ARIZONA NUCLEAR POWER PROJECT

PALO VERDE NUCLEAR GENERATING STATION

ANNUAI ENVIRONMENTAL OPERATING REPORT

FOR 1985

PREPARED BY

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I. INTRODUCTION

The Palo Verde Nuclear Generating Station (PVNGS) is located in Maricopa County, Arizona, approximately 50 miles west of the Phoenix metropolitan area. The PVNGS site comprises approximately 4050 acres. Site elevations range from 890 feet above mean sea level at the southern boundary to 1030 feet above mean sea level at the northern boundary. When completed, the station will consist of three pressurized water reactor electrical generating units with a nominal generating capacity of 1270 MWe per unit.

PVNGS was issued low power operating licenses NPF-34 and NPF-46 for Units 1 and 2 by the United States Nuclear Regulatory Commission (NRC) on December 12, 1984 and December 9, 1985, respectively. The Unit 1 full power operating license NPF-41 was issued June 1, 1985. Appendix B to these operating licenses is entitled the "Environmental Protection Plan (Non-Radiological)". The Environmental Protection Plans (EPP) of each of these operating licenses are identical with the exception of Section 4.2.2, which refers to a different revision of the Salt Deposition and Impact Monitoring Plan in license NPF-34. (See Section II.B for a further explanation of the differences between Salt Deposition and Impact Monitoring Plan revisions.)

On May 25, 1985, the PVNGS Unit 1 reactor achieved initial criticality. By December 31, 1985, power ascension testing had not been completed for the Unit 1 reactor, although the 100 percent power level had been achieved for short periods of time.

As of December 31, 1985, the PVNGS Unit 2 reactor had not achieved initial criticality.

PVNGS Unit 3 was still under construction at the end of 1985.

The EPP has as its stated purpose the "protection of environmental values during construction and operation of the nuclear facility." In conjunction with this general purpose, the EPP also has the principal objectives to:

"(1) Verify that the station is operated in an environmentally acceptable manner, as established by the FES (Final Environmental Statement) and other NRC environmental impact assessments.

(2) Coordinate NRC requirements and maintain consistency with other Federal, State and local requirements for environmental protection.

(3) Keep NRC informed of the environmental effects of facility construction and operation and of actions taken to control those effects."

This report is intended to satsify the requirements of Section 5.4.1 of the EPP regarding the submittal of an Annual Environmental Operating Report to the Commission. This report describes the activities during the year 1985 related to the PVNGS EPP. For purposes of this report, references to the EPP shall be considered to be the EPP of either NPF-41 or NPF-46 unless otherwise specified.

II. ENVIRONMENTAL MONITORING SUMMARIES AND ANALYSIS

A. Cultural Resources

Section 4.2.1 of the EPP requires that an archaelogical survey be performed when final alignment of the PVNGS-to-Saguaro transmission line is completed. As of the date of this report, plans for this transmission line have been placed on indefinite hold. Therefore, there has been no further activity in this area of the EPP.

B. Terrestrial Ecology Monitoring

Section 4.2.2 of the EPP requires that the provisions of the Salt Deposition and Impact Monitoring Plan be implemented by the onset of commercial operation of the first unit. The EPP further stipulates that the monitoring plan continue for a minimum of three full years after the onset of operation of all three units or until shown to not be necessary.

The Salt Deposition and Impact Monitoring Plan referenced in the EPP of license NPF-34 was submitted via a letter dated September 29, 1983, from E. E. Van Brunt, Jr., Arizona Public Service Company, to Mr. G. Knighton, U. S. Nuclear Regulatory Commission, and was designated Revision 3. Revision 4 of the Salt Deposition and Impact Monitoring Plan was submited via letter dated May 17, 1986, from E. E. Van Brunt, Jr., Arizona Nuclear Power Project, to Mr. G. W. Knighton, U. S. Nuclear Regulatory Commission. Subsequently, Revision 4 was referenced as the applicable Salt Deposition and Impact Monitoring Plan in the EPP of license NPF-41 and NPF-46.

Changes made in the Salt Deposition and Impact Monitoring Plan from Revision 3 to Revision 4 did not affect the program objectives described in the introduction to the Monitoring Plan. A brief description of these changes are described below. More detailed descriptions of the changes, justifications for the changes, and effects of the changes on the continuity of the study can be found in the letters dated March 29, and May 3, 1985, from E. E. Van Brunt, Jr., Arizona Nuclear Power Project, to Mr. G. W. Knighton, U. S. Nuclear Regulatory Commission.

Changes made in Revision 4 of the Salt Deposition and Impact Monitoring Plan include the following:

1. The location and type of monitoring performed at three monitoring stations were changed due to a fire and to changes in agricultural activities beyond the control of PVNGS.

2. Soil samples from uncultivated sites were split at textural changes rather than at an arbitrary six inch depth.

3. Soil sampling of agricultural sites following defoliation was initiated.

4. Crop yield determinations were restricted to cotton only.

5. Determination of foliar salt deposition on native and agricultural vegetation was discontinued.

The enclosed report, "Annual Report for the PVNGS Salt Deposition Monitoring Program, January - December 1985", prepared by the NUS Corporation for the Arizona Nuclear Power Project, describes the results of the monitoring activities during 1985. Due to the unavailability of data from the 1984 monitoring year, a complete comparison between 1985 and previous years was not possible at the time of this writing. A 1985 Annual Report Supplement will be prepared and submitted to the NRC when available.

Since the first PVNGS unit did not achieve commercial operation during 1985, these salt monitoring reports offer little insight into the environmental effects of unit operation. The limited amount of actual unit operation places the 1985 data more appropriately in the category of preoperational data, although operating drift emission modeling is included in the report.

III. PLANT DESIGN AND OPERATION CHANGES

Section 3.1 of the EPP allows changes to station design or operation or the performance of tests or experiments affecting the environment provided that such changes, tests or experiments do not constitute an unreviewed environmental question and do not require a change to the EPP. Changes, tests or experiments in which all measurable nonradiological effects are confined to the on-site areas previously disturbed during site preparation and plant construction or in which the environment is not affected are exempt from the evaluation and reporting requirements of Section 3.1. Section 3.2 of the EPP also exempts changes, tests, or experiments which are required to comply with other Federal, State or local environmental regulations.

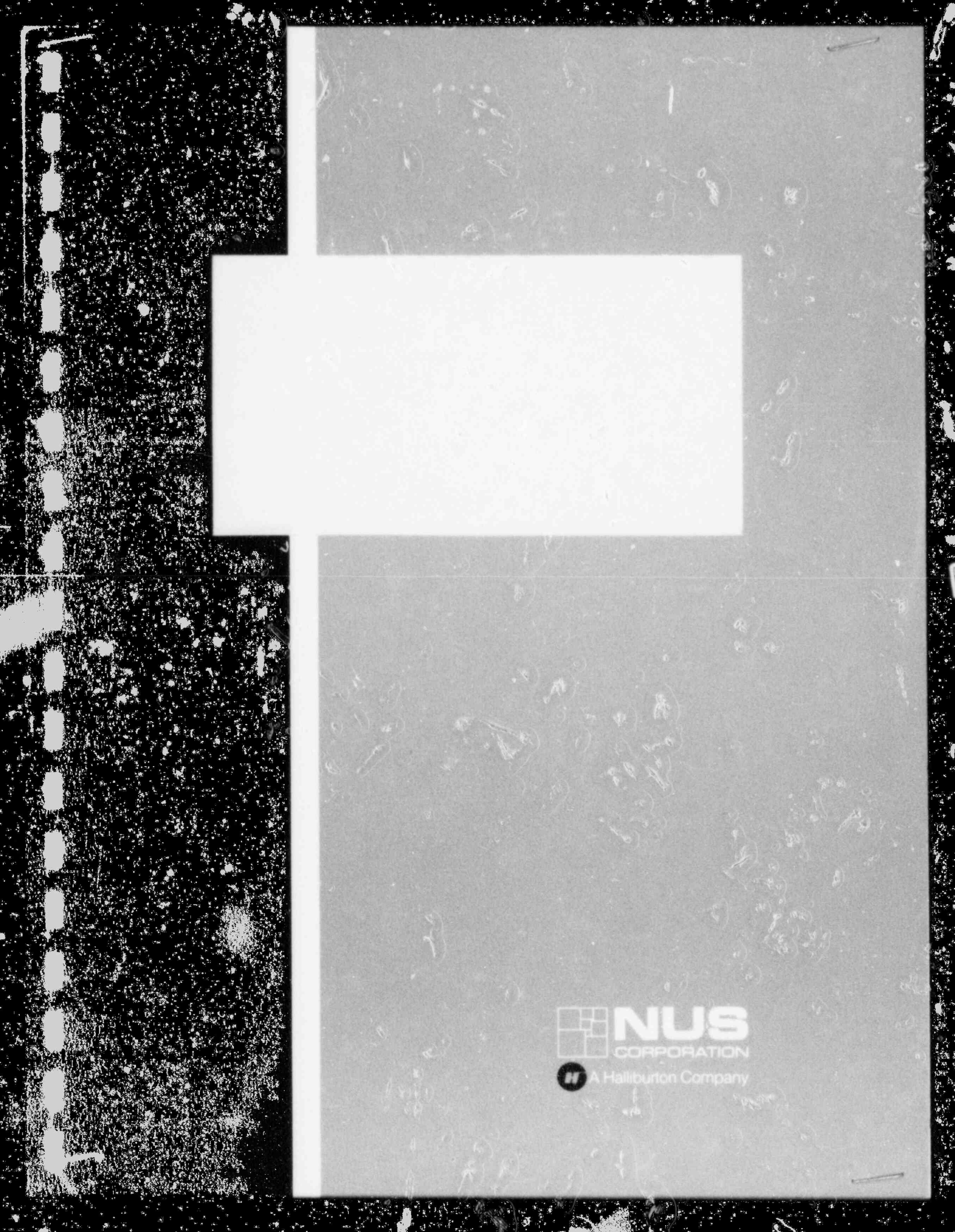
During 1985, there were no changes, tests or experiments implemented which involved a potentially significant unreviewed environmental question or which required a change to the EPP and which were not exempt by Sections 3.1 or 3.2 of the EPP.

IV. EPP COMPLIANCE

There were no instances of noncompliance with the EPP identified during 1985.

V. NONROUTINE REPORTS

There were no nonroutine reports required by Section 5.4.2 of the EPP submitted during 1985.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NUS-4831

ANNUAL REPORT FOR THE PVNGS SALT DEPOSITION MONITORING PROGRAM

JANUARY - DECEMBER 1985

Prepared for

Arizona Nuclear Power Project
Phoenix, Arizona

April 1986

By

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1 INTRODUCTION

NUS Corporation (NUS) is conducting a salt deposition and impact monitoring program in the vicinity of the Palo Verde Nuclear Generating Station (PVNGS) for Arizona Nuclear Power Project (ANPP). The objective of this monitoring program is to determine the environmental impact, if any, of salt drift emissions from the operation of the PVNGS mechanical draft cooling towers.

This annual report presents the results of laboratory analyses of samples collected from January through December 1985 and an assessment of their significance. The media sampled include agricultural crops, indigenous vegetation, soil, dustfall, particulates collected by low-volume air filters, and cooling tower basin water.

The assessments in subsequent sections of this report include: (1) levels and variations of airborne soluble and insoluble deposits, (2) chemical analyses of surficial soils, (3) salt tissue loading of the indigenous natural plant communities, and (4) salt tissue loading of crops and yield of cotton crops. Inter-relationships observed between measured parameters are also presented.

Additionally, this report provides a description, in the form of a climatological summary, of the area meteorology as measured at the PVNGS meteorological tower during the report period, and a modeling assessment of the salt deposition during the period using actual cooling tower operating data and site meteorological data. Appendices present tabulations of the plant operating data upon which the assessments are based. Meteorological data are presented in another report for 1985 (NUS-4868).

2 MONITORING PROGRAM SUMMARY

The salt deposition and impact monitoring program began operation in May 1983. The program is intended to meet the commitment to a monitoring program called for in the Environmental Report, Construction Permit Phase (ER-CP) (PVNGS, 1974, Section 6.2.5), and to satisfy the requirements of the PVNGS Units 1 and 2 Environmental Protection Plans, Section 4.2.2, Terrestrial Ecology Monitoring. (Appendix B to Facility Operating License NPF-34 and NPF-46.)

The monitoring program, as described in Salt Deposition and Impact Monitoring Plan, Revision 4 (May 1985), was designed to (1) determine levels of airborne salt deposition; (2) define physical and chemical properties of surficial soils; (3) estimate species richness and cover and measure salt loading of the indigenous plant communities; and (4) measure salt loading on crops grown in the vicinity of PVNGS and estimate cotton crop yield. Several background locations that would not be affected by the operation of the PVNGS cooling towers were established as control sites. These sites were selected to give an indication of any long-term natural changes.

The following sections provide a brief summary of the sampling activities conducted during January through December 1985 that together constitute the PVNGS salt deposition and impact monitoring program. The media sampled included air, cooling tower basin water, deposited soluble and insoluble mineral (salt), soils, and vegetation (indigenous and agricultural). A description of salt emission and deposition modeling of the PVNGS area, using actual plant operating and meteorological data over this period, is also presented in Section 2.2 of this report.

2.1 ONSITE METEOROLOGICAL MEASUREMENTS PROGRAM

2.1.1 Meteorological Facility Operations

The onsite meteorological measurements program at the site, which began on August 13, 1973, is described in the Environmental Report-Operating License

Stage (ER-OL) (PVNGS, 1979). The measurement system includes two levels of instrumentation (35-ft and 200-ft) on a guyed tower located on the northwestern portion of the site.

2.1.2 Meteorological Data Reduction

Digital meteorological data have been recorded by the upgraded PVNGS meteorological system since October 1985. Prior to October 1985, meteorological data were manually reduced from analog strip charts. For each one-hour data period, average values of wind direction, wind speed, ambient temperature, temperature differential, and dew point were obtained from the last 15-min sample of strip chart data available before the hour. The precipitation trace cumulatively recorded precipitation amounts and reset each quarter hour. Quarterly and annual joint frequency distributions (JFDs) of wind speed and direction by atmospheric stability class were generated using NUS computer programs. Monthly and annual statistics of all meteorological parameters collected at PVNGS were also processed and compared with historical data. The results of these programs for calendar year 1985 are discussed in more detail in Section 3.

2.2 COOLING TOWER BASIN WATER/EMISSIONS MODELING

2.2.1 Cooling Tower Basin Water

Cooling tower basin water was sampled monthly beginning May 1985. The chemical composition of the cooling tower basin water (and drift) provides the basis for comparison with those of deposits (dustfall) and suspended airborne materials (low-volume filter) to identify any changes in the composition of airborne salt associated with cooling tower operation. A summary of cooling tower operation during the period January through December 1985 is presented in Section 4.

The cooling tower basin water samples were analyzed for the major constituents identified in Table 3.6-1 of the PVNGS ER-OL to determine the composition of the drift. These constituents include calcium, magnesium, potassium, chloride, sodium, nitrate, sulfate, and silica. Minor constituents were also quantitatively assessed to the extent feasible.

2.2.2 Emissions Modeling

PVNGS Unit 1 cooling towers began operation with significant heat generation in August 1985. Throughout the remainder of the year, operation of Unit 1 was intermittent, with complete shutdown in the month of November 1985.

The NUS FOG code was used to calculate the deposition of dissolved solids (salt) emitted as drift by three round mechanical drift cooling towers of PVNGS Unit 1, which operated during the months of August, September, October, and December 1985. The FOG code utilized sequential hourly meteorological data for these months, which were obtained from the PVNGS meteorological tower system. The deposition calculations were performed using daily plant operating data including the number of fans in operation, circulating water flow rate, delta T (range), total dissolved solids concentration and the drift rate based on emission tests of the towers (ESC, 1983) in conjunction with hourly onsite meteorological data.

2.3 SALT DEPOSITION (DUSTFALL) MEASUREMENTS

The measurement of salt deposition was accomplished through the collection of dustfall samples, which were then analyzed for dissolved mineral content and suspended solids. The dustfall sampling was accomplished by placing, at selected monitoring locations, pairs of open jars containing demineralized water and an algicide. The jars were six inches in diameter and 18 inches deep. Two were placed at each sampling location to provide an estimate of sampling precision.

The jars were elevated approximately three feet above the ground surface on stands, and a bird ring was placed around the edge of each jar to prevent birds from perching and contaminating the sample. This height was used

instead of the minimum height of eight feet recommended by the American Society for Testing and Materials (ASTM, 1970) to permit the collection of dustfall that occurs at typical plant crown height. A chemically inert 1- to 2-mm conical screen was suspended above the maximum water level in the jars to keep out potential contaminants such as insects and birds.

The monthly sampling procedure followed the ASTM (1970) method for collection of dustfall. At the end of each month the jars were collected and a clean set of jars installed. The collected jars were rinsed to transfer the samples to shipping bottles, which were labeled and sent to a laboratory for analysis.

At least one inch of water was maintained in the jars to prevent collected dust from being blown out. The distilled water in the jars contained copper sulfate, an algicide, at an initial concentration of 15 mg/liter. The 18-inch-deep ASTM jar was used for dustfall collection. This jar is regarded as the most suitable vessel for sampling in a desert environment; it requires less frequent checking of the water level than other, shallower jars.

Figure 2-1 shows the sampling locations of 44 monitoring sites where dustfall samples were collected. In addition to the 44 sites committed in the Monitoring Plan, ANPP established four interim dustfall-only sampling locations onsite in May 1985 which are not shown in Figure 2-1. These locations were established close to the cooling towers to provide unambiguous indications of drift deposition above the pre-existing deposition background. The data will be collected over a limited period of time for confirmation of the drift deposition model. These sites are numbered 80-83, and their approximate distances (miles)/directions (degrees) from the centroid of the PVNGS Unit 2 cooling tower array are 0.6/051, 0.2/348, 0.6/210 and 0.4/115, respectively. (See Figures 4-1 through 4-4 for locations of these monitoring sites.)

The laboratory analyzed the collected dustfall samples for total suspended solids and the most significant dissolved components of the cooling tower drift as identified in Table 3.6-1 of the PVNGS ER-OL. Since copper sulfate was used as an algicide, the analysis also included copper.

2.4 SOILS MEASUREMENTS

At each of the 44 monitoring locations depicted in Figure 2-1, soil samples were collected at the end of the wet season (February-March), at the end of the dry season (July-August), and at all 13 agricultural sites after cotton defoliation. The samples were drawn from the upper and lower fractions of five cores on each of two transects. The sampling was done in accordance with the methodology in DOE Environmental Measurements Laboratory HASL-300 (DOE, no date). A soil auger was used to collect 3-inch-diameter core samples in depth increments to 30 cm, which were divided into upper and lower segments. For uncultivated soils, the depth to the break between upper and lower segments was determined in the field on the basis of the depth to the textural change. Cores in cultivated areas were divided into equal upper and lower segments. All upper segments and all lower segments for each transect were separately combined to form four composites (two depth increments for each of the two transects), from each of which two samples were taken and labeled. The labeled samples were then shipped to the analytical laboratory, where one of each composite was analyzed and the other retained in storage.

Soil samples from depths of 0-15 cm and 15-30 cm were each analyzed for the following parameters: soluble sodium, calcium, potassium, magnesium, sulfate, nitrate, chloride, fluoride, carbonate, bicarbonate, ammonia, phosphate and boron, exchangeable sodium, calcium, potassium and magnesium, pH, and electrical conductivity.

2.5 VEGETATION MEASUREMENTS

2.5.1 Indigenous Vegetation

Representative native plant communities, which have been identified and monitored since 1976 to determine baseline conditions, were sampled semiannually (March-April and August-September). The eight indigenous vegetation sites are depicted in Figure 2-2.

The indigenous plant communities at PVNGS are dominated by creosote-bush and salt-bush. Associated with these are mesquite and several species of cacti. The indigenous vegetative sampling conducted within each of the existing sites included:

- o measurement of species richness and relative cover
- o measurement of salt loading in tissues of the dominant or codominant flora (other than cacti)

After sampling, native vegetation samples were sent to a laboratory for analysis. These samples were oven dried at 70°C for 24 hr, dry weighed, ground in a blender, and stored in Kraft paper bags. The dried samples were analyzed for total sodium, phosphate, calcium, potassium, and magnesium, and soluble sulfate, nitrate, chloride, and fluoride.

2.5.2 Agricultural Crops

At 10 of the 13 agricultural monitoring sites (Figure 2-2), agricultural crops were sampled twice each growing season (e.g., June and September for cotton) before defoliation (or harvest) in order to estimate plant tissue salt loading. Three of the 13 agricultural monitoring sites (7, 28, and 45) were fallow during the 1985 cotton growing season. Additionally, cotton yield was estimated by collecting the seed and fiber (boll) from selected cotton plots.

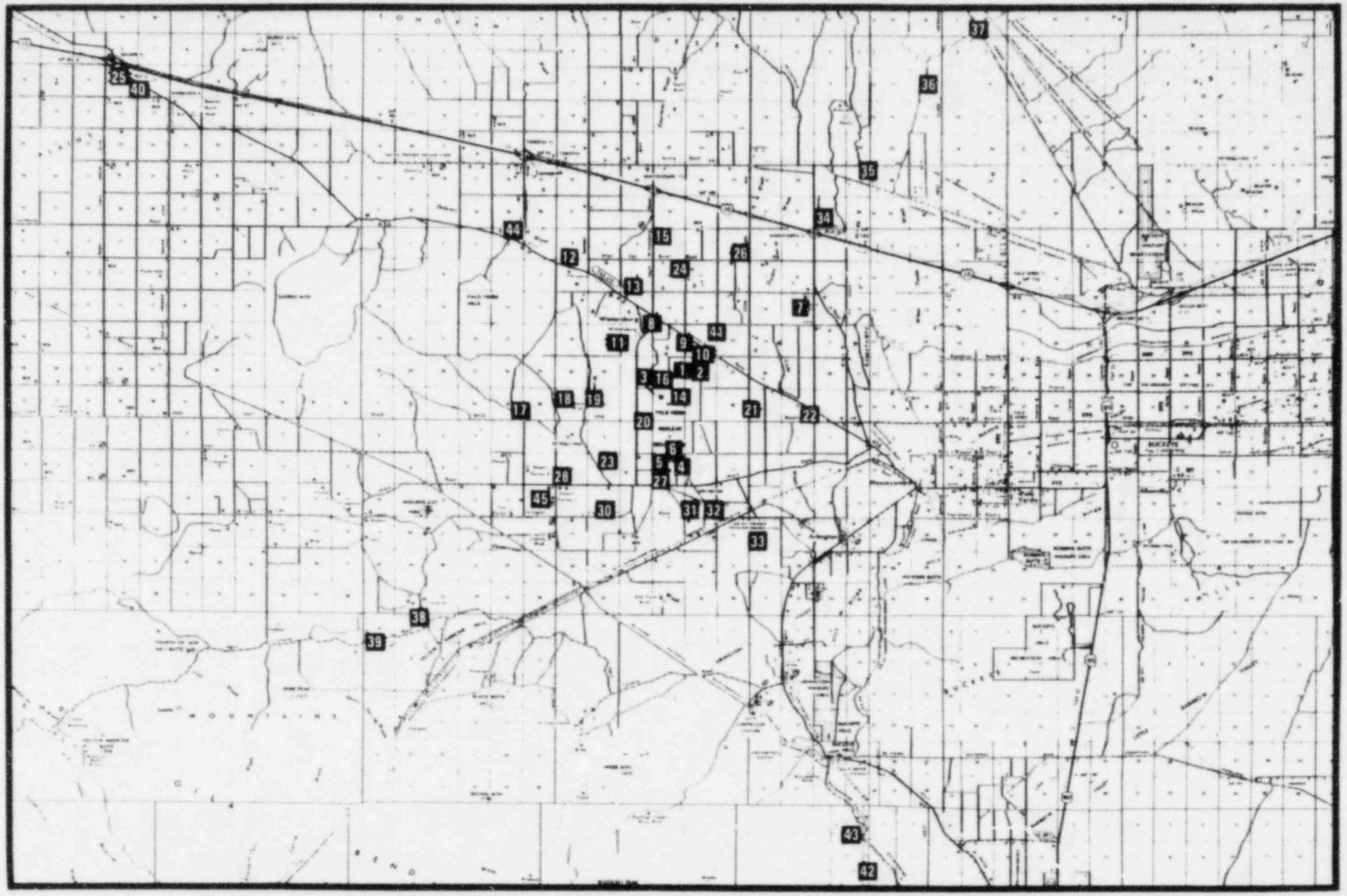
Agricultural crop samples were sent to a laboratory for analysis. The samples were oven dried at 70°C for 24 hr, dry weighed, ground, and stored in Kraft paper bags. The dried samples were analyzed for total sodium, calcium, potassium, magnesium, and phosphate, and soluble sulfate, nitrate, chloride, and fluoride.

2.5.3 Aerial Photography/Remote Sensing

Both indigenous vegetation (Section 2.5.1) and agricultural crops were monitored by aerial (color infrared) photography. The principal crops grown in a 5-mile radius of PVNGS were photographed at the time of peak productivity (August-September).

2.6 AIRBORNE SALT MEASUREMENTS

Airborne salt concentrations were measured by collecting particles on a low-volume particulate sampler. Measurements were taken from the existing low-volume samplers (Figure 2-1) being used as part of the PVNGS radiological monitoring program. The filters were collected weekly for radiological analysis and were composited for chemical analyses on a monthly basis. The composite filters were analyzed for calcium, chloride, iron, fluoride, potassium, magnesium, sodium, nitrate as nitrogen, sulfate, and phosphate as phosphorous.



Footnote:
Low-volume air samples are located at 8,9,10,20,21,27.

Figure 2-1
Distribution of Dustfall and Soil Sampling Locations

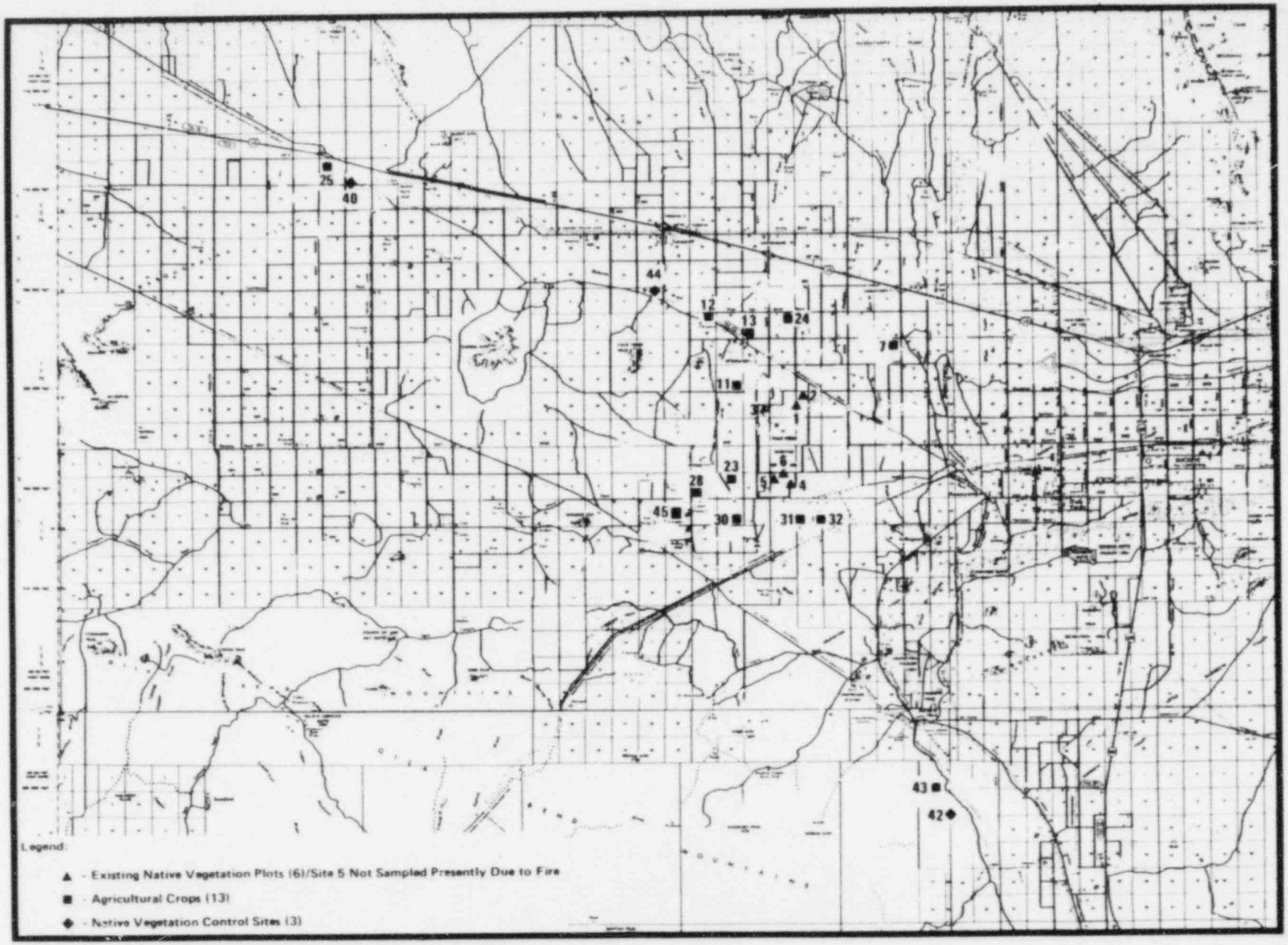


Figure 2-2
Distribution of Vegetation Sampling Locations

3 CLIMATOLOGICAL SUMMARY

3.1 GENERAL CLIMATOLOGY

The PVNGS site is located in southwestern Arizona, approximately 50 miles west-southwest of Phoenix (Sky Harbor International Airport). This area, which is in the Inter-Mountain Plateau Climatic Zone, is in the driest region of the United States (Baldwin, 1973). This large, arid region is typified by abundant sunshine, infrequent precipitation, low relative humidities, large diurnal temperature ranges, moderate wind speeds, and an occassional intense summer thunderstorm (NOAA, 1984). The summers are hot and the winters are mild. A more detailed description of the climatology of the PVNGS site is provided in the ER-OL (PVNGS, 1979, Section 2.3).

3.2 METEOROLOGICAL SUMMARY

Monthly averages of temperature, dew point, and wind speed, and monthly totals of precipitation for 1985 are presented in Table 3-1 for the PVNGS site and for the NWS Phoenix Station (Sky Harbor International Airport). The PVNGS data compare reasonably well with the NWS Phoenix data for temperature and dew point. The NWS Phoenix Station averages about 3°F warmer than the PVNGS site. The NWS Phoenix data show considerably more precipitation than the PVNGS data, with maximum amounts occurring in September and November. Data losses at the PVNGS site, due mainly to chart paper jams and inking problems, account for the majority of this discrepancy. Comparisons of PVNGS data with daily totals for NWS Phoenix show that as much as one quarter of the 1985 annual precipitation may have occurred in periods during which the PVNGS precipitation data were not recoverable. Another reason for the discrepancy between precipitation totals at PVNGS and NWS Phoenix is the highly variable and localized nature of the convective storms that account for most of the precipitation in the site area, especially during the summer and fall months. Table 3-2 lists the number of days each month when precipitation was recorded at the PVNGS site and the NWS Phoenix Station. The majority of the precipitation days in 1985 occurred in early winter and late fall, while an extended dry period occurred from late spring through mid summer.

Comparisons of 1985 data and long-term averages for both PVNGS and NWS Phoenix are presented in Section 9.1.

Figures 3-1 through 3-5 present monthly and annual wind roses of average speed and frequency by direction for the 35- and 200-ft levels at PVNGS for 1985. The annual distributions of wind direction are very similar between the two levels, with a peak frequency for winds from the southwest. However, a secondary peak from the north and north-northeast is evident only at the 35-ft level. This peak is a reflection of the nighttime cold air drainage flow from the higher terrain just to the north of the PVNGS site. The highest average wind speeds are for winds from the southwest. Also presented on the wind roses is the frequency of calm winds, 0.1 percent for the 35-ft level and 0.0 percent for the 200-ft level for the annual period.

Table 3-3 presents monthly distributions of atmospheric stability classes for PVNGS for 1985 based on the ΔT (200 ft-35 ft). The distributions show a preponderance of stable classes (E, F, and G) occurring most frequently during the fall and winter months. The unstable classes (A, B, and C) are more common in the spring and summer months. This is a normal pattern for the PVNGS site area. A more detailed description of the meteorological conditions measured at PVNGS during 1985 is presented in the report NUS-4868.

3.3 METEOROLOGICAL DATA RECOVERY

The meteorological data recovery for 1985 is listed in Table 3-4. The 200- and 35-ft wind data recoveries were 94 and 93 percent, respectively. The recovery of ΔT data was 84 percent. Severe chart drive problems and paper jams in January and September resulted in ΔT data recoveries of 38 and 61 percent, respectively. Problems in the remaining months, when ΔT recovery was less than 90 percent, were attributable mainly to paper jams in the chart recorder. The data recovery for the dew point was 82 percent and for the temperature 85 percent. Precipitation data recovery was 84 percent for the data period. However, in view of the highly convective nature of the precipitation at PVNGS, the high data recovery does not necessarily indicate that representative data was obtained. Data recoveries for all parameters

in November and December were 100 and 99 percent, respectively. These recovery rates are attributable to the new meteorological system installed at PVNGS during mid-October.

Table 3-1
MONTHLY AVERAGES OF METEOROLOGICAL DATA FOR PVNGS AND NWS PHOENIX FOR 1985

	Temperature (°F)		Dew Point (°F)		Precipitation (in)		Wind Speed (mph)	
Month	PVNGS	NWS Phoenix[a]	PVNGS	NWS Phoenix[a]	PVNGS	NWS Phoenix	PVNGS	NWS Phoenix[a]
January	48	54	35	36	0.28	0.95	4.9	4.7
February	53	57	35	32	0.64	0.18	4.7	4.3
March	60	63	35	34	0.00	0.46	6.4	5.7
April	73	75	39	36	0.09	0.17	7.4	7.4
May	81	84	34	34	0.00	0.00	7.4	7.1
June	91	92	40	39	0.00	0.00	7.3	5.2
July	94	95	60	55	0.25	0.98	7.8	8.0
August	92	95	58	56	0.00	0.21	6.9	7.6
September	76	82	50	49	0.00	1.60	6.1	7.3
October	70	75	49	49	0.75	0.92	5.0	6.2
November	57	61	37	39	1.38	1.59	5.2	6.5
December	51	56	38	37	1.14	0.86	3.2	4.4
Annual	71	74	43	41	4.53	7.92	6.0	6.2

[a]Based on measurement at 33 ft.

Table 3-2
NUMBER OF DAYS WITH PRECIPITATION EVENTS
≥0.01 INCH RECORDED AT PVNGS AND NWS
PHOENIX FOR 1985

Month	PVNGS	NWS Phoenix
January	2	7
February	3	5
March	0	4
April	1	3
May	0	0
June	0	0
July	1	4
August	0	1
September	0	4
October	3	4
November	4	5
December	3	1
Average (month)	1.4	3.2

Table 3-3
MONTHLY PERCENT FREQUENCY DISTRIBUTIONS OF STABILITY CLASSES BASED ON ΔT (200 ft-35 ft) FOR PVNGS[a] FOR 1985

	Stability Category						
Month	A	B	C	D	E	F	G
January	0.00	1.85	3.33	31.11	12.59	21.11	28.89
February	0.48	1.45	4.82	30.71	14.31	13.34	34.89
March	4.13	3.97	7.30	25.71	17.14	14.44	27.30
April	9.84	6.50	11.42	21.79	13.71	10.90	25.83
May	8.05	8.05	11.09	19.00	18.09	15.96	19.76
June	11.75	8.53	12.03	15.38	15.66	16.36	20.28
July	10.13	10.28	9.99	21.29	25.84	12.04	10.43
August	6.91	8.82	11.76	17.65	23.09	15.88	15.88
September	1.38	3.45	8.05	25.52	15.86	18.39	27.36
October	0.98	2.79	5.57	29.67	14.92	16.39	29.67
November	1.39	1.95	4.18	28.31	15.06	15.48	33.61
December	0.41	0.00	0.27	29.66	9.93	12.38	47.35
Annual	4.96	5.00	7.62	24.23	16.62	14.85	26.73

[a]Averages are based on the joint recovery of stability and 35-ft wind data.

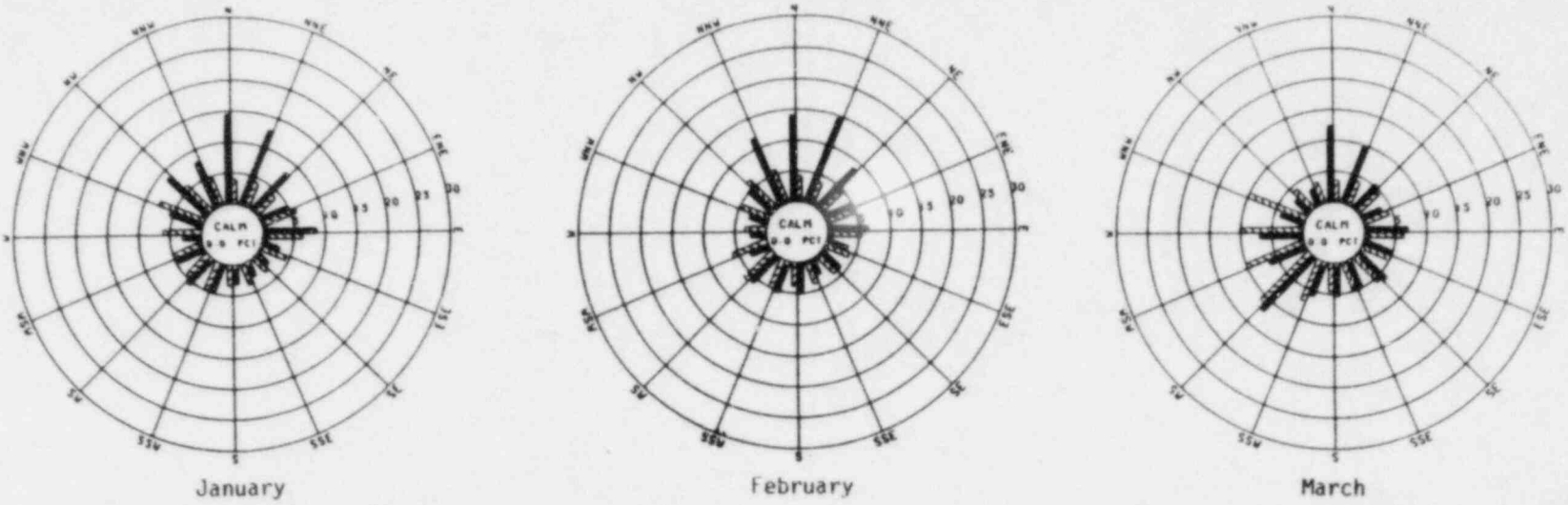
Table 3-4
METEOROLOGICAL DATA RECOVERY (PERCENT) AT PVNGS FOR 1985

Month	35-ft Wind Speed	35-ft Wind Direction	200-ft Wind Speed	200-ft Wind Direction	ΔT (200-ft to 35-ft) Wind Data	Joint (ΔT/35-ft) Wind Data	35-ft Dew Point	35-ft Temperature	Precipitation[a]
January	83	83	79	79	38	36	38	38	37
February	93	93	100	100	100	93	100	100	100
March	97	100	88	88	88	85	87	86	87
April	92	93	93	93	80	79	86	80	86
May	96	96	96	96	89	88	66	89	66
June	99	99	99	99	99	99	99	99	98
July	100	100	99	100	92	92	99	92	99
August	91	91	91	91	91	91	91	91	91
September	88	88	88	88	61	60	37	59	61
October	89	89	89	89	82	82	77	82	85
November	100	100	100	100	100	100	99	100	100
December	99	99	99	99	99	99	99	99	99
Annual	94	94	93	94	85	84	82	85	84

[a]Fairly high data recovery for precipitation does not necessarily indicate representative data have been obtained, since precipitation events could occur during missing periods.

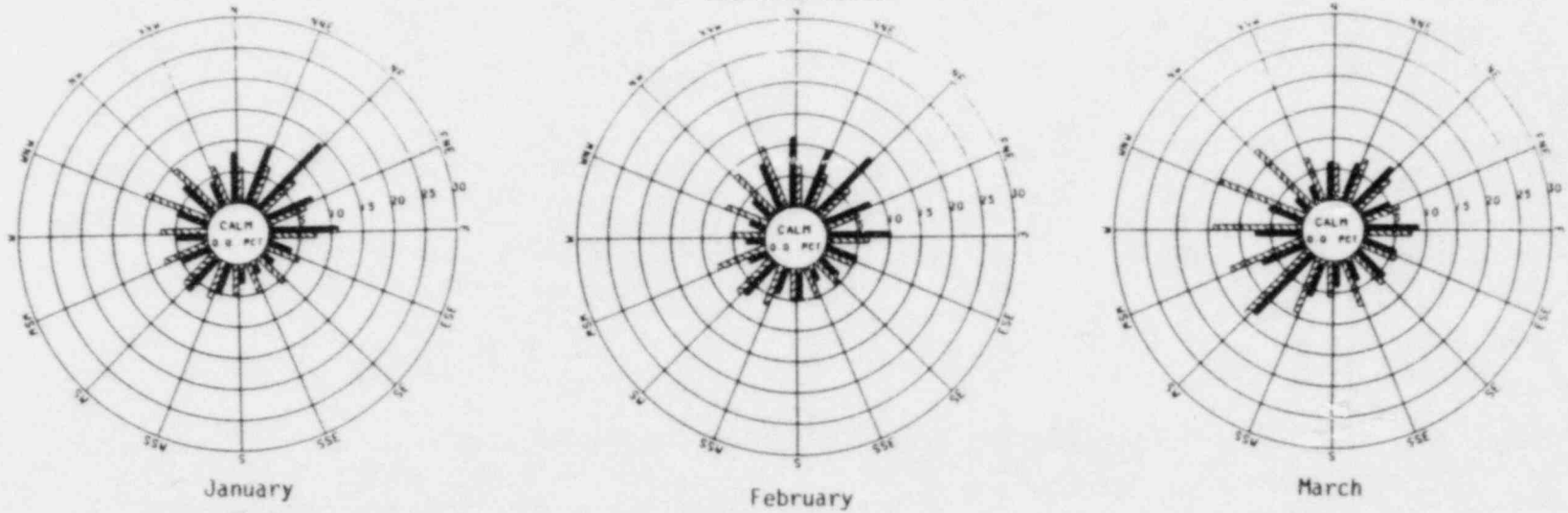
FIGURE 3-1
PALO VERDE GROSS WIND ROSES-JANUARY, FEBRUARY, AND MARCH 1985

35-Foot Level



January | February | March

200-Foot Level



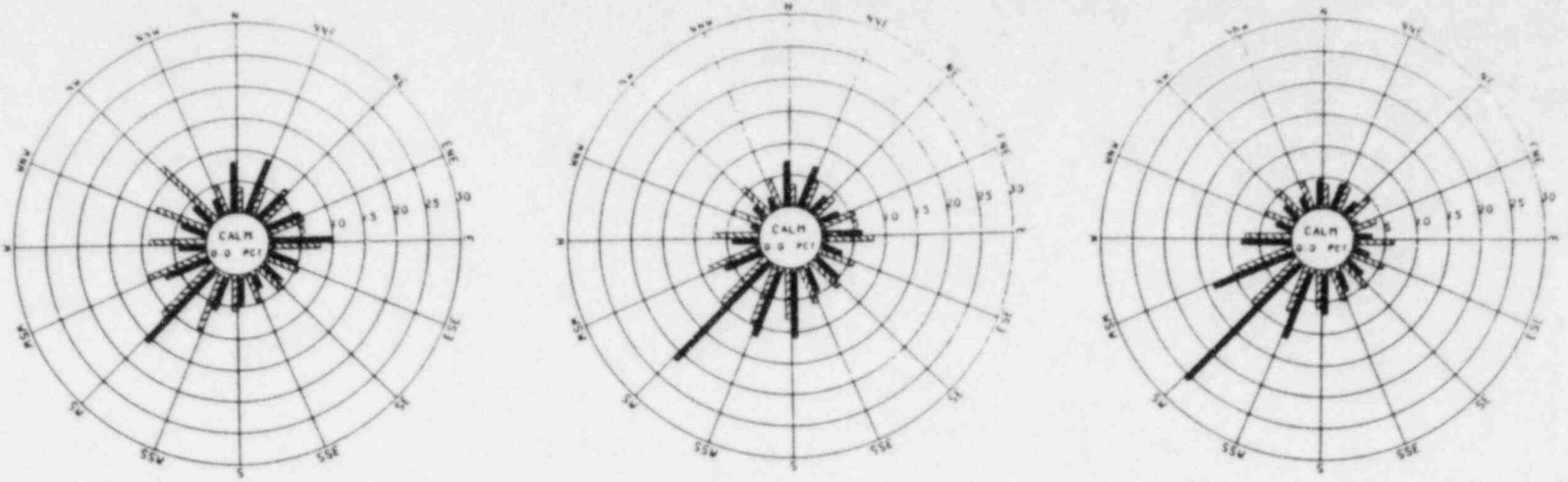
January | February | March

Wind Direction Frequency (Percent) Stability Classification

Mean Wind Speed (mi/hr)

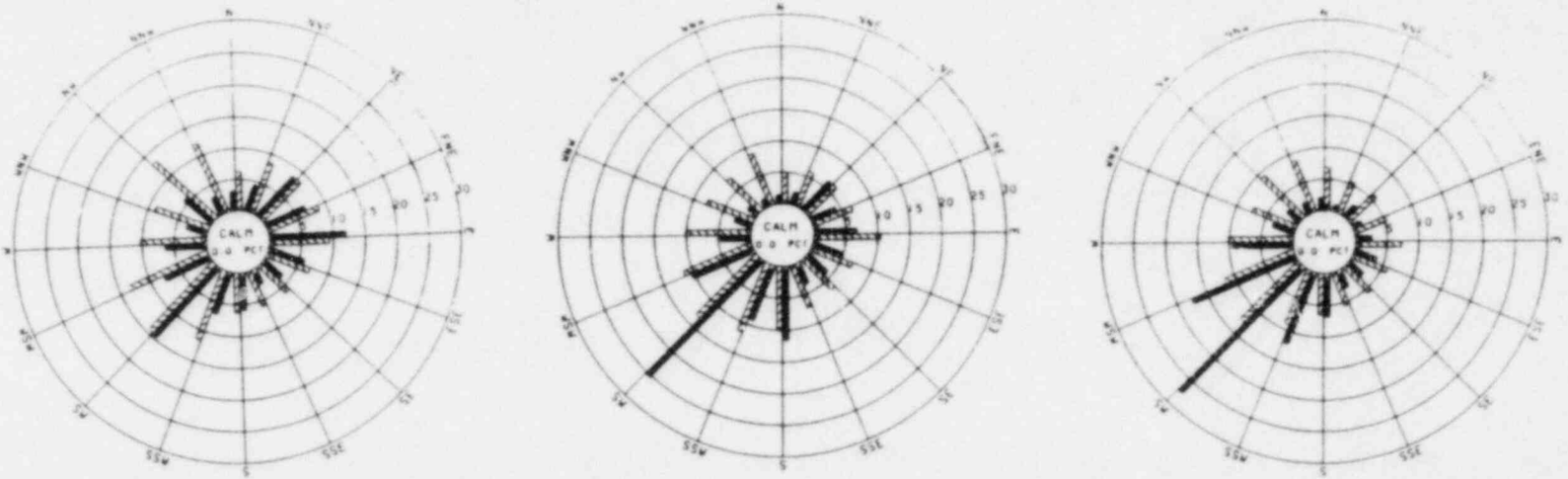
FIGURE 3-2
PALO VERDE GROSS WIND ROSES-APRIL, MAY, AND JUNE 1985

35-Foot Level



April May June

200-Foot Level



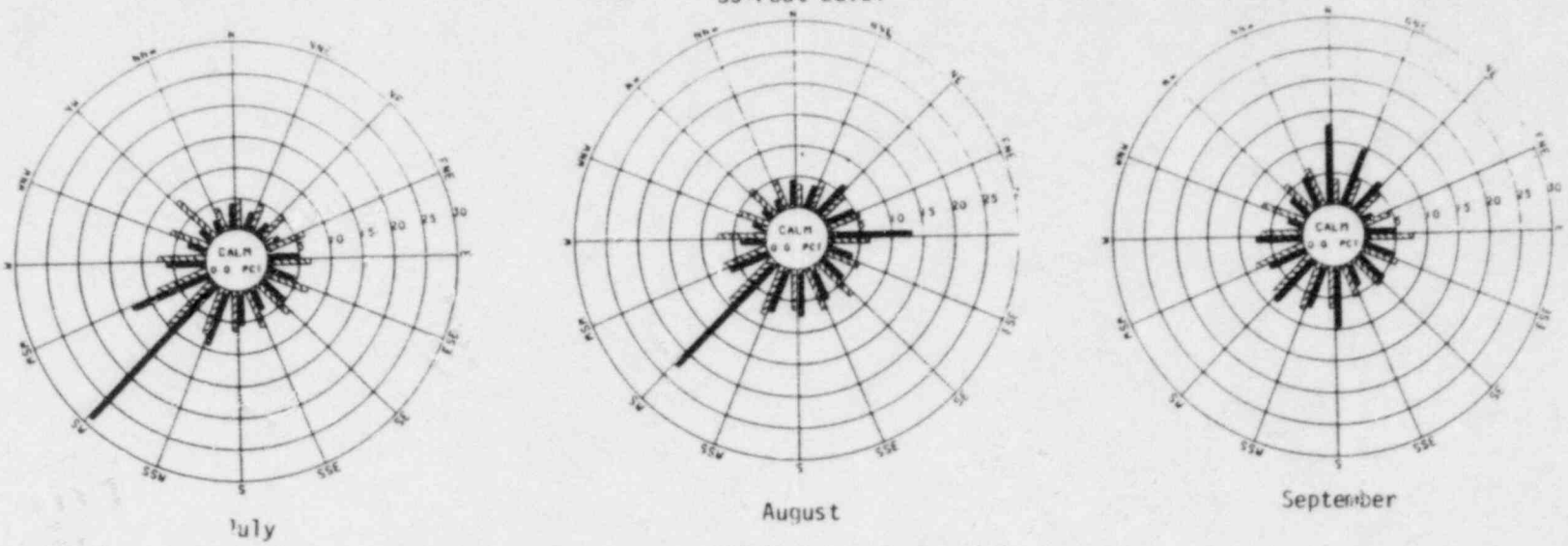
April May June

Wind Direction Frequency (Percent) Stability Classification

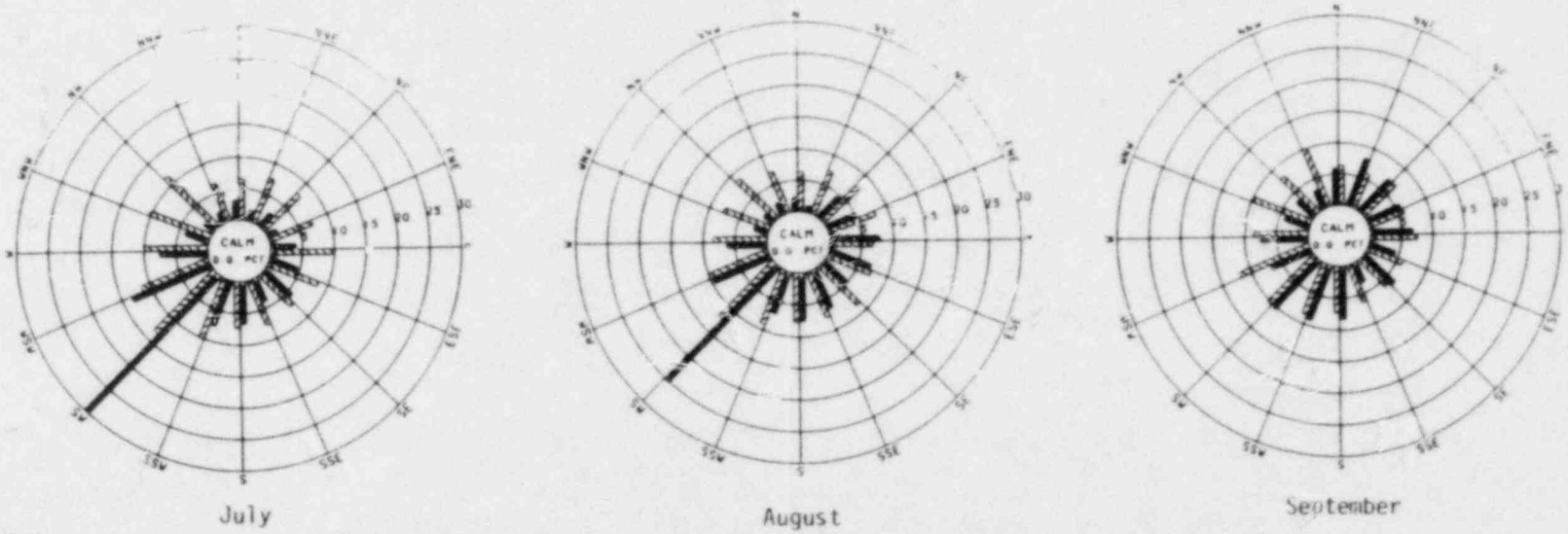
Mean Wind Speed (mi/hr)

FIGURE 3-3
PALO VERDE GROSS WIND ROSES-JULY, AUGUST, AND SEPTEMBER 1985

35-Foot Level



200-Foot Level

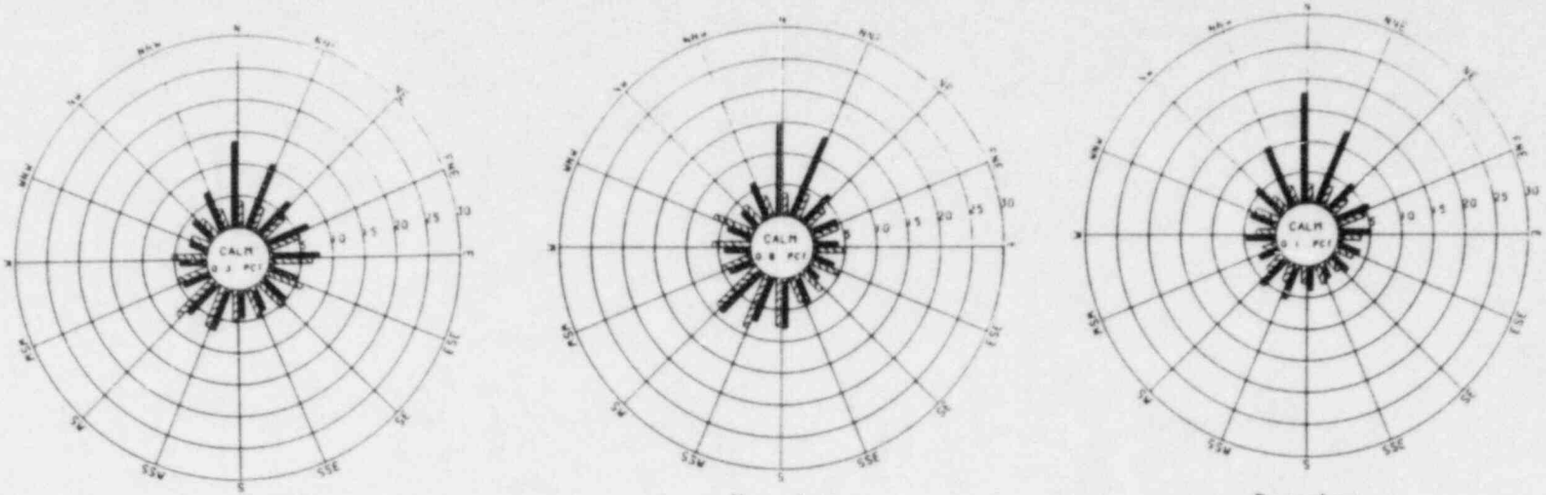


Wind Direction Frequency (Percent) Stability Classification

Mean Wind Speed (mi/hr)

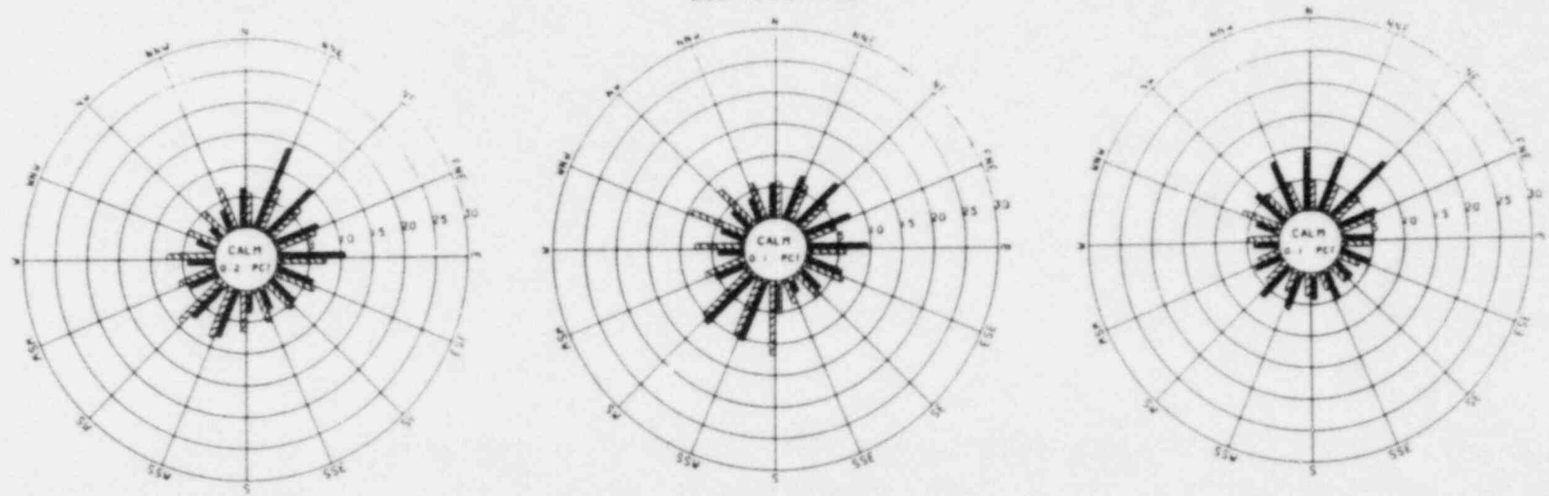
FIGURE 3-4
PALO VERDE GROSS WIND ROSES-OCTOBER, NOVEMBER, AND DECEMBER 1985

35-Foot Level



October November December

200-Foot Level



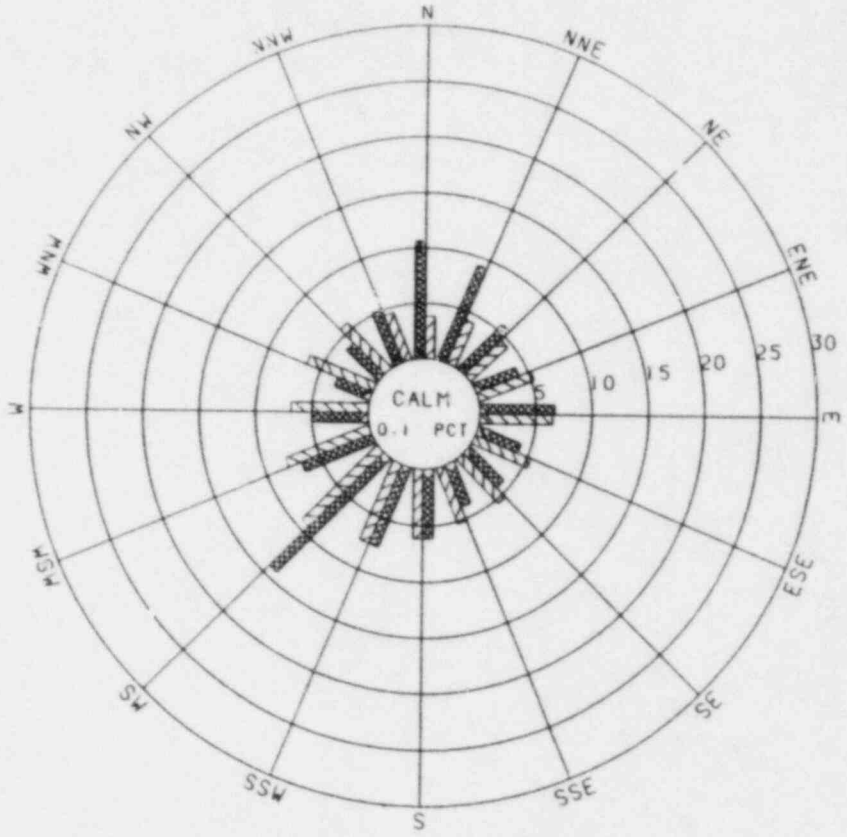
October November December

Wind Direction Frequency (Percent) Stability Classification

Mean Wind Speed (mi/hr)

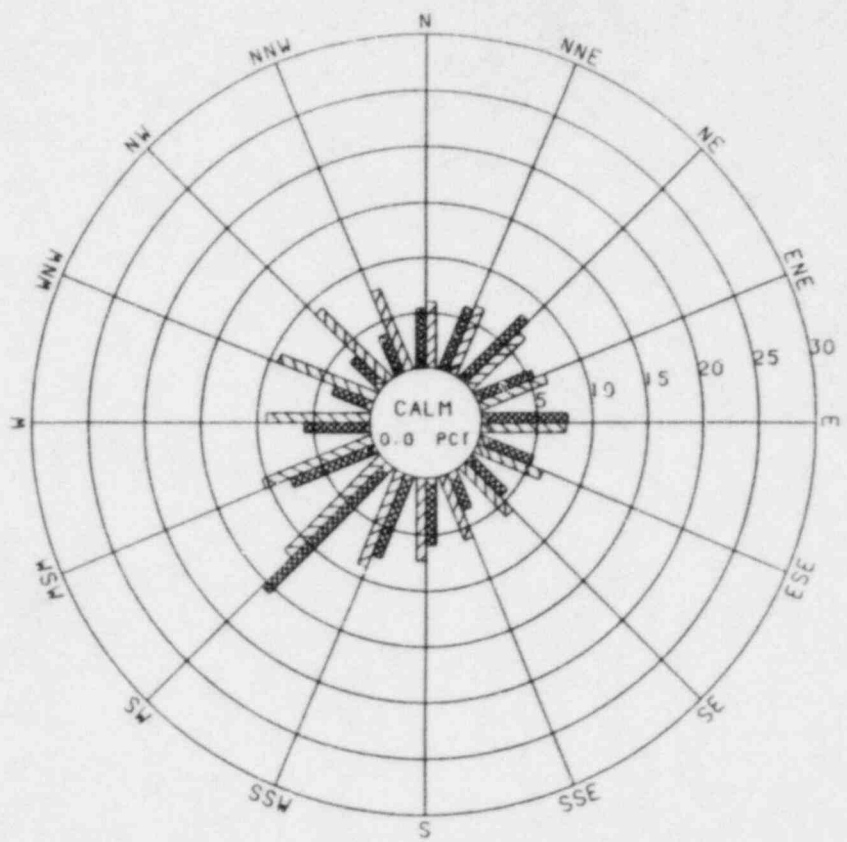
FIGURE 3-5
PALO VERDE GROSS WIND ROSES-ANNUAL PERIOD 1985

35-Foot Level



Annual

200-Foot Level



Annual

Wind Direction Frequency (Percent) Stability Classification

Mean Wind Speed (mi/hr)

4 PLANT OPERATION

4.1 COOLING TOWER OPERATION

Unit 1 of the Palo Verde Nuclear Generating Station (PVNGS) received Facility Operating License NPF-34 on December 31, 1984. Operation of the cooling towers concurrently with significant heat generation by Unit 1 did not begin until August 1985. Throughout the remainder of the year, operation of the unit was intermittent, consistent with the startup testing phase of activities. Unit 2 of the PVNGS received Facility Operating License, NPF-46, on December 9, 1985, and did not operate at any time during the remainder of the year.

Operating data were obtained for the period of August 1 through the end of the year to permit estimation of the emission of drift from the three cooling towers of Unit 1. These data included the dissolved solids content, as indicated by conductivity (see Section 4.3) and temperatures of the circulating water, the number of circulating water pumps and the number of cooling tower fans in operation and the thermal energy generated. From these data, the emission of drift per day was calculated, assuming a drift rate at full fan flow of 0.0002 percent of the circulating water flow rate. This rate is the best estimate of the drift measured by two different methods (ESC, 1983). The drift rate under natural draft in these towers (no fans in operation) was assumed to be zero.

The operating parameters and calculated drift emissions for each of the last five months of 1985 are summarized in Table 4-1. The daily plant data and calculated emissions for this period are presented by month in Appendix A.

4.2 DRIFT DEPOSITION MODELING

As described in Section 2.2.2, drift deposition modeling utilized the NUS FOG computer code. The FOG code was run for the months of August, September, October, and December 1985, which corresponded to the significant Unit 1 cooling tower operational times during the calendar year 1985.

The results of these analyses are presented in Figures 4-1 through 4-4 for the months of August, September, October, and December, respectively. The maximum calculated offsite deposition per month was slightly less than 0.5 lb/acre, which occurred to the northeast of the Unit 1 towers in August (Figure 4-1). FOG model calculated salt deposition rates (lb/acre-month) due only to operation of the Unit 1 cooling towers for each onsite dustfall monitoring location are summarized by month in Table 4-2. Section 9.2 provides a comparison of measured dustfall deposition with FOG model predicted values.

4.3 COOLING TOWER BASIN WATER QUALITY

Cooling tower basin water was sampled for analyses of ionic concentrations on a monthly basis, beginning in May 1985, as Unit 1 began the approach to full power. The intent was to track the buildup of dissolved solids in the circulating water as its concentration was increased by evaporation, and to determine the relationship between total dissolved solids concentrations and the usual measurements of conductivity.

The results of the analyses of the samples of water taken from the Unit 1 basin of Cooling Tower 1 are presented in Table 4-3 for each of the last eight months of 1985. The table also lists the ionic concentrations as presented in the ER-OL (PVNGS, 1979, Table 3.6-1). As expected, the measured ionic concentrations are, with some exceptions, significantly less than those estimated in the ER-OL. The exceptions include copper and cadmium (about the same as the ER-OL), iron (about 7 times greater) and boron (about 3 times greater). Based on the average circulating water TDS over this period (and an average TDS concentration in the reservoir water of 800 mg/l), an average concentration factor of about 5.4 was achieved. Table 4-3 also presents the ratios of the concentrations of sodium to potassium, to calcium, to magnesium and to nitrate by month.

It can also be noted in this table (as well as in Table 4-1 and the tables of Appendix A) that the intermittent nature of the operation resulted in widely varying concentrations over the period. For example, the TDS ranged from a May sample low of 1500 ppm to a maximum of 8200 ppm in the August

sample, with an eight-month average of about 4290 ppm. These variations are reflected in the relatively large values of the sample coefficients of variation (i.e., the ratio of the standard deviation to the mean value) for the measured ions, as presented in Table 4-4. The corresponding coefficient of variation values for the ion ratios are considerably smaller, indicating a much more consistent relationship in the concentrations of these ions relative to each other than in their absolute magnitudes.

A series of comparative measurements was made in July and August to determine the relationship between the routine measurements of conductivity, which were made on the circulating water, and the concentration of total dissolved solids needed for the calculation of drift solids. The series of measurements is presented in Table 4-5 and, for the range of conductivity covered by this series, indicates a best fit value for the conversion factor of 0.64. This value was used to convert the conductivity values to TDS concentrations as reported in Appendix A and Table 4-1.

Table 4-1
UNIT 1 COOLING TOWER SOURCE TERM PARAMETERS
AUGUST - DECEMBER 1985

Parameter (Monthly Avg)	Month				
	Aug	Sep	Oct	Nov	Dec
Airflow, m^3/s					
Tower 1	6,854	5,788	4,574	0	4,622
Tower 2	1,858	5,415	4,438	0	2,580
Tower 3	6,364	5,450	4,744	0	4,662
Heat Gen., BTU/m	0.64E07	0.84E08	0.79E08	0	0.11E09
Circ. Water					
Flow, gpm	305,990	501,890	494,060	178,330	498,680
TDS, ppm	4,043	5,085	4,954	2,633	6,072
Calc. Drift					
gpm (@ .0002%)	0.32	0.55	0.41	0	0.40
lb/min	0.014	0.026	0.026	0	0.021

Table 4-2
FOG MODEL PREDICTIONS OF 1985 MONTHLY ONSITE DRIFT DEPOSITION
DUE ONLY TO PVNGS UNIT 1 COOLING TOWER OPERATION (LB/ACRE-MONTH)

Dustfall Monitoring Site	Month			
	August	September	October	December
1	0.093	0.015	0.060	0.060
2	0.035	0.019	0.021	0.042
3	0.043	0.012	0.170	0.170
4	0.94E-02	0.27E-02	0.020	0.040
5	0.14E-02	0.55E-03	0.20E-02	0.59E-02
6	0.25E-02	0.96E-03	0.83E-02	0.010
10	0.027	0.60E-02	0.011	0.029
14	0.190	0.057	0.013	0.190
16	0.360	0.180	0.260	0.300
20	0.064	0.041	0.310	0.500
27	0.66E-02	0.26E-02	0.030	0.039
80	0.630	0.190	0.530	0.600
81	0.420	0.120	0.990	0.460
82	0.012	0.016	0.110	0.200
83	0.120	0.030	0.760	0.500

Table 4-3
COOLING TOWER BASIN WATER SAMPLE DATA
PVNGS - UNIT 1
CALENDAR YEAR 1985

Cooling Tower Sample Date	1 05/14/85	1 06/06/85	1 07/31/85	1 08/30/85	1 09/30/85	1 10/28/85	1 11/21/85	1 12/19/85	AVERAGE VALUE	DESIGN BASIS VALUES ER-OL TABLE 3.6-1
Determination (mg/l)										
Calcium, total	50	62	64	340	190	270	130	240	168.250	420.0
Magnesium, total	6.2	5.9	6.1	23.0	14.0	17.0	7.8	24.0	13.000	150.0
Sodium, total	370	400	430	2500	1600	1800	1100	2100	1287.500	3375.0
Chloride	440	500	530	3200	2000	2100	1200	2300	1533.750	2400.0
Sulfate (as SO_4)	370	460	460	1700	1300	1500	900	1700	1048.750	2250.0
Nitrate (as N)	6.2	5.2	7.0	35.0	24.0	20.0	14.0	56.0	20.925	1650.0
Silica (as SiO_2)	25	25	15	40	58	67	40	81	43.875	150.0
Phosphate	0.39	0.40	0.15	0.84	0.82	1.70	1.00	1.70	0.875	1.5
Fluoride	3.3	3.3	2.2	11.0	7.8	9.8	5.9	12.0	6.912	52.5
Potassium, total	23	20	21	130	83	97	42	110	65.750	207.0
Copper, total	0.120	0.180	0.590	0.670	0.110	0.420	0.260	0.180	0.316	0.3
Zinc, total	0.075	0.170	0.290	0.220	0.170	0.200	0.130	0.170	0.178	1.0
Iron, total	0.31	0.31	0.34	0.82	0.22	0.67	0.46	1.30	0.554	0.075
Arsenic, total	< 0.005	0.007	< 0.005	0.016	0.008	0.017	< 0.005	0.016	0.010	0.12
Boron	1.0	1.2	0.9	3.3	1.9	1.3	0.9	2.7	1.650	0.56
Ammonium	< 0.2	< 0.2	< 0.2	1.0	0.6	< 0.5	< 0.2	< 0.2	0.387	75.0*
TSS (at 105 deg C)	20	< 5	5	53	38	15	7	15	19.750	150.0
COD	45	24	39	120	140	160	81	100	88.625	1305.0
Alkalinity, total	33	< 5	< 5	41	50	130	30	84	47.250	1500.0
TDS (at 180 deg C)	1500	1700	1700	8200	5300	5900	3200	6800	4287.500	12000.0
Silver, total	< 0.005	< 0.005	< 0.005	0.015	0.007	< 0.005	< 0.005	0.014	0.0076	0.05
Barium, total	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.15
Cadmium, total	< 0.005	< 0.005	< 0.005	< 0.005	0.030	0.029	0.012	0.010	0.013	0.015
Chromium, total	0.023	0.010	< 0.005	0.027	0.027	0.030	0.024	0.034	0.022	0.06
Lead, total	< 0.005	< 0.005	0.006	0.006	< 0.005	0.008	0.010	0.008	0.0066	0.3
Mercury, total	< 0.0001	0.0001	0.0001	0.0003	0.0001	0.0001	< 0.0001	< 0.0001	0.00012	0.0015
Beryllium, total	< 0.005	0.007	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.0052	0.3
Selenium, total	< 0.005	< 0.005	< 0.005	< 0.005	0.009	< 0.005	< 0.005	< 0.005	0.0055	0.015
Manganese, total	0.014	0.018	0.050	0.098	0.030	0.021	0.016	0.005	0.031	0.75
Phenol	< 0.002	0.021	< 0.002	0.003	< 0.002	0.004	0.008	0.005	0.0059	0.14
										* NH_3-N
IONIC RATIOS										
Na/K	16.09	20.00	20.48	19.23	19.28	18.56	26.19	19.09	19.86	
Na/Ca	7.40	6.45	6.72	7.35	8.42	6.67	8.46	8.75	7.53	
Na/Mg	59.68	67.80	70.49	108.70	114.29	105.88	141.03	87.50	94.42	
Na/NO_3	59.68	76.92	61.43	71.43	66.67	90.00	78.57	37.50	67.77	

Table 4-4
COOLING TOWER BASIN WATER ANALYSES
1985 AVERAGE VALUES AND ION RATIOS

Analytical Determination (mg/l)	Average Value	Std Dev +/-	Coeff of Var
Calcium, total	168.250	108.940	0.647
Magnesium, total	13.000	7.647	0.588
Sodium, total	1287.500	835.853	0.649
Chloride	1533.750	1020.181	0.665
Sulfate (as SO_4)	1048.750	572.100	0.546
Nitrate (as N)	20.925	17.504	0.836
Silica (as SiO_2)	43.875	22.956	0.523
Phosphate	0.875	0.582	0.665
Fluoride	6.912	3.799	0.550
Potassium, total	65.750	44.477	0.676
Copper, total	0.316	0.218	0.689
Zinc, total	0.178	0.063	0.354
Iron, total	0.554	0.364	0.657
Arsenic, total	0.010	0.005	0.553
Boron	1.650	0.907	0.550
Ammonium	0.387	0.295	0.761
TSS (at 105 deg C)	19.750	17.244	0.873
COD	88.625	49.925	0.563
Alkalinity, total	47.250	38.872	0.823
TDS (at 180 deg C)	4287.500	2607.373	0.608
Silver, total	0.0076	0.0043	0.565
Barium, total	< 0.2	NA	NA
Cadmium, total	0.013	0.011	0.852
Chromium, total	0.022	0.010	0.443
Lead, total	0.0066	0.0018	0.279
Mercury, total	0.00012	0.00007	0.566
Beryllium, total	0.0052	0.0007	0.135
Selenium, total	0.0055	0.0014	0.257
Manganese, total	0.031	0.030	0.953
Phenol	0.0059	0.0064	1.097
IONIC RATIOS			
Na/K	19.86	2.87	0.145
Na/Ca	7.53	0.91	0.121
Na/Mg	94.42	27.87	0.295
Na/NO_3	67.77	15.73	0.232

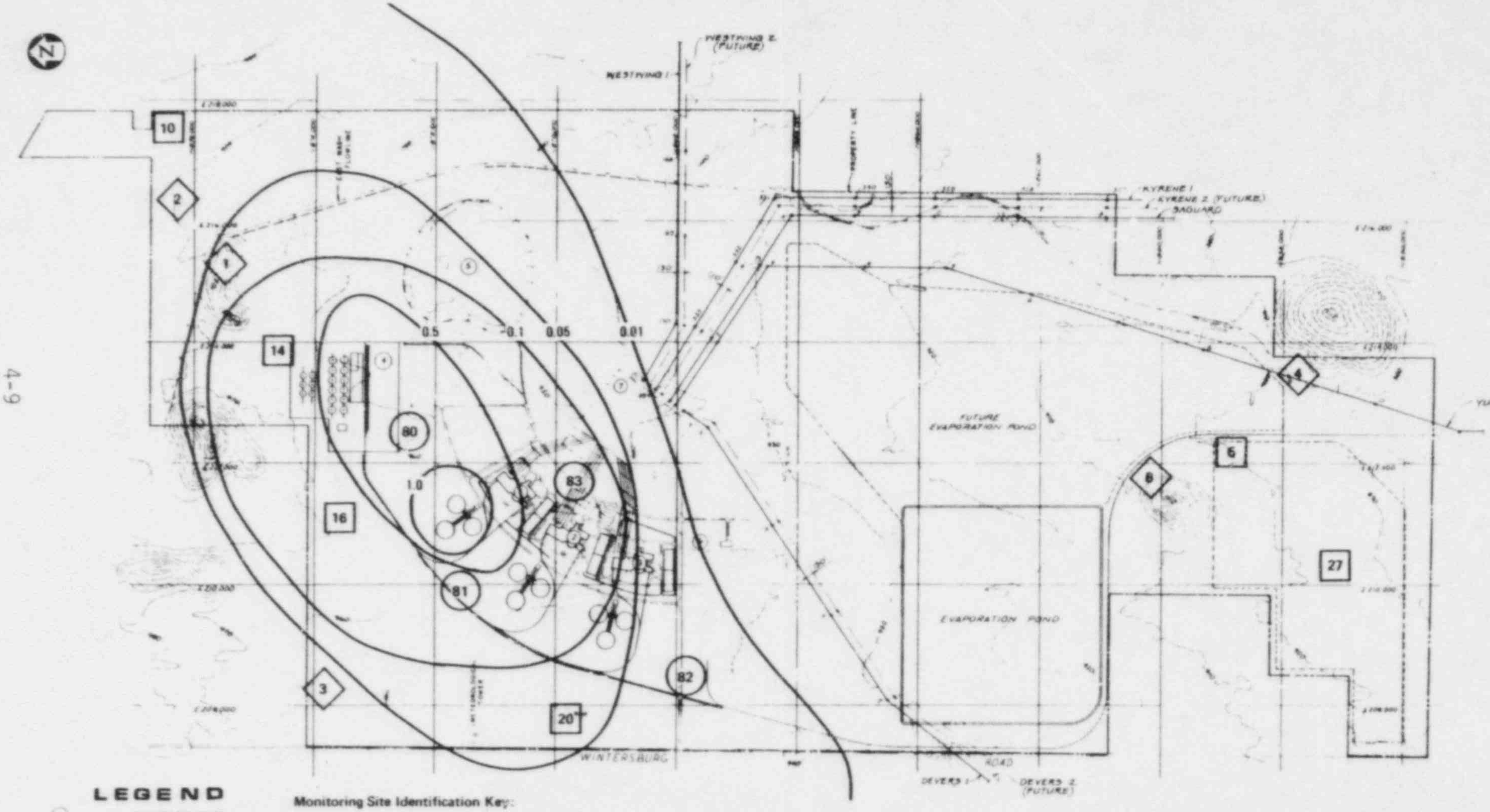
Table 4-5
CONDUCTIVITY: TDS CORRELATION ANALYSIS

Date		All Samples		
		COND umho	TDS ppm	TDS/COND
July	17	4950	3096	0.625
	18	4990	3000	0.601
	19	4330	2882	0.666
	20	4800	3236	0.674
	21	5420	3460	0.638
	22	5600	3496	0.624
	23	4720	3082	0.653
	24	3940	3102	0.787
	25	3910	2236	0.572
	26	3350	1894	0.565
	27	2770	1696	0.612
	28	2100	2048	0.975
	29	2670	1620	0.607
	30	2260	1250	0.553
	31	2250	1388	0.617
August	1	3000	1720	0.573
	2	3260	1980	0.607
	3	3630	1228	0.338
	4	3960	2420	0.611
	5	4540	2710	0.597
	6	4860	3220	0.663
	7	5280	3260	0.617
	8	5670	3520	0.621
	9	5900	3680	0.624
	10	5920	3822	0.647
	11	6880	4186	0.608
	12	6660	4606	0.692
	13	ND*	ND*	ND*
	14	7780	4862	0.625

REGRESSION ANALYSIS - Y = A + BX

Intercept (A)	-44.894
Slope (B)	0.638
R-square	0.926
SE of estimate	308.037
SE of A	161.126
SE of B	0.035

*ND = No data.



