



GPU Nuclear Corporation Post Office Box 388 Route 9 South Forked River, New Jersey 08731-0388 609 971-4000 Writer's Direct Dial Number:

February 28, 1996 6730-96-2074

U. S. Nuclear Regulatory Commission Attention: Document Control Desk Washington, DC 20555

Dear Sir:

Subject: Oyster Creek Nuclear Generating Station Docket No. 50-219 1995 Effluent Release Report

Attached is a copy of the Oyster Creek Annual Radioactive Effluent Release Report for the period covering January through December 31, 1995. This submittal is made in accordance with 10 CFR 50.36(a)(2) and our Operating License and Technical Specifications.

If you should have any questions or require further information, please contact Ms. Brenda DeMerchant, OC Regulatory Affairs Engineer, at 609-971-4642.

Very truly yours,

Wichael B Roche

Michael B. Roche Vice President & Director Oyster Creek

MBR/BDeM/gl

Enclosure

cc: Administrator, Region I NRC Project Manager NRC Resident Inspector Chief, Bureau of Nuclear Engrg., NJ Dept. of Env. Protection

9603110255 951231 PDR ADOCK 05000219 R PDR

GPU Nuclear Corporation is a subsidiary of General Public Utilities Corporation

EXECUTIVE SUMMARY

Oyster Creek Nuclear Station Effluent and Off Site Dose Report for the Period of January 1, 1995 through December 31, 1995

This report summarizes the radioactive liquid and gaseous releases (effluents) from Oyster Creek and the calculated maximum hypothetical radiation exposure to the public resulting from these releases. This report covers the period of operation from January 1, 1995 through December 31, 1995.

Radiological releases from the plant are monitored by installed plant radiation monitors which survey the plant stack for gaseous releases to the atmosphere and outfall pipes for liquid discharges to the cooling water discharge canal. These monitors and associated sample analyses provide a means to accurately determine the type and quantities of radioactive materials being released to the environment.

Utilizing gaseous effluent data, the maximum hypothetical dose to any individual in the vicinity of the plant is calculated. Similarly, liquid effluent data are used to calculate a maximum hypothetical dose to an individual from liquid effluents for any shoreline exposure. Doses to the public from consumption of shellfish and fish withdrawn from the canal are also calculated.

Calculations of the maximum hypothetical dose to an individual from liquid and gaseous effluents are performed using a mathematical model which is based on the methods defined by the U.S. Nuclear Regulatory Commission.

The maximum hypothetical doses are conservative overestimates of the actual off site doses which are likely to occur. For example, the dose does not take into consideration the removal of radioactive material from the salt water by precipitation of insoluble salts, absorption onto sediment, or biological removal.

As of January 1, 1996, all full containers of radioactive waste in storage in the onsite low level Rad Waste Storage Facility have been accepted and disposed of at the Barnwell, South Carolina Radioactive Waste Disposal Facility. Two partially full containers remain in storage and will be shipped for disposal when full.

Concrete was used for solidification material during the reporting period.

Liquid discharges made during 1995 consisted of 0.00000022 curies of cesium 137.

Airborne discharges made during this same time period consisted of 11.79 curies of tritium, 0.00289 curies of particulates, 0.022 curies of lodines, and 79.2 curies of noble gases.

Executive Summary Page 2

The maximum hypothetical calculated organ dose to any individual due to gaseous effluents was about 0.02 millirem to the thyroid. The maximum hypothetical calculated whole body dose to any individual due to gaseous effluents was 0.0043 mrem.

The maximum hypothetical calculated organ dose to any individual due to liquid effluents was about 0.00000011 mrem to the liver. The maximum hypothetical calculated whole body dose to any individual due to liquid effluents was 0.000000064 mrem.

The total maximum hypothetical whole body dose of 0.0043 mrem received by any individual from effluents from the Oyster Creek Nuclear Station for the reporting period is 69767 times lower than the dose the average individual in the Oyster Creek area receives from natural background and radon (300 mrem) during the same time period. Natural background averages about 100 millirem whole body per year in the central New Jersey area. In addition, the average equivalent dose to the whole body from natural radon is about 200 millirem per year.

The doses which could be received by the maximum hypothetical individual are each less than 0.25 percent of the annual guidelines established by the Nuclear Regulatory Commission.

Maximum Offsite Dose Due To Radionuclides in Effluents January-December 1995

<u>ODCM</u>	<u>4.6.6.1.4A</u> Liqui WB mrem	<u>4.6.1.1.4.A</u> d Dose Organ mrem	4.6.1.1.6.A Air Dose Beta mrem	4.6.1.1.6.A (GAS) Gamma mrem	<u>4.6.1.1.5.A</u> Whole Body mrem	<u>4.6.1.1.7.A</u> (Thyroid) Orgran mrem	<u>4.6.1.1.5A</u> Skin Skin mrem	<u>4.6.1.1.8.A</u> Whole Body mrem	4.6.1.1.8.A (Thyroid) Organ mrem
1995 Total	6.4E-8	1.1E-7	3.8E-4	1.1E-3	4.3E-3	2.0E-2	8.0E-4	4.3E-3	2.0E-2
ODCM Limit	3	10	20	10	100	15	3000	25	75
Fraction of Annual Limit	2.1E-8	1.1E-8	1.9E-5	1.1E-4	4.3E-5	1.3E-3	2.6E-7	1.7E-4	2.7E-4

OYSTER CREEK NUCLEAR GENERATING STATION LIQUID EFFLUENT RELEASES

Oyster Creek Nuclear Generating Station Policy is to strive for a zero liquid discharge of radioactive material. However, in 1995, 400 gallons of slightly contaminated demineralized water was released during a flush of the service water radiation monitor.

OFFSITE DOSE CALCULATION MANUAL

The offsite dose calculation manual was revised in 1995 to include clarification and addition of monitoring requirements to match surveillance requirements in the document.

EFFLUENT MONITORS OUT OF SERVICE GREATER THAN 30 DAYS:

There were no effluent Monitors out of service for greater than 30 days during 1995.

CHANGES TO THE PROCESS CONTROL PLAN:

~

There were no changes to the Process Control Plan during 1995.

, , , **Effluent and Waste Disposal Supplemental Information**

FACILITY: Oyster Creek Nuclear Generating Station

LICENSEE: Owner - Jersey Central Power and Light Company Operator - GPU Nuclear Corporation

1.) Regulatory Limits

ч 1

a.) Fission and Activation Gases

Technical Specification 3.6.E.1

The gross radioactivity in noble gases discharged from the main condenser air ejector shall not exceed a 0.21/E Ci/sec after the holdup line, where E is the average gamma energy (Mev per atomic transformation).

