ENVIRONMENTAL ASSESSMENT REPORT
FOR THE
ANN E. ABRAMSON MARINE FACILITY
PREVIOUSLY PERMITTED UNDER
CZX-36-99W, SAJ 199806059 (IP-DD) AND WQC-99-007
FREDERIKSTED, ST. CROIX U.S. VIRGIN ISLANDS

SUBMITTED TO
THE OFFICE OF COASTAL ZONE MANAGEMENT
DEPARTMENT OF PLANNING AND NATURAL RESOURCES
GOVERNMENT OF THE VIRGIN ISLANDS

SUBMITTED BY
THE VIRGIN ISLAND PORT AUTHORITY
P.O. BOX 1134
CHRISTIANSTED, ST. CROIX, U.S. VIRGIN ISLANDS 00821

PREPARED BY
BIOIMPACT, INC.
VIRGIN ISLANDS PORT AUTHORITY

JANUARY 2021
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>SECTION</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00 NAME AND ADDRESS OF APPLICANT</td>
<td>1</td>
</tr>
<tr>
<td>2.00 LOCATION OF PROJECT</td>
<td>1</td>
</tr>
<tr>
<td>3.00 ABSTRACT</td>
<td>3</td>
</tr>
<tr>
<td>4.00 STATEMENT OF OBJECTIVES SOUGHT BY THE PROPOSED PROJECT</td>
<td>3</td>
</tr>
<tr>
<td>5.00 DESCRIPTION OF PROJECT</td>
<td>3</td>
</tr>
<tr>
<td>5.01 Proposed Project</td>
<td>6</td>
</tr>
<tr>
<td>5.02 Exhibits and Drawings</td>
<td></td>
</tr>
<tr>
<td>5.03 Project Work Plan</td>
<td>10</td>
</tr>
<tr>
<td>6.00 ECOLOGICAL SETTING AND PROBABLE PROJECT IMPACT ON THE NATURAL ENVIRONMENT</td>
<td></td>
</tr>
<tr>
<td>6.01 Climate and Weather</td>
<td>10</td>
</tr>
<tr>
<td>6.02 Landform, Geology, Soils and Historic Land Use</td>
<td>13</td>
</tr>
<tr>
<td>6.03 Drainage, Flooding and Erosion Control</td>
<td>16</td>
</tr>
<tr>
<td>6.04 Fresh Water Resource</td>
<td>17</td>
</tr>
<tr>
<td>6.05 Oceanography</td>
<td>17</td>
</tr>
<tr>
<td>6.06 Marine Resources and Habitat Assessment</td>
<td>21</td>
</tr>
<tr>
<td>6.07 Terrestrial Resources</td>
<td>25</td>
</tr>
<tr>
<td>6.08 Wetlands</td>
<td>26</td>
</tr>
<tr>
<td>6.09 Rare and Endangered Species</td>
<td>26</td>
</tr>
<tr>
<td>6.10 Air Quality</td>
<td>27</td>
</tr>
<tr>
<td>7.00 IMPACT OF THE PROPOSE PROJECT ON THE HUMAN ENVIRONMENT</td>
<td>27</td>
</tr>
<tr>
<td>7.01 Land and Water Use Plans</td>
<td>27</td>
</tr>
<tr>
<td>7.02 Visual Impacts</td>
<td>27</td>
</tr>
<tr>
<td>7.03 Impacts of Public Services and Utilities</td>
<td>28</td>
</tr>
<tr>
<td>7.04 Social Impacts</td>
<td>28</td>
</tr>
<tr>
<td>7.05 Economic Impacts</td>
<td>28</td>
</tr>
<tr>
<td>7.06 Impacts on Historical and Archaeological Resources</td>
<td>28</td>
</tr>
<tr>
<td>7.07 Recreational Use</td>
<td>28</td>
</tr>
<tr>
<td>7.08 Waste Disposal</td>
<td>29</td>
</tr>
<tr>
<td>7.09 Accidental Spills</td>
<td>29</td>
</tr>
<tr>
<td>SECTION</td>
<td>PAGE</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>7.10 Potential Adverse Effects Which Cannot be Avoided</td>
<td>29</td>
</tr>
<tr>
<td>8.00 MITIGATION PLANS</td>
<td>29</td>
</tr>
<tr>
<td>9.00 ALTERNATIVES TO PROPOSED ACTION</td>
<td>29</td>
</tr>
<tr>
<td>10.00 RELATIONSHIP BETWEEN SHORT AND LONG TERM USES OF MAN’S ENVIRONMENT</td>
<td>29</td>
</tr>
<tr>
<td>11.00 LITERATURE CITED</td>
<td>29</td>
</tr>
</tbody>
</table>

**APPENDIX A**

Coastal Zone Management Permit CZX-36-99W
USACE SAJ 199806059 (IP-DD)
WQC-99-007

**APPENDIX B**

Qualification Statement Bioimpact, Inc.
1.00 NAME AND ADDRESS OF APPLICANT

Virgin Islands Port Authority
P.O. Box 1707
St. Thomas
U. S. Virgin Islands 00803

Carlton A. Dowe, Executive Director

2.00 LOCATION OF PROJECT

The project site is located at the Ann E. Abramson Marine Facility in Frederiksted, St. Croix, in the U.S. Virgin Islands. The pier extends from the shoreline at the northern end of the town of Frederiksted. The pier is located at 17.714181° North Latitude and 64.884702° West Longitude.

2.00.1 Location Map
2.00.2 Vicinity Map – Location of Ann E. Abramson Pier in relationship to Frederiksted Town.

2.00.3 Coastal Zone Management Jurisdiction Map
3.00 ABSTRACT

The Virgin Islands Port Authority (VIPA) would like to re-permit the existing Ann E. Abramson Frederiksted Pier which was previously permitted under CZX-36-99W. The pier and subsequent modifications are permitted under USACOE SAJ 199806059(IP-DD).

The Ann E. Abramson Frederiksted Pier is St. Croix’s berth for full sized cruise ships. The existing permit was completed in 1994 as a replacement for the pier which was destroyed by Hurricane Hugo in 1989. The facility consists of 1.6 acres of filled land a 910’ long by 32’ wide approach bridge connecting to a 402’ long by 80’ wide platform. A 20’x20’ mooring platform lies 200’ off the western end of the platform. A catwalk and dolphin mooring system extends off the end of the pier allowing it to accommodate larger vessels. This system consists of 2 breasting dolphins on either side of the pier connected by catwalks. The first two are located 89’ from the end of the platform and the second two are located 89’ from the first two and a new mooring dolphin is located 233’ from the original mooring dolphin. The breasting dolphins are 72” diameter monopiles and the western mooring dolphin consists of 3 54” diameter steel pipe piles. The catwalk to the mooring dolphin is supported by 4 48” piles. There is also a submarine mooring system on the northside of the pier.

In 2016, CZX-36-99W was modified to include a new 75’ x 15’ tender landing extending out perpendicular to the existing tender damaged landing and shoreline. New pilings would be placed beyond the existing colonized riprap and the existing tender landing would be removed and the colonized pilings cut off above the water line to minimize impact to colonizing organisms. The new pilings would be driven in the uncolonized sand beyond the existing tender landing. A set of precast concrete stairs would be installed for swimmer and diver access on a 10’x 5’8” square precast concrete foundation. The new tender landing has not yet been constructed and the VIPA respectfully requests that the permit for this addition be extend as a part of this application.

4.00 STATEMENT OF OBJECTIVES SOUGHT BY THE PROPOSED PROJECT

The VIPA proposes to re-permit the pier permitted by CZX-36-99W and its subsequent modifications. No work other than that permitted under CZX-36-99W and its modifications is proposed.

5.00 DESCRIPTION OF PROJECT

The Virgin Islands Port Authority (VIPA) would like to re-permit the existing Ann E. Abramson Frederiksted Pier which was previously permitted under CZX-36-99W. The pier and subsequent modifications are permitted under USACOE SAJ 199806059(IP-DD). The facility consists of 1.6 acres of filled land a 910’ long by 32’ wide approach bridge connecting to a 402’ long by 80’ wide platform. A 20’x20’ mooring platform lies 200’ off the western end of the platform. A
catwalk and dolphin mooring system extends off the end of the pier. This system consists of 2 breasting dolphins on either side of the pier connected by catwalks. The first two are located 89’ from the end of the platform and the second two are located 89’ from the first two and a new mooring dolphin is located 233’ from the original mooring dolphin. The breasting dolphins are 72” diameter monopiles and the western mooring dolphin consists of 3 54” diameter steel pipe piles. The catwalk to the mooring dolphin is supported by 4 48” piles.

In 2016, CZX-36-99W was modified to include a new 75 ft. x 15 ft. tender landing extending out perpendicular to the existing tender landing and shoreline. New pilings would be placed beyond the existing colonized riprap and the existing tender landing would be removed. A set of precast concrete stairs would be installed for swimmer and diver access on a 10’ x 5’8” square precast concrete foundation. The new tender landing has not yet been constructed and the VIPA respectfully request that the permit for this addition be extend as a part of this application.

### 5.02 Exhibits and Drawings

<table>
<thead>
<tr>
<th>Drawing</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location Map</td>
<td>5</td>
</tr>
<tr>
<td>Site Plan</td>
<td>6</td>
</tr>
<tr>
<td>Elevation</td>
<td>7</td>
</tr>
<tr>
<td>Mooring and Breasting Dolphin Elevation</td>
<td>8</td>
</tr>
<tr>
<td>Service Pier (Tender Landing)</td>
<td>9</td>
</tr>
</tbody>
</table>
5.03 Project Workplan

No new work which is has not already been permitted is proposed under this application. This application is to re-permit all work permitted under CZX-36-99(W) and its subsequent modifications including the construction of the tender landing which has not yet commenced.

6.00 ENVIRONMENTAL SETTING AND PROBABLE PROJECT MODIFICATIONS

6.01 Climate and Weather

Prevailing Winds

The Virgin Islands lie in the "Easterlies" or "Trade Winds" which traverse the southern part of the "Bermuda High" pressure area, thus the predominant winds are usually from the east northeast and east (IRF, 1977). These trade winds vary seasonally and are broadly divided into 4 seasonal modes: 1) December to February; 2) March to May; 3) June to August; and 4) September to November. Below are the characteristics of these modes as taken from Marine Environments of the Virgin Islands Technical Supplement No. 1 (IRF, 1977).

December – February

During the winter the trade winds reach a maximum and blow with great regularity from the east northeast. Wind speeds range from eleven to twenty-one knots about sixty percent of the time in January. This is a period when the Bermuda High is intensified with only nominal compensation pressure changes in the Equatorial Trough. The trade winds during this period are interrupted by "Northerners" or "Christmas Winds" which blow more than twenty knots from a northerly direction in gust from one to three days. Such outbreaks average about thirty each year. They are created by strengthening of high-pressure cells over the North American continent, which, in turn, allows weak cold fronts to move, southeastward over the entire Caribbean region. These storms are accompanied by intermittent rains and by clouds and low visibility for mariners.

March – May

During the spring, the trade winds are reduced in speed and blow mainly from the east. Winds exceed twenty knots only thirteen percent of the time in April. The change in speed and direction is the result of a decrease of the Equatorial Trough.

June – August

Trade winds reach a secondary maximum during this period and blow predominantly from the east to east southeast. Speeds exceed twenty knots twenty-three percent of the time during July. The trend for increasing winds results from the strengthening of the Bermuda High and a
concurrent lowering of the pressure in the Equatorial Trough. Trade winds during this period are interrupted by occasional hurricanes.

**September – November**

During the fall, winds blow mainly from the east or southeast and speeds reach an annual minimum. Only seven percent of the winds exceed twenty knots in October. The low speeds result from a decrease in the Equatorial Trough. During this period, especially during late August through mid-October, the normal trade wind regime is often broken down by easterly waves, tropical storms, and hurricanes.

**Storm and Hurricanes**

There are numerous disturbances during the year, especially squalls and thunderstorms. These occur most frequently during the summer, lasting only a few hours and causing no pronounced change in the trade winds.

A tropical cyclone whose winds exceed 74 miles per hour is termed a hurricane in the northern hemisphere, and significantly affects the area. These hurricanes occur most frequently between August and mid-October with their peak activity occurring in September. The annual probability of a cyclone is one in sixteen years.

**Climate**

The average annual rainfall on St. Croix is approximately 40 inches, ranging from 30 inches toward the eastern end of the islands to more than 50 inches at the higher elevations to the west. The Limetree Bay Terminals area receives less than 40 inches of rainfall per year on average. Rainfall usually occurs in brief, intense showers of less than a few tenths of an inch and major rainfall events are associated with weather systems (USGS 1998). The Virgin Islands have no sharply defined wet season. The wettest period generally is from September to November, and the driest period is from January to June (USGS 1998).

Annual temperatures average 79 degrees Fahrenheit (F), with the winter low averaging 76 degrees F. and the summer high reaching an average of 84 degrees F. Occasionally, maximum daily temperatures will exceed 90 degrees F. and minimum temperatures will drop below 70 degrees F. (Jordan, 1975).
Figure 6.01.1. Seasonal wind variations St. Croix (https://www.windfinder.com/windstatistics/st_croix)

6.01.2 Tropical Cyclone Frequencies in the Atlantic (National Weather Service).
Figure 6.01.3 Tropical Storm and Hurricane Occurrences in the Atlantic (National Weather Service)

Figure 6.01.4 Climate Normals Christiansted St. Croix (https://noaa.maps.arcgis.com/home/webmap/viewer)

6.02 Landforms, Geology, Soils, and Historic Use

GEOLOGY OF ST. CROIX

The Virgin Islands are near the northeastern corner of the present Caribbean Plate, a relatively small trapezoidal-shaped plate which is moving eastward relative to the North and South
American continents carried on the American plate. The arc of the Lesser Antilles is an active volcanic arc above a subduction zone in which the Atlantic oceanic crust of the American Plate is carried downward under the Caribbean Plate. The closest volcano to the Virgin Islands, which is still active, is Saba, about 160 km to the east.

The island of St. Croix consists geologically of two predominant mountainous areas (the North side and the East End ranges), with a central sediment filled valley in between. The oldest rock underlying both ranges, and probably in the valley as well, is from the Cretaceous period, 80 million years ago. These sedimentary rocks which were formed from the erosion of volcanic ash and debris, and are beset with igneous intrusions, underwent a period of orogeny lifting them up from the ocean floor and forming two islands with a channel in between. Oligocene clay and mud was deposited in this channel forming what is known as the Jealousy formation. Next, tertiary limestone was deposited when this channel area became a lagoon encircled by coral reef. The limestone and marls that overlay the Jealousy formation are known as the Kingshill formation. After these formations were deposited, the area underwent another period of uplifting, the two islands became connected by the newly emergent filled-in area, and the island of St. Croix was formed. Since that time, geologic activity has been limited primarily to the erosion of sediments and the formation of ponds, beaches, reefs, and beach rock coast. Two large basins, the Virgin Islands Basin and the St. Croix Basin, separate St. Croix from the other Virgin Islands. Within the distance between St. Croix and St. Thomas, about 40 nautical miles, hydrographic charts show that the ascent from the sea floor north of St. Croix is as much as 70'. Frasetto and Northrop (1057) indicate that this northern topographic slope extends downward to the Virgin Islands Basin at a gradient up to 43'. There is an ascent of 13,656 feet within a horizontal distance of 25,800 feet, terminating with the steep north coast in the vicinity of Hams Bluff. The area has been described as the south side of the Anegada Trough and its related fault scarp (Taber 1922). Meyerhoff (1927) suggested that this block faulting took place during the late Pliocene or early Pleistocene, prior to which St. Croix was physically attached to the northern Virgin Islands. The southern and eastern portions of the St. Croix Platform, differing greatly from the northern and western regions, have a gradient of much less amplitude and therefore, a wider shelf area.

GEOLOGY OF THE FREDERIKSTED PIER AREA

The shoreline along the base of the Frederiksted Pier is composed of exposed beach rock. This beach rock is intermittently exposed underwater out to a depth of 12’. The sea floor gradually slopes from 20' to 60’ over the next 1600’. The bottom is primarily sandy within the area, with a scattering of coral and rock rubble and debris. Beginning at depth of 60’, the depth of the closest older mooring dolphin, the slope increases both to the north and south of the pier. Approximately 30’ to the north of the closer mooring dolphin there is a large open sand slope with no colonization and only occasional rubble. To the south of the open sand and to the centerline of the dolphin and pier up to 35% of the seafloor becomes hard substrate, of which up to 50% is colonized by sponges. Corals colonize approximately 5% of the hard substrate in this area. Debris from the old pier and from vessels represent as much as 10% of the hard substrate in the area. From the midline of the mooring dolphin south, the amount of hard substrate
increases to up to 70%. Again 50% of the hard substate is colonized by sponges and less than 5% is colonized by corals species. Debris makes up as much as 20% of the hard substrate in this area.

Both berths along the platform area primarily sandy, with exposed cut off pilings present in the south berth. These piles were below the mud line until the passage of hurricanes in recent years and with hurricane Maria in 2017 as much as 5’ of some of the piles are exposed due to sediment movement. The storms also exposed a shelf of pavement under the pier and to the south of the approach bridge at a depth of 20’. The exposed piles in the south berth are deeper than the controlling depth of the berth.

Pavement ledge exposed by storms.

HISTORIC USE

The Frederiksted Harbor area has been used as a mooring and anchoring area for centuries. Historic bottles and other debris are not uncommon to find in the vicinity of the pier. Within the area, there are ballast piles, construction debris and old pilings and debris from past piers which were damaged by passing hurricanes.

Frederiksted piers, 1954.
FREDERIKSTED PIERS IMPACT ON THE SITE

During the construction of the pier because of the presence of rock pavement below the sand the concrete pilings of the pier were drilled and grouted in. With the movement of sand due to the passage of storms there are areas of exposed grout on the seafloor.

6.03 Drainage, Flooding and Erosion Control

6.03a Impacts of Terrestrial and Shoreline Erosion

The Frederiksted Pier is located entirely offshore and has no impact on terrestrial erosion. The pier extends from an “iron” or hard shoreline with exposed beach rock to both the north and south of the pier. The pier does however have an impact on littoral sand movement with sand being slowed down and trapped on the north side of the pier. Water depths are typically shallower to the north side of the pier.

6.03b Relationship of the Project to the Coastal Flood Plain

The Frederiksted Pier is located in FEMA Flood Zone VE 12 where the hundred-year coastal flood with velocity (wave action) is expected to be 12’.
Figure 6.03.1 FEMA FIRM 77 of 94. Note this was taken during the construction of the existing pier and before the old pier was torn down.