LEGEND

Monitoring Site Identification Key:

Location No.	Samples Collected
2 (diamond)	Native Vegetation, Dustfall, Soils
16 (square)	Dustfall, Soils
81 (circle)	Dustfall

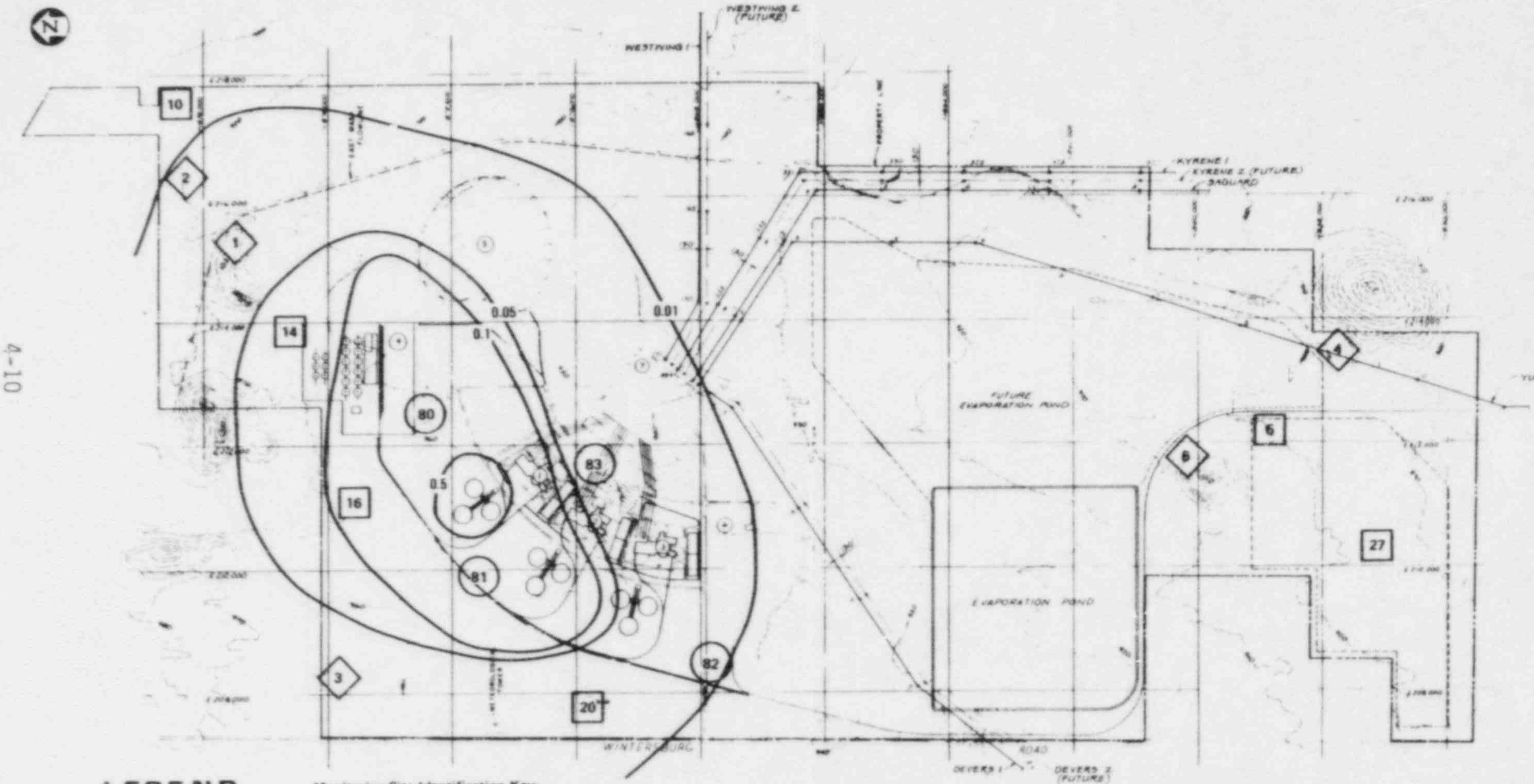
Notes:
1. PVNGS "16 Bin Spectrum"
2. 0.0002% Drift Rate
3. Unit 1 (three towers)

13-C-ZVA-005 REV. 2

Palo Verde Nuclear Generating Station

PVNGS Unit 1 - FOG Model Predictions of Total Solids Deposition for August 1985 (lb/acre-month)

Figure 4-1



LEGEND

Monitoring Site Identification Key:

Location No.	Samples Collected
2 (diamond)	Native Vegetation, Dustfall, Soils
16 (square)	Dustfall, Soils
81 (circle)	Dustfall

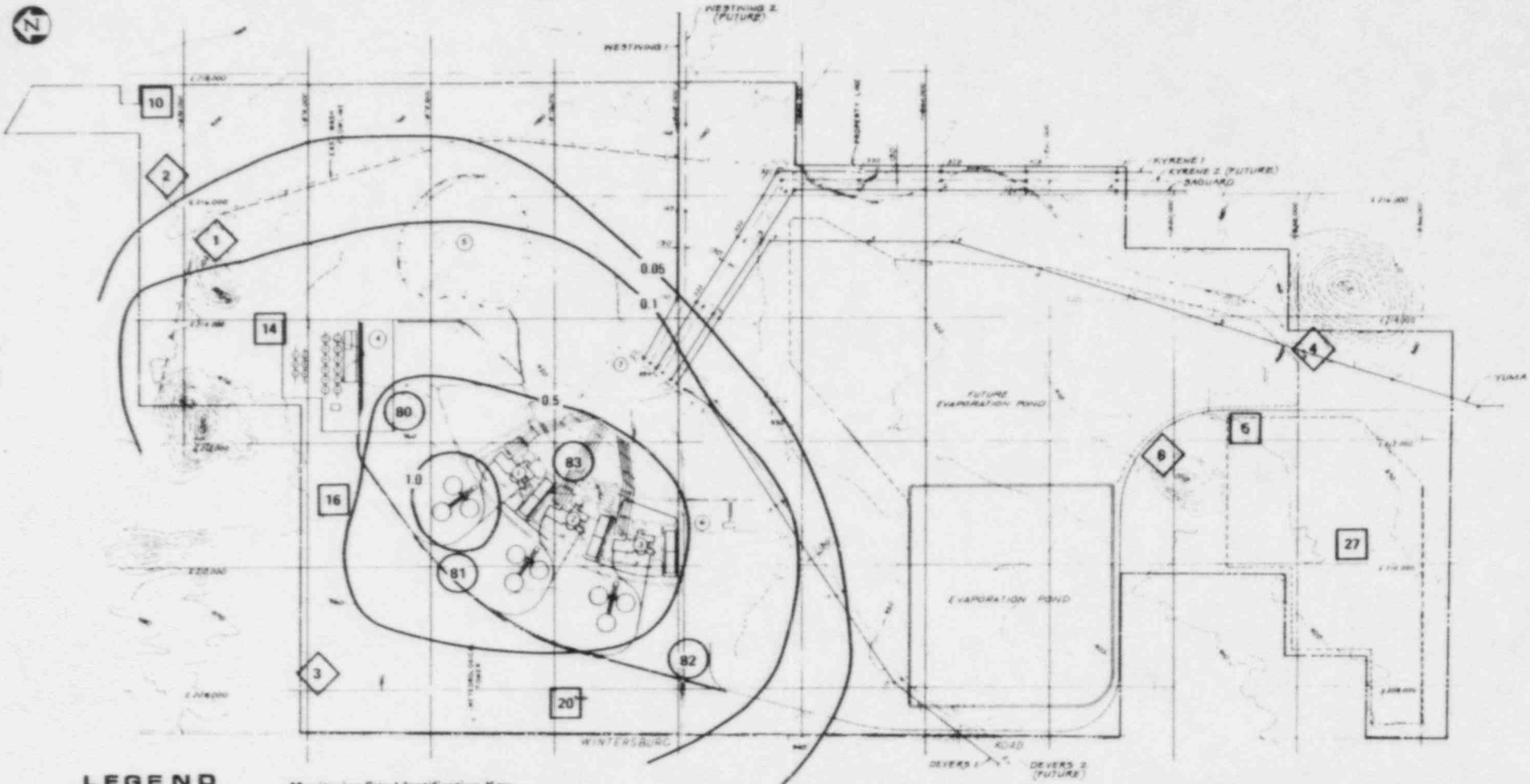
Notes:
1. PVNGS "16 Bin Spectrum"
2. 0.0002% Drift Rate
3. Unit 1 (three towers)

13-C-ZVA-005 REV 2

Palo Verde Nuclear Generating Station

PVNGS Unit 1 – FOG Model Predictions of Total Solids Deposition for September 1985 (lb/acre-month)

Figure 4-2



LEGEND

Monitoring Site Identification Key:

Location No.	Samples Collected
◇ 2	Native Vegetation, Dustfall, Soils
□ 16	Dustfall, Soils
○ 81	Dustfall

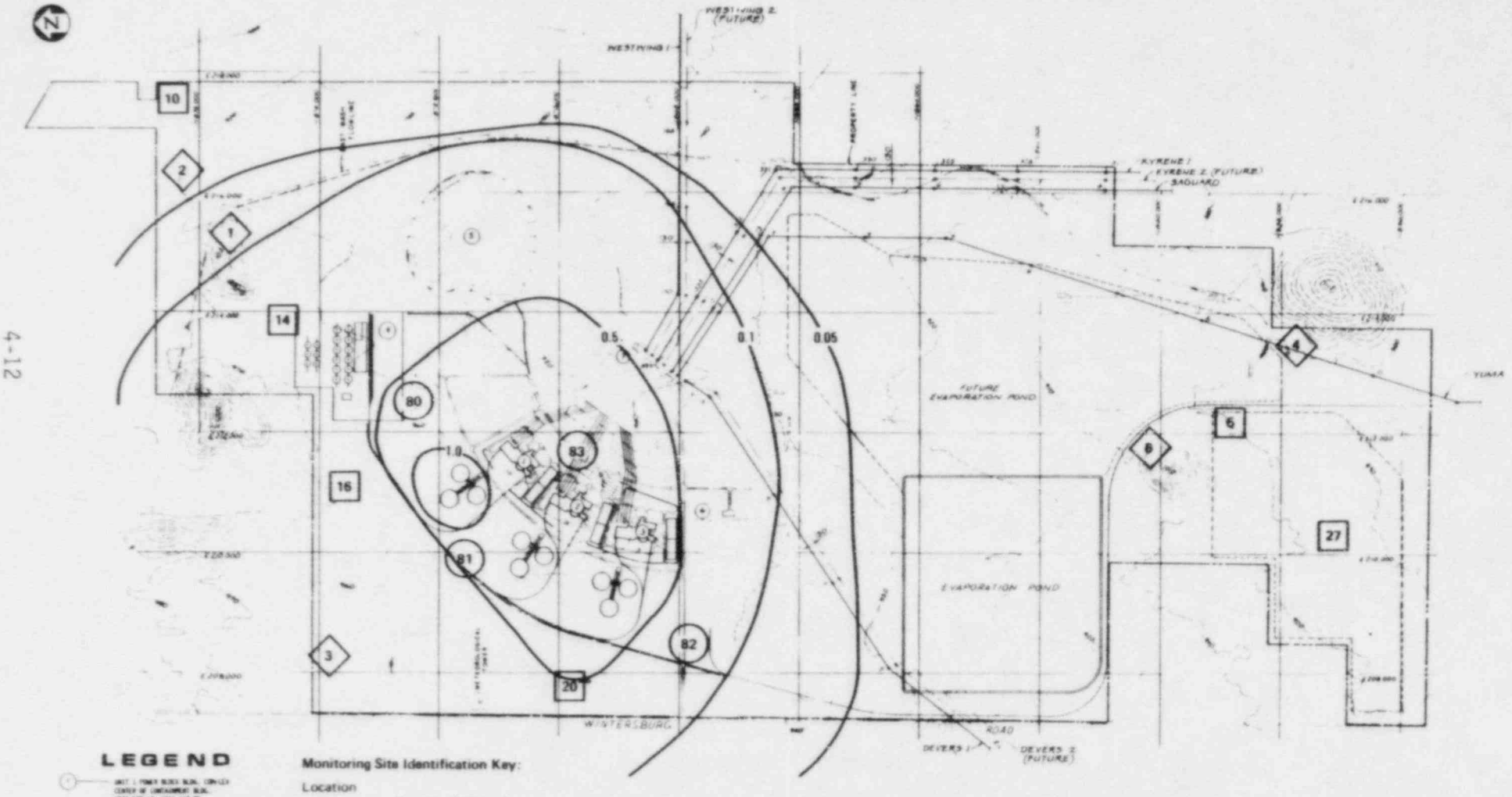
Notes:
1. PVNGS "16 Bin Spectrum"
2. 0.0002% Drift Rate
3. Unit 1 (three towers)

13-C-ZVA-005 REV. 2

Palo Verde Nuclear Generating Station

PVNGS Unit 1 – FOG Model Predictions of Total Solids Deposition for October 1985 (lb/acre-month)

Figure 4-3



LEGEND

1. UNIT 1 POWER BLOCK BLDG. CONSISTS OF CONTAINMENT BLDG., [illegible]
2. UNIT 2 POWER BLOCK BLDG. CONSISTS OF CONTAINMENT BLDG., [illegible]
3. UNIT 3 POWER BLOCK BLDG. CONSISTS OF CONTAINMENT BLDG., [illegible]
4. WATER RECLAMATION PLANT
5. WATER STORAGE RESERVOIR
6. SEWAGE TREATMENT PLANT
7. UNITS 1, 2 & 3 SWITCHYARD

Monitoring Site Identification Key:

Location No.	Samples Collected
2	Native Vegetation, Dustfall, Soils
16	Dustfall, Soils
81	Dustfall

GRAPHIC SCALE

0 1 2

MILES

Notes:

1. PVNGS "16 Bin Spectrum"
2. 0.0002% Drift Rate
3. Unit 1 (three towers)

13-C-ZVA-005, REV. 2

Palo Verde Nuclear Generating Station

PVNGS Unit 1 – FOG Model Predictions of Total Solids Deposition for December 1985 (lb/acre-month)

Figure 4-4

5 SALT DEPOSITION

5.1 INTRODUCTION

In order to evaluate the amount of drift deposition in the area surrounding PVNGS which could be attributable to the cooling towers, samples collected from the dustfall jars at the 44 primary monitoring locations (Figure 2-1) plus the four supplemental onsite monitoring locations were analyzed for drift constituents. Salt deposition was also evaluated through analyses of suspended particulate matter obtained from onsite and near-site low-volume (lo-vol) air samplers. (See Chapter 2 of this report for a discussion of the dustfall and air sampler monitoring programs.) The data were analyzed to provide temporal and areal distributions of the deposition of ionic constituents present in the cooling tower circulating water as well as total suspended solids (TSS). In addition, statistical analyses were performed to provide a basis for determining the significance of differences in the deposition of these ions and for relating any such changes to variations in the cooling tower operations. The types of analyses employed were based on the amounts and distributions of the available dustfall and lo-vol sample data. Evaluation of these data considered the limited operation of the PVNGS cooling towers during the report period of January 1 to December 31, 1985 (see Chapter 4).

5.2 DUSTFALL DATA COLLECTION SUMMARY

The two dustfall samples collected monthly at each of the 48 monitoring locations were analyzed for the concentration of those ions expected to constitute the majority of the salt drift from the cooling tower and for total suspended solids. The concentrations for the two samples were averaged and converted to deposition rates in pounds per acre per month based on the collection jar surface area and each sample's collection period and water volume. This section addresses only the most significant results from the totals for the 12-month monitoring period of January 1 to December 31, 1985. Appendix B presents all results of monthly deposition analyses by location for the period.

Many of the monthly samples produced concentrations at or below the detectable limit of the laboratory analysis procedures. Of the 14 parameters measured in each sample, fluoride, carbonate, and bicarbonate were routinely below their analytical detection limits. Measurements of such ions as ammonia, chloride, and phosphate were usually below their detection limits during the winter months, but were normally measurable during the summer months. Values below detection limits were not included in any subsequent analyses.

Detection limits for the analyzed parameters are provided in Table 5-1. Also provided in the table are minimum detectable deposition rates, which are based on the detectable limit of the analysis method, a nominal monthly sample water volume and period of collection, and the surface area of the collector opening normalized to a 12-month period. The volume of sample water available for analysis is the total of that remaining in the collector at the end of the month and the rinse water. The volume of water remaining in a collector at the end of the month varies with the season. The amount of rinse water necessary to clean the dust from the collector depends on the amount of dust collected. Since the water volume will be different for each location and sample, the minimum detectable deposition rate for an ion will vary for each sample. In Appendix B, those deposition values that correspond to the minimum detectable analytical limit are reported with negative signs to indicate that the actual values are less than those listed.

Although sulfate is an ion of interest and was measured at concentrations well above its detectable limit, the sulfate measured derives largely from copper sulfate added to the collection water as an algicide. The nominal "deposition," based on the initial concentration of the algicide and nominal collection water volume, is approximately 31.5 lb/acre-month. The copper concentration is used as yet another indicator of the efficiency of the sample collection and processing steps, and the amounts measured do not represent actual copper deposition from dustfall. Neither of these ions was statistically analyzed further.

5.2.1 Special Considerations in Data Evaluation

The data listed in Appendix B are collected and processed in a routine manner; there is no field evaluation of changes at the monitoring locations or correction for significant concentrations, if any, of the measured ions in the field blanks of the sample collection water. Field evaluation of the samples is limited to accepting or voiding a sample because of possible contamination by birds, insects, or vandalism.

Of the 13 agricultural monitoring locations, three were fallow during the 1985 growing season. The deposition measured at these three locations is probably less than it would be during periods of cultivation.

5.2.2 Dustfall Deposition Results

Monthly deposition values were analyzed statistically to examine the spatial and temporal variations of the data. The data for each ion (sodium, potassium, calcium, magnesium, nitrate, phosphate, ammonia, chloride, and TSS) were analyzed individually by monitoring location and month. Monthly means of deposition for each site were analyzed with Least Significant Difference (LSD) and F-Test statistics to determine the variability of the data throughout the study region and year. The sites were divided into agricultural and native (i.e., non-agricultural) sites, and the deposition totals of the analyzed ions examined statistically. The significance of this division can be seen in Tables 5-2 and 5-3. The mean deposition values for all ions (in lb/acre-year) are significantly greater for the agricultural sites than for the native sites. Additionally, the standard errors, which are a measure of data variability, are significantly larger for the agricultural sites than for the native sites.

5.2.2.1 Dustfall Deposition at Agricultural Sites

Figures 5-1 and 5-2 present the monthly mean dustfall deposition of the eight measurable ions and total suspended solids at all the agricultural sites (Sites 7, 11-13, 23-25, 28, 30-32, 43, and 45). Generally, the variation in deposition of most ions throughout the study area during the

report year was large. This can be primarily attributed to wet and dry season trends and seasonal agricultural practices which cause varying amounts of dust in the atmosphere. Most ions had peaks in the summer months with minimums in the winter. There was a marked peak for deposition during July.

Table 5-4 presents an analysis of the means and standard errors of the deposition of the three primary ions in the cooling tower basin water (chloride, sodium, and calcium) at each agricultural site. For sodium, differences in monthly means of deposition rates at each monitoring location were not significant at the 95 percent confidence level, indicating that the areal distribution of this ion at the agricultural sites is fairly uniform. Even though Sites 7, 24, and 28 were fallow for the report period, the means for sodium were not significantly different statistically from the other agricultural sites. This agreement of the fallow sites with other analyzed agricultural sites may be due to their proximity to surrounding cultivated agricultural areas. For chloride, means of deposition rates for all monitoring locations except Site 43 were not significantly different at the 95 percent confidence level. Site 43, a control site, had the highest deposition rate for chloride of all the agricultural sites. For calcium, Sites 23, 25, 28, 30, and 45 were shown to be distinctively higher in deposition rate. Site 23 had the highest deposition rate of calcium for the agricultural sites. Sites 23, 28, 30, and 45 are all located to the southwest of PVNGS within a five-square-mile area. Site 28 was fallow for the report period. Site 25 is an agricultural control site located 20 miles northwest of PVNGS. Examination of the data in Appendix B indicates that, generally, Sites 23, 25, and 30 had the maximum deposition rates of most ions, while Sites 7 and 24 had the minimum deposition rates of most ions.

5.2.2.2 Dustfall Deposition at Native (Non-Agricultural) Sites

Figures 5-3 and 5-4 present the monthly mean dustfall deposition rates of the eight measurable ions and total suspended solids at all the native sites (1-6, 8-10, 14-22, 26, 27, 33-42, 44, and 80-83). As with the agricultural sites, the variability of the deposition rates of most ions throughout the

study area during the report year was large. Most ions had maximums in the summer months and minimums in the winter months, although there was a peak for sodium in February.

Analysis of the distribution of the monthly means of deposition rates at native sites of the three primary ions in the drift (chloride, sodium, and calcium) indicates that statistically different groups exist. Table 5-5 presents an analysis of the means and standard errors of the deposition rates of these ions at each native site. For sodium, the deposition rate at Site 81 was significantly different at the 95 percent confidence level from all other native sites. Site 81 is the closest of all monitoring locations to the Unit 1 cooling towers. For chloride, the means of Sites 16, 44, 80 and 81 are shown to be significantly different at the 95 percent confidence level from the means of many of the remaining monitoring locations. Sites 16, 80, and 81 are all onsite, while Site 44 is seven miles northwest of PVNGS. The analyses for calcium indicate that the means of Sites 14, 21, 80, 81 and 83 are significantly different from the means of most of the other sites. Sites 14, 80, 81, and 83 are all onsite, while Site 21 is located three miles east of PVNGS. Although the supplemental onsite monitoring locations generally tend to show the higher means of deposition at the native sites for the three ions, they also show higher means of total suspended solids. This indicates a greater amount of dust in the atmosphere, probably due to onsite activities, which is likely contributing to the higher deposition rates of chloride, sodium, and calcium.

Table 5-6 presents the means and standard errors of the total dustfall deposition rates for all ions and for total suspended solids for all native sites and for the four supplemental sites in proximity to the PVNGS cooling towers. The table provides data for May 1 through December, which was the 1985 collection period for the supplemental monitoring locations. Effects from the cooling towers should be most evident at the close-in supplemental sites. The means of deposition rates at the supplemental sites are higher for total suspended solids and all ions, except ammonia.

Figures 5-5 and 5-6 provide the mean monthly deposition rates at the supplemental sites. The monthly trends for most ions appear to be the same as for the agricultural and all native monitoring sites (Figures 5-1 through 5-4). Peaks in deposition rates occur in July, with decreases in August. Decreases in deposition rates of three ions most prevalent in cooling tower basin water (chloride, sodium, and calcium) are evident during most months of cooling tower operation (August, September, October, and December).

For comparison, Table 5-7 presents the monthly means and standard errors of deposition rates for the onsite monitoring locations, excluding the four supplemental sites. This data set consists of Sites 1-6, 10, 14, 16, 20 and 27. As can be seen, the means for all ions and for total suspended solids are lower at these sites than for all native sites (Table 5-2) or for the supplemental sites (see Table 5-6).

5.2.2.3 Agricultural Versus Native Paired Control Sites

The salt deposition monitoring network includes two sets of neighboring agricultural and native control sites. The purpose of the control sites is to measure natural background levels and distributions of salt deposition at distances unlikely to be affected by PVNGS cooling tower emissions. These paired sites are Sites 25 and 40 to the northwest of PVNGS, and Sites 42 and 43 to the southeast; Sites 25 and 43 are the agricultural sites.

Table 5-8 presents the means and standard errors for each site. Sites 25 and 40 show higher deposition rates and variability for most ions and total suspended solids than Sites 42 and 43. The high total suspended solids deposition rates at native Site 40 may be due to influences of activities at the surrounding agricultural areas.

Examination of the control site pairs shows that deposition rates of sodium, potassium, calcium, magnesium, nitrate, ammonia, chloride and total suspended solids are higher at the agricultural sites. At the agricultural sites, high deposition rates of potassium, calcium, magnesium, and nitrates occur with the higher deposition rates of total suspended solids. However, the higher deposition rates of sodium, ammonia, and chloride occurred at

Site 43, which had lower deposition rates of total suspended solids. At Sites 40 and 42, the higher deposition rates of sodium, potassium, calcium, magnesium, nitrate and chloride occurred with the high deposition rate of total suspended solids.

5.2.2.4 Ion Ratios

The analyses of cooling tower basin water when the towers are in operation provide concentrations of ions present in the drift escaping from the towers. The drift preserves the proportions of most of these constituents. A comparison of ratios of these constituents in the dustfall samples with those in the drift should provide an indication of the contribution of the drift to the measured deposition rates at any location.

Table 5-9 presents the ratios of the average values for agricultural and native locations for sodium to potassium, sodium to calcium, sodium to magnesium and sodium to nitrate. The native sites are broken into three groups: all native, onsite and supplemental. Onsite locations consist of Sites 1-6, 10, 14, 16, 20, and 27. Supplemental sites, designated as Sites 80-83, are located closest to the cooling towers. The corresponding ratios for cooling tower water composition for 1985 are also included in Table 5-9 for comparison. The ratios for the monitoring site measurements are fairly consistent, especially between the three native groups. Both agricultural and native site samples have ratios significantly different from those measured in the cooling tower circulating water.

5.2.3 Summary and Conclusions

Based on analyses of the data for the report period, the following primary conclusions can be drawn (refer to Sections 9.2 and 9.3 for the relationship of these conclusions to cooling tower operation and soil measurements):

- Agricultural sites show significantly higher average dustfall deposition than native sites. This is evident at all sites including the paired control sites. The sum of mean measured ion

deposition rates totalled about 74 lb/acre-year and 43 lb/acre-year for the agricultural and native sites, respectively.

- o A characteristic of all sites is the large variability in measurements of most ions and total suspended solids. This variability is most pronounced in monthly data analyses. Marked peaks are evident for all sites in July, with decreases in August. Overall, the summer months show the maximum deposition, while winter months show minimums. The exact pattern varies, depending on the ion.

- o The analyses show that dustfall deposition rates of most ions at two agricultural sites southwest of PVNGS (Sites 23 and 30) and at the control agricultural site northwest of PVNGS (Site 25) are higher than at all other agricultural sites. No other geographic trends are evident for agricultural sites.

- o The supplemental native sites located onsite in close proximity to the cooling towers have higher mean dustfall deposition rates for most ions when compared to all other native sites. No other geographic trends are evident for native sites.

5.3 SUSPENDED PARTICULATE MATTER

5.3.1 Sample Collection

Airborne particulate matter has been collected at six locations around the PVNGS site and in nearby residential areas as part of the radiological monitoring program for PVNGS. Particulate matter samples are collected weekly at Sites 8, 9, 10, 20, 21, and 27 with low-volume air samplers (lo-vols) that draw air through a two-inch diameter filter. The filters are analyzed weekly for radioactivity and, since the initiation of the salt drift monitoring program, also composited monthly for analyses of calcium, chloride, iron, fluoride, potassium, magnesium, sodium, nitrate (as N), sulfate, and total phosphate (as P). As indicated in the Salt Deposition and Impact Monitoring Plan, Revision 4, (May 1985), "the primary purpose of analyzing the filters for salt concentration is to determine if there is a

correlation between salt deposition (determined from the dustfall analysis) and the airborne concentration at a location." Average concentrations of all analyses results of each of the ten ions at individual locations by month for the report period January 1 to December 31, 1985, are presented in Appendix C.

5.3.2 Data Analysis

Table 5-10 presents monthly means and standard errors of concentrations of sodium, calcium, magnesium, nitrate, sulfate, fluoride, and chloride. Nearly all analyses for concentrations of iron, potassium and phosphate were below detectable limits, and these ions were not included in any comparative evaluations. Statistically, mean concentrations for sodium, nitrate, sulfate, fluoride and chloride were not significantly different between sites, while calcium and magnesium showed more variability in the means between sites. Site 21 (offsite PVNGS) had the highest mean concentration for calcium, magnesium, nitrate, sulfate and fluoride, and the second highest for chloride. Site 8 (also offsite) had the lowest mean concentration for all ions except magnesium and chloride, for which Site 8 had the second lowest concentration.

Figures 5-7 and 5-8 provide the monthly mean concentrations of the various ions for the report period. All ions showed a great deal of monthly variability, with only sulfate having statistically insignificant differences between monthly means. Calcium, sulfate and magnesium nominally showed maxima in the growing season, while chloride, fluoride, sodium, and nitrate showed maxima in December. Generally, minima occured in January, except for fluoride and sulfate with minima in April and May, respectively.

5.3.3 Comparison of Airborne Concentrations and Dustfall Data

Of the ten ions for which analyses were performed on the particulate matter filters, iron is the only element that was not measured in the dustfall. However, only five ions (sodium, calcium, chloride, magnesium, and nitrate) were present in both dustfall and airborne samples at concentrations greater than their respective detectable limits.

Four of the five predominant ions were compared for possible associations in the monthly data between airborne concentrations and dustfall using correlation coefficients (chloride was not analyzed because of insufficient pairs of dustfall and lo-vol combinations with deposition or concentrations above detectable limits). Table 5-11 presents the correlation coefficients between dustfall and airborne concentrations for the four ions at the six locations. No significant correlation exists between average airborne concentrations and total deposition for any of the ions, except perhaps calcium at Site 8 and nitrate at Site 27. Overall, the best correlations appear to occur with calcium. Since both sampling methods involve collecting particulate matter samples from the same medium (air), a greater association between concentration and dustfall might be expected. However, the lo-vol samples collect only the smaller, or suspended, particles, while larger-sized particles, represented by those particles being collected in the dustfall jars, are not able to be drawn onto the lo-vol filter.

Table 5-1
DUSTFALL PROGRAM DETECTION LIMITS

Determination	Laboratory Detection Limit (mg/liter)	Minimum Detectable Deposition Rate* (lb/acre-year)
Sodium, total	0.1	1.8
Potassium, total	0.1	1.8
Calcium, total	0.1	1.8
Magnesium, total	0.05	0.9
Chloride	0.3	5.4
Fluoride	0.5	9.0
Sulfate	5.0	90.0
Nitrate (as N)	0.05	0.9
Phosphate (as P)	0.02	0.36
Carbonate	5.0	**
Bicarbonate	5.0	90.0
Ammonia (as N)	0.2	3.6
TSS (at 105°C)	5.0	90.0
Copper, total	0.1	***

*Determined for a "standard" sample volume of 3000 ml for rinse water and remaining collector water each month, normalized to one year.

**Based on pH.

***Total mass determined only.

Table 5-2
DUSTFALL DEPOSITION RATES (LB/ACRE-YEAR) FOR ALL AGRICULTURAL AND ALL NATIVE SITES FOR THE PERIOD JANUARY 1-DECEMBER 31, 1985

AGRICULTURAL SITES

Parameter	Mean	Standard Error
Sodium	8.3	0.5
Potassium	9.2	0.8
Calcium	23.1	1.8
Magnesium	6.2	0.7
Nitrate	2.5	0.2
Phosphate	1.0	0.1
Ammonia	13.3	1.6
Chloride	10.2	0.7
TSS*	575.1	60.0

NATIVE SITES

Parameter	Mean	Standard Error
Sodium	6.9	0.2
Potassium	5.4	0.2
Calcium	11.7	0.6
Magnesium	2.7	0.1
Nitrate	2.0	0.1
Phosphate	0.6	0.04
Ammonia	5.7	0.3
Chloride	7.7	0.3
TSS*	223.7	8.4

*Total suspended solids.

Table 5-3
RATIOS OF DUSTFALL DEPOSITION RATES (LB/ACRE-YEAR) AT AGRICULTURAL AND NATIVE SITES FOR THE PERIOD JANUARY 1-DECEMBER 31, 1985

Parameter	Mean, All Agricultural Sites	Mean, All Native Sites	Ratio, Agricultural/Native Sites
Sodium	8.3	6.9	1.2
Potassium	9.2	5.4	1.7
Calcium	23.1	11.7	2.0
Magnesium	6.2	2.7	2.3
Nitrate	2.5	2.0	1.3
Phosphate	1.0	0.6	1.7
Ammonia	13.3	5.7	2.3
Chloride	10.2	7.7	1.3
TSS*	575.1	223.7	2.6

*Total suspended solids.

Table 5-4
ANALYSIS OF MEANS AND STANDARD ERRORS* (LB/ACRE-YEAR) OF DUSTFALL DEPOSITION RATES
FOR CHLORIDE, SODIUM, AND CALCIUM FOR AGRICULTURAL SITES
JANUARY 1 - DECEMBER 31, 1985

Ion	Site 7	Site 11	Site 12	Site 13	Site 23	Site 24	Site 25
Chloride	6.4 ± 1.5[a]	8.3 ± 1.0[ab]	6.9 ± 0.7[a]	12.1 ± 5.9[ab]	12.7 ± 3.1[ab]	7.2 ± 1.5[a]	12.5 ± 4.1[ab]
Sodium	6.1 ± 1.0[a]	7.5 ± 1.3[a]	7.3 ± 1.2[a]	8.0 ± 2.6[a]	7.9 ± 2.2[a]	7.5 ± 1.6[a]	8.4 ± 1.5[a]
Calcium	11.3 ± 1.7[a]	19.7 ± 4.1[abc]	10.4 ± 1.4[a]	17.7 ± 7.0[abc]	47.3 ± 11.4[f]	15.0 ± 2.5[abc]	43.0 ± 4.7[ef]

Ion	Site 28	Site 30	Site 31	Site 32	Site 43	Site 45
Chloride	9.3 ± 2.0[ab]	11.1 ± 2.5[ab]	7.7 ± 0.5[a]	11.3 ± 2.2[ab]	14.8 ± 3.2[b]	11.4 ± 1.9[ab]
Sodium	6.0 ± 1.1[a]	10.5 ± 2.3[a]	7.5 ± 1.3[a]	9.8 ± 2.0[a]	10.1 ± 2.5[a]	10.3 ± 2.0[a]
Calcium	27.7 ± 5.0[bcd]	40.8 ± 9.8[def]	13.0 ± 2.8[ab]	17.5 ± 4.2[abc]	12.2 ± 2.5[a]	28.9 ± 8.1[cde]

*Number of samples for each site can be obtained from Appendix B.
[a,b,c,d,e,f]For individual ions, means with the same letters are not significantly (P >0.05) different.

Table 5-5
ANALYSIS OF MEANS AND STANDARD ERRORS* (LB/ACRE-YEAR) OF DUSTFALL
DEPOSITION RATES FOR CHLORIDE, SODIUM, AND CALCIUM FOR NATIVE SITES
JANUARY 1-DECEMBER 31, 1985

Ion	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 8
Chloride	6.6 ± 1.2^{ab}	6.3 ± 1.1^{ab}	8.0 ± 1.5^{abcd}	6.5 ± 0.9^{ab}	6.4 ± 1.2^{ab}	8.9 ± 1.8^{abcd}	10.3 ± 2.7^{abcde}
Sodium	6.6 ± 1.6^{abcd}	7.7 ± 1.1^{abcd}	7.6 ± 1.1^{abcd}	5.6 ± 1.1^{abc}	5.9 ± 1.4^{abcd}	8.1 ± 1.3^{abcd}	5.3 ± 0.9^{ab}
Calcium	9.1 ± 1.4^{a}	8.0 ± 1.1^{a}	10.3 ± 2.1^{a}	9.5 ± 1.7^{a}	9.2 ± 1.5^{a}	8.3 ± 1.4^{a}	7.7 ± 1.0^{a}

Ion	Site 9	Site 10	Site 14	Site 15	Site 16	Site 17	Site 18
Chloride	8.0 ± 0.9^{abcd}	6.3 ± 0.8^{ab}	7.2 ± 1.3^{abc}	6.4 ± 1.1^{ab}	10.6 ± 1.8^{cde}	8.4 ± 0.8^{abcd}	6.8 ± 0.4^{abcd}
Sodium	6.4 ± 1.1^{abcd}	5.4 ± 1.2^{ab}	7.5 ± 1.4^{abcd}	6.4 ± 1.0^{abcd}	6.7 ± 1.2^{abcd}	6.7 ± 1.5^{abcd}	5.7 ± 1.1^{abcd}
Calcium	12.5 ± 4.0^{abc}	11.5 ± 3.8^{a}	24.9 ± 5.3^{e}	8.6 ± 1.4^{a}	12.2 ± 2.4^{ab}	15.9 ± 3.6^{abcde}	9.5 ± 2.4^{a}

Ion	Site 19	Site 20	Site 21	Site 22	Site 26	Site 27	Site 33
Chloride	7.3 ± 1.9^{abcd}	8.0 ± 0.9^{abcd}	6.7 ± 1.3^{abc}	5.4 ± 0.8^{a}	6.6 ± 1.6^{abc}	5.8 ± 0.9^{a}	7.4 ± 0.9^{abc}
Sodium	5.5 ± 1.6^{abcd}	7.2 ± 1.3^{abcd}	6.3 ± 1.4^{abcd}	7.0 ± 1.2^{abcd}	6.6 ± 1.1^{abcd}	5.7 ± 0.8^{abc}	6.4 ± 1.0^{abcd}
Calcium	12.2 ± 2.6^{abc}	10.5 ± 1.9^{a}	20.9 ± 12.5^{bcde}	7.8 ± 0.7^{a}	9.9 ± 2.0^{a}	10.2 ± 1.9^{a}	13.3 ± 3.4^{abc}

Ion	Site 34	Site 35	Site 36	Site 37	Site 38	Site 39	Site 40
Chloride	6.2 ± 1.3^{ab}	7.8 ± 1.0^{abcd}	6.5 ± 1.2^{ab}	9.7 ± 1.4^{abcd}	6.6 ± 0.8^{ab}	7.7 ± 1.0^{abcd}	7.6 ± 0.9^{abcd}
Sodium	6.6 ± 1.1^{abcd}	6.5 ± 1.4^{abcd}	4.9 ± 0.9^{a}	7.9 ± 1.6^{abcd}	7.0 ± 1.3^{abcd}	8.4 ± 1.3^{abcd}	7.5 ± 1.7^{abcd}
Calcium	7.4 ± 1.1^{a}	11.7 ± 1.6^{ab}	7.6 ± 1.2^{a}	8.2 ± 1.3^{a}	9.1 ± 2.1^{a}	9.3 ± 1.9^{a}	13.5 ± 2.4^{abc}

Ion	Site 41	Site 42	Site 44	Site 80	Site 81	Site 82	Site 83
Chloride	6.4 ± 1.3^{ab}	6.4 ± 0.8^{ab}	11.3 ± 4.7^{de}	11.0 ± 1.2^{de}	14.0 ± 1.5^{e}	5.4 ± 0.7^{a}	5.9 ± 0.6^{a}
Sodium	5.5 ± 1.0^{ab}	5.8 ± 0.8^{abcd}	9.2 ± 1.6^{cd}	9.2 ± 2.1^{bcd}	13.8 ± 2.9^{e}	6.6 ± 1.3^{abcd}	9.5 ± 1.2^{d}
Calcium	10.0 ± 1.5^{a}	7.7 ± 1.1^{a}	7.7 ± 1.3^{a}	26.1 ± 7.5^{e}	22.4 ± 4.2^{cde}	13.2 ± 2.3^{abcd}	24.2 ± 4.2^{de}

*Number of samples for each site can be obtained from Appendix B.

a,b,c,d,eFor individual ions, means with the same letters are not significantly (P>0.05) different.

Table 5-6
DUSTFALL DEPOSITION (LB/ACRE-YEAR)
FOR THE SUPPLEMENTAL AND ALL
NATIVE SITES MAY 1-DECEMBER 31, 1985

ALL NATIVE SITES

Parameter	Mean	Standard Error
Sodium	6.8	0.3
Potassium	6.2	0.3
Calcium	13.7	0.8
Magnesium	3.1	0.2
Nitrate	2.2	0.07
Phosphate	0.6	0.05
Ammonia	6.3	0.4
Chloride	7.5	0.3
TSS*	237.3	9.9

SUPPLEMENTAL SITES ONLY

Parameter	Mean	Standard Error
Sodium	9.9	1.1
Potassium	6.8	1.1
Calcium	21.5	2.5
Magnesium	4.8	0.7
Nitrate	2.5	0.2
Phosphate	0.7	0.1
Ammonia	5.7	0.6
Chloride	9.5	0.9
TSS*	357.0	40.8

*Total suspended solids.

Table 5-7
DUSTFALL DEPOSITION RATES (LB/ACRE-YEAR) FOR
NON-SUPPLEMENTAL ONSITE MONITORING SITES*
JANUARY 1-DECEMBER 31, 1985

Parameter	Mean	Standard Error
Sodium	6.7	0.4
Potassium	5.0	0.4
Calcium	11.3	0.8
Magnesium	2.5	0.2
Nitrate	1.9	0.08
Phosphate	0.5	0.04
Ammonia	5.3	0.4
Chloride	7.4	0.4
TSS**	201.9	10.8

*Sites 1-6, 10, 14, 16, 20, and 27

**Total Suspended Solids

Table 5-8
DUSTFALL DEPOSITION RATES (LB/ACRE-YEAR) AT
AGRICULTURAL AND NATIVE CONTROL SITES FOR
JANUARY 1-DECEMBER 31, 1985

AGRICULTURAL SITES

	Site 25		Site 43	
Parameter	Mean	Standard Error	Mean	Standard Error
Sodium	8.4	1.5	10.1	2.5
Potassium	13.0	2.7	8.7	2.4
Calcium	43.0	4.7	12.2	2.5
Magnesium	13.6	2.5	3.7	0.8
Nitrate	2.9	0.2	2.2	0.2
Phosphate	0.9	0.1	1.3	0.3
Ammonia	9.7	2.8	28.4	9.5
Chloride	12.5	4.1	14.8	3.2
TSS*	1401.3	209.9	353.3	90.4

NATIVE SITES

	Site 40		Site 42	
Parameter	Mean	Standard Error	Mean	Standard Error
Sodium	7.5	1.7	5.8	0.8
Potassium	4.3	1.0	3.8	0.8
Calcium	13.5	2.4	7.7	1.1
Magnesium	4.8	1.3	1.8	0.1
Nitrate	2.5	0.5	1.8	0.2
Phosphate	0.5	0.05	1.7	0.4
Ammonia	6.3	0.8	6.3	1.1
Chloride	7.6	0.9	6.4	0.8
TSS*	378.2	89.1	152.8	27.9

*Total suspended solids

Table 5-9
RATIOS OF IONIC CONSTITUENTS IN
DUSTFALL SAMPLES AND COOLING TOWER BASIN WATER
JANUARY 1-DECEMBER 31, 1985

Ratio	Dustfall Deposition Measurements				Cooling Tower Basin Water
	All Agricultural	All Native	Onsite	Supplemental	
Sodium/Potassium	0.9	1.3	1.3	1.5	19.9
Sodium/Calcium	0.4	0.6	0.6	0.5	7.5
Sodium/Magnesium	1.3	2.6	2.7	2.1	94.4
Sodium/Nitrate	3.3	3.5	3.5	4.0	67.8

Table 5-10
MONTHLY MEAN CONCENTRATIONS OF SUSPENDED
PARTICULATES ($\mu g/m^3$) COLLECTED BY LOW-VOLUME AIR SAMPLER
AT SELECTED MONITORING LOCATIONS
JANUARY 1-DECEMBER 31, 1985

	Site 8		Site 9	
Ion	Mean	Standard Error	Mean	Standard Error
Sodium	1.0	0.16	1.12	0.19
Calcium	1.32	0.13	2.36	0.29
Magnesium	0.08	0.01	0.14	0.04
Nitrate	0.28	0.04	0.32	0.04
Sulfate	1.43	0.25	2.10	0.34
Fluoride	0.08	0.04	0.08	0.03
Chloride	1.26	0.53	1.35	0.57

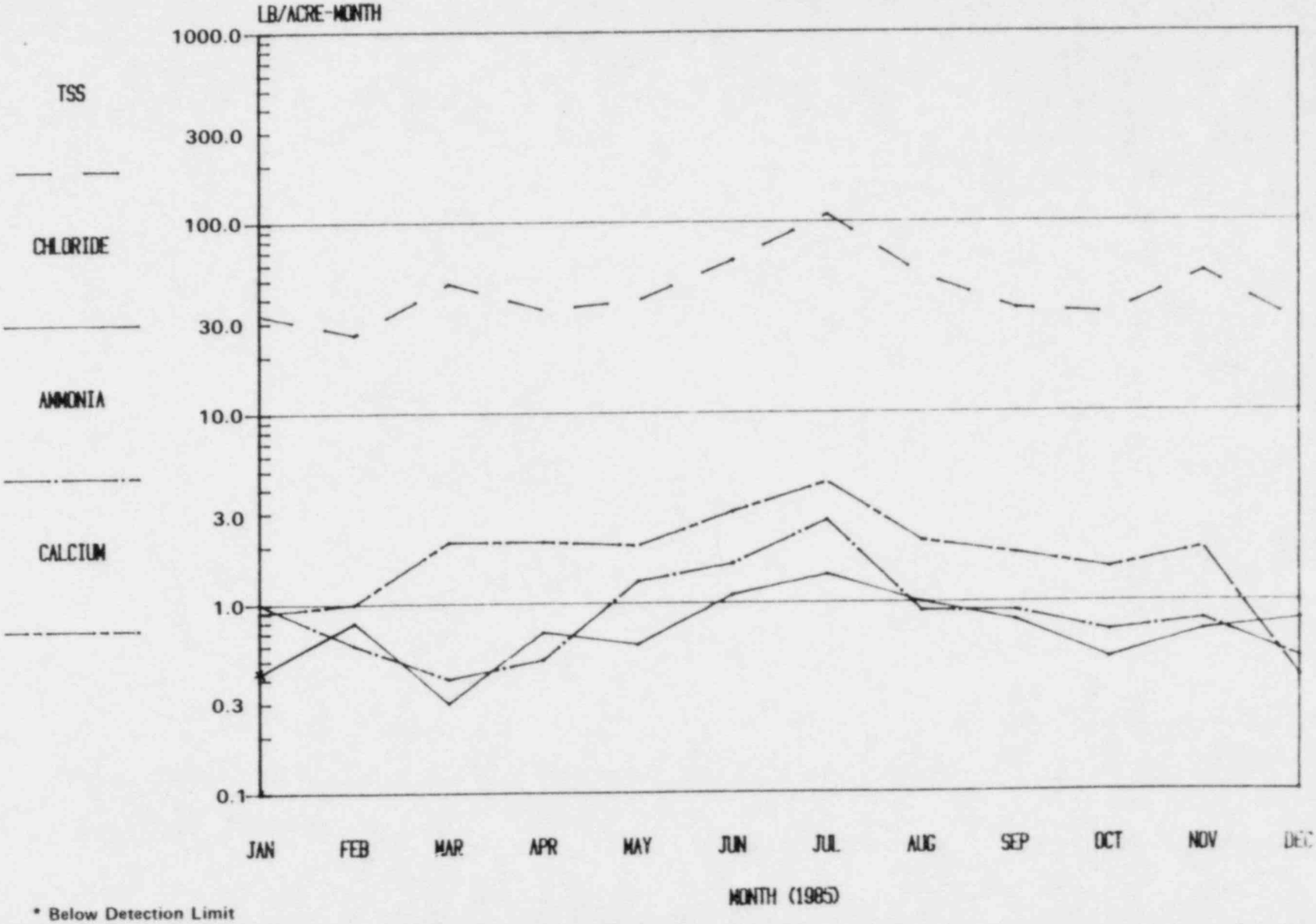
	Site 10		Site 20	
Ion	Mean	Standard Error	Mean	Standard Error
Sodium	1.25	0.18	1.60	0.23
Calcium	2.02	0.25	1.71	0.16
Magnesium	0.10	0.01	0.09	0.01
Nitrate	0.39	0.09	0.30	0.02
Sulfate	2.15	0.35	2.21	0.54
Fluoride	0.08	0.03	0.09	0.04
Chloride	1.03	0.32	1.31	0.38

	Site 21		Site 27	
Ion	Mean	Standard Error	Mean	Standard Error
Sodium	1.21	0.20	1.03	0.15
Calcium	3.56	0.56	1.62	0.16
Magnesium	0.14	0.02	0.07	0.01
Nitrate	0.44	0.08	0.29	0.03
Sulfate	3.68	1.52	1.74	0.35
Fluoride	0.09	0.04	0.08	0.04
Chloride	1.41	0.53	1.50	0.61

Table 5-11
CORRELATION VALUES, R, BETWEEN DUSTFALL
AND AIRBORNE CONCENTRATION OF PREDOMINANT
IONS AT SELECTED LOCATIONS

Site	Ion			
	Calcium	Nitrate	Magnesium	Sodium
8	0.74	-0.26	0.49	0.38
9	0.32	-0.01	-0.33	0.13
10	0.23	0.34	0.53	0.29
20	0.50	0.64	0.48	-0.44
21	0.33	-0.20	0.43	-0.11
27	0.50	0.81	0.58	0.06

FIGURE 5-1
MEAN MONTHLY DUSTFALL DEPOSITION
ALL AGRICULTURAL SITES
1985



* Below Detection Limit

FIGURE 5-2
MEAN MONTHLY DUSTFALL DEPOSITION
ALL AGRICULTURAL SITES
1985

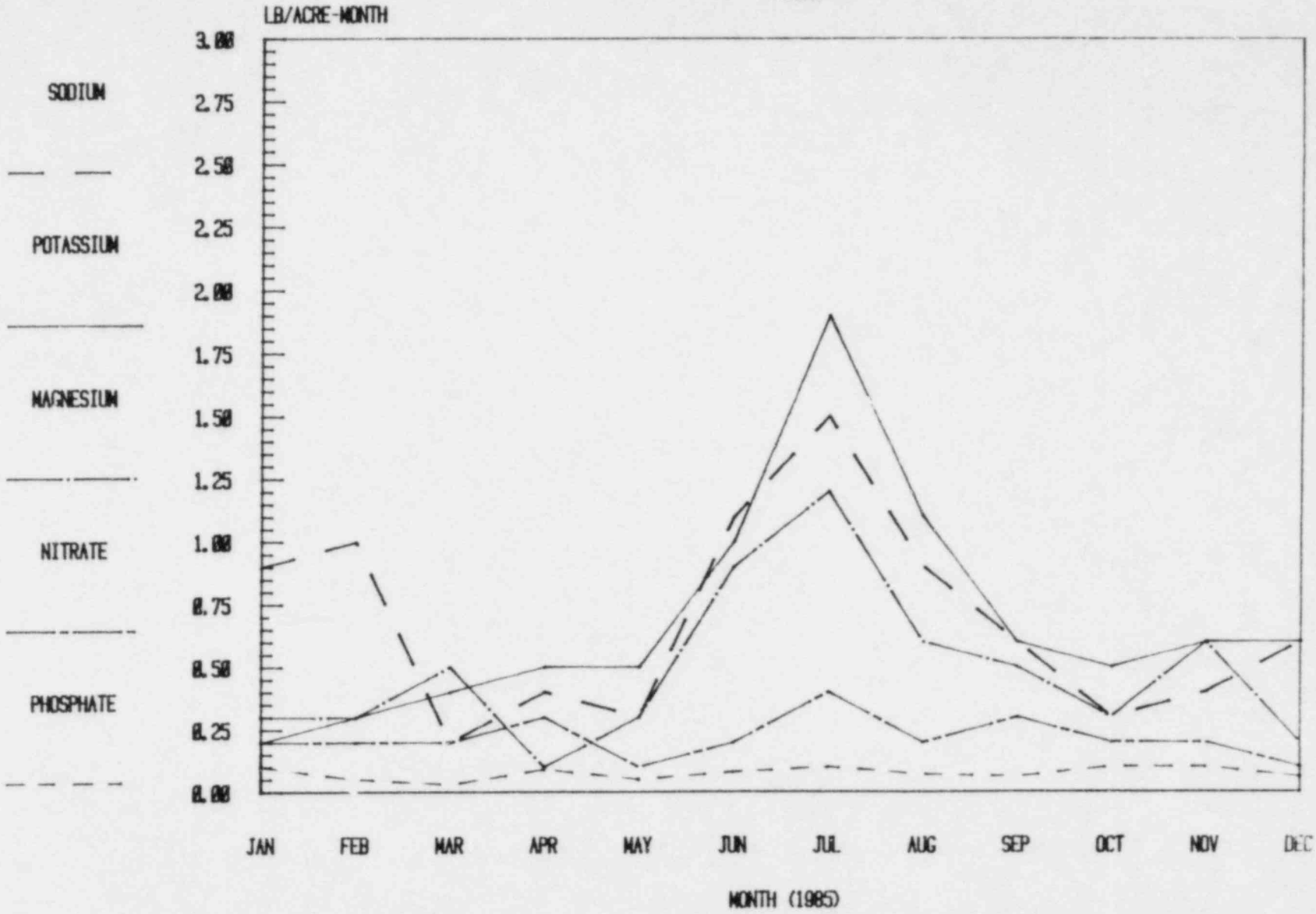
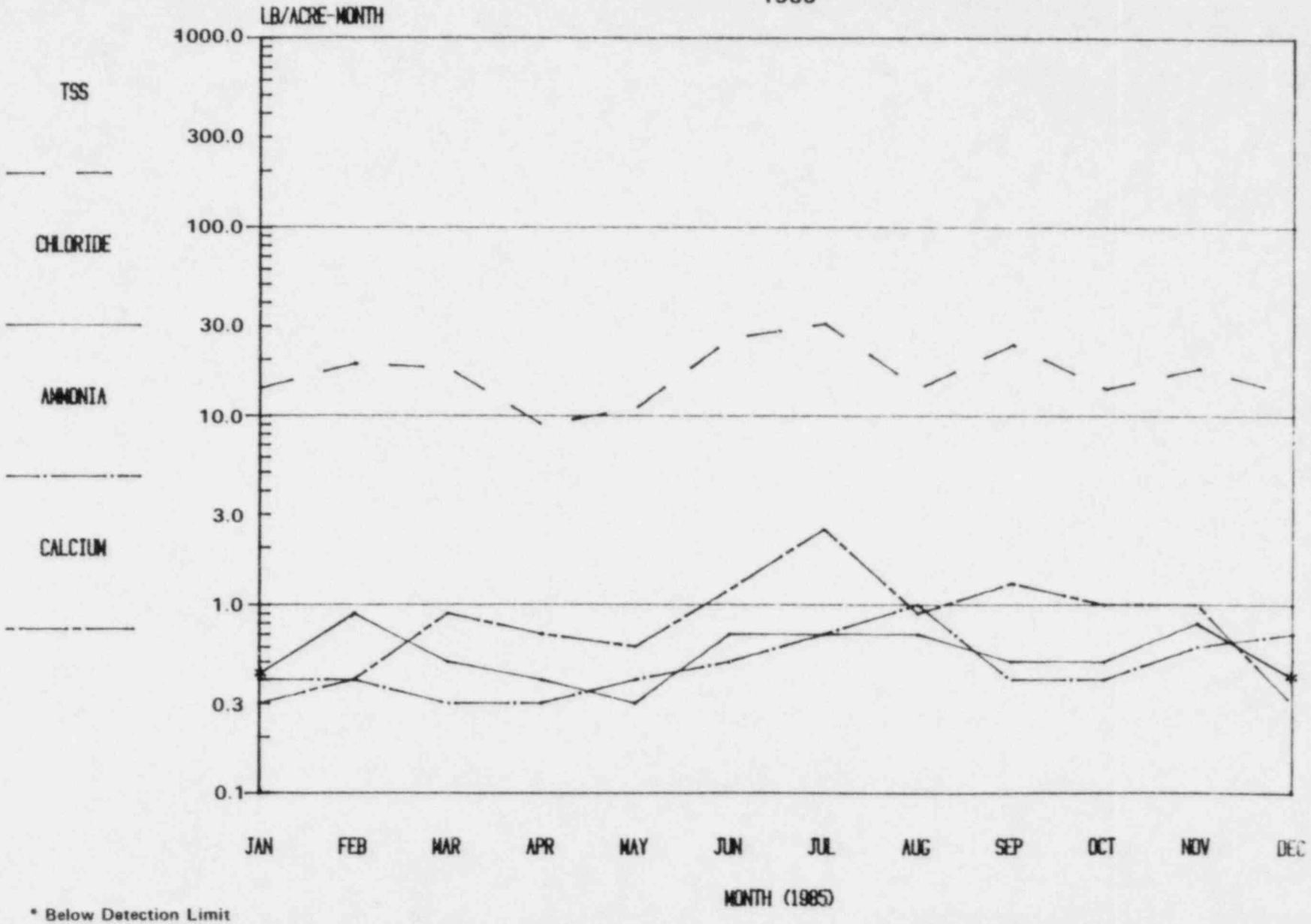


FIGURE 5-3
MEAN MONTHLY DUSTFALL DEPOSITION
ALL NATIVE SITES
1985



* Below Detection Limit

FIGURE 5-4
MEAN MONTHLY DUSTFALL DEPOSITION
ALL NATIVE SITES
1985

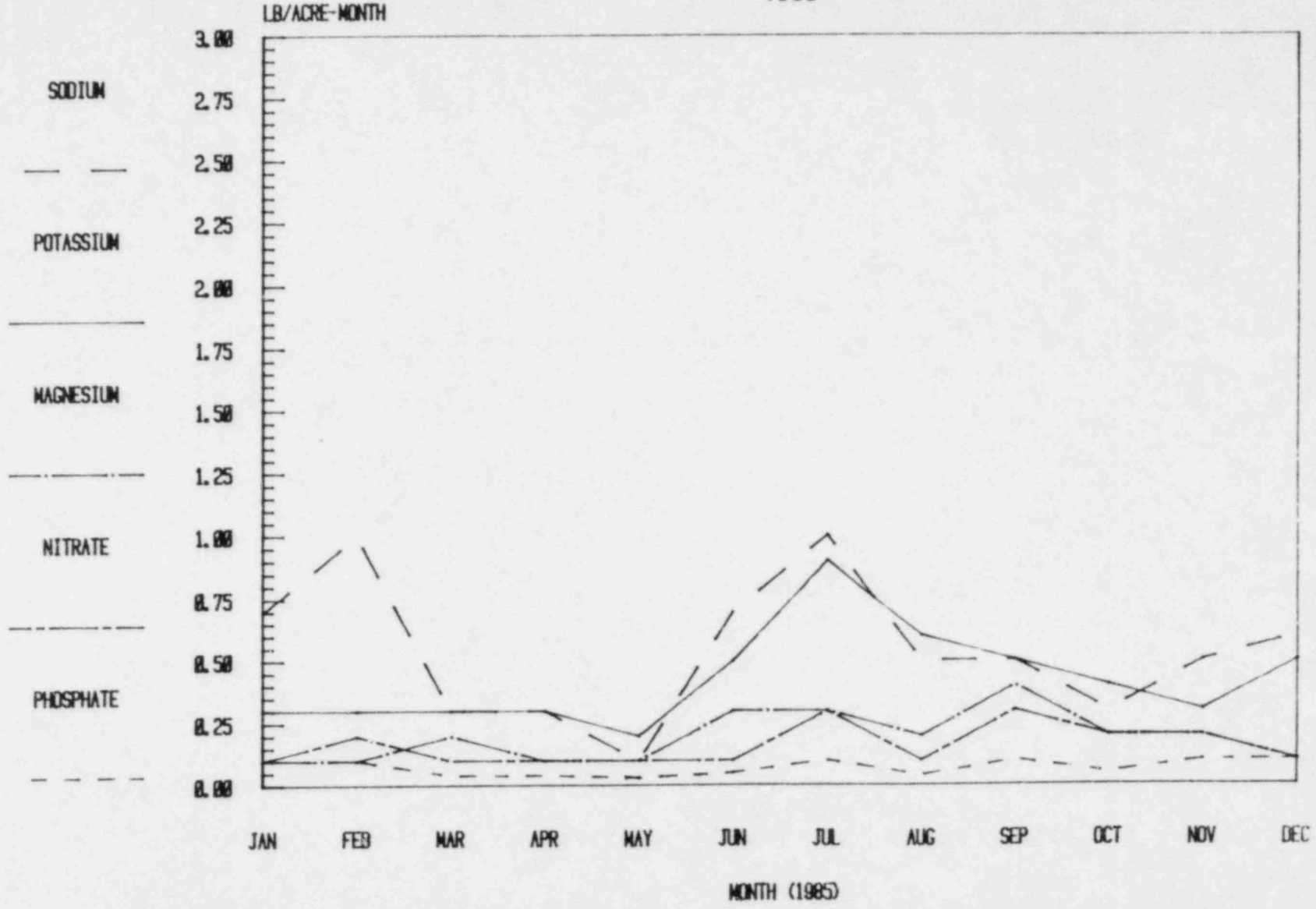
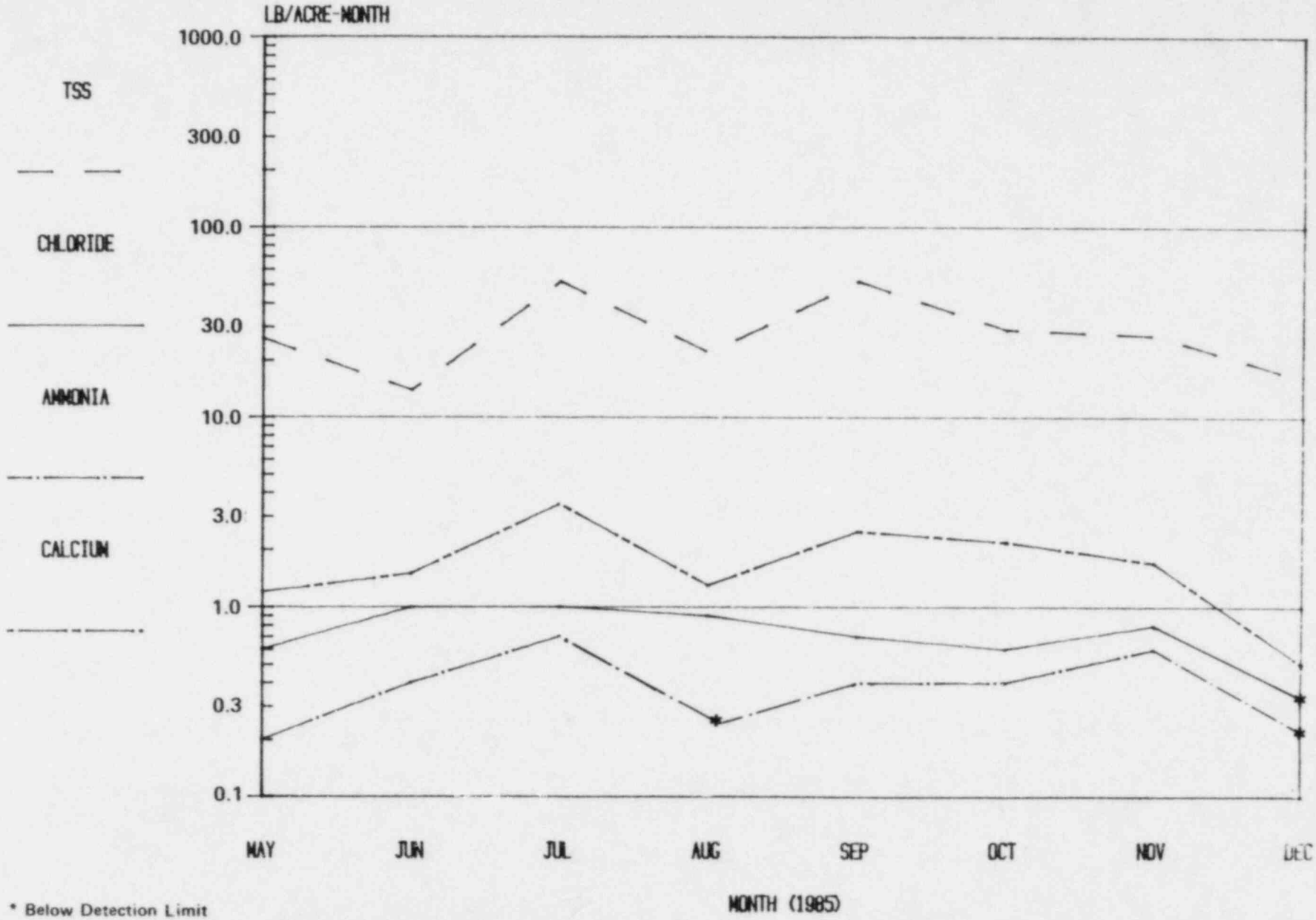
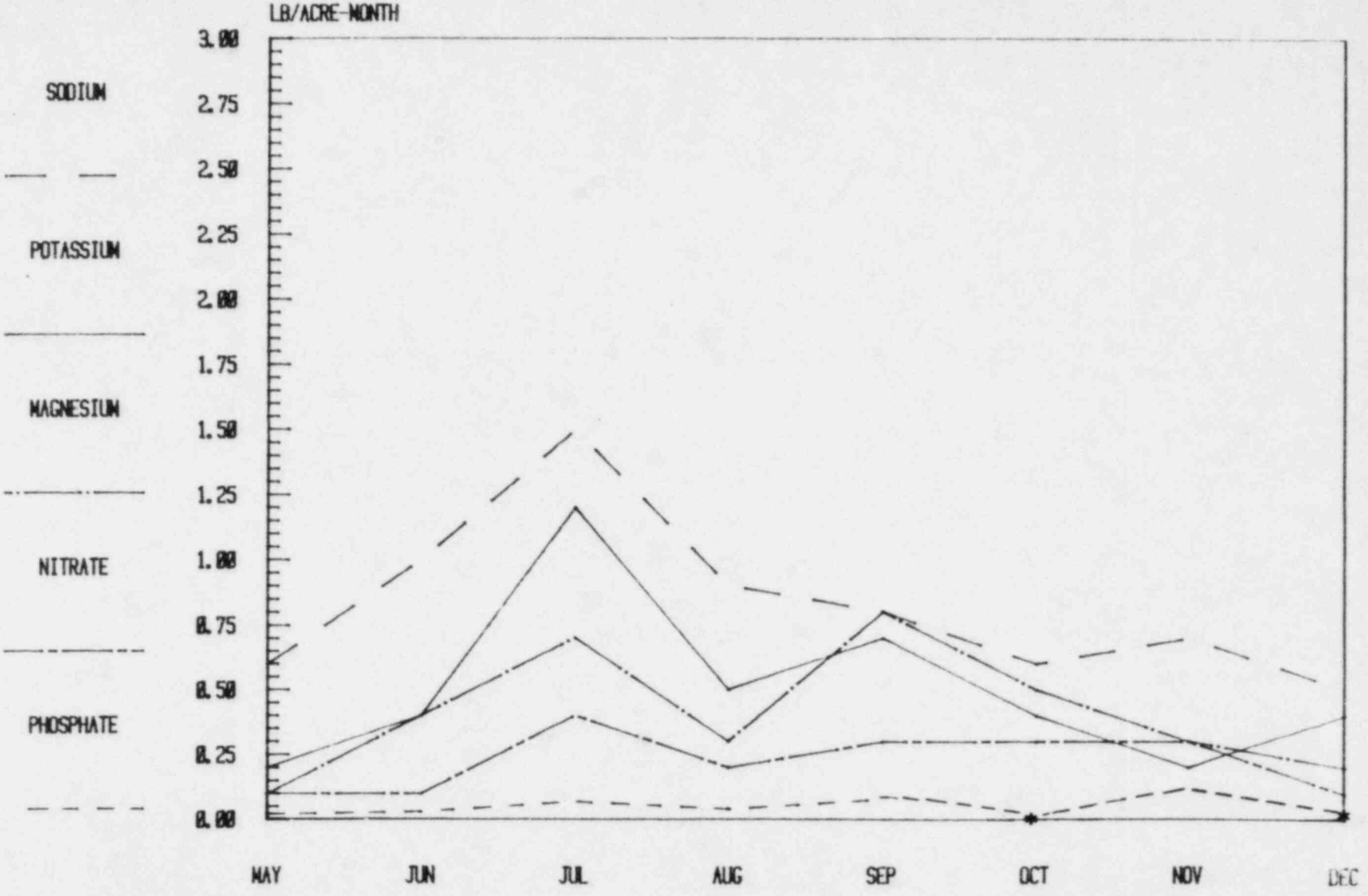


FIGURE 5-5
MEAN MONTHLY DUSTFALL DEPOSITION
SUPPLEMENTAL SITES
1985



* Below Detection Limit

FIGURE 5-6
MEAN MONTHLY DUSTFALL DEPOSITION
SUPPLEMENTAL SITES
1985



* Below Detection Limit

FIGURE 5-7
MEAN MONTHLY LO-VOL CONCENTRATIONS
1985

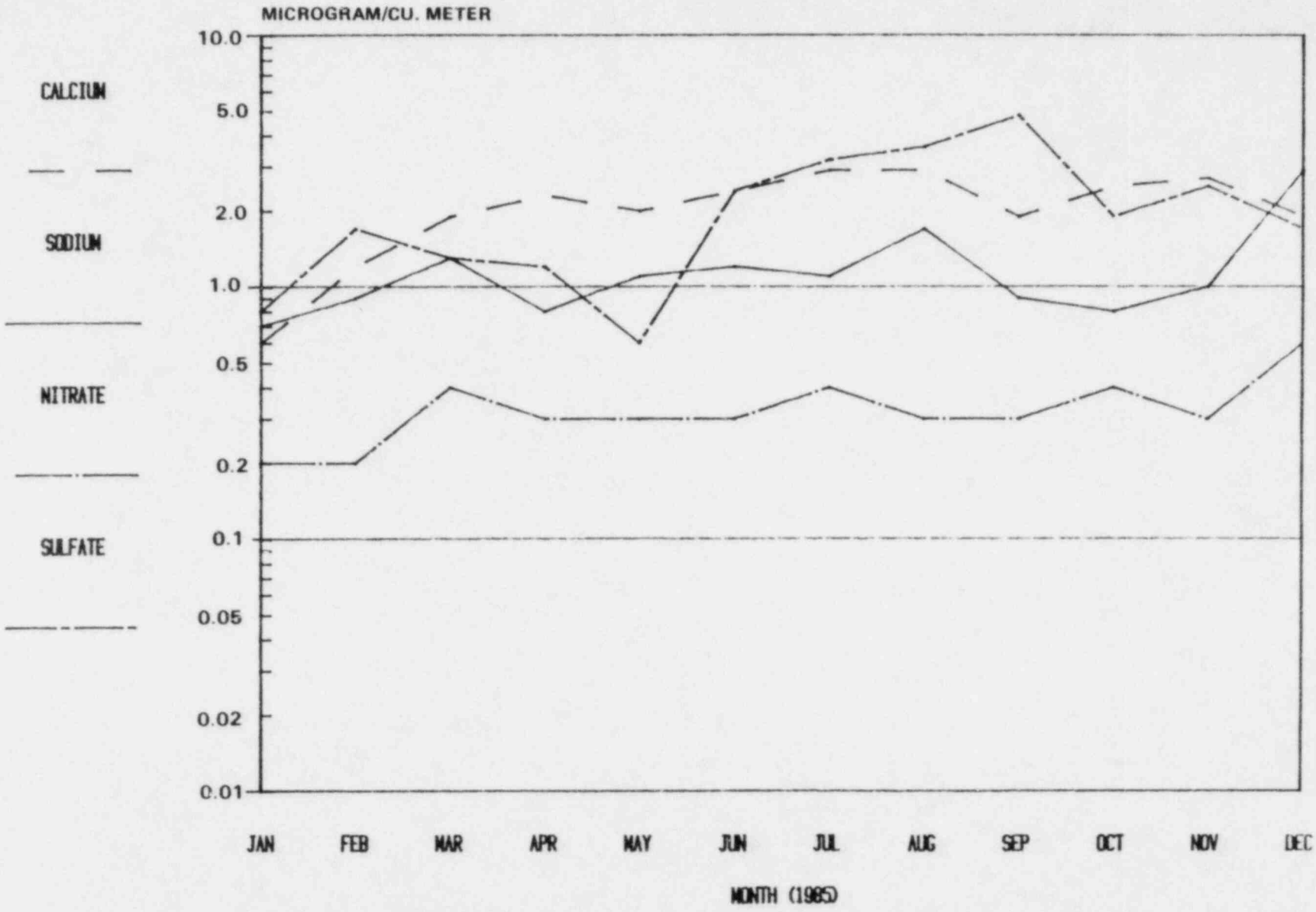
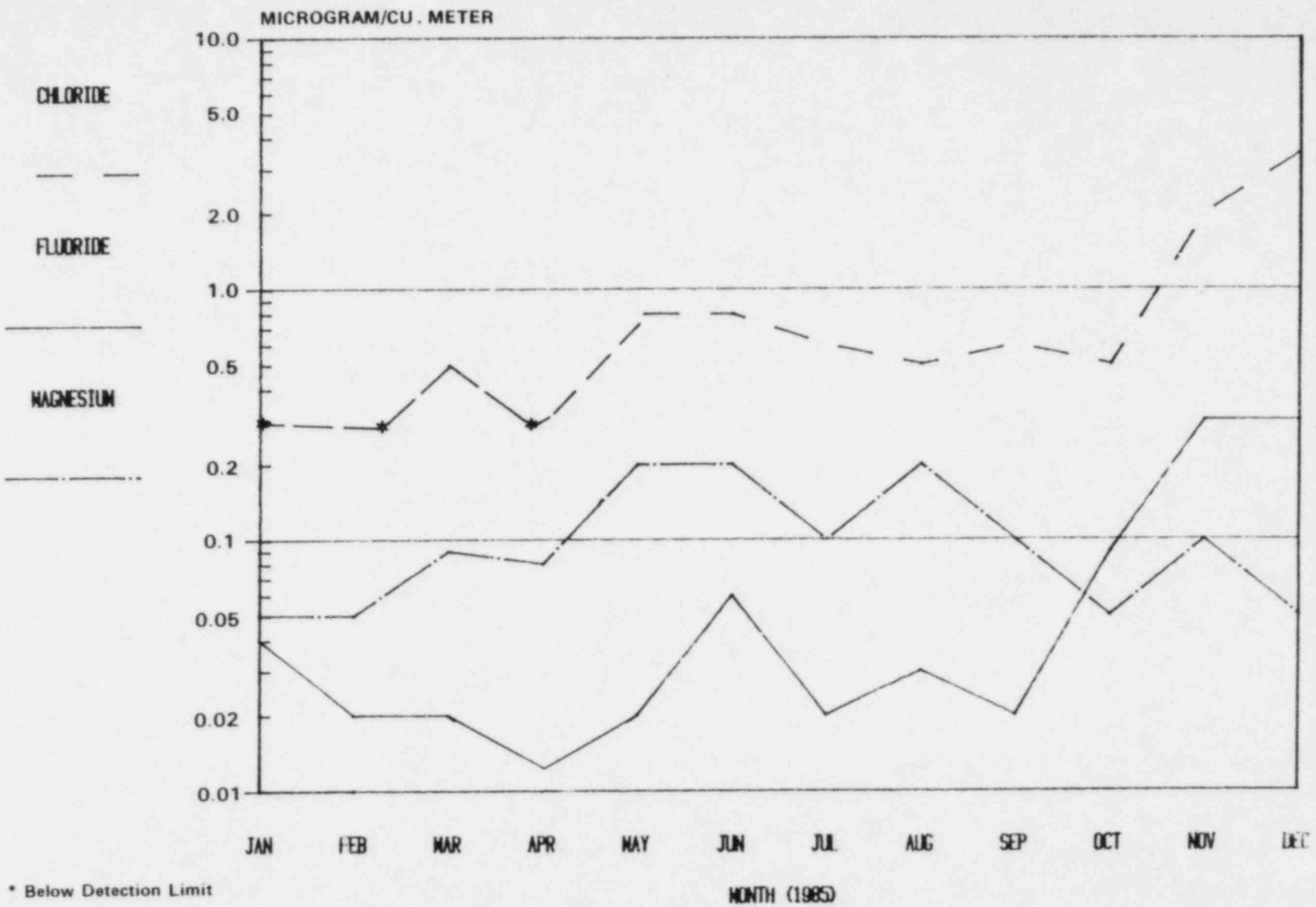


FIGURE 5-8
MEAN MONTHLY LO - VOL CONCENTRATIONS
1985



* Below Detection Limit

6 VEGETATION ANALYSES

6.1 CONCENTRATION OF SELECTED IONS IN LEAF TISSUE

The results of analyses of leaf tissues sampled during 1985 are presented in Appendix D for indigenous vegetation and in Appendix E for agricultural crops. The following sections summarize and discuss these results. Unless stated otherwise, differences are reported as significant when the probability level is less than 0.05.

6.1.1 Agricultural Crops

6.1.1.1 Alfalfa

Site 43 was the sole alfalfa field sampled in 1985; ten replicate samples were collected in May and July. Site 45 was also planted in alfalfa in 1985, but no tissue samples were collected because of plant immaturity (May) or the field having been harvested just prior to field surveys (July). Potassium was the most prevalent of the selected ions that was measured in alfalfa leaf tissue (Table 6-1). Codominants included sulfate, chloride, and calcium. Magnesium and sodium both exhibited concentrations of around 2000 ppm. Nitrate and phosphate had relatively small concentrations. The mean concentration of fluoride (13 ppm) was several orders of magnitude lower than the other ions. Expressed as a percentage of the sample mean, the standard errors for all means were below 13 percent.

6.1.1.2 Cotton

The concentration of selected ions in cotton leaf tissue was measured from nine fields at the middle (June) and end (September) of the 1985 growing season. Ten replications from each field were collected each season. As determined by a factorial analysis of variance in a completely randomized design, the main effects for location, month (except for magnesium and calcium), and the first order interactions were significant for the nine selected ions. That is, location and month were not independent factors, and both contributed to the observed variability. Because the objective of

the monitoring program during the startup period is to add to baseline estimates, mean concentrations of the selected ions were averaged across months (Table 6-2).

Sodium levels were significantly higher at Sites 31 and 32, and significantly lower at Sites 24 and 25. No reasons can be identified for the elevated sodium levels at these sites. The lower levels may be associated with the variety of cotton; Sites 24 and 25 were planted with long-staple (Pima) cotton, whereas all remaining sites contained short-staple cotton. Site 25 is located approximately 21 miles northwest of PVNGS (Figure 2-2) and serves as a control. No other varietal trend for the remaining ions was apparent.

Mean levels of potassium varied considerably between locations; Site 32 was significantly lower than the other sites, whereas cotton phytomass at Site 23 had the highest concentration of potassium. Calcium values ranged from approximately 31,500 ppm at Site 12 to approximately 50,760 ppm at Site 31. Again, Site 31 had a significantly higher concentration of calcium in cotton leaf tissue than the other sites. Site 31 also had a significantly higher concentration of magnesium in its leaf tissue; Site 25 had the lowest concentration of magnesium.

Chloride values, which ranged from 13,630 ppm to 24,115 ppm, were not significantly different between Sites 11, 12, 13, and 24, nor were there any real differences in concentrations between Sites 23, 30, 31, and 32. Site 23 had a significantly higher concentration of sulfate than the other sites; except for Sites 31 and 32, no difference in mean levels of sulfate concentration was found between Sites 11, 12, 13, 24, 25, and 30. Site 23 also had a significantly higher concentration of nitrate in cotton leaf tissue than did the other locations. Phosphate levels in cotton phytomass were significantly higher at Site 31; values ranged from 1,817 ppm to 3,228 ppm. The mean concentration of fluoride was generally much lower than that of the other ions. Sites 23, 30, 31, and 32 had slightly higher mean fluoride values than did Sites 11, 12, 13, 24, and 25.

Examination of simple effects for months indicated that concentrations of potassium, sulfate, nitrate, phosphate, and fluoride were lower in the middle of the growing season than at the end of the growing season. No temporal trend was apparent for the ions calcium, magnesium, and chloride.

6.1.2 Indigenous Vegetation

6.1.2.1 Creosote-Bush

Ionic content of creosote-bush (*Larrea divaricata*) leaf tissue was measured at five locations in 1985; ten replicate samples were collected during the wet (March) and dry (October) seasons, respectively. Sites 1, 4, and 6 are located onsite at PVNGS; Sites 40 and 42 serve as controls, and are located approximately 21 miles to the northwest and 15 miles to the southeast, respectively (Figure 2.2). Except for potassium, magnesium, and phosphate, the levels of ionic content differed by location and season. That is, for the ions sodium, calcium, chloride, sulfate, nitrate, and fluoride, the main effect for locations was not independent of the main effect for season.

The mean ionic content of creosote-bush leaf tissue averaged across seasons is given in Table 6-3. Sodium was the only ion whose concentration was not significantly different between locations. Leaf tissue at Site 1 had significantly higher levels of sulfate, nitrate, and fluoride; Site 1 and Site 6 also had significantly higher levels of calcium than the other locations. In addition, Site 1 had significantly lower concentrations of potassium and phosphate. The mean level of potassium was significantly higher at Site 4. The concentration of magnesium was significantly higher at Site 6. Mean chloride values ranged from 7,584 ppm to 9,070 ppm, but no discernible trend among sites was noted. Nitrate concentrations were not significantly different between Sites 4, 6, 40, and 42; as mentioned previously, nitrate concentration at Site 1 (2674 ppm) was significantly higher than levels at the other sites. Phosphate, which varied markedly between sites, was significantly higher at Site 6. Differences in concentrations of fluoride between

locations were similar to those of nitrate. Site 1, which had four significantly higher and two significantly lower mean concentration values, generally appeared dissimilar to the other locations. Site 40 had the lowest values for calcium and magnesium.

Based on examination of simple effects, concentrations of magnesium, chloride, sulfate, nitrate, and phosphate were generally higher in the dry season than the wet season. Season did not appear to affect levels of sodium, potassium, calcium, or fluoride.

6.1.2.2 Salt-Bush

The ionic content of salt-bush (Atriplex polycarpa) was measured at three locations at the end of the wet (March) and dry (October) seasons in 1985; ten replications were taken from each field per season. Sites 2 and 3 are on the PVNGS site; Site 44 lies approximately six miles northwest of the site and serves as a control (Figure 2-2).

Except for chloride, sulfate, and nitrate, the main effects for location and season were independent. Mean ionic concentrations for each location averaged across seasons are presented in Table 6-4. Fluoride was the only ion whose mean concentration was not significantly different between sites. Mean concentrations of sodium, potassium, and phosphate in leaf tissue of salt-bush were significantly different between the three locations. Compared to Sites 2 and 3, the control had the highest mean concentrations of potassium, magnesium, sulfate, and phosphate, and the lowest concentrations of sodium, calcium, chloride, and nitrate. Generally, each of the three sites exhibited variable concentrations of the measured ions in salt-bush leaf tissue.

Examination of simple effects for season indicated higher ionic concentrations for sodium, calcium, magnesium, and fluoride at the end of the dry season. No discernible differences between seasons were noted for concentrations of chloride, sulfate, nitrate, and phosphate.

6.2 COTTON YIELD

A comparison of cotton yields from seven sites in the vicinity of the PVNGS is presented in Table 6-5. Sites 11 and 13 were also planted in cotton in 1985; these were not sampled because they were harvested just prior to field surveys. Estimates of annual yield were based on the removal by hand of mature cotton bolls from ten 1 x 4 m plots in each site just prior to mechanical harvesting. In the 1985 growing season Sites 24 and 25 were planted with long-staple (Pima) cotton, whereas the remaining sites were planted with short-staple cotton.

The mean yield of cotton was significantly different between locations. Although the control site (Site 25) had the highest yield (2880 lb/acre), this was not significantly different from the yields of cotton at Sites 30 and 12. The yield of cotton at Site 31 was significantly lower than all other locations except Site 24.

6.3 STRUCTURE OF INDIGENOUS PLANT COMMUNITIES

Species composition, relative cover, and diversity were quantitatively monitored in eight native plant communities at PVNGS in 1985. Ten 1 x 10 meter plots were sampled during March and October to coincide with the end of the wet and dry seasons, respectively. Cover refers to the percentage of a line intersected by a given species. Two components of diversity were considered. The first, richness, refers to the number of species sampled from the community. The second, heterogeneity, incorporates both richness and equitability or evenness (Shannon and Weaver, 1949). Nomenclature follows Kearney and Peebles (1973).

6.3.1 Creosote-Bush

A comparison of the species composition, cover, and floristic diversity for five creosote-bush (Larrea divaricata) plant communities is presented in Table 6-6. Creosote-bush was the dominant perennial species, and it

characterized each native plant community. The prevalence of this species was further evidenced by its high cumulative cover value. Species richness varied markedly between seasons. Prolific growth of annuals occurred in March and was undoubtedly associated with recent rainfalls. Species richness in October was greatly diminished; some plots were devoid of herbaceous flora. Overall species richness was similar for Sites 1, 4, 6, and 42; Site 40, which serves as a control and is located approximately 20 miles to the northwest, was floristically impoverished. The dominant herbaceous flora was plaintain and globe-mallow, the latter sometimes covering most of the desert floor. Heterogeneity between communities was more varied. Again, diversity was greatest at Site 4 and lowest at Site 5. Higher species richness and heterogeneity values at Site 4 are attributable to the presence and abundance of cacti; except for Site 42, cacti are sparsely distributed at the other sites. Except for an increase in the species richness of herbaceous flora, there have been no significant changes in the species composition and structure of creosote-bush communities in the immediate vicinity of PVNGS (Sites 1, 4, and 6) or at the controls (Sites 40 and 42) since the initiation of quantitative surveys in 1983.

6.3.2 Salt-Bush

Three native plant communities in the vicinity of PVNGS are dominated by salt-bush (Table 6-7). Although less common than the abundant and widely distributed creosote-bush communities, the salt-bush (*Atriplex* spp.) communities were equally as diverse. Two species of salt-bush were identified in each of the three locations. *Atriplex polycarpa* was markedly more abundant than *Atriplex linearis*, and its relative cover values were the highest of the woody perennial vegetation. Other woody flora included creosote-bush, mesquite, and wolf-berry. Globe-mallow and *Schismus barbatus* were also the most prevalent non-woody flora associated with the salt-bush communities. Species richness was nearly identical at Sites 2 and 3, and lowest at the control (Site 44). Site 3, which had the highest species richness, also had the lowest heterogeneity value. As in the creosote-bush communities, species richness of herbaceous flora has increased since 1983, but this is a

dynamic phenomenon characteristic of desert flora. During periods of ample moisture numerous species may appear briefly, seed, and then remain dormant until the next precipitation cycle. No significant changes in the structure and species composition of the dominant flora of the salt-bush communities were observed.

Table 6-1

MEAN ION CONTENT (µg/g dry weight) ± S.E.*
OF ALFALFA LEAF TISSUE
1985

Ion	Site 43 (n = 20)
Na^{+}	2,029 ± 10
K^{+}	24,543 ± 6
Ca^{+2}	12,300 ± 3
Mg^{+2}	2,581 ± 4
Cl^{-}	14,220 ± 6
SO_4^{-2}	15,608 ± 5
NO_3	598 ± 12
PO_4^{-3}	159 ± 5
F^{-}	13 ± 5

*Standard errors are expressed as a percent of the sample mean.

Table 6-2

MEAN* ION CONTENT (µg/g dry weight) ± S.E.** OF COTTON LEAF TISSUE
1985

Ion	Sites								
	11 (n = 20)	12 (n = 20)	13 (n = 20)	23 (n = 20)	24 (n = 20)	25 (n = 20)	30 (n = 20)	31 (n = 20)	32 (n = 20)
Na^+	$2136^{cd} \pm 12$	$2422^{bcd} \pm 11$	$4230^{b} \pm 10$	$2902^{bc} \pm 5$	$889^{d} \pm 8$	$716^{d} \pm 8$	$2553^{bcd} \pm 8$	$13119^{a} \pm 11$	$14035^{a} \pm 10$
K^+	$15573^{bc} \pm 4$	$19712^{de} \pm 3$	$15956^{bcd} \pm 4$	$21645^{e} \pm 5$	$17411^{bcd} \pm 5$	$15200^{b} \pm 6$	$17423^{bcd} \pm 4$	$18831^{cde} \pm 15$	$11222^{a} \pm 11$
Ca^{+2}	$35633^{c} \pm 4$	$31504^{c} \pm 6$	$36475^{c} \pm 2$	$44666^{ab} \pm 4$	$37118^{c} \pm 5$	$45200^{ab} \pm 4$	$38103^{bc} \pm 4$	$50759^{a} \pm 12$	$38727^{bc} \pm 6$
Mg^{+2}	$4777^{cd} \pm 3$	$4539^{de} \pm 5$	$4532^{de} \pm 2$	$6274^{b} \pm 4$	$3995^{de} \pm 5$	$3757^{e} \pm 6$	$5463^{bc} \pm 4$	$7330^{a} \pm 10$	$5731^{b} \pm 7$
Cl^-	$13630^{a} \pm 3$	$14700^{a} \pm 2$	$16780^{ab} \pm 4$	$24115^{d} \pm 5$	$16660^{ab} \pm 5$	$18860^{bc} \pm 3$	$21350^{cd} \pm 7$	$20965^{d} \pm 9$	$20965^{d} \pm 7$
SO_4^{-2}	$27270^{c} \pm 6$	$28567^{c} \pm 12$	$32379^{c} \pm 8$	$145135^{a} + 22$	$39225^{c} \pm 10$	$41513^{c} \pm 8$	$82210^{b} \pm 12$	$83022^{b} \pm 12$	$83022^{b} \pm 10$
NO_3^-	$1011^{abc} \pm 15$	$1172^{bc} \pm 9$	$846^{bc} \pm 24$	$2383^{a} \pm 20$	$644^{c} \pm 19$	$742^{bc} \pm 21$	$1341^{b} \pm 23$	$623^{c} \pm 20$	$1006^{bc} \pm 21$
PO_4^{-3}	$2147^{bcd} \pm 6$	$2727^{ab} \pm 4$	$1817^{d} \pm 3$	$2526^{bc} \pm 10$	$2155^{bcd} \pm 5$	$2238^{bcd} \pm 9$	$2018^{cd} \pm 9$	$3228^{a} \pm 15$	$2168^{bcd} \pm 7$
F^-	$14^{b} \pm 3$	$13^{b} \pm 4$	$13^{b} \pm 3$	$35^{a} \pm 20$	$17^{b} \pm 3$	$15^{b} \pm 5$	$29^{a} \pm 17$	$33^{a} \pm 12$	$34^{a} \pm 15$

*For individual ions, means with the same letters are not significantly (P>.05) different.

**Standard errors are expressed as a percent of the sample mean.

Table 6-3

MEAN* ION CONTENT (µg/g dry weight) ± S.E.** OF
CREOSOTE-BUSH (Larrea divaricata) LEAF TISSUE
1985

Ion	Sites				
	1 (n = 20)	4 (n = 20)	6 (n = 20)	40 (n = 20)	42 (n = 20)
Na^{+}	513^{a} ± 5	520^{a} ± 5	428^{a} ± 3	538^{a} ± 12	469^{a} ± 5
K^{+}	8302^{c} ± 5	13410^{a} ± 4	10046^{b} ± 4	9709^{b} ± 5	9916^{b} ± 7
Ca^{+2}	16267^{a} ± 5	13871^{c} ± 3	15517^{ab} ± 5	13013^{c} ± 5	14101^{bc} ± 4
Mg^{+2}	1398^{b} ± 5	1353^{bc} ± 4	1618^{ad} ± 5	1230^{c} ± 6	1380^{bc} ± 4
Cl^{-}	7815^{b} ± 5	8545^{ab} ± 7	7584^{b} ± 6	8535^{ab} ± 4	9070^{a} ± 6
SO_4^{-2}	30613^{a} ± 5	9619^{d} ± 8	10813^{d} ± 8	16121^{c} ± 6	26607^{b} ± 7
NO_3^{-}	2674^{a} ± 17	853^{bd} ± 7	748^{b} ± 4	839^{b} ± 4	811^{b} ± 2
PO_4^{-3}	926^{d} ± 6	1142^{c} ± 5	1513^{a} ± 4	1191^{c} ± 6	1331^{b} ± 4
F^{-}	20.1^{a} + 2	8.5^{b} ± 1	18.5^{b} ± 1	17.7^{b} ± 1	18.4^{c} ± 1

*For individual ions, means with the same letters are not significantly ($P > .05$) different.

**Standard errors are expressed as a percent of the sample mean.

Table 6-4

MEAN* ION CONTENT (µg/g dry weight) ± S.E.**
OF SALT-BUSH (Atriplex polycarpa) LEAF TISSUE
1985

	Sites		
Ion	2 (n = 20)	3 (n = 20)	44 (n = 20)
Na^+	50627^b ± 3	55282^a ± 3	36155^c ± 4
K^+	15750^c ± 7	19580^b ± 5	23034^a ± 6
Ca^{+2}	12008^a ± 7	12825^a ± 8	9871^b ± 5
Mg^{+2}	4706^b ± 10	5811^a ± 9	5979^a ± 5
Cl^-	72950^a ± 4	69500^a ± 4	46180^b ± 9
SO_4^{-2}	12865^b ± 6	11356^b ± 6	16596^a ± 7
NO_3^-	673^b ± 5	747^a ± 7	519^b ± 12
PO_4^{-3}	1400^b ± 3	1164^c ± 4	1631^a ± 4
F^-	9.5^a ± 2	10.2^a ± 3	9.8^a ± 4

*For individual ions, means with the same letters are not significantly (P>.05) different.

