Responsiveness Summary
Engineering Evaluation and Cost Analysis (EE/CA)
Non-Time Critical Removal Action
Caneel Bay Resort Site, Virgin Islands National Park

The Caneel Bay Resort (the Site or Resort) is located within the Virgin Islands National Park (VIIS) on St. John, U.S. Virgin Islands (USVI). VIIS is owned by the United States and is under the jurisdiction of the National Park Service (NPS). Continuously operated by various private businesses since at least 1956, the Resort did not reopen to overnight guests after Hurricanes Irma and Maria severely damaged many of its buildings in 2017. EHI Acquisitions, LLC (EHI) and CBI Acquisitions, LLC (CBIA) currently operate the Resort property through a Retained Use Estate Indenture Agreement (RUE), which will expire on September 30, 2023. While planning for the RUE expiration, NPS identified possible contamination related to the Resort operation. NPS conducted a Removal Site Evaluation (RSE) in 2017 pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The RSE report recommended beginning a non-time-critical removal action to assess possible soil and groundwater contamination related to three general areas that included Area 1 - a storage area at the wastewater treatment plant; Area 2 - engineering, maintenance, fueling, and landscaping operations; and Area 3 – an unpermitted landfill.

NPS prepared a Draft Final Engineering Evaluation and Cost Analysis (EE/CA) Report[1] that summarizes the EE/CA investigation findings, compares cleanup alternatives, and identifies NPS's recommended cleanup action. For the EE/CA, NPS investigated Areas 1, 2, and 3 by collecting and analyzing soil samples. NPS used the sampling and analysis results to assess risks posed to human health and the environment. The risk assessment findings are presented in the EE/CA report. NPS determined that the risks posed by contamination in Areas 2 and 3 require a soil cleanup action.

During and after the investigation, NPS found that more investigation was needed to understand the risks posed to human health and the environment, and identified the new questions as data gaps in the EE/CA report. These data gaps are discussed in more detail in Section C, Part I of this response. Filling the identified data gaps is not required before conducting the removal action recommended in the EE/CA report.

NPS released the Draft Final EE/CA Report for public comment on June 8, 2021. Members of the public submitted comments on the Draft Final EE/CA during the comment period from June 10 through July 24, 2021. This responsiveness summary documents how NPS considered the public comments and how they added to the decision-making process.

[1] The EE/CA report was written in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Section 300.415(b)(4)(i), the U.S. Environmental Protection Agency (EPA) *Guidance on Conducting Non-Time-Critical Removal Actions Under CERCLA*, and the U.S. Department of the Interior (USDOI) *Central Hazardous Materials Fund (CHF) CERCLA Process for CHF Projects* Environmental Compliance Memorandum 16-3.

A. OVERVIEW

Public reaction to the recommended alternatives was varied. Some comments indicated a preference for more investigation in both Area 2 and Area 3, and suggested that with additional investigation, the volume of wastes and soils requiring removal could be reduced. Other comments expressed concern that the extent of contamination may be larger than the investigation showed, with possible impacts to ocean surface water, sediments, and habitat. In general, reviewers expressed concern over the soil removal, with individual commenters wishing to limit disturbance to roads and public spaces, and some comments suggesting engineering controls to allow the landfill waste to remain in-place.

B. COMMUNITY INVOLVEMENT OVERVIEW

NPS prepared a Community Involvement Plan in early 2021, which included information from six interviews with representatives of community, neighborhood, and environmental groups on St. John. In general, interviewees believed hazardous materials were released at Caneel Bay Resort and several studies have been done without additional action. Interviewees expressed concern for former workers, wildlife, and ocean water quality.

NPS hosted a listening session on April 8, 2021 for the public to inform NPS of the public's vision for the future of Caneel Bay Resort. NPS hosted a public meeting on June 10, 2021 to convey the EE/CA report findings and proposed cleanup actions. NPS hosted a second listening session on June 24 to hear additional comments from the public related to the cleanup action and additional investigation identified in the EE/CA report. At each meeting, people in attendance said they wanted to provide input on the future of the Resort.

More than 70 comments were received from the public with an interest in the Resort and/or environmental issues at VIIS.

C. SUMMARY OF PUBLIC COMMENTS RECEIVED DURING PUBLIC COMMENT PERIOD AND NPS RESPONSES

This response has two parts. Part I is a summary of commenters' major issues and concerns, with a focus on issues raised by the community. Part II is a more detailed response to significant technical and legal comments. Comments in each Part are grouped by similar topics/themes.

Part I - Summary and Response to Community Concerns

EE/CA Data Gaps

Several commenters noted additional information is required to understand where contaminants are and how they may cause risk. For example, some of the comments included:

- "*No effort was undertaken that I can determine to assess the release of contaminants from the hurricanes in 2017 and the failure of the Caneel operator, CBIA to properly clean up the debris created as a result of the hurricanes. What additional contamination was caused by the errors and omissions of the current operators? Many reports, some by elected officials, described the mess left for almost 4 years now on the Caneel site.*"
- "*The EE/CA identified data gaps regarding arsenic soil background, asbestos in soil, lead-based paint, a possible UST near Cottage 7, and the presence of a large subsurface anomaly near the catchment basin (EE/CA, pp. 95-96). Data gaps, such as inadequate data relating to arsenic background levels, have the potential to influence (or not) the decisions that would be based on the EE/CA and thereby render any recommendations in the EE/CA arbitrary and premature.*"
- *"Check all the restaurants and damaged guest rooms for lead and asbestos in plumbing, paint and roof construction."*
- "*Page viii, Area 1, states that NPS decided to defer cleanup decisions in Area 1 until additional background data can be collected. No provision has been made for when, how and to what extent the additional background data will be collected.*"
- *"Throughout the June 10th Learning Session, the fact of the testing results being incomplete was repeated over and over. Limitations on the scope of actual results were emphasized - more testing is needed, additional data is required in different location as well as the original sites 1, 2 and 3. This additional testing is not scheduled to begin until October or November 2021 with results taking another few months. What then are we supposed to be approving at this point? All of the existing plans could be completely altered based on additional test findings."*

NPS began planning the investigation in 2016, looking ahead to the expiring RUE and possible changes to the Resort. The initial investigation plan was created for an operating resort, but the 2017 hurricanes caused severe damage and the Resort closed. NPS had a 5-year deadline to use the money set aside for this investigation, but since the 2017 hurricanes, access to the Resort has been limited and was affected by travel restrictions related to COVID-19. As a result, NPS was unable to observe the existing conditions of the Site before the investigation began.

In early 2021, NPS completed the investigation of the three Areas as planned, understanding that some questions would remain unanswered, particularly in areas of the Resort that are outside of the previously defined Site (Areas 1, 2, and 3), such as possible releases to the environment of asbestos and lead (from lead-based paint), at hurricane-damaged buildings. From information gathered from the community, the US Virgin Islands Department of Planning & Natural Resources, and observations made while on-site, NPS has identified eight data gaps listed in the EE/CA report:

1. Arsenic background concentrations in soil
2. Asbestos-containing building materials and buried piping that may be or have been released to the environment
3. Lead-based paint on existing structures that may have been released to soil
4. An underground storage tank (UST) at Cottage 7, which may have been removed, and potentially related releases to the environment
5. Existing well MW-1, which is a conduit to the subsurface
6. Unknown buried items near the Catchment Basin
7. Wet season groundwater at the landfill in Area 3
8. Residual contamination at a legacy petroleum spill in Area 2

NPS will investigate these identified data gaps in late 2021. The data gaps do not affect the recommended removal actions presented in the EE/CA report for Area 2 and Area 3, and NPS is choosing to move ahead with these actions without delay. In light of currently available information, NPS concludes that the recommended removal actions will align with any future response actions that may be deemed necessary as a result of additional investigation. As discussed in the EE/CA report, contaminants at Areas 2 and 3 pose risk to human health and the environment and require cleanup action. Therefore, NPS sought public feedback on all of the preferred removal actions, which include removing soil in Area 2 and wastes and soil in Area 3. The information from the data gap investigation may add removal actions or may show that no additional actions are required.

Some of the commenters stated that they were aware of waste disposal at areas that were not investigated and not part of the data gaps identified in the EE/CA report. NPS is seeking additional information on specific waste disposal areas. If this information is provided to NPS in time, it can be used to guide the investigation in late 2021. Those with such specific information are asked to notify NPS via VIIS_Superintendent@nps.gov no later than October 29, 2021. In response to public comments, and regardless of additional data review, NPS will add pesticide sampling of soil around the buried item near the catchment basin to the next phase of investigation.

Areas of Concern Characterization

Several commenters raised the concern that investigation Areas may not be the right size, or that sampling soil was not enough to check for possible threats to nearby beaches and habitats.