6.04 Fresh Water Resources

The Frederiksted Pier has no impact on freshwater resources.

6.05 Oceanography

6.05a Seabed Alteration

The application is for the re-permitting of the existing pier and previous modifications. No additional seabed alteration is being requested.

6.05 B Tides and Currents

The Virgin Islands coastal areas are not subject to significant tidal ranges or tidal currents with an average tidal height of only a few inches and maximum tidal difference of approximately 12 inches. Consequently, there is only very narrow intertidal zone due to this lack of tidal amplitude and the steepness of the island rising out of the sea. Normal tidal ranges may be greatly
exceeded during storm conditions, when a combination of lower barometric pressure at the ocean surface and storm winds amplifies the tidal crest. St. Croix’s tides typically exhibit two (bimodal) ‘peaks’ during the diurnal period (24-hour day), with the second (lesser) ‘peak’ with relatively small ebbs and flows. The mean tides range from 0.8 feet to 1.0 feet and the spring tidal ranges reach up to 1.3 feet (IRF 1977). The closest NOAA tidal station was on the pier and is Station Id: 9751584, located at latitude 17° 42.8’ N and Longitude 64° 53’ W. It was installed in 1977 and removed in 2011. The mean range is 0.70 ft. and the mean diurnal range is 0.73 ft.

A typical daily tidal period is shown in Figure 6.05.1.

The surface currents throughout the Caribbean are driven by the North Equatorial Current that runs through the islands west-northwest and then joins the Gulf Stream. These currents change very little from season to season with the currents originating more from the south during the summer months. Because of the shallowness of the Caribbean basin, less than 3200 feet, mainly surface water from the Atlantic flows through the islands. Currents off shore of St. Croix average around 0.7 knots (IRF 1977).

![Graph](image)

**Figure 6.05.1 Typical Tides at the Frederiksted Pier.**

### 6.05 C Waves

The deep-water waves off of St. Croix are primarily driven by the northeast trade winds that blow most of the year. Waves average from 1 to 3 ft from the east, 42% of the time throughout the year (IRF, 1977). For 0.6% of the time easterly waves reach 12 ft. in height. The southeasterly swell with waves one to twelve feet high become significant in late summer and fall when the trade winds blow from the east or when tropical storms and hurricanes pass the islands at a distance to the south. During the winter months,
long length, long period northern swells develop to a height of 1 to 5 feet. The roughest sea conditions prevail between June and August, and the second highest seas occur from December through February. September through November is the calmest period for waves.

The pier is located on the western in the island and is in the lee from the predominant seas. The pier area is impacted directly when seas approach from the west, northwest and southwest. Significant sea conditions occur during hurricanes and periodically during fall months.

Figure 6.05.2 Wave Information for Station 61022 and 61025 (http://wis.usace.army.mil/hindcasts)
6.05 D Marine Water Quality

The offshore waters surrounding the Frederiksted Pier are classified as Class B, and the best usage of these waters is listed as the propagation of desirable species of marine life and for primarily contact recreation (swimming, water skiing, etc.). The quality criteria include dissolved oxygen not less than 5.5 mg/l from other than natural conditions. The pH must not vary by more than 0.1 pH unit from ambient; at no time shall the pH be less than 7.0 or greater than 8.3. Bacteria (fecal coliform) cannot exceed 70 per ml. and turbidity should not exceed such that a secchi disc is not visible at minimum depth of one meter.

The Frederiksted Pier area is impacted by periodic discharges coming from the large drainage to the north of the fort and discharges from town. The Department of Planning and Natural Resources takes periodic water quality measurements at Station #28 which is located immediately to the south of the proposed tender landing renovations. The results of those measurements are found in table listed below.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Depth (m)</th>
<th>Temp (°C)</th>
<th>Salinity (ppt)</th>
<th>DO (mg/L)</th>
<th>pH (s.u.)</th>
<th>Turbidity (NTU)</th>
<th>Secchi (m)</th>
<th>Fecal Coliform/100ml</th>
<th>Enterococci/100ml</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/10/2-13</td>
<td>1034</td>
<td>Surface</td>
<td>27.55</td>
<td>35.1</td>
<td>6.91</td>
<td>9.60</td>
<td>0.80</td>
<td>B</td>
<td>&lt;10</td>
<td>218</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bottom</td>
<td>27.55</td>
<td>35.1</td>
<td>6.91</td>
<td>9.60</td>
<td>0.80</td>
<td>B</td>
<td>&lt;10</td>
<td></td>
</tr>
<tr>
<td>6/10/2014</td>
<td>847</td>
<td>Surface</td>
<td>27.66</td>
<td>37.4</td>
<td>5.19</td>
<td>8.3</td>
<td>90.56</td>
<td>B</td>
<td>&lt;10</td>
<td>226</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bottom</td>
<td>27.66</td>
<td>37.4</td>
<td>5.19</td>
<td>8.3</td>
<td>90.56</td>
<td>B</td>
<td>&lt;10</td>
<td></td>
</tr>
<tr>
<td>9/16/2014</td>
<td>1455</td>
<td>Surface</td>
<td>29.80</td>
<td>35.80</td>
<td>7.08</td>
<td>9.21</td>
<td>0.64</td>
<td>B</td>
<td>171</td>
<td>&lt;10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bottom</td>
<td>29.80</td>
<td>35.80</td>
<td>7.08</td>
<td>9.21</td>
<td>0.64</td>
<td>B</td>
<td>171</td>
<td></td>
</tr>
<tr>
<td>12/18/2014</td>
<td>1419</td>
<td>Surface</td>
<td>27.8</td>
<td>36.1</td>
<td>5.0</td>
<td>8.9</td>
<td>0.80</td>
<td>B</td>
<td>&lt;10</td>
<td>&lt;10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bottom</td>
<td>27.8</td>
<td>36.1</td>
<td>5.1</td>
<td>8.9</td>
<td>0.82</td>
<td>B</td>
<td>&lt;10</td>
<td></td>
</tr>
<tr>
<td>2/26/2015</td>
<td>1000</td>
<td>Surface</td>
<td>26.63</td>
<td>35.62</td>
<td>6.50</td>
<td>7.82</td>
<td>0.4</td>
<td>B</td>
<td>&lt;10</td>
<td>&lt;10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bottom</td>
<td>26.63</td>
<td>35.62</td>
<td>6.42</td>
<td>7.82</td>
<td>0.4</td>
<td>B</td>
<td>&lt;10</td>
<td></td>
</tr>
<tr>
<td>2/16/2017</td>
<td>10:53</td>
<td>Surface</td>
<td>26.5</td>
<td>35.55</td>
<td>6.24</td>
<td>8.08</td>
<td>0.13</td>
<td>5.0</td>
<td>&lt;10</td>
<td>&lt;10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bottom</td>
<td>26.5</td>
<td>35.55</td>
<td>6.13</td>
<td>8.09</td>
<td>0.16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8/8/2018</td>
<td>13:17</td>
<td>Surface</td>
<td>27.96</td>
<td>35.54</td>
<td>6.37</td>
<td>8.23</td>
<td>0.3</td>
<td>6.1</td>
<td>&lt;10</td>
<td>&lt;10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bottom</td>
<td>27.78</td>
<td>35.51</td>
<td>6.30</td>
<td>8.22</td>
<td>0.2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table Error! No text of specified style in document. -1 Data from VI Ambient Monitoring Station #28

Impact of Application

The application requests the re-permitting of the existing pier permitted by CZX-36-99(W) and its subsequent modifications, including the modification for the construction of the new service pier (tender landing) which has not yet been built.

The application does not request any work which is not previously permitted.

The pier has been designed to meet the sea conditions which occur in the area including storm events.
6.06 Marine Resources and Habitat Assessment

Introduction

The existing Ann E. Abramson Pier was completed in 1994. The pier was built to the north of the old pier so that the facility could be used throughout the construction period with no loss of use. The old pier had been damaged by multiple hurricanes and had been repaired and rebuilt numerous times and beneath the pier considerable debris pile had grown. Overtime the pilings had been heavily colonized by a variety of sponge species, creating a diverse benthic habitat. But with the passage of hurricane Hugo in 1989, the old pier could no longer be repaired and a new pier had to be built.

The colorful pilings of the old pier provided incredible photographic opportunities for divers.

As the construction of the new pier progressed, monitoring sites were established on selected pilings along the pier as a part of the construction project monitoring. The monitoring documented the colonization of the new pilings first with an algal slime and the later progression of crustose coralline algae and finally the first settlement of corals and sponges. When the demolition of the old pier began, many of the sponges were broken off the pilings during the extraction process and monitors divers transplanted these sponges on to the new piles. During this period, loose rubble and debris was also transported from the demolition area to the underneath of the new pier structure to try to maintain the greatest amount of benthic habitat possible.

Transplanted sponges quickly attached themselves to the new pier pilings. Relocated debris.
The pilings that are the most heavily colonized are those onto which the sponge species were attached during the construction of the new pier. On pilings that did not receive transplants colonization was slower. Some coral re-attachment occurred, however due to the curved surface of the new piers most corals were transplanted onto large existing rubble south of the southern berth.

On pilings that received transplants, the community composition is quite different with species not usually found until later periods of succession densely packing the pilings where the original bands and ties circled the pilings.

The old breasting dolphins located off the Roll-on Roll off ramp still support a dense mature sponge community.

The outer pilings which receive the greatest amount of light have some coral colonization outside of them, and small plate corals, *Diploria labyrinthiformis*, *Diplora strigosa* and *D. clivosa* are all present. The hydrocoral, *Millepora* spp. is still prevalent in many areas of the pier and was the first coral-like colonizer of the pilings. *Millepora* has heavily colonized most of the bases of the access ladders of the pier.

This *Diploria labyrinthiformis* is one of the few successful coral transplants onto the pilings. A scar from the string attachment point and the remnant of the line that was originally used to attach it are still visible.

The following table (Table 6.06.1) documents the species present on pilings 10 years after the completion of construction and the difference between the piles that received transplants and those which did not.
## TABLE 6.06.1 SESSILE PILING COLONIZERS

<table>
<thead>
<tr>
<th>Transplant Recipients</th>
<th>Unaltered</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pseudoceratina crassa</strong></td>
<td><em>Holopsamma helwigi</em></td>
</tr>
<tr>
<td><strong>Aplysina fistularis</strong></td>
<td><em>Spirastrella coccinea</em></td>
</tr>
<tr>
<td><strong>Agelas conifera</strong></td>
<td><em>Phorbas amaranthus</em></td>
</tr>
<tr>
<td><strong>Callyspongia vaginalis</strong></td>
<td><em>Diplastrella spp.</em></td>
</tr>
<tr>
<td><strong>Geodia neptuni</strong></td>
<td><em>Monanchora barbadensis</em></td>
</tr>
<tr>
<td><strong>Spheciospongia vesparium</strong></td>
<td><em>Halisarca sp.</em></td>
</tr>
<tr>
<td><strong>Ircinia strobilina</strong></td>
<td><em>Rhaphidophlus venosus</em></td>
</tr>
<tr>
<td><strong>Neofibularia nolitangere</strong></td>
<td><em>Mycale laevis</em></td>
</tr>
<tr>
<td><strong>Aplysina cauliformis</strong></td>
<td><em>Demosponges</em></td>
</tr>
<tr>
<td><strong>Aplysina fulva</strong></td>
<td><em>Millepora alcicornis</em></td>
</tr>
<tr>
<td><strong>Haliclona hagarthi</strong></td>
<td><em>Millepora complanata</em></td>
</tr>
<tr>
<td><strong>Gelioides ramose</strong></td>
<td><em>Millepora alcicornis</em></td>
</tr>
<tr>
<td><strong>Neofibularia nolitangere</strong></td>
<td><em>Parazoanthus sp.</em></td>
</tr>
<tr>
<td><strong>Holopsamma helwigi</strong></td>
<td><em>Stylaster roseus</em></td>
</tr>
<tr>
<td><strong>Spirastrella coccinea</strong></td>
<td><em>Diploria strigosa</em></td>
</tr>
<tr>
<td><strong>Phorbas amaranthus</strong></td>
<td><em>Diploria labyrinthisformis</em></td>
</tr>
<tr>
<td><strong>Diplastrella spp.</strong></td>
<td><em>Halimeda copiosa</em></td>
</tr>
<tr>
<td><strong>Monanchora barbadensis</strong></td>
<td><em>Notaulax spp.</em></td>
</tr>
<tr>
<td><strong>Halisarca sp.</strong></td>
<td><em>Branchiomma nigromaculata</em></td>
</tr>
<tr>
<td><strong>Rhaphidophlus venosus</strong></td>
<td><em>Spriobranchus giganteus</em></td>
</tr>
<tr>
<td><strong>Mycale laevis</strong></td>
<td><em>Barnacles</em></td>
</tr>
<tr>
<td><strong>Millepora alcicornis</strong></td>
<td><em>Bryozoa</em></td>
</tr>
<tr>
<td><strong>Millepora complanata</strong></td>
<td><em>Oysters</em></td>
</tr>
<tr>
<td><strong>Millepora squarrosa</strong></td>
<td><em>Fileclams</em></td>
</tr>
<tr>
<td><strong>Parazoanthus sp.</strong></td>
<td><em>Scallops</em></td>
</tr>
<tr>
<td><strong>Stylaster roseus</strong></td>
<td><em>Tunicates</em></td>
</tr>
<tr>
<td><strong>Diploria strigosa</strong></td>
<td><em>Demosponges</em></td>
</tr>
<tr>
<td><strong>Diploria labyrinthisformis</strong></td>
<td><em>Barnacles</em></td>
</tr>
<tr>
<td><strong>Tubastreae cocinea</strong></td>
<td><em>Bryozoa</em></td>
</tr>
<tr>
<td><strong>Halimeda copiosa</strong></td>
<td><em>Oysters</em></td>
</tr>
<tr>
<td><strong>Notaulax spp.</strong></td>
<td><em>Fileclams</em></td>
</tr>
<tr>
<td><strong>Branchiomma nigromaculata</strong></td>
<td><em>Scallops</em></td>
</tr>
<tr>
<td><strong>Spriobranchus giganteus</strong></td>
<td><em>Tunicates</em></td>
</tr>
</tbody>
</table>

23
By 2020 the pilings have become more heavily colonized and have diverse sponge populations. Corals are primarily present on the outer piling and the mooring dolphin pilings.

The northern and southern sides of the area of filled land are protected by riprap boulders. The shallowest boulders and those in direct sunlight are heavily colonized by algal species. The boulders are completely involved with an algal turf. Algal species include; Sargasso, Jania, Laurencia, Hypnea, Caulerpa, Dictyota, Wrangelia, Galaxura, and crustose coralina algae. There are abundant hydroids as well in the shallows. As depth increases and in areas with partial shading, both branching and encrusting sponges appear, found are; Agelas citrina, Callyspongia, Smenospongia cerebriformis, Diplastrella megastellata, Ectyoplasia ferox, Plakinastrella onkodes, Mycale laevis, Ircinia strobilina, I. felix, Scopalina ruetzleri, Desmapsamma anchorata, Condrilla caribensis, Clonia sp., Aplysina insularis, A. fulva, Agelas conifer, A despard, A. wiedenmayeri, A. clathrodes, Clonia caribae, Neofibularia nolitangere, and Halisarca caerulea. Sponges are the most abundant colonizing invertebrate within the project area and the entire pier structure. Corals are present including; Porties astreoides, Porties porites, Siderastrea siderea, Diploria strigosa, Agaricia grahamae, Agaricia humilis, Agaricia lamarki, Erythropodium caribaeorum, and Palythoa caribbaeorum. No ESA listed coral species occur within the immediate area.

The area is teeming with fry, and the debris, pilings and boulders provide habitat to a variety of fish species and invertebrates including, Diadema antillarum, Sabellastarte magnifica, Bispira brunnea, Bispira variegata, Spirobranchus giganteus, Eupolymnia crassicornis and Condylactis gigantean.

SURROUNDING COMMUNITIES

To the north of the pier is a large sandy plain which extends with limited scattered rock rubble 450 m (1350ft) before reaching scattered patch reefs to the north. These reefs start near the
shoreline and extend off shore merging with the slope reef. To the south of the Frederiksted pier lies the rubble field from the old Frederiksted Pier and scattered rock rubble. Deeper water curves in towards the east to the south of the pier and a large slope reef is located approximately 200 meters (600ft) to the south of the pier. There are also a few scattered small patch reefs in the shallower water within the boat mooring area. To the west of the pier, beginning at the old concrete mooring dolphin is a deep slope reef. There is a large sand chute to the north of the mooring dolphin extending down off the shelf. The slope reef extends from approximately 55 to 60 ft of water depth to 110 to 112 ft. where an expansive sand plain extends to the west.

The closest coral community is to the west at the edge of the slope reef. The slope begins at the outer edge of the old concrete mooring dolphin and extends to a depth of 110-112ft. Sponges are the most predominant colonizer, as they are on the surrounding reefs and the pier structure itself. Basket sponges (*Xestospongia muta*) are abundant. As are tube sponges and rope sponges. These communities were monitored throughout the construction of the pier and the extension which involved drilling, pile driving, airlifting and pile filling and grouting and no impacts related to water quality issues were noted. There were some impacts related to spud placement and anchor chains that were noted during the monitoring and these impacts were mitigated for by the Port Authority.

![The reef area west of the pier.](image)

**IMPACT OF APPLICATION**

This application is for the re-permitting of the existing pier which was permitted under CZX-36-99(W) and its subsequent modifications as well as the permitting of the new service pier (tender landing) which was permitted in 2016 but has not yet been constructed. All impacts associated with the pier construction and modifications were mitigated for and mitigation plans have been approved for anticipated impacts of the construction of the new service pier.

**6.07 Terrestrial Resources**

The Frederiksted pier lies entirely offshore of the town of Frederiksted. The pier does include a section of filled land which has been landscaped and includes palms and other ornamentals. The pier has no impact on the terrestrial resources of St. Croix.
6.08 Wetlands

There are no terrestrial wetlands associated with the Frederiksted Pier.

6.09 RARE AND ENDANGERED SPECIES

Dives were made to inspect the pilings and mooring footprints. No ESA listed corals were encountered.

ESA listed sea turtle species occur in the immediate vicinity, these include two threatened species, the green turtle (*Chelonia mydas*) and the loggerhead (*Caretta caretta*), and two endangered species, the hawksbill turtle (*Eretmochelys imbricata*) and the leatherback turtle (*Dermochelys coriacea*). All four species have been seen near the Frederiksted Pier and Sandy Point which lies to the south is nesting area for leatherback turtles.