**Standard errors are expressed as a percent of the sample mean.

Table 6-5

AVERAGE YIELD* ± S.E.** OF COTTON AT SEVEN MONITORING SITES, 1985

Site	Mean Yield (lb/acre) NUS Field Studies (n = 10)
12	2314^{ab} ± 9
23	1894^{bc} ± 16
24	1423^{cd} ± 25
25	2880^{a} ± 8
30	2470^{ab} ± 7
31	1169^{d} ± 12
32	2002^{bc} ± 11

*Means with the same letters are not significantly (P>.05) different.

**Standard errors are expressed as a percent of the sample mean.

Table 6-6

SPECIES COMPOSITION, COVER (%), AND DIVERSITY OF THE FLORA IN FIVE CREOSOTE-BUSH (Larrea divaricata) COMMUNITIES IN THE VICINITY OF PVNGS, 1985

Species		Cover (%)					
		Site					Cumulative % Cover
Scientific Name	Common Name	1	4	6	40	42	
Shrubs							
Larrea divaricata		18.9	11.8	20.6	13.5	18.5	83.5
Herbs							
Ambrosia dumosa	Ragweed	1.4					1.4
Amsinckia intermedia	Fiddle Neck	1.4	0.1	3.6	*	0.2	5.3
Astragalus Nuttallianus	Milk Vetch		< 0.1	< 0.1			
Brassica Tournefortii	None		*				
Camelina microcarpa	False Flax		< 0.1				
Chaenactis carphoclinia	None	0.6	0.4			*	1.0
Chorizanthe rigida	None	< 0.1	0.1				0.1
Cryptantha angustifolia	None		< 0.1	0.1			0.1
Cryptantha inaequata	None	< 0.1					
Cryptantha maritima	None					0.2	0.2
Dalea neomexicana	Indigo Bush					0.2	0.2
Eriastrum diffusum	None	< 0.1					
Eriogonum thomasii	Wild Buckwheat	0.2	< 0.1				0.2
Eriogonum trichopes	Wild Buckwheat		0.3	0.1		2.1	2.5
Eriophyllum lanosum	Wooly Daisy	0.2		< 0.1			0.2
Erodium texanum	Heron Bill	2.3	0.1	0.2		< 0.1	2.6
Euphorbia polycarpa	Spurge			*			
Filago arizonica	None	0.2					0.2
Hesperocallis undulata	Desert Lily		< 0.1				
Lepidium lasiocarpum	Pepper Grass	0.6	0.3	0.3		1.8	3.0
Linanthus dichotomus	None	0.3		< 0.1			0.3

* Denotes species presence in plots.

Table 6-6 (Continued)

SPECIES COMPOSITION, COVER (%), AND DIVERSITY OF THE FLORA IN FIVE CREOSOTE-BUSH (*Larrea divaricata*) COMMUNITIES IN THE VICINITY OF PVNGS, 1985

Species		Cover (%)					
		Site					Cumulative % Cover
Scientific Name	Common Name	1	4	6	40	42	
Herbs (continued)							
Lotus Tonentellus	Deer Vetch			< 0.1			
Lupinus sparsiflorus	Lupine			0.2			0.2
Nemacladus glanduliferus	None	0.1					0.1
Oligomeris linifolia	None	< 0.1					
Orthocarpus purpurascens	Owl Clover		*				
Pectocarya platycarpa	None	0.6	0.5	0.3		0.5	1.9
Phacelia crenulata	None	< 0.1	*				
Plantago insularis	Plaintain, Indian wheat		8.8	1.2	5.0	1.8	16.8
Spermolepis echinata	None						
Sphaeralcea colteri	Globe Mallow				15.3		15.3
Grasses							
Festuca octoflora	Fescue	1.2		0.9			2.1
Schismus barbatus	None		4.6	< 0.1	0.6	1.7	6.9
Cacti							
Opuntia acanthocarpa	None		*			*	
Opuntia echinocarpa	None		*				
Opuntia ramossisima	None		0.3			*	0.3
Species Richness		18	21	16	5	13	
Heterogeneity (H')		1.32	1.37	0.94	1.08	1.18	
Number of Plots		20	20	20	20	20	

* Denotes species presence in plots.

Table 6-7

SPECIES COMPOSITION, COVER (%), AND DIVERSITY OF THE FLORA IN THREE SALT-BUSH (Atriplex spp.) COMMUNITIES IN THE VICINITY OF PVNGS, 1985

Species		Cover (%)			
		Site			Cumulative % Cover
Scientific Name	Common Name	2	3	44	
Shrubs					
Larrea divaricata	Creosote-bush	4.9		1.1	6.0
Atriplex polycarpa	Salt-bush, Orache	20.3	19.4	9.3	49.0
Atriplex linearis	Salt-bush, Orache	0.7	1.4	0.9	3.0
Prosopis velutina	Mesquite	4.8			4.8
Lycium Fremontii	Wolf Berry	0.2	3.3		5.3
Lycium sp.	Wolf Berry	0.4	3.7		4.1
Herbs					
Abronia villosa	Sand Verbena	< 0.1			< 0.1
Ambrosia dumosa	Ragweed		0.1		0.1
Amsinckia intermedia	Fiddle Neck	0.2	*	< 0.1	0.2
Astragalus Nuttallianus	Milk Vetch				
Brassica Tournefortii	None				
Camelina microcarpa	False Flax				
Chaenactis carphoclinia	None				
Chorizanthe rigida	None				
Cryptantha angustifolia	None		*		
Eriastrum diffusum	None		< 0.1		
Eriophyllum lanosum	Heron Bill	0.4	< 0.1		0.4
Eucrypta micrantha	None			< 0.1	
Euphorbia sp.	Spurge			0.1	
Lepidium lasiocarpum	Pepper Grass	< 0.1	0.2	< 0.1	0.2
Machaeranthera arida	None	< 0.1	< 0.1		
Nama hispidum	None		0.1		0.1

* Denotes species presence in plots.

Table 6-7 (Continued)

SPECIES COMPOSITION, COVER (%), AND DIVERSITY OF THE FLORA IN THREE SALT-BUSH (*Atriplex* spp.) COMMUNITIES IN THE VICINITY OF PVNGS, 1985

Species		Cover (%)			
		Site			Cumulative % Cover
Scientific Name	Common Name	2	3	44	
Herbs (Continued)					
Oligomeris linifolia	None	*	*		
Orthocarpus purpurascens	Owl Clover	*		*	
Pectocarya platycarpa	None		*		
Plantago insularis	Plaintain, Indian wheat	2.0	0.6	5.5	9.1
Sphaeralcea colteri	Globe Mallow	3.7	< 0.1	15.8	19.5
Grasses					
Festuca octaflora	Fescue	*	0.3		0.3
Schismus barbatus	None	5.3	16.9	18.0	40.2
Species Richness		17	18	11	
Heterogeneity (H')		1.66	1.37	1.45	
Number of Plots		20	20	20	

* Denotes species presence in plots.

7 REMOTE SENSING/AERIAL PHOTOGRAPHY

PVNGS and vicinity were aerially photographed with color infrared film on September 8, 1985. Photographic coverage included the area within a 5-mile radius of the PVNGS cooling towers and the four control sites located approximately 20 miles to the northwest and southeast of PVNGS (Figure 7-1). Specifications and associated data for the 1985 photomission are given in Table 7-1. The infrared band of the electromagnetic spectrum exhibits a high level of reflectance from living vegetation. This level of reflectance can provide some indication of physiological and morphological changes in the vegetation, and is a useful tool for monitoring environmental change. It is particularly applicable in identifying vegetative stress.

Vegetative stress in agricultural crops and indigenous vegetation may be ascribed to drought, poor drainage, nutrient deficiencies associated with varying soil fertility, disease or insect damage, weed competition, and other factors that alter a plant's normal physiology. Stress conditions attributable to salt typically include chlorosis of the leaves, marginal necrosis, premature leaf drop, wilting, and widespread mortality. Significant vegetative stress from salt drift dispersion would appear on the color infrared positives as a homogenous tonal signature covering an entire field, or a large portion thereof.

Examination of the 1985 color infrared exposures failed to disclose any evidence of widespread vegetative stress in either agricultural crops or indigenous plant communities. Patterns of agricultural vegetative growth in 1985 were consistent with those observed in previous films, indicating that the observed variability was associated with soil fertility and drainage.

Representative color infrared imagery for Sites 23 (cotton) and 43 (alfalfa) is included in Appendix G. The first color infrared photograph (PVNGS 6-9) shows Site 23. The uppermost field was planted with short-staple cotton in 1985. It should be noted that only half of the field was tilled in 1985, whereas since 1983 the entire field has been planted. The tonal signatures

for 1985 are nearly identical to those observed in previous photomissions. Drainage patterns appear as whitish streaks; the lighter areas depict less vigorous vegetative growth associated with variability in soil fertility. The larger field southeast of Site 23 was planted with alfalfa (note wider rows). Variations in plant productivity are readily apparent as shown by tonal color patterns.

The second photograph shows Site 43 (PVNGS 43-1), which was also planted with alfalfa. Prolific vegetative growth is shown by the bright red coloration; stunted or reduced growth, which appears whitish and green, was attributable to shallow, droughty soil. Based on ground verification of agricultural fields, no chlorosis or marginal necrosis was observed. The most frequently encountered causal agent of agricultural vegetative stress was insects, particularly leaf perforators. Some indigenous vegetation was cleared for agricultural tillage in 1985, but generally, the indigenous plant communities in the vicinity of PVNGS showed no evidence of significant vegetative stress.

Table 7-1

SUMMARY OF THE 1985 COLOR INFRARED (CIR) PHOTOMISSION
AT THE PALO VERDE NUCLEAR GENERATING STATION AND VICINITY

Item	Data
Subcontractor:	Aero Science P.O. Box 4 Scottsdale, Arizona 85252 (602) 948-6634
Date:	8 September 1985
Weather:	Clear
Start Time:	11:06 Mountain Standard Time
Stop Time:	12:36 Mountain Standard Time
Altitude:	3000 feet above ground level
Film Type:	Eastman Kodak 2443 Color Infrared
Camera Serial Number:	RC8 #925
Magazine Serial Number	#995
Lens Serial Number:	#UAG 414
Cameral Focal Length:	152.22mm
Filter:	BL (minus blue)
Shutter Speed:	1/375 second
Aperture:	F6.5
Scale:	1:6000

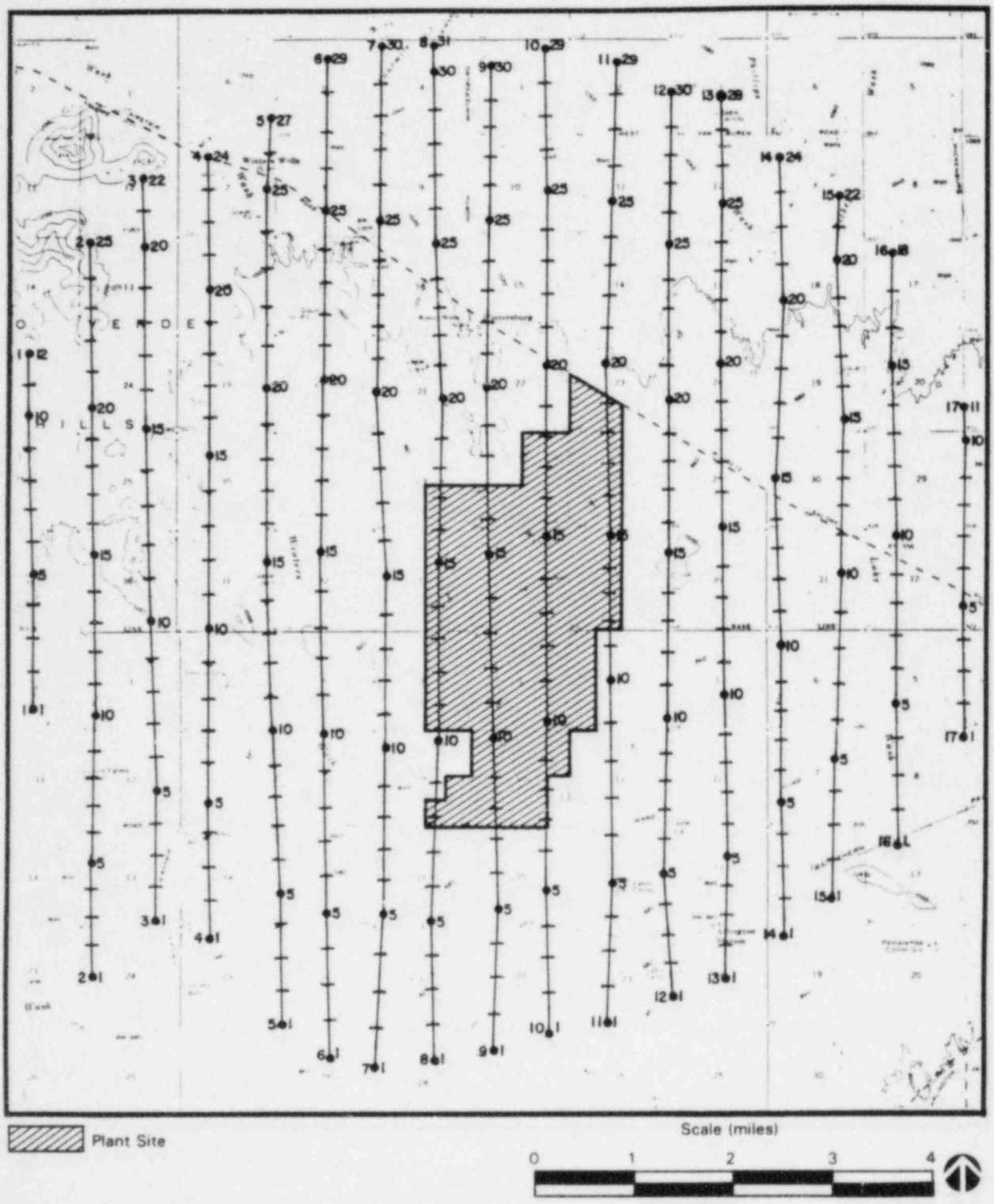


Figure 7-1 Orientation of Flight Lines for the 1985 PVNGS Color Infrared Aerial Photomission

8 SOIL ANALYSES

8.1 PHYSICAL ANALYSES

Soil particle-size analyses had been performed in 1983 to determine textural classes at all soil monitoring sites. Additional particle-size analyses were done in 1985 for soils from Site 45, which was established to replace Site 29 during 1985. Soil textural classes for all sites are reported in Appendix F for the two sample depths (upper, 0-15 cm; lower, 15-30 cm). The predominant texture of agricultural soils is loam, followed by silt loam in order of occurrence. Two sites (33 and 35) have sand to loamy sand textures.

8.2 CHEMICAL ANALYSES

8.2.1 Comparisons of Agricultural and Native Sites

Twelve soil samples were collected from each agricultural site in 1985, corresponding to two replicates for two depths for each of three seasons. Eight samples were collected from each native site, corresponding to two replicates for two depths for each of two seasons. A total of 156 agricultural soil samples and 248 native soil samples were collected for analysis over the year; the analytical results are presented in Appendix F.

For individual parameters, the mean values of each parameter in all agricultural soil samples were compared with the corresponding mean values of all native soil sample parameters using statistical techniques (Table 8-1). Mean values for agricultural and native soil parameters are significantly different for electrical conductivity, soluble sodium, chloride, fluoride, bicarbonate, nitrate, and sulfate, and exchangeable calcium, magnesium and sodium. As shown in Figure 8-1, concentrations of these soluble ions are consistently higher in agricultural soils than native soils. Such a trend is expected given the additional input of ions that agricultural soils receive from fertilizer and and irrigation water.

8.2.2 Bilevel Comparisons of Agricultural Soils

Table 8-2 presents the mean values of individual parameters for upper and lower soil depths at agricultural sites. There are significant differences between the two depths for electrical conductivity, soluble sodium, chloride, fluoride, and sulfate. The mean concentrations of these ions is greater in lower samples than in upper samples. The distribution of soluble sodium between depths for each season at each agricultural site is shown in Figure 8-2. The distribution for most other soluble ions is similar to sodium. For most sites, lower samples contain more sodium than upper samples. Site 30, for example, has 370 ppm and 660 ppm sodium (wet season) in upper and lower samples, respectively. Site 30 has the highest concentration of soluble sodium in the lower depth during each season and has the greatest difference in concentration between depths on a percentage basis.

8.2.3 Bilevel Comparisons of Native Soils

Table 8-2 also presents the mean value of parameters measured in upper and lower soil samples collected from native sites. All parameters except soluble calcium, magnesium, potassium, and ammonia, and exchangeable calcium, magnesium, and potassium, are significantly different between depths. The mean concentration of most soluble ions is greater in lower samples than in upper samples, which reflects natural leaching by rainfall; only calcium, magnesium, potassium, ammonia, and phosphate are exceptions. The distribution of soluble sodium between depths at each native site is shown in Figure 8-3, which illustrates the variability of sodium concentration between individual monitoring sites and depth of sample collection. The concentrations of most other soluble ions follow a trend similar to that for sodium. Sites 3 and 16, both onsite locations, have very high amounts of sodium when compared to other sites. These two sites are within 2,000 feet of each other and are located in the northwest section of the PVNGS site boundary. Sites 3 and 16 also have high levels of most other ions. Soil mapping conducted by the Soil Conservation Service (USDA, 1977) indicates that Sites 3 and 16 are located in an area of naturally saline soils (Casa Grande-Laveen Complex), which suggests that the amount of sodium measured at these locations reflects natural conditions.

In addition to Sites 3 and 16, Site 39 shows a sharp increase in sodium concentration for both depths in August, and has high levels of chloride, nitrate, and sulfate. This is a remote location ten miles southwest of the plant. Cattle were present at the site when soil samples were collected, and are a possible source of these ions.

8.2.4 Seasonal Comparisons of Agricultural Soils

Soil samples were collected from agricultural sites in March (wet season), August (dry season) and December (post-defoliation of cotton). Table 8-3 presents mean values of each parameter when all agricultural samples (upper and lower) are averaged by season. A comparison of wet to dry seasons indicates a significant difference between means for pH, soluble potassium, fluoride, carbonate, ammonia and phosphate, and exchangeable calcium and potassium. Mean values for wet season and post-defoliation samples are significantly different for pH, soluble potassium, boron, carbonate, nitrate, ammonia, phosphate, and exchangeable calcium. A comparison of mean values for dry and post-defoliation samples indicates significant differences for soluble boron, fluoride, ammonia, and exchangeable calcium and potassium.

8.2.5 Trend Analyses for Cotton Sites

Table 8-4 represents the mean value of parameters measured at each cotton site. When mean values are ranked from highest to lowest, Site 30 is shown to have the highest electrical conductivity, soluble calcium, magnesium, sodium, chloride, boron, ammonia-nitrogen, and sulfate, and exchangeable calcium, magnesium and sodium. Electrical conductivity is a useful indicator of the total salt content of soils and is used as the basis of comparison for all cotton sites. When mean values for electrical conductivity are ranked from highest to lowest, the corresponding order for cotton sites is: Sites 30, 12, 32, 23, 25, 11, 43, 13, and 31. Differences in irrigation management, fertilizer practices, and soil type may be responsible for the variation between cotton sites.

8.2.6 Detection Limits for Soils Monitoring

Detection limits for soils monitoring are based on the annual mean soluble sodium content in upper soil samples. To estimate detection limits, agricultural and native sites were divided into homogenous groupings using a least significant difference (LSD) procedure. All agricultural sites were divided into two groups based on the LSD test. For Group A (Sites 7, 11, 13, 24, 25, 28, 31, and 43) the mean soluble sodium content is 137 ± 6 ppm, and for Group B (Sites 12, 23, 30, 32, and 45) the mean is 301 ± 28 ppm. The mean soluble sodium values for sites within each group are not significantly different at a 95 percent confidence level.

If it is assumed that the soil bulk density is 1.33 g/cm^3 (83 lb/ft^3) and deposited material is uniformly mixed over a 15-cm depth, then 1 ppm concentration is approximately equal to 1.8 lb per acre. Therefore, it is estimated that a minimum increase of 18 lb of sodium per acre for Group A sites, and 85 lb of sodium per acre for Group B sites, is needed before a difference from baseline sodium content is detectable at a 95 percent confidence level ($t_{.05}$ = 1.68 and 1.70 for Groups A and B, respectively).

Native soil monitoring sites were also grouped according to the annual mean soluble sodium content in upper samples using the LSD procedure. Sites 3, 16, and 39 are not considered representative for reasons discussed in Section 8.2.3 and were not included in this analysis. The remaining 28 native sites were divided into eight groups based on the LSD test. Two groups, corresponding to the lowest and highest mean soluble sodium values, were selected to indicate the range in detection limits for native sites. For Group C (Sites 4, 9, 10, 15, 17, 18, 19, 22, 26, 33, 34, 35, 36, 37, 40, 42, and 44) the mean soluble sodium content is 14 ± 1 ppm, and for Group D (Sites 5 and 38) the mean is 90 ± 8 ppm. Therefore, it is estimated that a minimum increase of 3 lb of sodium per acre for Group C sites, and 27 lb of sodium per acre for Group D sites, is needed before a difference from baseline sodium content is detectable at a 95 percent confidence level ($t_{.05}$ = 1.67 and 1.89 for Groups C and D, respectively).

These estimates assume that all sodium added to the soil remains and is uniformly mixed in the upper 15 cm of soil. In irrigated agricultural soils, water will leach sodium to greater depths. Consequently, the detection limits reflect the statistical confidence by which sodium levels are compared, but do not reflect the physical processes that affect sodium concentrations in the soil. For native soils, leaching of soluble sodium is expected to be less than in agricultural soils due to lower volumes of percolating water.

Table 8-1

MEANS AND STANDARD ERRORS OF PARAMETERS MEASURED IN AGRICULTURAL AND NATIVE SOILS, 1985

Parameters	Agricultural Soils (n = 156)	Native Soils (n = 248)
Electrical Conductivity (mmhos/cm)	1.19 ± 0.07	0.72 ± 0.07
pH	8.39 ± 0.03[a]	8.36 ± 0.03[a]
Soluble Ions (ppm):		
Calcium	44.7 ± 2.3[a]	51.4 ± 2.6[a]
Magnesium	7.0 ± 0.4[a]	8.0 ± 0.8[a]
Sodium	234 ± 13	114 ± 15
Potassium	19.0 ± 1.6[a]	23.1 ± 1.6[a]
Chloride	129 ± 14	82.9 ± 17.0
Boron	2.1 ± 0.1[a]	2.5 ± 0.4[a]
Fluoride	5.5 ± 0.3	1.4 ± 0.2
Bicarbonate	222 ± 5	175 ± 5
Carbonate	5.4 ± 0.8[a]	7.2 ± 1.0[a]
Nitrate-N	14.5 ± 1.7	10.2 ± 1.4
Ammonia-N	5.2 ± 0.4[a]	6.0 ± 0.3[a]
Phosphate-P	2.9 ± 0.3[a]	2.6 ± 0.1[a]
Sulfate	241 ± 22	75 ± 18
Exchangeable Ions (meq/100g)		
Calcium	28.2 ± 0.9	23.1 ± 0.4
Magnesium	2.3 ± 0.1	1.7 ± 0.1
Sodium	3.2 ± 0.2	1.6 ± 0.2
Potassium	1.2 ± 0.1[a]	1.1 ± 0.1[a]

(a) Means are not significantly different (P >.05).

Table 8-2 (Page 1 of 2)

MEANS AND STANDARD ERRORS OF PARAMETERS MEASURED IN UPPER AND LOWER SAMPLES OF AGRICULTURAL AND NATIVE SOILS, 1985

Parameters	Depth[c]	Agricultural Soils (n = 78)	Native Soils (n = 124)
Electrical Conductivity (mmhos/cm)	U	1.03 ± 0.07	0.55 ± 0.05
	L	1.34 ± 0.11	0.90 ± 0.12
pH	U	8.38 ± 0.05[a]	8.26 ± 0.04
	L	8.40 ± 0.04[a]	8.45 ± 0.05
Soluble Ions (ppm):			
Calcium	U	42.2 ± 2.6[a]	52.5 ± 3.3[b]
	L	47.1 ± 3.8[a]	50.4 ± 4.1[b]
Magnesium	U	6.9 ± 0.5[a]	8.3 ± 1.2[b]
	L	7.1 ± 0.6[a]	7.8 ± 8.2[b]
Sodium	U	200 ± 14	67.4 ± 11.8
	L	268 ± 22	160 ± 26
Potassium	U	18.8 ± 2.1[a]	25.3 ± 2.4[b]
	L	19.2 ± 2.5[a]	20.9 ± 2.1[b]
Chloride	U	96.6 ± 14.8	47.9 ± 14.2
	L	160 ± 23	118 ± 30
Boron	U	2.0 ± 0.1[a]	1.4 ± 0.2
	L	2.2 ± 0.2[a]	3.6 ± 0.8
Fluoride	U	4.9 ± 0.4	0.8 ± 0.1
	L	6.1 ± 0.5	1.9 ± 0.4
Bicarbonate	U	231 ± 7[a]	163 ± 6
	L	214 ± 6[a]	187 ± 8
Carbonate	U	6.0 ± 1.3[a]	3.6 ± 0.8
	L	4.9 ± 1.0[a]	10.8 ± 1.7
Nitrate-N	U	14.2 ± 2.3[a]	7.0 ± 1.0
	L	14.8 ± 2.3[a]	13.4 ± 2.7
Ammonia-N	U	5.5 ± 0.6[a]	6.3 ± 0.4[b]
	L	4.9 ± 0.6[a]	5.7 ± 0.4[b]
Phosphate-P	U	3.0 ± 0.3[a]	2.8 ± 0.2
	L	2.9 ± 0.4[a]	2.3 ± 0.1
Sulfate	U	181 ± 23	31 ± 18
	L	296 ± 36	112 ± 29

Table 8-2 (Page 2 of 2)

MEANS AND STANDARD ERRORS OF PARAMETERS MEASURED IN UPPER AND LOWER SAMPLES OF AGRICULTURAL AND NATIVE SOILS, 1985

Parameters	Depth[c]	Agricultural Soils (n = 78)	Native Soils (n = 124)
Exchangeable Ions (meq/100g):			
Calcium	U	27.7 ± 1.2[a]	23.3 ± 0.6[b]
	L	28.8 ± 1.3[a]	22.8 ± 0.6[b]
Magnesium	U	2.3 ± 0.1[a]	1.8 ± 0.1[b]
	L	2.3 ± 0.1[a]	1.7 ± 0.1[b]
Sodium	U	3.0 ± 0.2[a]	1.0 ± 0.1
	L	3.5 ± 0.2[a]	2.1 ± 0.3
Potassium	U	1.2 ± 0.1[a]	1.1 ± 0.1[b]
	L	1.2 ± 0.1[a]	1.1 ± 0.1[b]

(a) Agricultural soils - no significant differences (P >.05) between means of upper and lower samples.
(b) Native soils - no significant differences (P >.05) between means of upper and lower samples
(c) U = 0-15 cm; L = 15-30 cm.

Table 8-3
MEANS AND STANDARD ERRORS[d] FOR PARAMETERS MEASURED IN AGRICULTURAL SOILS DURING WET, DRY, AND POST-DEFOLIATION SEASONS, 1985

Parameter	March (Wet)	August (Dry)	December (Post)
EC (mmhos/cm)	1.2 ± 0.1[a]	1.3 ± 0.1[a]	1.1 ± 0.1[a]
pH	8.02 ± 0.05[a]	8.63 ± 0.05[b]	8.51 ± 0.04[b]
Soluble Ions (ppm):			
Calcium	46.9 ± 4.9[a]	43.7 ± 3.6[a]	43.5 ± 3.6[a]
Magnesium	6.7 ± 0.7[a]	6.5 ± 0.6[a]	7.8 ± 0.7[a]
Sodium	238 ± 23[a]	264 ± 22[a]	200 ± 24[a]
Potassium	24.6 ± 4.4[a]	16.5 ± 1.3[b]	15.9 ± 1.5[b]
Chloride	122 ± 26[a]	151 ± 21[a]	113 ± 26[a]
Boron	2.6 ± 0.2[a]	2.3 ± 0.2[a]	1.4 ± 0.1[b]
Fluoride	4.3 ± 0.5[a]	7.0 ± 0.6[b]	5.2 ± 0.4[a]
Bicarbonate	210 ± 6[a]	228 ± 8[a]	229 ± 10[a]
Carbonate	1.9 ± 0.8[a]	8.1 ± 1.4[b]	6.3 ± 1.6[b]
Nitrate-N	18.5 ± 4.2[a]	16.2 ± 2.3[ab]	8.8 ± 1.2[b]
Ammonia-N	11.3 ± 0.6[a]	3.5 ± 0.3[b]	1.0 ± 0.2[c]
Phosphate-P	4.2 ± 0.7[a]	2.2 ± 0.2[b]	2.4 ± 0.2[b]
Sulfate	234 ± 49[a]	272 ± 40[a]	218 ± 30[a]
Exchangeable Ions (meq/100g):			
Calcium	21.6 ± 0.8[a]	25.4 ± 0.7[b]	37.8 ± 1.7[c]
Magnesium	2.1 ± 0.1[a]	2.2 ± 0.1[a]	2.4 ± 0.1[a]
Sodium	3.2 ± 0.3[a]	3.4 ± 0.3[a]	3.1 ± 0.3[a]
Potassium	1.2 ± 0.1[a]	1.1 ± 0.1[b]	1.2 ± 0.1[a]

Notes:
a,b,c For individual parameters, means with the same letters are not significantly different (P>.05).
d Sample size = 52 for each season.

Table 8-4

MEANS AND STANDARD ERRORS[h] FOR PARAMETERS MEASURED IN AGRICULTURAL SOILS, 1985 (Page 1 of 2)

Parameter	Sites						
	7 Fallow	11 Cotton	12 Cotton	13 Cotton	23 Cotton	24 Fallow	25 Cotton
EC (mmhos/cm)	0.97 ± 0.16^{ab}	0.91 ± 0.05^{a}	1.63 ± 0.37^{d}	0.75 ± 0.03^{a}	1.47 ± 0.24^{bcd}	0.72 ± 0.02^{a}	0.99 ± 0.08^{abc}
pH	8.59 ± 0.10^{ed}	8.23 ± 0.09^{ab}	8.38 ± 0.11^{bce}	8.18 ± 0.15^{ab}	8.13 ± 0.08^{abc}	8.31 ± 0.09^{b}	8.01 ± 0.08^{a}
Soluble Ions: (ppm)							
Calcium	29.2 ± 1.9^{ab}	42.9 ± 2.9^{bc}	63.5 ± 11.2^{d}	29.0 ± 1.5^{ab}	63.8 ± 9.9^{d}	35.0 ± 3.3^{ab}	63.8 ± 4.7^{d}
Magnesium	5.0 ± 0.4^{ab}	3.5 ± 0.2^{a}	9.9 ± 1.9^{c}	3.8 ± 0.2^{a}	8.7 ± 1.2^{c}	5.1 ± 0.9^{ab}	10.5 ± 1.0^{cd}
Sodium	215 ± 37^{ab}	174 ± 18^{a}	285 ± 66^{bc}	130 ± 4^{a}	281 ± 45^{bc}	126 ± 5^{a}	136 ± 13^{a}
Potassium	7.7 ± 0.8^{ab}	21.8 ± 1.7^{def}	63.2 ± 149	16.6 ± 2.3^{bcde}	17.3 ± 2.0^{bcdef}	25.3 ± 2.6^{ef}	20.5 ± 2.7^{cdef}
Chloride	80.4 ± 27.2^{ab}	77.8 ± 14.1^{ab}	241 ± 78^{d}	71.3 ± 6.0^{ab}	212 ± 63^{cd}	33.3 ± 4.9^{a}	82.3 ± 16.8^{ab}
Boron	2.4 ± 0.3^{cd}	1.5 ± 0.2^{a}	2.8 ± 0.6^{de}	1.2 ± 0.1^{ae}	1.9 ± 0.2^{abc}	1.4 ± 0.1^{a}	1.4 ± 0.1^{a}
Fluoride	3.5 ± 0.4^{bc}	11.0 ± 0.99	7.3 ± 1.6^{f}	6.5 ± 0.5^{f}	5.4 ± 0.5^{def}	4.8 ± 0.4^{cde}	1.9 ± 0.2^{ab}
Bicarbonate	223 ± 9^{cd}	206 ± 6^{bc}	219 ± 7^{cd}	175 ± 4^{ab}	211 ± 10^{bcd}	202 ± 9^{abc}	168 ± 9^{a}
Carbonate	5.0 ± 2.0^{ab}	1.0 ± 0.6^{a}	2.2 ± 1.1^{a}	1.4 ± 0.6^{a}	0.0^{a}	0.3 ± 0.2^{a}	0.0^{a}
Nitrate-N	7.5 ± 1.4^{a}	6.0 ± 0.4^{a}	42.0 ± 15.7^{d}	5.5 ± 0.6^{a}	22.5 ± 7.6^{bc}	17.3 ± 1.9^{abc}	20.0 ± 4.1^{abc}
Ammonia-N	3.1 ± 1.2^{ab}	6.9 ± 1.8^{bcd}	4.9 ± 1.6^{abcd}	4.0 ± 1.3^{abcd}	7.2 2.2^{bcd}	5.6 ± 1.3^{abcd}	7.3 ± 2.3^{cd}
Phosphate-P	3.7 ± 0.4^{c}	1.7 ± 0.1^{abc}	10.1 ± 2.5^{d}	2.8 ± 0.2^{bc}	3.2 ± 0.2^{bc}	2.6 ± 0.2^{bc}	2.2 ± 0.3^{abc}
Sulfate	308 ± 81^{cde}	60.0 ± 19.0^{a}	182 ± 56^{abc}	40.8 ± 3.0^{a}	178 ± 24^{abc}	23.8 ± 7.6^{a}	237 ± 51^{bcd}
Exchangeable Ions: (meq/100g)							
Calcium	30.2 ± 3.5^{cde}	23.3 ± 0.5^{abc}	19.7 ± 0.3^{a}	20.3 ± 0.4^{a}	22.2 ± 0.4^{ab}	30.3 ± 3.9^{cde}	30.7 ± 3.5^{cde}
Magnesium	3.5 ± 0.29	1.7 ± 0.03^{bc}	1.8 ± 0.1^{cd}	1.7 ± 0.1^{bc}	2.2 ± 0.1^{e}	2.0 ± 0.1^{cdef}	2.9 ± 0.3
Sodium	2.7 ± 0.4^{bc}	2.5 ± 0.1^{abc}	3.1 ± 0.5^{cd}	1.7 ± 0.04^{a}	3.6 ± 0.4^{d}	2.1 ± 0.1^{ab}	2.1 ± 0.1^{ab}
Potassium	0.5 ± 0.04^{b}	1.7 ± 0.03^{f}	2.3 ± 0.1^{i}	1.0 ± 0.1^{d}	1.1 ± 0.03^{d}	1.9 ± 0.19	1.3 ± 0.1^{e}

Table 8-4

MEANS AND STANDARD ERRORS[h] FOR PARAMETERS MEASURED IN AGRICULTURAL SOILS, 1985 (Page 2 of 2)

Parameter	Sites					
	28 Fallow	30 Cotton	31 Cotton	32 Cotton	43 Cotton	45 Fallow
EC (mmhos/cm)	0.71 ± 0.04[a]	2.69 ± 0.38[e]	0.75 ± 0.05[a]	1.49 ± 0.18[cd]	0.82 ± 0.06[a]	1.52 ± 0.14[d]
pH	8.54 ± 0.09[cde]	8.17 ± 0.06[ab]	8.58 ± 0.10[cde]	8.75 ± 0.09[d]	8.40 ± 0.10[bce]	8.80 ± 0.11[d]
Soluble Ions: (ppm)						
Calcium	26.7 ± 2.0[ab]	90.0 ± 14.0[e]	31.5 ± 3.6[ab]	25.4 ± 1.6[ab]	59.2 ± 4.6[cd]	21.0 ± 2.2[a]
Magnesium	3.8 ± 0.5[a]	13.3 ± 2.3[d]	7.9 ± 1.9[bc]	4.2 ± 0.8[a]	10.3 ± 0.6[cd]	4.9 ± 0.8[ab]
Sodium	151 ± 12[a]	536 ± 75[d]	166 ± 13[a]	353 ± 41[c]	142 ± 15[a]	348 ± 29[c]
Potassium	9.3 ± 1.9[abc]	29.3 ± 2.9[f]	9.7 ± 1.1[abcd]	4.9 ± 0.9[a]	12.5 ± 0.9[abcd]	8.8 ± 2.6[abc]
Chloride	27.0 ± 3.1[a]	442 ± 91[e]	49.0 ± 9.7[ab]	153 ± 34[bcd]	81.0 ± 15.1[ab]	124 ± 29[abc]
Boron	1.8 ± 0.1[abc]	4.1 ± 0.4[f]	1.6 ± 0.1[ab]	2.3 ± 0.2[bcd]	1.8 ± 0.1[abc]	3.3 ± 0.4[ef]
Fluoride	1.9 ± 0.2[ab]	4.5 ± 0.4[cd]	5.1 ± 0.7[cde]	11.1 ± 0.8[g]	0.9 ± 0.1[a]	7.2 ± 0.8[f]
Bicarbonate	247 ± 11[de]	197 ± 17[abc]	213 ± 15[cd]	271 ± 24[e]	245 ± 12[de]	315 ± 21[f]
Carbonate	5.0 ± 1.8[ab]	0.8 ± 0.8[a]	9.4 ± 2.3[bc]	13.8 ± 3.3[c]	2.8 ± 1.0[a]	28.7 ± 4.1[d]
Nitrate-N	5.9 ± 0.5[a]	28.1 ± 4.7[cd]	8.7 ± 1.9[ab]	13.1 ± 2.9[ab]	6.8 ± 1.1[a]	5.3 ± 1.3[a]
Ammonia-N	5.2 ± 1.1[abcd]	7.9 ± 1.9[d]	4.1 ± 1.0[abcd]	3.6 ± 1.0[abc]	5.8 ± 1.0[abcd]	2.4 ± 0.8[a]
Phosphate-P	1.3 ± 0.2[ab]	2.4 ± 0.3[abc]	2.7 ± 0.2[bc]	1.6 ± 0.2[ab]	3.4 ± 0.5[bc]	0.5 ± 0.1[a]
Sulfate	117 ± 41[ab]	752 ± 95[f]	157 ± 35[abc]	345 ± 70[de]	153 ± 29[ab]	453 ± 63[e]
Exchangeable Ions: (meq/100g)						
Calcium	34.5 ± 3.2[de]	37.7 ± 2.2[e]	27.0 ± 3.6[abcd]	31.1 ± 3.9[cde]	29.4 ± 3.9[bcd]	30.7 ± 3.0[cde]
Magnesium	1.9 ± 0.03[cde]	3.9 ± 0.1[g]	1.1 ± 0.1[a]	1.4 ± 0.1[ab]	3.1 ± 0.2[e]	2.2 ± 0.1[de]
Sodium	3.9 ± 0.3[d]	6.2 ± 0.6[e]	1.9 ± 0.1[ab]	3.3 ± 0.3[cd]	1.7 ± 0.1[a]	7.2 ± 0.3[f]
Potassium	1.1 ± 0.2[d]	2.1 ± 0.1[h]	0.5 ± 0.02[b]	0.3 ± 0.1[a]	0.8 ± 0.1[c]	0.7 ± 0.03[c]

Notes: a-g For individual parameters, means with the same letter are not significantly different (P>.05).
h Sample size = 12 for each site.

FIGURE 8-1
MEAN CONCENTRATIONS OF SOLUBLE IONS
IN AGRICULTURAL AND NATIVE SOILS
1985

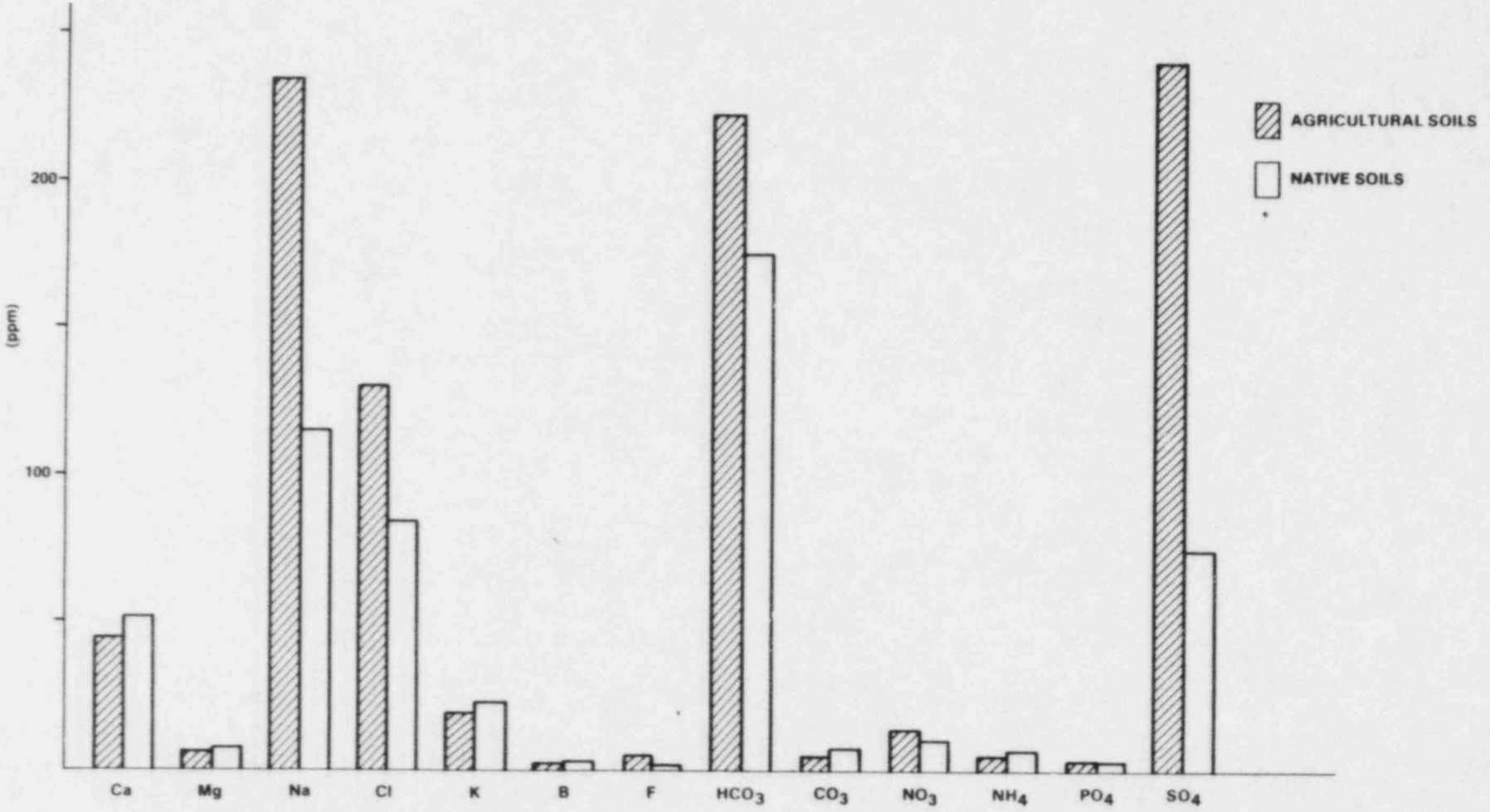


FIGURE 8-2
MEAN SOLUBLE SODIUM CONCENTRATIONS IN
AGRICULTURAL SOILS FOR EACH SITE,
DEPTH, AND SEASON
1985

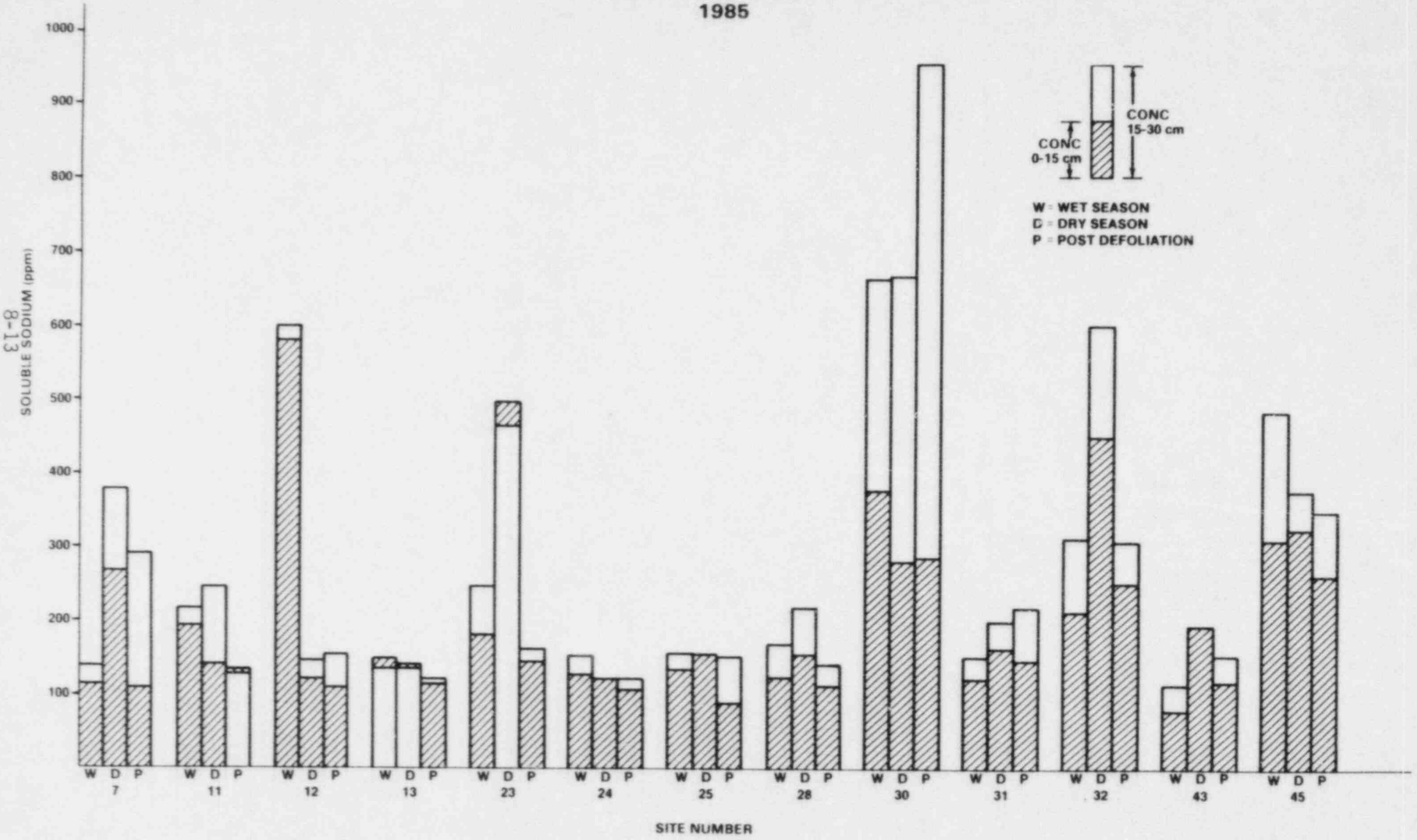


FIGURE 8-3
MEAN SOLUBLE SODIUM CONCENTRATIONS
IN NATIVE SOILS FOR EACH SITE,
DEPTH, AND SEASON
1985

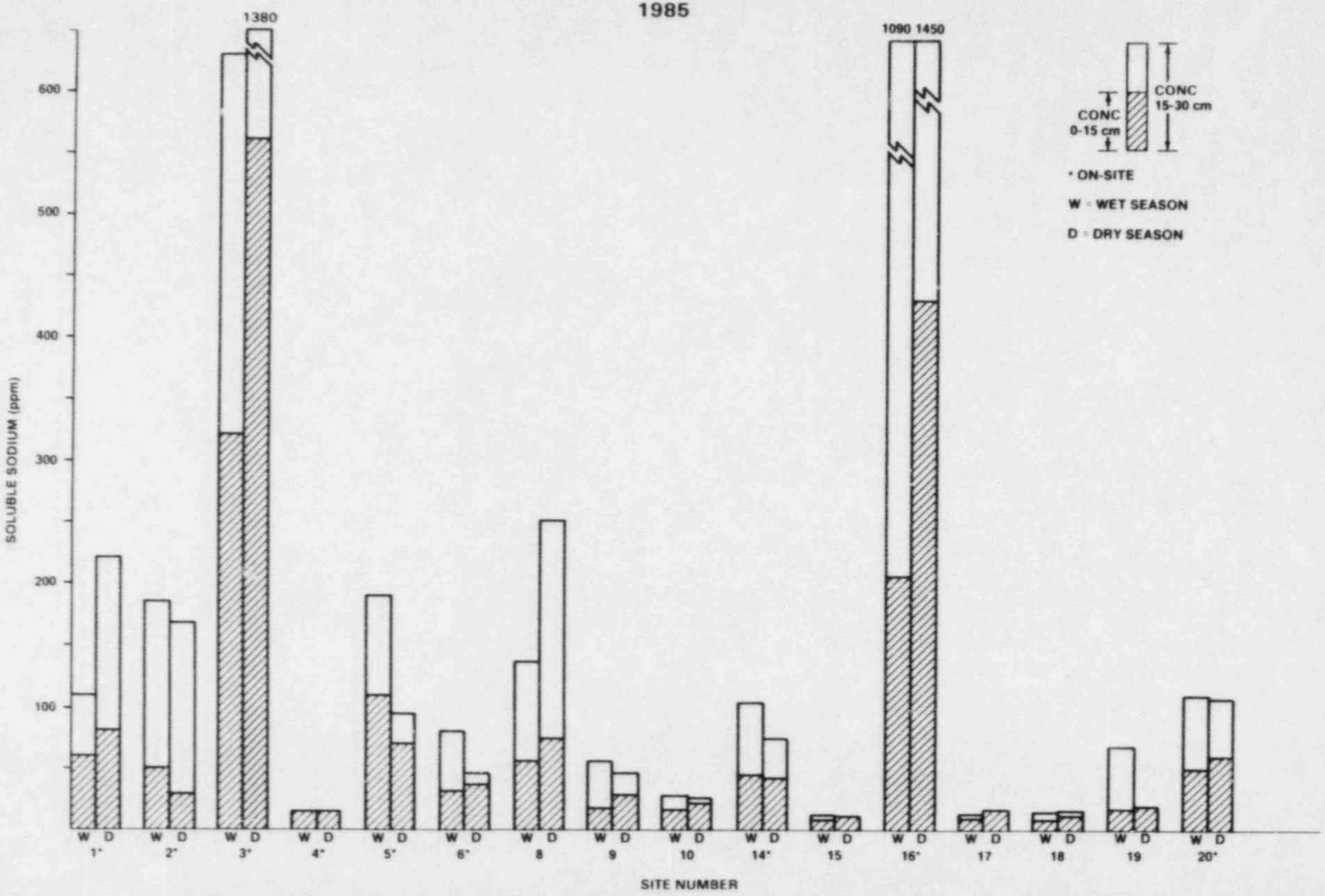
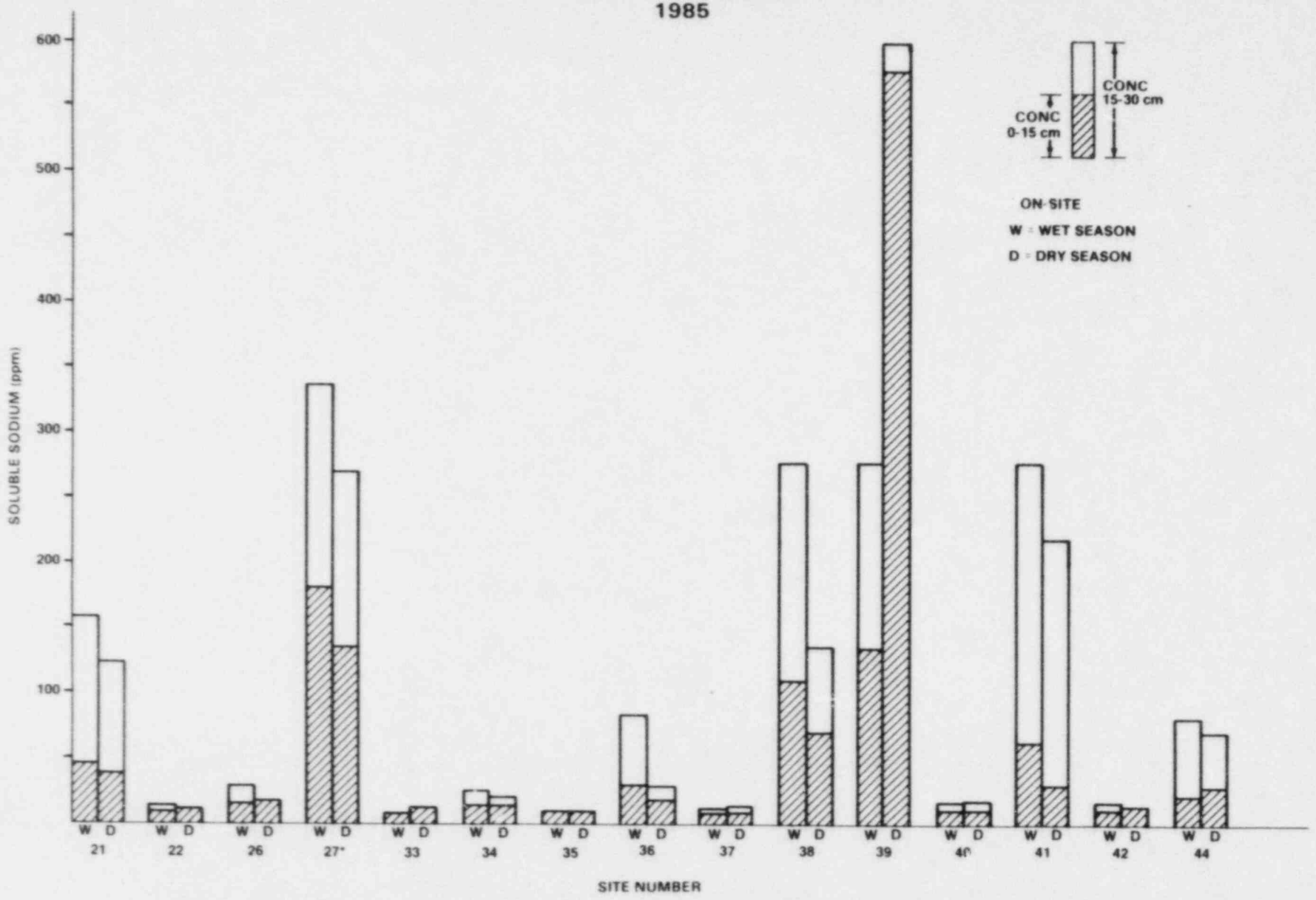


FIGURE 8-3
(CONTINUED)
MEAN SOLUBLE SODIUM CONCENTRATIONS
IN NATIVE SOILS FOR EACH SITE,
DEPTH, AND SEASON
1985



9 DISCUSSION OF COMPARISONS OF PARAMETERS

9.1 METEOROLOGY

9.1.1 General Meteorology and Climatological Comparisons

Comparisons of monthly averages of temperature, dew point, and wind speed, and monthly totals of precipitation at PVNGS for 1985 with long-term averages for 1973-1985 are presented in Table 9-1. Comparisons of NWS Phoenix 1985 data with the NWS Phoenix 1950-1980 climatological data are presented in Table 9-2. Slight differences are evident, including higher humidity and lower wind speeds for 1985 versus the long-term average for PVNGS. The average temperature at NWS Phoenix in 1985 was considerably higher than the average for the 30-year period 1950-1980. Precipitation for the 1985 data period was very low at PVNGS (Section 3.2) when compared with NWS Phoenix. However, as noted earlier, precipitation recorded at PVNGS is not considered representative, due to missing data periods.

According to the comparisons presented in Table 9-1 and 9-2, 1985 can be divided up into two periods with fairly distinct characteristics. January, February, and October through December were normal to cool periods with above normal precipitation. March through September were unusually warm with little or no precipitation.

The average wind speed for PVNGS in 1985 was somewhat below the long-term average, but only slightly below normal at NWS Phoenix. The unusually low wind speeds in February and December contributed significantly to the lower overall average. The average dew point for 1985 was 3°F higher than the long-term average for PVNGS. Only the month of May recorded an average dew point lower than the long-term average. Unfortunately, NWS Phoenix does not keep a climatological record of dew point, so a comparison of the 1985 NWS Phoenix dew points with the 30-year data record is not available.

9.1.2 Effects of Meteorological Parameters on Dustfall, Soils, and Vegetation

Meteorological conditions for the site area influence the atmospheric dust levels, soil conditions, runoff, and vegetative growth. These impacts may be locally altered by irrigation activities.

For 1985, overall conditions were slightly warmer, slightly more humid, and wetter (judging from the NWS Phoenix data) than average, with less wind (Tables 9-1 and 9-2). As discussed in the previous section, 1985 can be divided into two periods, as follows:

1. January, February, October through December: wet (less dust), with more vegetative growth and runoff.

2. March-September: dry (more dust), with less vegetative growth and runoff.

9.2 DUSTFALL AND COOLING TOWER EMISSIONS

9.2.1 Introduction

As discussed in Sections 2.2.2 and 4.2, the PVNGS Unit 1 began operation intermittently at significant power levels in August 1985 with a complete shutdown in November 1985. Section 4.2 provides FOG model onsite predictions of the drift deposition of total dissolved salt using actual plant operating parameters as well as concurrent onsite meteorological data for the four months of significant Unit 1 operation in 1985 (August, September, October, and December).

9.2.2 Dustfall and Cooling Tower Emissions Comparisons

Table 9-3 provides a comparison of estimated mean total dissolved solids (TDS) (drift) deposition at each of the 15 onsite dustfall monitoring locations (Sites 1-6, 10, 14, 16, 20, 27, and 80-83) for the four months of

cooling tower operation versus the eight non-operating months. Since TDS is not measured in the drift deposition samples, the TDS values are estimated based on measured sodium deposition rates and assuming the circulating water ratio of sodium to TDS of 0.30 is appropriate (Table 4-4). As shown in Table 9-3, the non-operating months, which could be considered as an indication of background, have higher or identical mean deposition values than do the operating months at all monitoring locations except Sites 1, 3 and 82. For comparison, the estimated TDS for the two native control sites are also provided in Table 9-3. The same trend is evident for these two sites.

Table 9-4 presents a comparison of the measured onsite total deposition (Table 9-3) and FOG model predicted onsite total deposition (Table 4-2) for the four months of Unit 1 cooling towers operation. Generally, the largest ratios of measured to predicted deposition occurred at the onsite monitoring locations furthest from the cooling towers (i.e., areas of lower predicted deposition). The smaller ratios occurred at sites closer to the Unit 1 cooling towers, where the predicted deposition was highest. Since the measured deposition is relatively uniform throughout the site area, the variation in ratios is the range of FOG model predictions. Table 9-4 also presents the results of a correlation analysis between the measured and predicted deposition. The correlation was relatively poor, indicating little or no relationship between the measured and predicted deposition at the onsite monitoring locations.

The monthly deposition predicted by the FOG model is relatively low compared to measured values both during months of Unit 1 cooling towers operation and during non-operating months (Tables 4-2 and 9-3). The predicted monthly deposition for 1985 is at or below the detection limits for most individual ions measured in the dustfall.

Based on the means and standard errors for sodium (Tables 5-2, 5-6 and 5-7) and the 0.30 ratio for sodium to TDS, the total deposition rate from the cooling towers must exceed 7.2 lb/acre-year for the mean of the supplemental sites, 2.6 lb/acre-year for the mean of the remaining onsite locations

1.3 lb/acre-year for the mean of all native sites, and 3.3 lb/acre-year for the mean of all agricultural sites to differ significantly at the 95 percent confidence level from 1985 measured deposition rates.

9.3 DUSTFALL AND SOILS ANALYSES

A comparison between dustfall and soil analyses was performed for the 13 agricultural sites. Soluble calcium, magnesium, sodium, and potassium in upper (0-15 cm) soil samples were compared to corresponding dustfall analyses in March, August, and December, when agricultural soils were collected. In general, ion concentrations in dustfall and soils were unrelated in each month. Correlation coefficients (r) ranged from 0.03 to 0.74 (n = 13). With the exception of calcium (r = 0.74 for August), there was no association between dustfall and soil ion concentrations.

9.4 LEAF TISSUE AND SOILS ANALYSES

The concentration of selected ions in agricultural and indigenous phytomass was generally unrelated to the corresponding ionic concentration in soils, and varied significantly with monitoring location and vegetation type. Correlation coefficients for exchangeable sodium, potassium, calcium, and magnesium in soil with corresponding ions in cotton phytomass were -0.10, 0.38, 0.22, and -0.29 (n = 9). There was no association between ionic concentrations of exchangeable sodium, potassium, and magnesium in soil with levels of sodium, potassium, and magnesium in creosote-bush leaf tissue. There was such an association (r = 0.93, n = 5) between exchangeable calcium in soil and calcium in these leaf tissues. Ionic concentration of exchangeable potassium was moderately associated (r = 0.83, n = 3) with potassium levels in leaf tissue of salt-bush. No other discernible trends in native vegetation were apparent.

The proportion or rank of the measured ions in the leaf tissue of agricultural crops and indigenous vegetation and the ionic proportions or ranks of the same ions in soils were measured by Spearman correlation analyses. Based on correlation coefficients (rs), there was no association between the

relative magnitude of ions in leaf tissue of agricultural crops and creosote-bush with the relative magnitude of the same ions in soils. Soil and alfalfa leaf tissue ionic concentrations were moderately associated (r_S = 0.71, n = 9). The rankings of ionic concentrations of salt-bush tissue and soils were also moderately correlated for monitoring locations 2 (r_S = 0.77, n = 9), 3 (r_S = 0.75, n = 9), and 44 (r_S = 0.70, n = 9). These data indicate that the ionic concentrations in plant leaf tissues were independent of the ionic concentrations in soils.

For those locations planted with cotton, sodium and chloride had the highest measured ionic concentrations in soils; calcium and sulfate were predominant in cotton leaf tissue. The concentration of chloride was the highest of the measured ions in phytomass at all salt-bush locations, whereas calcium and sulfate predominated in leaf tissue at all creosote-bush monitoring sites. Compared to ionic concentrations in soils, sodium and calcium were the most prevalent ions at salt-bush and creosote-bush monitoring sites, respectively

Table 9-1

MONTHLY AVERAGE METEOROLOGICAL DATA FOR PVNGS

Month	Temperature (°F)		Dew Point (°F)		Precipitation (in)		Wind Speed (mph)*	
	1985	1974-1985	1985	1974-1985	1985	1974-1985	1985	1974-1985
January	48	52	35	33	0.28	0.58	4.9	4.8
February	53	56	35	32	0.64	0.59	4.7	5.5
March	60	61	35	34	0.00	0.82	6.4	6.7
April	73	68	39	31	0.09	0.19	7.4	7.3
May	81	78	34	35	0.00	0.12	7.4	7.7
June	91	89	40	37	0.00	0.03	7.3	7.7
July	94	92	60	57	0.25	0.64	7.8	7.8
August	92	90	58	56	0.00	0.53	6.9	7.1
September	76	85	50	53	0.00	0.59	6.1	6.8
October	70	72	49	42	0.75	0.60	5.0	5.6
November	57	59	37	33	1.38	0.74	5.2	5.1
December	51	52	38	33	1.14	0.70	3.2	4.6
Annual	71	71	43	40	4.53	6.13	6.0	6.4

*Based on measurement at 35 ft.

Table 9-2

MONTHLY AVERAGE METEOROLOGICAL DATA FOR NWS PHOENIX

	Temperature (°F)		Dew Point (°F)		Precipitation (in)		Wind Speed (mph)*	
Month	1985	1950-1980	1985	1950-1980**	1985	1950-1980	1985	1950-1980
January	54	52	36	NA	0.95	0.73	4.7	5.3
February	57	56	32	NA	0.18	0.59	4.3	5.9
March	63	61	34	NA	0.46	0.81	5.7	6.7
April	75	68	36	NA	0.17	0.27	7.4	7.0
May	84	77	34	NA	0.00	0.14	7.1	7.1
June	92	87	39	NA	0.00	0.17	5.2	6.9
July	95	92	55	NA	0.98	0.74	8.0	7.1
August	95	90	56	NA	0.21	1.02	7.6	6.6
September	82	85	49	NA	1.60	0.64	7.3	6.3
October	75	73	49	NA	0.92	0.63	6.2	5.9
November	61	61	39	NA	1.59	0.54	6.5	5.4
December	56	53	37	NA	0.86	0.83	4.4	5.2
Annual	74	71	41	NA	7.92	7.11	6.2	6.3

*Based on measurement at 33 ft.
**NWS does not keep climotological records of dew point.

Table 9-3

ESTIMATED* AVERAGE TOTAL DISSOLVED SOLIDS
DEPOSITION (LB/ACRE-MONTH)
AT THE ONSITE MONITORING SITES
JANUARY 1-DECEMBER 31, 1985

Site	August-October And December Mean**	January-July And November Mean***
1	2.3	1.7
2	1.7	2.1
3	2.0	1.9
4	1.4	1.7
5	1.0	1.8
6	1.5	2.2
10	1.4	1.5
14	1.2	2.4
16	1.7	2.0
20	1.3	2.2
27	1.3	1.8
80	2.0	2.7
81	3.2	4.4
82	1.8	1.6
83	2.3	3.0
Mean of all onsite monitors	1.7	2.2
40 (native control site)	1.5	2.3
42 (native control site)	1.3	1.4

*Estimated values are based on scaling the measured sodium deposition at each monitoring site by the total dissolved solids to sodium ratio in the circulating water (equal to 3.3, from Table 4-4).
**Months of cooling tower operation.
***Sites 80-83 are for May-July and November.

Table 9-4

MEASURED VERSUS PREDICTED TOTAL DEPOSITION
(LB/ACRE) AT THE ONSITE MONITORING SITES
DURING UNIT 1 COOLING TOWERS OPERATION*

Site	Measured Total Deposition**	FOG Model Predicted Total Deposition***	Ratio Measured/Predicted
1	9.2	0.228	40
2	6.8	0.117	58
3	8.0	0.395	20
4	5.6	0.0721	78
5	4.0	0.00985	406
6	6.0	0.0218	275
10	5.6	0.0730	77
14	4.8	0.450	11
16	6.8	1.10	6
20	5.2	0.915	6
27	5.2	0.0782	66
80	8.0	1.95	4
81	12.8	1.99	6
82	7.2	0.338	21
83	9.2	1.51	6
Mean of all sites	7.0	0.617	11

Correlation Analysis

Regression Equation	Meas. = A + B (pred.)
Intercept (A)	5.64
Slope (B)	2.14
R-Square	0.45 (Correlation Coefficient = 0.67)

*Values presented are the sum of August, September, October and December.

**Measured total deposition is based on scaling the measured sodium deposition at each monitoring site by the total dissolved solids to sodium ratio in the circulating water (equal to 3.3, from Table 4-4).

***From Table 4-2. These values are for deposition from the Unit 1 cooling towers only.

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APPENDIX A
PLANT OPERATING DATA

Presented in this appendix are daily plant operating data which were used by the FOG code as input for the calculation of predicted drift deposition from the PVNGS Unit 1 cooling towers. Specifically provided are circulating water conductivity data, circulating water thermal data, circulating water flowrate data (number of pumps operated per shift), total number of fans operated per shift for each of the three Unit 1 cooling towers, and calculated tower parameters.

PALO VERDE NUCLEAR GENERATING STATION
UNIT 1 COOLING TOWER SOURCE TERM
DAILY PLANT DATA

INPUT DATA

MONTH	DAY	CW CONDUCTIVITY DATA, UMHOS/CM Sample 1	Sample 2	Sample 3	Sample 4	CW THERMAL DATA Deg F In	Deg F Out	MwHr, Th	CW FLOW - No PUMPS/SHIFT Mids	Days	Swings	SUM-FANS OPER/SHFT Twr 01
AUGUST	1	2560	2830	2930					2	2	2	
	2	2900	3030	3260	3090				2	2	2	
	3	3180	3140	3320					2	2	2	
	4	3710	3920						2	2	2	
	5	4050	4070	4300					2	2	2	
	6	4500	4860	4450	4500				2	2	2	
	7	4650	4820	5280	5020				2	2	2	44
	8	5020	4460	5670	5460				2	2	2	45
	9	5600	5400						2	2	2	45
	10	5600	5780						2	2	2	45
	11	6200	6200	6352					2	2	2	45
	12	6600	6430	6050								
	13	7100							2	2	2	45
	14	7780							2	2	2	45
	15								2	2	2	45
	16								2	2	2	45
	17								2	2	2	45
	18								2	2	2	45
	19								2	2	2	45
	20								2	2	2	42
	21								2	2	2	39
	22								2	2	2	36
	23								2	2	2	36
	24								2	2	2	36
	25								2	2	2	36
	26							117.00	2	2	2	36
	27	9750	9950					2560.00	2	2	2	36
	28	3600	10460	10230				2575.00	2	2	2	36
	29	10600	10900	11500		79.80	88.65	10942.00	2	2	2	40
	30	12170	14000	11000		79.54	94.45	29684.00	2	2	2	48
	31	12500	12200	11890				37767.00	2	4	4	47
AVERAGE								13940.83	2.00	2.07	2.07	41.96

ASSUMPTIONS: Drift Rate = 0.0002% at full fan flow
TDS, ppm = 0.64 x Conductivity, umhos/cm
Airflow = 64.4 E 06 cfm/ 48 fans
CW Flow = (No pumps x 140,000) + 29,000 gpm

PALO VERDE NUCLEAR GENERATING STATION
UNIT 1 COOLING TOWER SOURCE TERM
DAILY PLANT DATA

		SUM OF FANS OPER IN EA SHIFT		CALCULATED TOWER PERFORMANCE PARAMETERS PER UNIT								
MONTH	DAY	Twr 02	Twr 03	Airflow/Tower, cu m/s Twr 01	Twr 02	Twr 03	Heat BTU/min	CW Delta T,	Av Cond umhos	Calc TDS, ppm	CW Flow gpm	Calc Drift gpm / lb/min
AUGUST	1			0	0	0	0.00E 00	0.00	2773	1775	309000	0.000 / 0.000
	2			0	0	0	0.00E 00	0.00	3070	1965	309000	0.000 / 0.000
	3			0	0	0	0.00E 00	0.00	3213	2057	309000	0.000 / 0.000
	4			0	0	0	0.00E 00	0.00	3815	2442	309000	0.000 / 0.000
	5			0	0	0	0.00E 00	0.00	4140	2650	309000	0.000 / 0.000
	6			0	0	0	0.00E 00	0.00	4578	2930	309000	0.000 / 0.000
	7	26	38	9284	5486	8018	0.00E 00	0.00	4943	3163	309000	0.463 / 0.012
	8	24	39	9495	5064	8229	0.00E 00	0.00	5153	3298	309000	0.463 / 0.013
	9	14	39	9495	2954	8229	0.00E 00	0.00	5500	3520	309000	0.421 / 0.012
	10	9	39	9495	1899	8229	0.00E 00	0.00	5690	3642	309000	0.399 / 0.012
	11	9	39	9495	1899	8229	0.00E 00	0.00	6251	4000	309000	0.399 / 0.013
	12			0	0	0	0.00E 00	0.00	6360	4070	29000	0.000 / 0.000
	13	9	39	9495	1899	8229	0.00E 00	0.00	7100	4544	309000	0.399 / 0.015
	14	9	39	9495	1899	8229	0.00E 00	0.00	7780	4979	309000	0.399 / 0.017
	15	9	39	9495	1899	8229	0.00E 00	0.00	0	5081	309000	0.399 / 0.017
	16	9	39	9495	1899	8229	0.00E 00	0.00	0	5183	309000	0.399 / 0.017
	17	9	39	9495	1899	8229	0.00E 00	0.00	0	5285	309000	0.399 / 0.018
	18	9	39	9495	1899	8229	0.00E 00	0.00	0	5387	309000	0.399 / 0.018
	19	9	39	9495	1899	8229	0.00E 00	0.00	0	5489	309000	0.399 / 0.018
	20	9	39	8862	1899	8229	0.00E 00	0.00	0	5591	309000	0.386 / 0.018
	21	9	39	8229	1899	8229	0.00E 00	0.00	0	5693	309000	0.373 / 0.018
	22	9	39	7596	1899	8229	0.00E 00	0.00	0	5795	309000	0.360 / 0.017
	23	9	39	7596	1899	8229	0.00E 00	0.00	0	5896	309000	0.360 / 0.018
	24	9	39	7596	1899	8229	0.00E 00	0.00	0	5998	309000	0.360 / 0.018
	25	9	39	7596	1899	8229	0.00E 00	0.00	0	6100	309000	0.360 / 0.018
	26	3	39	7596	633	8229	0.28E 06	0.00	0	6202	309000	0.335 / 0.017
	27	3	39	7596	633	8229	0.61E 07	0.00	9850	6304	309000	0.335 / 0.018
	28	3	39	7596	633	8229	0.61E 07	0.00	8097	5182	309000	0.335 / 0.014
	29	11	39	8440	2321	8229	0.26E 08	8.85	11000	7040	309000	0.386 / 0.023
	30	27	39	10128	5697	8229	0.70E 08	14.91	12390	7930	309000	0.489 / 0.032
	31	27	39	9917	5697	8229	0.90E 08	0.00	12197	7806	495667	0.778 / 0.051
AVERAGE		11.38	38.96	6854.10	1858.16	6364.03	0.64E 07	0.77	6317	4043.13	305989	0.316 / 0.014

ASSUMPTIONS:

Drift Rate = 0.0002% at full fan flow
TDS, ppm = 0.64 x Conductivity, umhos/cm
Airflow = 64.4 E 06 cfm/ 48 fans
CW Flow = (No pumps x 140,000) + 29,000 gpm
[TDS Interpolated when Conductivity Missing]

PALO VERDE NUCLEAR GENERATING STATION
UNIT 1 COOLING TOWER SOURCE TERM
DAILY PLANT DATA

INPUT DATA

MONTH	DAY	CW CONDUCTIVITY DATA, UMHOS/CM Sample 1	Sample 2	Sample 3	Sample 4	CW THERMAL DATA Deg F In	Deg F Out	MwHr, Th	CW FLOW - No PUMPS/SHIFT Mids	Days	Swings	SUM-FANS OPER/SHFT Twr 01
SEPTEMBER	1	14000	14500	13000		83.00	99.00	45104.58	4	4	4	45
	2	12590	9560	9390		77.47	85.78	17120.9	4	4	4	45
	3	9200	8260	7950		78.16	104.20	41423.8	4	2	2	45
	4	8000	6570	6800		74.20	101.25	48360.7	2	2	2	45
	5	6900	5650	5090		73.95	96.62	48733.86	2	3	3	45
	6	5060	4800	4630		75.54	96.27	49134.38	3	3	3	45
	7	4750	4600	4400		77.45	96.77	49601.02	4	4	4	45
	8	4870	4530	4760		77.29	94.75	49457.76	4	4	4	45
	9					84.75	102.60	49829.4	4	4	4	15
	10					87.62	105.52	49985.96	4	4	4	0
	11					85.54	104.93	50049.42	4	4	3	0
	12					79.59	99.90	43905.2	3	3	3	0
	13							0	4	4	3	0
	14							0		4	4	0
	15					70.50	78.50	4359.36	4	4	4	0
	16							16395.48	4	4	2	32
	17							0	2	2	2	0
	18	5100	5410	5520				0	2	2	2	0
	19	5000	5700	5600				0	2	2	2	0
	20	5560	5400	5200				0	2	2	2	0
	21	5600	5670	5910				152	2	2	4	0
	22	5800	5800	6510		79.00	83.00	2426.3	4	4	4	32
	23	7300	7800	8500		77.83	91.33	35509.86	4	4	4	48
	24	10000	9510	8500		76.83	94.39	48503.2	4	4	4	48
	25	8700				80.33	101.11	55742.96	4	4	4	48
	26	10000				83.53	108.92	66570.68	4	4	4	48
	27	10000	8700	10250		83.25	110.41	73863.26	4	4	4	48
	28	11200	11000	11600	11810	82.45	109.45	74215.52	4	4	4	48
	29	12000	12000	11800		81.83	108.72	74429.46	4	4	4	48
	30	11180	11000	10230		80.87	107.62	74472.78	4	4	4	48
AVERAGE								35644.93	3.45	3.43	3.37	27.43

ASSUMPTIONS: Drift Rate = 0.0002% at full fan flow
TDS, ppm = 0.64 x Conductivity, umhos/cm
Airflow = 64.4 E 06 cfm/ 48 fans
CW Flow = (No pumps x 140,000) + 29,000 gpm

PALO VERDE NUCLEAR GENERATING STATION
UNIT 1 COOLING TOWER SOURCE TERM
DAILY PLANT DATA

		SUM OF FANS OPER IN EA SHIFT		CALCULATED TOWER PERFORMANCE PARAMETERS PER UNIT								
				Airflow/Tower, cu m/s			Heat	CW	Av Cond	Calc	CW Flow	Calc Drift
MONTH	DAY	Twr 02	Twr 03	Twr 01	Twr 02	Twr 03	BTU/min	Delta T,	umhos	TDS, ppm	gpm	gpm	lb/min
SEPTEMBER	1	17	40	9495	3587	8440	0.11E 09	16.00	13833	8853	589000	0.834	0.062
	2	39	42	9495	8229	8862	0.41E 08	8.31	10513	6729	589000	1.031	0.058
	3	39	42	9495	8229	8862	0.98E 08	26.04	8470	5421	402333	0.704	0.032
	4	39	42	9495	8229	8862	0.11E 09	27.05	7123	4559	309000	0.541	0.021
	5	39	42	9495	8229	8862	0.12E 09	22.67	5880	3763	402333	0.704	0.022
	6	39	42	9495	8229	8862	0.12E 09	20.73	4830	3091	449000	0.786	0.020
	7	33	42	9495	6963	8862	0.12E 09	19.32	4583	2933	589000	0.982	0.024
	8	33	42	9495	6963	8862	0.12E 09	17.46	4720	3021	589000	0.982	0.025
	9	33	42	3165	6963	8862	0.12E 09	17.85	0	3061	589000	0.736	0.019
	10	33	42	0	6963	8862	0.12E 09	17.90	0	3101	589000	0.614	0.016
	11	32	41	0	6752	8651	0.12E 09	19.39	0	3140	542333	0.550	0.014
	12	30	39	0	6330	8229	0.10E 09	20.31	0	3180	449000	0.430	0.011
	13	0	0	0	0	0	0.00E 00	0.00	0	3220	542333	0.000	0.000
	14	0	0	0	0	0	0.00E 00	0.00	0	3260	402333	0.000	0.000
	15	0	0	0	0	0	0.10E 08	8.00	0	3300	589000	0.000	0.000
	16	28	24	6752	5908	5064	0.39E 08	0.00	0	3340	495667	0.578	0.016
	17	0	0	0	0	0	0.00E 00	0.00	0	3380	309000	0.000	0.000
	18	0	0	0	0	0	0.00E 00	0.00	5343	3420	309000	0.000	0.000
	19	0	0	0	0	0	0.00E 00	0.00	5433	3477	309000	0.000	0.000
	20	0	0	0	0	0	0.00E 00	0.00	5387	3447	309000	0.000	0.000
	21	0	0	0	0	0	0.36E 06	0.00	5727	3665	402333	0.000	0.000
	22	0	0	6752	0	0	0.58E 07	4.00	6037	3863	589000	0.262	0.008
	23	42	12	10128	8862	2532	0.84E 08	13.50	7867	5035	589000	0.834	0.035
	24	42	34	10128	8862	7174	0.11E 09	17.56	9337	5975	589000	1.014	0.051
	25	42	30	10128	8862	6330	0.13E 09	20.78	8700	5568	589000	0.982	0.046
	26	42	32	10128	8862	6752	0.16E 09	25.39	10000	6400	589000	0.998	0.053
	27	42	36	10128	8862	7596	0.18E 09	27.16	9650	6176	589000	1.031	0.053
	28	42	36	10128	8862	7596	0.18E 09	27.00	11403	7298	589000	1.031	0.063
	29	42	37	10128	8862	7807	0.18E 09	26.89	11933	7637	589000	1.039	0.066
	30	42	36	10128	8862	7596	0.18E 09	26.75	10803	6914	589000	1.031	0.059
												0.000	
AVERAGE		25.67	25.83	5788.43	5415.67	5450.83	0.84E 08	14.34	7945.33	5085.01	501889	0.000 0.553	0.026

ASSUMPTIONS:

Drift Rate = 0.0002% at full fan flow
TDS, ppm = 0.64 x Conductivity, umhos/cm
Airflow = 64.4 E 06 cfm/ 48 fans
CW Flow = (No pumps x 140,000) + 29,000 gpm
[TDS Interpolated when Conductivity Missing]

PALO VERDE NUCLEAR GENERATING STATION
UNIT 1 COOLING TOWER SOURCE TERM
DAILY PLANT DATA

INPUT DATA

MONTH	DAY	CW CONDUCTIVITY DATA, UMHOS/CM Sample 1	Sample 2	Sample 3	Sample 4	CW THERMAL DATA Deg F In	Deg F Out	MwHr, Th	CW FLOW - No PUMPS/SHIFT Mids	Days	Swings	SUM-FANS OPER/SHFT Twr 01
OCTOBER	1	9190	9750	10000	8660	81.20	108.40	75175.4	4	4	4	48
	2	9400	9510	8740	7110	75.20	107.10	63361.58	4	4	2	48
	3	8220	8290	7800	7730	71.80	103.30	33723.48	2	2	2	48
		7650	4890	5040								
	4	5100	5340	4880				0	2	4	4	0
	5	4350	4400	4300				0	4	4	4	0
	6							0	4	4	4	0
	7	4060	3840	3950	3950			0	4	4	4	0
	8	4000	3990	3850	3830			0	2	4	4	0
	9	4100	4100	4230	4190			0	4	4	4	0
	10							0	4	4	4	0
	11	4100	4100	4080				0	4	4	4	0
	12	4100	5000	5040	5200			24457.18	4	4	4	32
	13	5940				76.70	101.80	73311.12	4	4	4	48
	14	7000	6100	7000	6670	76.70	102.40	73845.4	4	4	4	42
		7400										
	15	7950	8000	8250	8300	78.50	104.50	73560.4	4	4	4	42
		7700	8420									
	16	9240	9860	9180		76.70	95.80	61538.34	4	4	4	42
	17	10180	10670	10200	10200	75.80	93.70	48226.56	4	4	4	42
		10890										
	18	11000	11000	10980	10400	75.50	93.10	48388.44	4	4	4	42
	19	9800	10070	11860		77.90	99.50	59605.66	4	4	4	42
	20	11400	11910			80.20	106.50	74335.98	4	4	4	42
	21	11000	10290	10610		79.90	106.20	74696.98	4	4	4	42
	22	10800	11000	10600	7600	77.60	103.80	74191.58	4	4	4	42
		11000										
	23	10920	10840	10770	10540	76.70	102.60	73553.56	4	4	4	42
		11000	10690									
	24	10870	11000	9990		75.90	102.30	30658.4	4	4	0	28
	25	9900	9830	9460	9500			0	0	0	0	0
	26	9570	9230	9040				0	1	1	0	0
	27	9070	9060	8680				0	2	2	1	0
	28	8810	8540	8400				0	1	1	2	0
	29	8200	8170	8000				0	2	2	2	0
	30	7900	7900	7740				0	2	2	2	0
	31	7810	7550	7460				0	2	2	2	0
AVERAGE								33194.14				21.68

ASSUMPTIONS: Drift Rate = 0.0002% at full fan flow
TDS, ppm = 0.64 x Conductivity, umhos/cm

Airflow = 64.4 E 06 cfm/ 48 fans
CW Flow = (No pumps x 140,000) + 29,000 gpm

PALO VERDE NUCLEAR GENERATING STATION
UNIT 1 COOLING TOWER SOURCE TERM
DAILY PLANT DATA

		SUM OF FANS OPER IN EA SHIFT		CALCULATED TOWER PERFORMANCE PARAMETERS PER UNIT								
				Airflow/Tower, cu m/s			Heat	CW	Av Cond	Calc	CW Flow	Calc Drift
MONTH	DAY	Twr 02	Twr 03	Twr 01	Twr 02	Twr 03	BTU/min	Delta T,	umhos	TDS, ppm	gpm	gpm / lb/min
OCTOBER	1	42	36	10128	8862	7596	0.18E 09	27.20	9400	6016	589000	1.031 / 0.052
	2	42	36	10128	8862	7596	0.15E 09	31.90	8690	5562	495667	0.867 / 0.040
	3	38	36	10128	8018	7596	0.80E 08	31.50	7089	4537	309000	0.524 / 0.020
												0.000
	4	12	0	0	2532	0	0.00E 00	0.00	5107	3268	495667	0.083 / 0.002
	5	0	0	0	0	0	0.00E 00	0.00	4350	2784	589000	0.000 / 0.000
	6	0	0	0	0	0	0.00E 00	0.00	0	2656	589000	0.000 / 0.000
	7	0	0	0	0	0	0.00E 00	0.00	3950	2528	589000	0.000 / 0.000
	8	0	0	0	0	0	0.00E 00	0.00	3918	2507	495667	0.000 / 0.000
	9	0	0	0	0	0	0.00E 00	0.00	4155	2659	589000	0.000 / 0.000
	10	0	0	0	0	0	0.00E 00	0.00	0	2639	589000	0.000 / 0.000
	11	0	0	0	0	0	0.00E 00	0.00	4093	2620	589000	0.000 / 0.000
	12	28	32	6752	5908	6752	0.58E 08	0.00	4835	3094	589000	0.753 / 0.019
	13	42	48	10128	8862	10128	0.17E 09	25.10	5940	3802	589000	1.129 / 0.036
	14	42	48	8862	8862	10128	0.18E 09	25.70	6834	4374	589000	1.080 / 0.039
												0.000
	15	42	48	8862	8862	10128	0.17E 09	26.00	8103	5186	589000	1.080 / 0.047
												0.000
	16	42	46	8862	8862	9706	0.15E 09	19.10	9427	6033	589000	1.063 / 0.054
	17	42	42	8862	8862	8862	0.11E 09	17.90	10428	6674	589000	1.031 / 0.057
												0.000
	18	42	42	8862	8862	8862	0.11E 09	17.60	10845	6941	589000	1.031 / 0.060
	19	42	42	8862	8862	8862	0.14E 09	21.60	10577	6769	589000	1.031 / 0.058
	20	42	42	8862	8862	8862	0.18E 09	26.30	11655	7459	589000	1.031 / 0.064
	21	42	42	8862	8862	8862	0.18E 09	26.30	10633	6805	589000	1.031 / 0.059
	22	42	42	8862	8862	8862	0.18E 09	26.20	10200	6528	589000	1.031 / 0.056
												0.000
	23	42	42	8862	8862	8862	0.17E 09	25.90	10793	6908	589000	1.031 / 0.059
												0.000
	24	28	28	5908	5908	5908	0.73E 08	26.40	10620	6797	402333	0.469 / 0.027
	25	0	0	0	0	0	0.00E 00	0.00	9673	6190	29000	0.000 / 0.000
	26	0	0	0	0	0	0.00E 00	0.00	9280	5939	122333	0.000 / 0.000
	27	0	0	0	0	0	0.00E 00	0.00	8937	5719	262333	0.000 / 0.000
	28	0	0	0	0	0	0.00E 00	0.00	8583	5493	215667	0.000 / 0.000
	29	0	0	0	0	0	0.00E 00	0.00	8123	5199	309000	0.000 / 0.000
	30	0	0	0	0	0	0.00E 00	0.00	7847	5022	309000	0.000 / 0.000
	31	0	0	0	0	0	0.00E 00	0.00	7607	4868	309000	0.000 / 0.000
AVERAGE		21.03	21.03	4573.94	4437.81	4743.86	0.79E 08	12.92	8045.20	4954.11	494057.5	0.413 / 0.026