- "*Area 2 has been artificially determined and by doing so the nature and extent of the contamination in the areas adjacent to Area 2 have not been considered. No testing has occurred outside Area 2 as far as I can determine.*"
- "*In evaluating the runoff of waste from the landfill site no soil testing was done on the down slope towards the ocean as far as I can determine from the report…"*
- "*Contamination of soils and water near Honeymoon likely affected coral and animals. No effort has been undertaken to sample the coral adjacent to Honeymoon to see of contaminants have made it into the "food chain"."*
- *"The report states Site 3 poses a serious risk of contamination, with the toxins flowing downhill into Honeymoon Beach – which has a commercial enterprise catering to hundreds of tourists every day swimming in the water and walking barefoot over the ground. Why was testing of the water quality in Honeymoon Bay not done? Or soil samples?"*

Although NPS concluded that the contamination in Areas 2 and 3 is unacceptable and requires cleanup, NPS did not identify current threats to visitors. In Area 2, the risk assessment indicated that elevated levels of pesticides pose an unacceptable ecological risk and risk to a future resident or worker. In Area 3 the steep landfill slope that faces the beach is unstable and severe weather events have potential to cause continued erosion or slope failure. If slope failure were to occur, hazardous substances within the landfill could spread onto the beach and create an unacceptable risk to visitors and the environment. The removal action for Area 3 is intended to prevent a potential slope failure or continued erosion and further release/exposure of hazardous substances contained in the buried waste.

NPS began developing the scope of the EE/CA investigation several years ago based on earlier investigations, historical research, and interviews. Areas 1, 2, and 3 were identified during the planning stage based on the information available at the time. The objective was to find contaminants that were known or suspected to have been released by activities at the Resort and evaluate if they pose risk to human health and the environment. If a source of contamination was suspected, sampling was performed at or near the source, with additional sampling farther away to evaluate if the contaminants had traveled to or affected other areas. This step-by-step approach of tracking contamination from the source to areas where contaminants may travel is necessary to understand which environmental conditions are related to the Site, and which conditions may be the result of contamination from other sources or conditions that may be naturally occurring. For example, if contamination was discovered in the bay but there was no link to the source at the Resort, cleaning up the Resort may have no effect on conditions in the bay.

Areas 1, 2, and 3 were designed to evaluate contaminants that may have been released by activities performed at the Resort. Each Area was divided into decision units, where a person or animal could be exposed to similar contaminants at similar levels. In the investigation areas, the decision unit sizes were usually defined by a physical boundary. For example, Area 2 includes grass and buildings surrounded by the paved drainage channel, the paved road, and a fence. Area 2 was previously used as the landscaping and maintenance area, which suggested that pesticides and petroleum or other chemicals may have been released there, and the land uses suggest the soil mostly stayed in-place.

Some sampling areas were changed or added in the field based on physical features, such as the eroded channel beside the landfill. The ocean water, sediments, and coral were not included in the investigation because sampling results of the sediment in the drainage channel and in the eroded channel indicate that concentrations decrease with distance from the release area to levels that are not likely to pose a risk. If results from the data gap sampling, particularly in groundwater and the drainage channel sediment, show a complete contaminant migration pathway, NPS may need to expand the sampling area to investigate other media, including ocean sediments and surface water.

Recommended Removal Action Alternative Costs and Process

Some commenters asked for more detail about the costs and cleanup process. Some of the local community members believe that costs were too low, while others were concerned that the cleanup could cause unreasonable disruption to traffic and wear and tear on roadways.

- "*What does the $6 million estimate in EE/CA estimate report buy?*"
- "*Once the remediation process begins, can you give us a rough estimate as to the actual time to complete?*"
- "*The estimated costs to clean up site 3 are extremely low.*"
- "*The report has no indication how 19,500 yards of material will be transported off site. Since the yards are identified as "bank cubic yards" the excavation of native soils would take up more volume and result in more yards being transported than originally identified. One road exists on the North Shore adjacent to the sites. The removal will require at least 1950 semi-truck loads each containing 10 yards. Then soils will have to be brought in to replace what was removed. Almost 4000 trips could occur using 10-yard dump trucks which are the largest that could be used. The effects not only on the public but upon the tourism industry and the citizens of St. John will be dramatic and last for 200 days if 20 dump truck loads are transported each day, 7 days a week. The traffic in Cruz Bay will be unbearable for what could be a year. No plan exists to address the mitigation of such activities upon the residents.*"

The $6 million cost would include removal of some surface soil in Area 2 and all landfill material down to bedrock in Area 3; transport and disposal of soil and landfill waste at an off-Site disposal facility; and regrading/vegetating Area 2 to pre-removal conditions and Area 3 to achieve pre-landfill conditions (i.e., the historical quarry pit, not the current hillside, which could create another unstable slope).[2]

The remedy construction would take between two and six months based on preliminary discussions with local haulers, assumptions provided in Appendix D, and other factors (e.g., work schedule, weather, the material composition of landfill waste, potential slowdowns, and equipment availability). To avoid disruption to tourism and delays in the remedy construction,

[2] The $6 million cost estimate does not include additional investigation necessary to address the data gaps identified in the EE/CA Report, the cost of preparing an EE/CA Addendum, or the costs of any response actions deemed necessary to address additional contamination that may be identified in the EE/CA Addendum.

the removal action should be performed mainly during the off-season. If barge transportation can be arranged from the NPS dock or the Caneel dock, movement of soil and wastes from Areas 2 and 3 to a barge would almost entirely be conducted within the Virgin Islands National Park. The assumptions/details for the recommended removal action alternative are provided in Appendix D.

The cost projections included in the EE/CA report are intended for comparison of alternatives and, according to EPA guidance, are to be accurate to within 30% below and 50% above the actual cost. The accuracy of projected costs will be improved during the cleanup design phase. To develop the removal costs, NPS consulted multiple local waste handling and disposal contractors, and used standard published references, with adjustments for work in the US Virgin Islands when local cost information was not available. The accuracy of the costs identified in the EE/CA report is considered adequate to support selection of the removal action alternative. The volume of soils calculated include bulking factors as described by a commenter; for more information regarding the calculations of waste volumes and numbers of trucks, containers, and other logistical items, please see Appendix D to the EE/CA Report.

NPS notes however, that there are factors that could increase the cost of the cleanup, particularly with respect to the cost for waste disposal. NPS identified the presence of hazardous substances within the landfill, but there is no practical way until it is excavated to determine how much of the waste will be disposed of as regular solid waste at the St. Thomas landfill, and how much will need to be disposed in a properly licensed hazardous waste landfill (closest facility is in the continental U.S.). For the EE/CA, NPS assumed 1% of the waste in the landfill would need to be disposed in a hazardous waste facility (sampling will be required at the time of excavation to segregate hazardous and non-hazardous waste). Considering the source of waste is believed to be primarily from the commercial activities associated with the resort, the assumed proportion of waste that requires disposal in a hazardous waste facility is likely to be low and 1% is considered a reasonable estimate at this time.

Cleanup Funding Sources and Cost Recovery

NPS received multiple comments regarding the sources of funds that will be used to pay for implementation of the recommended response action.

- *Will the $32 million of hurricane payout to CBIA be used for Caneel clean-up? If no, why not?*
- *The EE/CA observed Irma & Maria damage that exposed asbestos & lead paint issues, can FEMA $ be used for Caneel clean-up?*
- *Require CBIA to pay for environmental cleanup and rebuild from their hurricane insurance payout.*
- *I urge that the current and or former leaseholders be held responsible for paying a fair share of the current and historic contamination.*

NPS is conducting the EE/CA pursuant to its authority under CERCLA. Pursuant to CERCLA, the United States is entitled to recover all costs of CERCLA removal or remedial actions "not

inconsistent with the national contingency plan" from potentially responsible parties (PRPs). 42 U.S.C. § 9607(a)(4)(A). In accordance with DOI Departmental Manual Part 207, Chapter 7, and NPS policy, NPS will seek to recover response costs incurred, and to be incurred, from potentially responsible parties (PRPs). *See* NPS Management Policies 2006, § 9.1.6.2 (noting that NPS "will take affirmative and aggressive action to ensure that all NPS costs and damages associated with the release of contaminants are borne by those responsible for contamination of NPS property"). PRPs under CERCLA include, among others, current owners and operators of the facility at issue as well as owners and operators at the time of hazardous substance disposal.

NPS does not exert authority over the sources of funds that PRPs use to reimburse the United States for response costs incurred at the Site. If necessary, financial assurance requirements may be included in CERCLA settlement agreements and/or unilateral administrative orders; such requirements will be tied to the estimated cost of the recommended response action.

