

LASALLE COUNTY STATION

RADIOACTIVE WASTE AND ENVIRONMENTAL MONITORING

ANNUAL REPORT 1982

HAZLETON ENVIRONMENTAL SCIENCES

Northbrook, Illinois

MARCH 1983

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LASALLE COUNTY NUCLEAR POWER STATION

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## INTRODUCTION

LaSalle Station, a two-unit BWR plant is located near Marseilles, Illinois, in LaSalle County, next to the Illinois River. Each reactor is designed to have a capacity of 1078 MW net. Unit No. 1 loaded fuel in April 1982. Unit No. 2 is scheduled to load fuel in September 1983. The plant has been designed to keep releases to the environment at levels below those specified in the regulations.

Liquid effluents from LaSalle County Station are released to the Illinois River in controlled batches after radioassay of each batch. Gaseous effluents are released to the atmosphere after delay to permit decay of short half-life gases. Releases to the atmosphere are calculated on the basis of analyses of daily grab samples of noble gases and continuously collected composite samples of iodine and particulate matter. The results of effluent analyses are summarized on a monthly basis and reported to the Nuclear Regulatory Commission as required per Technical Specifications. Airborne concentrations of noble gases, I-131 and particulate radioactivity in off-site areas are calculated using effluent and meteorological data on isotopic composition of effluents.

Environmental monitoring is conducted by sampling at indicator and reference (background) locations in the vicinity of the LaSalle County Station to measure changes in radiation or radioactivity levels that may be attributable to plant operations. If significant changes attributable to LaSalle County Station are measured, these changes are correlated with effluent releases. External gamma radiation exposure from noble gases and I-131 in milk are the most critical pathways at this site; however, an environmental monitoring program is conducted which includes other pathways of less importance.



#### SUMMARY

Gaseous and liquid effluents for the period remained at a fraction of the Technical Specification limits. Calculations of environmental concentrations based on effluent, Illinois River flow, and meteorological data for the period indicate that consumption by the public of radionuclides attributable to the plant are unlikely to exceed the regulatory limits. Gamma radiation exposure from noble gases released to the atmosphere represented the critical pathway for the period with a maximum individual dose estimated to be  $1.02\text{E}-06$  rem for the year, when a shielding and occupancy factor of 0.7 is assumed. Environmental monitoring results confirm that dose via other pathways was not significant.

## 1.0 EFFLUENTS

### 1.1 Gaseous Effluents to the Atmosphere

Measured concentrations and isotopic composition of noble gases, radioiodine, and particulate radioactivity released to the atmosphere during the year, are listed in Table 1.1-1. A total of 3.46 curies of fission and activation gases was released with a maximum release rate of  $2.67 \pm E+04$   $\mu\text{Ci/sec}$ .

No I-131 was released during the year.

A total of 4.16 curies of beta-gamma emitters and  $7.08E-06$  curies of alpha emitters was released as airborne particulate matter, with an average release rate of  $1.31E-04$   $\mu\text{Ci/sec}$ .

No tritium was released during the year.

### 1.2 Liquids Released to the Illinois River

A total of  $9.69E+06$  liters of radioactive liquid waste (prior to dilution) containing  $4.30E-02$  curies (excluding tritium, gases, and alpha) were discharged after dilution with a total of  $1.40E+10$  liters of water. These wastes were released at a monthly average concentration of  $4.0E-09$   $\mu\text{Ci/ml}$  during the second half of 1982, discharged on an unidentified nuclide basis, which is 4% of the Technical Specification release limits for unidentified radioactivity. A total of  $1.23E-05$  curies of alpha radioactivity and  $<2.88E-03$  curies of tritium were released. Monthly release estimates and principal radionuclides in liquid effluents are given in Table 1.2-1.

## 2.0 SOLID RADIOACTIVE WASTE

No solid radioactive wastes were shipped during the reporting period.

## 3.0 DOSE TO MAN

### 3.1 Gaseous Effluent Pathways

#### Gamma Dose Rates

Gamma air and whole body dose rates off-site were calculated based on measured release rates, isotopic composition of the noble gases, and meteorological data for the period (Table 3.1-1). Isodose contours of whole body dose are shown in Figure 3.1-1 for the year. Based on measured effluents and meteorological data, the maximum dose to an individual would be  $1.02E-06$  mrem for the year, with an occupancy or shielding factor of 0.7 included. The maximum gamma air dose was  $3.37E-06$  mrad.

### Beta Air and Skin Rates

The range of beta particles in air is relatively small (on the order of a few meters or less); consequently, plumes of gaseous effluents may be considered "infinite" for purpose of calculating the dose from beta radiation incident on the skin. However, the actual dose to sensitive skin tissues is difficult to calculate because this depends on the beta particle energies, thickness of inert skin, and clothing covering sensitive tissues. For purposes of this report the skin is taken to have a thickness of  $7 \text{ mg/cm}^2$  and an occupancy factor of 1.0 is used. The skin dose from beta and gamma radiation for the year was  $3.70\text{E}-06 \text{ mrem}$ .

The air concentrations of radioactive noble gases at the off-site receptor locations are given in Figure 3.1-2. The maximum off-site beta air dose for the year was  $3.83\text{E}-06 \text{ mrad}$ .

### Radioactive Iodine

The human thyroid exhibits a significant capacity to concentrate ingested or inhaled iodine, and the radioiodine, I-131, released during routine operation of the plant, may be made available to man thus resulting in a dose to the thyroid. The principal pathway of interest for this radionuclide is ingestion of radioiodine in milk by an infant. Calculation made in previous years indicate that contributions to doses from inhalation of I-131 and I-133, and I-133 in milk, are negligible.

### Iodine-131 Concentrations in Air

The calculated concentration contours for I-131 in air are shown in Figure 3.1-3. Included in these calculations is an iodine cloud depletion factor which accounts for the phenomenon of elemental iodine deposition on the ground. The maximum off-site average concentration is estimated to be  $0.0 \text{ pCi/m}^3$  for the year.

### Dose to Infant's Thyroid

The hypothetical thyroid dose to an infant living near the plant via ingestion of milk was calculated. The radionuclide considered was I-131 and the source of milk was taken to be the nearest dairy farm with the cows pastured from May to October. The maximum infant's thyroid dose was  $1.90\text{E}-07 \text{ mrem}$  during the year (Table 3.1-1).

### Concentrations of Particulates in Air

Concentration contours of radioactive airborne particulates are shown in Figure 3.1-4. The maximum off-site average level is estimated to be  $1.12\text{E}-05 \text{ pCi/m}^3$ .

### Summary of Doses

Table 3.1-1 summarizes the doses resulting from releases of airborne radioactivity via the different exposure pathways.

### 3.2 Liquid Effluent Pathways

The three principal pathways through the aquatic environment for potential doses to man from liquid waste are ingestion of potable water, eating aquatic foods, and exposure while walking on the shoreline. Not all of these pathways are applicable at a given time or station but a reasonable approximation of the dose can be made by adjusting the dose formula for season of the year or type and degree of use of the aquatic environment. NRC\* developed equations were used to calculate the doses to the whole body, lower GI tract, thyroid, bone and skin; specific parameters for use in the equations are given in the Commonwealth Edison Off-site Dose Calculation Manual. The maximum whole body dose for the year was  $7.87\text{E-}06$  mrem and no organ dose exceeded  $4.14\text{E-}05$  mrem.

### 4.0 SITE METEOROLOGY

A summary of the site meteorological measurements taken during each quarter of the year is given in Appendix II. The data are presented as cumulative joint frequency distributions of 375' level wind direction and wind speed class by atmospheric stability class determined from the temperature difference between the 375' and 33' levels. Data recovery for these measurements was about 99.7%.

### 5.0 ENVIRONMENTAL MONITORING

Table 5.0-1 provides an outline of the radiological environmental monitoring program as required in the Technical Specifications.

Except for tables of special interest, tables listing all data are no longer included in the annual report. All data tables are available for inspection at the Station or in the Corporate offices.

Specific findings for various environmental media are discussed below.

#### 5.1 Gamma Radiation

External radiation dose from on-site sources and noble gases released to the atmosphere was measured at ten indicator and four reference (background) locations using solid lithium fluoride thermoluminescent dosimeters (TLD). A comparison of the TLD results for reference stations with on-site and off-site indicator stations is included in Table 5.1-1. Additional TLDs, a total of 48 were installed on June 1, 1980 such that each sector was covered at both five miles and the site boundary.

\* Nuclear Regulatory Commission, Regulatory Guide 1.109 (Rev. 1).



## 5.2 Airborne I-131 and Particulate Radioactivity

Concentrations of airborne I-131 and particulate radioactivity at monitoring locations are summarized in Tables 5.0-2 through 5.0-5. Locations of the samplers are shown in Figure 5.0-1. Airborne I-131 remained below the LLD of 0.1 pCi/m<sup>3</sup> throughout the year.

Gross beta concentrations ranged from 0.011 to 0.047 pCi/m<sup>3</sup> at indicator locations and 0.012 to 0.056 pCi/m<sup>3</sup> at control locations, with an average concentration of 0.022 pCi/m<sup>3</sup> for the year at both indicator and control locations. No radioactivity attributable to station operation was detected in any sample.

## 5.3 Terrestrial Radioactivity

Precipitation samples were collected monthly from four milk sampling locations and analyzed for gross beta, tritium, strontium-89 and -90, and gamma-emitting isotopes. Except for gross beta, all other radioactivity was below the limits of detection indicating that there was no measurable amount of radioactivity attributable to the station releases.

Annual mean gross beta concentration measured 29.5 pCi/l, which is the level expected in precipitation samples.

Vegetables were collected in August and analyzed for gross beta, strontium-89 and -90, and gamma-emitting isotopes. In addition, green leafy vegetables were analyzed for iodine-131. Gross beta concentration ranged from 1.5 to 4.2 pCi/g wet weight and averaged 2.4 pCi/g wet weight. The range and mean values were those expected in the vegetation samples. All other isotopes were below the limits of detection indicating that there was no measurable amount of radioactivity attributable to the station releases.

Cattlefeed and grass samples were collected quarterly from milk sampling locations and analyzed for gross beta, strontium-89 and -90 and gamma-emitting isotopes. Except for gross beta, the level of radioactivity was below the detection limits. Gross beta concentrations were at the level usually encountered in these samples.

Well water from on-site well (L-27) was collected monthly and analyzed for gross beta activity. The annual mean gross beta concentration was 19.5 pCi/l. Monthly samples were also composited quarterly and analyzed for strontium-89 and -90, tritium, and gamma scanned. All results were below the lower limits of detection.

Well water was also collected quarterly from five off-site wells and analyzed for the same parameters as in well water from on-site. The results were similar to those obtained for the on-site well, indicating that there was no measurable amount of radioactivity due to the station releases.

#### 5.4 Aquatic Radioactivity

Surface water samples were collected weekly from eight locations and analyzed for gross beta content. Weekly samples from the Illinois River near the intake and discharge pipes were composited monthly and analyzed for gamma emitters, tritium, and strontium-89 and -90. Samples from other locations were composited monthly for gamma isotopic analysis and quarterly for tritium, Sr-89 and Sr-90. None of the composite samples indicated the presence of other than naturally occurring gamma emitters at a sensitivity of 10 pCi/l. None of the samples contained Sr-89 or Sr-90 above respective detection sensitivities of 10 pCi/l and 2 pCi/l. Tritium concentrations were below the LLD level of 200 pCi/l in all samples.

Gross beta concentrations were similar to those obtained during the preoperational program indicating that there was no measurable amount of radioactivity due to station operation present.

Sediment samples were collected three times, from one indicator and two control locations, and analyzed for gross beta and gamma-emitters. Gamma emitters were either below or at the detection limits. Mean gross beta activity in indicator samples measured 26.4 pCi/g and 25.1 pCi/g at control locations indicating the presence of no radioactivity due to station operation.

Collection sites, frequency, and analysis of aquatic vegetation were identical to those of sediments. As expected, the gross beta concentration was lower for aquatic vegetation than for sediments. All gamma emitters were below the detection levels.

Levels of gamma radioactivity in fish were measured and found in all cases to be below the lower limits of detection for the program. Gross beta concentration averaged 3.2 pCi/g wet weight and was at the level expected in fish.

#### 5.5 Milk

Milk samples were collected monthly from November through April and weekly from May through October and analyzed for iodine-131, radiostrontium, and gamma emitters. Radioiodine was below the limits of detection, 0.5 pCi/l during the grazing period (May to October) and 5.0 pCi/l during the non-grazing period (November to April). Sr-90 concentrations were variable within the usual range for milk and Sr-89 and gamma emitters were below the limits of detection.

#### 5.6 Special Collection

No special collections were made during the period.



## 6.0 ANALYTICAL PROCEDURES

A description of the procedures used for analyzing radioactivity in environmental samples is given in Appendix III of the Dresden report for the period January - December 1981. Procedures used during the period covered by this report remained essentially unchanged.

## 7.0 MILCH ANIMAL CENSUS

A census of milch animals was conducted within five miles of the Station. The survey was conducted by "door-to door" canvas and by information from Illinois Agricultural Agents. The census was conducted by A. Lewis on September 4, 1982.

There are no dairy farms within a five mile radius of the LaSalle Nuclear Power Station.

## 8.0 NEAREST RESIDENTS CENSUS

The census was conducted by A. Lewis in December of 1982. There were no changes from the previous census.

## 9.0 ERRATA

See Appendix III, page 63.

APPENDIX I  
DATA TABLES AND FIGURES

Table 1.1-1

## REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: LASALLE COUNTY NPS UNIT 1

DOCKET NOS.: 50-373

YEAR: 1982

| 1. Gaseous Effluents            | UNITS   | JANUARY       | FEBRUARY      | MARCH    | APRIL    | MAY      | JUNE     | 6MO. TOTAL | TECH. SPEC. REF |
|---------------------------------|---------|---------------|---------------|----------|----------|----------|----------|------------|-----------------|
| 1. Gross Radioactivity Releases |         |               |               |          |          |          |          |            |                 |
| a) Total Release Main Stack     | Curies  | None Released | None Released | 2.85E-05 | 4.38E-03 | 3.42E00  | 3.28E-02 | 3.46E+00   | 6.6.A.4.b.      |
| b. Maximum Release Rate         |         |               |               |          |          |          |          |            | 3.11.2.1        |
| (grab sample)                   | uCi/sec | N/A           | N/A           | 9.4E+00  | 2.81E03  | 5.16E+03 | 2.67E+04 | 2.67E+04   |                 |
| c. Isotopes Released            |         |               |               |          |          |          |          |            | 3.11.2.2        |
| Kr-85m                          | Curies  | ----          | ----          | ----     | ----     | ----     | ----     | ----       |                 |
| Kr-87                           | Curies  | ----          | ----          | ----     | ----     | ----     | ----     | ----       |                 |
| Kr-88                           | Curies  | ----          | ----          | ----     | ----     | ----     | ----     | ----       |                 |
| Xe-133                          | Curies  | ----          | ----          | 2.85E-05 | 4.38E-03 | 3.42E00  | 3.28E-02 | 3.46E+00   |                 |
| Xe-135                          | Curies  | ----          | ----          | ----     | ----     | ----     | ----     | ----       |                 |
| Xe-135m                         | Curies  | ----          | ----          | ----     | ----     | ----     | ----     | ----       |                 |
| Xe-138                          | Curies  | ----          | ----          | ----     | ----     | ----     | ----     | ----       |                 |
|                                 |         |               |               |          |          |          |          |            |                 |
|                                 |         |               |               |          |          |          |          |            |                 |
|                                 |         |               |               |          |          |          |          |            |                 |
| d. Percent of Stack Limit       | %       | N/A           | N/A           | 2.78E-10 | 4.27E-08 | 3.33E-05 | 3.20E-07 | 3.37E-05   | 3.11.2.2.b.     |
| e. Average Release Rate         | uCi/sec | N/A           | N/A           | 1.06E-05 | 1.69E-03 | 1.28E00  | 1.26E-02 | 2.21E-01   | 3.11.2.1.a      |
|                                 |         |               |               |          |          |          |          |            |                 |
| 2. Main Stack Iodine Release    |         | None          | None          | None     | None     | None     | None     | None       | 6.6.A.4.b       |
| a. Isotopes Released            |         | Released      | Released      | Released | Released | Released | Released | Released   | 3.11.2.3        |
| I-131                           | Curies  | ----          | ----          | ----     | ----     | ----     | ----     | ----       |                 |
| I-133                           | Curies  | ----          | ----          | ----     | ----     | ----     | ----     | ----       |                 |
| I-135                           | Curies  | ----          | ----          | ----     | ----     | ----     | ----     | ----       |                 |
| b. Percent of Stack Limit       | %       | N/A           | N/A           | N/A      | N/A      | N/A      | N/A      | N/A        |                 |
| c. Average Release Rate         | uCi/sec | N/A           | N/A           | N/A      | N/A      | N/A      | N/A      | N/A        | 3.11.2.1.b.     |

Table 1.1-1 (continued)

REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: LASALLE COUNTY NPS UNIT 1

DOCKET NOS.: 50-373

YEAR: 1982

| I. Gaseous Effluents           | UNITS   | JULY     | AUGUST   | SEPTEMBER | OCTOBER       | NOVEMBER | DECEMBER | 6MO. TOTAL | TECH. SPEC. REF. |
|--------------------------------|---------|----------|----------|-----------|---------------|----------|----------|------------|------------------|
| 1. Gross Radioactivity Release |         |          |          |           |               |          |          |            |                  |
| a) Total Release Main Stack    | Curies  | 1.8E-11  | 4.43E-06 | 1.6E-12   | None Released | 2.56E-03 | 1.61E-03 | 4.17E-03   | 6.6.A.4.b.       |
| b. Maximum Release Rate        |         |          |          |           |               |          |          |            | 3.11.2.1         |
| (grab sample)                  | uCi/sec | 1.8E-05  | 1.46E-02 | 1.6E-06   | N/A           | 6.68E-03 | 1.0E+01  | 1.0E+01    |                  |
| c. Isotopes Released           |         |          |          |           |               |          |          |            | 3.11.2.2         |
| Kr-85m                         | Curies  | ---      | ---      | ---       | ---           | ---      | ---      | ---        |                  |
| Kr-87                          | Curies  | ---      | ---      | ---       | ---           | ---      | ---      | ---        |                  |
| Kr-88                          | Curies  | ---      | ---      | ---       | ---           | ---      | ---      | ---        |                  |
| Xe-133                         | Curies  | ---      | ---      | ---       | ---           | ---      | ---      | ---        |                  |
| Xe-135                         | Curies  | ---      | ---      | ---       | ---           | ---      | ---      | ---        |                  |
| Xe-135m                        | Curies  | ---      | ---      | ---       | ---           | ---      | ---      | ---        |                  |
| Xe-138                         | Curies  | ---      | ---      | ---       | ---           | ---      | ---      | ---        |                  |
| Ar-41                          | Curies  | ---      | ---      | ---       | ---           | ---      | 1.0E-05  | 1.0E-05    |                  |
|                                |         |          |          |           |               |          |          |            |                  |
| d. Percent of Stack Limit      | %       | 6.27E-11 | 6.27E-06 | 0.00      | N/A           | 6.93E-07 | 5.7E-07  | 6.41E-06   | 3.11.2.2.b.      |
| e. Average Release Rate        | uCi/sec | 6.72E-12 | 1.65E-06 | 6.17E-13  | N/A           | 9.87E-04 | 6.01E-04 | 2.63E-04   | 3.11.2.1.a       |
|                                |         |          |          |           |               |          |          |            |                  |
| 2. Main Stack Iodine Releases  |         | None     | None     | None      | None          | None     | None     | None       | 6.6.A.4.b.       |
| a. Isotopes Released           |         | Released | Released | Released  | Released      | Released | Released | Released   | 3.11.2.3.        |
| I-131                          | Curies  | ---      | ---      | ---       | ---           | ---      | ---      | ---        |                  |
| I-133                          | Curies  | ---      | ---      | ---       | ---           | ---      | ---      | ---        |                  |
| I-135                          | Curies  | ---      | ---      | ---       | ---           | ---      | ---      | ---        |                  |
| b. Percent of Stack Limit      | %       | N/A      | N/A      | N/A       | N/A           | N/A      | N/A      | N/A        |                  |
| c. Average Release Rate        | uCi/sec | N/A      | N/A      | N/A       | N/A           | N/A      | N/A      | N/A        | 3.11.2.1.b.      |

