UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF WATER

JAN 11 1990

Honorable Robert W. Page
Assistant Secretary (Civil Works)
Department of the Army
Washington, D.C. 20310-0103

Dear Mr. Page:

Pursuant to provisions of the Memorandum of Agreement (MOA) between the U.S. Environmental Protection Agency (EPA) and the Department of the Army under Section 404(q) of the Clean Water Act (CWA), I am formally requesting your review of the decision by Colonel Larry S. Bonine, District Engineer, Mobile District, to issue a Section 10/404 permit to Meyer Properties, Inc. (AL88-00317). Colonel Bonine's notice of intent to issue a permit for this project was transmitted by letter dated December 11, 1989, to Greer Tidwell, Regional Administrator, EPA Region IV. Issuance of the permit to Meyer Properties would authorize construction of an entrance channel to the Gulf Intracoastal Waterway (ICWW) and a flushing channel to Bear Creek. These channels would serve a marina basin which the applicant has proposed to excavate from uplands adjacent to the ICWW at Gulf Shores, Alabama.

Colonel Bonine based his decision to issue a permit for the proposed marina in part upon receipt of water quality certification from the State of Alabama. State water quality certification is authorized in Section 401(a)(1) of the CWA (33 U.S.C. 1251, et seq.). The State's certification was issued by the Alabama Department of Environmental Management (ADEM), and states that "there is reasonable assurance that the discharge resulting from the proposed project will not violate applicable water quality standards established under Section 303 of the CWA and Title 22, Section 22-22-9 (g) Code of Alabama (1975)." Colonel Bonine concluded in attachment 1 of his Statement of Findings, dated December 8, 1989, that in accordance with 33 CFR 320.4(d), ADEM's Certification "is conclusive with respect to water quality considerations." EPA believes that information which is relevant to evaluation of the potential water quality impacts associated with the proposed project was not adequately considered in the ADEM certification, and that this information does not support the conclusions and findings in Colonel Bonine's Notice of Intent. EPA maintains that based on currently available information, the project would not comply with applicable water quality requirements, and believes that the Mobile District's review of the proposed marina project did not adequately recognize EPA's clear role in water quality issues, as reflected in Section 320.4(d) of the Corps Consolidated Permit Regulations.

The District's reliance on State issuance of the Section 401 certification per se failed to acknowledge the Corps' independent authority and responsibility to evaluate water quality impacts and EPA's expertise and authority regarding water quality issues under the Clean Water Act.[1] I am concerned by the precedent that would be set by proceeding with the issuance of a Section 10/404 permit based upon what EPA believes is an erroneous water quality certification, for a project which would exacerbate existing water quality problems. This could establish the precedent of treating the issuance of a water quality certification as irrefutable evidence that water quality standards will not be violated contrary to the express language of 33 CFR 320.4(d). Where, as in this case, there is information which contradicts the conclusions in the certification and EPA has indicated that construction of the proposed marina is likely to increase the number and duration of water quality standards violations in the subject stretch of the ICWW, a permit should not be issued simply on the basis that the State certification has been issued. In addition, because EPA believes that the project will cause or contribute to violations of State water quality standards, we believe that the project would not be consistent with 230.10(b)(1) of the Clean Water Act Section 404(b)(1) Guidelines.

After review of available information relevant to this case, I have determined that this referral meets the criteria in the MOA for elevation under Sections 5.b.1 and 5.b.3. Section 5.b.1 applies because there has been "insufficient interagency coordination at the District and Division levels" and "a failure to resolve stated EPA concerns regarding compliance with the Section 404(b)(1) Guidelines." Specifically, I am concerned that although the record indicates that EPA Region IV questioned the proposed project's compliance with applicable water quality requirements throughout the project review process, the Mobile District's findings and conclusions regarding water quality impacts were based solely on a finding of compliance by ADEM. Additionally, I believe that the failure to recognize EPA's expertise with regard to potential adverse water quality impacts resulting from projects proposed in waters of the United States raises environmental issues of national importance requiring policy level review, under Section 5.b.3.