ODCM 4.6.1.1.5.A

The dose equivalent rate outside of the EXCLUSION AREA due to radioactive noble gas in gaseous effluent shall not exceed 500 mrem/year to the total body or 3000 mrem/year to the skin. A value of 100 millirem total body is used due to the January 1, 1994 revision of 10 CRF20.

ODCM 4.6.1.1.6.A

The air dose outside of the EXCLUSION AREA due to noble gas released in gaseous effluent shall not exceed:

5 mrad/calendar quarter due to gamma radiation,

10 mrad/calendar quarter due to beta radiation,

10 mrad/calendar year due to gamma radiation, or

20 mrad/calendar year due to beta radiation

ODCM 4.6.1.1.8.A

The annual dose to a MEMBER OF THE PUBLIC due to radiation and radioactive material in effluents from the OCNGS outside of the EXCLUSION AREA shall not exceed 75 mrem to his thyroid or 25 mrem to his total body or to any other organ.

Effluent & Waste Disposal Supplemental Information Page 2 of 4

b. Iodines and Particulates

ODCM 4.6.1.1.5.B

The dose equivalent rate outside of the EXCLUSION AREA due to H-3, I-131, I-133, and to radioactive material in particulates having half-lives of 8 days or more in gaseous effluents shall not exceed 1500 mrem/year to any body organ when the dose rate due to H-3, Sr-89, Sr-90, and alpha-emitting radionuclides is averaged over no more than 3 months and the dose rate due to other radionuclides is averaged over no more than 31 days.

ODCM 4.6.1.1.7.A

The dose to a MEMBER OF THE PUBLIC from iodine-131, iodine-133, and from radionuclides in particulate form having half-lives of 8 days or more in gaseous effluents, outside of the EXCLUSION AREA shall not exceed 7.5 mrem to any body organ per calendar quarter or 15 mrem to any body organ per calendar year.

Liquid Effluents

c.

ODCM 4.6.1.1.3.A

The concentration of radioactive material, other than noble gases, in liquid effluent in the discharge canal at the Route 9 bridge shall not exceed the concentrations specified in 10 CFR Part 20, Appendix B, Table II, Column 2.

ODCM 4.6.1.1.3.B

The concentration of noble gases dissolved or entrained in liquid effluent in the discharge canal at the Route 9 bridge shall not exceed $2x10^{-4}$ microcuries/milliliter.

ODCM 4.6.1.1.4.A

The dose to a MEMBER OF THE PUBLIC due to radioactive material in liquid effluents beyond the outside of the EXCLUSION AREA shall not exceed:

1.5 mrem to the total body during any calendar quarter,5 mrem to any body organ during any calendar quarter,3 mrem to the total body during any calendar year, or10 mrem to any body organ during any calendar year.

Effluent & Waste Disposal Supplemental Information Page 3 of 4

- 2.) Derived Air Concentrations (DAC)
 - a. Fission and Activation Gases:

Appendix B, Table II, Column 1 of 10 CFR 20

b. Iodines and Particulates:

Appendix B. Table II, Column 1 of 10 CFR 20

c. Liquid Effluents:

Appendix B. Table II, Column 2 of 10 CFR 20, except for dissolved or entrained noble gases where the limit is 2×10^{-4} uCi/ml

3.) Measurements and Approximation of Total Radioactivity

- a. Fission and Activation Gases:
 - 1. Stack

The continuous recording of gross activity and the incorporation of isotopic data obtained from a weekly grab sample analyzed using gamma spectroscopy.

2. Augmented Offgas (AOG) Vent

The continuous recording of gross activity and the incorporation of isotopic data obtained from a monthly grab sample analyzed using gamma spectroscopy.

3. Turbine Building Stack and Feedpump Room Vent

The continuous recording of gross activity and the incorporation of isotopic data obtained from a monthly grab sample analyzed using gamma spectroscopy.

b. Iodines

s 1 1

1. Stack

Filters are changed weekly and analyzed using gamma spectroscopy.

2. AOG Vent

Filters are changed weekly and analyzed using gamma spectroscopy.

3. Turbine Building Stack and Feedpump Room Vent

Filters are changed weekly and analyzed using gamma spectroscopy.

- c. Particulates
 - 1. Stack

Filters are changed weekly and analyzed using a low background beta counter and gamma spectroscopy.

2. AOG Vent

Filters are changed weekly and analyzed using gamma spectroscopy.

3. Turbine Building Stack and Feedpump Room Vent

Filters are changed weekly and analyzed using gamma spectroscopy.

d. Liquid Effluents

Analysis per batch release using gamma spectrometry with a germanium detector, a low background beta counter, and a liquid scintillation counter.

OYSTER CREEK NUCLEAR GENERATING STATION FIRST QUARTER 1995 GASEOUS EFFLUENT ELEVATED RELEASES

• •

	*
FISSION GASES	QUANTITY
	(ci)
KR85M KR87	1.23E+00 6.22E+00
KR87 KR88	2.82E+00
XE133	6.69E-03
XE135	9.62E+00
	9.021100
Total Fission Gases Released:	1.99E+01 ci
Gamma Ebar	0.6546 Mev
Average Rate of Release:	2.56E+00 uCi/sec
TONTNO	
IODINES	QUANTITY (ci)
I131	5.97E-04
I131 I133	4.29E-03
	1.290 05
Total Iodines Released:	4.89E-03 ci
Average Rate of Release:	6.29E-04 uCi/sec
5	
PARTICULATES	QUANTITY (ci)
CR51	5.22E-05
- · ·	6.10E-06
CO58	4.41E-05
CO60	2.79E-04
SR89	1.09E-04
CS137	9.77E-06
BA140	3.14E-05
Total Particulates Released:	
Average Rate of Release:	6.84E-05 uCi/sec

RADIONUCLIDE

QUANTITY (ci) 1.07E+01

H3

Avg. Rate of Release for H3: 1.37E+00 uCi/sec

OYSTER CREEK NUCLEAR GENERATING STATION FIRST QUARTER 1995 GASEOUS EFFLUENT GROUND-LEVEL RELEASES

FISSION GASES

• •

* QUANTITY (ci)

Total Fission Gases Released: 0.00E+00 ci Average Rate of Release: 0.00E+00 uCi/sec

IODINES

I131 I133 (ci) 2.37E-06 4.62E-05

QUANTITY

Total Iodines Released:4.85E-05 ciAverage Rate of Release:6.24E-06 uCi/sec

PARTICULATES

QUANTITY (ci)