Table 1.1-1 (continued)

## REPORT OF RADIOACTIVE EFFLUENTS

| FACILITY: LASALLE COUNTY NPS UNIT 1   |  |  | DOCKET NOS.: 50-373 |               |               | YEAR: 1982    |          |          |          |            |                  |
|---------------------------------------|--|--|---------------------|---------------|---------------|---------------|----------|----------|----------|------------|------------------|
| I. Gaseous Effluents (cont'd)         |  |  | UNITS               | JANUARY       | FEBRUARY      | MARCH         | APRIL    | MAY      | JUNE     | 6MO. TOTAL | TECH. SPEC. REF. |
| 3. Main Stack Particulate Release     |  |  |                     |               |               |               |          |          |          |            |                  |
| a. Gross Radioactivity (p-X)          |  |  | milli-curies        | None Released | None Released | None Released | 2.14E-05 | 2.16E-09 | 8.35E-09 | 2.14E-05   | 6.6.A.4.b.       |
| b. Gross Alpha Radioactivity          |  |  | mCi                 | None          | None          | None          | 7.08E-06 | None     | None     | 7.08E-06   | 3.11.2.3         |
| c. Isotopes Released                  |  |  |                     | None          | None          | None          |          |          |          |            | 3.11.2.3.        |
| Cr-51                                 |  |  | mCi                 | Released      | Released      | Released      |          |          |          |            |                  |
| Mn-54                                 |  |  | mCi                 |               |               |               |          |          |          |            |                  |
| Co-58                                 |  |  | mCi                 |               |               |               |          |          |          |            |                  |
| Fe-59                                 |  |  | mCi                 |               |               |               |          |          |          |            |                  |
| Co-60                                 |  |  | mCi                 |               |               |               |          |          |          |            |                  |
| Zn-65                                 |  |  | mCi                 |               |               |               |          |          |          |            |                  |
| Sr-89                                 |  |  | mCi                 |               |               |               | 6.30E-06 |          | 5.57E-09 | 6.30E-06   |                  |
| Sr-90                                 |  |  | mCi                 |               |               |               | 1.51E-05 | 2.16E-09 | 2.78E-09 | 1.51E-05   |                  |
| Zr-95                                 |  |  | mCi                 |               |               |               |          |          |          |            |                  |
| Nb-95                                 |  |  | mCi                 |               |               |               |          |          |          |            |                  |
| Ru-103                                |  |  | mCi                 |               |               |               |          |          |          |            |                  |
| Ag-110m                               |  |  | mCi                 |               |               |               |          |          |          |            |                  |
| Sb-124                                |  |  | mCi                 |               |               |               |          |          |          |            |                  |
| I-131                                 |  |  | mCi                 |               |               |               |          |          |          |            |                  |
| Cs-134                                |  |  | mCi                 |               |               |               |          |          |          |            |                  |
| Cs-136                                |  |  | mCi                 |               |               |               |          |          |          |            |                  |
| Cs-137                                |  |  | mCi                 |               |               |               |          |          |          |            |                  |
| Ba-140*                               |  |  | mCi                 |               |               |               |          |          |          |            |                  |
| Ce-141                                |  |  | mCi                 |               |               |               |          |          |          |            |                  |
| Ce-144                                |  |  | mCi                 |               |               |               |          |          |          |            |                  |
| (Ala-140 Identified but not reported) |  |  |                     |               |               |               |          |          |          |            |                  |



Table 1.1-1 (continued)

## REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: LASALLE COUNTY NPS UNIT 1

DOCKET NOS.: 50-773

YEAR: 1982

| 1. Gaseous Effluents (cont)       | UNITS         | JULY    | AUGUST   | SEPTEMBER     | OCTOBER       | NOVEMBER | DECEMBER | 6 MO. TOTAL | TECH. SPEC. REF. |
|-----------------------------------|---------------|---------|----------|---------------|---------------|----------|----------|-------------|------------------|
| 3. Main Stack Particulate Release | milli-curries |         |          | None Released | None Released |          |          |             |                  |
| a. Gross Radioactivity (beta)     |               | 1.8E-08 | 4.43E-03 | None Released | None Released | 2.56E+00 | 1.60E00  | 4.16E+00    | 6.6.A.4.b        |
| b. Gross Alpha Radioactivity      | mCi           | <1.4E-8 | <3E-09   | 1.6E-09       | *             | *        | *        | 1.6E-09     | 3.11.2.3         |
| c. Isotopes Released              |               |         |          |               | None Released |          |          |             | 3.11.2.3         |
| Cr-51                             | mCi           | ---     | ---      | ---           | Released      | ---      | ---      | ---         |                  |
| Mn-54                             | mCi           | ---     | ---      | ---           | ---           | 1.52E-02 | 1.49E-02 | 3.01E-02    |                  |
| Co-58                             | mCi           | ---     | ---      | ---           | ---           | ---      | ---      | ---         |                  |
| Fe-59                             | mCi           | ---     | ---      | ---           | ---           | ---      | ---      | ---         |                  |
| Co-60                             | mCi           | ---     | ---      | ---           | ---           | ---      | 9.2E-03  | 9.2E-03     |                  |
| Zn-65                             | mCi           | ---     | ---      | ---           | ---           | ---      | ---      | ---         |                  |
| Sr-89                             | mCi           | <4E-08  | <1E-08   | <1E-09        | *             | *        | *        | <1E-08      |                  |
| Sr-90                             | mCi           | 1.8E-08 | 1.8E-03  | <2E-09        | *             | *        | *        | 1.8E-03     |                  |
| Mn-56                             | mCi           | ---     | ---      | ---           | ---           | 1.20E00  | 9.43E-01 | 2.14E+00    |                  |
| Na-24                             | mCi           | ---     | ---      | ---           | ---           | 1.31E00  | 6.37E-01 | 1.95E+00    |                  |
| Ru-103                            | mCi           | ---     | ---      | ---           | ---           | ---      | ---      | ---         |                  |
| Ag-110m                           | mCi           | ---     | ---      | ---           | ---           | ---      | ---      | ---         |                  |
| As-76                             | mCi           | ---     | ---      | ---           | ---           | 3.38E-02 | ---      | 3.38E-02    |                  |
| I-131                             | mCi           | ---     | ---      | ---           | ---           | ---      | ---      | ---         |                  |
| Cs-134                            | mCi           | ---     | ---      | ---           | ---           | ---      | ---      | ---         |                  |
| Cs-136                            | mCi           | ---     | ---      | ---           | ---           | ---      | ---      | ---         |                  |
| Cs-137                            | mCi           | ---     | ---      | ---           | ---           | ---      | ---      | ---         |                  |
| Ba-140 / La-140                   | mCi           | ---     | ---      | ---           | ---           | ---      | ---      | ---         |                  |
| Ce-141                            | mCi           | ---     | ---      | ---           | ---           | ---      | ---      | ---         |                  |
| Ce-144                            | mCi           | ---     | ---      | ---           | ---           | ---      | ---      | ---         |                  |
| Cs-138                            | mCi           | ---     | 2.63E-03 | ---           | ---           | ---      | ---      | 2.63E-03    |                  |



REPORT OF RADIOACTIVE EFFLUENTS

YEAR: 1982

DOCKET NOS: 50-373

FACILITY: LASALLE COUNTY NPS UNIT 1

| Gaseous Effluents (cont)          | UNITS   | JANUARY  | FEBRUARY | MARCH    | APRIL    | MAY      | JUNE     | \$ Mo. TOTAL | TECH SPEC REF          |
|-----------------------------------|---------|----------|----------|----------|----------|----------|----------|--------------|------------------------|
| a. Main Stack Particulate Release | %       | N/A      | N/A      | N/A      | 5.43E-08 | 7.53E-15 | 1.03E-11 | 5.43E-08     | 6.6.A.4.b.             |
| b. Percent Main Stack Limit       |         | N/A      | N/A      | N/A      | 1.10E-08 | 8.33E-13 | 3.22E-12 | 1.80E-09     | 3.11.2.1.b             |
| c. Average Release Rate           | uCi/sec |          |          |          |          |          |          |              |                        |
| d. Sum of Iodine and Particulate  | Curies  | Released | Released | Released | 2.85E-08 | 2.16E-12 | 8.35E-12 | 2.85E-08     | 6.6.A.4.b.<br>3.11.2.3 |
| e. Percent Main Stack Limit       | %       | N/A      | N/A      | N/A      | 5.43E-08 | 7.53E-15 | 1.03E-11 | 5.43E-08     |                        |
| f. Gaseous Tritium Release        | Curies  | Released | Released | Released | Released | Released | Released | Released     | 6.6.A.4.b              |
| g. Average Release Rate           | uCi/sec | N/A      | N/A      | N/A      | N/A      | N/A      | N/A      | N/A          |                        |
| h. Percent Tech Spec Limit        | %       | N/A      | N/A      | N/A      | N/A      | N/A      | N/A      | N/A          |                        |

Table 1.1-1 (continued)

## REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: LASALLE COUNTY NPS UNIT 1

DOCKET NOS: 50-373

YEAR: 1982

|   | UNITS   | JULY     | AUGUST   | SEPTEMBER | OCTOBER  | NOVEMBER | DECEMBER | 6MO. TOTAL | TECH. SPEC. REF. |
|---|---------|----------|----------|-----------|----------|----------|----------|------------|------------------|
| 1. Gaseous Effluents (cont'd)                     |         |          |          |           |          |          |          |            |                  |
| 3. Main Stack Particulate Release                 |         |          |          |           |          |          |          |            |                  |
| d. Percent Main Stack Limit                       | %       | 6.27E-11 | 6.27E-06 | 0.00      | N/A      | 6.93E-07 | 5.7E-07  | 6.41E-06   | 6.6.A.4.b.       |
| e. Average Release Rate                           | uCi/sec | 6.72E-12 | 1.65E-06 | 6.17E-13  | N/A      | 9.87E-04 | 5.97E-04 | 2.62E-04   | 3.11.2.1.b.      |
| 4. Sum of Iodine and Particulate                  |         |          |          |           | NONE     |          |          |            | 6.6.A.4.b.       |
| a. Percent Main Stack Limit                       | Curies  | 1.8E-11  | 4.43E-06 | 1.6E-12   | Released | 2.56E-03 | 1.6E-03  | 4.16E-03   | 3.11.2.3.        |
|   | %       | 6.27E-11 | 6.27E-06 | 0.00      | N/A      | 6.93E-07 | 5.7E-07  | 6.41E-06   |                  |
| 5. Gaseous Tritium                                |         |          |          |           |          |          |          |            |                  |
| a. Release  | Curies  | NONE     |          | NONE      | NONE     | NONE     | NONE     | NONE       | 6.6.A.4.b.       |
| b. Average Release Rate                           | uCi/sec | Released | <1E-12   | Released  | Released | Released | Released | Released   |                  |
| c. Percent Tech Spec Limit                        |         | N/A      | N/A      | N/A       | N/A      | N/A      | N/A      | N/A        |                  |
|   | %       | N/A      | N/A      | N/A       | N/A      | N/A      | N/A      | N/A        |                  |
| Data to be presented in an errata to this report. |         |          |          |           |          |          |          |            |                  |

Table 1.2-1

## REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: LASALLE COUNTY NPS UNIT 1

DOCKET NOS.: 50-373

YEAR: 1982

| 1. Liquid Effluents                                    |        | JANUARY       | FEBRUARY      | MARCH         | APRIL         | MAY           | JUNE          | 6MO. TOTAL    | TECH. SPEC. REF. |
|--|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|------------------|
| 2. Gross Radioactivity ( $\beta$ - $\gamma$ )          |        |               |               |               |               |               |               |               |                  |
| a. Total Release                                       | Curies | None Released | None Released | None Released | None Released | None Released | None Released | None Released | 6.6.A.4.b.       |
| b. Avg. Conc. Released                                 | uCi/ml | N/A           | N/A           | N/A           | N/A           | N/A           | N/A           | N/A           |                  |
| c. Max. Conc. Released                                 | uCi/ml | N/A           | N/A           | N/A           | N/A           | N/A           | N/A           | N/A           |                  |
| d. Percent of Tech Spec (based on Avg. Conc. Released) | %      | N/A           | N/A           | N/A           | N/A           | N/A           | N/A           | N/A           | 3.11.1.1         |
| 3. Tritium   |        |               |               |               |               |               |               |               |                  |
| a. Total Release                                       | Curies | None Released | None Released | None Released | None Released | None Released | None Released | None Released | 6.6.A.4.b.       |
| b. Avg. Conc. Released                                 | uCi/ml | N/A           | N/A           | N/A           | N/A           | N/A           | N/A           | N/A           |                  |
| c. Percent of Tech Spec                                | %      | N/A           | N/A           | N/A           | N/A           | N/A           | N/A           | N/A           |                  |
| 4. Dissolved Noble Gases                               |        |               |               |               |               |               |               |               |                  |
| a. Total Release                                       | Curies | None Released | None Released | None Released | None Released | None Released | None Released | None Released | 6.6.A.4.b.       |
| b. Avg. Conc. Released                                 | uCi/ml | N/A           | N/A           | N/A           | N/A           | N/A           | N/A           | N/A           |                  |
| c. Percent of Tech Spec                                | %      | N/A           | N/A           | N/A           | N/A           | N/A           | N/A           | N/A           | 3.11.1.1.        |
| 5. Gross Alpha Radioactivity                           |        |               |               |               |               |               |               |               |                  |
| a. Total Release                                       | Curies | None Released | None Released | None Released | None Released | None Released | None Released | None Released | 6.6.A.4.b.       |
| b. Avg. Conc. Released                                 | uCi/ml | N/A           | N/A           | N/A           | N/A           | N/A           | N/A           | N/A           |                  |
| 6. Volume of Liquid Waste                              | Liters | N/A           | N/A           | N/A           | N/A           | N/A           | N/A           | N/A           |                  |
| 7. Volume of Dilution Water                            | Liters | N/A           | N/A           | N/A           | N/A           | N/A           | N/A           | N/A           |                  |

Table 1.2-1 (continued)

## REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: LASALLE COUNTY NPS UNIT 1

DOCKET NOS.: 50-373

YEAR: 1982

| II. Liquids Effluents  | UNITS  | JULY      | AUGUST    | SEPTEMBER | OCTOBER  | NOVEMBER | DECEMBER | 6MO. TOTAL | TECH. SPEC. REF. |
|--|--------|-----------|-----------|-----------|----------|----------|----------|------------|------------------|
| 1. Gross Radioactivity ( $\beta$ - $\gamma$ )                |        |           |           |           |          |          |          |            |                  |
| a. Total Release   | Curies | 5.92E-05  | 1.29E-04  | 2.13E-04  | 3.39E-03 | 6.37E-03 | 3.27E-02 | 4.30E-02   | 6.6.A.4.b.       |
| b. Avg. Conc. Released                                       | uCi/ml | 2.35E-11  | 5.70E-11  | 6.45E-11  | 1.25E-09 | 4.75E-09 | 1.79E-08 | 4.0E-09    |                  |
| c. Max. Conc. Released                                       | uCi/ml | 1.1E-07   | 1.48E-07  | 1.37E-06  | 8.35E-06 | 4.62E-05 | 1.28E-04 | 1.28E-04   |                  |
| d. Percent of Tech Spec<br>(based on Avg. Conc.<br>Released) | %      | 1.2E-07   | 2.22E-07  | 2.12E-06  | 1.06E-05 | 2.34E-06 | 3.89E-04 | 4.03E-04   | 3.11.1.1         |
| 2. Tritium   |        |           |           |           |          |          |          |            | 6.6.A.4.b.       |
| a. Total Release   | Curies | <1.27E-03 | <1.61E-03 | *         | *        | *        | *        | <2.88E-03  |                  |
| b. Avg. Conc. Released                                       | uCi/ml | <5.04E-10 | <7.12E-10 | *         | *        | *        | *        | <2.06E-10  |                  |
| c. Percent of Tech Spec                                      | %      | <1.32E-07 | <1.67E-07 | *         | *        | *        | *        | <2.99E-07  |                  |
| 3. Dissolved Noble Gases                                     |        | NONE      | NONE      | NONE      | NONE     | NONE     | NONE     | NONE       | 6.6.A.4.b.       |
| a. Total Release   | Curies | Released  | Released  | Released  | Released | Released | Released | Released   |                  |
| b. Avg. Conc. Released                                       | uCi/ml | N/A       | N/A       | N/A       | N/A      | N/A      | N/A      | N/A        |                  |
| c. Percent of Tech Spec                                      | %      | N/A       | N/A       | N/A       | N/A      | N/A      | N/A      | N/A        | 3.11.1.1         |
| 4. Gross Alpha Radioactivity                                 |        |           |           |           |          |          |          |            | 6.6.A.4.b.       |
| a. Total Release   | Curies | 4.35E-06  | 7.90E-06  | *         | *        | *        | *        | 1.23E-05   |                  |
| b. Avg. Conc. Released                                       | uCi/ml | 1.73E-12  | 3.50E-12  | *         | *        | *        | *        | 8.78E-13   |                  |
| 5. Volume of Liquid Waste                                    | Liters | 1.27E+06  | 1.61E06   | 2.19E06   | 1.75E06  | 1.13E06  | 1.74E06  | 9.69E06    |                  |
| 6. Volume of Dilution Water                                  | Liters | 2.52E04   | 2.24E09   | 3.30E09   | 2.72E09  | 1.34E09  | 1.82E09  | 1.40E10    |                  |



Table 1.2-1 (continued)

REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: LASALLE COUNTY NPS UNIT 1