Background

The Gulf Intracoastal Waterway at Gulf Shores, Alabama, is an excavated canal which connects Pensacola Bay, Perdido Bay and Wolf Bay to the east with Oyster Bay, Bon Secour Bay and Mobile Bay to the west. This waterway provides a protected

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[1] e.g., §404(b): In issuing permits under §402 of the CWA, EPA has the authority to impose more stringent permit conditions than those in State certification where, in EPA's judgment, they are necessary to assure compliance with State water quality standards. See EPA General Counsel Decision No. 58 (March 29, 1977).

route for water traffic between those waterbodies. The canal is approximately 375 feet wide and is maintained at a depth of -12 feet National Geodetic Vertical Datum.

The State of Alabama has recognized that this reach of the ICWW has important value to the State's marine resources. It serves as the only pathway for aquatic biota migrating between the Perdido Bay and Mobile Bay estuarine ecosystems. The Alabama Department of Conservation and Natural Resources has observed juvenile fish and shrimp in the canal and has documented its value as a nursery area for various estuarine species. Additionally, the canal has been found to support valuable spawning habitat for sea trout, a species of substantial sport and commercial value to the region.

In assignment of water quality standards, ADEM acknowledged the value of the waterway at Gulf Shores and designated the use of the canal as "Fish and Wildlife Waters." Minimum dissolved oxygen concentration required to support this designation is 5.0 mg/l, except under extreme conditions due to natural causes when it may range between 5.0 mg/l and 4.0 mg/l.

The record indicates that historically and during recent years, the dissolved oxygen concentration of water in the canal has regularly been below the State standard of 5.0 mg/l. As is frequently the case, the cause or causes of the water quality problems resulting in these standard violations are not completely known. However, it is probable that pollution by point and non point sources, combined with physical constraints on natural flushing imposed by the hydrology of the system, results in overloading of oxygen-consuming material and a simultaneous decrease in dissolved oxygen. In the area in question, particularly during summer months, this interaction is sufficient to suppress, and at times deplete, available dissolved oxygen leading to violations of water quality standards for dissolved oxygen.

Due to its direct aquatic connections with adjacent estuaries, the ICWW canal can both influence the water quality of those water bodies and be influenced by conditions in the estuaries. In reviewing the possible impact of activities in the canal it is important to note that there have been several studies on the direction of water movement in the canal. A 1984 study by ADEM-Tetra Tech, based upon data collected in 1982, demonstrated that flow in the ICWW was to the west. In contrast, an ADEM study in 1984-1985 found that flow was to the east. In 1988, ADEM and the Florida Department of Environmental Regulation measured flow near the eastern end of this reach of the ICWW and found that in four of seven measurements the direction of flow was to the east, two measurements indicated flow to the west, and one measurement was inconclusive. In an attempt to resolve the question concerning direction of water movement in the canal, the Mobile District, in 1988 and 1989, gathered water current direction and velocity data for seven months near the site of the proposed marina and found that the overall net flow for that period was approximately

4.4 miles to the east. EPA believes that these studies indicate that: waters in the ICWW have a long residence time; waters move both east and west within the confinements of the canal; water movements are probably affected primarily by both prevailing winds and tides; and the net movement of waters within the canal is slowly to the east.

Finally, it is important to note that there are ongoing activities at the Federal and State level to improve water quality in the ICWW canal. EPA is currently preparing an environmental impact statement for Gulf Shores, Alabama, which will provide recommendations on long term planning for wastewater treatment alternatives to support the projected growth of the area. In addition, ADEM has recently imposed strict discharge limits for point sources into the ICWW and has taken enforcement action against a seafood processing plant, which has resulted in the elimination of a major point source discharge into the ICWW. Given these recent events, it is probable that the quality of the water in the ICWW will improve in the future if the responsible Federal, State, and local agencies continue to take similar actions to restore beneficial, and prevent degradation of, water quality in the ICWW aquatic environment.

Compliance with the Section 404(b)(1) Guidelines

In his Statement of Findings dated December 8, 1989, Colonel Bonine specified a requirement for placement of riprap in the proposed entrance channels to stabilize the channel banks. This requirement necessitates a Section 404 permit in addition to the Section 10 permit required for construction of the channel. Thus, the current project design requires both Section 10 and Section 404 permits. While EPA recognizes that the discharge of material associated with the proposed marina is only a segment of the project, I believe that the potential adverse water quality impacts of the entire project should be weighed against the evaluation criteria specified in the Section 404(b)(1) Guidelines, including 40 CFR 230.10(b)(1), which prohibits permit issuance if the discharge would cause or contribute to violations of any applicable water quality standards.