Total Particulates Released: 0.00E+00 ci Average Rate of Release: 0.00E+00 uCi/sec

RADIONUCLIDE

H3

QUANTITY (ci) 0.00E+00

Avg. Rate of Release for H3: 0.00E+00 uCi/sec

OYSTER CREEK NUCLEAR GENERATING STATION SECOND QUARTER 1995 GASEOUS EFFLUENT ELEVATED RELEASES

FISSION GASES QUANTITY (ci) KR85M 1.18E+00 KR87 6.03E+00 KR88 3.10E+00 XE133 2.13E-01 XE135 9.48E+00

Total Fission Gases Released:2.00E+01 ciGamma Ebar:0.6693 MevAverage Rate of Release:2.54E+00 uCi/sec

IODINES

• 1 I

I131 I133

Total Iodines Released:4.14E-03 ciAverage Rate of Release:5.27E-04 uCi/sec

PARTICULATES

CO58 CO60

SR89

SR90 BA140 QUANTITY (ci) 9.40E-05 1.26E-04 2.64E-04 6.34E-06

6.59E-05

QUANTITY (ci) 4.98E-04

3.64E-03

Total Particulates Released: 5.57E-04 ci Average Rate of Release: 7.08E-05 uCi/sec

> RADIONUCLIDE H3

QUANTITY (ci) 7.08E-01

Avg. Rate of Release for H3: 9.00E-02 uCi/sec

OYSTER CREEK NUCLEAR GENERATING STATION SECOND QUARTER 1995 GASEOUS EFFLUENT GROUND-LEVEL RELEASES

FISSION GASES

• • • • •

QUANTITY (ci)

*

Total Fission Gases Released: 0.00E+00 ci Average Rate of Release: 0.00E+00 uCi/sec

IODINES

I131

I133

QUANTITY (ci) 2.31E-06 1.26E-05

Total Iodines Released: 1.49E-05 ci Average Rate of Release: 1.89E-06 uCi/sec

PARTICULATES QUANTITY SR89

CS137

(ci) 4.47E-06 2.73E-08

Total Particulates Released: 4.50E-06 ci Average Rate of Release: 5.72E-07 uCi/sec

RADIONUCLIDE

QUANTITY (Ci) 0.00E+00

H3

Avg. Rate of Release for H3: 0.00E+00 uCi/sec

OYSTER CREEK NUCLEAR GENERATING STATION THIRD QUARTER 1995 GASEOUS EFFLUENT ELEVATED RELEASES

FISSION GASES QUANTITY (ci) KR85M 1.27E+00 KR87 6.70E+00 KR88 3.18E+00 XE135M 8.94E-01 XE135 1.02E+01 Total Fission Gases Released: 2.23E+01 ci

Gamma Ebar:0.6583 MevAverage Rate of Release:2.80E+00 uCi/sec

IODINES

• 1

> I131 I133

7.59E-04 6.39E-03 7.15E-03 ci

Total Iodines Released:7.15E-03 ciAverage Rate of Release:9.00E-04 uCi/sec

PARTICULATES

CR51 CO58

CO60

SR89

BA140

GROSSA

QUANTITY (ci) 2.60E-04 6.86E-05 2.04E-04 3.57E-04

1.52E-04

2.36E-06

QUANTITY (ci)

Total Particulates Released: 1.04E-03 ci Average Rate of Release: 1.31E-04 uCi/sec

> RADIONUCLIDE H3

QUANTITY (ci) 2.59E-01

Avg. Rate of Release for H3: 3.26E-02 uCi/sec

OYSTER CREEK NUCLEAR GENERATING STATION THIRD QUARTER 1995 GASEOUS EFFLUENT GROUND-LEVEL RELEASES

FISSION GASES

• •

QUANTITY (ci) *

Total Fission Gases Released: 0.00E+00 ci Average Rate of Release: 0.00E+00 uCi/sec

IODINES

I131 I133 QUANTITY (ci) 8.54E-07 3.57E-05

Total Iodines Released:3.65E-05 ciAverage Rate of Release:4.60E-06 uCi/sec

PARTICULATES

CO60 CS137

Total Particulates Released: 1.68E-06 ci Average Rate of Release: 2.12E-07 uCi/sec

RADIONUCLIDE

QUANTITY (ci) 0.00E+00

QUANTITY (ci)

5.69E-07

1.11E-06

H3

Avg. Rate of Release for H3: 0.00E+00 uCi/sec

OYSTER CREEK NUCLEAR GENERATING STATION FOURTH QUARTER 1995 GASEOUS EFFLUENT ELEVATED RELEASES

	••
FISSION GASES	QUANTITY
	(ci)
KR85M	1.04E+00
KR87	5.33E+00
KR88	2.41E+00
XE135	8.19E+00

*

Total Fission Gases Released:1.70E+01 ciGamma Ebar:0.6181 MevAverage Rate of Release:2.13E+00 uCi/sec

IODINES	QUANTITY
	(ci)
I131	1.15E-03
I133	4.97E-03

Total Iodines Released:6.12E-03 ciAverage Rate of Release:7.70E-04 uCi/sec

PARTICULATES	QUANTITY (ci)
CR51	1.16E-04
MN54	1.00E-05
CO58	8.89E-05
CO60	1.23E-04
SR89	2.58E-04
BA140	9.94E-05

Total Particulates Released: 6.96E-04 ci Average Rate of Release: 8.76E-05 uCi/sec

RADIONUCLIDE	QUANTITY
	(ci)
H3	1.24E-01

Avg. Rate of Release for H3: 1.56E-02 uCi/sec

OYSTER CREEK NUCLEAR GENERATING STATION FOURTH QUARTER 1995 GASEOUS EFFLUENT GROUND-LEVEL RELEASES

FISSION GASES

QUANTITY (ci)

*

Total Fission Gases Released: 0.00E+00 ci Average Rate of Release: 0.00E+00 uCi/sec

IODINES

I131 I133 QUANTITY (ci) 1.71E-06 4.62E-06

Total Iodines Released:6.33E-06 ciAverage Rate of Release:7.96E-07 uCi/sec

PARTICULATES

QUANTITY (ci)

Total Particulates Released: 0.00E+00 ci Average Rate of Release: 0.00E+00 uCi/sec

> RADIONUCLIDE H3

QUANTITY (ci) 0.00E+00

Avg. Rate of Release for H3: 0.00E+00 uCi/sec

OYSTER CREEK NUCLEAR GENERATING STATION 1995 LIQUID EFFLUENTS

• • • • • •

NUCLIDE RELEASED	QUANTITY (Ci)
CS137	2.23E-07
Total	2.23E-07
NOBLE GASES Total	0.00E+00
TRITIUM	0.00E+00
GROSS ALPHA	0.00E+00

Volume of Waste Released Prior to Dilution: 4.00E+02 gal Volume of Dilution Water Released: 9.20E+07 gal

Page 1 of 17

SOLID WASTE SHIPPED OFFSITE FOR DISPOSAL DURING PERIOD FROM 01/01/95 TO 12/31/95

VOLUME WASTE CURIES & ERROR FT^3 M^3 SHIPPED CLASS (Ci) А 4158 117.7 2.56E2 +/-25% В 970.6 27.5 1.29E2 +/-25% С 0 0 0 +/-25% A11 145.2 5128.6 3.85E2 +/-25%

WASTE STREAM: Resins, Filters, & Evap Bottoms







• • •

, . .