DOCKET NOS.: 50-373

YEAR: 1982

| II. Liquid Effluents(cont'd) | UNITS        | JANUARY *     | FEBRUARY      | MARCH         | APRIL         | MAY           | JUNE          | 6MO. TOTAL    | TECH. SPEC. REF. |
|------------------------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|------------------|
| 7. Isotopes Released         | milli-curies | None Released | None Released | None Released | None Released | None Released | None Released | None Released |                  |
| Cr-51                        | mCi          | ---           | ---           | ---           | ---           | ---           | ---           | ---           |                  |
| Mn-54                        | mCi          | ---           | ---           | ---           | ---           | ---           | ---           | ---           |                  |
| Co-58                        | mCi          | ---           | ---           | ---           | ---           | ---           | ---           | ---           |                  |
| Fe-59                        | mCi          | ---           | ---           | ---           | ---           | ---           | ---           | ---           |                  |
| Co-60                        | mCi          | ---           | ---           | ---           | ---           | ---           | ---           | ---           |                  |
| Zn-65                        | mCi          | ---           | ---           | ---           | ---           | ---           | ---           | ---           |                  |
| Sr-89                        | mCi          | ---           | ---           | ---           | ---           | ---           | ---           | ---           |                  |
| Sr-90                        | mCi          | ---           | ---           | ---           | ---           | ---           | ---           | ---           |                  |
| Zr-95                        | mCi          | ---           | ---           | ---           | ---           | ---           | ---           | ---           |                  |
| Nb-95                        | mCi          | ---           | ---           | ---           | ---           | ---           | ---           | ---           |                  |
| Ru-103                       | mCi          | ---           | ---           | ---           | ---           | ---           | ---           | ---           |                  |
| I-131                        | mCi          | ---           | ---           | ---           | ---           | ---           | ---           | ---           |                  |
| Cs-134                       | mCi          | ---           | ---           | ---           | ---           | ---           | ---           | ---           |                  |
| Cs-137                       | mCi          | ---           | ---           | ---           | ---           | ---           | ---           | ---           |                  |
| Ba-140                       | mCi          | ---           | ---           | ---           | ---           | ---           | ---           | ---           |                  |
| La-140                       | mCi          | ---           | ---           | ---           | ---           | ---           | ---           | ---           |                  |
| Ce-141                       | mCi          | ---           | ---           | ---           | ---           | ---           | ---           | ---           |                  |
| Ce-144                       | mCi          | ---           | ---           | ---           | ---           | ---           | ---           | ---           |                  |
|                              |              |               |               |               |               |               |               |               |                  |
| Xe-133                       | mCi          | ---           | ---           | ---           | ---           | ---           | ---           | ---           |                  |
| Xe-133m                      | mCi          | ---           | ---           | ---           | ---           | ---           | ---           | ---           |                  |
| Xe-135                       | mCi          | ---           | ---           | ---           | ---           | ---           | ---           | ---           |                  |
|                              |              |               |               |               |               |               |               |               |                  |

Table 1.2-1 (continued)

REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: LASALLE COUNTY NPS UNIT 1

DOCKET NOS.: 50-373

YEAR: 1982

| 11. Liquid Effluents(cont'd) | UNITS        | JULY      | AUGUST    | SEPTEMBER | OCTOBER   | NOVEMBER | DECEMBER | 6MO. TOTAL | TECH. SPEC. REF |
|------------------------------|--------------|-----------|-----------|-----------|-----------|----------|----------|------------|-----------------|
| 7. Isotopes Released         | milli-curies |           |           |           |           |          |          |            |                 |
|                              |              | 5.92E-02  | 1.22E-01  | 2.13E-01  | 3.39E+0   | 6.37E+0  | 3.27E+01 | 4.30E+01   |                 |
| Cr-51                        | mCi          | ---       | ---       | ---       | 4.78E-01  | 4.30E-01 | 3.82E+00 | 4.73E+00   |                 |
| Mn-54                        | mCi          | ---       | ---       | 1.73E-02  | 5.672E-01 | 1.07E-01 | 1.71E+01 | 1.78E+01   |                 |
| Co-58                        | mCi          | ---       | 1.2E-02   | 1.82E-01  | 2.51E-01  | 6.00E-03 | 6.77E+00 | 7.22E+00   |                 |
| Fe-59                        | mCi          | ---       | ---       | ---       | 3.36E-02  | 7.70E-03 | 1.1E-01  | 1.54E-01   |                 |
| Co-60                        | mCi          | ---       | ---       | ---       | 3.47E-02  | ---      | 2.86E+00 | 2.89E+00   |                 |
| Zn-65                        | mCi          | ---       | ---       | ---       | ---       | ---      | 2.05E+00 | 2.05E+00   |                 |
| Sr-89                        | mCi          | <4.46E-02 | <5.66E-03 | *         | *         | *        | *        | <4.46E-02  |                 |
| Sr-90                        | mCi          | <5.24E-02 | <7.27E-03 | *         | *         | *        | *        | <5.24E-02  |                 |
| Mo-99                        | mCi          | ---       | ---       | ---       | ---       | 7.4E-02  | ---      | 7.4E-02    |                 |
| Sb-122                       | mCi          | ---       | ---       | ---       | ---       | 1.79E-02 | ---      | 1.79E-02   |                 |
| Sb-124                       | mCi          | ---       | ---       | ---       | ---       | 2.00E-03 | ---      | 2.00E-03   |                 |
| I-131                        | mCi          | ---       | ---       | ---       | ---       | ---      | ---      | ---        |                 |
| Cs-134                       | mCi          | ---       | ---       | ---       | ---       | ---      | ---      | ---        |                 |
| Cs-137                       | mCi          | ---       | ---       | ---       | ---       | ---      | ---      | ---        |                 |
| As-76                        | mCi          | ---       | ---       | ---       | 8.05E-01  | 7.52E-01 | ---      | 1.56E+00   |                 |
| I-133                        | mCi          | ---       | ---       | ---       | 3.5E-03   | ---      | ---      | 3.5E-03    |                 |
| Ba-140/La-140                | mCi          | ---       | ---       | ---       | ---       | ---      | ---      | ---        |                 |
| Fe-55                        | mCi          | 5.92E-02  | 1.1E-01   | *         | *         | *        | *        | 1.70E-01   |                 |
| Na-24                        | mCi          | ---       | ---       | 1.43E-02  | 9.59E-01  | 4.82E+0  | ---      | 5.79E+00   |                 |
| Xe-133                       | mCi          | ---       | ---       | ---       | ---       | ---      | ---      | ---        |                 |
| Xe-133m                      | mCi          | ---       | ---       | ---       | ---       | ---      | ---      | ---        |                 |
| Xe-135                       | mCi          | ---       | ---       | ---       | ---       | ---      | ---      | ---        |                 |
| Tc-99m                       | mCi          | ---       | ---       | ---       | 2.55E-01  | 1.54E-01 | ---      | 4.09E-01   |                 |



REPORT OF RADIOACTIVE EFFLUENTS

FACILITY: LASALLE COUNTY NPS UNIT I

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REPORT OF RADIOACTIVE EFFLUENTS

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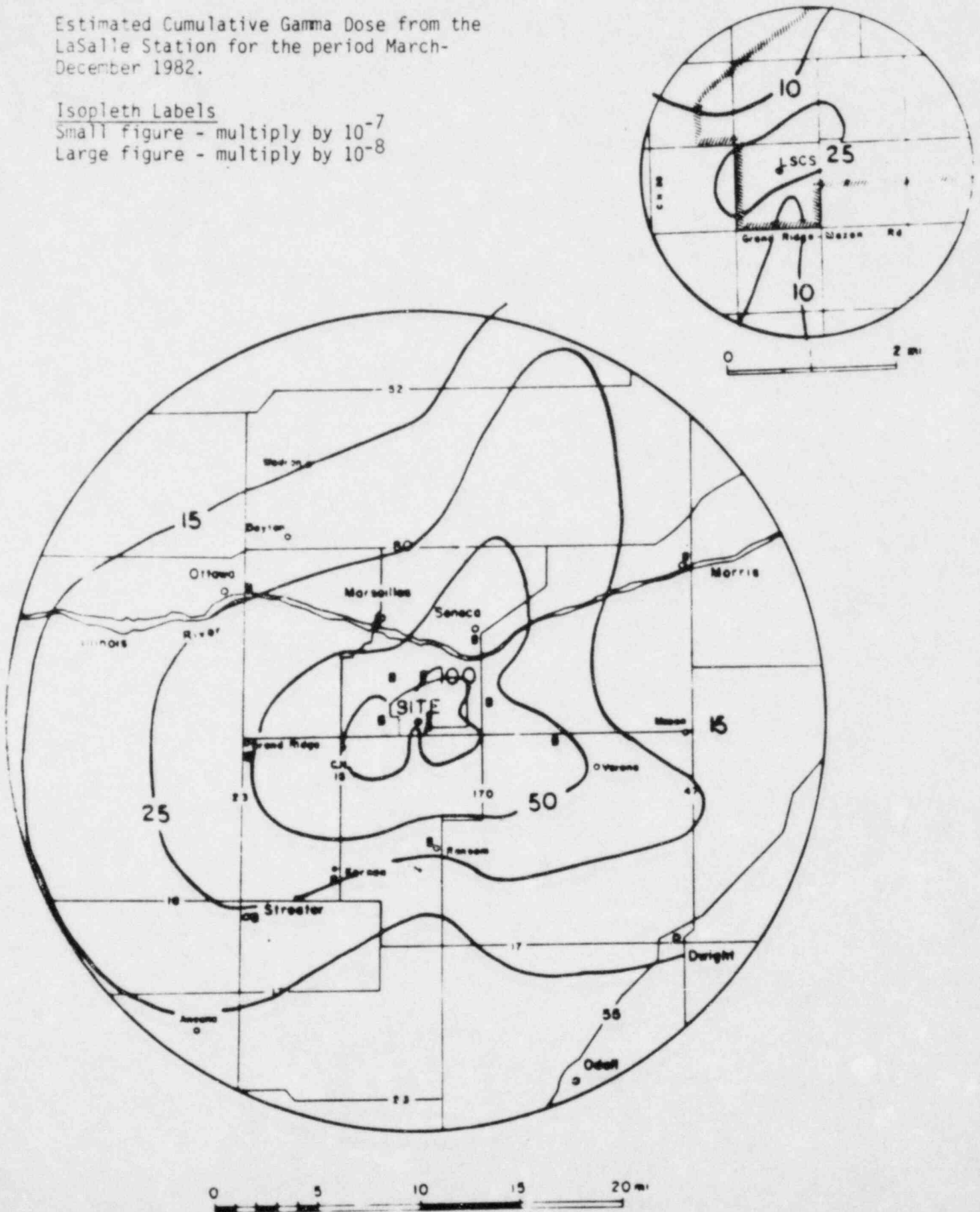
Figure 3.1-1

Estimated Cumulative Gamma Dose from the  
LaSalle Station for the period March-  
December 1982.

Isopleth Labels

Small figure - multiply by  $10^{-7}$

Large figure - multiply by  $10^{-8}$



Estimated Total Concentration of Noble Gases  
from the LaSalle Station for the period  
March-December 1982.

Isopleth Labels  
Small figure - multiply by  $10^{-5}$   
Large figure - multiply by  $10^{-4}$

Large figure - multiply by  $10^{-4}$



Figure 3.1-3

There were no iodine emissions during the period March - December 1982.



Figure 3.1-4

Estimated Total Concentration of Particulate Matter from the LaSalle Station for the period March-December 1982.

Isopleth Labels

Small figure - multiply by  $10^{-8}$

Large figure - multiply by  $10^{-7}$

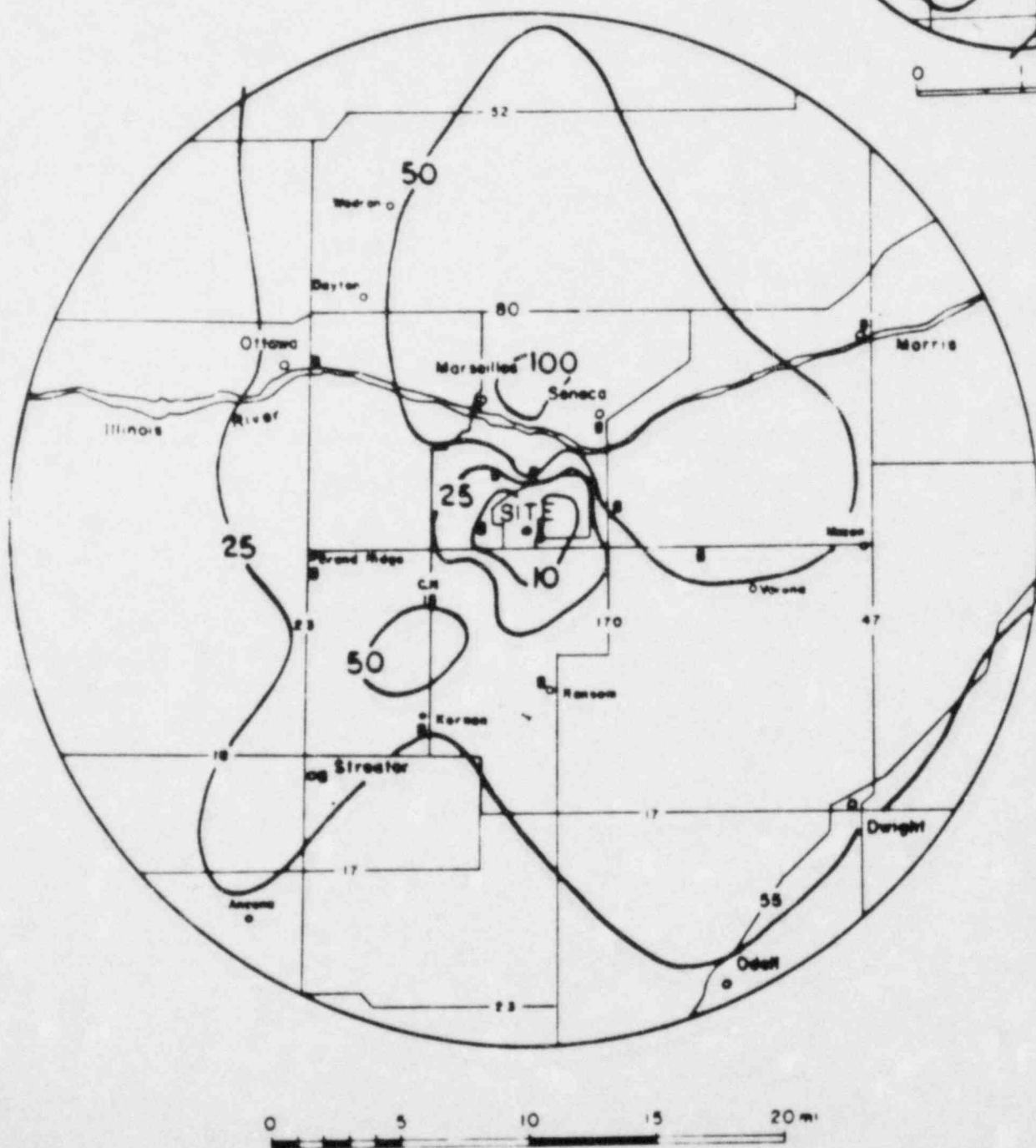
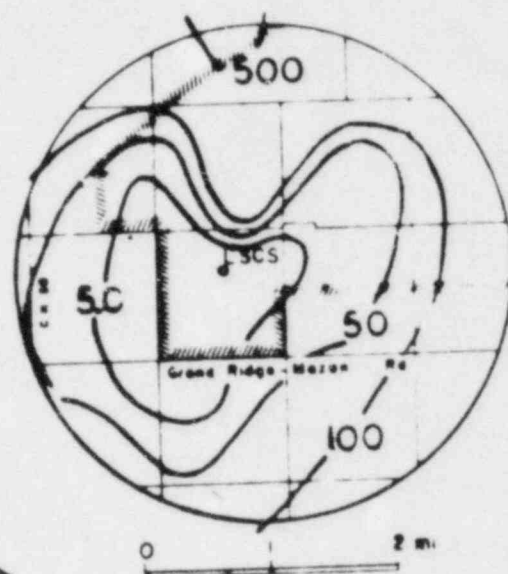




Table 3.1-1

LASALLE UNIT ONE  
 MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES  
 PERIOD OF RELEASE - 1/ 1/82 TO 12/31/82    CALCULATED 02/10/83

| TYPE                | 1ST<br>QUARTER<br>1/82- 3/82 | 2ND<br>QUARTER<br>4/82- 6/82 | 3RD<br>QUARTER<br>7/82- 9/82 | 4TH<br>QUARTER<br>10/82-12/82 | ANNUAL             |
|---------------------|------------------------------|------------------------------|------------------------------|-------------------------------|--------------------|
| GAMMA AIR<br>(MRAD) | 2.78E-11<br>(ESE )           | 3.37E-06<br>(ESE )           | 0.0<br>( )                   | 3.86E-10<br>(ESE )            | 3.37E-06<br>(ESE ) |
| BETA AIR<br>(MRAD)  | 3.15E-11<br>(E )             | 3.83E-06<br>(E )             | 0.0<br>( )                   | 3.33E-11<br>(E )              | 3.83E-06<br>(E )   |
| TOT. BODY<br>(MREM) | 8.4CE-12<br>(ESE )           | 1.02E-06<br>(ESE )           | 0.0<br>( )                   | 2.12E-10<br>(ESE )            | 1.02E-06<br>(ESE ) |
| SKIN<br>(MREM)      | 3.04E-11<br>(ESE )           | 3.70E-06<br>(ESE )           | 0.0<br>( )                   | 3.26E-10<br>(ESE )            | 3.70E-06<br>(ESE ) |
| ORGAN<br>(MREM)     | 0.0<br>( )                   | 0.0<br>( )                   | 2.25E-12<br>(ESE )           | 1.90E-07<br>(E )              | 1.90E-07<br>(E )   |
|                     | BONE                         | BONE                         | GI-LLI                       | GI-LLI                        | GI-LLI             |
|                     | LIVER                        | LIVER                        |                              |                               |                    |
|                     | THYROID                      | THYROID                      |                              |                               |                    |
|                     | KIDNEY                       | KIDNEY                       |                              |                               |                    |
|                     | LUNG                         | LUNG                         |                              |                               |                    |
|                     | GI-LLI                       | GI-LLI                       |                              |                               |                    |

THIS IS A REPORT FOR THE CALENDAR YEAR 1982

COMPLIANCE STATUS - 10 CFR 50 APP. I

|                  | QTRLY<br>OBJ | 1ST QTR<br>1/82-<br>3/82 | 2ND QTR<br>4/82-<br>6/82 | 3RD QTR<br>7/82-<br>9/82 | 4TH QTR<br>10/82-<br>12/82 | YRLY<br>OBJ | % OF<br>APP. I |
|------------------|--------------|--------------------------|--------------------------|--------------------------|----------------------------|-------------|----------------|
|                  |              | % OF APP I.              |                          |                          |                            |             |                |
| GAMMA AIR (MRAD) | 5.0          | 0.00                     | 0.00                     | 0.0                      | 0.00                       | 10.0        | 0.00           |
| BETA AIR (MRAD)  | 10.0         | 0.00                     | 0.00                     | 0.0                      | 0.00                       | 20.0        | 0.00           |
| TOT. BODY (MREM) | 2.5          | 0.00                     | 0.00                     | 0.0                      | 0.00                       | 5.0         | 0.00           |
| SKIN (MREM)      | 7.5          | 0.00                     | 0.00                     | 0.0                      | 0.00                       | 15.0        | 0.00           |
| ORGAN (MREM)     | 7.5          | 0.0                      | 0.0                      | 0.00                     | 0.00                       | 15.0        | 0.00           |
|                  |              | BONE                     | BONE                     | GI-LLI                   | GI-LLI                     |             | GI-LLI         |
|                  |              | LIVER                    | LIVER                    |                          |                            |             |                |
|                  |              | THYROID                  | THYROID                  |                          |                            |             |                |
|                  |              | KIDNEY                   | KIDNEY                   |                          |                            |             |                |
|                  |              | LUNG                     | LUNG                     |                          |                            |             |                |
|                  |              | GI-LLI                   | GI-LLI                   |                          |                            |             |                |

