UNITED STATES
CIVILIAN BOARD OF CONTRACT APPEALS

April 2, 2010

CBCA 1761-FEMA

In the Matter of SEWERAGE AND WATER BOARD OF NEW ORLEANS

Jason Higginbotham, Director of Emergency Management, Gerard M. Victor, Special Counsel, and Brian A. Ferrara, Deputy Special Counsel, Sewerage and Water Board of New Orleans, New Orleans, LA, appearing for Applicant.

Mark S. Riley, Deputy Director, and William J. Patrigo, Appeals Specialist, Governor's Office of Homeland Security and Emergency Preparedness, Baton Rouge, LA, appearing for Grantee.

Chad T. Clifford, John B. Patterson, Linda M. Davis, and Kim A. Hazel, Office of Chief Counsel, Federal Emergency Management Agency, Department of Homeland Security, Washington, DC, counsel for Federal Emergency Management Agency.

Before the Arbitration Panel consisting of Board Judges **GILMORE**, **STERN**, and **SHERIDAN**.

This matter involves a dispute between the Sewerage and Water Board of New Orleans, Louisiana (S&WB or applicant) and the Federal Emergency Management Agency (FEMA) concerning S&WB's request for public assistance to fund repair and replacement of certain steel components of the eight clarifiers at the East Bank Waste Water Treatment Plant (Plant). The applicant's request is supported by the grantee, the State of Louisiana.

The S&WB provides sewerage and water services throughout Orleans Parish, Louisiana, including the city of New Orleans. As a result of Hurricane Katrina on August 29, 2005, a seventeen-foot storm surge overtopped the berm surrounding the Plant causing extensive damage. The Plant has eight 160-foot diameter clarifiers which were submerged in the salt waters from a nearby lake. The exact number of days that each clarifier was submerged in salt water varied somewhere between forty-five and seventy-five days. The function of the clarifiers is to process the wastewater-biomass slurry and separate the liquids

from the solids which allows the liquids and solids to be treated with separate processes. Seven of the clarifiers incorporate a draft tube solids removal system, with a series of sweep arm-mounted scraper blades to direct the solids to the tube inlets. One clarifier is used as a gravity thickener supplying the primary feed to the belt presses. After the clarifying process, the effluent is discharged into the Mississippi River.

The steel components in issue here are the steel components that operate submerged within the sewage medium, and comprise approximately 80% of each clarifier's steel components. S&WB contends that the steel components had some corrosion and rust on them prior to Katrina, but were not severely corroded or pitted, and due to the effects of Katrina, they became severely corroded and are constantly in need of repair or replacement. Although the clarifiers are presently functioning, S&WB contends that they are not functioning in the manner they did prior to Katrina. S&WB estimates that refurbishment of the clarifiers would cost $2,312,500.

FEMA denied the assistance request contending that the original preventive coating applied to the steel components failed and that the steel components were corroded because of lack of maintenance and the normal aging process. FEMA also contends that any corrosion from exposure to saltwater for between forty-five to seventy-five days, under the worst conditions claimed, would be negligible. FEMA paid approximately $1.8 million to clean the clarifiers after the hurricane, and for repairs to those parts of the clarifiers that function above the sewage medium (e.g., motors, drive mechanisms, gears that turn the arms, etc.), but denied relief for the steel parts of the clarifiers that normally operate in the sewage medium.

The Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act) provides the President the authority to make public assistance disaster grants to a state or local government for repair, reconstruction, or replacement of public facilities on the basis of the design of a facility as it existed immediately before the major disaster. 42 U.S.C.§ 5172 (2006). FEMA administers the Stafford Act. FEMA's rules implementing the statute for public assistance grants are found at 44 CFR subt. G (2009). This matter is being arbitrated pursuant to regulations set forth in 44 CFR 206.209.

To be eligible for assistance, the damage to the facility must be disaster-related. 44 CFR 206.223(a)(1). There is no dispute that the steel components were severely corroded after Katrina. The issue is whether the damage to the steel components is due to Katrina.

