SALEM GENERATING STATION SEMIANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT SGS RERR-39

SALEM UNIT NOS. 1 & 2

UNIT 1 DOCKET NO. 50-272 UNIT 2 DOCKET NO. 50-311 OPERATING LICENSE NO. DPR-70 OPERATING LICENSE NO. DPR-75



FEBRUARY, 1996

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The Energy People

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#### SALEM GENERATING STATION RADIOACTIVE EFFLUENT RELEASE REPORT JULY - DECEMBER 1995

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## SALEM GENERATING STATION RADIOACTIVE EFFLUENT RELEASE REPORT JULY - DECEMBER 1995

#### INTRODUCTION

This report, SGS-RERR-39, summarizes information pertaining to the releases of radioactive materials in liquid, gaseous and solid form from the Salem Generating Station (SGS) Units 1 and 2 for the period July 1, 1995 to December 31, 1995.

This Semiannual RERR is submitted for both Salem Units and combines those sections which are common to each unit. Separate tables of releases and release totals are included whenever separate processing systems exist.

Salem Unit 1 is a Westinghouse Pressurized Water Reactor which has a licensed core power of 3411 MWt and an approximate net electrical output of 1115 MWe. Salem Unit 1 achieved initial criticality on December 11, 1976 and went into commercial operations on June 30, 1977.

Salem Unit 2 is a Westinghouse Pressurized Water Reactor which has a licensed core power of 3411 MWt and an approximate net electrical output of 1115 MWe. Salem Unit 2 achieved initial criticality on August 2, 1980 and went into commercial operations on October 13, 1981.

The report is prepared in the format of Regulatory Guide 1.21, Appendix B, as required by Specification 6.9.1.11 of the Salem Technical Specifications. Preceding the tables summarizing the gaseous and liquid discharges and solid waste shipments are our responses to parts A-F of the "Supplemental Information" section of Regulatory Guide 1.21, Appendix B.

As required by Regulatory Guide 1.21, our Technical Specification limits are described in detail within this report along with a summary description of how measurements and determinations of the total activity discharged were developed.

To facilitate determination of compliance with 40CFR190 requirements, the following information on electrical output is provided.

Unit 1 generated **0** megawatt-hours of electrical energy (net) during the reporting period.

Unit 2 generated **0** megawatt-hours of electrical energy (net) during the reporting period.

Results of liquid and gaseous composites analyzed for Sr-89, Sr-90 and Fe-55 for the fourth quarter of 1995 were not available for inclusion in this report. The results of these composites will be provided in the next Radioactive Effluent Release Report.

The Sr-89, Sr-90 and Fe-55 analyses for the first half of 1995 (refer to RERR-38) have been completed; amended pages to RERR-38 are included in this report.

#### PART A. PRELIMINARY SUPPLEMENTAL INFORMATION

#### 1.0 REGULATORY LIMITS

#### 1.1 Fission and Activation Gas Release Limits

The dose rate due to radioactive materials released in gaseous effluents from the site to areas at and beyond the site boundary, shall be limited to the following:

For noble gases: Less than or equal to 500 mrems/yr to the total body and less than or equal to 3000 mrems/yr to the skin.

In addition, the air dose due to noble gases released in gaseous effluents, from each reactor unit, from the site to areas at and beyond the site boundary, shall be limited to the following:

During any calendar quarter: Less than or equal to 5 mrad for gamma radiation and less than or equal to 10 mrad for beta radiation, and

During any calendar year: Less than or equal to 10 mrad for gamma radiation and less than or equal to 20 mrad for beta radiation.

#### 1.2 Iodine Particulates, and Tritium

The dose rate due to radioactive materials released in gaseous effluents from the site to areas at and beyond the site boundary, shall be limited to the following:

For Iodine-131, for tritium, and for all radionuclides in particulate form with half lives greater than 8 days: Less than or equal to 1500 mrems/yr to any organ.

In addition, the dose to a member of the public from iodine-131, from tritium, and from all radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents released, from each reactor unit, from the site to areas at and beyond the site boundary, shall be limited to the following:

During any calendar quarter: Less than or equal to 7.5 mrems to any organ, and

During any calendar year: Less than or equal to 15 mrems to any organ.

#### 1.3 Liquid Effluents Release Limits

The concentration of radioactive material released in liquid effluents to unrestricted areas shall be limited to the concentrations specified in 10 CFR, Part 20, Appendix B, Table II, Column 2 for radionuclides other than dissolved or entrained noble gases. For dissolved or entrained noble gases, the concentration shall be limited to 2E-4 microcuries per milliliter.

In addition, the dose or dose commitment to a member of the public from radioactive materials in liquid effluents released to unrestricted areas shall be limited:

During any calendar quarter to less than or equal to 1.5 mrems to the total body and to less than or equal to 5 mrems to any organ, and

During any calendar year to less than or equal to 3 mrems to the total body and to less than or equal to 10 mrems to any organ.

#### 1.4 Total Dose Limit

The annual (calendar year) dose or dose commitment to any member of the public, due to releases of radioactivity and radiation, from uranium fuel cycle sources shall be limited to less than or equal to 25 mrems to the total body or any organ (except the thyroid, which shall be limited to less than or equal to 75 mrems).

#### 2.0 MAXIMUM PERMISSIBLE CONCENTRATIONS (MPC)

Regulatory Guide 1.21 requires that the licensee provide the MPCs used in determining allowable release rates for radioactive releases.

- a. MPC values were not used to determine the maximum release rates for fission gases, iodines, or particulates from gaseous releases.
- b. MPC values as stated in 10CFR20, Appendix B, Table II, Column 2 were used for liquids.
- c. The MPC value used for dissolved or entrained noble gases is 2E-4 microcuries per milliliter.

#### 3.0 AVERAGE ENERGY

Regulatory Guide 1.21 requires that the licensee provide the average energy of the radionuclide mixture in releases of fission and activation gases; if applicable.

Release limits for SGS are not based upon average energy, hence, this section does not apply.

#### 4.0 MEASUREMENTS AND APPROXIMATION OF TOTAL RADIOACTIVITY

#### 4.1 Liquid Effluents

Liquid effluents are monitored in accordance with Table 4.11-1 of the Technical Specifications. During the period of record, all batch liquid wastes from the chemical drain tank and the laundry and hot shower tanks were routed to the hold-up tanks for monitoring prior to release. Technical Specifications require these tanks to be uniformly mixed for sampling and analysis before being released. Batch releases are defined as releases from the waste monitor hold-up tank and the chemical and volume control tanks. Continuous liquid releases are defined as condensate releases from intermittent blowdown of the steam generators. Specific activities from analyses were multiplied by the volume of effluent discharged to the environment in order to estimate the total liquid activity discharged.

The detection requirements of Tables 4.11-1 of the Technical Specifications are achieved or exceeded. Radionuclides detected at concentrations below the Technical Specification detection limits (LLDs) are treated as being present. Radionuclides for which no activity was detected, while meeting the required LLDs, are treated as absent.

#### 4.2 Gaseous Effluents

Gaseous effluent streams are monitored and sampled in accordance with Table 4.11-2 of the Technical Specifications. The plant vent is the final release point of all planned gaseous effluents and is continuously monitored by beta scintillator and high range GM tubes. The vent is also continuously sampled for iodine and particulates with a charcoal cartridge and filter paper. The filter and charcoal are changed weekly, and analyzed on a multi-channel analyzer in the laboratory.

Noble gas sampling is also performed on all gas decay tanks and containment purges prior to their release to the environment. The plant vent is sampled monthly for noble gases.

The detection requirements of Tables 4.11-1 and 4.11-2 of the Technical Specifications are achieved or exceeded. Radionuclides detected at concentrations below the Technical Specification detection limits (LLDs) are treated as being present. Radionuclides for which no activity was detected, while meeting the required LLDs, are treated as absent.

Continuous Mode gaseous releases are quantified by routine (monthly or weekly) sampling and isotopic analyses of the plant vent. Specific activities for each isotope detected are multiplied by the total vent flow volume for the entire sampling period in order to estimate the normal continuous release of radioactivity through the plant vent.

Slightly elevated plant vent radiation monitor readings are treated as continuous releases. The monitors response is converted to a "specific activity" using historical efficiency factors. The "specific activity" is multiplied by a default volume of effluent discharge to estimate the total activity discharged.

Batch Mode gaseous releases are quantified by sampling each gas decay tank or containment purge prior to discharge. Specific activities for each isotope are multiplied by the total volume of gas discharged for that batch.

Elevated plant vent radiation monitoring system readings while the channel is in an alarm state are treated as batch mode releases. If specific activity data from grab samples taken is not available, then the abnormal release is quantified by the use of the plant vent radiation monitors. The monitor's response is converted to a "specific activity" using historical efficiency factors. The "specific activity" is multiplied by the volume of effluent discharged while the channel was in an alarm state in order to estimate the total activity discharged.

#### 4.3 Estimated Total Error

The estimated total error of reported liquid and solid releases is within 25%

The estimated total error of the reported continuous gaseous releases is within 50% when concentrations exceed detectable levels. This error is due primarily to variability of waste stream flow rates and changes in isotopic distributions of waste streams between sampling periods. The estimated total error of the reported batch gaseous releases is within 10%.

Error estimates for releases where sample activity is below the detectable concentration levels are not included since error estimates at the LLD are not defined.

#### 5.0 BATCH RELEASES

Summaries of batch releases of gaseous and liquid effluents are provided in Tables 4A-1 and 4B-1 for Unit 1 and 4A-2 and 4B-2 for Unit 2.

#### 6.0 UNPLANNED RELEASES

During this reporting period there was one unplanned release. On 8/8/95 a small release of gaseous tritium occurred from the Salem Unit 1 equipment hatch to the surrounding environment. The equipment hatch was opened to the atmosphere in support of maintenance activities inside Unit 1 containment structure. The cause of the release was due to (2) temporary air handling units supplying cooling air that exceeded the removal capacity of the installed exhaust fans. The excess air instead of being released out the normal plant vent release point was exhausted out the open equipment hatch. Samples taken in containment detected tritium (H-3) at levels slightly above the monitoring equipments lower limit of detection. The unplanned gaseous release resulted in a small fraction (<1%) of the allowable dose limit to members of the general public at the site boundary. The air handling units were immediately secured and ventilation was restored to normal.

#### 7.0 ELEVATED R-16/R41C CHANNEL RESPONSES

During this reporting period, their were no elevated monitors readings on R16/R41C.

#### 8.0 MODIFICATION TO PREVIOUS RADIOACTIVE EFFLUENT RELEASE REPORTS

Our last report (RERR-38) did not include the quarterly Sr-89, Sr-90 and Fe-55 composite data for the second quarter of 1995. Amended pages to RERR-38 are included at the end of this report.

#### PART B. GASEOUS EFFLUENTS

See Summary Tables 1A-1 thru 1C for Salem Unit 1 Operations. See Summary Tables 1A-2 thru 1C for Salem Unit 2 Operations.

#### PART C. LIQUID EFFLUENTS

See Summary Tables 2A-1 thru 2B for Salem Unit 1 Operations. See Summary Tables 2A-2 thru 2B for Salem Unit 2 Operations.

#### PART D. SOLID WASTE

See Summary in Table 3.

#### PART E. RADIOLOGICAL IMPACT ON MAN

The calculated individual doses in this section are based on the controlling dose pathways and age groups as described below. The estimated dose represents the maximum radiation dose that could be received by a member of the general public. The population dose impact is based on historical site specific data i.e., food production, milk production, feed for milk animals and seafood production.

