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ZONE E BACKGROUND INFORMATION 1997 CNC CHARLESTON SC
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ZONE E BACKGROUND

MEMO 5-22-97

FROM: EnSafe
TO: Project Team technical subcommittee

RE: Zone E: Critical background reference values — groundwater

Because of the unique, industrial conditions of Zone E, it was not possible to collect background samples from locations based strictly on an overlain grid. Although there are 30 shallow and 30 deep wells labeled "GDE," only the first 25 of each group were installed at locations that were unbiased by knowledge of results from previously collected samples. Wells GDE026 and GDE26D were installed at infill locations to obtain additional control points, while wells GDE027-GDE030 and GDE27D-GDE30D were installed outside the zone boundary to help resolve groundwater flow questions. Consequently, the background datasets are composed of samples from wells GDE001-GDE025 (shallow) and GDE01D-GDE25D (deep). Data from four sampling rounds were available for inclusion, so that the shallow and deep groundwater datasets each consist of 100 samples.

Shallow groundwater

Arsenic was detected in 57 of 100 samples, with a maximum value of 316 μg/L in sample GDEGW00201. Second, third, and fourth-round samples from this well reported arsenic concentrations of 307, 269, and 249 μg/L, respectively; these four readings were the highest for arsenic in groundwater of any of the Zone E shallow monitoring wells. Other samples with high arsenic concentrations were as follows:

GDEGW00301: 51.7 μg/L	GDEGW01401: 16.4 μg/L
02: 69.3 "	02: 33.8 "
03: 34.4 "	03: 20.0 "
04: 46.1 "	04: 14.4 "
GDEGW00801: 56.3 "	GDEGW01601: 55.8 "
02: 17.3 "	02: 85.3 "
03: 160 "	03: 70.3 "
04: 109 "	04: 33.8 "

The dataset is strongly skewed to the right (Figs. 1a, 1b). Even after LN-transformation, the skewness remains above 1.0 (Figs. 2a, 2b) due to the high values shown above. Removing the four samples from well GDE002 results in a small improvement in the LN-transformed distribution (Figs. 3a, 3b), but it remains strongly skewed. A parametric UTL calculated using the dataset of n=96 (with the GDE002 samples removed) would be: UTL = exp[1.649 + (1.934)(1.219)] = 55.0 μg/L. Examination of the histograms and probability plots reveals that the central part of the distribution is relatively smooth and continuous, but it is noticeably separate from the high values on the right (the anomalous low values on the left represent estimates of nondetects). If the sixteen high values in this upper group (those $\geq$33.8 μg/L) are removed as outliers, the LN-transformed dataset for n=84 provides the best approximation of

normality (Figs. 4a, 4b), although it is still positively skewed because of the large number of nondetects. The parametric UTL based on this dataset is: UTL = exp[1.299 + (1.956)(0.826)] = 18.4 μg/L. However, because so many high detected values were removed from the dataset, the remaining detections constitute only 48.8% (41 of 84) of the total samples. Since nondetects now exceed 50%, a nonparametric UTL is appropriate. For a dataset of n=84, the second highest value provides minimum coverage of 95% with 95% confidence: **18.7 μg/L**, from sample GDEGW00601. Arsenic's tap water RBC is 0.045 μg/L (carcinogenic), while its MCL is 50 μg/L. The group of deleted samples is separated from the rest of the data by a gap in the values from 20 to 33.8 μg/L. For this dataset, estimated values for the nondetects may be higher than the true concentrations of those samples (Fig. 4b). With lower values on the left side of the plots, the data would have appeared to be more normally distributed. Arsenic in the groundwater grid samples is fairly strongly correlated with iron: $r = .77$ after removing the four highest values of iron (from well GDE001) and arsenic (from well GDE002); there is virtually no correlation between arsenic and aluminum.

Beryllium was detected in 17 of 100 samples. The maximum value was 0.51 μg/L in sample GDEGW01204 (higher values shown on the plots are "½U" estimates). Because nondetects are in the range 50-90%, a nonparametric UTL is appropriate. For a dataset of n=100, the second highest value serves as the UTL. The UTL for beryllium is therefore **0.43 μg/L**, which is the mean of the primary (0.44 μg/L) and duplicate (0.42 μg/L) results for sample GDEGW00503. Beryllium's tap water RBC is 0.016 μg/L (carcinogenic); its MCL is 4 μg/L.

Manganese was detected in 95 of 100 samples, with a maximum value of 2650 μg/L in sample GDEGW00903. Other results for samples from this well were 2560, 2000, and 2500 μg/L for rounds one, two, and four, respectively. The distribution is strongly skewed to the right for both the original (Figs. 1a, 1b) and square-root transformed (Figs. 3a, 3b) values, while the LN-transformed dataset (Figs. 2a, 2b) is slightly skewed to the left. Although the high ends of all of the datasets are somewhat discontinuous (Figs. 1b, 2b, 3b), there are no clear outliers. A parametric UTL based on the LN-transformed dataset of n=100 equals 3360 μg/L. If the 10 values above 1500 μg/L are removed (the group of three at the top end and the group of seven just below it), the parametric UTL (LN-transformed data) equals 1840 μg/L (Figs. 4a, 4b). If all remaining values above the continuous portion of the distribution curve are also removed (values above 800 μg/L: the group of three at the top and the lower group of five), the UTL based on square-root transformed values (n=82) equals 571 μg/L (Figs. 5a, 5b). Although the concentrations at the top end of the distribution for the original dataset are high vs. those for other zones, the distribution is probably not discontinuous enough to justify removal of "outliers" (Fig. 2b). As a conservative approach, EnSafe recommends considering the distribution to be nonnormal (recognizing the minor discontinuities). A nonparametric UTL consisting of the second highest value would therefore be appropriate: **2560 μg/L**, from sample GDEGW00901. The tap water RBC for manganese is 84 μg/L; it has no listed MCL.

Thallium was detected in 14 of 100 samples, with a maximum of 5.8 μg/L in sample GDEGW02404 (Figs. 1a, 1b). Because nondetects are in the range 50-90%, a nonparametric UTL is appropriate. The second highest value serves as the UTL: **5.4 μg/L**, from sample GDEGW00103. Thallium's tap water RBC is 0.29 μg/L, while its MCL is 2 μg/L.

Deep groundwater

Arsenic was detected in 48 of 100 samples. The highest values were 132 μg/L in sample GDEGW07D02, 85.3 μg/L in GDEGW09D04, and 84.2 μg/L in GDEGW09D03. The distribution is strongly skewed to the right (Figs. 1a, 1b), with a number of high values that do not fit with the rest. Removing the five highest values (those greater than 40 μg/L) leaves four high values that still do not fit the overall distribution (Figs. 2a, 2b). The best solution is the same as for arsenic in shallow groundwater: remove all high values above the continuous portion of the probability plot (Figs. 3a, 3b). In this case, the nine values exceeding 20 μg/L were removed. Because nondetects exceed 50%, a nonparametric UTL is appropriate. For a dataset of n=91, the second highest value serves as the UTL: **16.4 μg/L**. Arsenic's tap water RBC is 0.045 μg/L (carcinogenic), while its MCL is 50 μg/L.

Beryllium was detected in 27 samples, with a maximum value of 1.3 μg/L in sample GDEGW06D04. None of the higher values can be considered an outlier (Figs. 1a, 1b). Because nondetects exceed 50%, a nonparametric UTL is appropriate. The second highest value is **1.2 μg/L**. Beryllium's tap water RBC is 0.016 μg/L (carcinogenic); its MCL is 4 μg/L.

Manganese was detected in 98 of 100 samples, with a maximum value of 1,660 μg/L in sample GDEGW07D02. That sample result appears to be an outlier in the original (Figs. 1a, 1b), LN-transformed (Figs. 2a, 2b), and square-root transformed (Figs. 3a, 3b) datasets. After it was removed, the reduced dataset was closest to normality in the square-root transformed version (Figs. 4a, 4b). The parametric UTL $= [15.308 + (1.926)(7.355)]^2 =$ **869 μg/L**. The tap water RBC for manganese is 84 μg/L; it has no listed MCL.

Seventeen samples reported **thallium** detections, with a maximum value of 7.4 μg/L in sample GDEGW25D03. Although the distribution is positively skewed, none of the high values appears to be an outlier (Figs. 1a, 1b). Because nondetects exceed 50%, a nonparametric UTL is appropriate. The second highest value is **6.5 μg/L**. Thallium's tap water RBC is 0.29 μg/L, while its MCL is 2 μg/L.

Cyanide was detected in 27 of 100 samples. Eleven of the 13 highest cyanide values in Zone E groundwater were found in deep background samples, including the highest value of 134 μg/L in sample GDEGW06D03. The high value was removed from the dataset as an outlier (Figs. 1a, 1b), leaving a maximum value of 41.8 μg/L in sample GDEGW08D03. Because nondetects exceed 50%, a nonparametric UTL is appropriate. The second highest remaining value is **37.3 μg/L**. Although only the single outlier result exceeded cyanide's tap water RBC of 73 μg/L (MCL = 200 μg/L), there are two areas with somewhat elevated cyanide concentrations in deep groundwater. Deep wells GDE05D, GDE06D (source of the outlier sample), and GDE08D are in the middle of the southeastern extension of Zone E, while wells GDE22D, GDE23D, and GDE24D are located in the northeast corner of the zone, near the Cooper River. See the printout of cyanide detections for individual sample results.

Zone E: Background reference values for soil and groundwater 5-22-97

Background reference values for groundwater are based on four sampling rounds in 25 wells at each depth. Soil values have been approved; groundwater values are proposed.

Inorganic chemical	Surface soil [mg/kg] (n = 25)	Subsurface soil [mg/kg] (n = 24)	Shallow GW [µg/L] (n = 100)	Deep GW [µg/L] (n = 100)
Aluminum	26,600 P	41,100 P	2,810 P	319 N
Antimony	1.77 N	1.6 N	X	X
Arsenic	31.6 N	19.9 P	18.7 N	16.4 N
Barium	130 P	94.1 P	211 P	218 P
Beryllium	1.70 P	2.71 P	0.43 N	1.2 N
Cadmium	1.5 N	0.96 N	X	X
Chromium	94.6 P	75.2 N	12.3 N	15.5 N
Cobalt	19.0 P	14.9 N	2.5 N	12.9 N
Copper	66.0 P	152 P	2.7 N	X
Lead	265 N	173 N	4.8 N	X
Manganese	302 N	881 P	2,560 N	869 P
Mercury	2.60 P	1.59 P	X	0.2 N
Nickel	77.1 P	57.0 P	15.2 N	42.2 N
Selenium	1.7 N	2.4 N	X	X
Silver	X	ND	X	X
Thallium	2.8 N	ND	5.4 N	6.5 N
Tin	59.4 P	9.23 P	X	X
Vanadium	94.3 P	155 P	11.4 P	5.3 N
Zinc	827 P	886 P	27.3 N	11.8 N
Cyanide	0.5 N	X	7.9 N	37.3 N

Note:
P = Parametric UTL
N = Nonparametric UTL
X = No UTL calculated (NDs >90%)
ND=Not detected

Zone E 5-22-97

Outliers removed from background datasets for soil and groundwater

Upper interval soil

Antimony	7.4 mg/kg	GDESB01001
Arsenic	67.5 mg/kg	GDESB01001
Barium	1,980 mg/kg	GDESB01101
Chromium	560.5 mg/kg	GDESB00601
	90.1 mg/kg	GDESB01001
Copper	321 mg/kg	GDESB00301
	131 mg/kg	GDESB00801
	210 mg/kg	GDESB01001
	148 mg/kg	GDESB01501
	136 mg/kg	GDESB01601
	530.5 mg/kg	GDESB01801
Manganese	508 mg/kg	GDESB00701
Mercury	2.7 mg/kg	GDESB00301

Lower interval soil

Arsenic	22.6 mg/kg	GDESB00502
	21.3 mg/kg	GDESB00802
	27.85 mg/kg	GDESB01002
	23.6 mg/kg	GDESB01502
Copper	121 mg/kg	GDESB00302
	192 mg/kg	GDESB01502
Lead	322 mg/kg	GDESB01502
Tin	33.6U mg/kg	GDESB00702
	23.9 mg/kg	GDESB01502

Shallow groundwater

Aluminum	6150 μg/L	GDEGW01902
Arsenic	316 μg/L	GDEGW00201
	307 μg/L	02
	269 μg/L	03
	249 μg/L	04
	51.7 μg/L	GDEGW00301
	69.3 μg/L	02
	34.4 μg/L	03

	46.1 μg/L	GDEGW00304
	56.3 μg/L	GDEGW00801
	160 μg/L	03
	109 μg/L	04
	33.8 μg/L	GDEGW01402
	55.8 μg/L	GDEGW01601
	85.3 μg/L	02
	70.3 μg/L	03
	33.8 μg/L	04
Cobalt	36.0 μg/L	GDEGW00101
	39.2 μg/L	02
	43.7 μg/L	03
	27.0 μg/L	04
Lead	34.4 μg/L	GDEGW02401
	46.7 μg/L	02
	26.3 μg/L	03
	6.9 μg/L	04
Zinc	47.8 μg/L	GDEGW01801
	141 μg/L	03
	73.7 μg/L	04

Deep groundwater

Arsenic	132 μg/L	GDEGW07D02
	77.5 μg/L	GDEGW09D01
	64.2 μg/L	02
	84.2 μg/L	03
	85.3 μg/L	04
	29.1 μg/L	GDEGW15D01
	34.5 μg/L	02
	37.3 μg/L	03
	38.8 μg/L	04
Manganese	1,660 μg/L	GDEGW07D02
Vanadium	7.7 μg/L	GDEGW10D01
Zinc	21.4 μg/L	GDEGW03D01
Cyanide	134 μg/L	GDEGW06D03

In addition to the outliers listed above, several groundwater samples reported results that equaled or exceeded RBCs. Because they are in datasets with fewer than 10% detections, however, they were not eliminated as outliers because background values were not determined for those datasets:

Antimony	2.9 μg/L	GDEGW01603	(RBC = 1.5 μg/L; MCL = 6 μg/L)
	3.0 μg/L	GDEGW01703	

	2.1 μg/L	GDEGW01801	
	4.0 μg/L	GDEGW01901	
	3.2 μg/L	03	
	4.9 μg/L	GDEGW02401	
	4.5 μg/L	GDEGW10D01	
	2.8 μg/L	GDEGW17D03	
	6.8 μg/L	GDEGW19D01	
Cadmium	1.8 μg/L	GDEGW04D01	(RBC = 1.8 μg/L; MCL = 5 μg/L)

All reported antimony detections in shallow and deep background wells exceeded antimony's RBC, but only sample GDEGW19D01 (6.8 μg/L) exceeded its MCL.

Zone E: Background reference values for soil and groundwater 4-23-97

Background reference values for groundwater are based on four sampling rounds in 25 wells at each depth.

Inorganic chemical	Surface soil [mg/kg] (n = 25)	Subsurface soil [mg/kg] (n = 24)	Shallow GW [µg/L] (n = 100)	Deep GW [µg/L] (n = 100)	
Aluminum	26,600 P	41,100 P			
Antimony	1.77 N	1.6 N			
Arsenic	~~31.6 N~~ 23.9	19.9 P			
Barium	130 P	94.1 P			Concrete area
Beryllium	1.70 P	2.71 P			
Cadmium	1.5 N	0.96 N			
Chromium	94.6 P	75.2 N			
Cobalt	19.0 P	14.9 N			
Copper	66.0 P	152 P			
Lead	265 N 400	173 N 400			
Manganese	302 N	881 P			Zone 4 593
Mercury	2.60 P	1.59 P			
Nickel	77.1 P	57.0 P			
Selenium	1.7 N	2.4 N			
Silver	X	X			
Thallium	2.8 N	X			
Tin	59.4 P	9.23 P			
Vanadium	94.3 P	155 P			
Zinc	827 P	886 P			
Cyanide	0.5 N	X			

Note:
P = Parametric UTL
N = Nonparametric UTL
X = No UTL calculated (NDs >90%)

Zone E 4-23-97

Outliers removed from background datasets for soil

Upper interval soil

Antimony	7.4 mg/kg	GDESB01001
Arsenic	67.5 mg/kg	GDESB01001
Barium	1,980 mg/kg	GDESB01101
Chromium	560.5 mg/kg	GDESB00601
	90.1 mg/kg	GDESB01001
Copper	321 mg/kg	GDESB00301
	131 mg/kg	GDESB00801
	210 mg/kg	GDESB01001
	148 mg/kg	GDESB01501
	136 mg/kg	GDESB01601
	530.5 mg/kg	GDESB01801
Manganese	508 mg/kg	GDESB00701
Mercury	2.7 mg/kg	GDESB00301

Lower interval soil

Arsenic	22.6 mg/kg	GDESB00502
	21.3 mg/kg	GDESB00802
	27.85 mg/kg	GDESB01002
	23.6 mg/kg	GDESB01502
Copper	121 mg/kg	GDESB00302
	192 mg/kg	GDESB01502
Lead	322 mg/kg	GDESB01502
Tin	33.6U mg/kg	GDESB00702
	23.9 mg/kg	GDESB01502

MEMO 4-24-97

FROM: EnSafe
TO: Project Team technical subcommittee

RE: Zone E: Critical background reference values — soils

Upper interval soil

All 25 samples reported **aluminum** detections, distributed with a long tail to the right (Figs. 1a, 1b). The maximum value is 19,000 mg/kg in sample GDESB00701. The LN-transformed version was closest to normal, although the distribution remained somewhat skewed to the right (Figs. $2a_2$, 2b). UTL = exp[8.695 + (2.292)(0.651)] = **26,600 mg/kg**. High aluminum concentrations correlate with high iron concentrations (r = .78), indicating that samples with high aluminum levels are rich in clay. Residential RBC for aluminum in soil is 7,800 mg/kg (noncarcinogenic; THQ = 0.1).

Antimony was detected in 10 of 25 samples. The maximum value (7.4 mg/kg in sample GDESB01001) was removed as an outlier (see figure), leaving the remaining high value of **1.77 mg/kg** as the nonparametric UTL. The residential RBC for antimony in soil is 3.1 mg/kg (noncarcinogenic; THQ = 0.1).

Arsenic was present in 23 of 25 samples, with a maximum reported value of 67.5 mg/kg in sample GDESB01001. The distribution is positively skewed and somewhat bimodal (Figs. 1a, 1b, 2a, 2b), with two low nondetect estimates (Fig. 2b). Removing the high value as an outlier leaves the distribution positively skewed and bimodal (Figs. 3a, 3b). The LN-transformation (Figs. 4a, 4b) is slightly better as an approximation of normality than the square-root transformation (Figs. 5a, 5b), especially if the effect of the two low nondetect estimates is discounted. A UTL based on the LN-transformation of the reduced dataset (n = 24) would be 79.3 mg/kg, while one based on the square-root transformation would be 32.5 mg/kg. Because of the bimodal distribution, however, EnSafe recommends using a nonparametric UTL, which is the maximum remaining value of **31.6 mg/kg**. The residential RBC for arsenic in soil is 0.43 mg/kg (carcinogenic).

All 25 samples reported **barium** detections. There was one obvious outlier of 1,980 mg/kg in sample GDESB01101 (residential RBC = 550 mg/kg). After this sample result was removed, the LN-transformation produced the best distribution. UTL = exp[3.131 + (2.309)(0.751)] = **130 mg/kg**. The residential RBC for barium in soil is 550 mg/kg (noncarcinogenic; THQ = 0.1). The single outlier sample was collected from beneath pavement near Pier G, immediately adjoining the railroad tracks that parallel the river.

Beryllium was detected in 21 of 25 samples. It has a moderately regular distribution, skewed to the right (Figs. 1a, 1b, 2a, 2b), except for the four estimated nondetect values that are obvious on the probability plots (Figs. 1b, 2b). The square-root transformation provided the best approximation to

normality (Figs. 3a, 3b). UTL = $[0.641 + (2.292)(0.289)]^2$ = **1.70 mg/kg**. The residential RBC for beryllium in soil is 0.15 mg/kg (carcinogenic). A high correlation (r = .85) between beryllium and iron in background soil samples indicates that the beryllium is associated with clay particles in the soil.