Table 6.09.1. ESA Threatened and Endangered Species Potentially Occurring in the Project Area

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Acropora palmata</em></td>
<td>Elkhorn coral</td>
<td>T</td>
</tr>
<tr>
<td><em>Acropora cervicornis</em></td>
<td>Staghorn coral</td>
<td>T</td>
</tr>
<tr>
<td><em>Orbicella annularis</em></td>
<td>Lobbed Star coral</td>
<td>T</td>
</tr>
<tr>
<td><em>Orbicella faveolata</em></td>
<td>Mountainous star coral</td>
<td>T</td>
</tr>
<tr>
<td><em>Orbicella franksi</em></td>
<td>Boulder star coral,</td>
<td></td>
</tr>
<tr>
<td><em>Dendrogyra cylindrus</em></td>
<td>Pillar coral</td>
<td>T</td>
</tr>
<tr>
<td><em>Myctophyllia ferox</em></td>
<td>Rough Cactus Corals</td>
<td>T</td>
</tr>
<tr>
<td><em>Eretmochelys imbricata</em></td>
<td>Hawksbill sea turtle</td>
<td>E</td>
</tr>
<tr>
<td><em>Dermochelys coriacea</em></td>
<td>Leatherback sea turtle</td>
<td>E</td>
</tr>
<tr>
<td><em>Chelonia mydas</em></td>
<td>Green sea turtle</td>
<td>T</td>
</tr>
<tr>
<td><em>Caretta caretta</em></td>
<td>Loggerhead sea turtle</td>
<td>T</td>
</tr>
<tr>
<td><em>Trichechus manatus manatus</em></td>
<td>West Indian manatee</td>
<td>E</td>
</tr>
<tr>
<td><em>Megaptera novaeangliae</em></td>
<td>Humpback whale</td>
<td>E/D&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
<tr>
<td><em>Balaenoptera physalus</em></td>
<td>Finback whale</td>
<td>E</td>
</tr>
<tr>
<td><em>Epinephelus striatus</em></td>
<td>Nassua grouper</td>
<td>T</td>
</tr>
<tr>
<td><em>Manta birostris</em></td>
<td>Giant Manta Ray</td>
<td>T</td>
</tr>
<tr>
<td><em>Sphyma lewini</em></td>
<td>Scalloped Hammerhead</td>
<td></td>
</tr>
<tr>
<td><em>Carcharhinus longimanus</em></td>
<td>Oceanic Whitetip Shark</td>
<td>T</td>
</tr>
</tbody>
</table>

Coastal waters and waters within the Virgin Islands are frequented by whales (*Megaptera*...
novaeangliae, Balaenoptera physalus) during winter for mating and birthing and dolphins (Tursiops truncates) are year-round residents. Whales have been seen near the pier.

The endangered Antillean manatee (Trichechus manatus manatus) has recently been seen in the U.S. Virgin Islands after not being seen for many years so it is included in this assessment.

Nassau groupers (Epinephelus striatus) were seen during surveys for the pier associated with hardbottom areas.

Giant Manta Ray (Manta birostris), Scalloped Hammerhead (Sphyma lewini) and Oceanic Whitetip Shark (Carcharhinus longimanus) could occur in the offshore waters of the pier. None were seen during the in-water surveys of the pier. Giant manta rays have been seen off the southshore near Sandy Point in 2020.

The re-permitting of the pier will have no impact on these species.

6.10 Air Quality

All of St. Croix is designated Class II by the Environmental Protection Agency in compliance with National Ambient Air Quality Standards. In Class II air quality regions, the following air pollutants are regulated; open burning, visible air contaminants, particulate matter emissions, volatile petroleum products, sulfur compounds, and internal combustion engine exhaust (Virgin Islands Code Rules and Regulations).

This application is for the permitting of the existing pier facility which was previously permitted by CZX-36-99(W) and its subsequent modifications. The Frederiksted Pier receives cruise ships which create combustion engine exhaust as they arrive, are berthed at the dock and as they depart. Cruise ships have a short-term impact on air quality due to their combustion engines. Air quality quickly returns to normal upon the departure of the vessel.

7.00 IMPACTS ON THE HUMAN ENVIRONMENT

7.01 Land and Water Use Plans

The U.S. Virgin Islands, Department of Planning and Natural Resources, Coastal Land and Water Use Map has designated the Frederiksted Pier as Water Dependent and Related Commercial Marine Facilities. Re-permitting of the facility is in keeping with the intended use of the area.

7.02 Visual Impact

The re-permitting of the existing pier will create no change in the existing viewshed.
7.03 Impact on Public Services

The permitting of the existing facility will not change the existing impacts the facility currently has on public services. The pier has an 8” water line which can supply potable water to cruise ships. The pier does not currently provide electrical service or sewage pump out service to cruise ships. Naval vessels have been known to use private haulers to pump sewage off their vessels while at the pier and the pier is equipped with electrical service designed specifically for U.S. Navy Nuclear Submarines.

When ships are at dock traffic in the town of Frederiksted is impacted by taxis carrying passengers to and from the cruise ships. The one way traffic pattern in town is designed to facilitate traffic movement. The pier provides parking spaces for taxi vans within the pier gates and overflow parking is provided at the government lot behind the park.

The Frederiksted Pier is serviced by the Wilbur Francis Police Station east of the pier on Custom House Street, and by the Emile Henderson Fire Station located on Queen Street.

Cruise ship passengers occasionally are taken off ships to the local hospital for emergency care.

7.04 Social Impacts

The re-permitting of the Frederiksted Pier will have no social impact.

7.05 Economic Impact

The Virgin Islands Port Authority (VIPA) has direct responsibility for the development and maintenance of the airport and marine facilities throughout the Virgin Islands. The arrival of passengers by air and sea are a crucial part of the economy of the Virgin Islands. The re-permitting of the pier will allow for its continued use by cruise ships.

7.06 Impacts on Historical and Archeological Resources

The application is for the re-permitting of the existing facility and will have no impact on historical or archeological resources.

7.07 Recreational Use

The Frederiksted Pier is a popular recreational site for residents and tourist alike. The pier is a very popular dive site and as part of the permitted redesigned service pier stairs are being installed to provide easier access for divers, snorkelers and swimmers.

The pier is popular with locals and tourist for walking. The pier is a popular swimming area for local children who enjoy jumping from the pier. And the pier is a popular fishing site.
All of these activities are allowed when cruise ships are not at berth.

7.08 Waste Disposal

The pier has trash receptacles which are maintained by VIPA. Waste is collected and taken to the Anguilla Landfill. The re-permitting of the pier will have no impact on the solid waste currently created at the pier.

7.09 Accidental Spills

No construction which is not already permitted is proposed by this application.

7.10 Potential Adverse Effects Which Cannot Be Avoided

The re-permitting of the Frederiksted Pier and its subsequent modifications will have no adverse effects that cannot be avoided.

8.00 Mitigation Plans

No new construction is being proposed therefore no mitigation is proposed. Mitigation plans have been implemented in the past to minimize and remediate impacts.

9.00 Alternatives to Proposed Action

The Virgin Islands Port Authority (VIPA) is re-permitting the existing facility as required by Coastal Zone Management Rules and Regulations, there is no alternative to this action.

10.00 Relationship Between Short Term and Long Term Uses of Man’s Environment

Maintaining the permits for the existing facility is in the best short-term and current long-term use of man’s environment. The subsequent modifications and improvements to the pier have kept it in excellent condition and a competitive destination for Caribbean cruise ships.

The re-permitting of the existing Ann E. Abramson Frederiksted Pier creates long-term benefits for Virgin Islanders, it assures economic benefits to the people of St. Croix in the utilization of coastal resources.

11.00 References Cited

Bowden, M.J. et. al., 1969. Climate, water balance and climatic change in the north-west Virgin Islands. Caribbean Research Institute, CVI, St. Thomas, Virgin Islands.


https://www.windfinder.com/windstatistics/st_croix
https://noaa.maps.arcgis.com/home/webmap/viewer
http://wis.usace.army.mil/hindcasts
https://msc.fema.gov/portal/advanceSearch
http://tidesandcurrents.noaa.gov/tide_predictions.html?gid=374
MAJOR COASTAL ZONE PERMIT NO. CZX-36-99W

1. **AUTHORITY.** This permit is issued by the St. Croix Committee of the Virgin Islands (V.I.) Coastal Zone Management (CZM) Commission, pursuant to Title 12, Chapter 21, Virgin Islands Code, Section 910 and 911, and all other provisions of Chapter 21 that apply. As herein "Permittor" is the St. Croix Committee of the V.I. CZM Commission and "Permittee" is The Virgin Islands Port Authority (VIPA).

2. **SCOPE.** (a) This permit allows the Permittee to construct four (4) breasting dolphins, one (1) mooring dolphin and two (2) separate catwalks with a total length of four hundred and seven (407) feet to access both the mooring and breasting dolphins. The entire system will be supported by a total of nine (9) piles. This permit also allows the Permittee to install electrical service connections for nuclear submarines and to make minor repairs to the existing marine facility. The installation of the mooring and breasting dolphins is located at the western terminus of the existing Ann E. Abramson Marine Facility, formerly known as the Frederiksted Pier, Frederiksted, St. Croix U.S. Virgin Islands.

(b) This permit allows the Permittee to use four (4) breasting dolphins, one (1) mooring dolphin and two (2) separate catwalks with a total length of four hundred and seven (407) feet to access both the mooring and breasting dolphins, for the ("Term") set below. It shall not constitute a property right and may be renewed only in accordance with Section 911 of the Coastal Zone Management Act.

3. **TERM.** This permit is effective upon its signing by the Chairman of the St. Croix Committee of the V.I. CZM Commission, the Governor of the Virgin Islands, and ratified by the Legislature of the Virgin Islands or by the Committee on Planning and Environmental Protection if the Legislature is not in session. As used herein the term "Effective Date" or "the date hereof" means the date of such ratification. The Use Permit that is provided for in Subsection (b) above expires twenty (20) years after the Effective Date. The Permittee shall have the option to renew the permit 90 days before the expiration of the permit. The Permit shall be renewed only if the requirements of Title 12 of the V.I. Code, Section 911 are met.

4. **DOCUMENTS INCORPORATED BY REFERENCE.**


   Exhibit B -- Major Environmental Assessment Report
Coastal Zone Permit No. CZX-36-99(W)
Page 2


5. **GENERAL CONDITIONS.**

(a) **Liability.** The Permittee agrees to assume full and complete responsibility for all liability to any person or persons, including employees, as a result of its control of the area described in paragraph 2 of this permit, and all improvements thereon (which area and improvements are hereinafter referred to as "the premises"), and to hold the Permittee free and harmless from civil or other liability to any kind during the time the Permittee is in control of the premises pursuant to this permit.

(b) **Personal Property and Damage.** All personal property of any kind or description whatsoever located on the premises shall be there at the Permittee's sole risk.

(c) **Assigned or Transfer.** This permit may not be transferred or assigned except as provided in Section 910-15 of the Regulations of the Coastal Zone Management Act.

(d) **Permit to be Displayed.** A placard evidencing the permit shall be posted in a conspicuous place at the project site during the entire period of occupancy.

(e) **Reliance on Information and Data.** The Permittee affirms that the information and data which it provided in connection with its permit application is true and accurate, and acknowledges that if subsequent to the effective date of this permit such information and data proves to be false or inaccurate, the permit may be modified, suspended or revoked in whole or in part, and that the Committee of the CZM Commission which issued this permit or the Commissioner may, in addition, institute appropriate legal proceedings.

(f) **Development to be Commenced.** Construction of any development approved by this Coastal Zone Permit shall begin within twelve (12) months from the date this permit becomes effective and shall be continuous until completion. Failure to commence work within such period and continuously construct thereafter until the completion of construction shall cause the permit to terminate automatically and render it null and void, unless an extension is requested in
Coastal Zone Permit No. CZX-36-99(W)
Page 3

writing and granted by the Committee.

(g) Notification of Completion. Upon completion of any activity authorized or required by this Coastal Zone Permit, the Permittee shall promptly so notify the District Director of Permits ("The Director") and, where the services of a professional engineer were required in undertaking the activity, a certification of compliance provided by the project engineer that the plans and specifications of the project and all applicable Virgin Islands Code requirements have been met, shall be filed with the Director.

(h) Inspection. The Commission, its Committee, the Commissioner or their authorized agents or representatives shall have the power to enter at reasonable times upon any lands or waters in the coastal zone for which this Coastal Zone Permit has been issued. The Permittee shall permit such entry for the purpose of inspection and ascertaining compliance with the terms and conditions of said Coastal Zone Permit.

The Permittee shall provide access to such records as the Commission, its Committee, or the Commissioner in the performance of its or his duties under the Act may require the Permittee to maintain. Such records may be examined and copies shall be submitted to the Commission, its Committee or the Commissioner upon request.

(i) Condition of Premises. The Development authorized by this permit shall be maintained in a safe, attractive and satisfactory condition and in accordance with the description, plans or drawings approved by the Commissioner.

(j) Public Access to Shoreline. The development shall be operated so as to assure optimum public access to the shoreline.

(k) Restoration of Area. The Permittee, upon revocation or expiration of the permit, shall upon order of the Committee or the Commissioner, and in their sole discretion, remove all structures authorized by the permit and restore the area to its original condition, and/or modify such structure, and/or comply with any directive of the Committee or the Commissioner in satisfying the original permit conditions in such time and manner as the Committee, or the Commissioner may direct.

(l) Notices. All notices sent or required to be sent hereunder must be by certified mail, return receipt requested. If addressed to the Permittor, same shall be sent to the Commissioner of DPNR, Government of the Virgin Islands 6003 Est. Anna's Hope Christiansted, St. Croix 00820 or to such other place as the
Permittee may hereinafter designate by certified mail. If addressed to the Permittee, same shall be sent to Mr. Gordon Finch, Executive Director of the Virgin Islands Port Authority, Box 1134, Christiansted, St. Croix U.S. Virgin Islands 00821 or to such other place as the Permittee may herein after designate by certified mail, return receipt requested.

(m) Nonwaiver. One or more waivers by the Permittee of any covenant or condition of the permits shall not be construed as a waiver of a further breach of the covenant or condition, and the consent or approval shall not be construed as approval of any subsequent similar act by the Permittee.

(n) Revocation. It is specifically understood that all the foregoing covenants and agreements, as well as other terms and special conditions hereby agreed to the Permittee, are to be well and faithfully kept by Permittee and that any failure by Permittee to keep same will, result in revocation of this permit.

(o) Other approval. If the development covered under this permit requires separate and distinct approval from the United States Government or any agency, department, commission or bureau thereof, then no development is allowed under this permit until such permits or approvals have been obtained.

(p) Abandonment. If the Permittee abandons, deserts or vacates the premises or discontinues its operations at the premises for a period totaling six (6) consecutive months, then the permit will terminate automatically and be rendered null and void.

(q) Damage and Repair of Premises Described in Paragraph 2.

(1) In the event of damage to or destruction of the premises described in paragraph 2 hereof repair work may be done only after a request to do so has been submitted in writing to the Department and permission in writing has been granted. Repair must duplicate the original work, and must be in accordance with applicable law, rules and regulations.

(2) General maintenance or repair resulting from normal wear and tear or operations may be carried out as a matter of right under this permit, where such activities shall not result in an addition to, or enlargement or expansion of such object or facility.

(r) Signatures on the Permit Document. The applicant shall sign and return the permit document to the Department of Planning and Natural Resources within 60 days of receipt thereof. Failure to return the signed permit within the time period specified herein
will be considered a rejection of the terms and conditions of the permit and will render the offer of the permit null and void, unless a written extension is requested and granted.

6. **SPECIAL CONDITIONS.**

a) The Division of Coastal Zone Management shall be notified at least 3 days prior to the start of construction and again upon completion.

b) All federal and local permits shall be obtained prior to the start of construction including an Army Corps of Engineers Permit, and a Building Permit from Division of Building Permits, Department of Planning and Natural Resources.

c) Any Fallen Debris shall be removed from the waters at the end of the construction.

d) No petroleum based products shall be used as a form release agent for the construction of this project.

7. **FEES.**

Pursuant to Title 12, V.I. Code, Chapter 21, Section 910-5 (f) (1), The Commissioner of the Department of Planning and Natural Resources has made the determination that this project will be in the general public's interest and that it will be operated by the Government of the Virgin Islands. Therefore, no fees will be assessed for the use of the submerge area occupied under this permit.
8. **IT IS EXPRESSLY UNDERSTOOD** by the parties hereto that the title to all submerged or filled land which is altered or occupied on the basis of this permit is in the Government of the Virgin Islands, and the Permittee shall have no right or interest therein, of any kind whatsoever, other than rights as are expressly set forth herein, and that this instrument is not a lease.

9. **IN TESTIMONY WHEREOF**, the parties herein have set their hands and seals on the days and years appearing below.

---

**St. Croix Committee of the V.I. CZM Commission**

Permittee

Chairman, St. Croix Committee of the V.I. CZM Commission

9/22/99

**VIRGIN ISLANDS PORT AUTHORITY**

Permittee

Gordon Finch, Executive Director,

9/27/99

**APPROVED**

Governor of the U.S. Virgin Islands

9/28/99

**RATIFIED**

Legislature of the Virgin Islands

President of the Legislature

or if the Legislature is not in session
Committee on Planning and Environmental Protection.

Chairman

9/30/99
Coastal Zone Permit No. CZX-36-99(W)
Page 7

I, Mr. Gordon Finch, Executive Director of the Virgin Islands Port Authority, do hereby certify that as Executive Director of the Virgin Islands Port Authority, I am duly authorized and empowered to sign this permit on behalf of the agency.

[Signature]
Mr. Gordon Finch, Executive Director

[Date]

SWORN AND SUBSCRIBED before me this 28th day of September 1999.

[Signature]
Barbara C. Doxtasy
Notary Public
June 30, 2005

Mr. Darlan Brin  
Executive Director  
Virgin Islands Port Authority  
Post Office Box 1707  
St. Thomas, Virgin Islands 00803

SUBJECT: Modification of Major CZM Permit No. CZX-36-98W  
Virgin Islands Port Authority  
St. Thomas, Virgin Islands

Dear Mr. Brin:

On Thursday, April 7, 2005, the St. Croix Committee of the Virgin Islands Coastal Zone Management (CZM) Commission (hereinafter the "St. Croix CZM Committee") met to act on your request to modify CZM Permit No. CZX-36-99W. The proposed modification allows the Virgin Islands Port Authority (Permittee) to:

1. Dredge the southern berth of the Frederiksted Pier to remove approximately 20,000 cubic yards of material of which a portion is debris removal and the cutting off of pilings.
2. Dredge the northern berth of the Frederiksted Pier to remove 30,000 cubic yards of sand.
3. Store dredged material at the Gordon Finch Molasses Pier.

