

STATE OF CALIFORNIA  
STATE WATER RESOURCES CONTROL BOARD

In the Matter of the Petition of )  
 )  
MARY FISHER AND CHARLES YARBROUGH, SR. )  
 )  
For Review of Cease and Desist Order )  
No. 84-058 of the California Regional )  
Water Quality Control Board, Central )  
Valley Region. Our File No. A-356. )  
 )

ORDER NO. WQ 85- 12

BY THE BOARD:

On May 25, 1984, the California Regional Water Quality Control Board, Central Valley Region (Regional Board) adopted Cease and Desist Order No. 84-058, requiring McClellan Air Force Base (McClellan) to cease discharging domestic and industrial wastewater in violation of its NPDES permits and waste discharge requirements. The cease and desist order requires McClellan to comply with a time schedule that will result in the discharge of all domestic and industrial wastewaters to the Sacramento Regional County Sanitation District facilities by May 1, 1988.

On June 22, 1984, the State Water Resources Control Board (State Board) received a timely petition for review of this Order from Mary Fisher and Charles Yarbrough, Sr. (petitioners). Although the time for formal disposition of this petition has now expired pursuant to Title 23, California Administrative Code, Section 2052(d), we have chosen to review the Regional Board action on our own motion (Water Code Section 13320).<sup>1</sup>

<sup>1</sup> Petitioners have requested a hearing to present additional evidence on both the availability of federal funds for construction of a hook up to the  
(CONTINUED)

## I. BACKGROUND

McClellan Air Force Base, which is located about eight miles northeast of downtown Sacramento, produces domestic wastewater from the Base's population of about 17,000 people and also produces industrial wastewater from maintenance and repair activities. McClellan discharges about 1.0 million gallons per day (mgd) of treated domestic wastewater into Magpie Creek, a tributary to the Natomas East Main Drainage Canal which flows into the Sacramento River. At the time the Regional Board adopted the cease and desist order which is the subject of this petition, McClellan was also discharging about 500,000 gallons per day of treated industrial wastewater into their on-base reclamation system for use as cooling tower water and for landscape irrigation.

In 1978 the Regional Board adopted an NPDES Permit for McClellan's domestic and industrial wastewater treatment plants. (Order No. 78-232, NPDES No. CA 0004359.) The order prohibited discharges to surface waters after July 1, 1981. McClellan proposed meeting this prohibition by developing an on-site wastewater reclamation system. The system was completed in 1982. However, it was undersized and could not adequately dispose of all of the wastewater. Therefore, on September 24, 1982, the Regional Board adopted Order No. 82-125 which amended the prior NPDES permit to allow McClellan to discharge

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<sup>1</sup> (FOOTNOTE CONTINUED)

regional treatment facility and the effect which McClellan's violations of waste discharge requirements have had on the quality of water in the area. Our review of the transcript of the Regional Board hearing regarding this matter indicates that petitioners were given ample opportunity to discuss both of these issues (Reporter's Transcript (R.T.), May 25, 1984, pp.2-3; 12-13, 18-25; 52-55; 76). Our decision today will therefore be based on the record which was before the Regional Board.

tertiary treated domestic wastewater to Magpie Creek until July 1, 1985. The Regional Board also adopted Order No. 82-126 which established waste discharge requirements for the reclamation system. McClellan was given until July 1, 1985 to come into compliance with the prohibition of discharge to surface waters.

In early 1984, McClellan notified the Regional Board that it proposed to meet the discharge prohibition by discharging its raw domestic wastewater and treated industrial wastewater to the Sacramento Regional County Sanitation District (SRCSD) system and to abandon its reclamation system. McClellan requested an extension of the July 1985 surface water discharge prohibition to May 1988, due to time constraints in obtaining federal funds for the construction project. In the cease and desist order which is the subject of this petition, the Regional Board granted the time extension with the proviso that if construction funds were obtained at an earlier date, project completion would be moved up a comparable amount of time. In addition, several interim measures were required including evaluation of the possibility of connecting to SRCSD's Watt Avenue interceptor for disposal of part of the wastewater during the interim period.

## II. CONTENTIONS AND FINDINGS

1. Contention: Petitioners contend that continued discharge of domestic and industrial wastewater by McClellan to Magpie Creek directly affects the quality of drinking water and the health and safety of numerous downstream residents and therefore additional time should not have been granted to comply with the surface water discharge prohibition.

Finding: It is important to point out at the outset of this discussion that the issue being reviewed today is limited to the effect of

discharges from the domestic and industrial wastewater treatment plants and reclamation facilities. McClellan is also involved in a major clean up of on-site toxic wastes which were disposed of on its property and have since leached into the underlying ground water. This clean up is being conducted under the direction of the McClellan Groundwater Task Force which includes representatives of regulatory agencies, an employees' union and the public. This is a separate issue and not directly relevant to the matter before us today.

