

Tuai: Abnormally heavy rains on 14th May caused a sudden rise in the streams feeding Lake Whakamarino, bringing down large quantities of debris, which necessitated constant attention at the Pipipaua intake screens. A major slip caused the break-away of approximately 60 ft. of the Mangaone Stream concrete piping.

No. 1 governor control became erratic on the 19th December, and after adjustments were made remained in service until a complete overhaul was undertaken in March.

The changeover of the headgates Nos. 1, 2, and 3 from D.C. to A.C. control was commenced.

Piripaua: In May a large slip at the back of the power-house carried away six lengths of the 6 in. emergency pipe-line. Short lengths of wood found their way past the intake screens, causing reduction in loads and the breakage of numerous turbine gate safety links. The rotor of No. 5 generator was removed on the 29th November for an examination of loose iron in the stator. After repairs had been effected, No. 5 generator was placed on short-circuit dry out, finally going on to commercial load on the 14th December.

Kaitawa: In April, No. 7 machine was tested and put on load, with a limit of 10,000 kW. until such time as the balance of the governor parts arrived in February. In October the 16,000 kW. No. 6 machine was tested and put on load. Initially when both machines were in operation debris was carried through the tunnels to the top of the penstocks and several shutdowns had to be arranged to clear the large pieces of bush timber and rubble.

In July a fault developed in the stator of No. 7 unit, requiring the replacement of twelve coils of the generator winding.

During the summer, advantage of load conditions was taken to overhaul the machines while the interior of the tunnels and penstocks were repainted where timber and rubble had caused havoc to the initial painting.

Generator-running times were as follows for the year:—

Generator No.			Time on Load.		Time Idle.		Time under Repair.		Percentage Availability for Service.
			Hours.	Percentage.	Hours.	Percentage.	Not in Demand (Hours).	In Demand (Hours).	
Tuai									
1	..	..	6,872	78.45	1,530	17.46	355	3	95.91
2	..	..	6,308	72.01	2,112	24.11	339	1	96.12
3	..	..	4,812	54.93	3,730	42.58	218	..	97.51
Piripaua									
4	..	..	6,228	71.09	2,226	25.41	304	2	96.50
5	..	..	5,931	67.70	2,209	25.22	619	1	92.92
Kaitawa									
6	..	..	2,410	56.10	1,368	31.84	517	1	87.94
7	..	..	4,542	53.46	1,709	20.12	1,677	568	73.58

Mangahao.—The year's rainfall at No. 1 dam, being 123.77 in., was somewhat better than the previous year's 110.26 in. At No. 2 dam it was 118.73 in., at No. 3 dam 88.52 in., and at the power-station 53.00 in. Water spilled to waste over No. 2 dam in twenty-one weeks of the year.

The disperser valve grillage at No. 1 dam became so blocked with timber in March, 1949, that the dam had to be emptied and the trees removed with a winch. Opportunity was taken to sluice mud away from the channel leading to the bypass gate.