The modification of this permit is effective upon its signing by the Chairman of the St. Croix CZM Committee pursuant to Virgin Islands Code, Title 12, Section 910. Authorization for construction under the modification of the permit shall expire if the Permittee fails to commence work within twelve (12) months from the date this permit modification becomes effective.
All conditions in the original permit shall remain in full force and effect. The special conditions that apply to this modification are as follows:

A. Prior to commencement of work by the Permittee, the Division of CZM shall receive a Water Quality Certificate from the Division of Environmental Protection for the proposed modification.

B. The Permittee shall obtain all other necessary Federal and Territorial permits, including a Joint Army Corps Permit for both dredging and debris removal, prior to the commencement of work.

C. The Division of CZM shall be notified at least seventy-two (72) hours before work commences.

D. The Government of the Virgin Islands, through the Department of Planning and Natural Resources/Division of CZM, has the right to determine the disposition of all dredged material. The Permittee shall notify CZM prior to disposal of any dredge material.

E. Silt curtain/booms shall be used to enclose re-suspended sediments during dredging operations.

F. The Permittee is required to obtain and assume the costs/fees of independent environmental monitors selected by the Division of CZM.

Questions or concerns regarding this matter are to be referred to Mr. Victor Somme III, Director of CZM, at (340) 773-1082, or via e-mail to Victor.Somme@viczmp.com.

Sincerely,

[Signature]
John H. Beagles
Chairman, St. Croix CZM Committee

[Signature]
Darlan Brin
Executive Director
Virgin Islands Port Authority

[Signature]

[7/6/05]
Date

Copy: Members of the St. Croix CZM Committee
Victor Somme III, Director of CZM
Dalila E. Patton, Esq., CZM Legal Counsel
Charles Iles, St. Croix CZM Permits Coordinator
RECEIPT OF COASTAL ZONE MANAGEMENT DOCUMENT

Note: Please print then sign your name.

This is to certify that I,

[Signature]

[Print]

have received: Modification to C24-36-99 W. Port Authority.

Date Received: 7/4/05
Telephone No.: 718-7012
COASTAL ZONE PERMIT NO. CZX-36-09 (w)

This permit is approved, subject to conditions, if any, pursuant to Chapter 21, Title 12, Virgin Islands Code.

Conditions:
Yes, on the plan or an attached Permit document.

Date: June 30, 2020

EXHIBIT
GOVERNMENT OF THE UNITED STATES VIRGIN ISLANDS

DEPARTMENT OF PLANNING AND NATURAL RESOURCES
8100 Lindberg Bay, Suite #61
Cyril E. King Airport, Terminal Bldg., 2nd Floor
St. Thomas, U.S. Virgin Islands 00802

Office of the Commissioner

March 1, 2016

David Mapp
Assistant Executive Director
Virgin Islands Port Authority
Christiansted, VI 00821

SUBJECT: Request for Modification# 5 of Major CZM Permit No. CZX-36-99(W)
Virgin Islands Port Authority
St. Croix, Virgin Islands

Dear Mr. Mapp:

In your correspondence dated September 10, 2015, you requested a modification of Major Coastal Zone Management (CZM) Permit No. CZT-36-99(W). The proposed modification requests the replacement of the existing service pier on the south side of the Ann E. Abramson Cruise Facility in Frederiksted, St. Croix with a new service pier that will function as a berth for the harbor pilot boats, cruise tenders and tour operators, as well as, provide access to the water for divers and snorkelers.

Pursuant to 12 VIRR §910-14(a), it was determined that the proposed modification does not substantially alter the nature, scope or characteristics of the existing permit. This determination was forwarded to the St. Croix Committee of the VI Coastal Zone Management Commission (the “Committee”) to impose any additional conditions they deem necessary to satisfy the provisions of the CZM Act pursuant to 12 VIRR §910-14(b).

The Committee met on February 19, 2016, but did not impose additional conditions on your request. Therefore, you may proceed with the scope of work listed above with all existing conditions of CZT-36-99(W) remaining in full force and effect.
If we can be of further assistance to you, please contact Mr. Jean-Pierre L. Oriol, Director of CZM at (340) 774-3320, or by email at jp.oriol@dpnr.vi.gov.

Sincerely,

Dawn L. Henry, Esq.
Commissioner

cc: Massarea Webster, STX CZM Chairman
    St. Croix CZM Committee Members
    Jean-Pierre L. Oriol, Director CZM
    Michèle Baker, CZM Legal Counsel
    File
March 1, 2016

David Mapp
Assistant Executive Director
Virgin Islands Port Authority
Christiansted, VI 00821

SUBJECT: Request for Modification# 5 of Major CZM Permit No. CZX-36-99(W)
Virgin Islands Port Authority
St. Croix, Virgin Islands

Dear Mr. Mapp:

In your correspondence dated September 10, 2015, you requested a modification of Major Coastal Zone Management (CZM) Permit No. CZT-36-99(W). The proposed modification requests the replacement of the existing service pier on the south side of the Ann E. Abramson Cruise Facility in Frederiksted, St. Croix with a new service pier that will function as a berth for the harbor pilot boats, cruise tenders and tour operators, as well as, provide access to the water for divers and snorkelers.

Pursuant to 12 VIRR §910-14(a), it was determined that the proposed modification does not substantially alter the nature, scope or characteristics of the existing permit. This determination was forwarded to the St. Croix Committee of the VI Coastal Zone Management Commission (the “Committee”) to impose any additional conditions they deem necessary to satisfy the provisions of the CZM Act pursuant to 12 VIRR §910-14(b).

The Committee met on February 19, 2016, but did not impose additional conditions on your request. Therefore, you may proceed with the scope of work listed above with all existing conditions of CZT-36-99(W) remaining in full force and effect.
If we can be of further assistance to you, please contact Mr. Jean-Pierre L. Oriol, Director of CZM at (340) 774-3320, or by email at jp.oriol@dpnr.vi.gov.

Sincerely,

Dawn L. Henry, Esq.
Commissioner

cc: Massereae Webster, STX CZM Chairman
St. Croix CZM Committee Members
Jean-Pierre L. Oriol, Director CZM
Michèle Baker, CZM Legal Counsel
File
August 19, 2016

David Mapp
Assistant Executive Director
Virgin Islands Port Authority
Christiansted, VI 00821

SUBJECT: Request for Modification# 6 of Major CZM Permit No. CZX-36-99(W)
Virgin Islands Port Authority
St. Croix, Virgin Islands

Dear Mr. Mapp:

In your correspondence dated July 12, 2016, you requested a modification of Major Coastal Zone Management (CZM) Permit No. CZX-36-99(W). The proposed modification requests to redesign the existing service pier stairs on the south side of the Ann E. Abramson Cruise Facility in Frederiksted, St. Croix. This will require dredging to remove 27 yd$^3$ of material and the placement of a ten-foot by five-foot, eight-inch (10’ x 5’-8”) thick precast concrete foundation. Additionally, previously proposed timber fender piles will be replaced with fenders that will be mounted on the pier, and the three-pile dolphins will be replaced by seven-pile fenders. Your request also stated that the dredge spoils will be disposed of at the VIPA Borrow Pit which is adjacent to the Henry E. Rohlsen Airport on St. Croix.

Pursuant to 12 VIRR §910-14(a), it was determined that the proposed modification does not substantially alter the nature, scope or characteristics of the existing permit. This determination was forwarded to the St. Croix Committee of the VI Coastal Zone Management Commission (the “Committee”) to impose any additional conditions they deem necessary to satisfy the provisions of the CZM Act pursuant to 12 VIRR §910-14(b).

The Committee met on August 10, 2016, and imposed additional conditions on your request. Therefore, you may proceed with the scope of work listed above with all existing conditions of
CZT-36-99(W) remaining in full force and effect. In addition, the following special conditions have been imposed on your authorization:

1. The Permittee shall transport the dredge spoils in lined trucks to prevent the dredged material from leaking onto the roadway during transit to the disposal site at the VIPA Borrow Pit.
2. The Permit shall be responsible for cleaning up any material which may be spilled onto roadway during transport to disposal site.
3. Pursuant to 12 VIC § 911(f)(2) and 12 VIRR § 910-5(e)(6), the Permittee shall pay a reclamation fee of $1/yc$ for the removal of dredged material prior to the start of dredging activities.

If we can be of further assistance to you, please free to contact Mr. Jean-Pierre L. Oriol, Director of CZM, at (340) 774-3320 or by email at jp.oriol@dpnr.vi.gov.

Sincerely,

[Signature]

Dawn L. Henry, Esq.
Commissioner

cc: Massae Webster, STX CZM Chairman
    St. Croix CZM Committee Members
    Jean-Pierre L. Oriol, Director CZM
    Michèle Baker, CZM Legal Counsel
    File
BILL NO. 18-0517
EIGHTEENTH LEGISLATURE OF THE VIRGIN ISLANDS
OF THE UNITED STATES
Regular Session
1990

To waive the fee for occupancy of submerged lands for
the Frederiksted Pier, St. Croix

---0---

BE IT ENACTED by the Legislature of the Virgin Islands:

SECTION 1. Notwithstanding the provisions of Title
12, Chapter 21, Section 911, subsection (f), paragraph (5),
Virgin Islands Code, no fee shall be required for the
occupancy of submerged lands for the Frederiksted Pier, St. Croix; provided, however, that all other applicable
provisions of law with respect to CZM permits and leasing
of government property shall apply.

Thus passed by the Legislature of the Virgin Islands
on December 19, 1990.

Witness our Hands and the Seal of the Legislature of
the Virgin Islands on this 19th Day of December, A.D.,
1990.

[Signatures]

BENT LAMAERT
President

ST. CLAIRE N. WILLIAMS
Legislative Secretary
DEPARTMENT OF THE ARMY PERMIT

Permittee: Mr. Damian Cartwright
Virgin Islands Port Authority (VIPA)
P.O. Box 1134
St. Croix, Virgin Islands 00821

Permit No: SAJ-2015-02727 (SP-JMS)

Issuing Office: U.S. Army Engineer District, Jacksonville

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the U.S. Army Corps of Engineers (Corps) having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: The permittee is authorized to remove, replace and reconfigure the Frederiksted Service Pier, perpendicular to the landing to allow for more vessels to be moored. The new service pier will measure 80 feet (ft) long by 15 ft wide and be constructed perpendicular to the Frederiksted Pier. Concrete stairs will be constructed on the seaward side of the new pier near the connection to the existing Frederiksted Pier. The stairs will measure approximately 17 ft long and 10 ft wide and will enable divers and snorkelers access to the water. Foundation for the proposed stairs will measure 5 ft wide by 10 ft pre-cast U-shaped vault with 8 inch thick walls and would require dredging approximately 54 cubic yards (cy). Material will be dredged or graded to place the foundation, gravel, and landing for the concrete stairs, and install the U-shaped vault. All material will be side cast and placed back around the landing and allowed to resettle following construction. Approximately 8 cy of gravel would be deposited to level the foundation inside the vault. Three dolphins consisting of a group of 3 12-inch (in) wood piles will be installed immediately south of the new concrete stairs to prevent vessels from running into the stairs while mooring to the seaward side of the new pier. The new pier will be supported by 11 (18 inch diameter) concrete piles. Twelve (12 inch diameter) wood fender piles will be installed around the new dock. Piles will be installed with a vibratory hammer where there is no bedrock underlying the sand bottom. Where there is bedrock, an impact hammer will be used to install the new piles. A temporary, 25-ft-long sheet pile guide wall will be installed for the duration of the stair and vault construction and then removed. Up to 4 piles will be installed per day. Pile driving is expected to take 2 weeks and will be completed using equipment mounted on a spud barge. Work will take place during daylight hours only. The applicant has
established a 150 meter (m) safety zone for monitoring sea turtles during pile-driving activities using an impact hammer. The pile driving should take no more than two weeks. In addition, permitee will undertake a monofilament line and garbage clean up around the Frederiksted Pier. A total area of 215,000 ft² adjacent and under the Frederiksted Pier and Service pier will be covered. The work described above is to be completed in accordance with the 7 pages of drawings [and 6 attachments] affixed at the end of this permit instrument.

**Project Location:** The Frederiksted Service Pier, part of the Frederiksted Pier (Ann E. Abramson Marine Facility) is located at the west side of St. Croix, USVI

**Directions to site:** Starting from Henry E. Rohlsen Airport, travel, head West on Centerline Road, North on Queen Cross Street, West on Melvin H Evans Highway, North on Christiansted Bypass, West on Fisher Street, No1th on Queen Street, and West on Custom House Street Custom House Street terminates into the Cruise Pier entrance. Service Pier is located on the South side of the Cruise Pier.

**Approximate Central Coordinates:** Latitude: 17.713975°
Longitude: -64.88453°

**Permit Conditions**

**General Conditions:**

1. The time limit for completing the work authorized ends on November 28, 2023. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination
required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature and the mailing address of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

**Special Conditions:**

1. This permit does not authorize the discharge of dredged or fill material into waters of the United States, other than approved.

2. This permit does not authorize the take of an endangered species, in particular the Federally listed endangered Hawksbill (Eretmochelys imbricata) and Leatherback (Dermochelys coriacea) sea turtles, the Federally listed threatened Green sea turtle (Chelonia mydas), or the Federally listed threatened Elkhorn (Acropora palmata) and Staghorn Coral. In order to legally take a listed species, separate authorization under the ESA (e.g., an ESA section 10 permit, or a Biological Opinion under ESA section 7, with “incidental take” provisions with which you must comply) is required.


4. The permittee shall comply with the NMFS' Vessel Strike Avoidance Measures and Injured or Dead Protected Species Reporting (2008).

5. The applicant must install, maintain and leave double sets of turbidity barriers around the dredged and graded foot print before, during and after dredging activities and until the material has been returned around the installed pre-cast concrete landing and grading areas have been restored to existing seafloor contours.
6. If a vibratory hammer cannot be used to drive the piles, then a 150-m safety zone will be required around pile driving activities to minimize potential acoustic impacts to sea turtles.

7. Each time a pile-driving hammer is started, dry-firing or ramping-up of the hammer will be conducted for at least 30 minutes to allow animals the opportunity to leave the area. Dry-firing of a pile-driving hammer is a method of raising and dropping the hammer with no compression of the pistons, which produces a lower-intensity sound than the full power of the hammer. Ramp-up involves slowly increasing power of the hammer and noise produced over the ramp-up period.

8. Trained observers will visually monitor the safety zone for at least 30 minutes prior to beginning all pile driving activities (each time a hammer is started).

9. If at any time a sea turtle or marine mammal is observed in the safety zone during dry-firing or ramp-up, the hammer will be shut down until the animal has left the safety zone of its own volition. Ramp-up must be repeated following each shutdown.

10. Following the initial 30-minute observations for protected species and a pile driver achieves full power, intermittent observations will occur throughout the day to maintain watch for animals in the area. If at any time an animal is observed in the safety zone during pile driving, the pile driving activity shall cease until the animal has left the area of its own volition, or coordination with a VI Department of Planning and Natural Resources Division of Fish and Wildlife if the animal is injured.

11. All work will be conducted during daylight time.

12. All excess material/debris resulting from removal of the existing pier and construction of the new pier shall be adequately discarded in an authorized upland site.

13. Any collision with and/or injury to a sea turtle shall be reported immediately to the Antilles Regulatory Section (787-729-6905), the U.S. Fish and Wildlife Service, Caribbean Field Office (787-851 7297), and the National Marine Fisheries Service’s Protected Resources Division (787-851-3700). The NMFS Southeast Region Vessel Strike Avoidance Measures and Reporting for Mariners; revised February 2008 with the ship strike report needs to be filled and provided.
14. The Permittee shall keep a log detailing sightings, collisions, or injury to sea turtles, which have occurred during the construction period. Following project completion, a report summarizing the above incidents and sightings will be submitted to the U.S. Army Corps of Engineers, Antilles Regulatory Section (Fundación Angel Ramos Annex Building, 383 F.D. Roosevelt Ave. Suite 202, San Juan, Puerto Rico 00918), the U.S. Fish and Wildlife Service, Caribbean Field Office (P.O. Box 491, Boquerón, Puerto Rico 00622), and the NOAA, National Marine Fisheries Service, Protected Resources Division (P.O. Box 1310, Boquerón, Puerto Rico 00622).

15. Cultural Resources/Historic Properties:

   a. No structure or work shall adversely affect impact or disturb properties listed in the National Register of Historic Places (NRHP) or those eligible for inclusion in the NRHP.

   b. If during the ground disturbing activities and construction work within the permit area, there are archaeological/cultural materials encountered which were not the subject of a previous cultural resources assessment survey (and which shall include, but not be limited to: pottery, modified shell, flora, fauna, human remains, ceramics, stone tools or metal implements, dugout canoes, evidence of structures or any other physical remains that could be associated with Native cultures or early colonial or Spanish settlement), the Permittee shall immediately stop all work and ground-disturbing activities within a 100-meter diameter of the discovery and notify the Corps within the same business day (8 hours). The Corps shall then notify the Virgin Islands State Historic Preservation Officer (VISHPO) to assess the significance of the discovery and devise appropriate actions.

   c. Additional cultural resources assessments may be required of the permit area in the case of unanticipated discoveries as referenced in accordance with the above Special Condition; and if deemed necessary by the SHPO or Corps, in accordance with 36 CFR 800 or 33 CFR 325, Appendix C (5). Based, on the circumstances of the discovery, equity to all parties, and considerations of the public interest, the Corps may modify, suspend or revoke the permit in accordance with 33 CFR Part 325.7. Such activity shall not resume on non-federal lands without written authorization from the VISHPO for finds under his or her jurisdiction, and from the Corps.
16. **As-Built Certification**: Within 60 days of completion of the work authorized by this permit, the Permittee shall submit as-built drawings of the authorized work and a completed “As-Built Certification By Professional Engineer” form, attachment 7, to the Corps. The as-built drawings shall be signed and sealed by a registered professional engineer and include the following:

   a. A plan view drawing of the location of the authorized work footprint, as shown on the permit drawings, with transparent overlay of the work as constructed in the same scale as the permit drawings on 8½-inch by 11-inch sheets. The plan view drawing should show all "earth disturbance," including wetland impacts and water management structures.

   b. A list of any deviations between the work authorized by this permit and the work as constructed. In the event that the completed work deviates, in any manner, from the authorized work, describe on the attached “As-Built Certification By Professional Engineer” form the deviations between the work authorized by this permit and the work as constructed. Clearly indicate on the as-built drawings any deviations that have been listed. Please note that the depiction and/or description of any deviations on the drawings and/or “As-Built Certification By Professional Engineer” form does not constitute approval of any deviations by the Corps.

   c. Include the Department of the Army permit number on all sheets submitted.