Water Quality Concerns

During EPA Region IV's first meeting with the applicant, EPA voiced two major concerns with the proposed activity: impacts on wetlands and water quality. The applicant has successfully alleviated concerns over wetland losses, but EPA's opinion concerning violation of water quality standards in the excavated basin remains unchanged.

As stated previously, available historical water quality data indicate that ambient waters of the ICWW near Gulf Shores regularly fail to meet the dissolved oxygen standard. EPA believes that, based upon this information, it is reasonable to conclude

that the ICWW adjacent to the site of the proposed marina does not now, and will not in the near term, meet the water quality standard for dissolved oxygen during the months of May through September.

As proposed, construction of the marina basin will create new waters which will be connected to the ICWW by an entrance channel and connected to Oyster Bay by a flushing channel. Data collected within excavated marina basins located in this part of the country reveal that they exhibit a general decrease in dissolved oxygen concentration below ambient conditions. Therefore, EPA has concluded that based upon available historic water quality data for waters within the ICWW at Gulf Shores and empirical evidence regarding depressed dissolved oxygen conditions in excavated marina basins, the marina basin proposed by Meyer Properties would result in an increase in the number and frequency of violations of the water quality standard for dissolved oxygen. Furthermore, in addition to substandard dissolved oxygen conditions within the proposed marina basin, EPA believes that it is possible that the export of substandard waters from a basin constructed at this site could result in a further degradation of habitat in receiving waters of the ICWW and Oyster Bay. It is undisputed that the ICWW and Oyster Bay support important fish and shellfish resources.

Issues regarding ADEM Section 401 Certification:

In granting the Section 401 certification for the proposed marina, ADEM's conclusion that the proposed discharge will not violate applicable water quality standards was based largely upon the 1984 ADEM-Tetra Tech Water Quality Model of the ICWW. Results of that model were validated based upon six days of observations in August and September of 1982. That model predicted that the dissolved oxygen concentration in the ICWW near the proposed marina site would be above 5.0 mg/l except during early morning hours, when it would vary between 4 and 5 mg/l. ADEM assumed that the concentration of dissolved oxygen within the excavated marina basin would be similar to ambient waters.

In reaching their decision to issue water quality certification, ADEM largely ignored data from a long-term fixed monitoring station (ADEM Station IC1) located approximately two miles east of the proposed marina site. Data from this site indicate that the mean summertime (May through September) dissolved oxygen concentration from 1974 to 1989 at IC1 was 4.8 mg/l, and that as recent as 1987, summertime values for dissolved oxygen reached a low of 2.0 mg/l. EPA contends that data from this fixed station is representative of the water quality of the ICWW at the marina site; thus, ambient waters would regularly fail to meet the dissolved oxygen standard. It is our experience that the dissolved oxygen concentration in excavated basins varies between 0.5 and 1.0 mg/l less than ambient waters depending upon marina design, flushing rates, and oxygen demands. Thus, it is probable that dissolved oxygen concentration in the excavated basin would range between 3.8 and 4.3 mg/l during summer months.

ADEM and the applicant have contended that use of data from IC1 may not be appropriate since that station is located approximately two miles to the east of the proposed marina site and is proximate to several point source discharges into the ICWW. Further, since ADEM has recently restricted the point source discharges near this location, they conclude that the long-term average may not be representative of present conditions. After technical review of the ADEM water quality findings, EPA has concluded that dissolved oxygen concentrations at IC1 are in fact representative of the proposed marina site. This conclusion is based upon examination of the 1984 ADEM-Tetra Tech Model which we believe demonstrates that there is little or no difference between predicted water quality in the ICWW at IC1 and the marina site. Further, this conclusion is supported by recent ADEM Water Quality/Benthic Trend Data from 1987-1989, including synoptic samples from the IC1 and two stations in Oyster Bay. Oyster Bay is located immediately to the west of the proposed marina site. These data indicate that water quality within the ICWW system is relatively uniform, and the data from IC1 is representative of the reach of the ICWW in question.

