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ATLANTIC COAST UNIQUE REGIONAL ATMOSPHERIC TRACER EXPERIMENT
(ACURATE)

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ATLANTIC COAST UNIQUE REGIONAL ATMOSPHERIC TRACER EXPERIMENT (ACURATE)

ABSTRACT

The Atlantic Coast Unique Regional Atmospheric Tracer Experiment (ACURATE) was conducted to provide a long-range, long-term data set on the regional scale for air pollution model development and evaluation. ACURATE, which started in March 1982 and ended after 19 months in September 1983, used Kr-85 emitted intermittently from the Savannah River Plant (SRP), SC as a tracer of opportunity. Hourly source emission data are archived on an ACURATE data tape and listed in an appendix. Surface air samples were taken at five sites along the Atlantic Coast, located about 300 to 1100 km from the SRP (twice-daily samples at the four closest sites and daily at the fifth site). A total of 3858 measured concentrations were quality assured and are archived on the data tape. About 750 of the concentrations were attributed directly to the SRP plume. The concentration distributions at the five sampling sites are shown. All measured concentrations are given in an appendix. Upper-air, tower, and surface meteorological data were also collected during ACURATE and are archived on the data tape.

1. INTRODUCTION

The Atlantic Coast Unique Regional Atmospheric Tracer Experiment (ACURATE) was conducted by the National Oceanic and Atmospheric Administration/Air Resources Laboratory and the Savannah River Laboratory to provide data on the regional scale for air pollution model development and evaluation. The models are used for many purposes which include assessing the effects of energy usage on man and the environment (e.g., acid rain and other hazards evaluation studies), determining the cost-effectiveness of airborne nuclear waste management, and monitoring gaseous releases to the atmosphere. Past tracer experiments on the regional scale, using known emission rates from a source, have generally been limited to a few individual episodes (e.g., Ferber, et al., 1984) because of the high costs of sample collection and analysis over extended periods of time. ACURATE provides air pollution researchers with a unique, long-term data set of tracer emission rates from a single source, regional-scale measured tracer air concentrations with plumes attributed to the source, and meteorology.

This program is an extension to the regional scale of the 2½-year mesoscale Savannah River Experiment (Telegadas, et al., 1980). ACURATE, which started in March 1982 and ended in September 1983, used Kr-85 emitted intermittently from the Savannah River Plant (SRP), SC as a tracer of opportunity. Because Kr-85 is an inert, non-reactive gas, its use as a tracer enables one to study the effects of atmospheric transport and diffusion free of the complications introduced by wet and dry deposition and chemical transformations. Volunteers at five sampling sites along the Atlantic Coast, located about 300 to 1100 km from the SRP, took twice-daily surface air samples (daily at the 1100 km site) using cryogenic air samplers similar to those used in the Savannah River Experiment. A total of 3858 measured concentrations over the 19-month sampling period were quality assured. The SRP plume was observed on about 750 measurements (20%).

Meteorological observations at surface and upper-air stations over the eastern U.S. were archived during the ACURATE sampling period. In addition, tower winds at the SRP were spatially averaged and archived as source meteorological data.

2. SOURCE

2.1 Source Site

The Savannah River Plant is a production facility of the U.S. Department of Energy and is located about 35 km southeast of Aiken, SC. Krypton-85 is intermittently released from plant chemical separation operations through one 62 m stack in the 200-F area and one in the 200-H area with mid-location at 33.28°N, 81.66°W (see Fig. 1).

2.2 Source Emissions Determination

A model that predicts the hourly rate of Kr-85 vented to the atmosphere when irradiated fuel is dissolved at the SRP has been developed (Pendergast, 1978). This model was used to calculate the hourly emissions of Kr-85 released to the atmosphere for each fuel dissolution cycle.

In order to verify the calculated emissions, Kr-85 stack monitoring systems were installed in both stack areas. A vacuum-pressure pump was used to pump a fraction of the dissolver off-gas into a flow-through sample chamber. The sample chamber, which was mounted on a detector, recorded the gamma spectrum of the gas pumped through the chamber. The off-gas gamma spectrum was then analyzed for the Kr-85 energy peak. The measured and calculated Kr-85 emission values agree well.

2.3 Emission Rates

Emission rates for the SRP source are given in Appendix A. A record of hourly emissions is given for each 12-hour period. The appendix contains a total of 1158 records starting March 1, 1982 and ending September 30, 1983. The start of a 12-hour period is identified by an 8-digit date-time number, 2 digits each for year (YR), month (MO), day (DY) and hour (HR-GMT). Thus 82032512 (record #50) denotes the 12-hour period starting March 25, 1982 at 12 GMT. Following the start date-time group are 12 emission rates, in Ci/hr, for the 12-hour period after start. The remaining columns on the right (the 12-hour emission rate totals and the histogram) have been added for ease of visual comprehension and simplicity of comparison with the twice daily (12-hour) measured concentrations (Appendix B).

FILE 1 on the ACURATE data tape is the source emission file (see Appendix C). The file contains 1158 records where each record includes a record #, start date-time identification, and emission rates in Ci/hr for the 12-hour period after start. A FILE 1 tape dump should exactly match the left-hand portion of Appendix A below the column headings.

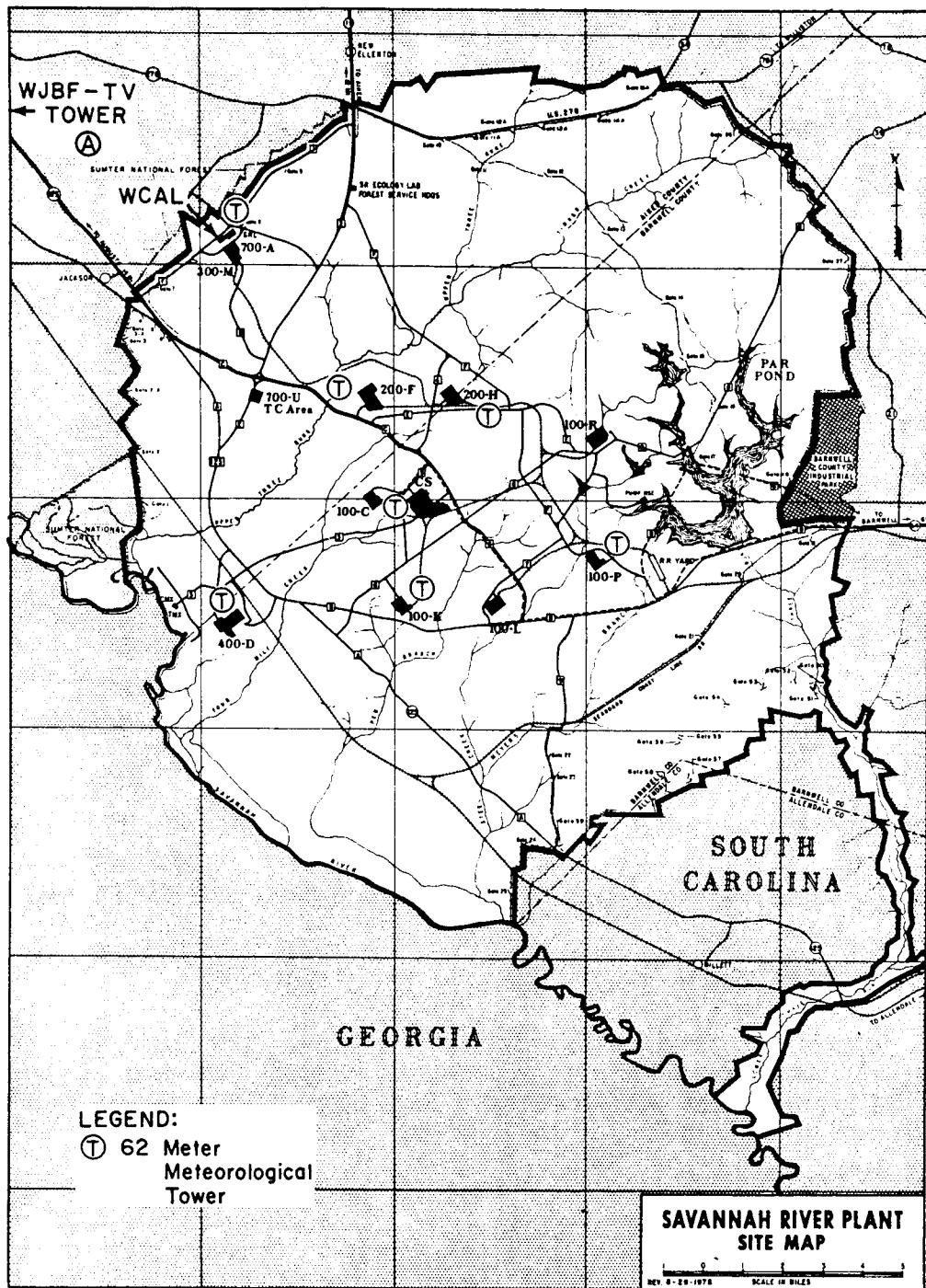


Figure 1. Savannah River Plant Site Map.

3. SAMPLING

3.1 Sampling Sites

Five surface air sampling sites along the Atlantic Coast were established for ACURATE. Table 1 gives the sites (and source), with their identification, location and distance from the SRP.

Table 1. ACURATE surface air sampling sites (and source).

<u>Sampling Site</u>	<u>Code</u>	<u>Description</u>	<u>Location</u>	<u>Distance from SRP (km)</u>
			°N °W	
Fayetteville, NC	FAY	Fire station	35.07 78.89	325
Tarboro, NC	TAR	Water Treatment Plant	35.91 77.55	475
Norfolk, VA	NOR	Water Treatment Plant	36.85 76.27	635
Salisbury, MD	SAL	Water Treatment Plant	38.37 75.59	790
Murray Hill, NJ	MUR	Laboratory	40.68 74.40	1050
<u>Source</u>				
Savannah River Plant	SRP	Production Facility	33.28 81.66	0

The ACURATE source and five sampling site locations are shown in Fig. 2.

3.2 Sample Collection and Processing

A cryogenic air sampler (CAS) was installed at each sampling site. The samplers were operated and monitored on a 24-hour/day schedule by volunteer personnel. Maintenance was performed by a contractor laboratory at regular time intervals and at the request of the site personnel.

The CAS concentrates krypton in the atmosphere from about one part per million to about one part per hundred. Air is supplied to the sampler by a compressor at the rate of about 12 liters/minute. Concentration is brought about by cryogenic fractionation of the incoming airstream. Liquid nitrogen is used as the source of refrigeration.

The final sample, having a volume of about 1.5 liter (STP), contains most of the components of the atmosphere that have boiling points higher than that of oxygen. Atmospheric moisture, carbon dioxide and hydrocarbons heavier than methane are removed by molecular sieve traps from the airstream before it enters the cryogenic section of the collector. These latter materials otherwise would rapidly plug the inside of the fractionating column, since they freeze at much higher temperatures than the boiling point of liquid oxygen.

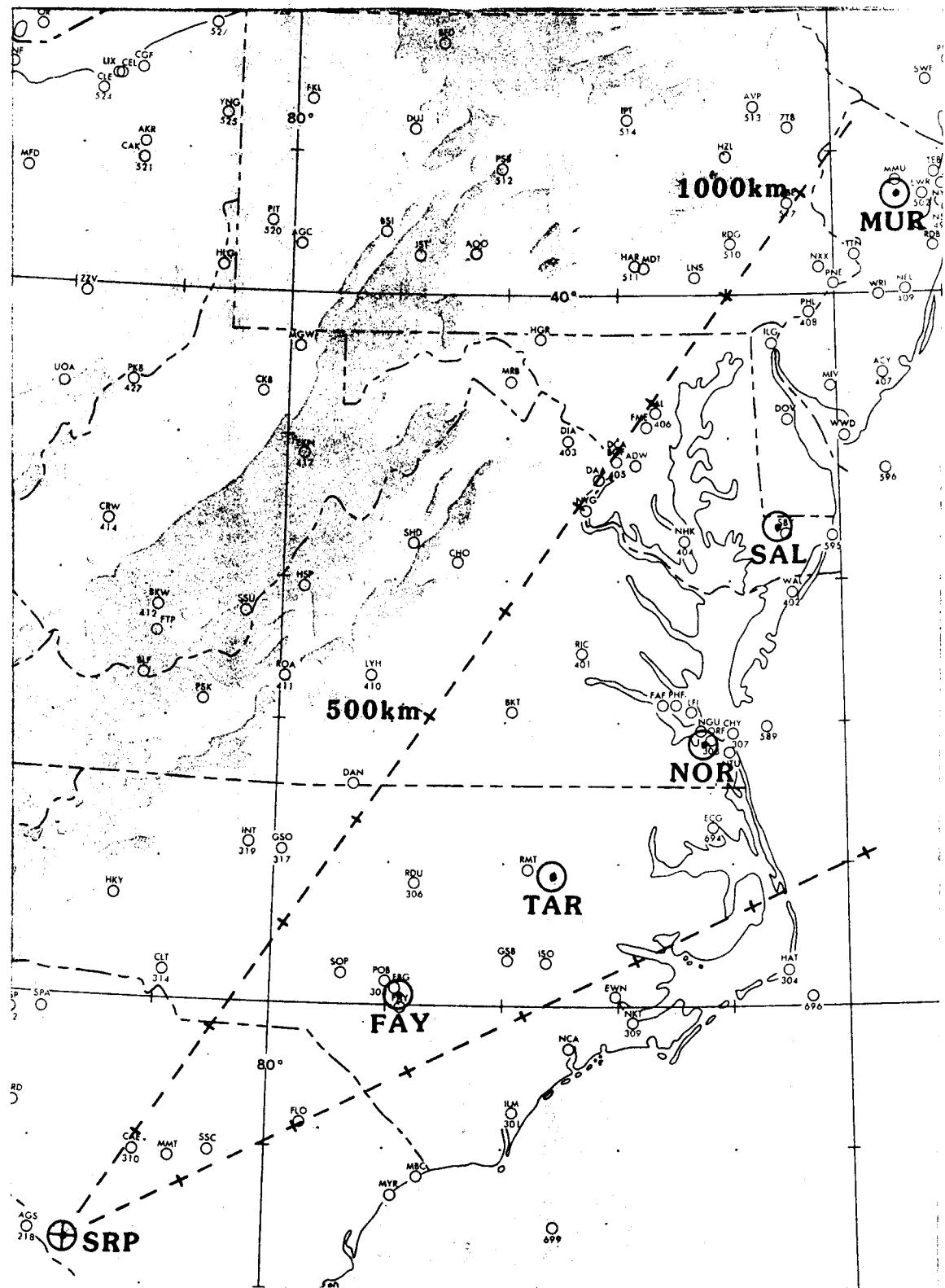


Figure 2. ACURATE source (SRP) and the five sampling site locations.

Four of the CAS units (at FAY, TAR, NOR, SAL) were programmed with a two-sample-per-day cycle, each cycle having an eleven-hour collection period and a one-hour sample recovery period. The other CAS unit (at MUR), was programmed with a one-sample-per-day cycle.

The effective length of the collection period is less than the clock length by about forty-five minutes to an hour and fifteen minutes. This is the time required for the column to cool down and reach steady state operation. At the end of the collection period incoming air flow is cut off. In the sample recovery phase the liquid at the bottom of the fractionating column is warmed, causing it to evaporate. The sample mixture, which consists mostly of oxygen with higher atmospheric boiling components, is collected in a steel bottle that has a volume of approximately one liter.

The samples were shipped from the sampling sites to the contractor laboratory for further purification and assay. Krypton was isolated from the sample mixture by preparative gas chromatography to give a highly purified (about 99.98% krypton) final sample. This product was then radio-assayed by Geiger counting to determine the level of Krypton-85 activity in the sample. The estimated standard deviation of this measurement is about 1%.

Quality assurance procedures were performed on the data to assure that they originated from the site and time indicated. Sampling logs kept independently by site personnel were checked against each sample measurement from the contractor laboratory. If differences were not resolved, the measurement was discarded.

3.3 Concentrations

The daily and twice-daily measured surface air concentrations during the entire 19-month ACURATE period for the five sampling sites are given in Appendix B. Similar to the format of Appendix A (source), a record is given for each 12-hour period for a total of 1158 records. Also, the start of each period is identified by an 8-digit date-time number. Following in the table are the measured concentrations (0.1 pCi/m^3) for each of the five sampling sites. (Records 268 and 628 for FAY shown as 999 due to format restrictions should be 1353 and 1664, respectively.) A zero (0) indicates a missing measurement due to one of many causes which could include a malfunctioning sampler, a sample lost in analysis, or an unresolved discrepancy in sample origin or sample time. A plus following a concentration value indicates the 12-hour sample was continued beyond 12 hours, a minus indicates the continuation. For example, records 54 through 57 for NOR indicate the 12-hour sample that began at 82032714 (195+) continues over 36 additional hours (three more 12-hour values shown as 195-) for a total sample duration of 48 hours. Note that MUR has alternate plus and minus notation indicating regular daily (24-hour) sampling. One additional code has been added to the values for completeness. Letters preceding a value indicate a late sample start; those following indicate a late sample end; A is for one hour; B for two hours, etc. Thus, record 78 for NOR indicates the measurement (D190B) started four hours late (April 8, 1982 at 18 GMT) and ended two hours late (April 9, 1982, 04 GMT) for a total measurement time of 10 hours rather than 12 hours. A total of 3858 samples (non-zero) were archived for ACURATE.

In order to identify the SRP plume, a concentration background must be subtracted from the measured concentration values. Since background may vary on a day-to-day basis by as much as 10% with changing meteorological conditions, it is often difficult to distinguish between background and a plume at low concentration.. To avoid determining variable background, a Background Upper Limit (BUL) has been estimated for each sampling site above which it seems reasonable to assume that the SRP plume is contributing to the measured concentration. Concentration values at or below the BUL usually indicate no presence of the SRP plume, but occasionally may be linked to the plume with caution (an example is discussed later). The BUL was determined by plotting measured concentration versus cumulative percent on a probability scale and noting that lower concentrations (background) lie along a straight line (see Fig. 3). At some point the plotted values deviate from the line toward higher concentrations. This deviation from the normal distribution is attributed to SRP pluming and the concentration value at the point of deviation is defined as the BUL. In order to test this technique on an independent data set, a plot is included in Fig. 3 for twice-daily measurements at the Augusta, GA (AUG) sampling site of the Savannah River Experiment (Telegadas, et al., 1980). This site was chosen because it had the most complete sampling record during the 1976-1977 twice-daily sampling periods. A BUL value is clearly evident at 16.0 pCi/m³.

BUL concentrations suggested for the ACURATE sampling sites are given in Table 2. The increase with increasing latitude is consistent with the known worldwide increase with latitude of Kr-85 background.

Table 2. Background Upper Limit (BUL) Concentrations
at ACURATE Sampling Sites.

Sampling Site	BUL (pCi/m ³)
MUR	19.3
SAL	19.2
NOR	19.1
TAR	19.0
FAY	19.0

As an example of determining plume concentration, record 54 in Appendix B for FAY gives a measured concentration of 19.3 pCi/m³. When the BUL value of 19.0 for FAY (from Table 2) is subtracted from the measured concentration, the remaining concentration of 0.3 pCi/m³ is attributed to the SRP plume. About 750 of the concentrations were above the BUL and, therefore, attributed directly to the SRP plume.

Figure 4 shows concentration distributions for the five ACURATE sampling sites (i.e., measured value minus the BUL value). The distributions include no-plume (zero) and plume (> 0.1 pCi/m³ by interval) concentrations. Researchers can refer directly to Fig. 4 for model evaluation studies.

