
T = threatened, E = endangered		

The EPA did not include an effects determination for Nassau grouper. Based on the benthic habitats in Tallaboa Bay, which is the discharge point for the Cooling Water Canal, and the mangrove habitat in the canal along with seagrass and coral at the canal mouth, we believe Nassau grouper could be present in the action area and have included our effects determination below.

The EPA determined that the project may affect, but is not likely to adversely affect leatherback sea turtles. There is no leatherback nesting habitat in Tallaboa Bay where the Cooling Water Canal discharges. Similarly, there are no leatherback nesting beaches in Guayanilla or Tallaboa Bays where one of the existing boat ramps will be used to launch the small boats that will be used during project construction. Leatherback sea turtles are an offshore species that forage in deep, pelagic waters and only transit to nearshore areas to access nesting beaches. Therefore, we believe the project will have no effect on leatherback sea turtles.

Consultation History

SERO requested additional information from EPA on March 23, April 21 and July 27, 2017. The consultants for PTP provided this information via conference calls and emails on April 6 and 21, July 19, and August 16, 2017. A technical memorandum was created by the project consultants detailing the proposed corrective action and the associated risk evaluation used to determine potential impacts to benthic and other environmental resources in the action area from taking the action. Once the consultation was transferred to OPR, a conference call was held with EPA and PTP's consultants to discuss the project and consultation requirements on September 25, 2017. OPR sent a request for more information October 10, 2017 regarding details of the proposed construction methodology. The information provided by EPA and PTP's consultants was used to identify potential stressors from the proposed action on ESA-listed species under NMFS' jurisdiction that may be affected and the potential extent of these effects.

Effects of the Action

Under the ESA, "effects of the action" means the direct and indirect effects of an action on the ESA-listed species or designated critical habitat, together with the effects of other activities that are interrelated or interdependent with that action (50 CFR §402.02). The applicable standard to find that a proposed action is not likely to adversely affect ESA-listed species or designated critical habitat is that all of the effects of the action are expected to be discountable, insignificant, or completely beneficial. Beneficial effects are contemporaneous positive effects without any adverse effects to the species or critical habitat. Insignificant effects relate to the size of the impact and should never reach the scale where take occurs. Discountable effects are those extremely unlikely to occur.

The proposed remedial action requires that work be conducted from the shoreline, vehicle bridge, and in terrestrial areas around the canal, and installation of the in-water turbidity barriers as well as monitoring the effectiveness of the in-water sediment controls and the sheet pile wall will be done by boat. Therefore, there could be effects to ESA-listed species associated with noise from pile driving to create the sheet pile barrier, sediment transport downstream, and vessel operation.

Hawksbill and green (North and South Atlantic Distinct Population Segments (DPSs)) sea turtles may be present in the area. Hawksbill nesting has been reported on one of the beaches in Guayanilla Bay. Seagrass, coral reefs, and colonized hard bottom are present in the action area and green and hawksbill sea turtles have been observed particularly in areas outside the mouth of Guayanilla Bay and in various areas in Tallaboa Bay. Loggerhead sea turtles are rare around Puerto Rico. Loggerhead nesting has been reported to date only in some areas along the east coast, as well as on beaches of Culebra and Vieques. Loggerheads are reported infrequently in stranding data, mainly associated with boat strikes with no loggerhead strandings reported in the Peñuelas area based on information from the Puerto Rico Department of Natural and Environmental Resources.

We do not have studies on the presence of Nassau grouper specific to the action area. However, the extensive seagrass beds, coral reefs, and colonized hard bottom in the action area coupled with the deeper water reefs offshore of the action area mean juvenile and adult habitats are available to the species. While stocks of this species are depleted, areas along the coastline of Puerto Rico with complexes of seagrass and corals often have juvenile Nassau groupers in low numbers.

Sea turtles and Nassau grouper could be affected by noise from construction activities particularly that associated with pile driving to install the sheet pile wall. Installation of metal sheet piles using a vibratory hammer to create the sheet pile wall closing off the northern part of the canal will not result in injurious noise effects based on noise calculations using the methodology described in NMFS's *Biological Opinion on Regional General Permit SAJ-82 (SAJ-2007-01590), Florida Keys, Monroe County, Florida* (2014). The use of a vibratory hammer to install the sheet pile walls in the enclosed canal could result in behavioral effects at radii of 32 ft for sea turtles and 152 ft for fish. Habitat for sea turtles and Nassau grouper, including seagrass beds, coral reefs, and colonized hard bottom, is not present in the portion of the channel where work will occur but is present over 2,000 ft from pile-driving activities. In addition, there are no reports of sea turtles or Nassau grouper presence in the part of the canal

where construction will take place in benthic surveys conducted for the project. Therefore, we believe the behavioral effects of noise from pile driving on loggerhead, green, and hawksbill sea turtles and Nassau grouper will be insignificant.

Green and hawksbill sea turtles and Nassau grouper could be affected by sediment resuspension and transport from the work area downstream. Turbidity and sediment transport will be minimized through the installation of in-water turbidity barriers prior to commencing in-water construction and through the installation and maintenance of sediment and erosion control measures around terrestrial work sites, including upland staging areas, and inside the area to be backfilled. Permanent sediment and erosion control structures have been incorporated in the design of the project along with replanting of mangroves once construction operations are completed in order to stabilize sediments in the backfilled area and ensure sediments remain in the northern portion of the channel. Water quality in the canal downstream of the in-water turbidity barriers will also be monitored to ensure no sediment plumes are transported downstream. The project phasing starts with the installation of all sediment, erosion, and stormwater controls followed by mangrove removal and installation of the sheet pile wall that will serve as a barrier between the work area and the rest of the channel. This phasing will ensure that contaminated sediments are not transported downstream during remediation work to cap the sediments. Sediment sampling conducted for the project indicated that sediment contamination levels drop rapidly outside the northern portion of the canal. The applicant anticipates that all construction work and mangrove planting will be completed in 180 days so any increases in turbidity downstream would be short-term. Therefore, we believe adverse effects to green, loggerhead, and hawksbill sea turtles and Nassau grouper associated with temporary impacts to downstream habitat from elevated turbidity and contaminants associated with the contaminated sediments will be discountable.

