1558 Atomic Disposal Company, Inc.

AEC LIC. NO. 12-11286-1

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FRANCIS X. PASTORELLE PRESIDENT June 11th. 1968 EDWARD FREDRICK VICE PRESIDENT

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Mr. Nate Bassin U. S. Atomic Energy Commission Division of Materia's Licensing Washington, D. C. 20545

Dear Mr. Bassin:

The following is submitted in answer to your request of May 20th 1966 for a more detailed description of our proposed training program.

ainee will begin with seven to twelve hours of instruction ording on the individuals previous instruction and experience) in the subjects listed in the outline previously submitted. The trainee will be expected to know pertinent facts similar to those samples listed on the attached sheet. The questions, derived to brin out these facts in the answers, must be correct before complation of this part of the training program. Incorrect or incomplete answers will be discussed further and the trainee resamined at a later date.

Astruction will also consist of a discussion of 10 CFR 20 to determine where limits on exposure or exposure rate may be exceeded such as the outside fence at the storage house and what can be done to reduce or eliminate such radiation levels, Labelling and record requirements will be interpreted in terms of the requirments for the storage site, packages and truck. Likewise the Emergency Procedmes (previously submitted) will be reviewed to examine the reasoning behind the duties expected of the trainee should such an emergency arise.

the Operating Procedures (previously submitted) will be reviewed and the trainee's knowledge of the procedures checked during the on-the-job training section of the program.

This part of the program will consist of at least five supervised pickups of radioactive wastes of varied isotope and activity. The trainee will perform each step listed in the Operational Procedures and record the necessary records in the truck log, shipping papers

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or survey form. The trainee's performance with survey meters and interpretation of their readings will be evaluated at this time. Performance to be required will be the use of the proper scale or range switch for locating radiation sources, proper relation of the probe to the radiation source depending on the type of radiation emitted. correct reading of the meter and use of the calibration correction factor, and use of the check source to determine instrument operation condition. Active participation in the calibration of a survey meter will be used as training for these techniques as well as a demonstration of the inverse square law.

The trainee will be kept informed of pertinent changes in AEC orDOT regulations. Past performance will be checked periodically by reviewing shipping papers, truck logs, and survey forms with the trainee for irregular readings. Any improper techniques or interpretations will be discussed and corrected immediately.

SAMPLE OF ANSWERS REQUIRED OF ORAL QUESTIONS:

- Radiation is emitted by the nucleus of an unstable radioactive 1. atom.
- Radiation looses energy and causes damage by collisions with 2. or itting electrons.
- The degree of radiation penetration through matter increases with 3. energy (MEV) and type of radiation (Alpha. Beta. Gamma) Common beta-only emitters like H³, S 35, Cl⁴. Ca 45 cannot have

4. measurable exposure rates outside a metal container.

- The exposure rate (MR/hr) from a source is proportional to the 5. activity (MC)
- Personnel exposures can be limited by time. distance and/or 6. shielding and by preventing the intake of isotopes through cleanliness and survey procedures.
- Total body exposures of 100 MR per week are permitted operational 7. limits at which level no somatic or genetic hazard should exist.
- Detectable somatic changes may be detected for total body exposures 8. of about 25 R or greater if received in a period of time less than several days.
- Exposure recording devices like film badges or pocket chambers 9. can have their readings ruined by exposure to light or mechanical shock.
- 10. C.M. Meters must be calibrated to read MR/hr, can read zero in very high dose rates and is best used to locate radiation.
- 11. If survey meter reads 10 MR/hr at 3 feet from a small source the meter should read about .4MR/hr at 15 feet (assuming inverse square failoff or radiation).

Respectfully.

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