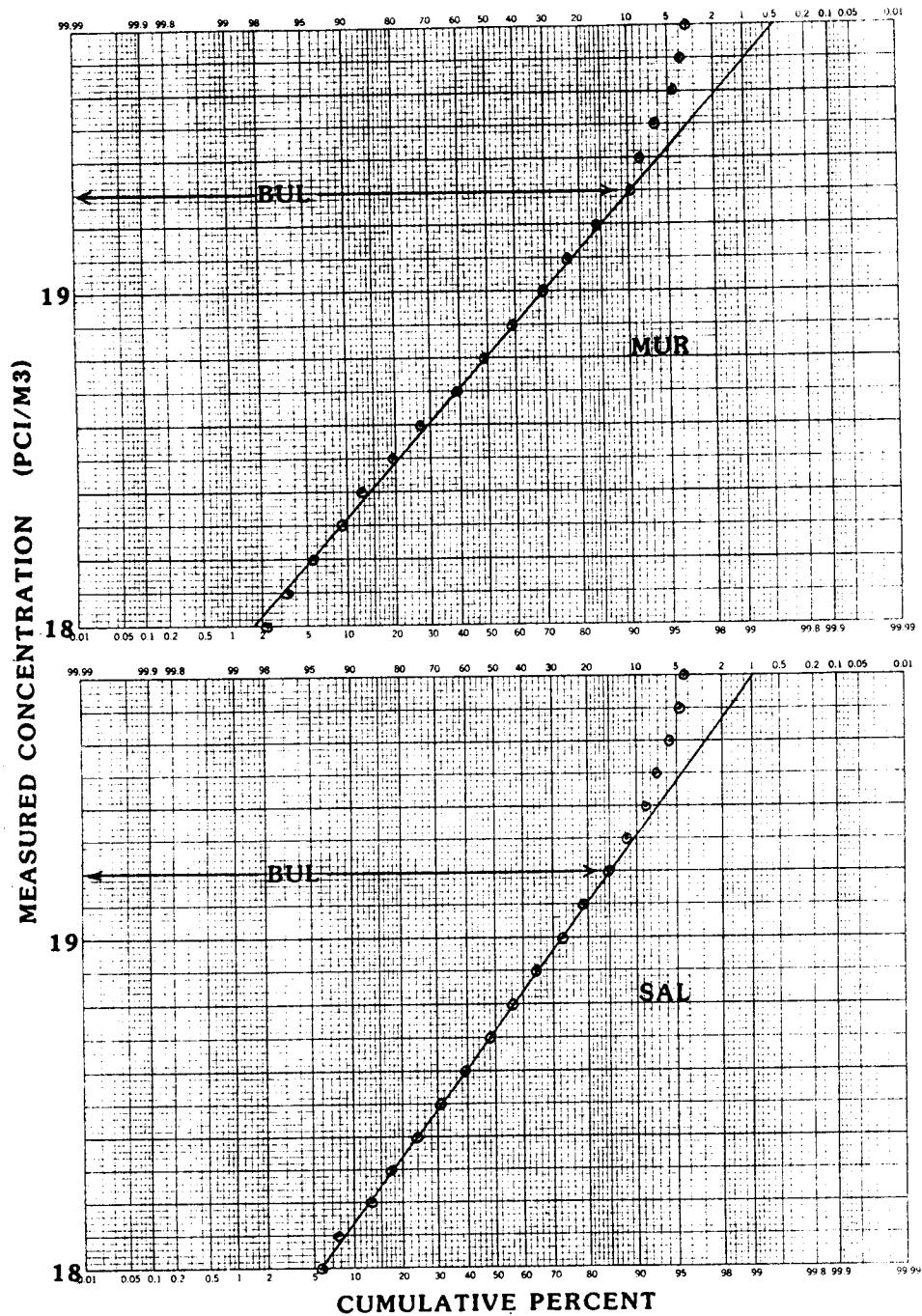


Figure 3. Determination of a Background Upper Limit (BUL) concentration at the five ACURATE sampling sites and at the Augusta, GA site (AUG) of the Savannah River Experiment.

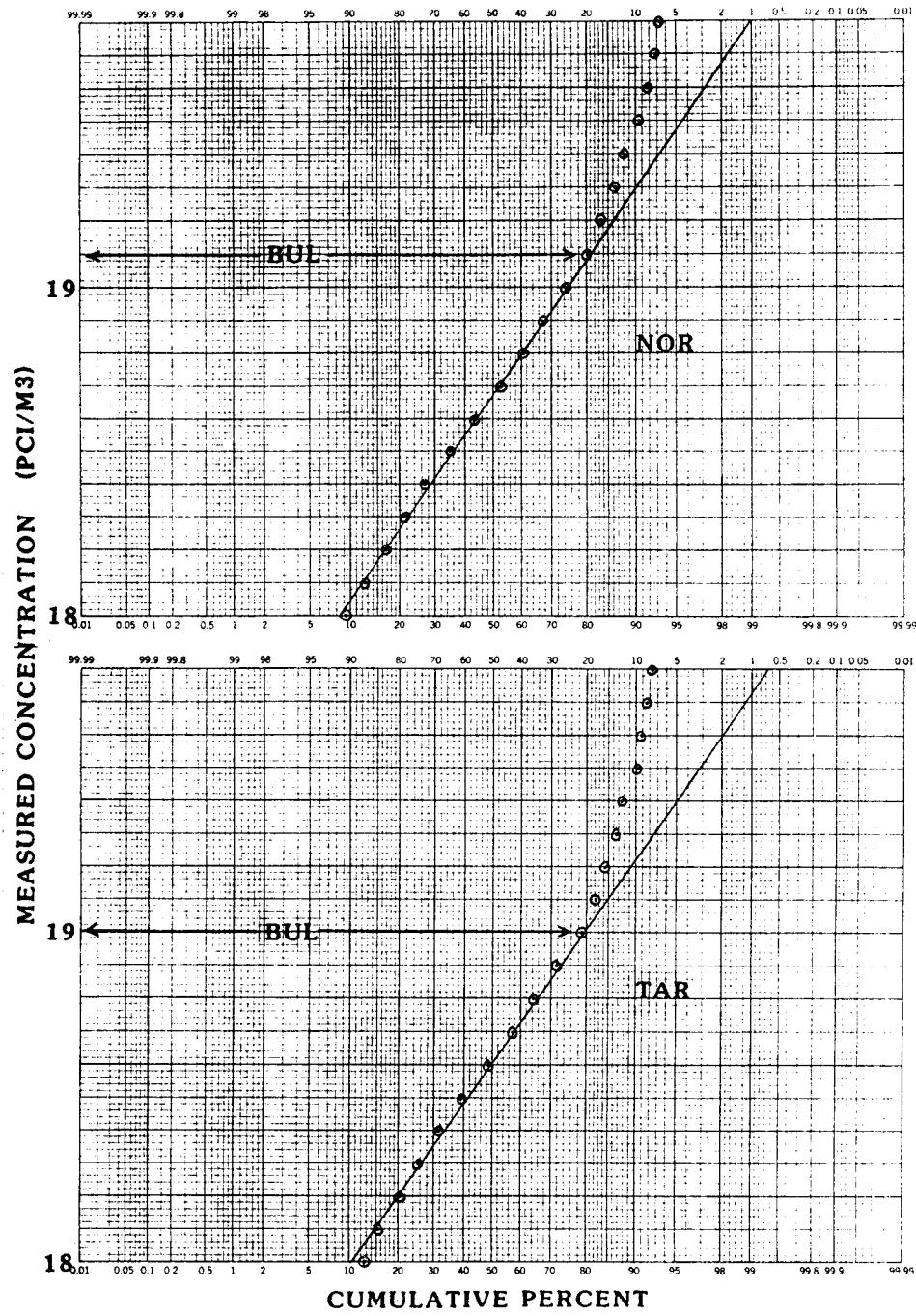


Figure 3. (continued)

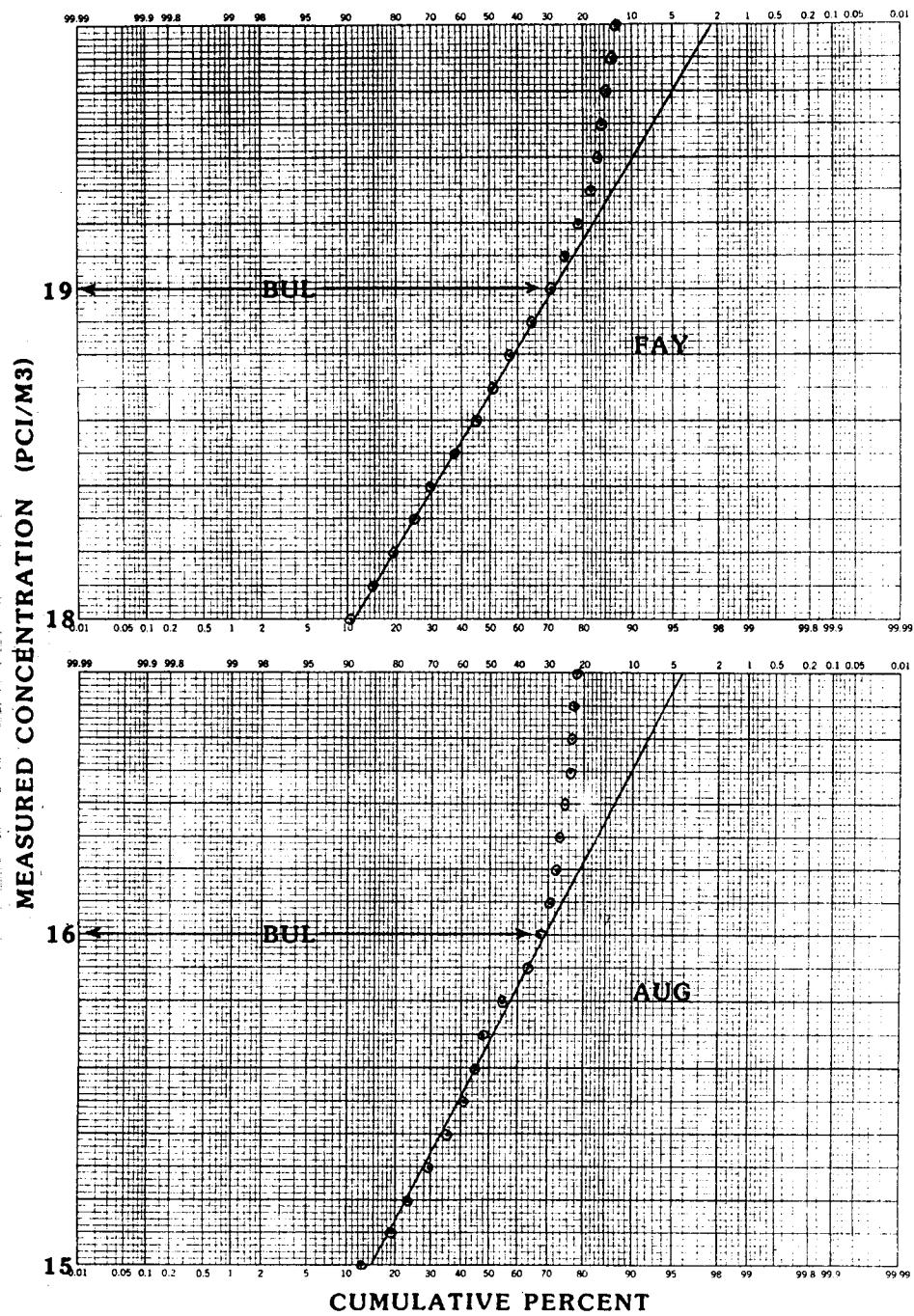


Figure 3. (continued)

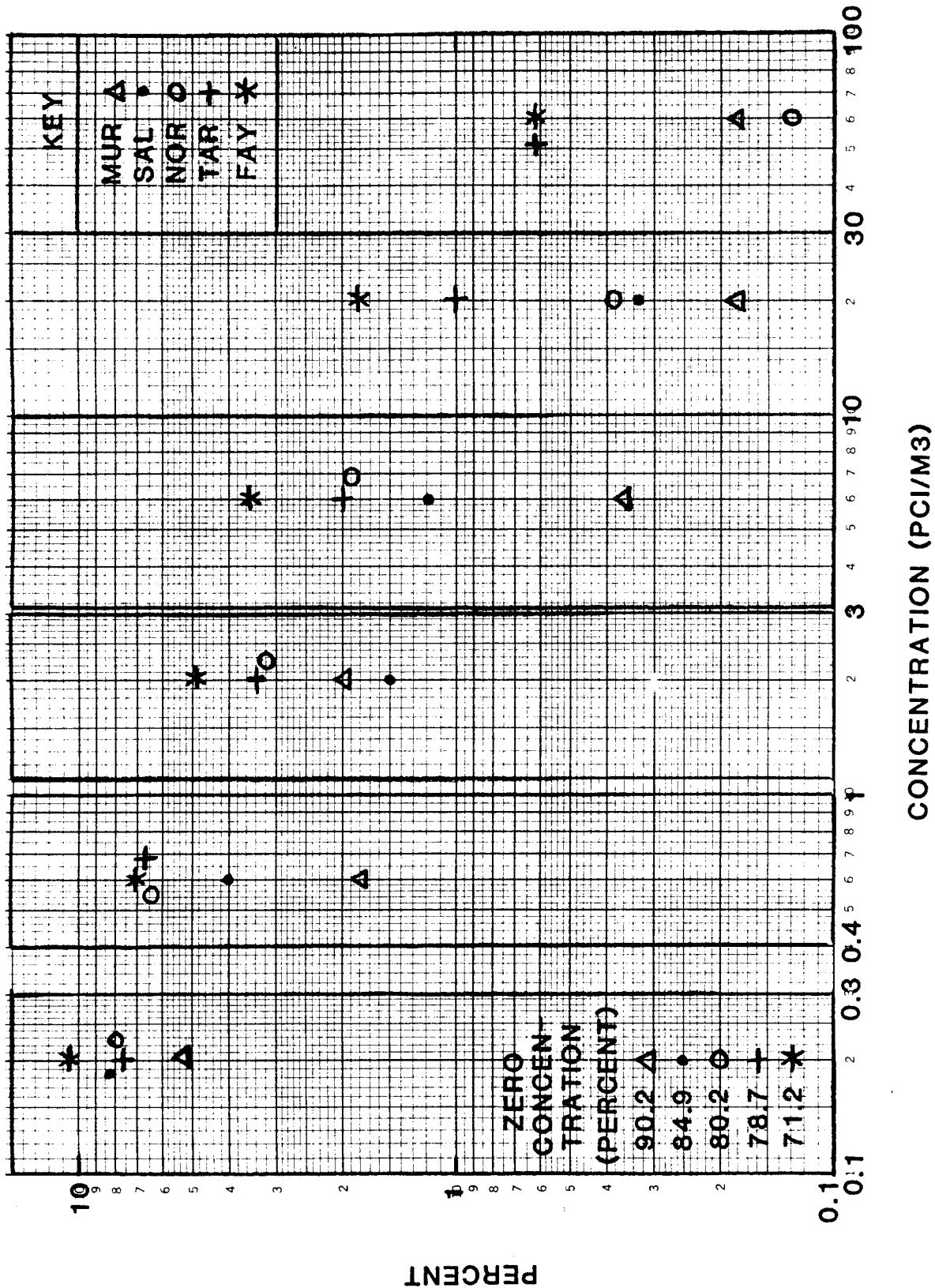


Figure 4. Concentration distributions for the five ACURATE sampling sites (percent at zero concentration and by concentration interval).

The right-hand columns in Appendix B (histogram) are presented as a visual means of separating the SRP plume from background by subtracting BUL values from measurements. The vertical axis at each site is aligned with the BUL value. A ":" on the axis indicates a missing measurement. The "0"s on each axis and to the right reflect measurements above the BUL values and thus SRP pluming (the distributions shown in Fig. 4); the "X"s on the axis and to the left are best interpreted as either background or plume. Visual inspection of the plots should give strong clues. For example, records 22 through 25 indicate no presence of plume at any of the five sampling sites. Records 52 through 60 indicate plume presence, or probable presence, at sites where symbols are shown just on or slightly below the axis. Start and continuation codes are also plotted on the axes for completeness. It should be noted again that visual comparison between source emission and receptor concentration can easily be made by aligning the "HISTOGRAM" portions of Appendices A and B.

FILE 2 on the ACURATE data tape is the measured surface air concentration file (see Appendix C). The file contains 1158 records (similar to FILE 1) where each record includes a record #, start date-time identification, and measured concentrations (with start and continuation codes) at each of the five sampling sites for the period after start. A missing concentration is coded 0. A FILE 2 tape dump should exactly match the left-hand portion of Appendix B below the column headings (note that records 268 and 628 for FAY, written as 999, should be 1353 and 1664, respectively).

4. METEOROLOGY

4.1 Local Meteorological Data

Local meteorological data were obtained from seven instrumented towers located at the SRP. Each tower is 62 m in height, corresponding to the stack heights of the source emissions. A turbulence quality vector vane mounted on top of each tower provided wind speed, direction, and horizontal and vertical wind fluctuations. In addition, an instrumented television tower (WJBF-TV) 330 m in height located about 15 km northwest of the plant boundary was used to collect meteorological data. The locations of the television tower and the seven production area towers on the SRP site are shown in Fig. 1. The local wind data at the SRP for the ACURATE period March 1, 1982 through September 30, 1983 are three-hour space average means (at 62 m) of wind speed, wind direction, and the standard deviation of horizontal and vertical wind directions.

4.2 Surface Meteorological Data

The surface meteorological data for the ACURATE period were taken from the hourly surface observations at 241 NWS stations and averaged over three-hour periods. These stations are located from 30° to 45°N and 70° to 88°W (see Fig. 5). The data consist of pressure, temperature, dewpoint, wind direction, and wind speed.

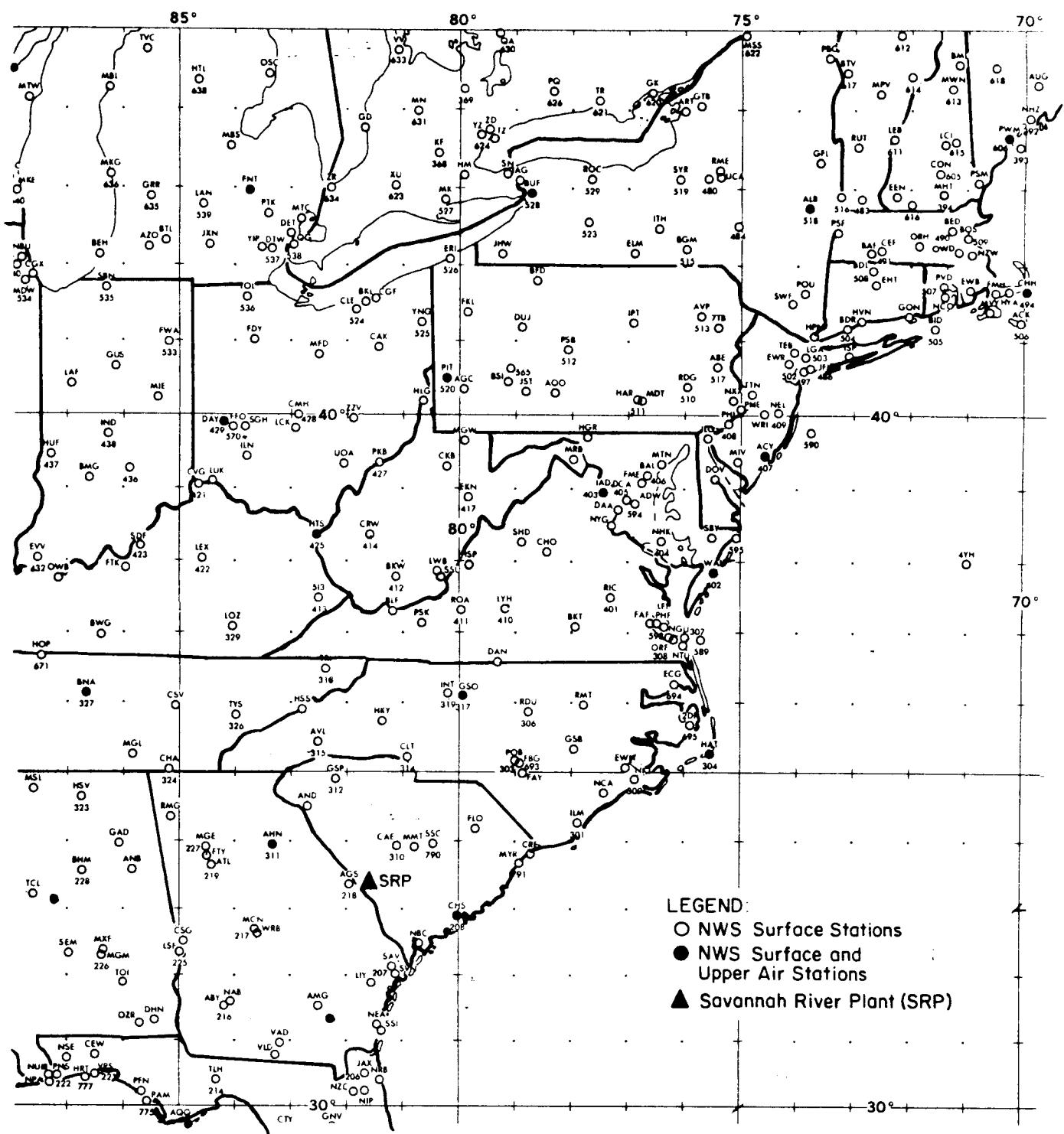


Figure 5. Source, surface, and upper-air stations for which ACURATE meteorological data were archived.