17. **Compensatory Mitigation**: Within 12 months from the date of initiating the work authorized by this permit, the Permittee shall complete all construction and implementation mitigation activities in accordance with the enclosed approved final mitigation plan. In addition, the Permittee shall complete all additional required mitigation plan components as detailed in the same attachment.

18. The Permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structures or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the Permittee will be required, upon due notice from the U.S. Army Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

   (X) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403)

   (X) Section 404 of the Clean Water Act (33 U.S.C. 1344)

   ( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413)

2. Limits of this authorization.

   a. This permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.

   b. This permit does not grant any property rights or exclusive privileges.

   c. This permit does not authorize any injury to the property or rights of others.

   d. This permit does not authorize interference with any existing or proposed Federal projects.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

   a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

   b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

   c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

   d. Design or construction deficiencies associated with the permitted work.

   e. Damage claims associated with any future modification, suspension, or revocation of this permit.
4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision: This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

   a. You fail to comply with the terms and conditions of this permit.

   b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 4 above).

   c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

   Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions: General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.
Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

______________________  11-28-18
(PERMITTEE)            (DATE)

DAMIAN CARTWRIGHT - VIPA ASST. EXECUTIVE DIRECTOR
(PERMITTEE NAME-PRINTED)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

______________________
(DISTRICT ENGINEER) (DATE)

Andrew D. Kelly, Jr
Colonel, U.S. Army
District Commander
When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

____________________________________  ____________________
(TRANSFEREE-SIGNATURE)  (DATE)

____________________________________
(NAME-PRINTED)

____________________________________
(ADDRESS)

____________________________________
(CITY, STATE, AND ZIP CODE)
Attachments to Department of the Army
Permit Number SAJ-2015-02727

1. PERMIT DRAWINGS: 7 pages, dated February 2018

2. WATER QUALITY CERTIFICATION: Specific Conditions of the water quality permit/certification in accordance with General Condition number 5 on page 2 of this DA permit. 4 pages.

3. SEA TURTLE – SAWFISH CONDITIONS: 1 page, Sea Turtle and Smalltooth Sawfish Construction Conditions, revised March 23, 2006

4. OTHER ENDANGERED SPECIES CONDITIONS: 5 pages, NMFS' Vessel Strike Avoidance Measures and Injured or Dead Protected Species Reporting (2008).

5. MITIGATION PROCEDURES: 10 pages

6. AS-BUILT CERTIFICATION FORM: 2 pages
DEPARTMENT OF THE ARMY PERMIT

Permittee: Virgin Islands Port Authority

Permit No. 199806059(IP-DD)

Issuing Office: U.S. Army Engineer District, Jacksonville

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: The construction of a mooring dolphin, four breasting dolphins, a catwalk, and installation of 11 piles for the expansion of the Frederiksted Pier. The mooring dolphin will be located at the seaward end of the existing pier approximately 243 feet from the existing dolphin. Three 54" diameter piles will support the mooring dolphin. The surface area of the mooring dolphin is approximately 365 square feet. Four 48" diameter batter piles will be placed between the mooring dolphin and the breasting dolphins in order to support the walkway. The surface area of the walkway is approximately 2144 square feet. The four breasting dolphins will be supported by 72" diameter mono-piles. The surface area of the breasting dolphins is approximately 686 square feet. The 11 total piles will impact approximately 211.3 square feet of sea bottom including 126 square feet of hard substrate.

The project is as shown and described on attached plans numbered 199806059(IP-DD) in 4 sheets, dated October 29, 1998.

Project Location: Frederiksted Harbor, St. Croix, U.S. Virgin Islands.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on . If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature and mailing address of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

**Special Conditions:**

1. All corals within the impact footprint of the pilings shall be relocated to the recipient areas immediately to the north and south of the existing pier. The transplantation shall be completed prior to commencement of the proposed project. The coral transplantation shall be initiated as follows:

   a. Divers shall move those corals and sessile invertebrates small enough to be carried by hand, to the mitigation area. The organisms shall be placed in underwater bins during transport.

   b. After removing those organisms not attached to a substrate, the applicant shall transplant those organisms attached to hard substrate. The organisms shall be removed with chisels.

   c. Holes shall be drilled into the base of the corals and pins inserted in order to attached them to the recipient site substrate at predrilled locations.
d. All corals and hard substrate removed from the piling impact footprint shall be fixed in place at the recipient site with Portland Cement/plaster mixture. Sponges shall be attached with wires, strings, or cable ties.

2. The applicant shall conduct a five year monitoring program of the coral transplantation plan. The monitoring plan shall be performed as follows:

a. Ten (10) modified meter square quadrats will be established at the recipient site. The meter square quadrats will be sampled and photographed on a weekly basis for the first 2 months after transplanting. After the first 2 months the pins will be sampled monthly for the next 10 months. After the first year of sampling, the pins will be sampled bi-monthly for the following two years, and bi-annually thereafter till the 5-year monitoring program is completed.

b. The first submitted report after the transplantation is completed shall detail the number of individual organisms and/or colonies transplanted in order to monitor the success ratio during the monitoring period. The first report shall be submitted to the USACE Antilles Office within 30 days after the coral transplantation is completed.

c. The applicant shall guarantee an 80% success rate to be measured by the number of surviving colonies that were originally transplanted.

3. The applicant shall implement sediment/turbidity controls during construction of the dolphins and installation of the pilings. Sediment and/or turbidity curtains shall be utilized in order to reduce the turbidity.

4. Permittee shall provide as-built drawings of the authorized work, including mitigation, and a completed As-Built Certification Form. The drawings are to be submitted within 90 days of completion of the authorized work, including mitigation, or at the expiration of the construction window of the permit, whichever comes first. The drawings and Certification Form must be signed and sealed by a Professional Engineer in the U.S. Virgin Islands. In the event that the completed work deviates from the approved permit drawings and special conditions, the permittee shall describe, on the Certification Form, the deviations between the authorized by the permit and the work as constructed. Please note that the depiction and description of the deviations on the drawings and Certification Form does not necessarily mean the U.S. Army Corps of Engineers will approve of them.

a. The As-Built drawings shall include the following:

1) Plan view of overall footprint of the project showing all "earth disturbance", including wetland impacts, water management structures, and any on-site mitigation areas.

2) A detailed plan view of all preserved, created and/or restored, or enhanced (as appropriate) mitigation areas showing planting zones, and cross-
sections of the mitigation areas showing elevations corresponding to the plantings; elevations of the inverted of any control structures servicing (inflow and outflow) the mitigation areas.

3) Any stormwater management system, that is a part of a wetland creation, restoration or enhancement mitigation project, especially elevations of the inverted of the control structures.

4) Location of the authorized work footprint (as shown on the permit drawings) with an overlay of the work as constructed.

5) List any deviations between the work authorized by the permit and the work as constructed. Clearly indicate on the as-built drawings any deviations which have been listed.

6) The Department of the Army Permit number.

7) Include pre- and post-construction aerial photographs of the project site, if available.

b. As-built drawings shall be submitted to:

Chief, Antilles Regulatory Section
U.S. Army Corps of Engineers
400 Fernandez Juncos Avenue
San Juan, PR 00901-3299

5. Within 60 days of completion of the work authorized and mitigation (if applicable), the attached "Self-Certification Statement of Compliance" must be completed and submitted to the U.S. Army Corps of Engineers. Mail the completed form to the above address indicated in Special Condition 4(b).

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

(X) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

2. Limits of this authorization.
   a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.
   b. This permit does not grant any property rights or exclusive privileges.
   c. This permit does not authorize any injury to the property or rights of others.
   d. This permit does not authorize interference with any existing or proposed Federal projects.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:
   a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
   b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
   c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
   d. Design or construction deficiencies associated with the permitted work.
   e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Re-evaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:
   a. You fail to comply with the terms and conditions of this permit.
   b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 4 above).
c. Significant new information surfaces which this office did not consider in reaching the original public interest decision. Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

(PERMITTEE) (DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

(FOR THE DISTRICT ENGINEER) (DATE)

JOSE A. BUITRAGO, JR.
LIEUTENANT COLONEL, U.S. ARMY
DEPUTY DISTRICT ENGINEER
FOR THE ANTILLES
PERMIT NUMBER: 199806059 (IP-DD)
PERMITTEE: VIRGIN ISLANDS PORT AUTHORITY
Page 7 OF 7

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(TRANSFEEER-SIGNATURE) (DATE)

(NAME-PRINTED)

(ADDRESS)

(CITY, STATE, AND ZIP CODE)
DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS, ANTILLES OFFICE
400 FERNÁNDEZ JUNCOS AVENUE
SAN JUAN, PUERTO RICO 00901-3299

Antilles Regulatory Section
SAJ-2005-1613 (IP-JR)

Mr. Darlan Brin
Virgin Island Port Authority
P.O. Box 301707
St. Thomas, U.S. Virgin Islands 00803-1707

Dear Mr. Brin:

The U.S. Army Corps of Engineers (Corps) is pleased to enclose the Department of the Army permit, which should be available at the construction site. Work may begin immediately but the Corps must be notified of:

a. The date of commencement of the work,

b. The dates of work suspensions and resumptions of work, if suspended over a week, and

c. The date of final completion.

This information should be mailed to the Enforcement Section of the Regulatory Section at 400 Fernández Juncos Avenue, San Juan, Puerto Rico 00901-3299. The Section Chief is also responsible for inspections to determine whether Permittees have strictly adhered to permit conditions.

IT IS NOT LAWFUL TO DEVIATE FROM THE APPROVED PLANS ENCLOSED.

Sincerely,

[Signature]
Erik L. Stor
Major, U.S. Army
Deputy District Engineer

Enclosure
Permittee: U.S. Virgin Islands Port Authority

Permit No: SAJ-2005-1613 (IP-JER)

Issuing Office: U.S. Army Engineer District, Jacksonville

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: To dredge approximately 50,000 cubic yards of material from both sides of the Frederiksted Pier. A clamshell would be used as the dredging method. All debris would be disposed at the Anguilla Landfill, and the sand would be stored at the Molasses dock for future use.

The work described above is to be completed in accordance with the attached drawings numbered SAJ-2005-1613 (IP-JER), in 4 pages of drawings affixed at the end of this permit instrument.

Project Location: The proposed project is located at either side of the Ann E. Abramson Marine Facilities, Frederiksted Pier, St. Croix, U.S. Virgin Islands

Latitude & Longitude:

Latitude: 17°42'08" N.
Longitude: 64°53'03" W.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on 6 October 2010. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature and the mailing address of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

1. Best management practices for erosion and sedimentation control shall be implemented and maintained at all times during the construction / discharge / excavation activities. Silt curtains shall be used around work areas to minimize sediment transport to adjacent aquatic environments. Erosion and sedimentation control devices shall be left and maintained in place until all discharge / excavation work is completed. All measures shall prevent siltation and turbid discharges, towards the surrounding waters.

2. Prior to the commencement of dredging activities, colonized rubble within the dredging footprint shall be relocated to one of the two existing transplant sites for the pier's mitigation at Buttler's Bay reef site, and north and south of the pier, and that monitoring of the transplant sites shall continue to determine success.
3. All debris would be disposed at the Anguila Landfill, and the sand would be stored at the Molasses dock for future use.

4. Any fuel lines shall be constructed on uplands. The fueling facilities shall comply with the U.S. Coast Guard requirements regarding spill control and prevention measures.

5. The permittee shall provide the U.S. Army Corps of Engineers, Antilles Regulatory Section a post dredging bathymetric survey within 30 days after completion of the authorized work. The bathymetric survey shall illustrate the authorized project limits.

6. The permittee shall provide as-built drawings (plan view and cross section drawings) of the authorized work, including mitigation, and a completed As-Built Certification Form herewith provided. The drawings are to be submitted within 60 days after completion of the authorized work, including mitigation, or at the expiration of the construction window of the permit, whichever comes first. The drawings and Certification Form must be signed and sealed by a Professional Engineer in USVI. In the event that the completed work deviates from the approved permit drawings and special conditions, the permittee shall describe, on the Certification Form, the deviations between the authorized by the permit and the work as constructed. A blank form is provided as an attachment. Please note that the depiction and description of the deviations on the drawings and Certification Form does not necessarily mean the Corps of Engineers will approve them.

a) The As-Built drawings shall include the following:

1) Plan view of overall footprint of the project showing all work as authorized.

2) Plan view of the exact location and dimensions of the area of the seagrass transplant site.

3) Location of the authorized work footprint (as shown on the permit drawings) with an overlay of the work as performed.

4) List any deviations between the work authorized by the permit and the work as performed. Clearly indicate on the as-built drawings any deviations, which have been listed, and explain impacts on the benthos.

5) The Department of the Army Permit number.
6) Include pre- and post-construction aerial photographs of the project site, if available.

b) As-built drawings shall be submitted to:

Chief, Antilles Regulatory Section
U.S. Army Corps of Engineers
400 Fernández Juncos Avenue
San Juan, Puerto Rico 00901

7. Within 60 days of completion of the authorized work, a “Self Certification Statement of Compliance” must be completed and submitted to the U.S Army Corps of Engineers and mall the completed form to the above address.

8. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structures or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the U.S. Army Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

(X) Section 10 of the Rivers and Harbors Act of 1899
   (33 U.S.C. 403).

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972
   (33 U.S.C. 1413).

2. Limits of this authorization.

   a. This permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.

   b. This permit does not grant any property rights or exclusive privileges.
c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal projects.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision: This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7
or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions: General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

The table on the page behind this signature page includes a list of all Attachments to this permit.

Mr. Darlan Brin, Executive Director
U.S. Virgin Islands Port Authority

[DISTRICT ENGINEER]
Robert M. Carpenter
Colonel, U.S. Army
District Engineer

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and
the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(TRANSFEREE-SIGNATURE)    (DATE)

(NAME-PRINTED)

(ADDRESS)

(CITY, STATE, AND ZIP CODE)
DEPARTMENT OF THE ARMY PERMIT

Attachments to Department of the Army Permit Number SAJ-2005-1613 (IP-JER)

1. Permit Drawings: 4 pages, dated 6 October 2005
2. Water Quality Certification: dated June 2005
3. Coastal Zone Management Permit: dated 30 June 2005
4. Self-Certification Statement of Compliance
5. As-Built Certification by Professional Engineer
PERMIT NO. SAJ-2005-1613(IP-JER)
DRAWING 3 OF 4
8 OCTOBER 2005

EXHIBIT

ANTILLEAN ENGINEERS INC.
1-HS CLIFTON MILL BT. CROIX
PO BOX 2083 KENDALL, BT. CROIX V. VIRIOT
Civil Engineering - Land Surveying
STRUCTURAL ENGINEERING
340-778-8828
CROSS SECTIONS

BATHYMETRIC SURVEY OF THE SOUTH SIDE OF FREDERIKSTED HARBOR
ST. CROIX, USVI
GOVERNMENT OF THE VIRGIN ISLANDS OF THE UNITED STATES

Department of Planning & Natural Resources
Division of Environmental Protection
46 Maspalos
Frederiksted, St. Croix, U.S.V.I. 00840-4474

COASTAL ZONE PERMIT APPLICATION
WATER QUALITY REVIEW AND CERTIFICATION

1. CZM PERMIT APPLICATION: CZX-36-99W (Modification)
DPNR, DEP WATER QUALITY CERTIFICATE: WQC-05-003W

2. Date of Application: January, 2005
Date of Final Division Review: June, 2005

3. SHORT TITLE OF WORK:
The Virgin Islands Port Authority (VI PA) proposes to modify existing permits to allow for
dredging of approximately 50,000 cubic yards of material of both the north and south berths
of the Ann B. Abramson Marine Facility.

4. APPLICANT:
   Virgin Islands Port Authority
   P.O. Box 1707
   St. Thomas
   US Virgin Islands 00803

5. WATERSHED(S):
   La Grange
   HUC-21020002010010

6. WATER QUALITY CERTIFICATION:
   Approved; There is currently reasonable assurance that the proposed project can be executed
   without violations of the Water Quality Standards cited in 12 V.I.C. Chapter 7 § 186. The
   permit shall comply with all Territorial Rules and Regulations, Federal Statutes, Orders,
   and permits issued by Territorial and/or Federal departments or agencies.
7. **COMMENTS OR SPECIAL RESTRICTIONS:**
   
   A. Work shall be performed in a manner that will not adversely impact existing water quality. In no case shall work be performed in a manner that causes any exceedence to the Virgin Islands Water Quality Standards set forth in Title 12, Section 186 of the Virgin Islands Rules and Regulations.
   
   B. DPNR/DEP reserves the right to temporarily suspend any activity which may cause an adverse environmental impact or result in any noncompliance with Title 12 of the Virgin Islands Rules and Regulations.
   
   C. DPNR/DEP reserves the right to require additional sampling/monitoring and/or implementation of mitigation measures as promulgated in Title 12 Section 186 of the Virgin Islands Rules and Regulations.
   
   D. No oil or debris may be discharged from any vessel or construction activities into the waters adjacent to the project site.
   
   
   F. The Applicant shall notify DEP ten (10) business days before the commencement of the project.
   
   G. A letter of project completion must be submitted to DEP no later than ten (10) business days after the project has been completed.
   
   H. The Water Quality Certificate WQX-99-007 is superseded by this modification.

8. **APPROVED BY:**

   [Signature]
   
   Aaron L. Hutchins, Director
   DPNR-Division of Environmental Protection

   
   (June 15, 2005)
   
   Date
June 30, 2005

Mr. Darian Brin
Executive Director
Virgin Islands Port Authority
Post Office Box 1707
St. Thomas, Virgin Islands 00803

SUBJECT: Modification of Major CZM Permit No. CZX-36-99W
Virgin Islands Port Authority
St. Thomas, Virgin Islands

Dear Mr. Brin:

On Thursday, April 7, 2005, the St. Croix Committee of the Virgin Islands Coastal Zone Management (CZM) Commission (hereinafter the "St. Croix CZM Committee") met to act on your request to modify CZM Permit No. CZX-36-99W. The proposed modification allows the Virgin Islands Port Authority (Permittee) to:

1. Dredge the southern berth of the Frederiksted Pier to remove approximately 20,000 cubic yards of material of which a portion is debris removal and the cutting off of pilings.