There will be direct impacts to existing mangroves in the northern portion of the channel. The existing mangroves in the remediation area will be removed and, though the area will be replanted, it will be inaccessible to sea turtles and Nassau grouper due to the installation of the sheet pile wall that will remain as a permanent feature at the site. No ESA-listed sea turtles have been reported in the canal. It is unlikely that these animals would use the narrow, shallow portion of the canal where habitat is limited to some areas with red mangrove roots versus the open waters at the mouth of the canal and other areas in the action area that contain various habitats such as seagrass, coral reefs, and colonized hard bottom in addition to more well-developed mangrove wetlands. Therefore, we believe there will be no effect to green, loggerhead, and hawksbill sea turtles associated with the removal of 0.65 acre of mangroves and the loss of access to the northern portion of the canal.

Juveniles of Nassau grouper could be present in the channel (adults are not likely to be present as they prefer deeper waters associated with coral reefs) but are also likely to preferentially utilize downstream portions of the canal and other portions of the action area where seagrass and coral habitats are present. There is no evidence from benthic and sediment surveys conducted for the project that this species are present in the northern portion of the canal. Therefore, we believe adverse effects to Nassau grouper associated with the removal of 0.65 acre of mangroves and the loss of access to the northern portion of the canal will be insignificant.

Sea turtles could be affected by vessel strikes. Up to three small motorized vessels will be used during the project to install the in-water turbidity barriers and monitor the effectiveness of

turbidity and sediment controls downstream of the construction area. The vessels will be 14 to 18 ft in length, will launch from an existing boat ramp in the action area (to be determined), and will transit to the canal and remain there until the project is complete. When not in use, the vessels will be moored at the existing pier within the canal. The project area contains public and private boat ramps and piers. There are fishing communities, recreational boating facilities, and commercial operations that include maritime traffic including a tug boat operation and a liquefied natural gas (LNG) facility that receives LNG vessels. These activities mean there is regular traffic of recreational and commercial vessels of various sizes ranging from recreational vessels and fishing boats of similar size to the vessels that will be used at the PTP site to large LNG carriers. Thus, the use of the three motorized vessels for the proposed project will not represent an increase in vessel traffic in the area. In addition, vessels will be operated in waters with depths that are adequate for the draft of the vessels, including in the canal. There is an existing pier in the canal that belongs to PTP. In the past when the site was operational, vessels were used in the channel. We do not have information indicating that the use of these vessels led to collisions with sea turtles, likely in part because sea turtles do not appear to enter the canal regularly. The project includes the use of observers to ensure that sea turtles and manatees are not present during in-water construction. The applicant has incorporated requirements regarding putting the vessel motor in neutral if animals are seen near the vessel. Therefore, we believe the risk of injury or death to green, loggerhead, and hawksbill sea turtles from vessel strikes due to the use of up to three small motorized vessels during project construction will be discountable.

Conclusion

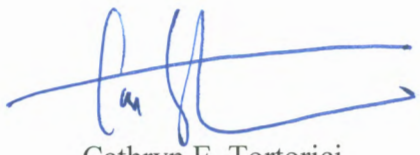
Based on this analysis, NMFS concurs with the EPA that all effects of the proposed action are not likely to adversely affect ESA-listed hawksbill, loggerhead, and green (North and South Atlantic DPSs) sea turtles. NMFS also believes that the proposed action is not likely to adversely affect Nassau grouper.

Reinitiation of Consultation

Reinitiation of consultation is required and shall be requested by the federal agency, or by NMFS, where discretionary federal involvement or control over the action has been retained or is authorized by law and (1) new information reveals effects of the action that may affect an ESA-listed species or designated critical habitat in a manner or to an extent not previously considered; (2) the identified action is subsequently modified in a manner that causes an effect to the ESA-listed species or designated critical habitat that was not considered in this concurrence letter; or if (3) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR §402.16). EPA is requiring that PTP compare the profiles in the Cooling Water Canal pre- and post-Hurricane Maria to determine whether sediments may have migrated from the area north of the bridge down the channel toward the Caribbean Sea once access to the site has been reestablished. If changes in sediment profiles indicate the hurricane caused downstream transport, EPA will coordinate with NMFS to determine whether reinitiation of consultation will be needed.

Please direct questions regarding this letter to Dr. Lisamarie Carrubba, Consulting Biologist, NMFS Office of Protected Resources, ESA Interagency Cooperation Division, 301-427-8493 or lisamarie.carrubba@noaa.gov.

Sincerely,



Cathryn E. Tortorici
Chief, ESA Interagency Cooperation Division
Office of Protected Resources

cc: F/SER3 – Sweeney
F/SER4 – Wilber
USACE – Castillo
EPA - Lamster

Literature Cited:

NMFS. 2014. Biological Opinion on Regional General Permit SAJ-82 (SAJ-2007-01590), Florida Keys, Monroe County, Florida. NMFS Southeast Regional Office, St. Petersburg, Florida. Issued June 10, 2014.