4.3 Upper-Air Meteorological Data

Twice-daily (00 and 12 GMT) upper-air data were taken from reports at 20 NWS upper-air stations (see Fig. 5). The data consist of pressure, height, temperature dewpoint, wind direction and wind speed at the mandatory and significant reporting levels.

FILE 3 through FILE 21 on the ACURATE data tape are the archived surface and upper-air meteorology data (see Appendix C). Each file contains one month of data. The date/time records are at 3-hour intervals (00, 03, 06 GMT, etc.). The surface station observations are given at these intervals. It should be noted that the first record after each date/time sequence is from the SRP giving local wind data at 62 m in height. The upper-air stations usually report only twice daily (00 and 12 GMT), so the number of UA records at the intermediate 3-hour intervals will usually have a count of 0. Missing data within a record are coded -99.

5. ACKNOWLEDGEMENTS

ACURATE was sponsored by the U.S. Department of Energy - Savannah River Operations Office.

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Telegadas, K., G.J. Ferber, R.R. Draxler, M.M. Pendergast, A.L. Boni, J.P. Hughes and J. Gray (1980): Measured Weekly and Twice-Daily Krypton-85 Surface Air Concentrations within 150 Km of the Savannah River Plant (March 1975 through September 1977) - Final Report, NOAA Tech. Memo ERL ARL-80, NOAA/Air Resources Labs., 6010 Executive Blvd., Rockville, MD 20852.

APPENDIX A

SOURCE EMISSION RATE

SOURCE EMISSION RATES (CI/HR)

START-YR
MONTH-MO
DOW

A-1

SOURCE EMISSION RATES (CI/HR)

A-3

SOURCE EMISSION RATES (CI/HR)

START
YEAR-YR
MONTH-MO

HOUR-DY
REC-
ORD

(GMT)

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SOURCE EMISSION RATES (CI/HR)

SOURCE EMISSION RATES (CI/HR)

START-YR
MONTH-MO

REC- ORD		DAY-DY HOUR-HR		YR/MOD/YHR		00 01 02 03 04 05 06 07 08 09 10 11		HOURS		AFTER START		HISTOGRAM		
*	#	*	*	*	*	*	*	*	*	*	*	*	*	*
* #*	*	301	820729012	290	281	224	222	179	169	151	140	124	105	365
302	82072912	293	283	235	211	189	169	152	147	136	122	109	327	
303	820730012	290	281	265	158	152	147	142	137	136	122	109	300	
304	82073012	294	282	179	159	146	136	120	107	103	98	83	277	
305	820730212	290	280	194	160	140	130	110	103	96	86	73	207	
306	82073112	290	280	180	160	140	130	110	103	96	86	73	200	
307	820731212	290	280	185	166	145	131	110	103	96	86	73	197	
308	820731312	290	280	184	175	156	143	110	103	96	86	73	194	
309	820731412	290	280	184	175	156	143	110	103	96	86	73	191	
310	820731512	290	280	184	175	156	143	110	103	96	86	73	188	
311	820731612	290	280	184	175	156	143	110	103	96	86	73	185	
312	820731712	290	280	184	175	156	143	110	103	96	86	73	182	
313	820731812	290	280	184	175	156	143	110	103	96	86	73	179	
314	820731912	290	280	184	175	156	143	110	103	96	86	73	176	
315	820732012	290	280	184	175	156	143	110	103	96	86	73	173	
316	820732112	290	280	184	175	156	143	110	103	96	86	73	170	
317	820732212	290	280	184	175	156	143	110	103	96	86	73	167	
318	820732312	290	280	184	175	156	143	110	103	96	86	73	164	
319	820732412	290	280	184	175	156	143	110	103	96	86	73	161	
320	820732512	290	280	184	175	156	143	110	103	96	86	73	158	
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328	820733312	290	280	184	175	156	143	110	103	96	86	73	134	
329	820733412	290	280	184	175	156	143	110	103	96	86	73	131	
330	820733512	290	280	184	175	156	143	110	103	96	86	73	128	
331	820733612	290	280	184	175	156	143	110	103	96	86	73	125	
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335	820734012	290	280	184	175	156	143	110	103	96	86	73	113	
336	820734112	290	280	184	175	156	143	110	103	96	86	73	110	
337	820734212	290	280	184	175	156	143	110	103	96	86	73	107	
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339	820734412	290	280	184	175	156	143	110	103	96	86	73	101	
340	820734512	290	280	184	175	156	143	110	103	96	86	73	98	
341	820734612	290	280	184	175	156	143	110	103	96	86	73	95	
342	820734712	290	280	184	175	156	143	110	103	96	86	73	92	
343	820734812	290	280	184	175	156	143	110	103	96	86	73	89	
344	820734912	290	280	184	175	156	143	110	103	96	86	73	86	
345	820735012	290	280	184	175	156	143	110	103	96	86	73	83	
346	820735112	290	280	184	175	156	143	110	103	96	86	73	80	
347	820735212	290	280	184	175	156	143	110	103	96	86	73	77	
348	820735312	290	280	184	175	156	143	110	103	96	86	73	74	
349	820735412	290	280	184	175	156	143	110	103	96	86	73	71	
350	820735512	290	280	184	175	156	143	110	103	96	86	73	68	
351	820735612	290	280	184	175	156	143	110	103	96	86	73	65	
352	820735712	290	280	184	175	156	143	110	103	96	86	73	62	
353	820735812	290	280	184	175	156	143	110	103	96	86	73	59	
354	820735912	290	280	184	175	156	143	110	103	96	86	73	56	
355	820736012	290	280	184	175	156	143	110	103	96	86	73	53	
356	820736112	290	280	184	175	156	143	110	103	96	86	73	50	
357	820736212	290	280	184	175	156	143	110	103	96	86	73	47	
358	820736312	290	280	184	175	156	143	110	103	96	86	73	44	
359	820736412	290	280	184	175	156	143	110	103	96	86	73	41	
360	820736512	290	280	184	175	156	143	110	103	96	86	73	38	

START YEAR-YR	SOURCE	EMISSION RATES (CI/HR)	HISTOGRAM*****												
			DAY-DY	HOUR-HR	(GMT)	00	01	02	03	04	05	06	07	08	09
REC-CRD	YRMDYHR		12	0	0	0	0	0	0	0	0	0	0	0	0
*	*	*	00	01	02	03	04	05	06	07	08	09	10	11	12
362	82082812	0	0	0	0	0	0	0	0	0	0	0	0	0	0
363	82082902	0	0	0	0	0	0	0	0	0	0	0	0	0	0
364	82082912	0	0	0	0	0	0	0	0	0	0	0	0	0	0
365	82083012	0	0	0	0	0	0	0	0	0	0	0	0	0	0
366	82083102	0	0	0	0	0	0	0	0	0	0	0	0	0	0
367	82083112	0	0	0	0	0	0	0	0	0	0	0	0	0	0
368	82083122	0	0	0	0	0	0	0	0	0	0	0	0	0	0
369	82090112	0	0	0	0	0	0	0	0	0	0	0	0	0	0
370	82090122	0	0	0	0	0	0	0	0	0	0	0	0	0	0
371	82090202	0	0	0	0	0	0	0	0	0	0	0	0	0	0
372	82090212	0	0	0	0	0	0	0	0	0	0	0	0	0	0
373	82090302	0	0	0	0	0	0	0	0	0	0	0	0	0	0
374	82090312	0	0	0	0	0	0	0	0	0	0	0	0	0	0
375	82090402	0	0	0	0	0	0	0	0	0	0	0	0	0	0
376	82090412	0	0	0	0	0	0	0	0	0	0	0	0	0	0
377	82090502	0	0	0	0	0	0	0	0	0	0	0	0	0	0
378	82090512	0	0	0	0	0	0	0	0	0	0	0	0	0	0
379	82090602	0	0	0	0	0	0	0	0	0	0	0	0	0	0
380	82090612	0	0	0	0	0	0	0	0	0	0	0	0	0	0
381	82090702	0	0	0	0	0	0	0	0	0	0	0	0	0	0
382	82090712	0	0	0	0	0	0	0	0	0	0	0	0	0	0
383	82090802	0	0	0	0	0	0	0	0	0	0	0	0	0	0
384	82090812	0	0	0	0	0	0	0	0	0	0	0	0	0	0
385	82090902	0	0	0	0	0	0	0	0	0	0	0	0	0	0
386	82090912	0	0	0	0	0	0	0	0	0	0	0	0	0	0
387	82091002	0	0	0	0	0	0	0	0	0	0	0	0	0	0
388	82091012	0	0	0	0	0	0	0	0	0	0	0	0	0	0
389	82091102	0	0	0	0	0	0	0	0	0	0	0	0	0	0
390	82091112	0	0	0	0	0	0	0	0	0	0	0	0	0	0
391	82091202	0	0	0	0	0	0	0	0	0	0	0	0	0	0
392	82091212	0	0	0	0	0	0	0	0	0	0	0	0	0	0
393	82091302	0	0	0	0	0	0	0	0	0	0	0	0	0	0
394	82091312	0	0	0	0	0	0	0	0	0	0	0	0	0	0
395	82091402	0	0	0	0	0	0	0	0	0	0	0	0	0	0
396	82091412	0	0	0	0	0	0	0	0	0	0	0	0	0	0
397	82091502	0	0	0	0	0	0	0	0	0	0	0	0	0	0
398	82091512	0	0	0	0	0	0	0	0	0	0	0	0	0	0
399	82091602	0	0	0	0	0	0	0	0	0	0	0	0	0	0
400	82091612	0	0	0	0	0	0	0	0	0	0	0	0	0	0
401	82091702	0	0	0	0	0	0	0	0	0	0	0	0	0	0
402	82091712	0	0	0	0	0	0	0	0	0	0	0	0	0	0
403	82091802	0	0	0	0	0	0	0	0	0	0	0	0	0	0
404	82091812	0	0	0	0	0	0	0	0	0	0	0	0	0	0
405	82091902	0	0	0	0	0	0	0	0	0	0	0	0	0	0
406	82091912	0	0	0	0	0	0	0	0	0	0	0	0	0	0
407	82091922	0	0	0	0	0	0	0	0	0	0	0	0	0	0
408	82092002	0	0	0	0	0	0	0	0	0	0	0	0	0	0
409	82092012	0	0	0	0	0	0	0	0	0	0	0	0	0	0
410	82092022	0	0	0	0	0	0	0	0	0	0	0	0	0	0
411	82092032	0	0	0	0	0	0	0	0	0	0	0	0	0	0
412	82092042	0	0	0	0	0	0	0	0	0	0	0	0	0	0
413	82092052	0	0	0	0	0	0	0	0	0	0	0	0	0	0
414	82092062	0	0	0	0	0	0	0	0	0	0	0	0	0	0
415	82092072	0	0	0	0	0	0	0	0	0	0	0	0	0	0
416	82092082	0	0	0	0	0	0	0	0	0	0	0	0	0	0
417	82092092	0	0	0	0	0	0	0	0	0	0	0	0	0	0
418	82092102	0	0	0	0	0	0	0	0	0	0	0	0	0	0
419	82092112	0	0	0	0	0	0	0	0	0	0	0	0	0	0
420	82092122	0	0	0	0	0	0	0	0	0	0	0	0	0	0

SOURCE EMISSION RATES (CI/HR)

START
YEAR-YR
MONTH-MO

SOURCE EMISSION RATES (CI/HR)

REC- ORD	YEAR- MONTH-MO-	DAY-HR-	HOUR (GMT)	***** HISTOGRAM *****											
				00	01	02	03	04	05	06	07	08	09	10	11
481	82192700	164	151	137	126	117	112	107	100	98	25	0			
482	82192800	132	18	135	136	325	291	261	233	209	42	41			
483	82192812	187	168	151	146	135	121	108	97	89	2356	000			
484	82192900	158	162	146	146	146	121	106	90	72	2399	000000000000			
485	82192912	356	356	329	271	234	189	175	178	164	1372	000000000000			
486	82193000	354	392	298	299	292	271	234	189	175	107	197			
487	82193012	162	218	296	296	296	296	296	296	296	151	138			
488	82193024	489	489	489	489	489	489	489	489	489	126	116			
489	82193100	17	17	17	17	17	17	17	17	17	129	000			
490	82193112	17	17	17	17	17	17	17	17	17	128	000			
491	82193124	17	17	17	17	17	17	17	17	17	128	000			
492	82110100	17	17	17	17	17	17	17	17	17	128	000			
493	82110112	17	17	17	17	17	17	17	17	17	128	000			
494	82110300	32	32	34	37	37	37	37	37	37	134	000			
495	82110312	32	32	34	37	37	37	37	37	37	134	000			
496	82110400	32	32	34	37	37	37	37	37	37	134	000			
497	82110412	32	32	34	37	37	37	37	37	37	134	000			
498	82110500	18	18	21	24	27	30	33	36	39	134	000			
499	82110512	18	18	21	24	27	30	33	36	39	134	000			
500	82110600	18	18	21	24	27	30	33	36	39	134	000			
501	82110612	18	18	21	24	27	30	33	36	39	134	000			
502	82110700	18	18	21	24	27	30	33	36	39	134	000			
503	82110712	18	18	21	24	27	30	33	36	39	134	000			
504	82110800	18	18	21	24	27	30	33	36	39	134	000			
505	82110812	18	18	21	24	27	30	33	36	39	134	000			
506	82110900	18	18	21	24	27	30	33	36	39	134	000			
507	82110912	18	18	21	24	27	30	33	36	39	134	000			
508	82111000	18	18	21	24	27	30	33	36	39	134	000			
509	82111012	18	18	21	24	27	30	33	36	39	134	000			
510	82111100	18	18	21	24	27	30	33	36	39	134	000			
511	82111112	18	18	21	24	27	30	33	36	39	134	000			
512	82111124	18	18	21	24	27	30	33	36	39	134	000			
513	82111136	18	18	21	24	27	30	33	36	39	134	000			
514	82111148	18	18	21	24	27	30	33	36	39	134	000			
515	82111160	18	18	21	24	27	30	33	36	39	134	000			
516	82111172	18	18	21	24	27	30	33	36	39	134	000			
517	82111184	18	18	21	24	27	30	33	36	39	134	000			
518	82111196	18	18	21	24	27	30	33	36	39	134	000			
519	82111208	18	18	21	24	27	30	33	36	39	134	000			
520	82111220	18	18	21	24	27	30	33	36	39	134	000			
521	82111232	18	18	21	24	27	30	33	36	39	134	000			
522	82111244	18	18	21	24	27	30	33	36	39	134	000			
523	82111256	18	18	21	24	27	30	33	36	39	134	000			
524	82111268	18	18	21	24	27	30	33	36	39	134	000			
525	82111280	18	18	21	24	27	30	33	36	39	134	000			
526	82111292	18	18	21	24	27	30	33	36	39	134	000			
527	82111304	18	18	21	24	27	30	33	36	39	134	000			
528	82111316	18	18	21	24	27	30	33	36	39	134	000			
529	82111328	18	18	21	24	27	30	33	36	39	134	000			
530	82111340	18	18	21	24	27	30	33	36	39	134	000			
531	82111352	18	18	21	24	27	30	33	36	39	134	000			
532	82111364	18	18	21	24	27	30	33	36	39	134	000			
533	82111376	18	18	21	24	27	30	33	36	39	134	000			
534	82111388	18	18	21	24	27	30	33	36	39	134	000			
535	82111300	18	18	21	24	27	30	33	36	39	134	000			
536	82111312	18	18	21	24	27	30	33	36	39	134	000			
537	82111324	18	18	21	24	27	30	33	36	39	134	000			
538	82111336	18	18	21	24	27	30	33	36	39	134	000			
539	82111348	18	18	21	24	27	30	33	36	39	134	000			
540	82111360	18	18	21	24	27	30	33	36	39	134	000			

***** HISTOGRAM *****

START YEAR-YR	MONTH-MO	DAY-DY	HOUR-HR	REC- ORD	YR MOD YR (GMT)	SOURCE EMISSION RATES (CI/HR)															
						00	01	02	03	04	05	06	07	08	09	10	11				
**#*	**#*	**#*	**#*	**#*	**#*	00	01	02	03	04	05	06	07	08	09	00	01	02	03	04	
541	82112600	275	249	224	203	184	168	153	142	132	121	110	107	100	098	00	01	02	03	04	
542	82112610	286	266	247	227	206	189	170	155	149	135	122	110	107	100	095	00	01	02	03	04
543	82112700	48	47	47	46	45	45	45	45	45	45	45	45	45	45	45	00	01	02	03	04
544	82112710	66	55	48	40	30	27	24	21	19	17	15	14	13	12	11	00	01	02	03	04
545	82112800	370	344	308	276	247	221	198	177	159	143	128	114	107	100	096	00	01	02	03	04
546	82112802	103	91	94	85	75	66	56	46	39	31	22	18	15	12	10	00	01	02	03	04
547	82112900	221	21	21	21	21	21	21	21	21	21	21	21	21	21	21	00	01	02	03	04
548	82113000	221	21	21	21	21	21	21	21	21	21	21	21	21	21	21	00	01	02	03	04
549	82113010	119	119	119	119	119	119	119	119	119	119	119	119	119	119	119	00	01	02	03	04
550	82113012	20	17	12	11	10	9	8	7	6	5	4	3	2	1	0	0	0	0	0	0
551	82120100	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	00	01	02	03	04
552	82120102	232	212	197	184	170	151	117	89	60	30	0	0	0	0	0	0	0	0	0	0
553	82120200	330	300	280	260	240	220	198	176	154	132	108	84	60	36	0	0	0	0	0	0
554	82120202	355	325	291	261	234	219	188	168	148	125	103	81	59	37	0	0	0	0	0	0
555	82120300	359	325	291	261	234	219	188	168	148	125	103	81	59	37	0	0	0	0	0	0
556	82120302	359	325	291	261	234	219	188	168	148	125	103	81	59	37	0	0	0	0	0	0
557	82120400	359	325	291	261	234	219	188	168	148	125	103	81	59	37	0	0	0	0	0	0
558	82120410	397	360	320	280	240	210	172	142	112	82	52	32	12	0	0	0	0	0	0	0
559	82120500	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	00	01	02	03	04
560	82120510	143	128	115	103	90	76	59	42	28	15	8	4	2	1	0	0	0	0	0	0
561	82120600	144	139	135	136	136	136	136	136	136	136	136	136	136	136	136	00	01	02	03	04
562	82120610	199	178	166	144	128	115	103	90	76	59	42	28	15	8	4	2	1	0	0	0
563	82120700	90	70	50	30	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
564	82120710	199	178	166	144	128	115	103	90	76	59	42	28	15	8	4	2	1	0	0	0
565	82120800	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	00	01	02	03	04
566	82120810	24	19	19	19	19	19	19	19	19	19	19	19	19	19	19	00	01	02	03	04
567	82120900	168	151	135	121	108	97	89	79	69	59	49	39	29	19	9	0	0	0	0	0
568	82120910	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	00	01	02	03	04
569	82121000	244	219	197	176	157	141	126	113	102	91	84	74	64	54	44	00	01	02	03	04
570	82121010	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	00	01	02	03	04
571	82121100	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	00	01	02	03	04
572	82121110	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	00	01	02	03	04
573	82121200	170	153	137	124	116	99	89	79	69	59	49	39	29	19	9	0	0	0	0	0
574	82121210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
575	82121300	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	00	01	02	03	04
576	82121310	394	397	400	403	406	409	412	415	418	421	424	427	430	433	436	439	442	445	448	451
577	82121400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
578	82121410	250	343	364	364	364	364	364	364	364	364	364	364	364	364	364	364	364	364	364	364
579	82121500	134	123	113	103	93	83	73	63	53	43	33	23	13	3	0	0	0	0	0	0
580	82121600	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134
581	82121700	210	188	168	158	148	138	128	118	108	98	88	78	68	58	48	38	28	18	8	0
582	82121800	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
583	82121900	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
584	82122000	135	121	107	93	79	65	51	37	23	10	0	0	0	0	0	0	0	0	0	0
585	82122100	61	65	71	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155
586	82122200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
587	82122300	61	65	71	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155
588	82122400	61	65	71	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155
589	82122500	61	65	71	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155
590	82122600	61	65	71	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155
591	82122700	61	65	71	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155
592	82122800	61	65	71	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155
593	82122900	61	65	71	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155
594	82123000	61	65	71	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155
595	82123100	61	65	71	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155
596	82123200	61	65	71	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155
597	82123300	61	65	71	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155
598	82123400	61	65	71	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155
599	82123500	61	65	71	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155
600	82123600	61	65	71	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155