The doses were calculated using methods described in Regulatory Guide 1.109 and represent calculations for the six month reporting interval. Individual doses from batch and continuous releases were calculated using the annual average historic meteorological dispersion coefficients as described in the Offsite Dose Calculation Manual.

Population doses were calculated using the meteorological dispersion coefficients for the six month reporting interval. The population living within a 50 mile radius of the plant site is estimated to be approximately 4.5 million people.

#### Liquid Pathways:

Type	Age Group	Location	Pathway
Total Body	Adult	Site Boundary	Seafood ingestion Seafood ingestion
Organ	Adult	Site Boundary	

#### Dose:

Total Body		0.239 mrem
Organ dose	(GI-LLI)	0.388 mrem
Population	(Total)	0.083 person-rem
Population	(Average)	0.000019  mrem/person

#### Air Pathways

Type	Age Group	Location	Pathway
Total Body	N/A	Site Boundary	Direct Exposure
Skin	N/A	Site Boundary	Direct Exposure
Organ	Teen	4.9 mi., West	Inhalation

#### Dose:

Total Body		0.0000022 mrem
Skin Dose		0.000048 mrem
Organ dose	(Lung)	0.0054 mrem
	(Total)	0.173 person-rem
Population	(Average)	0.000038 mrem/person

#### Direct Radiation

Direct radiation may be estimated by thermoluminescent dosimetric (TLD) measurements. One method for comparing TLD measurements is by comparison with preoperational data. It should be noted that the TLDs measure direct radiation from both the Salem and Hope Creek Generating Stations at Artificial Island, as well as natural background radiation.

TLD data for the six month reporting period is given below:

TLD	Location	Measurement
2S-2 5S-1	0.3 mile 0.9 mile	4.4 mrem/month 3.7 mrem/month

These values are interpreted to represent natural background. They are within the statistical variation associated with the pre-operational program results, which are: 3.7 mrem/month for location 2S-2, and 4.2 mrem/month for location 5S-1.

#### Total Dose - Site Boundary

40CFR190 limits the total dose to members of the public due to radioactivity and radiation from uranium fuel cycle sources to:

<25 mrem total body or any organ <75 mrem to the thyroid

for a calendar year. For Artificial Island, the major sources of dose are from liquid and gaseous effluents from the Salem and Hope Creek plants.

The following doses to members of the public at the site boundary have been calculated for the six month reporting period:

0.578 mrem total body 1.290 mrem organ (GI-LLI) 0.030 mrem thyroid

## Dose to Members of the Public Due to Activities inside the Site Boundary.

In accordance with the requirements of Technical Specification 6.9.1.8, the dose to members of the public inside the site boundary has been calculated based on the following assumptions:

- a. The most limiting member of the general public are the commercial food vendors.
- b. 20 hours per week on site
- c. Highest total body dose contributor is direct radiation received from Salem and Hope Creek operation.
- d. Occupancy coincides with gaseous effluent discharges.
- e. Located near the restricted area boundary.

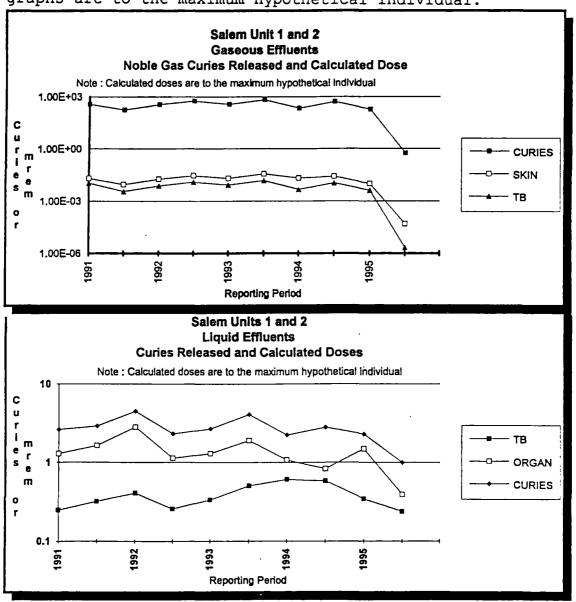
For the 12 month period, January 1, 1995 to December 31, 1995 the calculated doses are:

8.10E+00 mrem Total Body 2.53E-02 mrem Organ (Lung) 2.53E-02 mrem Thyroid

#### Assessment

Liquid and gaseous effluents released from Salem Units 1 and 2 decreased from previous reporting periods due to the extended shutdown of both units. Calculated doses for liquid effluents are due principally to isotopes of iron, cobalt and cesium. Gaseous effluents released consist prinicpally of isotopes of krypton and xenon. The dose from liquid and gaseous effluents to the maximum hypothetical individual were well below all applicable limits.

The following two trend graphs show the total curies of gaseous and liquid effluents released from Salem Units 1 and 2 for the past 5 years. Calculated doses in the graphs are to the maximum hypothetical individual.



#### PART F. METEOROLOGICAL DATA

Cumulative joint wind frequency distributions by atmospheric stability class at the 300 foot elevation are provided for the third and fourth quarters of 1995 at the end of this report.

PART G. OFFSITE DOSE CALCULATION MANUAL (ODCM) CHANGES

During this period, there were no revisions to the SGS off-site dose calculation manual (ODCM).

#### PART H. INOPERABLE MONITORS

During this period, the following effluent monitors were inoperable for more than 30 days:

\* Unit 1 Waste Gas Oxygen Analyzer

Extensive troubleshooting of a low flow condition on the Unit 1 Waste Gas Oygen Analyzer caused the monitor to be inoperable for greater than 30 days. The low flow condition was traced to a clogged filter at the inlet of the flow regulator. The filter was replaced at the monitor returned to service. The Unit 1 Waste Gas oxygen continued to be analyzed by the Unit 2 analyzer while Unit 1 was declared inoperable.

\* Unit 1 and 2 Steam Generator Blowdown Process Radiation Monitors (1(2)R19 A,B,C,D)

The securing of steam generator blowdown flow during the maintenance outage prevented the monitors from returning to service within the 30 day time period. The inoperability of the 1&2 R19 monitors are a routine occurrence during extended plant outages.

\* Unit 2 Radwaste Overboard Discharge Flow Recorder (2FR1064)

The flow recorder 2FR1064, which monitors the discharge rate of radioactive wastewater into the Delaware River indicated 15 to 20 gpm less than that calculated by the operator. Subsequent troubleshooting identified improper installation (personnel error) of the square root extractor as the cause of the discrepancy. The flow recorder was inoperable from 10/3/94 to 8/11/95. Liquid effluent releases occurring during this time period were evaluated and determined to be within regulatory limits. Actions to prevent reoccurence have been taken which include the review of the post maintenance requirements associated with this type of instrumentation.

\* Unit 2 Steam Generator Blowdown Flow Monitors (2FA5837 & 2FA5839)

The #22 and #24 S/G blowdown flow monitors could not be returned to service following corrective maintenance within the 30 day time period due to the extended plant maintenance outage. Testing of the flow monitors will be conducted when S/G blowdown flow is established.

#### PART I. PROCESS CONTROL PROGRAM (PCP) CHANGES

During this reporting period, there were no changes to the Process Control Program.

#### PART J. ENVIRONMENTAL MONITORING LOCATION CHANGES

During the reporting period, there were no changes to the environmental monitoring sampling program.

#### SALEM GENERATING STATION TABLE 1A-1

#### EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT JULY - DECEMBER 1995

#### UNIT 1 GASEOUS EFFLUENTS-SUMMATION OF ALL RELEASES

		Units	3rd Quarter	4th Quarter	Est. Total Error %
A.	Fission and Activation				
	Gases 1. Total release	Ci	1.55E-01	0.00E+00	25
	<ul><li>2. Average release rate for period</li><li>3. Percent of technical</li></ul>	uCi/sec	1.97E-02	0.00E+00	
	<pre>specification limit (T.S. 3.11.2.2(a))</pre>	90	1.89E-04	0.00E+00	
В.	Iodines 1. Total Iodine-131	Ci	0.00E+00	0.00E+00	25
	<ul><li>2. Average release rate for period</li><li>3. Percent of technical</li></ul>	uCi/sec	0.00E+00	0.00E+00	
	specification limit (T.S. 3.11.2.3(a))		9.08E-04	2.42E-04	
С.	Particulates 1. Particulates with				
	half-lives >8 days 2. Average release	Ci	3.41E-06	2.09E-06	25
	rate for period 3. Percent of technical	uCi/sec	4.34E-07	2.66E-07	
	specification limit (T.S. 3.11.2.3(a))		9.08E-04	2.42E-04	
	4. Gross alpha	Ci	1.39E-03	0.00E+00	
С.	Tritium 1. Total Release 2. Average release	Ci	3.32E+01	8.77E+00	25
	rate for period 3. Percent of technical		4.22E+00	1.11E+00	
	<pre>specification limit (T.S. 3.11.2.3(a))</pre>	(2)	9.08E-04	2.42E-04	

<sup>(1)</sup> For batch releases the estimated overall error is within 10% (2) Iodine, tritium and particulates are treated as a group

## SALEM GENERATING STATION TABLE 1A-2

## EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT JULY - DECEMBER 1995

## UNIT 2 GASEOUS EFFLUENTS-SUMMATION OF ALL RELEASES

	Units	3rd Quarter	4th Quarter	Est. Total Error %
A. Fission and Activation Gases 1. Total release 2. Average release	Ci	3.40E-01	5.36E-02	
rate for period  3. Percent of technica specification limit (T.S. 3.11.2.2(a))		4.32E-02 4.22E-04	6.82E-03 7.29E-05	
B. Iodines 1. Total Iodine-131 2. Average release rate for period	Ci uCi/sec	0.00E+00 0.00E+00	0.00E+00 0.00E+00	
3. Percent of technica specification limit (T.S. 3.11.2.3(a))	1	6.94E-04	2.21E-04	
<ul><li>C. Particulates</li><li>1. Particulates with half-lives &gt;8 days</li><li>2. Average release rate for period</li></ul>	Ci uCi/sec	5.57E-06 7.08E-07	0.00E+00 0.00E+00	
3. Percent of technica specification limit (T.S. 3.11.2.3(a)) 4. Gross alpha	1	6.94E-04 0.00E+00	2.21E-04 0.00E+00	
C. Tritium  1. Total Release 2. Average release rate for period	Ci uCi/sec	2.52E+01 3.20E+00	8.13E+00 1.03E+00	
3. Percent of technica specification limit (T.S. 3.11.2.3(a))	1	6.94E-04	2.21E-04	

<sup>(1)</sup> For batch releases the estimated overall error is within 10%

<sup>(2)</sup> Iodine, tritium and particulates are treated as a group

## SALEM GENERATING STATION TABLE 1B-1

# EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT JULY - DECEMBER 1995 GASEOUS EFFLUENTS-ELEVATED RELEASES UNIT 1

