030-05982
March 8, 1994
MS-16
9-5

1. Persons with responsibilities dealing with Radiation Safety are:

NORMAN FRITZ - RADIATION SAFETY OFFICER
LARRY HARMON - PLANT MANAGER & ALTERNATE R.S.O.
JOHN MACHUTCHIN, PH.D. - RADIATION CONSULTANT
CHARLES BERLIN - RADIATION SAFETY TECHNICIAN
LESTER BURGESS - HEALTH & SAFETY TECHNICIAN
JERRY SLOWICK - PRODUCTION MANAGER
MARTHA J.R. LAUBACH - PRODUCTION SUPPORT TECHNICIAN

STATEMENT OF EXPERIENCE AND QUALIFICATIONS
LESTER C. BURGESS

EDUCATION:

Shamokin High School, Shamokin, PA Graduated 1971

Bloomsburg University - Earth & Space Science Graduated 1975

WORK EXPERIENCE AT SAFETY LIGHT CORPORATION:

5/30/89 TO PRESENT - Health & Safety Technician

Performs all duties of Health & Safety Technician including, but not limited to, the following:

1. Performs radioactive surface contamination surveys.
2. Performs routine airborne radioactive contamination surveys.
3. Performs radiation surveys using Geiger Counter and Micro R meter.
4. Performs bioassay analyses.
5. Packages radioactive waste.
6. Prepares paperwork and surveys for shipping radioactive materials according to NRC and DOT regulations.
7. Maintains Health & Safety records.
8. Sets up sampling trains and tests for radioactive stack and Solid Waste Building effluent impinger contents.

2. Safety Light Corporation will meet the requirements of 10CFR 20.1001 through 20.2402, which were effective January 1, 1994.

3.a. Liquid from plastic scintillation counting vials will be poured into a suitable tray or similar container and placed in a ventilated hood allowing volatiles to evaporate. The hood exhaust will be routed to the Processing Building Main Exhaust Stack which is continuously sampled for tritium. Residuals remaining after the evaporation will be held for further treatment or disposal.

3.b. With regard to the recycling of used silica gel:

(1) This material consists only of 'spent' gel emptied from drying columns used in the Processing Bldg. Main Exhaust Stack sampling system.

(2) At current levels of Processing Bldg. operations, typical loadings will vary from about 0.01 to 0.02 μCi HTO/gm gel or, say, approximately 4-10 μCi HTO per drying column.

(3) The recycling process consists simply of baking the 'spent' gel for not less than 24 hours at 260°-270° F, and under constant ventilation. The exhausts from this operation are routed directly to the Processing Bldg. Main Exhaust Stack system, which is monitored continuously for tritium emissions. The baking process is conducted until an arbitrarily selected final concentration not exceeding 0.005 μCi HTO/gm of baked gel is attained.

(4) Depending on existing humidity conditions, the number of drying columns "processed" as above, will range anywhere from 18 to 24/month, on the average.

(5) Radiation safety precautions used during the above procedure involve providing adequate ventilation, use of gloves, use of paper-covered work surfaces, and monitoring for contamination of work areas.

NOTE: HTO content of the baked silica gel is determined using liquid scintillation counting methods.

3.c. The treatment of slightly contaminated glass tubing described in our 1989 submission is no longer used here.

4. Radioactive waste is stored in a 29' X 29' cinderblock building on the southeast corner of the SLC site. SLC has been using this building as an interim waste storage building for a number of years.

This building has a smoke detector in it that is tied into the fire alarm system that is monitored by the Triple A Security, which in turn notifies the fire company and certain staff members of SLC.

This building is enclosed inside the compound fence and locked during non-business hours.

This building is monitored 24 hours/day, 7 days/week using impingers. By connecting a probe to SLC's stack sample train and disconnecting our stack, we found a correlation between the oxide levels and gas levels in this building which will be used for offsite dose calculations.

The Solid Waste building is wipe tested twice monthly for Alpha-Beta-Gamma contamination. Periodically these wipes are counted specifically for Alpha contamination. On a yearly schedule a radiation survey is performed around the perimeter of the building. The building is visited daily by one or more Health & Safety personnel for various reasons. Several times a week the building is entered by the Health & Safety Technician. Any leaking drums or other situations requiring attention, would be detected at that time.

For all of 1993, SLC's waste inventory increased by 30 Curies. At our current level of business, we would expect this trend to continue. This was accomplished by: (1) Refusing to take back waste foils from other licensees except in very small quantities and (2) Exchanging waste gaseous sources for new gaseous sources with the country of origin.