START SOURCE EMISSION RATES (CI/HR)

MONTH-MO		DAY-DY		HOURS		AFTER		START		*****HISTOGRAM*****							
REC-	ORD	DAY-HR	HR	YRMDYHR	(GMT)	01	02	03	04	05	06	07	08	09	10	11	
***	***	6001	82122602	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6002	82122612	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6003	82122702	177	158	142	127	114	102	91	94	84	76	68	61	57	46
***	***	6004	82122802	0	54	44	39	35	30	0	0	0	0	0	0	0	0
***	***	6005	82122812	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6006	82122902	198	172	154	142	138	130	110	106	284	355	330	295	264	237
***	***	6007	82122912	0	58	50	46	40	38	34	16	10	192	284	355	330	295
***	***	6008	82123002	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6009	82123102	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6010	82123103	24	106	196	286	350	321	287	258	231	206	185	163	147	125
***	***	6011	83010112	166	149	133	119	107	96	99	88	79	71	63	57	51	45
***	***	6012	83010202	151	146	141	137	133	130	128	120	118	108	100	92	84	76
***	***	6013	83010203	0	237	211	190	170	152	137	122	119	110	100	90	80	70
***	***	6014	83010302	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6015	83010312	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6016	83010402	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6017	83010412	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6018	83010422	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6019	83010502	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6020	83010512	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6021	83010522	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6022	83010602	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6023	83010612	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6024	83010622	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6025	83010702	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6026	83010712	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6027	83010722	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6028	83010802	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6029	83010812	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6030	83010822	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6031	83010902	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6032	83010912	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6033	83010922	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6034	83011002	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6035	83011012	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6036	83011022	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6037	83011102	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6038	83011112	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6039	83011122	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6040	83011132	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6041	83011142	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6042	83011152	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6043	83011162	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6044	83011172	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6045	83011182	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6046	83011192	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6047	83011202	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6048	83011212	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6049	83011222	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6050	83011232	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6051	83011242	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6052	83011252	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6053	83011262	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6054	83011272	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6055	83011282	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6056	83011292	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6057	83011302	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6058	83011312	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6059	83011322	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6060	83011332	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6061	83011342	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6062	83011352	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6063	83011362	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6064	83011372	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6065	83011382	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6066	83011392	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6067	83011402	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6068	83011412	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6069	83011422	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6070	83011432	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6071	83011442	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6072	83011452	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6073	83011462	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6074	83011472	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6075	83011482	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6076	83011492	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6077	83011502	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6078	83011512	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6079	83011522	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6080	83011532	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6081	83011542	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6082	83011552	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6083	83011562	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6084	83011572	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6085	83011582	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6086	83011592	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6087	83011602	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6088	83011612	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6089	83011622	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6090	83011632	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6091	83011642	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6092	83011652	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6093	83011662	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6094	83011672	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6095	83011682	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6096	83011692	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6097	83011702	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6098	83011712	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***	***	6099	830117														

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SOURCE EMISSION RATES (CI/HR)

*****HISTOGRAM*****

START DAY-YR	MONTH-MO	HOUR-HR	(GMT)	REC-ORD	YR-MODYR#	***HOURS AFTER START***	***HOURS BEFORE START***	***TOTAL***
6661	83012510	09	01	**	02	03	06	00
6662	83012610	27	09	**	28	28	07	00
6663	83012710	51	54	**	54	58	07	00
6664	83012810	52	54	**	56	58	07	00
6665	83012910	52	54	**	56	58	07	00
6666	83013010	53	55	**	57	59	07	00
6667	83013110	53	55	**	57	59	07	00
6668	83013210	53	55	**	57	59	07	00
6669	83013310	53	55	**	57	59	07	00
6670	83013410	53	55	**	57	59	07	00
6671	83013510	53	55	**	57	59	07	00
6672	83013610	53	55	**	57	59	07	00
6673	83013710	53	55	**	57	59	07	00
6674	83013810	53	55	**	57	59	07	00
6675	83013910	53	55	**	57	59	07	00
6676	83014010	53	55	**	57	59	07	00
6677	83014110	53	55	**	57	59	07	00
6678	83014210	53	55	**	57	59	07	00
6679	83014310	53	55	**	57	59	07	00
6680	83014410	53	55	**	57	59	07	00
6681	83014510	53	55	**	57	59	07	00
6682	83014610	53	55	**	57	59	07	00
6683	83014710	53	55	**	57	59	07	00
6684	83014810	53	55	**	57	59	07	00
6685	83014910	53	55	**	57	59	07	00
6686	83015010	53	55	**	57	59	07	00
6687	83015110	53	55	**	57	59	07	00
6688	83015210	53	55	**	57	59	07	00
6689	83015310	53	55	**	57	59	07	00
6690	83015410	53	55	**	57	59	07	00
6691	83015510	53	55	**	57	59	07	00
6692	83015610	53	55	**	57	59	07	00
6693	83015710	53	55	**	57	59	07	00
6694	83015810	53	55	**	57	59	07	00
6695	83015910	53	55	**	57	59	07	00
6696	83016010	53	55	**	57	59	07	00
6697	83016110	53	55	**	57	59	07	00
6698	83016210	53	55	**	57	59	07	00
6699	83016310	53	55	**	57	59	07	00
6700	83016410	53	55	**	57	59	07	00
6701	83016510	53	55	**	57	59	07	00
6702	83016610	53	55	**	57	59	07	00
6703	83016710	53	55	**	57	59	07	00
6704	83016810	53	55	**	57	59	07	00
6705	83016910	53	55	**	57	59	07	00
6706	83017010	53	55	**	57	59	07	00
6707	83017110	53	55	**	57	59	07	00
6708	83017210	53	55	**	57	59	07	00
6709	83017310	53	55	**	57	59	07	00
6710	83017410	53	55	**	57	59	07	00
6711	83017510	53	55	**	57	59	07	00
6712	83017610	53	55	**	57	59	07	00
6713	83017710	53	55	**	57	59	07	00
6714	83017810	53	55	**	57	59	07	00
6715	83017910	53	55	**	57	59	07	00
6716	83018010	53	55	**	57	59	07	00
6717	83018110	53	55	**	57	59	07	00
6718	83018210	53	55	**	57	59	07	00
6719	83018310	53	55	**	57	59	07	00
6720	83018410	53	55	**	57	59	07	00

START YEAR-UP SOURCE EMISSION RATES (CI/HR)

SOURCE EMISSION RATES (CI/HR)

START YEAR-YR	MONTH-MO	DAY-DY	HOUR-HR	(GMT)	***** HISTOGRAM *****										
REC- ORD	YRMDYHR	00	01	02	03	04	05	06	07	08	09	10	11	12	0
***	***	***	***	***	***	***	***	***	***	***	***	***	***	0	0
841	83042500	0	0	0	0	0	0	0	0	0	0	0	0	0	0
842	83042512	359	325	294	266	241	218	197	178	161	146	132	119	2636	4
843	83042600	168	398	89	92	83	75	68	62	56	51	351	397	790	3
844	83042612	0	0	0	0	0	0	0	0	0	0	0	0	0	0
845	83042700	0	0	0	0	0	0	0	0	0	0	0	0	0	0
846	83042712	0	0	0	0	0	0	0	0	0	0	0	0	0	0
847	83042800	117	494	382	345	312	283	256	231	210	190	171	155	3056	0
848	83042812	149	127	115	104	94	84	78	73	66	59	54	42	1099	0
849	83042912	49	44	40	36	33	30	16	0	0	0	0	0	248	0
850	83043000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
851	83043012	0	0	0	0	0	0	0	0	0	0	0	0	0	0
852	83050100	208	188	170	154	139	126	114	104	93	87	258	236	2558	0
853	83050112	272	65	0	0	0	0	0	0	0	0	0	0	0	0
854	83050200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
855	83050212	0	0	0	0	0	0	0	0	0	0	0	0	0	0
856	83050300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
857	83050312	0	0	0	0	0	0	0	0	0	0	0	0	0	0
858	83050400	246	223	202	183	165	152	147	142	136	114	406	368	333	272
859	83050412	285	277	270	263	251	233	213	183	163	138	135	303	316	284
860	83050500	0	0	0	0	0	0	0	0	0	0	0	0	0	0
861	83050512	0	0	0	0	0	0	0	0	0	0	0	0	0	0
862	83050600	0	0	0	0	0	0	0	0	0	0	0	0	0	0
863	83050612	0	0	0	0	0	0	0	0	0	0	0	0	0	0
864	83050700	0	0	0	0	0	0	0	0	0	0	0	0	0	0
865	83050712	0	0	0	0	0	0	0	0	0	0	0	0	0	0
866	83050800	0	0	0	0	0	0	0	0	0	0	0	0	0	0
867	83050812	0	0	0	0	0	0	0	0	0	0	0	0	0	0
868	83050900	205	186	169	152	137	124	114	104	95	87	375	339	307	279
869	83050912	0	0	0	0	0	0	0	0	0	0	0	0	0	0
870	83051000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
871	83051012	0	0	0	0	0	0	0	0	0	0	0	0	0	0
872	83051100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
873	83051112	0	0	0	0	0	0	0	0	0	0	0	0	0	0
874	83051200	260	436	394	357	323	292	264	239	216	193	177	160	131	0
875	83051212	145	130	118	107	97	88	78	68	58	48	39	34	31	0
876	83051300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
877	83051312	0	0	0	0	0	0	0	0	0	0	0	0	0	0
878	83051400	288	339	340	416	416	416	416	416	416	416	396	386	349	317
879	83051412	41	41	41	41	41	41	41	41	41	41	41	41	41	41
880	83051500	0	0	0	0	0	0	0	0	0	0	0	0	0	0
881	83051512	0	0	0	0	0	0	0	0	0	0	0	0	0	0
882	83051600	256	459	416	416	416	416	416	416	416	416	416	416	416	416
883	83051612	0	0	0	0	0	0	0	0	0	0	0	0	0	0
884	83051700	149	124	117	110	106	104	104	104	104	104	104	104	104	104
885	83051712	0	0	0	0	0	0	0	0	0	0	0	0	0	0
886	83051800	96	53	52	50	48	47	46	45	44	43	42	41	40	40
887	83051812	482	447	413	370	343	317	292	267	242	217	192	167	142	121
888	83051900	121	111	106	101	96	91	86	81	76	71	66	61	56	51
889	83051912	0	0	0	0	0	0	0	0	0	0	0	0	0	0
890	83052000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
891	83052012	0	0	0	0	0	0	0	0	0	0	0	0	0	0
892	83052100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
893	83052112	0	0	0	0	0	0	0	0	0	0	0	0	0	0
894	83052200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
895	83052212	0	0	0	0	0	0	0	0	0	0	0	0	0	0
896	83052300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
897	83052312	0	0	0	0	0	0	0	0	0	0	0	0	0	0
898	83052400	0	0	0	0	0	0	0	0	0	0	0	0	0	0
899	83052412	0	0	0	0	0	0	0	0	0	0	0	0	0	0

REC- ORD	YEAR-XR MONTH-MO DAY-DY HOUR-HR (GMT)	YRMDYHR	#**#	*****HOURS		AFTER	START	*****08*0
				00	01	02	03	04
9961	9962	8300624100	57	52	52	51	52	51
9962	9963	8300625000	59	50	50	48	50	49
9963	9964	8300625100	46	48	48	46	48	47
9964	9965	8300626100	49	52	52	49	52	48
9965	9966	8300626200	49	52	52	49	52	48
9966	9967	8300626200	49	52	52	49	52	48
9967	9968	8300626210	49	52	52	49	52	48
9968	9969	8300626212	49	52	52	49	52	48
9969	9970	8300626212	49	52	52	49	52	48
9970	9971	8300626212	49	52	52	49	52	48
9971	9972	8300626212	49	52	52	49	52	48
9972	9973	8300626212	49	52	52	49	52	48
9973	9974	8300626212	49	52	52	49	52	48
9974	9975	8300626212	49	52	52	49	52	48
9975	9976	8300626212	49	52	52	49	52	48
9976	9977	8300626212	49	52	52	49	52	48
9977	9978	8300626212	49	52	52	49	52	48
9978	9979	8300626212	49	52	52	49	52	48
9979	9980	8300626212	49	52	52	49	52	48
9980	9981	8300626212	49	52	52	49	52	48
9981	9982	8300626212	49	52	52	49	52	48
9982	9983	8300626212	49	52	52	49	52	48
9983	9984	8300626212	49	52	52	49	52	48
9984	9985	8300626212	49	52	52	49	52	48
9985	9986	8300626212	49	52	52	49	52	48
9986	9987	8300626212	49	52	52	49	52	48
9987	9988	8300626212	49	52	52	49	52	48
9988	9989	8300626212	49	52	52	49	52	48
9989	9990	8300626212	49	52	52	49	52	48
9990	9991	8300626212	49	52	52	49	52	48
9991	9992	8300626212	49	52	52	49	52	48
9992	9993	8300626212	49	52	52	49	52	48
9993	9994	8300626212	49	52	52	49	52	48
9994	9995	8300626212	49	52	52	49	52	48
9995	9996	8300626212	49	52	52	49	52	48
9996	9997	8300626212	49	52	52	49	52	48
9997	9998	8300626212	49	52	52	49	52	48
9998	9999	8300626212	49	52	52	49	52	48
9999	10000	8300626212	49	52	52	49	52	48
10000	10001	8300626212	49	52	52	49	52	48
10001	10002	8300626212	49	52	52	49	52	48
10002	10003	8300626212	49	52	52	49	52	48
10003	10004	8300626212	49	52	52	49	52	48
10004	10005	8300626212	49	52	52	49	52	48
10005	10006	8300626212	49	52	52	49	52	48
10006	10007	8300626212	49	52	52	49	52	48
10007	10008	8300626212	49	52	52	49	52	48
10008	10009	8300626212	49	52	52	49	52	48
10009	10010	8300626212	49	52	52	49	52	48
10010	10011	8300626212	49	52	52	49	52	48
10011	10012	8300626212	49	52	52	49	52	48
10012	10013	8300626212	49	52	52	49	52	48
10013	10014	8300626212	49	52	52	49	52	48
10014	10015	8300626212	49	52	52	49	52	48
10015	10016	8300626212	49	52	52	49	52	48
10016	10017	8300626212	49	52	52	49	52	48
10017	10018	8300626212	49	52	52	49	52	48
10018	10019	8300626212	49	52	52	49	52	48
10019	10020	8300626212	49	52	52	49	52	48

SOURCE EMISSION RATES (CI/HR)