		CONTINU	CONTINUOUS MODE BATCH MODE		MODE	
Nu	clides Released	Unit	3rd Quarter	4th Quarter	3rd Quarter	4th Quarter
1.	Fission Gases					
	Krypton-85 Xenon-131m Xenon-133	Ci Ci Ci	0.00E+00 0.00E+00 0.00E+00	0.00E+00 0.00E+00 0.00E+00	1.20E-01 1.48E-02 1.99E-02	0.00E+00 0.00E+00 0.00E+00
	TOTALS	Ci	0.00E+00	0.00E+00	1.55E-01	0.00E+00
2.	Iodines					
	Iodine-131	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	TOTALS	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.	Particulates (half-live >8 d	ays)				
	Cobalt-60	Ci	3.41E-06	2.09E-06	0.00E+00	0.00E+00
	TOTALS	Ci	3.41E-06	2.09E-06	0.00E+00	0.00E+00

## SALEM GENERATING STATION TABLE 1B-2

# EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT JULY - DECEMBER 1995 GASEOUS EFFLUENTS-ELEVATED RELEASES UNIT 2

			CONTINU	OUS MODE	BATCH	MODE
Nu	clides Released	Unit	3rd Quarter	4th Quarter	3rd Quarter	4th Quarter
1.	Fission Gases					<del></del> .
	Krypton-85 Xenon-131m Xenon-133	Ci Ci Ci	0.00E+00 0.00E+00 0.00E+00	0.00E+00 0.00E+00 0.00E+00	2.75E-01 1.15E-02 5.36E-02	5.36E-02 0.00E+00 0.00E+00
	TOTALS	Ci	0.00E+00	0.00E+00	3.40E-01	5.36E-02
2.	Iodines					
	Iodine-131	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	TOTALS	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.	Particulates (half-lives >8	days)				
	Cobalt-60	Ci	5.57E-06	0.00E+00	0.00E+00	0.00E+00
,	TOTALS	Ci	5.57E-06	0.00E+00	0.00E+00	0.00E+00

## SALEM GENERATING STATION TABLE 1C

## EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT JULY - DECEMBER 1995

#### UNITS 1 AND 2

#### GASEOUS EFFLUENTS-GROUND-LEVEL RELEASES

		CONTIN	JOUS MODE	BATCH	MODE
Nuclides Released	Unit	3rd Quarter	4th Quarter	3rd Quarter	4th Quarter

There were no ground level gaseous releases during this reporting period.

## SALEM GENERATING STATION TABLE 2A-1

#### EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT JULY - DECEMBER 1995 UNIT 1

#### LIQUID EFFLUENTS-SUMMATION OF ALL RELEASES

		Units	3rd Quarter	4th Quarter	Est. Total Error %
Α.	Fission and activation products 1. Total release (not including tritium,				
	gases, alpha) 2. Average diluted concentration during period of release	Ci uCi/mL	4.64E-01 2.05E-07	1.42E-01 3.12E-07	25
	3. Percent of technical specification limit (T.S. 3.11.1.2.(a))	. 00	7.36E+00	2.61E+00	
В.	Tritium 1. Total release 2. Average diluted	Ci	6.78E+01	1.20E+01	25
	concentration during period 3. Percent of technical	uCi/mL	2.99E-05	2.63E-05	
	specification limit (T.S. 3.11.1.1)	. 00	9.98E-01	8.77E-01	
C.	Lissolved and entrained noble gases 1. Total release 2. Average diluted	Ci	0.00E+00	0.00E+00	25
	concentration during period 3. Percent of technical specification limit	uCi/mL	0.00E+00	0.00E+00	
	(T.S. 3.11.1.1)	0/0	0.00E+00	0.00E+00	
D.	Gross alpha activity 1. Total release	Ci	0.00E+00	0.00E+00	25
Ε.	Volume of waste release (prior to dilution - Batch Release)	liters	1.27E+06	2.62E+05	25
F.	Volume of dilution water used during entire period	d liters	1.78E+11	9.94E+09	25

## SALEM GENERATING STATION TABLE 2A-2

## EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT JULY - DECEMBER 1995 UNIT 2

LIQUID EFFLUENTS-SUMMATION OF ALL RELEASES

	Units	3rd Quarter	4th Quarter	Est. Total Error %
. Fission and activation products 1. Total release (not including tritium,				
gases, alpha)  2. Average diluted concentration during	Ci	2.05E-01	1.86E-01	25
period  3. Percent of technical specification limit	uCi/mL	1.48E-07	1.12E-07	
(T.S. 3.11.1.2.(a))	0/0	3.40E+00	2.53E+00	
Tritium  1. Total release  2. Average diluted	Ci	1.86E+01	1.31E+01	25
concentration during period  3. Percent of technical	uCi/mL	1.35E-05	7.86E-06	
<pre>specification limit (T.S. 3.11.1.1)</pre>	9	4.49E-01	2.62E-01	
<ul><li>Dissolved and entrained noble gases</li><li>Total release</li><li>Average diluted concentration during</li></ul>	Ci	0.00E+00	0.00E+00	25
period 3. Percent of technical specification limit	uCi/mL	0.00E+00	0.00E+00	
(T.S. 3.11.1.1)	ક્ર	0.00E+00	0.00E+00	
. Gross alpha activity 1. Total release	Ci	0.00E+00	0.00E+00	25
. Volume of waste release (prior to dilution - Batch Release)	liters	8.76E+05	3.07E+05	25
. Volume of dilution water used during entire perio		1.80E+11	7.81E+10	25

## SALEM GENERATING STATION TABLE 2B-1

## EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT JULY - DECEMBER 1995

#### LIQUID EFFLUENTS UNIT 1

		CONTINUOUS MODE		BATCH MODE	
Nuclides Released	Unit	3rd Quarter	4th Quarter	3rd Quarter	4th Quarter
Chromium-51 Manganese-54 Iron-55 Iron-59 Cobalt-57 Cobalt-58 Cobalt-60 Zinc-65 Niobium-95 Zirconium-95 Silver-110m Antimony-124 Antimony-125 Iodine-131 Cesium-134 Cesium-137	Ci Ci Ci Ci Ci Ci Ci Ci Ci	0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00	0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00	9.06E-04 1.35E-03 1.13E-02 4.59E-05 7.34E-04 1.73E-01 1.97E-02 4.14E-05 6.49E-04 2.87E-04 2.44E-03 1.13E-02 3.58E-02 4.23E-04 8.33E-02 1.22E-01	0.00E+00 1.09E-03 0.00E+00 0.00E+00 3.97E-04 4.79E-02 1.01E-02 0.00E+00 0.00E+00 0.00E+00 4.63E-04 4.10E-03 0.00E+00 3.06E-02 4.75E-02
TOTALS	Ci	0.00E+00	0.00E+00	4.64E-01	1.42E-01
Tritium	Ci	0.00E+00	0.00E+00	6.78E+01	1.20E+01
TOTALS	Ci	0.00E+00	0.00E+00	6.78E+01	1.20E+01

#### SALEM GENERATING STATION TABLE 2B-2

## EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT JULY - DECEMBER 1995

#### LIQUID EFFLUENTS UNIT 2

		CONTINUOU	S MODE	BATCH	MODE
Nuclides Released	Unit	3rd Quarter	4th Quarter	3rd Quarter	4th Quarter
Manganese-54 Iron-55 Cobalt-57 Cobalt-58 Cobalt-60 Niobium-95 Zirconium-95 Technetium-99m Silver-110m Antimony-124 Antimony-125 Iodine-131 Cesium-134 Cesium-137	Ci Ci Ci Ci Ci Ci Ci Ci	0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00	0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00	1.27E-04 2.93E-03 7.41E-05 3.22E-02 3.52E-03 2.23E-04 0.00E+00 1.26E-05 5.29E-04 7.12E-03 2.08E-02 4.34E-04 5.60E-02 8.13E-02	1.01E-03 0.00E+00 6.33E-04 8.13E-02 1.50E-02 0.00E+00 5.47E-05 0.00E+00 2.86E-05 4.69E-04 4.49E-03 0.C0E+00 3.17E-02 5.15E-02
TOTALS	Ci	0.00E+00	0.00E+00	2.05E-01	1.86E-01
Tritium	Ci	0.00E+00	0.00E+00	1.86E+01	1.31E+01
TOTALS		0.00E+00	0.00E+00	1.86E+01	1.31E+01

## SALEM GENERATING STATION TABLE 3

# EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT JULY - DECEMBER 1995 UNITS 1 AND 2 SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

## SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL (Not irradiated fuel)

1.	Тур	e of waste	Units(1)	6-month period	Est. Total Error, %
	a.	Spent resins, filters, sludges, evaporator bottoms	m3 Ci	9.23E+00 5.53E+01	25
	b.	Dry compressible waste, contaminated equipment.	m3 Ci	2.96E+01 4.82E+00	25
	c.	Irradiated components, control rods	m3 Ci	0.00E+00 0.00E+00	25
	d.	Others (described)	m3 Ci	0.00E+00 0.00E+00	25

#### 2. Estimate of major nuclide composition (for Type A and B waste)

	DAW			RESINS	
	(%)	(Ci)		(왕)	(Ci)
Fe-55 Co-58 Ni-63 Cs-137 Co-60 Cs-134 Sb-125 Mn-54 H-3	37.9 26.9 9.9 7.8 6.2 5.0 1.3 1.2	1.83E+00 1.30E+00 4.80E-01 3.80E-01 3.00E-01 2.40E-01 6.00E-02 6.00E-02 5.00E-02	Fe-55 Co-60 Ni-63 Cs-137 Cs-134 Cd-109 C-14 Co-58	23.9 22.4 20.6 16.1 8.3 4.5 2.1 1.4	1.32E+01 1.24E+01 1.14E+01 8.90E+00 4.60E+00 2.50E+00 1.20E+00 8.00E-01

## SALEM GENERATING STATION TABLE 3 (CONT'D)

# EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT JULY - DECEMBER 1995 UNITS 1 AND 2 SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

#### 3. Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination	Type of Containers
6	Truck	Oak Ridge, Tn	Strong, Tight
4	Truck	Barnwell, S.C.	High Integrity

#### 4. IRRADIATED FUEL SHIPMENTS (Disposition)

Number of Shipments	Mode of Transportation	Destination
None	N/A	N/A

### SALEM GENERATING STATION TABLE 4A-1

# EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT JULY - DECEMBER 1995 SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED IN A BATCH MODE UNIT 1

- 1. Dates: July 1 September 30, 1995
- 2. Type of release: Gas
- 3. Number of releases during the 3rd Quarter: 28
- 4. Total time duration for all releases of type listed above: 5.99E+04 minutes
- 5. Maximum duration for release of type listed above: 1.79E+04 minutes
- 6. Average duration for release of type listed above: 2.14E+03 minutes
- 7. Minimum duration for release of type listed above: 3.50E+01 minutes
- 8. Average stream flow (dilution flow) during the period of release: N/A

## SALEM GENERATING STATION TABLE 4A-1 (CONT'D)

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT

JULY - DECEMBER 1995

SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED

IN A BATCH MODE

UNIT 1

- 1. Dates: October 1 December 31, 1995
- 2. Type of release: Gas
- 3. Number of releases during the 4th Quarter: 0
- 4. Total time duration for all releases of type listed above: 0.00E+00 minutes
- 5. Maximum duration for release of type listed above: 0.00E+00 minutes
- 6. Average duration for release of type listed above: 0.00E+00 minutes
- 7. Minimum duration for release of type listed above: 0.00E+00 minutes
- 8. Average stream flow (dilution flow) during the period of release: N/A

### SALEM GENERATING STATION TABLE 4A-2

# EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT JULY - DECEMBER 1995 SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED IN A BATCH MODE UNIT 2