Page 2 of 17

ESTIMATES OF MAJOR NUCLIDES BY WASTE CLASS AND STREAM with 1% Cutoff

WASTE CLASS NUCLIDE NAME CURIES PERCENT ABUNDANCE Co-60 Α 45.807% 1.17E2 Fe-55 8.80E1 34.356% Cs-137 10.904% 2.79E1 Mn-54 5.833% 1.49E1 Ni-63 2.29E0 .894% Sr-90 .082% 2.10E-1 Pu-241 .070% 1.79E-1 C-14 4.61E-2 .018% Ni-59 .016% 4.1E-2 H-3 3.33E-2 .013% Cm-242 2.59E-4 .000% I-129 0.00E+0 <LLD Tc-99 <LLD 0.00E+0

Waste Stream: Resins, Filters, & Evap Bottoms





· · · ·

Page 3 of 17

ESTIMATES OF MAJOR NUCLIDES BY WASTE CLASS AND STREAM with 1% Cutoff

Waste Stream: Resins, Filters, and Evap Bottoms

WASTE CLASS	NUCLIDE NAME	PERCENT ABUNDANCE	CURIES
В	Cs-137	33.468%	4.32E1
	Co-60	32.096%	4.14E1
	Fe-55	27.063%	3.49E1
	Mn-54	2.803%	3.62E0
	Cs-134	1.249%	1.61E0
	Ni-63	.704%	9.08E-1
	Sr-90	.456%	5.88E-1
	Н-З	.400%	5.16E-1
	Pu-241	.277%	3.57E-1
	C-14	.231%	2.98E-1
	Ni-54	.008%	1.03E-2
	Cm-242	.000%	2.43E-4
	I-129	<lld< td=""><td>0.00E0</td></lld<>	0.00E0
	Tc-99	<lld< td=""><td>0.00E0</td></lld<>	0.00E0

Page 4 of 17

ESTIMATES OF MAJOR NUCLIDES BY WASTE CLASS AND STREAM with 1% Cutoff

Waste Stream: Resins, Filters, and Evap Bottoms

WASTE CLASS	NUCLIDE NAME	PERCENT ABUNDANCE	CURIES
A11	Co-60	41.893%	1.61E2
	Fe-55	32.274%	1.24E2
	Cs-137	17.346%	6.68E1
	Mn-54	4.968%	1.91E1
	Ni-63	.840%	3.23E0
	Sr-90	.189%	7.28E-1
	Pu-241	.129%	4.97E-1
	H-3	.124%	4.77E-1
	C-14	.079%	3.04E-1
	Ni-59	.014%	5.39E-2
	Cm-242	.000%	5.02E-4
	I-129	<lld< td=""><td>0.00E0</td></lld<>	0.00E0
	Tc-99	LLD	0.00E0

Page 5 of 17

SOLID WASTE SHIPPED OFFSITE FOR DISPOSAL DURING PERIOD FROM 01/01/95 TO 12/31/95

Waste Stream: LIQ-O-NA Evap Bottoms that was sent to an Offsite Reprocessor for further volume reduction.

	VOLUME			
WASTE CLASS	FT^3	M^3	CURIES SHIPPED	% ERROR (CI)
A	194.1	5.5	2.70E+0	+/-25%
В	194.1	5.5	9.62E+0	+/-25%
С	0	0	0	+/-25%
A11	388.2	11.0	1.23E+1	+/-25%

· · ·

Page 6 of 17

ESTIMATES OF MAJOR NUCLIDES BY WASTE CLASS AND STREAM WITH 1% CUTOFF

Waste Stream: Other Waste:

WASTE CLASS	NUCLIDE NAME	PERCENT ABUNDANCE	CURIES
A	Cs-137	93.333%	2.52E+00
	Cs-134	3.741%	1.01E-01
	Co-60	2.296%	6.20E-02
	Ni-63	.142%	3.83E-03
	Sr-90	.069%	1.85E-03
	C-14	.002%	4.73E-03
	I-129	<lld></lld>	0.00E+00
	Tc-99	<lld></lld>	0.00E+00
	H-3	<lld></lld>	0.00E+00

· · ·

Page 7 of 17

ESTIMATES OF MAJOR NUCLIDES BY WASTE CLASS AND STREAM WITH 1% CUTOFF

Waste Stream: Other Waste:

WASTE CLASS	NUCLIDE NAME	PERCENT ABUNDANCE	CURIES
В	Cs-137	95.426%	9.18E+00
	Cs-134	3.815%	3.67E-01
	Co-60	.542%	5.21E-02
	Sr-90	.070%	6.72E-03
	Ni-63	.033%	3.22E-03
	C-14	.000%	3.98E-05
	I-129	<lld></lld>	0.00E+00
	Tc-99	<lld></lld>	0.00E+00
	H-3	<lld></lld>	0.00E+00

-

· · · · ·

Page 8 of 17

ESTIMATES OF MAJOR NUCLIDES BY WASTE CLASS AND STREAM WITH 1% CUTOFF

Waste Stream: Other Waste:

WASTE CLASS	NUCLIDE NAME	PERCENT ABUNDANCE	CURIES		
A11	Cs-137	94.968%	1.17E+01		
	Cs-134	3.799%	4.68E-01		
	Co-60	.926%	1.14E-01		
	Sr-90	.070%	8.57E-03		
	Ni-63	.057%	7.05E-03		
	C-14	.001%	8.71E-5		
	I-129	<lld></lld>	0.00E+00		
	Tc-99	<lld></lld>	0.00E+00		
	H-3	<lld></lld>	0.00E+00		