ASSUMPTIONS:

Drift Rate = 0.0002% at full fan flow
TDS, ppm = 0.64 x Conductivity, umhos/cm

Airflow = 64.4 E 06 cfm/ 48 fans
[TDS Interpolated when Conductivity Missing]
CW Flow = (No pumps x 140,000) + 29,000 gpm

PALO VERDE NUCLEAR GENERATING STATION
UNIT 1 COOLING TOWER SOURCE TERM
DAILY PLANT DATA

INPUT DATA

MONTH	DAY	CW CONDUCTIVITY DATA, UMHOS/CM Sample 1	Sample 2	Sample 3	Sample 4	CW THERMAL DATA Deg F In	Deg F Out	MwHr, Th	CW FLOW - No PUMPS/SHIFT Mids	Days	Swings	SUM-FANS OPER/SHFT Twr 01
NOVEMBER	1	7270	7310	7350				0	0	0	0	0
	2	7320	7290	7120				0	0	0	0	0
	3	7000	6710	6730				0	0	0	0	0
	4	6630	6900	6330				0	0	2	2	0
	5	6250	6300	6210	5850			0	2	2	2	0
		6060										
	6	6000	6010	5650	5890			0	2	2	2	0
	7	6000	5940	5880				0	0	0	0	0
	8	5910	6000	5900	5850			0	0	0	0	0
	9	5980	5780	5980				0	0	0	0	0
	10	5850	5620	5680				0	0	0	2	0
	11	5530	5550	5400				0	2	2	2	0
	12	5460	5110	5100				0	2	2	2	0
	13	5250	5200	5100				0	2	2	2	0
	14	5170	5340	5030				0	2	2	2	0
	15							0	2	2	2	0
	16							0	0	0	0	0
	17							0	0	0	0	0
	18	4900	4820	5000				0	0	0	0	0
	19							0	0	0	0	0
	20							0	0	0	0	0
	21							0	0	0	0	0
	22	4900	4820	4020				0	0	0	2	0
	23	3980	3960	3980	3860			0	2	2	2	0
	24	3860	3870	3760				0	2	2	2	0
	25	3790	3660	3670				0	0	2	2	0
	26	3610	3610	3300				0	2	2	2	0
	27	3270	3750	3710				0	2	2	2	0
	28	3750	3850	3741				0	2	4	4	0
	29	3670	3740	3270				0	4	4	4	0
	30	3380	3590					0	4	4	4	0
AVERAGE									1.07	1.27	1.40	0.00

ASSUMPTIONS: Drift Rate = 0.0002% at full fan flow
TDS, ppm = 0.64 x Conductivity, umhos/cm
Airflow = 64.4 E 06 cfm/ 48 fans
CW Flow = (No pumps x 140,000) + 29,000 gpm

PALO VERDE NUCLEAR GENERATING STATION
UNIT 1 COOLING TOWER SOURCE TERM
DAILY PLANT DATA

MONTH	DAY	SUM OF FANS OPER IN EA SHIFT Twr 02	Twr 03	CALCULATED TOWER PERFORMANCE PARAMETERS PER U NIT Airflow/Tower, cu m/s Twr 01	Twr 02	Twr 03	Heat BTU/min	CW Delta T,	Av Cond umhos	Calc TDS, ppm	CW Flow gpm	Calc Drift gpm	lb/min
NOVEMBER	1	0	0	0	0	0	0 0.00E 00	0	7310	4678	29000	0.000	0.000
	2	0	0	0	0	0	0 0.00E 00	0	7243	4636	29000	0.000	0.000
	3	0	0	0	0	0	0 0.00E 00	0	6813	4361	29000	0.000	0.000
	4	0	0	0	0	0	0 0.00E 00	0	6620	4237	29000	0.000	0.000
	5	0	0	0	0	0	0 0.00E 00	0	6134	3926	309000	0.000	0.000
	6	0	0	0	0	0	0 0.00E 00	0	5888	3768	309000	0.000	0.000
	7	0	0	0	0	0	0 0.00E 00	0	5940	3802	29000	0.000	0.000
	8	0	0	0	0	0	0 0.00E 00	0	5915	3786	29000	0.000	0.000
	9	0	0	0	0	0	0 0.00E 00	0	5913	3785	29000	0.000	0.000
	10	0	0	0	0	0	0 0.00E 00	0	5717	3659	29000	0.000	0.000
	11	0	0	0	0	0	0 0.00E 00	0	5493	3516	309000	0.000	0.000
	12	0	0	0	0	0	0 0.00E 00	0	5223	3343	309000	0.000	0.000
	13	0	0	0	0	0	0 0.00E 00	0	5183	3317	309000	0.000	0.000
	14	0	0	0	0	0	0 0.00E 00	0	5180	3315	309000	0.000	0.000
	15	0	0	0	0	0	0 0.00E 00	0	0	3271	309000	0.000	0.000
	16	0	0	0	0	0	0 0.00E 00	0	0	3228	29000	0.000	0.000
	17	0	0	0	0	0	0 0.00E 00	0	0	3184	29000	0.000	0.000
	18	0	0	0	0	0	0 0.00E 00	0	4907	3140	29000	0.000	0.000
	19	0	0	0	0	0	0 0.00E 00	0	0	3088	29000	0.000	0.000
	20	0	0	0	0	0	0 0.00E 00	0	0	3036	29000	0.000	0.000
	21	0	0	0	0	0	0 0.00E 00	0	0	2984	29000	0.000	0.000
	22	0	0	0	0	0	0 0.00E 00	0	4580	2931	29000	0.000	0.000
	23	0	0	0	0	0	0 0.00E 00	0	3945	2525	309000	0.000	0.000
	24	0	0	0	0	0	0 0.00E 00	0	3830	2451	309000	0.000	0.000
	25	0	0	0	0	0	0 0.00E 00	0	3707	2372	29000	0.000	0.000
	26	0	0	0	0	0	0 0.00E 00	0	3507	2244	309000	0.000	0.000
	27	0	0	0	0	0	0 0.00E 00	0	3577	2289	309000	0.000	0.000
	28	0	0	0	0	0	0 0.00E 00	0	3780	2419	309000	0.000	0.000
	29	0	0	0	0	0	0 0.00E 00	0	3560	2278	589000	0.000	0.000
	30	0	0	0	0	0	0 0.00E 00	0	3485	2230	589000	0.000	0.000
AVERAGE		0.00	0.00	0.00	0.00	0.00	0.00E 00	0.00	4115.01	2633.60	178333.33	0.000	0.000

ASSUMPTIONS:

Drift Rate = 0.0002% at full fan flow
TDS, ppm = 0.64 x Conductivity, umhos/cm
Airflow = 64.4 E 06 cfm/ 48 fans
CW Flow = (No pumps x 140,000) + 29,000 g
[TDS Interpolated when Conductivity Missing]

PALO VERDE NUCLEAR GENERATING STATION
UNIT 1 COOLING TOWER SOURCE TERM
DAILY PLANT DATA

INPUT DATA

MONTH	DAY	CW CONDUCTIVITY DATA, UMHOS/CM Sample 1	Sample 2	Sample 3	Sample 4	CW THERMAL DATA Deg F In	Deg F Out	MwHr, Th	CW FLOW - No PUMPS/SHIFT Mids	Days	Swings	SUM-FANS OPER/SHFT Twr 01
DECEMBER	1	3200	3280	3320				7919.2	4	4	4	0
	2	3040	3060	3390		78	102	50793.08	4	4	4	38
	3	3600	4100	4410		81	107	70674.3	4	4	4	36
	4	5000	5160	5960				49262.06	4	4	4	36
	5	5640	5920	5420	5880			0	2	4	4	0
	6	5850	6350	6890				17298.36	4	4	4	24
	7	7360	7820	8280		73	110	42377.22	2	2	2	33
	8	9060	9200	8160		76	100	72956.96	4	4	4	48
	9	9600	10030	10080	10710	76	101	73981.44	4	4	4	48
	10	11000	11200	11780		74	104	82566.40	4	4	4	48
	11	12360	12670	11300		74	104	37536.4	4	2	2	32
	12	10890	10600	10780	7200			0	2	2	2	0
	13	7890	10600	11750				0	2	2	2	0
	14	10290	10880	10600	10800			0	4	4	4	0
	15	10500	10360					7770.24	4	4	4	0
	16	9670	10000	10600		65	102	38087.02	4	4	2	16
	17	10500	9500	9430				0	2	2	2	0
	18	9760	9840	9660				152	2	2	2	0
	19	9640	10250			69	90	24864.16	2	2	2	30
	20	10130	10560	10400				4879.2	2	2	2	13
	21	11630	11000	9500	10300	84	110	14641.78	2	2	2	0
		11590										
	22	10990	11470			88	113	21927.46	2	2	4	14
	23	11800	12570	9810		83	114	89744.60	4	4	4	34
	24	13750	12190	12550	10000	85	116	90628.48	4	4	4	33
	25	14000	11500	11000		85	116	90593.14	4	4	4	29
	26	11000	10500	10940		87	118	90569.58	4	4	4	29
	27	10800	11060	11200		87	117	87757.2	4	4	4	29
	28	9850	11100	12170	12660	86	115	86355.76	4	4	4	27
		12730										
	29	11900	11540			88	118	86812.52	4	4	4	28
	30	11700	11860	11490	11370	87	118	90065.70	4	4	4	27
	31	10900	10805	10365	9850	88	119	90515.24	4	4	4	27
AVERAGE								47120.31	3.35	3.35	3.35	21.90

ASSUMPTIONS: Drift Rate = 0.0002% at full fan flow
TDS, ppm = 0.64 x Conductivity, umhos/cm
Airflow = 64.4 E 06 cfm/ 48 fans
CW Flow = (No pumps x 140,000) + 29,000 gpm

PALO VERDE NUCLEAR GENERATING STATION
UNIT 1 COOLING TOWER SOURCE TERM
DAILY PLANT DATA

		SUM OF FANS OPER IN EA SHIFT		CALCULATED TOWER PERFORMANCE PARAMETERS PER UNIT									
				Airflow/Tower, cu m/s			Heat	CW	Av Cond	Calc	CW Flow	Calc Drift	
MONTH	DAY	Twr 02	Twr 03	Twr 01	Twr 02	Twr 03	BTU/min	Delta T,	umhos	TDS, ppm	gpm	gpm	lb/min
DECEMBER	1	0	0	0.00	0.00	0.00	0.19E 08	0.00	3267	2091	589000	0.000	0.000
	2	27	41	8018.00	5697.00	8651.00	0.12E 09	24.00	3163	2025	589000	0.867	0.015
	3	27	42	7596.00	5697.00	8862.00	0.17E 09	26.00	4037	2583	589000	0.859	0.019
	4	28	42	7596.00	5908.00	8862.00	0.12E 09	0.00	5373	3439	589000	0.867	0.025
	5	0	0	0.00	0.00	0.00	0.00E 00	0.00	5715	3658	495667	0.000	0.000
	6	16	28	5064.00	3376.00	5908.00	0.41E 08	0.00	6363	4073	589000	0.356	0.019
	7	21	42	6963.00	4431.00	8862.00	0.10E 09	37.00	7820	5005	309000	0.412	0.017
	8	21	48	10128.00	4431.00	10128.00	0.17E 09	24.00	8807	5636	589000	0.957	0.045
	9	15	48	10128.00	3165.00	10128.00	0.18E 09	25.00	10105	6467	589000	0.908	0.049
	10	16	48	10128.00	3376.00	10128.00	0.20E 09	30.00	11327	7249	589000	0.916	0.055
	11	18	32	6752.00	3798.00	6752.00	0.89E 08	30.00	12110	7750	402333	0.458	0.030
	12	0	0	0.00	0.00	0.00	0.00E 00	0.00	9868	6315	309000	0.000	0.000
	13	0	0	0.00	0.00	0.00	0.00E 00	0.00	10080	6451	309000	0.000	0.000
	14	0	0	0.00	0.00	0.00	0.00E 00	0.00	10643	6811	589000	0.000	0.000
	15	0	0	0.00	0.00	0.00	0.18E 08	0.00	10430	6675	589000	0.000	0.000
	16	7	16	3376.00	1477.00	3376.00	0.90E 08	37.00	10090	6458	495667	0.268	0.014
	17	0	0	0.00	0.00	0.00	0.00E 00	0.00	9810	6278	309000	0.000	0.000
	18	0	0	0.00	0.00	0.00	0.36E 06	0.00	9753	6242	309000	0.000	0.000
	19	10	28	6330.00	2110.00	5908.00	0.59E 08	21.00	9945	6365	309000	0.292	0.016
	20	5	14	2743.00	1055.00	2954.00	0.12E 08	0.00	10363	6633	309000	0.137	0.008
	21	0	0	0.00	0.00	0.00	0.35E 08	26.00	10804	6915	309000	0.000	0.000
												0.000	
	22	3	11	2954.00	633.00	2321.00	0.15E 09	27.00	11230	7187	402333	0.156	0.009
	23	8	34	7174.00	1688.00	7174.00	0.21E 09	31.00	11393	7292	589000	0.622	0.038
	24	17	31	6963.00	3587.00	6541.00	0.21E 09	31.00	12123	7758	589000	0.663	0.043
	25	21	31	6119.00	4431.00	6541.00	0.21E 09	31.00	12167	7787	589000	0.663	0.043
	26	18	31	6119.00	3798.00	6541.00	0.21E 09	31.00	10813	6921	589000	0.638	0.037
	27	18	27	6119.00	3798.00	5697.00	0.21E 09	30.00	11020	7053	589000	0.605	0.036
	28	19	21	5697.00	4009.00	4431.00	0.20E 09	29.00	11702	7489	589000	0.548	0.034
												0.000	
	29	20	21	5908.00	4220.00	4431.00	0.21E 09	30.00	11720	7501	589000	0.564	0.035
	30	21	23	5697.00	4431.00	4853.00	0.21E 09	31.00	11605	7427	589000	0.581	0.036
	31	23	26	5697.00	4853.00	5486.00	0.21E 09	31.00	10480	6707	589000	0.622	0.035
AVERAGE		12.23	22.10	4621.58	2579.65	4662.42	0.11E 09	18.77	9546.00	6072.26	498677	0.399	0.021

ASSUMPTIONS:

Drift Rate = 0.0002% at full fan flow
TDS, ppm = 0.64 x Conductivity, umhos/cm
Airflow = 64.4 E 06 cfm/ 48 fans
CW Flow = (No pumps x 140,000) + 29,000 gpm

APPENDIX B
DUSTFALL DATA

This appendix presents all the airborne salt deposition (dustfall) data obtained from January 1985 through December 1985 at the 48 monitoring locations (Sites 1-28, 30-45, 80-83).

Dustfall samples were collected each month and analyzed for the concentration of ions of interest by Accu-Labs Research, Inc., in Wheat Ridge, Colorado.

NUS converted the laboratory results for each of the two collocated samplers to average deposition rates in pounds per acre per month based on the collection jar surface area and each sample's collection period and water volume. No corrections were applied to the deposition rates to account for the presence of ions in the collection water at the beginning of the sampling period. Except for bicarbonate, the concentrations of these ions in the water are below the detection limits of the laboratory analytical methods for the monitoring program, and their presence does not contribute to the calculation of significant deposition rates. The solubility of bicarbonate in a sample is influenced more by the pH, the ambient temperature, and the presence of other ions in the sample than by the initial concentration in the collection water.

The deposition rates are tabulated by location for each of the twelve months. The attached individual monthly data tables present the calculated deposition rates for each of the selected ions and for total suspended solids. In the column to the right of each monthly chemical deposition rate is a value, identified as "d," which is the fractional difference between the two samples at each location. If one of the samples was missing or invalid, a field of all "9s" appears in the "d" column. If both samples are missing or invalid, a field of all "9s" appears in all positions for that location. A negative sign for numbers indicates that both sample results

were below the detectable limit of the analytical method. Values for "d" in this case are attributable to the differences in reported sample volume, and not to any measurable difference in the deposition rate.

For each location, a mean for the values of "d" and a corresponding standard deviation are determined to assess the precision of the measurements. Arithmetic and geometric means and the standard deviations of the arithmetic means are determined for each ion as an aid in assessing the calculated deposition rates. Since the minimum detectable levels of deposition are included in the determination of the means, the summary statistics do not accurately represent those ion categories whose entries reflect concentrations that are in large part below the detectable limit. The significant figures listed for the means and the standard deviations are determined by the computer data field lengths assigned to the chemical; they do not represent the accuracy of the measurements.

Copper sulfate is added to the sample collection water as an algicide. Unlike the listings for the other elements, values listed for copper (Cu A and Cu B) are the calculated mass in milligrams recovered from each sample. When compared with the initial copper sulfate concentration and water volume, these values provide a measure of the efficiency of the sample collection and processing steps. Sulfate values also do not represent actual deposition rates, since the added sulfate dominates this measurement.

Included in a comments table for each month's samples are significant comments on the validity of the analyzed samples or on special conditions at the monitoring locations. For the 12-month period, there were 16 occasions in which neither sample at a location produced valid data. There were also 35 occasions in which one sample at a location was invalidated: either the jars were knocked over by cattle or the sample itself was contaminated by birds or insects. The overall dustfall recovery rate for the period January 1985 through December 1985 was 94 percent.

The sample data have been reviewed for data entry errors and for consistency between paired samples and similar locations. Contaminated samples have been identified and their values removed from the tables.

ARIZONA PUBLIC SERVICE

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AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	Na	d	K	d	Ca	d	Mg	d	Cl	d	F	d	SO4	d	NO3	d
001	0.292	0.68	-0.193	0.01	0.195	0.01	0.097	0.01	-0.579	0.01	-0.966	0.01	23.340	0.01	0.117	0.01
002	0.903	1.12	-0.197	0.02	0.200	0.02	-0.098	0.02	-0.591	0.02	-0.986	0.02	21.965	0.20	0.110	0.20
003	0.500	0.42	-0.197	0.02	0.200	0.02	0.120	0.32	-0.593	0.02	-0.989	0.02	20.965	0.08	0.180	0.68
004	0.911	1.00	-0.204	0.01	0.205	0.01	-0.101	0.01	-0.613	0.01	-1.023	0.01	22.588	0.01	0.123	0.33
005	0.806	0.01	-0.200	0.01	0.202	0.01	-0.099	0.01	-0.600	0.01	-1.002	0.01	22.165	0.01	0.111	0.17
006	0.654	0.33	-0.198	0.11	0.189	0.11	0.094	0.11	-0.596	0.11	-0.994	0.11	22.548	0.06	0.103	0.07
007	0.916	0.51	-0.229	0.01	0.458	0.01	-0.114	0.01	-0.690	0.01	-1.150	0.01	25.148	0.17	0.137	0.32
008	0.584	1.20	-0.232	0.00	0.233	0.00	-0.115	0.00	-0.697	0.00	-1.163	0.00	24.497	0.09	0.117	0.00
009	0.617	1.20	-0.247	0.01	0.247	0.01	0.124	0.01	-0.743	0.01	-1.239	0.01	25.953	0.09	-0.123	0.01
010	0.285	0.77	-0.197	0.12	0.361	0.90	0.110	0.21	-0.591	0.12	-0.986	0.12	22.205	0.04	0.110	0.21
011	0.654	1.19	-0.264	0.02	0.658	0.42	0.144	0.17	-0.794	0.02	-1.324	0.02	27.584	0.08	0.131	0.02
012	0.719	0.70	-0.233	0.03	0.238	0.03	-0.116	0.03	-0.702	0.03	-1.170	0.03	25.038	0.13	-0.116	0.03
013	1.254	0.21	-0.230	0.03	0.455	0.03	0.239	0.06	-0.693	0.03	-1.156	0.03	25.036	0.03	0.125	0.15
014	1.023	0.02	-0.201	0.02	0.513	0.42	0.123	0.36	-0.605	0.02	-1.009	0.02	23.530	0.11	0.102	0.02
015	0.476	0.06	-0.244	0.06	0.238	0.06	-0.121	0.06	-0.733	0.06	-1.222	0.06	26.178	0.06	-0.121	0.06
016	0.308	0.72	-0.209	0.06	0.308	0.72	0.122	0.06	-0.628	0.06	-1.046	0.06	24.390	0.06	0.132	0.09
017	0.701	0.02	0.234	0.02	0.465	0.99	0.140	0.02	-0.693	0.02	-1.156	0.02	26.859	0.07	0.129	0.20
018	0.464	0.97	-0.237	0.03	0.234	0.03	-0.118	0.03	-0.714	0.03	-1.190	0.03	25.765	0.03	0.129	0.22
019	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99
020	0.883	0.22	0.196	0.00	0.491	0.40	0.226	0.09	-0.588	0.00	-0.981	0.00	22.570	0.09	0.098	0.00
021	0.983	999.99	-0.245	999.99	0.246	999.99	-0.122	999.99	-0.736	999.99	-1.228	999.99	27.035	999.99	-0.122	999.99
022	0.829	0.79	-0.230	0.08	0.357	0.60	-0.115	0.08	-0.693	0.08	-1.156	0.08	27.652	0.01	0.120	0.08
023	0.749	0.65	-0.248	0.01	1.002	0.01	0.577	0.71	-0.745	0.01	-1.242	0.01	27.542	0.01	0.200	0.26
024	1.548	0.21	-0.244	0.06	0.360	0.72	0.214	0.06	-0.733	0.06	-1.222	0.06	26.146	0.06	0.119	0.06
025	0.456	0.06	0.228	0.06	3.077	0.02	0.900	0.07	-0.703	0.06	-1.173	0.06	25.099	0.06	0.194	0.06
026	0.373	0.67	-0.247	0.01	0.248	0.01	-0.123	0.01	-0.742	0.01	-1.237	0.01	27.320	0.01	-0.123	0.01
027	0.565	0.62	-0.184	0.05	0.375	0.96	0.113	0.28	-0.554	0.05	-0.924	0.05	23.695	0.03	0.162	0.17
028	0.872	0.34	-0.254	0.06	0.872	0.34	0.148	0.28	-0.764	0.06	-1.274	0.06	27.288	0.06	0.410	0.12
030	1.369	0.54	-0.247	0.01	1.872	0.67	0.587	0.65	-0.743	0.01	-1.239	0.01	28.667	0.10	0.324	0.01
031	0.850	0.43	-0.206	0.07	0.643	0.07	0.172	0.32	-0.619	0.07	-1.033	0.07	23.496	0.11	0.193	0.07
032	1.037	0.21	-0.228	0.01	0.345	0.66	0.127	0.19	-0.687	0.01	-1.145	0.01	24.209	0.08	0.138	0.01
033	0.833	0.51	-0.206	0.01	0.208	0.01	0.115	0.19	-0.621	0.01	-1.036	0.01	22.886	0.17	0.156	0.14
034	0.709	0.04	-0.231	0.04	0.236	0.04	-0.115	0.04	-0.695	0.04	-1.159	0.04	27.147	0.05	0.154	0.19
035	0.940	0.45	-0.241	0.05	0.352	0.62	0.164	0.53	-0.726	0.05	-1.211	0.05	26.077	0.23	0.118	0.05
036	0.676	0.68	-0.221	0.12	0.224	0.02	-0.110	0.02	-0.665	0.02	-1.110	0.02	25.774	0.24	0.157	0.02
037	0.943	0.07	-0.243	0.07	0.236	0.07	-0.121	0.07	-0.731	0.07	-1.219	0.07	28.281	0.07	-0.121	0.07
038	1.005	1.15	-0.215	0.06	0.327	0.62	-0.112	0.06	-0.677	0.06	-1.129	0.06	24.190	0.06	0.188	0.41
039	1.190	0.94	-0.218	0.04	0.429	0.04	0.193	0.04	-0.655	0.04	-1.092	0.04	23.601	0.04	0.171	0.21
040	1.718	1.13	-0.244	0.01	0.739	0.01	0.283	0.77	-0.733	0.01	-1.222	0.01	27.098	0.01	0.123	0.01
041	0.682	0.61	0.341	0.61	0.341	0.61	0.137	0.27	-0.667	0.06	-1.112	0.06	26.371	0.03	0.126	0.12
042	0.532	0.43	-0.208	0.03	0.424	0.03	0.106	0.03	-0.626	0.03	-1.044	0.03	24.380	0.06	0.137	0.43
043	0.539	1.18	-0.213	0.03	0.329	0.70	0.186	0.15	-0.642	0.03	-1.070	0.03	23.984	0.03	0.142	0.12
044	1.074	1.10	-0.237	0.02	0.240	0.02	-0.118	0.02	-0.712	0.02	-1.187	0.02	25.212	0.11	0.120	0.02
045	0.522	0.05	-0.267	0.05	0.783	0.05	0.169	0.41	-0.802	0.05	-1.337	0.05	26.106	0.05	0.353	0.12
Ar.Mean	0.782	0.57	0.228	0.04	0.473	0.26	0.175	0.16	0.678	0.03	1.130	0.03	25.060	0.07	0.150	0.13
Std.Dev.	0.322	0.39	0.027	0.09	0.504	0.32	0.152	0.20	0.063	0.02	0.105	0.02	1.941	0.05	0.064	0.14
Geo.Mean	0.718	0.35	0.227	0.02	0.368	0.07	0.148	0.07	0.675	0.02	1.125	0.02	24.985	0.05	0.142	0.06

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AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	PO4	d	CO3	d	HCO3	d	NH3	d	TSS	d	Av d	SD(d)	(Milligrams) Cu A	Cu B
001	-0.038	0.01	-9.674	0.01	-9.674	0.01	-0.386	0.01	9.725	0.01	0.06	0.18	27.48	26.20
002	-0.039	0.02	-9.874	0.02	-9.874	0.02	-0.394	0.02	-9.874	0.02	0.13	0.31	28.05	28.21
003	-0.039	0.02	-9.899	0.02	-9.899	0.02	-0.395	0.02	10.978	0.16	0.14	0.21	28.51	23.37
004	-0.040	0.01	-10.240	0.01	-10.240	0.01	-0.409	0.01	-10.240	0.01	0.11	0.28	26.14	22.29
005	-0.039	0.01	-10.024	0.01	-10.024	0.01	-0.400	0.01	-10.024	0.01	0.02	0.04	28.47	25.92
006	-0.039	0.11	-9.949	0.11	-9.949	0.11	-0.397	0.11	-9.949	0.11	0.12	0.07	26.67	24.63
007	-0.045	0.01	-11.509	0.01	-11.509	0.01	-0.459	0.01	-11.509	0.01	0.09	0.16	29.13	26.00
008	-0.046	0.00	-11.638	0.00	-11.638	0.00	-0.465	0.00	-11.638	0.00	0.10	0.33	26.40	25.26
009	-0.049	0.01	-12.403	0.01	-12.403	0.01	-0.495	0.01	13.592	0.17	0.12	0.33	28.38	24.77
010	0.090	1.12	-9.874	0.12	-9.874	0.12	-0.394	0.12	11.918	0.34	0.33	0.36	26.47	22.69
011	-0.052	0.02	-13.249	0.02	-13.249	0.02	-0.529	0.02	-13.249	0.02	0.15	0.33	26.71	24.19
012	-0.046	0.03	-11.711	0.03	-11.711	0.03	-0.467	0.03	-11.711	0.03	0.09	0.18	26.80	23.94
013	-0.045	0.03	-11.566	0.03	-11.566	0.03	-0.462	0.03	19.439	0.62	0.10	0.16	28.47	23.67
014	-0.039	0.02	-10.099	0.02	-10.099	0.02	-0.403	0.02	-10.099	0.02	0.09	0.14	25.86	29.39
015	-0.048	0.06	-12.230	0.06	-12.230	0.06	-0.488	0.06	-12.230	0.06	0.06	0.00	27.14	25.26
016	-0.041	0.06	-10.474	0.06	-10.474	0.06	-0.418	0.06	-10.474	0.06	0.17	0.25	31.01	26.40
017	-0.045	0.02	-11.566	0.02	-11.566	0.02	-0.462	0.02	-11.566	0.02	0.11	0.27	24.46	27.81
018	-0.047	0.03	-11.912	0.03	-11.912	0.03	-0.476	0.03	-11.912	0.03	0.12	0.26	26.85	26.33
019	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.99	999.99	999.99	999.99
020	-0.038	0.00	-9.824	0.00	-9.824	0.00	-0.392	0.00	12.760	0.46	0.10	0.16	28.30	29.01
021	-0.048	999.99	-12.287	999.99	-12.287	999.99	-0.491	999.99	-12.287	999.99	999.99	999.99	999.99	29.39
022	-0.045	0.08	-11.566	0.08	-11.566	0.08	-0.462	0.08	13.200	0.10	0.17	0.24	27.27	28.21
023	0.075	0.68	-12.432	0.01	-12.432	0.01	1.002	0.01	40.113	0.39	0.22	0.29	25.43	27.53
024	-0.048	0.06	-12.230	0.06	-12.230	0.06	-0.488	0.06	20.238	0.18	0.13	0.18	26.71	26.80
025	0.101	1.07	-11.739	0.06	-11.739	0.06	-0.469	0.06	90.162	0.08	0.14	0.28	22.39	18.82
026	-0.049	0.01	-12.374	0.01	-12.374	0.01	-0.494	0.01	-12.374	0.01	0.06	0.18	21.88	31.10
027	0.075	0.96	-9.249	0.05	-9.249	0.05	0.380	0.05	-9.249	0.05	0.26	0.35	29.60	29.18
028	0.050	0.06	-12.749	0.06	-12.749	0.06	0.992	0.06	-12.749	0.06	0.12	0.12	29.61	25.92
030	0.162	0.14	-12.403	0.01	12.462	0.01	1.869	0.12	37.454	0.81	0.24	0.31	26.23	26.04
031	-0.040	0.07	-10.338	0.07	-10.338	0.07	0.429	0.07	-10.338	0.07	[illegible]	0.12	24.32	29.81
032	-0.045	0.01	-11.463	0.01	-11.463	0.01	-0.458	0.01	-11.463	0.01	[illegible]10	0.18	26.96	32.48
033	-0.040	0.01	-10.365	0.01	-10.365	0.01	0.416	0.01	-10.365	0.01	0.08	0.15	23.99	26.13
034	-0.045	0.04	-11.595	0.04	-11.595	0.04	-0.463	0.04	-11.595	0.04	0.05	0.04	28.14	30.02
035	0.047	0.05	-12.114	0.05	-12.114	0.05	-0.484	0.05	14.135	0.29	0.19	0.21	27.72	25.20
036	-0.043	0.02	-11.105	0.02	-11.105	0.02	-0.443	0.02	11.221	0.02	0.09	0.19	25.80	23.58
037	-0.048	0.07	-12.201	0.07	-12.201	0.07	-0.487	0.07	-12.201	0.07	0.07	0.00	28.76	26.40
038	0.197	0.39	-11.303	0.06	-11.303	0.06	-0.451	0.06	-11.303	0.06	0.24	0.33	28.27	27.13
039	0.053	0.36	-10.928	0.04	-10.928	0.04	-0.436	0.04	14.979	0.25	0.16	0.26	25.30	22.79
040	-0.048	0.01	-12.230	0.01	-12.230	0.01	0.493	0.01	27.063	0.35	0.18	0.36	23.74	25.37
041	-0.044	0.06	-11.134	0.06	-11.134	0.06	-0.444	0.06	13.708	0.27	0.22	0.24	26.63	25.42
042	-0.041	0.03	-10.445	0.03	-10.445	0.03	-0.417	0.03	-10.445	0.03	0.09	0.15	24.18	24.12
043	0.143	1.40	-10.713	0.03	-10.713	0.03	1.312	0.37	10.902	0.03	0.32	0.47	24.00	21.34
044	-0.047	0.02	-11.884	0.02	-11.884	0.02	-0.474	0.02	-11.884	0.02	0.11	0.30	24.72	25.62
045	-0.053	0.05	-13.384	0.05	-13.384	0.05	0.649	0.35	15.597	0.28	0.13	0.13	24.59	25.14
Ar.Mean	0.057	0.17	11.302	0.03	11.303	0.03	0.530	0.05	15.533	0.13	0.13	0.21	26.60	26.03
Std.dev.	0.033	0.34	1.052	0.02	1.054	0.02	0.274	0.07	13.312	0.18	0.06	0.10	2.00	2.66
Geo.Mean	0.052	0.04	11.253	0.02	11.254	0.02	0.494	0.02	13.482	0.05	0.11	0.13	26.53	25.89

ARIZONA PUBLIC SERVICE
MONTHLY REPORT for 01-85

DUSTFALL DATA
Comments and Messages Only

Location Number	Sample A Comments	Sample B Comments	Processing Messages
001	ICE IN JAR	ICE IN JAR	
002	ICE IN JAR	ICE IN JAR	
003			
004			
005			
006		LIVE SPIDERS	
007			
008			
009			
010	ICE IN JAR	ICE IN JAR, LEAVES	
011			
012		LEAVES	
013			
014	NO SCREEN, ICE IN JAR	ICE IN JAR	
015			
016	BURNT PAPER		
017	NO SCREEN, COW TRACKS, LEAVES		
018			
019	VOID/JAR ON GROUND. COW TRACKS.	VOID/JAR ON GROUND, COW TRACKS	MISSING SAMPLE A and B
020			
021	VOID GREEN & WHITE MATTER/APP. BIRD DROPPINGS		MISSING SAMPLE A
022			
023	NO SCREEN, FIELD PLOWED UNDER.	FIELD PLOWED UNDER	
024	FIELD PLOWED UNDER.	FIELD PLOWED UNDER	
025	NO SCREEN.		
026			
027			
028			
030	FIELD PLOWED UNDER.	LEAVES, FIELD PLOWED UNDER	
031	ICE IN JAR. FIELD PLOWED UNDER.	ICE IN JAR. FIELD PLOWED UNDER	
032	ICE IN JAR. FIELD PLOWED UNDER	ICE IN JAR. FIELD PLOWED UNDER	
033			
034			
035	WET SOIL, COW TRACKS	WET SOIL, COW TRACKS	
036	AREA WET, TIRE TRACKS.	AREA WET, TIRE TRACKS	
037	AREA WET	AREA WET	
038	ICE IN JAR, COW TRACKS	ICE IN JAR, COW TRACKS	
039	ICE IN JAR	ICE IN JAR	
040		LEAVES	
041			
042			
043	BIRD DROPPINGS		
044			
045			

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 02-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	Na	d	K	d	Ca	d	Mg	d	Cl	d	F	d	SO4	d	NO3	d
001	0.788	0.33	-0.182	0.11	0.430	0.29	0.131	0.24	0.980	0.99	-0.916	[illegible]11	25.270	0.18	0.189	0.44
002	1.082	0.34	0.301	0.81	0.390	0.16	0.098	0.16	0.902	0.81	-1.054	0.16	25.381	0.16	0.19[illegible]	0.45
003	1.076	0.50	-0.191	0.17	0.354	0.17	0.097	0.01	1.319	0.04	-0.959	0.17	22.031	0.09	0.180	0.51
004	0.814	0.56	0.296	1.01	0.295	0.01	0.081	0.19	0.738	0.01	-0.733	0.01	13.929	0.06	0.165	0.41
005	1.076	0.51	0.165	0.05	0.413	0.45	0.082	0.05	1.076	0.51	-0.843	0.05	20.588	0.13	0.188	0.39
006	1.053	0.08	0.241	0.60	0.325	0.07	0.097	0.26	1.131	0.21	-0.840	0.07	20.332	0.15	0.177	0.48
007	0.684	0.23	0.297	0.72	0.393	0.06	0.118	0.04	1.183	0.39	-1.008	0.06	27.481	0.06	0.215	0.31
008	0.843	0.04	-0.205	0.04	0.314	0.63	0.178	0.79	1.157	0.14	-1.030	0.04	25.251	0.12	0.222	0.33
009	1.101	0.49	0.202	0.06	0.403	0.06	0.121	0.06	0.801	0.45	-0.979	0.06	26.167	0.10	0.141	0.06
010	1.175	0.22	0.169	0.07	0.419	0.34	0.084	0.07	0.680	0.56	-0.870	0.07	26.165	0.13	0.152	0.07
011	1.350	0.15	0.297	0.80	0.668	0.14	0.254	0.53	0.757	0.36	-0.891	0.15	23.890	0.09	0.174	0.15
012	1.071	0.35	0.268	0.68	0.890	0.38	0.267	0.25	0.711	0.48	-0.882	0.02	24.055	0.05	0.187	0.08
013	1.003	0.27	-0.173	0.09	0.814	0.14	0.200	0.09	0.893	0.73	-0.869	0.09	25.368	0.06	0.200	0.09
014	0.826	0.21	0.184	0.01	0.626	0.21	0.202	0.01	-0.552	0.01	-0.921	0.01	20.199	0.01	0.147	0.01
015	0.997	0.41	-0.199	0.01	0.199	0.01	-0.099	0.01	0.598	0.01	-0.999	0.01	27.904	0.15	0.130	0.16
016	0.830	0.00	0.166	0.00	0.498	0.00	0.133	0.25	-0.497	0.00	-0.829	0.00	21.576	0.00	0.183	0.36
017	1.408	0.25	1.241	0.30	1.321	0.40	0.305	0.39	0.898	0.82	-0.879	0.10	22.623	0.18	0.210	0.18
018	1.000	0.17	0.154	0.02	0.308	0.02	0.092	0.32	0.538	0.27	-0.762	0.02	22.288	0.05	0.161	0.08
019	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99
020	0.995	0.25	0.341	1.06	0.501	0.08	0.126	0.21	0.928	0.62	-0.800	0.08	19.164	0.01	0.142	0.20
021	0.971	0.38	0.195	0.02	0.679	0.84	0.165	0.81	0.680	0.27	-0.964	0.02	24.335	0.10	0.233	0.65
022	0.916	0.31	-0.193	0.09	0.370	0.09	0.092	0.09	-0.580	0.09	-0.967	0.09	24.046	0.09	0.158	0.21
023	0.924	0.36	0.154	0.03	1.304	0.09	0.339	0.49	0.617	0.53	-0.779	0.03	23.780	0.03	0.123	0.53
024	1.036	0.44	0.227	0.23	1.036	0.44	0.250	0.23	1.061	0.86	-1.264	0.23	28.288	0.15	0.217	0.33
025	0.884	0.20	0.722	0.20	2.727	0.10	1.155	0.18	0.644	0.52	-0.809	0.02	24.060	0.11	0.225	0.02
026	1.124	0.62	0.412	1.06	0.404	0.08	0.112	0.26	0.922	0.73	-1.049	0.08	25.241	0.00	0.163	0.33
027	0.652	0.22	0.203	0.85	0.449	0.07	0.098	0.35	0.680	0.97	-0.721	0.22	23.175	0.01	0.167	0.09
028	0.865	0.45	0.172	0.05	1.191	0.81	0.178	1.01	-0.529	0.05	-0.882	0.05	23.198	0.02	0.206	0.28
030	0.640	0.06	0.145	0.28	1.011	0.28	0.308	0.15	0.496	0.00	-0.824	0.28	17.340	0.28	0.167	0.37
031	0.951	0.36	0.284	0.63	1.239	0.11	0.230	0.37	0.670	0.33	-0.934	0.04	23.893	0.12	0.239	0.04
032	1.201	0.38	0.301	0.71	0.501	0.45	-0.096	0.05	0.695	0.24	-0.971	0.05	21.921	0.05	0.139	0.24
033	0.704	0.02	-0.173	0.02	0.352	0.02	0.097	0.16	0.789	0.65	-0.870	0.02	23.767	0.10	0.211	0.15
034	0.921	0.02	-0.182	0.02	0.184	0.02	-0.090	0.02	0.924	0.81	-0.912	0.02	25.779	0.02	0.202	0.35
035	1.149	0.25	0.285	0.59	0.671	0.20	0.201	0.20	0.856	0.59	-0.922	0.09	27.010	0.09	0.230	0.25
036	0.808	0.30	-0.185	0.08	0.264	0.59	0.089	0.08	-0.558	0.08	-0.930	0.08	25.019	0.08	0.198	0.44
037	1.301	0.49	0.199	0.03	0.399	0.03	0.119	0.30	1.088	0.88	-0.979	0.03	25.888	0.12	0.290	0.24
038	0.948	0.18	0.190	0.18	0.379	0.18	0.095	0.18	0.672	0.46	-0.864	0.18	24.488	0.02	0.235	0.07
039	1.122	0.50	0.201	0.33	0.285	0.36	0.100	0.33	0.954	0.95	-1.170	0.33	28.125	0.33	0.239	0.74
040	0.822	0.29	0.384	1.27	0.525	0.39	0.147	0.29	0.798	0.82	-0.702	0.11	23.718	0.01	0.169	0.33
041	0.911	0.32	0.184	0.08	0.367	0.08	0.092	0.08	0.992	0.85	-0.881	0.08	24.753	0.00	0.219	0.26
042	0.852	0.14	-0.182	0.08	0.380	0.08	-0.090	0.08	0.845	0.69	-0.912	0.08	24.723	0.08	0.217	0.36
043	1.246	0.82	0.385	1.05	0.477	0.46	0.124	0.52	1.057	0.96	-0.977	0.07	23.641	0.01	0.276	0.41
044	1.444	0.38	0.312	0.75	0.312	0.75	0.113	0.28	0.829	0.59	-1.074	0.10	24.570	0.10	0.218	0.57
045	0.882	0.18	-0.191	0.05	0.686	0.24	0.118	0.05	0.666	0.24	-0.959	0.05	23.580	0.05	0.156	0.46
Ar.Mean	0.987	0.30	0.263	0.35	0.603	0.24	0.169	0.24	0.813	0.47	0.916	0.08	23.953	0.08	0.192	0.28
Std.Dev.	0.192	0.17	0.183	0.38	0.450	0.22	0.168	0.22	0.208	0.32	0.111	0.07	2.409	0.07	0.037	0.17
Geo.Mean	0.968	***.	0.235	***.	0.505	***.	0.139	0.14	0.787	***.	0.910	***.	23.829	***.	0.188	0.21

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 02-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	PO4	d	CO3	d	HCO3	d	NH3	d	TSS	d	Av d	SD(d)	(Milligrams) Cu A	Cu B
001	-0.036	0.11	-9.168	0.11	-9.168	0.11	-0.366	0.11	15.116	0.91	0.31	0.30	37.14	33.66
002	-0.041	0.16	-10.547	0.16	-10.547	0.16	-0.421	0.16	17.146	0.95	0.36	0.30	38.80	35.62
003	-0.037	0.17	-9.604	0.17	-9.604	0.17	-0.383	0.17	15.765	0.05	0.19	0.15	32.16	32.40
004	0.030	0.01	-7.335	0.01	-7.335	0.01	-0.292	0.01	13.298	0.23	0.20	0.30	30.99	28.53
005	-0.033	0.05	-8.437	0.05	-8.437	0.05	-0.337	0.05	13.078	0.45	0.22	0.21	30.60	30.10
006	0.083	1.25	-8.413	0.07	-8.413	0.07	-0.336	0.07	19.491	0.07	0.27	0.34	30.16	28.72
007	-0.039	0.06	-10.085	0.06	-10.085	0.06	-0.402	0.06	17.612	0.17	0.17	0.20	37.44	35.06
008	0.114	1.25	-10.312	0.04	-10.312	0.04	-0.412	0.04	29.330	0.53	0.31	0.38	34.27	34.57
009	-0.038	0.06	-9.801	0.06	-9.801	0.06	-0.391	0.06	26.167	0.10	0.13	0.15	34.87	34.89
010	-0.034	0.07	-8.709	0.07	-8.709	0.07	-0.347	0.07	23.831	0.63	0.19	0.20	34.56	37.07
011	-0.035	0.15	-8.919	0.15	-8.919	0.15	-0.356	0.15	28.784	0.02	0.23	0.21	28.64	31.73
012	-0.034	0.02	-8.824	0.02	-8.824	0.02	-0.352	0.02	37.380	0.27	0.20	0.22	33.89	34.20
013	-0.034	0.09	-8.699	0.09	-8.699	0.09	-0.347	0.09	23.860	0.54	0.19	0.21	32.36	33.73
014	-0.036	0.01	-9.217	0.01	-9.217	0.01	-0.368	0.01	22.021	0.33	0.06	0.11	30.10	27.97
015	-0.039	0.01	-9.995	0.01	-9.995	0.01	-0.399	0.01	10.963	0.19	0.07	0.12	35.17	35.33
016	-0.032	0.00	-8.297	0.00	-8.297	0.00	-0.331	0.00	16.597	0.00	0.05	0.12	31.90	30.87
017	-0.034	0.10	-8.799	0.10	-8.799	0.10	0.423	0.50	34.860	0.18	0.28	0.21	29.92	26.31
018	-0.030	0.02	-7.624	0.02	-7.624	0.02	-0.304	0.02	19.925	0.76	0.14	0.21	30.50	30.38
019	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.99	999.99	999.99	999.99
020	-0.031	0.08	-8.007	0.08	-8.007	0.08	-0.319	0.08	19.897	0.25	0.24	0.29	28.80	27.28
021	0.058	0.65	-9.646	0.02	-9.646	0.02	0.486	0.38	33.168	0.60	0.37	0.32	32.08	34.91
022	-0.038	0.09	-9.677	0.09	-9.677	0.09	-0.386	0.09	18.668	0.49	0.15	0.12	34.05	33.08
023	-0.030	0.03	-7.799	0.03	-7.799	0.03	0.911	1.32	30.700	0.03	0.27	0.38	34.32	29.29
024	-0.050	0.23	-12.646	0.23	-12.646	0.23	-0.505	0.23	31.314	0.06	0.30	0.20	42.05	35.10
025	-0.031	0.02	-8.099	0.02	-8.099	0.02	-0.323	0.02	73.740	0.24	0.13	0.14	31.75	31.16
026	-0.041	0.08	-10.499	0.08	-10.499	0.08	-0.419	0.08	24.114	0.26	0.29	0.32	37.76	34.97
027	-0.028	0.22	-7.218	0.22	-7.218	0.22	0.261	0.22	17.644	0.95	0.35	0.34	33.88	32.24
028	0.060	0.81	-8.824	0.05	-8.824	0.05	-0.352	0.05	17.200	0.05	0.29	0.36	31.77	27.47
030	-0.032	0.28	-8.249	0.28	-8.249	0.28	0.289	0.28	17.950	1.31	0.32	0.31	29.70	20.34
031	-0.036	0.04	-9.347	0.04	-9.347	0.04	-0.373	0.04	20.968	0.14	0.18	0.19	31.76	28.76
032	-0.038	0.05	-9.722	0.05	-9.722	0.05	-0.388	0.05	9.964	0.05	0.18	0.21	29.40	29.72
033	-0.034	0.02	-8.704	0.02	-8.704	0.02	-0.347	0.02	10.559	0.02	0.10	0.17	28.60	29.55
034	-0.036	0.02	-9.128	0.02	-9.128	0.02	-0.364	0.02	11.946	0.45	0.14	0.25	34.95	35.18
035	-0.036	0.09	-9.232	0.09	-9.232	0.09	-0.368	0.09	17.956	0.88	0.27	0.26	33.92	35.79
036	-0.036	0.08	-9.309	0.08	-9.309	0.08	-0.371	0.08	19.177	1.11	0.25	0.31	33.84	33.10
037	-0.038	0.03	-9.801	0.03	-9.801	0.03	-0.391	0.03	17.845	0.64	0.22	0.28	36.01	34.50
038	-0.034	0.18	-8.651	0.18	-8.651	0.18	-0.345	0.18	16.570	0.51	0.20	0.13	32.30	33.49
039	-0.046	0.33	-11.704	0.33	-11.704	0.33	-0.467	0.33	28.473	0.36	0.43	0.20	38.89	30.99
040	-0.027	0.11	-7.024	0.11	-7.024	0.11	-0.280	0.11	20.495	0.47	0.34	0.35	33.72	34.54
041	-0.034	0.08	-8.818	0.08	-8.818	0.08	-0.352	0.08	10.135	0.26	0.18	0.22	33.08	35.42
042	-0.036	0.08	-9.133	0.08	-9.133	0.08	-0.364	0.08	-9.133	0.08	0.15	0.16	30.69	32.47
043	0.047	0.34	-9.776	0.07	-9.776	0.07	0.470	0.34	10.385	0.12	0.40	0.35	33.95	29.75
044	-0.042	0.10	-10.749	0.10	-10.749	0.10	-0.429	0.10	15.100	0.58	0.35	0.27	36.12	32.29
045	-0.037	0.05	-9.599	0.05	-9.599	0.05	-0.383	0.05	14.625	0.63	0.16	0.19	33.02	31.38
Ar.Mean	0.040	0.17	9.167	0.08	9.167	0.08	0.384	0.13	20.998	0.39	0.22	0.23	33.25	31.95
Std.dev.	0.014	0.28	1.119	0.07	1.119	0.07	0.097	0.21	10.919	0.33	0.09	0.07	3.02	3.30
Geo.Mean	0.039	***	9.102	***	9.102	***	0.376	***	19.100	***	0.20	0.22	33.12	31.75

ARIZONA PUBLIC SERVICE
MONTHLY REPORT for 02-85

DUSTFALL DATA
Comments and Messages Only

Location Number	Sample A Comments	Sample B Comments	Processing Messages
001			
002		BUGS AND LEAVES	
003			
004			
005			
006			
007		TWIGS	
008	ALGAE AND GRIT	GRIT	
009			
010			
011			
012			
013			
014			
015			
016	ASHES	ASHES AND BUGS	
017	LEAVES, BUGS AND GRIT	LEAVES, HAIR AND BUGS	
018			
019	VOID/DAMAGE BY INTRUDERS OR COWS	VOID/DAMAGED BY INTRUDERS OR COWS	MISSING SAMPLE A and B
020			
021			
022			
023			
024			
025	DIRT AND BUGS	DIRT AND BUGS	
026			
027	SPIDER AND BUGS	SPIDER, BUGS AND LEAVES	
028			
030	SPIDER AND BUGS		
031			
032		ROCK IN JAR?	
033			
034			
035	TRASH IN JAR?	TWIGS	
036	GRIT		
037		HAIR AND TWIGS	
038	HAIR	HAIR	
039			
040			
041			
042			
043	BIRD DROPPINGS	SPIDER AND GRIT	
044	GRIT		
045			

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 03-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	Na	d	K	d	Ca	d	Mg	d	Cl	d	F	d	SO4	d	NO3	d
001	0.365	999.99	0.730	999.99	0.608	999.99	0.195	999.99	-0.364	999.99	-0.607	999.99	24.321	999.99	0.097	999.99
002	0.218	0.64	0.146	0.03	0.730	0.03	0.131	0.03	-0.443	0.03	-0.738	0.03	25.537	0.03	0.073	0.03
003	0.258	1.05	0.193	0.73	0.762	0.07	0.171	0.16	-0.367	0.07	-0.612	0.07	25.963	0.08	0.096	0.46
004	0.335	1.02	0.166	0.03	0.833	0.43	0.116	0.03	-0.489	0.03	-0.816	0.03	28.239	0.03	0.150	0.03
005	0.114	0.24	0.177	0.87	0.606	0.32	0.155	0.20	-0.300	0.24	-0.501	0.24	23.126	0.09	0.137	0.24
006	0.230	1.08	0.230	1.08	0.672	0.12	0.141	0.35	-0.316	0.12	-0.527	0.12	24.572	0.02	0.129	0.20
007	0.178	0.59	-0.124	0.08	0.720	0.08	0.120	0.12	0.360	0.08	-0.624	0.08	23.950	0.02	0.142	0.59
008	0.219	1.02	0.274	1.22	0.598	0.21	0.120	0.21	-0.320	0.03	-0.533	0.03	21.703	0.03	0.092	0.15
009	0.281	0.97	0.281	0.97	0.849	0.04	0.120	0.15	-0.431	0.04	-0.719	0.04	24.055	0.04	0.078	0.15
010	-0.135	0.10	-0.135	0.10	0.640	0.12	0.151	0.39	-0.406	0.10	-0.677	0.10	25.671	0.01	0.086	0.10
011	0.222	0.11	0.379	0.77	1.167	0.20	0.377	0.11	-0.349	0.11	-0.583	0.11	23.222	0.01	0.116	0.18
012	0.240	0.35	0.193	0.05	0.966	0.05	0.237	0.25	-0.282	0.05	-0.470	0.05	22.209	0.05	0.107	0.41
013	0.195	0.08	0.238	1.15	0.919	0.45	0.231	0.59	-0.280	0.08	-0.468	0.08	21.930	0.05	0.097	0.52
014	0.221	0.65	0.367	1.19	1.181	0.02	0.206	0.12	-0.446	0.02	-0.744	0.02	25.821	0.04	0.096	0.14
015	0.305	999.99	0.305	999.99	1.117	999.99	0.254	999.99	-0.304	999.99	-0.507	999.99	23.345	999.99	0.122	999.99
016	0.320	1.11	0.196	0.54	0.730	0.04	0.125	0.39	-0.428	0.14	-0.714	0.14	26.017	0.09	0.099	0.26
017	0.329	999.99	0.768	999.99	1.097	999.99	0.285	999.99	0.658	999.99	-0.547	999.99	27.422	999.99	0.176	999.99
018	0.269	1.32	0.269	1.32	0.769	0.15	0.154	0.03	-0.274	0.03	-0.458	0.03	21.247	0.01	0.181	0.43
019	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99
020	0.187	0.53	0.246	0.88	0.946	0.25	0.200	0.49	-0.354	0.15	-0.591	0.15	26.199	0.10	0.121	0.05
021	0.371	0.77	0.178	0.56	0.671	0.30	0.103	0.00	-0.341	0.12	-0.569	0.12	23.037	0.12	0.121	0.08
022	0.180	0.50	0.124	0.18	0.674	0.00	0.110	0.04	-0.402	0.18	-0.672	0.18	23.245	0.03	0.135	0.00
023	0.182	0.65	0.913	0.39	3.898	0.11	1.174	0.47	-0.367	0.02	-0.613	0.02	23.156	0.02	0.165	0.09
024	0.190	0.03	0.201	0.03	1.203	0.03	0.295	0.07	-0.295	0.03	-0.492	0.03	24.553	0.01	0.140	0.11
025	0.388	0.41	1.241	0.13	4.849	0.09	2.095	0.08	0.233	0.01	-0.386	0.01	21.720	0.07	0.229	0.04
026	0.426	1.34	0.142	0.01	0.920	0.16	0.120	0.11	-0.422	0.01	-0.704	0.01	25.470	0.01	0.106	0.39
027	0.377	1.03	0.194	0.82	0.938	0.56	0.191	0.20	-0.342	0.22	-0.571	0.22	24.362	0.03	0.172	0.13
028	0.245	1.12	0.172	0.52	2.029	0.24	0.224	0.52	-0.381	0.16	-0.637	0.16	25.298	0.12	0.195	0.22
030	0.219	0.12	0.335	0.77	2.607	0.58	0.698	0.52	0.386	0.40	-0.515	0.12	21.827	0.02	0.252	0.20
031	0.165	0.76	0.108	0.10	0.650	0.10	0.130	0.10	-0.307	0.10	-0.512	0.10	21.600	0.00	0.152	0.10
032	0.253	0.01	0.126	0.01	0.758	0.01	0.152	0.16	-0.380	0.01	-0.634	0.01	22.739	0.01	0.133	0.08
033	0.258	0.33	0.104	0.08	0.930	0.15	0.186	0.26	-0.299	0.08	-0.498	0.08	22.842	0.08	0.146	0.36
034	0.178	0.78	0.116	0.12	0.698	0.12	0.167	0.22	-0.326	0.12	-0.544	0.12	23.723	0.02	0.151	0.12
035	0.132	999.99	0.528	999.99	1.452	999.99	0.528	999.99	-0.395	999.99	-0.659	999.99	23.760	999.99	0.185	999.99
036	0.217	0.26	0.108	0.26	0.621	0.42	0.123	0.60	-0.367	0.26	-0.612	0.26	23.388	0.01	0.127	0.07
037	0.490	0.39	0.278	0.11	0.695	0.11	0.131	0.21	-0.393	0.11	-0.657	0.11	23.555	0.01	0.139	0.11
038	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99
039	0.271	0.30	0.386	0.39	1.485	1.07	0.411	0.47	0.386	0.39	-0.517	0.30	21.005	0.17	0.161	0.20
040	0.278	0.14	0.935	0.34	2.948	0.16	1.315	0.27	-0.387	0.26	-0.646	0.26	25.013	0.17	0.166	0.28
041	0.175	0.60	0.231	0.94	0.707	0.07	0.100	0.19	-0.339	0.07	-0.567	0.07	22.940	0.02	0.083	0.36
042	0.148	0.55	-0.094	0.13	0.552	0.06	0.106	0.22	-0.283	0.13	-0.472	0.13	22.634	0.01	0.156	0.07
043	0.205	0.85	0.323	0.20	0.742	0.09	0.237	0.20	0.371	0.09	-0.590	0.20	22.866	0.04	0.188	0.14
044	0.226	1.03	0.226	1.03	0.673	0.38	0.140	0.13	-0.342	0.05	-0.571	0.05	21.787	0.01	0.090	0.30
045	0.367	0.21	0.432	0.13	6.343	0.28	0.842	0.34	0.367	0.21	-0.327	0.43	21.309	0.09	0.190	0.13
Ar.Mean	0.249	0.60	0.307	0.48	1.260	0.20	0.311	0.23	0.364	0.11	0.581	0.11	23.723	0.04	0.137	0.19
Std.Dev.	0.087	0.39	0.254	0.42	1.201	0.20	0.390	0.16	0.071	0.09	0.099	0.09	1.728	0.04	0.041	0.14
Geo.Mean	0.234	0.42	0.243	0.24	1.001	0.11	0.214	0.16	0.358	0.07	0.573	0.07	23.663	0.02	0.131	0.14

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 03-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	PO4	d	CO3	d	HCO3	d	NH3	d	TSS	d	Av d	SD(d)	(Milligrams) Cu A	Cu B
001	0.036	999.99	-6.079	999.99	-6.079	999.99	-0.242	999.99	14.593	999.99	999.99	999.99	999.99	27.24
002	0.037	0.42	-7.392	0.03	-7.392	0.03	-0.295	0.03	10.996	0.69	0.16	0.25	27.05	29.59
003	0.038	0.61	-6.133	0.07	-6.133	0.07	0.254	0.07	10.114	0.18	0.28	0.33	29.77	24.50
004	0.033	0.03	-8.166	0.03	-8.166	0.03	-0.326	0.03	8.306	0.03	0.14	0.29	27.34	27.66
005	0.038	0.65	-5.016	0.24	-5.016	0.24	0.228	0.24	11.416	1.12	0.38	0.31	25.22	27.06
006	0.033	0.56	-5.275	0.12	-5.275	0.12	0.294	0.15	6.784	0.44	0.34	0.36	28.56	27.48
007	0.030	0.48	-6.249	0.08	-6.249	0.08	0.240	0.08	6.000	0.08	0.19	0.21	27.50	23.00
008	-0.020	0.03	-5.343	0.03	-5.343	0.03	-0.213	0.03	7.629	0.60	0.28	0.41	27.36	25.85
009	0.035	0.37	-7.199	0.04	-7.199	0.04	0.283	0.04	9.235	0.49	0.26	0.35	26.50	26.41
010	0.029	0.10	-6.776	0.10	-6.776	0.10	-0.270	0.10	15.734	0.10	0.12	0.09	25.30	25.57
011	0.045	0.60	-5.835	0.11	-5.835	0.11	-0.232	0.11	31.041	0.11	0.20	0.22	23.68	26.88
012	0.034	0.24	-4.710	0.05	-4.710	0.05	-0.187	0.05	19.830	0.19	0.14	0.13	28.14	27.43
013	0.034	0.79	-4.687	0.08	-4.687	0.08	-0.187	0.08	16.884	0.55	0.35	0.35	30.00	26.04
014	0.052	0.30	-7.445	0.02	-7.445	0.02	-0.297	0.02	16.235	0.02	0.20	0.35	27.80	28.39
015	0.030	999.99	-5.074	999.99	-5.074	999.99	-0.202	999.99	19.285	999.99	999.99	999.99	28.42	999.99
016	0.033	0.26	-7.151	0.14	-7.151	0.14	-0.285	0.14	10.693	0.14	0.27	0.28	29.37	25.52
017	0.055	999.99	-5.483	999.99	-5.483	999.99	0.329	999.99	26.325	999.99	999.99	999.99	999.99	30.42
018	0.032	0.88	-4.587	0.03	-4.587	0.03	-0.183	0.03	10.879	0.36	0.36	0.49	27.04	26.26
019	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.99	999.99	999.99	999.99
020	0.057	0.07	-5.919	0.15	-5.919	0.15	0.284	0.33	12.514	0.46	0.29	0.24	37.57	28.27
021	-0.022	0.12	-5.699	0.12	-5.699	0.12	0.243	0.12	8.343	0.46	0.23	0.23	25.06	25.70
022	-0.026	0.18	-6.724	0.18	-6.724	0.18	0.314	0.57	7.520	0.50	0.21	0.19	25.02	27.00
023	0.024	0.02	6.708	0.20	-6.140	0.02	0.668	0.90	114.319	0.54	0.26	0.30	22.79	22.19
024	0.035	0.25	5.505	0.15	-4.924	0.03	0.401	0.03	25.555	0.00	0.06	0.07	29.55	28.56
025	-0.014	0.01	4.266	0.18	-3.866	0.01	0.155	0.01	209.414	0.14	0.09	0.11	23.10	21.58
026	-0.027	0.01	-7.049	0.01	-7.049	0.01	-0.281	0.01	36.140	0.91	0.23	0.42	26.79	27.26
027	0.051	0.22	-5.715	0.22	-5.715	0.22	0.297	0.46	23.097	0.97	0.41	0.33	26.52	24.78
028	0.029	0.24	-6.374	0.16	-6.374	0.16	0.236	0.16	24.626	0.55	0.33	0.28	32.64	30.03
030	0.022	0.12	-5.155	0.12	-5.155	0.12	0.322	0.56	61.284	0.42	0.31	0.24	26.40	24.21
031	0.032	0.57	-5.132	0.10	-5.132	0.10	0.242	0.12	17.782	0.08	0.18	0.22	24.03	26.73
032	0.050	0.49	-6.351	0.01	-6.351	0.01	0.253	0.01	8.829	0.56	0.11	0.19	27.10	24.39
033	0.021	0.08	5.691	0.11	-4.991	0.08	0.233	0.15	10.842	0.21	0.15	0.10	25.56	27.60
034	0.034	0.55	-5.449	0.12	-5.449	0.12	0.287	0.28	13.660	0.55	0.25	0.23	26.16	27.17
035	0.040	999.99	-6.599	999.99	-6.599	999.99	-0.263	999.99	43.560	999.99	999.99	999.99	25.08	999.99
036	-0.024	0.26	-6.124	0.26	-6.124	0.26	-0.244	0.26	7.763	0.42	0.28	0.15	23.77	28.20
037	0.028	0.11	-6.574	0.11	-6.574	0.11	-0.262	0.11	8.265	0.23	0.14	0.09	26.30	25.78
038	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.99	999.99	999.99	999.99
039	0.037	0.89	-5.179	0.30	-5.179	0.30	0.540	0.85	32.719	0.03	0.43	0.31	26.52	21.32
040	0.023	0.26	6.863	0.26	-6.468	0.26	0.239	0.17	106.641	0.42	0.25	0.08	33.12	25.44
041	0.035	0.60	-5.674	0.07	-5.674	0.07	0.236	0.07	11.563	0.94	0.31	0.34	24.97	26.84
042	-0.018	0.13	-4.733	0.13	-4.733	0.13	-0.188	0.13	5.998	0.21	0.15	0.13	26.26	27.48
043	0.043	0.20	5.970	0.37	-5.905	0.20	1.010	1.04	21.832	0.49	0.31	0.31	24.70	31.05
044	0.022	0.05	-5.718	0.05	-5.718	0.05	-0.228	0.05	12.895	0.31	0.27	0.36	26.84	27.96
045	0.032	1.18	-3.280	0.43	-3.280	0.43	0.233	0.26	63.169	0.49	0.35	0.28	23.80	25.92
Ar. Mean	0.033	0.34	5.882	0.13	5.818	0.11	0.290	0.20	27.150	0.39	0.24	0.25	27.12	26.44
Std. dev.	0.009	0.28	0.975	0.09	0.995	0.09	0.144	0.25	37.410	0.28	0.09	0.10	2.85	2.16
Geo. Mean	0.031	0.19	5.799	0.09	5.731	0.07	0.271	0.10	17.366	0.25	0.22	0.22	26.98	26.35

ARIZONA PUBLIC SERVICE
MONTHLY REPORT for 03-85

DUSTFALL DATA
Comments and Messages Only

Location Number	Sample A Comments	Sample B Comments	Processing Messages
001	VOID/DEAD BIRD IN JAR		MISSING SAMPLE A
002			
003	SCREEN MISSING		
004			
005			
006			
007			
008			
009			
010			
011			
012			
013			
014			
015		VOID/JAR DRY	MISSING SAMPLE B
016			
017	VOID/VANDALIZED	SCREEN MISSING	MISSING SAMPLE A
018			
019	VOID/BEING RELOCATED	VOID/BEING RELOCATED	MISSING SAMPLE A and B
020			
021	SCREEN MISSING	SCREEN MISSING	
022			
023		MUDDY WATER	
024	SCREEN MISSING		
025	MUDDY WATER	MUDDY WATER	
026	SCREEN MISSING	SCREEN MISSING	
027		TWIGS, BUGS IN WATER	
028			
030	MUDDY WATER		
031			
032			
033			
034	SCREEN MISSING		
035		VOID/VANDALIZED	MISSING SAMPLE B
036			
037			
038	VOID/VANDALIZED	VOID/VANDALIZED	MISSING SAMPLE A and B
039	SCREEN MISSING	SCREEN MISSING	
040	DIRTY WATER		
041			
042			
043	BIRD DROPPINGS ON SCREEN WHEN COLLECTED		
044			
045			

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 04-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	Na	d	K	d	Ca	d	Mg	d	Cl	d	F	d	SO4	d	NO3	d
001	0.346	0.96	0.096	0.13	0.577	0.13	-0.050	0.13	0.334	0.16	-0.511	0.13	-5.120	0.13	0.140	0.20
002	0.355	0.23	0.102	0.06	0.611	0.06	-0.052	0.06	0.404	0.44	-0.524	0.06	-5.249	0.06	0.091	0.16
003	0.291	0.31	0.097	0.31	0.704	0.09	0.057	0.02	0.428	0.09	-0.408	0.31	-4.085	0.31	0.130	0.27
004	0.112	0.04	-0.109	0.04	0.560	0.04	-0.054	0.04	0.336	0.04	-0.549	0.04	6.170	0.22	0.078	0.54
005	0.156	0.65	0.104	0.02	0.573	0.20	-0.052	0.02	0.364	0.27	-0.524	0.02	24.492	0.14	0.068	0.45
006	0.327	1.28	0.327	1.28	0.675	0.09	-0.058	0.09	0.509	0.31	-0.588	0.09	26.411	0.05	0.119	0.56
007	0.142	0.66	0.236	1.20	0.866	0.47	0.052	0.18	0.268	0.12	-0.473	0.40	28.372	0.00	0.126	0.10
008	0.198	0.11	0.084	0.50	0.449	0.33	-0.051	0.50	0.251	0.50	-0.521	0.50	19.953	0.62	0.066	0.10
009	0.359	0.12	0.733	0.77	0.655	0.06	-0.055	0.12	0.416	0.17	-0.563	0.12	23.248	0.04	0.130	0.25
010	0.204	0.99	0.204	0.99	0.612	0.32	-0.050	0.02	-0.303	0.02	-0.506	0.02	-5.068	0.02	0.107	0.11
011	0.511	0.07	1.040	1.05	1.039	0.29	0.082	0.39	0.462	0.29	-0.492	0.29	25.554	0.07	0.171	0.76
012	0.359	1.34	0.318	0.52	1.040	0.27	0.060	0.34	0.327	0.16	-0.588	0.16	-5.892	0.16	0.095	0.75
013	0.424	999.99	-0.105	999.99	0.849	999.99	-0.052	999.99	-0.317	999.99	-0.529	999.99	-5.303	999.99	0.149	999.99
014	0.311	0.67	0.208	1.00	2.542	0.45	0.109	0.67	0.311	0.00	-0.519	0.00	-5.197	0.00	0.156	0.67
015	0.285	1.32	0.143	0.64	0.623	0.18	-0.048	0.03	-0.291	0.03	-0.485	0.03	15.169	1.36	0.120	0.27
016	0.361	0.72	0.139	0.35	0.812	0.01	-0.057	0.34	0.459	0.49	-0.576	0.34	-5.766	0.34	0.094	0.78
017	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99
018	0.249	1.13	0.206	0.11	0.514	0.11	0.051	0.11	-0.324	0.11	-0.541	0.11	-3.416	0.11	0.078	0.76
019	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99
020	0.458	0.51	0.572	0.41	0.686	0.01	0.057	0.01	0.343	0.01	-0.568	0.01	10.852	0.31	0.126	0.35
021	0.240	0.41	0.096	0.01	0.527	0.17	-0.047	0.01	-0.285	0.01	-0.476	0.01	21.554	0.03	0.086	0.01
022	0.205	0.95	0.154	0.61	0.470	0.29	-0.053	0.07	-0.321	0.07	-0.536	0.07	21.847	0.07	0.094	0.29
023	0.317	0.34	1.134	0.84	2.234	0.01	0.146	0.55	0.383	0.06	-0.658	0.06	-6.588	0.06	0.140	0.12
024	0.519	1.05	0.226	0.55	1.099	0.36	0.046	0.21	-0.244	0.13	-0.408	0.13	27.648	0.07	0.165	0.08
025	0.447	999.99	0.447	999.99	6.263	999.99	0.036	999.99	1.968	999.99	-0.446	999.99	-4.472	999.99	-0.044	999.99
026	0.301	0.56	0.151	0.56	0.561	0.06	-0.053	0.12	-0.326	0.12	-0.543	0.12	28.241	0.16	0.103	0.32
027	0.417	0.94	0.106	0.07	0.947	0.37	0.079	0.60	0.318	0.07	-0.549	0.07	-5.499	0.07	0.106	0.27
028	0.204	0.03	-0.102	0.03	2.243	0.21	0.051	0.03	-0.309	0.03	-0.516	0.03	-5.169	0.03	0.077	1.74
030	0.567	0.43	0.262	1.15	1.967	0.04	0.089	0.49	0.374	0.21	-0.687	0.21	-6.883	0.21	0.187	0.21
031	-0.098	999.99	-0.098	999.99	0.594	999.99	-0.049	999.99	-0.296	999.99	-0.494	999.99	23.760	999.99	0.109	999.99
032	0.219	0.18	-0.098	0.50	0.904	0.42	-0.049	0.50	-0.297	0.50	-0.496	0.50	17.095	0.68	0.076	0.90
033	0.131	0.63	0.131	0.63	0.573	0.20	-0.042	0.05	-0.257	0.05	-0.429	0.05	21.980	0.03	0.119	0.18
034	0.269	0.52	0.368	0.16	0.743	0.12	0.053	0.12	0.319	0.12	-0.497	0.12	29.739	0.12	0.148	0.02
035	0.282	999.99	1.502	999.99	1.314	999.99	0.160	999.99	-0.281	999.99	-0.468	999.99	26.284	999.99	0.178	999.99
036	0.422	0.75	0.409	0.58	0.414	0.13	-0.043	0.09	-0.263	0.09	-0.439	0.09	27.595	0.11	0.106	0.17
037	0.364	1.44	0.468	1.57	0.464	0.25	-0.050	0.03	-0.302	0.03	-0.505	0.03	27.711	0.19	0.103	0.03
038	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99
039	0.196	999.99	0.392	999.99	0.686	999.99	-0.048	999.99	0.392	999.99	-0.489	999.99	23.529	999.99	0.147	999.99
040	0.526	0.20	0.132	0.20	1.197	0.42	-0.071	0.20	-0.433	0.20	-0.722	0.20	-7.231	0.20	0.080	0.52
041	0.288	1.43	0.239	1.31	0.726	0.18	-0.040	0.18	-0.247	0.18	-0.413	0.18	21.535	0.07	0.135	0.18
042	0.235	1.11	0.189	0.89	0.392	0.14	-0.052	0.14	-0.314	0.14	-0.524	0.14	23.459	0.06	0.074	0.27
043	0.310	999.99	0.155	999.99	0.774	999.99	-0.076	999.99	0.929	999.99	-0.773	999.99	-7.740	999.99	0.155	999.99
044	0.325	999.99	0.216	999.99	0.649	999.99	-0.053	999.99	-0.324	999.99	-0.540	999.99	-5.410	999.99	0.141	999.99
045	1.083	0.10	0.486	0.73	7.219	0.11	0.255	0.38	1.237	0.16	-0.513	0.08	-5.142	0.08	1.804	1.26
Ar.Mean	0.327	0.65	0.302	0.58	1.154	0.19	0.066	0.20	0.411	0.15	0.527	0.13	15.205	0.18	0.156	0.40
Std.Dev.	0.167	0.44	0.307	0.43	1.382	0.13	0.039	0.19	0.305	0.14	0.077	0.13	9.617	0.25	0.265	0.37
Geo.Mean	0.293	0.44	0.217	0.34	0.853	0.13	0.060	0.10	0.365	0.09	0.522	0.08	11.912	0.09	0.117	0.25

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 04-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	PO4	d	CO3	d	HCO3	d	NH3	d	TSS	d	Av d	SD(d)	(Milligrams) Cu A	Cu B
001	0.024	0.27	-5.120	0.13	-5.120	0.13	0.192	0.13	6.222	0.02	0.20	0.23	0.79	0.87
002	-0.020	0.06	-5.249	0.06	-5.249	0.06	-0.209	0.06	-5.249	0.06	0.11	0.11	0.41	0.19
003	0.023	0.09	-4.085	0.31	5.254	0.13	0.194	0.31	6.480	0.27	0.22	0.11	0.32	0.43
004	-0.021	0.04	-5.499	0.04	-5.499	0.04	-0.219	0.04	6.150	0.15	0.10	0.14	6.16	7.07
005	-0.020	0.02	-5.249	0.02	-5.249	0.02	-0.209	0.02	7.808	0.12	0.15	0.20	26.46	22.32
006	-0.023	0.09	-5.888	0.09	-5.888	0.09	-0.235	0.09	11.144	0.31	0.34	0.44	25.44	27.02
007	-0.018	0.40	-4.739	0.40	-4.739	0.40	0.252	1.00	9.936	0.48	0.45	0.34	33.30	36.40
008	0.032	1.23	-5.222	0.50	-5.222	0.50	-0.208	0.50	7.312	1.14	0.54	0.33	27.30	15.21
009	0.030	0.29	-5.636	0.12	-5.636	0.12	0.240	0.12	7.749	0.04	0.18	0.19	25.63	24.89
010	-0.019	0.02	-5.068	0.02	-5.068	0.02	-0.202	0.02	5.108	0.02	0.20	0.36	0.20	0.60
011	0.028	0.11	-4.928	0.29	-4.928	0.29	0.576	1.08	28.977	0.72	0.44	0.35	23.92	24.45
012	0.028	0.55	-5.892	0.16	6.541	0.16	0.218	0.16	12.169	0.52	0.41	0.35	0.22	0.19
013	-0.020	999.99	-5.303	999.99	6.364	999.99	-0.211	999.99	-5.303	999.99	999.99	999.99	999.99	0.40
014	0.093	0.23	-5.197	0.00	11.935	0.61	0.519	0.00	15.049	0.63	0.38	0.35	0.20	0.20
015	0.024	0.37	-4.862	0.03	5.262	0.15	-0.194	0.03	12.912	0.19	0.36	0.47	32.16	31.20
016	-0.022	0.34	-5.766	0.34	5.335	0.16	0.197	0.34	6.153	0.13	0.36	0.21	0.45	0.32
017	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.99	999.99	999.99	999.99
018	0.058	1.33	-5.416	0.11	6.167	0.11	0.422	1.08	6.653	0.05	0.40	0.48	0.59	0.53
019	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.99	999.99	999.99	999.99
020	-0.022	0.01	-5.689	0.01	-5.689	0.01	0.286	0.39	-5.689	0.01	0.16	0.20	11.66	9.55
021	-0.018	0.01	-4.765	0.01	-4.765	0.01	0.192	0.01	7.198	0.68	0.11	0.21	27.58	27.86
022	-0.020	0.07	-5.370	0.07	5.705	0.12	0.258	0.34	5.202	0.07	0.23	0.27	26.64	27.04
023	0.162	1.51	-6.588	0.06	12.696	0.34	0.936	1.44	45.241	0.80	0.48	0.52	0.25	0.23
024	0.015	0.13	-4.088	0.13	4.207	0.06	0.846	0.13	38.802	0.23	0.25	0.28	33.80	31.29
025	0.134	999.99	-4.472	999.99	24.155	999.99	-0.178	999.99	161.036	999.99	999.99	999.99	999.99	2.00
026	0.021	0.12	-5.443	0.12	-5.443	0.12	0.308	0.12	6.573	0.34	0.22	0.17	40.50	31.84
027	0.021	0.07	-5.499	0.07	7.389	0.21	0.263	0.33	-5.499	0.07	0.25	0.27	0.40	0.18
028	0.046	0.19	-5.169	0.03	8.143	0.03	0.2[illegible]	0.03	11.665	0.40	0.22	0.47	0.19	0.19
030	0.095	0.60	-6.883	0.21	9.964	0.21	0.62[illegible]	0.21	46.578	0.66	0.37	0.30	0.26	0.21
031	0.020	999.99	-4.949	999.99	-4.949	999.99	0.396	999.99	16.830	999.99	999.99	999.99	999.99	27.72
032	-0.019	0.50	-4.974	0.50	4.273	0.33	0.159	0.50	11.233	0.83	0.53	0.19	25.87	14.28
033	0.031	0.33	-4.299	0.05	-4.299	0.05	0.477	1.25	12.710	0.30	0.29	0.36	25.80	25.20
034	0.041	0.90	-4.983	0.12	-4.983	0.12	0.412	0.90	13.285	1.15	0.35	0.39	37.08	39.61
035	0.216	999.99	-4.693	999.99	-4.693	999.99	0.469	999.99	22.529	999.99	999.99	999.99	999.99	31.04
036	0.018	0.09	-4.402	0.09	-4.402	0.09	0.273	0.58	10.694	0.35	0.25	0.24	38.22	34.00
037	0.051	0.03	-5.055	0.03	-5.055	0.03	0.411	0.03	-5.055	0.03	0.29	0.55	39.71	32.40
038	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.99	999.99	999.99	999.99
039	-0.019	999.99	-4.901	999.99	-4.901	999.99	0.294	999.99	12.745	999.99	999.99	999.99	25.62	999.99
040	0.041	0.84	-7.231	0.20	7.299	0.38	-0.288	0.20	11.638	0.98	0.36	0.27	0.27	0.22
041	-0.016	0.18	-4.136	0.18	-4.136	0.18	0.181	0.18	8.419	0.36	0.37	0.45	27.36	26.52
042	0.025	0.53	-5.249	0.14	-5.249	0.14	0.196	0.14	5.427	0.32	0.32	0.33	27.44	25.50
043	0.046	999.99	-7.740	999.99	-7.740	999.99	-0.309	999.99	10.837	999.99	999.99	999.99	40.46	999.99
044	0.022	999.99	-5.410	999.99	-5.410	999.99	-0.215	999.99	-5.410	999.99	999.99	999.99	0.40	999.99
045	0.299	1.17	-5.142	0.08	11.861	0.08	-0.205	0.08	31.436	0.55	0.38	0.43	0.19	0.18
Ar. Mean	0.047	0.37	5.275	0.13	6.509	0.16	0.314	0.34	16.392	0.38	0.30	0.31	17.11	15.24
Std. dev.	0.058	0.41	0.773	0.13	3.510	0.14	0.176	0.40	25.468	0.33	0.11	0.11	15.45	14.22
Geo. Mean	0.032	0.17	5.224	0.08	6.009	0.10	0.281	0.15	10.845	0.21	0.27	0.28	4.39	3.93

ARIZONA PUBLIC SERVICE
MONTHLY REPORT for 04-85

DUSTFALL DATA
Comments and Messages Only

Location Number	Sample A Comments	Sample B Comments	Processing Messages
001			
002			
003			
004			
005			
006			
007			
008			
009			
010			
011			
012	SCREEN MISSING		
013	VOID/CONTAMINATION		MISSING SAMPLE A
014			
015	SCREEN MISSING		
016	BUGS AND ASHES IN JAR	BUGS AND ASHES IN JAR	
017	VOID/ VANDALIZED	VOID/ VANDALIZED	MISSING SAMPLE A and B
018			
019	VOID/ VANDALIZED	VOID/ VANDALIZED	MISSING SAMPLE A and B
020			
021			
022			
023			
024	SCREEN MISSING		
025	VOID/ INCORRECT IDENTIFIER		MISSING SAMPLE A
026	SCREEN MISSING		
027	WIRE AND HAIR IN JAR	TWIGS AND SEEDS IN WATER	
028			
030			
031	VOID/ INCORRECT IDENTIFIER		MISSING SAMPLE A
032			
033			
034	SCREEN MISSING		
035	VOID/ INCORRECT IDENTIFIER		MISSING SAMPLE A
036	SCREEN MISSING	SCREEN MISSING	
037		SCREEN MISSING	
038	VOID/VANDALIZED	VOID/ INCORRECT IDENTIFIER	MISSING SAMPLE A and B
039		VOID/ INCORRECT IDENTIFIER	MISSING SAMPLE B
040			
041		LEAVES IN WATER	
042			
043		VOID/ INCORRECT IDENTIFIER	MISSING SAMPLE B
044		VOID/ INCORRECT IDENTIFIER	MISSING SAMPLE B
045			

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 05-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	Na	d	K	d	Ca	d	Mg	d	Cl	d	F	d	SO4	d	NO3	d
001	0.051	0.05	-0.051	0.05	0.484	0.37	0.051	1.04	0.177	0.23	-0.259	0.05	20.788	0.00	0.071	0.09
002	-0.072	0.17	-0.072	0.17	0.276	0.12	-0.036	0.17	0.240	0.17	-0.365	0.17	21.128	0.13	0.060	0.30
003	-0.056	0.09	0.060	0.09	0.569	0.02	0.057	0.02	0.297	0.31	-0.286	0.09	20.974	0.03	0.072	0.08
004	0.058	999.99	0.291	999.99	0.698	999.99	0.093	999.99	0.233	999.99	-0.290	999.99	19.782	999.99	0.122	999.99
005	-0.068	0.19	-0.068	0.19	0.455	0.19	-0.033	0.19	0.296	0.32	-0.343	0.19	21.521	0.08	0.063	0.17
006	-0.079	0.01	0.080	0.01	0.479	0.01	-0.039	0.01	0.240	0.01	-0.400	0.01	22.359	0.01	0.064	0.01
007	-0.070	0.32	0.061	0.32	0.767	0.15	0.107	1.07	0.210	0.04	-0.355	0.32	27.600	0.06	0.051	0.03
008	0.229	0.50	-0.171	0.18	0.545	0.10	-0.085	0.18	-0.516	0.18	-0.860	0.18	27.530	0.13	0.079	0.18
009	0.142	0.74	0.142	0.74	0.557	0.25	0.047	0.08	-0.291	0.08	-0.485	0.08	22.597	0.54	-0.048	0.08
010	0.144	1.05	-0.054	0.22	0.397	0.07	-0.026	0.22	0.212	0.06	-0.273	0.22	20.325	0.04	0.066	0.14
011	0.128	0.01	0.256	0.01	1.219	0.53	0.218	1.30	0.385	0.01	-0.638	0.01	28.839	0.04	0.083	0.15
012	-0.074	0.01	0.150	1.00	0.526	0.28	0.113	1.33	0.263	0.28	-0.376	0.01	22.187	0.10	0.071	0.10
013	0.084	0.17	0.122	0.51	0.915	0.01	0.080	0.87	0.251	0.17	-0.383	0.17	22.875	0.01	0.092	0.01
014	0.203	0.65	0.258	1.47	1.200	0.51	0.100	0.50	0.519	0.42	-0.341	0.27	22.584	0.06	0.072	0.27
015	-0.093	0.08	-0.093	0.08	0.584	0.38	0.045	0.08	0.272	0.08	-0.470	0.08	28.969	0.02	0.045	0.08
016	0.170	0.43	0.063	0.12	0.706	0.07	0.094	1.01	0.425	0.19	-0.332	0.77	17.753	0.40	0.080	0.16
017	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99
018	0.136	0.78	0.231	1.28	0.616	0.16	-0.046	0.13	-0.283	0.13	-0.472	0.13	24.352	0.02	0.066	0.01
019	0.131	0.69	0.173	0.02	0.563	0.13	0.043	0.02	0.347	0.02	-0.438	0.02	23.410	0.02	0.069	0.02
020	0.274	0.23	0.211	0.76	0.529	0.02	0.148	1.35	0.478	0.38	-0.242	0.11	16.112	0.59	0.087	0.00
021	0.113	999.99	0.151	999.99	0.603	999.99	0.106	999.99	0.226	999.99	-0.188	999.99	24.891	999.99	0.053	999.99
022	-0.097	0.16	-0.097	0.16	0.630	0.13	0.050	0.03	0.273	0.16	-0.490	0.16	30.681	0.08	0.050	0.03
023	0.664	0.50	1.493	0.22	5.453	0.57	0.933	1.36	1.092	0.03	-0.460	0.11	23.599	0.03	0.113	0.05
024	0.106	1.01	0.212	0.51	0.556	0.48	0.079	0.14	0.238	0.21	-0.263	0.01	26.730	0.03	0.077	0.21
025	-0.134	0.21	0.231	0.83	3.226	0.18	0.126	0.07	0.420	0.07	-0.674	0.21	26.707	0.12	0.149	0.19
026	-0.062	999.99	0.125	999.99	0.375	999.99	0.050	999.99	0.313	999.99	-0.312	999.99	28.157	999.99	0.044	999.99
027	0.079	0.52	0.145	1.20	0.373	0.13	0.096	0.55	0.220	0.41	-0.164	0.55	19.952	0.04	0.071	0.04
028	0.605	1.74	0.099	0.41	5.449	1.28	0.202	1.53	1.388	1.43	-0.392	0.27	24.666	0.16	0.179	0.86
030	0.745	0.14	1.529	0.38	5.375	0.26	1.923	0.25	1.140	0.18	-0.442	0.03	24.964	0.06	0.228	0.03
031	0.147	0.51	0.202	0.17	0.660	0.32	0.056	0.35	0.597	0.16	-0.460	0.17	23.123	0.08	0.135	0.05
032	0.398	999.99	0.796	999.99	0.796	999.99	0.133	999.99	0.929	999.99	-0.663	999.99	22.564	999.99	0.146	999.99
033	0.103	999.99	0.308	999.99	3.595	999.99	0.216	999.99	0.308	999.99	-0.513	999.99	22.600	999.99	0.082	999.99
034	0.102	0.74	0.126	0.98	0.505	0.22	0.058	0.89	0.190	0.03	-0.320	0.32	24.739	0.08	0.074	0.24
035	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99
036	0.132	1.18	0.089	0.42	0.586	0.16	0.076	1.15	0.186	0.26	-0.269	0.26	20.884	0.09	0.106	0.38
037	-0.067	0.29	0.080	0.29	0.512	0.14	-0.033	0.29	-0.203	0.29	-0.340	0.29	21.973	0.08	0.057	0.40
038	0.097	0.12	0.382	0.39	0.581	0.12	-0.050	0.12	0.291	0.12	-0.511	0.12	22.221	0.03	0.097	0.12
039	-0.118	0.17	0.110	0.17	0.440	0.17	-0.059	0.17	-0.356	0.17	-0.594	0.17	22.918	0.03	0.072	0.32
040	0.163	0.08	0.241	0.59	0.495	0.74	-0.084	0.08	-0.507	0.08	-0.846	0.08	26.762	0.10	0.074	0.30
041	0.107	0.77	0.070	0.12	0.664	0.01	0.109	0.91	0.210	0.12	-0.329	0.12	29.349	0.02	0.049	0.17
042	-0.068	0.88	-0.068	0.88	0.312	0.24	-0.033	0.88	-0.205	0.88	-0.342	0.88	30.062	0.45	0.090	0.33
043	0.265	0.60	0.886	0.33	0.564	0.04	0.202	0.72	0.944	0.43	-0.923	0.47	26.263	0.25	0.086	0.14
044	-0.079	0.16	0.127	0.52	0.302	0.13	-0.039	0.16	0.261	0.16	-0.400	0.16	26.673	0.06	0.056	0.31
045	0.236	0.12	0.373	1.55	0.812	0.36	0.173	1.32	0.550	0.12	-0.416	0.12	22.628	0.08	0.077	0.49
Ar.Mean	0.165	0.43	0.251	0.46	1.070	0.24	0.151	0.55	0.404	0.22	0.427	0.19	23.933	0.11	0.084	0.17
Std.Dev.	0.158	0.39	0.332	0.42	1.379	0.24	0.313	0.50	0.285	0.26	0.172	0.19	3.321	0.14	0.037	0.17
Geo.Mean	0.127	0.24	0.161	0.27	0.717	0.14	0.085	0.28	0.342	0.13	0.398	0.11	23.705	0.06	0.078	0.04

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 05-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	PO4	d	CO3	d	HCO3	d	NH3	d	TSS	d	Av d	SD(d)	(Milligrams) Cu A	Cu B
001	-0.009	0.05	-2.602	0.05	5.541	0.50	0.202	0.45	6.582	0.10	0.23	0.29	28.32	28.00
002	0.046	1.04	-3.661	0.17	7.451	1.02	0.313	0.34	5.656	0.45	0.34	0.32	23.24	27.44
003	0.012	0.09	-2.867	0.09	6.132	1.06	0.180	0.09	18.935	0.54	0.20	0.30	26.00	29.82
004	0.012	999.99	-2.908	999.99	-2.908	999.99	0.349	999.99	13.964	999.99	999.99	999.99	24.32	999.99
005	0.015	0.19	-3.440	0.19	5.868	0.83	0.152	0.19	7.306	0.64	0.27	0.21	28.08	28.20
006	-0.015	0.01	-4.014	0,01	5.978	0.66	0.160	0.01	9.591	0.34	0.09	0.19	29.12	28.80
007	0.020	0.58	-3.556	0.32	4.350	0.36	0.271	0.10	9.291	0.45	0.32	0.28	39.84	39.60
008	-0.033	0.18	-8.613	0.18	13.614	0.73	-0.344	0.18	8.748	0.36	0.25	0.18	34.49	28.67
009	0.019	0.08	-4.861	0.08	9.712	0.40	0.333	0.92	7.473	0.08	0.32	0.31	31.77	37.62
010	0.015	0.18	-2.734	0.22	6.154	1.11	0.232	0.82	9.026	0.18	0.35	0.38	29.76	24.80
011	0.032	0.39	-6.385	0.01	8.964	0.56	1.345	0.47	32.068	0.41	0.30	0.38	30.91	31.13
012	0.041	1.27	-3.771	0.01	4.138	0.19	0.600	1.50	11.272	0.66	0.52	0.56	25.65	27.20
013	0.032	0.87	-3.837	0.17	4.646	0.35	0.635	1.14	14.665	0.51	0.38	0.37	24.36	26.78
014	0.056	1.51	-3.418	0.27	5.422	0.02	0.932	1.27	23.268	0.00	0.55	0.53	21.70	22.33
015	-0.018	0.08	-4.713	0.08	6.418	0.64	-0.188	0.08	15.519	0.43	0.17	0.19	37.40	38.57
016	0.010	0.77	-3.330	0.77	2.404	0.77	0.155	0.28	11.541	0.77	0.50	0.32	27.18	20.77
017	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.99	999.99	999.99	999.99
018	-0.018	0.13	-4.726	0.13	6.334	0.69	-0.188	0.13	12.932	0.83	0.35	0.40	29.12	29.28
019	0.022	0.38	-4.385	0.02	4.774	0.21	0.565	0.48	27.684	0.35	0.18	0.22	28.95	26.39
020	0.014	0.76	-2.425	0.11	3.518	0.76	0.398	0.68	16.112	0.05	0.44	0.41	28.60	11.88
021	0.023	999.99	-1.885	999.99	-1.885	999.99	0.377	999.99	12.823	999.99	999.99	999.99	999.99	33.44
022	-0.019	0.16	-4.906	0.16	6.516	0.71	0.182	0.16	8.966	0.25	0.18	0.17	36.64	43.12
023	0.018	0.11	-4.609	0.11	7.006	0.11	0.465	1.21	143.338	0.20	0.35	0.45	13.79	11.09
024	0.024	0.23	-2.635	0.01	6.602	1.03	0.608	0.43	11.631	0.54	0.37	0.34	40.59	38.44
025	-0.026	0.21	-6.749	0.21	8.799	0.76	0.462	0.83	54.243	0.01	0.30	0.30	26.32	22.48
026	0.031	999.99	-3.128	999.99	8.760	999.99	0.688	999.99	7.509	999.99	999.99	999.99	39.42	999.99
027	0.019	0.78	-1.653	0.55	2.449	0.38	0.526	0.89	9.371	0.26	0.48	0.34	25.50	27.72
028	0.014	0.27	-3.925	0.27	4.643	0.31	0.168	0.13	44.374	1.22	0.76	0.60	30.26	4.73
030	0.018	0.03	-4.433	0.03	5.254	0.03	2.061	0.24	117.949	0.35	0.15	0.13	26.13	19.60
031	0.030	0.17	-4.613	0.17	6.430	0.30	0.790	0.34	11.359	0.70	0.27	0.18	22.33	26.51
032	0.186	999.99	-6.635	999.99	13.273	999.99	4.115	999.99	21.236	999.99	999.99	999.99	17.81	999.99
033	0.021	999.99	-5.135	999.99	-5.135	999.99	0.411	999.99	10.273	999.99	999.99	999.99	999.99	15.14
034	0.011	0.32	-3.213	0.32	3.739	0.75	0.231	0.79	6.133	0.74	0.49	0.33	33.00	37.06
035	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.99	999.99	999.99	999.99
036	-0.010	0.26	-2.699	0.26	4.457	0.42	0.151	0.14	7.676	1.30	0.48	0.43	27.72	29.52
037	0.016	0.29	-3.406	0.29	5.689	0.40	0.228	0.40	-3.406	0.29	0.29	0.09	25.44	25.56
038	0.033	0.76	-5.120	0.12	7.404	0.77	0.924	1.56	9.463	0.70	0.39	0.45	26.29	23.43
039	-0.023	0.17	-5.954	0.17	7.286	0.62	-0.237	0.17	6.005	0.02	0.19	0.15	25.94	28.86
040	0.048	0.59	-8.470	0.08	11.528	0.65	-0.338	0.08	12.044	0.59	0.31	0.27	24.96	31.51
041	0.029	1.08	-3.299	0.12	7.134	0.96	0.177	0.51	8.323	1.21	0.47	0.45	36.96	44.98
042	0.110	1.50	-3.428	0.88	7.811	0.24	-0.136	0.88	8.687	0.42	0.72	0.36	30.40	44.99
043	0.122	1.39	-9.235	0.47	15.778	0.11	3.765	0.14	22.817	0.59	0.44	0.36	23.27	21.71
044	0.027	0.80	-4.014	0.16	6.364	0.52	0.449	0.93	7.646	0.95	0.39	0.32	30.94	34.08
045	0.053	1.37	-4.168	0.12	6.137	0.64	1.466	1.32	16.500	1.39	0.69	0.60	24.57	26.72
Ar.Mean	0.032	0.51	4.276	0.19	6.533	0.55	0.631	0.54	19.604	0.51	0.36	0.32	28.42	28.15
Std.dev.	0.033	0.46	1.723	0.19	2.941	0.29	0.847	0.44	27.213	0.36	0.15	0.12	5.74	8.82
Geo.Mean	0.024	0.30	3.982	0.11	5.944	0.42	0.401	0.35	13.167	0.31	0.33	0.30	27.83	26.32

ARIZONA PUBLIC SERVICE
MONTHLY REPORT for 05-85

DUSTFALL DATA
Comments and Messages Only

Location Number	Sample A Comments	Sample B Comments	Processing Messages
001			
002			
003	SCREEN MISSING		
004	SCREEN MISSING	VOID/DEAD BIRD	MISSING SAMPLE B
005			
006			
007	SCREEN MISSING	SCREEN MISSING	
008			
009			
010			
011			
012			
013			
014			
015			
016		SCREEN MISSING	
017	VOID/VANDALIZED	VOID/VANDALIZED	MISSING SAMPLE A and B
018			
019			
020			
021	SCREEN MISSING VOID/DEAD BIRD		MISSING SAMPLE A
022			
023			
024			
025		SCREEN MISSING	
026		VOID/DEAD BIRD	MISSING SAMPLE B
027			
028			
030			
031			
032		VOID/DEAD BIRD	MISSING SAMPLE B
033	VOID/DEAD BIRD	STICKS, BUGS AND LEAVES.	MISSING SAMPLE A
034		BULLET HOLE IN JAR 5" ABOVE WATER.	
035	VOID/DEAD BIRD	VOID/DEAD BIRD	MISSING SAMPLE A and B
036	SCREEN MISSING		
037			
038	SCREEN MISSING		
039			
040			
041	BIRD DROPPINGS ON SCREEN AND IN JAR.	BIRD DROPPINGS ON SCREEN AND IN JAR.	
042			
043	BIRD DROPPINGS ON GROUND.	BIRD DROPPINGS ON THE BIRD RING.	
044			
045	BIRD DROPPINGS ON SCREEN AND JAR LID.	BIRD DROPPINGS ON SCREEN AND JAR STAND.	

