

RADIOLOGICAL ASPECTS  
OF  
OPERATION ALERT 1958

I Summary of the Cadre's Action and Radiation Exposure

The Cadre at Oneida observed heavy fallout at 9:00 P.M. Oneida time. The field quickly built up to 8.2 R/HR and at 9:30 P.M. the decision was made to leave Oneida and move toward Oak Ridge where fallout was not expected to be heavy. At 10:00 P.M., the cadre departed from Oneida southward on route 27 to Oak Ridge. At Wartburg, fields were down to 6 R/HR and the cadre went on to Oak Ridge. Arrived in Oak Ridge at 11:45 P.M., found fields of 5 R/HR, and 15 minutes later departed from Oak Ridge going via Kingston to Athens, Tennessee. The cadre arrived at Athens at 2:00 A.M. and found negligible fallout there. The cadre personnel received doses of 20 R during the time of exposure to fallout radiation.

II Summary of Present and Future Condition of City of Oak Ridge, Plant Sites, and Possible Work Schedules (H plus 2 weeks)

The cadre is presently located at Athens, Tennessee, where there is no appreciable fallout. The plant workers are also located in nearby clean zones. The radiation level in Oak Ridge is presently 90 mr/hr. The following conditions are apparent from a radiological point of view.

1. Since H plus 1 day, crews could go from clean areas into Oak Ridge on an emergency basis (loss of life or valuable property) and work for any number of eight hour days. If production were considered sufficiently vital, then this emergency could be decontamination of plant facilities.
2. If production were not considered emergency as above, then workers can now (H plus 2 weeks) go to plant sites on a one shot, eight hour day to decontaminate facilities. This would necessitate their receiving a permissible quarterly dose. Plants can probably now be decontaminated to permissible levels (300 mr/40 hr. week).
3. If extensive decontamination were not undertaken, then the earliest that workers will be able to commute to Oak Ridge on a routine basis and work an eight hour day will be H plus 4 months.
4. Oak Ridge cannot be reinhabited until H plus 1 year when the dose rate is about 300 mr/week.
5. The dose to the cadre by H plus 1 day was 20 R and the dose to the plant employees who originally evacuated to Crossville was less than 15 R. We assume that the plant personnel moved south to the clean zone by H plus 1 day.

RADIOLOGICAL ASPECTS OF OPERATION ALERT 1958

-2-

6. The radiation level in Oak Ridge at H plus 30 days will be 40 mr/hr.

1035148