Petitioners own property which abuts Magpie Creek. One petitioner's well, which is her sole source of domestic water, is within 50 feet of Magpie Creek. The record does not contain sufficient evidence to determine whether Magpie Creek contributes to aquifer recharge in the vicinity of petitioner's well. However, for purposes of this Order, we will assume that Magpie Creek provides at least partial recharge of that aquifer.

It is certainly true, as petitioners assert, that McClellan has experienced difficulties with the operation of its wastewater collection, treatment, and reclamation facilities. The total Coliform Organisms Effluent Limitation in Order No. 82-125 (Effluent Limitation B.1) on domestic effluent discharged to Magpie Creek had been exceeded on numerous occasions. During 1983, the daily maximum limitation of 23 MPN/100 ml was exceeded on 57 days and the 30-day median limitation of 2.2 MPN/100 ml was exceeded during four months. At this point, however, McClellan has been successful in eliminating its coliform violations. McClellan believes the violations were largely the result of removing a 70-foot effluent holding basin from service for re-lining. This tank was operational again by March 1, 1984. Also, McClellan has increased the chlorine daily feed rate to 100 pounds per day. There have been

no coliform violations since these actions were taken. Unfortunately, due to these actions, the treated domestic effluent now occasionally exceeds the chlorine limit. McClellan is in the process of correcting this problem by installing a sulfur dioxide dechlorination unit.

McClellan had a second problem in that its reclamation system was ineffective in preventing discharges of industrial effluent to receiving waters. Surface runoff was discharged directly to receiving waters year-round because the reclamation system was undersized and irrigated lands were in close proximity to receiving waters. Therefore, operation of the irrigation system placed McClellan in nearly constant violation of Provision C.9 in Order No. 82-126 which states, "Reclaimed wastewater shall be well managed to minimize erosion and runoff". As required in the interim plan, steps have been taken to correct the surface runoff problems of the reclamation system. McClellan has installed berms around the irrigated land and has adjusted the sprinklers to ensure that spray patterns avoid coverage within 50 feet of creeks and drainage courses. In addition, McClellan has reduced the annual irrigation application rate from approximately 5 acre-feet per acre to 3 acre-feet per acre.

These actions have not been sufficient to end and completely control surface runoff and erosion during winter months when the ground is saturated. However, effective July 1985, McClellan has begun using an interim connection with a capacity of 0.5 mgd to the SRCSD system. A majority of the industrial effluent is now being discharged to this system and the irrigation system is being phased out.

We note that at least some of the treated industrial effluent continues to be used as cooling water and then to be discharged to surface waters. Due to the presence of volatile organic compounds and trace elements,

this treated industrial effluent can have a more adverse impact on water quality than the treated domestic effluent. We therefore direct the Regional Board to revise the NPDES permits, waste discharge requirements and cease and desist order, as appropriate, to require compliance with the prohibition at the earliest possible date for all industrial plant effluent. This action shall be taken unless McClellan can demonstrate to the Regional Board, within three months of the date of this Order, that compliance with such a requirement is not feasible.

A third difficulty has involved storm water inflows into both the sanitary and industrial waste collection systems. These inflows were significant, and the potential for raw wastewater overflows in both systems was high. A storm water infiltration and inflow report determined that total surcharging of the gravity portion of the sanitary collection system could occur from storms with an intensity-duration having a five year return interval. Also, total surcharging of the gravity portion of the industrial waste collection system could occur whenever rainfall intensity exceeded 0.2 inches per hour. This intensity normally occurs every year. Therefore, McClellan threatened to violate Discharge Prohibitions A.1 and A.2 in Order No. 82-126 which provide as follows: "(1) The direct discharge of wastes to surface waters or surface water drainage courses is prohibited; (2) The bypass or overflow of untreated or partially treated waste is prohibited." The interim plan requires McClellan to eliminate the potential for untreated wastewater overflows and by-passes. McClellan has responded by instituting a water conservation program and a \$500,000 collection system rehabilitation program recommended by their consultants.

Review of 1983 monitoring data demonstrated that McClellan exceeded heavy metals limitations on an infrequent basis. The chromium limit in

receiving waters had been exceeded on six occasions, and the lead limitation had been exceeded once each in the receiving waters and the industrial plant effluent. Also, trace amounts of volatile organic compounds had been detected in the industrial treatment plant effluent and in receiving waters. No specific action has been taken by McClellan with respect to the heavy metals violations. However, these violations have not recurred during the last year.

