Exhibit 6, Attachment A

Cumulative Impacts

Cumulative and Secondary Impacts Analysis Template

A. Cumulative and Secondary Impacts – (40 CFR 230.11(g) and 40 CFR 1508.7, RGL 84-9) Cumulative impacts result from the incremental environmental impact of an action when added to all other past, present, and reasonably foreseeable future actions. They can result from individually minor but collectively significant actions taking place over a period of time. A cumulative effects assessment should consider both direct and indirect, or secondary, impacts. Indirect impacts result from actions that occur later in time or are farther removed in distance from the original action, but still reasonably foreseeable.

1. Geographic scope: The impact area is the Coral Bay Water Shed which flows into Coral Harbor and the harbor and its adjacent waters which are impacted by runoff from a developing watershed and water quality changes within the harbor.

2. Temporal scope: The temporal scope is 40 years, 20 years before the application and 15 years beyond the projects permitting.

Explain the selected timeframe: Forty years has been chosen because significant change has occurred within Coral Harbor and its watershed over the last 20 years and it is hard to assess changes in the harbor beyond a 20-year time period.

3. Historical conditions of the area subject to this analysis:

In the mid 1980's there was some residential and commercial development within the area and there were a few boats moored within the bay. Skinny Legs and and its boat yard were present and while there were obvious impacts due to human activities in the harbor there were still expansive seagrass beds and dense mangroves along most of the shorelines.

4. Major changes to the area and description of current condition: The St. John housing market has boomed over the last 20 years and many homes and road ways have been built in the area. Runoff, without treatment or attenuation for water quality, from unpaved roadways and areas without vegetation, has had a significant impact on water quality within the bay. Numerous studies have been conducted in this regard and Coral Bay Community Council has received federal grants to undertake studies and make drainage improvements in the water shed. The number of boats in the harbor has increased and with the uncontrolled anchoring and mooring seagrass beds have been negatively impacted and water quality has continued to decline. In addition, there are limited facilities to service the boats within the harbor which has also resulted in impacts to Coral Bay and Coral Harbor.

5. Anticipated cumulative and secondary/indirect impacts (environmental consequences) of the proposed action:

A total of 39,258.18 sq. ft. of docks for the project will be located over areas with submerged aquatic vegetation, the majority of these area have densities between 20% and 100% SAV. Based on a 46% survival of SAV since the Applicant is using grated decking, 21,199.42 sq. ft. (0.487 ac) of seagrass may be lost. At the maximum capacity of the marina and at the maximum size boat for each slip, there will be 5.65 acres of shading due to vessels. It can be assumed that 50% of this acreage will be lost due to vessels being in place more than 2 weeks at a time. There will be some survival due to angle of the sun and vessel types and available light. There will be impacts due to spudding impact during

construction which will probably account for an impact of 900 - 1020 sq ft of impact (6 sq. ft. per spudding event for 150 to 170 relocations. The operation of the marina will have an impact due to prop wash scour and one may assume another 10% loss of SAV. In total, approximately 3.75 acres of seagrass will probably be lost as a result of the project. The project will introduce additional vessels into the area and will increase the sloughing of metals from bottom paint and the resuspension of sediments in the bay due to vessel movement.

6. Reasonably foreseeable future actions:

There is currently a proposal to construct another marina in the northern portion of Coral Bay, and the plans for that marina are shown in the previously submitted Alternatives Analysis. There is also a plan for the installation of a potable water system by the Virgin Islands Water and Power Authority which has been tabled for several years but is now being revisited.

The development of two marinas in the harbor will minimize the mooring area available in the harbor and many of the vessels currently within the harbor will need to relocate or use one of the marinas. The presence of both marinas will significantly reduce the amount of illegally moored and anchored vessels in the area by providing facilities.

There will be a net loss of seagrass within the bay with the construction of both marinas and it is probable that as much as 5 acres of seagrass will be lost due to shading and direct impacts. The northern marina proposes dredging as part of its project which will have a significant impact on water quality as a result of increased turbidity. The turbidty will have a negative impact on light availability resulting in significantly more seagrass losses than would result if dreding did not occur. Both marinas would increase the number of boats to 241 vessels at dock and will result in a notable increase in vessels in and out of Coral Harbor.

The development of both marinas will result in a substantial increase in activity within the area and will most likely result in economic stimulation and the opening of additional businesses and services, particularly if potable water is available. With the marinas on both sides of the bay there is sufficient room surrounding the harbor for other small businesses and services to be developed. There is a dense mangrove fringe around almost the entire bay that is not encompassed by the two proposed marinas and it is unlikely that additional marine uses will be developed along the shoreline.

The development of both marinas and the introduction of potable water to the area would enhance the potential for future development. Overtime this could lead to additional water quality impacts and increased loss of seagrass resources.

7. Effect of the proposed mitigation, including avoidance and minimization, on reducing the project's contribution to cumulative effects in the region:

The applicant has avoided impacts within Coral Harbor by locating the marina so that no dredging is required. The docks extend into areas with fewer aquatic resources and the applicant has proposed implement minimization and mitigation efforts to protect those aquatic resources. Specifically, the applicant proposes to relocate the seagrass from within the piling and mooring foot prints to an area that previously supported seagrass and plant additional mangroves to complete the coastal mangrove fringe. During construction, the applicant proposes to utilize bubble curtains to reduce

acoustic impacts, conduct sea turtle and marine mammal monitoring, use stringent sediment and erosion control, and conduct water quality and environmental monitoring during and after construction.

YCSE will be completing the cleanup of debris in Coral Harbor to allow for the recolonization of seagrass into areas which were previously impacted. YCSE will also be implementing a maintenance plan for the storm water mitigation devices which were previously installed with funding from EPA and NOAA but have not been maintained YCSE will also be undertaking a long-term monitoring plan which will monitor water quality as well as the closest ESA corals species and the seagrass to the east of the project site to look for impacts. YCSE will also be installing 5 informational buoys, 1 to protect the transplant site and 4 to protect shallow seagrass and reef sites in the vicinity of the approach to Coral Harbor to help prevent future groundings and impacts to corals and seagrasses. YCSE will be providing information materials on their website and on a mobile application designed especially for Coral Bay, which will provide detailed National Park rules, regulations and procedures and will discuss the importance of not anchoring in seagrass beds or on coral resources. YCSE will be planting a mangrove fringe along the shoreline of their property. YCSE will be conducting a cleanup of 10,000 sqft of debris in greater Coral Harbor to minimize impacts on seagrass beds and coral reefs.

In addition, the applicant proposes to provide services for waste and garbage collection within the marina and the harbor, and use best management practices for marina operation to protect water quality for the aquatic resources.

8. Conclusions: There will be impacts due to the development of the marina. SEG has proposed methods to minimize and compensate for these impacts to the greatest degree possible.

SAJ-2004-12518 (SP-JCM)
St. John Marina Yacht Club

Exhibit 1, Attachment B

Letter from Jeff Boyd, President, Marine Management & Cionsultings