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 05-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	Na	d	K	d	Ca	d	Mg	d	Cl	d	F	d	SO4	d	NO3	d
080	0.338	0.13	-0.050	0.42	1.223	0.07	0.063	0.75	0.988	0.08	-0.256	0.42	29.928	0.11	0.091	0.08
081	0.490	0.13	0.196	1.11	1.181	0.07	0.057	0.13	0.854	0.04	-0.380	0.13	30.095	0.03	0.085	0.04
082	0.108	0.62	0.144	0.36	0.654	0.05	0.132	1.44	0.291	0.05	-0.354	0.05	30.513	0.00	0.062	0.17
083	1.279	1.85	-0.038	0.04	1.591	0.14	0.086	0.86	0.339	0.33	-0.492	0.04	31.396	0.01	0.092	0.36
Ar.Mean	0.553	0.68	0.122	0.63	1.162	0.08	0.084	0.79	0.618	0.12	0.371	0.16	30.483	0.03	0.082	0.16
Std.Dev.	0.508	0.80	0.061	0.49	0.385	0.04	0.033	0.53	0.354	0.13	0.097	0.18	0.656	0.05	0.014	0.14
Geo.Mean	0.388	0.37	0.109	0.37	1.107	0.07	0.080	0.59	0.537	0.08	0.361	0.10	30.477	***	0.081	0.11

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 05-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	PO4	d	CO3	d	HCO3	d	NH3	d	TSS	d	Av d	SD(d)	(Milligrams) Cu A	Cu B
080	0.013	0.42	-2.566	0.42	-2.566	0.42	0.156	0.03	23.469	0.42	0.29	0.22	31.15	30.14
081	0.024	0.54	-3.807	0.13	4.082	0.13	-0.151	0.13	37.875	0.25	0.22	0.30	33.00	30.20
082	0.022	0.62	-3.547	0.05	3.635	0.05	0.216	0.62	17.515	0.38	0.39	0.45	29.52	29.67
083	-0.019	0.04	-4.932	0.04	4.832	0.04	-0.196	0.04	25.950	0.48	0.33	0.52	29.07	29.52
Ar. Mean	0.019	0.40	3.713	0.16	3.778	0.16	0.180	0.20	26.202	0.38	0.30	0.37	30.68	29.88
Std. dev.	0.004	0.25	0.972	0.18	0.946	0.18	0.031	0.28	8.548	0.09	0.06	0.13	1.78	0.33
Geo. Mean	0.019	0.27	3.616	0.10	3.683	0.10	0.178	0.09	25.211	0.37	0.30	0.35	30.64	29.88

ARIZONA PUBLIC SERVICE
MONTHLY REPORT for 05-85

DUSTFALL DATA
Comments and Messages Only

Location Number	Sample A Comments	Sample B Comments	Processing Messages
080	ASHES IN SCREEN	ASHES IN SCREEN	
081			
082			
083			

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 06-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	Na	d	K	d	Ca	d	Mg	d	Cl	d	F	d	SO4	d	NO3	d
001	1.149	0.91	0.463	1.10	1.119	0.13	0.300	0.09	0.910	0.62	-1.193	0.13	33.420	0.00	0.122	0.05
002	1.106	0.68	0.739	1.34	0.982	0.01	0.344	0.15	0.736	0.01	-1.232	0.01	25.773	0.10	-0.122	0.01
003	0.940	0.05	0.371	0.96	1.220	0.10	0.263	0.05	0.844	0.17	-0.963	0.05	30.086	0.05	0.122	0.41
004	0.527	1.17	0.841	1.48	0.959	0.18	0.290	0.41	0.850	0.46	-1.044	0.05	29.877	0.10	0.151	0.61
005	0.704	0.74	0.526	0.53	0.926	0.08	0.247	0.03	0.622	0.14	-1.108	0.14	23.770	0.05	0.113	0.04
006	0.703	1.36	0.230	0.05	0.802	0.23	0.150	0.51	0.808	0.34	-1.119	0.05	24.190	0.15	-0.111	0.05
007	0.573	0.26	0.708	1.30	1.912	0.64	0.341	1.39	0.606	0.35	-0.248	0.26	22.386	0.09	0.097	0.26
008	0.393	999.99	0.590	999.99	0.787	999.99	0.354	999.99	0.787	999.99	-0.983	999.99	29.510	999.99	-0.097	999.99
009	0.839	0.59	0.614	1.04	1.135	0.08	0.379	0.03	0.984	0.10	-0.776	0.05	28.029	0.00	0.099	0.51
010	0.525	0.37	0.294	0.54	0.802	0.14	0.365	0.23	0.517	0.07	-0.535	0.15	27.072	0.02	0.095	0.70
011	0.916	0.22	1.323	0.15	3.462	0.36	1.141	0.50	1.018	0.00	-1.016	0.00	28.506	0.00	0.142	0.57
012	0.567	0.75	0.567	0.75	1.076	0.03	0.540	0.09	0.743	0.10	-0.883	0.13	24.646	0.01	0.124	0.01
013	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99
014	1.193	0.48	1.073	1.16	1.751	0.07	0.539	0.35	1.200	0.12	-1.057	0.07	21.884	0.07	0.183	0.77
015	0.895	0.64	0.372	0.18	0.912	0.22	0.412	0.13	0.642	0.10	-1.013	0.18	27.536	0.09	0.093	0.18
016	1.110	0.29	0.794	1.20	1.177	0.15	0.198	0.72	1.359	0.14	-0.907	0.14	22.867	0.06	0.109	0.33
017	0.864	0.07	0.768	0.60	1.626	0.46	0.363	0.17	0.774	0.15	-0.832	0.07	25.854	0.06	0.146	0.28
018	0.819	1.19	0.456	1.27	0.883	0.11	0.341	0.25	0.530	0.11	-0.832	0.11	23.780	0.04	0.157	0.34
019	1.074	0.44	0.990	0.64	1.951	0.11	0.743	0.01	0.887	0.11	-0.837	0.11	23.890	0.03	0.175	0.29
020	1.239	0.62	0.307	0.88	1.104	0.14	0.358	0.11	0.797	0.15	-0.736	0.15	26.973	0.03	0.134	0.20
021	1.193	999.99	0.530	999.99	1.326	999.99	0.331	999.99	0.663	999.99	-0.662	999.99	25.190	999.99	0.133	999.99
022	0.439	0.66	0.439	0.66	0.793	0.23	0.305	0.06	0.396	0.23	-0.582	0.23	20.552	0.30	0.073	0.41
023	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99
024	0.351	0.07	0.407	0.22	2.861	0.03	0.297	0.13	0.411	0.35	-0.563	0.07	23.935	0.02	0.128	0.11
025	0.864	0.09	1.522	0.37	4.872	0.15	1.866	0.06	0.776	0.84	-0.752	0.09	23.736	0.03	0.250	0.20
026	0.386	0.27	0.276	0.42	1.937	0.76	0.344	0.35	0.469	0.14	-0.834	0.42	23.715	0.03	0.069	0.42
027	0.692	0.22	0.398	0.06	0.891	0.16	0.330	0.37	0.596	0.06	-1.025	0.06	26.799	0.01	-0.102	0.06
028	0.782	0.34	0.624	0.45	3.800	0.89	0.800	0.79	0.472	0.06	-0.808	0.06	25.157	0.06	0.228	0.13
030	1.678	0.12	3.344	0.01	7.861	0.14	3.048	0.18	1.667	0.10	-0.987	0.12	26.976	0.05	0.387	0.26
031	1.250	0.36	0.490	1.14	1.400	0.20	0.308	0.50	0.700	0.20	-1.052	0.20	31.167	0.03	0.130	0.37
032	1.245	999.99	0.747	999.99	2.739	999.99	0.896	999.99	1.494	999.99	-1.244	999.99	29.880	999.99	0.149	999.99
033	0.914	0.80	0.503	0.55	1.295	0.31	0.460	0.41	0.884	0.07	-1.066	0.15	27.575	0.01	0.136	0.43
034	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99
035	0.996	999.99	0.830	999.99	1.494	999.99	0.548	999.99	0.498	999.99	-0.829	999.99	24.900	999.99	0.083	999.99
036	0.507	0.22	0.507	0.22	0.943	0.09	0.471	0.15	0.582	0.07	-0.702	0.07	24.685	0.05	0.080	0.25
037	0.560	0.02	0.489	0.26	1.027	0.20	0.416	0.31	0.794	0.14	-0.706	0.26	25.650	0.01	0.082	0.26
038	0.366	0.11	0.122	0.11	0.976	0.11	0.169	0.17	0.366	0.11	-0.574	0.11	25.480	0.08	0.222	1.48
039	0.240	0.90	0.182	0.55	0.858	0.16	0.191	0.06	-0.393	0.13	-0.657	0.13	26.143	0.31	0.097	0.64
040	0.157	999.99	0.157	999.99	1.258	999.99	0.409	999.99	-0.471	999.99	-0.785	999.99	22.014	999.99	0.173	999.99
041	0.415	0.60	0.212	0.73	1.775	0.93	0.337	0.32	0.420	0.07	-0.674	0.07	25.171	0.07	0.111	0.18
042	0.396	999.99	0.099	999.99	0.594	999.99	0.188	999.99	0.396	999.99	-0.494	999.99	27.720	999.99	0.059	999.99
043	2.171	0.07	0.927	0.61	1.509	0.29	0.394	0.36	3.012	0.18	-0.861	0.07	28.390	0.07	0.184	0.07
044	0.506	0.11	0.258	0.76	1.377	0.84	0.290	0.57	0.595	0.39	-0.796	0.11	25.293	0.11	0.191	0.11
045	2.022	0.36	0.727	0.48	2.114	0.43	0.507	0.10	1.688	0.39	-0.918	0.20	26.577	0.07	0.158	0.09
Ar. Mean	0.835	0.46	0.629	0.65	1.665	0.26	0.501	0.28	0.813	0.19	0.851	0.12	26.023	0.06	0.134	0.31
Std. Dev.	0.444	0.35	0.534	0.41	1.335	0.25	0.506	0.27	0.482	0.17	0.216	0.08	2.709	0.06	0.058	0.28
Geo. Mean	0.725	0.31	0.498	0.45	1.390	0.17	0.399	0.18	0.724	0.13	0.819	0.09	25.868	0.03	0.125	0.19

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 06-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	PO4	d	CO3	d	HCO3	d	NH3	d	TSS	d	Av d	SD(d)	(Milligrams) Cu A	Cu B
001	0.045	0.13	-11.939	0.13	-11.939	0.13	0.865	0.90	19.542	0.78	0.39	0.40	32.64	32.02
002	-0.048	0.01	-12.329	0.01	-12.329	0.01	-0.492	0.01	25.749	0.28	0.20	0.39	28.77	21.16
003	0.038	0.05	-9.642	0.05	-9.642	0.05	-0.385	0.05	44.164	0.01	0.16	0.26	33.84	25.31
004	0.043	0.05	-10.445	0.05	-10.445	0.05	-0.417	0.05	22.661	0.89	0.43	0.48	34.71	28.56
005	-0.043	0.14	-11.088	0.14	-11.088	0.14	-0.443	0.14	17.405	0.22	0.19	0.21	29.81	24.48
006	0.046	0.05	-11.195	0.05	-11.195	0.05	-0.447	0.05	20.646	0.17	0.24	0.37	28.01	26.46
007	0.021	0.79	-2.491	0.26	4.488	0.89	1.282	1.84	40.536	0.30	0.66	0.55	20.60	22.79
008	-0.038	999.99	-9.836	999.99	-9.836	999.99	-0.392	999.99	23.608	999.99	999.99	999.99	31.03	999.99
009	0.030	0.05	-7.767	0.05	-7.767	0.05	-0.310	0.05	18.268	0.38	0.23	0.31	31.90	27.60
010	0.023	0.15	-5.356	0.15	-5.356	0.15	0.356	0.80	22.653	1.12	0.35	0.34	32.00	30.84
011	0.071	0.85	-10.166	0.00	-10.166	0.00	0.611	0.66	78.403	0.24	0.27	0.29	29.28	27.53
012	0.049	0.55	-8.838	0.13	-8.838	0.13	0.878	1.19	41.223	0.49	0.33	0.38	30.36	25.32
013	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.99	999.99	999.99	999.99
014	0.065	0.61	-10.579	0.07	-10.579	0.07	0.649	0.61	28.449	0.07	0.35	0.36	24.89	26.59
015	0.037	0.18	-10.138	0.18	-10.138	0.18	-0.405	0.18	29.394	0.07	0.19	0.14	32.85	30.40
016	0.034	0.14	-9.079	0.14	-9.079	0.14	-0.362	0.14	28.669	0.79	0.34	0.35	27.80	23.31
017	0.044	0.47	-8.329	0.07	-8.329	0.07	-0.332	0.07	29.186	0.28	0.22	0.19	28.30	28.06
018	0.045	0.51	-8.329	0.11	-8.329	0.11	0.296	1.78	26.081	0.43	0.49	0.56	28.92	28.19
019	0.105	0.23	-8.383	0.11	-8.383	0.11	0.448	0.50	70.832	0.06	0.21	0.20	28.48	20.59
020	0.032	0.15	-7.365	0.15	-7.365	0.15	-0.294	0.15	16.071	0.93	0.29	0.31	30.25	30.08
021	-0.026	999.99	-6.628	999.99	-6.628	999.99	-0.264	999.99	18.561	999.99	999.99	999.99	999.99	27.40
022	0.026	0.23	-5.830	0.23	-5.830	0.23	[illegible]	0.23	23.240	1.11	0.37	0.28	23.62	28.67
023	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.[illegible]	999.999	999.99	999.99	999.99	999.99	999.99
024	0.035	0.07	-5.636	[illegible]	6.406	0.11	0.753	0.39	26.272	0.03	0.13	0.12	30.29	25.00
025	0.059	1.07	-7.52[illegible]		-7.525	0.09	1.191	1.54	165.300	0.54	0.40	0.47	25.32	23.41
026	0.028	0.42	-8.3[illegible]		-8.346	0.42	-0.333	0.42	22.909	0.19	0.36	0.18	31.40	29.38
027	0.081	1.05	-10.258	[illegible]	-10.258	0.06	0.494	0.34	27.056	0.58	0.24	0.29	33.70	31.23
028	0.048	0.72	-8.088	0.06	-8.088	0.06	0.314	0.06	28.621	0.83	0.35	0.34	29.60	42.75
030	0.106	1.34	-9.883	0.12	17.116	0.77	7.208	0.69	160.152	0.47	0.34	0.39	25.09	22.56
031	0.068	0.49	-10.529	0.20	-10.529	0.20	0.467	0.20	29.289	0.27	0.33	0.28	34.40	32.03
032	0.125	999.99	-12.449	999.99	-12.449	999.99	1.992	999.99	59.760	999.99	999.99	999.99	27.39	999.99
033	0.104	1.29	-10.666	0.15	-10.666	0.15	0.396	0.15	35.500	0.76	0.40	0.37	28.80	29.28
034	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.99	999.99	999.99	999.99
035	0.116	999.99	-8.299	999.99	-8.299	999.99	0.332	999.99	34.860	999.99	999.99	999.99	999.99	27.89
036	0.036	0.33	-7.024	0.07	-7.024	0.07	0.713	1.16	33.465	0.07	0.22	0.30	30.91	28.90
037	0.061	0.79	-7.074	0.26	-7.074	0.26	0.680	0.91	29.403	0.12	0.29	0.27	31.13	31.73
038	0.024	0.11	-5.749	0.11	-5.749	0.11	-0.229	0.11	15.215	0.03	0.22	0.38	34.50	25.80
039	0.025	0.13	-6.574	0.13	-6.574	0.13	-0.262	0.13	17.055	0.78	0.32	0.29	36.82	25.52
040	0.031	999.99	-7.861	999.99	-7.861	999.99	-0.313	999.99	36.166	999.99	999.99	999.99	30.40	999.99
041	-0.026	0.07	-6.749	0.07	-6.749	0.07	-0.269	0.07	20.252	0.00	0.25	0.31	30.69	27.81
042	-0.019	999.99	-4.949	999.99	-4.949	999.99	-0.197	999.99	8.910	999.99	999.99	999.99	999.99	31.68
043	0.269	0.56	-8.624	0.07	-8.624	0.07	1.692	0.85	34.593	0.69	0.30	0.28	29.67	26.81
044	0.042	0.29	-7.965	0.11	-7.965	0.11	0.337	0.11	18.786	1.05	0.36	0.34	26.18	26.49
045	0.048	0.48	-9.187	0.20	-9.187	0.20	1.313	1.44	29.167	0.14	0.35	0.36	29.84	22.76
Ar. Mean	0.055	0.41	8.517	0.12	8.761	0.15	0.724	0.51	36.065	0.43	0.30	0.32	29.84	27.53
Std. dev.	0.043	0.37	2.163	0.08	2.413	0.18	1.113	0.53	32.224	0.35	0.10	0.10	3.31	3.98
Geo. Mean	0.046	0.24	8.195	0.09	8.452	0.10	0.502	0.26	29.470	0.22	0.29	0.30	29.65	27.27

ARIZONA PUBLIC SERVICE
MONTHLY REPORT for 06-85

DUSTFALL DATA
Comments and Messages Only

Location Number	Sample A Comments	Sample B Comments	Processing Messages
001		SCREEN MISSING	
002			
003		SCREEN MISSING	
004	SCREEN MISSING	SCREEN MISSING	
005			
006			
007	SCREEN OFF	SCREEN MISSING	
008		VOID/CONTAMINATION	MISSING SAMPLE B
009			
010			
011			
012			
013	VOID/VANDALIZED	VOID/VANDALIZED	MISSING SAMPLE A and B
014		SCREEN MISSING	
015			
016			
017		SCREEN HANGING ON BIRD RING	
018			
019	SCREEN HANGING ON BIRD RING	SCREEN IN CONTAINER	
020		SCREEN MISSING	
021	VOID/VANDALIZED	SCREEN MISSING	MISSING SAMPLE A
022			
023	VOID/OILY SUBSTANCE ON WATER	VOID/OILY SUBSTANCE ON WATER	MISSING SAMPLE A and B
024			
025			
026			
027		SCREEN MISSING	
028	BIRD DROPPINGS ON SCREEN		
030	SCREEN HANGING ON BIRD RING	SCREEN HANGING ON BIRD RING	
031			
032	SCREEN IN CONTAINER	VOID/DEAD BIRD	MISSING SAMPLE B
033	SCREEN ASKEW	SCREEN ASKEW	
034	VOID/CONTAMINATION	VOID/CONTAMINATION	MISSING SAMPLE A and B
035	VOID/DEAD BIRD		MISSING SAMPLE A
036			
037			
038	SCREEN MISSING	SCREEN MISSING	
039			
040		VOID/DEAD BIRD	MISSING SAMPLE B
041			
042	VOID/EMPTY JAR		MISSING SAMPLE A
043	BIRD DROPPINGS ON SCREEN	SCREEN MISSING	
044	PART OF SCREEN IN CONTAINER		
045	BIRD DROPPINGS ON SCREEN		

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 06-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	Na	d	K	d	Ca	d	Mg	d	Cl	d	F	d	SO4	d	NO3	d
080	1.154	999.99	0.385	999.99	1.346	999.99	0.308	999.99	0.769	999.99	-0.961	999.99	25.002	999.99	0.115	999.99
081	1.594	0.03	0.368	0.93	1.872	0.12	0.455	0.45	1.218	0.07	-0.899	0.09	24.364	0.07	0.150	0.17
082	0.552	0.25	0.158	0.04	0.945	0.29	0.323	0.40	-0.463	0.04	-0.773	0.04	23.641	0.23	0.087	0.22
083	0.677	0.00	0.706	1.36	1.973	0.28	0.445	0.32	-0.674	0.28	-1.124	0.28	18.878	0.38	0.110	0.46
Ar.Mean	0.994	0.09	0.404	0.77	1.534	0.23	0.382	0.39	0.781	0.13	0.940	0.13	22.971	0.22	0.115	0.28
Std.Dev.	0.476	0.13	0.225	0.67	0.479	0.09	0.078	0.06	0.317	0.13	0.145	0.12	2.785	0.15	0.025	0.15
Geo.Mean	0.910	0.03	0.354	0.37	1.472	0.21	0.376	0.38	0.736	0.09	0.931	0.09	22.834	0.18	0.113	0.25

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 06-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	PO4	d	CO3	d	HCO3	d	NH3	d	TSS	d	Av d	SD(d)	(Milligrams) Cu A	Cu B
080	-0.037	999.99	-9.615	999.99	-9.615	999.99	-0.384	999.99	13.463	999.99	999.99	999.99	30.87	999.99
081	-0.035	0.09	-8.999	0.09	-8.999	0.09	-0.359	0.09	15.284	0.82	0.24	0.30	30.91	30.38
082	0.032	0.04	-7.740	0.04	-7.740	0.04	-0.309	0.04	12.675	0.29	0.15	0.13	31.79	28.60
083	-0.044	0.28	-11.249	0.28	-11.249	0.28	0.395	0.28	16.335	0.75	0.40	0.33	28.80	25.43
Ar.Mean	0.037	0.13	9.401	0.13	9.401	0.13	0.362	0.13	14.439	0.62	0.26	0.25	30.59	28.13
Std.dev.	0.005	0.12	1.458	0.12	1.458	0.12	0.037	0.12	1.670	0.28	0.12	0.10	1.26	2.50
Geo.Mean	0.037	0.09	9.317	0.09	9.317	0.09	0.360	0.09	14.366	0.56	0.24	0.23	30.57	28.05

ARIZONA PUBLIC SERVICE
MONTHLY REPORT for 06-85

DUSTFALL DATA
Comments and Messages Only

Location Number	Sample A Comments	Sample B Comments	Processing Messages
080		VOID/ NO SAMPLER	MISSING SAMPLE B
081			
082			
083			

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 07-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	Na	d	K	d	Ca	d	Mg	d	Cl	d	F	d	SO4	d	NO3	d
001	0.736	0.28	0.587	0.39	1.491	0.12	0.232	0.31	0.596	0.12	-0.789	0.12	30.424	0.03	0.246	0.06
002	0.640	0.50	0.440	0.91	1.179	0.17	0.102	0.82	0.580	0.76	-0.798	0.28	25.985	0.34	0.142	1.15
003	0.925	0.57	0.859	0.77	2.247	0.11	0.499	0.23	0.586	0.26	-0.661	0.25	49.655	0.19	0.320	0.01
004	1.299	0.76	1.908	0.81	1.954	0.02	0.311	0.65	0.744	1.04	-0.807	0.10	52.690	0.04	0.295	0.30
005	1.118	0.05	1.598	0.38	1.821	0.21	0.370	0.06	0.555	0.45	-0.679	0.05	51.028	0.08	0.272	0.00
006	1.316	0.24	0.566	0.04	1.693	0.18	0.282	0.09	1.404	0.63	-0.922	0.04	45.160	0.12	0.291	0.28
007	0.593	999.99	0.790	999.99	1.383	999.99	0.158	999.99	-0.592	999.99	-0.987	999.99	29.638	999.99	0.196	999.99
008	0.790	0.24	0.614	0.30	1.227	0.02	0.219	0.55	1.233	1.15	-0.883	0.02	26.297	0.02	0.333	0.23
009	1.100	0.11	1.024	0.65	4.543	1.24	0.150	0.84	0.723	0.39	-0.864	0.11	25.659	0.11	0.227	0.29
010	0.590	0.85	0.506	0.66	4.044	1.24	0.253	0.52	0.676	0.49	-0.840	0.01	29.594	0.04	0.279	0.41
011	0.999	0.13	1.505	0.26	4.142	0.47	1.500	0.36	0.880	0.55	-0.933	0.13	28.911	0.06	0.338	0.01
012	1.210	0.27	1.417	0.77	1.679	0.33	0.343	0.17	0.556	0.11	-0.979	0.11	26.819	0.05	0.241	0.11
013	2.505	0.32	1.332	0.05	6.662	0.10	1.665	0.05	2.924	0.36	-0.809	0.05	28.297	0.05	0.577	0.37
014	1.156	0.34	0.963	0.80	3.657	0.01	0.510	0.12	0.577	0.01	-0.964	0.01	52.935	0.03	0.289	0.01
015	0.799	0.60	0.799	0.60	1.518	0.28	0.136	0.73	0.626	0.21	-0.865	0.07	27.832	0.01	0.249	0.50
016	1.307	0.19	0.729	0.31	2.801	0.19	0.541	0.18	1.223	0.35	-1.023	0.19	52.583	0.05	0.451	0.73
017	0.759	0.10	1.019	0.13	3.545	0.07	0.771	0.06	0.510	0.13	-0.795	0.13	20.487	0.29	0.248	0.33
018	0.765	0.19	0.679	0.47	2.723	0.66	0.409	0.39	0.625	0.21	-0.863	0.21	21.058	0.52	0.447	0.63
019	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99
020	1.027	0.03	0.685	0.03	2.394	0.11	0.429	0.43	0.682	0.47	-0.842	0.03	56.498	0.03	0.291	0.03
021	0.708	1.05	0.639	0.41	13.157	0.34	0.307	0.09	0.654	0.59	-0.844	0.09	28.225	0.04	0.243	0.23
022	0.855	0.04	0.433	1.23	1.029	0.37	0.171	0.04	-0.523	0.04	-0.871	0.04	30.780	0.04	0.214	0.12
023	1.936	0.01	4.304	0.21	10.218	0.07	3.763	0.05	1.835	1.30	-1.080	0.01	25.810	0.01	0.409	0.01
024	1.094	999.99	2.006	999.99	2.006	999.99	0.346	999.99	-0.546	999.99	-0.911	999.99	47.405	999.99	0.237	999.99
025	1.384	0.24	2.410	0.41	3.590	0.81	1.839	0.11	0.552	0.11	-0.870	0.11	30.134	0.08	0.364	0.30
026	0.966	0.26	0.857	0.04	1.556	0.25	0.171	0.21	-0.654	0.70	-1.090	0.70	30.546	0.14	0.247	0.47
027	0.992	0.60	0.808	0.28	2.230	0.18	0.356	0.45	0.624	0.23	-0.869	0.06	54.470	0.11	0.348	0.20
028	0.980	0.10	0.681	0.19	3.723	0.10	0.540	0.21	0.691	0.38	-1.027	0.10	26.504	0.17	0.507	0.68
030	2.190	0.40	3.484	0.74	8.489	0.20	2.876	0.33	2.200	0.61	-1.194	0.09	32.042	0.09	0.643	0.23
031	0.838	0.03	0.668	0.47	3.187	0.14	0.485	0.11	0.835	0.37	-0.824	0.03	28.463	0.09	0.343	0.21
032	2.132	0.01	2.611	0.52	4.456	0.08	0.974	0.14	1.967	0.16	-0.965	0.16	25.859	0.09	0.307	0.39
033	0.717	0.27	0.473	0.62	1.582	0.35	0.326	0.10	0.639	0.54	-0.812	0.05	27.790	0.01	0.278	0.01
034	0.560	0.02	0.466	0.38	1.213	0.13	0.112	0.31	0.655	0.31	-0.943	0.02	33.610	0.02	0.290	0.09
035	0.727	0.24	0.931	0.63	1.459	0.04	0.198	0.06	0.727	0.24	-1.018	0.04	32.286	0.02	0.260	0.20
036	0.844	0.33	0.844	0.33	1.305	0.11	-0.098	0.11	0.756	0.61	-0.984	0.11	32.578	0.06	0.302	0.48
037	0.924	0.65	1.333	1.07	1.545	0.15	0.164	0.74	0.822	0.49	-1.036	0.02	30.879	0.02	0.247	0.15
038	1.074	0.27	0.786	0.58	2.131	0.09	0.281	0.12	0.685	0.37	-1.014	0.09	32.044	0.03	0.407	0.10
039	0.828	0.53	1.090	0.89	2.046	0.22	0.455	0.00	0.565	0.14	-0.873	0.14	30.016	0.02	0.502	0.37
040	1.330	0.48	0.696	0.42	1.652	0.45	0.374	0.43	0.528	0.09	-0.841	0.09	28.142	0.09	0.438	0.07
041	0.776	0.65	0.861	0.78	1.382	0.23	0.130	0.11	0.519	0.02	-0.855	0.02	32.855	0.08	0.269	0.34
042	0.699	999.99	0.699	999.99	1.048	999.99	0.175	999.99	0.524	999.99	-0.872	999.99	31.436	999.99	0.262	999.99
043	1.987	0.57	2.195	0.52	2.924	0.47	0.868	0.60	1.880	0.49	-1.062	0.05	34.321	0.11	0.311	0.22
044	0.689	0.01	0.517	0.01	1.119	0.14	0.181	0.66	-0.513	0.01	-0.855	0.01	30.150	0.07	0.233	0.09
045	1.626	999.99	1.423	999.99	4.065	999.99	0.691	999.99	1.626	999.99	-1.015	999.99	28.452	999.99	0.366	999.99
Ar.Mean	1.081	0.32	1.144	0.48	2.972	0.26	0.575	0.29	0.879	0.39	0.908	0.10	33.637	0.08	0.319	0.26
Std.Dev.	0.465	0.25	0.823	0.29	2.500	0.28	0.736	0.24	0.544	0.30	0.108	0.11	9.770	0.10	0.103	0.24
Geo.Mean	1.003	0.18	0.958	0.34	2.377	0.16	0.365	0.17	0.775	0.25	0.902	0.06	32.460	0.05	0.305	0.14

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 07-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	PO4	d	CO3	d	HCO3	d	NH3	d	TSS	d	Av d	SD(d)	(Milligrams) Cu A	Cu B
001	-0.031	0.12	-7.897	0.12	-7.897	0.12	0.508	0.76	23.238	0.31	0.22	0.20	31.00	35.88
002	-0.031	0.28	-7.991	0.28	-7.991	0.28	0.360	0.67	16.589	0.70	0.55	0.31	37.51	24.32
003	-0.025	0.25	-6.620	0.25	-6.620	0.25	0.604	0.25	39.662	0.20	0.28	0.19	48.64	53.04
004	-0.031	0.10	-8.074	0.10	-8.074	0.10	0.600	0.39	36.823	0.33	0.36	0.34	58.14	60.86
005	0.028	0.05	-6.799	0.05	6.988	0.05	0.827	0.96	35.655	0.09	0.19	0.27	59.84	60.27
006	-0.036	0.04	-9.224	0.04	-9.224	0.04	0.566	0.04	30.923	0.51	0.18	0. .	55.35	46.30
007	0.099	999.99	-9.878	999.99	9.879	999.99	1.778	999.99	9.879	999.99	999.99	999.99	999.99	31.71
008	0.035	0.02	-8.835	0.02	-8.835	0.02	0.526	0.02	31.641	0.68	0.25	0.35	29.03	31.54
009	-0.034	0.11	-8.647	0.11	10.132	0.29	0.367	0.11	27.698	0.38	0.37	0.35	28.78	31.80
010	-0.033	0.01	-8.404	0.01	8.457	0.01	0.507	0.01	27.789	1.39	0.44	0.49	27.63	30.93
011	-0.036	0.13	-9.338	0.13	12.121	0.46	2.105	0.23	114.542	0.57	0.27	0.19	28.56	28.16
012	-0.038	0.11	-9.797	0.11	-9.797	0.11	0.916	0.29	32.591	0.28	0.22	0.19	32.00	34.30
013	-0.031	0.05	-8.104	0.05	8.323	0.05	1.502	0.27	121.858	0.27	0.16	0.13	26.80	28.59
014	0.058	0.67	-9.649	0.01	-9.649	0.01	0.771	0.50	34.660	0.23	0.21	0.28	61.76	57.60
015	0.036	0.07	-8.658	0.07	-8.658	0.07	0.446	0.33	16.377	0.73	0.33	0.27	29.72	35.67
016	0.096	1.15	-10.240	0.19	-10.240	0.19	1.205	0.04	26.684	0.61	0.34	0.31	55.44	68.46
017	0.127	0.01	-7.959	0.13	8.492	0.13	0.600	0.41	56.204	0.27	0.17	0.12	16.45	25.36
018	0.045	0.47	-8.636	0.21	7.815	0.21	0.798	0.60	34.055	0.03	0.37	0.20	15.35	28.90
019	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.99	999.99	999.99	999.99
020	-0.033	0.03	-8.430	0.03	-8.430	0.03	0.769	0.19	23.917	0.26	0.13	0.16	58.68	67.20
021	0.040	0.31	-8.449	0.09	12.300	0.75	0.485	0.09	37.145	0.09	0.32	0.31	37.18	30.80
022	-0.034	0.04	-8.724	0.04	-8.724	0.04	0.429	0.44	19.858	0.99	0.27	0.40	34.90	36.85
023	0.097	1.12	-10.814	0.01	16.125	0.12	1.503	0.56	376.210	0.16	0.28	0.44	20.56	20.33
024	0.055	999.99	-9.115	999.99	9.116	999.99	0.729	999.99	30.996	999.99	999.99	999.99	999.99	49.35
025	0.037	0.11	-8.709	0.11	12.097	0.56	1.423	1.27	170.323	0.16	0.33	0.36	28.44	32.00
026	0.032	0.70	-10.913	0.70	-10.913	0.70	0.376	0.32	23.638	0.40	0.43	0.25	34.18	32.48
027	0.036	0.06	-8.699	0.06	-8.699	0.06	0.982	0.13	35.750	0.04	0.19	0.17	55.68	55.20
028	0.039	0.10	-10.281	0.10	9.798	0.10	0.990	0.49	52.077	0.21	0.22	0.18	25.50	29.65
030	0.070	0.74	-11.951	0.09	21.005	0.96	4.748	0.62	200.923	0.24	0.41	0.29	24.21	28.93
031	0.042	0.43	-8.249	0.03	8.379	0.03	0.918	0.52	43.596	0.11	0.20	0.18	27.81	31.22
032	0.616	1.31	-9.655	0.16	30.223	0.72	8.394	0.67	116.632	0.05	0.34	0.38	20.19	13.69
033	0.063	0.46	-8.132	0.05	7.945	0.05	0.798	0.45	31.706	0.15	0.24	0.22	27.76	32.77
034	0.065	0.84	-9.439	0.02	-9.439	0.02	0.560	0.02	14.876	0.73	0.22	0.28	34.67	35.70
035	0.074	0.89	-10.189	0.04	-10.189	0.04	0.727	0.24	26.266	0.76	0.27	0.30	32.31	34.20
036	-0.038	0.11	-9.852	0.11	-9.852	0.11	0.373	0.11	12.841	0.47	0.24	0.18	33.91	37.40
037	0.235	1.65	-10.370	0.02	13.358	0.45	2.354	1.47	23.604	0.77	0.59	0.55	31.68	30.81
038	0.039	0.09	-10.151	0.09	-10.151	0.09	0.583	0.09	29.671	0.63	0.20	0.20	32.22	34.35
039	0.048	0.54	-8.740	0.14	-8.740	0.14	0.729	0.08	37.942	0.16	0.26	0.26	29.41	35.16
040	0.044	0.48	-8.418	0.09	-8.418	0.09	0.711	0.58	41.221	0.04	0.26	0.21	29.93	32.22
041	-0.033	0.02	-8.559	0.02	-8.559	0.02	1.482	1.54	26.025	0.55	0.34	0.45	33.10	37.18
042	-0.034	999.99	-8.731	999.99	-8.731	999.99	0.524	999.99	27.943	999.99	999.99	999.99	999.99	35.86
043	0.258	0.68	-10.633	0.05	26.199	0.76	8.068	0.74	99.190	0.44	0.44	0.25	25.41	26.91
044	-0.033	0.01	-8.564	0.01	-8.564	0.01	0.517	0.01	25.839	0.01	0.08	0.18	35.40	35.08
045	0.041	999.99	-10.160	999.99	10.161	999.99	2.235	999.99	54.871	999.99	999.99	999.99	22.26	999.99
Ar. Mean	0.069	0.36	9.086	0.10	10.589	0.21	1.311	0.42	53.486	0.38	0.28	0.27	34.43	37.02
Std. dev.	0.097	0.41	1.088	0.11	4.664	0.25	1.731	0.38	64.923	0.30	0.10	0.10	12.42	12.49
Geo. Mean	0.050	0.16	9.022	0.06	9.983	0.10	0.889	0.23	37.619	0.25	0.26	0.25	32.48	35.18

ARIZONA PUBLIC SERVICE
MONTHLY REPORT for 07-85

DUSTFALL DATA
Comments and Messages Only

Location Number	Sample A Comments	Sample B Comments	Processing Messages
001	SCREEN ASKEW		
002			
003			
004	SCREEN ASKEW	SCREEN MISSING	
005	SCREE MISSING	SCREEN MISSING	
006			
007	VOID/GREEN SUBSTANCE IN WATER	SCREEN MISSING	MISSING SAMPLE A
008			
009			
010			
011	SCREEN DISTURBED	SCREEN ASKEW	
012		SCREEN ASKEW	
013	SCREEN OFF/BIRD DROPPINGS ON RING	SCREEN OFF/BIRD DROPPINGS ON RING	
014	SCREEN ASKEW	SCREEN ASKEW	
015	SCREEN ASKEW		
016		SCREEN ASKEW	
017	SCREEN MISSING		
018		SCREEN MISSING	
019	VOID/VANDALISM	VOID/VANDALISM	MISSING SAMPLE A and B
020	SCREEN MISSING	SCREEN MISSING	
021	SCREEN MISSING		
022			
023		SCREEN ASKEW	
024	VOID/APPARENT CONTAMINATION		MISSING SAMPLE A
025			
026	SCREEN ASKEW	DAMAGED ALUMINUM FOIL	
027		SCREEN MISSING	
028			
030	SCREEN MISSING	SCREEN MISSING	
031			
032	SCREEN IN MONITOR	SCREEN IN MONITOR	
033			
034	SCREEN IN MONITOR	SCREEN ASKEW	
035			
036			
037			
038	SCREEN ASKEW		
039			
040			
041			
042	VOID/LOW WATER LEVEL	SCREEN IN MONITOR	MISSING SAMPLE A
043	SCREEN MISSING	SCREEN MISSING	
044			
045	SCREEN ASKEW	VOID/LOW WATER LEVEL	MISSING SAMPLE B

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 07-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	Na	d	K	d	Ca	d	Mg	d	Cl	d	F	d	SO4	d	NO3	d
080	1.512	0.37	0.891	0.81	5.063	0.02	0.941	0.33	1.244	0.01	-0.894	0.01	57.724	0.08	0.382	0.03
081	2.414	0.56	1.894	1.08	3.973	0.01	0.812	0.18	1.555	0.01	-0.868	0.01	54.393	0.15	0.440	0.11
082	1.038	999.99	1.384	999.99	1.903	999.99	0.346	999.99	0.519	999.99	-0.864	999.99	55.360	999.99	0.294	999.99
083	1.005	0.52	0.821	0.64	2.936	0.03	0.514	0.18	0.551	0.03	-0.902	0.03	55.953	0.00	0.339	0.02
Ar.Mean	1.432	0.48	1.247	0.84	3.468	0.02	0.653	0.22	0.967	0.01	0.882	0.01	55.857	0.07	0.363	0.05
Std.Dev.	0.656	0.10	0.498	0.22	1.357	0.01	0.271	0.08	0.515	0.01	0.018	0.01	1.400	0.07	0.062	0.04
Geo.Mean	1.396	0.47	1.176	0.82	3.256	0.02	0.607	0.21	0.862	0.01	0.882	0.01	55.844	0.01	0.359	0.04

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 07-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	PO4	d	CO3	d	HCO3	d	NH3	d	TSS	d	Av d	SD(d)	(Milligrams) Cu A	Cu B
080	0.044	0.39	-8.947	0.01	-8.947	0.01	0.621	0.27	54.093	0.48	0.22	0.25	62.28	68.20
081	0.095	0.56	-8.689	0.01	9.507	0.19	0.778	0.23	70.821	0.04	0.24	0.32	53.76	59.76
082	0.087	999.99	-8.649	999.99	-8.649	999.99	0.865	999.99	34.600	999.99	999.99	999.99	999.99	65.74
083	0.055	0.64	-9.024	0.03	-9.024	0.03	0.734	0.03	46.658	0.32	0.19	0.25	61.37	63.41
Ar. Mean	0.070	0.52	8.828	0.01	9.032	0.08	0.749	0.17	51.542	0.27	0.21	0.27	59.13	64.27
Std. dev.	0.024	0.12	0.186	0.01	0.355	0.09	0.101	0.12	15.155	0.22	0.02	0.03	4.67	3.59
Geo. Mean	0.066	0.51	8.826	0.01	9.027	0.04	0.744	0.12	49.868	0.17	0.21	0.26	59.00	64.20

ARIZONA PUBLIC SERVICE
MONTHLY REPORT for 07-85

DUSTFALL DATA
Comments and Messages Only

Location Number	Sample A Comments	Sample B Comments	Processing Messages
080			
081			
082	VOID/LOW WATER LEVEL		MISSING SAMPLE A
083			

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 08-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	Na	d	K	d	Ca	d	Mg	d	Cl	d	F	d	SO4	d	NO3	d
001	0.829	0.14	1.403	0.02	1.338	0.39	0.127	0.79	0.497	0.14	-0.886	0.14	-8.870	0.14	0.101	0.47
002	0.662	0.42	1.009	0.41	0.842	0.48	0.091	0.47	-0.520	0.08	-0.868	0.08	-8.689	0.08	0.101	0.41
003	0.635	0.07	0.996	0.15	0.930	0.30	0.112	0.36	-0.458	0.15	-0.764	0.15	-7.644	0.15	0.071	0.15
004	0.411	0.68	0.546	0.01	0.888	0.17	0.164	1.01	0.410	0.01	-0.677	0.01	-6.774	0.01	0.089	0.45
005	0.340	0.35	0.270	0.96	0.884	0.42	0.183	0.47	0.410	0.05	-0.667	0.05	-6.674	0.05	0.115	0.78
006	0.310	0.01	0.310	0.01	0.698	0.23	0.147	0.11	-0.465	0.01	-0.777	0.01	-7.774	0.01	-0.077	0.01
007	0.843	0.06	1.354	0.31	1.175	0.23	0.178	0.35	-0.489	0.06	-0.816	0.06	-8.171	0.06	0.109	0.40
008	0.525	0.84	0.603	0.52	0.678	0.24	0.113	0.42	-0.455	0.02	-0.759	0.02	30.100	0.02	-0.075	0.02
009	0.447	0.31	0.748	0.49	0.739	0.04	0.156	0.79	-0.564	0.58	-0.940	0.58	-9.413	0.58	-0.093	0.58
010	0.295	1.46	0.337	1.52	0.370	0.17	0.118	1.13	-0.240	0.06	-0.400	0.06	-4.008	0.06	0.041	0.06
011	0.995	0.49	1.554	0.18	2.535	0.06	0.713	0.16	0.548	0.06	-0.939	0.06	28.370	0.25	0.155	0.18
012	0.858	0.08	0.426	0.33	0.858	0.08	0.196	0.19	0.769	0.15	-0.889	0.08	29.380	0.02	0.094	0.11
013	0.688	999.99	0.860	999.99	1.376	999.99	0.396	999.99	0.516	999.99	-0.859	999.99	29.240	999.99	0.138	999.99
014	0.344	0.23	0.484	0.12	2.588	0.47	0.419	0.26	0.484	0.12	-0.639	0.17	-6.399	0.17	0.120	0.29
015	0.451	1.17	0.451	1.17	0.816	0.63	0.155	0.08	-0.536	0.04	-0.894	0.04	-8.947	0.04	-0.088	0.04
016	0.358	0.56	0.141	0.17	1.050	0.04	0.128	0.81	1.396	0.03	-0.764	0.17	-7.644	0.17	0.077	0.01
017	0.233	0.77	0.305	0.12	0.771	0.51	0.144	0.02	-0.484	0.12	-0.807	0.12	23.487	0.07	0.114	0.01
018	0.309	0.31	0.255	1.06	0.623	0.09	0.094	0.22	-0.389	0.09	-0.649	0.09	28.635	0.09	0.130	0.01
019	0.412	1.28	0.381	1.11	1.025	0.02	0.393	1.31	-0.443	0.13	-0.739	0.13	25.150	0.12	-0.073	0.13
020	0.471	0.33	0.399	0.63	0.738	0.23	0.201	0.18	0.670	0.04	-0.684	0.04	-6.849	0.04	0.141	0.05
021	0.366	1.19	0.732	0.79	0.882	0.35	0.155	0.49	-0.443	0.01	-0.739	0.01	30.109	0.03	0.132	0.01
022	0.753	0.24	1.093	1.39	0.668	0.02	0.126	0.42	0.501	0.02	-0.827	0.02	33.429	0.12	0.142	0.10
023	0.603	0.83	1.641	0.50	4.171	0.28	1.622	0.06	1.374	1.23	-0.880	0.03	31.144	0.30	0.139	0.03
024	1.005	0.65	0.469	0.84	1.412	0.11	0.269	0.52	0.891	0.13	-0.677	0.21	-6.775	0.21	0.130	0.72
025	1.366	0.23	1.355	0.94	4.782	0.19	2.204	0.76	3.438	0.92	-0.844	0.02	28.205	0.04	0.274	0.15
026	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99
027	0.474	0.89	0.610	1.14	0.536	0.04	0.081	0.38	-0.392	0.04	-0.654	0.04	-6.5	0.04	0.107	0.21
028	0.514	0.17	0.536	1.12	1.927	0.17	0.196	0.56	-0.417	0.17	-0.696	0.17	21.731	0.05	0.155	0.33
030	0.957	0.48	1.835	0.22	3.689	0.07	1.510	0.05	0.872	0.33	-0.909	0.07	26.347	0.07	0.219	0.17
031	0.672	0.01	0.672	0.01	0.924	0.17	0.159	0.30	0.504	0.01	-0.834	0.01	20.995	0.07	0.143	0.34
032	1.146	0.02	1.549	0.24	1.549	0.24	0.452	0.39	0.630	0.16	-0.964	0.16	31.330	0.03	0.124	0.17
033	0.333	0.41	0.334	1.21	0.732	0.20	0.160	0.18	0.532	0.02	-0.659	0.02	27.260	0.03	0.100	0.12
034	0.771	0.69	1.028	0.69	0.769	0.25	0.162	0.13	0.512	0.02	-0.842	0.02	-8.430	0.02	0.128	0.11
035	0.197	0.03	1.195	1.67	0.985	0.03	0.158	0.28	-0.582	0.03	-0.971	0.03	-9.723	0.03	0.157	0.73
036	0.194	0.35	0.434	0.95	0.468	0.06	-0.056	0.34	-0.340	0.34	-0.568	0.34	-5.689	0.34	0.121	0.12
037	0.209	0.34	0.479	0.55	0.505	0.07	0.074	0.35	-0.365	0.35	-0.609	0.35	-6.102	0.35	0.158	0.46
038	0.431	0.32	0.870	1.44	0.677	0.21	0.161	0.64	0.681	0.93	-0.623	0.03	26.395	0.11	0.080	0.43
039	0.792	1.64	0.275	0.09	1.015	0.58	0.244	0.58	0.936	1.08	-0.654	0.09	32.085	0.20	0.097	0.38
040	0.311	0.06	0.307	0.96	0.933	0.06	0.293	0.47	-0.479	0.06	-0.799	0.06	28.745	0.00	0.085	0.12
041	0.617	999.99	0.771	999.99	0.771	999.99	0.108	999.99	-0.461	999.99	-0.770	999.99	-7.706	999.99	0.139	999.99
042	0.512	0.25	0.290	0.97	0.733	0.04	0.138	0.70	0.440	0.04	-0.747	0.04	-7.475	0.04	0.161	0.14
043	0.779	0.31	0.697	0.58	1.183	0.22	0.347	0.27	0.554	0.38	-0.749	0.09	31.379	0.01	0.151	0.61
044	0.544	0.87	0.699	0.68	0.543	0.30	0.109	0.01	-0.467	0.01	-0.779	0.01	27.130	0.07	0.124	0.74
045	0.796	0.84	0.881	1.30	1.096	0.53	0.172	0.50	0.635	0.55	-0.807	0.05	23.700	0.18	0.144	0.93
Ar.Mean	0.575	0.49	0.748	0.67	1.206	0.21	0.306	0.42	0.632	0.21	0.768	0.09	17.936	0.10	0.121	0.27
Std.Dev.	0.273	0.41	0.468	0.48	0.961	0.16	0.433	0.30	0.494	0.31	0.118	0.11	10.681	0.11	0.040	0.25
Geo.Mean	0.514	0.28	0.620	0.39	0.998	0.14	0.198	0.30	0.555	0.08	0.758	0.05	14.467	0.06	0.115	0.14

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 08-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	PO4	d	CO3	d	HCO3	d	NH3	d	TSS	d	Av d	SD(d)	(Milligrams) Cu A	Cu B
001	-0.034	0.14	-8.870	0.14	-8.870	0.14	-0.354	0.14	10.063	0.47	0.25	0.21	0.69	3.58
002	-0.034	0.08	-8.689	0.08	-8.689	0.08	-0.347	0.08	9.222	0.26	0.23	0.18	1.01	1.55
003	0.028	0.15	-7.644	0.15	-7.644	0.15	-0.305	0.15	8.642	0.48	0.20	0.11	0.63	0.82
004	0.027	0.01	-6.774	0.01	-6.774	0.01	-0.270	0.01	-6.774	0.01	0.19	0.32	0.27	0.00
005	0.041	0.05	-6.674	0.05	-6.674	0.05	0.274	0.05	12.178	0.85	0.32	0.35	0.80	1.40
006	-0.030	0.01	-7.774	0.01	-7.774	0.01	-0.310	0.01	11.638	0.67	0.08	0.19	0.93	0.31
007	0.066	0.95	-8.171	0.06	-8.171	0.06	0.337	0.06	10.117	0.06	0.21	0.26	0.63	1.01
008	0.030	0.02	-7.599	0.02	-7.599	0.02	-0.303	0.02	9.045	0.35	0.19	0.27	33.44	35.76
009	0.029	0.58	-9.413	0.58	-9.413	0.58	-0.376	0.58	15.197	0.23	0.50	0.20	0.36	0.60
010	0.017	0.06	-4.008	0.06	-4.008	0.06	-0.159	0.06	6.931	0.78	0.42	0.58	0.93	0.66
011	0.102	1.31	-9.399	0.06	-9.399	0.06	0.647	0.91	58.895	0.62	0.34	0.39	31.96	30.44
012	0.059	0.79	-8.899	0.08	-8.899	0.08	0.762	0.60	16.325	0.18	0.21	0.23	35.60	36.30
013	0.034	999.99	-8.599	999.99	-8.599	999.99	0.516	999.99	15.480	999.99	999.99	999.99	999.99	34.06
014	0.076	0.01	-6.399	0.17	8.400	0.17	-0.255	0.17	19.120	0.41	0.21	0.12	0.51	0.61
015	-0.035	0.04	-8.947	0.04	-8.947	0.04	-0.357	0.04	9.129	0.04	0.26	0.44	0.35	1.08
016	0.028	0.17	-7.644	0.17	-7.644	0.17	-0.305	0.17	11.545	0.68	0.26	0.26	0.63	0.80
017	0.030	0.12	-8.080	0.12	-8.080	0.12	-0.322	0.12	8.337	0.06	0.18	0.22	25.72	38.48
018	0.031	0.31	-6.499	0.09	-6.499	0.09	-0.259	0.09	12.770	0.98	0.27	0.35	33.80	33.32
019	0.047	0.55	-7.399	0.13	-7.399	0.13	-0.295	0.13	35.935	0.97	0.47	0.50	32.56	30.08
020	0.132	1.17	-6.849	0.04	-6.849	0.04	0.595	1.08	11.375	0.07	0.30	0.40	2.47	2.62
021	0.029	0.01	-7.396	0.01	-7.396	0.01	-0.295	0.01	13.971	0.33	0.25	0.37	34.32	36.66
022	-0.032	0.02	-8.275	0.02	-8.275	0.02	-0.330	0.02	8.353	0.02	0.19	0.38	38.40	39.12
023	0.052	0.64	-8.805	0.03	-8.805	0.03	1.121	0.74	141.549	0.19	0.38	0.39	30.94	25.06
024	0.030	0.21	-6.775	0.21	8.229	0.02	0.370	0.20	13.650	0.78	0.37	0.29	0.52	0.32
025	0.043	0.42	-8.449	0.02	-8.449	0.02	2.032	1.66	204.600	0.48	0.45	0.50	30.76	24.22
026	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.99	999.99	999.99	999.99
027	-0.025	0.04	-6.549	0.04	-6.549	0.04	-0.261	0.04	7.355	0.14	0.24	0.36	0.26	0.82
028	0.026	0.17	-6.967	0.17	-6.967	0.17	-0.278	0.17	13.979	0.99	0.34	0.34	27.36	23.33
030	0.153	1.33	-9.096	0.07	-9.096	0.07	1.320	0.20	111.944	0.28	0.26	0.35	31.58	28.00
031	-0.032	0.01	-8.349	0.01	-8.349	0.01	-0.333	0.01	12.575	0.66	0.13	0.20	29.39	28.39
032	0.150	1.09	-9.649	0.16	-9.649	0.16	1.289	1.30	36.895	1.14	0.41	0.45	33.58	37.23
033	-0.025	0.02	-6.599	0.02	-6.599	0.02	0.332	0.39	13.280	0.39	0.23	0.33	34.32	32.16
034	-0.033	0.02	-8.430	0.02	-8.430	0.02	-0.336	0.02	10.221	0.31	0.18	0.24	0.98	0.33
035	-0.038	0.03	-9.723	0.03	-9.723	0.03	-0.388	0.03	11.798	0.31	0.25	0.48	0.38	0.77
036	-0.022	0.34	-5.689	0.34	-5.689	0.34	-0.227	0.34	7.422	0.16	0.33	0.21	0.22	0.31
037	-0.023	0.35	-6.102	0.35	-6.102	0.35	-0.243	0.35	7.397	0.35	0.35	0.11	0.47	0.34
038	0.025	0.03	-6.241	0.03	-6.241	0.03	3.492	1.86	22.998	1.47	0.58	0.64	25.54	35.00
039	-0.025	0.09	-6.549	0.09	-6.549	0.09	-0.261	0.09	13.620	0.31	0.41	0.47	39.30	34.56
040	0.039	0.34	-7.999	0.06	-7.999	0.06	-0.319	0.06	19.505	0.30	0.20	0.27	35.20	36.24
041	-0.030	999.99	-7.706	999.99	-7.706	999.99	-0.307	999.99	-7.706	999.99	999.99	999.99	999.99	0.60
042	0.124	0.08	-7.475	0.04	-7.475	0.04	0.512	0.25	7.331	0.04	0.20	0.30	1.24	0.59
043	0.115	1.14	-7.499	0.09	8.685	0.27	1.004	0.69	32.056	0.15	0.37	0.31	37.20	44.20
044	-0.030	0.01	-7.799	0.01	-7.799	0.01	-0.311	0.01	-7.799	0.01	0.21	0.33	34.32	30.80
045	0.048	0.71	-8.080	0.05	-8.080	0.05	-0.322	0.05	10.311	0.51	0.48	0.40	36.74	26.39
Ar.Mean	0.048	0.33	7.687	0.09	7.795	0.09	0.536	0.31	24.070	0.42	0.29	0.32	17.22	17.18
Std.dev.	0.035	0.41	1.186	0.11	1.174	0.11	0.588	0.45	38.400	0.34	0.11	0.12	16.53	16.53
Geo.Mean	0.040	0.11	7.588	0.05	7.697	0.05	0.409	0.11	14.760	0.26	0.27	0.29	4.64	

ARIZONA PUBLIC SERVICE
MONTHLY REPORT for 08-85

DUSTFALL DATA
Comments and Messages Only

Location Number	Sample A Comments	Sample B Comments	Processing Messages
001			
002			
003			
004			
005			
006			
007			
008			
009			
010			
011	BIRD DROPPINGS ON SCREEN	SCREEN ASKEW	
012			
013	VOID/CONTAMINATION		MISSING SAMPLE A
014			
015			
016			
017			
018			
019			
020			
021			
022			
023			
024			
025			
026	VOID/CONTAMINATION	VOID/VANDALISM	MISSING SAMPLE A and B
027			
028			
030			
031			
032		SCREEN IN MONITOR	
033			
034			
035			
036			
037			
038			
039			
040			
041	VOID/TAMPERING		MISSING SAMPLE A
042			
043			
044			
045			

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 08-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	Na	d	K	d	Ca	d	Mg	d	Cl	d	F	d	SO4	d	NO3	d
080	0.650	0.43	0.588	1.13	1.235	0.34	0.215	0.81	1.299	0.23	-0.638	0.03	-6.386	0.03	0.181	0.11
081	1.702	0.65	0.324	0.36	1.886	0.03	0.566	0.03	1.690	0.12	-0.662	0.04	-6.628	0.04	0.202	0.10
082	0.713	0.53	0.909	0.27	0.975	0.15	0.176	0.39	0.390	0.02	-0.654	0.02	-6.549	0.02	0.163	0.26
083	0.419	0.08	0.212	0.74	1.183	0.04	0.173	0.32	0.419	0.08	-0.669	0.08	-6.699	0.08	0.113	0.57
Ar.Mean	0.871	0.42	0.508	0.62	1.319	0.14	0.282	0.38	0.949	0.11	0.656	0.04	6.566	0.04	0.164	0.26
Std.Dev.	0.568	0.24	0.310	0.39	0.393	0.14	0.189	0.32	0.649	0.08	0.013	0.02	0.134	0.02	0.038	0.21
Geo.Mean	0.758	0.32	0.437	0.53	1.280	0.08	0.246	0.23	0.773	0.07	0.656	0.03	6.565	0.03	0.160	0.20

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 08-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	PO4	d	CO3	d	HCO3	d	NH3	d	TSS	d	Av d	SD(d)	(Milligrams) Cu A	Cu B
080	0.033	0.43	-6.386	0.03	-6.386	0.03	-0.254	0.03	13.723	1.07	0.36	0.40	0.26	0.54
081	0.052	0.53	-6.628	0.04	-6.628	0.04	-0.264	0.04	51.402	0.01	0.16	0.22	2.19	2.11
082	0.033	0.41	-6.549	0.02	7.145	0.17	-0.261	0.02	14.300	0.02	0.17	0.18	0.52	0.26
083	0.028	0.08	-6.699	0.08	-6.699	0.08	-0.267	0.08	9.820	0.36	0.20	0.23	0.54	0.58
Ar.Mean	0.036	0.36	6.566	0.04	6.715	0.07	0.262	0.04	22.311	0.36	0.22	0.25	0.87	0.87
Std.dev.	0.010	0.19	0.134	0.02	0.316	0.06	0.005	0.02	19.495	0.49	0.09	0.09	0.88	0.83
Geo.Mean	0.035	0.29	6.565	0.03	6.709	0.06	0.262	0.03	17.740	0.09	0.21	0.24	0.63	0.64

ARIZONA PUBLIC SERVICE
MONTHLY REPORT for 08-85

DUSTFALL DATA
Comments and Messages Only

Location Number	Sample A Comments	Sample B Comments	Processing Messages
080			
081			
082			
083			

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 09-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	Na	d	K	d	Ca	d	Mg	d	Cl	d	F	d	SO4	d	NO3	d
001	0.170	0.01	-0.169	0.01	0.933	0.19	0.398	0.29	0.509	0.01	-0.849	0.01	38.991	0.08	0.288	0.47
002	0.181	0.01	-0.179	0.01	0.814	0.21	0.281	0.20	0.543	0.01	-0.899	0.01	38.900	0.06	0.281	0.46
003	0.621	1.46	0.263	0.72	1.567	0.29	0.426	0.27	0.520	0.06	-0.838	0.06	28.589	0.00	0.199	0.20
004	0.302	0.95	-0.158	0.07	1.001	0.22	0.246	0.07	0.461	0.07	-0.794	0.07	28.341	0.09	0.252	0.36
005	0.404	0.28	0.317	0.91	0.972	0.21	0.212	0.03	-0.460	0.12	-0.767	0.12	24.445	0.01	0.187	0.14
006	0.543	0.14	0.157	0.14	0.952	0.47	0.357	0.45	-0.504	0.14	-0.840	0.14	24.750	0.23	0.202	0.16
007	0.517	0.27	0.595	1.51	1.480	0.22	0.362	0.27	0.444	0.02	-0.745	0.02	32.516	0.07	0.281	0.30
008	0.320	1.02	-0.156	0.02	0.794	0.38	0.215	0.54	-0.471	0.02	-0.785	0.02	36.591	0.02	0.199	0.10
009	0.374	1.03	-0.180	0.04	1.015	0.14	0.381	0.38	0.555	0.04	-0.904	0.04	37.945	0.09	0.297	0.29
010	0.335	0.98	0.169	0.03	0.931	0.21	0.279	0.09	0.507	0.03	-0.858	0.03	37.173	0.06	0.227	0.49
011	0.396	1.22	0.157	0.03	1.728	0.15	0.819	0.26	0.472	0.03	-0.775	0.03	32.254	0.08	0.244	0.09
012	0.306	0.77	0.624	1.39	0.862	1.51	0.308	1.31	-0.634	0.11	-1.058	0.11	27.495	0.61	0.157	0.65
013	0.265	0.73	0.355	1.05	1.131	0.08	0.411	0.12	-0.542	0.07	-0.904	0.07	36.527	0.12	0.305	0.10
014	0.352	1.04	0.441	1.23	4.881	0.33	1.001	0.24	0.521	0.05	-0.889	0.05	36.435	0.05	0.243	0.09
015	0.281	0.58	-0.199	0.10	0.862	0.32	0.288	0.36	-0.599	0.10	-0.999	0.10	39.805	0.09	0.228	0.07
016	0.530	0.30	0.610	1.51	1.815	0.15	0.558	0.74	0.682	0.24	-0.763	0.02	28.745	0.09	0.318	0.21
017	0.268	0.72	0.540	1.36	0.975	0.24	0.290	0.37	-0.544	0.06	-0.908	0.06	34.455	0.01	0.254	0.57
018	0.249	0.66	0.498	1.33	0.748	0.22	0.250	0.67	-0.994	0.66	-0.828	0.01	25.782	0.07	0.299	0.12
019	0.170	0.14	-0.157	0.14	1.440	0.03	0.658	0.66	-0.473	0.14	-0.789	0.14	25.511	0.14	0.276	0.51
020	0.423	1.20	0.423	1.20	1.184	0.29	0.338	0.10	-0.506	0.00	-0.844	0.00	27.055	0.00	0.228	0.07
021	0.152	0.06	-0.146	0.06	0.833	0.12	0.257	0.30	-0.441	0.06	-0.736	0.06	21.646	1.32	0.182	0.06
022	0.363	0.25	0.521	0.44	0.816	0.34	0.181	0.25	0.442	0.16	-0.793	0.16	35.250	0.07	0.224	0.30
023	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.93	999.999	999.99	999.999	999.99
024	0.186	0.06	0.186	0.06	1.305	0.06	0.429	0.15	0.559	0.06	-0.958	0.06	36.314	0.01	0.286	0.53
025	0.289	0.67	0.289	0.67	2.987	0.06	1.176	0.07	0.578	0.00	-0.963	0.00	35.635	0.05	0.357	0.49
026	0.495	0.65	0.165	0.02	1.242	0.16	0.314	0.02	0.496	0.02	-0.835	0.02	34.764	0.12	0.232	0.16
027	0.236	0.65	0.551	0.27	1.103	0.01	0.260	0.20	-0.468	0.01	-0.781	0.01	26.764	0.10	0.252	0.49
028	0.308	0.81	0.597	1.39	1.800	0.23	0.295	0.23	0.852	0.71	-0.722	0.23	33.641	0.28	0.375	0.92
030	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99
031	0.442	0.43	0.708	0.53	1.937	0.15	0.423	0.14	0.529	0.03	-0.867	0.03	28.191	0.09	0.220	0.05
032	0.525	1.29	0.740	1.49	2.093	0.15	0.626	0.20	0.604	0.14	-0.935	0.14	26.973	0.08	0.149	0.26
033	0.360	1.15	0.573	1.47	1.467	0.13	0.410	0.21	0.442	0.07	-0.763	0.07	38.291	0.07	0.278	0.35
034	0.615	0.91	0.755	1.55	0.784	0.28	0.262	0.18	0.476	0.12	-0.840	0.12	37.882	0.05	0.238	0.12
035	0.434	1.18	0.348	0.98	1.225	0.03	0.315	0.14	0.525	0.03	-0.863	0.03	32.409	0.19	0.289	0.33
036	0.250	0.63	0.333	0.97	0.927	0.22	0.236	0.19	0.505	0.04	-0.822	0.04	37.000	0.04	0.378	0.00
037	0.179	0.25	-0.155	0.25	0.817	0.47	0.301	0.55	0.537	0.25	-0.781	0.25	36.927	0.03	0.265	0.48
038	0.676	1.48	1.012	1.66	0.682	0.47	0.248	0.17	0.514	0.04	-0.872	0.04	35.955	0.06	0.273	0.47
039	0.854	0.39	1.282	0.14	0.683	0.49	0.222	0.30	0.598	0.28	-0.858	0.01	35.891	0.01	0.462	0.31
040	0.452	1.18	0.182	0.02	0.909	0.38	0.346	0.29	0.547	0.02	-0.922	0.02	36.432	0.08	0.483	0.06
041	0.665	0.50	1.165	1.43	0.665	0.50	0.225	0.52	-0.498	0.00	-0.831	0.00	37.432	0.04	0.283	0.47
042	0.633	999.99	0.316	999.99	1.107	999.99	0.190	999.99	0.475	999.99	-0.790	999.99	36.382	999.99	0.221	999.99
043	1.549	0.82	1.291	0.82	1.080	0.02	0.377	0.22	2.124	1.42	-0.908	0.17	36.655	0.08	0.260	0.24
044	0.835	0.27	0.275	0.63	0.925	0.04	0.314	0.07	0.555	0.04	-0.904	0.04	37.945	0.09	0.334	0.38
045	1.483	0.54	0.870	0.75	3.242	0.21	0.763	0.10	1.136	0.41	-0.854	0.06	34.277	0.01	0.246	0.06
Ar.Mean	0.452	0.67	0.448	0.69	1.302	0.25	0.386	0.29	0.591	0.14	0.849	0.06	33.213	0.11	0.267	0.29
Std.Dev.	0.297	0.41	0.317	0.59	0.796	0.24	0.215	0.24	0.278	0.25	0.073	0.06	4.958	0.21	0.069	0.20
Geo.Mean	0.386	0.45	0.356	0.30	1.162	0.17	0.347	0.21	0.559		0.846		32.820		0.259	0.19

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 09-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	PO4	d	CO3	d	HCO3	d	NH3	d	TSS	d	Av d	SD(d)	(Milligrams) Cu A	Cu B
001	0.085	1.20	-8.499	0.01	-8.499	0.01	0.509	0.67	15.255	0.22	0.24	0.36	44.88	48.36
002	-0.035	0.01	-8.999	0.01	-8.999	0.01	-0.359	0.01	13.582	0.41	0.11	0.16	36.83	48.00
003	-0.033	0.06	-8.390	0.06	-8.390	0.06	-0.335	0.06	27.080	0.51	0.30	0.41	30.07	33.62
004	-0.031	0.07	-7.954	0.07	-7.954	0.07	0.307	0.07	15.527	0.66	0.22	0.28	33.60	30.64
005	-0.030	0.12	-7.681	0.12	-7.681	0.12	0.404	0.28	16.364	0.12	0.20	0.23	27.04	24.07
006	0.040	0.54	-8.408	0.14	-8.408	0.14	0.314	0.14	23.864	0.54	0.26	0.17	32.56	35.20
007	0.037	0.42	-7.456	0.02	12.523	0.81	0.370	0.42	19.260	0.48	0.37	0.41	38.28	41.04
008	-0.030	0.02	-7.863	0.02	-7.863	0.02	0.318	0.02	11.136	0.02	0.17	0.30	41.52	53.10
009	0.046	0.36	-9.044	0.04	-9.044	0.04	-0.361	0.04	37.986	0.19	0.21	0.28	39.40	54.08
010	-0.033	0.03	-8.590	0.03	12.614	0.64	-0.343	0.03	21.095	0.21	0.22	0.30	41.58	47.58
011	0.047	0.64	-7.756	0.03	-7.756	0.03	0.392	0.37	47.833	0.40	0.26	0.35	34.75	37.20
012	-0.041	0.11	-10.590	0.11	-10.590	0.11	0.685	0.76	27.268	0.91	0.65	0.52	24.70	40.35
013	0.079	0.29	-9.044	0.07	-9.044	0.07	0.440	0.47	27.736	0.30	0.27	0.31	37.81	44.40
014	0.096	0.59	-8.902	0.05	9.576	0.23	0.525	0.71	57.498	0.29	0.38	0.40	34.22	38.50
015	0.085	0.12	-9.999	0.10	-9.999	0.10	-0.399	0.10	28.664	0.23	0.18	0.15	44.00	47.76
016	-0.030	0.02	-7.635	0.02	-7.635	0.02	0.532	0.87	30.982	0.32	0.35	0.44	31.25	32.01
017	-0.035	0.06	-9.090	0.06	-9.090	0.06	-0.363	0.06	17.632	0.14	0.29	0.39	38.80	41.58
018	-0.032	0.01	-8.293	0.01	-8.293	0.01	0.499	0.66	11.643	0.01	0.34	0.42	32.71	30.24
019	-0.031	0.14	-7.896	0.14	-7.896	0.14	0.340	0.14	38.570	0.36	0.22	0.18	30.79	37.17
020	-0.033	0.00	-8.454	0.00	-8.454	0.00	-0.337	0.00	19.445	0.09	0.23	0.44	31.99	31.62
021	0.030	0.06	-7.370	0.06	13.056	0.87	0.377	0.34	18.953	0.02	0.26	0.39	44.72	46.02
022	-0.031	0.16	-7.940	0.16	8.047	0.03	0.295	0.16	14.162	0.88	0.26	0.22	43.20	43.12
023	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.99	999.99	999.99	999.99
024	0.075	0.06	-9.590	0.06	10.223	0.12	0.373	0.06	29.818	0.06	0.10	0.13	42.20	51.74
025	0.067	0.86	-9.635	0.00	10.600	0.18	0.385	0.00	66.491	1.19	0.33	0.40	36.89	46.64
026	-0.032	0.02	-8.363	0.02	9.091	0.16	-0.334	0.02	14.891	0.02	0.11	0.17	36.80	46.80
027	0.055	0.85	-7.817	0.01	8.668	0.20	0.473	0.01	14.186	0.24	0.24	0.27	32.34	34.90
028	0.062	0.81	-7.226	0.23	9.095	0.41	0.655	0.23	18.723	0.15	0.51	0.38	34.98	44.22
030	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.999	999.99	999.99	999.99	999.99	999.99
031	-0.034	0.03	-8.681	0.03	9.714	0.21	0.353	0.03	21.191	0.20	0.15	0.16	32.47	37.82
032	0.062	0.79	-9.363	0.14	11.145	0.32	-0.374	0.14	42.709	0.42	0.43	0.47	30.90	43.13
033	-0.030	0.07	-7.635	0.07	12.327	0.76	0.371	0.47	21.164	0.41	0.41	0.45	43.68	49.92
034	-0.033	0.12	-8.408	0.12	8.677	0.06	-0.335	0.12	9.423	0.22	0.31	0.44	40.70	49.20
035	0.035	0.03	-8.635	0.03	9.636	0.21	-0.344	0.03	22.864	0.79	0.31	0.41	34.58	46.80
036	-0.032	0.04	-8.226	0.04	-8.226	0.04	-0.328	0.04	15.100	0.18	0.19	0.29	43.44	49.14
037	-0.030	0.25	-7.817	0.25	-7.817	0.25	-0.312	0.25	22.273	0.17	0.29	0.14	34.40	53.28
038	-0.034	0.04	-8.726	0.04	-8.726	0.04	-0.348	0.04	11.091	0.43	0.38	0.56	38.02	48.10
039	-0.033	0.01	-8.590	0.01	-8.590	0.01	0.855	0.01	11.964	0.01	0.15	0.18	37.80	48.62
040	-0.036	0.02	-9.226	0.02	-9.226	0.02	0.637	0.26	26.395	0.18	0.20	0.32	34.10	51.48
041	0.092	1.27	-8.317	0.00	-8.317	0.00	0.333	0.00	14.973	0.22	0.38	0.48	40.26	58.56
042	0.301	999.99	-7.908	999.99	-7.908	999.99	0.633	999.99	17.400	999.99	999.99	999.99	38.28	999.99
043	0.079	1.23	-9.090	0.17	14.727	0.96	5.124	1.76	34.94	0.60	0.66	0.57	40.00	43.68
044	0.073	0.97	-9.044	0.04	-9.044	0.04	0.370	0.04	11.704	0.42	0.24	0.29	55.72	54.08
045	0.044	0.35	-8.544	0.06	9.700	0.24	0.533	0.72	45 686	0.02	0.27	0.26	33.09	43.78
Ar. Mean	0.053	0.31	8.493	0.06	9.354	0.19	0.530	0.25	24.161	0.32	0.28	0.32	37.03	43.59
Std. dev.	0.043	0.38	0.733	0.06	1.638	0.25	0.736	0.34	13.005	0.27	0.12	0.12	5.71	7.79
Geo. Mean	0.045		8.463		9.232		0.429		21.459	0.19	0.26	0.30	36.61	42.85

ARIZONA PUBLIC SERVICE
MONTHLY REPORT for 09-85

DUSTFALL DATA
Comments and Messages Only

Location Number	Sample A Comments	Sample B Comments	Processing Messages
001			
002			
003			
004			
005			
006			
007			
008			
009			
010			
011			
012			
013			
014			
015			
016	ASH IN JAR.	ASH IN JAR.	
017			
018			
019			
020			
021			
022			
023	VOID/APPARENT CONTAMINATION	VOID/APPARENT CONTAMINATION	MISSING SAMPLE A and B
024			
025			
026			
027			
028	LARGE VOLUME DIFFERENCE.	LARGE VOLUME DIFFERENCE.	
030	VOID/APPARENT CONTAMINATION.	VOID/APPARENT CONTAMINATION.	MISSING SAMPLE A and B
031			
032			
033			
034			
035			
036			
037	LARGE VOLUME DIFFERENCE.	LARGE VOLUME DIFFERENCE.	
038			
039			
040			
041	BIRD DROPPINGS ON SCREEN.		
042		VOID/DEAD BIRD.	MISSING SAMPLE B
043			
044			
045			