Table 3.2-1

LASALLE UNIT ONE  
 MAXIMUM DOSES (MREM) RESULTING FROM LIQUID EFFLUENTS  
 PERIOD OF RELEASE - 1/ 1/82 TO 12/31/82      CALCULATED 02/10/83 \*

| DOSE TYPE         | 1ST<br>QUARTER<br>1/82- 3/82 | 2ND<br>QUARTER<br>4/82- 6/82 | 3RD<br>QUARTER<br>7/82- 9/82 | 4TH<br>QUARTER<br>10/82-12/82 | ANNUAL   |
|-------------------|------------------------------|------------------------------|------------------------------|-------------------------------|----------|
| TOTAL<br>BODY     | 0.0                          | 0.0                          | 1.17E-08                     | 7.86E-06                      | 7.87E-06 |
| INTERNAL<br>ORGAN | 0.0                          | 0.0                          | 1.15E-07                     | 4.13E-05                      | 4.14E-05 |
|                   | BONE<br>LIVER                | BONE<br>LIVER                | GI-LLI                       | GI-LLI                        | GI-LLI   |
|                   | THYROID                      | THYROID                      |                              |                               |          |
|                   | KIDNEY                       | KIDNEY                       |                              |                               |          |
|                   | LUNG                         | LUNG                         |                              |                               |          |
|                   | GI-LLI                       | GI-LLI                       |                              |                               |          |

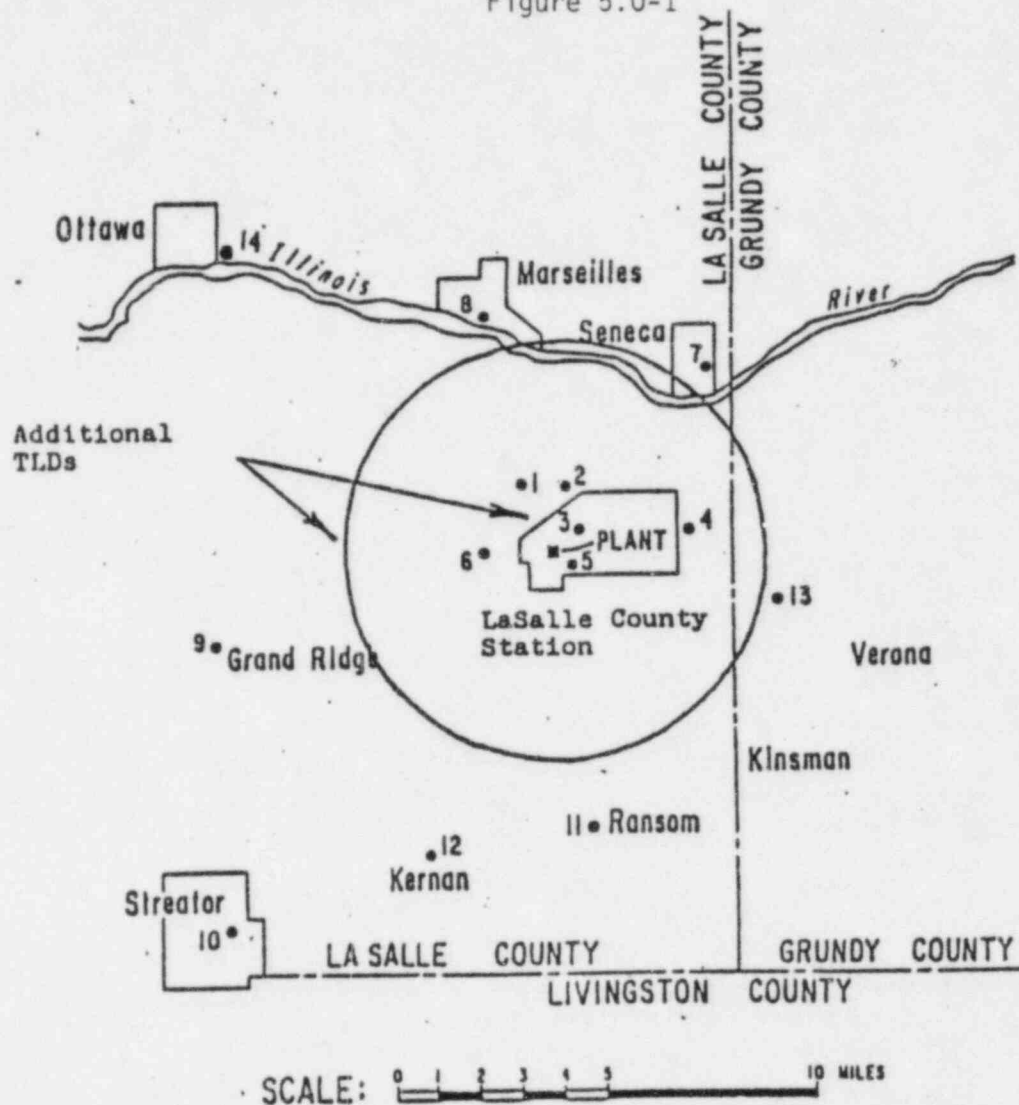
\* THIS IS A REPORT FOR THE CALENDAR YEAR 1982

#### COMPLIANCE STATUS - 10 CFR 50 APP. I

| ----- % OF APP I. ----- |                          |                          |                          |                            |             |                |
|-------------------------|--------------------------|--------------------------|--------------------------|----------------------------|-------------|----------------|
| QTRLY<br>OBJ            | 1ST QTR<br>1/82-<br>3/82 | 2ND QTR<br>4/82-<br>6/82 | 3RD QTR<br>7/82-<br>9/82 | 4TH QTR<br>10/82-<br>12/82 | YRLY<br>OBJ | % OF<br>APP. I |
| TOTAL BODY (MREM)       | 1.5                      | 0.0                      | 0.0                      | 0.00                       | 3.0         | 0.00           |
| CRIT. ORGAN(MREM)       | 5.0                      | 0.0                      | 0.0                      | 0.00                       | 10.0        | 0.00           |
|                         | BONE                     | BONE                     | GI-LLI                   | GI-LLI                     |             | GI-LLI         |
|                         | LIVER                    | LIVER                    |                          |                            |             |                |
|                         | THYROID                  | THYROID                  |                          |                            |             |                |
|                         | KIDNEY                   | KIDNEY                   |                          |                            |             |                |
|                         | LUNG                     | LUNG                     |                          |                            |             |                |
|                         | GI-LLI                   | GI-LLI                   |                          |                            |             |                |

# LASALLE COUNTY NUCLEAR POWER STATION LOCATIONS OF FIXED ENVIRONMENTAL RADIOLOGICAL MONITORING STATIONS

Figure 5.0-1



## Air Samplers

- |                |                             |
|----------------|-----------------------------|
| 1 - Nearsite 1 | 8 - Marseilles              |
| 2 - Onsite 2   | 9 - Grand Ridge             |
| 3 - Onsite 3   | 10 - Streator               |
| 4 - Nearsite 4 | 11 - Ransom                 |
| 5 - Onsite 5   | 12 - Kernan                 |
| 6 - Nearsite 6 | 13 - Route 6 at Gonnam Road |
| 7 - Seneca     | 14 - Ottawa                 |

## TLD

Same as air samplers plus a sufficient number of additional dosimeters placed near the site and near 5 miles to assure that one dosimeter is located at each range in each of the 16 meteorological sectors.

# LASALLE COUNTY NUCLEAR POWER STATION

## Standard Radiological Sampling Program

| Loc.<br>Code | Type <sup>a</sup> | Location Description                                | Media       |      |               |            |      |                |           |      |               |              |            |
|--------------|-------------------|---|-------------|------|---------------|------------|------|----------------|-----------|------|---------------|--------------|------------|
|              |                   |   | Air Samples | TLDs | Surface Water | Well Water | Fish | Aquatic Plants | Sediments | Milk | Precipitation | Feed & Grass | Vegetables |
| L-01         |                   | Nearsite No. 1                                      | X           | X    |               |            |      |                |           |      |               |              |            |
| L-02         |                   | Onsite No. 2  | X           | X    |               |            |      |                |           |      |               |              |            |
| L-03         |                   | Onsite No. 3  | X           | X    |               |            |      |                |           |      |               |              |            |
| L-04         |                   | Nearsite No. 4                                      | X           | X    |               |            |      |                |           |      |               |              |            |
| L-05         |                   | Onsite No. 5  | X           | X    |               |            |      |                |           |      |               |              |            |
| L-06         |                   | Nearsite No. 6                                      | X           | X    |               |            |      |                |           |      |               |              |            |
| L-07         |                   | Seneca  | X           | X    |               |            |      |                |           |      |               |              |            |
| L-08         |                   | Marseilles  | X           | X    |               |            |      |                |           |      |               |              |            |
| L-09         | C                 | Grand Ridge   | X           | X    |               |            |      |                |           |      |               |              |            |
| L-10         | C                 | Streator  | X           | X    |               |            |      |                |           |      |               |              |            |
| L-11         |                   | Ransom  | X           | X    |               |            |      |                |           |      |               |              |            |
| L-12         | C                 | Kewanee   | X           | X    |               |            |      |                |           |      |               |              |            |
| L-13         |                   | Route 6 at Gonnam Road                              | X           | X    |               |            |      |                |           |      |               |              |            |
| L-14         | C                 | Ottawa  | X           | X    |               |            |      |                |           |      |               |              |            |
| L-15         |                   | Johnson Dairy                                       |             |      |               |            |      |                | X         | X    | X             |              |            |
| L-16         |                   | Lowery Dairy  |             |      |               |            |      |                | X         | X    | X             |              |            |
| L-17         | C                 | Norsen Dairy  |             |      |               |            |      |                | X         | X    | X             |              |            |
| L-18         | C                 | Sunnyisle Dairy                                     |             |      |               |            |      |                | X         | X    | X             |              |            |
| L-19         |                   | Illinois River at Marseilles                        |             |      | X             |            |      |                |           |      |               |              |            |
| L-20         |                   | Illinois River at Ottawa                            |             |      | X             |            |      |                |           |      |               |              |            |
| L-21         | C                 | Illinois River at Seneca                            |             |      | X             |            |      |                |           |      |               |              |            |
| L-22         |                   | South Kickapoo Creek                                |             |      | X             |            |      |                |           |      |               |              |            |
| L-23         |                   | Illinois Nitrogen Corp.                             |             |      | X             |            |      |                |           |      |               |              |            |
| L-24         |                   | LSCS Cooling Lake near recreation area              |             |      | X             |            | X    | X              |           |      |               |              |            |
| L-25         |                   | LSCS intake pipe/river                              |             |      | X             |            |      |                |           |      |               |              |            |
| L-26         |                   | LSCS discharge pipe/river                           |             |      | X             |            |      |                |           |      |               |              |            |
| L-27         |                   | LSCS onsite well                                    |             |      |               | X          |      |                |           |      |               |              |            |
| L-28         |                   | Marseilles Well Water                               |             |      |               | X          |      |                |           |      |               |              |            |
| L-29         | C                 | Seneca Well Water                                   |             |      |               | X          |      |                |           |      |               |              |            |
| L-30         |                   | Ransom Well Water                                   |             |      |               | X          |      |                |           |      |               |              |            |
| L-31         |                   | Ottawa Well Water                                   |             |      |               | X          |      |                |           |      |               |              |            |
| L-32         |                   | Illinois State Park                                 |             |      |               | X          |      |                |           |      |               |              |            |
| L-33         | C                 | Just upstream of cooling lake inlet structure       |             |      |               |            |      | X              | X         |      |               |              |            |
| L-34         |                   | Just downstream of cooling lake discharge structure |             |      |               |            |      | X              | X         |      |               |              |            |
| L-35         |                   | Marseilles Pool of Illinois River                   |             |      |               | X          |      |                |           |      |               |              |            |
| L-36         |                   | Farm A - vegetables                                 |             |      |               |            |      |                |           |      |               | X            |            |
| L-37         |                   | Farm B - vegetables                                 |             |      |               |            |      |                |           |      |               | X            |            |

<sup>a</sup> Control (background) locations are indicated by a "C" in this column. All other locations are indicator.

Table 5.0-1

## LaSalle County Radiological Monitoring Program, Sample Collection and Analyses.

| Sample Media             | Location   |  | Collection Frequency | Type of Analysis                                | Frequency of Analysis | Remarks   |
|--------------------------|------------|--|----------------------|---|-----------------------|---|
|                          | Code       | Site                                   |                      |   |                       |   |
| 1. Airborne Particulates | L-1        | Nearsite No. 1                         | Weekly               | Gross beta<br>Gamma Isot<br>Sr-89,90            | Weekly                | On all samples.   |
|                          | L-2        | Onsite No. 2                           |                      |   | Quarterly             | On quarterly composites from each location.   |
|                          | L-3        | Onsite No. 3                           |                      |   | Quarterly             | On quarterly composites from each location.   |
|                          | L-4        | Nearsite No. 4                         |                      |   |                       |   |
|                          | L-5        | Onsite No. 5                           |                      |   |                       |   |
|                          | L-6        | Nearsite No. 6                         |                      |   |                       |   |
|                          | L-7        | Seneca                                 |                      |   |                       |   |
|                          | L-8        | Marseille                              |                      |   |                       |   |
|                          | L-9        | Grand Ridge                            |                      |   |                       |   |
|                          | L-10       | Streator                               |                      |   |                       |   |
|                          | L-11       | Ransom                                 |                      |   |                       |   |
|                          | L-12       | Kernan                                 |                      |   |                       |   |
|                          | L-13       | Route 6 at Gonnam Rd.                  |                      |   |                       |   |
|                          | L-14       | Ottawa                                 |                      |   |                       |   |
| 2. Airborne Iodine       | Same as 1. |  | Bi-weekly            | I-131   | Bi-weekly             | Bi-weekly = every 2 weeks, on all samples.  |
| 3. TLD                   | Same as 1. |  | Quarterly            | Gamma   | Quarterly             | Two sets at all AP locations. One set read quarterly. Second set read if required by Edison. At other locations, all sets read quarterly. |
|                          | L-101-07   | Inner Ring                             |                      |   |                       |   |
|                          | L-201-16   | Outer Ring                             |                      |   |                       |   |
| 4. Milk                  | L-15       | Johnson Dairy                          | Weekly: Apr to Sep   | I-131<br>Gamma Isot<br>Sr-89,90                 | Weekly                | May thru October only. LLD: 0.5 pCi/l   |
|                          | L-16       | Sunnyisle Farm                         | Monthly: Oct to Mar  |   | Monthly               |   |
|                          | L-17       | Norsen Dairy                           |                      |   | Monthly               |   |
|                          | L-18       | Rinker Dairy                           |                      |   |                       |   |
| 5. Surface Water         | L-19       | Illinois River at Marseilles           | Weekly               | Gross beta<br>Gamma Isot<br>Tritium<br>Sr-89,90 | Weekly                | On all samples.   |
|                          | L-20       | Ill. River at Ottawa                   |                      |   | Monthly               | On monthly composites from each location.   |
|                          | L-21       | Ill. River at Seneca                   |                      |   | Quarterly             | On quarterly composites from each location.   |
|                          | L-22       | South Kickapoo Creek                   |                      |   | Quarterly             | On quarterly composites from each location.   |
|                          | L-23       | Ill. River at Intake to Nitrogen Corp. |                      |   |                       |   |
|                          | L-24       | LSCS Cooling Lake near Rec. area       |                      |   |                       |   |
| 6. Cooling Water         | L-25       | LSCS intake pipe/ river                | Weekly               | Gross beta<br>Gamma Isot<br>Tritium<br>Sr-89,90 | Weekly                | On all samples.   |
|                          | L-26       | LSCS discharge pipe/ river             |                      |   | Monthly               | On monthly composites from each location.   |
|                          |            |  |                      |   | Monthly               | On monthly composites from each location.   |
|                          |            |  |                      |   | Monthly               | On monthly composites from each location.   |



Table 5.0-1 (continued)

## LaSalle County Radiological Monitoring Program, Sample Collection and Analyses.

| Sample Media               | Location                             |  | Collection Frequency | Type of Analysis                                | Frequency of Analysis                          | Remarks  |
|----------------------------|--------------------------------------|--|----------------------|---|--|--|
|                            | Code                                 | Site   |                      |   |  |  |
| 7. Precipitation           | Same as 4.                           |  | Monthly              | Gross beta<br>Gamma Isot<br>Tritium<br>Sr-89,90 | Monthly<br>Quarterly<br>Quarterly<br>Quarterly | On all samples.<br>On quarterly composites from each location.<br>On quarterly composites from each location.<br>On quarterly composites from each location. |
| 8. Well Water, Offsite     | L-28<br>L-29<br>L-30<br>L-31<br>L-32 | Marseilles Well<br>Seneca Well<br>Ransom Well<br>Ottawa Well<br>Illinois State Park Well | Quarterly            | Gross beta<br>Gamma Isot<br>Tritium<br>Sr-89,90 | Quarterly                                      | On all samples.  |
| 9. Well Water, Onsite      | L-27                                 | LSCS Onsite Well   | Monthly              | Gross beta<br>Gamma Isot<br>Tritium<br>Sr-89,90 | Monthly<br>Quarterly<br>Quarterly<br>Quarterly | On quarterly composite.<br>On quarterly composite.<br>On quarterly composite.  |
| 10. Vegetables             | L-36<br>L-37                         | Farm A<br>Farm B   | Annually at harvest  | Gross beta<br>Gamma Isot<br>Sr-89,90            | Annually<br>Annually<br>Annually               | Four varieties from each location.   |
| 11. Green Leafy Vegetables | Same as 10.                          |  | Annually at harvest  | I-131   | Annually                                       |  |
| 12. Cattle Feed and Grass  | Same as 4.                           |  | Quarterly            | Gross beta<br>Gamma Isot<br>Sr-89,90            | Quarterly<br>Quarterly<br>Quarterly            | Cattle Feed: winter<br>Grass: summer   |
| 13. Fish                   | L-24                                 | LSCS Cooling Lake  | Three times a year   | Gross beta                                      | Three times a year                             | On edible portions only.   |
|                            | L-35                                 | Marseilles Pool  | a year               | Gamma Isot<br>Sr-89,90                          | Three times a year<br>Three times a year       | On edible portions only.<br>On edible portions only.   |

Table 5.0-1 (continued)