It is apparent from EPA discussions with ADEM that State certification was based upon the 1984 ADEM-Tetra Tech model. In reaching their decision regarding water quality in the ICWW at the marina site, ADEM largely ignored data from the previously mentioned fixed, long-term monitoring station located approximately two miles east of the marina site. It is our opinion that data from the fixed sampling location is the best available long-term estimate of water quality in the ICWW at the marina site, and those data conclusively demonstrate that ambient waters currently violate the dissolved oxygen standard of 5.0 mg/l. For this project, ADEM implies in their certification that a violation will occur only when dissolved oxygen concentration in the basin is lower than ambient conditions, apparently regardless of ambient concentration. We do not agree with this position. However, since it is our experience that excavated basins connected to ambient waters experience decreased concentration of dissolved oxygen compared to ambient waters, we have concluded that issuance of a permit for this project would result in or contribute to violations of that standard under any circumstances.

Finally, I believe it is important to note that ADEM's decision to issue a permit was supported by a condition to include monitoring and corrective actions if monitoring reveals water quality standard violations. Clearly, the potential for detrimental impacts to water quality was recognized by ADEM. Not only does this approach assume that water quality violations have a strong potential to occur (otherwise the applicant would not be required up-front to expend resources), this approach to permitting may necessitate reaching a very difficult decision regarding marina closure once the facility is in place. It is also useful to mention that EPA's concerns with respect to this permit decision are similar to those raised as a national issue in EPA's Section 404(q) referral request of the Miami Conservancy District permit decision, that was accepted by Army under the 1982 MOA. As in the Miami Conservancy case, the Mobile District

Engineer's decision to issue a permit is premised on a certification of compliance with State water quality standards which is clearly conditioned to recognize the distinct potential for violations of water quality standards.

Interagency Coordination

Throughout the entire project review process, EPA has voiced concern regarding the potential for the proposed project to result in adverse impacts to water quality and possible violations of State water quality standards. During a preapplication meeting and site inspection in January of 1988, EPA informed the applicant and the Corps that the project, as proposed at that time, was unacceptable because there were less environmentally damaging alternatives to the destruction of intertidal marsh for a marina basin. EPA further noted that water quality in the proposed marina basin might not meet State water quality standards. The applicant was informed that ambient water quality sampling and use of an appropriate predictive water quality model was required to address the latter concern. This position was restated in EPA's April 22, 1988, formal response to the first public notice for the proposed project.

On September 9, 1988, in response to a revised public notice for the project, Region IV stated that for the project to be environmentally acceptable to EPA, unavoidable wetland impacts must be replaced at a ratio of 1.5 to 1, and that the applicant must conclusively demonstrate that the excavated system will meet water quality standards. After review of the hydrodynamic model prepared by the applicant, EPA stated by letter dated October 19, 1988, that based upon existing information, it was probable that water quality within the basin would not meet water quality standards. EPA once again asserted that a site specific sampling program and model were necessary to rebut that conclusion. Further, that letter expressed EPA's belief that mechanical aeration was not an acceptable alternative to a poorly designed or located marina. These concerns were restated at an interagency meeting on November 14, 1988.

In response to a September 1, 1989, letter from Colonel Bonine, which served as the initial notification to the Agency of his intent to issue a permit, EPA responded by letter dated September 21, 1989, and again stated that based upon existing data, the marina basin would not meet the dissolved oxygen standard. On September 28, 1989, EPA requested a meeting with Colonel Bonine, the Division Engineer, and the applicant. As a result of that meeting, on September 29, 1989, EPA met with ADEM to review the rationale used in reaching their decision to issue water quality certification. On December 6, 1989, EPA met with ADEM to review available water quality data from the ICWW. After final review and analysis of the relevant water quality data, EPA continued to recommend permit denial based upon concerns over adverse water quality in the proposed marina basin.

The history of EPA's involvement in the permit review proces clearly indicates that the Agency repeatedly requested ambient water quality sampling and routinely raised the issue of possible violations of water quality standards. While there is certainly no paucity of EPA comments on water quality issues, both relative to ADEM's findings and independent of those findings, I believe that Colonel Bonine's review did not adequately consider those comments and that this omission is inconsistent with the applicable section of the Corps of Engineers Regulations regarding evaluation of water quality impacts.