, . , , , , ,

,

Page 9 of 17

SOLID WASTE SHIPPED OFFSITE FOR DISPOSAL DURING PERIOD FROM 01/01/95 TO 12/31/95

Waste Stream: HI-RAD TRASH (DAW) shipped direct to Burial Ground

WASTE CLASS		VOLUME				
		FT^3	M ³	CURIES SHIPPED	% ERROR (CI)	
	A	380.9	10.8	1.69E+0	+/-25%	
	В	0	0	0	+/-25%	
	С	0	0	0	+/-25%	
	A11	380.9	10.8	1.69E+0	+/-25%	

· · ·

Page 10 of 17

ESTIMATES OF MAJOR NUCLIDES BY WASTE CLASS AND STREAM with 1% Cutoff

Waste Stream: Hi-Rad Trash (DAW)

WASTE CLASS	NUCLIDE NAME	PERCENT ABUNDANCE	CURIES	
A	Co-60	39.284%	6.64E-1	
	Fe-55	37.691%	6.37E-1	
All	Cs-137	10.397%	1.76E-1	
	Mn-54	7.016%	1.19E-1	
	Co-58	1.726%	2.91E-2	
	Zn-65	1.152%	1.95E-2	
	Cr-51	1.021%	1.72E-2	
	Ni-63	.617%	1.04E-2	
	Sr-90	.071%	1.20E-3	
	Pu-241	.031%	5.27E-4	
	Ni-59	.010%	1.62E-4	
	Cm-242	0.00%	4.35E-6	
	I-129	<lld< td=""><td>O.00E0</td></lld<>	O.00E0	
	Tc-99	<lld< td=""><td>0.00E0</td></lld<>	0.00E0	
	C-14	<lld></lld>	0.00E0	
	Н-3	<lld></lld>	0.00E0	

, , **, ,** , ,

Page 11 of 17

SOLID WASTE SHIPPED OFFSITE FOR DISPOSAL DURING PERIOD FROM 01/01/95 TO 12/31/95

Waste Stream: DRY ACTIVE WASTE sent to a Reprocessor

WASTE CLASS		VOL	UME		% ERROR (CI)	
		FT^3	M ³	CURIES SHIPPED		
	А	5237.5	148.22	5.49E-1	+/-25%	
	В	0	0	0	+/-25%	
	С	0	0	0	+/-25%	
	A11	5237.5	148.22	5.49E-1	+/-25%	

NOTE: This material was sent to a Reprocessor for further volume reduction prior to burial.

Page 12 of 17

ESTIMATES OF MAJOR NUCLIDES BY WASTE CLASS AND STREAM with 1% Cutoff

Waste Stream: DRY ACTIVE WASTE sent to a Reprocessor

WASTE CLASS	NUCLIDE NAME	PERCENT ABUNDANCE	CURIES	
A	Co-60	39.43%	2.16E-1	
	Fe-55	37.83%	2.08E-1	
A11	Cs-137	10.42%	5.72E-2	
	Mn-54	7.01%	3.85E-2	
	Co-58	1.74%	9.55E-3	
	Zn-65	1.15%	6.32E-3	
	Cr-51	1.03%	5.65E-3	
	Н-3	<lld></lld>	0.00	
	C-14	<lld></lld>	0.00	
	Tc-99	<lld></lld>	0.00	
	I-129	<lld></lld>	0.00	

Page 13 of 17

Waste Stream: SUM OF ALL CATEGORIES

	VOL	UME			
WASTE CLASS			CURIES SHIPPED	% ERROR (CI)	
A	9970.5	282.22	2.61E2	+/-25%	
В	1164.7	33.0	1.39E2	+/-25%	
С	0	0	0	+/-25%	
A11	11135.2	315.22	4.00E2	+/-25%	

1

Page 14 of 17

- ---- -

ESTIMATES OF MAJOR NUCLIDES BY WASTE CLASS AND STREAM with 1% Cutoff

Waste Stream: SUM OF ALL CATEGORIES

WASTE CLASS	NUCLIDE NAME	PERCENT ABUNDANCE	CURIES	
A	Co-60	46.1%	1.18E2	
	Fe-55	34.69%	8.88E1	
	Cs-137	11.99%	3.07E1	
	Mn-54	5.898%	1.51E1	
	Ni-63	0.898%	2.30E0	
	Sr-90	0.083%	2.13E-1	
	Pu-241	0.070%	1.80E-1	
	C-14	0.018%	4.62E-2	
	Ni-59	0.016%	4.12E-2	
	H-3	0.013%	3.33E-2	
	Cm-242	0.00%	2.63E-4	
	I-129	<lld< td=""><td>0.00</td></lld<>	0.00	
	Tc-99	<lld< td=""><td>0.00</td></lld<>	0.00	

---- - ------

· · · · · ·

Page 15 of 17

ESTIMATES OF MAJOR NUCLIDES BY WASTE CLASS AND STREAM with 1% Cutoff

Waste Stream: SUM OF ALL CATEGORIES

WASTE CLASS	NUCLIDE NAME	PERCENT ABUNDANCE	CURIES	
В	Cs-137	38.248%	5.24E1	
	Co-60	30.292%	4.15E1	
	Fe-55	25.474%	3.49E1	
	Mn-54	2.642%	3.62E0	
	Cs-134	1.445%	1.98E0	
	Ni-63	0.665%	9.11E-1	
	Sr-90	0.434%	5.95E-1	
	H-3	0.377%	5.16E-1	
	Pu-241	0.261%	3.57E-1	
	C-14	0.218%	2.98E-1	
	Ni-59	0.008%	1.03E-2	
	Cm-242	0.000%	2.43E-4	
	Tc-99	<lld< td=""><td>0</td></lld<>	0	
	I-129	<lld< td=""><td>0</td></lld<>	0	

· · · · · ·

Page 16 of 17

ESTIMATES OF MAJOR NUCLIDES BY WASTE CLASS AND STREAM with 1% Cutoff

WASTE CLASS	NUCLIDE NAME	PERCENT ABUNDANCE	CURIES	
All	Co-60	40.585%	1.62E2	
	Fe-55	31.476%	1.24E2	
	Cs-137	21.145%	8.31E1	
	Mn-54	4.738%	1.86E1	
	Ni-63	0.817%	3.211E0	
	C-134	0.529%	2.08E0	
	C-14	0.224%	8.81E-1	
	Sr-90	0.206%	8.08E-1	
	H-3	0.153%	6.01E-1	
	Pu-241	0.137%	5.37E-1	
	Ni-59	0.013%	5.15E-2	
	Cm-242	0.00%	5.06E-4	
	Tc-99	<lld></lld>	0	
	I-129	<lld< td=""><td>0</td></lld<>	0	