Chromium was found in all 25 samples, with a maximum concentration of 560.5 mg/kg in sample GDESB00601 (Figs. 1a, 1b). After this obvious outlier was removed from the dataset (Figs. 2a, 2b), the LN-transformation yielded the best approximation of normality (Figs. 3a, 3b). It would result in a UTL of 119 mg/kg. Although the remaining high value of 90.1 mg/kg would not be considered an outlier under most conventional criteria (Fig. 3b), it was removed for the sake of conservatism, and because it is high relative to chromium concentrations seen in background samples in other zones at NAVBASE. With this value removed (Figs 4a, 4b), the LN-transformation (Figs. 5a, 5b) provides a somewhat more normal distribution than the square-root transformation (Figs. 6a, 6b). UTL = exp[2.551 + (2.329)(0.858)] = **94.6 mg/kg**. The residential RBC for hexachrome in soil is 39 mg/kg (noncarcinogenic; THQ = 0.1). Of the 60 total upper interval soil samples analyzed for hexachrome in Zone E, only four reported detections; the maximum concentration was 0.586 mg/kg in sample 605CB01201 (there were no hexachrome detections in 28 lower interval samples).

The dataset for **copper** comprises 19 samples below 50 mg/kg and six samples above 130 mg/kg (Figs. 1a, 1b). If LN-transformed (Figs. 2a, 2b), it appears to provide a good approximation of normality. A UTL based on this transformation would be UTL = exp[3.211 + (2.292)(1.546)] = 858 mg/kg. Because several sites in Zone E report high copper concentrations in soil samples, and because the highest copper levels in Zone E background soil samples are much higher than those seen in other zones, EnSafe recommends removing the entire upper modal group of six samples from the background dataset, leaving n = 19. Under these circumstances, UTL = [3.953 + (2.423)(1.721)] = **66.0 mg/kg**. The residential RBC for copper in soil is 310 mg/kg (noncarcinogenic; THQ = 0.1). Two of the six outlier sample locations (GDE015 and GDE016) are near the power plant, while the other four are distributed widely throughout the zone.

Manganese was detected in all 25 samples, with a maximum value of 508 mg/kg in sample GDESB00701. The distribution is skewed to the right (Fig. 1a) and bimodal, with a lower group of 14 samples and an upper group of 11 (Figs. 1b, 2b, 3b). The maximum value qualifies marginally as an outlier, and was removed from the dataset. After its removal, the square-root transformation (Figs. 6a, 6b) comes closer to a normal distribution than original values (Figs. 4a, 4b) or LN-transformed values (Figs. 5a, 5b), and would result in a UTL of 357 mg/kg. Due to the pronounced bimodal distribution of values, however, a nonparametric UTL based on the maximum remaining value in the dataset is **302 mg/kg**. The residential RBC for manganese is 180 mg/kg (noncarcinogenic; THQ = 0.1). Manganese concentrations in background samples are strongly correlated with aluminum (r = .81) and iron (r = .84), indicating that the manganese has a natural origin in clay particles in the soil.

Mercury was detected in 20 of 25 samples, with a maximum value of 2.7 mg/kg in sample GDESB00301 (Figs. 1a, 1b). After this value was removed as an outlier, the distribution was skewed to the right (Figs. 2a, 2b). For the reduced dataset of n = 24, the LN-transformed version (Figs. 3a, 3b) gave a better approximation of normality than the square-root transformation (Figs. $4a_1$, $4a_2$, 4b), although the five estimated nondetect values (Fig. 3b) are lower than expected. The UTL for the LN-

transformed version is: UTL = exp[-2.419 + (2.309)(1.461)] = **2.6 mg/kg**. The residential RBC for mercury in soil is 2.3 mg/kg (noncarcinogenic; THQ = 0.1).

Four of 25 samples reported **thallium** detections. The highest concentration was 2.8 mg/kg in sample GDESB01801. Histograms (Figs. 1a, 2a) show that the four detections are also the four highest values in the dataset. Because detections were less than 50% of the total, the nonparametric UTL is the highest value, or **2.8 mg/kg**. Thallium's residential RBC in soil is 0.63 mg/kg (noncarcinogenic; THQ = 0.1).

Vanadium was detected in all 25 samples, with a maximum value of 60.1 mg/kg in sample GDESB00701. The original dataset is continuous, but skewed strongly to the right (Figs. 1a, 1b). LN-transforming the data provides a good approximation of normality (Figs. 2a, 2b), although the two highest values are slightly lower than expected (Fig. 2b). The parametric UTL for the LN-transformed dataset is: UTL = exp[2.488 + (2.292)(0.898)] = **94.3 mg/kg**. The residential RBC for vanadium in soil is 55 mg/kg (noncarcinogenic; THQ = 0.1). Vanadium in background soil samples is very highly correlated with both aluminum (r = .92) and iron (r = .87), indicating a natural source in clay particles.

Lower interval soil

Arsenic was detected in 23 of the 24 subsurface soil samples, with a maximum concentration of 27.9 mg/kg in sample GDESB01002. The distribution is skewed to the right (Fig. 1a). Probability plots of the original values (Fig. 1b), LN-transformed values (Fig. 2b), and square-root transformed values (Fig. 3b) all indicate that the four highest data values should be considered outliers:

GDESB00502 = 22.6 mg/kg
GDESB00802 = 21.3 mg/kg
GDESB01002 = 27.9 mg/kg
GDESB01502 = 23.6 mg/kg

When these values are removed from the dataset (Figs. 4a, 4b), square-root transformed values provide the best approximation to normality (Figs. 5a, 5b). The parametric UTL for the reduced dataset (n = 20) is: UTL = $[2.269 + (2.396)(0.913)]^2$ = **19.9 mg/kg**. The generic SSL for arsenic (assuming DAF = 20) is 29 mg/kg.

Chromium was detected in all 24 samples, with a maximum value of 75.2 mg/kg in sample GDESB00602. The distribution is positively skewed (Fig. 1a) and bimodal, with a lower group of 14 samples and an upper group of 12 (Figs. 1b, 2b). If LN-transformed values of the original dataset (Figs. 2a.2b) were used as the basis for a background value, UTL = exp[2.591 + (2.309)(1.114)] = 174.7 mg/kg. If the entire upper modal group of 11 values were removed as possible outliers and the UTL were calculated based on original values (n = 13), UTL = 6.746 + (2.670)(3.469) = 16.0 mg/kg. However, the modal separation is not pronounced enough to justify this drastic an approach (see Fig. 2b). The most reasonable alternative is to consider this bimodal chromium distribution nonnormal, and to use a nonparametric UTL for the original dataset (n = 24): UTL = maximum value = **75.2 mg/kg**. Hexachrome's generic SSL (assuming DAF = 20) is 38 mg/kg; trivalent chromium levels in soil are not of concern for migration to groundwater at any concentration. The enclosed printout of

the results of hexachrome analyses in Zone E soil samples shows only four detections in 88 total samples, with none occurring in lower interval samples. The maximum detection was 0.586 mg/kg in sample 605CB01201, an upper interval sample at AOC 605. There were no hexachrome detections in nine background samples.

Nickel was detected in 23 of 24 samples, with a maximum value of 23.7 mg/kg in sample GDESB01402. The distribution of original values (Figs. 1a, 1b) is positively skewed. The LN-transformation (Figs. 2a, 2b) provides a slightly better approximation to normality than the square-root transformation (Figs. 3a, 3b), based on skewness and the box-and-whisker plot. For the LN-transformed values (n = 24), UTL = exp[1.626 + (2.309)(1.047)] = **57.0 mg/kg**. Nickel's generic SSL (assuming DAF = 20) is 130 mg/kg.

There were six **selenium** detections in 24 samples. Since the detection rate was less than 50%, a nonparametric UTL is appropriate. The UTL is the maximum detected value: **2.4 mg/kg** in sample GDESB00702. Selenium's generic SSL (assuming DAF = 20) is 5 mg/kg.

Risk-based concentrations (RBCs) for surface soil - 2/97

RBCs for noncarcinogens have been divided by 10 (THQ=0.1) to allow for multiple contaminants.

Inorganics	**Resid. RBC** (mg/kg)	**Indust. RBC** (mg/kg)	**c/n**	(carcinogenic/noncarcinogenic)
Aluminum	7800	100000	n	
Antimony	3.1	82	n	
Arsenic	0.43	3.8	c	
"	2.3	61	n	
Barium	550	14000	n	
Beryllium	0.15	1.3	c	
Boron	700	18000	n	
Cadmium	3.9	100	n	
Chlorine	780	20000	n	
Chromium3	7800	100000	n	
Chromium6	39	1000	n	
Cobalt	470	12000	n	
Copper	310	8200	n	
Cyanide	160	4100	n	(free cyanide, hydrogen cyanide)
Flouride	470	12000	n	
Iron	2300	61000	n	
Lead	400*	400*		
Manganese	180	4700	n	
Mercury	2.3	61	n	(inorganic mercury, mercuric chloride)
Nickel	160	4100	n	
Selenium	39	1000	n	
Silver	39	1000	n	
Thallium	0.63	16	n	(thallium carbonate, chloride, sulfate)
Tin	4700	100000	n	
Uranium	23	610	n	(soluble salts)
Vanadium	55	1400	n	
Zinc	2300	61000	n	

*= *De facto* residential soil RBC

Table A-1 (continued)

Inorganics				Migration to ground water	
CAS No.	Compound	Ingestion (mg/kg)	Inhalation fugitive particulate (mg/kg)	20 DAF (mg/kg)	1 DAF (mg/kg)
7440-36-0	Antimony	31 [b]	— [c]	5	0.3
7440-38-2	Arsenic	0.4 [e]	750 [e]	29 [i]	1 [i]
7440-39-3	Barium	5,500 [b]	6.9E+05 [b]	1,600 [i]	82 [i]
7440-41-7	Beryllium	0.1 [e]	1,300 [e]	63 [i]	3 [i]
7440-43-9	Cadmium	78 [b,m]	1,800 [e]	8 [i]	0.4 [i]
7440-47-3	Chromium (total)	390 [b]	270 [e]	38 [i]	2 [i]
16065-83-1	Chromium (III)	78,000 [b]	— [c]	— [g]	— [g]
18540-29-9	Chromium (VI)	390 [b]	270 [e]	38 [i]	2 [i]
57-12-5	Cyanide (amenable)	1,600 [b]	— [c]	40	2
7439-92-1	Lead	400 [k]	— [k]	— [k]	— [k]
7440-02-0	Nickel	1,600 [b]	13,000 [e]	130 [i]	7 [i]
7782-49-2	Selenium	390 [b]	— [c]	5 [i]	0.3 [i]
7440-22-4	Silver	390 [b]	— [c]	34 [b,i]	2 [b,i]
7440-28-0	Thallium	— [c]	— [c]	0.7 [i]	0.04 [i]
7440-62-2	Vanadium	550 [b]	— [c]	6,000 [b]	300 [b]
7440-66-6	Zinc	23,000 [b]	— [c]	12,000 [b,i]	620 [b,i]

DAF = Dilution and attenuation factor.

[a] Screening levels based on human health criteria only.

[b] Calculated values correspond to a noncancer hazard quotient of 1.

[c] No toxicity criteria available for that route of exposure.

[d] Soil saturation concentration (C_{sat}).

[e] Calculated values correspond to a cancer risk level of 1 in 1,000,000.

[f] Level is at or below Contract Laboratory Program required quantitation limit for Regular Analytical Services (RAS).

[g] Chemical-specific properties are such that this pathway is not of concern at any soil contaminant concentration.

[h] A preliminary remediation goal of 1 mg/kg has been set for PCBs based on *Guidance on Remedial Actions for Superfund Sites with PCB Contamination* (U.S. EPA, 1990) and on EPA efforts to manage PCB contamination.

[i] SSL for pH of 6.8.

[j] Ingestion SSL adjusted by a factor of 0.5 to account for dermal exposure.

[k] A screening level of 400 mg/kg has been set for lead based on *Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities* (U.S. EPA, 1994).

[l] SSL is based on RfD for mercuric chloride (CAS No. 007487-94-7).

[m] SSL is based on dietary RfD.

Maximum contaminant levels (MCLs) and risk-based concentrations (RBCs) for groundwater (tap water standards) -- 2/97

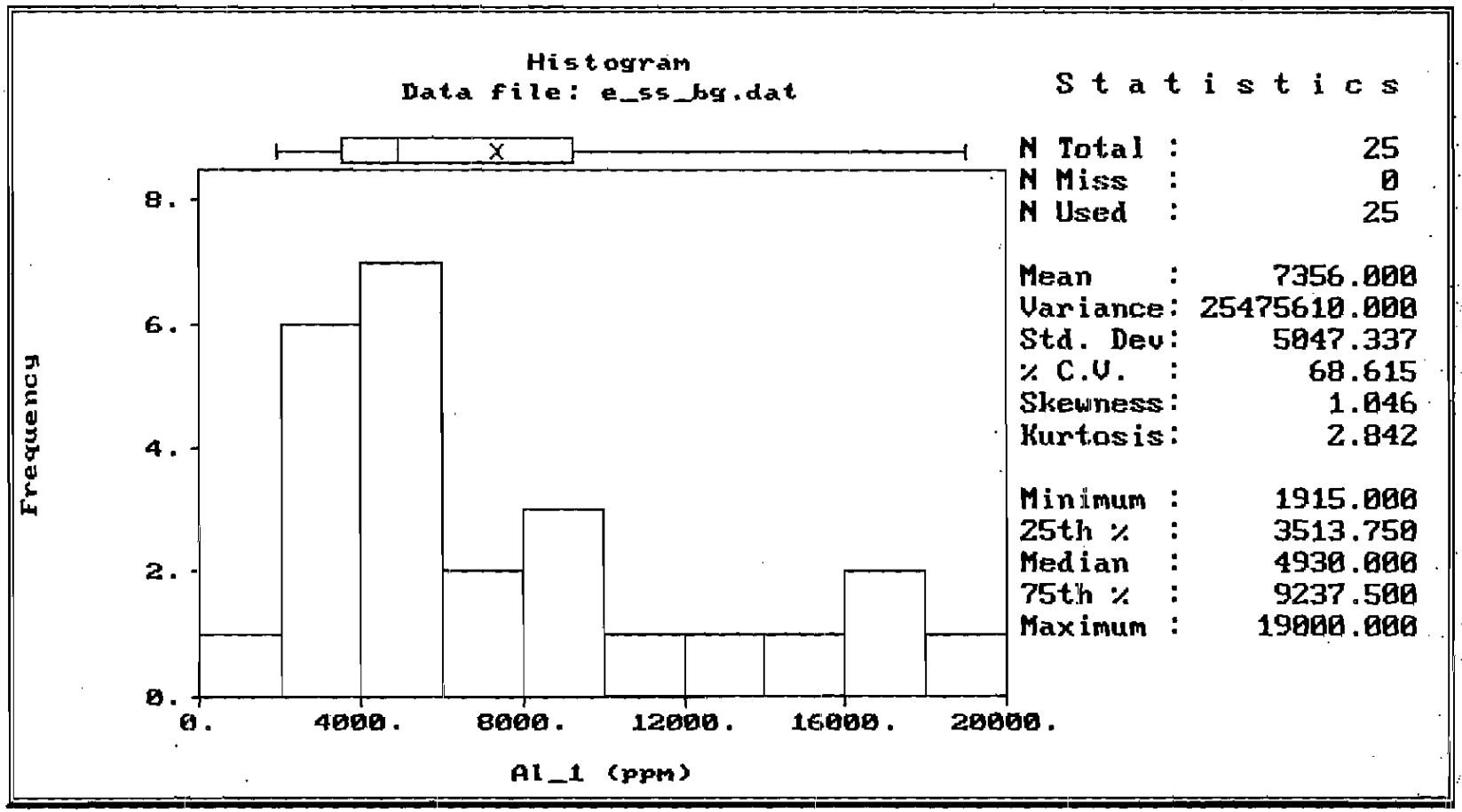
RBCs for noncarcinogens have been divided by 10 (THQ=0.1) to allow for multiple contaminants.

Inorganics	MCL (μg/L)	RBC (μg/L)	c=carcinogen, n=noncarcinogen	
Aluminum	--	3700	n	
Antimony	6	1.5	n	
Arsenic	50	0.045	c	
"	50	1.1	n	
Barium	2000	260	n	
Beryllium	4	0.016	c	
Boron	--	330	n	
Cadmium	5	1.8	n	
Chlorine	4000	370	n	
Chromium3	100	3700	n	
Chromium6	total	18	n	
Cobalt	--	220	n	
Copper	1300*	150	n	
Cyanide	200	73	n	(free cyanide, hydrogen cyanide)
Flouride	4000	220	n	
Iron	--	1100	n	
Lead	15*	15*		
Manganese	--	84	n	
Mercury	2	1.1	n	(inorganic mercury and mercuric chloride)
Nickel	100	73	n	
Selenium	50	18	n	
Silver	--	18	n	
Thallium	2	0.29	n	(thallium carbonate, chloride, sulfate)
Tin	--	2200	n	
Uranium	20	11	n	(soluble salts)
Vanadium	--	26	n	
Zinc	--	1100	n	

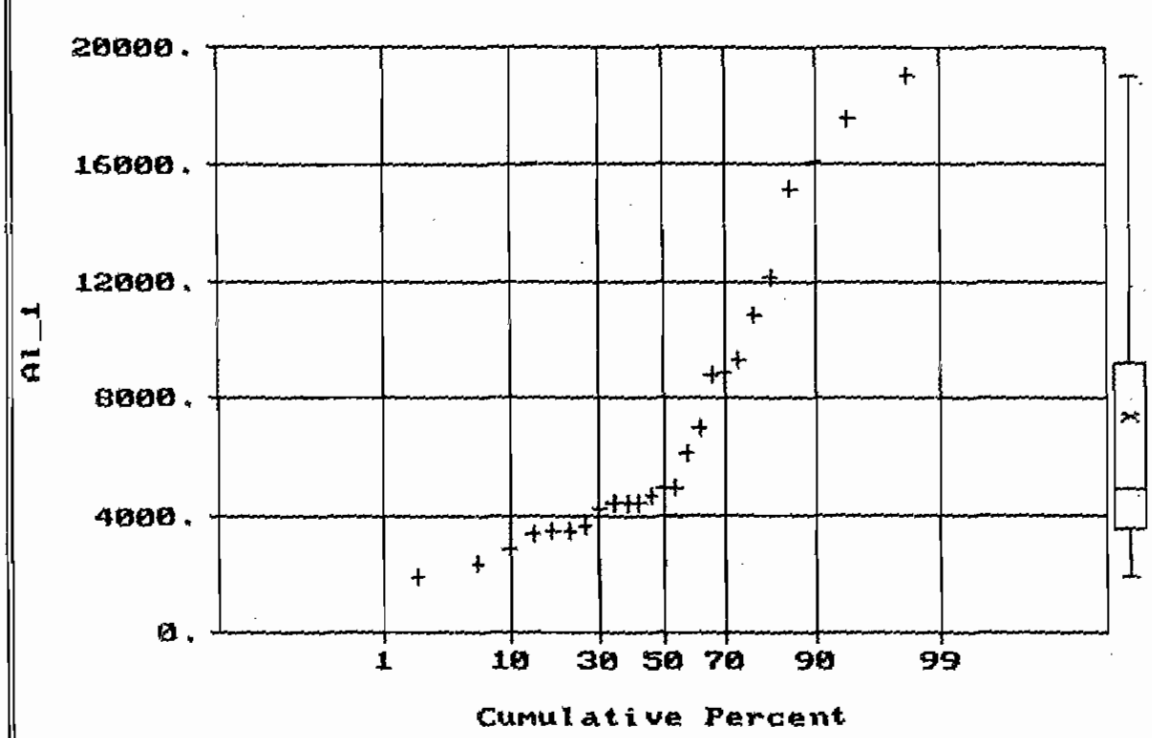
*= Treatment technique action level

Zone E
Aluminum in surface soil BG samples
Original dataset (N = 25)
Original values