Part II - Summary and Responses to Technical and Legal Comments

Specific technical and legal comments are addressed in this part.

1) Public commenter: "The report references primarily what are called Areas 1, 2 and 3. It is a substantial deficiency and omission for the other areas of the Caneel Bay Resort property to be left without any analysis, testing, or evaluation for other potential areas of contamination. A simple example is the catchment basin I referred to in my prior filings and notices. The area is reported by former employees to be a storage site for DDT in barrels. No effort was given to taking soil samples from the site even though I have repeatedly referenced the storage of dangerous and hazardous chemicals. Ground radar indicates the existence of a substantial size or amount of buried elements with no action taken to determine whether the items buried do in fact consist of hazardous waste."

   NPS Response: As noted in the general responses, NPS identified a number of data gaps, including areas outside of the originally defined Site (Areas 1, 2, and 3). Supplemental investigation will be completed to address these data gaps, which may lead to an EE/CA Addendum, or a separate EE/CA depending on the nature and extent of identified contamination. With regard to the example of pesticide storage provided in the comment, NPS has conducted a ground-penetrating radar (GPR) survey and visual reconnaissance to search for evidence of buried waste in the catchment basin area. Aside from a large, unidentified buried object, no such evidence was found. Later in 2021, NPS will uncover the unidentified buried object. NPS will also collect soil samples from the immediately surrounding area and analyze them for pesticides.

2) Public commenter: "No efforts have been made to contact or inquire of former employees with knowledge regarding other areas that may have been contaminated. Many former employees of Caneel Bay Resort still live on St. John or St. Thomas and no effort to date has been exerted to inquire of them regarding their knowledge of other sites or sources of contamination . . . ."

NPS Response: As required under CERCLA, NPS has provided opportunities for members of the public, including former Resort employees, to comment on the Draft EE/CA Report and/or to provide any information that may be relevant to NPS' planning and decision-making process. On February 9, 2021, NPS issued a Community Involvement Plan (CIP), which outlines planned opportunities for public comment and provides information regarding the site spokesperson, administrative record file, community updates, public meetings, etc. As described above, NPS also hosted public meetings to discuss the EE/CA Report and solicit public feedback and held a 45-day public comment period. In addition, NPS interviewed community members and a former resort employee. Interviewees were asked to provide information regarding past use and activities at the Resort property and potential environmental issues, among other things.

3) Public commenter: "The report indicates that a visual inspection of other resort areas was undertaken recently but there has been no disclosure of screening-level data and how it will be used to plan additional investigation activities outside of Areas 1, 2 and 3. This is a major omission in the report and in the planning for the clean-up of the entire Caneel site."

   NPS Response: The planned visual inspection included observing buildings and debris for possible asbestos-containing materials; in addition to the ground-penetrating radar investigation for buried asbestos pipes at Area 2. These observations were mapped on Figures B-3 and B-4 in the Inspection Summary Report. NPS was not prepared to sample building debris or find all buried asbestos pipes at the Resort but is using the information to design the data gaps investigation. All inspections performed as part of the EE/CA are described in the EE/CA report or in the Investigation Summary Report included as Appendix B of the EE/CA Report. Previous inspection observations are summarized in the EE/CA Report or included in the Phase II ESA report, which is included as Appendix E to the EE/CA and is also included in the Administrative Record File available at https://parkplanning.nps.gov/CaneelBayAssessment.

4) i) Public commenter: "The petroleum in soil in area 2 was substantial. From a report I previously shared with you it appears the soils were never properly addressed and were left in piles in the area. No schedule appears with respect to the groundwater testing which must occur to properly investigate the nature or extent of the contamination occurring as a result of the substantial fuel spill."

   ii) Public commenter: "DPNR signed off on one investigation about petroleum. Will this be reopened? "

   NPS Response: NPS has received documentation from the Virgin Islands Department of Planning and Natural Resources (DPNR) regarding prior response actions taken to address the release of diesel fuel in Area 2 in 2010. According to the documentation provided, DPNR concluded in 2014 that no further action was needed to address the diesel release. Nevertheless, based on observations made by NPS's contractors during the February 2021 field work in an area outside the limits of the fuel release

investigation, NPS intends to conduct additional sampling to evaluate the presence of residual contamination in Area 2. Any additional response actions to address residual contamination in Area 2 will be addressed, if necessary, in an EE/CA Addendum after additional field work is completed.

5) i) Public commenter: "Site 3 contains 70 years [of] debris and waste from all aspects of the resort – PCB's, lead paint, chemicals of all varieties, the resort never trucked any waste off site, it is all buried right there. For a good idea of what it contains, you could check the results from the St John Dump fire when the Superfund was used to remove the same number of years of island waste and found massive quantities of toxic materials.

   ii) Public commenter: "Landfill use[d] to be the landfill [for] Municipality of St John since the beginning of 1900."

   NPS Response: NPS recognizes there is uncertainty associated with the materials that were disposed in the landfill. The selected remedy will evaluate excavated material to determine what can be disposed as solid waste and what requires management as hazardous waste. In the review of historical site operations, NPS did not identify documentation suggesting the landfill accepted waste from outside of the resort. However, discussions with community members and former resort employees indicate that, prior to the 1950s, the landfill in Area 3 was used as a community dump and municipal landfill. The methods NPS used in the EE/CA investigation and the previous Phase II investigation are used to identify a wide variety of contaminants, including, PCBs, lead, and chemicals, that could be expected in a municipal landfill.

6) i) Public commenter: "My previous notices regarding contamination referred to the Clean Water Act and Resource Conservation and Recovery Act. No reference to the other acts is made in the report yet jurisdiction exists as provided in those acts."

   ii) Public commenter: "Did the current owners violate the Federal Clean Water Act, I think that is pretty clear from evidence at the land fill site #3 where the next hurricane will wash all those chemicals into the ocean."

   NPS Response: NPS conducted the EE/CA pursuant to its authority under CERCLA. Investigation of Clean Water Act and/or Resource Conservation and Recovery Act (RCRA) violations falls outside the scope of the EE/CA process and within the authority of other regulatory entities. Section 4 of the EE/CA identifies applicable or relevant and appropriate requirements (ARARs), including portions of the Clean Water Act and the Resource Conservation and Recovery Act, among others. The EE/CA must consider these ARARs not to identify current violations, but to identify if the possible response action alternatives will comply with them. Response actions must be consistent with ARARs or provide justification for why ARARs should be waived. As discussed in the report, in general the "No Action Alternative" did not meet ARARs, whereas the recommended Alternative will satisfy all ARARs for the Site.

7) Public commenter: It is a major deficiency that only one groundwater test was made with the excuse being that it was too dry. Why was groundwater testing not done in the season when there would be a substantial amount of rain and groundwater present?

   NPS Response: NPS chose to begin field work in February 2021 so as to avoid further delays to site investigation and cleanup. Because NPS's contractors were unable to collect groundwater samples during the February 2021 field work, NPS intends to conduct additional sampling during the wet season in late 2021 to further characterize the nature and extent of potential impacts to groundwater.

8) Public commenter: "The report is completely devoid of references to how other statutes and regulations pertaining to the clean-up of the contamination will be addressed. For example, human remains have been found on all Caneel beaches and substantial numbers of artifacts have been uncovered, many of which are now in storage. The plan for addressing the contamination has no plan identifying how the remains and artifacts will be protected especially since over 14,500 cubic yards of material are expected to be removed at Honeymoon alone. Removal of waste such as contaminated soils in other areas will require the exposure of other areas likely containing artifacts. When and how will the plan be amended to reflect the prescriptions appearing in other laws, regulations and policies related to protection of such assets?"

   NPS Response: Section 4 of the EE/CA Report identifies and analyzes standards, requirements, criteria, and/or limitations under federal and/or state environmental laws that are applicable or relevant and appropriate to the recommended response actions (ARARs). As explained in the EE/CA Report, the recommended response actions for Areas 2 and 3 will comply with these ARARs, which include, among others, requirements regarding protection of historical and cultural resources such as the National Historic Preservation Act, the Historic Sites, Buildings, and Antiquities Act, and the Archaeological and Historic Preservation Act. With its archeological staff and mandate to protect the cultural resources of St. John, VIIS is well positioned to assess historic and pre-historic artifacts. Because removal of material in Area 2 is limited to surface soil, and removal of material in Area 3 is limited to waste, much of which was placed within the past 50 years, it is unlikely such artifacts will be disturbed, but a VIIS archeologist is available to assess items of possible interest and stop work for archeological inspection when needed.

