

The two highest stations for the year (through October) were #1 and #14 with 11.5 mrem and 72.2 mrem, respectively (stray chambers). These data do not include background radiation which is taken as 71.2 mrem, calculated by the licensee as the average of stations 2 and 5 located at Fortuna and Arcata, California, respectively. The year-end projected exposure, based on station #14, would be approximately 86.5 mrem.

Environmental film badge records showed the following doses for the year through September 24. These data do not include the background badge readings (background is approximately 100 mrem/year).

<u>Station</u>	<u>Dose</u> (mrem)
1	33
2-7	0
8	4
9	0
10	4
11	25
12	15
13	4
14	48
15-30	0

2. Continuous Air Monitor - Humboldt Mill Station

Samples are removed from the station weekly and analyzed at the PG&E laboratory in Emeryville, California. Results were available through July 9, 1968. The maximum air concentration noted was 0.473 $\mu\text{Ci}/\text{m}^3$ or $4.7 \times 10^{-13} \text{ uCi/cc}$.

3. Test Wells

Six test wells are sampled weekly and the results graphed. Three of the wells are sampled for Zn-65 only; the remaining well samples are gamma scanned. Following are year to date averages and maximums.

<u>Well No.</u>	<u>Average</u> <u>$\mu\text{Ci/cc} \times 10^{-7}$</u>	<u>Maximum</u> <u>$\mu\text{Ci/cc} \times 10^{-7}$</u>	<u>Location</u>	<u>Remarks</u>
1	1.0	2.0	Drinking water 1 mile east of plant	Zn-65 only
2	1.0	1.0	East, across highway from plant	

<u>Well No.</u>	<u>Average uCi/cc x 10⁻⁷</u>	<u>Maximum uCi/cc x 10⁻⁷</u>	<u>Location</u>	<u>Remarks</u>
3*	250.0	500.0	Condensate storage tank area	Zn-65 only
4	5.0	8.0	North of plant between building and canal	
5	1.0	4.0	60 feet east of plant	Zn-65 only
6	5.0	6.0	Northwest of plant	

*Residual activity from Zn-65 leak from spent fuel pool occurring in 1967. Situation corrected in 1967 (see report 133/67-3). Graph shows downward trend. The unrestricted release concentration limit (10 CFR 20 App.B) for Zn-65 is 1.0×10^{-4} uCi/cc, averaged over seven consecutive days.

The gamma scan records also showed minor peaks representing Cs-134, -137.

4. Other Environmental Samples

Various samples of animal thyroids, milk, vegetation and domestic water are taken from one to four times per year. Following are the results through June 1968 of the samples taken.

<u>Month</u>	<u>Type</u>	<u>Activity (Gross Beta)</u>	<u>Remarks</u>
April	Domestic water	2×10^{-9} uCi/ml	
June	Domestic water	1.5×10^{-9} uCi/ml	
March	Rabbit thyroid	10 picocuries of I-131 total	
June	Rabbit thyroid	4 picocuries per gram of I-131	Will use beef thyroids in future
April	2 gallons milk	2.64×10^{-9} uCi/ml	One gallon taken one mile east of plant; one gallon five miles south of plant

<u>Month</u>	<u>Type</u>	<u>Activity (Gross Beta)</u>	<u>Remarks</u>
June	2 gallons milk	2.64×10^{-9} uCi/ml	One gallon taken one mile east of plant; one gallon five miles south of plant
May	Vegetation	7.6 picocuries/gram	