1a



Normal Probability Plot for Al_1
Data file: E_ss_bg.dat

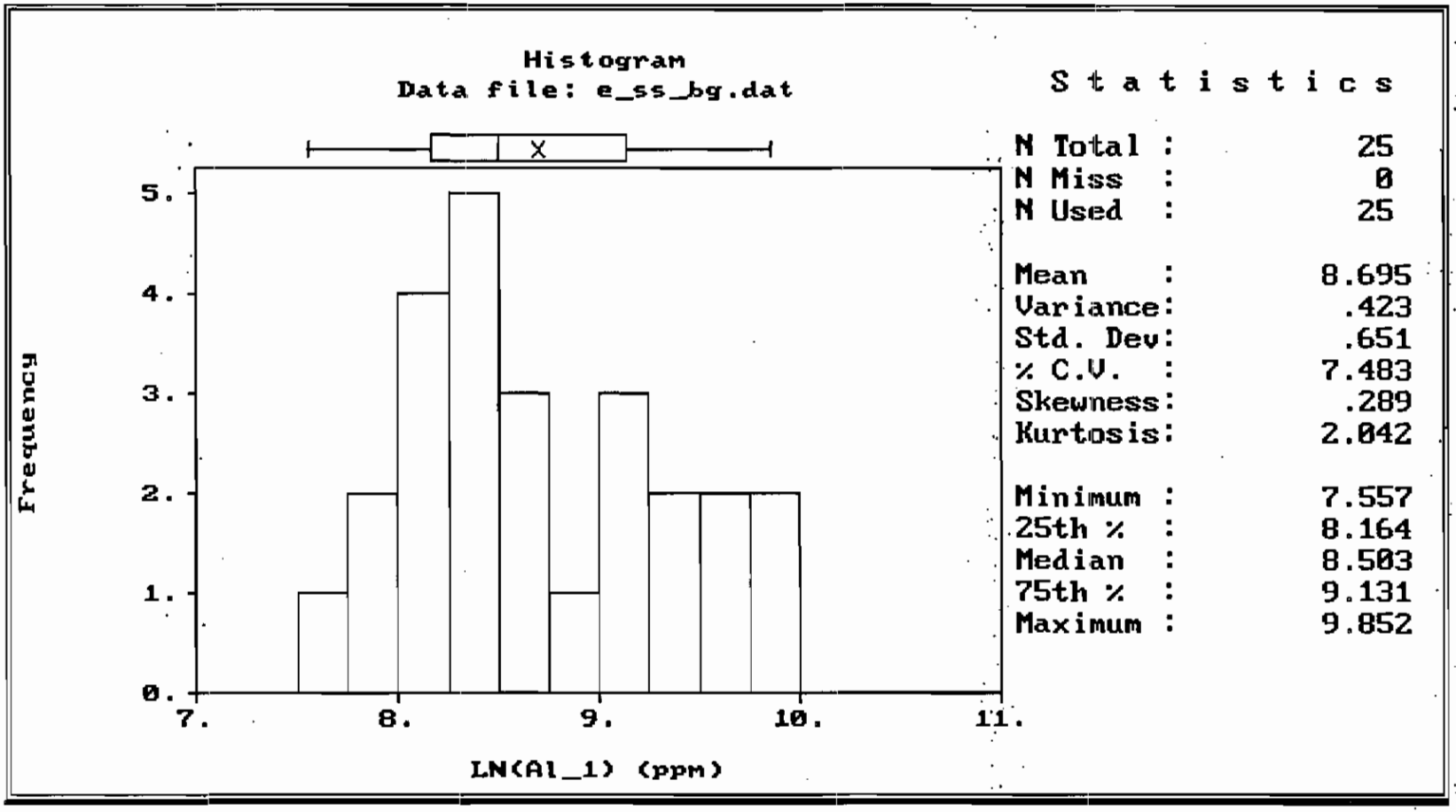


Statistics

N Total :	25
N Miss :	0
N Used :	25
Mean :	7356.000
Variance:	25475610.000
Std. Dev:	5047.337
% C.V. :	68.615
Skewness:	1.046
Kurtosis:	2.842
Minimum :	1915.000
25th % :	3513.750
Median :	4930.000
75th % :	9237.500
Maximum :	19000.000

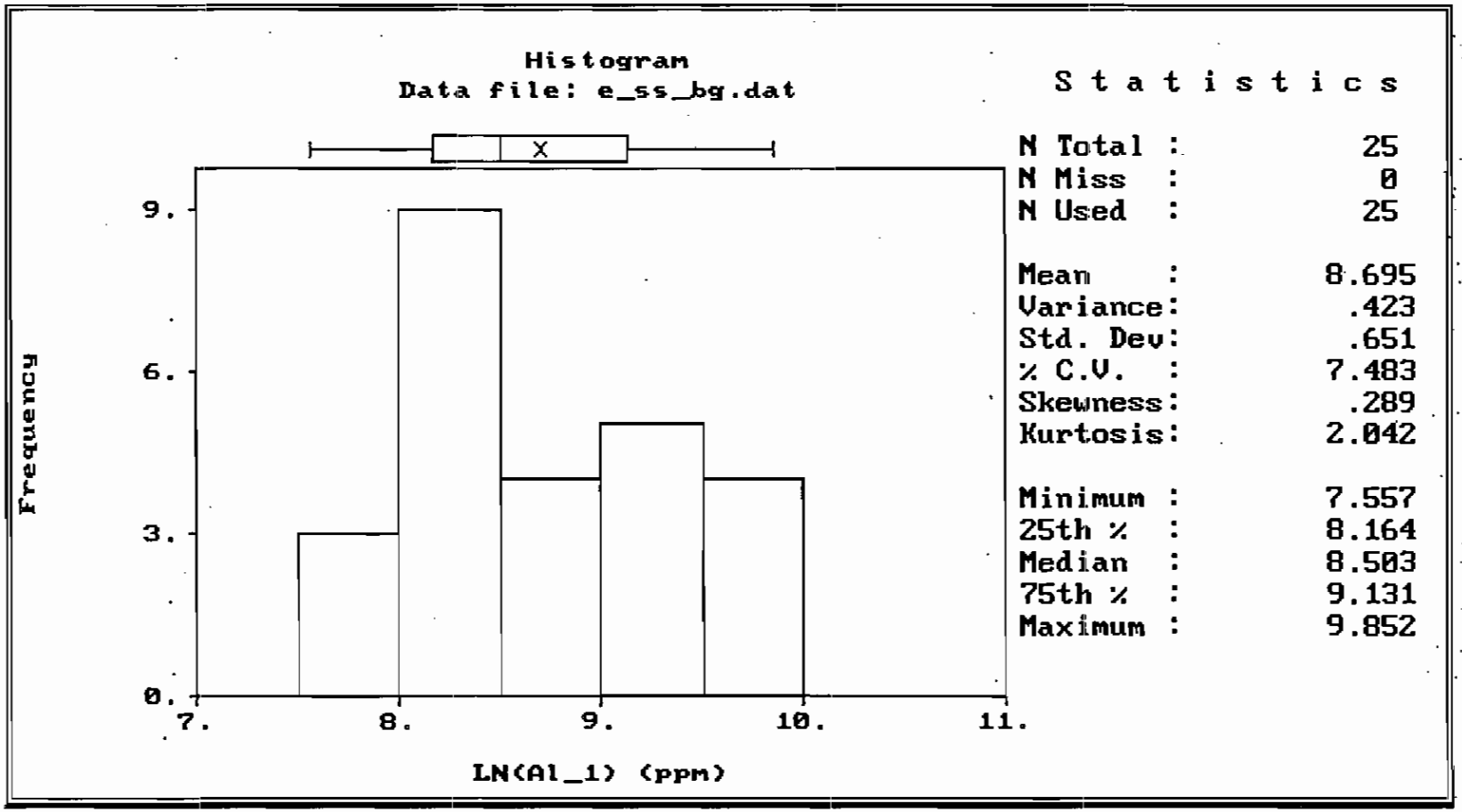
Zone E
Aluminum in surface soil BG samples
Original dataset (N=25)
LN-transformed values

2a,

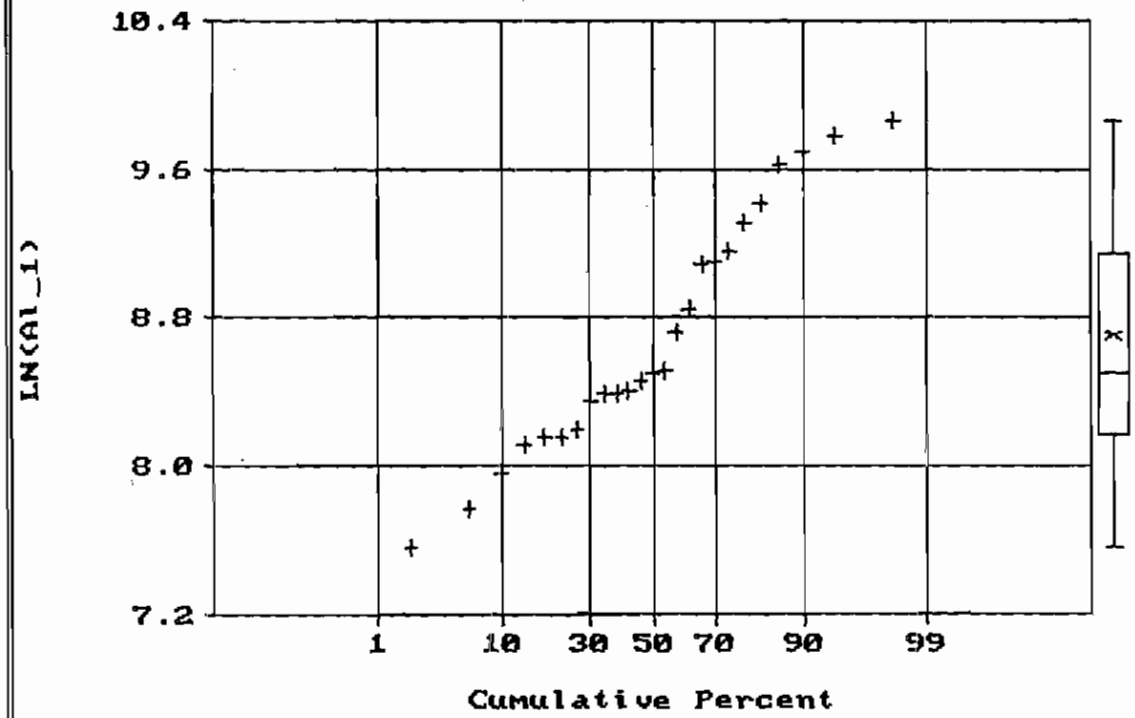


Zone E
Aluminum in surface soil BG samples — generalized view
Original dataset
LN- transformed values

2a2



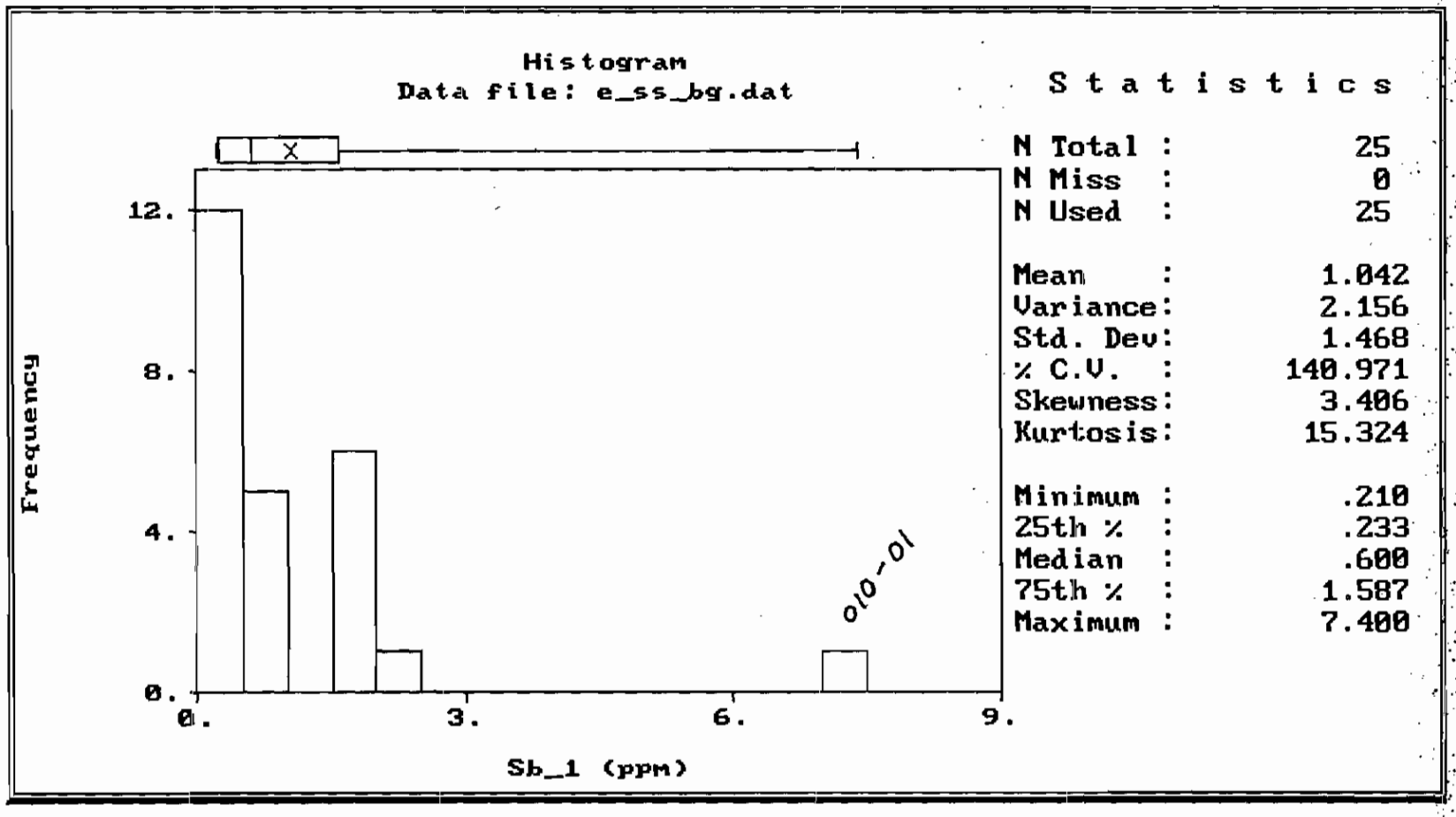
Normal Probability Plot for LN(Al_1)
Data file: E_ss_bg.dat



Statistics

N Total :	25
N Miss :	0
N Used :	25
Mean :	8.695
Variance:	.423
Std. Dev:	.651
% C.V. :	7.483
Skewness:	.289
Kurtosis:	2.042
Minimum :	7.557
25th % :	8.164
Median :	8.503
75th % :	9.131
Maximum :	9.852

Zone E
Antimony in surface soil BG samples
Original dataset (N=25 ; 10 detections)
Original values

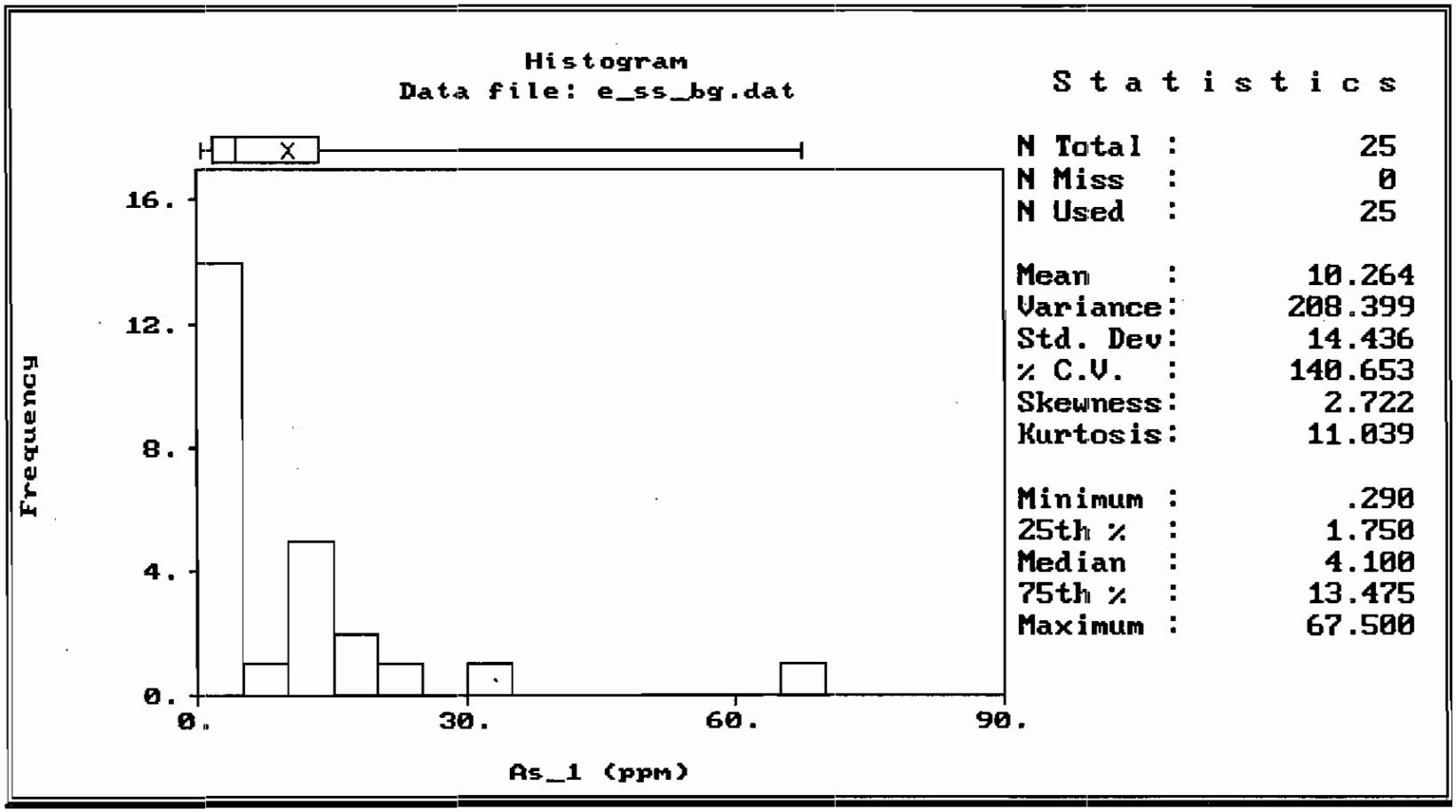


Statistics

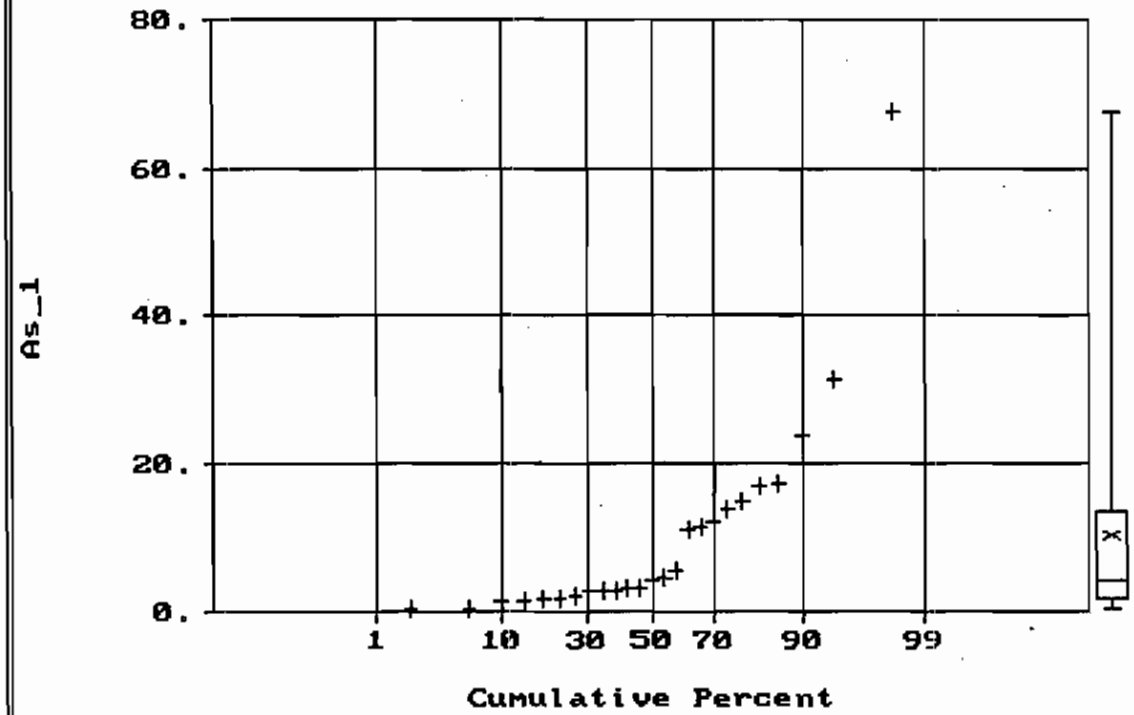
N Total :	25
N Miss :	0
N Used :	25
Mean :	1.042
Variance:	2.156
Std. Dev:	1.468
% C.V. :	140.971
Skewness:	3.406
Kurtosis:	15.324
Minimum :	.210
25th % :	.233
Median :	.600
75th % :	1.587
Maximum :	7.400