Safety Light Corporation's waste is varied and stored in different ways. The following comprises a brief description of each type of waste and its container.

1. Foils & Targets - Crimp-sealed in can, the can is put in stainless steel cylinders with Flourco (absorbant) to take up any voids and then a top is welded on the cylinder.
2. Glass Tube Stubs - Two gal. can with lid soldered.
3. Scrubber Columns - Soldered in galvanized canisters.
4. Paper Waste - Fifty-five gal. drums and paper bags.

The biggest volume going into waste at the present time is bags of paper waste. SLC calculates these bags to be 0.572 cu.ft.. In 1993 SLC produced 78 bags of paper waste or approx. 45 cu.ft.. Assuming the building to be 29' X 29' X 9', the cu.ft. of the building is 7569 cu.ft.. Assuming that 1/2 of this volume is taken up by cabinets, compactor, shelves, etc., dividing 7569 cu.ft. by two and dividing that result by 45, would appear to give SLC eighty-four (84) years of storage capability. Safety Light feels that this is substantially longer than our need will be to store waste.

5. Tritium Processing Systems and equipment no longer in use at the Bloomsburg facility are as follows:

   1. Gaseous Tritium Light source (GTLS) Fill System.
   2. Rotary Fill System I.
   3. Spark Gap Tube Filling System.
   4. Rotary I Vacuum Pump Exhaust Scrubbing System.

6. The following check sources were undoubtedly distributed to U.S. Radium Corp. by suppliers properly licensed to do so, perhaps in 1969 or earlier. The sources were probably exempt from regulations due to the quantities involved.

#10236 - Thorium-230; 0.0019 μCi
Supplier - Eberline Instrument Corp., Santa Fe, NM
August 25, 1969

#AMR-23-R400 - Americium-241; 3.16 E5 DPM
Supplier - The Radiochemical Centre, Amersham, Buckinghamshire, England
April 22, 1968

#P-6055 - Plutonium-239 2600 DPM
#P-6759 - Plutonium-239 26,800 DPM
#P-6113 - Plutonium-239 277,900 DPM
#P-6876 - Plutonium-239 3,185,000 DPM
Supplier - Eberline Instrument Corp.,
August 25, 1969

#1387 - Uranium-238 0.005 μCi
Supplier - Unknown
Date - Unknown

#AIC - Protactinium-234 0.46 E-5 μCi
Supplier - "AIC"?
October 1951

#AMR-33-R9022 0.1 μCi
Supplier - (Probably) The Radiochemical Centre, England
Date - Probably 1969

7. As shown on Drawing 4001-80 Rev. 4, all exhaust discussed in Item 7 is vented via the one and only Processing Bldg. Main Exhaust Stack. This stack is monitored 24 hours/day, 7 days/week via the impinger train in Health Physics. It should be noted here that some of the systems referred to in those sections of Appendix D in Item 7, do not exist any longer, notably the GTLS Filling System, Spark Gap Filling System, Rotary I and the Rotary I Room Scrubbing System. The vacuum pump exhaust from the Foil Impregnation System is now exhausted through the Rotary II Scrubbing System. The exhaust from the scrubbing system is vented to the Main Exhaust Stack.

8. After tank contents are agitated sufficiently a one quart aliquot is taken for pH and tritium testing. The tritium test involves pipetting one milliliter of sample into a scintillation vial followed by 10 milliliters of scintillation cocktail. The sample thus prepared is counted for tritium in a Packard 4530 scintillation spectrometer. Based on this result, calculated to μCi ^{3}H/ml, appropriate dilution of tank contents is implemented during discharge to comply with 10CFR, Appendix B to part 20, Table 2, Column 2 (1×10^{-3} μCi ^{3}H/ml), compliance demonstrated per 20.1302(b)(2).

9. Tritium Foil Impregnation System (3.1.2.4) has its pump exhaust presently connected to the Rotary Fill System II (3.2.1.3) scrubbing system. Both systems now both use the same scrubbing system.

   Systems identified in Item 5 were removed from the previous Gas Fill Room area. The area was then re-designed to afford additional non-active production space and a smaller Gas Fill Room.

