ATTACHMENT 2

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 2

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT FOR 1978

SEPTEMBER, 1980

<u>Millstone Unit No. 2</u>

(1) Location should read 3.2 Miles WSW New London.

(2) <u>Measurements and Approximations of Total Radioactivity</u>

 a) <u>Unit 2 Vent</u>

 Total cc's out the Unit 2 vent per month is multiplied by the isotopic concentrations as measured by gamma spectrometer GE(Li) analysis of grab samples of gases, iodine, and particulates to obtain total μCi released from the vent.

 b) <u>Containment Purges</u>

 Grab samples are taken for gaseous, particulate, and iodine. These are analyzed on GE(Li) gamma spectrometer and concentrations computed. Computed concentrations are then multiplied by the purge volume for total μCi released.

 Tritium collection is by the gas washing bottle method. The sample is counted on a liquid scintilation counter. Concentration is computed using worst possible case, 100% humidity. Concentration is multiplied by volume purged to give total μCi released.

 c) <u>Liquid Effluents</u>

 There are three tanks which are used to discharge liquids containing radioactivity to the environs. They are one Aerated Waste Monitor Tank and two Coolant Waste Monitor Tanks.

 Prior to release, the tank is recirculated for two tank volumes, a one liter sample is drawn and analyzed on the GE(Li) gamma spectrometer for individual radionuclide composition. An aliquot of the sample is analyzed for Tritium in μCi per cc. The μCi per cc is multiplied by the cc's released to obtain total μCi released.

 The sample is retained for composite analysis for Sr-89, 90 and gross alpha. The composite contains proportional amounts of each discharge.

(3) Batch Releases, Quarters 1 and 2

A.1	195
A.2	1.82E04
A.3	3.15E02
A.4	9.30E01
A.5	5.00E01
A.6	N/A - Ocean Site

(4) Batch Releases - Gaseous

        Waste Gas Decay Tanks
        Number of Batch Releases   3

B.2	1.04E03
B.3	4.25E02
B.4	3.45E02
B.5	3.00E02

(5) Containment Purges

	Number of Purges	13
2.	Total time period for purge releases (min.)	1.64E04
3.	Maximum time period for a purge (min.)	3.69E03
4.	Average time period for a purge (min.)	1.26E03
5.	Minimum time period for a purge (min.)	5.00E00

(6) Abnormal Releases

        A. None
        B. None

(7) Batch Releases, Quarters 3 and 4

A.1	148
A.2	1.49E04
A.3	9.07E02
A.4	1.00E02
A.5	4.00E01
A.6	N/A - Ocean Site

(8) Batch Releases - Gaseous

        Waste Gas Decay Tanks
        Number of Batch Releases   4

B.2	2.93E03
B.3	1.40E03
B.4	7.32E02
B.5	3.03E02

(9) Containment Purges

	Number of Purges	9
2.	Total time period for purge release (min.)	1.71E03
3.	Maximum time period for a purge (min.)	3.10E02
4.	Average time period for a purge (min.)	1.40E02
5.	Minimum time period for a purge (min.)	5.00E00

(10) Abnormal Releases

        A. None
        B. None

(11) Gaseous Effluents - Summation of All Releases

	Quarter 1	Quarter 2	Est. Total % Error
A.3	*	*	N/R
B.3	N/R	N/R	N/R
C.3	*	*	N/R
C.4	N/D	N/D	N/R
D.1	N/D	N/D	N/R
D.2	N/R	N/R	N/R
D.3	N/R	N/R	N/R

* Reported under Millstone Unit No. 1 effluents.

(12) Gaseous Effluents Summation of All Releases

	Quarter 3	Quarter 4
A.3	*	*
B.3	N/R	N/R
C.3	*	*
C.4	N/D	N/D
D.3	N/R	N/R

* Reported under Millstone Unit No. 1 effluents.

(13) Delete all values for elevated release of gaseous effluents, continuous mode, Quarter 2

(14) Gaseous Effluents, Ground Release, Continuous Mode for Quarter 1,

        Under particulates, Delete H-3 and Curie Value
        Delete all "<" values and enter N/D
        First Quarter Tritium, enter N/D

        Add Under Continuous Mode Quarter 2:

Fission Gases	Ar-37	2.13E01
	Kr-37	1.41E01
	Xe-133	5.04E02

	Iodines	I-131	5.80E-04
		I-133	1.33E-03
		I-135	3.70E-04

Particulates	Ba-La-140	N/D
	Co-60	2.99E-05
	Gross alpha	N/D
	I-131	7.77E-06
	Sr-89	2.38E-06
	Sr-90	4.73E-06
	Tritium	N/D

(15) Gaseous effluents, Ground Release, Continuous Mode for Quarters 3 and 4

   Particulates: Delete H-3 and Curie Values
   Delete all "<" values and enter N/D
   Enter for Tritium - 1.69E01 and 2.27E01 for Quarters 3 and 4

(16) Liquid effluents, Continuous and Batch Mode for Quarters 1 - 4

   Delete all "<" values and enter N/D
   Batch Mode, Quarter 4, for H-3 should read 7.20E01

(17) Liquid effluents, Summation of all Releases, Quarters 1 and 2:

   Estimated Total Error %, Enter N/R in all Locations

B.3	N/R	N/R
C.3	N/R	N/R
D.1	N/D	N/D

   Quarters 3 and 4:

C.3	N/R	N/R
D.1	N/D	N/D

(18) Solid Waste and Irradiated Fuel Shipments,

   | Jan. to June | A.1.C | None |
   | | A.1.D | None |

   Add:

   3. Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
8	Truck (Sole Use)	Barnwell, SC

   | July - Dec. | A.1.C | None |
   | | A.1.D | None |