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 09-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	Na	d	K	d	Ca	d	Mg	d	Cl	d	F	d	SO4	d	NO3	d
080	0.914	0.08	0.530	0.21	4.790	0.02	1.501	0.11	0.762	0.08	-0.791	0.08	25.777	0.16	0.336	0.17
081	0.959	0.12	0.584	1.49	2.364	0.03	0.768	0.05	0.959	0.12	-0.726	0.03	28.068	0.03	0.398	0.19
082	0.474	0.70	0.398	1.23	1.333	0.08	0.392	0.20	0.471	0.04	-0.801	0.04	27.464	0.02	0.291	0.20
083	0.780	999.99	1.170	999.99	1.560	999.99	0.468	999.99	0.585	999.99	-0.974	999.99	27.300	999.99	0.195	999.99
Ar.Mean	0.781	0.30	0.670	0.97	2.511	0.04	0.782	0.11	0.694	0.08	0.824	0.05	27.152	0.06	0.304	0.18
Std.Dev.	0.218	0.34	0.342	0.67	1.581	0.03	0.506	0.07	0.213	0.04	0.105	0.02	0.974	0.07	0.085	0.01
Geo.Mean	0.754	0.19	0.616	0.72	2.202	0.03	0.677	0.10	0.669	0.07	0.819	0.04	27.138	0.04	0.295	0.18

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 09-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	PO4	d	CO3	d	HCO3	d	NH3	d	TSS	d	Av d	SD(d)	(Milligrams) Cu A	Cu B
080	0.113	0.32	-7.321	0.08	9.141	0.08	0.457	0.08	85.556	0.22	0.13	0.08	25.35	31.20
081	0.082	0.93	-7.272	0.03	8.114	0.15	0.443	0.03	64.205	0.08	0.25	0.44	38.40	39.60
082	0.078	0.76	-8.015	0.04	-8.015	0.04	0.391	0.36	28.167	0.29	0.31	0.37	37.62	39.36
083	0.059	999.99	-9.749	999.99	-9.749	999.99	0.390	999.99	31.200	999.99	999.99	999.99	37.02	999.99
Ar. Mean	0.082	0.67	8.240	0.05	8.754	0.09	0.420	0.15	52.281	0.19	0.23	0.29	34.59	36.72
Std. dev.	0.022	0.31	1.059	0.02	0.836	0.05	0.034	0.17	27.539	0.10	0.09	0.19	6.19	4.78
Geo. Mean	0.080	0.61	8.191	0.04	8.725	0.07	0.419	0.09	46.873	0.17	0.21	0.23	34.12	36.50

ARIZONA PUBLIC SERVICE
MONTHLY REPORT for 09-85

DUSTFALL DATA
Comments and Messages Only

Location Number	Sample A Comments	Sample B Comments	Processing Messages
080	ASH IN JAR.		
081			
082			
083		VOID/MISSING.	MISSING SAMPLE B

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 10-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	Na	d	K	d	Ca	d	Mg	d	Cl	d	F	d	SO4	d	NO3	d
001	0.128	0.04	0.190	0.63	0.765	0.04	0.159	0.04	0.383	0.04	-0.624	0.04	22.325	0.10	0.197	0.41
002	0.590	1.49	0.737	1.59	0.891	0.02	0.178	0.15	-0.440	0.02	-0.734	0.02	21.540	0.09	0.163	0.02
003	0.214	0.57	0.145	0.11	0.794	0.07	0.152	0.02	-0.410	0.11	-0.684	0.11	20.985	0.04	0.152	0.02
004	0.334	1.20	0.334	1.20	0.735	0.19	0.114	0.13	0.401	0.01	-0.669	0.01	22.030	0.07	0.260	0.26
005	0.138	0.25	0.371	1.35	0.811	0.09	0.161	0.50	0.414	0.25	-0.774	0.25	21.135	0.05	0.226	0.61
006	-0.144	0.07	-0.144	0.07	0.895	0.27	0.127	0.29	0.450	0.07	-0.724	0.07	21.000	0.07	0.151	0.27
007	0.372	1.22	0.889	0.70	1.029	0.25	0.162	0.04	-0.449	0.04	-0.749	0.04	22.098	0.04	0.272	0.02
008	0.223	0.67	0.223	0.67	0.668	0.22	0.119	0.01	-0.446	0.01	-0.744	0.01	23.020	0.07	0.238	0.12
009	0.239	0.61	0.239	0.61	1.049	0.22	0.168	0.22	0.483	0.06	-0.779	0.06	22.540	0.06	0.290	0.06
010	0.137	0.04	-0.134	0.04	0.962	0.04	0.186	0.04	0.413	0.04	-0.674	0.04	14.300	1.02	0.212	0.55
011	0.256	0.67	0.171	0.01	1.620	0.10	0.350	0.05	-0.512	0.01	-0.854	0.01	20.460	0.01	0.238	0.71
012	0.388	0.34	0.559	1.46	1.319	0.29	0.248	0.31	0.544	0.22	-0.754	0.06	30.145	0.50	0.303	0.19
013	0.238	0.71	-0.160	0.05	0.861	0.13	0.126	0.55	0.471	0.05	-0.804	0.05	23.550	0.05	0.401	0.17
014	-0.151	0.03	-0.151	0.03	1.278	0.38	0.483	1.08	0.602	0.52	-0.759	0.03	23.280	0.22	0.142	0.08
015	0.341	1.01	0.852	0.81	0.850	0.01	0.128	0.15	-0.512	0.01	-0.854	0.01	21.255	0.09	0.178	0.47
016	0.388	1.39	0.585	1.59	0.995	0.15	0.185	0.58	0.501	0.10	-0.656	0.10	21.874	0.04	0.272	0.51
017	0.140	0.19	-0.152	0.19	0.901	0.04	0.160	0.11	-0.459	0.19	-0.765	0.19	21.707	0.26	0.226	0.44
018	0.251	1.04	0.569	1.57	0.747	0.38	0.136	0.32	-0.380	0.05	-0.634	0.05	20.445	0.01	0.242	0.20
019	0.414	1.26	0.481	1.37	0.785	0.06	0.149	0.17	-0.404	0.12	-0.674	0.12	20.005	0.02	0.128	0.10
020	0.387	0.06	0.379	1.30	0.903	0.06	0.169	0.52	-0.398	0.06	-0.664	0.06	20.640	0.06	0.161	0.02
021	0.170	0.04	0.336	0.97	1.019	0.04	0.204	0.04	-0.497	0.04	-0.829	0.04	21.209	0.04	0.247	0.39
022	-0.153	0.01	-0.153	0.01	0.777	0.01	0.109	0.01	-0.462	0.01	-0.770	0.01	21.739	0.13	0.225	0.08
023	0.173	0.08	0.588	1.39	3.093	0.25	0.865	0.42	-0.497	0.08	-0.829	0.08	19.930	0.17	0.177	1.06
024	0.308	1.02	-0.154	0.03	1.149	0.16	0.222	0.04	0.459	0.03	-0.774	0.03	22.215	0.23	0.238	0.60
025	0.618	0.89	1.269	0.11	2.133	0.24	0.677	0.02	-0.446	0.14	-0.744	0.14	22.290	0.01	0.215	0.06
026	0.474	1.42	0.406	1.33	0.884	0.14	0.177	0.14	-0.404	0.01	-0.674	0.01	21.750	0.01	0.232	0.48
027	0.300	0.96	0.306	1.03	0.909	0.05	0.151	0.36	0.454	0.05	-0.739	0.05	14.235	0.91	0.273	0.05
028	0.212	0.74	0.272	0.93	1.674	0.25	0.279	0.29	0.434	0.20	-0.724	0.09	20.065	0.12	0.272	0.24
030	0.166	0.10	0.727	1.04	2.079	0.18	0.538	0.00	0.498	0.10	-0.869	0.10	20.710	0.02	0.255	0.23
031	0.207	0.61	0.342	1.16	0.765	0.12	0.091	0.52	-0.404	0.06	-0.674	0.06	22.275	0.06	0.293	0.03
032	0.309	0.91	0.459	1.27	1.788	0.68	0.312	0.60	0.477	0.11	-0.749	0.11	20.580	0.04	0.150	0.20
033	0.414	0.67	0.828	0.00	0.759	0.18	0.124	0.22	-0.413	0.00	-0.689	0.00	22.080	0.00	0.297	0.05
034	0.435	1.35	0.344	1.18	0.899	0.43	0.135	0.96	-0.545	0.25	-0.909	0.25	26.045	0.38	0.164	0.45
035	0.236	0.63	0.313	0.97	0.793	0.04	0.135	0.16	-0.464	0.04	-0.774	0.04	21.415	0.12	0.254	0.17
036	0.211	0.75	0.429	1.38	0.627	0.31	0.105	0.49	-0.395	0.09	-0.659	0.09	21.435	0.03	0.150	0.64
037	-0.132	0.08	-0.132	0.08	0.754	0.47	0.111	0.08	-0.398	0.08	-0.664	0.08	20.000	0.13	0.208	0.08
038	0.206	0.58	0.406	1.28	0.977	0.09	0.132	0.22	-0.398	0.09	-0.664	0.09	22.190	0.16	0.099	0.66
039	-0.130	0.02	-0.130	0.02	0.729	0.20	0.126	0.34	-0.392	0.02	-0.654	0.02	19.875	0.02	0.211	0.48
040	0.158	0.03	0.318	1.02	1.418	0.03	0.291	0.35	0.473	0.03	-0.799	0.03	22.875	0.24	0.307	0.23
041	-0.141	0.09	-0.141	0.09	0.958	0.37	0.186	0.60	0.408	0.09	-0.709	0.09	20.400	0.09	0.219	0.34
042	-0.120	0.00	0.242	1.00	0.726	0.33	0.163	0.67	0.363	0.00	-0.604	0.00	19.965	0.06	0.169	0.43
043	0.136	0.00	0.136	0.00	1.088	0.25	0.272	0.40	0.544	0.50	-0.679	0.00	19.040	0.00	0.143	0.10
044	-0.164	0.09	-0.164	0.09	0.780	0.31	0.129	0.05	-0.494	0.09	-0.824	0.09	23.250	0.01	0.171	0.32
045	0.303	0.11	0.598	0.39	1.132	0.02	0.190	0.19	-0.479	0.11	-0.799	0.11	19.695	0.11	0.167	0.11
Ar. Mean	0.258	0.54	0.378	0.73	1.062	0.18	0.213	0.28	0.453	0.09	0.736	0.06	21.354	0.13	0.217	0.28
Std. Dev.	0.125	0.48	0.256	0.57	0.474	0.14	0.155	0.25	0.053	0.11	0.072	0.05	2.404	0.20	0.060	0.23
Geo. Mean	0.232		0.309		0.993	0.12	0.182	0.15	0.450		0.733		21.217		0.209	0.18

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 10-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	PO4	d	CO3	d	HCO3	d	NH3	d	TSS	d	Av d	SD(d)	(Milligrams) Cu A	Cu B
001	0.038	0.63	-6.249	0.04	-6.249	0.04	0.755	1.31	10.200	0.04	0.26	0.39	17.25	26.00
002	-0.028	0.02	-7.349	0.02	-7.349	0.02	-0.293	0.02	16.290	0.53	0.31	0.57	22.93	26.70
003	-0.026	0.11	-6.849	0.11	-6.849	0.11	0.290	0.11	10.755	0.29	0.14	0.15	21.92	24.48
004	0.040	0.66	-6.699	0.01	-6.699	0.01	0.400	0.66	7.345	0.19	0.35	0.44	25.73	24.21
005	-0.030	0.25	-7.749	0.25	-7.749	0.25	0.276	0.25	12.590	0.46	0.37	0.33	23.25	21.05
006	-0.028	0.07	-7.249	0.07	-7.249	0.07	-0.289	0.07	13.300	0.83	0.17	0.22	25.23	25.42
007	-0.029	0.04	-7.499	0.04	-7.499	0.04	0.295	0.04	10.339	0.32	0.22	0.36	24.08	22.41
008	0.059	1.01	-7.449	0.01	-7.449	0.01	0.297	0.01	9.660	0.47	0.25	0.34	28.31	26.34
009	-0.030	0.06	-7.799	0.06	-7.799	0.06	-0.311	0.06	11.220	0.22	0.18	0.20	26.21	25.90
010	-0.026	0.04	-6.749	0.04	-6.749	0.04	0.275	0.04	12.300	0.63	0.20	0.32	25.65	5.60
011	0.060	0.29	-8.549	0.01	-8.549	0.01	0.426	0.39	22.165	0.01	0.17	0.26	25.31	24.48
012	0.046	0.61	-7.549	0.06	9.360	0.06	1.304	1.01	23.050	0.88	0.46	0.43	42.28	24.15
013	0.039	0.45	-8.049	0.05	-8.049	0.05	0.475	0.71	11.875	0.71	0.29	0.29	27.69	24.48
014	-0.029	0.03	-7.599	0.03	-7.599	0.03	-1.519	1.35	28.760	1.38	0.40	0.53	30.40	24.57
015	-0.033	0.01	-8.549	0.01	9.355	0.19	-0.341	0.01	-8.549	0.01	0.22	0.34	26.68	25.35
016	-0.025	0.10	-6.568	0.10	-6.568	0.10	0.638	0.88	11.017	0.81	0.50	0.53	25.40	23.00
017	-0.030	0.19	-7.660	0.19	-7.660	0.19	-0.305	0.19	7.610	0.01	0.19	0.10	25.17	21.42
018	-0.024	0.05	-6.349	0.05	-6.349	0.05	0.502	1.04	11.765	0.06	0.37	0.51	21.34	24.20
019	-0.026	0.12	-6.749	0.12	-6.749	0.12	-0.269	0.12	9.200	0.35	0.31	0.45	25.65	24.93
020	-0.026	0.06	-6.649	0.06	-6.649	0.06	0.258	0.06	9.655	0.07	0.19	0.36	26.33	21.50
021	-0.032	0.04	-8.303	0.04	-8.303	0.04	0.340	0.04	10.152	0.29	0.16	0.27	25.42	23.33
022	-0.030	0.01	-7.713	0.01	-7.713	0.01	0.311	0.01	-7.713	0.01	0.03	0.04	25.34	21.61
023	0.109	1.34	-8.299	0.08	9.350	0.26	0.595	0.79	86.900	0.67	0.51	0.49	20.58	22.32
024	-0.030	0.03	-7.749	0.03	8.405	0.16	0.384	0.43	13.750	0.20	0.23	0.30	26.66	25.97
025	0.081	0.53	-7.449	0.14	-7.449	0.14	0.480	0.14	50.235	0.04	0.20	0.25	25.33	28.04
026	-0.026	0.01	-6.749	0.01	7.485	0.20	0.340	0.41	8.160	0.01	0.32	0.49	26.73	24.93
027	-0.029	0.05	-7.399	0.05	26.950	1.45	0.377	0.36	9.055	0.29	0.43	0.49	26.64	1.86
028	0.108	1.46	-7.249	0.09	23.575	1.38	1.360	0.93	22.240	0.09	0.52	0.50	20.88	21.01
030	0.081	1.14	-8.699	0.10	-8.699	0.10	0.814	0.72	37.070	0.22	0.31	0.39	24.71	22.12
031	-0.026	0.06	-6.749	0.06	16.335	1.17	0.419	0.06	7.695	0.25	0.33	0.42	25.11	25.34
032	0.377	1.82	-7.499	0.11	8.700	0.07	1.977	1.49	21.810	0.61	0.62	0.60	19.50	23.52
033	-0.027	0.00	-6.899	0.00	65.550	1.79	0.552	1.00	9.660	0.00	0.30	0.54	27.05	24.84
034	-0.035	0.25	-9.099	0.25	-9.099	0.25	-0.363	0.25	9.895	0.58	0.53	0.38	40.04	27.35
035	-0.030	0.04	-7.749	0.04	-7.749	0.04	-0.309	0.04	10.250	0.42	0.21	0.29	27.28	25.27
036	-0.025	0.09	-6.599	0.09	-6.599	0.09	-0.263	0.09	9.100	0.55	0.36	0.39	26.14	29.00
037	-0.026	0.08	-6.649	0.08	7.645	0.26	-0.265	0.08	7.590	0.10	0.13	0.11	25.80	25.63
038	-0.026	0.09	-6.649	0.09	-6.649	0.09	-0.265	0.09	9.765	0.09	0.28	0.36	26.60	25.70
039	-0.025	0.02	-6.549	0.02	-6.549	0.02	0.461	0.84	7.280	0.16	0.17	0.25	24.10	25.46
040	-0.031	0.03	-7.999	0.03	-7.999	0.03	0.553	0.32	33.750	0.39	0.21	0.28	26.56	27.90
041	0.049	0.93	-7.099	0.09	-7.099	0.09	0.556	1.06	11.000	0.58	0.35	0.35	25.84	26.00
042	-0.023	0.00	-6.049	0.00	-6.049	0.00	0.242	0.00	13.310	0.73	0.25	0.35	22.72	26.62
043	0.082	1.00	-6.799	0.00	7.480	0.18	0.612	0.67	17.000	0.72	0.29	0.34	23.94	24.48
044	-0.032	0.09	-8.249	0.09	-8.249	0.09	-0.329	0.09	-8.249	0.09	0.11	0.09	24.75	28.80
045	-0.031	0.11	-7.999	0.11	8.290	0.07	0.375	0.29	102.435	1.75	0.27	0.46	26.56	21.45
Ar. Mean	0.047	0.31	7.368	0.06	9.925	0.21	0.501	0.42	17.766	0.38	0.28	0.35	25.72	23.74
Std. dev.	0.055	0.45	0.726	0.05	9.472	0.40	0.367	0.43	19.213	0.37	0.12	0.13	4.16	4.87
Geo. Mean	0.037		7.333		8.531		0.427		13.555		0.25	0.31	25.44	22.44

ARIZONA PUBLIC SERVICE
MONTHLY REPORT for 10-85

DUSTFALL DATA
Comments and Messages Only

Location Number	Sample A Comments	Sample B Comments	Processing Messages
001			
002			
003			
004			
005		SCREEN IN JAR	
006			
007		BIRD DROPPINGS IN JAR	
008			
009			
010			
011	BIRD DROPPINGS ON SCREEN	BIRD DROPPINGS ON SCREEN	
012	BIRD DROPPINGS ON SCREEN	BIRD VOMIT BALL ON SCREEN	
013			
014			
015			
016	ASH IN JAR	ASH IN JAR	
017			
018			
019			
020			
021			
022			
023			
024			
025			
026			
027			
028			
030			
031	SCREEN TAMPERED WITH	SCREEN TAMPERED WITH	
032	BIRD DROPPINGS ON SCREEN		
033			
034			
035	SCREEN LOOSE	SCREEN LOOSE	
036			
037			
038			
039			
040			
041			
042	BIRD DROPPINGS ON SCREEN		
043	BIRD DROPPINGS ON SCREEN	BIRD DROPPINGS ON SCREEN	
044	BIRD DROPPINGS ON SCREEN		
045	BIRD DROPPINGS ON SCREEN	BIRD DROPPINGS ON SCREEN	

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 10-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	Na	d	K	d	Ca	d	Mg	d	Cl	d	F	d	SO4	d	NO3	d
080	0.128	0.08	-0.132	0.08	1.283	0.08	0.172	0.14	0.575	0.14	-0.666	0.08	21.703	0.16	0.205	0.04
081	0.702	0.16	0.191	0.64	1.470	0.11	0.397	0.22	0.831	0.18	-0.630	0.02	21.734	0.14	0.314	0.55
082	0.516	1.47	0.196	0.61	1.824	0.81	0.365	0.81	-0.407	0.06	-0.679	0.06	21.760	0.00	0.253	0.58
083	1.000	1.22	0.796	1.67	4.036	0.32	1.122	0.16	0.415	0.11	-0.652	0.11	20.758	0.11	0.255	0.05
Ar.Mean	0.586	0.73	0.329	0.75	2.153	0.32	0.514	0.33	0.557	0.12	0.657	0.06	21.488	0.10	0.256	0.30
Std.Dev.	0.364	0.71	0.312	0.66	1.275	0.33	0.417	0.31	0.198	0.04	0.020	0.03	0.487	0.07	0.044	0.30
Geo.Mean	0.464	0.38	0.251	0.48	1.930	0.21	0.409	0.25	0.533	0.11	0.657	0.06	21.484	0.00	0.253	0.16

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 10-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	PO4	d	CO3	d	HCO3	d	NH3	d	TSS	d	Av d	SD(d)	(Milligrams) Cu A	Cu B
080	-0.026	0.08	-6.671	0.08	-6.671	0.08	0.446	0.21	12.828	0.08	0.10	0.04	25.28	26.18
081	-0.024	0.02	-6.309	0.02	7.019	0.16	0.320	0.42	32.602	0.14	0.22	0.20	24.40	24.75
082	-0.026	0.06	-6.799	0.06	-6.799	0.06	0.396	0.06	18.480	0.06	0.36	0.46	25.84	35.84
083	-0.025	0.11	-6.531	0.11	8.303	0.11	0.415	0.11	50.894	0.10	0.33	0.51	24.84	25.97
Ar. Mean	0.026	0.06	6.578	0.06	7.198	0.10	0.394	0.20	28.700	0.09	0.25	0.30	25.09	28.18
Std. dev.	0.000	0.03	0.209	0.03	0.750	0.04	0.053	0.16	16.972	0.03	0.11	0.21	0.61	5.14
Geo. Mean	0.026	0.06	6.576	0.06	7.170	0.09	0.391	0.15	25.043	0.09	0.22	0.21	25.08	27.86

ARIZONA PUBLIC SERVICE
MONTHLY REPORT for 10-85

DUSTFALL DATA
Comments and Messages Only

Location Number	Sample A Comments	Sample B Comments	Processing Messages
080			
081			
082			
083			

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 11-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	Na	d	K	d	Ca	d	Mg	d	Cl	d	F	d	SO4	d	NO3	d
001	0.215	0.09	0.215	0.09	0.860	0.09	0.108	0.09	-0.672	0.09	-1.121	0.09	22.622	0.18	0.172	0.09
002	0.682	0.00	-0.227	0.00	0.909	0.00	-0.113	0.00	-0.682	0.00	-1.138	0.00	22.728	0.20	0.159	0.00
003	0.535	1.17	0.217	0.04	0.756	0.25	-0.105	0.04	0.650	0.04	-1.060	0.04	22.728	0.05	0.163	0.17
004	0.440	0.96	-0.216	0.05	0.554	0.35	-0.107	0.05	0.668	0.05	-1.084	0.05	24.496	0.05	0.270	0.88
005	0.230	0.04	-0.233	0.04	0.806	0.32	-0.116	0.04	-0.702	0.04	-1.170	0.04	21.837	0.15	0.196	0.39
006	0.669	0.70	-0.216	0.04	0.773	0.24	-0.107	0.04	0.665	0.04	-1.084	0.04	23.238	0.05	0.257	0.82
007	-0.217	0.04	-0.217	0.04	0.853	0.04	-0.108	0.04	0.640	0.04	-1.088	0.04	22.422	0.14	0.160	0.09
008	0.212	0.02	-0.209	0.02	0.742	0.27	-0.104	0.02	-0.629	0.02	-1.049	0.02	23.322	0.16	0.170	0.27
009	0.470	1.01	-0.235	0.01	1.056	0.23	-0.117	0.01	0.703	0.01	-1.177	0.01	23.456	0.21	0.211	0.45
010	0.448	0.99	0.224	0.01	1.009	0.21	0.112	0.01	0.673	0.01	-1.116	0.01	22.433	0.19	0.202	0.44
011	0.438	0.07	-0.210	0.07	1.200	0.11	0.166	0.73	0.657	0.07	-1.055	0.07	22.950	0.02	0.260	0.60
012	0.223	0.03	-0.218	0.03	0.782	0.32	-0.108	0.03	0.668	0.03	-1.093	0.03	23.372	0.06	0.145	0.19
013	0.218	0.02	-0.216	0.02	0.763	0.27	-0.107	0.02	-0.649	0.02	-1.082	0.02	24.000	0.17	0.196	0.43
014	0.681	1.31	-0.225	0.04	4.235	0.45	0.551	0.13	-0.676	0.04	-1.127	0.04	24.128	0.06	0.184	0.04
015	-0.227	0.01	-0.227	0.01	0.687	0.01	-0.113	0.01	-0.682	0.01	-1.138	0.01	21.739	0.10	0.137	0.01
016	0.314	0.68	-0.209	0.01	1.044	0.01	0.115	0.17	1.044	0.01	-1.049	0.01	22.978	0.01	0.314	0.81
017	0.341	0.80	0.222	0.16	1.193	0.40	0.111	0.16	0.665	0.16	-1.193	0.16	23.361	0.25	0.153	0.13
018	-0.205	0.16	0.191	0.16	0.572	0.16	-0.102	0.16	-0.616	0.16	-1.027	0.16	21.989	0.24	0.286	1.02
019	0.197	0.16	-0.180	0.16	1.167	0.17	0.200	0.72	0.592	0.16	-0.905	0.16	22.439	0.10	0.229	0.69
020	-0.227	0.06	0.221	0.06	0.884	0.06	0.111	0.06	0.777	0.34	-1.138	0.06	23.250	0.16	0.177	0.06
021	-0.213	0.11	-0.213	0.11	0.787	0.18	-0.106	0.11	-0.642	0.11	-1.071	0.11	22.544	0.09	0.171	0.24
022	-0.220	0.02	-0.220	0.02	0.548	0.42	-0.110	0.02	0.657	0.02	-1.105	0.02	22.972	0.07	0.305	0.70
023	-0.231	0.03	1.765	0.11	7.289	0.23	2.668	0.26	-0.696	0.03	-1.160	0.03	22.361	0.08	0.188	0.03
024	0.431	1.00	0.323	0.67	0.753	0.29	-0.107	0.01	-0.646	0.01	-1.077	0.01	23.656	0.19	0.183	0.11
025	0.218	0.03	0.547	0.42	2.943	0.20	0.806	0.30	0.763	0.26	-1.077	0.03	23.989	0.16	0.251	0.06
026	0.670	1.35	-0.223	0.03	0.776	0.32	-0.111	0.03	-0.672	0.03	-1.121	0.03	23.233	0.13	0.166	0.10
027	0.394	1.46	-0.226	0.73	0.613	0.97	-0.113	0.73	-0.681	0.73	-1.136	0.73	16.126	0.82	0.100	0.73
028	0.192	0.02	-0.189	0.02	2.780	0.09	0.212	1.10	-0.569	0.02	-0.949	0.02	22.033	0.07	0.325	0.57
030	0.580	0.34	0.467	0.06	2.100	0.06	0.417	0.50	0.700	0.06	-1.199	0.06	25.667	0.06	0.287	1.00
031	0.548	0.32	0.752	1.39	0.663	0.08	0.111	0.08	0.663	0.08	-1.149	0.08	20.961	0.02	0.234	0.36
032	0.373	0.61	0.509	1.04	1.392	0.60	0.229	0.94	0.753	0.06	-1.216	0.06	27.606	0.06	0.443	0.68
033	0.929	0.47	-0.236	0.03	0.699	0.03	-0.117	0.03	0.699	0.03	-1.182	0.03	23.342	0.23	0.317	0.99
034	-0.210	0.09	-0.210	0.09	0.510	0.48	-0.105	0.09	-0.632	0.09	-1.055	0.09	21.367	0.37	0.152	0.22
035	-0.238	0.05	-0.238	0.05	0.735	0.05	0.123	0.05	-0.716	0.05	-1.193	0.05	23.244	0.06	0.135	0.23
036	0.221	0.02	-0.218	0.02	0.551	0.39	-0.108	0.02	0.662	0.02	-1.093	0.02	24.261	0.02	0.266	0.85
037	-0.240	0.01	-0.240	0.01	0.601	0.41	-0.120	0.01	-0.722	0.01	-1.205	0.01	22.806	0.11	0.156	0.16
038	0.546	0.37	-0.215	0.03	0.653	0.64	-0.107	0.03	0.657	0.03	-1.077	0.03	25.156	0.06	0.264	0.86
039	0.774	1.41	-0.227	0.03	0.448	0.03	-0.113	0.03	0.672	0.03	-1.138	0.03	24.667	0.22	0.317	1.17
040	0.628	0.75	0.206	0.09	1.129	0.09	0.280	0.31	0.824	0.09	-0.982	0.09	22.672	0.09	0.318	0.10
041	0.214	0.02	-0.211	0.02	0.856	0.02	0.150	0.59	0.642	0.02	-1.060	0.02	21.406	0.22	0.139	0.14
042	0.513	1.28	0.408	1.09	1.094	0.30	0.184	0.63	0.698	0.41	-1.049	0.12	21.633	0.06	0.158	0.12
043	0.226	999.99	0.226	999.99	1.353	999.99	0.248	999.99	0.902	999.99	-1.127	999.99	20.300	999.99	0.180	999.99
044	1.350	1.66	1.013	1.54	0.568	0.37	0.114	0.03	2.479	1.44	-1.155	0.03	20.500	0.03	0.137	0.03
045	0.419	0.15	0.209	0.15	1.224	0.53	0.163	0.61	0.628	0.15	-0.966	0.15	22.878	0.03	0.279	0.75
Ar. Mean	0.403	0.46	0.310	0.20	1.179	0.24	0.220	0.21	0.729	0.11	1.101	0.06	22.837	0.13	0.216	0.41
Std. Dev.	0.240	0.52	0.274	0.38	1.182	0.20	0.399	0.29	0.281	0.24	0.068	0.11	1.684	0.13	0.071	0.34
Geo. Mean	0.350	0.15	0.263	0.06	0.947	0.15	0.150	0.07	0.705	0.04	1.099	0.03	22.772	0.09	0.205	0.23

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 11-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
And Fractional Differences (d)

Location Number	PO4	d	Cl	d	HCO3	d	NH3	d	TSS	d	Av d	SD(d)	(Milligrams) Cu A	Cu B
001	-0.044	0.09	-11.221	0.09	-11.221	0.09	-0.448	0.09	-11.221	0.09	0.10	0.03	24.24	24.79
002	-0.045	0.00	-11.388	0.00	-11.388	0.00	-0.455	0.00	-11.388	0.00	0.02	0.06	22.96	26.93
003	-0.041	0.04	-10.610	0.04	-10.610	0.04	-0.423	0.04	-10.610	0.04	0.16	0.31	22.92	26.27
004	0.045	0.05	-10.845	0.05	-10.845	0.05	-0.433	0.05	-10.845	0.05	0.21	0.33	21.81	26.14
005	-0.046	0.04	-11.711	0.04	-11.711	0.04	-0.467	0.04	-11.711	0.04	0.10	0.12	22.74	24.18
006	0.067	0.70	-10.845	0.04	-10.845	0.04	-0.433	0.04	11.077	0.04	0.22	0.30	22.18	27.44
007	-0.043	0.04	-10.888	0.04	-10.888	0.04	-0.435	0.04	-10.888	0.04	0.05	0.03	22.74	23.69
008	-0.041	0.02	-10.499	0.02	-10.499	0.02	-0.419	0.02	-10.499	0.02	0.07	0.10	23.81	26.25
009	-0.046	0.01	-11.777	0.01	-11.777	0.01	-0.470	0.01	11.722	0.01	0.15	0.29	24.17	26.04
010	-0.044	0.01	-11.166	0.01	-11.166	0.01	-0.446	0.01	15.689	0.56	0.19	0.30	23.72	27.20
011	0.044	0.07	-10.557	0.07	-10.557	0.07	0.438	0.07	20.761	0.03	0.16	0.23	21.59	27.12
012	-0.043	0.03	-10.943	0.03	-10.943	0.03	0.668	0.03	11.139	0.03	0.07	0.09	22.46	27.34
013	0.109	0.41	-10.832	0.02	-10.832	0.02	-0.432	0.02	13.083	0.32	0.13	0.17	23.40	28.51
014	0.069	0.63	-11.277	0.04	-11.277	0.04	-0.450	0.04	36.711	0.21	0.24	0.37	23.95	27.01
015	-0.045	0.01	-11.388	0.01	-11.388	0.01	-0.455	0.01	11.444	0.01	0.02	0.02	23.37	25.67
016	-0.041	0.01	-10.499	0.01	-10.499	0.01	0.628	0.68	11.494	0.19	0.20	0.30	22.68	26.55
017	-0.047	0.16	-11.943	0.16	-11.943	0.16	-0.477	0.16	13.300	0.16	0.23	0.19	23.65	22.82
018	-0.040	0.16	-10.277	0.16	-10.277	0.16	0.587	0.80	9.528	0.16	0.28	0.28	22.57	22.12
019	-0.035	0.16	-9.055	0.16	-9.055	0.16	-0.361	0.16	31.978	0.27	0.25	0.21	19.56	23.42
020	-0.045	0.06	-11.388	0.06	-11.388	0.06	-0.455	0.06	15.478	0.06	0.09	0.08	23.37	25.48
021	-0.042	0.11	-10.721	0.11	-10.721	0.11	-0.428	0.11	15.744	0.18	0.13	0.04	22.00	27.95
022	0.055	0.42	-11.055	0.02	-11.055	0.02	-0.441	0.02	13.133	0.02	0.14	0.22	22.69	26.13
023	0.200	0.15	-11.610	0.03	-11.610	0.03	-0.463	0.03	341.389	0.04	0.08	0.08	19.65	21.50
024	0.043	0.01	-10.777	0.01	-10.777	0.01	-0.430	0.01	18.283	0.36	0.20	0.31	23.67	25.86
025	0.066	0.69	-10.777	0.03	-10.777	0.03	-0.430	0.03	90.567	0.05	0.17	0.20	22.50	22.69
026	-0.044	0.03	-11.221	0.03	-11.221	0.03	-0.448	0.03	12.144	0.15	0.18	0.36	23.43	23.91
027	-0.044	0.73	-11.364	0.73	-11.364	0.73	-0.454	0.73	8.856	0.57	0.80	0.22	22.06	25.33
028	-0.037	0.02	-9.499	0.02	10.533	0.16	0.573	0.65	20.183	0.68	0.26	0.36	19.84	25.06
030	-0.047	0.06	-11.999	0.06	-11.999	0.06	-0.479	0.06	52.267	0.26	0.20	0.28	24.62	24.07
031	0.102	1.17	-11.499	0.08	-11.499	0.08	0.787	0.92	17.778	0.33	0.38	0.47	24.43	27.50
032	0.192	1.49	-12.172	0.06	-12.172	0.06	1.658	1.12	16.425	0.52	0.56	0.49	24.05	22.85
033	-0.046	0.03	-11.826	0.03	-11.826	0.03	0.584	0.43	11.654	0.03	0.18	0.29	25.42	26.27
034	-0.041	0.09	-10.555	0.09	-10.555	0.09	-0.421	0.09	11.078	0.09	0.15	0.13	26.22	22.62
035	-0.047	0.05	-11.943	0.05	-11.943	0.05	-0.477	0.05	16.017	0.51	0.10	0.13	24.94	27.12
036	-0.043	0.02	-10.943	0.02	-10.943	0.02	-0.437	0.02	12.139	0.20	0.12	0.24	26.00	23.20
037	-0.047	0.01	-12.055	0.01	-12.055	0.01	-0.481	0.01	19.178	0.49	0.10	0.17	27.34	24.51
038	0.044	0.03	-10.777	0.03	-10.777	0.03	-0.430	0.03	14.278	0.49	0.20	0.29	27.16	24.40
039	-0.045	0.03	-11.388	0.03	-11.388	0.03	0.562	0.43	-11.388	0.03	0.27	0.47	28.70	26.93
040	-0.038	0.09	-9.832	0.09	-9.832	0.09	0.511	0.31	32.372	0.66	0.22	0.23	21.95	25.61
041	-0.041	0.02	-10.610	0.02	-10.610	0.02	-0.423	0.02	16.083	0.68	0.14	0.23	24.83	26.38
042	0.124	1.40	-10.499	0.12	-10.499	0.12	0.816	1.09	21.267	0.62	0.57	0.49	24.57	25.38
043	0.045	999.99	-11.277	999.99	-11.277	999.99	0.677	999.99	29.322	999.99	999.99	999.99	25.98	999.99
044	-0.045	0.03	-11.555	0.03	-11.555	0.03	-0.461	0.03	14.756	0.43	0.44	0.65	27.46	24.24
045	0.119	1.24	-9.666	0.15	-9.666	0.15	0.709	0.73	15.467	0.25	0.39	0.36	22.27	25.58
Ar. Mean	0.059	0.24	11.017	0.06	11.041	0.07	0.522	0.21	25.507	0.23	0.20	0.24	23.62	25.34
Std. dev.	0.036	0.40	0.689	0.11	0.653	0.11	0.202	0.32	50.690	0.22	0.15	0.14	1.98	1.73
Gen. Mean	0.053	0.07	10.995	0.03	11.021	0.03	0.501	0.06	16.802	0.11	0.16	0.19	23.54	25.29

ARIZONA PUBLIC SERVICE
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DUSTFALL DATA
Comments and Messages Only

Location Number	Sample A Comments	Sample B Comments	Processing Messages
001			
002	PIECE OF GLAZING MATERIAL IN JAR		
003			
004			
005			
006			
007			
008			
009			
010			
011			
012			
013			
014			
015			
016	ASH ON SCREEN	BLACK ASH IN JAR	
017			
018			
019			
020			
021			
022			
023			
024			
025			
026			
027			
028			
030			
031			
032		BIRD DROPPING S ON SCREEN	
033			
034			
035			
036			
037			
038			
039			
040			
041			
042	BIRD DROPPING S ON SCREEN		
043	BIRD VOMIT BALL ON SCREEN	VOID/CONTAMINATION	MISSING SAMPLE B
044	BIRD DROPPING S ON SCREEN		
045			

ARIZONA PUBLIC SERVICE

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AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	Na	d	K	d	Ca	d	Mg	d	Cl	d	F	d	SO4	d	NO3	d
080	-0.202	0.06	-0.202	0.06	2.067	0.15	0.246	0.14	0.786	0.06	-1.012	0.06	24.546	0.02	0.226	0.03
081	0.843	1.47	0.217	0.07	1.517	0.07	0.314	0.00	1.083	0.07	-1.121	0.07	24.878	0.02	0.270	0.17
082	-0.206	0.02	0.205	0.02	0.818	0.02	0.153	0.16	0.614	0.02	-1.033	0.02	25.574	0.10	0.308	0.55
083	0.551	1.22	-0.221	0.03	2.294	0.07	0.425	0.54	0.656	0.03	-1.107	0.03	26.238	0.03	0.251	0.06
Ar. Mean	0.450	0.69	0.211	0.04	1.674	0.07	0.284	0.20	0.784	0.04	1.069	0.04	25.309	0.04	0.263	0.20
Std. Dev.	0.308	0.75	0.009	0.02	0.657	0.05	0.114	0.23	0.212	0.02	0.054	0.02	0.753	0.04	0.034	0.24
Geo. Mean	0.373	0.22	0.211	0.03	1.557	0.06	0.266	0.07	0.765	0.03	1.068	0.03	25.300	0.03	0.261	0.11

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 11-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	PO4	d	CO3	d	HCO3	d	NH3	d	TSS	d	Av d	SD(d)	(Milligrams) Cu A	Cu B
080	-0.040	0.06	-10.124	0.06	-10.124	0.06	-0.404	0.06	22.698	0.32	0.09	0.08	25.33	24.92
081	-0.044	0.07	-11.221	0.07	-11.221	0.07	-0.448	0.07	30.256	0.07	0.18	0.39	26.26	25.19
082	0.112	1.26	-10.338	0.02	-10.338	0.02	0.611	0.65	17.371	0.10	0.23	0.37	25.48	26.21
083	-0.043	0.03	-11.076	0.03	-11.076	0.03	-0.442	0.03	36.092	0.09	0.17	0.34	25.34	24.68
Ar.Mean	0.060	0.35	10.690	0.04	10.690	0.04	0.477	0.20	26.604	0.14	0.16	0.29	25.60	25.25
Std.dev.	0.034	0.60	0.540	0.02	0.540	0.02	0.091	0.29	8.243	0.11	0.05	0.14	0.44	0.67
Geo.Mean	0.054	0.10	10.680	0.03	10.680	0.03	0.471	0.09	25.616	0.11	0.15	0.25	25.59	25.24

ARIZONA PUBLIC SERVICE
MONTHLY REPORT for 11-85

DUSTFALL DATA
Comments and Messages Only

Location Number	Sample A Comments	Sample B Comments	Processing Messages
080			
081			
082		BIRD DROPPINGS ON SCREEN	
083			

ARIZONA PUBLIC SERVICE

MONTHLY REPORT for 12-85

AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	Na	d	K	d	Ca	d	Mg	d	Cl	d	F	d	SO4	d	NO3	d
001	1.575	0.19	-0.215	0.06	0.311	0.61	-0.107	0.06	-0.647	0.06	-1.079	0.06	20.885	0.14	0.105	0.06
002	0.634	0.74	-0.199	0.08	0.209	0.08	-0.099	0.08	-0.599	0.08	-0.999	0.08	19.765	0.02	0.104	0.08
003	0.956	0.90	-0.174	0.01	0.174	0.01	0.096	0.18	-0.523	0.01	-0.872	0.01	16.536	0.10	0.104	0.01
004	0.603	0.01	1.208	1.01	-0.199	0.01	-0.099	0.01	-0.599	0.01	-0.999	0.01	20.091	0.01	0.111	0.19
005	0.291	0.66	-0.194	0.00	-0.194	0.00	-0.096	0.00	-0.583	0.00	-0.972	0.00	19.409	0.00	0.117	0.34
006	0.740	0.58	0.183	0.08	0.183	0.08	-0.087	0.08	-0.525	0.08	-0.876	0.08	17.364	0.02	0.130	0.65
007	0.298	0.63	0.395	0.97	0.302	0.71	-0.097	0.04	-0.585	0.04	-0.976	0.04	18.963	0.06	0.100	0.04
008	0.751	1.45	0.945	0.17	-0.204	0.05	-0.102	0.05	-0.614	0.05	-1.024	0.05	19.970	0.05	0.105	0.05
009	0.425	0.00	-0.212	0.00	0.213	0.00	-0.105	0.00	-0.637	0.00	-1.062	0.00	19.125	0.00	-0.105	0.00
010	0.847	1.10	0.205	0.14	-0.218	0.14	-0.109	0.14	-0.656	0.14	-1.094	0.14	19.500	0.25	-0.109	0.14
011	0.607	0.66	-0.201	0.01	0.203	0.01	-0.100	0.01	1.016	0.81	-1.008	0.01	18.248	0.01	0.152	0.68
012	0.781	0.95	-0.191	0.07	0.199	0.07	-0.095	0.07	0.595	0.07	-0.959	0.07	19.850	0.07	0.120	0.40
013	0.499	1.16	0.204	0.06	-0.209	0.06	-0.104	0.06	-0.629	0.06	-1.049	0.06	19.365	0.17	0.161	0.69
014	0.535	0.35	0.326	0.72	0.215	0.06	0.108	0.06	-0.626	0.06	-1.044	0.06	20.395	0.05	0.108	0.06
015	0.521	1.21	0.208	0.01	0.208	0.01	-0.104	0.01	-0.626	0.01	-1.044	0.01	19.720	0.12	0.104	0.01
016	0.685	0.46	0.781	0.71	0.260	0.71	-0.087	0.05	-0.528	0.05	-0.881	0.05	17.227	0.05	0.129	0.18
017	0.337	0.05	-0.183	0.05	-0.183	0.05	0.090	0.05	-0.550	0.05	-0.917	0.05	16.118	0.05	0.098	0.13
018	0.701	1.50	-0.174	0.01	-0.174	0.01	0.087	0.01	-0.525	0.01	-0.876	0.01	17.455	0.01	0.157	0.68
019	0.809	0.70	-0.174	0.04	0.179	0.04	0.089	0.04	-0.525	0.04	-0.876	0.04	16.955	0.07	0.089	0.04
020	0.280	0.65	0.188	0.02	0.188	0.02	0.112	0.31	-0.569	0.02	-0.949	0.02	17.845	0.13	0.103	0.16
021	0.483	0.32	-0.186	0.08	0.195	0.08	0.107	0.10	-0.559	0.08	-0.933	0.08	18.484	0.02	0.097	0.08
022	0.741	0.93	1.780	0.44	-0.197	0.09	-0.098	0.09	-0.594	0.09	-0.991	0.09	18.063	0.20	0.104	0.09
023	0.371	1.00	-0.184	0.00	0.837	0.67	0.484	0.77	-0.555	0.00	-0.926	0.00	16.732	0.00	0.093	0.00
024	0.810	1.49	0.411	1.02	-0.201	0.02	0.113	0.21	-0.605	0.02	-1.009	0.02	20.450	0.02	0.102	0.02
025	0.815	0.71	2.154	0.05	1.524	0.07	0.684	0.31	-0.524	0.05	-0.874	0.05	19.745	0.05	0.172	0.57
026	0.293	0.69	-0.196	0.03	0.195	0.03	-0.098	0.03	-0.591	0.03	-0.986	0.03	18.494	0.14	0.097	0.03
027	0.482	0.38	-0.190	0.02	-0.190	0.02	-0.094	0.02	-0.572	0.02	-0.954	0.02	18.341	0.08	0.106	0.21
028	0.263	0.74	0.173	0.09	0.173	0.09	0.086	0.09	-0.540	0.09	-0.901	0.09	17.295	0.09	0.181	0.01
030	0.559	0.68	-0.186	0.01	0.372	0.01	0.167	0.65	-0.561	0.01	-0.935	0.01	16.732	0.01	0.111	0.32
031	0.820	0.46	-0.201	0.04	0.307	0.63	0.124	0.37	-0.605	0.04	-1.009	0.04	19.550	0.07	0.113	0.22
032	0.946	0.20	0.210	0.02	0.210	0.02	0.137	0.48	-0.638	0.02	-1.064	0.02	18.944	0.02	-0.105	0.02
033	0.697	0.87	0.399	1.01	-0.195	0.02	-0.097	0.02	-0.588	0.02	-0.981	0.02	17.855	0.02	0.119	0.02
034	0.927	0.43	0.185	0.03	0.276	0.64	-0.090	0.03	-0.545	0.03	-0.909	0.03	17.545	0.07	0.121	0.49
035	0.310	0.66	-0.207	0.01	0.207	0.01	-0.103	0.01	-0.623	0.01	-1.039	0.01	18.639	0.01	-0.103	0.01
036	0.458	1.19	0.184	0.01	-0.182	0.01	0.092	0.01	-0.548	0.01	-0.914	0.01	19.302	0.08	0.129	0.56
037	0.980	1.63	-0.196	0.08	-0.196	0.08	-0.098	0.08	-0.591	0.08	-0.986	0.08	18.102	0.18	-0.098	0.08
038	0.460	0.38	0.644	0.27	0.184	0.02	-0.090	0.02	-0.547	0.02	-0.913	0.02	16.589	0.02	0.101	0.20
039	0.701	1.50	0.435	1.19	0.175	0.01	0.087	0.01	-0.525	0.01	-0.876	0.01	16.586	0.12	0.114	0.16
040	1.001	0.87	-0.204	0.08	0.300	0.74	0.245	0.16	-0.614	0.08	-1.024	0.08	18.755	0.19	0.118	0.08
041	0.197	0.01	-0.194	0.01	-0.194	0.01	0.098	0.01	-0.585	0.01	0.985	0.01	18.702	0.09	0.108	0.20
042	0.295	0.01	0.296	1.00	0.296	1.00	0.118	0.51	-0.444	0.01	-0.740	0.01	15.514	0.10	0.118	0.01
043	0.735	999.99	-0.183	999.99	0.184	999.99	0.092	999.99	-0.550	999.99	-0.917	999.99	18.364	999.99	0.110	999.99
044	0.645	1.36	-0.216	0.06	0.211	0.06	0.187	0.84	-0.650	0.06	-1.084	0.06	17.965	0.17	-0.108	0.06
045	0.537	0.02	-0.176	0.02	0.179	0.02	0.090	0.02	-0.531	0.02	-0.885	0.02	17.023	0.13	0.126	0.59
Ar.Mn	0.627	0.70	0.363	0.22	0.259	0.16	0.128	0.14	0.588	0.05	0.964	0.03	18.376	0.07	0.115	0.20
Std.D.	0.263	0.46	0.416	0.36	0.221	0.27	0.106	0.21	0.079	0.12	0.074	0.03	1.306	0.06	0.020	0.22
Geo.Mean	0.573		0.269		0.228		0.113		0.584		0.961		18.330		0.113	

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Location Number	PO4	d	CO3	d	HCO3	d	NH3	d	TSS	d	Av d	SD(d)	(Milligrams) Cu A	Cu B
001	-0.042	0.06	-10.799	0.06	-10.799	0.06	-0.431	0.06	10.475	0.06	0.12	0.15	34.99	28.83
002	-0.039	0.08	-9.999	0.08	-9.999	0.08	-0.399	0.08	-9.999	0.08	0.13	0.18	32.00	22.57
003	-0.034	0.01	-8.726	0.01	-8.726	0.01	-0.348	0.01	10.450	0.34	0.12	0.26	28.03	24.07
004	-0.039	0.01	-9.999	0.01	-9.999	0.01	-0.399	0.01	-9.999	0.01	0.10	0.28	40.92	25.75
005	-0.038	0.00	-9.726	0.00	-9.726	0.00	-0.388	0.00	-9.726	0.00	0.08	0.20	35.10	23.43
006	-0.034	0.08	-8.772	0.08	-8.772	0.08	-0.350	0.08	-8.772	0.08	0.16	0.20	18.14	21.84
007	-0.038	0.04	-9.773	0.04	-9.773	0.04	-0.390	0.04	-9.773	0.04	0.21	0.32	40.00	21.52
008	-0.040	0.05	-10.249	0.05	-10.249	0.05	-0.409	0.05	-10.249	0.05	0.17	0.39	38.13	24.19
009	-0.042	0.00	-10.624	0.00	-10.624	0.00	-0.424	0.00	-10.624	0.00	0.00	0.00	23.80	24.65
010	-0.043	0.14	-10.949	0.14	-10.949	0.14	-0.437	0.14	-10.949	0.14	0.22	0.27	23.65	28.50
011	-0.039	0.01	-10.085	0.01	-10.085	0.01	-0.402	0.01	-10.085	0.01	0.17	0.31	20.67	31.52
012	-0.037	0.07	-9.599	0.07	-9.599	0.07	0.595	0.07	-9.599	0.07	0.16	0.25	34.18	27.47
013	-0.041	0.06	-10.499	0.06	-10.499	0.06	-0.419	0.06	-10.499	0.06	0.20	0.34	26.88	27.58
014	0.053	0.35	-10.449	0.06	-10.449	0.06	-0.417	0.06	12.840	0.28	0.17	0.20	24.66	34.92
015	0.052	0.39	-10.449	0.01	-10.449	0.01	-0.417	0.01	-10.449	0.01	0.14	0.34	24.24	32.14
016	0.034	0.05	-8.817	0.05	9.495	0.23	-0.352	0.05	-8.817	0.05	0.20	0.25	20.95	21.83
017	-0.036	0.05	-9.181	0.05	-9.181	0.05	-0.366	0.05	-9.181	0.05	0.06	0.02	25.45	19.20
018	-0.034	0.01	-8.772	0.01	-8.772	0.01	-0.350	0.01	-8.772	0.01	0.18	0.44	19.30	22.92
019	0.045	0.37	-8.772	0.04	-8.772	0.04	-0.350	0.04	-8.772	0.04	0.11	0.20	22.00	31.60
020	-0.037	0.02	-9.499	0.02	-9.499	0.02	-0.379	0.02	-9.499	0.02	0.11	0.18	21.32	22.85
021	-0.036	0.08	-9.338	0.08	-9.338	0.08	-0.373	0.08	-9.338	0.08	0.10	0.07	20.46	23.52
022	-0.039	0.09	-9.918	0.09	-9.918	0.09	-0.396	0.09	-9.918	0.09	0.19	0.24	35.67	22.07
023	0.084	1.11	-9.272	0.00	-9.272	0.00	-0.370	0.00	41.832	0.05	0.28	0.43	24.89	28.29
024	-0.039	0.02	-10.099	0.02	-10.099	0.02	-0.403	0.02	-10.099	0.02	0.23	0.47	35.96	28.57
025	-0.034	0.05	-8.749	0.05	-8.749	0.05	0.359	0.05	64.620	0.05	0.16	0.23	26.95	19.14
026	-0.038	0.03	-9.870	0.03	-9.870	0.03	-0.394	0.03	-9.870	0.03	0.09	0.18	26.93	21.78
027	-0.037	0.02	-9.544	0.02	-9.544	0.02	-0.381	0.02	-9.544	0.02	0.07	0.11	21.42	24.08
028	0.035	0.09	-9.022	0.09	-9.022	0.09	0.287	1.77	-9.022	0.09	0.26	0.49	20.25	24.75
030	-0.036	0.01	-9.363	0.01	-9.363	0.01	0.836	0.21	15.768	0.57	0.20	0.27	20.19	23.14
031	-0.039	0.04	-10.099	0.04	-10.099	0.04	-0.403	0.04	10.300	0.04	0.16	0.20	23.03	27.30
032	-0.042	0.02	-10.644	0.02	-10.644	0.02	-0.425	0.02	10.524	0.02	0.07	0.13	20.68	26.23
033	-0.038	0.02	-9.822	0.02	-9.822	0.02	-0.392	0.02	-9.822	0.02	0.16	0.35	22.33	30.22
034	-0.035	0.03	-9.096	0.03	-9.096	0.03	-0.363	0.03	-9.096	0.03	0.15	0.22	18.05	27.16
035	-0.041	0.01	-10.402	0.01	-10.402	0.01	-0.415	0.01	-10.402	0.01	0.06	0.18	17.63	26.41
036	-0.036	0.01	-9.144	0.01	-9.144	0.01	-0.365	0.01	-9.144	0.01	0.15	0.35	24.57	22.54
037	-0.038	0.08	-9.870	0.08	-9.870	0.08	-0.394	0.08	9.508	0.08	0.20	0.43	24.07	23.06
038	-0.036	0.02	-9.135	0.02	-9.135	0.02	-0.364	0.02	-9.135	0.02	0.08	0.12	20.90	22.50
039	-0.034	0.01	-8.772	0.01	-8.772	0.01	-0.350	0.01	-8.772	0.01	0.24	0.50	20.07	23.68
040	0.060	0.74	-10.249	0.08	-10.249	0.08	-0.409	0.08	10.875	0.26	0.27	0.30	25.42	36.67
041	-0.038	0.01	-9.773	0.01	-9.773	0.01	-0.390	0.01	-9.773	0.01	0.03	0.05	22.62	24.19
042	0.170	1.13	-7.408	0.01	-7.408	0.01	0.740	0.81	11.091	0.67	0.41	0.46	18.26	21.38
043	0.055	999.99	-9.181	999.99	-9.181	999.99	-0.366	999.99	-9.181	999.99	999.99	999.99	28.28	999.99
044	-0.042	0.06	-10.849	0.06	-10.849	0.06	-0.433	0.06	13.625	0.41	0.25	0.40	24.30	22.96
045	-0.034	0.02	-8.863	0.02	-8.863	0.02	0.358	0.02	-8.863	0.02	0.07	0.16	17.16	25.47
Ar. Mean	0.044	0.12	9.642	0.03	9.657	0.04	0.409	0.10	12.038	0.09	0.15	0.25	25.32	25.40
Std. dev.	0.021	0.25	0.744	0.03	0.734	0.04	0.094	0.28	9.508	0.14	0.07	0.12	6.38	3.93
Geo. Mean	0.042		9.613		9.629		0.402		10.781				24.62	25.12

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DUSTFALL DATA
Comments and Messages Only

Location Number	Sample A Comments	Sample B Comments	Processing Messages
001			
002			
003			
004			
005			
006			
007			
008			
009			
010			
011			
012			
013			
014			
015			
016			
017			
018			
019			
020			
021			
022			
023			
024			
025			
026			
027			
028			
030			
031			
032			
033			
034			
035			
036			
037			
038			
039			
040	SCREEN OFF		
041			
042	BIRD DROPPINGS ON SCREEN	BIRD DROPPINGS ON SCREEN	
043	DECAYED INSECT PARTS ON SCREEN	VOID/CONTAMINATION	MISSING SAMPLE B
044			
045			

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AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	Na	d	K	d	Ca	d	Mg	d	Cl	d	F	d	SO4	d	NO3	d
080	0.645	1.44	-0.178	0.03	0.364	0.03	0.146	0.53	-0.536	0.03	-0.894	0.03	17.309	0.14	0.109	0.03
081	0.471	0.39	-0.189	0.01	0.661	0.30	0.197	0.85	-0.569	0.01	-0.949	0.01	18.864	0.01	0.123	0.14
082	0.474	1.22	0.188	0.03	0.375	0.03	0.159	0.08	-0.572	0.03	-0.954	0.03	18.773	0.03	-0.094	0.03
083	0.599	0.77	0.656	1.37	0.587	0.12	0.342	0.06	-0.551	0.12	-0.919	0.12	19.568	0.12	0.098	0.12
Ar.Mean	0.547	0.95	0.303	0.36	0.496	0.12	0.211	0.38	0.558	0.04	0.930	0.04	18.628	0.07	0.106	0.08
Std.Dev.	0.088	0.47	0.235	0.67	0.149	0.12	0.089	0.37	0.016	0.04	0.027	0.04	0.948	0.06	0.012	0.05
Geo.Mean	0.541	0.85	0.254	0.06	0.479	0.07	0.199	0.21	0.557	0.03	0.929	0.03	18.609	0.05	0.105	0.06

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AVERAGE DUSTFALL DATA (Pounds per Acre - 30 Days)
and Fractional Differences (d)

Location Number	PO4	d	CO3	d	HCO3	d	NH3	d	TSS	d	Av d	SD(d)	(Milligrams) Cu A	Cu B
080	-0.035	0.03	-8.954	0.03	-8.954	0.03	-0.357	0.03	9.102	0.03	0.19	0.40	22.85	22.39
081	-0.037	0.01	-9.499	0.01	-9.499	0.01	-0.379	0.01	19.814	0.11	0.15	0.24	21.32	21.84
082	-0.037	0.03	-9.544	0.03	-9.544	0.03	-0.381	0.03	13.205	0.60	0.17	0.35	23.94	24.77
083	-0.036	0.12	-9.204	0.12	-9.204	0.12	-0.367	0.12	21.409	0.06	0.26	0.38	21.87	35.11
Ar.Mean	0.037	0.04	9.301	0.04	9.301	0.04	0.372	0.04	15.882	0.20	0.19	0.34	22.49	26.02
Std.dev.	0.001	0.04	0.276	0.04	0.276	0.04	0.011	0.04	5.748	0.26	0.04	0.07	1.15	6.19
Geo.Mean	0.037	0.03	9.298	0.03	9.298	0.03	0.371	0.03	15.026	0.10	0.18	0.33	22.47	25.53

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DUSTFALL DATA
Comments and Messages Only

Location Number	Sample A Comments	Sample B Comments	Processing Messages
080	BLACK ASH ON SCREEN	BLACK ASH ON SCREEN	
081			
082			
083			

APPENDIX C
SUSPENDED PARTICULATE MATTER DATA

Suspended particulate matter data are collected each month for the following six (6) sites: 8, 9, 10, 20, 21, 27. The data for the ten (10) ions analyzed are presented for each month in the following tables. Values below the detectable limit of the laboratory procedure are preceded by negative signs. Missing data are represented by a field of "9s."

03/07/86

Suspended Particulate

Location	Date	Lab Number	Ca ug/m3	Cl ug/m3	Fe ug/m3	F ug/m3	K ug/m3	Mg ug/m3	Na ug/m3	N ug/m3	SO4 ug/m3	P ug/m3
008	3/85	85-05-230	1.40	-0.3	-0.002	0.018	-0.30	0.06	1.17	0.70	1.2	-0.02
009	3/85	85-05-230	3.11	0.4	-0.002	0.022	-0.30	0.15	1.48	0.56	3.3	-0.02
010	3/85	85-05-230	2.43	0.4	-0.002	0.024	-0.30	0.12	1.57	0.39	1.6	-0.02
020	3/85	85-05-230	1.75	0.6	-0.002	0.026	-0.30	0.09	1.75	0.35	0.6	-0.02
021	3/85	85-05-230	1.55	-0.3	-0.002	0.015	-0.30	0.06	0.59	0.29	0.3	-0.02
027	3/85	85-05-230	1.40	-0.3	-0.002	0.017	-0.30	0.06	1.16	0.32	0.9	-0.02

03/07/86

Suspended Particulate

Location	Date	Lab Number	Ca ug/m3	Cl ug/m3	Fe ug/m3	F ug/m3	K ug/m3	Mg ug/m3	Na ug/m3	N ug/m3	SO4 ug/m3	P ug/m3
008	4/85	85-06-041	1.77	-0.3	-0.002	0.012	-0.30	0.06	0.58	0.23	-0.2	-0.02
009	4/85	85-06-041	3.09	-0.3	-0.002	0.014	-0.30	0.12	0.58	0.29	1.2	-0.02
010	4/85	85-06-041	2.34	-0.3	-0.002	0.014	-0.30	0.09	0.86	0.26	1.1	-0.02
020	4/85	85-06-041	2.32	-0.3	-0.002	0.023	-0.30	0.09	1.45	0.29	-0.2	-0.02
021	4/85	85-06-041	1.99	-0.3	-0.002	0.012	-0.30	0.06	0.86	0.23	1.2	-0.02
027	4/85	85-06-041	2.35	-0.3	-0.002	0.014	-0.30	0.06	0.58	0.23	-0.2	-0.02

03/07/86

Suspended Particulate

Location	Date	Lab Number	Ca ug/m3	Cl ug/m3	Fe ug/m3	F ug/m3	K ug/m3	Mg ug/m3	Na ug/m3	N ug/m3	SO4 ug/m3	P ug/m3
008	1/85	85-03-096	0.38	-0.3	-0.002	0.009	0.09	0.05	0.64	0.19	0.4	-0.02
009	1/85	85-03-096	0.68	-0.3	-0.002	0.131	0.11	0.05	0.74	0.24	0.8	-0.02
010	1/85	85-03-096	0.45	-0.3	-0.002	0.012	0.09	0.05	0.61	0.16	1.2	-0.02
020	1/85	85-03-096	0.73	-0.3	-0.002	0.038	0.09	0.05	0.78	0.26	0.7	-0.02
021	1/85	85-03-096	0.52	-0.3	-0.002	0.012	0.12	0.05	0.64	0.35	0.7	-0.02
027	1/85	85-03-096	0.54	-0.3	-0.002	0.014	0.09	0.05	0.64	0.24	0.9	-0.02

03/07/86

Suspended Particulate

Location	Date	Lab Number	Ca ug/m3	Cl ug/m3	Fe ug/m3	F ug/m3	K ug/m3	Mg ug/m3	Na ug/m3	N ug/m3	SO4 ug/m3	P ug/m3
008	2/85	85-05-229	0.84	-0.3	-0.002	0.012	-0.30	0.03	0.88	0.14	0.9	-0.02
009	2/85	85-05-229	1.75	-0.3	-0.002	0.026	-0.30	0.07	1.12	0.26	1.9	-0.02
010	2/85	85-05-229	1.22	-0.3	-0.002	0.023	-0.30	0.04	0.76	0.19	0.4	-0.02
020	2/85	85-05-229	1.20	-0.3	-0.002	0.026	-0.30	0.06	1.17	0.23	2.0	-0.02
021	2/85	85-05-229	1.11	-0.3	-0.002	0.020	-0.30	0.06	0.88	0.26	3.5	-0.02
027	2/85	85-05-229	1.02	-0.3	-0.002	0.020	-0.30	0.03	0.87	0.20	1.7	-0.02

03/07/86

Suspended Particulate

Location	Date	Lab Number	Ca ug/m3	Cl ug/m3	Fe ug/m3	F ug/m3	K ug/m3	Mg ug/m3	Na ug/m3	N ug/m3	SO4 ug/m3	P ug/m3
008	5/85	85-06-362	1.31	-0.3	-0.002	0.009	-0.30	0.07	0.94	0.23	-0.2	-0.02
009	5/85	85-06-362	0.99	-0.3	-0.002	0.006	-0.30	0.52	0.34	0.10	0.2	-0.02
010	5/85	85-06-362	1.85	0.5	-0.002	0.014	-0.30	0.12	0.94	0.28	0.9	-0.02
020	5/85	85-06-362	1.84	1.4	-0.002	0.026	2.56	0.12	1.86	0.28	-0.2	-0.02
021	5/85	85-06-362	4.20	0.5	-0.002	0.062	2.08	0.21	1.56	0.42	1.0	-0.02
027	5/85	85-06-362	1.80	-0.3	-0.002	0.014	-0.30	0.09	0.94	0.26	0.5	-0.02

03/07/86

Suspended Particulate

Location	Date	Lab Number	Ca ug/m3	Cl ug/m3	Fe ug/m3	F ug/m3	K ug/m3	Mg ug/m3	Na ug/m3	N ug/m3	SO4 ug/m3	P ug/m3
008	6/85	85-07-388	1.75	0.6	-0.002	0.026	-0.30	0.12	1.17	0.29	2.3	-0.02
009	6/85	85-07-388	2.34	0.6	-0.002	0.050	0.58	0.15	1.20	0.26	2.9	-0.02
010	6/85	85-07-388	2.34	1.2	-0.002	0.056	-0.30	0.15	1.46	0.26	2.6	-0.02
020	6/85	85-07-388	2.34	0.9	-0.002	0.058	0.58	0.15	1.17	0.32	2.3	-0.02
021	6/85	85-07-388	3.81	0.9	-0.002	0.094	0.59	0.23	1.17	0.32	2.3	-0.02
027	6/85	85-07-388	2.03	0.6	-0.002	0.046	0.58	0.14	1.16	0.26	2.3	-0.02

03/07/86

Suspended Particulate

Location	Date	Lab Number	Ca ug/m3	Cl ug/m3	Fe ug/m3	F ug/m3	K ug/m3	Mg ug/m3	Na ug/m3	N ug/m3	SO4 ug/m3	P ug/m3
008	7/85	85-10-154	1.92	999.9	99.999	99.999	-0.30	0.12	0.87	99.99	1.2	99.99
009	7/85	85-10-154	2.82	0.6	-0.002	0.012	0.30	0.14	1.16	0.41	3.5	-0.02
010	7/85	85-10-154	2.41	0.3	-0.002	-0.020	-0.30	0.14	1.16	0.38	3.5	-0.02
020	7/85	85-10-154	2.24	0.9	-0.002	0.032	-0.30	0.12	1.46	0.49	3.8	-0.02
021	7/85	85-10-154	5.34	999.9	99.999	99.999	-0.30	0.20	1.16	99.99	6.1	99.99
027	7/85	85-10-154	2.28	-0.3	-0.002	0.012	-0.30	0.12	0.88	0.50	0.9	-0.02

03/07/86

Suspended Particulate

Location	Date	Lab Number	Ca ug/m3	Cl ug/m3	Fe ug/m3	F ug/m3	K ug/m3	Mg ug/m3	Na ug/m3	N ug/m3	SO4 ug/m3	P ug/m3
008	8/85	85-10-176	1.72	0.3	-0.002	0.012	-0.30	0.12	1.16	0.26	0.6	-0.02
009	8/85	85-10-176	3.89	999.9	99.999	99.999	-0.30	0.18	1.46	99.99	3.5	99.99
010	8/85	85-10-176	2.71	0.6	-0.002	0.017	-0.30	0.17	1.75	0.32	3.8	-0.02
020	8/85	85-10-176	2.36	999.9	-0.002	0.035	-0.30	0.14	3.21	0.29	6.1	-0.02
021	8/85	85-10-176	5.05	0.6	-0.002	0.044	-0.30	0.23	1.46	0.47	3.2	-0.02
027	8/85	85-10-176	1.95	999.9	-0.002	99.999	-0.30	0.12	1.16	99.99	4.7	99.99

03/07/86

Suspended Particulate

Location	Date	Lab Number	Ca ug/m3	Cl ug/m3	Fe ug/m3	F ug/m3	K ug/m3	Mg ug/m3	Na ug/m3	N ug/m3	SO4 ug/m3	P ug/m3
008	9/85	85-11-020	1.37	0.6	-0.002	0.009	-0.30	0.09	0.86	0.30	1.8	-0.02
009	9/85	85-11-020	2.51	0.6	-0.002	0.009	-0.30	0.12	0.91	0.35	2.3	-0.02
010	9/85	85-11-020	1.57	0.6	-0.002	0.006	-0.30	0.12	0.86	0.33	2.7	-0.02
020	9/85	85-11-020	1.51	0.6	-0.002	0.030	-0.30	0.09	1.13	0.30	0.9	0.02
021	9/85	85-11-020	2.98	0.6	-0.002	0.035	-0.30	0.15	0.96	0.38	19.6	-0.02
027	9/85	85-11-020	1.36	0.6	-0.002	0.015	-0.30	0.09	0.83	0.27	1.5	-0.02

03/07/86

Suspended Particulate

Location	Date	Lab Number	Ca ug/m3	Cl ug/m3	Fe ug/m3	F ug/m3	K ug/m3	Mg ug/m3	Na ug/m3	N ug/m3	SO4 ug/m3	P ug/m3
008	10/85	85-11-063	1.23	-0.3	-0.002	0.073	-0.30	0.03	0.58	0.26	1.5	-0.02
009	10/85	85-11-063	2.54	-0.3	-0.002	0.093	-0.30	0.06	0.58	0.38	999.9	-0.02
010	10/85	85-11-063	3.64	0.6	-0.002	0.158	-0.30	0.06	1.17	0.64	4.1	-0.02
020	10/85	85-11-063	1.43	0.3	-0.002	0.079	-0.30	0.03	0.88	0.29	1.2	-0.02
021	10/85	85-11-063	4.19	0.6	-0.002	0.081	-0.30	0.09	0.87	0.46	0.9	-0.02
027	10/85	85-11-063	1.91	-0.3	-0.002	0.079	-0.30	0.03	0.59	0.38	2.0	-0.02

03/07/86

Suspended Particulate

Location	Date	Lab Number	Ca ug/m3	Cl ug/m3	Fe ug/m3	F ug/m3	K ug/m3	Mg ug/m3	Na ug/m3	N ug/m3	SO4 ug/m3	P ug/m3
008	11/85	85-12-393	1.38	1.6	0.007	0.328	-0.30	0.14	0.94	0.23	3.0	-0.02
009	11/85	85-12-393	3.39	1.9	0.005	0.281	-0.30	0.14	0.94	0.40	2.1	-0.02
010	11/85	85-12-393	2.34	1.9	0.012	0.328	-0.30	0.09	0.94	0.23	2.1	-0.02
020	11/85	85-12-393	1.80	2.3	0.007	0.351	-0.30	0.07	1.17	0.23	2.8	-0.02
02.	11/85	85-12-393	5.27	2.6	0.005	0.375	-0.30	0.21	1.17	0.52	2.8	-0.02
027	11/85	85-12-393	1.85	1.6	0.009	0.351	-0.30	0.07	0.94	0.23	2.3	-0.02

03/07/86

Suspended Particulate

Location	Date	Lab Number	Ca ug/m3	Cl ug/m3	Fe ug/m3	F ug/m3	K ug/m3	Mg ug/m3	Na ug/m3	N ug/m3	SO4 ug/m3	P ug/m3
008	12/85	86-01-456	0.73	3.2	-0.002	0.407	-0.30	0.03	2.62	0.20	1.4	-0.02
009	12/85	86-01-456	1.22	4.0	0.006	0.268	-0.30	0.03	2.92	0.32	1.4	-0.02
010	12/85	86-01-456	0.88	3.2	0.003	0.251	-0.30	0.03	2.92	1.28	1.8	-0.02
020	12/85	86-01-456	1.05	3.5	0.003	0.350	-0.30	0.06	3.20	-0.03	1.7	-0.02
021	12/85	86-01-456	6.54	4.1	-0.002	0.286	-0.30	0.12	3.21	1.17	2.6	0.06
027	12/85	86-01-456	0.93	3.2	0.003	0.347	-0.30	0.03	2.60	0.26	1.4	-0.02

APPENDIX D
INDIGENOUS VEGETATION DATA

Indigenous vegetation data were collected twice during 1985, once during the first quarter and again during the fourth quarter. Data were collected at eight (8) sites (1, 2, 3, 4, 6, 40, 42, 44). The laboratory analyses included nine (9) ions for phytomass. No rinsate analyses were performed during 1985. Also, no leaf area or leaf biomass data were reported. Missing data are reported as a field of "9s."

Indigenous Vegetation

Monitoring Location 0001

Date 3/85 Species LARREA DIVARICATA

02/28/86 Rinsate

Plot Number	Plant Id No	Tran-sect	Cations (ppm)				Anions (ppm)				
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F
1	01-01	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
1	01-02	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
2	01-03	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
3	01-04	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
4	01-05	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
6	01-06	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
7	01-07	B	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
8	01-08	B	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
9	01-09	B	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
10	01-10	B	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99

Phytomass

Plot Number	Plant Id No	Tran-sect	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	01-01	A	486.00	10417.00	13300.00	1325.00	6200.00	18551.00	1800.00	1290.00	16.00	9999.9	999.99
1	01-02	A	457.00	7917.00	15500.00	1300.00	9200.00	19565.00	3000.00	1062.00	22.00	9999.9	999.99
2	01-03	A	743.00	7500.00	13138.00	1013.00	9800.00	30435.00	4600.00	1290.00	21.00	9999.9	999.99
3	01-04	A	600.00	11458.00	13263.00	988.00	7800.00	23913.00	5000.00	1062.00	20.00	9999.9	999.99
4	01-05	A	686.00	10417.00	11863.00	1163.00	6600.00	26087.00	3500.00	1214.00	19.00	9999.9	999.99
6	01-06	A	457.00	9167.00	15088.00	1150.00	9000.00	21739.00	4200.00	1138.00	19.00	9999.9	999.99
7	01-07	B	371.00	10417.00	14663.00	1250.00	6600.00	32609.00	5000.00	1138.00	19.00	9999.9	999.99
8	01-08	B	429.00	8333.00	15050.00	1225.00	6700.00	33768.00	4200.00	1062.00	19.00	9999.9	999.99
9	01-09	B	457.00	7083.00	16125.00	1375.00	3900.00	35435.00	5000.00	834.00	19.00	9999.9	999.99
10	01-10	B	429.00	10417.00	14438.00	1238.00	8000.00	30435.00	7500.00	1214.00	19.00	9999.9	999.99

Indigenous Vegetation

Monitoring Location 0002
Date 3/85 Species ATRIPLEX

02/28/86 Rinsate

Plot Number	Plant Id No	Tran-sect	Cations (ppm)				Anions (ppm)				
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F
1	02-01	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
2	02-02	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
3	02-03	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
4	02-04	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
5	02-05	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
6	02-06	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
7	02-07	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
8	02-08	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
9	02-09	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
10	02-10	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99

Phytomass

Plot Number	Plant Id No	Tran-sect	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	02-01	A	48810.00	13000.00	9975.00	3538.00	42000.00	7692.00	500.00	1593.00	11.00	9999.9	999.99
2	02-02	A	36905.00	18000.00	11538.00	2525.00	68000.00	10769.00	625.00	1365.00	10.00	9999.9	999.99
3	02-03	A	53846.00	20000.00	7550.00	3038.00	80000.00	13462.00	800.00	1593.00	10.00	9999.9	999.99
4	02-04	A	47619.00	20000.00	8313.00	2063.00	82000.00	19615.00	513.00	1669.00	9.00	9999.9	999.99
5	02-05	A	53846.00	17000.00	8750.00	4413.00	66000.00	11538.00	625.00	1593.00	10.00	9999.9	999.99
6	02-06	A	42857.00	24000.00	11288.00	3775.00	76000.00	13846.00	875.00	1214.00	9.00	9999.9	999.99
7	02-07	A	57692.00	18000.00	16438.00	6375.00	102000.00	11538.00	800.00	1214.00	11.00	9999.9	999.99
8	02-08	A	51923.00	18000.00	13675.00	6500.00	76000.00	11538.00	438.00	1138.00	10.00	9999.9	999.99
9	02-09	A	41667.00	19000.00	5750.00	2425.00	54000.00	10962.00	613.00	1821.00	9.00	9999.9	999.99
10	02-10	A	41667.00	23000.00	7713.00	2500.00	83000.00	13846.00	750.00	1593.00	11.00	9999.9	999.99

Indigenous Vegetation

Monitoring Location 0003
Date 3/85 Species ATRIPLEX POLYCARPA

02/28/86 Rinsate

Plot Number	Plant Id No	Tran-sect	Cations (ppm)				Anions (ppm)				
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F
1	03-01	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
2	03-02	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
3	03-03	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
4	03-04	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
5	03-05	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
6	03-06	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
7	03-07	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
8	03-08	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
9	03-09	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
10	03-10	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99

Phytomass

Plot Number	Plant Id No	Tran-sect	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	03-01	A	50000.00	13000.00	24113.00	6000.00	58000.00	5385.00	600.00	986.00	15.00	9999.9	999.99
2	03-02	A	51923.00	24000.00	6688.00	2438.00	92000.00	8462.00	1000.00	1290.00	10.00	9999.9	999.99
3	03-03	A	48810.00	25000.00	9388.00	3213.00	108000.00	10000.00	875.00	1290.00	10.00	9999.9	999.99
4	03-04	A	47619.00	25000.00	10475.00	3388.00	68000.00	6923.00	550.00	1290.00	9.00	9999.9	999.99
5	03-05	A	53846.00	18478.00	10975.00	4475.00	82000.00	8182.00	625.00	1365.00	11.00	9999.9	999.99
6	03-06	A	57692.00	19565.00	9625.00	4825.00	78000.00	8939.00	1000.00	1441.00	12.00	9999.9	999.99
7	03-07	A	65385.00	19565.00	6313.00	3888.00	62000.00	11818.00	575.00	1441.00	10.00	9999.9	999.99
8	03-08	A	46250.00	21739.00	23738.00	3938.00	72000.00	12727.00	900.00	1214.00	10.00	9999.9	999.99
9	03-09	A	47500.00	27381.00	8738.00	4650.00	63000.00	10909.00	1250.00	1290.00	10.00	9999.9	999.99
10	03-10	A	46250.00	23913.00	12638.00	3900.00	68000.00	13333.00	825.00	1138.00	10.00	9999.9	999.99

Indigenous Vegetation

Monitoring Location 0004
Date 3/85 Species LARREA DIVARICATA

02/28/86

Rinsate

Plot Number	Plant Id No	Tran-sect	Cations (ppm)				Anions (ppm)				
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F
1	04-01	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
1	04-02	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
2	04-03	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
3	04-04	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
3	04-05	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
4	04-06	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
4	04-07	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
5	04-08	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
6	04-09	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
7	04-10	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99

Phytomass

Plot Number	Plant Id No	Tran -sect	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	04-01	A	600.00	15217.00	15825.00	1013.00	8600.00	6667.00	775.00	1441.00	19.00	9999.9	999.99
1	04-02	A	571.00	16304.00	17525.00	1525.00	5000.00	5833.00	650.00	1517.00	16.00	9999.9	999.99
2	04-03	A	543.00	16304.00	12150.00	1025.00	5200.00	5833.00	800.00	1745.00	18.00	9999.9	999.99
3	04-04	A	543.00	10000.00	13025.00	1300.00	4800.00	5000.00	738.00	1290.00	18.00	9999.9	999.99
3	04-05	A	486.00	14130.00	14375.00	938.00	7800.00	7500.00	850.00	1365.00	20.00	9999.9	999.99
4	04-06	A	514.00	11957.00	14813.00	1425.00	4800.00	5833.00	650.00	1138.00	17.00	9999.9	999.99
4	04-07	A	543.00	15217.00	14350.00	1363.00	5100.00	10833.00	700.00	1365.00	17.00	9999.9	999.99
5	04-08	A	600.00	10870.00	15425.00	1175.00	7900.00	4167.00	800.00	986.00	19.00	9999.9	999.99
6	04-09	A	743.00	10870.00	13713.00	1013.00	8100.00	7500.00	925.00	1214.00	20.00	9999.9	999.99
7	04-10	A	571.00	10870.00	16025.00	1250.00	7800.00	9167.00	775.00	1214.00	20.00	9999.9	999.99

Indigenous Vegetation

Monitoring Location 0006
Date 3/85 Species LARREA DIVARICATA

02/28/86 Rinsate

Plot Number	Plant Id No	Tran-sect	Cations (ppm)				Anions (ppm)				
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F
1	06-01	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
2	06-02	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
3	06-03	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
4	06-04	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
5	06-05	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
6	06-06	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
7	06-07	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
8	06-08	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
9	06-09	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
10	06-10	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99

Phytomass

Plot Number	Plant Id No	Tran-sect	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	06-01	A	543.00	9130.00	22550.00	1875.00	8200.00	10000.00	750.00	1365.00	20.00	9999.9	999.99
2	06-02	A	514.00	9130.00	18900.00	1888.00	7400.00	10000.00	838.00	1593.00	19.00	9999.9	999.99
3	06-03	A	429.00	7391.00	15925.00	2313.00	7200.00	10833.00	800.00	1593.00	13.00	9999.9	999.99
4	06-04	A	400.00	10000.00	15500.00	1013.00	7600.00	7500.00	750.00	1972.00	20.00	9999.9	999.99
5	06-05	A	457.00	13043.00	14488.00	1438.00	6400.00	5000.00	725.00	1972.00	19.00	9999.9	999.99
6	06-06	A	486.00	10870.00	15675.00	1500.00	7400.00	11667.00	800.00	1745.00	19.00	9999.9	999.99
7	06-07	A	571.00	11957.00	11550.00	1188.00	6800.00	5833.00	800.00	1593.00	21.00	9999.9	999.99
8	06-08	A	457.00	11957.00	19438.00	1338.00	880.00	7500.00	775.00	1745.00	19.00	9999.9	999.99
9	06-09	A	457.00	10870.00	12475.00	1088.00	4800.00	5833.00	663.00	1441.00	18.00	9999.9	999.99
10	06-10	A	371.00	10952.00	16400.00	1300.00	6700.00	8333.00	850.00	1669.00	18.00	9999.9	999.99

Indigenous Vegetation

Monitoring Location 0040
Date 3/85 Species LARREA DIVARICATA

02/28/86 Rinsate

Plot Number	Plant Id No	Tran-sect	Cations (ppm)				Anions (ppm)				
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F
1	40-01	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
1	40-02	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
2	40-03	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
3	40-04	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
4	40-05	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
5	40-06	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
6	40-07	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
7	40-08	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
8	40-09	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
10	40-10	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99

Phytomass

Plot Number	Plant Id No	Tran -sect	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	40-01	A	353.00	4583.00	10638.00	850.00	10000.00	10000.00	838.00	1517.00	19.00	9999.9	999.99
1	40-02	A	500.00	9583.00	10325.00	888.00	8600.00	17000.00	750.00	1517.00	19.00	9999.9	999.99
2	40-03	A	441.00	10417.00	7550.00	875.00	9600.00	10000.00	800.00	1290.00	20.00	9999.9	999.99
3	40-04	A	412.00	10417.00	11300.00	1450.00	6400.00	8000.00	925.00	1214.00	19.00	9999.9	999.99
4	40-05	A	559.00	12500.00	9263.00	950.00	5400.00	15714.00	725.00	1593.00	15.00	9999.9	999.99
5	40-06	A	471.00	11458.00	10450.00	900.00	7600.00	17000.00	650.00	1669.00	17.00	9999.9	999.99
6	40-07	A	382.00	11458.00	13275.00	1325.00	10500.00	19714.00	800.00	1365.00	17.00	9999.9	999.99
7	40-08	A	382.00	11458.00	13538.00	988.00	10000.00	19000.00	850.00	1593.00	18.00	9999.9	999.99
8	40-09	A	324.00	10938.00	11363.00	963.00	10000.00	10000.00	950.00	1593.00	18.00	9999.9	999.99
10	40-10	A	588.00	12500.00	11825.00	1188.00	9600.00	21000.00	788.00	1138.00	18.00	9999.9	999.99

Indigenous Vegetation

Monitoring Location 0042
Date 3/85 Species LARREA DIVARICATA

02/28/86 Rinsate

Plot Number	Plant Id No	Tran-sect	Cations (ppm)				Anions (ppm)				
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F
1	42-01	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
2	42-02	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
3	42-03	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
4	42-04	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
5	42-05	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
6	42-06	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
7	42-07	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
8	42-08	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
9	42-09	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
10	42-10	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99

Phytomass

Plot Number	Plant Id No	Tran-sect	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	42-01	A	647.00	3125.00	10563.00	1313.00	11000.00	19000.00	875.00	1669.00	18.00	9999.9	999.99
2	42-02	A	588.00	11458.00	15163.00	1300.00	5800.00	20143.00	900.00	1517.00	17.00	9999.9	999.99
3	42-03	A	441.00	10952.00	19125.00	1638.00	5000.00	23000.00	800.00	1441.00	18.00	9999.9	999.99
4	42-04	A	647.00	10714.00	17300.00	1213.00	6300.00	24714.00	925.00	1365.00	18.00	9999.9	999.99
5	42-05	A	676.00	10476.00	16838.00	1213.00	6700.00	24857.00	850.00	1365.00	18.00	9999.9	999.99
6	42-06	A	353.00	10417.00	13738.00	1075.00	10000.00	23714.00	700.00	1290.00	19.00	9999.9	999.99
7	42-07	A	382.00	11458.00	9125.00	1063.00	8100.00	21143.00	788.00	1517.00	18.00	9999.9	999.99
8	42-08	A	426.00	1042.00	14825.00	1525.00	10000.00	18000.00	788.00	1517.00	18.00	9999.9	999.99
9	42-09	A	500.00	11979.00	15000.00	1338.00	7400.00	11286.00	775.00	1669.00	19.00	9999.9	999.99
10	42-10	A	412.00	11458.00	12125.00	1138.00	7800.00	14000.00	950.00	1593.00	20.00	9999.9	999.99

Indigenous Vegetation

Monitoring Location 0044
Date 3/85 Species ATRIPLEX

02/28/86

Rinsate

Plot Number	Plant Id No	Tran-sect	Cations (ppm)				Anions (ppm)				
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F
1	44-01	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
2	44-02	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
3	44-03	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
4	44-04	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
5	44-05	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
6	44-06	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
7	44-07	B	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
8	44-08	B	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
9	44-09	B	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
10	44-10	B	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99

Phytomass

Plot Number	Plant Id No	Tran-sect	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	44-01	A	27857.00	20833.00	7575.00	4300.00	37000.00	11429.00	280.00	1441.00	15.00	9999.9	999.99
2	44-02	A	26786.00	19792.00	9088.00	5000.00	28500.00	14286.00	263.00	1669.00	12.00	9999.9	999.99
3	44-03	A	30000.00	11979.00	11300.00	5000.00	40000.00	16429.00	250.00	2124.00	14.00	9999.9	999.99
4	44-04	A	29286.00	27976.00	7513.00	4938.00	36000.00	18571.00	300.00	1593.00	11.00	9999.9	999.99
5	44-05	A	25714.00	27381.00	13825.00	5500.00	38500.00	20429.00	250.00	1517.00	9.00	9999.9	999.99
6	44-06	A	28571.00	35714.00	9075.00	5000.00	31000.00	12857.00	275.00	1441.00	9.00	9999.9	999.99
7	44-07	B	34091.00	27381.00	8625.00	4688.00	40000.00	20714.00	338.00	1365.00	9.00	9999.9	999.99
8	44-08	B	39091.00	16146.00	9475.00	5375.00	3600.00	19714.00	380.00	1441.00	9.00	9999.9	999.99
9	44-09	B	31818.00	19792.00	7425.00	4525.00	31500.00	23143.00	225.00	1669.00	9.00	9999.9	999.99
10	44-10	B	33636.00	23958.00	9025.00	7000.00	38500.00	28429.00	263.00	1972.00	9.00	9999.9	999.99