10. Calibration of certain equipment in the Health & Safety Area

a. PACKARD MODEL 4530 SCINTILLATION SPECTROMETER

Person(s) performing calibration -

Radiation Safety Officer or
Radiation Safety Consultant or
Radiation Safety Technician or
Health & Safety Technician

Frequency of Calibration - at least quarterly

Calibration Procedure:

Count tritiated water standard[1], (Packard P/N 6004052 or equivalent)

Adjust for radioactive decay and calculate counting efficiency.

Distilled water check: 1 ml H_2O + 10 ml scintillation cocktail + 50 μL standard

Ethylene Glycol check: 0.8 ml H_2O + 0.2 ml E.G. + 10 ml scintillation cocktail + 50 μL standard.

Count time = 10 min./sample

Lower Limit of Detection - 0.005 μCi ^{3}H/L (5 min. count)

b. EBERLINE MS-2 MINISCALERS (2)

Person(s) Performing Calibration:

Health & Safety Technician or
Radiation Safety Technician or
Radiation Safety Officer

Frequency of Calibration:

Calibration Check - Daily
Alpha Plateau - Quarterly
Alpha-Beta-Gamma Plateau - Quarterly

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[1]Standard traceable to NBS or NIST by certificate.

Calibration Procedure:

Daily calibration check using Baird-Atomic, Inc. Carbon-14 certified 1" disc source.

Quarterly Alpha and Alpha-Beta-Gamma plateaus procedure using Radium D+E standard PS 37603 (#3504) certified by National Bureau of Standards.

1. Insert standard in counting well flushed with argon-methane counting gas.
2. Starting at "High Voltage" setting of 0.00, count standard for 1 minute at every 0.25 increment of "High Voltage" setting up to 10.00 and plot resultant curve on straight graph paper.
3. Determine set point on Alpha plateau and set point on Alpha-Beta-Gamma plateau. Record settings. Use these "H.V." settings for counting.

Efficiency - 2% counting efficiency used.

Studies by N. Fritz, 6/2/90 and J. MacHutchin, 5/25/89, comparing polyfoam wipes of tritium contaminated surfaces counted by scintillation spectrometer and paper wipes of tritium contaminated surfaces counted by MS-2 proportional counter suggested a 10% counting efficiency.

A study of Radium D+E standard counted on MS-2 proportional counter on 3/1/90 and 3/22/90 showed approximately 45% counting efficiency.

It is felt that use of a 2% counting efficiency on both Eberline MS-2 internal proportional counters is very conservative and therefore useable.

Should wipe test results determined by counting on the internal proportional counters approach critical limits as set forth in NRC or DOT regulations (examples: 22,000 DPM/100 cm^2 tritium for packages received; 1000 DPM/100 cm^2 for release to unrestricted areas), scintillation counted polyfoam wipes would be used.

Lower Limit of Detection - Instrument Background

c. <u>CARY 401 VIBRATING REED ELECTROMETERS -</u> N/A
Not used for quantitative measurements.

d. SIX MINI-IMPINGERS - Stack Exhaust Sampling -
The gas meter used to determine total sampling volume will be calibrated biennially by PA Gas and Water Company or other similarly equipped entity. Recording on gas meters is to significant single digit.

e. THREE ENVIRONMENTAL IMPINGERS - East Boundary Fence - N/A
No longer used.

f. PORTABLE TRITON TRITIUM AIR MONITOR

Person(s) Performing Calibration:

Radiation Safety Technician or
Health & Safety Technician or
Radiation Safety Officer

Frequency of Calibration: Annually

Calibration Check Procedure:

Using Johnston Laboratories' CL-1 calibrator, inject a 2 to 4 second aliquot of tritium spiked methane into a triton monitor intake port. Connect the exhaust port of the monitor to the CL-1 calibrator so as to form a circulated, closed loop sampling. Continue until a steady maximum reading is obtained on the Triton monitor in μCi $^{3}H/m^{3}$. Perform the following calculation to determine ^{3}H concentration of the closed loop recirculated gas in μCi $^{3}H/L$.

v = metering volume (11.0 ml in the CL-1)

V = total volume of TRITON plus Calibrator (liters)

P = gauge pressure of gas in metering volume (psig) (i.e., reading of outlet pressure gauge).

A = specific activity of gas in lecture bottle (μCi/L at 25° C and 14.7 psia).

n = number of aliquots injected.

d = tritium decay since cylinder calibration (see below)

T = ambient temperature (°C).

$$\text{So scale reading} = n(v) \times \frac{P}{14.7} \times \frac{298}{273 + T} \times \frac{dA}{V} \; \mu Ci/m^3$$

Comparison of calculated scale reading with actual scale reading determines if adjustment of mechanics or scale reading factors are required.