9) Public commenter: "On June 28, 2021, Governor Bryan issued a proclamation recognizing the Taino Tribe of the Virgin Islands as an American Indian Tribe of the United States. Therefore, I assert that the NPS is bound to provide for the protection of Native American Graves and the Repatriation of Native American Remains and Cultural Patrimony. Lineal descendants of the Taino tribes have the right of possession of remains or funerary objects excavated or discovered on Federal land. This report does not address how the provisions of NAGPRA will be addressed. NPS preservation activities requires consultation with Indian tribes under Section 106 and now that the Taino tribes have been recognized they must be consulted with and such has not occurred. An organization representing the Taino tribes has been identified and recognized by the

government of the Virgin Islands and representatives of the tribes are available for consultation."

NPS Response: As noted in Text Table 4.2 in the EE/CA Report, NPS has identified the Native American Graves Protection and Repatriation Act (NAGPRA) as an ARAR for the Site. Accordingly, the selected response actions will comply with the substantive provisions of NAGPRA if Native American remains or objects are encountered during response action activities.

10) Public commenter: "Caneel operators drilled two wells on the site. No effort was made to test the water in the wells to determine if contaminants have found their way into those wells."

NPS Response: To date, NPS has been unable to locate these wells. If their locations are identified before the data gap investigation, NPS will attempt to collect a groundwater sample from each well.

11) Public commenter: "No effort has been undertaken to protect against the possibility of increased risk of sediment [from] the landfill entering the ocean even though we have not entered hurricane season and extreme rainstorms can be expected."

NPS Response: NPS' goal is to remove the hazardous materials, and NPS will use appropriate stormwater pollution prevention controls during active work on site. NPS has not identified any cost-effective interim measures that would effectively reduce the risk of sedimentation. As explained in section 6.2 of the EE/CA Report the recommend response action for Area 3 would include installing sedimentation controls to prevent erosion from runoff during execution of the response action.

12) Public commenter: "Numerous federally listed threatened or endangered species are present on St John and the adjacent waters. The report does not indicate how the recognized species will be protected especially considering the proposed significant excavations proposed to clean up the contamination."

NPS Response: NPS has identified federally listed endangered species of plants within the Park, but none are in proposed response areas. Section 4 of the EE/CA Report identifies ARARs (e.g., 2006 NPS MP §4.4.2.3) related to threatened, sensitive, or endangered species considered during alternative selection. In compliance with ARARs, soil erosion and sedimentation controls would be used during soil removal to reduce possible effects on the ocean and potential threatened, sensitive, or endangered species habitat near the Resort.

13) Public commenter: "The report does not indicate how far into the ground bore samples were taken. That is always done after any environmental spill in the USA. Bore samples determine how deep into the ground penetration of pollutants go. Whether the spill is superficial or more pervasive. This is an EPA industry standard in the USA. I know this first hand."

NPS Response: NPS recorded and presented this information. The depth of soil borings and associated soil samples collected during the EE/CA investigation are provided in Attachment B of Appendix B: EE/CA Investigation Summary Report.

14) Public commenter: "The report discusses removal of over 19,500 yards of soil and landfill contents from Area 3. It was suggested that the material could be disposed of at the former Susannaberg landfill on St. John. Any such attempts will not only violate all sense of decency but will violate the current consent decrees regarding the closure of that landfill site. The citizens of St John will likely express outrage over such a proposal if pursued further."

NPS Response: Comment is noted. No decision has been made to dispose of soil and landfill contents at the Susannaberg landfill. The Susannaberg landfill is noted in the EE/CA Report as a "potential" location at which the excavated landfill contents could be disposed "pending local permission." Additional requirements would need to be satisfied before any excavated material could be disposed of at the Susannaberg landfill. Alternatively, the excavated landfill contents could potentially be brought to the Bovoni landfill on St. Thomas. As explained in the EE/CA Report, any material that is determined to be hazardous waste will need to be disposed in the continental U.S. and cannot be transported to any landfill in the Virgin Islands.

15) Public commenter: "Because of the uncertainty surrounding the applicability of future resident receptors, it is imperative to have a quantitative demonstration of site visitor risks, and to develop site visitor Risk-based Cleanup Goals (RBCGs) for risk management purposes."

NPS Response: The purpose of risk assessments in the CERCLA process is to determine the baseline risks posed by a site and ensure that the selected remedy will be protective of human health and the environment. Accordingly, the receptors chosen for evaluation in the HHRA are intended to cover a broad range of exposure scenarios. A visitor is a short-term receptor, assumed to visit 1 to 2 weeks per year, on average. NPS focused the risk assessment on receptors (commercial worker and resident) that reflect a range of activities and long-term exposures. Because the commercial worker receptor is the person, under current/planned uses, most likely to be exposed to contaminants in soil on a daily basis, the health risks assessed for this receptor are adequately protective of a visitor's short-term exposure. Risks for a park worker scenario were evaluated for all three areas of the Site.

As explained below, evaluation of a residential use scenario is appropriate for this Site where future site redevelopment plans are still being formulated and no regulatory restrictions prohibit use of the Site for residential use. Also, the unimpairment mandate found in the NPS Organic Act of 1916 (54 USC § 100101(a) (recodified in 2014)) ("Organic Act") mandates that NPS manage park resources in a manner that will leave them unimpaired for the enjoyment of future generations.

16) i) Public commenter: "With such contamination is it safe for Caneel to be operating the way it is now?"

ii) Public commenter: "It is noted that no NPS measures currently are in place to prevent visitors at the public beaches (e.g., Honeymoon Beach near Area 3; see attached information) from accessing Area 3, which suggests that NPS views assumed visitor risks to be insignificant."

NPS Response: Recreating at Honeymoon Beach or eating in the restaurant does not present imminent health risks to visitors. If workers excavate soil in Area 2 or Area 3, which is one of the scenarios considered in the risk assessment, they may be exposed to contaminants above acceptable risk levels. Remediation is required in Areas 2 and 3 to prevent future unacceptable risks to workers or visitors. For contaminants found during the previous investigations, the Human Health Risk Assessment calculated risks for a person who is at one Area every day for several years. Because the Resort is not operating routinely, it is less likely that people are currently spending as much time in Area 2 or Area 3 as is assumed in the risk assessments.

Under the RUE, CBIA/EHI are responsible for the safety of visitors to the Resort property. The lack of restrictions to certain areas of the park property does not reflect NPS views with regard to current or future visitor exposure risks.

17) Public commenter: "To the extent that it is believed that the sampling conducted to date did not capture the nature of the landfill impacts, additional sampling should be proposed, rather than defaulting to a 'we don't know, so just remove it all' approach."

NPS Response: The removal actions proposed in the EE/CA are supported by technical and risk based evaluation and analysis of potential impacts to both human and ecological receptors. Because waste disposal was not systematic or controlled, high concentrations of contaminants with low mobility may be present anywhere in the landfill. Arsenic, metals, pesticides, and PCBs have been detected in the landfill. Given there is visible evidence of slope failure and erosion, and exposed landfill waste, a removal action is necessary to achieve the removal action objective (RAO) to "[r]educe the potential for future releases of COC [contaminant of concern]-containing sediment to surface water at Honeymoon Beach in the event of an extreme rainfall event..." Based on the heterogeneous nature of landfill waste, the confirmed presence of PCBs and other hazardous substances in the landfill, and the high risk of continued erosion and slope failure, NPS has determined that complete removal of soil and landfill contents in Area 3 is necessary.

18) Public commenter: "[t]he HHRA assumes residential use as a future scenario, even though there is no current or planned full time residential use for the resort property and particularly the areas covered by the site investigation. … The HHRA identified hypothetical future residential exposure to arsenic as the overwhelming risk driver at the debris landfill (Area 3). Area 3 comprises only about 1% of the 150-acre resort area and is

in the far southwestern corner of the resort, a significant distance from any areas appropriate for future residential development. Under any reasonable analysis, residential use may be excluded from Area 3. It further is noted in the EE/CA that housing for resort employees is contemplated for land north of Areas 1 and 2, but not Area 3 (EE/CA, p. 34)."

NPS Response: When selecting an appropriate CERCLA response action, it is important to consider both current and reasonably anticipated future land uses. *See, e.g.,* EPA, Land Use in the CERCLA Remedy Selection Process, OSWER Directive No. 9335.7-01 (May 25, 1995). By evaluating residential use, NPS acknowledges the possibility that the Resort may include future staff housing. There are no prohibitions in the VIIS management plan or foundation document to prevent future residential occupancy of the Site, and evaluation of a residential exposure scenario is consistent with the unimpairment mandate in the Organic Act, which is discussed in more detail in the EE/CA Report and below. The fact that employee housing is not currently contemplated for Area 3 does not change the appropriateness of evaluating the residential use scenario in that Area. *See, e.g.,* EPA, Role of Baseline Risk Assessment in Superfund Remedy Selection Decisions, OSWER Directive 9355.0-30 (Apr. 22, 1991). (noting that "[i]n general . . . undeveloped areas can be assumed to be residential in the future unless sites are in areas where residential land use is unreasonable.").

