AEROTEST OPERATIONS, INC.
3455 FOSTORIA WAY • SAN RAMON, CALIFORNIA 94583 • (415) 866-1212

8 August 1994

Executive Director for Operations
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Docket No. 50-228

Dear Sir:

This informational letter is to keep the cognizant NRC personnel informed on our program to meet the requirements of 10 CFR 20.1301. We are currently using calculations as specified in 10 CFR 20.1302 (b) (1) to demonstrate that we are not exceeding the annual dose limit.

In anticipation of the required lower limits in the newly implemented 20.1301 requirements, we increased our fenced area and added significant shielding to our largest source of environmental radiation, the demineralizer column. The additional shielding consists of 2 inches of lead, 7.5 inches of concrete and an additional 24 inches of concrete about 3 feet away from the new shields. These changes were all made in early 1994.

The overall dose reduction factor from these changes is calculated to be a factor of about 100. The dosimetric monitoring period was reduced to monthly from quarterly in order to evaluate our dose reduction techniques in a timely fashion. And, indeed, the doses at our fences dropped as expected in March, 1994. See Table I. However, the doses from succeeding months have begun increasing in spite of reduced reactor operating hours.

To counteract any forseeable problems, a letter was requested and received from our neighbor on three sides Pacific Gas and Electric Company (PG & E) concerning their limited occupancy of the area next to our east fence. Administrative controls were added to the north and west fences in the form of periodic surveillance (approximately 1 hour intervals) of the area whenever the reactor is operational. As an additional safeguard, we have made and are continuing to refine fence surveys using collimated detectors under shutdown and 180 Kw power conditions in order to re-identify our source of radiation.

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We are investigating also the components of our peripheral doses in terms of procedure and accuracy. To bolster our environmental data, we have added calcium sulfate chips at our fence line, are going back to quarterly monitoring based on recommendations from our dosimetry supplier, Radiation Detection Company, and placed albedo dosimeters at the two closest PG & E work sites.

A special session of our Reactor Safeguards Committee (RSC) was convened to discuss the accumulated data to date. The RSC has suggested various actions which should help in our efforts to meet the requirements of 20.1301 without having to rely on occupancy rates and administrative controls. Aerotest will pursue these actions in a timely fashion in an effort to confirm the adequacy of our changes to meet the new requirements and will provide updates on our progress to the NRC.

Very truly yours,

Ray R. Tsukimura
Vice President,
General Manager

cc: Marvin Mendonca, USNRC
Samuel Collins, USNRC, Region IV
G. Ben Huber, AO
Roy Lewey, OEA

TABLE I

PERIMETER DOSIMETRY vs N-RAY ROOM

| QUARTERLY Period ending | FENCE Doses * East | West | North | South | N-Ray Room | Reference Badge | Rx Op. hours |
|---|---|---|---|---|---|---|---|
| 6/91 | 55/40 | 60/40 | 10/0 | 30/0 | 750/500 | 75/40 | 787 |
| 9/91 | 55/35 | 50/0 | 20/0 | 30/0 | 600/100 | 65/0 | 706 |
| 12/91 | 25/0 | 70/0 | 20/0 | 30/0 | 500/85 | 70/0 | 790 |
| Annual | 210 | 220 | 50 | 90 | 1425 | 250 | 2978 |
| 3/92 | 90/30 | 75/0 | 40/0 | 55/0 | 960/200 | 130/0 | 640 |
| 6/92 | 80/0 | 70/0 | 35/0 | 30/0 | 700/350 | 80/0 | 569 |
| 9/92** | 95/0 | 100/0 | 50/0 | 60/0 | 800/190 | 180/0 | 550 |
| 12/92 | 30/0 | 25/0 | 0/0 | 0/0 | 270/130 | 30/0 | 506 |
| Annual | 325 | 270 | 125 | 145 | 3590 | 420 | 2265 |
| 3/93 | 85/0 | 45/0 | 0/0 | 0/0 | 550/260 | 55/0 | 492 |
| 6/93 | 45/0 | 45/0 | 0/0 | 25/0 | 85/40 | 50/0 | 490 |
| 9/93 | 45/230 | 30/0 | 20/0 | 20/170 | 500/160 | 50/0 | 473 |
| 12/93 | 65/0 | 50/0 | 15/0 | 25/0 | 350/110 | 70/0 | 472 |
| Annual | 470 | 170 | 35 | 240 | 2055 | 225 | 1972 |
| 1+2/94 | 35/0 | 15/0 | 20/0 | 10/0 | 490/50 | 30/0 | 284 |
| 3/94 | 10/0 | 10/0 | ND | ND | 290/40 | 25/0 | 199 |
| 4/94 | 20/0 | 15/0 | 10/0 | ND | 250/50 | 15/0 | 162 |
| 5/94 | 30/0 | 30/0 | 20/0 | 20/0 | 230/0 | 35/0 | 145 |

* Note: Doses reported for neutron/gamma in milliRem since change to Radiation Detection Company.

**Note: ARRR operating power level dropped from 250 to 180 Kw