## LaSalle County Radiological Monitoring Program, Sample Collection and Analyses

| Sample Media                 | Location                        |                            | Collection Frequency             | Type of Analysis | Frequency of Analysis | Remarks               |
|------------------------------|---------------------------------|----------------------------|----------------------------------|------------------|-----------------------|-----------------------|
|                              | Code                            | Site                       |                                  |                  |                       |                       |
| 14. Aquatic Plants           | L-24                            | LSCS cooling Lake          | Three times a year, if available | Gross beta       | Three times a year    |                       |
|                              | L-33                            | Upstream of cooling lake   |                                  | Gamma Isot       | Three times a year    |                       |
|                              | L-34                            | Downstream of cooling lake |                                  |                  |                       |                       |
| 15. Bottom Sediments         | Same as 14.                     |                            | Three times a year               | Gross beta       | Three times a year    |                       |
|                              |                                 |                            |                                  | Gamma Isot       | Three times a year    |                       |
| 16. Dairy Census             | (a) Site boundary to 2 miles    |                            |                                  |                  | Annually              | During grazing season |
|                              | (b) 2 miles to 5 miles          |                            |                                  |                  |                       |                       |
|                              | (c) At dairies listed in item 7 |                            |                                  |                  |                       |                       |
| 17. Nearest Residence Census | In all 16 sectors               |                            |                                  |                  | Annually              |                       |

Table 5.0-2

## Environmental Radiological Monitoring Program Quarterly Summary

Name of facility LaSalle Nuclear Power Station Docket No. 50-254, 50-265  
 Location of facility Marseilles, Illinois Reporting Period 1st Quarter 1982  
 (County, State)

| Sample Type (Units)                    | Type and Number of Analyses | LLD  | Indicator Locations Mean <sup>a</sup> Range | Location with Highest Annual Mean            |                             | Control Locations Mean <sup>a</sup> Range | Number of non-routine Results |
|--|-----------------------------|------|---|--|-----------------------------|---|-------------------------------|
|  |                             |      |   | Location                                     | Mean Range                  |   |                               |
| Air Particulates (pCi/m <sup>3</sup> ) | Gross Beta 175              | 0.01 | 0.027 (118/126) (0.011-0.047)               | L-08, Marseilles 7.0 mi @ 326                | 0.035 (12/13) (0.019-0.045) | 0.028 (41/49) (0.014-0.051)               | 0                             |
|  | Gamma Spec. 14              | 0.01 | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Sr-89 14                    | 0.01 | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Sr-90 14                    | 0.01 | <LLD  | -  | -                           | <LLD                                      | 0                             |
| Airborne Iodine (pCi/m <sup>3</sup> )  | I-131 96                    | 0.10 | <LLD  | -  | -                           | <LLD                                      | 0                             |
| Gamma Background (TLDs) (mR/Qtr.)      | Gamma Dose 14               | 3.0  | 13.5 (10/10) (12.5-14.7)                    | L-05, On-site # 5 0.3 mi @ 145°              | 14.7 (1/1) -                | 12.5 (4/4) (12.1-13.2)                    | 0                             |
| Milk (pCi/l)                           | Gamma Spec. 12              |      |   |  |                             |   |                               |
|  | Cs-134 10                   | 10   | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Cs-137 10                   | 10   | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Other gammas 20             | 20   | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Sr-89 12                    | 10   | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Sr-90 12                    | 2    | 2.6 (1/6) -                                 | L-15, Johnson Dairy 7.6 mi @ 258°            | 2.6 (1/6) -                 | 2.2 (2/6) (2.2-2.2)                       | 0                             |
| Precipitation                          | Gross Beta 12               | 12.1 | <LLD  | L-18, Sunnyside Farm 8.8 mi @ 22°            | 28.5 (3/3) (16.1-42.6)      | 25.2 (4/6) (15.4-42.6)                    | 0                             |
|  | Gamma Spec. 4               | 10   | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Tritium 4                   | 200  | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Sr-89 4                     | 10   | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Sr-90 4                     | 2    | <LLD  | -  | -                           | <LLD                                      | 0                             |
| Cooling Water (pCi/l)                  | Gross Beta 26               | 2.0  | 5.8 (24/26) (2.4-11.9)                      | L-26, LCSC Discharge Pipe - River at Station | 7.7 (13/13) (2.7-11.9)      | None                                      | 0                             |
|  | Gamma Spec. 6               |      |   |  |                             |   |                               |
|  | Cs-134 10                   | 10   | <LLD  | -  | -                           | None                                      | 0                             |
|  | Cs-137 10                   | 10   | <LLD  | -  | -                           | None                                      | 0                             |
|  | Other gammas 20             | 20   | <LLD  | -  | -                           | None                                      | 0                             |
|  | Tritium 6                   | 200  | <LLD  | -  | -                           | None                                      | 0                             |
|  | Sr-89 6                     | 10   | <LLD  | -  | -                           | None                                      | 0                             |
|  | Sr-90 6                     | 2    | <LLD  | -  | -                           | None                                      | 0                             |

Table 5.0-2 (continued)

## Environmental Radiological Monitoring Program Quarterly Summary

Name of facility LaSalle Nuclear Power Station Reporting Period 1st Quarter 1982

| Sample Type (Units)            | Type and Number of Analyses | LLD | Indicator Locations Mean <sup>a</sup> Range | Location with Highest Annual Mean                  |                       | Control Locations Mean <sup>a</sup> Range | Number of non-routine Results |
|--------------------------------|-----------------------------|-----|---|--|-----------------------|---|-------------------------------|
|                                |                             |     |   | Location   | Mean Range            |   |                               |
| Surface Water (pCi/l)          | Gross Beta 78               | 2.0 | 4.9 (63/65) (2.2-18.1)                      | L-24, Recreational Area Cooling Lake 0.3 mi @ 112° | 5.7 (13/13) (4.0-7.8) | 5.0 (13/13) (3.5-9.4)                     | 0                             |
|                                | Gamma Spec. 18              |     |   |  |                       |   |                               |
|                                | Cs-134                      | 10  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                                | Cs-137                      | 10  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                                | Other gammas                | 20  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                                | Tritium 6                   | 200 | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                                | Sr-89 6                     | 10  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                                | Sr-90 6                     | 2   | <LLD  | -  | -                     | <LLD                                      | 0                             |
| Well Water (pCi/l)             | Gross Beta 8                | 5.6 | 19.8 (6/7) (9.8-27.3)                       | L-32, Ill. Stat Park Well 6.5 mi @ 326°            | 27.2 (1/1) -          | 13.9 (1/1) -                              | 0                             |
|                                | Gamma Spec. 6               |     |   |  |                       |   |                               |
|                                | Cs-134                      | 10  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                                | Cs-137                      | 10  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                                | Other gammas                | 20  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                                | Tritium 6                   | 200 | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                                | Sr-89 6                     | 10  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                                | Sr-90 6                     | 2   | <LLD  | -  | -                     | <LLD                                      | 0                             |
| Cattlefeed & Grass (pCi/g wet) | Gross Beta 10               | 2.0 | 11.3 (5/5) (4.0-25.5)                       | L-18, Sunnyside Farm 8.8 mi @ 220°                 | 23.9 (2/2) (4.5-43.3) | 14.7 (5/5) (3.4-43.3)                     | 0                             |
|                                | Gamma Spec. 10              |     |   |  |                       |   |                               |
|                                | Cs-134                      | 0.1 | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                                | Cs-137                      | 0.1 | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                                | Other gammas                | 0.2 | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                                | Sr-89 6                     | 1.0 | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                                | Sr-90 6                     | 1.0 | <LLD  | -  | -                     | <LLD                                      | 0                             |

<sup>a</sup> Mean and range based on detectable measurements only. Fraction indicated in parenthesis.

Table 5.0-3

## Environmental Radiological Monitoring Program Quarterly Summary

Name of facility LaSalle Nuclear Power Station Docket No. 50-254, 50-265  
 Location of facility Marseilles, Illinois Reporting Period 2nd Quarter 1982  
 (County, State)

| Sample Type (Units)                    | Type and Number of Analyses | LLD  | Indicator Locations Mean <sup>a</sup> Range | Location with Highest Annual Mean            |                             | Control Locations Mean <sup>a</sup> Range | Number of non-routine Results |
|--|-----------------------------|------|---|--|-----------------------------|---|-------------------------------|
|  |                             |      |   | Location                                     | Mean Range                  |   |                               |
| Air Particulates (pCi/m <sup>3</sup> ) | Gross Beta 181              | 0.01 | 0.019 (114/129) (0.011-0.037)               | L-13, Rt. 6 at Gonnam Rd. 4.3 mi @ 100°      | 0.024 (12/13) (0.014-0.037) | 0.018 (46/52)                             | 0                             |
|  | Gamma Spec. 14              | 0.01 | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Sr-89 14                    | 0.01 | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Sr-90 14                    | 0.01 | <LLD  | -  | -                           | <LLD                                      | 0                             |
| Airborne Iodine (pCi/m <sup>3</sup> )  | I-131 84                    | 0.10 | <LLD  | -  | -                           | <LLD                                      | 0                             |
| Gamma Background (TLDs) (mR/Qtr.)      | Gamma Dose 14               | 3.0  | 17.7 (10/10) (16.0-18.9)                    | L-08, Marseilles 7.0 mi @ 326°               | 18.9 (1/1) -                | 17.1 (4/4) (14.6-18.6)                    | 0                             |
| Milk (pCi/l)                           | I-131 36                    | 0.5  | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Gamma Spec. 12              |      |   |  |                             |   |                               |
|  | Cs-134 10                   | 10   | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Cs-137 10                   | 10   | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Other gammas 20             |      | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Sr-89 12                    | 10   | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Sr-90 12                    | 2    | 2.6 (1/6) -                                 | L-15, Johnson Dairy 7.8 mi @ 258°            | 2.6 (1/6) -                 | 2.4 (3/6) (2.1-2.7)                       | 0                             |
| Precipitation                          | Gross Beta 12               | 12.9 | 30.5 (4/6) (16.7-70.8)                      | L-15, Johnson Dairy 7.8 mi @ 258°            | 35.7 (3/4) (16.7-70.8)      | 25.9 (4/6) (13.0-29.6)                    | 0                             |
|  | Gamma Spec. 4               | 10   | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Tritium 4                   | 200  | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Sr-89 4                     | 10   | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Sr-90 4                     | 2    | <LLD  | -  | -                           | <LLD                                      | 0                             |
| Cooling Water (pCi/l)                  | Gross Beta 26               | 2.0  | 4.9 (26/26) (2.5-8.6)                       | L-26, LCSC Discharge Pipe - River at Station | 5.9 (13/13) (3.8-8.6)       | None                                      | 0                             |
|  | Gamma Spec. 6               |      |   |  |                             |   |                               |
|  | Cs-134 10                   | 10   | <LLD  | -  | -                           | None                                      | 0                             |
|  | Cs-134 10                   | 10   | <LLD  | -  | -                           | None                                      | 0                             |
|  | Other gammas 20             |      | <LLD  | -  | -                           | None                                      | 0                             |
|  | Tritium 6                   | 200  | <LLD  | -  | -                           | None                                      | 0                             |
|  | Sr-89 6                     | 10   | <LLD  | -  | -                           | None                                      | 0                             |
|  | Sr-90 6                     | 2    | <LLD  | -  | -                           | None                                      | 0                             |



Table 5.0-3 (continued)

## Environmental Radiological Monitoring Program Quarterly Summary

Name of facility LaSalle Nuclear Power Station Reporting Period 2nd Quarter 1982

| Sample Type (Units)   | Type and Number of Analyses | LLD | Indicator Locations Mean <sup>a</sup> Range | Location with Highest Annual Mean                  |                       | Control Locations Mean <sup>a</sup> Range | Number of non-routine Results |
|-----------------------|-----------------------------|-----|---|--|-----------------------|---|-------------------------------|
|                       |                             |     |   | Location   | Mean Range            |   |                               |
| Surface Water (pCi/l) | Gross Beta 78               | 2.0 | 4.4 (65/65) (2.3-7.1)                       | L-24, Recreational Area Cooling Lake 0.3 mi @ 112° | 5.6 (13/13) (4.6-6.4) | 4.1 (13/13) (2.6-5.5)                     | 0                             |
|                       | Gamma Spec. 18              |     |   |  |                       |   |                               |
|                       | Cs-134                      | 10  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Cs-137                      | 10  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Other gammas                | 20  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Tritium 6                   | 200 | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Sr-89 6                     | 10  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Sr-90 6                     | 2   | <LLD  | -  | -                     | <LLD                                      | 0                             |
| Well Water (pCi/l)    | Gross Beta 8                | 5.0 | 17.4 (7/7) (9.8-25.5)                       | L-32, Ill. State Park Well 6.5 mi @ 326°           | 25.5 (1/1) -          | 17.7 (1/1) -                              | 0                             |
|                       | Gamma Spec. 6               |     |   |  |                       |   |                               |
|                       | Cs-134                      | 10  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Cs-137                      | 10  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Other gammas                | 20  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Tritium 6                   | 200 | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Sr-89 6                     | 10  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Sr-90 6                     | 2   | <LLD  | -  | -                     | <LLD                                      | 0                             |
| Fish (pCi/g wet)      | Gross Beta 11               | 2.0 | 3.1 (11/11) (2.4-3.4)                       | L-24, Cooling pond 0.3 mi @ 112°                   | 3.1 (6/6) (2.9-3.4)   | None                                      | 0                             |
|                       | Gamma Spec. 11              |     |   |  |                       |   |                               |
|                       | Cs-134                      | 0.1 | <LLD  | -  | -                     | None                                      | 0                             |
|                       | Cs-137                      | 0.1 | <LLD  | -  | -                     | None                                      | 0                             |
|                       | Other gammas                | 0.2 | <LLD  | -  | -                     | None                                      | 0                             |
|                       | Sr-89 11                    | 0.1 | <LLD  | -  | -                     | None                                      | 0                             |
|                       | Sr-90 11                    | 0.1 | <LLD  | -  | -                     | None                                      | 0                             |

Table 5.0-3 (continued)

## Environmental Radiological Monitoring Program: Quarterly Summary

Name of facility LaSalle Nuclear Power Station Reporting Period 2nd Quarter 1982

| Sample Type (Units)            | Type and Number of Analyses | LLD | Indicator Locations Mean <sup>a</sup> Range | Location with Highest Annual Mean              |            | Control Locations Mean <sup>a</sup> Range | Number of non-routine Results |
|--------------------------------|-----------------------------|-----|---|--|------------|---|-------------------------------|
|                                |                             |     |   | Location                                       | Mean Range |   |                               |
| Cattlefeed & Grass (pCi/g wet) | Gross Beta 4                | 2.0 | 7.8 (2/2) (7.5-8.1)                         | L-15, Johnson Dairy 7.8 mi @ 258°              | 8.1 (1/1)  | 7.6 (2/2) (7.3-7.8)                       | 0                             |
|                                | Gamma Spec. 4               |     |   |  |            |   |                               |
|                                | Cs-134                      | 0.1 | <LLD  | -  | -          | <LLD                                      | 0                             |
|                                | Cs-137                      | 0.1 | <LLD  | -  | -          | <LLD                                      | 0                             |
|                                | Other gammas                | 0.2 | <LLD  | -  | -          | <LLD                                      | 0                             |
|                                | Sr-89 4                     | 1.0 | <LLD  | -  | -          | <LLD                                      | 0                             |
|                                | Sr-90 4                     | 1.0 | <LLD  | -  | -          | <LLD                                      | 0                             |
| Aquatic Vegetation (pCi/g wet) | Gross Beta 3                | 1.0 | 3.2 (2/2) (2.2-4.3)                         | L-34, Downstream of Cooling Lake 4.8 mi @ 350° | 4.3 (1/1)  | 1.7 (1/1)                                 | 0                             |
|                                | Gamma Spec. 3               |     |   |  |            |   |                               |
|                                | Cs-134                      | 0.1 | <LLD  | -  | -          | <LLD                                      | 0                             |
|                                | Cs-137                      | 0.1 | <LLD  | -  | -          | <LLD                                      | 0                             |
|                                | Other gammas                | 0.2 | <LLD  | -  | -          | <LLD                                      | 0                             |
| Bottom Sediments (pCi/g dry)   | Gross Beta 3                | 10  | 26.4 (2/2) (26.4-26.5)                      | L-33, Upstream of Cooling Lake 4.7 mi @ 354°   | 29.6 (1/1) | 29.6 (1/1)                                | 0                             |
|                                | Gamma Spec. 3               |     |   |  |            |   |                               |
|                                | Cs-134                      | 0.1 | <LLD  | -  | -          | <LLD                                      | 0                             |
|                                | Cs-137                      | 0.1 | <LLD  | -  | -          | <LLD                                      | 0                             |
|                                | Other gammas                | 0.2 | <LLD  | -  | -          | <LLD                                      | 0                             |

<sup>a</sup> Mean and range based on detectable measurements only. Fractions indicated in parenthesis.