We considered, in weighing the evidence, that the steel components were approximately thirty-five years old at the time of Katrina (now forty years old) and that they have a normal useful life of approximately fifty years. There are no documents in the record

relating to the maintenance of the steel components prior to Katrina. Mr. Savant , the Plant's superintendent, testified that the steel components require very little maintenance and that no sandblasting or recoating of the steel was required or performed after the initial protective coating was applied. A report submitted by the applicant indicates that under the provisions of the Clean Water Act of 1980, waste water plants are now required to pre-treat waste water to eliminate or reduce heavy metals (which metals retard the growth of bacteria), and that because of this requirement, steel components operating in sewer systems, have experienced an increase in acidic deterioration or corrosion. Additionally, a 1991 Environmental Protection Agency report submitted by FEMA, which documented the extent of hydrogen sulfide corrosion at a number of plants across the United States, stated that it found severe corrosion at the Plant, that the Plant did not have any control measures to prevent future corrosion, and that no efforts had been made to rehabilitate the corroded structures.

Mr. Savant was the only witness who personally observed the condition of the steel components prior to Katrina. He testified that prior to Katrina, the steel components were rusted with some corrosion, but became severely corroded after Katrina, and that the manufacturer's maintenance instructions do not require recoating of the steel components after the initial protective coating is applied. Immediately after Katrina, the S&WB hired an engineer to assess the damage to the Plant and, after examining the clarifiers, she stated in her structural assessment report dated January 17, 2006, that the structural steel submerged in salt water was heavily corroded and that the corrosion should be removed and steel replaced where necessary, and that recoating of the protective coating was needed. Recoating was not performed after Katrina, and the record is not clear as to what or when any repairs were made.

Mr. Gingrich, FEMA's witness, a licensed professional engineer who is currently pursuing a master's degree in metallurgical engineering, testified that, in the worst case claimed by the applicant, where carbon steel was submerged in salt water for seventy-five days, it would result in pits of less than 1/64 of an inch deep, which would not have been enough to breach any of the carbon steel components in question, and that any possible corrosion from the flooding would have been negligible. Mr. Gingrich's opinion was based on new carbon steel submerged in salt water for seventy-five days and did not consider steel that was approximately thirty-five years old and already had some rust and corrosion before exposure to the salt water.

Based on the record as a whole, the weight of the evidence leads us to first conclude that the steel components of the clarifiers were in a more corroded state prior to Katrina than Mr. Savant indicated in his testimony, since no corrosion-prevention measures had been taken for approximately thirty-five years. Second, we conclude that the corrosion to the steel as a result of Katrina would be more than merely negligible, since the steel components

already had some pre-existing corrosion. However, we believe that the submersion in the salt water for between forty-five to seventy-five days would have caused, at best, only minimal additional corrosion. Finally, we conclude that the S&WB's failure to mitigate damages after Katrina, and the normal aging process of steel submerged in sewage for forty years, are the overriding factors contributing to the steel component failures that the S&WB continues to experience.

Because we have concluded that only a minimal amount of additional corrosion to the steel components was due to the effects of the salt water, we grant funding only for the repair or replacement of steel components occurring within the six months following issuance of the January 17, 2006, structural assessment report. Thus, the applicant is entitled to recover any costs it incurred repairing or replacing the applicable steel components from the date Katrina struck the Plant, August 29, 2005, to July 17, 2006. This represents a reasonable time in which the applicant should have recoated the steel to prevent further corrosion, and repaired or replaced those components that hindered the proper functioning of the clarifiers after the Plant became operational again. Because the components are near the end of their useful life and had some degree of corrosion prior to Katrina, and because the applicant did not employ mitigating measures after Katrina, we are unable to conclude that any failures of the steel components after July 17, 2006, are attributable to the effects of Katrina.

The panel directs FEMA to issue a new version of Project Worksheet 4031, which awards to S&WB any costs it proves were associated with repairing or replacing the applicable steel components from August 29, 2005, to July 17, 2006.

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BERYL S. GILMORE
Board Judge

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JAMES L. STERN
Board Judge

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PATRICIA J. SHERIDAN
Board Judge