2. Dredge the northern berth of the Frederiksted Pier to remove 30,000 cubic yards of sand.

3. Store dredged material at the Gordon Finch Molasses Pier.

The modification of this permit is effective upon its signing by the Chairman of the St. Croix CZM Committee pursuant to Virgin Islands Code, Title 12, Section 910. Authorization for construction under the modification of the permit shall expire if the Permittee fails to commence work within twelve (12) months from the date this permit modification becomes effective.
Mr. Darlan Brin, Executive Director  
Modification of Major CZM Permit No. CZX-36-99W  
Virgin Islands Port Authority  
Page 2

All conditions in the original permit shall remain in full force and effect. The special conditions that apply to this modification are as follows:

A. Prior to commencement of work by the Permittee, the Division of CZM shall receive a Water Quality Certificate from the Division of Environmental Protection for the proposed modification.

B. The Permittee shall obtain all other necessary Federal and Territorial permits, including a Joint Army Corps Permit for both dredging and debris removal, prior to the commencement of work.

C. The Division of CZM shall be notified at least seventy-two (72) hours before work commences.

D. The Government of the Virgin Islands, through the Department of Planning and Natural Resources/Division of CZM, has the right to determine the disposition of all dredged material. The Permittee shall notify CZM prior to disposal of any dredge material.

E. Silt curtain/booms shall be used to enclose re-suspended sediments during dredging operations.

F. The Permittee is required to obtain and assume the costs/fees of independent environmental monitors selected by the Division of CZM.

Questions or concerns regarding this matter are to be referred to Mr. Victor Somme III, Director of CZM, at (340) 773-1082, or via e-mail to Victor.Somme@viczmp.com.

Sincerely,

John H. Beagles  
Chairman, St. Croix CZM Committee

D. Brin  
Executive Director  
Virgin Islands Port Authority

Copy: Members of the St. Croix CZM Committee  
Victor Somme III, Director of CZM  
Dallia E. Patton, Esq., CZM Legal Counsel  
Charles Illes, St. Croix CZM Permits Coordinator
SELF-CERTIFICATION STATEMENT OF COMPLIANCE

Permit Number: ________________________

Permittee's Name & Address (please print or type): ________________________________

____________________________________________________________________________

____________________________________________________________________________

Telephone Number: ____________________________________________________________

Location of the Work: __________________________________________________________

Date Work Started: __________ Date Work Completed: __________

Description of the Work (e.g. bank stabilization, residential or commercial filling, docks, dredging, etc.):

____________________________________________________________________________

____________________________________________________________________________

Acreage or Square Feet of Impacts to Waters of the United States: ________________

Describe Mitigation completed (if applicable):

____________________________________________________________________________

____________________________________________________________________________

Describe any Deviations from Permit (attach drawing(s) depicting the deviations):

____________________________________________________________________________

____________________________________________________________________________

I certify that all work, and mitigation (if applicable) was done in accordance with the limitations and conditions as described in the permit. Any deviations as described above are depicted on the attached drawing(s).

________________________________________
Signature of Permittee

______________
Date
AS-BUILT CERTIFICATION BY PROFESSIONAL ENGINEER

Submit this form and one set of as-built engineered drawings to the Chief, Antilles Regulatory Section, U.S. Army Corps of Engineers, 400 Fernández Juncos Avenue, San Juan, Puerto Rico 00901-3299. If you have questions regarding this requirement, please contact the Antilles Regulatory Section at (787) 729-6905/6944.

1. Department of the Army Permit Number: ________________________

2. Permittee Information: ________________________________
   Name ____________________________________________
   Address _________________________________________

3. Project Site Identification:
   Physical location/address ______________________________

4. As-Built Certification:

   I hereby certify that the authorized work, including any mitigation required by Special Conditions to the permit, has been accomplished in accordance with the Department of the Army permit with any deviations noted below. This determination is based upon on-site observation, scheduled and conducted by me or by a project representative under my direct supervision. I have enclosed one set of as-built engineering drawings.

   ____________________________  ____________________________
   Signature of Engineer        Name (Please type)

   ____________________________  ____________________________
   (FL, PR or VI) Reg. Number   Company Name

   ____________________________
   Address

   ____________________________  ____________________________
   City    State    ZIP    Telephone Number

   (Affix Seal)

   ____________________________
   Date

Deviations from the approved permit drawings and special conditions: (attach additional pages if necessary)
Col. U.S. Army
Robert Carpenter

Permit Number

1707 P.O. Box 301707, St. Thomas, U.S. Virgin Islands 00803
Virgin Island Port Authority on Oct 6, 2005

Director

MR. Darin Brin

4 At Crotix, U.S. Virgin Islands
Either side of the Ann E.Abramsom Marine Facilities, Frederiksted Pier, St.
A permit to Frederiksted Pier.

Claimshell dredge 000 cubic yards of material around

EXPIRES 6 OCT 2010

United States Army Corps of Engineers

conspicuously displayed at the site of work.

This notice of authorization must be
COASTAL ZONE PERMIT APPLICATION
WATER QUALITY REVIEW AND CERTIFICATION

1. CZM PERMIT APPLICATION No. : CZX-36-99(W)
   DPNR/DEP WQC#: WQX-99-007

2. Date of Application: June 11, 1999
   Date of Division Review: June 24, 1999

3. SHORT TITLE OF WORK: The expansion of the Frederiksted Pier which includes the installation of a mooring dolphin, four breasting dolphins, a catwalk and 11 new piles.

4. APPLICANT(s): The Virgin Islands Port Authority
   P.O. Box 1134
   Christiansted, St. Croix,
   U.S. Virgin Islands, 00821

5. WATER QUALITY CERTIFICATION: Approved. Pursuant to 12 V.I.C. Chapter 7 §186 there is reasonable assurance that the proposed project can be executed without violations of the Water Quality Standards. The permittee shall comply with all Territorial Rules and Regulations, Federal Statutes, Orders, and permits issued by Territorial of Federal departments or agencies.

6. ADDITIONAL INFORMATION NEEDED FOR CERTIFICATION: NONE

7. COMMENTS OR SPECIAL RESTRICTIONS:
   A. Silt devices may be installed and maintained to limit any release of material beyond the boundary of the construction site. A permanent hard boom may be placed in the water surrounding the area or in close proximity to where the heavy machinery will operate as a provision.
B. Any Water Quality degradation (particularly for Class C waters) is not permissible and must be reported to DEP immediately via telephone or fax. The environmental monitor then must submit a written report to DEP within twenty-four hours of the degradation indicating the date and time the waters were degraded, the NTU values, the cause of the degradation, NTU values of the water that meets water quality standards, date and time when the water quality returned, and what measures were implemented to correct the violation. Sampling of an infraction includes split samples which are to be collected at the same sampling points. The analysis of the split sample must be analyzed by an EPA certified laboratory and an EPA recommended field turbidity meter. Additionally, the documented information listed above must always be kept onsite, and is subject to review/inspection by DEP. The following water quality nephelometric turbidity units shall be three (3) NTUs for the duration of the project. Moreover, the sampling regime must continue to be conducted every hour until the water quality is back to normal as described below in special restriction “L”. (Based on the Water Quality Monitoring Plan.)

C. Work shall be performed in a manner that will not adversely impact existing water quality.

D. An environmental monitor must be provided on-site during the course of the construction phase in order to ensure that all water quality standards are complied with inclusive to monitoring for any exceedences in water quality and immediately reporting such exceedences to DEP as described in “B”, that all siltation devices are properly installed. The environmental monitor must also daily check the siltation devices for any rips, or splits in the seams to prevent the escape of any material which may cause an increase in turbidity. The environmental monitor must monitor all phases of the construction activities.

E. Samples for analysis must be collected by a Qualified Water Sampler/ Environmental Monitor at the during in-water construction activities at the site to assure that no environmental infraction occurs. One round of samples as specified in the Water Quality Monitoring Plan is to be collected at the sites specified in the Plan and analyzed for any exceedence in the turbidity, TSS and secchi depth prior to any construction activities taking place. This regime shall be followed for each day of scheduled in-water construction activity. The standard sampling regime as described in the plan must be conducted once every hour during the in-water construction activities. An additional surface and subsurface sample must be collected in the plume that resulted from the project activities.

F. The Division of Environmental Protection reserves the right to temporarily suspended construction should the conditions arise which may cause any adverse environmental impact or which may cause noncompliance with the Environmental Assessment
VIPA Frederiksted Pier Expansion and Improvement Project
CZM Permit No.: CZX-36-99W
Page 3

Report, the Water Quality Management Plan or the Territorial Water Quality Standards.

G. The environmental monitor must submit weekly reports to Nora Santana, Assistant Director, CZM, Hollis Griffin, Director of Environmental Protection, and Lorina Williams, Environmental Specialist III at DEP, regarding all activities including but not limited to all activities at the construction site, sampling results, the direction of the currents etc. Reports regarding the Coral Health during construction activities and the assessment to be performed after the completion of construction activities should also be submitted to Toby Tobias, Fisheries Biologist of the Division of Fish and Wildlife.

H. DEP requests that a six month Coral Health survey be conducted instead of a three month survey. Kindly submit a letter specifying this to CZM, DEP, and FW.

8. REVIEWER(s):
   [Signature]
   Lorina L. Williams, Environmental Specialist III

Phyllis Brin, Environmental Engineer, WPC Supervisor

CERTIFIED:
   [Signature]
   Hollis Griffin, Director, DEP Date
Coastal Zone Permit Application
Water Quality Review and Certification

1. CZM PERMIT APPLICATION No: CZX-36-99(W) (Modification)

2. DPNR, DEP WATER QUALITY CERTIFICATE No: WQC-19-001(W) (Supersedes WQC-05-003(W))

3. Date of Final Application: July 12, 2016
   Date of Final Review: August 10, 2016

4. SHORT TITLE OF WORK:
The Virgin Islands Port Authority (VIPA) proposes to reconstruct the tender landing at the Frederiksted Peir. The plans call for a new 75 ft. x 15 ft. tender landing extending out perpendicular to the existing tender landing and shoreline. New pilings will be placed beyond the existing colonized riprap and for the existing tender landing to be removed and the colonized piling to be cut off above the water line to minimize impact to colonizing organisms. The pilings will be driven in the uncolonized sand beyond the existing tender landing. There will be a set of cast concrete stairs. The placement of the stairs will require excavation to a depth of -3.5’ feet, dredging 6.5 CY of material. The material will be dewatered on the barge and then disposed of at VIPA’s old borrow pit adjacent to the airport. The scope of work has recently been modified to accommodate a redesign of the stairs, additional 27 cubic yards of dredging, and placement of a 10’x5’8” square precast concrete foundation.

5. APPLICANT: Virgin Islands Port Authority
   David W. Mapp, Executive Director
   P.O. Box 1134
   Christiansted, VI 00821

6. SUB-WATERSHED: LA GRANGE (HUC 14-21020002010010)

7. WATER QUALITY CERTIFICATION:
   Approved: There is currently reasonable assurance that the proposed project can be executed without violations of the Water Quality Standards cited in Annotated (Ann.) Title (Tit.) 12 Virgin Islands Code Chapter 7, Section 186. The permittee shall comply with all Territorial Rules and Regulations, Federal Statutes, Orders, and permits issued by Territorial and/or Federal departments or agencies.

8. COMMENTS OR SPECIAL RESTRICTIONS:
   A. Work shall be performed in a manner that will not adversely impact existing water quality. Existing water quality conditions will be determined in the baseline water quality monitoring survey, conducted by the applicant, and submitted to DPNR – Division of Environmental Protection (DEP) for review prior to the commencement of the project. In no case shall work be performed in a manner that causes any exceedence of the Virgin Islands Water Quality Standards found in Title 12, Chapter 7, Section 186 of the Virgin Islands Rules and Regulations. The applicant should note that the Assessment Unit in which this work is taking
place is an Impaired Waterbody and therefore, special attention will be given to ensure that water quality is protected. It is currently listed for Dissolved Oxygen and Turbidity impairments.

B. The DEP reserves the right to temporarily suspend any activity which may cause any adverse environmental impact or results in any noncompliance with Title 12 of the Virgin Islands Rules and Regulations.

C. The DEP reserves the right to require additional sampling/monitoring as promulgated in Title 12 of the Virgin Islands Code, Section 189.

D. No oil or debris may be discharged from any source during the proposed project.

E. The Water Quality Monitoring Plan or subsequent approved amendments must be complied with in determining the water quality baseline for the area. Turbidity (measured in NTU) readings are to be taken in-situ weekly at three (3) sampling locations established around the project area and two (2) control sites for two (2) months prior to the start of construction. Baseline information will be used to assist in determining correlations between construction and ambient conditions. Finally, data will also be collected on the recorder’s name, date, the start and stop time, the location (GPS coordinates), wind direction/speed, wave height/direction and rainfall will also be collected during the collection of baseline data and throughout the entire project.

F. The Environmental Mitigation Plan must be complied with to ensure that the amount of corals, sponge, other sessile life forms and seagrass lost during this project is minimized throughout the project. In accordance with the Environmental Mitigation Plan (October 2016) or subsequent approved amendments/plans, a monofilament and garbage cleanup must be undertaken from the tender land to the southern terminus of the pier, from the surface to the seafloor. Divers should carefully collect monofilament line cutting it as necessary to prevent impact to corals and sponges and collect garbage from under and around the pier, taking care to not accidentally collect any small invertebrates or fish that may be hiding in the debris. Divers must collect monofilament line, hooks and sinkers from around and under the pier in an area of 215,000 sq.ft. and carefully remove them from corals and sponges with care not to pull the lines and damage animals. The lines should be coiled and placed in mesh bags which when they are full, be pulled to the surface for proper disposal. Divers must also collect cans, bottles and other trash that have been thrown off the pier, and be careful to check for small fish, invertebrates and octopus within the garbage to make sure none of these animals are inadvertently collected. On the surface as the materials are pulled out, the garbage should be gone through to ensure that no animals were removed from the water and any animal found must be carefully returned to the water.

G. During the duration of the project, monitoring will be continued in accordance with the Water Quality Monitoring Plan or subsequent approved amendments. Three (3) samples will be collected around the area of in-water work, at 1-meter depth below the surface and analyzed by either a Hach 2100 Turbidity meter or a YSI Meter twice during an 8-hour shift and samplers will be available 24-hours per day if the project so dictates (during in-water work to include dredging and dewatering). Additionally, wind speed and direction; wave height and direction; and rainfall will also be recorded during each sampling event. The individual(s) recording the data collected are required to document in indelible ink and keep in a bound log book with pre-numbered pages the recorder name, date, the start and stop time, the location (GPS coordinates), and sea conditions. All data and information documented must be submitted to DEP on a weekly basis.

H. VIPA and its contractors shall adhere to all established requirements related to sea turtles for lighting and acoustic impact minimization and protected species protection, specifically the National Marine Fisheries Service’s (NMFS) Sea Turtle and Smalltooth Sawfish Construction Conditions. If an impact hammer is required to drive or set the piles, a 500-m safety zone shall be established around the project area for sea turtles and marine mammals. Trained observers shall be used to visually monitor the safety zone for at least 30 minutes prior to beginning all noise creating in-water activities. VIPA and its contractors shall also adhere to all established NMFS measures from the Vessel Strike Avoidance Measures and Reporting
for Mariners. If at any time a sea turtle or marine mammal is observed in the safety zone the operation shall be shut down until the animal has left the safety zone of its own volition. Observations for protected species shall occur at least twice a day to maintain watch for animals in the area. If at any time an animal is observed in the safety zone during the noise creating in-water activity, work shall cease until the animal has left the area of its own volition, or coordination with a DPNR representative has occurred, if the animal is injured. VIPA and/or contractors must record all sea turtle and mammal sightings in the project area. If sighted, within the project area, the following information must be recorded: date, time, weather conditions, species identification, approximate distance from dredging area, direction, heading in relation to dredging area and behavioral observations. When animals are observed in the safety zone, additional information and corrective actions taken such as a shutdown of trenching equipment, duration of the shutdown, behavior of the animal, and time spent in the safety zone will be recorded. All data collected is to be submitted to DPNR (CZM, DEP & DFW), NMFS, VIPA, FWS and ACOE in a report format on a monthly basis.

I. An Environmental Monitor must be present at the site during all near/in-water activities. The Environmental Monitor must notify the VIPA and the DEP as soon as possible, but within 24 hours of exceedence, if at any time during water quality does not comply with the Virgin Islands Water Quality Standards or exceed baseline values. Methods to reduce the impact must be implemented, including temporarily terminating construction and allowing the water quality to return to normal conditions.

J. Any device that emits air pollution throughout the duration of the entire project may require Air Pollution Control Permit(s), i.e. generators and barge equipment. A Dust Control Plan may also be required by DEP-Air Pollution Control Program; this plan should describe the applicant’s means of mitigating dust during dredging and dewatering activities. Ms. Verline Marcellin, Environmental Program Manager of APC, can be contacted at (340) 773-1082 if further information is required on these issues.

K. Unless specifically stated, the Applicant shall adhere to all provisions set forth in the submitted project plans (or approved amendments) as submitted to the Department of Planning & Natural Resources.

L. DPNR-DEP reserves the right to revise/amend this Water Quality Certificate.

M. Spill containment materials as well as a copy of the Spill Prevention Control and Countermeasures (SPCC) Plan must be kept on the premises at all times.

N. The general working area should remain clean at all times. All dredged materials generated during the execution of the project shall be kept in the properly constructed spoils area. All other waste materials generated during the project shall be kept in appropriate waste containers. At completion of work, all construction debris must be removed from the site.

O. VIPA and/or its contractors must dispose of the dredge spoils at the final disposal site at the VIPA Borrow Pit in accordance with the Project Workplan, using lined trucks to prevent the dredged material from leaking onto the roadway during transit to the VIPA Borrow Pit. VIPA shall be responsible for cleaning up any material which may be spilled onto the roadway during transport to the disposal site.

P. VIPA and/or its contractors must ensure that the stockpiling of the dredged materials at the VIPA Borrow Site is stabilized in a way that storm water does not carry any pollutants, particularly sediment, out of the Borrow Site boundary.

Q. The Applicant shall notify DEP ten (10) business days before the commencement of the proposed project. In addition, a letter of project completion must be submitted to DPNR-DEP no later than ten (10) business days after the project has been completed. DPNR-DFW should also receive these notifications since the public access boat ramp managed by this Division is just north of the project site.
R. With eight (8) weeks after project completion, a final report will be due to DPNR which provides a critical review of observed water quality degradation and any biological impacts from the project, to include status of Mitigation Plan.