Zone E
Arsenic in surface soil BG samples
Original dataset (N=25)
Original values

1a



Normal Probability Plot for As_1
Data file: e_ss_bg.dat

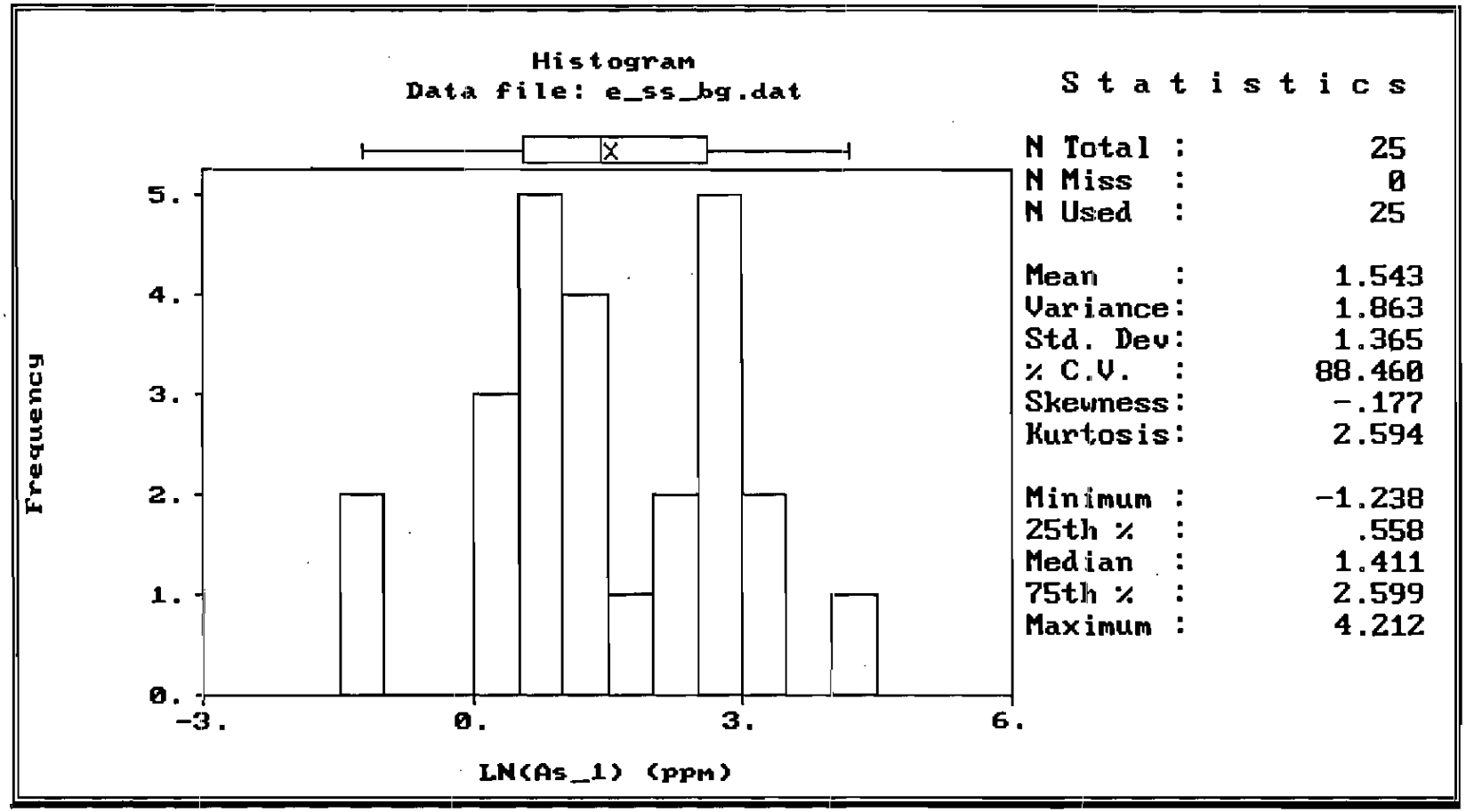


S t a t i s t i c s

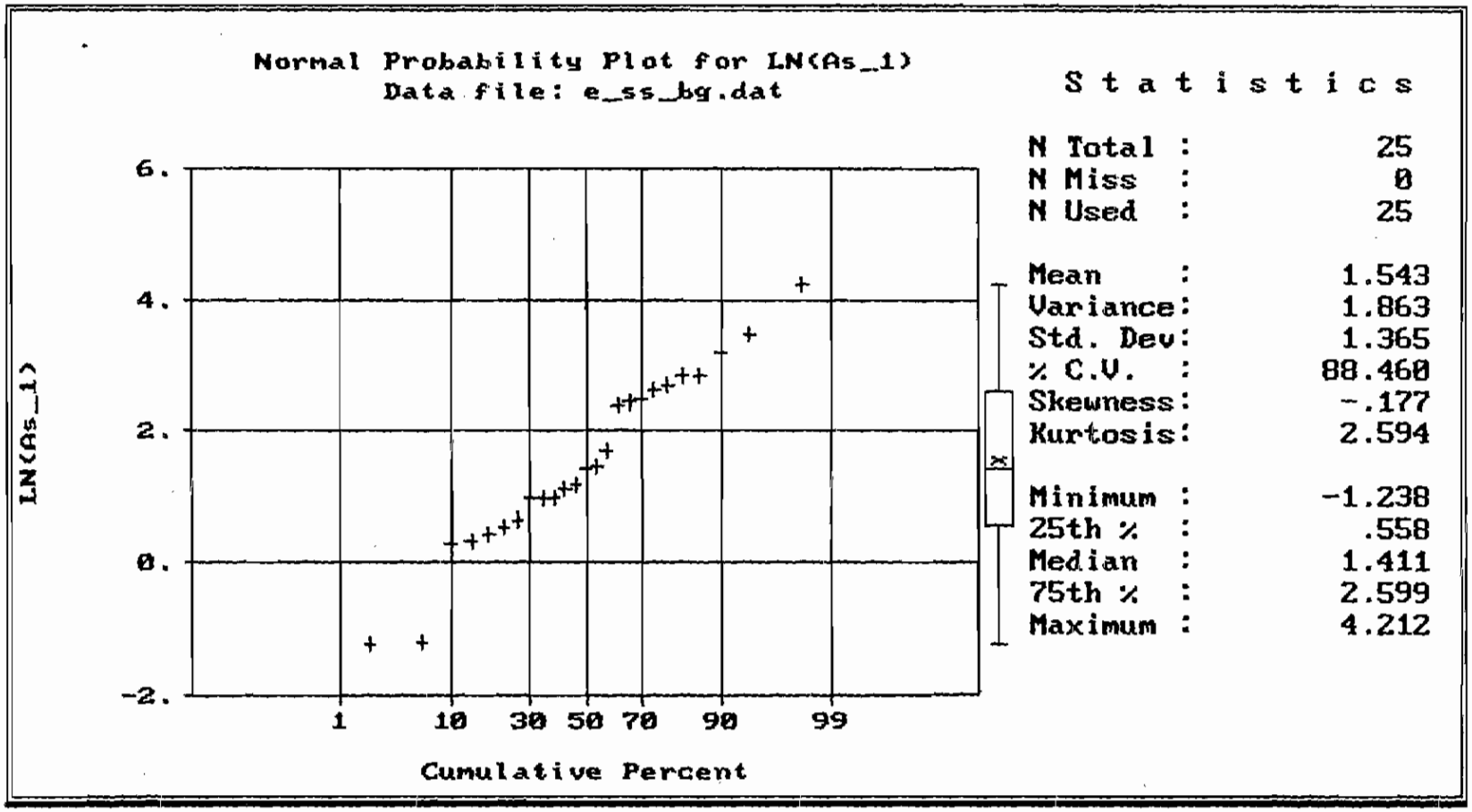
N Total :	25
N Miss :	0
N Used :	25
Mean :	10.264
Variance:	208.399
Std. Dev:	14.436
% C.V. :	140.653
Skewness:	2.722
Kurtosis:	11.039
Minimum :	.290
25th % :	1.750
Median :	4.100
75th % :	13.475
Maximum :	67.500

Zone E
Arsenic in surface soil BG samples
Original dataset (N=25)
LN- transformed values

2a

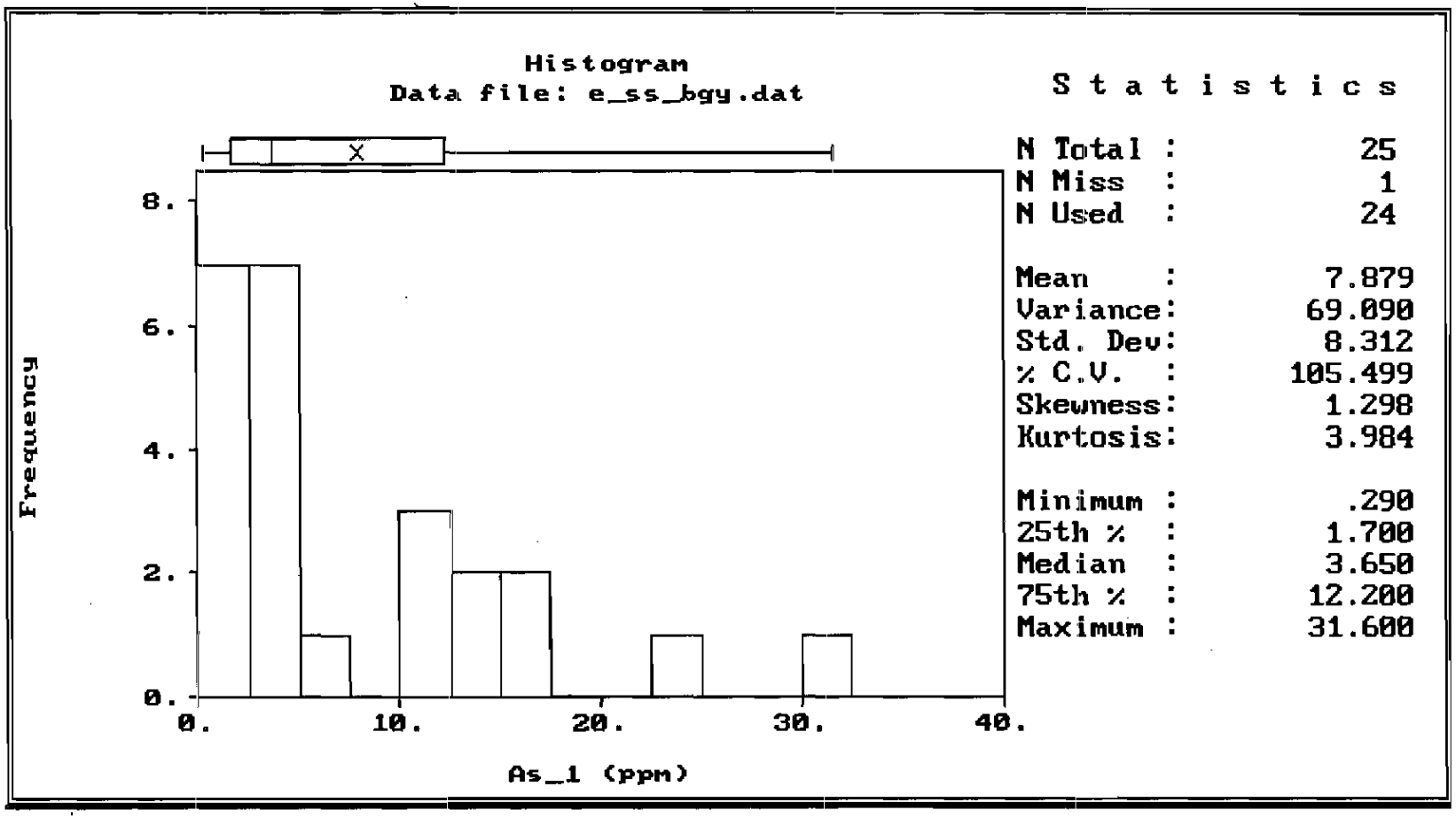


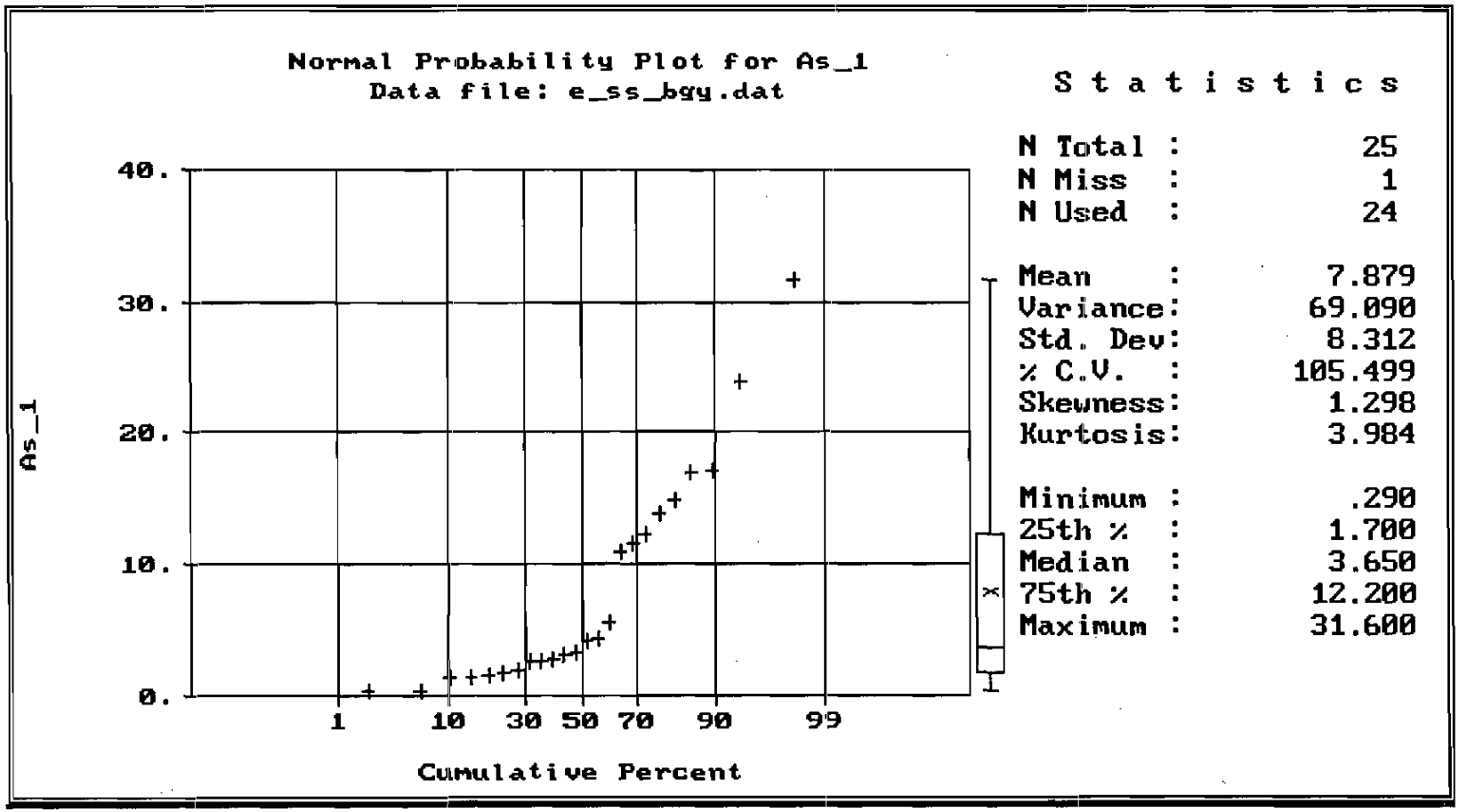
2b


Normal Probability Plot for LN(As_1)
Data file: e_ss_bg.dat
LN(As_1)
6.
4.
2.
0.
-2.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 25
N Miss : 0
N Used : 25
Mean : 1.543
Variance: 1.863
Std. Dev: 1.365
% C.V. : 88.460
Skewness: -.177
Kurtosis: 2.594
Minimum : -1.238
25th % : .558
Median : 1.411
75th % : 2.599
Maximum : 4.212

Zone E
Arsenic in surface soil BG samples
Sample # 10-01 removed (N=24)
Original values