START YEAR	MONTH-MO	DAY-DY	HOUR-HR	REC- ORD (GMT)	*** # YRMODYHR *** ** 021 83072409 ** 022 83072412 ** 023 83072415 ** 024 83072512 ** 025 83072608 ** 026 83072612 ** 027 83072712 ** 028 83072812 ** 029 83072815 ** 030 83072912 ** 031 83072915 ** 032 83073012 ** 033 83073015 ** 034 83073112 ** 035 83073115 ** 036 83073212 ** 037 83073215 ** 038 83073312 ** 039 83073315 ** 040 83073412 ** 041 83073415 ** 042 83073512 ** 043 83073515 ** 044 83073612 ** 045 83073615 ** 046 83073712 ** 047 83073715 ** 048 83073812 ** 049 83073815 ** 050 83073912 ** 051 83073915 ** 052 83074012 ** 053 83074015 ** 054 83074112 ** 055 83074115 ** 056 83074212 ** 057 83074215 ** 058 83074312 ** 059 83074315 ** 060 83074412 ** 061 83074415 ** 062 83074512 ** 063 83074515 ** 064 83074612 ** 065 83074615 ** 066 83074712 ** 067 83074715 ** 068 83074812 ** 069 83074815 ** 070 83074912 ** 071 83074915 ** 072 83075012 ** 073 83075015 ** 074 83075112 ** 075 83075115 ** 076 83075212 ** 077 83075215 ** 078 83075312 ** 079 83075315 ** 080 83075412 ** 081 83075415 ** 082 83075512 ** 083 83075515 ** 084 83075612 ** 085 83075615 ** 086 83075712 ** 087 83075715 ** 088 83075812 ** 089 83075815 ** 090 83075912 ** 091 83075915 ** 092 83076012 ** 093 83076015 ** 094 83076112 ** 095 83076115 ** 096 83076212 ** 097 83076215 ** 098 83076312 ** 099 83076315 ** 0100 83076412 ** 0101 83076415 ** 0102 83076512 ** 0103 83076515 ** 0104 83076612 ** 0105 83076615 ** 0106 83076712 ** 0107 83076715 ** 0108 83076812 ** 0109 83076815 ** 0110 83076912 ** 0111 83076915 ** 0112 83077012 ** 0113 83077015 ** 0114 83077112 ** 0115 83077115 ** 0116 83077212 ** 0117 83077215 ** 0118 83077312 ** 0119 83077315 ** 0120 83077412 ** 0121 83077415 ** 0122 83077512 ** 0123 83077515 ** 0124 83077612 ** 0125 83077615 ** 0126 83077712 ** 0127 83077715 ** 0128 83077812 ** 0129 83077815 ** 0130 83077912 ** 0131 83077915 ** 0132 83078012 ** 0133 83078015 ** 0134 83078112 ** 0135 83078115 ** 0136 83078212 ** 0137 83078215 ** 0138 83078312 ** 0139 83078315 ** 0140 83078412 ** 0141 83078415 ** 0142 83078512 ** 0143 83078515 ** 0144 83078612 ** 0145 83078615 ** 0146 83078712 ** 0147 83078715 ** 0148 83078812 ** 0149 83078815 ** 0150 83078912 ** 0151 83078915 ** 0152 83079012 ** 0153 83079015 ** 0154 83079112 ** 0155 83079115 ** 0156 83079212 ** 0157 83079215 ** 0158 83079312 ** 0159 83079315 ** 0160 83079412 ** 0161 83079415 ** 0162 83079512 ** 0163 83079515 ** 0164 83079612 ** 0165 83079615 ** 0166 83079712 ** 0167 83079715 ** 0168 83079812 ** 0169 83079815 ** 0170 83079912 ** 0171 83079915 ** 0172 83080012 ** 0173 83080015 ** 0174 83080112 ** 0175 83080115 ** 0176 83080212 ** 0177 83080215 ** 0178 83080312 ** 0179 83080315 ** 0180 83080412 ** 0181 83080415 ** 0182 83080512 ** 0183 83080515 ** 0184 83080612 ** 0185 83080615 ** 0186 83080712 ** 0187 83080715 ** 0188 83080812 ** 0189 83080815 ** 0190 83080912 ** 0191 83080915 ** 0192 83081012 ** 0193 83081015 ** 0194 83081112 ** 0195 83081115 ** 0196 83081212 ** 0197 83081215 ** 0198 83081312 ** 0199 83081315 ** 0200 83081412 ** 0201 83081415 ** 0202 83081512 ** 0203 83081515 ** 0204 83081612 ** 0205 83081615 ** 0206 83081712 ** 0207 83081715 ** 0208 83081812 ** 0209 83081815 ** 0210 83081912 ** 0211 83081915 ** 0212 83082012 ** 0213 83082015 ** 0214 83082112 ** 0215 83082115 ** 0216 83082212 ** 0217 83082215 ** 0218 83082312 ** 0219 83082315 ** 0220 83082412 ** 0221 83082415 ** 0222 83082512 ** 0223 83082515 ** 0224 83082612 ** 0225 83082615 ** 0226 83082712 ** 0227 83082715 ** 0228 83082812 ** 0229 83082815 ** 0230 83082912 ** 0231 83082915 ** 0232 83083012 ** 0233 83083015 ** 0234 83083112 ** 0235 83083115 ** 0236 83083212 ** 0237 83083215 ** 0238 83083312 ** 0239 83083315 ** 0240 83083412 ** 0241 83083415 ** 0242 83083512 ** 0243 83083515 ** 0244 83083612 ** 0245 83083615 ** 0246 83083712 ** 0247 83083715 ** 0248 83083812 ** 0249 83083815 ** 0250 83083912 ** 0251 83083915 ** 0252 83084012 ** 0253 83084015 ** 0254 83084112 ** 0255 83084115 ** 0256 83084212 ** 0257 83084215 ** 0258 83084312 ** 0259 83084315 ** 0260 83084412 ** 0261 83084415 ** 0262 83084512 ** 0263 83084515 ** 0264 83084612 ** 0265 83084615 ** 0266 83084712 ** 0267 83084715 ** 0268 83084812 ** 0269 83084815 ** 0270 83084912 ** 0271 83084915 ** 0272 83085012 ** 0273 83085015 ** 0274 83085112 ** 0275 83085115 ** 0276 83085212 ** 0277 83085215 ** 0278 83085312 ** 0279 83085315 ** 0280 83085412 ** 0281 83085415 ** 0282 83085512 ** 0283 83085515 ** 0284 83085612 ** 0285 83085615 ** 0286 83085712 ** 0287 83085715 ** 0288 83085812 ** 0289 83085815 ** 0290 83085912 ** 0291 83085915 ** 0292 83086012 ** 0293 83086015 ** 0294 83086112 ** 0295 83086115 ** 0296 83086212 ** 0297 83086215 ** 0298 83086312 ** 0299 83086315 ** 0300 83086412 ** 0301 83086415 ** 0302 83086512 ** 0303 83086515 ** 0304 83086612 ** 0305 83086615 ** 0306 83086712 ** 0307 83086715 ** 0308 83086812 ** 0309 83086815 ** 0310 83086912 ** 0311 83086915 ** 0312 83087012 ** 0313 83087015 ** 0314 83087112 ** 0315 83087115 ** 0316 83087212 ** 0317 83087215 ** 0318 83087312 ** 0319 83087315 ** 0320 83087412 ** 0321 83087415 ** 0322 83087512 ** 0323 83087515 ** 0324 83087612 ** 0325 83087615 ** 0326 83087712 ** 0327 83087715 ** 0328 83087812 ** 0329 83087815 ** 0330 83087912 ** 0331 83087915 ** 0332 83088012 ** 0333 83088015 ** 0334 83088112 ** 0335 83088115 ** 0336 83088212 ** 0337 83088215 ** 0338 83088312 ** 0339 83088315 ** 0340 83088412 ** 0341 83088415 ** 0342 83088512 ** 0343 83088515 ** 0344 83088612 ** 0345 83088615 ** 0346 83088712 ** 0347 83088715 ** 0348 83088812 ** 0349 83088815 ** 0350 83088912 ** 0351 83088915 ** 0352 83089012 ** 0353 83089015 ** 0354 83089112 ** 0355 83089115 ** 0356 83089212 ** 0357 83089215 ** 0358 83089312 ** 0359 83089315 ** 0360 83089412 ** 0361 83089415 ** 0362 83089512 ** 0363 83089515 ** 0364 83089612 ** 0365 83089615 ** 0366 83089712 ** 0367 83089715 ** 0368 83089812 ** 0369 83089815 ** 0370 83089912 ** 0371 83089915 ** 0372 83090012 ** 0373 83090015 ** 0374 83090112 ** 0375 83090115 ** 0376 83090212 ** 0377 83090215 ** 0378 83090312 ** 0379 83090315 ** 0380 83090412 ** 0381 83090415 ** 0382 83090512 ** 0383 83090515 ** 0384 83090612 ** 0385 83090615 ** 0386 83090712 ** 0387 83090715 ** 0388 83090812 ** 0389 83090815 ** 0390 83090912 ** 0391 83090915 ** 0392 83091012 ** 0393 83091015 ** 0394 83091112 ** 0395 83091115 ** 0396 83091212 ** 0397 83091215 ** 0398 83091312 ** 0399 83091315 ** 0400 83091412 ** 0401 83091415 ** 0402 83091512 ** 0403 83091515 ** 0404 83091612 ** 0405 83091615 ** 0406 83091712 ** 0407 83091715 ** 0408 83091812 ** 0409 83091815 ** 0410 83091912 ** 0411 83091915 ** 0412 83092012 ** 0413 83092015 ** 0414 83092112 ** 0415 83092115 ** 0416 83092212 ** 0417 83092215 ** 0418 83092312 ** 0419 83092315 ** 0420 83092412 ** 0421 83092415 ** 0422 83092512 ** 0423 83092515 ** 0424 83092612 ** 0425 83092615 ** 0426 83092712 ** 0427 83092715 ** 0428 83092812 ** 0429 83092815 ** 0430 83092912 ** 0431 83092915 ** 0432 83093012 ** 0433 83093015 ** 0434 83093112 ** 0435 83093115 ** 0436 83093212 ** 0437 83093215 ** 0438 83093312 ** 0439 83093315 ** 0440 83093412 ** 0441 83093415 ** 0442 83093512 ** 0443 83093515 ** 0444 83093612 ** 0445 83093615 ** 0446 83093712 ** 0447 83093715 ** 0448 83093812 ** 0449 83093815 ** 0450 83093912 ** 0451 83093915 ** 0452 83094012 ** 0453 83094015 ** 0454 83094112 ** 0455 83094115 ** 0456 83094212 ** 0457 83094215 ** 0458 83094312 ** 0459 83094315 ** 0460 83094412 ** 0461 83094415 ** 0462 83094512 ** 0463 83094515 ** 0464 83094612 ** 0465 83094615 ** 0466 83094712 ** 0467 83094715 ** 0468 83094812 ** 0469 83094815 ** 0470 83094912 ** 0471 83094915 ** 0472 83095012 ** 0473 83095015 ** 0474 83095112 ** 0475 83095115 ** 0476 83095212 ** 0477 83095215 ** 0478 83095312 ** 0479 83095315 ** 0480 83095412 ** 0481 83095415 ** 0482 83095512 ** 0483 83095515 ** 0484 83095612 ** 0485 83095615 ** 0486 83095712 ** 0487 83095715 ** 0488 83095812 ** 0489 83095815 ** 0490 83095912 ** 0491 83095915 ** 0492 83096012 ** 0493 83096015 ** 0494 83096112 ** 0495 83096115 ** 0496 83096212 ** 0497 83096215 ** 0498 83096312 ** 0499 83096315 ** 0500 83096412 ** 0501 83096415 ** 0502 83096512 ** 0503 83096515 ** 0504 83096612 ** 0505 83096615 ** 0506 83096712 ** 0507 83096715 ** 0508 83096812 ** 0509 83096815 ** 0510 83096912 ** 0511 83096915 ** 0512 83097012 ** 0513 83097015 ** 0514 83097112 ** 0515 83097115 ** 0516 83097212 ** 0517 83097215 ** 0518 83097312 ** 0519 83097315 ** 0520 83097412 ** 0521 83097415 ** 0522 83097512 ** 0523 83097515 ** 0524 83097612 ** 0525 83097615 ** 0526 83097712 ** 0527 83097715 ** 0528 83097812 ** 0529 83097815 ** 0530 83097912 ** 0531 83097915 ** 0532 83098012 ** 0533 83098015 ** 0534 83098112 ** 0535 83098115 ** 0536 83098212 ** 0537 83098215 ** 0538 83098312 ** 0539 83098315 ** 0540 83098412 ** 0541 83098415 ** 0542 83098512 ** 0543 83098515 ** 0544 83098612 ** 0545 83098615 ** 0546 83098712 ** 0547 83098715 ** 0548 83098812 ** 0549 83098815 ** 0550 83098912 ** 0551 83098915 ** 0552 83099012 ** 0553 83099015 ** 0554 83099112 ** 0555 83099115 ** 0556 83099212 ** 0557 83099215 ** 0558 83099312 ** 0559 83099315 ** 0560 83099412 ** 0561 83099415 ** 0562 83099512 ** 0563 83099515 ** 0564 83099612 ** 0565 83099615 ** 0566 83099712 ** 0567 83099715 ** 0568 83099812 ** 0569 83099815 ** 0570 83099912 ** 0571 83099915 ** 0572 83100012 ** 0573 83100015 ** 0574 83100112 ** 0575 83100115 ** 0576 83100212 ** 0577 83100215 ** 0578 83100312 ** 0579 83100315 ** 0580 83100412 ** 0581 83100415 ** 0582 83100512 ** 0583 83100515 ** 0584 83100612 ** 0585 83100615 ** 0586 83100712 ** 0587 83100715 ** 0588 83100812 ** 0589 83100815 ** 0590 83100912 ** 0591 83100915 ** 0592 83101012 ** 0593 83101015 ** 0594 83101112 ** 0595 83101115 ** 0596 83101212 ** 0597 83101215 ** 0598 83101312 ** 0599 83101315 ** 0600 83101412 ** 0601 83101415 ** 0602 83101512 ** 0603 83101515 ** 0604 83101612 ** 0605 83101615 ** 0606 83101712 ** 0607 83101715 ** 0608 83101812 ** 0609 83101815 ** 0610 83101912 ** 0611 83101915 ** 0612 83102012 ** 0613 83102015 ** 0614 83102112 ** 0615 83102115 ** 0616 83102212 ** 0617 83102215 ** 0618 83102312 ** 0619 83102315 ** 0620 83102412 ** 0621 83102415 ** 0622 83102512 ** 0623 83102515 ** 0624 83102612 ** 0625 83102615 ** 0626 83102712 ** 0627 83102715 ** 0628 83102812 ** 0629 83102815 ** 0630 83102912 ** 0631 83102915 ** 0632 83103012 ** 0633 83103015 ** 0634 83103112 ** 0635 83103115 ** 0636 83103212 ** 0637 83103215 ** 0638 83103312 ** 0639 83103315 ** 0640 83103412 ** 0641 83103415 ** 0642 83103512 ** 0643 83103515 ** 0644 83103612 ** 0645 83103615 ** 0646 83103712 ** 0647 83103715 ** 0648 83103812 ** 0649 83103815 ** 0650 83103912 ** 0651 83103915 ** 0652 83104012 ** 0653 83104015 ** 0654 83104112 ** 0655 83104115 ** 0656 83104212 ** 0657 83104215 ** 0658 83104312 ** 0659 83104315 ** 0660 83104412 ** 0661 83104415 ** 0662 83104512 ** 0663 83104515 ** 0664 83104612 ** 0665 83104615 ** 0666 83104712 ** 0667 83104715 ** 0668 83104812 ** 0669 83104815 ** 0670 83104912 ** 0671 83104915 ** 0672 83105012 ** 0673 83105015 ** 0674 83105112 ** 0675 83105115 ** 0676 83105212 ** 0677 83105215 ** 0678 83105312 ** 0679 83105315 ** 0680 83105412 ** 0681 83105415 ** 0682 83105512 ** 0683 83105515 ** 0
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START YEAR-YR	MONTH-MO	DAY-DY	HOUR-HR	REC- ORD	YR MOD/HR	(GMT)
**#*	1081	83080823012				
1082	83080823102					
1083	83080824002					
1084	83080824102					
1085	83080825002					
1086	83080826002					
1087	83080826102					
1088	83080827002					
1089	83080827102					
1090	83080828102					
1091	83080828202					
1092	83080829002					
1093	83080829102					
1094	83080829120					
1095	83080830102					
1096	83080830120					
1097	83080830140					
1098	83080831120					
1099	83090901002					
1100	83090901022					
1101	83090902122					
1102	83090903002					
1103	83090903102					
1104	83090903122					
1105	83090904002					
1106	83090904122					
1107	83090905002					
1108	83090905102					
1109	83090906122					
1110	83090907002					
1111	83090907122					
1112	83090908002					
1113	83090908122					
1114	83090909002					
1115	83090910022					
1116	83090911022					
1117	83090911122					
1118	83090911222					
1119	83090911322					
1120	83090911422					
1121	83090911522					
1122	83090911622					
1123	83090911722					
1124	83090911822					
1125	83090911922					
1126	83090912022					
1127	83090912122					
1128	83090912222					
1129	83090912322					
1130	83090912422					
1131	83090912522					
1132	83090912622					
1133	83090912722					
1134	83090912822					
1135	83090912922					
1136	83090913022					
1137	83090913122					
1138	83090913222					
1139	83090913322					
1140	83090913422					

SOURCE EMISSION RATES (CI/HR)

A-20

APPENDIX B
MEASURED SURFACE AIR CONCENTRATIONS

+ = VALUE CONTINUED
A = 1 HOUR LATE
B = 2 HOURS LATE
(LATE START BEFORE VALUE)

B-1

START MEASURED CONCENTRATIONS
(0.1 PCU/M₃)

REC- ORD	YEAR-YR MONTH-MO	HOUR-HR DAY-DY	YRMDYHR (GMT)	FAY	TAR	NOR	SAL	MUR	* * * * FAY***	* * * * TAR***	* * * * NOR***	* * * * SAL***	* * * * MUR***	* * * * * *
**#*				*	*	*	*	*	1 9	2 0	2 1	2 0	2 1	2 0
61	820433102	185	0	186	192-	186-	189C	189C	0	0	0	1	1	2
62	82033114	183	0	186	186+	186+	187C	188C	0	0	0	1	1	0
63	82040114	184	0	186	186-	186-	187C	188C	0	0	0	1	1	3
64	82040202	186	0	185	186-	186-	187C	188C	0	0	0	1	1	-
65	82040214	186	0	187	191+	191+	187C	188C	0	0	0	1	1	-
66	82040302	187	0	185	189+	189+	188C	189E	0	0	0	1	1	-
67	82040314	188	0	185	189-	189-	188C	189E	0	0	0	1	1	-
68	82040402	188	0	187	191+	191+	189C	189C	0	0	0	1	1	-
69	82040404	189	0	187	191-	191-	189C	189C	0	0	0	1	1	-
70	82040405	189	0	187	191-	191-	189C	189C	0	0	0	1	1	-
71	82040502	189	0	187	191-	191-	189C	189C	0	0	0	1	1	-
72	82040602	189	0	187	191-	191-	189C	189C	0	0	0	1	1	-
73	82040614	192	0	193	192-	192-	190C	190C	0	0	0	0	0	+0
74	82040702	193	0	193	193+	193+	190C	190C	0	0	0	0	0	-0
75	82040714	193	0	193	193+	193+	190C	190C	0	0	0	0	0	+0
76	82040802	194	0	193	194-	194-	190C	190C	0	0	0	0	0	-0
77	82040814	189	0	193	194-	194-	190C	190C	0	0	0	0	0	-0
78	82040902	191	0	191	190-	190-	190C	190C	0	0	0	0	0	-0
79	82040914	191	0	191	190-	190-	190C	190C	0	0	0	0	0	-0
80	82041002	191	0	191	190-	190-	190C	190C	0	0	0	0	0	-0
81	82041014	192	0	192	190-	190-	190C	190C	0	0	0	0	0	-0
82	82041102	193	0	193	189-	189-	190C	190C	0	0	0	0	0	-0
83	82041114	193	0	193	189-	189-	190C	190C	0	0	0	0	0	-0
84	82041124	188	0	188	189+	189+	190C	190C	0	0	0	0	0	-0
85	82041202	186	0	186	189-	189-	190C	190C	0	0	0	0	0	-0
86	82041214	190	0	190	190-	190-	190C	190C	0	0	0	0	0	-0
87	82041302	190	0	190	190-	190-	190C	190C	0	0	0	0	0	-0
88	82041314	200	0	200	201+	201+	200C	200C	0	0	0	0	0	-0
89	82041402	186	0	193	188D	191-	190C	190C	0	0	0	0	0	-0
90	82041414	183	0	183	186	186	189C	189C	0	0	0	0	0	-0
91	82041514	185	0	187	190D	189-	191+	191+	0	0	0	0	0	-0
92	82041602	188	0	188	189-	189-	190C	190C	0	0	0	0	0	-0
93	82041602	182	0	182	190D	190-	190C	190C	0	0	0	0	0	-0
94	82041614	190	0	184D	185+	185+	184C	184C	0	0	0	0	0	-0
95	82041702	199	0	198	188	188	182C	182C	0	0	0	0	0	-0
96	82041714	173	0	173	177B	176-	183+	183+	0	0	0	0	0	-0
97	82041802	176	0	176	178B	184B	188-	183-	0	0	0	0	0	-0
98	82041814	187	0	188	190-	190-	190C	190C	0	0	0	0	0	-0
99	82041902	189	0	190	190-	190-	188C	188C	0	0	0	0	0	-0
100	82041914	189	0	189	188-	188-	189C	189C	0	0	0	0	0	-0
101	82042002	189	0	189	189-	189-	189C	189C	0	0	0	0	0	-0
102	82042014	184	0	184	184-	184-	182C	182C	0	0	0	0	0	-0
103	82042102	200	0	186	186-	186-	189C	189C	0	0	0	0	0	-0
104	82042114	184	0	184	190-	190-	190C	190C	0	0	0	0	0	-0
105	82042202	188	0	190	190-	190-	190C	190C	0	0	0	0	0	-0
106	82042214	196	0	196	196-	196-	191D	191D	0	0	0	0	0	-0
107	82042302	196	0	196	196-	196-	191D	191D	0	0	0	0	0	-0
108	82042314	190	0	190	190-	190-	191D	191D	0	0	0	0	0	-0
109	82042402	190	0	190	190-	190-	191D	191D	0	0	0	0	0	-0
110	82042414	190	0	190	190-	190-	191D	191D	0	0	0	0	0	-0
111	82042513	187	0	187	189-	189-	186E	186E	0	0	0	0	0	-0
112	82042513	187	0	187	188-	188-	186D	186D	0	0	0	0	0	-0
113	82042601	185	0	185	184-	184-	184	184	0	0	0	0	0	-0
114	82042613	177	A	178	178-	178-	183	183	0	0	0	0	0	-0
115	82042701	186	0	186	187-	187-	182+	182+	0	0	0	0	0	-0
116	82042713	186	0	198	198-	198-	182+	182+	0	0	0	0	0	-0
117	82042801	191	0	191	195	195	194+	194+	0	0	0	0	0	-0
118	82042813	197	0	197	196-	196-	194-	194-	0	0	0	0	0	-0
119	82042901	191	0	191	195	195	194+	194+	0	0	0	0	0	-0
120	82042913	191	0	191	195	195	194+	194+	0	0	0	0	0	-0

⁺ = VALUE CONTINUED, ⁻ = CONTINUATION
^A = 1 HOUR LATE, ^B = 2 HOURS LATE ETC.
(LATE START BEFORE VALUE, LATE END AFTER VALUE)

MEASURED CONCENTRATIONS
(θ .1 pCi/M₃)

START MONTH-MO	YEAR-YR	HOUR-HR	REC- ORD	YRMDYHR (GMT)	FAY	TAR	NOR	MUR	SAL	NOR	FAY	TAR	NOR	MUR	SAL	NOR	FAY	TAR	NOR	MUR	SAL	NOR	FAY	TAR	NOR	MUR	SAL
#	*	*	121	82043001	194	197	0	197	0	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2
			122	82043013	193	195	0	196	193+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			123	8205010193	192	194	0	195	193+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			124	82050201	193	194	0	194	193+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			125	82050213	192	194	0	195	193-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			126	82050301	1371	199	0	191	192+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			127	82050313	2002	192	0	192	193-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			128	82050313	2003	0	0	0	193	194+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			129	82050401	1888	213	0	193	193-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			130	82050413	199	191	0	192	193+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			131	82050501	190	209	0	190	191	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			132	82050501	190	209	0	190	191	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			133	82050501	190	209	0	190	191	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			134	82050613	2007	199	0	199	199	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			135	82050613	2009	209	0	205	208	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			136	82050613	2009	205	0	305	305	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			137	82050801	199	222	0	222	222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			138	82050901	199	188	0	199	199	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			139	82050901	199	188	0	199	199	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			140	82051001	199	189	0	190	190	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			141	82051013	192	192	0	192	192	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			142	82051013	192	192	0	192	192	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			143	82051101	192	192	0	192	192	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			144	82051101	192	192	0	192	192	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			145	82051201	193	193	0	193	193	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			146	82051201	193	193	0	193	193	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			147	82051301	193	193	0	193	193	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			148	82051401	193	193	0	193	193	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			149	82051401	193	193	0	193	193	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			150	82051501	194	194	0	194	194	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			151	82051501	194	194	0	194	194	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			152	82051601	195	195	0	195	195	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			153	82051601	195	195	0	195	195	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			154	82051613	196	196	0	196	196	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			155	82051713	196	196	0	196	196	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			156	82051713	196	196	0	196	196	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			157	82051801	197	197	0	197	197	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			158	82051813	197	197	0	197	197	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			159	82051901	197	197	0	197	197	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			160	82051913	197	197	0	197	197	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			161	82051913	197	197	0	197	197	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			162	82052001	198	198	0	198	198	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			163	82052010	198	198	0	198	198	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			164	82052010	198	198	0	198	198	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			165	82052201	198	198	0	198	198	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			166	82052201	198	198	0	198	198	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			167	82052301	198	198	0	198	198	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			168	82052401	198	198	0	198	198	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			169	82052413	198	198	0	198	198	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			170	82052501	198	198	0	198	198	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			171	82052501	198	198	0	198	198	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			172	82052501	198	198	0	198	198	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			173	82052601	198	198	0	198	198	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			174	82052601	198	198	0	198	198	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			175	82052701	198	198	0	198	198	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			176	82052701	198	198	0	198	198	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			177	82052801	198	198	0	198	198	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			178	82052801	198	198	0	198	198	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			179	82052901</																							