9. APPROVED BY:

[Signature]

Kathlyn P. Worrell-George, Director
DPNR-Division of Environmental Protection

[Date] 10/15/18
COASTAL ZONE PERMIT APPLICATION
WATER QUALITY REVIEW AND CERTIFICATION

1. CZM PERMIT APPLICATION: CZX-99-99(W)(modification)
   DPNR, DEP WATER QUALITY CERTIFICATE: WQX-02-002W

2. Date of Application: June 2001 (modification request)
   Date of Final Division Review: November 21, 2001

3. SHORT TITLE OF WORK:
   The VI Port Authority proposes to modify existing permit CZX-36-99W to include repairs
   the Frederiksted Pier RO/RO ramp and welcome area that were sustained during Hurricane Lenny.

4. APPLICANT:
   Virgin Islands Port Authority
   PO Box 1134
   Christiansted, US Virgin Islands 00821

5. WATER QUALITY CERTIFICATION:
   Approved: There is currently reasonable assurance that the proposed project can be executed
   without violations of the Water Quality Standards cited in 12 V.I.C. Chapter 7 § 186. The
   permittee shall comply with all Territorial Rules and Regulations, Federal Statutes, Orders,
   and permits issued by Territorial and/or Federal departments or agencies.

6. COMMENTS OR SPECIAL RESTRICTIONS:
   A. Work shall be performed in a manner that will not adversely impact existing water
      quality. In no case shall work be performed in a manner that causes any exceedence
      to the Virgin Islands Water Quality Standards found in Title 12, Section 186 of the
      Virgin Islands Rules and Regulations.

   B. The DEP reserves the right to temporarily suspend any activity which may cause any
      adverse environmental impact or results in any noncompliance with Title 12 of the
      Virgin Islands Rules and Regulations.
C. The DEP reserves the right to require additional sampling/monitoring as promulgated in Title 12 of the Virgin Islands Code, Section 189 (12 VIC § 189).

D. No concrete form release agents shall be used during over water construction.

7. APPROVED BY:

Hollis L. Griffin, Director  
DPNR-Division of Environmental Protection

Date
COASTAL ZONE PERMIT APPLICATION
WATER QUALITY REVIEW AND CERTIFICATION

1. CZM PERMIT APPLICATION: CZX-36-99W (Modification)
   DPNR, DEP WATER QUALITY CERTIFICATE: WQC-05-003W

2. Date of Application: January, 2005
   Date of Final Division Review: June, 2005

3. SHORT TITLE OF WORK:
The Virgin Islands Port Authority (VIPA) proposes to modify existing permits to allow for
dredging of approximately 50,000 cubic yards of material of both the north and south berths
of the Ann E. Abramson Marine Facility.

4. APPLICANT:
   Virgin Islands Port Authority
   P.O.Box 1707
   St. Thomas
   US Virgin Islands 00803

5. WATERSHED (S):
   La Grange
   HUC-21020002010010

6. WATER QUALITY CERTIFICATION:
   Approved: There is currently reasonable assurance that the proposed project can be executed
   without violations of the Water Quality Standards cited in 12 V.I.C. Chapter 7 § 186. The
   permittee shall comply with all Territorial Rules and Regulations, Federal Statutes, Orders,
   and permits issued by Territorial and/or Federal departments or agencies.
7. **COMMENTS OR SPECIAL RESTRICTIONS:**
   
   A. Work shall be performed in a manner that will not adversely impact existing water quality. In no case shall work be performed in a manner that causes any exceedence to the Virgin Islands Water Quality Standards set forth in Title 12, Section 186 of the Virgin Islands Rules and Regulations.
   
   B. DPNR/DEP reserves the right to temporarily suspend any activity which may cause an adverse environmental impact or result in any noncompliance with Title 12 of the Virgin Islands Rules and Regulations.
   
   C. DPNR/DEP reserves the right to require additional sampling/monitoring and/or implementation of mitigation measures as promulgated in Title 12 Section 186 of the Virgin Islands Rules and Regulations.
   
   D. No oil or debris may be discharged from any vessel or construction activities into the waters adjacent to the project site.
   
   
   F. The Applicant shall notify DEP ten (10) business days before the commencement of the project.
   
   G. A letter of project completion must be submitted to DEP no later than ten (10) business days after the project has been completed.
   
   H. The Water Quality Certificate WQX-99-007 is superseded by this modification.

8. **APPROVED BY:**

   ![Signature]

   Aaron L. Hutchins, Director
   DPNR-Division of Environmental Protection

   ![Date]
   June 15, 2005
DEPARTMENT OF PLANNING & NATURAL RESOURCES
Division of Coastal Zone Management
45 Mars Hill, Fredricksted
St. Croix, USVI 00841

Facsimile Transmittal Cover Sheet

Date: 10-3-05
To: DARLON BRIN
Co./Dept.: U.E.P.A.
Phone: 778-3757
Fax #: 778-3989

From: CLAUDE GERARD
Co./Dept: DPNR-CZM
Phone: 340-773-1082
Fax#: 340-773-3343

Comments:

NOTE: This facsimile contains PRIVILEGED AND CONFIDENTIAL INFORMATION intended for the use of the Addressee(s) named above. If you are not the intended recipient of this facsimile, you are hereby notified that any dissemination or copying of this facsimile is strictly prohibited. If you have received this facsimile in error, please immediately notify us by telephone and return the original facsimile to us at the above address via the U.S. Postal Service. Thank You.

"Managing Our Resources For The Future"
COASTAL ZONE PERMIT APPLICATION
WATER QUALITY REVIEW AND CERTIFICATION

1. CZM PERMIT APPLICATION No.: CZX-36-99(W)
   DPNR/DEP WQC#: WQX-99-007

2. Date of Application: June 11, 1999
   Date of Division Review: June 24, 1999

3. SHORT TITLE OF WORK: The expansion of the Frederiksted Pier which includes the
   installation of a mooring dolphin, four breasting dolphins, a catwalk and 11 new piles.

4. APPLICANT(s): The Virgin Islands Port Authority
   P.O. Box 1134
   Christiansted, St. Croix,
   U.S. Virgin Islands, 00821

5. WATER QUALITY CERTIFICATION: Approved: Pursuant to 12 V.I.C. Chapter 7
   §186 there is reasonable assurance that the proposed project can be executed without
   violations of the Water Quality Standards. The permittee shall comply with all Territorial
   Rules and Regulations, Federal Statutes, Orders, and permits issued by Territorial of Federal
   departments or agencies.

6. ADDITIONAL INFORMATION NEEDED FOR CERTIFICATION:
   NONE

7. COMMENTS OR SPECIAL RESTRICTIONS:

   A. Silt devices may be installed and maintained to limit any release of material beyond the
      boundary of the construction site. A permanent hard boom may be placed in the water
      surrounding the area or in close proximity to where the heavy machinery will operate
      as a provision.
B. Any Water Quality degradation (particularly for Class C waters) is not permissible and must be reported to DEP immediately via telephone or fax. The environmental monitor then must submit a written report to DEP within twenty-four hours of the degradation indicating the date and time the waters were degraded, the NTU values, the cause of the degradation, NTU values of the water that meets water quality standards, date and time when the water quality returned, and what measures were implemented to correct the violation. Sampling of an infraction includes split samples which are to be collected at the same sampling points. The analysis of the split sample must be analyzed by an EPA certified laboratory and an EPA recommended field turbidity meter. Additionally, the documented information listed above must always be kept onsite, and is subject to review/inspection by DEP. The following water quality nephelometric turbidity units shall be three (3) NTUs for the duration of the project. Moreover, the sampling regime must continue to be conducted every hour until the water quality is back to normal as described below in special restriction “L”. (Based on the Water Quality Monitoring Plan.)

C. Work shall be performed in a manner that will not adversely impact existing water quality.

D. An environmental monitor must be provided on-site during the course of the construction phase in order to ensure that all water quality standards are complied with inclusive to monitoring for any exceedences in water quality and immediately reporting such exceedences to DEP as described in “B”, that all siltation devices are properly installed. The environmental monitor must also daily check the siltation devices for any rips, or splits in the seams to prevent the escape of any material which may cause an increase in turbidity. The environmental monitor must monitor all phases of the construction activities.

E. Samples for analysis must be collected by a Qualified Water Sampler/Environmental Monitor at the during in-water construction activities at the site to assure that no environmental infraction occurs. One round of samples as specified in the Water Quality Monitoring Plan is to be collected at the sites specified in the Plan and analyzed for any exceedence in the turbidity, TSS and secchi depth prior to any construction activities taking place. This regime shall be followed for each day of scheduled in-water construction activity. The standard sampling regime as described in the plan must be conducted once every hour during the in-water construction activities. An additional surface and subsurface sample must be collected in the plume that resulted from the project activities.

F. The Division of Environmental Protection reserves the right to temporarily suspended construction should the conditions arise which may cause any adverse environmental impact or which may cause noncompliance with the Environmental Assessment
VIFA Frederiksted Pier Expansion and Improvement Project
CZM Permit No.: CZX-3699W
Page 3

Report, the Water Quality Management Plan or the Territorial Water Quality Standards.

G. The environmental monitor must submit weekly reports to Nora Santana,
Assistant Director, CZM, Hollis Griffin, Director of Environmental Protection,
and Lorina Williams, Environmental Specialist III at DEP, regarding all activities
including but not limited to all activities at the construction site, sampling results, the
direction of the currents etc. Reports regarding the Coral Health during construction
activities and the assessment to be performed after the completion of construction
activities should also be submitted to Toby Tobias, Fisheries Biologist of the Division
of Fish and Wildlife.

II. DEP requests that a six month Coral Health survey be conducted instead of a three
month survey. Kindly submit a letter specifying this to CZM, DEP, and FW.

8. REVIEWER(s):

Lorina L. Williams, Environmental Specialist III

Phyllis Brin, Environmental Engineer, WPC Supervisor

CERTIFIED:

Hollis Griffin, Director, DEP  9-20-99
**BIOIMPACT, INC. QUALIFICATION STATEMENT**

**Bioimpact, Inc.** is a Virgin Islands Corporation licensed to do business in the Virgin Islands since 1986.

**Bioimpact, Inc.** is qualified to conduct and prepare both terrestrial and marine Environmental Assessment Report required by the Department of Planning and Natural Resources, Division of Coastal Zone Management, and the U.S. Army Corps of Engineers.

Amy Claire Dempsey, principal of **Bioimpact, Inc.** is certified in wetland delineation by the National Wetland Science Training Cooperative to establish wetland jurisdictional limits for the U.S. Army Corps of Engineers.

**Bioimpact, Inc.** is experienced in the creation and implementation of wetland mitigation programs.

**Bioimpact, Inc.** is experienced in developing and implementing marine water quality monitoring programs and long-term photographic monitoring of the benthic environment. Amy Claire Dempsey, principal of **Bioimpact, Inc.** is an EPA certified water sampler and analyst.

**Bioimpact, Inc.** has successfully designed and implemented large scale coral and seagrass transplant programs.

**Bioimpact, Inc.** is experienced in cable landfall studies and the establishment of routes for undersea cables and monitoring of cable installations to minimize impact.

**Bioimpact, Inc.** is experienced in endangered species surveys included the endangered coral, as well as terrestrial flora and fauna species and is experienced in preparing Biological Assessments for National Marine Fisheries and Fish and Wildlife Service.

**Bioimpact, Inc.** is experienced in the transplant and monitoring of Environmental Protection Act (ESA) listed coral species as authorized under “take permits” from National Marine Fisheries Service.

**Bioimpact, Inc.** is experienced in preparing Environmental Assessments for federal permitting and the issuance of Findings of No Significant Impact.

**Bioimpact, Inc.** is experienced in the preparations of Phase I Environmental Site Assessments as set forth in the ASTM Standard Practice Designation E 1527-13 and All Appropriate Inquires and Phase II Environmental Site Assessments as set for in ASTM E1903 – 11.

**Bioimpact, Inc.** is experienced in the development and implementation of sampling plans to detect and delineation hazardous materials and petroleum products.
Bioimpact, Inc. is experience in conducting deep water ROV surveys up to 1000ft and has all the necessary equipment to undertake these studies.

Bioimpact, Inc. has conducted environmental studies in the U.S. Virgin Islands, Puerto Rico, British Virgin Islands, throughout the Caribbean and in the Florida Keys.

PARTIAL JOB LIST
UP-DATED March 2018

MONITORING PROGRAMS


2013 –2015 Environmental Monitoring of the wetland created as mitigation for the development of VIWMA’s St.Croix Transfer Station

2013-2018 Development and Implementation of the Monitoring Plans for VIDPW’s Improvements to Veterans Drive St. Thomas


2013-2018 Development and Implementation of the Monitoring Plans for Westin Resorts Permitting of the dock and Improvements of Drainage, St. John
2012 – 2018 Development and Implementation of the Monitoring Plans for viNGN’s Cable System in the USVI.

2011-2018 Water Quality and Environmental Monitoring Program for the increase in discharge from the Frenchman’s Reef Hotel, St. Thomas

2010-2012 Development of the Water Quality and Environmental Monitoring Program for the development of Thatch Cay, with special emphasize on the ESA listed coral species

2009 Establishment of the baseline for the dredging of Charlotte Amalie Harbor and entrance channel and the filling of the dredged hole in Lindbergh Bay, St. Thomas for West Indies Company


2009-2015 Environmental Monitoring for the development of Oil Nut Bay, and YCCS Yacht Club, Virgin Gorda, BVI, for Victor International

2008-2009 Environmental Monitoring of the development of Scrub Island, BVI, for MainSail Development, LLC

2007 – 2010 Water Quality Monitoring for the development of the Calabash Boom Affordable Housing Complex in Calabash Boom, St. John for Reliance Housing

2007 - 2009 Water Quality and Environmental Monitoring for the Subdivision of 77 acres in Hansen Bay, St. John, for Flamboyant

2006- 2008 Water Quality Monitoring for the dredging of the Sand Channel for the V.I. Water and Power Authority

2006-2007 Water Quality Monitoring for the renovations to the Ritz Carlton Hotel, St. Thomas for Ritz Carlton

2006 - 2010 Environmental monitoring for the placement of undersea cables at the Global Crossing Cable Station in St. Croix for Global Crossing Network, ALCATEL and TYCO

2005-2007 Water Quality Monitoring for the dredging of Crown Bay, St. Thomas for the V.I. Port Authority

2005- 2006 Water Quality and Environmental Monitoring for Improvements to the Redhook Marine Terminal for the V.I. Port Authority

2004 - 2011 Water Quality and Environmental Monitoring for the construction of the Pond
Bay Resort, St. John for First American Development Group

2003 - 2006 Water Quality Monitoring for the construction of the Enighed Pond Marine Terminal, St. John, for the V.I. Port Authority

2002 - 2008 Water Quality and Environmental Monitoring for the development of Marine Amenities on the island of Lovango, St. John, for the Joseph Markus Trust

2003 - 2004 Water Quality Monitoring for the development of the Crown Bay Marine Terminal, St. Thomas for the V.I. Port Authority

2002-2005 Water Quality Monitoring for the improvements to the Gallows Bay Marine Terminal, St. Croix, for the V.I. Port Authority

1999-2006 Water Quality Monitoring for repairs to the Frederiksted Pier, St. Croix, for the V.I. Port Authority

2001-2008 Coral Transplant Monitoring for the Enighed Pond Marine Terminal, St. John, for the V.I. Port Authority

2001-2007 Coral Transplant Monitoring for the Mangrove Lagoon Sewage Treatment Plant Outfall, St. Thomas for the V.I. Department of Public Works

2000 - 2003 Water Quality Monitoring for the dredging of Charlotte Amalie Harbor, St. Thomas, for the V.I. Port Authority


2000 - 2006 Seagrass Transplant Monitoring for the Seagrass Transplant for the Dredging of Charlotte Amalie Harbor for the V.I. Port Authority

1999- 2002 Water quality monitoring for Construction of Cable Stations at Estate Northside for Global Crossings

1997-2002 Wetland monitoring of the Airport Mitigation Site at the Henry E. Rohlsen Airport for the V.I. Port Authority

1997 - 2002 Wetland monitoring for the Fairplains Mitigation Site at the Henry E. Rohlsen Airport for the V.I. Port Authority

1997-2005 Wetland monitoring of Tren Urbano, PR 5 and PR 22 Mitigation *Sites in Puerto Rico under subcontract to Nutter and Associates for the Puerto Rico Highway Authority

1996 Water quality monitoring program for Expansion and Improvements to the Redhook Marine Terminal in St. Thomas prepared for the V.I. Port Authority

1996 Water quality monitoring program for the creation of The Enighed Pond Marine Terminal in St. John prepared for Maguire Group, Inc. for the V.I. Port Authority

1996-1998 Water quality monitoring for the Expansion of the Molasses Pier at the Third Port St. Croix conducted for the V.I. Port Authority

1995 Water quality for the Construction of the AT&T Cable Landing Facility, Estate Northside St. Croix, conducted for AT&T Submarine Systems

1992-1994 Water quality monitoring program for the Reconstruction of the Frederiksted Pier, conducted for the V.I. Port Authority, St. Croix

1992-1993 Establishment of a baseline and long term monitoring of the benthic community potentially impacted by the Water and Power Authority Outfall from the Richmond Power Plant, conducted for the V.I. Water and Power Authority, St. Croix

1992-1993 Preparation of a biological monitoring study for the Cooling Pond Discharge, and monitoring of the algal bloom within the cooling ponds; development of management strategies to alleviate algal and runoff problems, the V.I. Alumina Corporation, St. Croix

1990-1992 Water quality monitoring for The Dredging Project and Related Activities in Christiansted Harbor, conducted for the V.I. Port Authority, St. Croix

1989 Turtle Monitoring Program for Manchineel Beach, St. Croix

LARGE SCALE MITIGATION PROGRAMS
UPDATED AUGUST 2019

Development and Implementation of the Compensatory Mitigation Plan for the transplant of approximately 1700 corals, repair of 500 corals of opportunity and outplanting of 3000 ESA listed corals for Limetree Bay Terminal’s Single Point Mooring on St. Croix.

Development and Implementation of a Compensatory Mitigation Plan for the relocation of 1.25 acres of seagrass and transplant of 631 corals from the impact footprint of the Veterans Drive Project in St. Thomas.

Development and Implementation of the Mitigation Plan for the relocation of 10,000 corals off the WICO bulkhead in Havensight for West Indies Company in St. Thomas.
Development and Implementation of a coral transplant for the Stabilization of the Seawater Intake line for Marriott Frenchman’s Reef, St. Thomas.

Development and Implementation of a coral transplant to minimize construction impacts for LPG Improvements at the VIWAPA facilities on St. Croix and St. Thomas.