Indigenous Vegetation

Monitoring Location 0001
Date 10/85 Species LARREA DIVARICATA

02/28/86 Rinsate

Plot Number	Plant Id No	Tran-sect	Cations (ppm)				Anions (ppm)				
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F
1	01-01	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
1	01-02	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
2	01-03	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
3	01-04	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
4	01-05	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
7	01-06	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
8	01-07	B	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
9	01-08	B	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
10	01-09	B	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
11	01-10	B	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99

Phytomass

Plot Number	Plant Id No	Tran-sect	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	01-01	A	543.00	8333.00	18775.00	1563.00	8400.00	39286.00	1500.00	759.00	19.00	9999.9	999.99
1	01-02	A	486.00	5833.00	24700.00	1550.00	9000.00	24476.00	925.00	759.00	20.00	9999.9	999.99
2	01-03	A	571.00	7500.00	20900.00	1088.00	10500.00	25952.00	1250.00	683.00	21.00	9999.9	999.99
3	01-04	A	571.00	5417.00	18375.00	1375.00	9400.00	25000.00	1000.00	759.00	21.00	9999.9	999.99
4	01-05	A	771.00	8750.00	13575.00	1413.00	9200.00	34524.00	638.00	683.00	21.00	9999.9	999.99
7	01-06	A	657.00	7500.00	20413.00	1513.00	8000.00	41667.00	875.00	683.00	24.00	9999.9	999.99
8	01-07	B	400.00	8333.00	18438.00	2200.00	7400.00	33333.00	950.00	607.00	21.00	9999.9	999.99
9	01-08	B	400.00	7083.00	13463.00	1638.00	7800.00	33333.00	900.00	759.00	21.00	9999.9	999.99
10	01-09	B	400.00	8333.00	15563.00	1738.00	6000.00	44048.00	825.00	834.00	21.00	9999.9	999.99
11	01-10	B	343.00	5833.00	18700.00	1850.00	6800.00	38095.00	813.00	683.00	20.00	9999.9	999.99

Indigenous Vegetation

Monitoring Location 0002
Date 10/85 Species ATRIPLEX

04/18/86 Rinsate

Plot Number	Plant Id No	Tran-sect	Cations (ppm) Na	K	Ca	Mg	Anions (ppm) Cl	SO4	NO3	PO4	F
1	02-01	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
2	02-02	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
3	02-03	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
4	02-04	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
5	02-05	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
6	02-06	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
7	02-07	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
8	02-08	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
9	02-09	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
10	02-10	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99

Phytomass

Plot Number	Plant Id No	Tran-sect	Cations (ppm) Na	K	Ca	Mg	Anions (ppm) Cl	SO4	NO3	PO4	F	Leaf Area (cm2)	Leaf Biomass (g dry wt)
1	02-01	A	57143.00	10417.00	11338.00	6875.00	69000.00	14151.00	550.00	1214.00	9.00	9999.9	999.99
2	02-02	A	46250.00	10417.00	19225.00	4438.00	66000.00	6382.00	370.00	1290.00	9.00	9999.9	999.99
3	02-03	A	58929.00	12500.00	10900.00	3850.00	66000.00	10377.00	650.00	1365.00	9.00	9999.9	999.99
4	02-04	A	62500.00	10417.00	11900.00	4350.00	82000.00	11969.00	650.00	1365.00	9.00	9999.9	999.99
5	02-05	A	58929.00	12500.00	13400.00	7250.00	78000.00	15094.00	650.00	1214.00	9.00	9999.9	999.99
6	02-06	A	48750.00	19792.00	11763.00	4050.00	83000.00	16907.00	850.00	1365.00	9.00	9999.9	999.99
7	02-07	A	57143.00	10417.00	18188.00	11000.00	78000.00	19811.00	875.00	1062.00	9.00	9999.9	999.99
8	02-08	A	47500.00	10417.00	12613.00	6500.00	68000.00	11247.00	625.00	1441.00	9.00	9999.9	999.99
9	02-09	A	53571.00	10417.00	15813.00	4175.00	71000.00	15890.00	650.00	1517.00	9.00	9999.9	999.99
10	02-10	A	45000.00	17708.00	14025.00	4488.00	69000.00	10656.00	1050.00	1365.00	9.00	9999.9	999.99

Indigenous Vegetation

Monitoring Location 0003
Date 10/85 Species ATRIPLEX

02/28/86 Rinsate

Plot Number	Plant Id No	Tran-sect	Cations (ppm)				Anions (ppm)				
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F
1	03-01	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
2	03-02	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
3	03-03	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
4	03-04	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
5	03-05	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
6	03-06	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
7	03-07	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
8	03-08	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
9	03-09	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
10	03-10	B	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99

Phytomass

Plot Number	Plant Id No	Tran-sect	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	03-01	A	58929.00	17708.00	14400.00	7750.00	42000.00	8491.00	480.00	531.00	10.00	9999.9	999.99
2	03-02	A	64286.00	18750.00	12613.00	5875.00	65000.00	8769.00	400.00	1062.00	9.00	9999.9	999.99
3	03-03	A	62500.00	13542.00	15313.00	8125.00	66000.00	11674.00	480.00	1230.00	10.00	9999.9	999.99
4	03-04	A	55357.00	21875.00	16913.00	6500.00	68000.00	12986.00	800.00	986.00	9.00	9999.9	999.99
5	03-05	A	64286.00	14583.00	12650.00	7250.00	64000.00	15595.00	650.00	1290.00	9.00	9999.9	999.99
6	03-06	A	67857.00	14583.00	12400.00	11750.00	57000.00	16612.00	725.00	910.00	11.00	9999.9	999.99
7	03-07	A	58929.00	13542.00	9850.00	6500.00	72000.00	15947.00	600.00	1138.00	10.00	9999.9	999.99
8	03-08	A	53571.00	21875.00	13138.00	6125.00	76000.00	12322.00	1000.00	834.00	10.00	9999.9	999.99
9	03-09	A	47500.00	21875.00	12700.00	7000.00	72000.00	14783.00	900.00	1441.00	9.00	9999.9	999.99
10	03-10	B	57143.00	15625.00	13825.00	8625.00	57000.00	13265.00	700.00	1062.00	9.00	9999.9	999.99

Indigenous Vegetation

Monitoring Location 0004
Date 10/85 Species LARREA DIVARICATA

02/28/86 Rinsate

Plot Number	Plant Id No	Tran-sect	Cations (ppm)				Anions (ppm)				
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F
1	04-01	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
1	04-02	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
2	04-03	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
3	04-04	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
3	04-05	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
4	04-06	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
4	04-07	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
5	04-08	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
6	04-09	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
10	04-10	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99

Phytomass

Plot Number	Plant Id No	Tran-sect	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	04-01	A	353.00	14583.00	15475.00	1438.00	9600.00	10577.00	1250.00	834.00	17.00	9999.9	999.99
1	04-02	A	324.00	14583.00	14925.00	1838.00	9600.00	9615.00	875.00	834.00	18.00	9999.9	999.99
2	04-03	A	588.00	17708.00	11113.00	1300.00	7400.00	15385.00	1088.00	834.00	18.00	9999.9	999.99
3	04-04	A	324.00	11458.00	14338.00	1688.00	10500.00	10577.00	613.00	910.00	18.00	9999.9	999.99
3	04-05	A	529.00	13542.00	11775.00	1125.00	11000.00	15385.00	363.00	986.00	18.00	9999.9	999.99
4	04-06	A	471.00	13542.00	9775.00	1413.00	12000.00	11538.00	875.00	1290.00	18.00	9999.9	999.99
4	04-07	A	559.00	13542.00	11250.00	1413.00	12000.00	11538.00	850.00	910.00	19.00	9999.9	999.99
5	04-08	A	500.00	13542.00	15825.00	1813.00	11200.00	12500.00	938.00	986.00	20.00	9999.9	999.99
6	04-09	A	794.00	13542.00	12063.00	1463.00	12000.00	13462.00	1625.00	1062.00	20.00	9999.9	999.99
10	04-10	A	441.00	10417.00	13650.00	1550.00	10500.00	13462.00	913.00	910.00	20.00	9999.9	999.99

Indigenous Vegetation

Monitoring Location 0006
Date 10/85 Species LARREA DIVARICATA

02/28/86 Rinsate

Plot Number	Plant Id No	Tran-sect	Cations (ppm)				Anions (ppm)				
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F
1	06-01	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
2	06-02	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
3	06-03	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
4	06-04	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
5	06-05	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
6	06-06	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
7	06-07	B	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
8	06-08	B	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
9	06-09	B	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
10	06-10	B	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99

Phytomass

Plot Number	Plant Id No	Tran-sect	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	06-01	A	412.00	10417.00	16338.00	1825.00	8800.00	9615.00	525.00	1214.00	18.00	9999.9	999.99
2	06-02	A	412.00	10417.00	12413.00	1600.00	9200.00	9615.00	875.00	1441.00	19.00	9999.9	999.99
3	06-03	A	441.00	11458.00	14938.00	2450.00	11500.00	10577.00	1075.00	1441.00	19.00	9999.9	999.99
4	06-04	A	353.00	5417.00	15588.00	1763.00	8400.00	7692.00	675.00	1365.00	18.00	9999.9	999.99
5	06-05	A	382.00	10417.00	11563.00	1475.00	9200.00	10577.00	688.00	1593.00	17.00	9999.9	999.99
6	06-06	A	441.00	10417.00	16650.00	1725.00	9800.00	10577.00	575.00	1669.00	18.00	9999.9	999.99
7	06-07	B	382.00	10000.00	15763.00	1563.00	7600.00	12500.00	675.00	910.00	18.00	9999.9	999.99
8	06-08	B	353.00	9167.00	19250.00	1875.00	6500.00	14423.00	750.00	1517.00	17.00	9999.9	999.99
9	06-09	B	353.00	8750.00	8975.00	1225.00	8800.00	16346.00	525.00	1441.00	17.00	9999.9	999.99
10	06-10	B	353.00	9167.00	15963.00	1925.00	8500.00	19231.00	850.00	986.00	17.00	9999.9	999.99

Indigenous Vegetation

Monitoring Location 0040
Date 10/85 Species LARREA DIVARICATA

02/28/86 Rinsate

Plot Number	Plant Id No	Tran-sect	Cations (ppm) Na	K	Ca	Mg	Anions (ppm) Cl	SO4	NO3	PO4	F
1	40-01	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
1	40-02	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
2	40-03	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
3	40-04	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
4	40-05	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
5	40-06	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
6	40-07	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
7	40-08	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
8	40-09	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
10	40-10	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99

Phytomass

Plot Number	Plant Id No	Tran-sect	Cations (ppm) Na	K	Ca	Mg	Anions (ppm) Cl	SO4	NO3	PO4	F	Leaf Area (cm2)	Leaf Biomass (g dry wt)
1	40-01	A	486.00	6250.00	13875.00	1188.00	7000.00	14655.00	800.00	986.00	18.00	9999.9	999.99
1	40-02	A	486.00	8333.00	13363.00	1313.00	8600.00	25000.00	775.00	1138.00	17.00	9999.9	999.99
2	40-03	A	514.00	10000.00	14650.00	1263.00	8400.00	18103.00	875.00	910.00	17.00	9999.9	999.99
3	40-04	A	657.00	10909.00	18575.00	2288.00	9800.00	16379.00	1250.00	986.00	18.00	9999.9	999.99
4	40-05	A	514.00	7500.00	13775.00	1350.00	6000.00	17241.00	1250.00	986.00	18.00	9999.9	999.99
5	40-06	A	1750.00	9167.00	13500.00	1288.00	6600.00	20690.00	675.00	986.00	17.00	9999.9	999.99
6	40-07	A	514.00	9167.00	13913.00	1350.00	9400.00	17241.00	663.00	759.00	17.00	9999.9	999.99
7	40-08	A	486.00	9583.00	16438.00	1350.00	8800.00	20690.00	850.00	986.00	17.00	9999.9	999.99
8	40-09	A	486.00	7500.00	18188.00	1350.00	9600.00	12931.00	813.00	759.00	17.00	9999.9	999.99
10	40-10	A	457.00	10455.00	14463.00	1488.00	8800.00	12069.00	750.00	834.00	17.00	9999.9	999.99

Indigenous Vegetation

Monitoring Location 0042
Date 10/85 Species LARREA DIVARICATA

04/16/86 Rinsate

Plot Number	Plant Id No	Transect	Cations (ppm) Na	K	Ca	Mg	Anions (ppm) Cl	SO4	NO3	PO4	F
1	42-01	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
2	42-02	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
3	42-03	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
4	42-04	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
5	42-05	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
6	42-06	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
7	42-07	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
8	42-08	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
9	42-09	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
10	42-10	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99

Phytomass

Plot Number	Plant Id No	Transect	Cations (ppm) Na	K	Ca	Mg	Anions (ppm) Cl	SO4	NO3	PO4	F	Leaf Area (cm2)	Leaf Biomass (g dry wt)
1	42-01	A	514.00	13000.00	13238.00	1938.00	8400.00	30952.00	775.00	1214.00	18.00	9999.9	999.99
2	42-02	A	457.00	13000.00	12288.00	1338.00	8500.00	32143.00	788.00	1593.00	18.00	9999.9	999.99
3	42-03	A	429.00	8750.00	16525.00	1413.00	8600.00	27381.00	775.00	910.00	18.00	9999.9	999.99
4	42-04	A	457.00	6667.00	15113.00	1275.00	10800.00	30952.00	638.00	986.00	18.00	9999.9	999.99
5	42-05	A	371.00	6250.00	16675.00	1525.00	13000.00	30952.00	875.00	910.00	19.00	9999.9	999.99
6	42-06	A	400.00	12000.00	13425.00	1638.00	12000.00	34524.00	925.00	986.00	19.00	9999.9	999.99
7	42-07	A	400.00	11500.00	9738.00	1338.00	8200.00	35857.00	700.00	1290.00	19.00	9999.9	999.99
8	42-08	A	457.00	9583.00	14100.00	1588.00	11000.00	32143.00	813.00	1138.00	18.00	9999.9	999.99
9	42-09	A	429.00	13500.00	14125.00	1525.00	12000.00	44048.00	763.00	1365.00	18.00	9999.9	999.99
10	42-10	A	400.00	11000.00	12950.00	1213.00	10800.00	33333.00	813.00	1290.00	19.00	9999.9	999.99

Indigenous Vegetation

Monitoring Location 0044
Date 10/85 Species ATRIPLEX

02/28/86 Rinsate

Plot Number	Plant Id No	Tran-sect	Cations (ppm)				Anions (ppm)				
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F
1	44-01	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
2	44-02	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
3	44-03	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
4	44-04	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
5	44-05	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
6	44-06	A	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
7	44-07	B	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
8	44-08	B	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
9	44-09	B	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99
10	44-10	B	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99

Phytomass

Plot Number	Plant Id No	Tran-sect	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	44-01	A	40000.00	18750.00	13488.00	8625.00	44000.00	6897.00	525.00	1138.00	9.00	9999.9	999.99
2	44-02	A	36250.00	29545.00	11088.00	6875.00	57000.00	12069.00	850.00	1214.00	9.00	9999.9	999.99
3	44-03	A	46250.00	10417.00	8300.00	5625.00	56000.00	10205.00	450.00	1593.00	9.00	9999.9	999.99
4	44-04	A	42500.00	20833.00	8363.00	7500.00	58000.00	13793.00	600.00	1669.00	9.00	9999.9	999.99
5	44-05	A	42500.00	32955.00	14575.00	5875.00	72000.00	16379.00	900.00	1745.00	9.00	9999.9	999.99
6	44-06	A	37500.00	29545.00	7075.00	6625.00	54000.00	21913.00	800.00	1821.00	9.00	9999.9	999.99
7	44-07	B	47500.00	23958.00	10463.00	5375.00	78000.00	13793.00	700.00	1745.00	9.00	9999.9	999.99
8	44-08	B	38750.00	18750.00	9888.00	7875.00	45000.00	13793.00	300.00	1745.00	9.00	9999.9	999.99
9	44-09	B	42500.00	17708.00	9713.00	7500.00	60000.00	17241.00	675.00	1441.00	9.00	9999.9	999.99
10	44-10	B	42500.00	27273.00	11550.00	6375.00	75000.00	19828.00	1150.00	2276.00	9.00	9999.9	999.99

APPENDIX E

AGRICULTURAL VEGETATION DATA

Agricultural vegetation data were collected during the second, third and fourth quarters for ten (10) sites (11, 12, 13, 23, 24, 25, 30, 31, 32, and 43). Laboratory analyses were performed for nine (9) ions for phytomass. No rinsate data were reported during 1985. Also, no leaf area or leaf biomass data were reported. Boll biomass and number of immature bolls were reported for cotton during the fourth quarter only. Missing data are reported as a field of "9s."

Monitoring Location 0030
Date 5/85 Crop BARLEY

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	80	146	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
2	80	224	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
3	201	130	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
4	201	233	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
5	432	149	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
6	432	343	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
7	609	108	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
8	609	74	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
9	830	59	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
10	830	173	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	80	146	6111.00	6667.00	1613.00	775.00	15800.00	9091.00	68.00	1821.00	11.00	9999.9	999.99
2	80	224	11111.00	6625.00	2750.00	850.00	24000.00	11667.00	338.00	607.00	11.00	9999.9	999.99
3	201	130	5077.00	5556.00	1600.00	700.00	16500.00	11818.00	131.00	531.00	12.00	9999.9	999.99
4	201	233	6181.00	6875.00	1900.00	775.00	16500.00	11818.00	325.00	531.00	12.00	9999.9	999.99
5	432	149	3091.00	4000.00	1363.00	788.00	8400.00	14242.00	108.00	1441.00	11.00	9999.9	999.99
6	432	343	2923.00	4583.00	1250.00	813.00	9200.00	14242.00	80.00	1669.00	11.00	9999.9	999.99
7	609	108	4615.00	4778.00	1725.00	775.00	14500.00	16212.00	138.00	986.00	10.00	9999.9	999.99
8	609	74	5385.00	4889.00	1600.00	750.00	15000.00	14394.00	103.00	759.00	10.00	9999.9	999.99
9	830	59	3273.00	4167.00	1200.00	925.00	6000.00	20303.00	80.00	1821.00	10.00	9999.9	999.99
10	830	173	2923.00	4167.00	1125.00	825.00	5400.00	18636.00	131.00	1972.00	10.00	9999.9	999.99

Agricultural Vegetation

Monitoring Location 0043
Date 5/85 Crop ALFALFA

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	27	20	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
2	79	20	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
3	131	20	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
4	176	20	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
5	307	20	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
6	583	20	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
7	611	20	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
8	633	20	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
9	728	20	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
10	839	20	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	27	20	1800.00	31818.00	11063.00	2613.00	17000.00	11538.00	450.00	3262.00	13.00	9999.9	999.99
2	79	20	972.00	28409.00	15488.00	3288.00	17200.00	15385.00	575.00	3490.00	12.00	9999.9	999.99
3	131	20	1450.00	28409.00	16013.00	2600.00	16800.00	17308.00	625.00	2959.00	12.00	9999.9	999.99
4	176	20	1100.00	29545.00	14038.00	2838.00	16000.00	18269.00	338.00	2883.00	11.00	9999.9	999.99
5	307	20	972.00	35227.00	8550.00	2338.00	19200.00	11538.00	975.00	3869.00	12.00	9999.9	999.99
6	583	20	2231.00	30682.00	11625.00	3050.00	18000.00	16346.00	313.00	4172.00	11.00	9999.9	999.99
7	611	20	1050.00	28409.00	11500.00	2950.00	16000.00	18269.00	875.00	3338.00	11.00	9999.9	999.99
8	633	20	694.00	27273.00	12613.00	2875.00	17200.00	17308.00	500.00	4172.00	12.00	9999.9	999.99
9	728	20	1200.00	28409.00	11388.00	2438.00	21000.00	23077.00	338.00	3641.00	12.00	9999.9	999.99
10	839	20	1450.00	30682.00	13913.00	2600.00	18800.00	22115.00	263.00	3793.00	12.00	9999.9	999.99

Agricultural Vegetation

Monitoring Location 0011
Date 6/85 Crop COTTON

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	81	357	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
2	81	382	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
3	184	108	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
4	184	625	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
5	199	141	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
6	199	181	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
7	216	518	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
8	216	635	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
9	224	554	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
10	224	65	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	81	357	1190.00	18750.00	41500.00	5125.00	16200.00	27885.00	1000.00	2352.00	15.00	9999.9	999.99
2	81	382	1333.00	18750.00	39875.00	4350.00	15200.00	27885.00	1000.00	2200.00	14.00	9999.9	999.99
3	184	108	1429.00	17708.00	33875.00	4625.00	14000.00	33654.00	2150.00	2807.00	13.00	9999.9	999.99
4	184	625	2077.00	22917.00	38000.00	4663.00	17200.00	35577.00	2150.00	2503.00	16.00	9999.9	999.99
5	199	141	1143.00	11458.00	32750.00	3888.00	9400.00	33024.00	875.00	2200.00	14.00	9999.9	999.99
6	199	181	2231.00	15625.00	37500.00	4763.00	14600.00	22115.00	925.00	2655.00	16.00	9999.9	999.99
7	216	518	1333.00	18750.00	29375.00	3775.00	14700.00	29808.00	2000.00	3034.00	14.00	9999.9	999.99
8	216	635	1762.00	16667.00	36125.00	5375.00	14100.00	39423.00	2100.00	2807.00	16.00	9999.9	999.99
9	224	554	1714.00	13542.00	40000.00	5250.00	12600.00	34615.00	700.00	2883.00	16.00	9999.9	999.99
10	224	65	1857.00	14583.00	40750.00	6000.00	13900.00	38462.00	1500.00	2352.00	15.00	9999.9	999.99

Monitoring Location 0012
Date 6/85 Crop COTTON

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	16	119	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
2	16	520	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
3	97	48	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
4	97	486	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
5	205	64	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
6	205	96	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
7	208	66	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
8	208	240	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
9	248	16	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
10	248	288	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	16	119	2500.00	19792.00	32125.00	4988.00	15500.00	23810.00	2100.00	2655.00	14.00	9999.9	999.99
2	16	520	2429.00	18750.00	35500.00	5000.00	16200.00	25000.00	2100.00	2200.00	14.00	9999.9	999.99
3	97	48	2286.00	18750.00	30500.00	4900.00	15000.00	23810.00	1250.00	2883.00	14.00	9999.9	999.99
4	97	486	2429.00	16667.00	35125.00	4950.00	16000.00	29762.00	1850.00	2731.00	14.00	9999.9	999.99
5	205	64	2857.00	20833.00	39500.00	5750.00	13200.00	54762.00	1050.00	2579.00	15.00	9999.9	999.99
6	205	96	1737.00	15625.00	35250.00	5500.00	12500.00	45238.00	1000.00	2352.00	15.00	9999.9	999.99
7	208	66	2429.00	18750.00	30125.00	4975.00	14200.00	47619.00	1000.00	2124.00	15.00	9999.9	999.99
8	208	240	2286.00	21875.00	32875.00	4663.00	14500.00	35714.00	1400.00	2276.00	15.00	9999.9	999.99
9	248	16	2071.00	16667.00	34500.00	4888.00	14500.00	45238.00	725.00	3186.00	14.00	9999.9	999.99
10	248	288	2571.00	19792.00	41125.00	6125.00	15200.00	49958.00	1200.00	2200.00	15.00	9999.9	999.99

Agricultural Vegetation

Monitoring Location 0013
Date 6/85 Crop COTTON

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	78	224	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
2	78	665	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
3	106	427	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
4	106	630	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
5	114	588	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
6	114	644	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
7	189	371	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
8	189	462	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
9	193	245	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
10	193	441	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	78	224	2643.00	19792.00	35625.00	4113.00	18500.00	34384.00	2100.00	2124.00	14.00	9999.9	999.99
2	78	665	2429.00	18750.00	32750.00	4163.00	16000.00	17675.00	3600.00	2048.00	13.00	9999.9	999.99
3	106	427	3000.00	18750.00	37625.00	4888.00	16500.00	22535.00	1250.00	2276.00	14.00	9999.9	999.99
4	106	630	2500.00	14583.00	33250.00	5000.00	12000.00	54650.00	1050.00	1972.00	14.00	9999.9	999.99
5	114	588	2000.00	18750.00	36750.00	4800.00	15000.00	42829.00	1550.00	2124.00	14.00	9999.9	999.99
6	114	644	3833.00	18750.00	33625.00	4875.00	14500.00	57073.00	1450.00	1745.00	15.00	9999.9	999.99
7	189	371	2214.00	18750.00	35125.00	4188.00	14000.00	26092.00	1500.00	1669.00	14.00	9999.9	999.99
8	189	462	2071.00	20833.00	31500.00	3963.00	14800.00	47535.00	1500.00	1593.00	16.00	9999.9	999.99
9	193	245	2786.00	15625.00	37500.00	4475.00	20500.00	47619.00	575.00	2200.00	16.00	9999.9	999.99
10	193	441	2429.00	13542.00	33875.00	3813.00	12500.00	46246.00	1000.00	1669.00	14.00	9999.9	999.99

Monitoring Location 0023
Date 6/85 Crop COTTON

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	13	31	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
2	13	296	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
3	18	364	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
4	18	371	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
5	103	362	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
6	103	366	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
7	169	70	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
8	169	390	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
9	257	198	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
10	257	81	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm²)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	13	31	3400.00	26087.00	48300.00	6425.00	36000.00	97564.00	2400.00	2428.00	28.00	9999.9	999.99
2	13	296	2500.00	26087.00	41550.00	6400.00	16800.00	102308.00	4300.00	3641.00	26.00	9999.9	999.99
3	18	364	3200.00	26087.00	44600.00	7925.00	36000.00	493269.00	5250.00	3338.00	110.00	9999.9	999.99
4	18	371	1900.00	23913.00	43250.00	6875.00	21500.00	232212.00	5750.00	4552.00	55.00	9999.9	999.99
5	103	362	4403.00	27219.00	56700.00	6863.00	26400.00	160416.00	4495.00	3034.00	37.00	9999.9	999.99
6	103	366	2680.00	21635.00	42713.00	4938.00	26400.00	154013.00	4495.00	2352.00	37.00	9999.9	999.99
7	169	70	3446.00	26521.00	52850.00	6288.00	24400.00	112067.00	3164.00	5614.00	37.00	9999.9	999.99
8	169	390	2929.00	25000.00	52375.00	6125.00	24000.00	245673.00	4750.00	3414.00	55.00	9999.9	999.99
9	257	198	3091.00	27083.00	57375.00	5750.00	20300.00	240385.00	5000.00	3338.00	55.00	9999.9	999.99
10	257	81	3400.00	23913.00	50000.00	5500.00	26000.00	525000.00	4125.00	2731.00	120.00	9999.9	999.99

Agricultural Vegetation

Monitoring Location 0024
Date 6/85 Crop COTTON

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	210	120	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
2	210	594	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
3	340	496	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
4	340	688	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
5	498	275	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
6	498	456	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
7	550	216	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
8	550	296	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
9	576	296	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
10	576	688	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	210	120	1000.00	16304.00	46000.00	3513.00	13500.00	22244.00	1900.00	3034.00	14.00	9999.9	999.99
2	210	594	1050.00	25000.00	44250.00	3325.00	14800.00	39231.00	1125.00	2200.00	15.00	9999.9	999.99
3	340	496	629.00	20652.00	39750.00	4463.00	13200.00	58077.00	1300.00	2959.00	15.00	9999.9	999.99
4	340	688	686.00	21739.00	35875.00	4375.00	14500.00	48846.00	1150.00	2428.00	15.00	9999.9	999.99
5	498	275	743.00	15217.00	36625.00	3913.00	12200.00	59744.00	1100.00	1897.00	15.00	9999.9	999.99
6	498	456	857.00	17391.00	37000.00	4025.00	13000.00	47436.00	525.00	2276.00	16.00	9999.9	999.99
7	550	216	771.00	19565.00	32500.00	4350.00	13200.00	55833.00	1050.00	2503.00	16.00	9999.9	999.99
8	550	296	686.00	19565.00	35000.00	4163.00	14000.00	50192.00	1000.00	2124.00	16.00	9999.9	999.99
9	576	296	771.00	17391.00	35250.00	3825.00	14200.00	51282.00	1100.00	2655.00	16.00	9999.9	999.99
10	576	688	657.00	17391.00	36375.00	4113.00	15200.00	50321.00	950.00	2428.00	16.00	9999.9	999.99

Monitoring Location 0025
Date 6/85 Crop COTTON

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	56	85	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
2	56	140	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
3	199	27	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
4	199	172	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
5	220	235	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
6	220	47	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
7	250	252	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
8	250	319	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
9	270	110	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
10	270	247	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	56	85	657.00	22000.00	42750.00	3563.00	17000.00	39583.00	1950.00	3490.00	14.00	9999.9	999.99
2	56	140	857.00	20000.00	34250.00	2713.00	13900.00	32708.00	1550.00	2731.00	12.00	9999.9	999.99
3	199	27	771.00	20000.00	43875.00	2825.00	17500.00	42917.00	850.00	2883.00	13.00	9999.9	999.99
4	199	172	543.00	15000.00	41875.00	2988.00	14500.00	44792.00	600.00	2807.00	12.00	9999.9	999.99
5	220	235	629.00	13000.00	32625.00	2763.00	18800.00	35000.00	1700.00	2959.00	12.00	9999.9	999.99
6	220	47	657.00	21000.00	43875.00	2663.00	24000.00	44167.00	1600.00	3338.00	13.00	9999.9	999.99
7	250	252	514.00	18000.00	42875.00	3288.00	21000.00	30625.00	800.00	2655.00	12.00	9999.9	999.99
8	250	319	714.00	18000.00	39750.00	2638.00	20500.00	37292.00	950.00	3717.00	13.00	9999.9	999.99
9	270	110	914.00	17000.00	42625.00	3250.00	23500.00	38542.00	1600.00	2883.00	12.00	9999.9	999.99
10	270	247	743.00	18000.00	34500.00	2875.00	19200.00	41042.00	1650.00	3186.00	12.00	9999.9	999.99

Agricultural Vegetation

Monitoring Location 0030
Date 6/85 Crop COTTON

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	26	35	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
2	26	190	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
3	34	60	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
4	34	110	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
5	45	240	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
6	45	260	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
7	124	320	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
8	124	385	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
9	338	275	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
10	338	400	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	26	35	3455.00	17000.00	45625.00	4538.00	20500.00	10000.00	1250.00	1972.00	35.00	9999.9	999.99
2	26	190	3000.00	17000.00	50875.00	6375.00	25000.00	33333.00	1375.00	2352.00	60.00	9999.9	999.99
3	34	60	2857.00	18000.00	40625.00	4438.00	27500.00	41667.00	3000.00	2731.00	60.00	9999.9	999.99
4	34	110	324.00	18191.00	47113.00	5175.00	28000.00	30525.00	3330.00	2959.00	40.00	9999.9	999.99
5	45	240	5332.00	13330.00	45275.00	5238.00	30300.00	52725.00	1415.00	986.00	40.00	9999.9	999.99
6	45	260	2365.00	18191.00	26013.00	2838.00	29000.00	24975.00	1665.00	2959.00	40.00	9999.9	999.99
7	124	320	1953.00	23497.00	47025.00	6425.00	28600.00	30525.00	3913.00	2959.00	37.00	9999.9	999.99
8	124	385	1886.00	20000.00	37025.00	4825.00	21400.00	31667.00	3100.00	3793.00	24.00	9999.9	999.99
9	338	275	2700.00	24000.00	37600.00	5775.00	37000.00	83333.00	3875.00	3186.00	100.00	9999.9	999.99
10	338	400	2547.00	22739.00	37263.00	4963.00	27000.00	30525.00	383.00	2352.00	37.00	9999.9	999.99

Agricultural Vegetation

Monitoring Location 0031
Date 6/85 Crop COTTON

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	16	112	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
2	16	184	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
3	107	31	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
4	107	333	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
5	108	92	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
6	108	171	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
7	141	113	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
8	141	576	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
9	181	68	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
10	181	334	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	16	112	9545.00	18229.00	28125.00	4588.00	26500.00	138462.00	1000.00	2845.00	50.00	9999.9	999.99
2	16	184	27500.00	44271.00	93438.00	11313.00	34000.00	115385.00	1563.00	8155.00	50.00	9999.9	999.99
3	107	31	8636.00	49479.00	105131.00	13125.00	36000.00	130769.00	781.00	8534.00	50.00	9999.9	999.99
4	107	333	6346.00	15625.00	35313.00	5038.00	32000.00	96154.00	1688.00	2086.00	50.00	9999.9	999.99
5	108	92	5000.00	10417.00	32475.00	4438.00	35000.00	96154.00	781.00	2465.00	60.00	9999.9	999.99
6	108	171	5962.00	18229.00	36750.00	5100.00	34000.00	111538.00	1000.00	2655.00	55.00	9999.9	999.99
7	141	113	3625.00	15625.00	32288.00	4688.00	22000.00	142308.00	969.00	2655.00	50.00	9999.9	999.99
8	141	576	15000.00	39063.00	126250.00	16250.00	29000.00	138462.00	1313.00	6258.00	50.00	9999.9	999.99
9	181	68	24286.00	39063.00	89125.00	10000.00	25000.00	138462.00	1313.00	6448.00	50.00	9999.9	999.99
10	181	334	9091.00	15625.00	38163.00	4163.00	28000.00	123077.00	938.00	3793.00	50.00	9999.9	999.99

Agricultural Vegetation

Monitoring Location 0032
Date 6/85 Crop COTTON

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	52	56	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
2	52	297	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
3	53	73	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
4	53	393	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
5	163	76	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
6	163	320	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
7	177	34	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
8	177	47	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
9	38	97	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
10	38	204	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	52	56	14286.00	20833.00	28288.00	3938.00	24000.00	160417.00	2875.00	2276.00	60.00	9999.9	999.99
2	52	297	6346.00	13021.00	33500.00	4600.00	32000.00	126923.00	750.00	1897.00	50.00	9999.9	999.99
3	53	73	6731.00	15625.00	29938.00	4413.00	26000.00	89744.00	1438.00	2465.00	55.00	9999.9	999.99
4	53	393	14286.00	18229.00	25788.00	3688.00	35000.00	110256.00	1625.00	3034.00	55.00	9999.9	999.99
5	163	76	8636.00	15625.00	30938.00	4375.00	21000.00	114103.00	2000.00	2845.00	50.00	9999.9	999.99
6	163	320	14286.00	23438.00	25750.00	4313.00	21500.00	108974.00	2188.00	3034.00	55.00	9999.9	999.99
7	177	34	10000.00	10417.00	36975.00	5163.00	28000.00	112821.00	1125.00	2845.00	55.00	9999.9	999.99
8	177	47	6923.00	10417.00	30100.00	4375.00	25000.00	101282.00	1250.00	3034.00	50.00	9999.9	999.99
9	38	97	6731.00	13021.00	29975.00	3938.00	23000.00	125641.00	2500.00	3224.00	50.00	9999.9	999.99
10	38	204	9773.00	15625.00	28163.00	4188.00	26000.00	116667.00	2438.00	2845.00	55.00	9999.9	999.99

Agricultural Vegetation

Monitoring Location 0045
Date 6/85 Crop ALFALFA

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	9999	9999	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
2	9999	9999	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
3	9999	9999	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
4	9999	9999	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
5	9999	9999	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
6	9999	9999	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
7	9999	9999	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
8	9999	9999	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
9	9999	9999	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
10	9999	9999	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	9999	9999999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
2	9999	9999999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
3	9999	9999999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
4	9999	9999999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
5	9999	9999999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
6	9999	9999999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
7	9999	9999999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
8	9999	9999999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
9	9999	9999999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
10	9999	9999999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99

Monitoring Location 0043
Date 7/85 Crop ALFALFA

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	27	20	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
2	79	20	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
3	131	20	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
4	176	20	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
5	307	20	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
6	583	20	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
7	611	20	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
8	633	20	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
9	728	20	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
10	839	20	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	27	20	3200.00	19792.00	12513.00	2363.00	8200.00	14000.00	519.00	2048.00	14.00	9999.9	999.99
2	79	20	2714.00	18750.00	10263.00	1550.00	9900.00	12000.00	563.00	2352.00	13.00	9999.9	999.99
3	131	20	2429.00	20833.00	11838.00	1988.00	9500.00	15000.00	675.00	2959.00	13.00	9999.9	999.99
4	176	20	2571.00	20833.00	12050.00	2075.00	10800.00	13000.00	600.00	2655.00	13.00	9999.9	999.99
5	307	20	3200.00	18750.00	14350.00	3150.00	13800.00	15000.00	613.00	3034.00	13.00	9999.9	999.99
6	583	20	2214.00	26190.00	11063.00	2700.00	10800.00	14000.00	1700.00	4552.00	13.00	9999.9	999.99
7	611	20	2714.00	15625.00	12538.00	2100.00	7800.00	14000.00	655.00	3034.00	24.00	9999.9	999.99
8	633	20	2857.00	18750.00	13388.00	2375.00	9400.00	14000.00	650.00	2655.00	12.00	9999.9	999.99
9	728	20	3400.00	13542.00	11788.00	2738.00	13200.00	17000.00	340.00	2200.00	12.00	9999.9	999.99
10	839	20	2357.00	18750.00	10025.00	2988.00	13800.00	13000.00	388.00	2276.00	12.00	9999.9	999.99

Agricultural Vegetation

Monitoring Location 0011
Date 9/85 Crop COTTON

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	81	357	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
2	81	382	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
3	184	108	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
4	184	625	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
5	199	141	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
6	199	181	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
7	216	518	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
8	216	635	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
9	224	554	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
10	224	65	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	81	357	2667.00	10417.00	44000.00	5375.00	13000.00	24590.00	165.00	1290.00	15.00	9999.9	999.99
2	81	382	1800.00	13542.00	43125.00	4363.00	12000.00	20492.00	131.00	1365.00	12.00	9999.9	999.99
3	184	108	2583.00	14583.00	35125.00	5375.00	14000.00	24590.00	850.00	1745.00	11.00	9999.9	999.99
4	184	625	1500.00	15625.00	23413.00	4313.00	12000.00	18852.00	269.00	1517.00	11.00	9999.9	999.99
5	199	141	6286.00	15625.00	43625.00	5000.00	12800.00	32787.00	575.00	1365.00	13.00	9999.9	999.99
6	199	181	2917.00	14533.00	34125.00	4963.00	11200.00	22951.00	775.00	1669.00	13.00	9999.9	999.99
7	216	518	1800.00	13542.00	30750.00	5000.00	15000.00	18852.00	663.00	2352.00	12.00	9999.9	999.99
8	216	635	2250.00	17708.00	27125.00	4725.00	14000.00	19672.00	1050.00	1972.00	12.00	9999.9	999.99
9	224	554	3000.00	15625.00	35625.00	4925.00	14000.00	27049.00	1200.00	1972.00	11.00	9999.9	999.99
10	224	65	1850.00	11458.00	26000.00	3688.00	12700.00	13115.00	141.00	1897.00	12.00	9999.9	999.99

Monitoring Location 0012
Date 9/85 Crop COTTON

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	16	119	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
2	16	520	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
3	97	48	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
4	97	468	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
5	205	64	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
6	205	96	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
7	208	66	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
8	208	240	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
9	248	16	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
10	248	288	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	16	119	1789.00	14423.00	15475.00	2813.00	15000.00	7692.00	825.00	2276.00	10.00	9999.9	999.99
2	16	520	1684.00	17308.00	24050.00	3875.00	15500.00	10577.00	388.00	3414.00	-10.00	9999.9	999.99
3	97	48	2357.00	23077.00	33875.00	3738.00	13800.00	17308.00	1500.00	3110.00	-10.00	9999.9	999.99
4	97	468	1263.00	20192.00	23275.00	3288.00	14800.00	14423.00	1050.00	3338.00	-10.00	9999.9	999.99
5	205	64	1737.00	20192.00	21388.00	3513.00	14500.00	9615.00	675.00	3490.00	-10.00	9999.9	999.99
6	205	96	4182.00	24038.00	44375.00	4538.00	14200.00	40385.00	800.00	2731.00	11.00	9999.9	999.99
7	208	66	6571.00	19231.00	48875.00	4988.00	13000.00	43269.00	475.00	2655.00	10.00	9999.9	999.99
8	208	240	1789.00	22115.00	22400.00	3975.00	15000.00	11538.00	1150.00	2731.00	10.00	9999.9	999.99
9	248	16	1684.00	23077.00	25138.00	2688.00	16200.00	17308.00	1400.00	3034.00	-10.00	9999.9	999.99
10	248	288	1789.00	23077.00	24600.00	3625.00	15200.00	18308.00	1500.00	2579.00	10.00	9999.9	999.99

Monitoring Location 0013
Date 9/85 Crop COTTON

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	78	224	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
2	78	665	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
3	106	427	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
4	106	630	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
5	114	588	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
6	114	644	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
7	189	371	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
8	189	462	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
9	193	245	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
10	193	441	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	78	224	6579.00	15000.00	42500.00	3975.00	18500.00	31132.00	109.00	1821.00	12.00	9999.9	999.99
2	78	665	7632.00	17000.00	37500.00	5000.00	18200.00	25472.00	225.00	1517.00	12.00	9999.9	999.99
3	106	427	7895.00	16000.00	36625.00	4925.00	18000.00	25472.00	194.00	2124.00	12.00	9999.9	999.99
4	106	630	6579.00	10000.00	39375.00	4113.00	23200.00	21698.00	108.00	1745.00	11.00	9999.9	999.99
5	114	588	4737.00	15000.00	44000.00	3888.00	19800.00	22642.00	109.00	1669.00	11.00	9999.9	999.99
6	114	644	4737.00	13000.00	42500.00	4588.00	19000.00	28302.00	138.00	1517.00	11.00	9999.9	999.99
7	189	371	4737.00	14000.00	28250.00	4388.00	14000.00	19811.00	179.00	1897.00	11.00	9999.9	999.99
8	189	462	5263.00	14000.00	37625.00	5013.00	14300.00	25472.00	88.00	1517.00	12.00	9999.9	999.99
9	193	245	5263.00	14000.00	36250.00	4963.00	20300.00	22642.00	98.00	1593.00	14.00	9999.9	999.99
10	193	441	5263.00	13000.00	37250.00	5500.00	16000.00	28302.00	95.00	1517.00	12.00	9999.9	999.99

Agricultural Vegetation

Monitoring Location 0023
Date 9/85 Crop COTTON

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	13	31	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
2	13	296	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
3	18	364	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
4	18	371	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
5	103	362	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
6	103	366	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
7	169	70	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
8	169	390	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
9	257	198	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
10	257	81	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	13	31	2929.00	18478.00	48375.00	5750.00	20500.00	38679.00	294.00	1897.00	14.00	9999.9	999.99
2	13	296	2643.00	20652.00	50875.00	8250.00	22800.00	60377.00	450.00	1441.00	17.00	9999.9	999.99
3	18	364	2571.00	20652.00	42750.00	7000.00	26200.00	61321.00	600.00	1365.00	16.00	9999.9	999.99
4	18	371	3200.00	21739.00	47750.00	7750.00	23800.00	66038.00	481.00	1290.00	16.00	9999.9	999.99
5	103	362	3300.00	18478.00	36125.00	5625.00	27000.00	60377.00	300.00	1593.00	14.00	9999.9	999.99
6	103	366	3300.00	17391.00	40750.00	5875.00	25500.00	54717.00	400.00	1517.00	14.00	9999.9	999.99
7	169	70	2000.00	14130.00	39625.00	5175.00	19200.00	53396.00	313.00	1441.00	12.00	9999.9	999.99
8	169	390	1950.00	13043.00	39125.00	6875.00	25500.00	48703.00	250.00	1593.00	14.00	9999.9	999.99
9	257	198	3650.00	16304.00	35000.00	5125.00	20000.00	57217.00	175.00	1517.00	15.00	9999.9	999.99
10	257	81	1550.00	18478.00	23225.00	4975.00	14000.00	38962.00	675.00	2428.00	12.00	9999.9	999.99

Agricultural Vegetation

Monitoring Location 0024
Date 9/85 Crop COTTON

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	210	120	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
2	210	594	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
3	340	496	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
4	340	688	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
5	498	275	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
6	498	456	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
7	550	216	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
8	550	296	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
9	576	290	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
10	576	688	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	210	120	1190.00	10000.00	29750.00	3700.00	18200.00	17391.00	125.00	1365.00	18.00	9999.9	999.99
2	210	594	914.00	17000.00	27250.00	2938.00	17000.00	10870.00	139.00	1821.00	17.00	9999.9	999.99
3	340	496	771.00	16000.00	23275.00	2925.00	16000.00	16304.00	139.00	1972.00	20.00	9999.9	999.99
4	340	688	829.00	18000.00	31375.00	3750.00	17000.00	22826.00	148.00	1897.00	19.00	9999.9	999.99
5	498	275	971.00	19000.00	52250.00	4475.00	15200.00	31522.00	150.00	1821.00	19.00	9999.9	999.99
6	498	456	943.00	25000.00	36625.00	2763.00	18500.00	27174.00	179.00	2124.00	24.00	9999.9	999.99
7	550	216	886.00	11000.00	37750.00	4913.00	24500.00	21739.00	160.00	1821.00	18.00	9999.9	999.99
8	550	296	714.00	14000.00	21825.00	4025.00	21000.00	19565.00	325.00	2428.00	19.00	9999.9	999.99
9	576	290	714.00	15000.00	48125.00	3600.00	21500.00	46739.00	138.00	1821.00	19.00	9999.9	999.99
10	576	688	2000.00	13000.00	55500.00	6750.00	26500.00	35870.00	175.00	1517.00	19.00	9999.9	999.99

Agricultural Vegetation

Monitoring Location 0025
Date 9/85 Crop COTTON

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	56	85	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
2	56	140	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
3	199	27	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
4	199	172	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
5	220	235	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
6	220	47	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
7	250	252	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
8	250	317	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
9	270	110	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
10	270	247	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	56	85	771.00	16000.00	52625.00	3175.00	20000.00	39130.00	154.00	1441.00	18.00	9999.9	999.99
2	56	140	686.00	12000.00	52125.00	4000.00	19500.00	33696.00	115.00	1365.00	19.00	9999.9	999.99
3	199	27	886.00	11000.00	47250.00	4625.00	21500.00	39130.00	125.00	1441.00	19.00	9999.9	999.99
4	199	172	571.00	10000.00	39875.00	4850.00	18000.00	28261.00	138.00	1062.00	18.00	9999.9	999.99
5	220	235	657.00	11000.00	52500.00	4725.00	15500.00	35870.00	116.00	1365.00	18.00	9999.9	999.99
6	220	47	[illegible]4.00	12000.00	58000.00	4850.00	18000.00	42391.00	123.00	1517.00	18.00	9999.9	999.99
7	250	252	714.00	10000.00	49250.00	5375.00	18500.00	41304.00	129.00	1593.00	18.00	9999.9	999.99
8	250	317	629.00	10000.00	47000.00	5250.00	20000.00	34783.00	128.00	1593.00	19.00	9999.9	999.99
9	270	110	857.00	15000.00	53750.00	4325.00	17000.00	57609.00	156.00	1290.00	19.00	9999.9	999.99
10	270	247	829.00	15000.00	52625.00	4400.00	19300.00	45652.00	400.00	1441.00	18.00	9999.9	999.99

Agricultural Vegetation

Monitoring Location 0030
Date 9/85 Crop COTTON

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	26	35	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
2	26	190	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
3	34	60	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
4	34	110	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
5	45	240	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
6	45	260	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
7	124	320	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
8	124	385	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
9	338	275	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
10	338	400	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	26	35	2571.00	11957.00	36375.00	5750.00	16200.00	42453.00	113.00	1290.00	11.00	9999.9	999.99
2	26	190	1750.00	16304.00	27625.00	5163.00	13800.00	40236.00	313.00	1365.00	11.00	9999.9	999.99
3	34	60	3000.00	13043.00	32250.00	5125.00	16300.00	46226.00	150.00	1138.00	12.00	9999.9	999.99
4	34	110	2643.00	11957.00	40375.00	6250.00	15000.00	45283.00	156.00	1365.00	12.00	9999.9	999.99
5	45	240	2643.00	17391.00	30125.00	5250.00	14800.00	47170.00	475.00	1517.00	10.00	9999.9	999.99
6	45	260	2071.00	16304.00	34750.00	5375.00	14500.00	47170.00	450.00	1669.00	10.00	9999.9	999.99
7	124	320	2714.00	17391.00	44375.00	7375.00	16000.00	47170.00	238.00	1214.00	12.00	9999.9	999.99
8	124	385	2929.00	14130.00	39500.00	7250.00	15800.00	53774.00	200.00	1290.00	13.00	9999.9	999.99
9	338	275	2429.00	19565.00	29500.00	6000.00	15800.00	46226.00	213.00	1517.00	13.00	9999.9	999.99
10	338	400	1900.00	18478.00	32750.00	5125.00	14500.00	45283.00	1200.00	1745.00	10.00	9999.9	999.99

Monitoring Location 0031
Date 9/85 Crop COTTON

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm) Na	K	Ca	Mg	Anions (ppm) Cl	SO4	NO3	PO4	F	Boll Biomass (g)	Number Immature Bolls
1	16	112	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
2	16	184	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
3	107	31	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
4	107	333	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
5	108	92	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
6	108	171	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
7	141	113	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
8	141	576	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
9	131	68	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
10	131	334	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm) Na	K	Ca	Mg	Anions (ppm) Cl	SO4	NO3	PO4	F	Leaf Area (cm2)	Leaf Biomass (g dry wt)
1	16	112	22143.00	13000.00	29750.00	4650.00	10000.00	39623.00	75.00	1821.00	17.00	9999.9	999.99
2	16	184	16000.00	12000.00	35625.00	6500.00	13500.00	46283.00	95.00	2200.00	14.00	9999.9	999.99
3	107	31	10500.00	13000.00	41375.00	7750.00	16200.00	43396.00	100.00	1972.00	13.00	9999.9	999.99
4	107	333	16000.00	12000.00	39000.00	5500.00	9600.00	36849.00	128.00	1897.00	14.00	9999.9	999.99
5	108	92	15500.00	8000.00	41625.00	8125.00	18500.00	43396.00	83.00	1821.00	13.00	9999.9	999.99
6	108	171	12500.00	15000.00	37625.00	5875.00	13200.00	42509.00	150.00	1517.00	13.00	9999.9	999.99
7	141	113	17500.00	8000.00	41000.00	8500.00	20000.00	43396.00	110.00	1821.00	14.00	9999.9	999.99
8	141	576	9737.00	6000.00	53250.00	5625.00	12500.00	37736.00	75.00	1593.00	11.00	9999.9	999.99
9	131	68	15000.00	12000.00	35875.00	9375.00	14500.00	41566.00	119.00	1897.00	14.00	9999.9	999.99
10	131	334	12500.00	12000.00	43000.00	6000.00	17800.00	38679.00	169.00	2124.00	12.00	9999.9	999.99

Agricultural Vegetation

Monitoring Location 0032
Date 9/85 Crop COTTON

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	38	97	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
2	38	204	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
3	52	56	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
4	52	297	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
5	53	73	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
6	53	393	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
7	163	76	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
8	163	320	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
9	177	34	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
10	177	47	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	38	97	12105.00	6731.00	63250.00	7125.00	15500.00	52885.00	144.00	1593.00	15.00	9999.9	999.99
2	38	204	22143.00	6731.00	48500.00	8375.00	15500.00	54192.00	188.00	1517.00	15.00	9999.9	999.99
3	52	56	17368.00	3846.00	45875.00	9125.00	15500.00	46231.00	163.00	1290.00	14.00	9999.9	999.99
4	52	297	24286.00	8654.00	43000.00	8000.00	15500.00	49385.00	200.00	1365.00	13.00	9999.9	999.99
5	53	73	14211.00	7692.00	56000.00	7000.00	17000.00	51308.00	338.00	1821.00	11.00	9999.9	999.99
6	53	393	15263.00	10500.00	41125.00	8250.00	15000.00	49500.00	238.00	1821.00	14.00	9999.9	999.99
7	163	76	18947.00	5769.00	44875.00	6250.00	15000.00	45192.00	213.00	1593.00	15.00	9999.9	999.99
8	163	320	27857.00	7692.00	34750.00	5375.00	15500.00	51500.00	181.00	1972.00	15.00	9999.9	999.99
9	177	34	13684.00	4808.00	45625.00	5625.00	16500.00	52077.00	125.00	1138.00	13.00	9999.9	999.99
10	177	47	16842.00	5769.00	52125.00	6500.00	16800.00	41346.00	131.00	1745.00	13.00	9999.9	999.99

Agricultural Vegetation

Monitoring Location 0045
Date 9/85 Crop ALFALFA

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm) Na	K	Ca	Mg	Anions (ppm) Cl	SO4	NO3	PO4	F	Boll Biomass (g)	Number Immature Bolls
99	9999	9999	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
99	9999	9999	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
99	9999	9999	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
99	9999	9999	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
99	9999	9999	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
99	9999	9999	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
99	9999	9999	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
99	9999	9999	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
99	9999	9999	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
99	9999	9999	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm) Na	K	Ca	Mg	Anions (ppm) Cl	SO4	NO3	PO4	F	Leaf Area (cm2)	Leaf Biomass (g dry wt)
99	9999	9999	999999.99	99999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
99	9999	9999	999999.99	99999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
99	9999	9999	999999.99	99999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
99	9999	9999	999999.99	99999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
99	9999	9999	999999.99	99999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
99	9999	9999	999999.99	99999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
99	9999	9999	999999.99	99999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
99	9999	9999	999999.99	99999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
99	9999	9999	999999.99	99999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
99	9999	9999	999999.99	99999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99

Monitoring Location 0011
Date 10/85 Crop COTTON

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	81	357	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
2	81	382	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
3	184	108	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
4	184	625	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
5	199	141	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
6	199	181	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
7	216	518	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
8	216	635	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
9	224	554	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
10	224	65	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	81	357	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
2	81	382	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
3	184	108	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
4	184	625	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
5	199	141	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
6	199	181	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
7	216	518	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
8	216	635	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
9	224	554	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
10	224	65	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99

Monitoring Location 0012
Date 10/85 Crop COTTON

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm) Na	K	Ca	Mg	Anions (ppm) Cl	SO4	NO3	PO4	F	Boll Biomass (g)	Number Immature Bolls
1	16	119	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1073.00	238
2	16	520	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1567.70	273
3	97	48	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1363.90	43
4	97	486	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1136.80	281
5	205	64	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	771.00	182
6	205	96	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1119.40	151
7	208	66	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	820.40	16[illegible]
8	208	240	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	692.50	206
9	248	16	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	713.60	20[illegible]
10	248	288	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1046.80	259

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm) Na	K	Ca	Mg	Anions (ppm) Cl	SO4	NO3	PO4	F	Leaf Area (cm2)	Leaf Biomass (g dry wt)
1	16	119	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
2	16	520	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
3	97	48	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
4	97	486	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
5	205	64	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
6	205	96	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
7	208	66	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
8	208	240	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
9	248	16	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
10	248	288	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99

Agricultural Vegetation

Monitoring Location 0013
Date 10/85 Crop COTTON

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	78	224	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
2	78	665	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
3	106	427	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
4	106	630	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
5	114	588	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
6	114	644	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
7	189	371	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
8	189	462	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
9	193	245	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999
10	193	441	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	9999.99	9999

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	78	224	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
2	78	665	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
3	106	427	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
4	106	630	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
5	114	588	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
6	114	644	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
7	189	371	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
8	189	462	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
9	193	245	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
10	193	441	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99

Agricultural Vegetation

Monitoring Location 0031
Date 10/85 Crop COTTON

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	16	112	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	367.30	25
2	16	184	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	359.00	13
3	107	31	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	413.00	51
4	107	333	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	728.50	17
5	108	92	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	282.50	20
6	108	171	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	403.80	7
7	141	113	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	442.50	19
8	141	576	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	862.10	7
9	181	68	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	619.80	11
10	181	334	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	765.30	21

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	16	112	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
2	16	184	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
3	107	31	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
4	107	333	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
5	108	92	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
6	108	171	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
7	141	113	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
8	141	576	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
9	181	68	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
10	181	334	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99

Agricultural Vegetation

Monitoring Location 0032
Date 10/85 Crop COTTON

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	52	56	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	412.20	7
2	52	297	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1118.80	5
3	53	73	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	554.70	6
4	53	393	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	515.70	15
5	163	76	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1122.30	3
6	163	320	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	850.30	40
7	177	34	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1246.70	2
8	177	47	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1180.00	1
9	38	97	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	940.60	4
10	38	204	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1038.10	16

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	52	56	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
2	52	297	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
3	53	73	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
4	53	393	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
5	163	76	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
6	163	320	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
7	177	34	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
8	177	47	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
9	38	97	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
10	38	204	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99

Monitoring Location 0023
Date 11/85 Crop COTTON

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	13	31	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	899.40	250
2	13	296	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	580.80	37
3	18	364	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	744.10	48
4	18	371	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	569.60	41
5	103	362	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1473.90	114
6	103	366	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1338.60	141
7	169	70	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1416.20	106
8	169	390	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	550.60	136
9	257	198	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	693.60	232
10	257	81	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	227.70	217

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	13	31	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
2	13	296	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
3	18	364	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
4	18	371	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
5	103	362	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
6	103	366	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
7	169	70	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
8	169	390	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
9	257	198	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
10	257	81	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99

Agricultural Vegetation

Monitoring Location 0024
Date 11/85 Crop COTTON

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	210	120	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	260.90	124
2	210	594	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	128.50	106
3	340	496	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	318.30	233
4	340	688	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	130.00	109
5	498	275	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1474.40	71
6	498	456	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	418.50	110
7	550	216	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1338.30	73
8	550	296	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	743.30	89
9	576	296	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1064.70	219
10	576	688	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	504.40	156

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	210	120	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
2	210	594	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
3	340	496	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
4	340	688	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
5	498	275	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
6	498	456	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
7	550	216	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
8	550	296	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
9	576	296	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
10	576	688	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99

Agricultural Vegetation

Monitoring Location 0025
Date 11/85 Crop COTTON

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	56	85	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	895.60	254
2	56	140	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1183.20	150
3	199	27	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1360.30	103
4	199	172	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1560.10	144
5	220	235	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1390.90	53
6	220	47	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1709.00	118
7	250	252	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1648.80	97
8	250	319	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1205.60	137
9	270	110	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	740.60	264
10	270	247	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1221.70	163

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	56	85	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
2	56	140	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
3	199	27	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
4	199	172	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
5	220	235	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
6	220	47	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
7	250	252	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
8	250	319	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
9	270	110	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
10	270	247	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99

Monitoring Location 0030
Date 11/85 Crop COTTON

Rinsate

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Boll Biomass (g)	Number Immature Bolls
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	26	35	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1316.70	115
2	26	190	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	886.10	91
3	34	60	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1528.00	60
4	34	110	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1134.00	52
5	45	240	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1095.40	199
6	45	260	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1094.30	223
7	124	320	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	906.50	98
8	124	385	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1289.70	263
9	338	275	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	742.50	135
10	338	400	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	99.99	1081.70	324

Phytomass

Plot Number	Row Number	Paces From End	Cations (ppm)				Anions (ppm)					Leaf Area (cm2)	Leaf Biomass (g dry wt)
			Na	K	Ca	Mg	Cl	SO4	NO3	PO4	F		
1	26	35	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
2	26	190	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
3	34	60	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
4	34	110	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
5	45	240	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
6	45	260	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
7	124	320	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
8	124	385	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
9	338	275	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99
10	338	400	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	999999.99	9999.9	999.99

APPENDIX F
SOILS DATA

The soils data presented in this appendix consist of a table containing soil texture for each of the 44 sites (1-28, 30-45) where soil samples were collected, and laboratory analysis data for electrical conductivity (EC x 1000), soluble salts, pH, and eighteen (18) ions.

The soils texture data are presented for two (2) levels, an upper level representing the depth from 0 to 15 cm, and a lower level representing the depth from 15 to 30 cm.

The laboratory analysis results are presented for each of two (2) collocated samples (A&B) for the upper and lower levels (U&L). Samples were collected during the first, third and fourth quarters, representing the wet, dry and post-defoliation seasons. The post-defoliation season is defined as the period following the cotton crop harvest.

A value preceded by a negative sign indicates the value is below the detectable limit of the laboratory procedure. Missing data are presented as a field of "9s." No total phosphorus data were reported during 1985.

Site	Soil Texture	
	Upper Level (0 - 15 cm)	Lower Level (15 - 30 cm)
1	Sandy Loam	Sandy Loam
2	Silt Loam-Loam	Loam
3	Silt Loam-Loam	Sandy Loam
4	Sandy Loam	Sandy Loam
5	Sandy Loam	Sandy Loam
6	Sandy Loam	Sandy Loam
7	Sandy Loam	Sandy Loam
8	Sandy Loam	Loamy Sand
9	Loam	Loam-Sandy Loam
10	Loamy Sand-Sandy Loam	Sandy Loam
11	Silt Loam	Silt Loam
12	Loam	Sandy Loam
13	Loam-Sandy Clay Loam	Loam-Sandy Loam
14	Silt Loam	Loam
15	Sandy Loam	Sandy Loam
16	Sandy Loam	Sandy Loam-Sandy Clay Loam
17	Loamy Sand-Sandy Loam	Loamy Sand-Sandy Loam
18	Sandy Loam	Sandy Loam
19	Silt Loam-Loam	Silt Loam
20	Sandy Loam	Sandy Loam-Loamy Sand
21	Sandy Loam	Sandy Loam
22	Sandy Loam-Loamy Sand	Sandy Loam
23	Loam-Silt Loam	Silt Loam
24	Silt Loam-Loam	Loam
25	Loam	Loam
26	Sandy Loam	Loam
27	Sandy Loam	Sandy Loam
28	Sandy Loam	Loam-Sandy Loam
30	Silt Loam	Loam-Silt Loam
31	Sandy Loam	Sandy Loam
32	Sandy Loam	Sandy Loam
33	Sand	Sand
34	Sandy Loam	Sandy Loam
35	Loamy Sand-Sand	Sand
36	Sandy Loam	Sandy Loam
37	Sandy Loam	Sandy Loam
38	Sandy Loam	Sandy Loam
39	Sandy Loam	Sandy Loam
40	Sandy Loam-Loam	Sandy Loam
41	Sandy Loam	Sandy Loam
42	Sandy Loam	Sandy Loam
43	Silt Loam	Silt Loam
44	Silt Loam	Silt Loam
45	Loam-Clay Loam	Loam-Clay Loam

Raw Soil Sample Data

For Quarter 1/85

Site	Qtr	Yr	Mn	Sea	Id Num	Lab Num	EC x 1000	Solu Salts ppm	pH	Ca ppm	Mg ppm	Na ppm	Cl ppm	SO4 ppm	HCO3 ppm	CO3 ppm	F ppm	NO3-N ppm	Boron ppm	NH4 ppm	PO4-P ppm	K ppm
01AL	1	85	3	WET	404	572	1.36	870	8.1	143	9	128	102	345.0	118	0.0	0.59	37.50	1.67	8.75	0.76	8
01AU	1	85	3	WET	403	571	0.80	51	8.2	89	7	76	80	26.0	130	0.0	0.29	26.25	0.71	11.25	1.21	13
01BL	1	85	3	WET	406	574	1.06	678	8.1	117	9	89	88	60.0	128	0.0	0.34	38.75	0.00	9.38	1.52	8
01BU	1	85	3	WET	405	573	1.54	986	8.0	217	17	42	176	25.0	103	0.0	0.15	71.88	0.67	12.98	1.06	22
02AL	1	85	3	WET	408	576	0.62	397	8.5	42	8	106	12	-2.5	240	0.0	0.54	3.00	1.00	11.25	2.42	20
02AU	1	85	3	WET	407	575	0.42	269	8.3	51	8	30	14	-2.5	211	0.0	0.20	3.00	0.42	9.38	2.42	27
02BL	1	85	3	WET	410	578	1.06	678	9.1	117	95	263	24	-2.5	544	24.0	1.12	3.50	2.38	10.00	5.15	71
02BU	1	85	3	WET	409	577	0.60	384	8.5	76	27	72	8	-2.5	236	0.0	0.22	2.50	0.83	11.25	4.85	51
03AL	1	85	3	WET	412	580	2.90	1856	9.4	13	2	674	556	15.0	373	48.0	16.50	27.50	25.83	6.25	3.03	10
03AU	1	85	3	WET	411	579	1.32	845	9.4	44	81	331	128	-2.5	402	53.0	7.00	4.19	5.83	9.38	4.39	65
03BL	1	85	3	WET	414	609	2.50	1600	8.4	17	3	580	269	618.0	260	34.0	11.00	15.63	51.54	4.17	1.52	10
03BU	1	85	3	WET	413	581	1.20	768	9.4	45	81	309	100	-2.5	422	48.0	8.40	4.13	10.83	8.75	3.64	64
04AL	1	85	3	WET	416	582	0.46	294	8.3	75	6	14	10	-2.5	162	0.0	0.42	2.75	0.67	15.38	1.21	15
04AU	1	85	3	WET	415	610	0.40	256	7.2	60	5	11	8	-2.5	140	0.0	0.29	2.75	1.38	11.70	0.91	14
04BL	1	85	3	WET	418	584	0.48	307	8.9	78	6	16	10	3.0	162	0.0	0.43	3.00	0.54	12.98	1.52	25
04BU	1	85	3	WET	417	583	0.42	269	8.3	72	6	13	10	-2.5	159	0.0	0.33	2.50	0.50	12.19	1.82	25
05AL	1	85	3	WET	420	586	0.64	410	8.9	25	4	138	12	-2.5	260	0.0	6.50	3.13	2.44	10.77	2.12	7
05AU	1	85	3	WET	419	585	0.50	320	8.6	38	6	89	10	-2.5	226	0.0	3.80	4.38	1.83	8.75	4.85	20
05BL	1	85	3	WET	422	588	0.84	538	8.9	28	5	235	12	-2.5	319	0.0	9.20	2.75	3.78	9.62	2.42	9
05BU	1	85	3	WET	421	587	0.66	422	8.8	29	4	124	8	-2.5	226	0.0	3.70	2.19	2.33	8.75	3.64	17
06AL	1	85	3	WET	424	611	0.38	243	7.4	38	3	58	8	-2.5	144	0.0	0.29	2.88	0.69	9.02	0.61	2
06AU	1	85	3	WET	423	589	0.42	269	8.3	65	5	33	8	-2.5	172	0.0	0.34	2.50	0.72	9.62	0.91	7
06BL	1	85	3	WET	426	590	0.50	320	8.6	37	3	101	12	-2.5	226	0.0	0.44	2.63	1.00	7.80	1.82	3
06BU	1	85	3	WET	425	612	0.34	218	7.3	51	4	32	8	-2.5	125	0.0	0.24	2.63	0.46	12.23	1.21	7
07AL	1	85	3	WET	428	592	0.68	435	8.7	34	5	135	20	36.0	221	0.0	2.50	3.63	2.67	6.73	4.24	5
07AU	1	85	3	WET	427	591	0.60	384	8.6	37	6	115	22	-2.5	235	0.0	2.30	3.38	2.00	7.88	5.15	7
07BL	1	85	3	WET	430	593	0.76	486	8.6	38	6	138	34	50.0	221	0.0	2.40	3.88	1.78	9.90	4.85	9
07BU	1	85	3	WET	429	613	0.58	371	7.6	34	6	113	20	-2.5	191	0.0	2.50	4.63	1.62	9.29	4.55	7
08AL	1	85	3	WET	432	642	0.70	448	8.8	21	6	153	80	-2.5	199	24.0	0.66	4.88	2.23	7.28	3.64	12
08AU	1	85	3	WET	431	641	0.32	205	8.1	32	5	38	6	-2.5	135	0.0	0.39	3.38	1.13	8.59	4.55	15
08BL	1	85	3	WET	434	643	0.54	346	8.8	17	4	120	30	-2.5	196	27.0	0.84	3.88	1.67	6.30	3.33	7
08BU	1	85	3	WET	433	594	0.42	269	8.8	29	5	78	16	-2.5	199	0.0	0.52	2.31	0.89	7.31	4.24	16
09AL	1	85	3	WET	436	595	0.52	333	8.5	34	7	63	20	-2.5	211	0.0	0.26	2.63	1.28	7.88	3.64	57
09AU	1	85	3	WET	435	644	0.46	294	7.7	61	9	18	10	-2.5	162	0.0	0.15	3.63	1.33	14.77	4.55	35
09BL	1	85	3	WET	438	597	0.44	282	8.5	42	8	32	12	-2.5	154	0.0	0.21	2.63	0.94	11.35	4.85	40
09BU	1	85	3	WET	437	596	0.52	333	8.2	74	11	19	12	-2.5	181	0.0	0.17	2.75	1.17	10.48	5.15	35
10AL	1	85	3	WET	440	645	0.36	230	7.6	51	6	26	8	4.0	162	0.0	0.58	3.38	1.83	10.87	1.82	10
10AU	1	85	3	WET	439	598	0.38	243	8.3	61	7	16	8	-2.5	132	0.0	0.34	2.50	0.67	9.62	2.42	17
10BL	1	85	3	WET	442	600	0.42	269	8.4	58	8	29	12	-2.5	167	0.0	0.54	2.56	0.72	10.48	1.21	14
10BU	1	85	3	WET	441	599	0.40	256	8.4	61	7	19	10	-2.5	142	0.0	0.35	2.50	0.83	8.46	2.12	17
11AL	1	85	3	WET	444	602	1.00	640	8.4	44	4	235	60	17.0	231	0.0	11.00	5.88	2.00	13.75	2.12	31
11AU	1	85	3	WET	443	601	1.00	640	8.5	42	4	235	76	-2.5	240	0.0	8.00	5.00	2.56	17.50	2.42	30
11BL	1	85	3	WET	446	646	0.96	614	7.6	41	4	194	52	-2.5	226	0.0	10.80	6.25	1.40	13.57	1.21	28
11BU	1	85	3	WET	445	614	0.78	499	7.6	32	3	145	44	12.0	181	0.0	8.60	5.38	2.38	13.07	1.82	21

Raw Soil Sample Data

For Quarter 1/85

Site	Qtr	Yr	Mn	Sea	Id Num	Lab Num	EC x 1000	Solu Salts ppm	pH	Ca ppm	Mg ppm	Na ppm	Cl ppm	SO4 ppm	HCO3 ppm	CO3 ppm	F ppm	NO3-N ppm	Boron ppm	NH4 ppm	PO4-P ppm	k ppm
12AL	1	85	3	WET	448	647	3.00	1920	7.6	106	17	526	456	518.0	235	0.0	2.14	105.00	4.67	15.36	21.97	120
12AU	1	85	3	WET	447	603	3.40	2176	8.3	114	18	632	628	429.0	204	0.0	2.30	105.00	6.67	7.31	21.21	118
12BL	1	85	3	WET	450	604	3.80	2432	8.3	133	22	674	728	314.0	191	0.0	1.80	125.00	6.11	11.92	25.76	151
12BU	1	85	3	WET	449	648	3.10	1984	7.7	107	17	526	572	165.0	194	0.0	2.10	125.00	4.47	12.86	18.18	120
13AL	1	85	3	WET	452	616	0.76	486	7.6	31	4	132	56	31.0	172	0.0	5.40	5.13	1.46	11.16	3.64	23
13AU	1	85	3	WET	451	615	0.78	499	7.4	32	4	132	92	42.0	191	0.0	5.46	9.69	1.46	8.48	2.73	23
13BL	1	85	3	WET	454	618	0.78	499	7.6	30	4	135	58	38.0	172	0.0	6.00	4.38	1.92	9.02	3.64	24
13BU	1	85	3	WET	453	617	1.04	666	7.5	43	5	160	60	35.0	194	0.0	3.40	8.75	1.69	11.70	3.94	35
14AL	1	85	3	WET	456	620	0.80	512	7.7	43	7	117	12	-2.5	216	0.0	0.27	7.19	1.04	11.70	2.42	59
14AU	1	85	3	WET	455	619	0.68	435	7.2	41	8	52	10	-2.5	177	0.0	0.24	11.56	1.54	14.20	3.64	103
14BL	1	85	3	WET	458	605	0.88	563	8.4	54	11	91	50	14.0	250	0.0	0.31	20.00	2.22	11.35	4.55	88
14BU	1	85	3	WET	457	621	0.80	512	7.5	61	12	38	10	6.0	208	0.0	0.18	4.38	1.38	14.20	5.15	136
15AL	1	85	3	WET	460	622	0.40	256	7.4	63	6	9	8	-2.5	137	0.0	0.31	2.50	0.38	11.16	2.12	19
15AU	1	85	3	WET	459	606	0.44	282	7.2	66	6	8	8	8.0	140	0.0	0.18	4.00	0.42	11.96	2.42	21
15BL	1	85	3	WET	462	624	0.38	243	7.8	59	5	16	8	-2.5	125	0.0	0.29	2.19	0.54	9.29	2.12	16
15BU	1	85	3	WET	461	623	0.44	282	7.2	70	6	9	8	-2.5	147	0.0	0.16	2.50	0.58	9.82	2.73	30
16AL	1	85	3	WET	464	626	4.40	2816	8.7	24	3	1108	962	359.0	302	72.0	2.68	140.00	37.33	3.08	3.94	55
16AU	1	85	3	WET	463	625	0.88	563	8.4	20	4	166	108	-2.5	228	27.0	0.51	8.44	4.62	2.92	7.58	28
16BL	1	85	3	WET	466	627	4.46	2854	8.9	23	3	1077	912	435.0	336	82.0	3.10	125.00	26.00	3.08	2.42	40
16BU	1	85	3	WET	465	607	1.00	640	8.5	17	5	247	126	-2.5	289	24.0	0.65	13.13	8.85	3.33	5.45	19
17AL	1	85	3	WET	468	628	0.48	307	7.7	61	6	14	8	-2.5	136	0.0	0.23	9.50	1.23	12.17	6.06	37
17AU	1	85	3	WET	467	608	0.50	320	7.1	78	8	9	8	-2.5	152	0.0	0.13	7.19	1.42	15.34	6.36	38
17BL	1	85	3	WET	470	630	0.40	256	7.8	55	5	13	10	-2.5	147	0.0	0.17	3.50	1.13	11.85	7.27	42
17BU	1	85	3	WET	469	629	0.40	256	7.7	61	6	10	8	-2.5	152	0.0	0.13	3.88	1.00	14.77	6.36	40
18AL	1	85	3	WET	472	632	0.32	205	7.8	61	5	18	6	-2.5	128	0.0	0.32	2.88	0.53	9.57	2.27	5
18AU	1	85	3	WET	471	631	0.32	205	7.7	61	5	10	8	-2.5	128	0.0	0.19	3.00	0.40	9.89	2.88	10
18BL	1	85	3	WET	474	634	0.34	218	7.8	65	5	16	10	-2.5	145	0.0	0.31	2.81	0.33	8.26	2.42	7
18BU	1	85	3	WET	473	633	0.34	218	7.7	64	5	13	6	-2.5	137	0.0	0.18	3.06	0.33	12.88	1.36	12
19AL	1	85	3	WET	476	636	0.50	320	8.1	35	5	78	8	-2.5	211	0.0	0.84	3.38	0.87	13.64	2.73	37
19AU	1	85	3	WET	475	635	0.34	218	7.8	38	5	17	8	3.0	154	0.0	0.29	3.19	0.33	8.26	4.24	45
19BL	1	85	3	WET	478	638	0.48	307	8.0	38	5	54	6	-2.5	177	0.0	1.00	3.13	0.63	9.89	2.73	49
19BU	1	85	3	WET	477	637	0.40	256	7.9	50	6	19	6	-2.5	157	0.0	0.36	3.75	0.33	14.77	3.79	55
20AL	1	85	3	WET	480	640	0.44	282	8.5	71	17	92	8	-2.5	253	10.0	2.90	3.75	2.27	6.30	4.39	32
20AU	1	85	3	WET	479	639	0.36	230	8.1	33	5	34	10	-2.5	142	0.0	1.68	3.50	0.97	7.28	5.00	40
20BL	1	85	3	WET	482	650	0.58	371	8.2	20	7	130	12	-2.5	240	10.0	5.70	2.88	1.87	8.75	3.64	23
20BU	1	85	3	WET	481	649	0.50	320	7.7	28	5	67	10	-2.5	177	0.0	2.47	3.75	1.03	8.75	4.24	35
21AL	1	85	3	WET	484	652	0.66	422	8.5	15	8	157	12	-2.5	297	24.0	0.48	3.75	1.20	7.50	2.12	17
21AU	1	85	3	WET	483	651	0.44	282	7.7	37	6	51	10	-2.5	162	0.0	0.28	3.13	0.43	9.38	2.73	28
21BL	1	85	3	WET	486	654	0.72	461	8.5	15	9	160	24	-2.5	311	17.0	0.52	3.63	0.67	8.13	2.12	19
21BU	1	85	3	WET	485	653	0.38	243	7.8	37	6	40	8	-2.5	162	0.0	0.17	3.00	0.27	10.00	2.42	23
22AL	1	85	3	WET	488	656	0.34	218	7.4	57	4	13	16	-2.5	113	0.0	0.27	3.38	0.17	11.88	1.52	9
22AU	1	85	3	WET	487	655	0.34	218	7.3	53	4	9	20	-2.5	133	0.0	0.16	3.50	0.13	7.81	1.21	14
22BL	1	85	3	WET	490	658	0.32	205	7.5	56	4	13	14	-2.5	130	0.0	0.28	4.13	0.17	9.06	1.21	7
22BU	1	85	3	WET	489	657	0.28	179	7.5	51	4	9	6	-2.5	108	0.0	0.17	3.13	0.27	10.00	1.52	10

Raw Soil Sample Data

For Quarter 1/85

Site	Qtr	Yr	Mn	Sea	Id Num	Lab Num	EC x 1000	Solu Salts ppm	pH	Ca ppm	Mg ppm	Na ppm	Cl ppm	SO4 ppm	HCO3 ppm	CO3 ppm	F ppm	NO3-N ppm	Boron ppm	NH4 ppm	PO4-P ppm	K ppm
23AL	1	85	3	WET	492	681	0.80	512	8.0	38	5	200	44	-2.5	174	0.0	5.10	5.38	2.46	16.91	3.33	10
23AU	1	85	3	WET	491	659	0.98	627	7.5	64	8	153	80	9.0	204	0.0	1.95	6.88	1.27	18.93	3.33	26
23BL	1	85	3	WET	494	660	1.16	742	7.9	39	5	286	52	-2.5	284	0.0	8.40	7.81	2.33	15.36	4.24	14
23BU	1	85	3	WET	493	682	0.92	589	7.8	47	6	212	74	-2.5	201	0.0	3.00	10.63	2.77	16.91	4.85	14
24AL	1	85	3	WET	496	683	0.76	486	8.1	27	3	153	32	7.0	184	0.0	3.50	13.00	2.12	11.25	2.73	16
24AU	1	85	3	WET	495	661	0.68	435	7.9	26	4	133	8	-2.5	226	0.0	3.51	7.81	1.40	11.88	3.03	26
24BL	1	85	3	WET	498	685	0.72	461	7.9	22	3	149	30	78.0	217	0.0	3.20	11.88	1.92	9.38	3.18	16
24BU	1	85	3	WET	497	684	0.60	384	8.0	25	3	124	8	7.0	189	0.0	3.30	7.19	2.15	10.63	3.03	21
25AL	1	85	3	WET	762	662	0.94	602	7.6	59	9	143	38	-2.5	221	0.0	1.60	13.75	1.53	18.57	3.64	35
25AU	1	85	3	WET	499	686	0.94	602	7.8	64	11	118	36	26.0	181	0.0	1.43	13.75	2.08	18.06	4.24	35
25BL	1	85	3	WET	764	664	1.02	653	8.2	60	8	147	48	41.0	149	0.0	2.60	24.38	1.28	3.18	1.82	16
25BU	1	85	3	WET	763	663	0.96	614	7.6	59	9	147	46	35.0	189	0.0	1.72	27.50	1.27	19.29	3.03	30
26AL	1	85	3	WET	766	666	0.40	256	7.6	52	5	34	8	-2.5	103	0.0	0.58	2.63	0.62	9.38	2.58	5
26AU	1	85	3	WET	765	665	0.36	230	7.4	62	5	15	20	-2.5	157	0.0	0.31	2.75	0.27	9.06	2.12	12
26BL	1	85	3	WET	768	668	0.34	218	7.7	59	5	22	12	-2.5	101	0.0	0.37	2.50	0.62	8.75	2.12	3
26BU	1	85	3	WET	767	667	0.32	205	7.5	59	5	16	8	-2.5	105	0.0	0.25	2.50	0.31	8.75	2.58	7
27AL	1	85	3	WET	770	688	1.80	1152	8.5	23	3	388	118	377.0	339	5.0	17.50	10.31	6.92	8.46	4.24	11
27AU	1	85	3	WET	769	687	0.88	563	8.3	40	6	224	24	14.0	363	0.0	7.10	4.88	4.23	10.77	6.67	24
27BL	1	85	3	WET	772	689	1.06	678	8.9	32	14	282	10	-2.5	427	34.0	26.00	3.63	6.92	10.19	3.03	16
27BU	1	85	3	WET	771	669	0.56	358	8.4	17	2	135	8	-2.5	199	0.0	2.85	2.63	3.65	8.13	3.33	7
28AL	1	85	3	WET	774	670	0.84	538	8.1	23	2	171	48	376.0	162	0.0	1.16	5.75	1.92	8.13	1.52	5
28AU	1	85	3	WET	773	690	0.62	397	8.2	27	4	124	12	7.0	270	0.0	2.18	5.63	1.85	10.19	1.82	11
28BL	1	85	3	WET	776	672	0.70	448	8.2	20	2	164	28	88.0	217	0.0	1.14	4.94	2.12	10.63	1.82	5
28BU	1	85	3	WET	775	671	0.52	333	8.1	19	2	120	18	-2.5	201	0.0	1.42	4.50	1.92	9.38	1.97	5
30AL	1	85	3	WET	778	674	3.60	2304	8.1	174	23	680	580	1023.0	135	0.0	3.30	55.00	5.85	15.44	2.12	38
30AU	1	85	3	WET	777	673	1.70	1088	8.0	59	8	341	188	471.0	172	0.0	5.00	16.88	4.35	17.65	3.03	23
30BL	1	85	3	WET	780	676	3.40	2176	8.0	158	20	640	574	1062.0	124	0.0	3.10	51.25	4.54	16.18	1.97	37
30BU	1	85	3	WET	779	675	2.10	1344	8.0	75	11	400	264	538.0	250	0.0	4.20	28.13	4.92	13.97	2.27	28
31AL	1	85	3	WET	782	678	0.56	358	8.2	18	2	142	8	-2.5	179	0.0	3.40	5.25	1.69	8.75	2.73	3
31AU	1	85	3	WET	781	677	0.54	346	8.0	23	3	135	22	-2.5	147	0.0	1.95	6.00	1.85	8.75	3.33	7
31BL	1	85	3	WET	784	691	0.72	461	8.5	27	7	156	16	29.0	292	12.0	10.00	5.38	2.31	6.73	2.73	9
31BU	1	85	3	WET	783	679	0.50	320	7.9	25	3	108	10	-2.5	179	0.0	2.30	4.63	1.69	9.38	3.18	7
32AL	1	85	3	WET	786	692	1.56	998	8.5	19	2	353	152	243.0	269	14.0	17.00	14.06	2.38	7.88	1.52	2
32AU	1	85	3	WET	785	680	0.80	512	8.3	21	2	212	24	29.0	196	0.0	5.80	8.44	2.92	8.75	2.73	3
32BL	1	85	3	WET	788	694	1.16	742	8.2	26	3	271	46	243.0	247	5.0	12.50	11.75	1.77	7.88	0.91	2
32BU	1	85	3	WET	787	693	0.84	538	8.4	22	5	212	20	-2.5	311	5.0	10.80	7.50	2.54	7.88	1.82	4
33AL	1	85	3	WET	790	696	0.20	128	8.1	34	3	7	8	-2.5	93	0.0	0.27	2.63	0.00	6.73	3.03	9
33AU	1	85	3	WET	789	695	0.20	128	7.9	32	3	7	10	-2.5	98	0.0	0.34	3.13	0.00	5.58	5.15	11
33BL	1	85	3	WET	792	698	0.20	128	8.0	35	3	7	8	-2.5	91	0.0	0.25	3.00	0.00	7.88	3.64	9
33BU	1	85	3	WET	791	697	0.20	128	8.2	34	3	6	10	-2.5	86	0.0	0.20	2.88	0.00	7.31	5.45	9
34AL	1	85	3	WET	794	700	0.40	256	7.9	71	5	16	14	-2.5	101	0.0	0.21	3.44	0.23	8.46	1.82	7
34AU	1	85	3	WET	793	699	0.34	218	7.9	64	5	9	10	-2.5	98	0.0	0.16	3.06	0.15	7.88	2.42	11
34BL	1	85	3	WET	796	702	0.48	307	7.9	76	5	31	8	18.0	177	0.0	0.15	4.25	0.38	9.62	1.21	7
34BU	1	85	3	WET	795	701	0.36	230	7.8	63	5	16	8	-2.5	163	0.0	0.17	4.00	0.23	9.62	1.52	9