- 1. Dates: July 1 September 30, 1995
- 2. Type of release: Gas
- 3. Number of releases during the 3rd Quarter: 18
- 4. Total time duration for all releases of type listed above: 2.32E+03 minutes
- 5. Maximum duration for release of type listed above: 9.19E+02 minutes
- 6. Average duration for release of type listed above: 1.29E+02 minutes
- 7. Minimum duration for release of type listed above: 6.70E+01 minutes
- 8. Average stream flow (dilution flow) during the period of release: N/A

## SALEM GENERATING STATION TABLE 4A-2 (CONT'D)

# EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT JULY - DECEMBER 1995 SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED IN A BATCH MODE UNIT 2

- 1. Dates: October 1 December 31, 1995
- 2. Type of release: Gas
- 3. Number of releases during the 4th Quarter: 22
- 4. Total time duration for all releases of type listed above: 2.33E+04 minutes
- 5. Maximum duration for release of type listed above: 7.57E+03 minutes
- 6. Average duration for release of type listed above: 1.06E+03 minutes
- 7. Minimum duration for release of type listed above: 7.60E+01 minutes
- 8. Average stream flow (dilution flow) during the period of release: N/A

#### SALEM GENERATING STATION TABLE 4B-1

# EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT JULY - DECEMBER 1995 SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED IN A BATCH MODE UNIT 1

- 1. Dates: July 1 September 30, 1995
- 2. Type of release: Liquid
- 3. Number of releases during the 3rd Quarter: 13
- 4. Total time duration for all releases of type listed above: 3.94E+03 minutes
- 5. Maximum duration for release of type listed above: 3.91E+02 minutes
- 6. Average duration for release of type listed above: 3.03E+02 minutes
- 7. Minimum duration for release of type listed above: 2.32E+02 minutes
- 8. Average stream flow (dilution flow) during the period of release: 1.52E+05 gpm

## SALEM GENERATING STATION TABLE 4B-1 (CONT'D)

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT

JULY - DECEMBER 1995

SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED

IN A BATCH MODE

UNIT 1

- 1. Dates: October 1 December 31, 1995
- 2. Type of release: Liquid
- 3. Number of releases during the 4th Quarter: 5
- 4. Total time duration for all releases of type listed above: 1.20E+03 minutes
- 5. Maximum duration for release of type listed above: 3.94E+02 minutes
- 6. Average duration for release of type listed above: 2.41E+02 minutes
- 7. Minimum duration for release of type listed above: 1.14E+02 minutes
- 8. Average stream flow (dilution flow) during the period of release: 1.00E+05 gpm

### SALEM GENERATING STATION TABLE 4B-2

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT

JULY - DECEMBER 1995

SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED

IN A BATCH MODE

UNIT 2

- 1. Dates: July 1 September 30, 1995
- 2. Type of release: Liquid
- 3. Number of releases during the 3rd Quarter: 9
- 4. Total time duration for all releases of type listed above: 1.88E+03 minutes
- 5. Maximum duration for release of type listed above: 2.90E+02 minutes
- 6. Average duration for release of type listed above: 2.09E+02 minutes
- 7. Minimum duration for release of type listed above: 9.00E+00 minutes
- 8. Average stream flow (dilution flow) during the period of release: 1.94E+05 gpm

## SALEM GENERATING STATION TABLE 4B-2 (CONT'D)

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT

JULY - DECEMBER 1995

SUMMARY SHEET FOR RADIOACTIVE EFFLUENTS RELEASED

IN A BATCH MODE

UNIT 2

- 1. Dates: October 1 December 31, 1995
- 2. Type of release: Liquid
- 3. Number of releases during the 4th Quarter: 5
- 4. Total time duration for all releases of type listed above: 1.36E+03 minutes
- 5. Maximum duration for release of type listed above: 3.41E+02 minutes
- 6. Average duration for release of type listed above: 2.72E+02 minutes
- 7. Minimum duration for release of type listed above: 1.81E+02 minutes
- 8. Average stream flow (dilution flow) during the period of release: 3.23E+05 gpm

METEOROLOGICAL DATA 7/1/95 - 12/31/95

#### JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT DELTA T: (300-33FT) LAPSE RATE:

LE -1.9 DEG C/100M

CLASS A

#### WIND SPEED GROUPS (MPH)

	0.0	-0.5	0.6	-3.5	3.6	-7.5	7.6	12.5	12.6	-18.5	18.6	-24.5	GE 2	24.6	SUM PE	RCENT
DIRECTION	SUM PI	ERCENT	SUM PI	ERCENT	SUM PI	ERCENT	SUM PE	RCENT	SUM P	ERCENT	SUM PI	ERCENT	SUM PE	RCENT		
N	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0	0	0.0	0	0.0	. 2	0.1
NNE	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
NE	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
ENE	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	1	0.0	5	0.2	9	0.4	2	0.1	0	0.0	17	0.8
SSE	0	0.0	0	0.0	6	0.3	13	0.6	9	0.4	1	0.0	0	0.0	29	1.3
S	0	0.0	0	0.0	3	0.1	4	0.2	0	0.0	0	0.0	0	0.0	7	0.3
SSW	0	0.0	0	0.0	9	0.4	4	0.2	0	0.0	0	0.0	0	0.0	13	0.6
SW	0	0.0	1	0.0	10	0.5	6	0.3	4	0.2	0	0.0	0	0.0	21	1.0
WSW	0	0.0	0	0.0	10	0.5	11	0.5	2	0.1	0	0.0	0	0.0	23	1.1
W	0	0.0	0	0.0	2	0.1	1	0.0	6	0.3	0	0.0	0	0.0	9	0.4
WNW	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0	0	0.0	0	0.0	2	0.1
NW	0	0.0	0	0.0	2	0.1	1	0.0	0	0.0	0	0.0	0	0.0	3	0.1
MNM	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0
	0	0.0	1	0.0	48	2.2	47	2.2	33	1.5	3	0.1	0	0.0	132	6.1

MEAN WIND SPEED: 10.0 MISSING: 0

#### JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT DELTA T: (300-33FT) LAPSE RATE: -1.8 TO -1.7 DEG C/100M

CLASS B

#### WIND SPEED GROUPS (MPH)

	0.0	-0.5	0.6	-3.5	3.6	-7.5	7.6	12.5	12.6	-18.5	18.6	24.5	GE 2	24.6	SUM PE	RCENT
DIRECTION	SUM PI	ERCENT	SUM PE	ERCENT	SUM PE	ERCENT	SUM PE	RCENT	SUM PE	ERCENT	SUM PE	RCENT	SUM PE	RCENT		
N	0	0.0	0	0.0	8	0.4	11	0.5	2	0.1	1	0.0	0	0.0	22	1.0
NNE	0	0.0	0	0.0	1	0.0	5	0.2	0	0.0	0	0.0	0	0.0	6	0.3
NE	0	0.0	0	0.0	2	0.1	3	0.1	2	0.1	0	0.0	0	0.0	7	0.3
ENE	0	0.0	0	0.0	0	0.0	6	0.3	1	0.0	0	0.0	0	0.0	7	0.3
E	0	0.0	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	0	0.0	4	0.2
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	1	0.0	2	0.1	3	0.1	6	0.3	0	0.0	12	0.6
SSE	0	0.0	0	0.0	5	0.2	2	0.1	2	0.1	4	0.2	0	0.0	13	0.6
S	0	0.0	0	0.0	7	0.3	3	0.1	2	0.1	0	0.0	0	0.0	12	0.6
SSW	0	0.0	0	0.0	3	0.1	4	0.2	0	0.0	0	0.0	0	0.0	7	0.3
SW	0	0.0	0	0.0	5	0.2	5	0.2	6	0.3	1	0.0	0	0.0	17	0.8
WSW	0	0.0	0	0.0	3	0.1	3	0.1	6	0.3	0	0.0	0	0.0	12	0.6
W	0	0.0	1	0.0	3	0.1	6	0.3	2	0.1	0	0.0	0	0.0	12	0.6
WNW	0	0.0	0	0.0	1	0.0	4	0.2	2	0.1	G	0.0	0	0.0	7	0.3
NW	0	0.0	0	0.0	5	0.2	1	0.0	1	0.0	0	0.0	0	0.0	7	0.3
WWW	0	0.0	0	0.0	3	0.1	13	0.6	4	0.2	0	0.0	0	0.0	20	0.9
		0.0		0.0	40	2.2	70	7 2	77	1 5	12	0.4	0	0.0	1/5	7.4
	0	0.0	1	0.0	49	2.2	70	3.2	33	1.5	12	0.6	0	0.0	· 165	7.6

MEAN WIND SPEED: 10.4 MISSING: 0

#### JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT DELTA T: (300-33FT) LAPSE RATE: -1.6 TO -1.5 DEG C/100M

CLASS C

#### WIND SPEED GROUPS (MPH)

	0.0	-0.5	0.6	-3.5	3.6	-7.5	7.6	-12.5	12.6	-18.5	18.6	-24.5	GE 2	24.6	SUM PE	RCENT
DIRECTION	SUM P	ERCENT	SUM P	ERCENT	SUM PI	ERCENT	SUM PE	RCENT	SUM PE	ERCENT	SUM P	ERCENT	SUM PE	RCENT		
N	0	0.0	0	0.0	3	0.1	14	0.6	4	0.2	1	0.0	0	0.0	22	1.0
NNE	0	0.0	0	0.0	1	0.0	6	0.3	1	0.0	0	0.0	0	0.0	8	0.4
NE	0	0.0	0	0.0	1	0.0	7	0.3	8	0.4	0	0.0	0	0.0	16	0.7
ENE	0	0.0	0	0.0	1	0.0	6	0.3	1	0.0	0	0.0	0	0.0	8	0.4
E	0	0.0	1	0.0	1	0.0	5	0.2	0	0.0	0	0.0	0	0.0	7	0.3
ESE	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
SE	0	0.0	0	0.0	4	0.2	3	0.1	4	0.2	3	0.1	0	0.0	14	0.6
SSE	0	0.0	0	0.0	3	0.1	2	0.1	4	0.2	3	0.1	0	0.0	12	0.6
S	0	0.0	2	0.1	6	0.3	1	0.0	0	0.0	0	0.0	0	0.0	9	0.4
SSW	0	0.0	3	0.1	2	0.1	1	0.0	1	0.0	0	0.0	0	0.0	7	0.3
SW	0	0.0	2.	0.1	3	0.1	1	0.0	7	0.3	1	0.0	0	0.0	14	0.6
WSW	0	0.0	0	0.0	2	0.1	6	0.3	5	0.2	0	0.0	0	0.0	13	0.6
W	0	0.0	0	0.0	2	0.1	4	0.2	1	0.0	0	0.0	0	0.0	7	0.3
HNH	0	0.0	0	0.0.	2	0.1	2	0.1	0	0.0	0	0.0	0	0.0	4	0.2
NW	0	0.0	0	0.0	4	0.2	3	0.1	1	0.0	0	0.0	0	0.0	8	0.4
NNW	0	0.0	1	0.0	2	0.1	9	0.4	3	0.1	0	0.0	0	0.0	15	0.7
	0	0.0	9	0.4	38	1.7	70	3.2	40	1.8	8	0.4	0	0.0	165	7.6

MEAN WIND SPEED: 10.4 MISSING:

#### JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT DELTA T: (300-33FT) LAPSE RATE: -1.4 TO -0.5 DEG C/100M

CLASS D

#### WIND SPEED GROUPS (MPH)

	0.0	-0.5	0.6	-3.5	3.6	-7.5	7.6	12.5	12.6	-18.5	18.6	-24.5	GE 2	24.6	SUM P	ERCENT
DIRECTION	SUM PI	ERCENT	SUM PI	ERCENT	SUM PI	ERCENT	SUM P	RCENT	SUM P	ERCENT	SUM PI	ERCENT	SUM PE	ERCENT		
N	0	0.0	1	0.0	4	0.2	13	0.6	22	1.0	6	0.3	0	0.0	46	2.1
NNE	0	0.0	0	0.0	8	0.4	9	0.4	5	0.2	3	0.1	0	0.0	25	1.1
NE	0	0.0	1	0.0	1	0.0	9	0.4	22	1.0	12	0.6	0	0.0	45	2.1
ENE	0	0.0	1	0.0	8	0.4	20	0.9	19	0.9	1	0.0	0	0.0	49	2.2
Ε	0	0.0	2	0.1	4	0.2	15	0.7	3	0.1	0	0.0	0	0.0	24	1.1
ESE	0	0.0	3	0.1	3	0.1	1	0.0	5	0.2	0	0.0	0	0.0	12	0.6
SE	0	0.0	0	0.0	3	0.1	11	0.5	13	0.6	19	0.9	4	0.2	50	2.3
SSE	0	0.0	2	0.1	17	0.8	27	1.2	58	2.7	39	1.8	1	0.0	144	6.6
S	0	0.0	1	0.0	4	0.2	44	2.0	49	2.2	8	0.4	0	0.0	106	4.9
SSW	0	0.0	4	0.2	5	0.2	13	0.6	36	1.7	8	0.4	0	0.0	66	3.0
SW	0	0.0	2	0.1	11	0.5	6	0.3	20	0.9	3	0.1	0	0.0	42	1.9
WSW	0	0.0	1	0.0	6	0.3	8	0.4	11	0.5	0	0.0	0	0.0	26	1.2
W	0	0.0	0	0.0	5	0.2	7	0.3	6	0.3	0	0.0	0	0.0	18	8.0
WNW	0	0.0	2	0.1	2	0.1	3	0.1	2	0.1	0	0.0	0	0.0	9	0.4
WИ	0	0.0	0	0.0	4	0.2	14	0.6	2	0.1	2	0.1	1	0.0	23	1.1
NNW	0	0.0	2	0.1	9	0.4	9	0.4	4	0.2	0	0.0	1	0.0	25	1.1
	0	0.0	22	1.0	94	4.3	209	9.6	277	12.7	101	4.6	7	0.3	710	32.6

MEAN WIND SPEED: 13.1 MISSING:

#### JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT DELTA T: (300-33FT) LAPSE RATE: -0.4 TO 1.5 DEG C/100M CLASS E

#### WIND SPEED GROUPS (MPH)

	0.0	-0.5	0.6	-3.5	3.6	-7.5	7.6	-12.5	12.6	-18.5	18.6	-24.5	GE 2	24.6	SUM P	ERCENT
DIRECTION	SUM PI	ERCENT	SUM P	ERCENT	SUM PI	ERCENT	SUM P	ERCENT	SUM P	ERCENT	SUM PI	ERCENT	SUM PI	ERCENT		
N	0	0.0	1	0.0	5	0.2	14	0.6	16	0.7	10	0.5	1	0.0	47	2.2
NNE	0	0.0	1	0.0	1	0.0	9	0.4	18	0.8	8	0.4	0	0.0	37	1.7
NE	0	0.0	2	0.1	5	0.2	12	0.6	29	1.3	19	0.9	2	0.1	69	3.2
ENE	0	0.0	0	0.0	6	0.3	14	0.6	29	1.3	0	0.0	0	0.0	49	2.2
E	0	0.0	0	0.0	6	0.3	37	1.7	4	0.2	0	0.0	0	0.0	. 47	2.2
ESE	0	0.0	0	0.0	1	0.0	9	0.4	11	0.5	0	0.0	0	0.0	21	1.0
SE	0	0.0	0	0.0	5	0.2	12	0.6	13	0.6	3	0.1	0	0.0	33	1.5
SSE	0	0.0	2	0.1	4	0.2	10	0.5	14	0.6	3	0.1	0	0.0	33	1.5
S	0	0.0	2	0.1	5	0.2	21	1.0	19	0.9	3	0.1	0	0.0	50	2.3
SSW	0	0.0	2	0.1	9	0.4	21	1.0	38	1.7	14	0.6	0	0.0	84	3.9
SW	0	0.0	6	0.3	11	0.5	26	1.2	43	2.0	21	1.0	0	0.0	107	4.9
WSW	0	0.0	3	0.1	7	0.3	18	8.0	25	1.1	8	0.4	0	0.0	61	2.8
W	0	0.0	2	0.1	16	0.7	13	0.6	9	0.4	2	0.1	0	0.0	42	1.9
LINH	0	0.0	1	0.0	3	0.1	10	0.5	2	0.1	0	0.0	0	0.0	16	0.7
NW	0	0.0	0	0.0	9	0.4	15	0.7	24	1.1	4	0.2	1	0.0	53	2.4
NNW	0	0.0	0	0.0	6	0.3	16	0.7	13	0.6	7	0.3	4	0.2	46	2.1
	0	0.0	22	1.0	99	4.5	257	11.8	307	14.1	102	4.7	8	0.4	795	36.5

MEAN WIND SPEED: 13.0 HISSING: 3

#### JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT DELTA T: (300-33FT) LAPSE RATE: 1.6 TO 4.0 DEG C/100M

CLASS F

#### WIND SPEED GROUPS (MPH)

	0.0	-0.5	0.6	-3.5	3.6	-7.5	7.6	12.5	12.6	-18.5	18.6	-24.5	GE 2	24.6	SUM PI	RCENT
DIRECTION	SUM P	ERCENT	SUM PI	ERCENT	SUM PI	ERCENT	SUM PE	ERCENT	SUM PI	ERCENT	SUM P	ERCENT	SUM PI	ERCENT		
N	0	0.0	0	0.0	0	0.0	4	0.2	16	0.7	3	0.1	0	0.0	23	1.1
NNE	0	0.0	0	0.0	1	0.0	3	0.1	17	0.8	13	0.6	0	0.0	34	1.6
NE	0	0.0	1	0.0	1	0.0	0	0.0	15	0.7	8	0.4	0	0.0	25	1.1
ENE	0	0.0	0	0.0	0	0.0	2	0.1	5	0.2	5	0.2	0	0.0	12	0.6
E	0	0.0	1	0.0	1	0.0	5	0.2	2	0.1	0	0.0	0	0.0	9	0.4
ESE	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	5	0.2	0	0.0	6	0.3
SE	0	0.0	0	0.0	1	0.0	2	0.1	2	0.1	5	0.2	0	0.0	10	0.5
SSE	0	0.0	3	0.1	2	0.1	4	0.2	1	0.0	0	0.0	0	0.0	10	0.5
S	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	. 2	0.1
SSW	0	0.0	0	0.0	1	0.0	1	0.0	1	0.0	0	0.0	0	0.0	<sup>*</sup> 3	0.1
SW	0	0.0	2	0.1	1	0.0	1	0.0	3	0.1	3	0.1	0	0.0	10	0.5
WSW	0	0.0	0	0.0	1	0.0	5	0.2	11	0.5	1	0.0	0	0.0	18	0.8
u	0	0.0	0	0.0	4	0.2	3	0.1	5	0.2	1	0.0	0	0.0	13	0.6
WNW	0	0.0	0	0.0	0	0.0	1	0.0	3	0.1	0	, 0.0	0	0.0	4	0.2
NW	0	0.0	0	0.0	0	0.0	4	0.2	7	0.3	0	0.0	0	0.0	11	0.5
NNW	0	0.0	0	0.0	4	0.2	4	0.2	11	0.5	2	0.1	0	0.0	21	1.0
	0	0.0	7	0.3	19	0.9	39	1.8	100	4.6	46	2.1	0	0.0	` 211	9.7

MEAN WIND SPEED: 14.5 MISSING: 0

#### JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT DELTA T: (300-33FT) LAPSE RATE:

GT 4.0 DEG C/100M

CLASS G

#### WIND SPEED GROUPS (MPH)

	0.0	-0.5	0.6	-3.5	3.6	-7.5	7.6	12.5	12.6	-18.5	18.6	-24.5	GE 2	24.6	SUM PI	ERCENT
DIRECTION	SUM P	ERCENT	SUM P	ERCENT	SUM P	ERCENT	SUM PI	ERCENT	SUM PI	ERCENT	SUM P	ERCENT	SUM PI	ERCENT		
N	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ENE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	2	0.1
SE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
S	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0
W	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
WNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	2	0.1	0	0.0	3	0.1

MEAN WIND SPEED: 19.3 MISSING: 0

1.

#### JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT DELTA T: (300-33FT)

ALL STABILITY CLASSES

#### WIND SPEED GROUPS (MPH)

	0.0	-0.5	0.6	-3.5	3.6	-7.5	7.6	-12.5	12.6	-18.5	18.6	-24.5	GE 2	24.6	SUM F	PERCENT
DIRECTION	SUM PE	ERCENT	SUM PI	ERCENT	SUM P	ERCENT	SUM PE	ERCENT								
N	0	0.0	2	0.1	21	1.0	56	2.6	61	2.8	21	1.0	1	0.0	162	7.4
NNE	0	0.0	1	0.0	14	0.6	32	1.5	41	1.9	24	1.1	0	0.0	112	5.1
NE	0	0.0	4	0.2	10	0.5	32	1.5	76	3.5	39	1.8	2	0.1	163	7.5
ENE	0	0.0	1	0.0	16	0.7	49	2.2	55	2.5	6	0.3	0	0.0	127	5.8
E	0	0.0	4	0.2	14	0.6	64	2.9	9	0.4	0	0.0	0	0.0	91	4.2
ESE	0	0.0	3.	0.1	5	0.2	10	0.5	18	0.8	6	0.3	0	0.0	42	1.9
SE	0	0.0	0	0.0	15	0.7	35	1.6	44	2.0	38	1.7	4	0.2	136	6.2
SSE	0	0.0	7	0.3	37	1.7	58	2.7	88	4.0	50	2.3	1	0.0	241	11.0
S	0	0.0	5	0.2	27	1.2	73	3.3	70	3.2	11	0.5	0	0.0	186	8.5
SSW	0	0.0	9	0.4	29	1.3	44	2.0	76	3.5	22	1.0	0	0.0	180	8.3
SW	0	0.0	13	0.6	41	1.9	45	2.1	83	3.8	29	1.3	0	0.0	211	9.7
WSW	0	0.0	4	0.2	29	1.3	51	2.3	60	2.8	10	0.5	0	0.0	154	7.1
u	0	0.0	3	0.1	32	1.5	34	1.6	- 29	1.3	3	0.1	0	0.0	101	4.6
UNU	0	0.0	3	0.1	9	0.4	20	0.9	10	0.5	0	0.0	0	0.0	42	1.9
NW	0	0.0	0	0.0	24	1.1	38	1.7	35	1.6	6	0.3	2	0.1	105	4.8
NNW	0	0.0	3	0.1	24	1.1	51	2.3	36	1.7	9	0.4	5	0.2	128	5.9
	0	0.0	62	2.8	347	15.9	692	31.7	791	36.3	274	12.6	15	0.7	2181	100.0