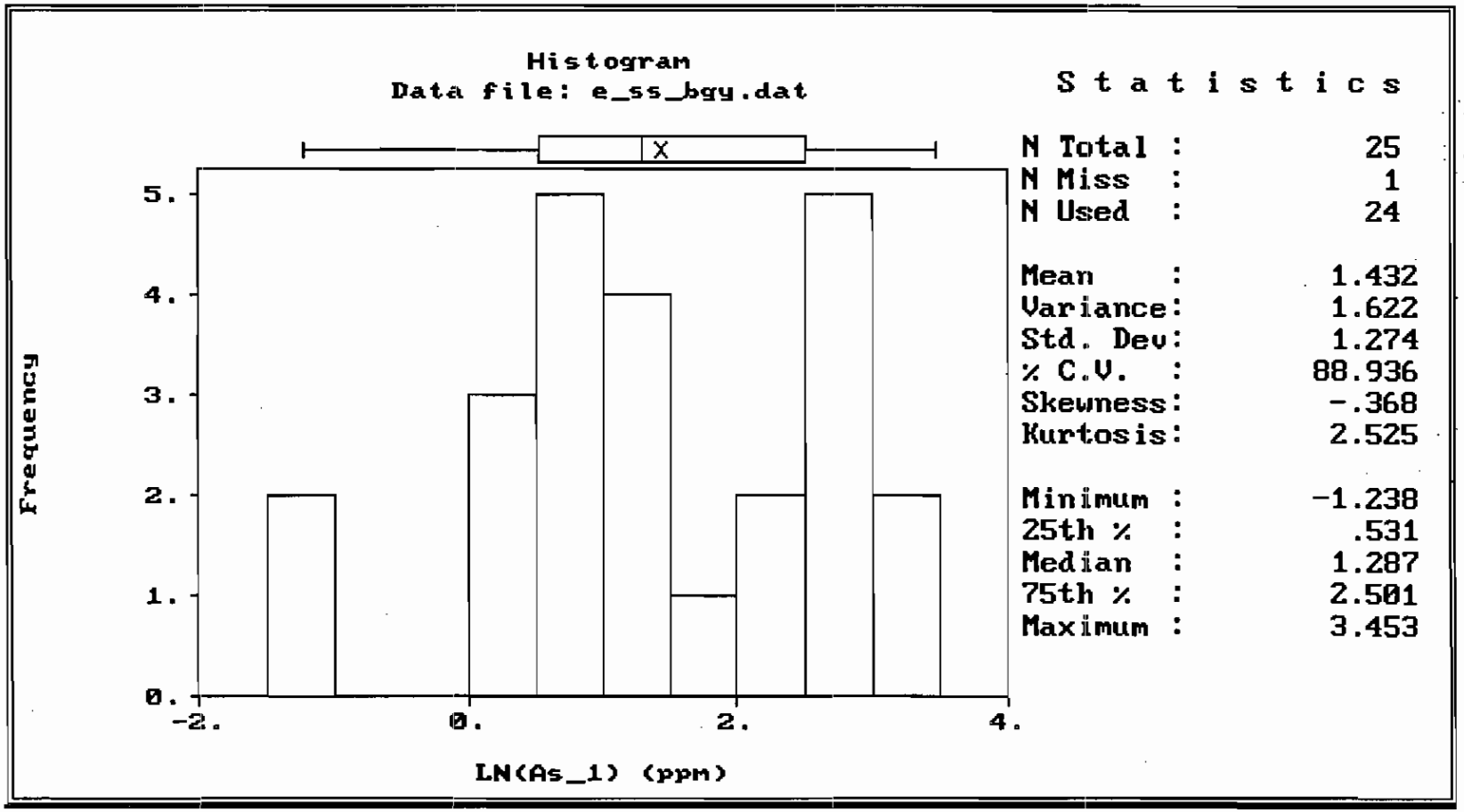
3a

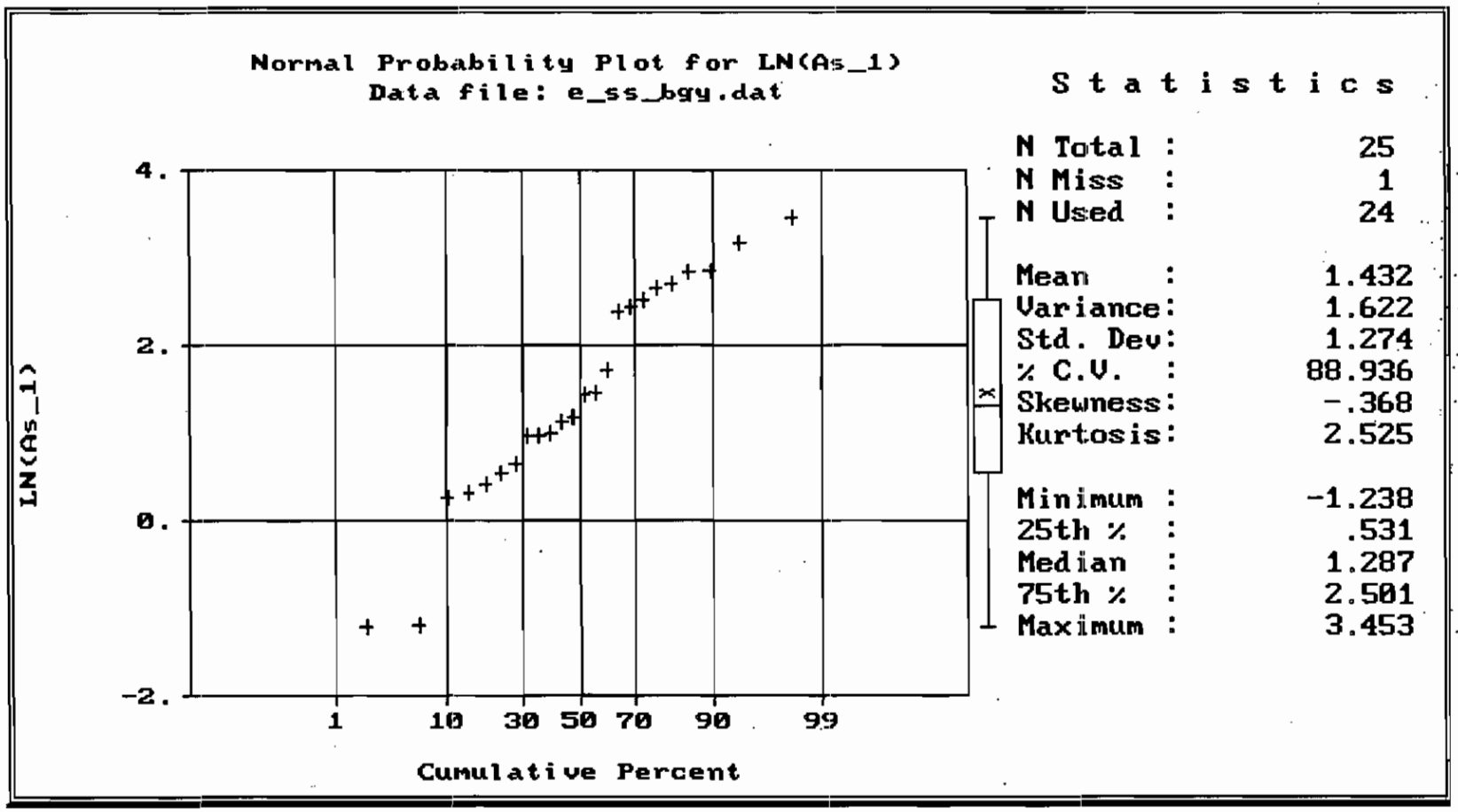



Normal Probability Plot for As_1
Data file: e_ss_bgy.dat
As_1
40.
30.
20.
10.
0.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 25
N Miss : 1
N Used : 24
Mean : 7.879
Variance: 69.090
Std. Dev: 8.312
% C.V. : 105.499
Skewness: 1.298
Kurtosis: 3.984
Minimum : .290
25th % : 1.700
Median : 3.650
75th % : 12.200
Maximum : 31.600

Zone E
Arsenic in surface soil BG samples
Sample # 10-01 removed (N=24)
LN- transformed values

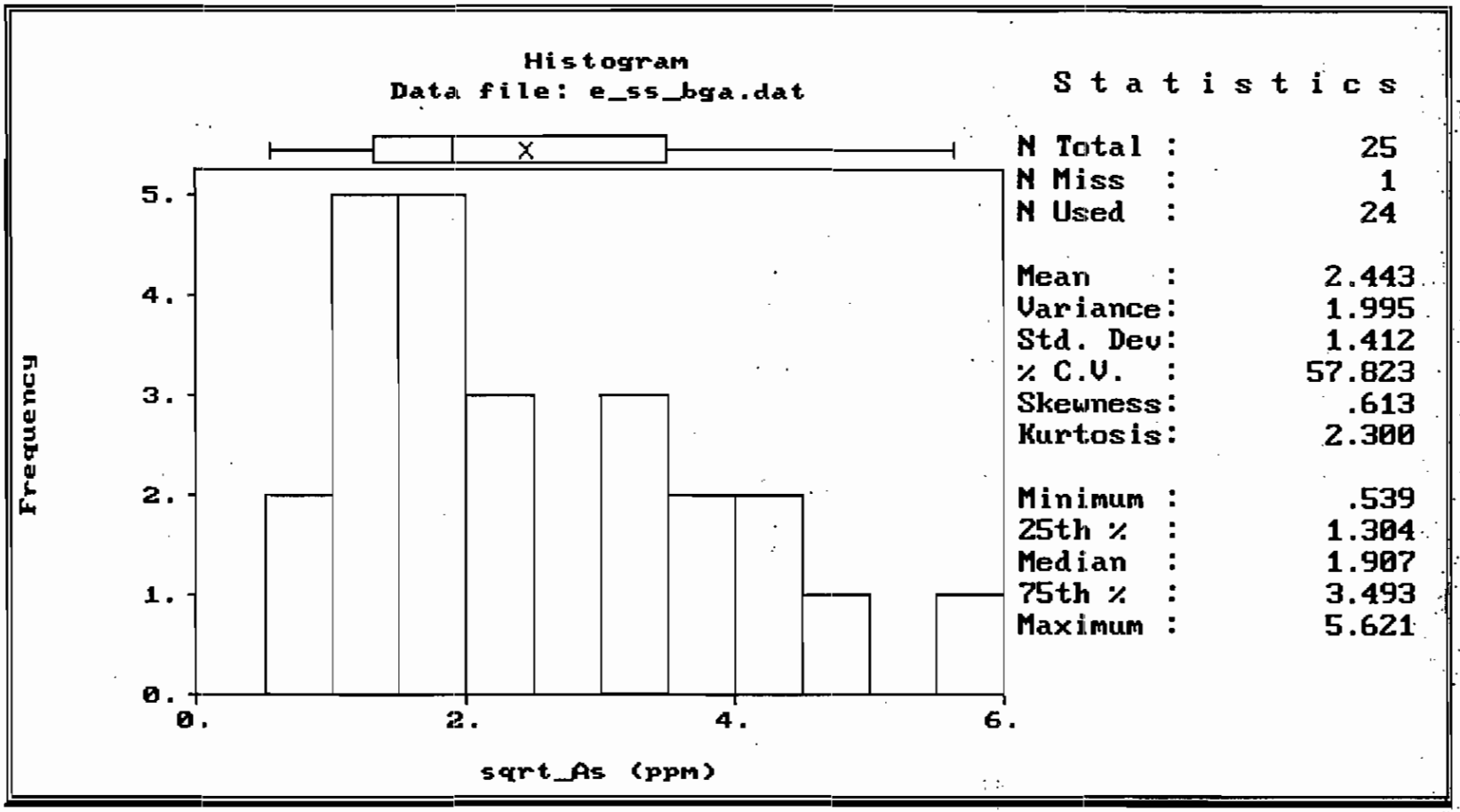
4a

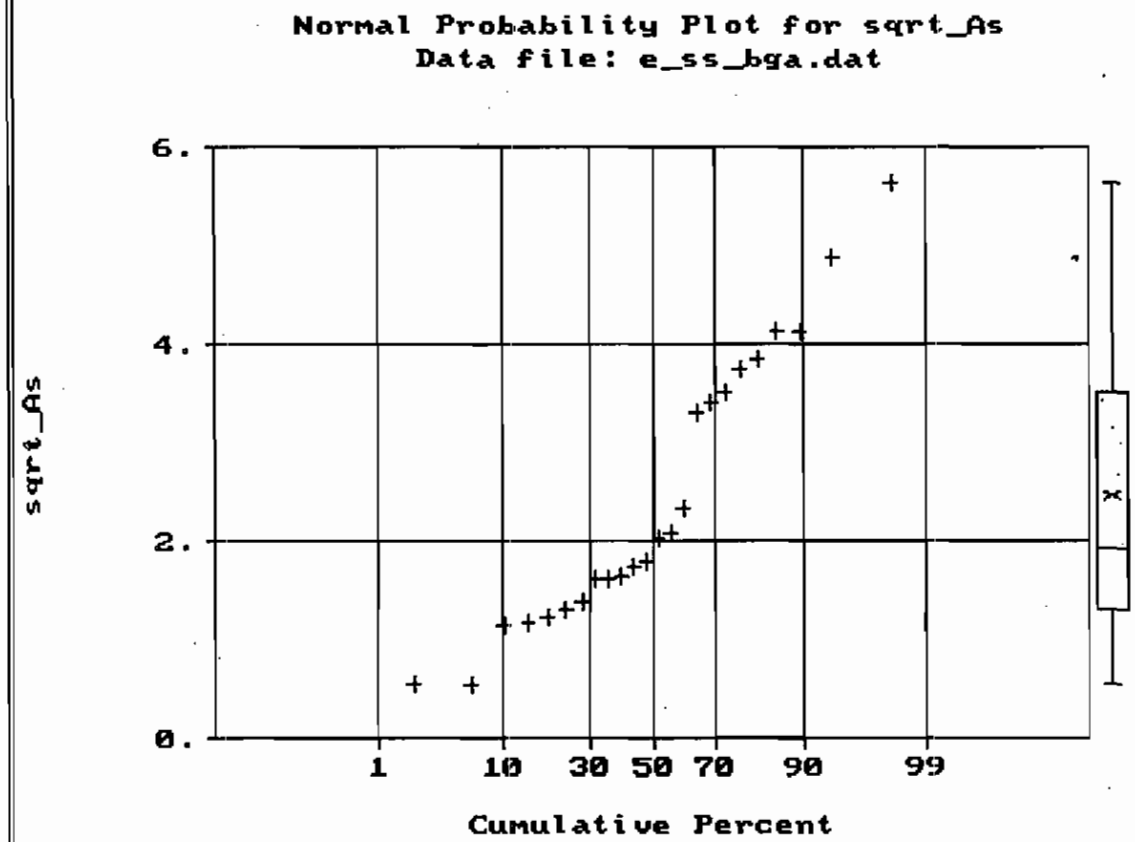



Normal Probability Plot for LN(As_1)
Data file: e_ss_bgy.dat
LN(As_1)
4.
2.
0.
-2.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 25
N Miss : 1
N Used : 24
Mean : 1.432
Variance: 1.622
Std. Dev: 1.274
% C.V. : 88.936
Skewness: -.368
Kurtosis: 2.525
Minimum : -1.238
25th % : .531
Median : 1.287
75th % : 2.501
Maximum : 3.453

Zone E
Arsenic in surface soil BG samples
Sample #10-01 removed (N=24)
Square-root transformed values

Sa

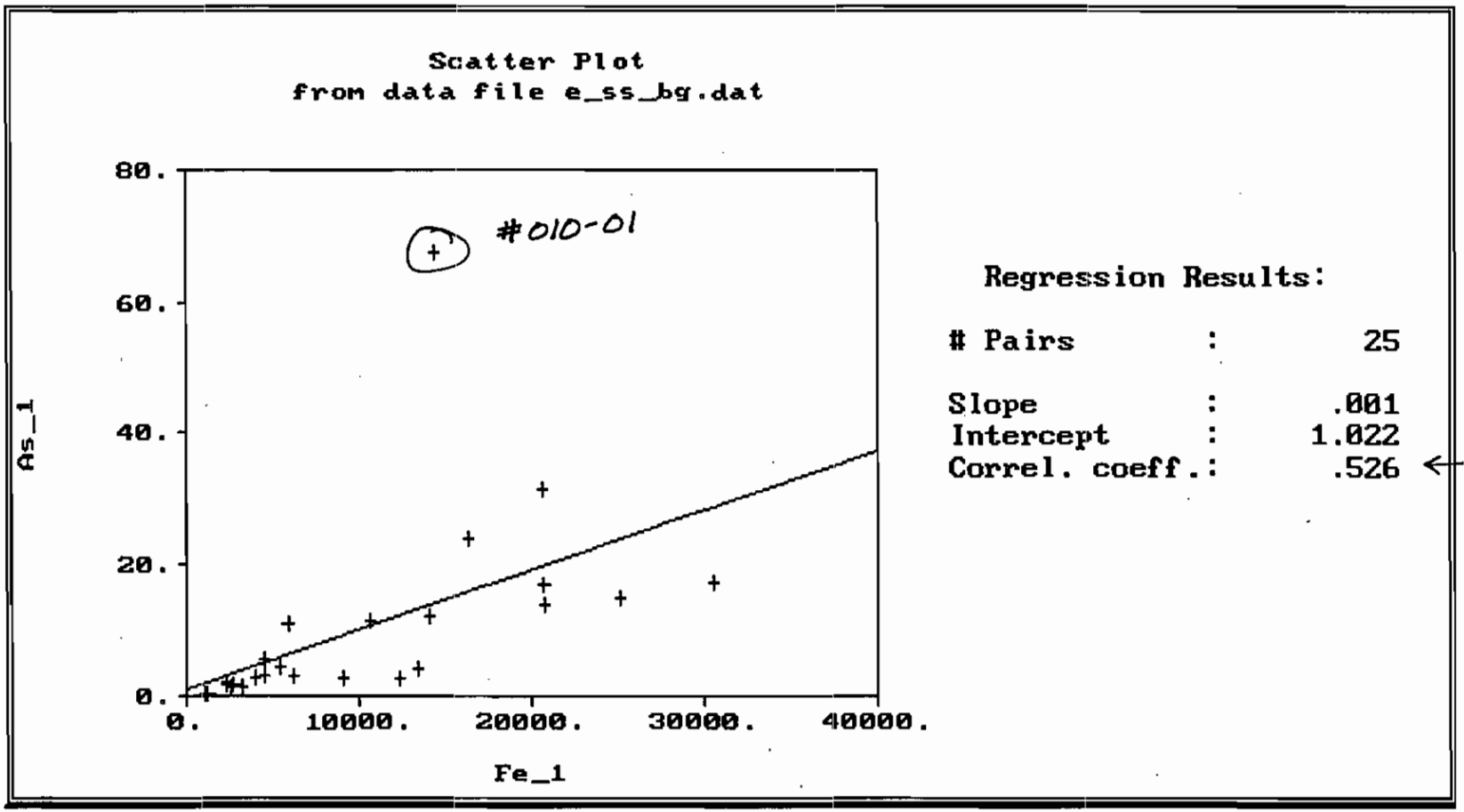




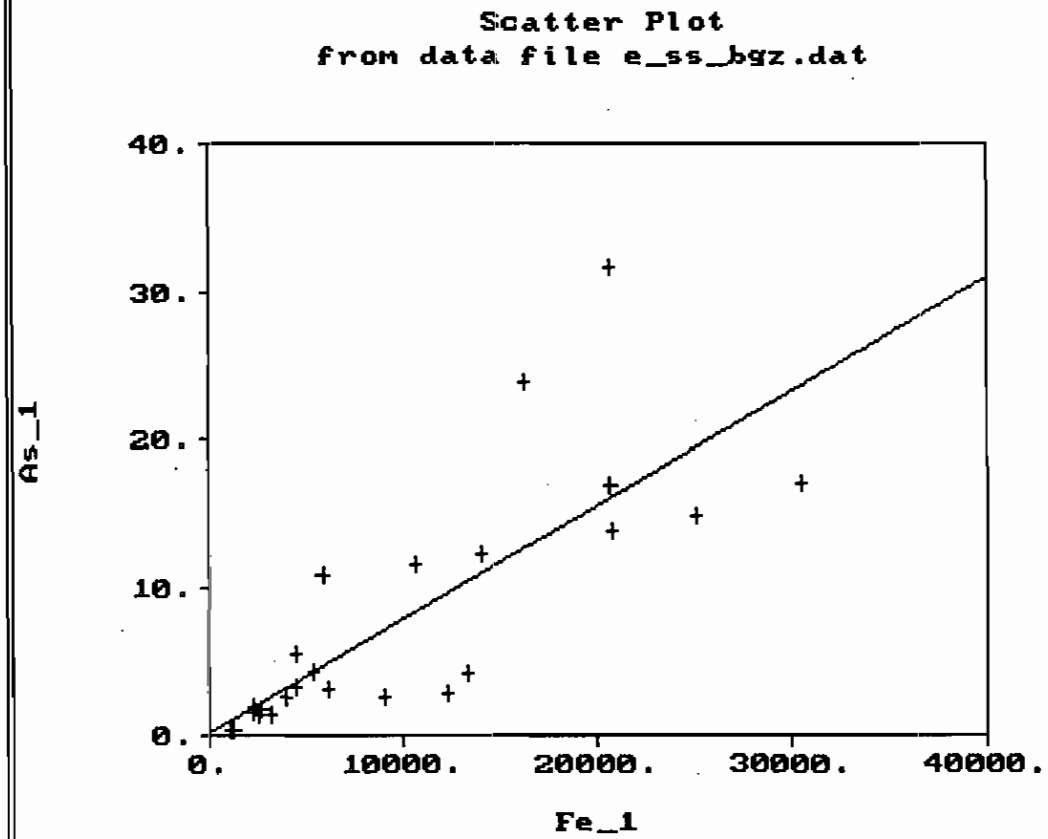
Statistics

N Total :	25
N Miss :	1
N Used :	24
Mean :	2.443
Variance:	1.995
Std. Dev:	1.412
% C.V. :	57.823
Skewness:	.613
Kurtosis:	2.300
Minimum :	.539
25th % :	1.304
Median :	1.907
75th % :	3.493
Maximum :	5.621