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Raw Soil Sample Data

For Quarter 1/85

Site	Qtr	Yr	Mn	Sea	Id Num	Lab Num	EC x 1000	Solu Salts ppm	pH	Ca ppm	Mg ppm	Na ppm	Cl ppm	SO4 ppm	HCO3 ppm	CO3 ppm	F ppm	NO3-N ppm	Boron ppm	NH4 ppm	PO4-P ppm	k ppm
35AL	1	85	3	WET	798	703	0.20	128	7.9	33	3	8	8	-2.5	88	0.0	0.17	2.88	0.08	5.00	3.64	7
35AU	1	85	3	WET	797	713	0.20	128	8.1	38	3	9	8	-2.5	88	0.0	0.18	2.44	0.29	6.36	3.03	9
35BL	1	85	3	WET	800	705	0.20	128	7.8	34	3	8	10	-2.5	96	0.0	0.22	3.50	0.62	6.15	4.24	7
35BU	1	85	3	WET	799	704	0.20	128	7.9	38	3	7	8	-2.5	91	0.0	0.16	3.25	0.15	7.31	4.55	9
36AL	1	85	3	WET	802	707	0.46	294	7.9	70	5	58	20	3.0	179	0.0	0.34	2.63	0.71	9.77	1.52	9
36AU	1	85	3	WET	801	706	0.40	256	7.9	57	5	25	8	-2.5	152	0.0	0.19	3.63	0.43	11.82	1.52	12
36BL	1	85	3	WET	804	709	0.54	346	8.1	29	2	106	26	35.0	194	0.0	0.97	3.38	2.00	11.82	1.21	5
36BU	1	85	3	WET	803	708	0.34	218	7.9	47	5	32	10	-2.5	135	0.0	0.18	2.50	0.57	11.82	0.91	12
37AL	1	85	3	WET	806	711	0.44	282	7.9	88	5	13	8	-2.5	154	0.0	0.26	3.25	0.64	9.77	2.42	3
37AU	1	85	3	WET	805	710	0.44	282	7.9	91	6	9	8	-2.5	172	0.0	0.18	3.00	0.64	11.14	2.73	10
37BL	1	85	3	WET	808	712	0.40	256	7.9	85	5	12	8	-2.5	158	0.0	0.20	3.38	0.50	9.09	1.21	3
37BU	1	85	3	WET	807	714	0.42	269	7.8	86	5	8	8	-2.5	164	0.0	0.17	3.13	0.50	11.14	1.21	9
38AL	1	85	3	WET	810	716	1.00	640	8.9	11	5	271	30	10.0	436	43.0	2.50	4.00	2.79	12.50	2.42	2
38AU	1	85	3	WET	809	715	0.48	307	8.4	15	2	114	18	-2.5	255	7.0	0.28	3.38	0.57	10.45	2.42	3
38BL	1	85	3	WET	812	718	1.00	640	8.9	11	8	282	24	-2.5	389	60.0	2.00	5.00	2.50	13.97	2.73	2
38BU	1	85	3	WET	811	717	0.46	294	8.5	15	2	106	8	-2.5	216	12.0	0.36	3.25	0.57	11.14	2.73	3
39AL	1	85	3	WET	814	720	1.12	717	8.7	13	2	282	142	61.0	245	27.0	1.90	5.63	4.64	9.09	1.21	3
39AU	1	85	3	WET	813	719	0.54	346	8.4	20	2	106	56	17.0	172	5.0	0.33	4.50	1.07	9.77	1.82	7
39BL	1	85	3	WET	816	722	1.06	678	8.7	15	2	271	70	236.0	226	14.0	2.20	5.13	4.14	7.73	0.91	3
39BU	1	85	3	WET	815	721	0.86	550	8.0	27	3	164	118	150.0	191	0.0	0.42	7.19	2.21	9.09	1.82	7
40AL	1	85	3	WET	818	724	0.36	230	8.1	64	5	14	8	-2.5	140	0.0	0.19	4.63	0.64	11.82	2.73	19
40AU	1	85	3	WET	817	723	0.44	282	7.7	73	5	13	8	-2.5	154	0.0	0.17	5.00	0.86	11.82	0.91	30
40BL	1	85	3	WET	820	726	0.32	205	7.6	55	5	17	8	-2.5	139	0.0	0.17	4.00	0.85	10.53	3.03	15
40BU	1	85	3	WET	819	725	0.38	243	7.6	68	5	12	8	-2.5	196	0.0	0.12	5.13	0.93	12.50	2.73	24
41AL	1	85	3	WET	822	728	1.20	768	8.3	24	3	297	166	52.0	289	2.0	1.20	7.50	9.23	6.97	0.30	8
41AU	1	85	3	WET	821	727	0.50	320	7.6	46	5	66	48	4.0	177	0.0	0.20	3.25	1.38	9.34	1.21	13
41BL	1	85	3	WET	824	730	0.90	576	8.4	31	3	251	68	39.0	262	17.0	1.10	5.63	6.92	6.97	0.30	5
41BU	1	85	3	WET	823	729	0.40	256	7.8	39	4	58	16	-2.5	140	0.0	0.24	3.75	1.08	10.13	0.61	10
42AL	1	85	3	WET	826	732	0.28	179	7.7	55	4	15	8	-2.5	115	0.0	0.28	3.13	0.12	5.79	1.82	5
42AU	1	85	3	WET	825	731	0.32	205	7.6	60	4	11	8	-2.5	125	0.0	0.20	2.88	0.23	8.55	1.82	8
42BL	1	85	3	WET	828	734	0.34	218	7.7	65	5	16	8	-2.5	154	0.0	0.27	3.00	0.12	5.00	1.82	5
42BU	1	85	3	WET	827	733	0.28	179	7.9	55	4	8	8	-2.5	120	0.0	0.18	3.13	0.12	6.97	1.52	8
43AL	1	85	3	WET	830	736	0.60	384	8.0	36	7	108	22	36.0	186	0.0	0.80	3.25	2.08	8.55	2.73	8
43AU	1	85	3	WET	829	735	0.62	397	7.9	54	12	80	32	4.0	282	0.0	0.70	7.50	1.42	12.11	3.64	13
43BL	1	85	3	WET	832	738	0.62	397	8.1	41	6	114	24	129.0	167	0.0	0.79	3.00	2.23	0.71	2.73	8
43BU	1	85	3	WET	831	737	0.60	384	7.9	50	10	80	24	-2.5	199	0.0	0.74	6.25	1.77	11.71	4.24	13
44AL	1	85	3	WET	834	740	0.44	282	8.0	26	4	70	8	-2.5	191	5.0	0.30	2.75	0.77	4.29	3.94	55
44AU	1	85	3	WET	833	739	0.42	269	7.8	45	7	18	10	-2.5	159	0.0	0.17	3.38	0.54	7.37	4.24	57
44BL	1	85	3	WET	836	742	0.56	358	8.3	24	4	92	12	-2.5	201	10.0	0.32	3.38	1.00	6.97	3.94	59
44BU	1	85	3	WET	835	741	0.40	256	8.0	36	6	24	8	-2.5	147	0.0	0.15	3.00	0.77	10.92	4.85	61
45AL	1	85	3	WET	838	744	2.90	1856	8.3	40	5	640	402	893.0	191	0.0	5.30	15.63	5.31	4.29	0.30	8
45AU	1	85	3	WET	837	743	1.66	1062	8.3	21	3	309	164	557.0	206	14.0	3.75	11.25	3.73	7.37	1.21	7
45BL	1	85	3	WET	840	746	1.70	1088	8.4	21	2	320	118	600.0	287	19.0	5.79	6.25	4.69	7.79	0.30	7
45BU	1	85	3	WET	839	745	1.26	806	8.2	17	3	309	74	429.0	269	29.0	4.39	8.75	4.54	3.57	0.61	5

Raw Soil Sample Data

For Quarter 1/85

Site	Qtr	Yr	Mn	Sea	Id Num	Lab Num	Na exchg Meq/ 100gm	K exchg Meq/ 100gm	Ca exchg Meq/ 100gm	Mg exchg Meq/ 100gm	Total P ppm
01AL	1	85	3	WET	404	572	1.33	0.51	33.18	1.52	9999.99
01AU	1	85	3	WET	403	571	0.92	0.78	33.68	1.83	9999.99
01BL	1	85	3	WET	406	574	0.96	0.56	33.93	1.65	9999.99
01BU	1	85	3	WET	405	573	0.60	0.80	34.56	1.91	9999.99
02AL	1	85	3	WET	408	576	1.33	0.96	28.82	2.72	9999.99
02AU	1	85	3	WET	407	575	0.50	1.05	21.32	2.61	9999.99
02BL	1	85	3	WET	410	578	3.32	1.14	27.69	2.59	9999.99
02BU	1	85	3	WET	409	577	0.84	1.35	28.19	2.51	9999.99
03AL	1	85	3	WET	412	580	8.20	0.85	19.02	1.40	9999.99
03AU	1	85	3	WET	411	579	6.21	1.14	22.49	1.77	9999.99
03BL	1	85	3	WET	414	609	7.67	0.91	18.26	1.75	9999.99
03BU	1	85	3	WET	413	581	5.71	1.11	21.71	1.83	9999.99
04AL	1	85	3	WET	416	582	0.37	0.56	28.19	1.11	9999.99
04AU	1	85	3	WET	415	610	0.38	0.74	24.70	1.44	9999.99
04BL	1	85	3	WET	418	584	0.37	0.76	23.20	1.03	9999.99
04BU	1	85	3	WET	417	583	0.35	0.85	26.69	1.23	9999.99
05AL	1	85	3	WET	420	586	2.05	0.56	18.71	1.54	9999.99
05AU	1	85	3	WET	419	585	1.01	0.71	22.42	1.54	9999.99
05BL	1	85	3	WET	422	588	2.30	0.49	18.01	1.40	9999.99
05BU	1	85	3	WET	421	587	1.39	0.78	17.63	1.52	9999.99
06AL	1	85	3	WET	424	611	1.04	0.30	32.31	1.50	9999.99
06AU	1	85	3	WET	423	589	0.55	0.44	24.69	1.56	9999.99
06BL	1	85	3	WET	426	590	1.52	0.36	31.81	1.46	9999.99
06BU	1	85	3	WET	425	612	0.66	0.51	29.94	1.63	9999.99
07AL	1	85	3	WET	428	592	1.74	0.38	20.71	2.82	9999.99
07AU	1	85	3	WET	427	591	1.57	0.38	20.42	2.74	9999.99
07BL	1	85	3	WET	430	593	1.61	0.47	20.47	2.82	9999.99
07BU	1	85	3	WET	429	613	1.65	0.47	21.41	3.25	9999.99
08AL	1	85	3	WET	432	642	2.39	0.60	15.02	1.23	9999.99
08AU	1	85	3	WET	431	641	0.61	0.56	14.81	1.34	9999.99
08BL	1	85	3	WET	434	643	1.88	0.51	13.29	0.95	9999.99
08BU	1	85	3	WET	433	594	0.91	0.63	18.15	1.60	9999.99
09AL	1	85	3	WET	436	595	0.74	1.99	18.56	2.45	9999.99
09AU	1	85	3	WET	435	644	0.41	1.31	20.50	2.51	9999.99
09BL	1	85	3	WET	438	597	0.53	1.29	19.63	2.41	9999.99
09BU	1	85	3	WET	437	596	0.37	1.08	20.63	2.49	9999.99
10AL	1	85	3	WET	440	645	0.41	0.40	19.79	1.58	9999.99
10AU	1	85	3	WET	439	598	0.34	0.51	18.14	1.42	9999.99
10BL	1	85	3	WET	442	600	0.47	0.54	20.68	1.91	9999.99
10BU	1	85	3	WET	441	599	0.26	0.47	18.76	1.50	9999.99
11AL	1	85	3	WET	444	602	2.48	1.62	22.17	1.69	9999.99
11AU	1	85	3	WET	443	601	2.61	1.59	21.97	1.65	9999.99
11BL	1	85	3	WET	446	646	2.69	1.73	22.90	1.69	9999.99
11BU	1	85	3	WET	445	614	2.77	1.59	22.84	1.75	9999.99

Raw Soil Sample Data

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Site	Qtr	Yr	Mn	Sea	Id Num	Lab Num	Na exchg Meq/ 100gm	K exchg Meq/ 100gm	Ca exchg Meq/ 100gm	Mg exchg Meq/ 100gm	Total P ppm
12AL	1	85	3	WET	448	647	4.72	2.67	18.76	2.28	9999.99
12AU	1	85	3	WET	447	603	5.53	2.89	18.96	2.37	9999.99
12BL	1	85	3	WET	450	604	5.80	2.89	18.89	2.49	9999.99
12BU	1	85	3	WET	449	648	4.97	2.89	20.05	2.35	9999.99
13AL	1	85	3	WET	452	616	1.87	1.25	20.43	2.00	9999.99
13AU	1	85	3	WET	451	615	2.01	1.22	19.19	1.87	9999.99
13BL	1	85	3	WET	454	618	1.70	1.14	19.41	1.89	9999.99
13BU	1	85	3	WET	453	617	1.74	1.34	19.51	1.93	9999.99
14AL	1	85	3	WET	456	620	0.13	2.56	22.27	3.44	9999.99
14AU	1	85	3	WET	455	619	0.13	4.69	20.18	2.45	9999.99
14BL	1	85	3	WET	458	605	1.04	3.34	19.86	2.61	9999.99
14BU	1	85	3	WET	457	621	0.08	4.26	16.49	3.50	9999.99
15AL	1	85	3	WET	460	622	0.31	0.74	19.09	1.28	9999.99
15AU	1	85	3	WET	459	606	0.33	0.84	21.43	1.28	9999.99
15BL	1	85	3	WET	462	624	0.38	0.70	19.44	1.15	9999.99
15BU	1	85	3	WET	461	623	0.33	0.98	18.77	1.17	9999.99
16AL	1	85	3	WET	464	626	13.04	1.81	17.86	2.04	9999.99
16AU	1	85	3	WET	463	625	2.34	1.22	17.63	1.50	9999.99
16BL	1	85	3	WET	466	627	13.48	1.51	17.28	2.16	9999.99
16BU	1	85	3	WET	465	607	3.40	1.11	18.14	1.58	9999.99
17AL	1	85	3	WET	468	628	0.43	2.45	22.60	1.93	9999.99
17AU	1	85	3	WET	467	608	0.36	1.99	23.90	2.18	9999.99
17BL	1	85	3	WET	470	630	0.33	2.67	21.83	1.81	9999.99
17BU	1	85	3	WET	469	629	0.31	2.45	20.66	1.77	9999.99
18AL	1	85	3	WET	472	632	0.36	0.44	23.52	1.58	9999.99
18AU	1	85	3	WET	471	631	0.33	0.72	23.76	1.54	9999.99
18BL	1	85	3	WET	474	634	0.38	0.49	23.19	1.46	9999.99
18BU	1	85	3	WET	473	633	0.33	0.63	22.58	1.40	9999.99
19AL	1	85	3	WET	476	636	1.61	3.34	21.51	2.10	9999.99
19AU	1	85	3	WET	475	635	0.41	2.89	18.82	1.56	9999.99
19BL	1	85	3	WET	478	638	0.87	2.89	19.35	1.81	9999.99
19BU	1	85	3	WET	477	637	0.43	2.89	19.31	1.54	9999.99
20AL	1	85	3	WET	480	640	1.13	0.86	15.17	1.54	9999.99
20AU	1	85	3	WET	479	639	0.61	1.34	16.04	1.67	9999.99
20BL	1	85	3	WET	482	650	1.94	1.27	17.53	1.93	9999.99
20BU	1	85	3	WET	481	649	0.82	1.13	17.64	1.77	9999.99
21AL	1	85	3	WET	484	652	2.69	1.21	17.78	1.75	9999.99
21AU	1	85	3	WET	483	651	0.62	0.95	19.62	2.00	9999.99
21BL	1	85	3	WET	486	654	2.69	1.16	17.15	1.63	9999.99
21BU	1	85	3	WET	485	653	0.87	0.91	19.34	1.89	9999.99
22AL	1	85	3	WET	488	656	0.32	0.33	19.51	0.78	9999.99
22AU	1	85	3	WET	487	655	0.27	0.47	19.97	1.89	9999.99
22BL	1	85	3	WET	490	658	0.30	0.29	22.23	2.96	9999.99
22BU	1	85	3	WET	489	657	0.27	0.38	19.40	0.78	9999.99

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For Quarter 1/85

Site	Qtr	Yr	Mn	Sea	Id Num	Lab Num	Na exchg Meq/ 100gm	K exchg Meq/ 100gm	Ca exchg Meq/ 100gm	Mg exchg Meq/ 100gm	Total P ppm
23AL	1	85	3	WET	492	681	2.83	1.07	19.95	1.87	9999.99
23AU	1	85	3	WET	491	659	2.01	1.18	22.31	2.90	9999.99
23BL	1	85	3	WET	494	660	4.72	1.10	22.88	3.02	9999.99
23BU	1	85	3	WET	493	682	3.12	1.10	22.41	2.22	9999.99
24AL	1	85	3	WET	496	683	2.41	1.60	19.87	1.87	9999.99
24AU	1	85	3	WET	495	661	2.07	1.73	20.21	1.05	9999.99
24BL	1	85	3	WET	498	685	2.75	1.73	20.46	2.00	9999.99
24BU	1	85	3	WET	497	684	2.14	1.79	19.56	1.85	9999.99
25AL	1	85	3	WET	762	662	1.87	1.69	20.08	0.82	9999.99
25AU	1	85	3	WET	499	686	1.74	1.48	22.67	3.27	9999.99
25BL	1	85	3	WET	764	664	2.27	1.17	24.20	3.15	9999.99
25BU	1	85	3	WET	763	663	1.94	1.43	19.62	0.74	9999.99
26AL	1	85	3	WET	766	666	0.49	0.38	20.56	1.19	9999.99
26AU	1	85	3	WET	765	665	0.37	0.58	30.44	2.39	9999.99
26BL	1	85	3	WET	768	668	0.49	0.36	20.41	1.07	9999.99
26BU	1	85	3	WET	767	667	0.31	0.49	19.89	0.99	9999.99
27AL	1	85	3	WET	770	688	5.53	0.67	16.78	1.03	9999.99
27AU	1	85	3	WET	769	687	2.45	1.05	18.55	1.28	9999.99
27BL	1	85	3	WET	772	689	6.06	0.70	17.47	1.11	9999.99
27BU	1	85	3	WET	771	669	2.47	0.86	17.20	1.07	9999.99
28AL	1	85	3	WET	774	670	4.86	1.07	24.16	1.89	9999.99
28AU	1	85	3	WET	773	690	2.85	1.02	24.06	1.79	9999.99
28BL	1	85	3	WET	776	672	4.86	1.02	22.80	1.69	9999.99
28BU	1	85	3	WET	775	671	3.12	1.02	23.57	1.75	9999.99
30AL	1	85	3	WET	778	674	8.44	2.22	42.29	4.24	9999.99
30AU	1	85	3	WET	777	673	5.88	1.95	35.68	3.54	9999.99
30BL	1	85	3	WET	780	676	7.42	2.00	43.79	4.69	9999.99
30BU	1	85	3	WET	779	675	5.63	1.92	37.05	3.50	9999.99
31AL	1	85	3	WET	782	678	1.81	0.40	14.97	1.07	9999.99
31AU	1	85	3	WET	781	677	1.30	0.38	14.91	1.11	9999.99
31BL	1	85	3	WET	784	691	2.17	0.39	15.03	0.97	9999.99
31BU	1	85	3	WET	783	679	1.13	0.38	14.13	0.97	9999.99
32AL	1	85	3	WET	786	692	3.56	0.19	18.60	1.32	9999.99
32AU	1	85	3	WET	785	680	2.14	0.29	16.29	1.21	9999.99
32BL	1	85	3	WET	788	694	2.55	0.22	20.05	1.46	9999.99
32BU	1	85	3	WET	787	693	2.17	0.22	16.48	1.15	9999.99
33AL	1	85	3	WET	790	696	0.24	0.15	6.23	0.39	9999.99
33AU	1	85	3	WET	789	695	0.21	0.17	5.55	0.41	9999.99
33BL	1	85	3	WET	792	698	0.24	0.15	6.37	0.37	9999.99
33BU	1	85	3	WET	791	697	0.21	0.17	5.58	0.37	9999.99
34AL	1	85	3	WET	794	700	0.34	0.37	21.62	0.93	9999.99
34AU	1	85	3	WET	793	699	0.34	0.46	21.69	1.01	9999.99
34BL	1	85	3	WET	796	702	0.45	0.34	21.54	0.95	9999.99
34BU	1	85	3	WET	795	701	0.34	0.53	22.13	1.15	9999.99

Raw Soil Sample Data

For Quarter 1/85

Site	Qtr	Yr	Mn	Sea	Id Num	Lab Num	Na exchg Meq/ 100gm	K exchg Meq/ 100gm	Ca exchg Meq/ 100gm	Mg exchg Meq/ 100gm	Total P ppm
35AL	1	85	3	WET	798	703	0.21	0.19	11.09	0.49	9999.99
35AU	1	85	3	WET	797	713	0.25	0.24	13.17	0.58	9999.99
35BL	1	85	3	WET	800	705	0.26	0.24	11.33	0.53	9999.99
35BU	1	85	3	WET	799	704	0.21	0.24	12.40	0.56	9999.99
36AL	1	85	3	WET	802	707	0.70	0.63	30.06	1.60	9999.99
36AU	1	85	3	WET	801	706	0.55	1.05	33.18	2.37	9999.99
36BL	1	85	3	WET	804	709	1.14	0.49	20.37	1.23	9999.99
36BU	1	85	3	WET	803	708	0.62	1.16	35.93	2.65	9999.99
37AL	1	85	3	WET	806	711	0.30	0.31	23.44	1.05	9999.99
37AU	1	85	3	WET	805	710	0.27	0.44	22.97	1.01	9999.99
37BL	1	85	3	WET	808	712	0.32	0.31	23.89	0.99	9999.99
37BU	1	85	3	WET	807	714	0.27	0.40	22.99	1.03	9999.99
38AL	1	85	3	WET	810	716	8.45	0.40	31.94	3.09	9999.99
38AU	1	85	3	WET	809	715	3.00	0.49	34.31	2.76	9999.99
38BL	1	85	3	WET	812	718	9.61	0.33	31.44	2.96	9999.99
38BU	1	85	3	WET	811	717	2.55	0.44	37.43	2.88	9999.99
39AL	1	85	3	WET	814	720	5.71	0.38	23.42	2.72	9999.99
39AU	1	85	3	WET	813	719	1.99	0.67	32.19	2.51	9999.99
39BL	1	85	3	WET	816	722	4.72	0.27	23.27	3.05	9999.99
39BU	1	85	3	WET	815	721	2.36	0.51	30.56	2.57	9999.99
40AL	1	85	3	WET	818	724	0.40	0.98	21.36	1.23	9999.99
40AU	1	85	3	WET	817	723	0.35	1.24	22.29	1.34	9999.99
40BL	1	85	3	WET	820	726	0.45	0.91	21.18	1.42	9999.99
40BU	1	85	3	WET	819	725	0.35	1.24	22.87	1.38	9999.99
41AL	1	85	3	WET	822	728	2.85	0.47	18.10	1.19	9999.99
41AU	1	85	3	WET	821	727	0.80	0.65	19.91	1.52	9999.99
41BL	1	85	3	WET	824	730	2.77	0.38	18.19	1.26	9999.99
41BU	1	85	3	WET	823	729	0.80	0.65	20.13	1.52	9999.99
42AL	1	85	3	WET	826	732	0.37	0.29	21.99	1.07	9999.99
42AU	1	85	3	WET	825	731	0.32	0.33	21.25	0.97	9999.99
42BL	1	85	3	WET	828	734	0.35	0.27	20.80	0.97	9999.99
42BU	1	85	3	WET	827	733	0.30	0.40	21.12	1.03	9999.99
43AL	1	85	3	WET	830	736	1.30	0.42	17.58	2.35	9999.99
43AU	1	85	3	WET	829	735	0.91	0.51	17.40	2.37	9999.99
43BL	1	85	3	WET	832	738	1.65	0.56	19.07	2.82	9999.99
43BU	1	85	3	WET	831	737	1.00	0.51	17.04	2.22	9999.99
44AL	1	85	3	WET	834	740	1.65	4.23	20.31	2.47	9999.99
44AU	1	85	3	WET	833	739	0.47	3.34	21.25	2.59	9999.99
44BL	1	85	3	WET	836	742	2.42	5.35	20.30	2.59	9999.99
44BU	1	85	3	WET	835	741	0.57	3.78	20.53	2.55	9999.99
45AL	1	85	3	WET	838	744	7.20	0.56	22.72	2.28	9999.99
45AU	1	85	3	WET	837	743	4.97	0.79	21.89	2.18	9999.99
45BL	1	85	3	WET	840	746	7.20	0.67	21.44	2.10	9999.99
45BU	1	85	3	WET	839	745	6.46	0.77	21.28	2.10	9999.99

Raw Soil Sample Data

For Quarter 3/85

Site	Qtr	Yr	Mn	Sea	Id Num	Lab Num	EC x 1000	Solu Salts ppm	pH	Ca ppm	Mg ppm	Na ppm	Cl ppm	SO4 ppm	HCO3 ppm	CO3 ppm	F ppm	NO3-N ppm	Boron ppm	NH4 ppm	PO4-P ppm	K ppm
01AL	3	85	8	DRY	850	10	1.28	819	8.2	104	7	145	172	51.0	103	0.0	0.82	53.75	1.50	2.50	0.30	5
01AU	3	85	8	DRY	849	9	0.42	269	8.5	37	3	60	40	5.0	130	0.0	0.42	8.75	0.50	2.50	0.00	6
01BL	3	85	8	DRY	852	12	2.56	1638	8.0	264	15	300	364	210.0	83	0.0	0.32	118.75	1.32	2.50	0.30	11
01BU	3	85	8	DRY	851	11	1.60	1024	8.1	187	13	95	230	49.0	81	0.0	0.20	57.50	0.50	2.50	0.61	16
02AL	3	85	8	DRY	842	2	0.40	256	8.8	27	4	74	12	7.0	202	12.0	0.54	2.31	0.46	2.50	0.45	14
02AU	3	85	8	DRY	841	1	0.40	256	8.4	47	7	24	28	3.0	168	0.0	0.32	2.69	0.29	2.50	1.06	22
02BL	3	85	8	DRY	844	4	1.00	640	9.3	37	7	267	90	71.0	281	33.0	0.78	12.50	2.11	2.50	1.82	14
02BU	3	85	8	DRY	843	3	0.36	230	8.7	32	6	40	12	-2.5	169	7.0	0.31	3.06	0.50	2.50	1.67	22
03AL	3	85	8	DRY	862	22	5.64	3610	9.2	22	4	1309	1522	324.0	148	60.0	11.00	112.50	33.67	2.19	2.73	18
03AU	3	85	8	DRY	861	21	2.60	1664	9.3	54	22	620	633	28.0	227	29.0	3.10	30.00	9.67	2.19	3.94	42
03BL	3	85	8	DRY	864	24	6.46	4134	8.9	45	7	1455	1960	890.0	132	41.0	13.00	125.00	49.33	2.50	2.42	22
03BU	3	85	8	DRY	863	23	2.00	1280	9.3	146	79	500	387	27.0	269	50.0	5.90	20.00	12.33	2.81	2.73	95
04AL	3	85	8	DRY	922	82	0.32	205	8.3	59	6	18	6	8.0	140	0.0	0.29	3.38	0.52	3.18	0.00	16
04AU	3	85	8	DRY	921	81	0.26	166	8.3	52	5	16	6	6.0	128	0.0	0.36	2.81	0.52	2.27	0.00	14
04BL	3	85	8	DRY	924	84	0.26	166	8.4	52	4	14	6	3.0	125	1.0	0.35	3.00	0.80	5.90	0.30	13
04BU	3	85	8	DRY	923	83	0.28	179	8.4	52	4	16	6	-2.5	129	1.0	0.31	3.25	0.80	4.23	0.30	14
05AL	3	85	8	DRY	914	74	0.52	333	8.8	35	4	92	6	-2.5	208	4.0	5.80	3.88	2.50	3.00	2.73	11
05AU	3	85	8	DRY	913	73	0.46	294	8.5	41	4	74	8	-2.5	200	2.0	3.30	4.38	2.45	3.33	3.33	16
05BL	3	85	8	DRY	916	76	0.50	320	9.0	24	5	95	8	-2.5	196	12.0	7.40	3.44	2.20	1.67	2.73	10
05BU	3	85	8	DRY	915	75	0.42	269	8.8	23	4	70	6	-2.5	182	5.0	3.40	3.63	2.20	3.00	2.73	13
06AL	3	85	8	DRY	918	78	0.32	205	8.5	46	4	40	8	13.0	152	0.0	0.40	3.13	0.68	2.73	0.00	5
06AU	3	85	8	DRY	917	77	0.34	218	8.3	51	4	29	14	6.0	128	0.0	0.28	4.50	0.64	2.27	0.61	8
06BL	3	85	8	DRY	920	80	0.30	192	8.7	43	4	50	16	-2.5	164	1.0	0.38	2.56	0.56	0.91	0.30	3
06BU	3	85	8	DRY	919	79	0.30	192	8.7	44	6	44	8	-2.5	132	5.0	0.32	2.88	0.52	1.36	0.30	6
07AL	3	85	8	DRY	978	140	1.94	1242	8.6	36	7	440	220	699.0	245	2.0	4.30	11.88	4.52	1.47	2.73	8
07AU	3	85	8	DRY	977	139	1.02	653	8.8	27	5	278	81	389.0	272	10.0	4.40	6.88	3.22	1.76	3.03	6
07BL	3	85	8	DRY	980	142	1.24	794	8.8	24	4	311	136	461.0	248	5.0	5.20	7.19	3.30	0.00	3.03	5
07BU	3	85	8	DRY	979	141	0.94	602	8.9	21	4	256	44	389.0	253	22.0	5.80	5.63	3.22	0.29	2.12	3
08AL	3	85	8	DRY	898	58	1.48	947	9.4	33	4	343	296	155.0	152	25.0	0.68	10.94	3.30	4.33	2.73	18
08AU	3	85	8	DRY	897	57	0.60	384	9.1	34	5	95	60	-2.5	179	10.0	0.50	3.75	0.85	3.67	5.45	21
08BL	3	85	8	DRY	900	60	0.84	538	9.4	32	5	164	132	-2.5	165	25.0	0.86	3.56	1.15	2.67	3.33	10
08BU	3	85	8	DRY	899	59	0.38	243	8.8	38	5	56	17	-2.5	149	6.0	0.48	3.13	0.55	2.67	4.24	11
09AL	3	85	8	DRY	906	66	0.44	282	8.7	50	8	52	22	5.0	183	6.0	0.31	4.25	1.75	3.00	4.24	45
09AU	3	85	8	DRY	905	65	0.42	269	8.3	65	9	27	16	13.0	202	0.0	0.29	3.75	1.35	4.00	4.55	35
09BL	3	85	8	DRY	908	68	0.36	230	8.7	45	7	34	12	6.0	163	5.0	0.31	2.75	2.20	3.33	5.15	37
09BU	3	85	8	DRY	907	67	0.38	243	8.4	57	8	26	17	6.0	162	0.0	0.23	3.88	1.55	4.33	4.85	35
10AL	3	85	8	DRY	846	6	0.28	179	8.5	44	5	23	8	-2.5	47	2.0	0.57	2.63	0.36	2.50	0.61	10
10AU	3	85	8	DRY	845	5	0.30	192	8.5	46	5	20	16	-2.5	137	0.0	0.48	3.00	0.36	2.50	1.21	13
10BL	3	85	8	DRY	848	8	0.26	166	8.6	35	5	28	6	3.0	132	0.0	0.99	2.44	0.61	6.25	0.30	11
10BU	3	85	8	DRY	847	7	0.30	192	8.5	45	5	22	12	11.0	147	0.0	0.59	3.06	0.43	5.50	1.06	13
11AL	3	85	8	DRY	902	62	0.92	589	8.4	52	4	164	80	44.0	209	4.0	18.00	6.56	1.25	6.88	1.82	21
11AU	3	85	8	DRY	901	61	0.80	512	8.4	51	3	132	73	30.0	191	6.0	13.80	5.38	1.20	3.67	1.52	18
11BL	3	85	8	DRY	904	64	1.44	922	8.1	65	5	320	227	16.0	221	0.0	14.00	8.13	1.70	6.13	2.12	29
11BU	3	85	8	DRY	903	63	0.80	512	8.5	49	3	144	84	43.0	195	2.0	10.80	6.44	1.45	5.38	2.12	18

03/06/86

Raw Soil Sample Data

For Quarter 3/85

Site	Qtr	Yr	Mn	Sea	Id Num	Lab Num	EC x 1000	Solu Salts ppm	pH	Ca ppm	Mg ppm	Na ppm	Cl ppm	SO4 ppm	HCO3 ppm	CO3 ppm	F ppm	NO3-N ppm	Boron ppm	NH4 ppm	PO4-P ppm	K ppm
12AL	3	85	8	DRY	23	184	0.76	486	8.7	38	5	135	48	5.0	255	2.0	18.00	4.25	2.00	1.92	3.64	30
12AU	3	85	8	DRY	22	183	0.62	397	8.7	31	5	120	52	-2.5	211	5.0	9.20	4.75	1.48	1.92	3.64	22
12BL	3	85	8	DRY	25	186	0.78	499	8.8	35	4	145	48	4.0	265	10.0	16.00	3.75	1.52	0.77	3.33	28
12BU	3	85	8	DRY	24	185	0.66	422	8.8	34	6	127	46	-2.5	240	10.0	9.30	4.13	1.93	1.15	4.24	22
13AL	3	85	8	DRY	19	180	0.64	410	8.7	25	3	120	77	36.0	152	5.0	7.60	3.63	1.52	0.38	1.82	9
13AU	3	85	8	DRY	18	179	0.72	461	8.8	25	3	138	88	33.0	169	5.0	7.10	5.25	0.81	1.15	3.03	9
13BL	3	85	8	DRY	21	182	0.80	512	8.6	29	3	145	114	39.0	152	2.0	8.60	6.88	1.52	2.69	2.73	12
13BU	3	85	8	DRY	20	181	0.70	448	8.7	27	3	138	80	27.0	186	5.0	7.60	5.88	1.07	1.54	3.33	9
14AL	3	85	8	DRY	854	14	0.56	358	8.6	32	6	76	24	6.0	221	0.0	0.37	13.75	0.86	5.25	1.82	55
14AU	3	85	8	DRY	853	13	0.64	410	8.5	40	8	39	24	10.0	226	10.0	0.26	11.25	1.64	5.75	2.42	113
14BL	3	85	8	DRY	856	16	0.72	461	8.5	36	6	76	36	18.0	213	0.0	0.35	17.50	0.93	5.00	2.12	76
14BU	3	85	8	DRY	855	15	0.60	384	8.5	37	9	44	16	18.0	226	10.0	0.31	6.88	1.61	6.75	2.58	109
15AL	3	85	8	DRY	11	172	0.26	166	8.4	45	4	11	8	-2.5	142	0.0	0.40	2.56	0.33	0.00	1.52	13
15AU	3	85	8	DRY	10	171	0.32	205	8.4	45	5	10	8	3.0	144	0.0	0.23	3.75	0.33	0.00	2.12	16
15BL	3	85	8	DRY	13	174	0.30	192	8.4	50	5	11	8	-2.5	162	0.0	0.38	2.63	0.33	1.15	2.73	18
15BU	3	85	8	DRY	12	173	0.26	166	8.4	45	4	10	8	-2.5	142	0.0	0.26	2.88	0.26	0.38	2.42	22
16AL	3	85	8	DRY	858	18	5.80	3712	9.2	28	4	1382	1232	320.0	188	85.0	0.20	131.25	28.93	1.25	1.97	67
16AU	3	85	8	DRY	857	17	1.96	1254	9.0	28	3	420	384	44.0	200	14.0	0.54	35.00	5.00	1.25	4.55	48
16BL	3	85	8	DRY	860	20	6.40	4096	9.1	34	5	1527	1432	28.0	196	77.0	2.30	143.75	19.29	2.50	1.21	63
16BU	3	85	8	DRY	859	19	2.12	1357	9.0	28	4	440	445	5.0	215	17.0	0.76	35.00	5.36	5.00	3.64	35
17AL	3	85	8	DRY	894	54	0.72	461	8.4	74	14	16	11	-2.5	260	0.0	0.25	30.00	1.83	2.14	5.45	105
17AU	3	85	8	DRY	893	53	0.92	589	8.2	105	20	14	14	8.0	255	0.0	0.23	45.00	2.04	7.05	11.51	93
17BL	3	85	8	DRY	896	56	0.90	576	8.3	83	22	18	24	4.0	311	0.0	0.17	33.75	2.42	8.41	6.97	134
17BU	3	85	8	DRY	895	55	1.00	640	8.2	97	27	18	24	29.0	338	0.0	0.19	42.50	2.71	7.73	8.48	137
18AL	3	85	8	DRY	930	90	0.26	166	8.4	52	4	17	8	3.0	136	1.0	0.42	2.38	0.92	2.27	0.30	5
18AU	3	85	8	DRY	929	89	0.26	166	8.4	55	4	14	8	4.0	137	0.0	0.31	2.88	0.76	1.36	2.12	8
18BL	3	85	8	DRY	932	92	0.26	166	8.4	54	4	17	8	-2.5	147	0.0	0.38	2.31	0.48	3.64	2.12	6
18BU	3	85	8	DRY	931	91	0.26	166	8.3	51	4	14	8	3.0	132	0.0	0.27	3.00	0.68	2.27	0.30	8
19AL	3	85	8	DRY	926	86	0.32	205	8.6	44	5	22	6	-2.5	159	1.0	0.60	3.75	1.56	4.55	0.00	50
19AU	3	85	8	DRY	925	85	0.38	243	8.3	52	6	17	10	-2.5	167	0.0	0.27	5.88	0.48	7.70	0.30	46
19BL	3	85	8	DRY	928	88	0.32	205	8.8	38	4	18	6	-2.5	147	10.0	0.60	3.75	1.48	3.64	3.03	53
19BU	3	85	8	DRY	927	87	0.36	230	8.4	45	5	22	10	3.0	159	0.0	0.33	6.06	1.44	5.00	2.73	48
20AL	3	85	8	DRY	866	26	0.46	294	9.4	122	84	98	8	-2.5	314	39.0	5.80	2.63	1.23	2.50	3.94	68
20AU	3	85	8	DRY	865	25	0.42	269	9.1	46	21	64	8	-2.5	284	19.0	4.00	4.00	1.00	2.50	4.24	43
20BL	3	85	8	DRY	868	28	0.54	345	9.4	95	63	117	8	-2.5	363	39.0	6.50	2.88	1.40	3.13	4.55	59
20BU	3	85	8	DRY	867	27	0.40	256	9.0	88	40	54	8	-2.5	255	10.0	2.80	3.75	0.70	2.81	4.24	52
21AL	3	85	8	DRY	974	136	0.66	422	9.4	18	6	132	80	-2.5	177	34.0	0.48	4.75	2.35	0.29	2.27	18
21AU	3	85	8	DRY	973	135	0.26	166	8.9	24	5	38	4	3.0	132	5.0	0.23	3.56	1.61	0.29	3.18	16
21BL	3	85	8	DRY	976	138	0.54	346	9.4	21	9	111	35	-2.5	204	36.0	0.47	3.75	0.70	0.29	2.42	16
21BU	3	85	8	DRY	975	137	0.28	179	8.8	27	6	39	10	3.0	86	7.0	0.25	3.63	1.39	0.29	3.03	16
22AL	3	85	8	DRY	970	132	0.22	141	8.6	43	4	10	10	3.0	108	2.0	0.27	3.69	1.00	0.29	0.61	10
22AU	3	85	8	DRY	969	131	0.28	179	8.6	48	5	11	40	4.0	118	0.0	0.22	5.63	1.39	0.29	1.21	11
22BL	3	85	8	DRY	972	134	-0.20	128	8.6	41	4	11	6	3.0	108	0.0	0.28	3.38	1.17	0.29	0.76	3
22BU	3	85	8	DRY	971	133	0.20	128	8.6	41	4	11	6	4.0	101	0.0	0.24	3.63	0.96	0.88	0.91	8

Raw Soil Sample Data

For Quarter 3/85

Site	Qtr	Yr	Mn	Sea	Id Num	Lab Num	EC x 1000	Solu Salts ppm	pH	Ca ppm	Mg ppm	Na ppm	Cl ppm	SO4 ppm	HCO3 ppm	CO3 ppm	F ppm	NO3-N ppm	Boron ppm	NH4 ppm	PO4-P ppm	K ppm
23AL	3	85	8	DRY	31	192	2.80	1792	8.2	110	14	547	544	217.0	184	0.0	5.40	60.00	2.52	6.36	3.33	27
23AU	3	85	8	DRY	30	191	2.50	1600	8.2	92	12	463	472	208.0	181	0.0	5.40	62.50	2.74	4.23	3.33	25
23BL	3	85	8	DRY	33	194	1.88	1203	8.4	63	8	378	329	242.0	169	0.0	7.20	23.75	1.89	1.54	2.12	15
23BU	3	85	8	DRY	32	193	3.00	1920	8.1	144	19	526	628	217.0	191	0.0	4.60	12.50	2.52	5.00	2.73	28
24AL	3	85	8	DRY	15	176	0.76	486	8.7	66	14	138	40	17.0	245	0.0	6.40	18.75	1.30	3.46	2.12	36
24AU	3	85	8	DRY	14	175	0.80	512	8.6	36	5	127	46	3.0	231	0.0	5.80	21.88	1.07	7.05	3.03	37
24BL	3	85	8	DRY	17	178	0.64	410	8.7	38	7	111	20	-2.5	240	0.0	7.70	13.75	1.07	6.02	2.42	30
24BU	3	85	8	DRY	16	177	0.70	448	8.6	35	4	117	28	-2.5	221	2.0	6.40	21.88	1.26	6.36	2.73	31
25AL	3	85	8	DRY	934	94	1.02	653	8.3	55	8	153	96	350.0	167	0.0	3.30	12.50	1.52	3.18	0.30	11
25AU	3	85	8	DRY	933	93	0.94	602	8.2	58	9	140	84	207.0	164	0.0	2.35	26.25	1.84	3.18	0.30	18
25BL	3	85	8	DRY	936	96	1.02	653	8.2	60	9	147	116	150.0	149	0.0	2.60	24.38	1.28	3.18	1.82	16
25BU	3	85	8	DRY	935	95	1.28	819	8.2	77	13	160	142	236.0	162	0.0	2.08	45.00	1.76	4.55	1.82	24
26AL	3	85	8	DRY	982	144	0.24	154	8.4	50	4	19	6	4.0	147	0.0	0.56	3.00	0.35	1.25	2.12	3
26AU	3	85	8	DRY	981	143	0.26	166	8.4	49	4	17	4	3.0	140	0.0	0.37	4.13	0.61	0.29	1.97	8
26BL	3	85	8	DRY	984	146	0.20	128	8.4	43	4	17	6	3.0	125	0.0	0.62	2.50	0.35	0.00	1.82	3
26BU	3	85	8	DRY	983	145	0.20	128	8.4	41	4	14	8	-2.5	113	0.0	0.40	3.06	0.26	0.00	2.12	6
27AL	3	85	8	DRY	910	70	1.00	640	9.2	62	16	263	44	14.0	285	39.0	16.00	8.44	5.05	3.33	3.03	16
27AU	3	85	8	DRY	909	69	0.76	486	8.9	36	6	152	28	-2.5	265	14.0	6.40	9.69	2.10	1.67	3.33	14
27BL	3	85	8	DRY	912	72	1.00	640	9.4	58	21	274	22	-2.5	476	58.0	15.50	5.38	4.80	3.00	1.82	32
27BU	3	85	8	DRY	911	71	0.66	422	9.1	52	8	120	12	-2.5	208	24.0	5.90	7.19	3.05	1.33	3.03	13
28AL	3	85	8	DRY	890	50	0.88	563	8.9	29	3	167	30	50.0	272	10.0	2.30	3.63	1.75	5.00	0.30	12
28AU	3	85	8	DRY	889	49	0.70	448	8.9	24	4	145	24	104.0	276	14.0	2.30	4.88	1.71	6.36	0.61	10
28BL	3	85	8	DRY	892	52	1.06	678	8.9	25	3	267	46	279.0	230	15.0	3.00	5.69	3.08	2.86	0.91	8
28BU	3	85	8	DRY	891	51	0.72	461	8.8	23	4	153	20	16.0	300	14.0	2.40	6.56	1.83	2.86	0.61	10
30AL	3	85	8	DRY	882	42	3.42	2189	8.0	101	18	737	668	1181.0	167	0.0	3.80	43.75	5.82	5.94	3.03	37
30AU	3	85	8	DRY	881	41	1.16	742	8.5	48	5	278	110	260.0	305	10.0	7.40	10.94	2.91	5.94	3.33	16
30BL	3	85	8	DRY	884	44	2.80	1792	7.8	82	14	589	434	1116.0	186	0.0	4.10	42.50	4.32	6.25	3.64	38
30BU	3	85	8	DRY	883	43	1.20	768	8.4	43	5	278	113	632.0	274	0.0	6.00	22.50	3.18	10.31	3.64	21
31AL	3	85	8	DRY	874	34	0.64	410	8.8	25	7	132	60	200.0	167	14.0	5.80	5.25	1.41	3.00	3.03	8
31AU	3	85	8	DRY	873	33	0.88	563	8.7	23	4	164	84	110.0	202	6.0	4.59	11.88	1.91	2.50	2.42	10
31BL	3	85	8	DRY	876	36	1.06	678	8.8	28	4	267	100	290.0	226	13.0	6.80	13.75	1.86	2.50	3.03	13
31BU	3	85	8	DRY	875	35	0.86	550	8.6	27	4	164	80	48.0	154	9.0	2.70	28.13	1.95	3.50	3.33	14
32AL	3	85	8	DRY	870	30	1.80	1152	9.0	23	3	420	240	391.0	227	7.0	13.00	13.13	2.47	2.81	1.21	5
32AU	3	85	8	DRY	869	29	2.26	1446	9.0	27	4	540	332	580.0	210	5.0	8.90	23.13	2.30	1.56	2.12	8
32BL	3	85	8	DRY	872	32	1.88	1203	9.1	20	3	460	245	480.0	247	12.0	13.00	18.13	2.83	2.50	2.42	9
32BU	3	85	8	DRY	871	31	2.80	1792	9.0	35	4	660	356	874.0	242	12.0	12.00	40.00	4.47	1.88	3.03	12
33AL	3	85	8	DRY	878	38	-0.20	128	8.6	30	3	11	6	-2.5	84	0.0	0.26	3.00	0.09	2.50	3.03	6
33AU	3	85	8	DRY	877	37	-0.20	128	8.5	28	3	11	7	-2.5	77	0.0	0.23	3.38	0.05	2.50	3.33	8
33BL	3	85	8	DRY	880	40	0.22	141	8.5	31	3	11	5	-2.5	83	0.0	0.27	2.19	0.05	5.00	2.73	8
33BU	3	85	8	DRY	879	39	0.20	128	8.6	29	3	11	8	-2.5	79	0.0	0.23	2.63	0.05	3.50	3.64	8
34AL	3	85	8	DRY	990	152	0.26	166	8.4	43	4	24	14	10.0	108	5.0	0.25	2.56	0.48	0.00	0.76	5
34AU	3	85	8	DRY	989	151	0.22	141	8.5	40	4	13	12	7.0	110	0.0	0.21	2.88	0.22	0.00	0.91	6
34BL	3	85	8	DRY	992	154	0.26	166	8.3	47	4	16	6	13.0	125	0.0	0.23	2.94	0.57	0.00	0.76	5
34BU	3	85	8	DRY	991	153	0.20	128	8.5	38	4	10	6	-2.5	103	0.0	0.20	2.75	0.52	0.00	0.76	5

03/06/86

Raw Soil Sample Data

For Quarter 3/85

Site	Qtr	Yr	Mn	Sea	Id Num	Lab Num	EC x 1000	Solu Salts ppm	pH	Ca ppm	Mg ppm	Na ppm	Cl ppm	SO4 ppm	HCO3 ppm	CO3 ppm	F ppm	NO3-N ppm	Boron ppm	NH4 ppm	PO4-P ppm	K ppm
35AL	3	85	8	DRY	994	156	-0.20	128	8.5	29	3	9	6	-2.5	76	0.0	0.22	2.38	0.48	0.00	3.64	6
35AU	3	85	8	DRY	993	155	-0.20	128	8.2	30	3	8	6	-2.5	74	0.0	0.16	2.50	0.35	0.00	3.94	8
35BL	3	85	8	DRY	996	158	-0.20	128	8.4	34	3	8	6	-2.5	83	0.0	0.22	2.63	1.04	0.00	3.03	6
35BU	3	85	8	DRY	995	157	-0.20	128	8.4	27	3	7	6	-2.5	66	0.0	0.14	2.88	1.00	0.00	3.33	8
36AL	3	85	8	DRY	998	160	0.24	154	8.4	37	4	19	16	20.0	103	0.0	0.24	2.88	1.22	0.83	0.91	6
36AU	3	85	8	DRY	997	159	0.24	154	8.4	38	4	15	6	4.0	130	0.0	0.17	2.94	1.26	0.83	1.06	8
36BL	3	85	8	DRY	1	162	0.26	166	8.6	30	3	35	18	12.0	104	0.0	0.29	4.50	1.17	0.00	0.76	6
36BU	3	85	8	DRY	999	161	0.22	141	8.5	33	4	23	6	-2.5	98	0.0	0.19	3.25	1.00	1.25	0.91	8
37AL	3	85	8	DRY	3	164	0.22	141	8.4	58	4	15	8	-2.5	147	0.0	0.33	3.00	1.04	0.83	1.36	3
37AU	3	85	8	DRY	2	163	0.20	128	8.3	50	4	8	8	-2.5	118	0.0	0.22	3.63	1.13	1.67	1.82	6
37BL	3	85	8	DRY	5	166	0.20	128	8.4	50	4	13	6	-2.5	128	0.0	0.26	2.88	0.78	0.42	0.91	2
37BU	3	85	8	DRY	4	165	0.22	141	8.4	50	4	10	6	3.0	118	0.0	0.27	3.38	0.78	0.42	1.21	3
38AL	3	85	8	DRY	950	112	0.54	346	9.2	21	6	124	10	9.0	234	20.0	0.40	6.44	2.09	4.58	2.42	5
38AU	3	85	8	DRY	949	111	0.34	218	8.8	25	4	64	8	6.0	159	5.0	0.21	6.88	1.17	4.17	2.73	6
38B'	3	85	8	DRY	952	114	0.60	384	9.3	18	7	145	14	4.0	250	40.0	0.53	3.50	2.43	2.50	2.73	3
38BU	3	85	8	DRY	951	113	0.36	230	9.0	20	3	78	8	-2.5	172	15.0	0.28	4.63	1.65	5.65	2.12	5
39AL	3	85	8	DRY	954	116	6.20	3968	8.0	427	54	862	1736	939.0	73	0.0	0.19	70.00	5.22	1.25	2.12	22
39AU	3	85	8	DRY	953	115	5.48	3507	8.0	324	34	1033	1500	814.0	70	0.0	0.17	56.25	5.65	0.83	2.12	28
39BL	3	85	8	DRY	956	118	1.56	998	8.6	40	5	333	404	49.0	101	2.0	0.30	11.88	1.96	1.47	0.91	8
39BU	3	85	8	DRY	955	117	0.80	512	8.6	38	4	117	177	32.0	96	0.0	0.17	7.50	0.65	2.06	1.52	8
40AL	3	85	8	DRY	938	98	0.28	179	8.4	58	5	13	6	-2.5	181	0.0	0.19	2.19	0.65	2.50	2.12	20
40AU	3	85	8	DRY	937	97	0.34	218	8.3	57	4	12	4	-2.5	185	0.0	0.18	3.38	0.74	4.58	2.73	29
40BL	3	85	8	DRY	940	100	0.32	205	8.4	60	4	17	8	-2.5	189	0.0	0.19	2.31	0.65	6.96	0.91	20
40BU	3	85	8	DRY	939	99	0.40	256	8.3	67	5	13	14	3.0	192	0.0	0.17	3.75	0.74	9.57	2.12	28
41AL	3	85	8	DRY	906	148	0.96	614	8.5	33	4	160	204	24.0	123	0.0	0.32	7.50	1.65	0.00	0.30	8
41AU	3	85	8	DRY	985	147	0.28	179	8.4	36	4	25	21	6.0	110	0.0	0.21	2.88	0.39	0.42	0.91	8
41BL	3	85	8	DRY	988	150	1.16	742	8.6	31	3	274	263	30.0	113	5.0	0.32	7.81	2.00	0.00	0.30	6
41BU	3	85	8	DRY	987	149	0.30	192	8.5	34	4	35	32	7.0	110	0.0	0.25	3.25	0.39	0.00	0.76	6
42AL	3	85	8	DRY	946	108	0.26	166	8.3	50	4	14	6	3.0	140	2.0	0.24	3.50	0.74	2.08	1.21	6
42AU	3	85	8	DRY	945	107	0.26	166	8.4	45	4	11	10	4.0	113	2.0	0.28	3.81	0.48	2.08	1.52	8
42BL	3	85	8	DRY	948	110	0.24	154	8.4	53	4	12	4	-2.5	147	0.0	0.26	3.75	0.96	2.08	1.82	6
42BU	3	85	8	DRY	947	109	0.24	154	8.4	55	4	11	6	3.0	157	0.0	0.22	3.81	1.00	2.08	1.52	9
43AL	3	85	8	DRY	942	104	0.96	614	8.6	49	10	156	118	192.0	233	6.0	1.40	6.25	1.30	3.75	0.91	12
43AU	3	85	8	DRY	941	103	1.02	653	8.5	57	12	164	130	142.0	250	6.0	1.20	13.00	1.70	5.98	2.73	14
43BL	3	85	8	DRY	944	106	1.04	666	8.7	53	9	233	132	192.0	262	10.0	0.92	5.94	2.17	2.92	3.94	17
43BU	3	85	8	DRY	943	105	1.14	730	8.5	58	12	233	160	167.0	253	5.0	1.10	15.63	1.91	5.33	0.61	15
44AL	3	85	8	DRY	27	188	0.50	320	9.1	29	5	69	10	-2.5	235	19.0	0.35	3.63	2.44	2.31	4.55	66
44AU	3	85	8	DRY	26	187	0.42	269	8.6	34	6	27	20	3.0	196	5.0	0.21	4.94	1.19	1.92	5.45	67
44BL	3	85	8	DRY	29	190	0.48	307	9.0	36	7	69	12	-2.5	235	10.0	0.33	3.50	2.07	3.46	3.03	50
44BU	3	85	8	DRY	28	189	0.40	256	8.7	32	5	28	10	-2.5	186	2.0	0.18	4.00	0.81	2.69	4.55	64
45AL	3	85	8	DRY	886	46	1.60	1024	9.1	14	2	389	116	616.0	340	33.0	12.00	2.38	4.88	0.00	0.00	5
45AU	3	85	8	DRY	885	45	1.28	819	9.2	13	4	333	72	208.0	387	43.0	9.40	2.25	3.00	0.71	0.30	7
45BL	3	85	8	DRY	888	48	1.38	883	9.1	14	4	356	95	565.0	330	40.0	8.30	2.19	3.88	3.57	0.00	5
45BU	3	85	8	DRY	887	47	1.20	768	9.3	30	5	311	68	324.0	356	39.0	10.50	2.31	3.71	1.43	0.00	7

Raw Soil Sample Data

For Quarter 3/85

Site	Qtr	Yr	Mn	Sea	Id Num	Lab Num	Na exchg Meq/ 100gm	K exchg Meq/ 100gm	Ca exchg Meq/ 100gm	Mg exchg Meq/ 100gm	Total P ppm
01AL	3	85	8	DRY	850	10	1.51	0.43	28.57	1.60	9999.99
01AU	3	85	8	DRY	849	9	0.82	0.58	34.76	1.69	9999.99
01BL	3	85	8	DRY	852	12	2.07	0.53	36.80	1.60	9999.99
01BU	3	85	8	DRY	851	11	0.92	0.77	35.03	1.77	9999.99
02AL	3	85	8	DRY	842	2	1.05	0.98	28.84	2.51	9999.99
02AU	3	85	8	DRY	841	1	0.48	1.11	29.72	2.47	9999.99
02BL	3	85	8	DRY	844	4	1.69	1.34	29.37	2.88	9999.99
02BU	3	85	8	DRY	843	3	0.65	1.14	28.69	2.47	9999.99
03AL	3	85	8	DRY	862	22	12.61	0.91	24.23	1.69	9999.99
03AU	3	85	8	DRY	861	21	7.97	1.00	25.00	4.77	9999.99
03BL	3	85	8	DRY	864	24	12.17	0.89	25.25	1.89	9999.99
03BU	3	85	8	DRY	863	23	7.25	1.00	25.75	1.81	9999.99
04AL	3	85	8	DRY	922	82	0.29	0.70	25.91	1.28	9999.99
04AU	3	85	8	DRY	921	81	0.31	0.79	30.44	1.34	9999.99
04BL	3	85	8	DRY	924	84	0.31	0.84	31.31	1.26	9999.99
04BU	3	85	8	DRY	923	83	0.27	0.67	24.85	1.13	9999.99
05AL	3	85	8	DRY	914	74	1.45	0.79	22.85	1.81	9999.99
05AU	3	85	8	DRY	913	73	1.12	0.91	21.44	1.79	9999.99
05BL	3	85	8	DRY	916	76	1.49	0.70	22.65	1.67	9999.99
05BU	3	85	8	DRY	915	75	0.99	0.81	22.63	1.79	9999.99
06AL	3	85	8	DRY	918	78	0.72	0.31	32.19	1.54	9999.99
06AU	3	85	8	DRY	917	77	0.46	0.43	32.31	1.58	9999.99
06BL	3	85	8	DRY	920	80	0.92	0.28	33.06	1.40	9999.99
06BU	3	85	8	DRY	919	79	0.77	0.39	32.68	1.56	9999.99
07AL	3	85	8	DRY	978	140	5.49	0.41	23.84	3.56	9999.99
07AU	3	85	8	DRY	977	139	2.61	0.41	23.94	3.33	9999.99
07BL	3	85	8	DRY	980	142	3.48	0.43	23.14	3.74	9999.99
07BU	3	85	8	DRY	979	141	2.87	0.39	23.19	3.77	9999.99
08AL	3	85	8	DRY	898	58	3.48	0.84	18.94	1.23	9999.99
08AU	3	85	8	DRY	897	57	1.33	0.95	20.17	1.63	9999.99
08BL	3	85	8	DRY	900	60	2.05	0.49	17.13	1.13	9999.99
08BU	3	85	8	DRY	899	59	0.72	0.53	20.71	1.54	9999.99
09AL	3	85	8	DRY	906	66	0.80	1.91	22.63	2.74	9999.99
09AU	3	85	8	DRY	905	65	0.56	1.57	24.91	3.09	9999.99
09BL	3	85	8	DRY	908	68	0.58	1.71	22.32	2.57	9999.99
09BU	3	85	8	DRY	907	67	0.51	1.39	23.17	2.61	9999.99
10AL	3	85	8	DRY	846	6	0.43	0.49	29.02	1.69	9999.99
10AU	3	85	8	DRY	845	5	0.39	0.47	26.42	1.40	9999.99
10BL	3	85	8	DRY	848	8	0.51	0.49	29.17	2.02	9999.99
10BU	3	85	8	DRY	847	7	0.39	0.47	26.97	1.60	9999.99
11AL	3	85	8	DRY	902	62	2.80	1.84	25.89	1.89	9999.99
11AU	3	85	8	DRY	901	61	2.42	1.71	25.07	1.73	9999.99
11BL	3	85	8	DRY	904	64	2.90	1.64	25.47	1.75	9999.99
11BU	3	85	8	DRY	903	63	2.55	1.57	25.17	1.69	9999.99

Raw Soil Sample Data

For Quarter 3/85

Site	Qtr	Yr	Mn	Sea	Id Num	Lab Num	Na exchg Meq/ 100gm	K exchg Meq/ 100gm	Ca exchg Meq/ 100gm	Mg exchg Meq/ 100gm	Total P ppm
12AL	3	85	8	DRY	23	184	1.99	1.84	21.06	1.52	9999.99
12AU	3	85	8	DRY	22	183	2.11	1.74	21.06	1.50	9999.99
12BL	3	85	8	DRY	25	186	2.30	2.08	21.77	1.65	9999.99
12BU	3	85	8	DRY	24	185	2.05	1.71	20.53	1.48	9999.99
13AL	3	85	8	DRY	19	180	1.48	0.70	21.44	1.83	9999.99
13AU	3	85	8	DRY	18	179	1.74	0.79	22.03	1.67	9999.99
13BL	3	85	8	DRY	21	182	1.74	0.86	22.62	1.73	9999.99
13BU	3	85	8	DRY	20	181	1.80	0.77	22.07	1.58	9999.99
14AL	3	85	8	DRY	854	14	0.96	2.56	24.15	2.26	9999.99
14AU	3	85	8	DRY	853	13	0.65	4.48	28.69	3.13	9999.99
14BL	3	85	8	DRY	856	16	1.01	3.41	26.80	2.63	9999.99
14BU	3	85	8	DRY	855	15	0.72	4.26	28.32	3.83	9999.99
15AL	3	85	8	DRY	11	172	0.30	0.93	23.94	1.44	9999.99
15AU	3	85	8	DRY	10	171	0.32	0.91	22.77	1.21	9999.99
15BL	3	85	8	DRY	13	174	0.30	1.00	21.86	1.23	9999.99
15BU	3	85	8	DRY	12	173	0.25	1.16	22.26	1.21	9999.99
16AL	3	85	8	DRY	858	18	13.27	1.57	27.05	2.02	9999.99
16AU	3	85	8	DRY	857	17	3.04	1.02	25.52	1.44	9999.99
16BL	3	85	8	DRY	860	20	14.19	1.48	27.47	2.30	9999.99
16BU	3	85	8	DRY	859	19	3.12	0.86	22.78	1.56	9999.99
17AL	3	85	8	DRY	894	54	0.48	6.58	24.44	4.20	9999.99
17AU	3	85	8	DRY	893	53	0.05	4.26	30.94	4.28	9999.99
17BL	3	85	8	DRY	896	56	0.48	6.33	24.73	5.45	9999.99
17BU	3	85	8	DRY	895	55	0.48	5.60	25.59	5.91	9999.99
18AL	3	85	8	DRY	930	90	0.51	0.43	25.61	1.36	9999.99
18AU	3	85	8	DRY	929	89	0.31	0.70	25.70	1.44	9999.99
18BL	3	85	8	DRY	932	92	0.34	0.51	24.58	1.40	9999.99
18BU	3	85	8	DRY	931	91	0.31	0.63	25.12	1.38	9999.99
19AL	3	85	8	DRY	926	86	0.46	3.74	22.28	1.89	9999.99
19AU	3	85	8	DRY	925	85	0.34	2.56	18.99	1.46	9999.99
19BL	3	85	8	DRY	928	88	0.48	4.92	21.78	2.12	9999.99
19BU	3	85	8	DRY	927	87	0.46	3.15	21.23	1.81	9999.99
20AL	3	85	8	DRY	866	26	1.43	0.89	23.65	1.65	9999.99
20AU	3	85	8	DRY	865	25	0.91	1.05	24.45	1.77	9999.99
20BL	3	85	8	DRY	868	28	1.65	0.96	23.68	1.69	9999.99
20BU	3	85	8	DRY	867	27	0.77	0.93	24.05	1.65	9999.99
21AL	3	85	8	DRY	974	136	2.27	1.22	19.31	1.83	9999.99
21AU	3	85	8	DRY	973	135	0.62	0.88	21.03	2.02	9999.99
21BL	3	85	8	DRY	976	138	1.87	1.00	19.47	1.77	9999.99
21BU	3	85	8	DRY	975	137	0.66	0.81	21.97	1.98	9999.99
22AL	3	85	8	DRY	970	132	0.25	0.39	21.56	0.86	9999.99
22AU	3	85	8	DRY	969	131	0.30	0.43	21.56	0.84	9999.99
22BL	3	85	8	DRY	972	134	0.32	0.26	22.27	0.78	9999.99
22BU	3	85	8	DRY	971	133	0.27	0.33	20.82	0.80	9999.99

Raw Soil Sample Data

For Quarter 3/85

Site	Qtr	Yr	Mn	Sea	Id Num	Lab Num	Na exchg Meq/ 100gm	K exchg Meq/ 100gm	Ca exchg Meq/ 100gm	Mg exchg Meq/ 100gm	Total P ppm
23AL	3	85	8	DRY	31	192	5.47	1.08	23.54	2.12	9999.99
23AU	3	85	8	DRY	30	191	5.22	1.05	24.09	2.20	9999.99
23BL	3	85	8	DRY	33	194	3.64	1.00	22.92	1.95	9999.99
23BU	3	85	8	DRY	32	193	5.47	1.10	24.63	2.41	9999.99
24AL	3	85	8	DRY	15	176	1.93	2.05	22.26	1.98	9999.99
24AU	3	85	8	DRY	14	175	1.70	2.11	22.31	1.98	9999.99
24BL	3	85	8	DRY	17	178	1.70	1.88	22.78	2.00	9999.99
24BU	3	85	8	DRY	16	177	1.70	2.08	23.07	2.02	9999.99
25AL	3	85	8	DRY	934	94	2.54	0.98	23.84	2.96	9999.99
25AU	3	85	8	DRY	933	93	2.14	1.29	24.91	3.31	9999.99
25BL	3	85	8	DRY	936	96	2.27	1.17	24.20	3.15	9999.99
25BU	3	85	8	DRY	935	95	2.21	1.29	23.85	3.21	9999.99
26AL	3	85	8	DRY	982	144	0.43	0.38	22.99	1.15	9999.99
26AU	3	85	8	DRY	981	143	0.37	0.51	21.82	1.07	9999.99
26BL	3	85	8	DRY	984	146	0.46	0.40	23.81	1.19	9999.99
26BU	3	85	8	DRY	983	145	0.36	0.56	21.69	1.01	9999.99
27AL	3	85	8	DRY	910	70	5.31	0.65	21.02	1.17	9999.99
27AU	3	85	8	DRY	909	69	2.30	0.95	20.86	1.36	9999.99
27BL	3	85	8	DRY	912	72	5.56	0.77	21.31	1.15	9999.99
27BU	3	85	8	DRY	911	71	1.99	0.91	21.74	1.28	9999.99
28AL	3	85	8	DRY	890	50	5.31	1.16	31.44	1.89	9999.99
28AU	3	85	8	DRY	889	49	3.32	1.21	30.94	1.81	9999.99
28BL	3	85	8	DRY	892	52	5.80	1.05	30.44	1.81	9999.99
28BU	3	85	8	DRY	891	51	3.48	1.21	30.69	1.83	9999.99
30AL	3	85	8	DRY	882	42	8.45	1.95	38.17	3.85	9999.99
30AU	3	85	8	DRY	881	41	5.31	2.01	23.70	2.86	9999.99
30BL	3	85	8	DRY	884	44	0.75	2.66	32.93	3.50	9999.99
30BU	3	85	8	DRY	883	43	5.31	2.08	38.80	3.89	9999.99
31AL	3	85	8	DRY	874	34	2.05	0.47	23.80	1.05	9999.99
31AU	3	85	8	DRY	873	33	2.05	0.49	22.93	1.13	9999.99
31BL	3	85	8	DRY	876	36	1.93	0.51	22.42	0.97	9999.99
31BU	3	85	8	DRY	875	35	1.36	0.54	22.18	1.03	9999.99
32AL	3	85	8	DRY	870	30	3.48	0.31	26.67	1.65	9999.99
32AU	3	85	8	DRY	869	29	3.48	0.30	24.88	1.32	9999.99
32BL	3	85	8	DRY	872	32	4.83	0.43	50.35	1.36	9999.99
32BU	3	85	8	DRY	871	31	5.56	0.41	22.93	1.11	9999.99
33AL	3	85	8	DRY	878	38	0.22	0.16	4.94	0.39	9999.99
33AU	3	85	8	DRY	877	37	0.22	0.16	5.05	0.39	9999.99
33BL	3	85	8	DRY	880	40	0.22	0.14	5.60	0.39	9999.99
33BU	3	85	8	DRY	879	39	0.22	0.16	4.75	0.37	9999.99
34AL	3	85	8	DRY	990	152	0.39	0.34	22.80	0.91	9999.99
34AU	3	85	8	DRY	989	151	0.29	0.45	23.10	1.05	9999.99
34BL	3	85	8	DRY	992	154	0.34	0.38	24.05	1.01	9999.99
34BU	3	85	8	DRY	991	153	0.29	0.47	24.31	1.13	9999.99

Raw Soil Sample Data

For Quarter 3/85

Site	Qtr	Yr	Mn	Sea	Id Num	Lab Num	Na exchg Meq/ 100gm	K exchg Meq/ 100gm	Ca exchg Meq/ 100gm	Mg exchg Meq/ 100gm	Total P ppm
35AL	3	85	8	DRY	994	156	0.29	0.23	12.74	0.60	9999.99
35AU	3	85	8	DRY	993	155	0.22	0.23	12.45	0.51	9999.99
35BL	3	85	8	DRY	996	158	0.24	0.32	14.50	0.72	9999.99
35BU	3	85	8	DRY	995	157	0.27	0.28	12.44	0.53	9999.99
36AL	3	85	8	DRY	998	160	0.43	0.78	33.06	1.93	9999.99
36AU	3	85	8	DRY	997	159	0.36	1.13	35.55	2.16	9999.99
36BL	3	85	8	DRY	1	162	0.77	0.90	35.93	2.16	9999.99
36BU	3	85	8	DRY	999	161	0.58	1.13	37.30	2.65	9999.99
37AL	3	85	8	DRY	3	164	0.29	0.36	29.57	1.03	9999.99
37AU	3	85	8	DRY	2	163	0.34	0.45	29.07	1.07	9999.99
37BL	3	85	8	DRY	5	166	0.29	0.28	29.94	1.03	9999.99
37BU	3	85	8	DRY	4	165	0.29	0.34	22.92	1.01	9999.99
38AL	3	85	8	DRY	950	112	3.39	0.43	30.56	2.55	9999.99
38AU	3	85	8	DRY	949	111	1.22	0.56	38.17	2.67	9999.99
38BL	3	85	8	DRY	952	114	6.11	0.41	36.18	2.88	9999.99
38BU	3	85	8	DRY	951	113	2.34	0.51	36.93	2.82	9999.99
39AL	3	85	8	DRY	954	116	7.29	0.45	36.55	3.11	9999.99
39AU	3	85	8	DRY	953	115	7.05	0.60	28.94	3.46	9999.99
39BL	3	85	8	DRY	956	118	3.13	0.41	24.51	2.49	9999.99
39BU	3	85	8	DRY	955	117	1.61	0.58	23.02	1.98	9999.99
40AL	3	85	8	DRY	938	98	0.33	1.08	25.01	1.54	9999.99
40AU	3	85	8	DRY	937	97	0.33	1.35	24.94	1.52	9999.99
40BL	3	85	8	DRY	940	100	0.45	1.02	24.98	1.46	9999.99
40BU	3	85	8	DRY	939	99	0.38	1.32	30.06	1.63	9999.99
41AL	3	85	8	DRY	986	148	1.74	0.31	22.69	1.52	9999.99
41AU	3	85	8	DRY	985	147	0.48	0.63	23.04	1.58	9999.99
41BL	3	85	8	DRY	988	150	2.01	0.45	21.81	1.28	9999.99
41BU	3	85	8	DRY	987	149	0.58	0.56	21.62	1.40	9999.99
42AL	3	85	8	DRY	946	108	0.33	0.35	25.60	1.09	9999.99
42AU	3	85	8	DRY	945	107	0.33	0.41	24.58	1.21	9999.99
42BL	3	85	8	DRY	948	110	0.38	0.41	30.69	1.17	9999.99
42BU	3	85	8	DRY	947	109	0.33	0.41	24.88	1.09	9999.99
43AL	3	85	8	DRY	942	104	1.65	0.67	23.83	3.00	9999.99
43AU	3	85	8	DRY	941	103	1.81	0.70	24.63	3.33	9999.99
43BL	3	85	8	DRY	944	106	2.07	0.91	23.90	3.29	9999.99
43BU	3	85	8	DRY	943	105	2.07	0.79	20.61	2.80	9999.99
44AL	3	85	8	DRY	27	188	1.61	6.74	22.21	2.78	9999.99
44AU	3	85	8	DRY	26	187	0.57	4.00	22.83	2.45	9999.99
44BL	3	85	8	DRY	29	190	1.86	5.58	22.48	2.80	9999.99
44BU	3	85	8	DRY	28	189	0.62	4.67	22.04	2.49	9999.99
45AL	3	85	8	DRY	886	46	7.49	0.68	24.84	2.00	9999.99
45AU	3	85	8	DRY	885	45	7.97	0.78	30.06	2.30	9999.99
45BL	3	85	8	DRY	888	48	7.25	0.66	24.49	2.18	9999.99
45BU	3	85	8	DRY	887	47	7.73	0.76	24.53	2.55	9999.99

Raw Soil Sample Data

For Quarter 4/85

Site	Qtr	Yr	Mn	Sea	Id Num	Lab Num	EC x 1000	Solu Salts ppm	pH	Ca ppm	Mg ppm	Na ppm	Cl ppm	SO4 ppm	HCO3 ppm	CO3 ppm	F ppm	NO3-N ppm	Boron ppm	NH4 ppm	PO4-P ppm	K ppm
07AL	4	85	12	POST	87	1061	0.66	422	8.6	28	4	131	36	339.0	194	2.0	3.30	11.56	1.70	0.00	6.06	13
07AU	4	85	12	POST	86	1060	0.46	294	8.4	24	4	86	22	34.0	191	0.0	3.40	6.56	1.19	0.00	3.94	10
07BL	4	85	12	POST	89	1063	2.10	1344	8.7	29	6	442	308	639.0	167	5.0	2.30	20.00	1.67	0.00	2.12	11
07BU	4	85	12	POST	88	1062	0.62	397	8.8	18	3	135	22	43.0	239	14.0	3.30	4.75	1.81	0.00	3.03	8
11AL	4	85	12	POST	43	1016	0.74	474	8.2	35	3	117	62	44.0	178	0.0	10.50	6.00	0.96	0.33	0.91	15
11AU	4	85	12	POST	42	1015	0.88	563	8.3	37	3	142	62	187.0	192	0.0	7.30	7.81	1.31	1.00	1.52	18
11BL	4	85	12	POST	45	1018	0.84	538	8.3	35	3	138	74	54.0	198	0.0	11.20	4.38	1.31	0.67	1.21	17
11BU	4	85	12	POST	44	1017	0.76	486	8.4	32	3	127	40	153.0	206	0.0	7.60	4.25	0.69	0.67	1.21	15
12AL	4	85	12	POST	39	1012	1.00	640	8.4	46	5	149	109	147.0	197	0.0	8.70	8.13	1.31	0.67	4.55	46
12AU	4	85	12	POST	38	1011	0.70	448	8.4	40	9	117	37	87.0	211	0.0	5.10	5.75	1.62	2.33	4.55	30
12BL	4	85	12	POST	41	1014	1.00	640	8.4	42	4	149	121	55.0	207	0.0	7.10	7.19	1.23	1.00	4.55	44
12BU	4	85	12	POST	40	1013	0.74	474	8.4	36	7	114	41	100.0	213	0.0	5.60	6.25	1.15	1.33	5.15	27
13AL	4	85	12	POST	35	1008	0.68	435	8.3	29	5	117	70	41.0	194	0.0	8.30	3.50	0.69	0.00	2.42	15
13AU	4	85	12	POST	34	1007	0.74	474	8.3	26	4	120	54	61.0	168	0.0	6.90	5.25	0.85	0.33	2.42	12
13BL	4	85	12	POST	37	1010	0.72	461	8.3	23	3	117	70	49.0	167	0.0	7.80	3.56	0.77	1.00	2.42	13
13BU	4	85	12	POST	36	1009	0.66	422	8.4	28	4	111	36	58.0	179	0.0	4.20	3.94	0.92	1.00	2.12	15
23AL	4	85	12	POST	47	1020	1.02	653	8.3	51	6	164	117	139.0	248	0.0	7.30	5.00	1.00	0.00	3.03	12
23AU	4	85	12	POST	46	1019	0.88	563	8.4	35	5	153	62	231.0	226	0.0	5.20	5.50	1.15	0.67	2.73	10
23BL	4	85	12	POST	49	1022	0.96	614	8.4	43	7	160	96	162.0	225	0.0	6.00	5.50	1.15	0.33	2.73	12
23BU	4	85	12	POST	48	1021	0.76	486	8.4	40	9	127	42	180.0	243	0.0	5.90	4.25	1.08	0.33	3.03	15
24AL	4	85	12	POST	91	1065	0.76	486	8.3	33	4	131	65	24.0	173	2.0	4.80	27.50	1.11	0.42	2.12	14
24AU	4	85	12	POST	90	1064	0.86	550	8.2	41	5	117	54	23.0	172	0.0	3.20	19.38	1.19	0.00	1.52	34
24BL	4	85	12	POST	93	1067	0.70	448	8.4	33	4	117	40	36.0	167	0.0	5.60	23.75	0.89	0.00	1.82	13
24BU	4	85	12	POST	92	1066	0.66	422	8.3	38	5	95	28	19.0	163	0.0	3.90	21.25	1.11	1.25	3.33	30
25AL	4	85	12	POST	95	1069	0.58	371	8.1	56	8	63	38	407.0	142	0.0	1.80	2.63	0.52	1.25	2.12	8
25AU	4	85	12	POST	94	1068	0.66	422	8.2	59	13	61	51	371.0	166	0.0	1.00	3.75	0.74	0.42	1.52	11
25BL	4	85	12	POST	97	1071	1.68	1075	8.1	111	20	233	232	541.0	101	0.0	1.80	46.25	1.56	0.00	1.82	18
25BU	4	85	12	POST	96	1070	0.80	512	8.2	54	9	108	60	245.0	167	0.0	1.85	11.88	1.63	0.00	2.42	14
28AL	4	85	12	POST	59	1033	0.66	422	8.7	24	4	131	26	47.0	255	5.0	1.80	6.25	1.64	1.67	0.61	5
28AU	4	85	12	POST	58	1032	0.58	371	8.5	31	6	112	22	4.0	265	0.0	1.48	6.19	1.29	0.00	2.12	8
28BL	4	85	12	POST	61	1035	0.70	448	8.6	30	5	142	30	309.0	235	2.0	1.95	10.31	1.61	1.67	1.52	5
28BU	4	85	12	POST	60	1034	0.54	346	8.6	45	7	112	20	3.0	280	0.0	1.35	6.25	1.18	3.33	2.12	28
30AL	4	85	12	POST	51	1024	4.20	2688	8.3	92	16	914	892	886.0	148	0.0	3.55	21.25	3.85	0.67	0.91	33
30AU	4	85	12	POST	50	1023	1.60	1024	8.3	49	6	297	206	356.0	235	0.0	5.40	9.38	1.85	1.33	1.82	18
30BL	4	85	12	POST	53	1026	5.40	3456	8.2	159	28	1000	1067	1029.0	147	0.0	3.25	28.13	4.92	1.00	1.82	46
30BU	4	85	12	POST	52	1025	1.70	1088	8.4	40	5	274	210	470.0	215	0.0	5.30	7.81	2.23	0.33	1.52	17
31AL	4	85	12	POST	67	1041	0.86	550	9.0	42	16	206	55	267.0	280	29.0	7.80	6.25	1.71	0.00	2.12	18
31AU	4	85	12	POST	66	1040	0.66	422	8.9	43	21	138	20	130.0	289	10.0	4.60	4.75	1.07	2.50	2.42	10
31BL	4	85	12	POST	69	1043	0.96	614	8.7	34	6	229	88	287.0	216	10.0	6.00	7.19	0.71	0.00	1.82	8
31BU	4	85	12	POST	68	1042	0.74	474	8.8	63	18	145	44	56.0	228	10.0	4.60	6.25	1.11	1.67	2.12	10
32AL	4	85	12	POST	63	1037	1.52	973	8.8	22	3	331	161	200.0	270	24.0	9.60	5.63	1.36	0.00	0.91	3
32AU	4	85	12	POST	62	1036	0.98	627	9.0	27	9	263	52	180.0	299	29.0	13.00	4.38	2.00	0.83	1.21	5
32BL	4	85	12	POST	65	1039	1.30	832	8.8	27	3	286	139	371.0	227	14.0	9.10	6.56	1.11	0.00	0.30	3
32BU	4	85	12	POST	64	1038	0.96	614	8.9	36	10	229	72	209.0	510	39.0	9.00	5.00	1.64	0.83	0.91	3

Raw Soil Sample Data

For Quarter 4/85

Site	Qtr	Yr	Mn	Sea	Id Num	Lab Num	EC x 1000	Solu Salts ppm	pH	Ca ppm	Mg ppm	Na ppm	Cl ppm	SO4 ppm	HCO3 ppm	CO3 ppm	F ppm	NO3-N ppm	Boron ppm	NH4 ppm	PO4-P ppm	k ppm
43AL	4	85	12	POST	71	1045	0.84	538	8.5	66	12	145	106	277.0	260	0.0	0.95	4.50	1.57	5.75	5.15	12
43AU	4	85	12	POST	70	1044	0.66	422	8.6	73	11	109	40	48.0	287	0.0	1.15	6.56	1.00	5.38	3.94	10
43BL	4	85	12	POST	73	1047	0.94	602	8.8	88	10	160	128	313.0	287	5.0	0.50	3.75	2.21	2.50	5.76	18
43BU	4	85	12	POST	72	1046	0.74	474	8.7	85	13	127	56	180.0	275	2.0	0.96	5.50	1.64	5.38	4.55	10
45AL	4	85	12	POST	55	1029	1.50	960	8.9	19	9	320	114	407.0	301	31.0	9.10	3.00	1.31	0.00	0.61	7
45AU	4	85	12	POST	54	1028	1.00	640	9.1	16	9	251	32	153.0	368	48.0	7.60	3.13	0.92	0.00	0.91	37
45BL	4	85	12	POST	57	1031	1.72	1101	8.8	22	3	366	198	532.0	307	14.0	4.80	3.13	2.39	0.00	0.61	3
45BU	4	85	12	POST	56	1030	1.08	691	8.9	25	10	274	36	157.0	441	34.0	6.00	3.25	1.57	0.00	0.91	8

Raw Soil Sample Data

For Quarter 4/85

Site	Qtr	Yr	Mn	Sea	Id Num	Lab Num	Na exchg Meq/ 100gm	K exchg Meq/ 100gm	Ca exchg Meq/ 100gm	Mg exchg Meq/ 100gm	Total P ppm
07AL	4	85	12	POST	87	1061	2.17	0.76	47.90	4.18	9999.99
07AU	4	85	12	POST	86	1060	1.56	0.66	47.41	4.40	9999.99
07BL	4	85	12	POST	89	1063	4.94	0.58	45.28	4.03	9999.99
07BU	4	85	12	POST	88	1062	2.61	0.66	45.16	3.46	9999.99
11AL	4	85	12	POST	43	1016	2.32	1.79	22.21	1.73	9999.99
11AU	4	85	12	POST	42	1015	2.32	1.73	21.81	1.56	9999.99
11BL	4	85	12	POST	45	1018	2.38	1.73	21.89	1.58	9999.99
11BU	4	85	12	POST	44	1017	2.38	1.53	21.86	1.50	9999.99
12AL	4	85	12	POST	39	1012	2.09	2.45	18.53	1.58	9999.99
12AU	4	85	12	POST	38	1011	2.03	1.89	19.11	1.36	9999.99
12BL	4	85	12	POST	41	1014	2.14	2.67	19.22	1.67	9999.99
12BU	4	85	12	POST	40	1013	1.80	1.85	18.34	1.34	9999.99
13AL	4	85	12	POST	35	1008	1.51	0.90	19.22	1.44	9999.99
13AU	4	85	12	POST	34	1007	1.69	1.00	18.92	1.44	9999.99
13BL	4	85	12	POST	37	1010	1.65	1.07	19.34	1.56	9999.99
13BU	4	85	12	POST	36	1009	1.56	1.10	19.47	1.48	9999.99
23AL	4	85	12	POST	47	1020	2.87	1.28	21.58	1.85	9999.99
23AU	4	85	12	POST	46	1019	2.87	1.33	20.81	2.08	9999.99
23BL	4	85	12	POST	49	1022	3.04	1.18	20.91	1.83	9999.99
23BU	4	85	12	POST	48	1021	2.55	1.13	20.02	1.93	9999.99
24AL	4	85	12	POST	91	1065	2.61	1.48	50.65	2.47	9999.99
24AU	4	85	12	POST	90	1064	1.81	2.08	47.78	2.49	9999.99
24BL	4	85	12	POST	93	1067	2.25	1.45	49.03	2.35	9999.99
24BU	4	85	12	POST	92	1066	1.74	2.34	45.66	2.49	9999.99
25AL	4	85	12	POST	95	1069	1.42	1.18	47.28	3.35	9999.99
25AU	4	85	12	POST	94	1068	1.33	1.29	46.91	4.32	9999.99
25BL	4	85	12	POST	97	1071	2.92	1.27	46.53	3.52	9999.99
25BU	4	85	12	POST	96	1070	1.96	1.43	46.78	3.58	9999.99
28AL	4	85	12	POST	59	1033	3.56	0.85	49.40	2.00	9999.99
28AU	4	85	12	POST	58	1032	2.85	1.24	48.40	1.98	9999.99
28BL	4	85	12	POST	61	1035	3.48	1.00	48.03	1.81	9999.99
28BU	4	85	12	POST	60	1034	3.40	1.53	50.15	2.10	9999.99
30AL	4	85	12	POST	51	1024	8.20	1.76	30.19	3.68	9999.99
30AU	4	85	12	POST	50	1023	5.22	2.01	31.31	4.05	9999.99
30BL	4	85	12	POST	53	1026	8.70	1.98	49.78	4.26	9999.99
30BU	4	85	12	POST	52	1025	5.22	2.01	48.90	4.28	9999.99
31AL	4	85	12	POST	67	1041	2.77	0.56	42.91	1.26	9999.99
31AU	4	85	12	POST	66	1040	1.80	0.58	43.04	1.26	9999.99
31BL	4	85	12	POST	69	1043	2.24	0.49	44.91	1.28	9999.99
31BU	4	85	12	POST	68	1042	1.99	0.47	42.17	1.32	9999.99
32AL	4	85	12	POST	63	1037	3.56	0.27	47.28	1.69	9999.99
32AU	4	85	12	POST	62	1036	2.85	0.36	39.05	1.54	9999.99
32BL	4	85	12	POST	65	1039	3.08	0.27	48.40	1.71	9999.99
32BU	4	85	12	POST	64	1038	2.61	0.31	42.79	1.60	9999.99

03/06/86

Raw Soil Sample Data

For Quarter 4/85

Site	Qtr	Yr	Mn	Sea	Id Num	Lab Num	Na exchg Meq/ 100gm	K exchg Meq/ 100gm	Ca exchg Meq/ 100gm	Mg exchg Meq/ 100gm	Total P ppm
43AL	4	85	12	POST	71	1045	2.11	1.05	47.53	3.81	9999.99
43AU	4	85	12	POST	70	1044	1.69	0.88	47.28	3.72	9999.99
43BL	4	85	12	POST	73	1047	2.17	1.27	47.90	3.81	9999.99
43BU	4	85	12	POST	72	1046	1.99	0.93	46.53	3.70	9999.99
45AL	4	85	12	POST	55	1029	7.20	0.58	44.04	1.89	9999.99
45AU	4	85	12	POST	54	1028	6.21	0.73	43.04	2.10	9999.99
45BL	4	85	12	POST	57	1031	9.15	0.78	45.66	1.83	9999.99
45BU	4	85	12	POST	56	1030	6.96	0.85	44.91	2.39	9999.99

0 100 500 1000 Feet

0 100 300 Meters

N

Color Infrared Imagery for Monitoring Location 23

0 500 1000 Feet

0 100 300 Meters

N

Color Infrared Imagery for Monitoring Location 43