Lower Limit of Detection - 10 μCi $^3H/m^3$

11. SENTENCE 1 OF FIRST PARAGRAPH - Please refer to our reply under Item 8.

Remainder of First Paragraph, RE: "Appendix G" - Effective 1/1/94, our calculations are now made in accordance with 'NCRP Commentary No. 3', rather than 'USNRC Reg. Guide 3.35'; hence a number of the assumptions made in our 1989 submission are no longer applicable - please refer to Item 12 of our reply.

With Regard to Second Paragraph of Item 11:

Average Annual Concentration of ^3H Released to River - Please refer to Item 8 of this reply.

Dose from External Sources - We are not aware of any unrestricted areas in which the dose to an individual from external sources will exceed 2 mrem/hour or 50 mrem/year.

In accordance with 10 CFR 20.1302(b)(1), we shall use the Calculation Method to show compliance that the total effective dose to the individual most likely to receive the highest dose from our licensed operation should not exceed 100 mrem/year. Please refer also to Item 12.

12. Effective 1/1/94, calculations related to determination of average off-site ground-level HTO concentrations and to corresponding Whole Body Dose Rates will be made in accordance with 'NCRP Commentary No. 3', as outlined below:

(A) Estimated Average Ground-Level HTO Concentrations:

(1) From Processing Building Stack Emissions - Use will be made of NCRP Equation A-7 for determination of the atmospheric diffusion factor (P) values, and of Equation A-6 for determination of annual average ground-level HTO concentrations at any given distance from the Processing Bldg. Stack.

(2) From Solid Waste Bldg. Emissions - Determination of the atmospheric diffusion factor (B) values involved will be made using NCRP data presented in their Fig. 4, Page 78. Average annual ground-level HTO concentrations at any given distance from the Solid Waste Bldg. exhaust location will be calculated using NCRP Equation A-10, Page A-5.

(B) Estimated Average Annual Dose Rates:

The estimated Annual Whole Body Dose rate to the unrestricted area individual most likely to receive a dose from the SLC tritium operations will be determined as follows:

(1) Dose Rate From Inhalation of HTO:

Effective Whole Body Dose from inhalation of HTO in the Processing Bldg. stack emissions, as well as that from HTO in the Solid Waste Bldg. emissions, will each be determined from the NCRP-based relationship:

$$EDE_{INH} = (C)(DF)$$

where:

EDE_{INH} = Effective Whole Body Dose From Inhalation (mrem/year)

C = Annual Average HTO Concentration at Receptor's Location (Ci/m^3)

DF = NCRP Effective Whole Body Dose Factor (1×10^9 mrem/year per Ci/m^3)

The total annual Whole Body Dose from HTO inhalation will be determined by summing the estimated dose rate from the Processing Bldg. Stack emissions and that from the Solid Waste Bldg. emissions.

(2) Dose Rate From Oral Ingestion of HTO:

(a) From Garden Vegetables - insofar as the unrestricted area receptor selected, normally has a vegetable garden, an estimate will be made of his annual dose rate due to ingestion of HTO in the vegetables.

The effective Whole Body Dose from ingestion of HTO in vegetables resulting from absorption of HTO in the Processing Bldg. Stack emissions, as well as that from the Solid Waste Bldg. emissions, will be determined from the NCRP-based relationship:

where: EDE_{VEG} = Effective Whole Body Dose from Ingestion of HTO in Garden Vegetables (mrem/year)

$Intake_{VEG}$ = Annual Vegetable Consumption Rate for Standard Man (200 kg/year)

C_{VEG} = Estimated HTO Concentration in the Garden Vegetables Involved (Ci/kg)

(b) From Well Water - Insofar as the selected off-site receptor consumes water from his private well, and since SLC has for several years, conducted monthly assays of the HTO content of the well water, it was decided by SLC to include this item in our estimation of the Annual Dose Rate for this receptor. This will be determined using the following relationship:

$$EDE_{H2O} = (Intake_{H2O})(C_{H2O})$$

where: $Intake_{H2O}$ = Annual Intake of Water by Standard Man (= 730 L/year)

C_{H2O} = Annual Average HTO Concentration in Well Water (ρCi/L H_2O)

In Summary:

The Total Estimated Annual Dose Rate to individual most likely to receive a dose from SLC tritium operations will be comprised of the following:

(1) Dose from inhalation of combined SLC HTO emissions.