MISSING HOURS: 27

MEAN WIND SPEED: 12.6

#### JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT DELTA T: (300-33FT)

DIRECTION VS SPEED ONLY

#### WIND SPEED GROUPS (MPH)

	0.0	)-0. <del>\$</del>	0.6	-3.5	3.6	-7.5	7.6	-12.5	12.6	-18.5	18.6	-24.5	GE 2	24.6	'SUM P	ERCENT
DIRECTION	SUM P	ERCENT	SUM PI	ERCENT	SUM P	ERCENT	SUM PE	ERCENT								
И	0	0.0	2	0.1	21	1.0	56	2.6	61	2.8	21	1.0	1	0.0	162	7.4
NNE	0	0.0	1	0.0	14	0.6	33	1.5	41	1.9	24	1.1	0	0.0	113	5.2
NE	0	0.0	4	0.2	11	0.5	33	1.5	76	3.5	39	1.8	2	0.1	165	7.5
ENE	0	0.0	1	0.0	17	0.8	49	2.2	55	2.5	6	0.3	0	0.0	128	5.8
E	0	0.0	4	0.2	15	0.7	64	2.9	9	0.4	0	0.0	0	0.0	92	4.2
ESE	0	0.0	3	0.1	5	0.2	10	0.5	18	0.8	6	0.3	0	0.0	42	1.9
SE	0	0.0	0	0.0	16	0.7	35	1.6	46	2.1	40	1.8	4	0.2	141	6.4
SSE	0	0.0	7	0.3	37	1.7	58	2.6	88	4.0	50	2.3	1	0.0	241	11.0
S	0	0.0	5	0.2	27	1.2	73	3.3	70	3.2	11	0.5	0	0.0	186	8.5
SSW	0	0.0	9	0.4	29	1.3	44 .	2.0	76	3.5	22	1.0	0	0.0	180	8.2
SW	0	0.0	13	0.6	41	1.9	45	2.1	83	3.8	29	1.3	0	0.0	211	9.6
usu	0	0.0	4	0.2	29	1.3	51	2.3	60	2.7	10	0.5	0	0.0	154	7.0
u	0	0.0	3	0.1	32	1.5	34	1.6	29	1.3	3	0.1	0	0.0	101	4.6
UNU	0	0.0	3	0.1	9	0.4	20	0.9	10	0.5	0	0.0	0	0.0	42	1.9
NW	0	0.0	0	0.0	24	1.1	38	1.7	35	1.6	6	0.3	2	0.1	105	4.8
NNW	0	0.0	3	0.1	24	1.1	51	2.3	36	1.6	9	0.4	5	0.2	128	5.8
	0	0.0	62	2.8	351	16.0	694	31.7	793	36.2	276	12.6	15	0.7	2191	100.0

MISSING HOURS: 17

MEAN WIND SPEED: 12.6

#### JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT DELTA T: (300-33FT)

LAPSE RATE:

LE -1.9 DEG C/100M CLASS A

#### WIND SPEED GROUPS (MPH)

	0.0	-0.5	0.6	-3.5	3.6	-7.5	7.6	12.5	12.6	-18.5	18.6	24.5	GE 2	24.6	SUM PE	RCENT
DIRECTION	SUM P	ERCENT	SUM P	ERCENT	SUM P	ERCENT	SUM PE	RCENT	SUM PE	ERCENT	SUM P	RCENT	SUM PE	RCENT		
N	0	0.0	0	0.0	2	0.1	3	0.2	2	0.1	0	0.0	0	0.0	7	0.4
NNE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ENE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SSE	0	0.0	0	0.0	0	0.0	4	0.2	0	0.0	0	0.0	0	0.0	4	0.2
S	0	0.0	3	0.2	1	0.1	0	0.0	2	0.1	0	0.0	0	0.0	6	0.3
SSW	0	0.0	2	0.1	2	0.1	0	0.0	4	0.2	0	0.0	0	0.0	8	0.4
SW	0	0.0	2	0.1	4	0.2	0	0.0	0	0.0	0	0.0	0	0.0	6	0.3
WSW	0	0.0	1	0.1	3	0.2	1	0.1	4	0.2	0	0.0	0	0.0	9	0.5
W	0	0.0	0	0.0	5	0.3	3	0.2	4	0.2	1	0.1	1	0.1	14	0.7
WNW	0	0.0	0	0.0	3	0.2	6	0.3	6	0.3	6	0.3	4	0.2	25	1.3
NW	0	0.0	0	0.0	0	0.0	6	0.3	17	0.9	8	0.4	1	0.1	32	1.7
MNM	0	0.0	0	0.0	0	0.0	7	0.4	5	0.3	0	0.0	0	0.0	12	0.6
	0	0.0	8	0.4	20	1.0	30	1.6	44	2.3	15	0.8	6	0.3	123	6.4

MEAN WIND SPEED: 13.1 MISSING: 10

#### JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT DELTA T: (300-33FT) LAPSE RATE: -1.8 TO -1.7 DEG C/100M

CLASS B

#### WIND SPEED GROUPS (MPH)

	0.0	-0.5	0.6	-3.5	3.6	-7.5	7.6	-12.5	12.6	-18.5	18.6	-24.5	GE 2	24.6	SUM P	ERCENT
DIRECTION	SUM PI	ERCENT	SUM PI	ERCENT	SUM P	ERCENT	SUM PE	ERCENT	SUM P	ERCENT	SUM PI	ERCENT	SUM PE	ERCENT		
N	0	0.0	0	0.0	0	0.0	5	0.3	1	0.1	0	0.0	0	0.0	6	0.3
NNE	0	0.0	0	0.0	0	0.0	3	0.2	0	0.0	0	0.0	0	0.0	3	0.2
NE	0	0.0	1	0.1	0	0.0	0	0.0	0	. 0.0	0	0.0	0	0.0	1	0.1
ENE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ε	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESE	0	0.0	1	0.1	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	3	0.2
SE	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	1	0.1	3	0.2
SSE	0	0.0	0	0.0	1	0.1	1	0.1	1	0.1	0	0.0	1	0.1	4	0.2
S	0	0.0	0	0.0	2	0.1	0	0.0	1	0.1	0	0.0	0	0.0	3	0.2
SSW	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	2	0.1
SW	0	0.0	1	0.1	1	0.1	1	0.1	1	0.1	0	0.0	0	0.0	4	0.2
WSW	0	0.0	2	0.1	1	0.1	3	0.2	1	0.1	0	0.0	0	0.0	7	0.4
W	0	0.0	0	0.0	1	0.1	2	0.1	5	0.3	0	0.0	1	0.1	9	0.5
WNW	0	0.0	0	0.0	3	0.2	3	0.2	2	0.1	10	0.5	3	0.2	21	1.1
N₩	0	0.0	0	0.0	1	0.1	1	0.1	12	0.6	7	0.4	0	0.0	21	1.1
NNW	0	0.0	0	0.0	2	0.1	3	0.2	8	0.4	0	0.0	0	0.0	13	0.7
	0	0.0	5	0.3	14	0.7	24	1.2	34	1.8	17	0.9	6	0.3	100	5.2

MEAN WIND SPEED: 13.8 MISSING:

#### JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT DELTA T: (300-33FT)

LAPSE RATE: -1.6 TO -1.5 DEG C/100M

CLASS C

#### WIND SPEED GROUPS (MPH)

	0.0	-0.5	0.6	-3.5	3.6	-7.5	7.6	12.5	12.6	-18.5	18.6	-24.5	GE 2	24.6	SUM PI	ERCENT
DIRECTION	SUM P	ERCENT	SUM PI	ERCENT	SUM PI	ERCENT	SUM PE	RCENT	SUM PE	ERCENT	SUM PI	ERCENT	SUM PE	ERCENT		
N	0	0.0	0	0.0	1	0.1	4	0.2	2	0.1	0	0.0	0	0.0	7	0.4
NNE	0	0.0	1	0.1	2	0.1	2	0.1	0	0.0	0	0.0	0	0.0	5	0.3
NE	0	0.0	0	0.0	1	0.1	1	0.1	0	0.0	0	0.0	0	0.0	2	0.1
ENE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
ESE	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
SE	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	1	0.1	2	0.1	5	0.3
SSE	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1	1	0.1	0	0.0	3	0.2
S	0	0.0	1	0.1	0	0.0	0	0.0	1	0.1	1	0.1	0	0.0	3	0.2
SS₩	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
SW	0	0.0	1	0.1	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
wsw	0	0.0	0	0.0	0	0.0	3	0.2	1	0.1	0	0.0	0	0.0	4	0.2
W	0	0.0	1	0.1	0	0.0	2	0.1	2	0.1	0	0.0	0	0.0	5	0.3
WNW	0	0.0	0	0.0	2	0.1	1	0.1	4	0.2	4	0.2	2	0.1	13	0.7
N₩	0	0.0	0	0.0	0	0.0	3	0.2	5	0.3	3	0.2	0	0.0	11	0.6
WNW	0	0.0	0	0.0	1	0.1	0	0.0	7	0.4	0	0.0	0	0.0	8	0.4
	0	0.0	6	0.3	13	0.7	17	0.9	23	1.2	10	0.5	4	0.2	73	3.8

MEAN WIND SPEED: 12.9
MISSING: 15

#### JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT DELTA T: (300-33FT)

LAPSE RATE: -1.4 TO -0.5 DEG C/100M CLASS D

#### WIND SPEED GROUPS (MPH)

	0.0	-0.5	0.6	-3.5	3.6	-7.5	7.6	12.5	12.6	-18.5	18.6	24.5	GE 2	24.6	SUM P	ERCENT
DIRECTION	SUM PI	ERCENT	SUM PE	ERCENT	SUM PE	RCENT	SUM P	ERCENT								
N	0	0.0	0	0.0	0	0.0	11	0.6	14 .	0.7	2	0.1	0	0.0	27	1.4
NNE	0	0.0	0	0.0	6	0.3	13	0.7	19	1.0	4	0.2	3	0.2	45	2.3
NE	0	0.0	1	0.1	5	0.3	10	0.5	3	0.2	2	0.1	3	0.2	24	1.2
ENE	0	0.0	0	0.0	8	0.4	12	0.6	1	0.1	0	0.0	0	0.0	21	1.1
E	0	0.0	0	0.0	11	0.6	2	0.1	0	0.0	0	0.0	0	0.0	13	0.7
ESE	0	0.0	0	0.0	1	0.1	2	0.1	1	0.1	1	0.1	0	0.0	5	0.3
SE	0	0.0	1	0.1	6	0.3	3	0.2	1	0.1	2	0.1	6	0.3	19	1.0
SSE	0	0.0	0	0.0	3	0.2	3	0.2	13	0.7	2	0.1	0	0.0	21	1.1
S	0	0.0	2	0.1	7	0.4	2	0.1	14	0.7	15	0.8	1	0.1	41	2.1
SS₩	0	0.0	3	0.2	6	0.3	9	0.5	7	0.4	8	0.4	2	0.1	35	1.8
SW	0	0.0	0	0.0	5	0.3	18	0.9	11	0.6	6	0.3	1	0.1	41	2.1
wsw	0	0.0	2	0.1	6	0.3	4	0.2	10	0.5	6	0.3	8	0.4	36	1.9
W	0	0.0	1	0.1	2	0.1	7	0.4	16	0.8	12	0.6	12	0.6	50	2.6
WNW	0	0.0	1	0.1	2	0.1	8	0.4	23	1.2	35	1.8	20	1.0	89	4.6
NW	0	0.0	0	0.0	2	0.1	12	0.6	29	1.5	29	1.5	10	0.5	82	4.2
พทพ	0	0.0	1	0.1	2	0.1	7	0.4	21	1.1	13	0.7	0	0.0	44	2.3
	0	0.0	12	0.6	72	3.7	123	6.4	183	9.5	137	7.1	66	3.4	593	30.7