Zone E
Crossplot: Arsenic vs. iron in surface soil BG samples
Original dataset (N = 25)
Original values



Zone E
Crossplot: As vs. Fe in surface soil BG samples
Sample # 010-01 removed (N=24)
Original values

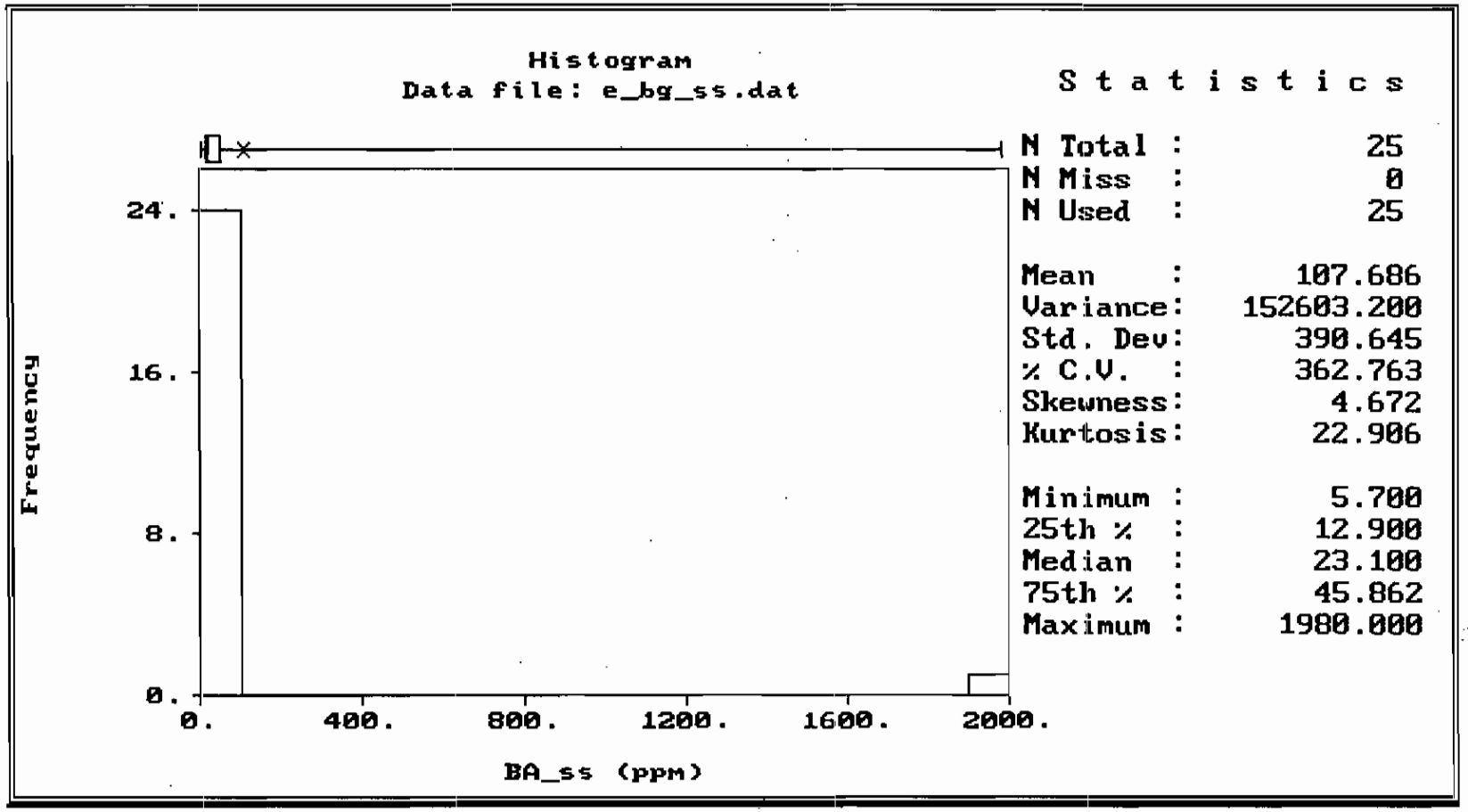


Regression Results:

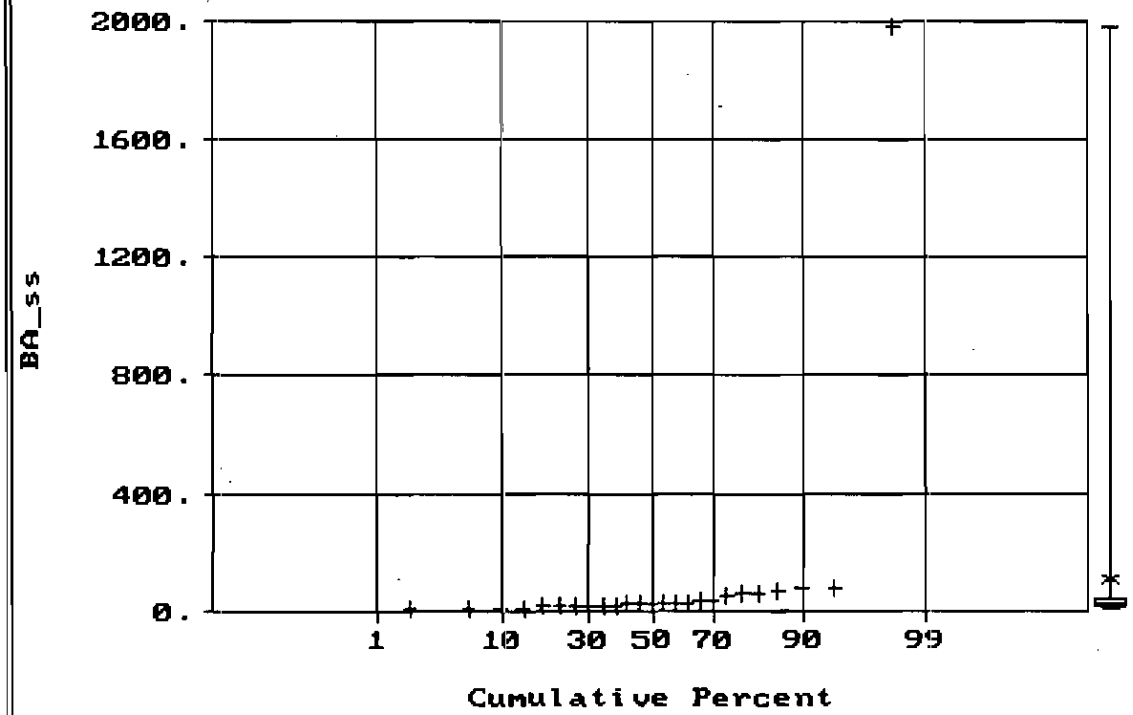
# Pairs	:	24
Slope	:	.001
Intercept	:	.194
Correl. coeff.	:	.785

Zone E
Barium in surface soil BG samples
Original dataset (N=25)
Original values

1a



Normal Probability Plot for BA_ss
Data file: e_bg_ss.dat

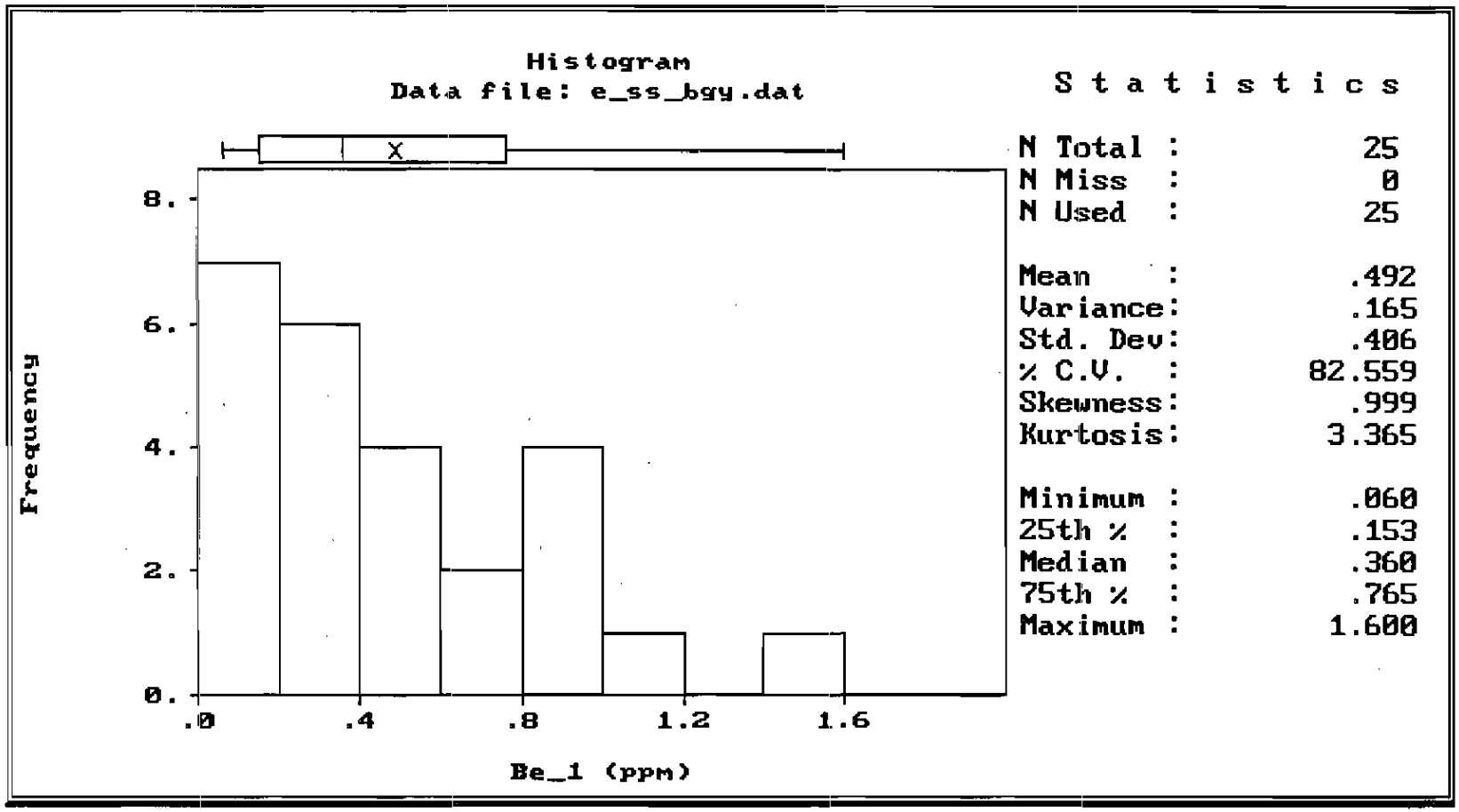


Statistics

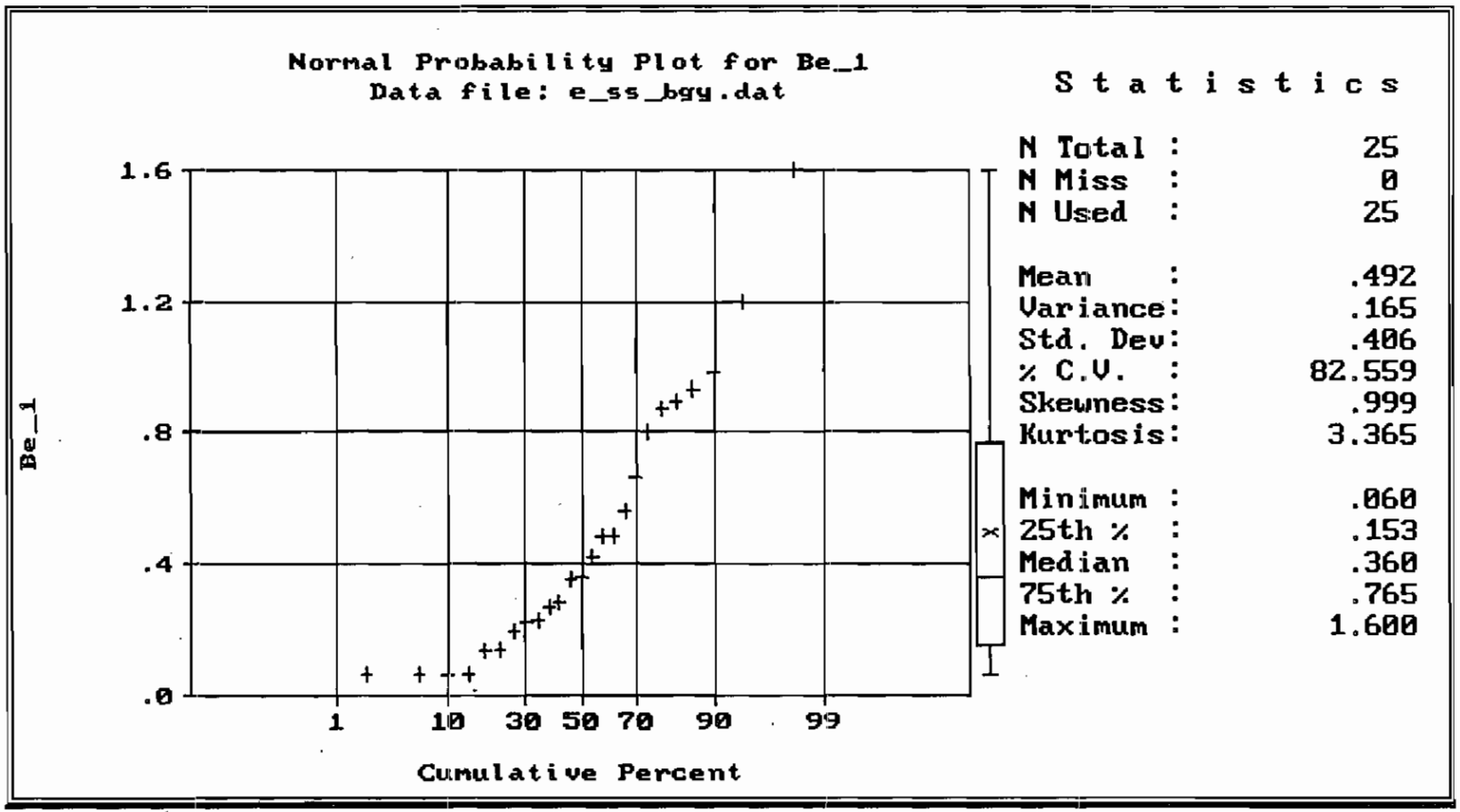
N Total :	25
N Miss :	0
N Used :	25
Mean :	107.686
Variance:	152603.200
Std. Dev:	390.645
% C.V. :	362.763
Skewness:	4.672
Kurtosis:	22.906
Minimum :	5.700
25th % :	12.900
Median :	23.100
75th % :	45.862
Maximum :	1980.000

Zone E
Beryllium in surface soil BG samples
Original dataset (N = 25)
Original values

1a

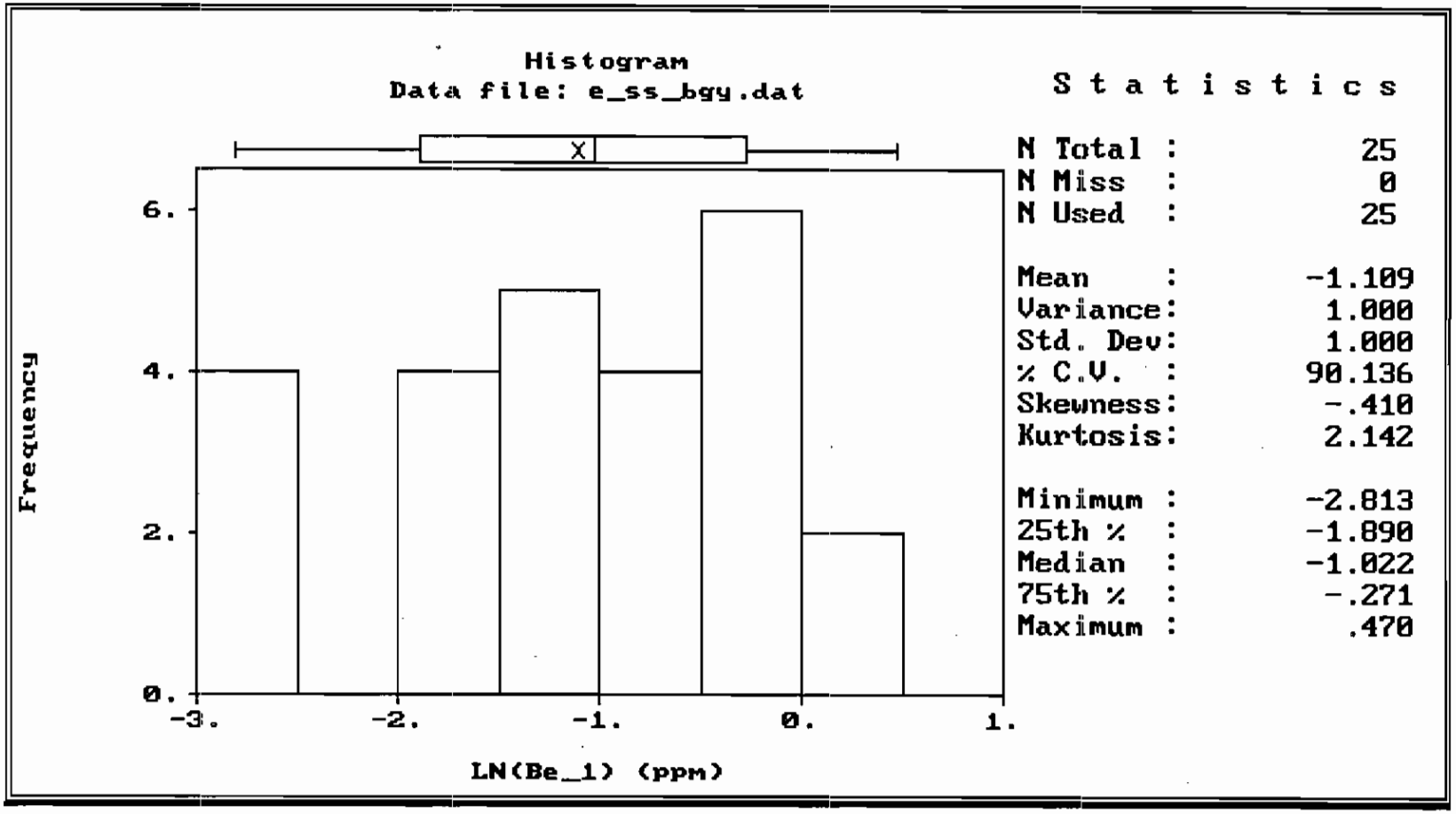


1b

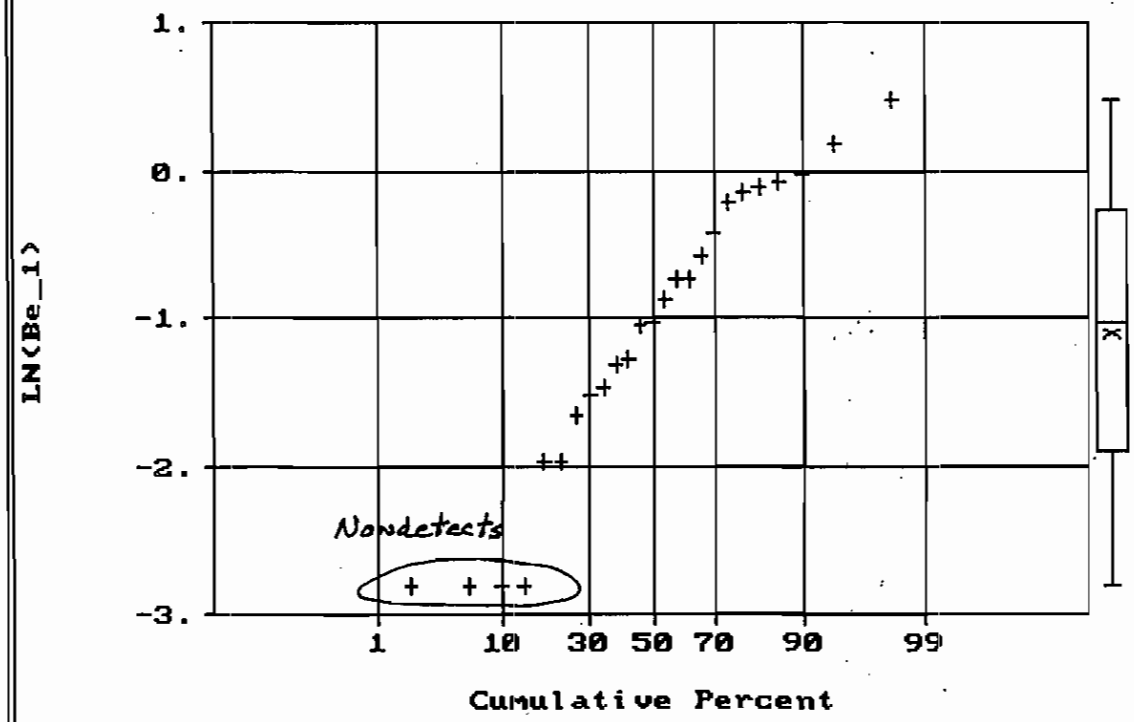

Normal Probability Plot for Be_1
Data file: e_ss_bgy.dat
Be_1
1.6
1.2
.8
.4
.0
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 25
N Miss : 0
N Used : 25
Mean : .492
Variance: .165
Std. Dev: .406
% C.V. : 82.559
Skewness: .999
Kurtosis: 3.365
Minimum : .060
25th % : .153
Median : .360
75th % : .765
Maximum : 1.600