REC- ORD	YEAR-YR MONTH-MO DAY-DY	HOUR-HR	GMDH	MEASURED CONCENTRATIONS (0.1 PCI/M ₃)											
				Y	M	D	H	TAR	FAY	NOR	SAL	M*	SAL*	M*	
1881	8204530001	*	196	233	0	180									
1882	82053013	*	171	174	0	183									
1883	820553101	*	173	173	0	177									
1884	820553113	*	241	197	0	174									
1885	820601101	*	173	174	0	178									
1886	820601113	*	172	174	0	175									
1887	820602013	*	175	183	0	188									
1888	820603013	*	175	185	0	188									
1889	820604013	*	179	184	0	188									
1890	820605013	*	176	176	0	187									
1891	820606013	*	178	176	0	187									
1892	820606013	*	178	186	0	188									
1893	820606013	*	178	187	0	189									
1894	820606013	*	179	185	0	189									
1895	820606013	*	179	187	0	189									
1896	820606013	*	179	187	0	189									
1897	820606013	*	179	188	0	189									
1898	820606013	*	179	188	0	189									
1899	820606013	*	179	188	0	189									
1900	820606013	*	179	188	0	189									
1901	820606013	*	179	188	0	189									
1902	820606013	*	179	188	0	189									
1903	820606013	*	179	188	0	189									
1904	820606013	*	179	188	0	189									
1905	820606013	*	179	188	0	189									
1906	820606013	*	179	188	0	189									
1907	820606013	*	179	188	0	189									
1908	820606013	*	179	188	0	189									
1909	820606013	*	179	188	0	189									
1910	820606013	*	179	188	0	189									
1911	820606013	*	179	188	0	189									
1912	820606013	*	179	188	0	189									
1913	820606013	*	179	188	0	189									
1914	820606013	*	179	188	0	189									
1915	820606013	*	179	188	0	189									
1916	820606013	*	179	188	0	189									
1917	820606013	*	179	188	0	189									
1918	820606013	*	179	188	0	189									
1919	820606013	*	179	188	0	189									
1920	820606013	*	179	188	0	189									
1921	820606013	*	179	188	0	189									
1922	820606013	*	179	188	0	189									
1923	820606013	*	179	188	0	189									
1924	820606013	*	179	188	0	189									
1925	820606013	*	179	188	0	189									
1926	820606013	*	179	188	0	189									
1927	820606013	*	179	188	0	189									
1928	820606013	*	179	188	0	189									
1929	820606013	*	179	188	0	189									
1930	820606013	*	179	188	0	189									
1931	820606013	*	179	188	0	189									
1932	820606013	*	179	188	0	189									
1933	820606013	*	179	188	0	189									
1934	820606013	*	179	188	0	189									
1935	820606013	*	179	188	0	189									
1936	820606013	*	179	188	0	189									
1937	820606013	*	179	188	0	189									
1938	820606013	*	179	188	0	189									
1939	820606013	*	179	188	0	189									
1940	820606013	*	179	188	0	189									
1941	820606013	*	179	188	0	189									
1942	820606013	*	179	188	0	189									
1943	820606013	*	179	188	0	189									
1944	820606013	*	179	188	0	189									
1945	820606013	*	179	188	0	189									
1946	820606013	*	179	188	0	189									
1947	820606013	*	179	188	0	189									
1948	820606013	*	179	188	0	189									
1949	820606013	*	179	188	0	189									
1950	820606013	*	179	188	0	189									
1951	820606013	*	179	188	0	189									
1952	820606013	*	179	188	0	189									
1953	820606013	*	179	188	0	189									
1954	820606013	*	179	188	0	189									
1955	820606013	*	179	188	0	189									
1956	820606013	*	179	188	0	189									
1957	820606013	*	179	188	0	189									
1958	820606013	*	179	188	0	189									
1959	820606013	*	179	188	0	189									
1960	820606013	*	179	188	0	189									
1961	820606013	*	179	188	0	189									
1962	820606013	*	179	188	0	189									
1963	820606013	*	179	188	0	189									
1964	820606013	*	179	188	0	189									
1965	820606013	*	179	188	0	189									
1966	820606013	*	179	188	0	189									
1967	820606013	*	179	188	0	189									
1968	820606013	*	179	188	0	189									
1969	820606013	*	179	188	0	189									
1970	820606013	*	179	188	0	189									
1971	820606013	*	179	188	0	189									
1972	820606013	*	179	188	0	189									
1973	820606013	*	179	188	0	189									
1974	820606013	*	179	188	0	189									
1975	820606013	*	179	188	0	189									
1976	820606013	*	179	188	0	189									
1977	820606013	*	179	188	0	189									
1978	820606013	*	179	188	0	189									
1979	820606013	*	179	188	0	189									
1980	820606013	*	179	188	0	189									
1981	820606013	*	179	188	0	189									
1982	820606013	*	179	188	0	189									
1983	820606013	*	179	188	0	189									
1984	820606013	*	179	188	0	189									
1985	820606013	*	179	188	0	189									
1986	820606013	*	179	188	0	189									
1987	820606013	*	179	188	0	189									
1988	820606013	*	179	188	0	189									
1989	820606013	*	179	188	0	189									
1990	820606013	*	179	188	0	189									
1991	820606013	*	179	188	0	189									
1992	820606013	*	179	188	0	189									
1993	820606013	*	179	188	0	189									
1994	820606013	*	179	188	0	189									
1995	820606013	*	179	188	0	189									
1996	820606013	*	179	188	0	189									
1997	820606013	*	179	188	0	189									
1998	820606013	*	179	188	0	189									
1999	820606013	*	179	188	0	189									
2000	820606013	*	179	188	0	189									
2001	820606013	*	179	18											

HISTOGRAM

FAY	NOR
0.80	0
0.81	0
0.82	0
0.83	0
0.84	0
0.85	0
0.86	0
0.87	0
0.88	0
0.89	0
0.90	0
0.91	1
0.92	2
0.93	2
0.94	2
0.95	2
0.96	2
0.97	2
0.98	2
0.99	2
1.00	2
1.01	2
1.02	2
1.03	2
1.04	2
1.05	2
1.06	2
1.07	2
1.08	2
1.09	2
1.10	2
1.11	2
1.12	2
1.13	2
1.14	2
1.15	2
1.16	2
1.17	2
1.18	2
1.19	2
1.20	2
1.21	2
1.22	2
1.23	2
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1.27	2
1.28	2
1.29	2
1.30	2
1.31	2
1.32	2
1.33	2
1.34	2
1.35	2
1.36	2
1.37	2
1.38	2
1.39	2
1.40	2
1.41	2
1.42	2
1.43	2
1.44	2
1.45	2
1.46	2
1.47	2
1.48	2
1.49	2
1.50	2
1.51	2
1.52	2
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1.56	2
1.57	2
1.58	2
1.59	2
1.60	2
1.61	2
1.62	2
1.63	2
1.64	2
1.65	2
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1.67	2
1.68	2
1.69	2
1.70	2
1.71	2
1.72	2
1.73	2
1.74	2
1.75	2
1.76	2
1.77	2
1.78	2
1.79	2
1.80	2
1.81	2
1.82	2
1.83	2
1.84	2
1.85	2
1.86	2

+ = VALUE CONTINUED, **-** = CONTINUATION
A = 1 HOUR LATE, **B** = 2 HOURS LATE ETC
(LATE START BEFORE VALUE), **LATE END AFTER VALUE**)

START MEASURED CONCENTRATIONS
YEAR-MO
MONTH-YR
DAY-DY

REC#	ORD	YR	MONTH	DAY	HR	MIN	SEC	(GMT)	FAY	TAR	NOR	SAL	MUR	FAY	TAR	NOR	SAL	MUR	FAY	TAR	NOR	SAL	MUR		
241	82062901	0	175	A	178	185	-	175	174	0	179+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
242	82062913	273	175	175	0	175	-	175	175	0	186-	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
243	82063001	175	175	175	0	175	-	175	175	0	187+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
244	82063013	175	175	175	0	175	-	175	175	0	187+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
245	82070101	0	182	183	0	182	-	182	183	0	187+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
246	82070113	0	190	189	A	190	0	190	190	+	190+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
247	82070201	188	188	189	A	189	0	188	189	0	189+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
248	82070213	190	189	189	A	191	0	189	189	0	190+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
249	82070301	188	189	189	A	189	0	188	189	0	189+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
250	82070313	201	188	188	A	186	0	186	186	0	190+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
251	82070401	172	172	181	A	186	0	172	181	0	191+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
252	82070413	179	186	186	A	187	0	179	186	0	191+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
253	82070501	182	182	190	A	190	0	182	190	0	192+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
254	82070513	182	182	190	A	191	A	189	189	0	192+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
255	82070601	180	180	180	A	190	0	180	180	0	192+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
256	82070613	193	186	186	A	188	0	193	186	0	192+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
257	82070701	183	187	187	A	186	A	186	187	0	187+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
258	82070713	0	190	184	A	183	0	190	184	0	187+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
259	82070801	0	185	185	A	185	A	185	185	0	179+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
260	82070813	0	174	174	A	180	0	174	174	0	179+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
261	82070901	0	174	174	A	184	0	174	174	0	179+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
262	82070913	771	198	180	A	178	0	171	178	0	187+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
263	82071001	669	310	310	A	178	0	669	310	0	179+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
264	82071013	269	181	183	A	183	+	269	181	0	186+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
265	82071101	231	266	266	A	183	-	231	183	-	186+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
266	82071113	267	820	971201	999	962	0	266	1438A	0	186-	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
267	82071101	352	980	980	A	186	0	352	980	0	177	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
268	82071301	223	269	269	A	183	0	223	269	0	186+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
269	82071401	0	176	176	A	183	A	0	176	0	186+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
270	82071413	0	177	177	A	177	A	0	177	0	186+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
271	82071501	177	176	176	A	177	A	177	176	0	186+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
272	82071513	177	176	176	A	178	A	177	176	0	186+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
273	82071601	177	176	176	A	178	A	177	176	0	186+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
274	82071613	177	176	176	A	178	A	177	176	0	186+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2	
275	82071613	0	177	178	A	179	A	0	177	178	0	186-	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2
276	82071701	0	178	178	A	179	A	0	178	178	0	185+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2
277	82071701	0	178	178	A	179	A	0	178	178	0	185+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2
278	82071701	0	178	178	A	179	A	0	178	178	0	185+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2
279	82071701	0	178	178	B	179	B	0	178	179	0	185+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2
280	82071801	0	176	175	B	175	B	0	176	175	0	185+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2
281	82071901	0	175	174	B	174	B	0	175	174	0	185+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2
282	82072001	0	174	174	B	174	B	0	174	174	0	185+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2
283	82072001	0	174	174	B	174	B	0	174	174	0	185+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2
284	82072101	0	174	174	B	174	B	0	174	174	0	185+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2
285	82072101	0	174	174	B	174	B	0	174	174	0	185+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2
286	82072101	0	174	174	B	174	B	0	174	174	0	185+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2
287	82072101	0	174	174	B	174	B	0	174	174	0	185+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2
288	82072101	0	174	174	B	174	B	0	174	174	0	185+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2
289	82072301	0	174	174	B	174	B	0	174	174	0	185+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2
290	82072401	0	174	174	B	174	B	0	174	174	0	185+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2
291	82072401	0	174	174	B	174	B	0	174	174	0	185+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2
292	82072401	0	174	174	B	174	B	0	174	174	0	185+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2
293	82072501	0	174	174	B	174	B	0	174	174	0	185+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2
294	82072501	0	174	174	B	174	B	0	174	174	0	185+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2
295	82072601	0	174	174	B	174	B	0	174	174	0	185+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2
296	82072601	0	174	174	B	174	B	0	174	174	0	185+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2
297	82072701	0	174	174	B	174	B	0	174	174	0	185+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2
298	82072701	0	174	174	B	174	B	0	174	174	0	185+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2
299	82072801	0	174	174	B	174	B	0	174	174	0	185+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2
300	82072801	0	174	174	B	174	B	0	174	174	0	185+	<XXXXX	<XXXXX	0	1	2	1	2	1	2	1	2	1	2

HISTOGRAM
(0.1 PCU/M₃)

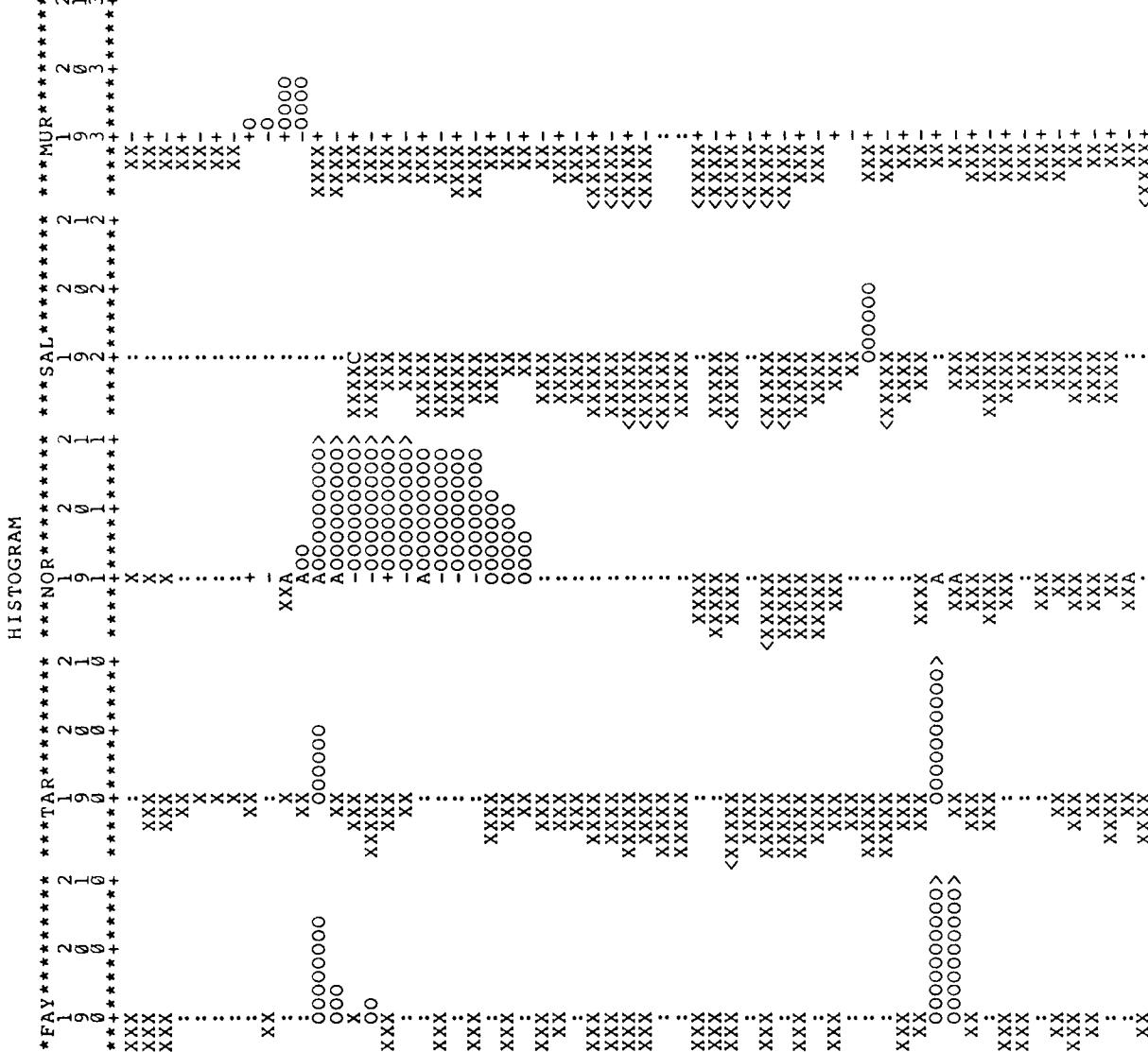
A + = VALUE CONTINUED
A = 1 HOUR LATE
(LATE START BEFORE VALUE)
— = CONTINUATION
— = 2 HOURS LATE
(LATE END AFTER VALUE)

START MEASURED CONCENTRATIONS
(0.1 PCl/M₃)

YEAR-MO	MONTH-MO	DAY-DY	HOUR-HR	REC-ORD	YRMDYHR (GMT)	FAY	TAR	NOR	SAL	MUR
* * *	* * *	* * *	* * *	361	82082801	182	0	190	0	188-
362	82082813	182	186	191	0	189+	XX	XX	XX	XX-
363	82082901	186	188	191	0	189-	XX	XX	XX	XX+
364	82083001	0	188	188	0	188+	XX	XX	XX	XX-
365	82083013	0	189	189	0	189+	XX	XX	XX	XX+
366	82083101	0	189	189	0	189+	XX	XX	XX	XX-
367	82083113	0	188	190+	0	189-	XX	XX	XX	XX+
368	82090101	187	0	190-	0	190-	XX	XX	XX	XX-
369	82090113	0	190	190	0	188-	XX	XX	XX	XX+
370	82090113	0	190	191	0	189+	XX	XX	XX	XX-
371	82090201	203	197	195	0	188-	XX	XX	XX	XX+
372	82090301	194	188	204A	0	184-	XX	XX	XX	XX-
373	82090301	189	185	202+	0	184-	XX	XX	XX	XX+
374	82090401	181	186	202-	0	184-	XX	XX	XX	XX-
375	82090501	184	185	184	0	184-	XX	XX	XX	XX+
376	82090601	186	188	236+	0	188+	XX	XX	XX	XX-
377	82090601	184	188	236-	0	188-	XX	XX	XX	XX+
378	82090701	185	188	208+	0	186+	XX	XX	XX	XX-
379	82090701	189	188	208-	0	186-	XX	XX	XX	XX+
380	82090701	183	183	208-	0	185+	XX	XX	XX	XX-
381	82090701	183	183	203	0	185-	XX	XX	XX	XX+
382	82090801	183	183	203	0	185-	XX	XX	XX	XX-
383	82090801	183	183	196	0	186-	XX	XX	XX	XX+
384	82090801	183	183	196	0	186-	XX	XX	XX	XX-
385	82090901	182	182	208	0	186-	XX	XX	XX	XX+
386	82090901	188	186	208	0	186-	XX	XX	XX	XX-
387	82090901	183	183	208	0	186-	XX	XX	XX	XX+
388	82090901	183	183	208	0	186-	XX	XX	XX	XX-
389	82091001	182	182	196	0	186-	XX	XX	XX	XX+
390	82091001	181	181	196	0	186-	XX	XX	XX	XX-
391	82091001	182	182	196	0	186-	XX	XX	XX	XX+
392	82091201	182	182	196	0	186-	XX	XX	XX	XX-
393	82091301	181	182	182	0	186-	XX	XX	XX	XX+
394	82091301	181	182	182	0	186-	XX	XX	XX	XX-
395	82091401	183	183	182	0	186-	XX	XX	XX	XX+
396	82091501	182	183	182	0	186-	XX	XX	XX	XX-
397	82091501	180	183	182	0	186-	XX	XX	XX	XX+
398	82091601	184	182	181	0	186-	XX	XX	XX	XX-
399	82091601	180	182	182	0	186-	XX	XX	XX	XX+
400	82091701	184	182	183	0	186-	XX	XX	XX	XX-
401	82091701	184	182	183	0	186-	XX	XX	XX	XX+
402	82091801	184	182	183	0	186-	XX	XX	XX	XX-
403	82091801	184	182	183	0	186-	XX	XX	XX	XX+
404	82091901	181	181	182	0	186-	XX	XX	XX	XX-
405	82091901	181	181	182	0	186-	XX	XX	XX	XX+
406	82091913	185	185	185	0	188+	XX	XX	XX	XX-
407	82092001	187	186	186	0	188+	XX	XX	XX	XX+
408	82092101	183	187	186	0	188+	XX	XX	XX	XX-
409	82092113	278	187	186	0	188+	XX	XX	XX	XX+
410	82092201	187	186	185	0	188+	XX	XX	XX	XX-
411	82092201	187	185	185	0	188+	XX	XX	XX	XX+
412	82092213	185	187	185	0	188+	XX	XX	XX	XX-
413	82092301	186	186	187	0	188+	XX	XX	XX	XX+
414	82092313	187	186	187	0	188+	XX	XX	XX	XX-
415	82092401	187	186	189	0	188+	XX	XX	XX	XX+
416	82092413	186	185	187	0	188+	XX	XX	XX	XX-
417	82092501	187	187	187	0	188+	XX	XX	XX	XX+
418	82092513	189	184	188	0	188+	XX	XX	XX	XX-
419	82092601	188	183	187	0	188+	XX	XX	XX	XX+
420	82092613	188	183	187	0	188+	XX	XX	XX	XX-