MEAN WIND SPEED: 15.8 MISSING: 146

#### JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT DELTA T: (300-33FT) LAPSE RATE: -0.4 TO 1.5 DEG C/100M CLASS E

#### WIND SPEED GROUPS (MPH)

	0.0	-0.5	0.6	-3.5	3.6	-7.5	7.6	-12.5	12.6	-18.5	18.6	24.5	GE 2	24.6	SUM P	ERCENT
DIRECTION	SUM PI	ERCENT	SUM PI	ERCENT	SUM PI	ERCENT	SUM P	ERCENT	SUM P	ERCENT	SUM PE	RCENT	SUM PE	RCENT		
N	0	0.0	0	0.0	7	0.4	5	0.3	7	0.4	1	0.1	0	0.0	20	1.0
NNE	0	0.0	0	0.0	4	0.2	9	0.5	13	0.7	0	0.0	0	0.0	26	1.3
NE	0	0.0	0	0.0	2	0.1	1	0.1	6	0.3	2	0.1	2	0.1	13	0.7
ENE	0	0.0	1	0.1	3	0.2	9	0.5	3	0.2	0	0.0	0	0.0	16	0.8
E	0	0.0	0	0.0	3	0.2	12	0.6	2	0.1	0	0.0	0	0.0	17	0.9
ESE	0	0.0	0	0.0	1	0.1	0	0.0	3	0.2	2	0.1	0	0.0	6	0.3
SE	0	0.0	0	0.0	1	0.1	5	0.3	6	0.3	5	0.3	20	1.0	37	1.9
SSE	0	0.0	2	0.1	7	0.4	10	0.5	15	0.8	11	0.6	5	0.3	50	2.6
S	0	0.0	1	0.1	11	0.6	19	1.0	27	1.4	23	1.2	2	0.1	83	4.3
SSW	0	0.0	1	0.1	12	0.6	29	1.5	31	1.6	24	1.2	8	0.4	105	5.4
SW	0	0.0	2	0.1	11	0.6	14	0.7	19	1.0	7	0.4	13	0.7	66	3.4
wsw	0	0.0	2	0.1	7	0.4	12	0.6	13	0.7	0	0.0	1	0.1	35	1.8
W	0	0.0	1	0.1	6	0.3	20	1.0	24	1.2	4	0.2	1	0.1	56	2.9
WNW	0	0.0	0	0.0	9	0.5	16	0.8	21	1.1	12	0.6	1	0.1	59	3.1
N₩	0	0.0	1	0.1	6	0.3	23	1.2	43	2.2	18	0.9	10	0.5	101	5.2
NNW	0	0.0	0	0.0	3	0.2	21	1.1	44	2.3	14	0.7	0	0.0	82	4.2
												-				
	0	0.0	11	0.6	93	4.8	205	10.6	277	14.4	123	6.4	63	3.3	772	40.0

MEAN WIND SPEED: 14.8 MISSING: 79

#### JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT DELTA T: (300-33FT)

LAPSE RATE: 1.6 TO 4.0 DEG C/100M

CLASS F

#### WIND SPEED GROUPS (MPH)

	0.0	-0.5	0.6	-3.5	3.6	-7.5	7.6	-12.5	12.6	-18.5	18.6	-24.5	GE 2	24.6	SUM P	ERCENT
DIRECTION	SUM PI	ERCENT	SUM P	ERCENT	SUM P	ERCENT	SUM PE	ERCENT								
N	0	0.0	0	0.0	2	0.1	4	0.2	4	0.2	0	0.0	0	0.0	10	0.5
NNE	0	0.0	0	0.0	2	0.1	3	0.2	4	0.2	1	0.1	0	0.0	10	0.5
NE	0	0.0	0	0.0	2	0.1	1	0.1	0	0.0	0	0.0	0	0.0	3	0.2
ENE	0	0.0	0	0.0	2	0.1	6	0.3	6	0.3	0	0.0	0	0.0	14	0.7
E	0	0.0	0	0.0	2	0.1	2	0.1	. 4	0.2	0	0.0	0	0.0	8	0.4
ESE	0	0.0	0	0.0	1	0.1	4	0.2	2	0.1	0	0.0	0	0.0	7	0.4
SE	0	0.0	0	0.0	2	0.1	8	0.4	8	0.4	2	0.1	1	0.1	21	1.1
SSE	0	0.0	0	0.0	3	0.2	3	0.2	0	0.0	5	0.3	8	0.4	19	1.0
S	0	0.0	0	0.0	2	0.1.	7	0.4	5	0.3	6	0.3	0	0.0	20	1.0
SSW	0	0.0	1	0.1	1	0.1	6	0.3	15	0.8	14	0.7	0	0.0	37	1.9
SW	0	0.0	0	0.0	3	0.2	7	0.4	16	0.8	4	0.2	0	0.0	30	1.6
WSW	0	0.0	0	0.0	0	0.0	10	0.5	5	0.3	2	0.1	0	0.0	17	0.9
W	0	0.0	1	0.1	1	0.1	5	0.3	10	0.5	2	0.1	2	0.1	21	1.1
WNW	0	0.0	0	0.0	1	0.1	2	0.1	5	0.3	0	0.0	0	0.0	8	0.4
ИW	Ú	0.0	0	0.0	0	0.0	1	0.1	3	0.2	0	0.0	0	0.0	4	0.2
WNW	0	0.0	0	0.0	0	0.0	2	0.1	5	0.3	1	0.1	0	0.0	8	0.4
	0	0.0	2	0.1	24	1.2	71	3.7	92	4.8	37	1.9	11	0.6	237	12.3

MEAN WIND SPEED: 14.5 MISSING: 2

#### JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED BY ATMOSPHERIC STABILITY CLASS

WIND: 300 FT DELTA T: (300-33FT) LAPSE RATE:

GT 4.0 DEG C/100M CLASS G

#### WIND SPEED GROUPS (MPH)

	0.0	-0.5	0.6	-3.5	3.6	-7.5	7.6	12.5	12.6	-18.5	18.6	24.5	GE 2	24.6	SUM PE	ERCENT
DIRECTION	SUM P	ERCENT	SUM PI	ERCENT	SUM PI	ERCENT	SUM PE	RCENT	SUM P	ERCENT	SUM PE	RCENT	SUM PE	RCENT		
N	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	1	0.1
NNE	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NE	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1	0	0.0	0	0.0	2	0.1
ENE	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	2	0.1
Ε	0	0.0	0	0.0	1	0.1	1	0.1	1	0.1	0	0.0	0	0.0	3	0.2
ESE	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	1	0.1
, SE	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1	0	0.0	0	0.0	2	0.1
SSE	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1	0	0.0	2	0.1	4	0.2
S	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1	0	0.0	0	0.0	2	0.1
SSW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SW	0	0.0	0	0.0	0	0.0	3	0.2	2	0.1	0	0.0	0	0.0	5	0.3
WSW	0	0.0	0	0.0	0	0.0	3	0.2	2	0.1	1	0.1	0	0.0	6	0.3
W	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
WNW	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
NW	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NNW	0	0.0	0	0.0	1	0.1	1	0.1	0	0.0	0	0.0	0	0.0	2	0.1
	0	0.0	0	0.0	4	0.2	15	8.0	10	0.5	. 1	0.1	2	0.1	32	1.7

MEAN WIND SPEED: 13.1 MISSING: 2

#### JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED BY ATMOSPHERIC STABILITY CLASS WIND: 300 FT

DELTA T: (300-33FT)

ALL STABILITY CLASSES

#### WIND SPEED GROUPS (MPH)

	0.0	-0.5	0.6	-3.5	3.6	-7.5	7.6	-12.5	12.6	-18.5	18.6	-24.5	GE 2	24.6	SUM F	PERCENT
DIRECTION	SUM PE	ERCENT	SUM PI	ERCENT	SUM P	ERCENT	SUM PE	ERCENT								
N	0	0.0	0	0.0	12	0.6	33	1.7	30	1.6	3	0.2	0	0.0	78	4.0
NNE	0	0.0	1	0.1	14	0.7	30	1.6	36	1.9	5	0.3	3	0.2	89	4.6
NE	0	0.0	2	0.1	10	0.5	14	0.7	10	0.5	4	0.2	5	0.3	45	2.3
ENE	0	0.0	1	0.1	13	0.7	29	1.5	10	0.5	0	0.0	0	0.0	53	2.7
E	0	0.0	0	0.0	19	1.0	17	0.9	7	0.4	0	0.0	0	0.0	43	2.2
ESE	0	0.0	1	0.1	6	0.3	6	0.3	7	0.4	3	0.2	0	0.0	23	1.2
SE	0	0.0	1	0.1	11	0.6	19	1.0	16	0.8	10	0.5	30	1.6	87	4.5
SSE	0	0.0	2	0.1	14	0.7	23	1.2	31	1.6	19	1.0	16	8.0	105	5.4
\$	0	0.0	7	0.4	23	1.2	29	1.5	51	2.6	45	2.3	3	0.2	158	8.2
SS₩	0	0.0	9	0.5	21	1.1	44	2.3	59	3.1	46	2.4	10	0.5	189	9.8
SW	0	0.0	6	0.3	25	1.3	43	2.2	49	2.5	17	0.9	14	0.7	154	8.0
WSW	0	0.0	7	0.4	17	0.9	36	1.9	36	1.9	9	0.5	9	0.5	114	5.9
u	0	0.0	4	0.2	16	0.8	39	2.0	61	3.2	19	1.0	17	0.9	156	8.1
WNW	0	0.0	1	0.1	21	1.1	36	1.9	61	3.2	67	3.5	30	1.6	216	11.2
NW	0	0.0	1	0.1	9	0.5	46	2.4	109	5.6	65	3.4	21	1.1	251	13.0
NNW	0	0.0	1	0.1	9	0.5	41	2.1	90	4.7	28	1.5	0	0.0	169	8.8
	n	0.0	44	2 3	240	12 4	485	25 1	663	34 4	340	17 6	158	8.2	1930	100.0
	0	0.0	44	2.3	240	12.4	485	25.1	663	34.4	340	17.6	158	8.2	1930	10

MISSING HOURS: 278

MEAN WIND SPEED: 14.8

#### JOINT DISTRIBUTION OF WIND DIRECTION AND SPEED BY ATMOSPHERIC STABILITY CLASS WIND: 300 FT

DELTA T: (300-33FT)