(2) Dose from oral ingestion of HTO-contaminated garden vegetables.

(3) Dose from oral ingestion of HTO-contaminated well water.

13. Delete - Fixed contamination is Alpha not tritium.

14. Procedures are in place for dealing with minor emergencies in the Tritium Processing Building. Health & Safety Personnel administer these procedures and are trained accordingly. In addition, new employees are given Orientation specific to Tritium Building operations, in addition to Radiation Training, which includes reference to these emergency procedures. These procedures, being transferred only verbally in the past, will be documented as another written part of the Orientation for future sessions.

15. Monitors will be set to alarm at 40 μCi ^{3}H/m^3, in areas where persons are working.

Tritium uptake is monitored by bioassay and not calculated from room air concentrations, however, Triton monitors perform a valuable function in determining almost instantly if a tritium release in a work area has been triggered by an incident. Calibration of Triton monitors is described in 10 (f).

16. The Solid Waste Building is ventilated by a 3600 cfm fan located in the South (rear) wall of the building. The entrance door (front wall) is open and the fan is on approximately eight (8) hours a day except when no one is working in the tritium compound. The door is closed and the fan is off, the remaining 16 hours and weekends.

Building air is sampled 24 hours a day on a continuous basis, being changed and analyzed once per week. A large ethylene glycol filled impinger is used with its sampling tube located in the middle of the building. Contents of the impinger are counted by scintillation spectrometer and calculated to μCi ^{3}H per milliliter of building air.

17. Dose Estimates Based on ^{3}H Bioassay Data:

a. Background:

Over the past 25-30 years, the above type estimates made at the Bloomsburg facility have been done using basic information provided in Los Alamos Scientific Laboratory Report LA-2163, "Estimation of Whole body Dose (rem) from Tritium in Body Water" (copy attached). The calculations used have been modified, as required, to conform to 10 CFR 20 Regulations in effect at the time.

On Page 7 of the above report, it is stated that the dose (D_t) at any time after an acute intake of ^3H may be expressed as:

$$D_t = \frac{(\{rem/wk\}/{}^{MPC}body)}{{}^{MPC}body} B_b \int_0^t e^{-0.693y/t1/2} \cdot d_y \ldots . (A)$$

where:

$\frac{rem/wk}{{}^{MPC}body}$	= $\frac{5\ rem/yr}{52\ wk/yr}$	=	0.096 rem/wk[2]
^{MPC}body	=	92.4 μCi/L[3]	
B_b	=	Actual measured acute body concentration (μCi HTO/L) in water of urine, or other body water	
t	=	Time after ^3H intake (days)	
t1/2	=	^3H Elimination half-life (Standard Man), in weeks = 10 days/(7 days/week) = 1.429 weeks.	

Substitution of the above values in Equation (A) gives:

$$D_t = (0.096/92.4)\ B_b \int_0^t e^{-0.693y/1.429} \cdot d_y$$

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[2]Effective 1/1/94.

[3]Estimated equilibrium concentration of HTO in urine or other body water required to produce a total whole body effective dose equivalent of 5 rem/year (corresponding to the ALI value for HTO of 80,000 μCi/year which became effective 1/1/94.

By integration:

$D_t = (0.096/92.4)\ (1/(0.693/1.429)\ B_b\ (e^{-0.693y/1.429})$ -or-

$D_t = 0.00214\ B_b\ (1-e^{-0.693y/1.429})$

At $t = \infty$ (i.e. after all HTO has been eliminated) :

$D\infty = 0.00214\ B_b$ (for 10 day elimination half-life) . . . . . . (A-1)

b. Dose Calculations:

Based on the above, plus additional information provided in LA-2163, the following equation was developed for use in our facility (Effective 1/1/94):

Dose (rem) = $0.00214\ [A_1 - A_2\ e^{-0.693t}]$ . . . . . (A-2)

Where:	A_1	=	Current bioassay HTO activity level (μCi/L)
	A_2	=	Preceding bioassay HTO activity level.
	t	=	Elapsed days between A_1 and A_2. and assumed average ^3H biological half-life (Standard Man) = 10 days.

EXAMPLE:

Assumed Scenario - A recently hired person, who has not worked previously with radioactive materials, is assigned to work as a technician in the SLC Gas Fill Laboratory. He (or she) provides an initial 'background' urine sample prior to entering the lab on Monday morning, 1/3/94. The technician works daily in the active area during the remainder of the month, and provides urine samples on successive Monday mornings.