The Corps of Engineers Regulations conclude that Section 401 certification by the State will be considered conclusive with respect to water quality considerations "unless the Regional Administrator, Environmental Protection Agency, advises of other water quality aspects to be taken into consideration" (33 CFR 320.4 (d)). As noted previously, in the case of Meyer Properties, the District Engineer concluded that ADEM's certification was decisive with respect to water quality considerations in this case. Colonel Bonine's reasoning in this matter was offered during a meeting with the Regional Administrator on December 5, 1989, and is paraphrased as follows:

> ADEM considered the dissolved oxygen concentration and other water quality parameters in the ICWW in reaching their decision to issue certification; EPA objects to issuance of a permit for this project since it is EPA's opinion that the dissolved oxygen standard will be regularly violated within the basin; therefore, EPA has not raised any other water quality aspect to be taken into consideration.

It is our opinion that if the Regional Administrator has reason to believe that data were ignored or misinterpreted by the State, the Regional Administrator has the responsibility to bring this to the attention of the District Engineer as another factor which must be taken into consideration in reaching an appropriate permit decision. Further, EPA believes that this "other" factor may reasonably include the opinion that a State's conclusions with regard to issuance of certification was based upon a misinterpretation of the relevant information. It is our understanding that the District Engineer suggested that EPA's concerns with the Alabama Section 401 certification could be addressed by withdrawal of the State's authority. Nothing in the CWA authorizes EPA to withdraw the State's Section 401 authority or "veto" the State certification.

It is our opinion that when the Regional Administrator has valid arguments which were not recognized by the State in reaching their decision, the Regional Administrator must bring this information to the attention of the District Engineer so that he may take these "other water quality" aspects into consideration in reaching his permit decision. It is the Regional Administrator's duty to assure that permits are consistent with the Clean Water Act and state his opinion to the District Engineer,

even when the Regional Administrator has considered the same water quality parameters that were reviewed by the State. To define "other" to include only additional water quality parameters which were not considered by the State would severely restrict the authority of the Regional Administrator with respect to water quality matters.

RESOLUTION

In light of the issues raised in this elevation, I believe it is possible to address EPA's concerns without precluding construction of a marina facility capable of serving the Gulf Shores area. EPA Region IV has made it clear throughout the Section 10/404 permit review process that acquisition of site specific data for ambient water quality adjacent to the proposed marina is necessary to fully resolve the issue of potential water quality impacts resulting from the project. Agreement on an appropriate sampling methodology and predictive model and implementation of a program to gather the necessary data would contribute significantly towards understanding baseline water quality conditions prior to construction. If the information gathered indicates that the ICWW adjacent to the proposed marina does indeed experience water quality standards violations, and the selected model predicts that the proposed basin will increase the frequency and duration of these violations, compliance with applicable water quality requirements will not be possible and the permit should be denied. If, on the other hand, forecasts resulting from the site specific sampling predict compliance with the water quality standard, including appropriate consideration of depressed DO levels characteristic of excavated marinas in this region, EPA will withdraw its objection to the proposed project.

EPA is willing to work with the Corps and the applicant to resolve these issues. If future sampling as suggested above confirms our belief that the site currently proposed is unsuitable for construction of a marina basin, EPA will work with the Mobile District and Meyer Properties in evaluating alternative locations for a marina facility. EPA does believe that alternatives which will meet the needs of Gulf Shores without causing or contributing to violations of water quality standards are available.

In closing, the record demonstrates that throughout the permit review process, EPA Region IV formally raised significant concerns with regard to Alabama's Section 401 water quality certification as well as potential adverse water quality impacts associated with the proposed Meyer Properties marina project. These concerns were based on the applicability of available data which were not adequately considered by the Alabama Department of Environmental Management during their review of the proposed project as well as empirical evidence regarding water quality conditions in marina basins of the sort proposed for Gulf Shores. While the Corps permit regulations indicate that State certification is generally conclusive with regard to water quality, those regulations condition that finding with recognition of EPA's expertise and

capability with regard to evaluation of water quality issues. I believe that Colonel Bonine's Statement of Findings does not adequately reflect the letter or the spirit of the Corps permit regulations and I believe that the decision to issue the permit for the proposed project warrants additional review.

I look forward to your response to our concerns. If my staff can be of further assistance during your evaluation of our request, please have your staff direct their questions to William Garvey in the Office of Wetlands Protection at 475-7799. Data which we used to reach our decision in this matter are available for review through Mr. Garvey. You should also, of course, feel free to contact me, or David G. Davis, Director of the Office of Wetlands Protection, at 475-7791.

Sincerely yours,

Robert H. Wayland III

LaJuana S. Wilcher
Assistant Administrator