19) Public commenter: "The EE/CA acknowledges (e.g., EE/CA, p. 31) that no site-related source for arsenic was likely, and that natural background concentrations may be greater than risk-based levels. Removals typically are not required for Constituents of Potential Concern (COPCs) that are present at or at less than naturally occurring background levels. In short, if residential use is excluded, and if arsenic is shown to be naturally occurring, potentially elevated human health risks are eliminated at Area 1 and Area 3 and are reduced significantly in Area 2."

NPS Response: NPS considers background concentrations in selecting removal goals. The recommended alternative does not depend only on background concentrations of arsenic because eliminating unacceptable risks to human health from this potentially site-related contaminant is only one of the RAOs. Other RAOs are summarized in EE/CA Section 5.1. Additional information regarding arsenic background concentrations would not change or eliminate the need to conduct the selected removal action for Areas 2 and 3.

20) Public commenter: "The EE/CA identified data gaps regarding arsenic soil background, asbestos in soil, lead-based paint, a possible UST near Cottage 7, and the presence of a large subsurface anomaly near the catchment basin (EE/CA, pp. 95-96). Data gaps, such as inadequate data relating to arsenic background levels, have the potential to influence (or not) the decisions that would be based on the EE/CA and thereby render any recommendations in the EE/CA arbitrary and premature… Given NPS's acknowledgment of its lack of information related to arsenic concentrations, it would be arbitrary and

capricious for NPS to issue a final EE/CA and decision on removal action before it fully understands and documents the background presence of arsenic in the area."

NPS Response: As stated in the EE/CA report, NPS agrees that the level of uncertainty regarding the arsenic background concentration is unacceptable. NPS will address this question, as well as the other identified data gaps, in the data gaps investigation. As noted above, the current uncertainty regarding arsenic background concentrations does not impact the actions proposed in the EE/CA Report.

21) Public commenter: "...soil was the only medium of concern carried through the HHRA. Groundwater was evaluated qualitatively in the uncertainty section, and the risk from excluding it as a medium of concern was deemed to be low because there is limited to no potential for exposure to groundwater. Ingestion of produce is discussed in the Exposure Assessment (pp. 2-4), and the text points to the uncertainty analysis for a qualitative evaluation, but no such evaluation is included in the uncertainty analysis. The EE/CA makes no mention of potential ingestion of produce."

NPS Response: This discussion was inadvertently omitted; NPS will add a discussion of produce ingestion to the uncertainty analysis in the Human Health Risk Assessment appendix to the EE/CA report.

22) Public commenter: "Evaluation of a CT *[central tendency]* exposure condition is appropriate in these circumstances and should have been undertaken as part of the HHRA in order to develop a better supported risk assessment and provide for more informed decision-making."

NPS Response: The reasonable maximum exposure (RME) represents an estimated conservative exposure case that, while higher than the average exposure, is still within the range of possible exposures. Basing risk management decisions on RME estimates, considering both current and future land use conditions, is common at CERCLA sites and is consistent with EPA guidance. *See* EPA, Risk Assessment Guidance for Superfund Volume I Human Health Evaluation Manual (Part A), Interim Final (Dec. 1989), section 6.1.2. ("Actions at Superfund sites should be based on an estimate of the reasonable maximum exposure (RME) expected to occur under both current and future land-use conditions."). Decisions regarding risk are more typically based on reasonable mean exposure (RME), not CT exposure, results. CT exposure risks are typically around 2-3 times lower than RME, although the calculation depends on a number of factors. Given the outcome of RME particularly for Area 2 (cancer risk of 8E-05), it is unlikely that CT exposure would result in risks below the 1E-6 threshold.

23) Public commenter: "It is noted, however, that some of the 95% UCL concentrations that were based on ISM sampling should be considered highly uncertain and extraordinarily conservative, as they included one-half the detection limit for samples that were reported as below detectable levels, even for DUs where all replicates reported non-detect (ND) results (further detailed examples are presented in the SLERA-specific

comments). This use of the data is inconsistent with the USEPA ProUCL recommended approaches and ITRC preferences for handling non-detects in a statistical evaluation…. There are many instances of ND results for replicate samples throughout each area of interest. This has the effect of inappropriately and arbitrarily attributing risk to areas for which there were no detections."

NPS Response: Using half of the reporting level as a substitute for non-detected values is consistent with the Interstate Technology and Regulatory Council's (ITRC's) Incremental Sampling Methodology guidance's calculator tool. This approach is used to calculate exposure point concentrations for chemicals that may be present below the laboratory detection limit. However, the chemicals for which this approach were used were not found to present potentially unacceptable risk at the Site.

24) Public commenter: "NPS determined that the elevated ecological risks estimated by the SLERA with Refinement were sufficient to move forward on recommending removal actions without conducting a follow-up Baseline Ecological Risk Assessment (BERA). The SLERA notes that the estimated ecological risks are dominated by pesticides in a limited portion of Area 2 (only two of five decision units (DUs)) and to a lesser extent in Area 3 (only one of four DUs). A formal BERA may reasonably be expected to find a very low risk of these DUs being the primary habitat and/or feeding zone for receptors of interest, thus necessitating no further action. Failure to have performed a BERA is an arbitrary decision that skews the risk evaluation results."

NPS Response: This risk assessment followed EPA guidance that outlines an 8-step process for evaluating potential risk. Steps 1 and 2 comprise the SLERA, and Steps 3 - 8 outline the components of the baseline ecological risk assessment, or BERA. The first step of the BERA Step 3 is the Refinement of the Preliminary Contaminants of Potential Ecological Concern, and this section was included in the present report. While the field portion of a BERA typically includes toxicity testing of soils, the Refinement methodology used the toxicity testing results in the EPA soil screening level database to develop effect levels representative of what site-specific soil toxicity tests might show. These effect levels were then used to identify areas where effects might be likely. As correctly described, these areas were confined primarily to a small portion of Area 2, and the magnitude of effect level exceedances, up to 41 for soil invertebrates, indicates that concentrations are far above known toxic levels and that actual toxicity tests with site soil would thus very likely show the same result. For these reasons- small area of effect (which limits remedial cost) and high likelihood of toxicity - the Refinement results were considered sufficient to support need for remediation and the considerable expense of BERA field studies were not warranted.

25) Public commenter: "Area 2 ecological risks are solely related to impacts that were identified using Incremental Sampling Methodology (ISM) sampling results in only two of five Area 2 DUs. It is likely that additional discrete sampling in Area 2 would identify more focused, reduced, but still protective removals that are smaller and less costly than those proposed in the EE/CA."

NPS Response: The ISM results do not indicate the likely presence of concentrated sources within decision units. NPS is actively seeking additional information regarding specific disposal areas. If point sources of releases are identified, during the removal action design phase, NPS will define a separate decision unit to target evaluation of contaminant concentrations in that specific area. Currently, NPS only recommends removal of soil in the DU-2091 and DU-2-02 portions of Area 2 (a total of approximately 327 bank cubic yards of soil) rather than complete removal of all soils in Area 2.

26) Public commenter: "The risk assessments relied on the minimum three replicates per DU. This introduces yet another level of uncertainty and related conservatism to the analysis. Additional replicates per DU should have been performed to reduce uncertainty and produce a more realistic analysis."

NPS Response: For the conditions present at the Site, using three replicate samples per decision unit is consistent with ITRC guidance. The analytical COPEC and COPC results were similar among each set of three decision unit replicates. This indicates that NPS appropriately designed the decision units and the results are indicative of the mean. The ITRC's ISM guidance, Section 8.3.3, states that more than three replicates may be necessary if the site is "relatively heterogeneous and may be worthwhile if the result is anticipated to be close to a level of concern." In most decision units, results were not so close to a level of concern to require a more accurate estimate of the mean.

27) Public commenter: "As noted in the SLERA with Refinement (p. 3-13, Section 3.7.1), while use of smaller areas may more accurately reflect exposure for plants and invertebrates, the approach taken likely overestimates exposure/risk for birds and mammals, which would spend only a small portion of their time foraging in the area."

NPS Response: As a conservative assumption, NPS assumed wildlife feed entirely within each decision unit, a condition that might represent a limited foraging range of a nursing female. In addition, unrestricted future land use may result in soils being dispersed over a wide area, a condition that could increase exposure. For these reasons, and to comply with the unimpairment mandate set forth in the Organic Act, all calculations reflect sole use of each area separately for foraging by wildlife.