+ = VALUE CONTINUED,
- = CONTINUATION,
A = 1 HOUR LATE
B = 2 HOURS LATE
(LATE START BEFORE VALUE,
LATE END AFTER VALUE)

HISTOGRAM



START MEASURED CONCENTRATIONS
(0.1 PC1/M3)

REC- ORD #	YEAR-YR MONTH-MO DAY-DY HOUR-HR	YRMDYHR * * * * *	REC- ORD #	YEAR-YR MONTH-MO DAY-DY HOUR-HR	YRMDYHR * * * * *	FAY * * * * *	TAR * * * * *	NOR * * * * *	SAL * * * * *	MUR * * * * *	MUR * * * * *	FAY * * * * *	TAR * * * * *	NOR * * * * *	SAL * * * * *	MUR * * * * *	MUR * * * * *
1	1	1	1	1	1	1	2	2	2	2	2	1	2	2	2	2	2
2	8	8	2	9	2	7	0	0	0	0	0	1	9	0	1	9	0
3	4	4	2	9	2	8	1	1	1	1	1	0	0	0	0	0	0
4	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
5	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
6	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
7	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
8	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
9	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
10	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
11	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
12	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
13	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
14	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
15	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
16	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
17	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
18	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
19	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
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21	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
22	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
23	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
24	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
25	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
26	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
27	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
28	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
29	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
30	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
31	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
32	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
33	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
34	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
35	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
36	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
37	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
38	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
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41	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
42	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
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44	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
45	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
46	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
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51	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
52	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
53	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
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56	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
57	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
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59	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
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62	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
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67	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
68	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
69	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
70	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
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72	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
73	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
74	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
75	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
76	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
77	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
78	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
79	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0
80	4	2	8	2	9	2	1	1	1	1	1	0	0	0	0	0	0

+ = VALUE CONTINUED
A = 1 HOUR LATE
B = 2 HOURS LATE
TC = START BEFORE VALUE, LATE END AFTER VALUE

START MEASURED CONCENTRATIONS
(θ_1 PC1/M3)

REC- ORD	YEAR- MONTH-MO	DAY-HR- MIN-MIN	HR-DY	FAY- MODYHR	TAR- NOR	MUR- SAL	NOR- SAL	FAY- MUR	TAR- NOR	SAL- NOR	HISTOGRAM
* * # *	481	82102701	186	185	185	186	187	187-	187-	187	188+ <----->
	482	82102713	186	185	185	188	188+	188-	188-	188	188+ <----->
	483	82102813	185	185	185	188	188+	188-	188-	188	188+ <----->
	484	82102901	184	185	185	190	190+	190+	190+	190	190+ <----->
	485	82102913	185	188	188	190	190+	190+	190+	190	190+ <----->
	486	82103013	211	188	188	190	188+	188+	188+	188	188+ <----->
	487	82103013	188	188	185	190	188+	188+	188+	188	188+ <----->
	488	82103102	188	187	187	190	206-	206-	206-	206-	206- <----->
	489	82103102	149	151	151	156	251+	251+	251+	251+	251+ <----->
	490	82110102	9	379	251	0	573+	573+	573+	573+	573+ <----->
	491	82110104	9	191	191	0	272+	272+	272+	272+	272+ <----->
	492	82110104	9	189	189	0	220+	220+	220+	220+	220+ <----->
	493	82110204	9	189	182	0	182+	182+	182+	182+	182+ <----->
	494	82110204	9	189	183	0	183+	183+	183+	183+	183+ <----->
	495	82110302	9	191	182	0	182+	182+	182+	182+	182+ <----->
	496	82110314	9	181	181	0	181+	181+	181+	181+	181+ <----->
	497	82110402	9	189	189	0	189+	189+	189+	189+	189+ <----->
	498	82110502	9	179	179	0	179+	179+	179+	179+	179+ <----->
	499	82110514	9	189	189	0	189+	189+	189+	189+	189+ <----->
	500	82110602	189	191	191	0	191+	191+	191+	191+	191+ <----->
	501	82110614	199	191	191	0	191+	191+	191+	191+	191+ <----->
	502	82110702	189	190	190	0	190+	190+	190+	190+	190+ <----->
	503	82110714	189	190	190	0	190+	190+	190+	190+	190+ <----->
	504	82110802	193	188	188	0	188+	188+	188+	188+	188+ <----->
	505	82110814	190	188	188	0	188+	188+	188+	188+	188+ <----->
	506	82110824	190	189	189	0	189+	189+	189+	189+	189+ <----->
	507	82110902	190	186	186	0	186+	186+	186+	186+	186+ <----->
	508	82110914	190	186	186	0	186+	186+	186+	186+	186+ <----->
	509	82110924	190	189	189	0	189+	189+	189+	189+	189+ <----->
	510	82110934	190	189	189	0	189+	189+	189+	189+	189+ <----->
	511	82111002	190	189	189	0	189+	189+	189+	189+	189+ <----->
	512	82111014	190	189	189	0	189+	189+	189+	189+	189+ <----->
	513	82111024	190	185	185	0	185+	185+	185+	185+	185+ <----->
	514	82111034	190	189	189	0	189+	189+	189+	189+	189+ <----->
	515	82111102	190	189	189	0	189+	189+	189+	189+	189+ <----->
	516	82111114	190	189	189	0	189+	189+	189+	189+	189+ <----->
	517	82111149	190	193	193	0	193+	193+	193+	193+	193+ <----->
	518	82111151	191	192	192	0	192+	192+	192+	192+	192+ <----->
	519	82111162	191	192	192	0	192+	192+	192+	192+	192+ <----->
	520	82111169	191	191	191	0	191+	191+	191+	191+	191+ <----->
	521	82111170	191	188	188	0	188+	188+	188+	188+	188+ <----->
	522	82111174	191	188	188	0	188+	188+	188+	188+	188+ <----->
	523	82111174	191	188	188	0	188+	188+	188+	188+	188+ <----->
	524	82111174	191	189	189	0	189+	189+	189+	189+	189+ <----->
	525	82111174	191	189	189	0	189+	189+	189+	189+	189+ <----->
	526	82111174	191	186	186	0	186+	186+	186+	186+	186+ <----->
	527	82111174	191	188	188	0	188+	188+	188+	188+	188+ <----->
	528	82111194	191	188	188	0	188+	188+	188+	188+	188+ <----->
	529	82111194	191	188	188	0	188+	188+	188+	188+	188+ <----->
	530	82111204	191	187	187	0	187+	187+	187+	187+	187+ <----->
	531	82111214	191	188	188	0	188+	188+	188+	188+	188+ <----->
	532	82111214	191	188	188	0	188+	188+	188+	188+	188+ <----->
	533	82111220	191	185	185	0	185+	185+	185+	185+	185+ <----->
	534	82111224	191	188	188	0	188+	188+	188+	188+	188+ <----->
	535	82111230	191	187	187	0	187+	187+	187+	187+	187+ <----->
	536	82111231	191	182	182	0	182+	182+	182+	182+	182+ <----->
	537	82111240	191	184	184	0	184+	184+	184+	184+	184+ <----->
	538	82111241	191	183	183	0	183+	183+	183+	183+	183+ <----->
	539	82111250	191	189	189	0	189+	189+	189+	189+	189+ <----->
	540	82111251	191	191	191	0	191+	191+	191+	191+	191+ <----->

+ = VALUE CONTINUED,
A = 1 HOUR LATE
B = 2 HOURS LATE ETC.
(LATE START BEFORE VALUE, LATE END AFTER VALUE)

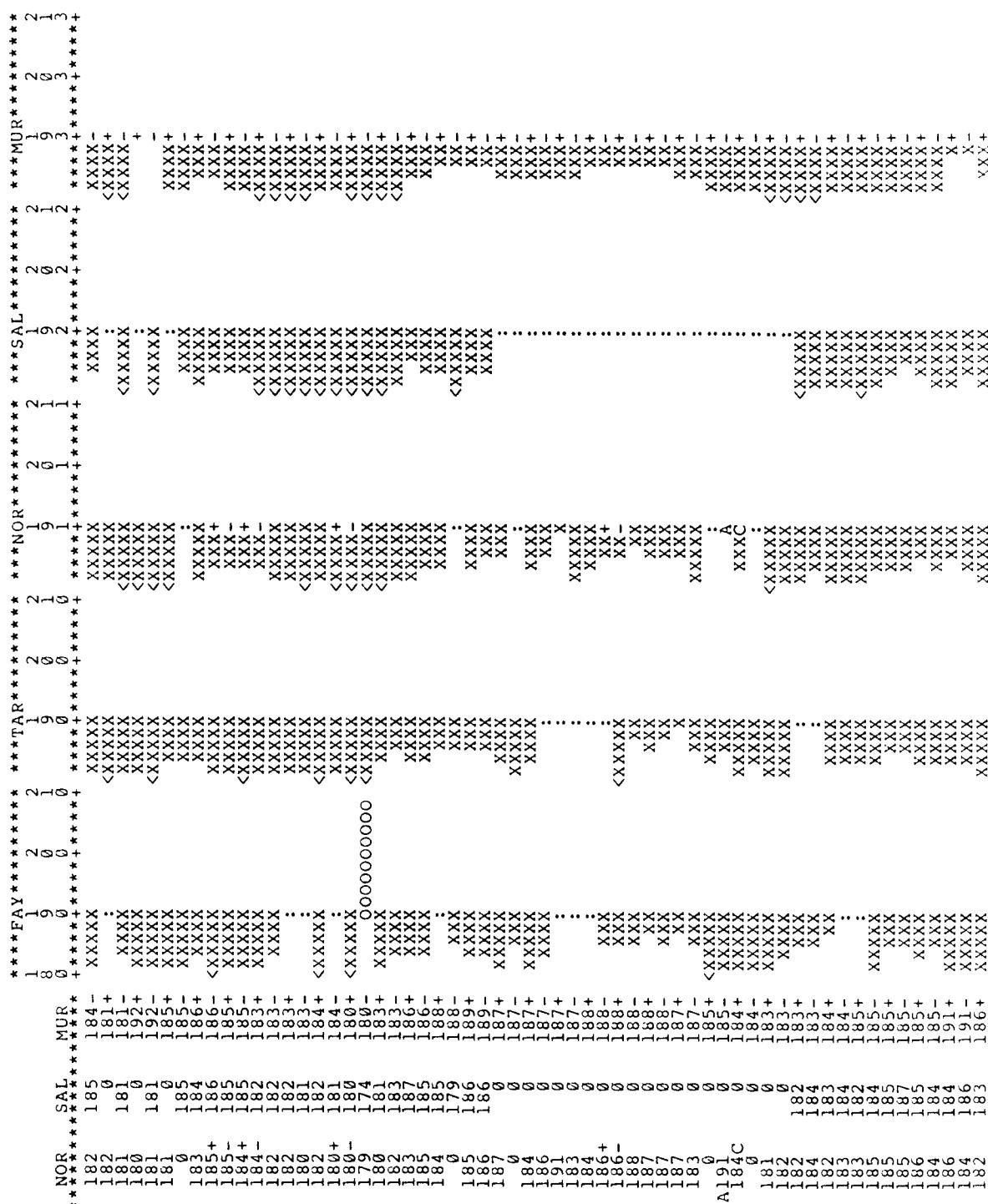
START MEASURED CONCENTRATIONS
(μ .1 PC/M₃)

REC- ORD	YEAR-YR MONTH-MO MONTH-DY	HOUR-HR HOUR-MIN HOUR-SEC	REC- ORD (GMT)	FAY	TAR	NOR	SAL	MUR	MUR*	FAY*	TAR*	NOR*	SAL*	MUR*	MUR*	FAY**	TAR**	NOR**	SAL**	MUR**	MUR**
* # *	601	82122602	0	179	179	183	184	184	184	188	188	188	188	188	188	188	188	188	188	188	188
602	82122614	0	178	178	178	182	183	183	183	188	188	188	188	188	188	188	188	188	188	188	188
603	82122702	0	175	175	175	179	183	183	183	188	188	188	188	188	188	188	188	188	188	188	188
604	82122714	0	178	177	177	179	183	183	183	188	188	188	188	188	188	188	188	188	188	188	188
605	82122802	0	178	178	178	179	183	183	183	188	188	188	188	188	188	188	188	188	188	188	188
606	82122814	0	178	176	176	179	182	182	182	188	188	188	188	188	188	188	188	188	188	188	188
607	82122902	0	178	184	184	179	183	183	183	188	188	188	188	188	188	188	188	188	188	188	188
608	82122914	0	184	184	184	179	179	179	179	185	185	185	185	185	185	185	185	185	185	185	185
609	82123002	0	182	182	182	184	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188
610	82123014	0	184	184	184	185	185	185	185	188	188	188	188	188	188	188	188	188	188	188	188
611	82123102	0	185	185	185	187	187	187	187	188	188	188	188	188	188	188	188	188	188	188	188
612	82123114	0	186	186	186	187	187	187	187	188	188	188	188	188	188	188	188	188	188	188	188
613	83010102	0	185	185	185	185	185	185	185	188	188	188	188	188	188	188	188	188	188	188	188
614	83010114	0	185	185	185	184	184	184	184	188	188	188	188	188	188	188	188	188	188	188	188
615	83010202	0	185	185	185	185	185	185	185	188	188	188	188	188	188	188	188	188	188	188	188
616	83010214	0	185	185	185	183	183	183	183	188	188	188	188	188	188	188	188	188	188	188	188
617	83010302	0	182	182	182	185	185	185	185	188	188	188	188	188	188	188	188	188	188	188	188
618	83010314	0	183	183	183	185	185	185	185	188	188	188	188	188	188	188	188	188	188	188	188
619	83010402	0	185	185	185	184	184	184	184	188	188	188	188	188	188	188	188	188	188	188	188
620	83010414	0	185	185	185	187	187	187	187	188	188	188	188	188	188	188	188	188	188	188	188
621	83010502	0	187	187	187	187	187	187	187	188	188	188	188	188	188	188	188	188	188	188	188
622	83010514	0	186	186	186	186	186	186	186	188	188	188	188	188	188	188	188	188	188	188	188
623	83010614	0	185	185	185	185	185	185	185	188	188	188	188	188	188	188	188	188	188	188	188
624	83010702	0	183	183	183	183	183	183	183	188	188	188	188	188	188	188	188	188	188	188	188
625	83010714	0	186	186	186	186	186	186	186	188	188	188	188	188	188	188	188	188	188	188	188
626	83010802	0	186	186	186	186	186	186	186	188	188	188	188	188	188	188	188	188	188	188	188
627	83010814	0	186	186	186	186	186	186	186	188	188	188	188	188	188	188	188	188	188	188	188
628	83010824	0	189	189	189	189	189	189	189	188	188	188	188	188	188	188	188	188	188	188	188
629	83010902	0	236	236	236	236	236	236	236	185	185	185	185	185	185	185	185	185	185	185	185
630	83010914	0	185	185	185	185	185	185	185	188	188	188	188	188	188	188	188	188	188	188	188
631	83011002	0	185	185	185	185	185	185	185	188	188	188	188	188	188	188	188	188	188	188	188
632	83011014	0	185	185	185	185	185	185	185	188	188	188	188	188	188	188	188	188	188	188	188
633	83011102	0	192	192	192	192	192	192	192	189	189	189	189	189	189	189	189	189	189	189	189
634	83011114	0	184	184	184	184	184	184	184	185	185	185	185	185	185	185	185	185	185	185	185
635	83011202	0	184	184	184	184	184	184	184	185	185	185	185	185	185	185	185	185	185	185	185
636	83011214	0	184	184	184	184	184	184	184	185	185	185	185	185	185	185	185	185	185	185	185
637	83011302	0	186	186	186	186	186	186	186	187	187	187	187	187	187	187	187	187	187	187	187
638	83011314	0	184	184	184	184	184	184	184	185	185	185	185	185	185	185	185	185	185	185	185
639	83011402	0	187	187	187	187	187	187	187	188	188	188	188	188	188	188	188	188	188	188	188
640	83011414	0	184	184	184	184	184	184	184	185	185	185	185	185	185	185	185	185	185	185	185
641	83011502	0	187	187	187	187	187	187	187	188	188	188	188	188	188	188	188	188	188	188	188
642	83011514	0	191	191	191	191	191	191	191	188	188	188	188	188	188	188	188	188	188	188	188
643	83011602	0	186	186	186	186	186	186	186	188	188	188	188	188	188	188	188	188	188	188	188
644	83011614	0	185	185	185	185	185	185	185	188	188	188	188	188	188	188	188	188	188	188	188
645	83011702	0	185	185	185	185	185	185	185	188	188	188	188	188	188	188	188	188	188	188	188
646	83011714	0	185	185	185	185	185	185	185	188	188	188	188	188	188	188	188	188	188	188	188
647	83011802	0	184	184	184	184	184	184	184	185	185	185	185	185	185	185	185	185	185	185	185
648	83011814	0	185	185	185	185	185	185	185	188	188	188	188	188	188	188	188	188	188	188	188
649	83011902	0	182	182	182	182	182	182	182	183	183	183	183	183	183	183	183	183	183	183	183
650	83011914	0	184	184	184	184	184	184	184	185	185	185	185	185	185	185	185	185	185	185	185
651	83012002	0	184	184	184	184	184	184	184	185	185	185	185	185	185	185	185	185	185	185	185
652	83012014	0	187	187	187	187	187	187	187	188	188	188	188	188	188	188	188	188	188	188	188
653	83012102	0	181	181	181	181	181	181	181	182	182	182	182	182	182	182	182	182	182	182	182
654	83012114	0	181	181	181	181	181	181	181	182	182	182	182	182	182	182	182	182	182	182	182
655	83012202	0	186	186	186	186	186	186	186	187	187	187	187	187	187	187	187	187	187	187	187
656	83012214	0	183	183	183	183	183	183	183	184	184	184	184	184	184	184	184	184	184	184	184
657	83012302	0	182	182	182	182	182	182	182	183	183	183	183	183	183	183	183	183	183	183	183
658	83012314	0	184	184	184	184	184	184	184	185	185	185	185	185	185	185	185	185	185	185	185
659	83012402	0	184	184	184	184	184	184	184	185	185	185	185	185	185	185	185	185	185	185	185
660	83012414	0	184	184	184	184	184	184	184	185	185	185	185	185	185	185	185	185	185	185	185

+ = VALUE CONTINUED
 A = 1 HOUR LATE
 B = 1 HOUR LATE ETC.
 (LATE START BEFORE VALUE

START YEAR-YR MONTHS MEASURED CONCENTRATIONS (θ .1 PCI/M₃)