Zone E
Be in surface soil BG samples
Original dataset
LN-transformed values

2a



Normal Probability Plot for LN(Be_1)
Data file: e_ss_bgy.dat



Statistics

N Total :	25
N Miss :	0
N Used :	25
Mean :	-1.109
Variance:	1.000
Std. Dev:	1.000
% C.V. :	90.136
Skewness:	-.410
Kurtosis:	2.142
Minimum :	-2.813
25th % :	-1.890
Median :	-1.022
75th % :	-.271
Maximum :	.470

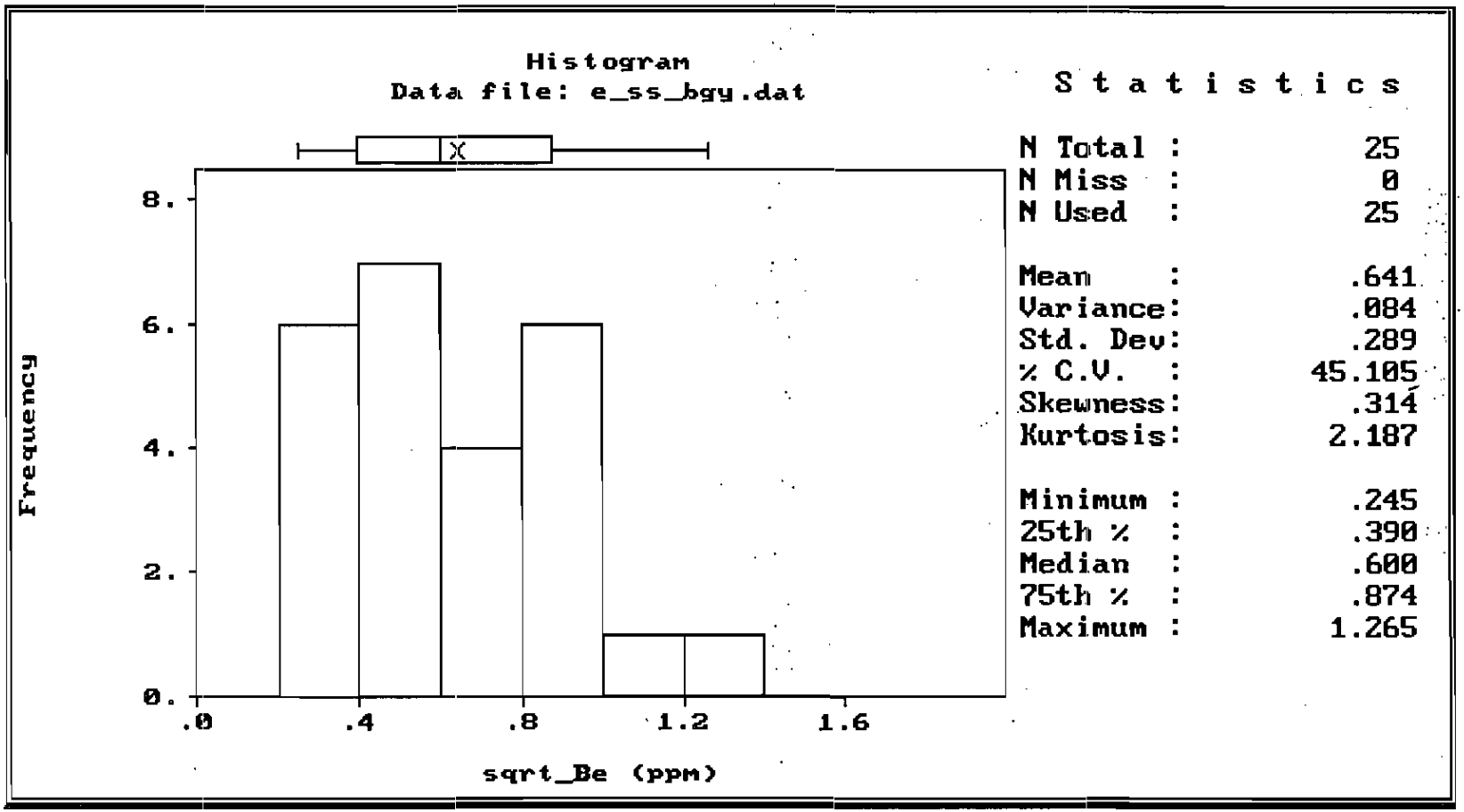
Zone E

Be in surface soil BG samples

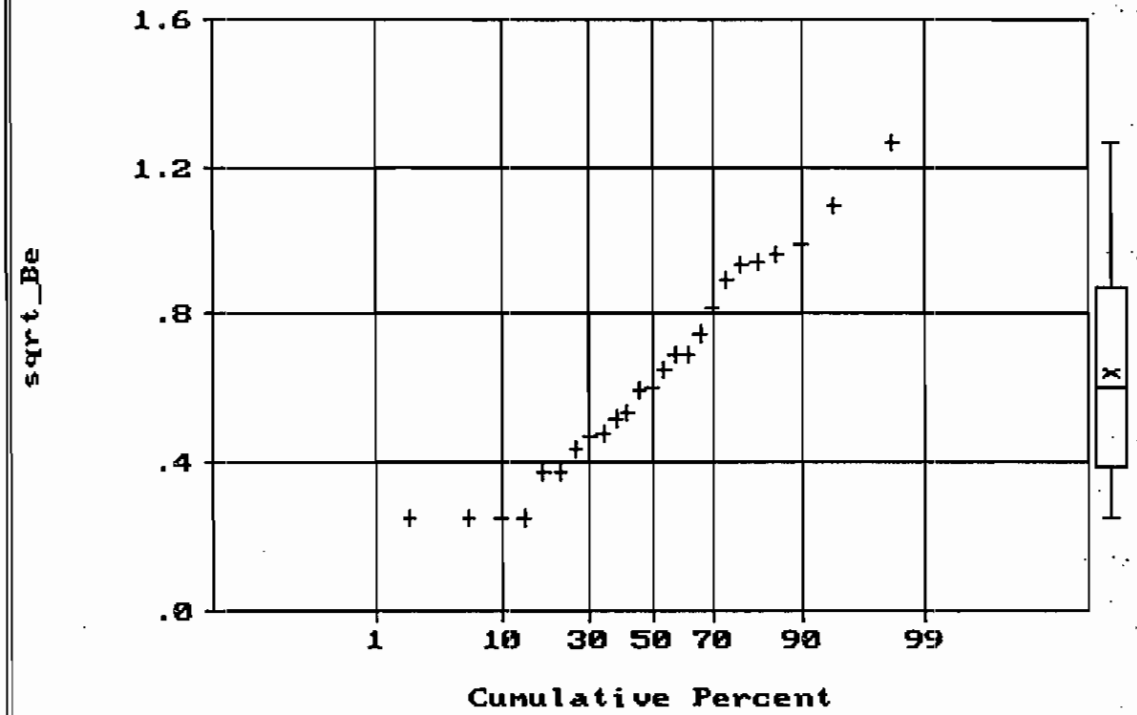
Original dataset (N=25)

Square-root transformed values

3a



Normal Probability Plot for sqrt_Be
Data file: e_ss_bgy.dat

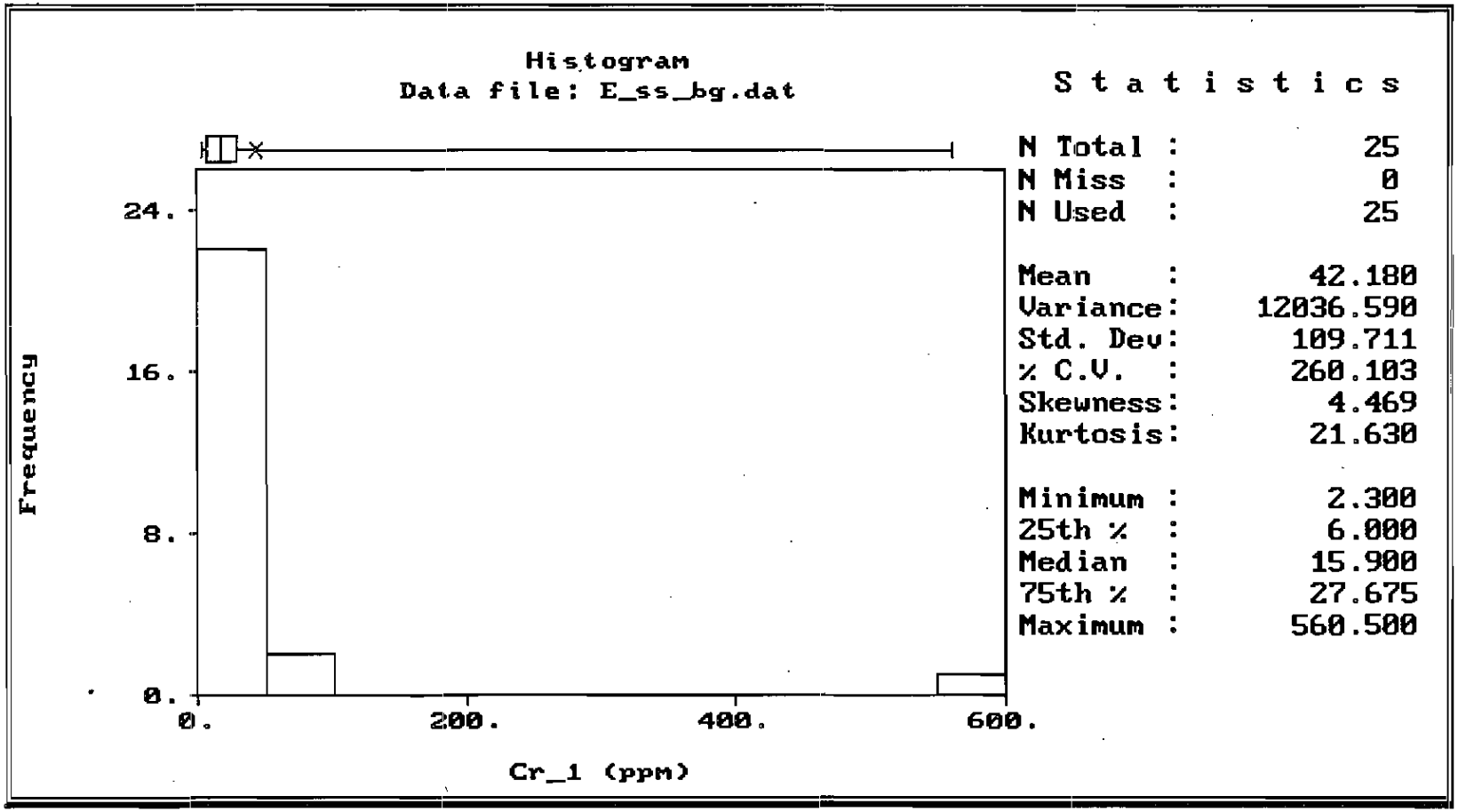


Statistics

N Total :	25
N Miss :	0
N Used :	25
Mean :	.641
Variance:	.084
Std. Dev:	.289
% C.V. :	45.105
Skewness:	.314
Kurtosis:	2.187
Minimum :	.245
25th % :	.390
Median :	.600
75th % :	.874
Maximum :	1.265

Zone E
Chromium in surface soil BG samples
Original dataset
Original values

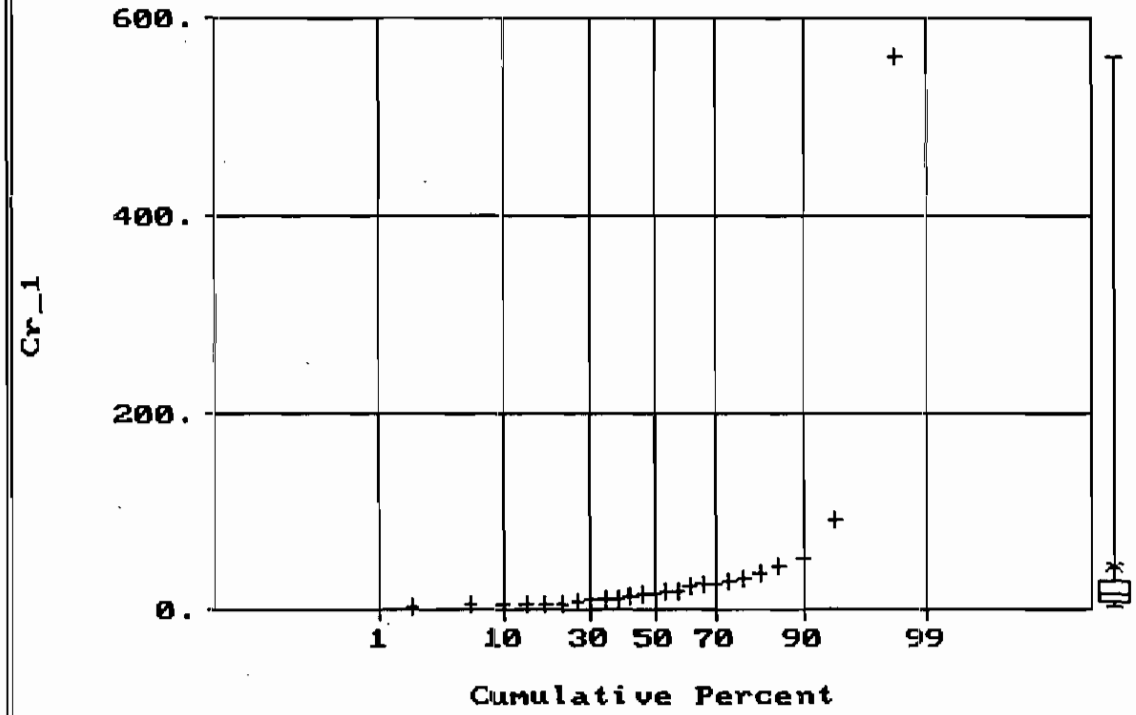
1a



Statistics

N Total :	25
N Miss :	0
N Used :	25
Mean :	42.180
Variance:	12036.590
Std. Dev:	109.711
% C.V. :	260.103
Skewness:	4.469
Kurtosis:	21.630
Minimum :	2.300
25th % :	6.000
Median :	15.900
75th % :	27.675
Maximum :	560.500

Normal Probability Plot for Cr_1
Data file: E_ss_bg.dat



Statistics

N Total :	25
N Miss :	0
N Used :	25
Mean :	42.180
Variance:	12036.590
Std. Dev:	109.711
% C.V. :	260.103
Skewness:	4.469
Kurtosis:	21.630
Minimum :	2.300
25th % :	6.000
Median :	15.900
75th % :	27.675
Maximum :	560.500

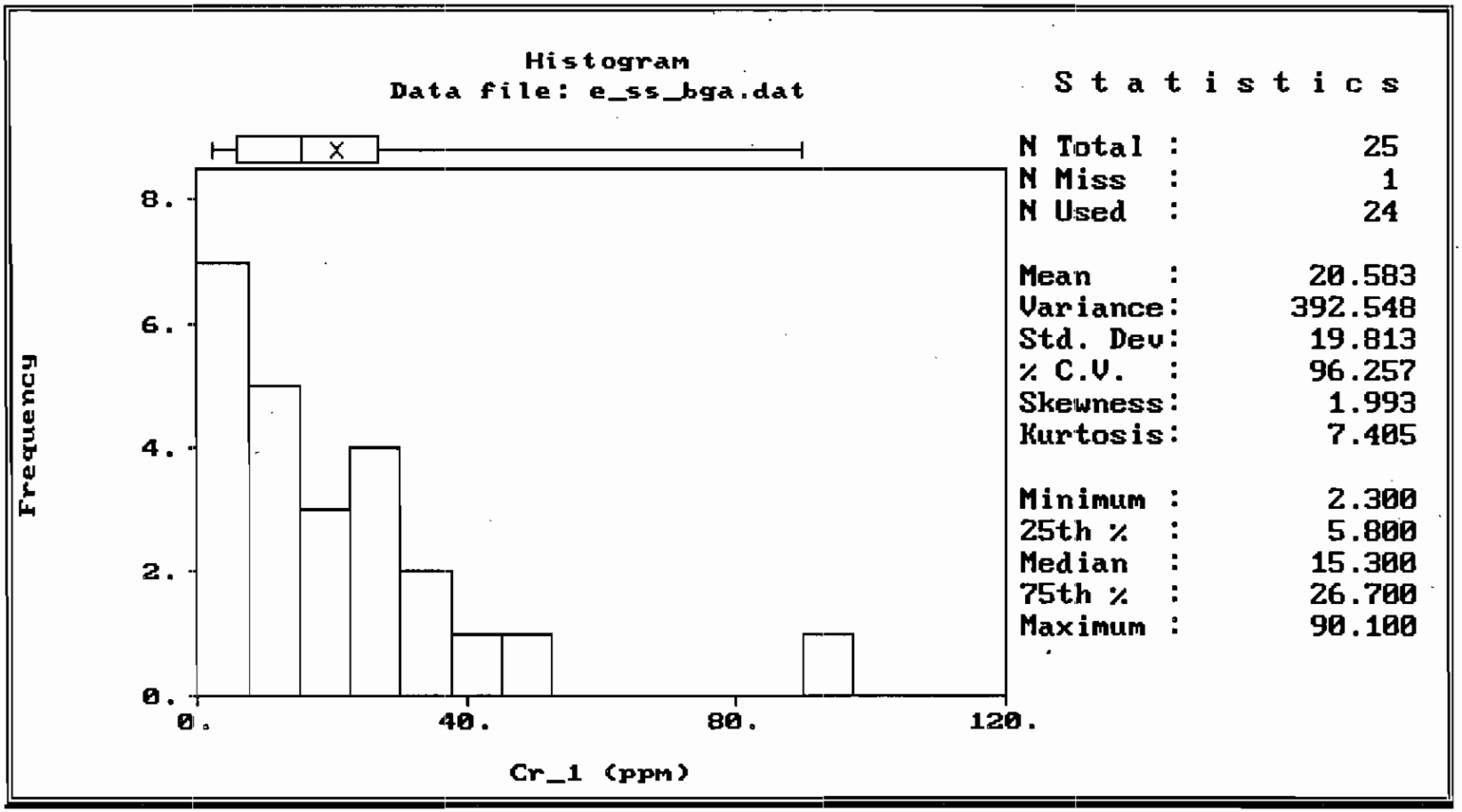
Zone E

Chromium in surface soil BG samples

Sample # 006-01 removed (N = 24)

