

Decision No. 79097

ORIGINAL

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Corral de Tierra Homeowners,)
a Corporation,)
Complainant,)
vs.)
Toro Water Service,)
a Corporation,)
Defendant.)

Case No. 9156
(Filed December 7, 1970)

Robert T. Adcock, for Toro Water Service, Inc.,
defendant.
Robert H. Ames, Attorney at Law, for Corral de
Tierra Homeowners, complainant.
Leslie D. Hay, for the Commission staff.

O P I N I O N

By this complaint filed December 7, 1970 the Corral de Tierra Homeowners Association alleges that water supplied by defendant is corrosive and is high in total dissolved and suspended solids; that pressures fluctuate radically; that there is excessive air in the water; that applicant has failed to install meters; that the system is not routinely flushed; that fire protection is inadequate; that poor water quality results in excessive repairs to users' plumbing; that defendant is slow to respond to complaints; and that water service is frequently interrupted without prior warning by defendant.

Complainant requested an investigation and public hearing; a complete chemical analysis of the water; and an order requiring elimination of the corrosiveness of the water and further requiring the immediate installation of a properly engineered sediment tank to remove excessive suspended solids from the water.

Defendant, in its answer to the complaint, stated that it had been working with the Monterey County Health Department regarding the quality of water and had, at the recommendation of the Health Department, installed a sand separator and a chemical feed pump to treat the water with caustic soda and a standby generator. It denied the remaining allegations set forth in the complaint.

Public hearing was held in Salinas on April 29 and May 12, 1971 before Examiner Gillanders and the matter submitted on the later date.

Complainant presented 11 witnesses and seven exhibits to substantiate the allegations contained in its complaint.

Testimony was presented by 2 witnesses from the Monterey County Health Department.

Defendant presented testimony and one exhibit. A staff engineer presented testimony and three exhibits.

The Commission, upon consideration of the evidence in this proceeding, finds that:

1. Defendant, Toro Water Service, Inc., obtains its water from two rotary drilled and gravel packed wells located along the Salinas-Monterey Highway. The original well has an 8-inch casing and is 700 feet deep. It is equipped with a line-shaft deep well turbine pump driven by a 30-horsepower motor. The pump is rated to produce approximately 200 gallons per minute. The second and newer well has a 10-inch casing and is 550 feet deep. This well is equipped with a submersible deep well turbine pump driven by a 5-horsepower motor. This pump will produce approximately 50 gallons per minute.

2. The water utility facilities are provided with power purchased from Pacific Gas and Electric Company. Prior to September, 1970, defendant installed a gas-engine powered 440-volt, 50 Kw standby generator. The generator is automatically controlled to

supply power when commercial power is not available and cease operating when commercial power again becomes available. The generator is equipped to serve both the well station and the booster station.

3. The well pump station is adequately fenced and facilities are protected against vandalism and accidents. Additionally, defendant is revamping some of the facilities to obtain even greater protection.

4. Defendant has a 12,000 gallon steel storage tank and a 1,000 gallon steel hydropneumatic tank. Water is pumped from one or both of the two wells into the storage tank at its location on top of a knoll. The water is then pumped from storage by means of a 1-horsepower, centrifugal booster pump through the hydropneumatic tank into the distribution system. The booster pump produces approximately 55 gallons per minute at system operating pressures. In March, 1971 the utility installed an additional 1/2-horsepower centrifugal booster pump. This pump provides an additional 40 gallons per minute for the distribution system. There is also an automatically controlled compressor which is used to recharge air into the hydropneumatic tank.

5. The storage tank also serves as a sand separator. To make sure of centrifugal force, the water is pumped into the tank at its periphery so that the particles of sand settle out along the perimeter of the tank. Water is then pumped from the center of the tank through the hydropneumatic system and into the distribution system.

6. Defendant uses "Mercoid" mercury switches to resolve potential emergencies before they occur. One switch operates the system in its normal manner, in that it controls the pressure of the water boosted from the storage tank into the distribution system. From a maximum flooded suction of approximately 9 psi, the booster pump increases the water pressure to between 28 and 40 psi at the booster pump discharge. In the event the booster pump should fail,

a second switch will cause the storage tank to be by-passed and well water will be pumped directly into the system during emergencies. A third switch operates in such a manner as to ensure that the discharge pressure of the pumps into the distribution system will not exceed 50 psi. In the event this level of pressure is attained the control will automatically turn off whichever pump is supplying water to the distribution system.

7. If all pumps were to fail so that no water would be pumped directly into the distribution system an altitude type check valve would be opened by the pressure of the water within the storage tank so that this water could be used to serve the distribution system without the benefit of boosting. The present storage would allow in excess of 4 hours continual usage by customers under the present pattern of usage even during peak period. At the present time controls are set to ensure that there will never be less than 8,000 gallons in the storage tank at any time.

8. Water pressures are being maintained within the standards set by the Commission's General Order No. 103. Some customers, who reside in homes at the lower elevations, are served from mains in which the pressure exceeds the 125 psi normal operating range prescribed by the general order. Most, if not all, of these customers have pressure reducing valves on their facilities. The water pressures at the higher elevation homes are within the 20-25 psi range established by the general order. Pressures at higher elevations can diminish below standards during emergencies such as use of fire hydrants by fire fighting authorities.

9. Prior to installation of the storage and booster pump facilities the water was pumped directly into the distribution system from the wells. Air was also pumped into the distribution system resulting in air bubbles at various locations throughout the distribution system. The air would occasionally pass through the customers' meters and services and into their facilities. With the

installation of the booster pump and storage facilities most of the air problems experienced by the customers have been eliminated.

10. All customers now receive metered water service. The final few meters were installed subsequent to the filing of the instant complaint.

11. Water samples taken and tested by the Monterey County Health Department during September, 1970 indicated that the pH of the water from wells 1 and 2 was 6.4 and 6.8, respectively.

12. In November, 1970 the Monterey County Health Department recommended that a standby generator and a sand separator be installed and that the water be treated by adding caustic soda (NaOH).

13. Defendant subsequently installed two injector type chemical feeders with which to add caustic soda (NaOH) to the water.

14. Samples taken in April and March, 1971 showed the water to have a pH of 6.6-6.8.

15. A sample of water taken on March 15, 1971 showed a pH of 7.18.

16. The Monterey County Health Department recommended the pH be maintained between 7.2 and 7.4.

17. Subsequent to the April 29 hearing, Doctor Marchi, holder of a PhD in chemistry and a customer of defendant, determined the proper amount of NaOH to be added to the water.

18. On May 10, 1971 a sample of water tested by the Monterey County Health Department had a pH of 7.01.

19. Dr. Marchi made various pH tests of the water and on May 11, 1971 the pH was 7.2.

20. Water supplied to the community swimming pool did not meet Monterey County Health Department turbidity standards. Turbidity was 13 instead of 10.

21. Copper in the water meets the standards of the United States Public Health Service.

22. In September 1970, as a result of the water system being used by firefighters to refill water tanks, certain customers were without water or lacked sufficient pressure to wet down their property.

Conclusions of Law

The Commission concludes that:

1. Prior to May 11, 1971 water supplied by defendant to its customers was less than a pH of 7.2 but that defendant on or about May 11, 1971 has been and is capable of supplying water of a pH that meets the standards for pH set by the Monterey County Health Department.

2. Applicant must continue to treat its water with NaOH in order to control the pH.

3. Water supplied by defendant does not presently meet the turbidity standards of the Monterey County Health Department.

4. Applicant must install a satisfactory sand separator in order to meet turbidity standards.

5. Defendant may be required to supply water for the use of fire fighting departments or agencies only to the extent that water for such purposes is available in the normal course of its operations.

6. Other than turbidity, defendant has resolved the complaints alleged by complainant.

O R D E R

IT IS ORDERED that:

1. Defendant continue to treat its water with NaOH in such a manner that the pH of the water supplied to its customers will be within the range of 7.2-7.4.

2. Defendant shall, within 180 days of the effective date of this order, install a Krebs Centrifugal Sand Separator Model W-100 or equivalent.

3. Defendant shall report in writing its compliance with ordering paragraph 2 above.

The effective date of this order shall be twenty days after the date hereof.

Dated at San Francisco, California, this 31st day of AUGUST, 1971.

[Signature]
Chairman

[Signature]

[Signature]

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Commissioners