,

•

Page 17 of 17

SOLID WASTE DISPOSITION SUMMARY DURING PERIOD FROM 01/01/95 TO 12/31/95

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
30	TRUCK	Barnwell, SC
0	TRUCK	Richland, WA
3	TRUCK	Oak Ridge, TN







OYSTER CREEK 33 FOOT DATA JOINT FREQUENCY TABLES VERSION: 93.2 PRINTED 01-16-1996

HOURS AT EACH WIND SPEED AND DIRECTION PERIOD OF RECORD 95010100 TO 95123123 STABILITY CLASS A

-

	WIND SPEED							
SECTO TO	FROM	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
· N	S	1	5	47	53	1	0	107
NNE	SSW	1	12	35	20	2	0	70
NE	SW	0	19	38	7	1	0	65
ENE	WSW	1	12	46	3	0	0	62
E	W	0	20	53	20	5	0	98
ESE	WNW	1	19	97	61	1	0	179
SE	NW	1	21	107	42	0	0	171
SSE	NNW	1	12	40	3	0	0	56
S	N	0	6	14	0	0	0	20
SSW	NNE	0	9	17	1	0	0	27
SW	NE	0	14	55	2	0	0	71
WSW	ENE	0	22	126	10	0	0	158
u	E	0	30	72	1	0	. 0	103
UNU	ESE	0	42	44	2	0	0	88
NW	SE	0	29	105	3	0	0	137
NNW	SSE	1	8	59	19	0	0	87
TOTAL	,	7	280	955	247	10	0	1499

•

.

HOURS AT EACH WIND SPEED AND DIRECTION PERIOD OF RECORD 95010100 TO 95123123 STABILITY CLASS B

•

.

~

SECTO	WINDS			WIN	ID SPEED			
TO	FROM	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	S	0	8	24	13	0	0	45
NNE	SSW	0	6	22	7	0	0	35
NE	SW	0	10	13	1	0	0	24
ENE	WSW	1	12	11	0	0	0	24
E	W	0	19	23	7	0	0	49
ESE	WNW	0	6	28	13	0	0	47
SE	NW	0	17	21	10	0	0	48
SSE	NNW	0	11	10	1	0	0	22
s	N	0	13	6	0	0	0	19
SSW	NNE	0	12	5	1	0	0	18
SW	NE	2	16	12	0	0	0	30
WSW	ENE	1	16	17	1	0	0	35
W	E	1	14	11	0	0	0	26
WNW	ESE	0	17	13	0	0	٥ ر	30
NW	SE	0	12	14	0	0	0	26
NNW	\$ SE	1	10	18	3	0	0	32
··								
TOTAL		6	199	248	57	0	0	510

HOURS AT EACH WIND SPEED AND DIRECTION PERIOD OF RECORD 95010100 TO 95123123 STABILITY CLASS C

••••<u>-</u>

•

•

~

WIND SPEED									
SECTOR TO		1-3	4-7 8	-12 1	3-18 1	9-24	>24 T	OTAL	
N	S	1	3	13	5	1	0	23	
 NNE	SSW	1	1	4	4	0	0	10	
NE	SW	2	2	5	0	0	0	9	
ENE	WSW	1	7	9	0	0	0	17	
E	w	0	7	6	3	0	0	16	
ESE	WNW	0	6	18	8	0	0	32	
SE	NW	0	8	10	4	0	0	22	
SSE	NNW	0	3	5	0	0	0	8	
S	N	0	6	1	0	0	0	7 .	
SSW	NNE	0	10	1	0	0	0	11	
s₩	NE	0	15	3	0	0	0	18	
WSW	ENE	0	7	9	0	0	0	16	
¥	E	0	6	2	0	0	0	8	
WNW	ESE	0	4	3	0	0	0	7	
NW	SE	0	8	7	0	0	0	15	
NNW	SSE	0	6	3	1	0	0	10	
TOTAL		5	99	99	25	1	0	229	

HOURS AT EACH WIND SPEED AND DIRECTION PERIOD OF RECORD 95010100 TO 95123123 STABILITY CLASS D

•

- -

SECTOR	חואטפ			WIN	D SPEED			
TO		1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	s	9	58	70	30	9	0	176
NNE	SSW	12	38	75	26	0	1	152
NE	SW	11	35	26	20	0	0	92
ENE	WSW	. 10	44	36	6	0	0	96
Ε	W	20	32	51	17	2	0	122
ESE	WNW	21	45	86	35	1	0	188
SE	NW	14	80	72	25	1	0	192
SSE	NNW	20	83	44	1	1	0	149
S	N	14	75	17	1	0	0	107
SSW	NNE	24	80	27	0	0	0	131
sw	NE	29	156	87	1	0	0	273
WSW	ENE	18	78	88	11	1	0	196
W	E	13	53	25	1	0	0	92
WNW	ESE	3	25	21	2	0	. 0	51
NW	SE	15	48	13	5	0	0	81
NNV	SSE	7	64	31	15	1	0	118
						·		
TOTAL		240	994	769	196	16	1	2216

- .

HOURS AT EACH WIND SPEED AND DIRECTION PERIOD OF RECORD 95010100 TO 95123123 STABILITY CLASS E

· "

efetop	WIND SPEED SECTOR WINDS								
TO	FROM	1-3	4-7	8-12	13-18	19-24	>24	TOTAL	
N	S	35	84	51	14	5	0	189	
NNE	SSW	26	131	88	16	2	0	263	
NE	SW	32	123	50	5	0	0	210	
ENE	WSW	45	181	41	2	0	0	269	
E	W	26	155	25	3	0	0	209	
ESE	WNW	27	151	115	12	0	0	305	
SE	мм	47	127	66	6	0	0	246	
SSE	NNW	3 1 ·	102	19	0	0	0	152	
s	N	20	52	12	0	0	0	84	
SSW	NNE	22	27	22	1	0	0	72	
SW	NE	24	43	29	8	0	0	104	
WSW	ENE	15	45	17	8	1	0	86	
W	Ε	11	37	11	2	0	0	61	
WNW	ESE	12	23	9	2	0	0	46	
мы	SE	18	27	10	5	0	0	60	
NNW	SSE	16	43	35	4	5	1	104	
				<u> </u>				<u> </u>	-
TOTAL		407	1351	600	88	13	1	2460	

.