Table 5.0-4

## Environmental Radiological Monitoring Program Quarterly Summary

Name of facility LaSalle Nuclear Power Station Docket No. 50-254, 50-265  
 Location of facility Marseilles, Illinois Reporting Period 3rd Quarter 1982  
 (County, State)

| Sample Type (Units)                    | Type and Number of Analyses | LLD  | Indicator Locations Mean <sup>a</sup> Range | Location with Highest Annual Mean             |                             | Control Locations Mean <sup>a</sup> Range | Number of non-routine Results |
|--|-----------------------------|------|---|---|-----------------------------|---|-------------------------------|
|  |                             |      |   | Location                                      | Mean Range                  |   |                               |
| Air Particulates (pCi/m <sup>3</sup> ) | Gross Beta 182              | 0.01 | 0.020 (121/130) (0.011-0.036)               | L-01, Near Site #1<br>0.5 mi @ 326°           | 0.023 (10/13) (0.015-0.035) | 0.018 (50/52) (0.011-0.031)               | 0                             |
|  | Gamma Spec. 14              | 0.01 | <LLD  | -   | -                           | <LLD                                      | 0                             |
|  | Sr-89 14                    | 0.01 | <LLD  | -   | -                           | <LLD                                      | 0                             |
|  | Sr-90 14                    | 0.01 | <LLD  | -   | -                           | <LLD                                      | 0                             |
| Airborne Iodine (pCi/m <sup>3</sup> )  | I-131 98                    | 0.10 | <LLD  | -   | -                           | <LLD                                      | 0                             |
| Gamma Background (TLDs) (mR/Qtr.)      | Gamma Dose 14               | 3.0  | 15.1 (10/10) (13.9-16.7)                    | L-01, Near Site #1<br>0.5 mi @ 326°           | 16.7 (1/1)<br>-             | 14.7 (4/4) (13.8-15.7)                    | 0                             |
| Milk (pCi/l)                           | I-131 52                    | 0.5  | <LLD  | -   | -                           | <LLD                                      | 0                             |
|  | Gamma Spec. 12              |      |   |   |                             |   |                               |
|  | Cs-134 10                   |      | <LLD  | -   | -                           | <LLD                                      | 0                             |
|  | Cs-137 10                   |      | <LLD  | -   | -                           | <LLD                                      | 0                             |
|  | Other gammas 20             |      | <LLD  | -   | -                           | <LLD                                      | 0                             |
|  | Sr-89 12                    | 10   | <LLD  | -   | -                           | <LLD                                      | 0                             |
|  | Sr-90 12                    | 2    | 2.3 (2/6) (2.2-2.4)                         | L-18, Sunnyisle Farm<br>8.8 mi @ 220°         | 2.7 (1/6)<br>-              | 2.7 (1/6)                                 | 0                             |
| Precipitation                          | Gross Beta 12               | 14.0 | 27.7 (4/6) (16.5-38.9)                      | L-15, Johnson Dairy<br>7.8 mi @ 258°          | 38.9 (1/3)                  | 32.8 (1/6)                                | 0                             |
|  | Gamma Spec. 4               | 10   | <LLD  | -   | -                           | <LLD                                      | 0                             |
|  | Tritium 4                   | 200  | <LLD  | -   | -                           | <LLD                                      | 0                             |
|  | Sr-89 4                     | 10   | <LLD  | -   | -                           | <LLD                                      | 0                             |
|  | Sr-90 4                     | 2    | <LLD  | -   | -                           | <LLD                                      | 0                             |
| Cooling Water (pCi/l)                  | Gross Beta 26               | 2.0  | 5.0 (25/26) (2.8-8.0)                       | L-26, LCSC Dis-charge Pipe - River at Station | 6.6 (13/13) (4.9-8.0)       | None                                      | 0                             |
|  | Gamma Spec. 6               |      |   |   |                             |   |                               |
|  | Cs-134 10                   |      | <LLD  | -   | -                           | None                                      | 0                             |
|  | Cs-137 10                   |      | <LLD  | -   | -                           | None                                      | 0                             |
|  | Other gammas 20             |      | <LLD  | -   | -                           | None                                      | 0                             |
|  | Tritium 6                   | 200  | <LLD  | -   | -                           | None                                      | 0                             |
|  | Sr-89 6                     | 10   | <LLD  | -   | -                           | None                                      | 0                             |
|  | Sr-90 6                     | 2    | <LLD  | -   | -                           | None                                      | 0                             |

Table 5.0-4 (continued)

## Environmental Radiological Monitoring Program Quarterly Summary

Name of facility LaSalle Nuclear Power Station Reporting Period 3rd Quarter 1982

| Sample Type (Units)   | Type and Number of Analyses | LLD | Indicator Locations Mean <sup>a</sup> Range | Location with Highest Annual Mean                    |                       | Control Locations Mean <sup>a</sup> Range | Number of non-routine Results |
|-----------------------|-----------------------------|-----|---|--|-----------------------|---|-------------------------------|
|                       |                             |     |   | Location   | Mean Range            |   |                               |
| Surface Water (pCi/l) | Gross Beta 78               | 2.0 | 4.3 (65/65) (2.5-6.5)                       | L-24, Recreational Area Cooling Lake 0.3 mi @ 112°   | 5.1 (13/13) (3.4-6.5) | 4.9 (13/13) (3.6-6.0)                     | 0                             |
|                       | Gamma Spec. 18              |     |   |  |                       |   |                               |
|                       | Cs-134                      | 10  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Cs-137                      | 10  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Other gammas                | 20  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Tritium 6                   | 200 | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Sr-89 6                     | 10  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Sr-90 6                     | 2   | <LLD  | -  | -                     | <LLD                                      | 0                             |
| Well Water (pCi/l)    | Gross Beta 8                | 5.0 | 13.5 (7/7) (11.4-18.0)                      | L-32, Ill. State Park Well 6.5 mi @ 326°             | 16.2 (1/1) -          | 15.9 (1/1) -                              | 0                             |
|                       | Gamma Spec. 6               |     |   |  |                       |   |                               |
|                       | Cs-134                      | 10  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Cs-137                      | 10  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Other gammas                | 20  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Tritium 6                   | 200 | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Sr-89 6                     | 10  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Sr-90 6                     | 2   | <LLD  | -  | -                     | <LLD                                      | 0                             |
| Fish (pCi/g wet)      | Gross Beta 14               | 2.0 | 3.1 (14/14) (2.5-3.7)                       | L-35, Marseilles Pool - Illinois River 6.5 mi @ 326° | 3.4 (7/7) (2.7-3.7)   | None                                      | 0                             |
|                       | Gamma Spec. 14              |     |   |  |                       |   |                               |
|                       | Cs-134                      | 0.1 | <LLD  | -  | -                     | None                                      | 0                             |
|                       | Cs-137                      | 0.1 | <LLD  | -  | -                     | None                                      | 0                             |
|                       | Other gammas                | 0.2 | <LLD  | -  | -                     | None                                      | 0                             |
|                       | Sr-89 14                    | 0.1 | <LLD  | -  | -                     | None                                      | 0                             |
|                       | Sr-90 14                    | 0.1 | <LLD  | -  | -                     | None                                      | 0                             |

Table 5.0-4 (continued)

## Environmental Radiological Monitoring Program Quarterly Summary

Name of facility LaSalle Nuclear Power Station Reporting Period 3rd Quarter 1982

| Sample Type (Units)            | Type and Number of Analyses | LLD   | Indicator Locations Mean <sup>a</sup> Range | Location with Highest Annual Mean               |                        | Control Locations Mean <sup>a</sup> Range | Number of non-routine Results |
|--------------------------------|-----------------------------|-------|---|---|------------------------|---|-------------------------------|
|                                |                             |       |   | Location  | Mean Range             |   |                               |
| Cattlefeed & Grass (pCi/g wet) | Gross Beta 4                | 2.0   | 7.3 (2/2)<br>(7.3-7.3)                      | L-15, Johnson Dairy<br>7.8 mi @ 258°            | 7.3 (1/1)              | 6.0 (2/2)<br>(5.2-6.8)                    | 0                             |
|                                | Gamma Spec. 4               |       |   | L-16, Lowery Dairy<br>7.2 mi @ 120°             | 7.3 (1/1)              |   |                               |
|                                | Cs-134                      | 0.1   | <LLD  | -   | -                      | <LLD                                      | 0                             |
|                                | Cs-137                      | 0.1   | <LLD  | -   | -                      | <LLD                                      | 0                             |
|                                | Other gammas                | 0.2   | <LLD  | -   | -                      | <LLD                                      | 0                             |
|                                | Sr-89 4                     | 1.0   | <LLD  | -   | -                      | <LLD                                      | 0                             |
|                                | Sr-90 4                     | 1.0   | <LLD  | -   | -                      | <LLD                                      | 0                             |
| Aquatic Vegetation (pCi/g wet) | Gross Beta 3                | 1.0   | 1.8 (2/2)<br>(1.3-2.2)                      | L-33, Upstream of Cooling Lake<br>4.7 mi @ 354° | 3.1 (1/1)<br>-         | 3.1 (1/1)<br>-                            | 0                             |
|                                | Gamma Spec. 3               |       |   |   |                        |   |                               |
|                                | Cs-134                      | 0.1   | <LLD  | -   | -                      | <LLD                                      | 0                             |
|                                | Cs-137                      | 0.1   | <LLD  | -   | -                      | <LLD                                      | 0                             |
|                                | Other gammas                | 0.2   | <LLD  | -   | -                      | <LLD                                      | 0                             |
| Bottom Sediments (pCi/g dry)   | Gross Beta 3                | 10    | 24.7 (2/2)<br>(22.3-27.1)                   | L-33, Upstream of Cooling Lake<br>4.7 mi @ 354° | 29.9 (1/1)<br>-        | 29.9 (1/1)<br>-                           | 0                             |
|                                | Gamma Spec. 3               |       |   |   |                        |   |                               |
|                                | Cs-134                      | 0.1   | <LLD  | -   | -                      | <LLD                                      | 0                             |
|                                | Cs-137                      | 0.1   | <LLD  | -   | -                      | <LLD                                      | 0                             |
|                                | Other gammas                | 0.2   | <LLD  | -   | -                      | <LLD                                      | 0                             |
| Vegetables (pCi/g wet)         | Gross Beta 10               | 1.0   | 2.4 (10/10)<br>(1.5-4.2)                    | L-36, Farm A                                    | 2.8 (5/5)<br>(1.8-4.2) | None                                      | 0                             |
|                                | Gamma Spec. 10              |       |   |   |                        |   |                               |
|                                | Cs-134                      | 0.1   | <LLD  | -   | -                      | <LLD                                      | 0                             |
|                                | Cs-137                      | 0.1   | <LLD  | -   | -                      | <LLD                                      | 0                             |
|                                | Other gammas                | 0.2   | <LLD  | -   | -                      | <LLD                                      | 0                             |
|                                | Sr-89 10                    | 1.0   | <LLD  | -   | -                      | <LLD                                      | 0                             |
|                                | Sr-90 10                    | 1.0   | <LLD  | -   | -                      | <LLD                                      | 0                             |
|                                | I-131 3                     | 0.041 | <LLD  | -   | -                      | <LLD                                      | 0                             |

<sup>a</sup> Mean and range based on detectable measurements only. Fractions indicated in parenthesis.



Table 5.0-5

## Environmental Radiological Monitoring Program Quarterly Summary

Name of facility LaSalle Nuclear Power Station Docket No. 50-254, 50-265  
 Location of facility Marseilles, Illinois Reporting Period 4th Quarter 1982  
 (County, State)

| Sample Type (Units)                    | Type and Number of Analyses | LLD    | Indicator Locations Mean <sup>a</sup> Range | Location with Highest Annual Mean                                    |                             | Control Locations Mean <sup>a</sup> Range | Number of non-routine Results |
|--|-----------------------------|--------|---|--|-----------------------------|---|-------------------------------|
|  |                             |        |   | Location   | Mean Range                  |   |                               |
| Air Particulates (pCi/m <sup>3</sup> ) | Gross Beta 182              | 0.01   | 0.021 (127/130) (0.011-0.037)               | L-14, Ottawa 12.0 mi @ 315°  | 0.027 (13/13) (0.012-0.056) | 0.023 (50/52) (0.012-0.056)               | 0                             |
|  | Gamma Spec. 14              | 0.01   | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Sr-89 14                    | 0.01   | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Sr-90 14                    | 0.01   | <LLD  | -  | -                           | <LLD                                      | 0                             |
| Airborne Iodine (pCi/m <sup>3</sup> )  | I-131 98                    | 0.10   | <LLD  | -  | -                           | <LLD                                      | 0                             |
| Gamma Background (TLDs) (mR/Qtr.)      | Gamma Dose 14               | 3.0    | 15.7 (10/10) (12.9-17.9)                    | L-01, On-site # 1 0.5 mi @ 326°                                      | 17.9 (1/1) -                | 15.1 (4/4) (13.8-16.8)                    | 0                             |
| Milk (pCi/l)                           | I-131 28                    | 5/0.5* | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Gamma Spec. 12              |        |   |  |                             |   |                               |
|  | Cs-134                      | 10     | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Cs-137                      | 10     | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Other gammas                | 20     | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Sr-89 12                    | 10     | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Sr-90 12                    | 2      | 2.3 (1/6) -                                 | L-16, Lowery Dairy 7.2 mi @ 258°<br>L-17, Norsen Dairy 9.0 mi @ 337° | 2.3 (1/3) -<br>2.3 (2/3)    | 2.2 (3/6) (2.1-2.5)                       | 0                             |
| Precipitation (pCi/l)                  | Gross Beta 12               | 17.3   | 60.6 (1/6)                                  | L-15, Johnson Dairy 7.8 mi @ 258°                                    | 60.6 (1/3)                  | <LLD                                      | 0                             |
|  | Gamma Spec. 4               | 10     | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Tritium 4                   | 200    | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Sr-89 4                     | 10     | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Sr-90 4                     | 2      | <LLD  | -  | -                           | <LLD                                      | 0                             |
| Cooling Water (pCi/l)                  | Gross Beta 28               | 2.0    | 5.6 (28/28) (2.6-8.7)                       | L-26, LCSC Dis-charge Pipe - River at Station                        | 6.6 (14/14) (3.6-8.4)       | None                                      | 0                             |
|  | Gamma Spec 6                |        |   |  |                             |   |                               |
|  | Cs-134                      | 10*    | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Cs-137                      | 10     | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Other gammas                | 20     | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Tritium 6                   | 200    | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Sr-89 6                     | 10     | <LLD  | -  | -                           | <LLD                                      | 0                             |
|  | Sr-90 5                     | 2      | <LLD  | -  | -                           | <LLD                                      | 0                             |

Table 5.0-5 (continued)

## Environmental Radiological Monitoring Program Quarterly Summary

Name of facility LaSalle Nuclear Power Station Reporting Period 4th Quarter 1982

| Sample Type (Units)   | Type and Number of Analyses | LLD | Indicator Locations Mean <sup>a</sup> Range | Location with Highest Annual Mean              |                       | Control Locations Mean <sup>a</sup> Range | Number of non-routine Results |
|-----------------------|-----------------------------|-----|---|--|-----------------------|---|-------------------------------|
|                       |                             |     |   | Location                                       | Mean Range            |   |                               |
| Surface Water (pCi/l) | Gross Beta 84               | 2.0 | 5.4 (70/70) (2.1-9.2)                       | L-21, Illinois River at Seneca 4.0 mi @ 22°    | 6.6 (14/14) (4.0-7.9) | 6.6 (14/14) (4.0-7.9)                     | 0                             |
|                       | Gamma Spec. 18              |     |   |  |                       |   |                               |
|                       | Cs-134                      | 10  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Cs-137                      | 10  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Other gammas                | 20  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Tritium 6                   | 200 | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Sr-89 6                     | 10  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Sr-90 6                     | 2   | <LLD  | -  | -                     | <LLD                                      | 0                             |
| Well Water (pCi/l)    | Gross Beta 8                | 5.0 | 18.5 (7/7) (13.4-25.7)                      | L-32, Ill Stat Park Well 6.5 mi @ 326°         | 25.7 (1/1) -          | 17.7 (1/1) -                              | 0                             |
|                       | Gamma Spec. 6               |     |   |  |                       |   |                               |
|                       | Cs-134                      | 10  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Cs-137                      | 10  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Other gammas                | 20  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Tritium 6                   | 200 | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Sr-89 6                     | 10  | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Sr-90 6                     | 2   | <LLD  | -  | -                     | <LLD                                      | 0                             |
| Fish (pCi/g wet)      | Gross Beta 10               | 2.0 | 3.3 (10/10) (2.7-3.9)                       | L-35, Marseilles Pool Ill. River 6.5 mi @ 326° | 3.3 (5/5) (2.8-3.7)   | None                                      | 0                             |
|                       | Gamma Spec. 10              |     |   |  |                       |   |                               |
|                       | Cs-134                      | 0.1 | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Cs-137                      | 0.1 | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Other gammas                | 0.2 | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Sr-89 10                    | 0.1 | <LLD  | -  | -                     | <LLD                                      | 0                             |
|                       | Sr-90 10                    | 0.1 | <LLD  | -  | -                     | <LLD                                      | 0                             |

Table 5.0-5 (continued)

## Environmental Radiological Monitoring Program Quarterly Summary

Name of facility LaSalle Nuclear Power Station Reporting Period 4th Quarter 1982

| Sample Type (Units)            | Type and Number of Analyses | LLD | Indicator Locations Mean <sup>a</sup> Range | Location with Highest Annual Mean              |            | Control Locations Mean <sup>a</sup> Range | Number of non-routine Results |
|--------------------------------|-----------------------------|-----|---|--|------------|---|-------------------------------|
|                                |                             |     |   | Location                                       | Mean Range |   |                               |
| Cattlefeed & Grass (pCi/g wet) | Gross Beta 4                | 2.0 | 8.7 (2/2) (8.4-9.0)                         | L-17, Norsen Dairy 9.0 mi @ 337°               | 11.9 (1/1) | 10.4 (2/2) (8.9-11.9)                     | 0                             |
|                                | Gamma Spec. 4               |     |   |  |            |   |                               |
|                                | Cs-134                      | 0.1 | <LLD  | -  | -          | <LLD                                      | 0                             |
|                                | Cs-137                      | 0.1 | <LLD  | -  | -          | <LLD                                      | 0                             |
|                                | Other gammas                | 0.2 | <LLD  | -  | -          | <LLD                                      | 0                             |
|                                | Sr-89 4                     | 1.0 | <LLD  | -  | -          | <LLD                                      | 0                             |
|                                | Sr-90 4                     | 1.0 | <LLD  | -  | -          | <LLD                                      | 0                             |
| Aquatic Vegetation (pCi/g wet) | Gross Beta 3                | 1.0 | 2.2 (2/2) (2.0-2.4)                         | L-34, Downstream of Cooling Lake 4.8 mi @ 350° | 2.4 (1/1)  | 1.0 (1/1)                                 | 0                             |
|                                | Gamma Spec. 3               |     |   |  |            |   |                               |
|                                | Cs-134                      | 0.1 | <LLD  | -  | -          | <LLD                                      | 0                             |
|                                | Cs-137                      | 0.1 | <LLD  | -  | -          | <LLD                                      | 0                             |
|                                | Other gammas                | 0.2 | <LLD  | -  | -          | <LLD                                      | 0                             |
| Bottom Sediments (pCi/g dry)   | Gross Beta 3                | 10  | 22.4 (2/2) (21.7-23.0)                      | L-33, Upstream of Cooling Lake 4.7 mi @ 354°   | 27.0 (1/1) | 27.0 (1/1)                                | 0                             |
|                                | Gamma Spec. 3               |     |   |  |            |   |                               |
|                                | Cs-134                      | 0.1 | <LLD  | -  | -          | <LLD                                      | 0                             |
|                                | Cs-137                      | 0.1 | <LLD  | -  | -          | <LLD                                      | 0                             |
|                                | Other gammas                | 0.2 | <LLD  | -  | -          | <LLD                                      | 0                             |

<sup>a</sup> Mean and range based on detectable measurements only. Fractions indicated in parenthesis.

\* May - October LLD = 0.5, November - April LLD = 5.0.