A summary of his/her estimated total effective whole body dose for the month of January is presented in the following table:

Bioassay Date	Bioassay Value (μCi HTO/L)	Interval (Days)	Est. Dose Based on Use of Equation (A-2) (rem)
1/3/94	0	0	0.000
1/10/94	5.0	7	0.011
1/17/94	7.5	7	0.009*
1/24/94	4.3	7	0.000**
1/31/94	8.5	7	0.013
TOTAL DOSE:			0.033 rem

*rem = 0.00214 [7.5 - 5.0(0.616)] = 0.00214 [4.4] = 0.009 rem
**rem = 0.00214 [4.3 - 7.5(0.616)] = 0.00214 [0] = 0.000 rem (i.e., no HTO uptake)

Surveys will be performed using appropriate techniques to determine if certain Safety Light Corporation employees should be monitored for $Radon_{222}$ per 10 CFR Part 20.1502.

18. (A) Impinger train for measuring tritium in effluent air from the Processing Building is changed weekly and the contents counted by scintillation spectrometer. Copies of blank worksheets showing calculations are attached.

(B) Cary Tolbert -Not pertinent to measuring quantity of tritium released from stack. Based on past studies, 100% collection of Insolubles, Solubles, and sub is assumed. Also 100% conversion of sub by catalytic converter is assumed. Therefore lower limit of detection for Scintillation Spectrometer is limiting.

19. Described in 10 (b).

20. A Ludlum Model 19 Micro R meter is used to measure radiation levels pertinent to regulatory limits. This meter is calibrated yearly by Ludlum Measurements, Inc., and is certified traceable to NIST. The Geiger counter is sometimes used for determination of the presence of Beta and/or Gamma radiation at various locations.

21. Triton monitors are used to qualitatively measure tritium air concentrations in hoods and pump exhausts, i.e., to alert operators of process variations that may or may not require actions. Regulatory compliance is determined by calculations based on sampling of stack effluent air for tritium.

22. A urine count result in excess of 20 μCi ^{3}H/L would require an investigation of occurrences leading to the intake, a report, and Radiation Safety Committee review of the report. The same review would be required for stack emissions exceeding 100 Curies combined HT and HTO in any one week sampling period. Circumstances may result in investigation, report or review for uptakes or releases lower than stated above.

    Although unlikely, some situations could require that special actions be taken regarding personnel uptakes or contamination, as follows:

    1. Follow-up urinalysis monitoring for tritium.

    2. Personnel decontamination, i.e., wash-up, clothing decontamination, showers.

    3. Possible removal from tritium-related work until urinalysis shows appreciable reduction in tritium burden.

23. Section 206 of the Energy Reorganization Act and Part 21 of 10 CFR will be posted or available to workers as required.

24. Section 1.1, Appendix C, Revision 8 of the Health & Safety Program will be revised as follows:

    a. Region II office will be changed to Region I office.

    b. Telephone area code will be changed from "215" to "610".

25. Low concentrations of tritium, presently well below the EPA drinking water limit of 20,000 pCi per liter, have been detected in domestic wells outside the Safety Light corporation property lines. These wells are regularly sampled and counted for tritium. Safety Light Corporation will continue to survey these wells, including, but not limited to, the following:

Vance/Walton - (owned by SLC)
K. Murphy
C. Rubenstein
R. Martz
M. Rachkiss

The perimeter environmental air samplers have been discontinued. It is planned to demonstrate regulatory compliance by calculation of downwind dose from stack effluent per 10 CFR 20.1302 (b)(1)

26. (A) Letters of Agreement and cooperation to local emergency response facilities and other entities are hereto attached. These will periodically be updated when necessary.

(B) Drills - An accident in the tritium compound which involves release of tritium could require an evacuation of personnel from all work areas. Such a drill will be held at least annually, announced by sounding of the alarm bell and by verbal communication.

Accident Response Training - On an annual basis, members of internal response teams will meet to profile a postulate emergency. A review of the responsibilities of the teams will be conducted during the meeting.

Communications Checks - A semi-annual communications check will be made with local offsite response organizations.
Biennial Exercise - One of the evacuation drills (held at least annually) will be expanded into an exercise, as follows:

(1) The tritium compound will be evacuated and personnel accounted for.

(2) One of the postulated accidents in the Radiological contingency Plan, or a similar accident scenario, will be declared "in progress" as an exercise.