28) Public commenter: "In each area, concentrations of the metals produce Hazard Quotients (HQs) mostly below 2, suggesting a low to moderate potential risk for these naturally occurring substances. In Area 3, elevated HQs for DDT and metabolites were present in only one DU. The section further concludes that Area 2 had the highest estimated potential risk, but that is true for only two of the five DUs, noting that actual risk would only occur for individuals spending a majority of their time foraging in one or both of those DUs. In summary, the SLERA with Refinement conclusions provide at best very weak support for the ultimate proposed removal action… The SLERA with Refinement similarly concluded that the highest risks were quite localized, in this case on two of the five DUs in Area 2. Most important, however, is the fact that the ecological risk assessment did not proceed to the typical final step of conducting a BERA. Moreover, it

is quite likely that focused removal(s) in Area 2, and possibly elsewhere, would mitigate perceived ecological risks that were identified in the SLERA with Refinement at costs far less than proposed in the EE/CA."

NPS Response: It is not appropriate to combine all of Area 2 into a single exposure unit. Multiple operations occurred at Area 2 and were considered in the selection of decision units; for example, the landscaping area was used differently than the area with the gasoline pump. Similarly, various parts of Area 2 have different habitat values. The highest potential for risk is confined to a portion of Area 2.

The need to perform more in-depth risk evaluation methods, such as toxicity tests and community assessments, which can be time-consuming and costly, is not required for all sites but is to be determined by risk managers on a site-specific basis. As provided by EPA guidance EPA 540/F-01/014 on this issue, "a decision can be made to proceed with cleanup after any tier of the ERA [ecological risk assessment] process…[and] it may be preferable to clean up the site to the screening values rather than to spend time and resources determining a less conservative cleanup number.

29) Public commenter: "The EE/CA should acknowledge that sea level rise sufficient to significantly impact the landfill likely would render this entire evaluation moot, given that the beaches and much of the park/resort land would then be submerged, uninhabitable, and unusable."

NPS Response: Because VIIS continues beyond the boundaries of the Caneel Bay Resort, migration of waste into the ocean resulting from sea level rise would pose an unacceptable risk to marine life and habitat, as well as water clarity. At present, VIIS includes over 5,000 acres of submerged lands. Submerged lands serve as additional valuable habitat for marine life, protection of which is one of the Park's fundamental values and a key reason for establishment of the Park. *See* 16 U.S.C. § 398c; NPS, Foundation Document, Virgin Islands National Park-Virgin Islands Coral Reef National Monument (Dec. 2016), at 7, available at http://npshistory.com/publications/foundation-documents/viis-fd-2016.pdf.

30) Public commenter: "The landfill has remained relatively stable during the period of its use and apparently survived the most recent storms."

NPS Response: The landfill is not stable. There is evidence of slope failure and erosion along the steep slope facing Honeymoon Beach, where waste is exposed at the ground surface. Continued erosion and potential catastrophic failure represent an unacceptable risk to the park resources and the environment. Moreover, as explained in the EE/CA Report, climate change is expected to increase the risk of potential failure of the landfill slope, which could expose additional hazardous substances. The landfill's ability to withstand the 2017 hurricanes does not alter this fact as past weather conditions are not necessarily representative of future conditions. *See* NPS, Climate Change Response Strategy (Sept. 2010) at 8 (noting that climate change will likely result in a future

"characterized by climatic and seasonal patterns for which we have no modern or historical reference").

31) Public commenter: "Capping and stabilizing the slope is included as a potential removal action for Area 3 but is not fully evaluated because it does not address landfill contents and because it may in the future be undermined by sea level rise due to climate change . . . Appropriate capping, stabilization, and maintenance, coupled with appropriate institutional controls, likely can be designed and implemented to address potential exposure to landfill contents at a far less intrusive level."

NPS Response: Pursuant to CERCLA and the NCP, NPS may only select a removal action alternative that is protective of human health and the environment and that satisfies ARARs. *See* 42 U.S.C. § 9622(d); 40 C.F.R. § 300.430(f)(1)(i)(A). Capping and stabilizing the landfill slope was eliminated from further consideration because it would not satisfy these threshold requirements as required by the NCP. Most notably, capping and stabilization would violate the unimpairment standard contained in the Organic Act. The Organic Act created the NPS and remains the fundamental legal authority guiding NPS land management decisions. The Organic Act mandates that NPS manage units of the national park system so as "to conserve the scenery, natural and historic objects, and wildlife in the [national park system] units and to provide for the enjoyment of the scenery, natural and historic objects, and wildlife in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." The unimpairment mandate established by the Organic Act is additionally codified in federal regulation at 36 CFR § 1.1(b), which states "[t]hese regulations will be utilized to. . . conserve scenery, natural and historic objects, and wildlife, and to provide for the enjoyment of those resources in a manner that will leave them unimpaired for the enjoyment of future generations."

The unimpairment mandate governs how NPS manages national parks and, in particular, how NPS exercises its authority under CERCLA to respond to the release or threatened release of hazardous substances affecting national parks. Section 121(d) of CERCLA, 42 USC § 9622(d), requires that remedial actions achieve ARARs. Specifically, the Organic Act's unimpairment mandate establishes the key location-specific ARAR that must be achieved as part of a CERCLA action taken on a unit of the national park system. NPS implements the Organic Act requirements across the national park system consistent with a number of NPS directives and policies, including the NPS "Management Policies 2006," which is identified as a "to be considered" requirement for the removal action at the Caneel Bay site.

Pursuant to Section 1.4.5 of the NPS Management Policies 2006, "[t]he impairment that is prohibited . . . is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources, or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. Whether an impact meets this definition depends on the particular resources and values that would be affected; the severity, duration, and timing of the impact, the direct

and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts. . . ."

The "park resources and values" that are subject to the unimpairment standard include:

- "The park's scenery, natural and historic objects, and wildlife, and the processes and conditions that sustain them, including, to the extent present in the park: the ecological, biological, and physical processes that created the park and continue to act upon it; scenic features; natural visibility, both in daytime and at night; natural landscapes; natural soundscapes and smells; water and air resources; soils, geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structures, and objects; museum collections; and native plants and animals;

- Appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them;

- The park's role in contributing to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefit and inspiration provided to the American people by the national park system; and

- Any additional attributes encompassed by the specific values and purposes for which the park was established." NPS Management Policies 2006, § 1.4.6.

Section 1.4.7 of the 2006 Management Policies provides that "[b]efore approving a proposed action that could lead to an impairment of park resources and values, an NPS decision-maker must consider the impacts of the proposed action and determine, in writing, that the activity will not lead to an impairment of park resources and values. If there would be an impairment, the action must not be approved" NPS Management Policies, § 1.4.7. "If it determined that there is, or will be, an impairment, the decision-maker must take appropriate action, to the extent possible within the Service's authorities and available resources, to eliminate the impairment . . . as soon as reasonably possible. . . " *Id.*

NPS has determined that capping and stabilizing the landfill would constitute an impairment to Park resources, as discussed below and in sections 4.2 (ARARs), 6 (Text Table 6 Screening of Removal Action Options), and section 7.1 (Effectiveness) of the EE/CA Report, because the landfill contents, including hazardous substances, would remain on the site in perpetuity, presenting an ongoing threat to Park resources given the Site's vulnerability to extreme weather events.

Capping and stabilizing the landfill slope is inconsistent with VIIS enabling legislation and the Park's Foundation Document. Pursuant to the Park enabling legislation, VIIS was established to "preserve for the benefit of the public, significant coral gardens, marine life, and seascapes in the vicinity thereof." Similarly, the Park's Foundation document

states that the "purpose of Virgin Islands National Park is to preserve and protect for public benefit and inspiration the outstanding scenic features, Caribbean tropical marine and terrestrial ecosystems in their natural conditions, and cultural heritage from pre-Columbian through Danish colonial times." Allowing a landfill that contains hazardous substances posing risks to ecological receptors to remain at the site in perpetuity clearly conflicts with the goal of preserving and protecting terrestrial ecosystems in their natural conditions.

In general, NPS considers maintenance of a landfill on park lands to be an impairment to park resources. *See* Management Policies 2006, § 9.1.6.1 ("The disposal in parks of solid wastes generated by non NPS activities is, in most cases, incompatible with national park values."). Accordingly, it is NPS policy to "remove landfill operations and associated impacts from parks where feasible." Management Policies 2006, § 9.1.6.1; *see also* 36 C.F.R. § 6.1 (stating that the purpose of NPS regulations regarding solid waste disposal sites is to "ensure that all activities within the boundaries of any national park system resulting from the operation of a solid waste disposal site are conducted in a manner to prevent the deterioration of air and water quality, to prevent degradation of natural and cultural, including archaeological, resources, and to reduce adverse effects to visitor enjoyment.").