DIRECTION VS SPEED ONLY

#### WIND SPEED GROUPS (MPH)

	0.0	-0.5	0.6	-3.5	3.6	-7.5	7.6	-12.5	12.6	-18.5	18.6	-24.5	GE 2	24.6	SUM F	PERCENT
DIRECTION	SUM P	ERCENT	SUM PI	ERCENT												
N	0	0.0	0	0.0	12	0.6	33	1.7	30	1.6	3	0.2	0	0.0	78	4.0
NNE	0	0.0	1	0.1	14	0.7	30	1.6	36	1.9	5	0.3	3	0.2	89	4.6
NE	0	0.0	2	0.1	10	0.5	14	0.7	10	0.5	4	0.2	5	0.3	45	2.3
ENE	0	0.0	1	0.1	13	0.7	29	1.5	10	0.5	0	0.0	0	0.0	53	2.7
E	0	0.0	0	0.0	19	1.0	17	0.9	7	0.4	0	0.0	0	0.0	43	2.2
ESE	0	0.0	1	0.1	6	0.3	6	0.3	7	0.4	3	0.2	0	0.0	23	1.2
SE	0	0.0	1	0.1	11	0.6	19	1.0	16	0.8	10	0.5	30	1.6	87	4.5
SSE	0	0.0	2	0.1	14	0.7	23	1.2	31	1.6	19	1.0	16	0.8	105	5.4
S	0	0.0	7	0.4	23	1.2	29	1.5	51	2.6	45	2.3	3	0.2	158	8.2
SSW	0	0.0	9	0.5	21	1.1	44	2.3	59	3.1	46	2.4	10	0.5	189	9.8
SW	0	0.0	6	0.3	25	1.3	43	2.2	49	2.5	17	0.9	14	0.7	154	8.0
WSW	0	0.0	7	0.4	17	0.9	36	1.9	36	1.9	9	0.5	9	0.5	114	5.9
W	0	0.0	4	0.2	16	0.8	39	2.0	63	3.3	19	1.0	17	0.9	158	8.2
WNW	0	0.0	1	0.1	21	1.1	36	1.9	61	3.2	67	3.5	30	1.6	216	11.2
N₩	0	0.0	1	0.1	9	0.5	46	2.4	109	5.6	65	3.4	21	1.1	251	13.0
MNM	0	0.0	1	0.1	9	0.5	41	2.1	90	4.7	28	1.4	0	0.0	169	8.7
	0	0.0	44	2.3	240	12.4	485	25.1	665	34.4	340	17.6	158	8.2	1932	100.0
	•		, ,								- 10		.50		.,,,,	

MISSING HOURS: 276

MEAN WIND SPEED: 14.8

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#### PART B. GASEOUS EFFLUENTS

See Summary Tables 1A-1 thru 1C for Salem Unit 1 Operations.

See Summary Tables 1A-2 thru 1C for Salem Unit 2 Operations.

#### PART C. LIQUID EFFLUENTS

See Summary Tables 2A-1 thru 2B for Salem Unit 1 Operations.

See Summary Tables 2A-2 thru 2B for Salem Unit 2 Operations.

#### PART D. SOLID WASTE

See Summary in Table 3.

#### PART E. RADIOLOGICAL IMPACT ON MAN

The calculated individual doses in this section are based on actual locations of nearby residents and farms. The population dose impact is based on historical site specific data i.e., food production, milk production, feed for milk animals and seafood production.

The doses were calculated using methods described in Regulatory Guide 1.109 and represent calculations for the six month reporting interval. Individual doses from batch and continuous releases were calculated using the annual average historic meteorological dispersion coefficients as described in the Offsite Dose Calculation Manual. Population doses were calculated using the meteorological dispersion coefficients for the six month reporting interval.

#### Liquid Pathways

Doses to "maximum hypothetical individuals" in the population from liquid releases are primarily from the seafood ingestion pathway. Calculated doses to individuals are as shown below:

Total body dose to the individual: 3.53E-01 mrem Highest organ dose (GI-LLI): 1.51E+00 mrem

Dose to the 4.5 million individuals living within the 50 mile radius of the plant site:

Total population dose: 3.20E-02 person-rem

Average population dose: 7.11E-06 mrem/person

## SALEM GENERATING STATION TABLE 2A-1

# EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT JANUARY - JUNE 1995 UNIT 1

#### LIQUID EFFLUENTS-SUMMATION OF ALL RELEASES

		Units	1st Quarter	2nd Quarter	Est. Total Error %	
Α.	Fission and activation products 1. Total release (not					
	<pre>including tritium,   gases, alpha) 2. Average diluted</pre>	Ci	7.24E-01	6.03E-01	25	
	concentration during period 3. Percent of technical	uCi/mL	1.26E-07	2.54E-07		
	<pre>specification limit (T.S. 3.11.1.2.(a))</pre>	. 96	6.32E+00	9.69E+00		
В.	Tritium  1. Total release  2. Average diluted	Ci	1.15E+02	4.84E+01	25	
	concentration during period 3. Percent of technical specification limit	uCi/mL	1.99E-05	2.04E-05		
	(T.S. 3.11.1.1)	. %	6.65E-01	6.79E-01		
C.	Dissolved and entrained noble gases 1. Total release 2. Average diluted	Ci	4.87E-02	3.25E-02	25	•
	concentration during period 3. Percent of technical	uCi/mL	8.48E-09	1.37E-08		
	<pre>specification limit (T.S. 3.11.1.1)</pre>	90	4.24E-03	6.84E-03		
D.	Gross alpha activity 1. Total release	Ci	0.00E+00	0.00E+00	25	
Ε.	Volume of waste release (prior to dilution - Batch Release)	liters	2.71E+06	1.12E+06	25	
F.	Volume of dilution water used during entire perio		4.84E+11	3.66E+11	25	

## SALEM GENERATING STATION TABLE 2A-2

# EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT JANUARY - JUNE 1995 UNIT 2

#### LIQUID EFFLUENTS-SUMMATION OF ALL RELEASES

		Units	1st Quarter	2nd Quarter	Est. Total Error %
A.	Fission and activation products 1. Total release (not including tritium, gases, alpha) 2. Average diluted concentration during period 3. Percent of technical	Ci uCi/mL	6.12E-01 2.47E-07	3.51E-01 2.33E-07	25
	<pre>specification limit (T.S. 3.11.1.2.(a))</pre>	9	6.30E+00	7.88E+00	
В.	Tritium  1. Total release  2. Average diluted	Ci	9.55E+01	1.49E+01	25
	concentration during period 3. Percent of technical specification limit	uCi/mL	3.86E-05	9.94E-06	
	(T.S. 3.11.1.1)	96	1.29E+00	3.31E-01	
c.	Dissolved and entrained noble gases 1. Total release 2. Average diluted	Ci	3.63E-02	3.96E-02	25
	concentration during period 3. Percent of technical	uCi/mL	1.46E-08	2.63E-08	
	<pre>specification limit (T.S. 3.11.1.1)</pre>	8	7.32E-03	1.32E-02	
D.	Gross alpha activity 1. Total release	Ci	0.00E+00	0.00E+00	25
E.	Volume of waste release (prior to dilution - Batch Release)	liters	1.57E+06	6.92E+05	25
F.	Volume of dilution water used during entire period	i liters	2.70E+11	3.96E+11	25

## SALEM GENERATING STATION TABLE 2B-1

# EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT JANUARY - JUNE 1995

#### LIQUID EFFLUENTS UNIT 1

		CONTINUOU	S MODE	BATCH MODE			
Nuclides Released	Unit	lst Quarter	2nd Quarter	1st Quarter	2nd Quarter		
A. Fission Product		2	2	2			
	Ci Ci Ci Ci Ci Ci Ci Ci Ci Ci Ci	0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.35E-05 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00	0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00	1.35E-03 1.45E-02 6.55E-05 1.04E-03 4.99E-01 2.16E-02 3.01E-05 2.99E-05 5.65E-05 3.68E-04 1.30E-04 2.15E-04 1.61E-04 1.61E-04 8.39E-03 3.61E-02 6.00E-03 1.65E-04 5.30E-02 1.25E-04	1.01E-03 1.68E-02 3.43E-04 1.03E-03 3.23E-01 2.29E-02 0.00E+00 0.00E+00 0.00E+00 4.18E-03 2.50E-03 0.00E+00 3.70E-04 0.00E+00 8.38E-03 2.56E-02 2.83E-03 5.35E-03 7.74E-02 0.00E+00		
Cesium-137 Lanthanum-140	Ci Ci	1.37E-04 0.00E+00	0.00E+00 0.00E+00	8.14E-02 2.45E-05	1.11E-01 6.88E-05		
Ruthenium-105	Ci	0.00E+00	0.00E+00	0.00E+00	2.55E-04		
Sodium-24	Ci	0.00E+00	0.00E+00	7.98E-05	0.00E+00		
Tin-113 Zinc-65	Ci Ci	0.00E+00 0.00E+00	0.00E+00 0.00E+00	0.00E+00 0.00E+00	4.66E-04 6.77E-05		
111C 00	01	0.001.00	0.00100	0.002100	0.77E-05		
TOTALS	Ci	2.43E-04	0.00E+00	7.24E-01	6.03E-01		
B. Tritium, Dissol	ved and	Entrained	Gases				
Tritium Xenon-133m Xenon-133 Xenon-135	Ci Ci Ci Ci	2.00E-03 0.00E+00 0.00E+00 0.00E+00	0.00E+00 0.00E+00 0.00E+00 0.00E+00	1.15E+02 4.82E-04 4.78E-02 4.06E-04	4.84E+01 2.78E-04 3.21E-02 8.03E-05		
TOTALS	Ci	2.00E-03	0.00E+00	1.15E+02	4.84E+01		

### SALEM GENERATING STATION TABLE 2B-2

# EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT JANUARY - JUNE 1995

#### LIQUID EFFLUENTS UNIT 2

		CONTINUOU	S MODE	BATCH	MODE
Nuclides Released	Unit	1st Quarter	2nd Quarter	1st Quarter	2nd Quarter
A. Fission Product	S				
Sodium-24 Chromium-51 Manganese-54 Iron-55 Iron-59 Cobalt-57 Cobalt-58 Cobalt-60 Strontium-90 Niobium-95 Zirconium-95 Niobium-97 Cerium-141 Silver-110m Antimony-122 Antimony-124 Antimony-125 Iodine-131 Cesium-134 Cesium-136 Cesium-137 Lanthanum-140 Ruthenium-105 Tin-113 Zinc-65	Ci Ci Ci Ci Ci Ci Ci Ci Ci Ci Ci Ci Ci C	O.00E+00 O.00E+00	0.00E+00 0.00E+00	5.13E-05 3.25E-04 1.18E-03 2.35E-02 1.08E-04 6.82E-04 3.75E-01 2.64E-02 2.51E-05 6.24E-04 2.71E-04 1.07E-04 0.00E+00 4.90E-04 5.14E-05 7.30E-03 3.15E-02 3.62E-03 5.57E-02 3.34E-05 8.55E-02 5.06E-06 0.00E+00 0.00E+00 0.00E+00	2.03E-05 6.23E-03 6.87E-04 8.26E-03 1.36E-04 7.33E-04 2.38E-01 1.20E-02 0.00E+00 4.49E-03 2.67E-03 0.00E+00 4.92E-05 3.79E-04 0.00E+00 4.26E-03 1.28E-02 6.24E-05 2.47E-02 0.00E+00 3.43E-02 7.98E-04 1.97E-04 8.20E-04 1.14E-04
TOTALS	Ci	0.00E+00	6.32E-07	6.12E-01	3.51E-01
B. Tritium, Dissol	ved and	l Entrained	Gases		
Tritium Xenon-133 Xenon-133m Xenon-135	Ci Ci Ci	0.00E+00 0.00E+00 0.00E+00 0.00E+00	0.00E+00 0.00E+00 0.00E+00 0.00E+00	9.55E+01 3.60E-02 1.19E-04 1.56E-04	1.49E+01 3.91E-02 4.07E-04 7.05E-05
TOTALS		0.00E+00	0.00E+00	9.55E+01	1.50E+01