Development and Implementation of a coral transplant for Coral World (VI), Inc. in Association with the development of the dolphin exhibit in St. Thomas.

Development and Implementation of the Mitigation Plans for VIDPW’s Improvements to Veterans Drive St. Thomas

Development and Implementation of the Mitigation Plans for VIPA’s Dredging of Crown Bay Marine Terminal and Turning Basin, St. Thomas

Development and Implementation of the Mitigation Plans for VIPA’s Maintenance Dredging of Crown Bay Marina, St. Thomas

Development and Implementation of the Mitigation Plans for Westin Resorts Permitting of the dock and Improvements of Drainage, St. John

Virgin Islands Waste Management Authority creation of an Herbaceous Wetland as mitigation for the construction of the Transfer Station at the Anguilla Landfill, St. Croix

Mainsail Coral Transplant/Seagrass Transplant for impacts associated with the development of the Scrub Island Resort BVI, Bioimpact, Inc. came in and completed the transplant and monitoring began by others (Approximately 3000 Corals)

Victor International Coral Transplant for impacts associated by the development of an access ramp and dock at Oil Nut Bay, BVI (Approximately 300 corals)

V.I. Port Authority Mangrove Mitigation for the construction of the Enighed Pond Terminal in St. John (2.8 Acres of Mangrove Wetland)

Joseph Markus Trust Creation of Acropora Thickets and Artificial Reefs as mitigation for the construction of a barge landing facility on the island of Lovango

V.I. Port Authority Transplanting of coral out of the area of impact for the development of the Crown Bay Marine Terminal, St. Thomas (Approximately 3000 Corals)

Department of Public Works Mangrove Mitigation Project for the construction of the Mangrove Lagoon Sewage Treatment Plant, St. Thomas (Approximately 1 Acre of Mangrove Wetland)
V.I. Port Authority Transplanting of Coral out of the area of impact for the Enighed Pond Marine Terminal Project, St. John (Approximately 50,000 Corals)

Department of Public Works Transplanting of Coral out of the area of impact for the placement of the Mangrove Lagoon Sewage Treatment Plant Outfall, St. Thomas (7,000 Corals)

V.I. Port Authority Transplanting of Coral out of the area of impact for the mooring improvements to the Frederiksted Pier, St. Croix (Approximately 300 corals)

V.I. Port Authority Transplanting of Seagrass from the Dredging footprint for the dredging of Charlotte Amalie Harbor, St. Thomas (Approximately 2 acres)

V.I. Port Authority/Department of Public Works, Mangrove Mitigation Project for the construction of the Molasses Dock Road, St. Croix (Approximately ½ acre)

V.I. Port Authority creation of Herbaceous Wetlands for mitigation at the Henry E. Rohlsen Airport, St. Croix (Approximately 1 acres)

V.I. Port Authority mitigation plan for impact incurred in Fairplains Gut by the VIPA plan for creation of 16,000 Square Feet of Wetland at the Manning Bay Site, St. Croix

V.I. Water and Power Authority plan for creation of 4.1 Acres of Wetland as mitigation of the construction of the South Shore Power Plant, Third Port, St. Croix

Green Cay Plan for mitigation for the impacting of 12 Acres of Wetland for the construction of the Green Cay Resort, St. Croix

ENVIRONMENTAL ASSESSMENT REPORTS 2014-2018

Installation of a Single Point Mooring at the Limetree Bay Terminal, St. Croix, Limetree Bay Terminals, LLC.

Installation of a Submarine Cable System for the V.I. Water and Power Authority, St. Thomas

Veterans Drive Expansion with Parsons Brinckerhoff, for the Department of Public Works St. Thomas

Maintenance Dredging of Krause Lagoon Channel for V.I. Port Authority, St. Thomas

Installation of New Reverse Osmosis Discharge and Intake Line, Westin Resorts, St. John

Shoreline Stabilization Project for Buccaneer Hotel, St. Croix

VIWAPA’s conversion to LPG in both St. Croix and St. Thomas.
viNGN Submarine Cable Network with Acatel-Lucent for Virgin Islands Next Generation Network, Virgin Islands

Improvements to the Frederiksted Pier, V.I. Port Authority, St. Croix

Improvements to the Red Hook Marine Terminal, V.I. Port Authority, St. Thomas

Offshore Windmills for Ocean Energy, Inc.

St. John Marina for Summers End Group, St. John

Maintenance Dredging of the Schooner Channel, V.I. Port Authority, St. Croix

Remediation of Hydrocarbon Contamination at the V.I. Seaplane Ramp, V.I. Port Authority, St. Croix.

Maintenance of the Existing Bulkhead and Maintenance Dredging of Charlotte Amalie Harbor, with CH2M Hill for West Indies Company, St. Thomas

ENVIRONMENTAL ASSESSMENT REPORTS 2009-2013

Dredging of Crown Bay Marine Terminal and Turning Basin, V.I. Port Authority, St. Thomas.

Maintenance Dredging of Crown Bay Marina, V.I. Port Authority, St. Thomas

Improvements to Bordeaux Road, with Parsons Brinkerhoff, for V.I. Department of Public Works, St. Thomas.

Improvement to Spring Gut Road, with Stanley Engineer, for V.I. Department of Public Works, St. Croix.

Coral World’s Dolphin Exhibit for Coral World (VI), Inc., St. Thomas.

Expansion of the Spratt Bay Homeowners Dock on Water Island.

Veterans Drive Expansion with Parsons Brinckerhoff, for the Department of Public Works St. Thomas

Chiller Cooling System, BaHaMar, HDR, Grande Bahama

Reverse Osmosis Facility at V.I. Water and Power Authority’s St. Thomas Power Plant
Submarine Cable for V.I. Water and Power Authority between the Islands of St. Thomas and St. John

Chiller System and Dock repairs at Frenchman’s Reef, St. Thomas

Expansion of Heavy Materials Krum Bay Facility, St. Thomas

33 Mega-Watt Waste to Energy Plant Alpine Energy Group, Inc. St. Thomas

18 Mega-Watt Waste to Energy Plant Alpine Energy Group, Inc. St. Croix

Reverse Osmosis Facility V.I. Water and Power Authority, St. John

Seven Hills Development, Robin Bay Partners, St. Croix

Improvements to the Molasses Dock, V.I. Port Authority, St. Croix

Dredging of the Charlotte Amalie Harbor and the Channel and the Filling of Lindbergh Bay, West Indies Corporation, St. Thomas

Fueling Station, V.I. Water and Power Authority, St. Croix

ENVIRONMENTAL ASSESSMENT REPORTS 2005 -2008

Port of Mandahl, MSJ Realty, St. Thomas

North Sound Yacht Club, Victor International, Virgin Gorda, BVI

Reconstruction of the Frenchman’s Cove Dock, Marriott Ownership Vacation Club, Inc. St. Thomas

Thatch Cay Development, Thatch Cay, LLC, St. Thomas

Smith Bay Development Smith Bay Developers, Inc. Smith Bay, St. Thomas

Subdivision of Great St. James Christian Kejer, Great St. James Island, St. Thomas

Subdivision of Inner Brass Green Island Developers, Inner Brass Island, St. Thomas

Subdivision of Inner Brass Byran family, Inner Brass Island, St. Thomas

Cabrita Point Major Land Permit Cabrita Point Partners, Lionstone LLC, Cabrita Point, St. Thomas
Cabrita Point Major Water Permit Cabrita Point Partners, Lionstone, LLC, Cabrita Point, St. Thomas

Subdivision of 77 Acres in Hansen Bay on the East End of St. John Flamboyant Realty, St. John

Subdivision of 14 Acres in Hansen Bay on the East End of St. John Hansen Bay Development Group, St. John

Expansions and Improvements to the Ritz Carlton Hotel William Karr and Associates, St. Thomas

Modification to Carden Beach Condominiums TK Properties, Inc. St. Croix

Development of Betty’s Hope V.I. Port Authority, St. Croix

Expansion of the Compass Point Marine Margate Management, Benner Bay, St. Thomas

Construction of Maintenance Buildings HOVENSA, St. Croix

Replacement of Existing Stacks HOVENSA, St. Croix

Installation of a Permanent Barge Landing Facility on Lovango Cay Joseph Markus Trust, Lovango Cay

Relocation of the Existing Barge Landing and Construction of a Swim Dock and Beach Enhancing Devices on Little St. James LSJ, LLC, Little St. James

Development of Affordable Housing in Calabash Boom, Reliance Housing, St. John

Demineralized Water System and Storage Tank Upgrades, V.I. Water and Power Authority, St. Croix

Development of a Pizza Bar and Miniature Golf Course, Divi Carina Bay Resort, St. Croix

Placement of Fuel Pipelines on the Ann E. Abramson Pier, Royal Caribbean Cruise Lines, St. Croix

Development of a Marine and Related Infrastructure, Coral Bay Marina LLC, St. John

Development of a Marine Mammal Encountered Facility, Coral World VI, St. Thomas

Improvements to The “Doc” James Race Track, TRAXCO, St. Croix
Maintenance Dredging and the Permitting of Permanent Moorings, Westin Resort, St. John

Construction of the LSF Facility, HOVENSA, St. Croix

Construction of the LSF Project on Uplands, HOVENSA, St. Croix

Construction of the LSF Project on Submerged Lands, HOVENSA, St. Croix

Construction of Modular Buildings, HOVENSA, St. Croix

Construction of Housing in Estate Blessing, HOVENSA, St. Croix

Permitting of an Existing Borrow Pit, HOVENSA, St. Croix

ENVIRONMENTAL ASSESSMENT REPORTS 2000-2004

Compass Point Marina Expansion of the existing marina with Springline Architects, St. Thomas

Emergency Electrical Cable to St. John V.I. Water and Power Authority, St. Thomas/St. John

Richmond Sand Channel Dredging V.I. Water and Power Authority, St. Croix

Hassel Island Electrical Cable Replacement V.I. Water and Power Authority, St. Thomas

Golden Resort Hotel Casino Resort Environmental Assessment Report, St. Croix


Global Crossings Environmental Assessment Report for the Placement of a Point of Presence in Frederiksted, St. Croix

Innovative Telephone Environmental Assessment Report for the Burial of Fiber Optic Cable on the North Shore of St. Croix

Innovative Telephone Environmental Assessment Report for the Burial of Fiber Optic Cable on the West End of St. Croix

Callaloo Club Blowing Point Environmental Assessment for the Cration of a marina on Anguilla, BWI

V.I. Water and Power Authority Waterline Environmental Assessment for a waterline between St. Thomas and St. John
V.I. Water and Power Authority Powerline Environmental Assessment for a utility line between St. Thomas and Little St. James

Global Crossings Environmental Assessment Report for the South American Crossing Cable Station at Estate Northside

Water Island Ferry Dock Environmental Assessment Report for the construction of a ferry dock on Water Island

Cuisanart Environmental Impact Assessment for Beach Renourishment, Anguilla, BWI

Cinnamon Bay Environmental Impact Assessment for Development of a Marine Facility, Anguilla, BWI

Crown Bay Benthic Habitat Survey of Crown Bay and Gregerie Channel as a supplement to the USACOE Feasibility Report

Frederiksted Pier Environmental Assessment Report for the Improvements to the Existing Frederiksted Pier, St. Croix

Little St. James Environmental Assessment Report for a Private Dock on Little St. James Island

Government of the Virgin Islands Environmental Assessment Report for Phase II of the Christiansted Boardwalk, St. Croix

Beal Aerospace Environmental Assessment Report for Construction of the World Headquarters Estate Great Pond, St. Croix

ENVIRONMENTAL ASSESSMENT REPORTS 1988-2000

Divi Hotel Environmental Assessment Report for the reconstruction of a dock, St. Croix

Global Crossing Environmental Assessment Report for the construction of a Cable Terminal Building and a corridor for 8 submarine fiber optic cables

HOVENSA Environmental Assessment Report for the Construction of a Coker and Coker Dock at the Existing HOVIC Refinery

V.I. Port Authority Environmental Assessment Report for the construction of a Mooring Dolphin at the Frederiksted Pier

Seaborne Environmental Assessment Report for the Development of a Seaplane Terminal at the old Seaplane Ramp, St. Croix
Forest Bay Environmental Assessment Report for the Development of a Marina and related facilities in Forest Bay Anguilla, BWI

META Resorts Environmental Assessment Report for the development of a Dolphin Lagoon at Meads Bay Anguilla, BWI

Government of the Virgin Islands Environmental Assessment Report for the Construction of a boardwalk in Christiansted, St. Croix

V.I. Port Authority Environmental Assessment Report for the runway extension at the Henry E. Rohlsen Airport under subcontract to LPA Group

V.I. Port Authority Environmental Assessment Report for the expansion of the Redhook Marine Terminal, St. Thomas

V.I. Port Authority Environmental Assessment Report for the creation of the Enighed Pond Marine Facility, St. John

Coral World (VI), Inc. Environmental Assessment Report for the renewal of the submerged land lease for the Coral World Facility, St. Thomas

Cowpet Bay Environmental Assessment Report for the modification of the existing permit for construction of a seawall, St. Thomas

Watergate East Villas Environmental Assessment Report for the Construction of a Rip-Rap Revetment, St. Thomas

Christiansted Boardwalk Environmental Assessment Report for the construction of a boardwalk on the Christiansted Waterfront, St. Croix

V.I. Water and Power Authority Environmental Assessment Report for Improvements to the fuel dock at the Power Generating Facility, St. Thomas

La Domaine Environmental Assessment Report for the subdivision of 40 Acres of Land in Estate Misngunt, St. Thomas

V.I. Port Authority Environmental Assessment Report for the expansion of the Alexander Hamilton Airport Terminal and Highway 64 Relocation, St. Croix

AT&T Environmental Assessment Report for the Cable Landing Facility at Estate Northside, St. Croix
DEVCON Environmental Assessment Report for the Dredging of the Christiansted Sand Channel, St. Croix

VIALCO Environmental Assessment Report for the Expansion of the Red Mud Storage Ponds, VIALCO Alumina Facility, St. Croix

VIALCO Environmental Assessment Report for the creation of a stormwater drainage system, VIALCO Alumina Facility, St. Croix

VIALCO Environmental Assessment Report for the Mining of Caliche, VIALCO Alumina Facility, St. Croix

Molasses Dock/VI Port Authority Consulting on the Environmental Assessment Report for the Molasses Dock Terminal at the Third Port Facility, subcontracted by Frank Torrez, and the V.I. Port Authority, St. Croix

**SELECTED ENVIRONMENTAL ASSESSMENT REPORTS 1988 -1993**

St. Croix by the Sea Environmental Assessment Report for beach renourishment and the construction of jetties, St. Croix

Vieques Environmental Assessment Report for the creation of a shrimp farm in Puerto Ferro, Vieques, Puerto Rico

MSRC Dock Environmental Assessment Report for the construction of a pier in the HOVIC West Turning Basin, St. Croix

Eden Beach Proposed hotel and condominium project Environmental Assessment Report, St. Croix

Tamarind Reef proposed reconstruction and expansion of the Tamarind Reef Hotel, Hotel, St. Croix

V.I. Water and Power Authority Environmental Assessment Report and U.S. Corps of Engineers Application for the construction of two gas turbines at the Third Port Site, St. Croix

Lovango Cay Environmental Assessment Report for the creation of a subdivision on Lovango Cay Placement of a private dock, St. Thomas

VIALCO Environmental Assessment Report for the construction of a well water gathering system for wells at the Virgin Islands Alumina Corporation’s Plant, St. Croix

Crawl Cay Environmental Assessment Report, Wetlands Delineation and Hammock Studies of Crawl Cay, Florida, for Monroe County
Jack’s Bay Environmental Assessment Report for the subdivision of Approximately 300 Acres into 64 lots at Estate Jack’s and Isaac’s Bays, St. Croix

VIALCO Environmental Assessment Report for the Expansion of the Bauxite Building at the Virgin Islands Alumina Corporation’s Alumina Facility, St. Croix

Carambola Beach Club Environmental Assessment Report for the repair and improvement of the Carambola Beach Club facility prepared for Danested, St. Croix

Salt River Environmental Impact Statement for the proposed National Park at Salt River, St. Croix, prepared for the National Park Service

V.I. Water and Power Authority Environmental Assessment Report for the Construction of a desalination unit on St. John, prepared for the V.I. Water and Power Authority, St. John

Carmel by the Sea Environmental Assessment Report for the Construction of a 95 unit condominium at Estate Turner’s Hole, St. Croix

VLBA Environmental Assessment Report and Landscaping Plan for the Very Long Baseline Array, St. Croix

Buccaneer Environmental Assessment Report for 20 room addition to the Buccaneer Hotel, St. Croix

Ritz Carlton Zoning Application and Environmental Assessment Report for a 350 room Hotel, Estate Davis Bay, St. Croix

Frederiksted Pier Environmental Assessment Report for the construction of a second pier in Frederiksted, St. Croix

Kingston Environmental Assessment Report for Hotel and Condominium Construction, Kingston, Tortola

Airport Warehouse Environmental Assessment Report for construction of a Warehouse Facility at the Alexander Hamilton Airport, St. Croix

Great Pond Environmental Assessment Report, Zoning Application, and COE Permit Application for a Hotel and Condominium Project at Estate Great Pond, St. Croix
ENVIRONMENTAL ASSESSMENT REPORTS 1986-1988

Southeast Peninsula, St. Kitts
Columbus Landing, St. Croix
Grapetree Beach, St. Croix
Blue Beards Beach, St. Thomas
St. Croix by the Sea, St. Croix
Divi Dive Canal, Nassau, Bahamas
Ensenada, St. Croix
Virgin Grand, St. Croix
Sugar Bay, St. Croix
Turtle Run, St. Croix
Palm Shores, St. Croix
Baobab, St. Croix
Reflection Bay, St. Croix
Coakley Bay, St. Croix
Green Cay, St. Croix
Turquoise Bay St. Croix
Eagle Bay, St. Croix
Granard, St. Croix
Concordia, St. John

ENVIRONMENTAL ASSESSMENTS
Sampling of USTs for Domino Oil on St. Thomas 2016-2017
Sampling of the LUSTs at the VIPA’s Seaplane Ramp, St. Croix 1994, 2011, 2012-2016
Sampling for REC Estate Anna’s Hope, St. Croix 2012-2016
Sampling for petroleum products at gasoline stations and industrial sites in St. Croix 2006-2016
Sampling for chemical contamination in cisterns in St. Croix 2000-2011
Sampling for mold Renaissance Hotel, St. Thomas
Sampling for REC residential and commercial properties St. Croix, St. Thomas, St. John and Puerto 1990 - 2018