

B&V Project 163528 December 22,2008

BLACK & VEATCH INTERNATIONAL COMPANY

MEETING MEMORANDUM

Florida Keys Aqueduct Authority

Cudjoe Key Wastewater Treatment Plant

FDEP questioned if the existing outfall structure would need to be modified for the project. TKW stated they anticipate no modifications to the existing outfall structure.

B&V reiterated that the existing site is impervious and any improvements to the site will only decrease the total amount of runoff leaving the site. After a lengthy discussion of the existing site conditions and the effect of site improvements, FDEP decided that if the post development conditions can be demonstrated to have a net decrease in stormwater runoff and no modifications are made to the existing outfall structure then the existing stormwater treatment facilities will be adequate and no additional water management will be required. Under these conditions, the permitting process will simply be a letter modification to the existing permit, and no fees are associated with this permit application. TKW explained that stormwater management will consist of onsite collection and discharge into the existing stormwater collection system.

Effluent Disposal

FCAA presented a brief history of the project and the service area planned for the new Cudjoe Key WWTP. B&V distributed two technical memorandums outlining the anticipated flows and loads to the new WWTP. B&V stated that based on the flows and loads study by Brown and Caldwell, the plant design capacity will be 0.94 mgd, average annual flow.

FDEP stated that based on the memorandum the maximum flow leaving the plant will be 2.35 mgd and therefore will require deep well injection in accordance with the Chapter 99-395.

B&V responded that Chapter 99-395 requires the design capacity to be greater than 1.0 million gall 3ns in order to require deep wells for effluent disposal. FDEP responded and stated that most shallow wells in the Florida Keys are only operational when the tide is receding. FDEP cited several plants with shallow wells that do not work. After a lengthy discussion over deep wells versus shallow wells, the following was concluded:

- The FDEP would permit the facility on a 3-month, max month, rolling average.
- FCAA would build the plant to treat 0.94 mgd ADF with shallow injection wells and permit the plant for a lesser capacity such that the 3-month, max month rolling average would not exceed 1.0 mgd.
- A single deep well would be constructed if the 3-month, max month rolling average is anticipated to exceed 1.0 mgd based on a Capacity Analysis Report. The shallow wells built during the initial plant construction will be utilized as a backup to the deep well.