The petitioners particularly contend that continued discharge into Magpie Creek results in high coliform levels in the creek and damages domestic water supplies. As already discussed, Order No. 84-058 requires compliance with specified coliform limits, and McClellan is meeting those limits. It is therefore necessary to determine whether a continued discharge containing less than the monthly median limitation of 2.2 MPN/100 ml poses a threat to ground water used for domestic water supply. As water percolates through an unsaturated zone, bacterial contaminants are removed. A number of physical site characteristics affect this removal process. These include depth to ground water, soil constituents, and soil percolation rates. In the vicinity of the petitioner's property, the average depth to ground water is approximately 80 feet. Over this distance, the soil will provide significant bacterial removal for the treated wastewater percolating through it. The Department of Health Services' monthly median drinking water standard for coliform is 1 MPN per 100 ml. McClellan's discharge is diluted in Magpie Creek, filtered through 80 feet of soil, and diluted in the aquifer. Considering these facts, it is reasonable to conclude that the coliform levels in McClellan's domestic water discharge does not threaten the petitioner's water supply.

Given the improvements that have been made to McClellan's interim facilities, the tertiary treatment which is being given to its domestic wastewater, and the routing of a majority of the industrial effluent to the SRCSD plant which eliminates that discharge to surface waters, we conclude that it was appropriate to grant McClellan additional time to comply with the surface water discharge prohibition. However, we are concerned with the length of time given, as discussed below. This conclusion is contingent also upon our direction to the Regional Board to revise the NPDES permits and waste discharge requirements to eliminate the total industrial effluent discharge to surface waters and ground water.

2. Contention: Petitioners contend that McClellan failed to furnish an adequate explanation of its failure to complete a project which they originally agreed to complete by July 1981 and that they failed to show good causes for an extension of time to comply with the discharge prohibition.

Finding: The State Board was not a party to the Regional Board's approval of McClellan's proposal to meet the original July 1981 surface water discharge prohibition by establishing an irrigation/reclamation project. However, we have in the past strongly supported proposed reclamation projects and note that the Regional Board concurred in McClellan's assessment at the time that the project would be successful. (R.T. p. 15.) It was apparently only in early 1984 that an engineering consulting firm's study of the needed improvements to the reclamation system revealed that a major construction effort would be required. Since that time, McClellan has certainly taken reasonable steps to achieve a final and permanent solution to the pollution problem involved. As discussed at the Regional Board hearing, three years of lead time would normally be necessary to obtain the Congressional appropriation

needed to construct the project which would provide the permanent solution. McClellan is attempting to expedite the availability of funds for the necessary project. We note that the cease and desist order took this into consideration and expressly provides that the date for compliance with the prohibition will be accelerated to the extent that funds are available prior to federal fiscal year 1987 which was the estimated date for initiation of construction.

Given our conclusion above that downstream water users are adequately protected by the interim measures which have been taken, and the quality of the wastewater which is being discharged, we find that an extension of time to comply with the surface discharge prohibition was appropriate. However, pursuant to authority contained in Water Code Section 13320, we requested augmentation of the record on this issue. Information from the petitioner and McClellan was obtained. Based on a review of that evidence and the entire record, we have determined that through the exercise of due diligence, McClellan ought to be able to comply with the prohibitions by August 1987. Accordingly, we will direct the Regional Board to require compliance by that date.

### III. CONCLUSIONS

After review of the record and consideration of the contentions of the petitioners, and for the reasons discussed above, we conclude as follows:

1. An extension of time to McClellan to comply with the surface water discharge prohibition does not threaten the quality of the drinking water or the health and safety of the petitioners in light of the interim measures which have been taken and the quality of the wastewater which is being discharged.
2. The record supports a conclusion that McClellan can, through the exercise of due diligence, comply with the prohibition by August 1987. The

Regional Board must amend this time schedule to require compliance by that date.

3. The Regional Board must revise the NPDES permits, waste discharge requirements and cease and desist order, as appropriate, to require compliance with the prohibition at the earliest possible date for all industrial plant effluent. This action shall be taken unless McClellan can demonstrate to the Regional Board, within three months of the date of this Order, that compliance with such a requirement is not feasible.

IV. ORDER

IT IS HEREBY ORDERED that;

1. The petition is denied.
2. The Regional Board is directed to take the actions listed herein.

V. CERTIFICATION

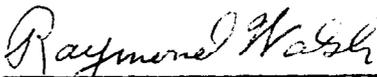
The undersigned, Executive Director of the State Water Resources Control Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on October 17, 1985.

Aye: Raymond V. Stone  
Darlene E. Ruiz  
E. H. Finster

No: None

Absent: None

Abstain: Eliseo M. Samaniego

  
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Raymond Walsh  
Interim Executive Director