HOURS AT EACH WIND SPEED AND DIRECTION PERIOD OF RECORD 95010100 TO 95123123 STABILITY CLASS F

CECTO				WIN	ID SPEED			
TO	R WINDS		4-7	8-12	13-18	19-24	>24	TOTAL
N	s	22	9	0	0	0	0	31
NNE	SSW	30	23	0	1	0	0	54
NE	SW	23	58	1	0	0	0	82
ENE	WSW	34	100	2	0	0	0	136
E	W	56	87	3	0	0	0	146
ESE	WNW	32	66	1	0	0	0	99
SE	NW	33	48	4	0	0	0	85
SSE	NNW	29	48	0	0	0	0	77
s	N	7	7	0	0	0	0	14
SSW	NNE	10	0	0	0	0	0	10
SW	NE	7	1	2	0	0	0	10
WSW	ENE	6	6	0	1	1	0	14
W	E	5	1	0	0	0	0	6
VNV	ESE	5	1	1	0	0	<u>,</u> 0	7
NW	SE	6	3	2	0	0	0	11
NNW	SSE	18	9	0	0	0	0	27
TOTAL		323	467	16	2	1	0	809

• •

•

HOURS AT EACH WIND SPEED AND DIRECTION PERIOD OF RECORD 95010100 TO 95123123 STABILITY CLASS G

• • • • •

	WIND SPEED											
SECTOR	FROM	1-3	4-7	8-12	13-18	19-24	>24	TOTAL				
N	s	21	3	0	0	0	0	24				
NNE	SSU	21	6	0	0	0	0	27				
NE	SW	51	20	0	0	0	0	71				
ENË	WSW	123	114	1	2	0	0	240				
E	W	188	67	0	1	0	0	256				
ESE	WNW	106	23	0	1	0	0	130				
SE	NW .	96	27	0	0	0	0	123				
SSE	NNW .	52	41	0	0	0	0	93				
s	N	20	6	0	0	0	0	26				
SSW	NNE	13	1	0	0	0	0	14				
SW	NE	4	0.	0	0	0	0	4				
WSW	ENE	1	1	0	0	0	o	2				
u.	E	9	2	0	0	0	0	11				
WNW	ESE	. 2	0	0	0	0	0	2				
NW	SE	6	0	0	0	0	0	6				
NNW	SSE	6	0	٥	0	0	0	6				
TOTAL		719	311	1	4	0	0	1035				

.

HOURS AT EACH WIND SPEED AND DIRECTION PERIOD OF RECORD 95010100 TO 95123123 STABILITY CLASS ALL

•

.

SECTO	WIND SPEED										
TO			4-7	8-12	13-18	19-24	>24	TOTAL			
N	S	89	170	205	115	16	0	595			
NNE	SSW	91	217	224	74	4	1	611			
NE	รพ	119	267	133	33	1	0	553			
ENE	WSW	215	470	146	13	0	0	844			
E	W	290	387	161	51	7	0	896			
ESE	WNW	187	316	345	130	2	0	9 80			
SE	NW	191	328	280	87	1	0	887			
SSE	NNW	133	300	118	5	1	0	557			
s	N	61	165	50	1	0	0	277			
SSW	NNE	69	139	72	3	0	0	283			
SW	NE	66	245	188	11	0	0	510			
WSW	ENE	41	175	257	31	3	0	507			
W	E	39	143	121	4	0	0	307			
WNW	ESE	22	112	91	6	0	٥	231			
NW	SE	45	127	151	13	0	0	336			
NNW	SSE	49	140	146	42	6	1	384			
TOTAL		1707	3701	2688		41	2	8758			
IUIAL				2000			٤	0610			

Hours of Missing/Invalid Data: 2

HOURS AT EACH WIND SPEED AND DIRECTION PERIOD OF RECORD 95010100 TO 95123123 STABILITY CLASS A

.

.

SECTOR	WIND SPEED										
TO	FROM	1-3	4-7	8-12	13-18	19-24	>24	TOTAL			
N	s	0	0	0	0	4	0	4			
NNE	SSW	0	0	0	3	1	0	4			
NE	SW	0	0	2	3	0	0	5			
ENE	WSW	0	0	0	4	0	1	5			
E	W	0	0	2	6	6	0	14			
ESE	WNW	0	1	0	6	7	4	18			
SE	NW	0	0	1	7	6	9	23			
SSE	NNW	0	0	0	3	3	0	6			
S	N	0	0	0	1	0	0	1			
SSW	NNE	0	0	0	1	1	0	2			
SW	NE	0	0	0	10	2	0	12			
WSW	ENE	0	0	2	4	3	1	10			
W	E	0	1	1	1	0	0	3			
WNW	ESE	0	0	0	0	0	0	0			
NW	SE	0	0	3	3	0	0	6			
NNW	SSE	0	0	1	3	1	0	5			
TOTAL		0	2	12	55	34	15	118			

HOURS AT EACH WIND SPEED AND DIRECTION PERIOD OF RECORD 95010100 TO 95123123 STABILITY CLASS B

-

• • •

-9

				WI	ID SPEED			
TO	R WINDS FROM		4-7	8-12	13-18	19-24	>24	TOTAL
N	S	0	1	2	18	8	0	29
NNE	SSW	0	0	0	7	3	1	11
NE	S₩	0	1	2	7	3	0	13
ENE	WSW	0	0	9	16	0	1	26
E	W	0	0	3	9	2	5	19
ESE	WNW	0	0	3	19	19	8	49
SE	NW	0	0	2	21	11	7	41
SSE	NNU	0	0	3	4	1	0	8
S	N	0	0	0	1	0	0	1
SSW	NNE	0	0	0	0	3	0	3
SW	NE	0	0	3	21	3	0	27
WSM	ENE	0	0	17	26	7	1	51
w	Ε	0	0	7	2	1	0	10
WNW	ESE	0	2	14	3	1	, 0 -	20
NW	SE	0	0	11	5	0	0	16
NNW	SSE	0	0	4	24	3	0	31
TOTAL		0	4	80	183	65	23	355

HOURS AT EACH WIND SPEED AND DIRECTION PERIOD OF RECORD 95010100 TO 95123123 STABILITY CLASS C

SECTO	N WINDS			WIN	ID SPEED	1		
TO	FROM		4-7	8-12	13-18	19-24	>24	TOTAL
N	s	0	0	7	21	7	1	36
NNE	SSW	0	2	5	19	9	4	39
NE	SW	٥	1	10	8	3	1	23
ENE	WSW	0	4	8	16	2	1	31
E	W	0	1	18	21	8	6	54
ESE	WNW	0	2	10	32	36	20	100
SE	NW	0	2	18	23	23	11	77
SSE	NNW	0	1	6	11	3	1	22
S	N	0	0	3	4	0	0	7
SSW	NNE	0	0	4	2	1	0	7
SW	NE	0	1	9	16	9	1	36
WSW	ENE	0	1	24	33	5	1	64
w.	E	0	2	20	8	0	0	30
WNW	ESE	0	1	16	6	1	. 0	24
NW	SE	0	1	24	8	0	0	33
NNW	SSE	0	0	13	22	1	0	36
TOTAL		0	19	195	250	108	47	619

.