# LASALLE COUNTY NUCLEAR POWER STATION

Table 5.1-1

Gamma Radiation, as measured by Thermoluminescent Dosimeters (TLDs)

Standard Radiological Monitoring Program.

|                   | <u>1st Quarter</u>     | <u>2nd Quarter</u> | <u>3rd Quarter</u> | <u>4th Quarter</u> |
|-------------------|------------------------|--------------------|--------------------|--------------------|
| Date Placed:      | 01/02/82,<br>01/10/82* | 04/03/82           | 07/03/82           | 10/02/82           |
| Date Removed      | 04/03/82               | 07/03/82           | 10/02/82           | 12/31/82           |
| Days in the Field | 91,83*                 | 91                 | 91                 | 90                 |

| Location                                  | Average mR/Qtr.   |           |          |          |          |
|---|-------------------|-----------|----------|----------|----------|
| On-Site and Near-Site Indicator Locations |                   |           |          |          |          |
| L-01                                      | Near Site No. 1   | 14.4±0.9  | 18.1±1.1 | 16.7±1.0 | 17.9±0.9 |
| L-02                                      | On-Site No. 2     | 13.5±0.7  | 17.8±1.0 | 14.2±0.6 | 15.6±0.6 |
| L-03*                                     | On-Site No. 3     | 13.6±0.5* | 17.7±1.1 | 13.9±1.1 | 15.7±0.8 |
| L-04                                      | Near-Site No. 4   | 12.9±0.3  | 17.4±0.8 | 15.0±0.7 | 15.5±0.7 |
| L-05                                      | On-Site No. 5     | 14.7±1.0  | 18.7±1.0 | 16.4±0.7 | 17.6±0.6 |
| L-06                                      | Near-Site No. 6   | 13.6±1.0  | 18.2±0.8 | 15.8±0.4 | 16.0±1.8 |
| Mean ± s.d.                               |                   | 13.8±0.7  | 18.0±0.4 | 15.3±1.2 | 16.6±1.1 |
| Off-Site Indicator Locations              |                   |           |          |          |          |
| L-07                                      | Seneca            | 12.8±0.6  | 17.3±0.2 | 14.4±0.9 | 16.5±0.6 |
| L-08                                      | Marseilles        | 14.4±0.7  | 18.9±0.6 | 15.5±1.0 | 16.2±0.4 |
| L-11                                      | Ransom            | 12.5±0.4  | 16.0±0.5 | 15.0±2.2 | 12.9±1.0 |
| L-13                                      | Rt. 6/Gonnam Road | 12.8±0.4  | 17.2±0.7 | 14.5±0.6 | 13.4±2.3 |
| Mean ± s.d.                               |                   | 13.1±0.9  | 17.4±1.2 | 14.8±0.5 | 14.8±1.9 |
| Background Locations                      |                   |           |          |          |          |
| L-09                                      | Grand Ridge       | 12.6±0.5  | 17.4±0.5 | 13.8±0.9 | 14.9±0.4 |
| L-10                                      | Streator          | 12.1±0.8  | 14.6±0.6 | 15.7±2.2 | 14.7±0.4 |
| L-12                                      | Kernan            | 12.1±0.4  | 17.7±0.5 | 14.2±0.6 | 13.8±1.4 |
| L-14                                      | Ottawa            | 13.2±0.7  | 18.6±0.3 | 15.0±1.7 | 16.8±0.6 |
| Mean ± s.d.                               |                   | 12.5±0.5  | 17.1±1.7 | 14.7±0.8 | 15.1±1.3 |

LASALLE COUNTY NUCLEAR POWER STATION

Table 5.1-1 (continued)

Gamma radiation, as measured by Thermoluminescent Dosimeters (TLDs)

Special Program.

Inner Ring, Near Site Boundary, Indicator Locations.

|                   | <u>1st Quarter</u> | <u>2nd Quarter</u> | <u>3rd Quarter</u> | <u>4th Quarter</u> |
|-------------------|--------------------|--------------------|--------------------|--------------------|
| Date Placed:      | 01/02/82           | 04/03/82           | 07/03/82           | 10/02/82           |
| Date Removed      | 04/03/82           | 07/03/82           | 10/02/82           | 12/31/82           |
| Days in the Field | 91                 | 91                 | 91                 | 90                 |

| <u>Location</u> | <u>Average mR/Qtr.</u> |          |          |          |
|-----------------|------------------------|----------|----------|----------|
| L-100-1         | 14.0±0.5               | 20.4±0.5 | 16.2±0.7 | 18.3±1.1 |
| L-100-2         | 14.5±0.8               | 18.9±0.8 | 15.6±0.7 | 18.3±0.9 |
| L-101-1         | 14.3±0.3               | 19.9±0.7 | 17.1±0.8 | 17.9±1.3 |
| L-101-2         | 14.0±0.5               | 19.1±0.6 | 17.7±1.5 | 17.8±1.3 |
| L-102-1         | 14.2±0.5               | 19.9±0.7 | 17.1±0.8 | 17.4±0.5 |
| L-102-2         | 14.3±0.9               | 19.1±0.6 | 15.5±1.0 | 17.0±1.2 |
| L-103-1         | 14.7±0.6               | 18.9±0.7 | 15.6±0.4 | 18.6±0.5 |
| L-103-2         | 15.0±0.4               | 18.8±1.1 | 16.1±1.3 | 17.6±0.9 |
| L-104-1         | 14.9±0.7               | 19.9±0.7 | 14.6±0.6 | 18.4±0.3 |
| L-104-2         | 15.9±0.8               | 19.4±0.9 | 16.1±0.5 | 18.0±1.3 |
| L-105-1         | 15.3±0.9               | 19.2±0.6 | 17.6±1.0 | 17.3±0.2 |
| L-105-2         | 16.2±0.8               | 20.0±1.1 | 14.9±0.5 | 18.4±1.3 |
| L-106-1         | 16.4±0.7               | 20.9±0.7 | 15.9±0.4 | 19.1±0.9 |
| L-106-2         | 15.4±0.6               | 20.8±1.3 | 17.0±0.7 | 19.1±1.0 |
| L-107-1         | 16.0±0.6               | 19.2±0.9 | 17.6±2.3 | 19.4±0.8 |
| L-107-2         | 15.6±0.6               | 19.8±0.6 | 15.5±1.4 | 18.9±0.3 |
| Mean ± s.d.     | 15.0±0.8               | 19.6±0.7 | 16.3±1.0 | 18.2±0.7 |



LASALLE COUNTY NUCLEAR POWER STATION

Table 5.1-1 (continued)

Gamma radiation, as measured by Thermoluminescent Dosimeters (TLDs)

Special Program.

Outer Ring, Near 5 Miles Radius, Indicator Locations.

|                   | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|-------------------|-------------|-------------|-------------|-------------|
| Date Placed:      | 01/02/82    | 04/03/82    | 07/03/82    | 10/02/82    |
| Date Removed      | 04/03/82    | 07/03/82    | 10/02/82    | 12/31/82    |
| Days in the Field | 91          | 91          | 91          | 90          |

| Location    | Average mR/Qtr. |          |          |          |
|-------------|-----------------|----------|----------|----------|
| L-201-1     | 15.7±0.7        | 19.3±0.6 | 16.4±0.6 | 18.4±0.8 |
| L-201-2     | 15.7±0.4        | 19.9±0.8 | 15.4±0.6 | 17.3±0.6 |
| L-202-1     | 14.6±0.6        | 18.7±0.8 | 16.8±2.2 | 17.7±0.9 |
| L-202-2     | 14.6±0.9        | 19.0±1.3 | 15.5±0.8 | 17.4±0.6 |
| L-203-1     | 15.3±0.7        | 18.5±0.8 | 18.2±1.8 | 17.0±0.7 |
| L-203-2     | 15.5±0.5        | 19.5±0.7 | 15.8±0.8 | 16.8±1.5 |
| L-204-1     | 15.9±0.9        | 19.0±0.6 | 15.7±0.7 | 18.1±0.8 |
| L-204-2     | 15.4±0.6        | 18.4±0.8 | 14.7±1.3 | 18.5±0.7 |
| L-205-1     | 16.6±0.6        | 20.1±0.3 | 15.9±0.7 | 18.7±1.2 |
| L-205-2     | 16.1±0.5        | 20.8±1.4 | 16.2±0.7 | 17.9±0.8 |
| L-206-1     | 15.7±0.5        | 19.2±0.6 | 15.8±0.2 | 17.5±0.7 |
| L-206-2     | 16.0±0.7        | 19.4±1.2 | 15.7±0.8 | 18.0±1.1 |
| L-207-1     | 17.3±0.7        | 19.4±0.6 | 16.4±1.4 | 16.5±0.9 |
| L-207-2     | 15.5±0.5        | 19.3±1.4 | 15.6±0.8 | 17.8±0.5 |
| L-208-1     | 15.5±0.5        | 19.7±0.8 | 17.5±2.5 | 18.4±0.7 |
| L-208-2     | 15.8±0.8        | 19.4±1.1 | 15.4±0.9 | 17.2±1.1 |
| L-209-1     | 15.9±0.9        | 20.1±0.9 | 15.2±1.1 | 18.5±0.4 |
| L-209-2     | 15.6±1.4        | 20.4±1.2 | 18.8±0.4 | 18.2±0.5 |
| L-210-1     | 16.2±0.3        | 20.7±0.9 | 16.8±0.7 | 17.8±0.4 |
| L-210-2     | 14.9±0.4        | 22.0±1.6 | 16.6±1.3 | 20.4±1.1 |
| L-211-1     | 16.7±1.7        | 19.6±0.6 | 14.5±1.7 | 17.7±1.0 |
| L-211-2     | 16.3±1.1        | 19.9±0.8 | 16.1±0.6 | 19.5±0.6 |
| L-212-1     | 14.7±0.7        | 19.3±0.9 | 16.1±0.6 | 19.0±0.6 |
| L-212-2     | 15.0±0.7        | 18.8±0.4 | 15.1±0.5 | 18.3±1.0 |
| L-213-1     | 15.0±0.6        | 18.8±0.4 | 16.3±0.5 | 18.0±1.1 |
| L-213-2     | 15.3±0.5        | 19.2±0.6 | 16.0±0.4 | 18.7±1.4 |
| L-214-1     | 15.8±0.9        | 21.1±1.4 | 17.2±0.8 | 20.2±0.8 |
| L-214-2     | 16.3±0.7        | 19.7±0.9 | 15.9±1.2 | 19.1±0.9 |
| L-215-1     | 15.9±0.9        | 20.1±0.8 | 17.0±1.4 | 18.9±0.8 |
| L-215-2     | 16.7±0.7        | 20.2±1.4 | 16.6±0.9 | 19.4±0.9 |
| L-216-1     | 14.6±1.0        | 19.6±0.4 | 14.9±0.6 | 19.4±1.4 |
| L-216-2     | 14.8±1.0        | 19.0±1.0 | 16.4±0.4 | 17.5±0.8 |
| Mean ± s.d. | 15.6±0.7        | 19.6±0.8 | 16.1±0.9 | 18.2±0.9 |

Appendix II  
Meteorological Data

LASALLE NUCLEAR POWER STATION  
 PERIOD OF RECORD - JULY - SEPTEMBER 1982  
 STABILITY CLASS - EXTREMELY UNSTABLE (DELTA T 375-33 FT)  
 WINDS MEASURED AT 375 FEET

| WIND<br>DIRECTION | WIND SPEED (IN MPH) |      |      |       |       | GT 24 | TOTAL |
|-------------------|---------------------|------|------|-------|-------|-------|-------|
|                   | .7-3                | 4- 7 | 8-12 | 13-18 | 19-24 |       |       |
| N                 | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| NNE               | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| NE                | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| ENE               | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| E                 | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| ESE               | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| SE                | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| SSE               | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| S                 | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| SSW               | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| SW                | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| WSW               | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| W                 | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| WNW               | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| NW                | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| NNW               | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| VARIABLE          | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| TOTAL             | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |

HOURS OF CALM IN THIS STABILITY CLASS - 0  
 HOURS OF MISSING WIND MEASUREMENTS IN THIS STABILITY CLASS - 0  
 HOURS OF MISSING STABILITY MEASUREMENTS IN ALL STABILITY CLASSES - 84

LASALLE NUCLEAR POWER STATION  
 PERIOD OF RECORD - JULY - SEPTEMBER 1982  
 STABILITY CLASS - MODERATELY UNSTABLE (DELTA T 375-33 FT)  
 WINDS MEASURED AT 375 FEET

| WIND<br>DIRECTION | WIND SPEED (IN MPH) |     |      |       |       | GT 24 | TOTAL |
|-------------------|---------------------|-----|------|-------|-------|-------|-------|
| -----             | 0-3                 | 4-7 | 8-12 | 13-18 | 19-24 | ----- | ----- |
| N                 | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| NNE               | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| NE                | 0                   | 0   | 5    | 0     | 0     | 0     | 5     |
| ENE               | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| E                 | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| ESE               | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| SE                | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| SSE               | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| S                 | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| SSW               | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| SW                | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| WSW               | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| W                 | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| WNW               | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| NW                | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| NNW               | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| VARIABLE          | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| TOTAL             | 0                   | 0   | 5    | 0     | 0     | 0     | 5     |

HOURS OF CALM IN THIS STABILITY CLASS - 0  
 HOURS OF MISSING WIND MEASUREMENTS IN THIS STABILITY CLASS - 0

HOURS OF MISSING STABILITY MEASUREMENTS IN ALL STABILITY CLASSES - 84

LASALLE NUCLEAR POWER STATION  
 PERIOD OF RECORD - JULY - SEPTEMBER 1982  
 STABILITY CLASS - SLIGHTLY UNSTABLE (DELTA T 375-33 FT)  
 WINDS MEASURED AT 375 FEET

| WIND<br>DIRECTION | WIND SPEED (IN MPH) |     |      |       |       |       | TOTAL |
|-------------------|---------------------|-----|------|-------|-------|-------|-------|
|                   | 0-3                 | 4-7 | 8-12 | 13-18 | 19-24 | GT 24 |       |
| N                 | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| NNE               | 0                   | 0   | 1    | 1     | 0     | 0     | 2     |
| NE                | 0                   | 0   | 3    | 1     | 0     | 0     | 4     |
| ENE               | 0                   | 0   | 1    | 0     | 0     | 0     | 1     |
| E                 | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| ESE               | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| SE                | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| SSE               | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| S                 | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| SSW               | 0                   | 0   | 1    | 7     | 1     | 0     | 9     |
| SW                | 0                   | 0   | 0    | 4     | 0     | 0     | 4     |
| WSW               | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| W                 | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| WNW               | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| NW                | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| NNW               | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| VARIABLE          | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| TOTAL             | 0                   | 0   | 6    | 13    | 1     | 0     | 20    |

HOURS OF CALM IN THIS STABILITY CLASS - 0  
 HOURS OF MISSING WIND MEASUREMENTS IN THIS STABILITY CLASS - 0  
 HOURS OF MISSING STABILITY MEASUREMENTS IN ALL STABILITY CLASSES - 84



LASALLE NUCLEAR POWER STATION  
 PERIOD OF RECORD - JULY - SEPTEMBER 1982  
 STABILITY CLASS - NEUTRAL (DELTA T 375-33 FT)  
 WINDS MEASURED AT 375 FEET

| WIND<br>DIRECTION | WIND SPEED (IN MPH) |     |      |       |       | GT 24 | TOTAL |
|-------------------|---------------------|-----|------|-------|-------|-------|-------|
|                   | 7-3                 | 4-7 | 8-12 | 13-18 | 19-24 |       |       |
| N                 | 1                   | 20  | 21   | 36    | 5     | 0     | 83    |
| NNE               | 5                   | 23  | 16   | 5     | 0     | 0     | 49    |
| NE                | 6                   | 25  | 57   | 5     | 0     | 0     | 93    |
| ENE               | 1                   | 22  | 28   | 12    | 0     | 0     | 63    |
| E                 | 1                   | 15  | 14   | 14    | 2     | 0     | 46    |
| ESE               | 1                   | 9   | 9    | 1     | 1     | 0     | 21    |
| SE                | 2                   | 13  | 17   | 4     | 0     | 0     | 36    |
| SSE               | 1                   | 17  | 21   | 22    | 6     | 2     | 69    |
| S                 | 3                   | 9   | 19   | 32    | 17    | 2     | 82    |
| SSW               | 0                   | 4   | 21   | 47    | 24    | 2     | 98    |
| SW                | 1                   | 9   | 14   | 19    | 12    | 1     | 56    |
| WSW               | 2                   | 13  | 16   | 15    | 5     | 1     | 52    |
| W                 | 0                   | 18  | 14   | 12    | 6     | 0     | 50    |
| WNW               | 1                   | 13  | 21   | 17    | 11    | 2     | 65    |
| NW                | 3                   | 20  | 15   | 21    | 9     | 9     | 77    |
| NNW               | 2                   | 10  | 17   | 25    | 12    | 1     | 67    |
| VARIABLE          | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| TOTAL             | 30                  | 240 | 320  | 287   | 110   | 20    | 1007  |

HOURS OF CALM IN THIS STABILITY CLASS - 0

HOURS OF MISSING WIND MEASUREMENTS IN THIS STABILITY CLASS - 11

HOURS OF MISSING STABILITY MEASUREMENTS IN ALL STABILITY CLASSES - 84

LASALLE NUCLEAR POWER STATION  
 PERIOD OF RECORD - JULY - SEPTEMBER 1982  
 STABILITY CLASS - SLIGHTLY STABLE (DELTA T 375-33 FT)  
 WINDS MEASURED AT 375 FEET

| WIND<br>DIRECTION | WIND SPEED (IN MPH) |      |      |       |       | GT 24 | TOTAL |
|-------------------|---------------------|------|------|-------|-------|-------|-------|
| -----             | .7-3                | 4- 7 | 8-12 | 13-18 | 19-24 | ----- | ----- |
| N                 | 1                   | 2    | 9    | 10    | 7     | 0     | 29    |
| NNE               | 2                   | 6    | 4    | 3     | 4     | 0     | 19    |
| NE                | 2                   | 6    | 6    | 11    | 0     | 0     | 25    |
| ENE               | 2                   | 5    | 26   | 18    | 1     | 0     | 52    |
| E                 | 1                   | 2    | 15   | 24    | 6     | 0     | 48    |
| ESE               | 0                   | 2    | 11   | 12    | 2     | 0     | 27    |
| SE                | 1                   | 8    | 7    | 5     | 2     | 0     | 23    |
| SSE               | 0                   | 3    | 13   | 11    | 8     | 8     | 43    |
| S                 | 2                   | 8    | 5    | 7     | 22    | 12    | 56    |
| SSW               | 2                   | 2    | 8    | 13    | 22    | 12    | 59    |
| Sw                | 0                   | 3    | 13   | 10    | 17    | 13    | 56    |
| WSW               | 1                   | 4    | 5    | 8     | 14    | 5     | 37    |
| W                 | 0                   | 3    | 10   | 8     | 8     | 2     | 31    |
| WNW               | 0                   | 4    | 9    | 5     | 7     | 1     | 26    |
| NW                | 0                   | 2    | 5    | 15    | 9     | 1     | 32    |
| NNW               | 0                   | 1    | 5    | 11    | 11    | 0     | 28    |
| VARIABLE          | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| TOTAL             | 14                  | 61   | 151  | 171   | 140   | 54    | 591   |

HOURS OF CALM IN THIS STABILITY CLASS - 0  
 HOURS OF MISSING WIND MEASUREMENTS IN THIS STABILITY CLASS - 8  
 HOURS OF MISSING STABILITY MEASUREMENTS IN ALL STABILITY CLASSES - 84

