Environmental Surveys

One hundred and twelve soil samples, 112 vegetation samples, and nine water samples were collected and analyzed for radioactivity during the third quarter of 1956. The sampling stations are the same locations as stated in previous reports with the exception of the Santa Susana survey, which has an additional station. This station is designated station 12, and is located at the KEWB cooling water discharge point. The purpose of station 12 is to measure any increase in the environmental activity due to radioactivity in the KEWB cooling water. The monthly average activities in each area are illustrated in figures 1 through 10.

The water samples were taken from the ponds at stations six and nine and also from wells seven and eleven. The maximum activity in the water was $2.91 \times 10^{-9}$ c/cc of alpha activity and $2.52 \times 10^7$ c/cc of beta-gamma activity.

An air sampler was in continuous operation at Vanowen during this quarter. The results are shown on figures 11 and 12. Abnormally high activity was encountered during the last half of September. Decay curves on this activity will be presented in the fourth quarter progress report.
Fig. 2: Vegetation Samples from Donney,

μg/gm × 10⁷

Fig. 7
Soil Samples from Site Valley
μg/gm x 10^6

Jan  Feb.  Mar  Apr  May  June  July  Aug  Sept
Fig. 5
Soil Samples from Russell Valley and Vicinity
$\mu g/gm \times 10^4$
Vegetation Samples from Russell Valley and Vicinity

Fig. 12
Daily Long-Lived
Air Activity at Vanuatu
(0.06 x 10^9)