Institutional controls, depending on the nature of those controls, may also result in an impairment to Park resources and therefore are generally considered inappropriate to address hazardous substance releases at sites on NPS-managed lands. Such controls, for example, may prevent visitors from accessing and enjoying certain areas of the Park, impose unnecessary constraints on land management decisions, and limit the Park's ability to provide quality habitat for wildlife. Reliance on such controls at this Site is also inconsistent with NPS Management Policies, which require that all parks be managed in a manner "providing for the enjoyment of park resources and values by the people of the United States" and state that NPS should "strive to restore the integrity of park resources that have been damaged or compromised in the past." NPS, Management Policies 2006, §§ 1.4.3, 1.4.7.2; *see also* Management Policies 2006, § 4.1.5 ("The Service will seek to return [] disturbed areas to the natural conditions and characteristics of the ecological zone in which the damaged resources area situated.").

32) Public commenter: "The human health risks, although already well within NCP risk guidelines, demonstrably may be mitigated readily through land use restrictions and focused removal."

NPS Response: The NCP establishes an acceptable cancer risk range between $1x10^{-4}$ and $1x10^{-6}$ but specifies that "the 10^{-6} risk level should be used as the point of departure for determining remediation goals …" to address known or suspected carcinogens. The 1990 Preamble to the NCP is clear that the "preference, all things being equal, is to select remedies that are at the more protective end of the risk range." Aligned with the unimpairment standard set forth in the Organic Act, NPS has selected a target risk level of one-in-one million ($1x10^{-6}$) and generally considers any cancer risk exceeding this risk

level to be unacceptable absent compelling site-specific factors that preclude this level of protection. *See* NPS, Southeast Regional Office, Southeast Region Directive: SER DIR-FAC-1 (Winter 2019), § 4.1.1. NPS is not aware of any compelling site-specific factors that would preclude achieving the $1x10^{-6}$ target risk level at this Site or otherwise justify a departure from the $1x10^{-6}$ risk level. NPS uses a cancer risk level of $1x10^{-6}$ as both the basis for interpreting human health risks and the point of departure for developing risk-based cleanup goals.

As explained above, reliance on land use restrictions to address the risks identified in the EE/CA is inconsistent with Organic Act's unimpairment mandate and NPS Management Policies. Accordingly, NPS chose not to carry land use restrictions (i.e., institutional controls) forward for further evaluation in the EE/CA because such restrictions would not satisfy CERCLA's threshold requirement of compliance with ARARs. *See* EE/CA Report, Text Table 6: Screening of Removal Action Options.

With respect to Area 3, NPS considered the inconsistent distribution of contaminants but, based on the nature of the Area, determined that focused removal is not sufficient to address the risks identified in the EE/CA Report. Information obtained through historical records and discussions with community members and former resort employees indicates that the landfill in Area 3 was used to dispose of wastes associated with the resort since the 1950s and, prior to that, was used as a community dump and municipal landfill. Prior to the 1970s, hazardous waste disposal was largely unregulated and hazardous wastes were often co-disposed with solid waste. As a result, CERCLA landfills are typically characterized by a heterogenous mixture of hazardous and non-hazardous (i.e., solid) waste. *See* EPA, Office of Solid Waste and Emergency Response, Presumptive Remedy for CERCLA Municipal Landfill Sites: Quick Reference Fact Sheet (Sept. 1993). The results of NPS's sampling work indicate that this is likely the case with respect to the Area 3 landfill. Because hazardous and non-hazardous wastes are intermixed within the landfill, there is no reliable way to target removal of only the hazardous wastes while leaving non-hazardous waste in place. *See* EE/CA Report, Section 5.1 ("[I]t is not feasible to find and remove only the contaminant hot spots."). Therefore, complete removal is required to ensure that identified risks to human and ecological receptors are fully addressed.

Removal of contaminated soil and landfill contents in Area 3 is also consistent with NPS's policies and regulations governing solid waste disposal in parks, which have been identified as ARARs or "to be considered" for the Site. Pursuant to solid waste disposal regulations, NPS strives to ensure that all activities associated with the operation of solid waste disposal sites within the boundaries of national park units are conducted in a manner that will (1) prevent deterioration of air and water quality; (2) prevent the degradation of natural and cultural resources; and (3) reduce adverse effects on visitor enjoyment. *See* 36 C.F.R. § 6.1. In accordance with its Management Policies, NPS generally considers "[t]he disposal in parks of solid wastes generated by non-NPS activities" to be "incompatible with national park values." Management Policies 2006, Section 9.1.6.1. In addition, NPS is also required to "make every reasonable effort to

prevent or minimize the release of contaminants on or that will affect NPS lands or resources" and to "take all necessary actions to control or minimize such releases." Management Policies 2006, § 9.1.6.2. Allowing a waste disposal unit, which has been confirmed to contain hazardous wastes, to remain on park land in perpetuity conflicts with these policies.

33) Public commenter: "[NPS] apparently "considered" USEPA presumptive remedy directives for landfill remedial actions identifying specific technologies that could effectively allow landfill materials to remain in place . . . As demonstrated by multiple directives regarding municipal landfill presumptive remedies (e.g., OSWER 9355.0-661, OSWER 9355.3-11FS, OSWER 9356.0-03), USEPA expects that the use of presumptive remedies will streamline removal actions while improving consistency, reducing costs, and reducing the time necessary to achieve remedial objectives particularly in the context of a NTCRA. The NPS determination to employ a removal action in Area 3 appears to be based on Park policy, rather than a decision based upon other relevant ARARs (e.g., RCRA subtitle D and C)…. Stabilizing, capping the landfill, and restricting access to Area 3 was eliminated as a removal action, not because it did not meet ARAR requirements or RAOs, but because it would require institutional controls that 'would impose an impairment on Park resources.'"

NPS Response: NPS has the authority to select a removal action that meets RAOs and attains ARARs. Because the landfill was not constructed or operated in compliance with Subtitle C or Subtitle D, attaining these ARARs is not a requirement.

As explained in the EE/CA Report, NPS considered EPA's presumptive remedy guidance for municipal landfills. That guidance, however, does not mandate selection of containment as the recommended remedy for the Caneel Bay Site. NPS's decision is tailored to address the unique aspects of CERCLA sites located within units of the national park system.

Site-specific factors, including location-specific ARARs, justify deviation from EPA's presumptive remedy guidance for municipal landfills. Virgin Islands National Park is a unique and important unit of the national park system which is intended to "preserve and protect for public benefit and inspiration outstanding scenic features, Caribbean tropical marine and terrestrial ecosystems in their natural conditions, and cultural heritage from pre-Columbian through Danish colonial times." NPS, Foundation Document, Virgin Island National Park & Virgin Islands Coral Reef National Monument (Dec. 2016). Among other things, the Park:

- Provides and protects significant marine and terrestrial resources and ecosystems, including the largest and most intact dry tropical forests remaining in the Caribbean;

- Provides key wintering habitat for neotropical migratory birds as well as a wide range of habitat for other plants and animals;

- Preserves an exceptional array of prehistoric and historic sites, reflecting the cultural heritage of diverse people who have inhabited the Island of St. John; and

- Provides unparalleled opportunities to experience scenic views of natural and cultural features of St. John and Hassel Island.

Marine ecosystems, terrestrial ecosystems, and diverse historic landscapes are just some of the fundamental resources and values that warrant protection and preservation of VIIS.

NPS is obligated to protect these fundamental resources and values and to ensure that they remain "unimpaired for the enjoyment of future generations." This is a statutory requirement and an ARAR. NPS has determined that stabilizing and capping the landfill, and restricting access to Area 3 would not comply with the statutory mandate under the Organic Act to prevent impairment of this outstanding national resource. EPA's presumptive remedy guidance does not take into consideration the important resources and values our national parks provide for the American people or NPS's duty to manage those resources and values in accordance with the unimpairment mandate. EPA's presumptive remedy for municipal landfills does not, therefore, comply with ARARs and is not eligible to be selected for this Site.

34) Public commenter: "NPS climate change policy and Park value- impairment policies may be considered in the assessment of removal action alternatives; however, they are, by nature, speculative. Such policies unnecessarily increase the cost comparative to other removal actions that nonetheless still meet applicable or relevant and appropriate requirements."