HISTOGRAM



*** = VALUE CONTINUED**, **- = CONTINUATION**
(A LATE HOUR LATE B LATE C) **= VALUE** **AFTER VALUE**

MEASURED CONCENTRATIONS (0.1 PCI/M₃)

URED CONCENTRATIONS
(0.1 PCI/M₃)

HISTOGRAM

$\text{+} = \text{VALUE CONTINUED}$, $\text{-} = \text{CONTINUATION}$
 $\text{A} = \text{1 HOUR LATE}$, $\text{B} = \text{2 HOURS LATE}$
 $\text{E} = \text{LATE START BEFORE VALUE}$, $\text{F} = \text{LATE END AFTER VALUE}$

MEASURED CONCENTRATIONS (θ .1 PCI/M₃)

MEASURED CONCENTRATIONS ($\theta : 1 \text{ PCI}/\text{m}^3$)

HISTOGRAM

+ = VALUE CONTINUED **- = CONTINUATION**
A = 1 HOUR LATE **B = 2 HOURS LATE** **ETC.**
(LATE START BEFORE VALUE, LATE END AFTER VALUE)

\dagger = VALUE CONTINUED, \ddagger = CONTINUATION
 \wedge = 1 HOUR LATE, \vee = 2 HOURS LATE
 $\wedge\wedge$ = START BEFORE VALVE, $\vee\vee$ = END AFTER VALVE

MEASURED CONCENTRATIONS (θ .1 PCI/m³)

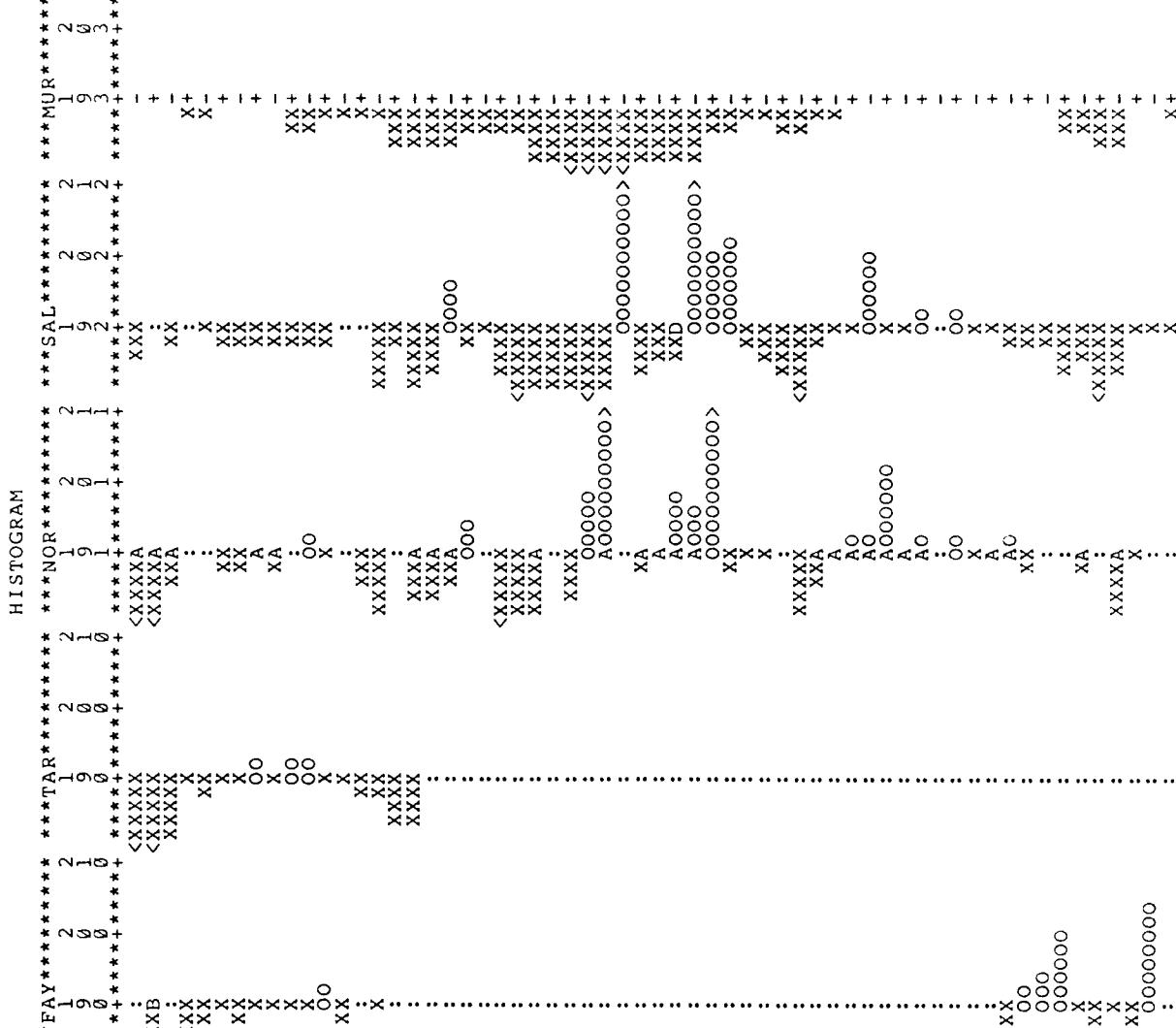
MEASURED CONCENTRATIONS (0.1 PCI/M₃)

⁺ = VALUE CONTINUED, ⁻ = CONTINUATION ETC.
^A = 1 HOUR LATE
^B = 2 HOURS LATE ETC.
^(LATE START BEFORE VALUE) LATE END AFTER VALUE)

MEASURED CONCENTRATIONS
(0.1 PCI/M^3)

START YEAR-YR MONTH-MO DAY-DY	HOUR-HR (GMT)	R ORD	Y RMDYHR	FAY	TAR	NOR	SAL	MUR
* * # *	10221	83072401	0	180	180A	188		
* * # *	10222	83072413	B180	179	A180A	189		
* * # *	10223	83072501	0	181	186A	189	193+	
* * # *	10224	83072513	184	187	0	190+	190+	
* * # *	10225	83072601	188	189	190	190-	192+	
* * # *	10226	83072613	189	190	190	190-	192+	
* * # *	10227	83072701	190	191	190	190+	192+	
* * # *	10228	83072713	190	191	190	190-	192+	
* * # *	10229	83072801	190	191	190	190-	192+	
* * # *	10230	83072813	189	190	190	190-	192+	
* * # *	10231	83072901	190	191	190	190-	192+	
* * # *	10232	83072913	188	189	190	190-	192+	
* * # *	10233	83073001	188	189	190	190-	192+	
* * # *	10234	83073013	190	187	187	190-	192+	
* * # *	10235	83073101	190	183	183	190-	192+	
* * # *	10236	83073113	190	184	184	189	192+	
* * # *	10237	83080101	183	185	184	189	192+	
* * # *	10238	83080113	0	0	0	0	0	
* * # *	10239	83080201	0	0	0	0	0	
* * # *	10240	83080213	0	0	0	0	0	
* * # *	10241	83080301	0	0	0	0	0	
* * # *	10242	83080313	0	0	0	0	0	
* * # *	10243	83080401	0	0	0	0	0	
* * # *	10244	83080413	0	0	0	0	0	
* * # *	10245	83080501	0	0	0	0	0	
* * # *	10246	83080513	0	0	0	0	0	
* * # *	10247	83080601	0	0	0	0	0	
* * # *	10248	83080613	0	0	0	0	0	
* * # *	10249	83080701	0	0	0	0	0	
* * # *	10250	83080713	0	0	0	0	0	
* * # *	10251	83080801	0	0	0	0	0	
* * # *	10252	83080813	0	0	0	0	0	
* * # *	10253	83080901	0	0	0	0	0	
* * # *	10254	83080913	0	0	0	0	0	
* * # *	10255	83080925	0	0	0	0	0	
* * # *	10256	83081001	0	0	0	0	0	
* * # *	10257	83081013	0	0	0	0	0	
* * # *	10258	83081101	0	0	0	0	0	
* * # *	10259	83081113	0	0	0	0	0	
* * # *	10260	83081201	0	0	0	0	0	
* * # *	10261	83081213	0	0	0	0	0	
* * # *	10262	83081301	0	0	0	0	0	
* * # *	10263	83081313	0	0	0	0	0	
* * # *	10264	83081401	0	0	0	0	0	
* * # *	10265	83081413	0	0	0	0	0	
* * # *	10266	83081501	0	0	0	0	0	
* * # *	10267	83081513	0	0	0	0	0	
* * # *	10268	83081601	0	0	0	0	0	
* * # *	10269	83081613	0	0	0	0	0	
* * # *	10270	83081701	0	0	0	0	0	
* * # *	10271	83081713	0	0	0	0	0	
* * # *	10272	83081801	0	0	0	0	0	
* * # *	10273	83081813	0	0	0	0	0	
* * # *	10274	83081901	0	0	0	0	0	
* * # *	10275	83081913	0	0	0	0	0	
* * # *	10276	83082001	0	0	0	0	0	
* * # *	10277	83082013	0	0	0	0	0	
* * # *	10278	83082101	0	0	0	0	0	
* * # *	10279	83082113	0	0	0	0	0	
* * # *	10280	83082201	0	0	0	0	0	
* * # *	10281	83082213	0	0	0	0	0	
* * # *	10282	83082223	0	0	0	0	0	

† = VALUE CONTINUED,
 A = 1 HOUR LATE, B = 2 HOURS LATE,
 ETC.
 (LATE START BEFORE VALUE, LATE END AFTER VALUE)



MEASURED CONCENTRATIONS (θ .1 PCI/m³)

M 1300

$\text{A}^{++} = \text{VALUE CONTINUED}$ $\text{B}^- = \text{CONTINUATION}$
 $\text{A}^+ = 1/12 \text{ HOUR LATE}$ $\text{B}^+ = 2 \text{ HOURS LATE}$
 $\text{A}^- = \text{LATE END BEFORE VALUE}$ $\text{B}^- = \text{LATE END AFTER VALUE}$

REC- ORD	YEAR-YR MONTH-MO DAY-DY HOUR-HR	(GMT)	MEASURED CONCENTRATIONS (0.1 PCI/M ₃)			SAL	MIL
			YR/MO/DY	HR	FAY	TAR	NOR
* 1141	830922201	0	0	0	0	0	194
* 1142	830922213	0	0	0	0	0	194
* 1143	830922301	0	0	0	0	0	194
* 1144	830922313	0	0	0	0	0	195
* 1145	830922401	0	0	0	0	0	195
* 1146	830922413	0	0	0	0	0	195
* 1147	830922501	0	0	0	0	0	196
* 1148	830922513	0	0	0	0	0	196
* 1149	830922601	0	0	0	0	0	196
* 1150	830922613	0	0	0	0	0	196
* 1151	830922701	0	0	0	0	0	196
* 1152	830922713	0	0	0	0	0	196
* 1153	830922801	0	0	0	0	0	196
* 1154	830922813	0	0	0	0	0	196
* 1155	830922901	0	0	0	0	0	196
* 1156	830922913	0	0	0	0	0	196
* 1157	830923001	0	0	0	0	0	196
* 1158	830923013	0	0	0	0	0	196

HISTOGRAM

Category	Value Range	Frequency
FAY	1-10	2
	11-20	0
	21-30	2
	31-40	1
	41-50	9
	51-60	0
	61-70	0
	71-80	0
	81-90	0
	91-100	0
	101+	1
TAR	1-10	2
	11-20	2
	21-30	1
	31-40	0
	41-50	1
	51-60	9
	61-70	0
	71-80	0
	81-90	0
	91-100	0
	101+	1
NOR	1-10	2
	11-20	1
	21-30	0
	31-40	1
	41-50	1
	51-60	1
	61-70	1
	71-80	1
	81-90	1
	91-100	1
	101+	1
SAL	1-10	2
	11-20	1
	21-30	2
	31-40	1
	41-50	1
	51-60	1
	61-70	1
	71-80	1
	81-90	1
	91-100	1
	101+	1
MUR	1-10	2
	11-20	1
	21-30	1
	31-40	1
	41-50	1
	51-60	1
	61-70	1
	71-80	1
	81-90	1
	91-100	1
	101+	1
UR	1-10	2
	11-20	1
	21-30	0
	31-40	1
	41-50	0
	51-60	1
	61-70	0
	71-80	1
	81-90	0
	91-100	0
	101+	1

B-20

APPENDIX C

ACURATE DATA TAPE

TAPE REQUESTS (Refer to ACURATE Data Tape)

E.I. DuPont & Co.
Savannah River Laboratory
Bldg. 733A-1011
Aiken, SC 29801
Attn: J.F. Schubert

TAPE CHARACTERISTICS

9 TRACK, 6250 BPI, NO LABEL, EBCDIC
RECORD FORMAT = FB
BLOCK SIZE = 8000

FILE 1; Source Emission

RECORD LENGTH = 80
NUMBER OF RECORDS = 1158

RECORD	[SPACE]	YEAR	MONTH	DAY	HOUR	EMISSION RATES
(#)					(GMT)	(CI/HR)
I4	IX	I2	I2	I2	I2	12I4

FILE 2; Measured Concentrations

RECORD LENGTH = 80
NUMBER OF RECORDS = 1158

RECORD	[SPACE]	YEAR	MONTH	DAY	HOUR	MEASURED CONCENTRATIONS	[MSG DATA]
(#)					(GMT)	(PCI/M ³)	(O)
I4	IX	I2	I2	I2	I2	5(IX,A1,I3,A1)	

FILES 3-21; Savannah River Plant (SRP), Surface (SFC), and Upper Air (UA)
Station Meteorology (1 file per month)

RECORD LENGTH = 40

RECORD FORMAT

DATE/TIME [3-HOUR INTERVALS]	YEAR	MONTH	DAY	HOUR (GMT)	NUMBER OF		NUMBER OF UA RECS
					SRP & SFC RECS		
	I2	I2	I2	I2	I4		I4

SRP	STA	LAT	LON	ELEV	WIND		WIND		[MSG DATA] (-99)
					DIR	SPD (0.1M/S)	HORIZ (0.1DEG)	VERT (0.1DEG)	
	(3-Ltr)	(100°N)	(100°W)	(M)	(DEG)				
	A3	I5	I5	I5	I4	I4	I4	I4	

SFC	STA	LAT	LON	ELEV	PRESS	TEMP (0.1°C)	DEW- POINT		WIND		[MSG DATA] (-99)
							DIR	SPD	DIR	SPD	
	(3-LTR)	(100°N)	(100°W)	(M)	(MB)	(0.1°C)	(0.1°C)	(DEG)	(0.1M/S)		
	A3	I5	I5	I5	I4		I5	I5	I4	I4	

UA ID	STA	LAT	LON	ELEV	NBR OF LVLS				
					(3-LTR)	(100°N)	(100°W)	(M)	I3
	A3	I5	I5	I5					

UA LEVEL	PRESS (MB)	HGT (M)	TEMP (0.1°C)	DEW- POINT		WIND		[MSG DATA] (-99)
				DIR	SPD (0.1M/S)	DIR	SPD	
	I4	I5	I5	I5		I4	I4	

RECORD ORGANIZATION

DATE/TIME1

SRP

SFC 1

SFC 2

:

UA ID 1

UA LEVEL 1

UA LEVEL 2

:

UA ID 2

UA LEVEL 1

UA LEVEL 2

:

DATE/TIME 2

:

March 1985

Changes to:

NOAA Technical Memorandum ERL ARL-130

ATLANTIC COAST UNIQUE REGIONAL ATMOSPHERIC TRACER EXPERIMENT
(ACURATE)

J.L. Heffter
J.F. Schubert
G.A. Mead

Air Resources Laboratory
Rockville, Maryland
October 1984

4.3 Upper-Air Meteorological Data

Four times-daily (00, 06, 12, and 18 GMT) upper-air data were taken from reports at NWS upper-air stations (see Fig.5) although most of the stations report only at 00 and 12 GMT. The data consist of pressure, height, temperature, dewpoint, wind direction, and wind speed at the mandatory and significant reporting levels.

FILE 3 through FILE 21 on the ACURATE data tape are the archived surface meteorology data (see Appendix C). Each file contains one month of data. The date/time records are at 3-hour intervals (00, 03, 06 GMT, etc.). It should be noted that the first record after each date/time sequence is from the SRP giving local wind data at 62 m in height. Missing data within a record are coded -99.

FILE 22 through FILE 40 are the archived upper-air meteorological data (see Appendix C). Each file contains one month of data. The date/time records are at 6-hour intervals (00, 06, 12, and 18 GMT). Since most of the stations report only at 00 and 12 GMT, the 06 and 18 GMT data/time records often have the number of reports and number of records equal to 0.

TAPE REQUESTS (Refer to ACURATE Data Tape)

E.I. DuPont & Co.
Savannah River Laboratory
Bldg. 733A-1011
Aiken, SC 29801
Attn: J.F. Schubert

TAPE CHARACTERISTICS

9 TRACK, 6250 BPI, NO LABEL, EBCDIC
RECORD FORMAT = FB
BLOCK SIZE = 8000 (FILES 1-21)
= 2500 (FILES 22-40)

FILE 1; Source Emission

RECORD LENGTH = 80
NUMBER OF RECORDS = 1158

RECORD (#)	[SPACE]	YEAR	MONTH	DAY	HOUR (GMT)	EMISSION RATES (CI/HR)
I4	IX	I2	I2	I2	I2	I2I4

FILE 2; Measured Concentrations

RECORD LENGTH = 80
NUMBER OF RECORDS = 1158

RECORD (#)	[SPACE]	YEAR	MONTH	DAY	HOUR (GMT)	MEASURED CONCENTRATIONS (PCI/M ³)	[MSG DATA] (0)
I4	IX	I2	I2	I2	I2	5(IX,A1,I3,A1)	

FILES 3-21; Savannah River Plant (SRP) and Surface (SFC)
Station Meteorology (1 file per month)

RECORD LENGTH = 40

RECORD FORMAT

DATE/TIME [3-HOUR INTERVALS]	YEAR	MONTH	DAY	HOUR	NUMBER OF SRP & SFC RECS	
	I2	I2	I2	I2	I4	

SRP					WIND	WIND	WIND	WIND	[MSG
	STA	LAT	LON	ELEV	DIR	SPD	HORIZ	VERT	DATA]
	(3-LTR)	(100°N)	(100°W)	(M)	(DEG)	(0.1M/S)	(0.1DEG)	(0.1DEG)	(-99)
	A3	I5	I5	I5	I4	I4	I4	I4	

SFC						DEW-	WIND	WIND	[MSG	
	STA	LAT	LON	ELEV	PRESS	TEMP	POINT	DIR	SPD	DATA]
	(3-LTR)	(100°N)	(100°W)	(M)	(MB)	(0.1°C)	(0.1°C)	(DEG)	(0.1M/S)	(-99)
	A3	I5	I5	I5	I4	I5	I5	I4	I4	

RECORD ORGANIZATION

DATE/TIME1

SRP

SFC 1

SFC 2

:

DATE/TIME 2

SRP

SFC 1

SFC 2

:

FILES 22-40 Upper Air Meteorology (1 file per month)

RECORD LENGTH = 25

RECORD FORMAT

DATE/TIME [6-HOUR INTERVALS]	YEAR	MONTH	DAY	HOUR (GMT)	NUMBER OF	NUMBER OF	CODE
					REPORTS	RECS	
	I2	I2	I2	I2	I4	I5	I2- { 1=WINDS 2=TEMPS }

ID	BLOCK STATION	LAT		ELEV (M)	NUMBER OF LEVELS
		(100°N)	(100°W)		
	I5	I5	I6	I4	I3

WIND	HT	DIR	SPD
	(M)	(DEG)	(0.1M/S)
	I4	I4	I5

TEMP	HT	PRESS	TEMP	DEWPT
	(M)	(MB)	(0.1°K)	(0.1°K)
	I4	I4	I5	I5

RECORD ORGANIZATION

DATE/TIME1 (CODE=1,WINDS)

ID1

WIND1

WIND2

:

ID2

WIND1

WIND2

:

DATE/TIME1 (CODE=2,TEMPS)

ID1

TEMP1

TEMP2

:

ID2

TEMP1

TEMP2

:

DATE/TIME2 (CODE=1,WINDS)

: