

BRICK BUILDING NEAR HILL WILL BE KEY TO CITY WATER SYSTEM

Plant Second to None in
Nation for Town of
Boulder City's Size

TO FINISH FEB. 13

Engineers Explain Course
Water Will Take Before
Going to Homes of City

By ELTON GARRETT

That mysterious, tower-like brick house at the upper end of town soon will be in operation, furnishing to all Boulder City a band of water that is pure and wholesome, and which is minus all the silt with which it was laden before it was pumped from the Colorado river.

In about two weeks the purification plant of which that building is a part will be at work filtering and treating water in sufficient quantity to supply the community with an entirely different brand of water.

G. G. Walter, bureau of reclamation inspector in charge of the construction of the water purification and the sewage disposal plants, and Superintendent T. H. Shannon of the Stearns-Roger Manufacturing company of Denver, went over the water plant recently with your representative and pointed out some of the most interesting features of the \$30,000 plant, construction of which has been nearly finished by Stearns-Roger.

AT THE RATE of 1,500 gallons a minute this plant can purify water, although but about two-thirds that amount is expected to be needed.

First, let's go down the narrow, steel, spiral stairway below the surface of the earth under the building, and see with the engineers a gallery of more than 70 tons of cast iron piping, some of it as much as 16 inches in diameter, suspended on both sides of the room and leading in and out in various directions.

The "heart" of the plant, so to speak, is this roomful of huge pipes and valves that will control the flowing of the water in course of purification.

THEN LET'S RETURN to the control room on the ground floor, where automatic lever control system can be seen, in the center of the room. These levers control all the pumps and valves, and thereby all the flows of water.

Let's then take a look down into those deep filtration tanks inside the building.

Men are dumping sacks of pure white sand into chutes that send it to the bottom of the tanks about 10 feet below. Water will filter through that clean sand and then through gravel, losing impurities in

that process, it is explained.

We now ask our guides just what processes the water will go thru from the time it leaves the river, that we might understand what all this is "about."

THE MUDDY water will be pumped into "presedimentation" tanks near the river level, where much of the silt will be settled out.

It will then be pumped seven miles and more, thru one-foot pipe, up to the 100,000 gallon tank at the foot of "water-tank hill."

Thence it will be piped down to the purification plant in which we are standing. It will go thru a pipe in the sub-surface gallery of the plant, and then to the chemical mixing chambers for treatment. These chambers are outside the building.

FROM THE CHEMICAL chambers it will go to the big clarifying tanks, where sediment will be settled out.

Then come the re-carbonating chambers, where carbon-dioxide is forced into the water.

Next it will return by pipes thru the gallery and into the filter beds.

After filtration, it will be chlorinated and sent to the clear well, whence it will be pumped again, up to the big tank at the top of the hill, which is capable of holding 2,000,000 gallons of pure water.

THE STORAGE tank will give Boulder City pressure in the mains that recently were completed thru-out the community, and which will lead to all homes and business houses.

The water will be as pure and as soft as can be desired after this careful treatment in Uncle Sam's well-planned purifier. It will be as different from the water which courses the bottom of Black canyon as water can very well be.

Chlorination at the lower level will be ceased, and the water will lose the peculiar taste with which it has been tinged as the result of its treatment by the temporary system.

Were they not to contain water for drinking and cooking for an entire town of 5,000, the two big concrete clarifying basins would offer a splendid plunge in the summertime for Boulder's boys! For they are each 45 feet in diameter and 11 feet deep.

THE SOLE SWIMMERS in these pools, however, will be long, ribbed metal arms called "agitators," which will revolve on a central axis at the bottoms of the tanks to keep the water in motion and send settling sediment into the sediment outlet near the center at the bottom.

These big concrete tanks soon will have been painted with two coats of waterproof paint.

Deep concrete channels leading away from the clarifiers have pipes in the bottom, from holes in which will be forced carbon dioxide to purify the water.

Dorr pumps and clarifier equipment and International filter equipment were installed by Stearns-Roger in this plant. Byron-Jackson pumps were used and Dorr sludge pumps.

EIGHTY TO NINETY men have been employed on this job, the crew now being but around thirty men as completion date, February 13, is neared.

The water for the community until now has been chlorinated and settled at the river and pumped into the 100,000 gallon tank, from which it has been going into the mains.

PURIFIER AND sewage disposal plant together are costing the government about \$38,000, most of which is for the water plant.

The disposal plant, located at the lower end of town, away from the residence district, is almost completed, painting and final installations being all left remaining before it can be put into operation.

Boulder City's water purification plant is proclaimed by experts as one of the most complete and modern of any town of equal or even greater size in the United States today.