LASALLE NUCLEAR POWER STATION  
 PERIOD OF RECORD - JULY - SEPTEMBER 1982  
 STABILITY CLASS - MODERATELY STABLE (DELTA T 375-33 FT)  
 WINDS MEASURED AT 375 FEET

| WIND<br>DIRECTION | WIND SPEED (IN MPH) |      |      |       |       |       | TOTAL |
|-------------------|---------------------|------|------|-------|-------|-------|-------|
| -----             | .7-3                | 4- 7 | 8-12 | 13-18 | 19-24 | GT 24 | ----- |
| N                 | 0                   | 2    | 2    | 2     | 3     | 3     | 12    |
| NNE               | 0                   | 4    | 1    | 0     | 0     | 0     | 5     |
| NE                | 2                   | 6    | 2    | 0     | 0     | 0     | 10    |
| ENE               | 1                   | 11   | 4    | 3     | 0     | 0     | 19    |
| E                 | 0                   | 1    | 9    | 4     | 4     | 0     | 18    |
| ESE               | 1                   | 2    | 4    | 6     | 8     | 0     | 21    |
| SE                | 2                   | 2    | 9    | 8     | 7     | 1     | 29    |
| SSE               | 0                   | 5    | 16   | 8     | 11    | 3     | 43    |
| S                 | 0                   | 2    | 13   | 7     | 17    | 9     | 48    |
| SSW               | 1                   | 1    | 8    | 19    | 13    | 21    | 63    |
| SW                | 0                   | 3    | 15   | 11    | 6     | 17    | 52    |
| WSW               | 0                   | 4    | 8    | 7     | 4     | 1     | 24    |
| W                 | 0                   | 4    | 8    | 10    | 8     | 0     | 30    |
| WNW               | 0                   | 3    | 3    | 4     | 7     | 1     | 18    |
| NW                | 0                   | 2    | 3    | 5     | 14    | 4     | 28    |
| NNW               | 0                   | 3    | 7    | 8     | 2     | 0     | 20    |
| VARIABLE          | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| TOTAL             | 7                   | 55   | 112  | 102   | 104   | 60    | 440   |

HOURS OF CALM IN THIS STABILITY CLASS - 0  
 HOURS OF MISSING WIND MEASUREMENTS IN THIS STABILITY CLASS - 0  
 HOURS OF MISSING STABILITY MEASUREMENTS IN ALL STABILITY CLASSES - 84

LASALLE NUCLEAR POWER STATION  
 PERIOD OF RECORD - JULY - SEPTEMBER 1982  
 STABILITY CLASS - EXTREMELY STABLE (DELTA T 375-33 FT)  
 WINDS MEASURED AT 375 FEET

| WIND<br>DIRECTION | WIND SPEED (IN MPH) |      |      |       |       |       | TOTAL |
|-------------------|---------------------|------|------|-------|-------|-------|-------|
| -----             | .7-3                | 4- 7 | 8-12 | 13-18 | 19-24 | GT 24 | ----- |
| N                 | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| NNE               | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| NE                | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| ENE               | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| E                 | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| ESE               | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| SE                | 0                   | 0    | 0    | 1     | 1     | 0     | 2     |
| SSE               | 0                   | 0    | 5    | 3     | 0     | 3     | 11    |
| S                 | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| SSW               | 0                   | 1    | 0    | 1     | 2     | 1     | 5     |
| SW                | 0                   | 0    | 0    | 2     | 9     | 2     | 13    |
| WSW               | 0                   | 0    | 0    | 2     | 2     | 0     | 4     |
| W                 | 0                   | 0    | 0    | 1     | 1     | 0     | 2     |
| WNW               | 0                   | 0    | 1    | 0     | 1     | 0     | 2     |
| NW                | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| NNW               | 0                   | 0    | 0    | 3     | 0     | 0     | 3     |
| VARIABLE          | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| TOTAL             | 0                   | 1    | 6    | 13    | 16    | 6     | 42    |

HOURS OF CALM IN THIS STABILITY CLASS - 0

HOURS OF MISSING WIND MEASUREMENTS IN THIS STABILITY CLASS - 0

HOURS OF MISSING STABILITY MEASUREMENTS IN ALL STABILITY CLASSES - 84

LASALLE NUCLEAR POWER STATION  
 PERIOD OF RECORD - OCTOBER - DECEMBER 1982  
 STABILITY CLASS - EXTREMELY UNSTABLE (DELTA T 375-33 FT)  
 WINDS MEASURED AT 375 FEET

| WIND<br>DIRECTION | WIND SPEED (IN MPH) |     |      |       |       | GT 24 | TOTAL |
|-------------------|---------------------|-----|------|-------|-------|-------|-------|
|                   | .7-3                | 4-7 | 8-12 | 13-18 | 19-24 |       |       |
| N                 | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| NNE               | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| NE                | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| ENE               | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| E                 | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| ESE               | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| SE                | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| SSE               | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| S                 | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| SSW               | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| SW                | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| WSW               | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| W                 | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| WNW               | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| NW                | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| NNW               | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| VARIABLE          | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| TOTAL             | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |

HOURS OF CALM IN THIS STABILITY CLASS - 0

HOURS OF MISSING WIND MEASUREMENTS IN THIS STABILITY CLASS - 1

HOURS OF MISSING STABILITY MEASUREMENTS IN ALL STABILITY CLASSES - 2



LASALGE NUCLEAR POWER STATION  
 PERIOD OF RECORD - OCTOBER - DECEMBER 1982  
 STABILITY CLASS - MODERATELY UNSTABLE (DELTA T 375-33 FT)  
 WINDS MEASURED AT 375 FEET

| WIND<br>DIRECTION<br>----- | WIND SPEED (IN MPH) |               |               |                |                | GT 24<br>----- | TOTAL<br>----- |
|----------------------------|---------------------|---------------|---------------|----------------|----------------|----------------|----------------|
|                            | .7-3<br>-----       | 4- 7<br>----- | 8-12<br>----- | 13-18<br>----- | 19-24<br>----- |                |                |
| N                          | 0                   | 0             | 0             | 0              | 0              | 0              | 0              |
| NNE                        | 0                   | 0             | 0             | 0              | 0              | 0              | 0              |
| NE                         | 0                   | 0             | 0             | 0              | 0              | 0              | 0              |
| ENE                        | 0                   | 0             | 0             | 0              | 0              | 0              | 0              |
| E                          | 0                   | 0             | 0             | 0              | 0              | 0              | 0              |
| ESE                        | 0                   | 0             | 0             | 0              | 0              | 0              | 0              |
| SE                         | 0                   | 0             | 0             | 0              | 0              | 0              | 0              |
| SSE                        | 0                   | 0             | 0             | 0              | 0              | 0              | 0              |
| S                          | 0                   | 0             | 0             | 5              | 1              | 0              | 6              |
| SSW                        | 0                   | 0             | 2             | 0              | 7              | 1              | 10             |
| SW                         | 0                   | 0             | 0             | 0              | 0              | 0              | 0              |
| WSW                        | 0                   | 0             | 0             | 0              | 0              | 0              | 0              |
| W                          | 0                   | 0             | 0             | 0              | 0              | 0              | 0              |
| WNW                        | 0                   | 0             | 0             | 0              | 0              | 0              | 0              |
| NW                         | 0                   | 0             | 0             | 0              | 0              | 0              | 0              |
| NNW                        | 0                   | 0             | 0             | 0              | 0              | 0              | 0              |
| VARIABLE                   | 0                   | 0             | 0             | 0              | 0              | 0              | 0              |
| TOTAL                      | 0                   | 0             | 2             | 5              | 8              | 1              | 16             |

HOURS OF CALM IN THIS STABILITY CLASS - 0

HOURS OF MISSING WIND MEASUREMENTS IN THIS STABILITY CLASS - 0

HOURS OF MISSING STABILITY MEASUREMENTS IN ALL STABILITY CLASSES - 2

LASALLE NUCLEAR POWER STATION  
 PERIOD OF RECORD - OCTOBER - DECEMBER 1982  
 STABILITY CLASS - SLIGHTLY UNSTABLE (DELTA T 375-33 FT)  
 WINDS MEASURED AT 375 FEET

| WIND<br>DIRECTION | WIND SPEED (IN MPH) |     |      |       |       | GT 24 | TOTAL |
|-------------------|---------------------|-----|------|-------|-------|-------|-------|
|                   | 0-3                 | 4-7 | 8-12 | 13-18 | 19-24 |       |       |
| N                 | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| NNE               | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| NE                | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| ENE               | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| E                 | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| ESE               | 0                   | 0   | 1    | 0     | 0     | 0     | 1     |
| SE                | 0                   | 2   | 1    | 0     | 0     | 0     | 3     |
| SSE               | 0                   | 0   | 0    | 1     | 0     | 0     | 1     |
| S                 | 0                   | 0   | 5    | 5     | 3     | 0     | 13    |
| SSW               | 0                   | 0   | 4    | 5     | 6     | 1     | 16    |
| SW                | 0                   | 0   | 1    | 0     | 1     | 2     | 4     |
| WSW               | 0                   | 0   | 0    | 0     | 1     | 0     | 1     |
| W                 | 0                   | 0   | 0    | 0     | 1     | 0     | 1     |
| WNW               | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| NW                | 0                   | 0   | 0    | 1     | 0     | 1     | 2     |
| NNW               | 0                   | 0   | 0    | 0     | 2     | 0     | 2     |
| VARIABLE          | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| TOTAL             | 0                   | 2   | 12   | 12    | 14    | 4     | 44    |

HOURS OF CALM IN THIS STABILITY CLASS - 0  
 HOURS OF MISSING WIND MEASUREMENTS IN THIS STABILITY CLASS - 0

HOURS OF MISSING STABILITY MEASUREMENTS IN ALL STABILITY CLASSES - 2

LASALLE NUCLEAR POWER STATION  
 PERIOD OF RECORD - OCTOBER - DECEMBER 1982  
 STABILITY CLASS - NEUTRAL (DELTA T 375-33 FT)  
 WINDS MEASURED AT 375 FEET

| WIND<br>DIRECTION | WIND SPEED (IN MPH) |      |      |       |       |       | TOTAL |
|-------------------|---------------------|------|------|-------|-------|-------|-------|
|                   | .7-3                | 4- 7 | 8-12 | 13-18 | 19-24 | GT 24 |       |
| N                 | 2                   | 4    | 11   | 19    | 14    | 0     | 50    |
| NNE               | 0                   | 4    | 10   | 6     | 0     | 0     | 20    |
| NF                | 0                   | 2    | 7    | 22    | 13    | 1     | 45    |
| ENE               | 2                   | 1    | 7    | 19    | 9     | 1     | 39    |
| E                 | 0                   | 7    | 11   | 20    | 2     | 5     | 45    |
| ESE               | 0                   | 8    | 15   | 11    | 5     | 0     | 39    |
| SE                | 1                   | 9    | 11   | 11    | 8     | 0     | 40    |
| SSE               | 0                   | 2    | 14   | 15    | 15    | 29    | 75    |
| S                 | 0                   | 3    | 11   | 38    | 31    | 39    | 122   |
| SSW               | 1                   | 3    | 9    | 26    | 12    | 40    | 91    |
| SW                | 0                   | 4    | 8    | 26    | 27    | 26    | 91    |
| WSW               | 3                   | 3    | 7    | 26    | 32    | 23    | 94    |
| W                 | 1                   | 5    | 13   | 32    | 23    | 46    | 120   |
| WNW               | 1                   | 4    | 10   | 26    | 15    | 21    | 77    |
| NW                | 2                   | 7    | 14   | 28    | 40    | 24    | 115   |
| NNW               | 3                   | 4    | 14   | 35    | 16    | 0     | 72    |
| VARIABLE          | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| TOTAL             | 16                  | 70   | 172  | 360   | 262   | 255   | 1135  |

HOURS OF CALM IN THIS STABILITY CLASS - 0  
 HOURS OF MISSING WIND MEASUREMENTS IN THIS STABILITY CLASS - 16  
 HOURS OF MISSING STABILITY MEASUREMENTS IN ALL STABILITY CLASSES - 2

LASALLE NUCLEAR POWER STATION  
 PERIOD OF RECORD - OCTOBER - DECEMBER 1982  
 STABILITY CLASS - SLIGHTLY STABLE (DELTA T 375-33 FT)  
 WINDS MEASURED AT 375 FEET

| WIND<br>DIRECTION<br>----- | WIND SPEED (IN MPH) |               |               |                |                |                | TOTAL<br>----- |
|----------------------------|---------------------|---------------|---------------|----------------|----------------|----------------|----------------|
|                            | .7-3<br>-----       | 4- 7<br>----- | 8-12<br>----- | 13-18<br>----- | 19-24<br>----- | GT 24<br>----- |                |
| N                          | 0                   | 3             | 3             | 4              | 0              | 0              | 10             |
| NNE                        | 0                   | 1             | 1             | 0              | 0              | 0              | 2              |
| NE                         | 0                   | 0             | 5             | 6              | 0              | 0              | 11             |
| ENE                        | 0                   | 1             | 1             | 6              | 4              | 0              | 12             |
| E                          | 0                   | 3             | 3             | 2              | 6              | 1              | 15             |
| ESE                        | 0                   | 4             | 3             | 2              | 7              | 1              | 17             |
| SE                         | 3                   | 3             | 2             | 11             | 13             | 13             | 45             |
| SSE                        | 1                   | 2             | 2             | 17             | 47             | 43             | 112            |
| S                          | 0                   | 4             | 4             | 22             | 33             | 71             | 134            |
| SSW                        | 0                   | 2             | 4             | 11             | 34             | 37             | 88             |
| SW                         | 1                   | 3             | 3             | 18             | 19             | 10             | 54             |
| WSW                        | 1                   | 2             | 2             | 24             | 15             | 4              | 48             |
| W                          | 0                   | 0             | 2             | 8              | 20             | 3              | 33             |
| WNW                        | 0                   | 1             | 4             | 14             | 12             | 2              | 33             |
| NW                         | 0                   | 1             | 4             | 10             | 8              | 2              | 25             |
| NNW                        | 0                   | 5             | 4             | 6              | 4              | 0              | 19             |
| VARIABLE                   | 0                   | 0             | 0             | 0              | 0              | 0              | 0              |
| TOTAL                      | 6                   | 35            | 47            | 161            | 222            | 187            | 658            |

HOURS OF CALM IN THIS STABILITY CLASS - 0  
 HOURS OF MISSING WIND MEASUREMENTS IN THIS STABILITY CLASS - 17  
 HOURS OF MISSING STABILITY MEASUREMENTS IN ALL STABILITY CLASSES - 2

LASALLE NUCLEAR POWER STATION  
 PERIOD OF RECORD - OCTOBER - DECEMBER 1982  
 STABILITY CLASS - MODERATELY STABLE (DELTA T 375-33 FT)  
 WINDS MEASURED AT 375 FEET

| WIND<br>DIRECTION | WIND SPEED (IN MPH) |     |      |       |       | GT 24 | TOTAL |
|-------------------|---------------------|-----|------|-------|-------|-------|-------|
|                   | .7-3                | 4-7 | 8-12 | 13-18 | 19-24 |       |       |
| N                 | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| NNE               | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| NE                | 0                   | 1   | 0    | 0     | 0     | 0     | 1     |
| ENE               | 0                   | 0   | 0    | 0     | 5     | 4     | 9     |
| E                 | 1                   | 1   | 3    | 1     | 0     | 2     | 8     |
| ESE               | 0                   | 0   | 6    | 3     | 3     | 0     | 12    |
| SE                | 1                   | 2   | 0    | 5     | 4     | 2     | 14    |
| SSE               | 1                   | 4   | 12   | 8     | 9     | 22    | 56    |
| S                 | 1                   | 5   | 3    | 3     | 8     | 23    | 43    |
| SSW               | 0                   | 2   | 1    | 3     | 4     | 21    | 31    |
| SW                | 1                   | 1   | 1    | 3     | 7     | 1     | 14    |
| WSW               | 0                   | 1   | 1    | 2     | 2     | 5     | 11    |
| W                 | 0                   | 0   | 0    | 2     | 1     | 7     | 10    |
| WNW               | 0                   | 0   | 1    | 0     | 7     | 2     | 10    |
| NW                | 0                   | 1   | 0    | 1     | 2     | 0     | 4     |
| NNW               | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| VARIABLE          | 0                   | 0   | 0    | 0     | 0     | 0     | 0     |
| TOTAL             | 5                   | 18  | 28   | 31    | 52    | 89    | 223   |

HOURS OF CALM IN THIS STABILITY CLASS - 0

HOURS OF MISSING WIND MEASUREMENTS IN THIS STABILITY CLASS - 9

HOURS OF MISSING STABILITY MEASUREMENTS IN ALL STABILITY CLASSES - 2



LASALLE NUCLEAR POWER STATION  
 PERIOD OF RECORD - OCTOBER - DECEMBER 1982  
 STABILITY CLASS - EXTREMELY STABLE (DELTA T 375-33 FT)  
 WINDS MEASURED AT 375 FEET

| WIND<br>DIRECTION | WIND SPEED (IN MPH) |      |      |       |       |       | TOTAL |
|-------------------|---------------------|------|------|-------|-------|-------|-------|
|                   | .7-3                | 4- 7 | 8-12 | 13-18 | 19-24 | GT 24 |       |
| N                 | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| NNE               | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| NE                | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| ENE               | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| E                 | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| ESE               | 0                   | 0    | 0    | 1     | 3     | 0     | 4     |
| SE                | 0                   | 0    | 1    | 8     | 2     | 0     | 11    |
| SSE               | 0                   | 3    | 2    | 5     | 13    | 3     | 26    |
| S                 | 0                   | 4    | 2    | 3     | 6     | 7     | 22    |
| SSW               | 0                   | 0    | 0    | 0     | 3     | 4     | 7     |
| SW                | 0                   | 0    | 0    | 2     | 3     | 0     | 5     |
| WSW               | 1                   | 0    | 0    | 0     | 3     | 0     | 4     |
| W                 | 0                   | 0    | 0    | 0     | 3     | 0     | 3     |
| WNW               | 0                   | 0    | 0    | 0     | 1     | 0     | 1     |
| NW                | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| NNW               | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| VARIABLE          | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| TOTAL             | 1                   | 7    | 5    | 19    | 37    | 14    | 83    |

HOURS OF CALM IN THIS STABILITY CLASS - 0  
 HOURS OF MISSING WIND MEASUREMENTS IN THIS STABILITY CLASS - 4

HOURS OF MISSING STABILITY MEASUREMENTS IN ALL STABILITY CLASSES - 2

LASALLE NUCLEAR POWER STATION  
 PERIOD OF RECORD - JULY - SEPTEMBER 1982  
 STABILITY CLASS - EXTREMELY UNSTABLE (DELTA T 375-33 FT)  
 WINDS MEASURED AT 375 FEET

| WIND<br>DIRECTION | WIND SPEED (IN MPH) |      |      |       |       | GT 24 | TOTAL |
|-------------------|---------------------|------|------|-------|-------|-------|-------|
| -----             | .7-3                | 4- 7 | 8-12 | 13-18 | 19-24 | ----- | ----- |
| N                 | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| NNE               | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| NE                | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| ENE               | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| E                 | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| ESE               | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| SE                | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| SSE               | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| S                 | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| SSW               | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| SW                | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| WSW               | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| W                 | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| WNW               | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| NW                | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| NNW               | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| VARIABLE          | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |
| TOTAL             | 0                   | 0    | 0    | 0     | 0     | 0     | 0     |

HOURS OF CALM IN THIS STABILITY CLASS - 0  
 HOURS OF MISSING WIND MEASUREMENTS IN THIS STABILITY CLASS - 0  
 HOURS OF MISSING STABILITY MEASUREMENTS IN ALL STABILITY CLASSES - 84

Appendix III

Errata

ERRATA TO SEMI-ANNUAL RADIOACTIVE EFFLUENT REPORT

July - December, 1982

(ref. Table 1.2-7 pg. 17)

II. Liquid Effluents

6 mo. Total

1. b. Avg. Conc. Released

3.05E-06 Should read: 4.0E-09