٠.

• • •

HOURS AT EACH WIND SPEED AND DIRECTION PERIOD OF RECORD 95010100 TO 95123123 STABILITY CLASS D

• • • •

				WIN	WIND SPEED					
SECTOR TO	FROM	1-3	4-7	8-12	13-18	19-24	>24	TOTAL		
N	S	2	23	75	104	42	32	278		
NNE	SSW	2	27	45	118	67	28	287		
NE .	sw	3	21	43	41	23	13	144		
ENE	WSW	4	16	49	61	24	10	164		
E	W	5	25	33	71	45	33	212		
ESE	WNW	2	25	45	107	119	87	385		
SE	NW	5	28	68	119	92	57	369		
SSE	NNW	2	14	58	73	26	5	178		
S	N	2	26	68	28	11	0	135		
SSW	NNE	7	27	86	54	8	0	182		
SW	NE	5	30	108	154	50	18	365		
WSW	ENE	8	26	104	102	69	31	3 40		
W	Е	4	39	65	30	6	3	147		
WNW	ESE	4	40	60	35	12	. 4	155		
NW	SE	9	45	77	21	4	5	161		
NNW	SSE	5	13	84	32	5	15	154		
TOTAL		69	425	1068	1150	603	341	3656	-	

_

.

.

HOURS AT EACH WIND SPEED AND DIRECTION PERIOD OF RECORD 95010100 TO 95123123 STABILITY CLASS E

• • •

7

				WIN	D SPEED			
SECTOR	FROM	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	s	3	7	34	54	38	17	153
NNE	SSW	2	10	38	125	103	21	299
NE	SW	4	10	27	56	91	15	203
ENE	WSW	2	4	22	49	83	12	172
Ε	W	2	7	24	63	77	16	189
ESE	WNW	0	7	20	56	168	27	278
SE	NW	4	8	20	65	86	12	195
SSE	NNW	2	13	19	57	63	7	161
S	N	3	7	21	50	11	2	94
SS₩	NNE	3	7	27	19	4	0	60
S₩	NE	2	9	16	21	12	10	70
WSW	ENE	5	12	12	40	7	6	82
¥	E	4	16	15	24	6	6	71
WNW	ESE	0	9	15	14	4	_ 2	44
NW	SE	6	12	9	8	10	7	52
NNW	SSE	1	12	40	21	13	30	117
TOTAL		43	150	359	722	776	190	2240

•

.

HOURS AT EACH WIND SPEED AND DIRECTION PERIOD OF RECORD 95010100 TO 95123123 STABILITY CLASS F

SECTOR	WIND SPEED								
TO	FROM	1-3	4-7	8-12	13-18	19-24	>24	TOTAL	
N	S	2	3	27	9	3	0	44	
NNE	SSW	1	2	19	49	18	3	92	
NE	SW	3	3	23	38	39	17	123	
ENE	WSW	3	8	16	21	38	17	103	
ε	¥	0	3	6	32	50	29	120	
ESE	WNW	1	3	11	39	48	14	116	
SE	NW	0	5	15	41	37	13	111	
SSE	NNW	1	4	10	35	44	6	100	
S	N	0	5	11	33	22	4	75	
SSW	NNE	1	2	7	24	0	0	34	
sw	NE	0	6	17	11	1	0	35	
wsw	ENE	0	2	6	6	0	0	14	
W	E	0	8	5	2	0	0	15	
WNW	ESE	1	10	4	4	1	_ 0	20	
NW	SE	2	4	8	5	1	0	20	
NNW	SSE	1	3	5	11	5	1	26	
TOTAL		16	71	190	360	307	104	104	

HOURS AT EACH WIND SPEED AND DIRECTION PERIOD OF RECORD 95010100 TO 95123123 STABILITY CLASS G

, Ст. -Ч. , Х. А.

SECTOR	WINDS			WIN	D SPEED			
TO			4-7	8-12	13-18	19-24	>24	TOTAL
N	s	3	8	14	6	3	0	34
NNE	SSW	3	6	19	18	10	3	59
NE	sw	6	18	28	30	8	5	95
ENE	WSW	3	11	17	15	31	4	81
E	W	2	8	16	27	36	14	103
ESE	WNW	2	6	13	20	13	2	56
SE	NW	2	6	13	20	11	0	52
SSE	NNW	4	6	11	13	4	1	39
s	N	1	12	14	21	9	0	57
SSW	NNE	3	2	7	13	3	0	28
SW	NE	1	3	18	12	1	0	35
WSW	ENE	1	4	11	1	0	0	17
W	E	2	2	12	7	0	0	23
WNW	ESE	1	2	10	2	1	0	16
NW	SE	1	3	4	2	0	o	10
NNW	SSE	1	1	9	3	0	0	14
TOTAL		36	98	216	210	130	29	719

•

HOURS AT EACH WIND SPEED AND DIRECTION PERIOD OF RECORD 95010100 TO 95123123 STABILITY CLASS ALL

· ..

SECTOR	UINOS		WIND SPEED					
TO	FROM	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	s	10	42	159	212	105	50	578
NNE	SSW	8	47	126	339	211	60	791
NE	sw	16	54	135	183	167	51	606
ENE	WSW	12	43	121	182	178	46	582
E	W	9	44	102	229	224	103	711
ESE	WNW	5	44	102	279	410	162	100
SE	NW	11	49	137	296	266	109	
SSE	NNW	9	38	107	196	144	20	514
s	N	6	50	117	138	53	6	370
SSW	NNE	14	38	131	113	20	0	316
SW	NE	8	49	171	245	78	29	580
WSW	ENE	14	45	176	212	91	40	578
W	E	10	68	125	74	13	9	299
WNW	ESE	6	64	119	64	20	6	279
NW	SE	18	65	136	52	15	12	298
NNW	SSE	8	29	156	116	28	46	383
TOTAL		164	769	2120	2930	2023	749	875

Hours of Missing/Invalid Data: 5