NPS Response: The unimpairment requirement is an ARAR and is not speculative. Interpretation and implementation of Organic Act requirements across the national park system is guided by the Park enabling legislation and a number of NPS directives and policies, chief among them NPS "Management Policies 2006." Management Policies 2006 specifies that the Organic Act mandate establishes two distinct requirements: (1) to conserve park resources and values for the enjoyment of the American people; and (2) to manage those resources and values in such a manner as to leave them unimpaired for future generations. Park-specific resources and values include those resources and values for which a specific park was established as identified in the park's enabling legislation and its management planning documents. In large measure, it is a park's purpose, significance, and fundamental resources and values that define what is required to satisfy the unimpairment requirement for that particular park.

In addition to applicable or relevant and appropriate requirements, the NCP directs lead agencies, as appropriate, to identify "other advisories, criteria, or guidance to be considered." 40 C.F.R. § 300.400(g)(3). The lead agency may identify as "to be considered" (TBC) any federal or state advisories, criteria, or guidance that may be helpful in selecting a CERCLA remedy. *Id.* TBCs are "non-promulgated advisories or guidance . . . that are not

legally binding" but "may be used in determining the necessary level of cleanup for protection of health or the environment." EPA, CERCLA Compliance with Other Laws Manual: Interim Final (Aug. 1988), https://semspub.epa.gov/work/HQ/174076.pdf. NPS climate change policies have been identified as policies "to be considered" in developing the remedy for the Caneel Bay Resort Site. *See* EE/CA Report, Text Table 4.2 (Location-Specific ARARs). These policies are not speculative; rather, they are intended to provide guidance and direction regarding the stewardship of NPS resources in the context of climate change. Pursuant to these policies, NPS managers are instructed to use the best available science, including climate science, to inform park policies and management decisions.

35) Public commenter: "The administrative costs associated with the NPS's proposed removal alternative requires adherence to applicable non-environmental laws and concerns of other regulatory agencies, including compliance with statutory limits on NTCRAs (i.e., the $2 million or 12-month limits on such actions). If the funding or time needed to implement the selected alternative exceeds the statutory limit for removal actions, the NPS must specifically address these limits in an exemption request as soon as possible."

NPS Response: The $2 million or 12-month statutory limits set forth in the NCP apply only to "fund-financed removal actions." 40 C.F.R. § 300.415(b)(5). Because the removal actions selected for the Site are not "fund-financed," these limitations are not applicable, and no exemption is required.

36) Public commenter: "The EE/CA must also evaluate whether any alternative requires on-site and/or off-site permits (e.g., solid and hazardous waste disposal permits, building and construction permits, easements, rights- of-way agreements, access agreements, DOT and/or RCRA transportation permits). In the event that the proposed alternative requires off-site removal of CERCLA waste materials for treatment and/or disposal, the EE/CA should independently confirm the adequacy of off-site treatment facilities and disposal capacity that meet CERCLA requirements."

NPS Response: Pursuant to Section 121(e)(1) of CERCLA, "[n]o Federal, State, or local permit shall be required for the portion of any removal or remedial action conducted entirely onsite." 42 U.S.C. § 9621(e)(1). In accordance with this provision, commonly referred to as the "permit exemption," CERCLA response actions conducted on-site are exempt from permitting processes and related administrative and procedural requirements. The purpose of the permit exemption is to ensure that CERCLA response actions "proceed in an expeditious manner, free from potentially lengthy delays associated with the permit process." *See* EPA, Office of Solid Waste and Emergency Response, RCRA, Superfund & EPCRA Hotline Training Module: Introduction to Applicable or Relevant and Appropriate Requirements, EPA540-R-98-020 (June 1998). Nevertheless, on-site activities must still comply with all substantive requirements that are "applicable" or "relevant and appropriate." 42 U.S.C. § 9621(d)(2). As explained in EE/CA Report, NPS has identified ARARs for the recommended response actions and has

determined that the recommended response action alternative would comply with ARARs. *See* EE/CA Report, § 4 (Identification and Analysis of ARARs), § 7.1 (Effectiveness). In addition, NPS acknowledges that actions taking place off-site must comply with all applicable requirements regardless of whether those requirements are substantive or procedural in nature. Permit requirements for off-site activities and availability of off-site treatment and disposal facilities will be addressed at the removal action design phase. As explained in the EE/CA Report, additional characterization would be required before wastes are disposed, administrative work would be required to identify an appropriate disposal facility, and hazardous waste would need to be disposed at a licensed hazardous waste landfill on the continental U.S. *See* EE/CA Report §§ 6.2, 7.2.

37) Public commenter: "Further investigation relating to groundwater, or any removal action based on groundwater, is simply not supported by the record."

NPS Response: Sampling groundwater in different seasons is a standard investigation procedure. Groundwater is a limited resource on St. John and is a potential emergency source of drinking water at Caneel Bay. NPS will investigate during the rainy season, when subsurface conditions may be different, to assess potential contaminant migration. While groundwater is not currently used as a potable water source at the resort, the EE/CA Report notes that deep groundwater is a potentially viable drinking water source. *See* EECA Report Text Table 4.1.

Moreover, groundwater at the Site is expected to flow west towards the ocean. Accordingly, hazardous substances present in Site groundwater could ultimately reach the ocean, potentially posing additional risks to human and ecological receptors. Because protection of marine habitat was one of the key reasons for establishment of VIIS, additional investigation of groundwater is consistent with the unimpairment mandate contained in the Organic Act.

38) Public commenter: "The new landfill should be monitored regularly by DOI to prevent future environmental damage."

NPS Response: The recommended removal action for Area 3 includes excavation and off-site disposal of soil and landfill contents. Construction of a new landfill is not recommended. Pursuant to 36 C.F.R. Part 6, the operation of a new solid waste disposal site within the boundaries of any unit of the national park system is generally prohibited unless certain specific requirements are met.

D. REMAINING COMMENTS

Issues and comments that are outside of the scope of the EE/CA include the following:

- **"No effort was made to address the disposal of human wastes on the site after the 2017 hurricanes."** NPS did not find evidence of disposal of human wastes outside of the former sewage treatment system.
- **"[Honeymoon Bay] restaurant has no running water and no hookup to the Caneel sewage system. It uses buckets of salt water drawn from the ocean buckets to flush its toilets into an unknown septic setup. Why is this bar/restaurant allowed to be open? What is the risk to the health of the visiting tourists and employees?"** The restaurant is operated under the RUE. Caneel Bay sewerage is outside of the scope of the EE/CA.

- **NPS received multiple comments regarding future commercial agreements related to the property. Examples include: "Insist on adequate insurance coverage from any new Caneel leasee to cover any future storm or environmental damage that could close Caneel again." "Require future Caneel Bay operators to follow DOI standards for safe use and disposal of pesticides. Require staff training of dangerous materials and inspect documented use of these substances regularly."** NPS appreciates these comments regarding the future of the Caneel Bay Resort property. While these issues fall outside the scope of the EE/CA, they will be shared with the NPS teams that are evaluating potential future commercial uses of the property. Any agreement regarding future use of the property will be consistent with all applicable laws, regulations, and policies governing commercial use of property in national parks.

- **NPS received multiple comments regarding potential negligence or fault of the RUE holder and/or resort operator. Examples include: "The findings of this study clearly indicate negligence on the part of the owners of Caneel Bay for failing to maintain the property in an acceptable condition." "The owners actions and continued stance are criminal and they should be prosecuted to the fullest extent of the law."** The purpose of the EE/CA is to characterize the nature and extent of contamination at the Site, not to establish fault. NPS has evaluated the nature and extent of contamination in Areas 2 and 3 and intends to implement the recommended removal actions for those areas. Under CERCLA, NPS may seek recovery of its response costs from PRPs who, pursuant to CERCLA's strict liability scheme, are liable for response costs regardless of intent or negligence.

- **NPS received multiple comments regarding the condition of the Resort property upon expiration of the RUE. Examples include: "As per the RUE, insist CBIA return Caneel Bay to the NPS in its original condition." "The leaseholder(s) should be made to clean up the site, remove all debris, and return the property to the national park service in accordance with the lease and the original donor's intent."** NPS appreciates these comments regarding the condition of the Resort property upon

expiration of the RUE. However, the terms of the RUE and enforcement of the obligations contained in the RUE fall outside the scope of the EE/CA.

- **"Has the NPS contacted the Rockefeller Foundation about the current condition of Caneel since the RUE is still valid?"** The terms of the RUE and the obligations contained within it fall outside the scope of the EE/CA.

- **"How does this report and action impact the contract with CBIA?"** The RUE is currently held by CBIA's sister company, EHI. The RUE is set to expire on September 30, 2023. The EE/CA Report and recommended response actions will not impact the expiration of the RUE and are not expected to have any substantive impact on future site redevelopment.

- **"Does the toxic clean-up need to be completed before the general hurricane damage clean-up begins?"** The process of cleaning up hurricane damage is not impacted by the recommended CERCLA response action and may begin at any time.