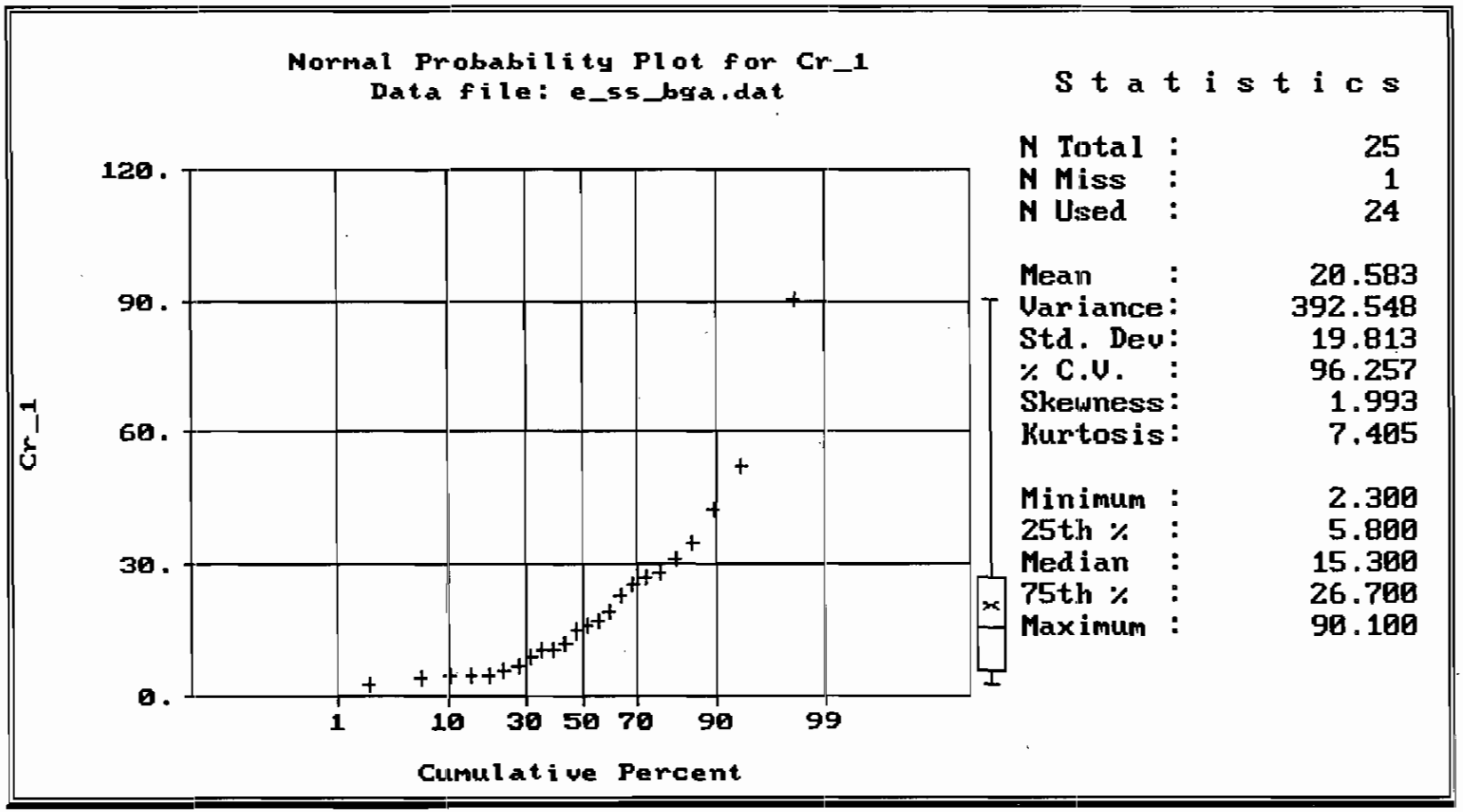
Original values

2a



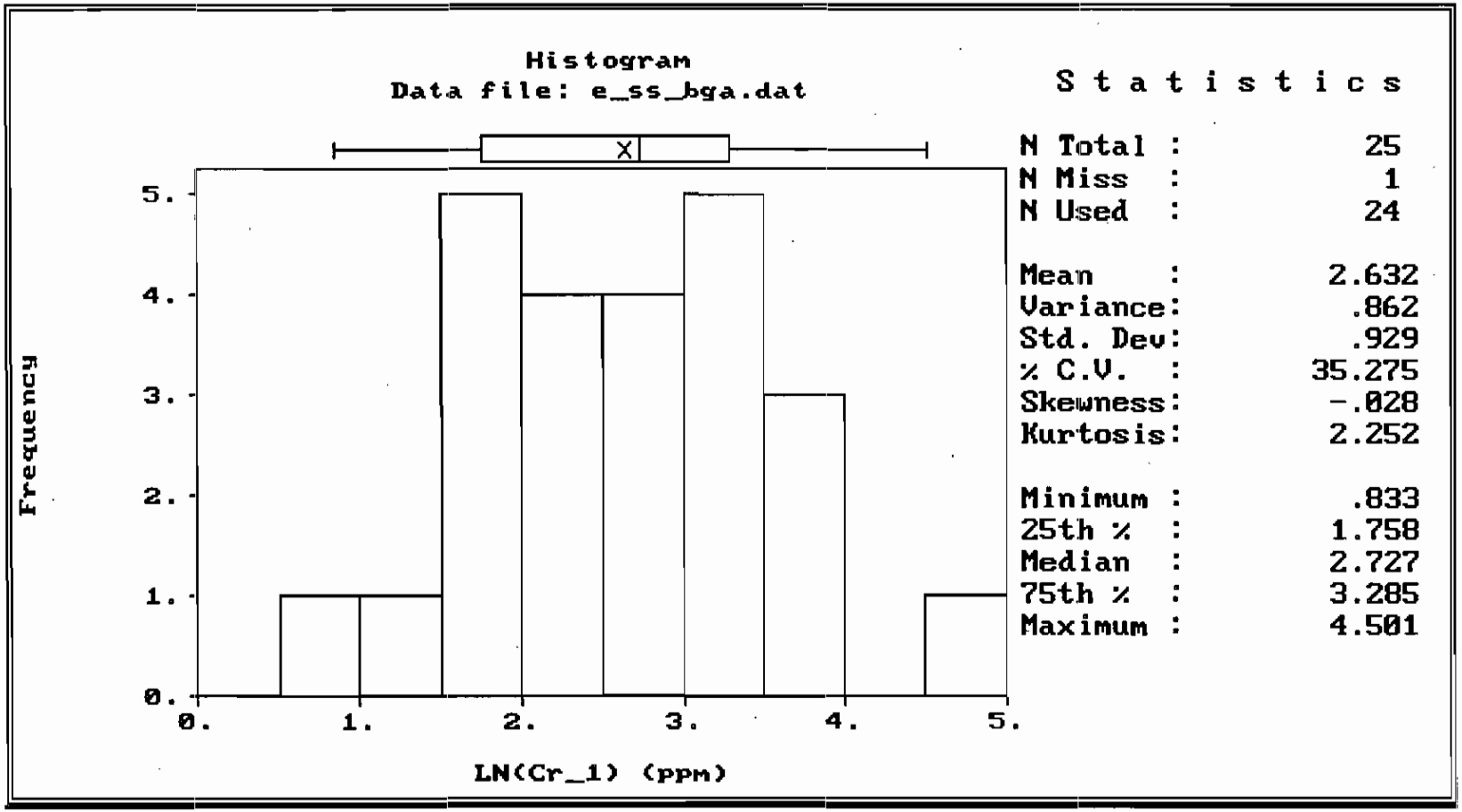
Statistics

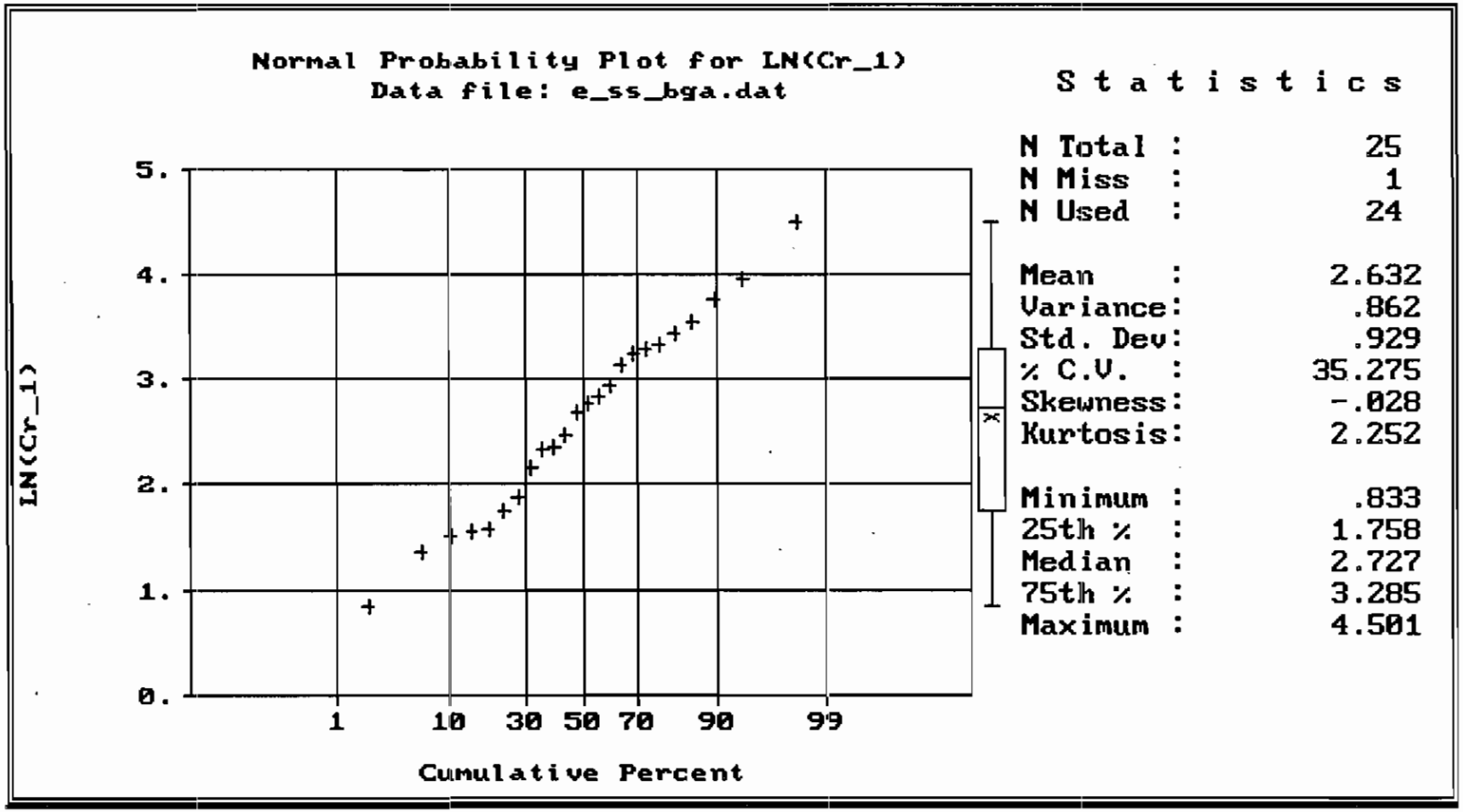
N Total :	25
N Miss :	1
N Used :	24
Mean :	20.583
Variance:	392.548
Std. Dev:	19.813
% C.V. :	96.257
Skewness:	1.993
Kurtosis:	7.405
Minimum :	2.300
25th % :	5.800
Median :	15.300
75th % :	26.700
Maximum :	90.100


Normal Probability Plot for Cr_1
Data file: e_ss_bga.dat
120.
90.
60.
30.
0.
Cr_1
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 25
N Miss : 1
N Used : 24
Mean : 20.583
Variance: 392.548
Std. Dev: 19.813
% C.V. : 96.257
Skewness: 1.993
Kurtosis: 7.405
Minimum : 2.300
25th % : 5.800
Median : 15.300
75th % : 26.700
Maximum : 90.100

Zone E
Chromium in surface soil BG samples
Sample #006-01 removed (N=24)
LN-transformed values

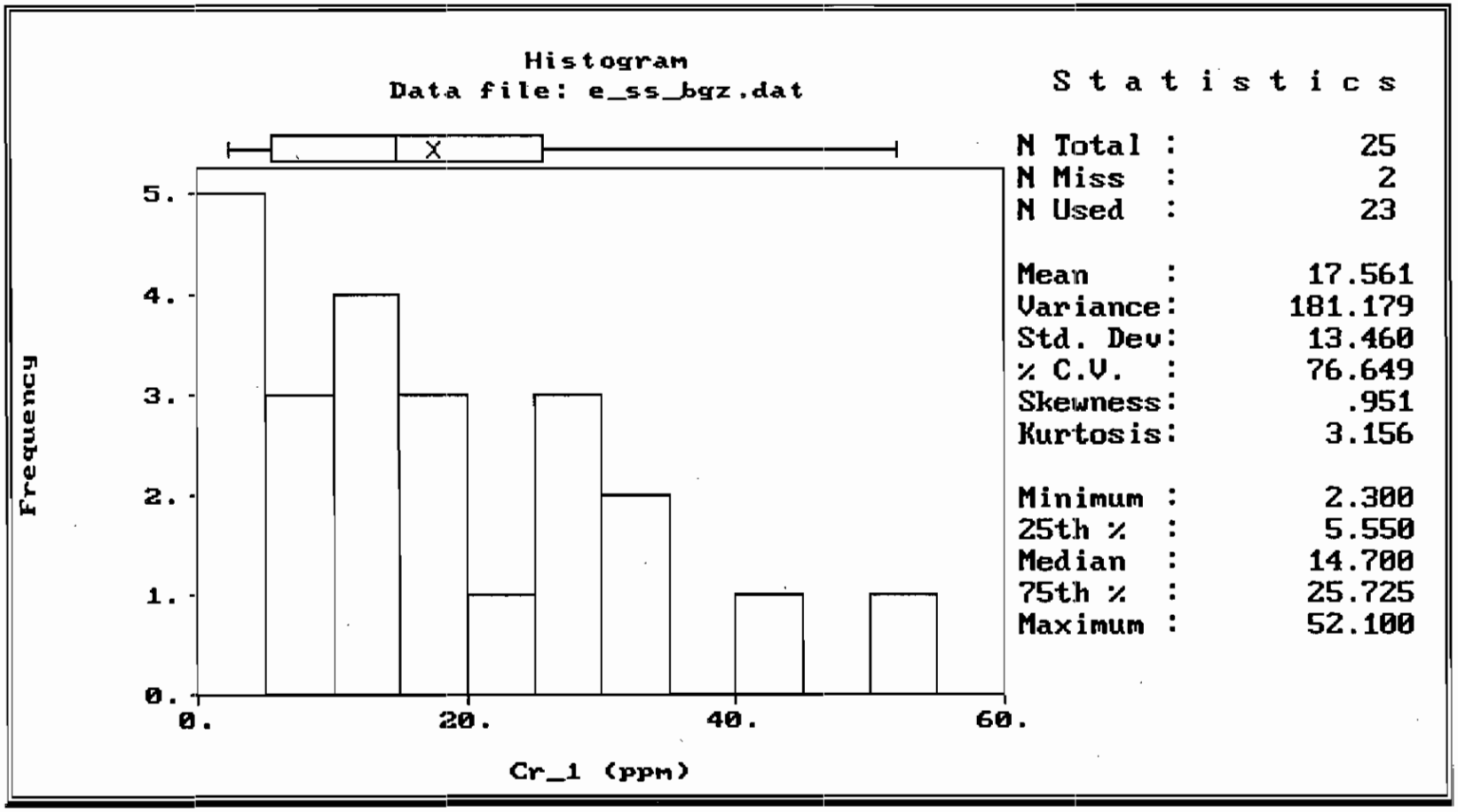
3a

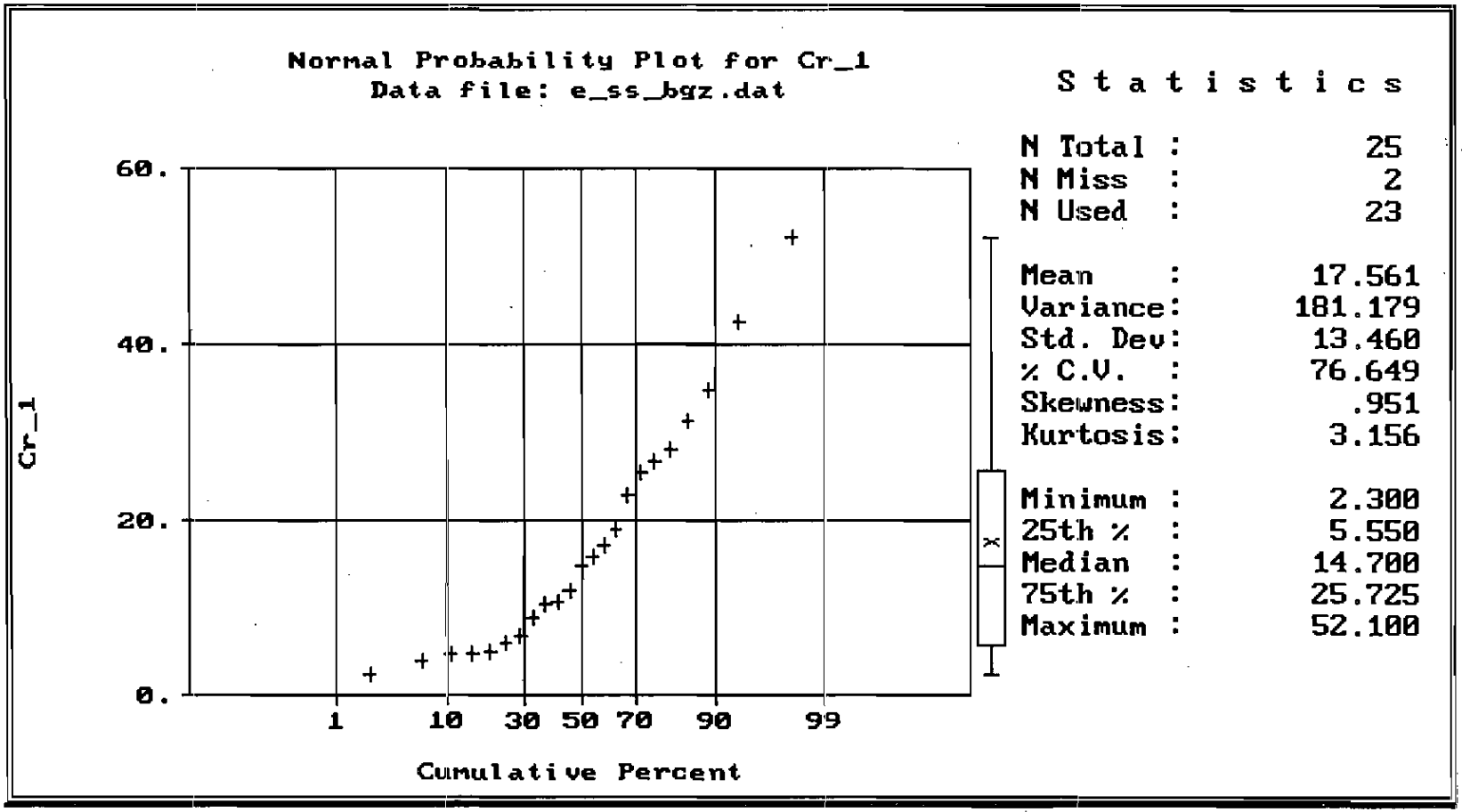



Normal Probability Plot for LN(Cr_1)
Data file: e_ss_bga.dat
LN(Cr_1)
5.
4.
3.
2.
1.
0.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 25
N Miss : 1
N Used : 24
Mean : 2.632
Variance: .862
Std. Dev: .929
% C.V. : 35.275
Skewness: -.028
Kurtosis: 2.252
Minimum : .833
25th % : 1.758
Median : 2.727
75th % : 3.285
Maximum : 4.501

Zone E
Chromium in surface soil BG samples
Samples # 006-01 and 010-01 removed (N=23)
Original values

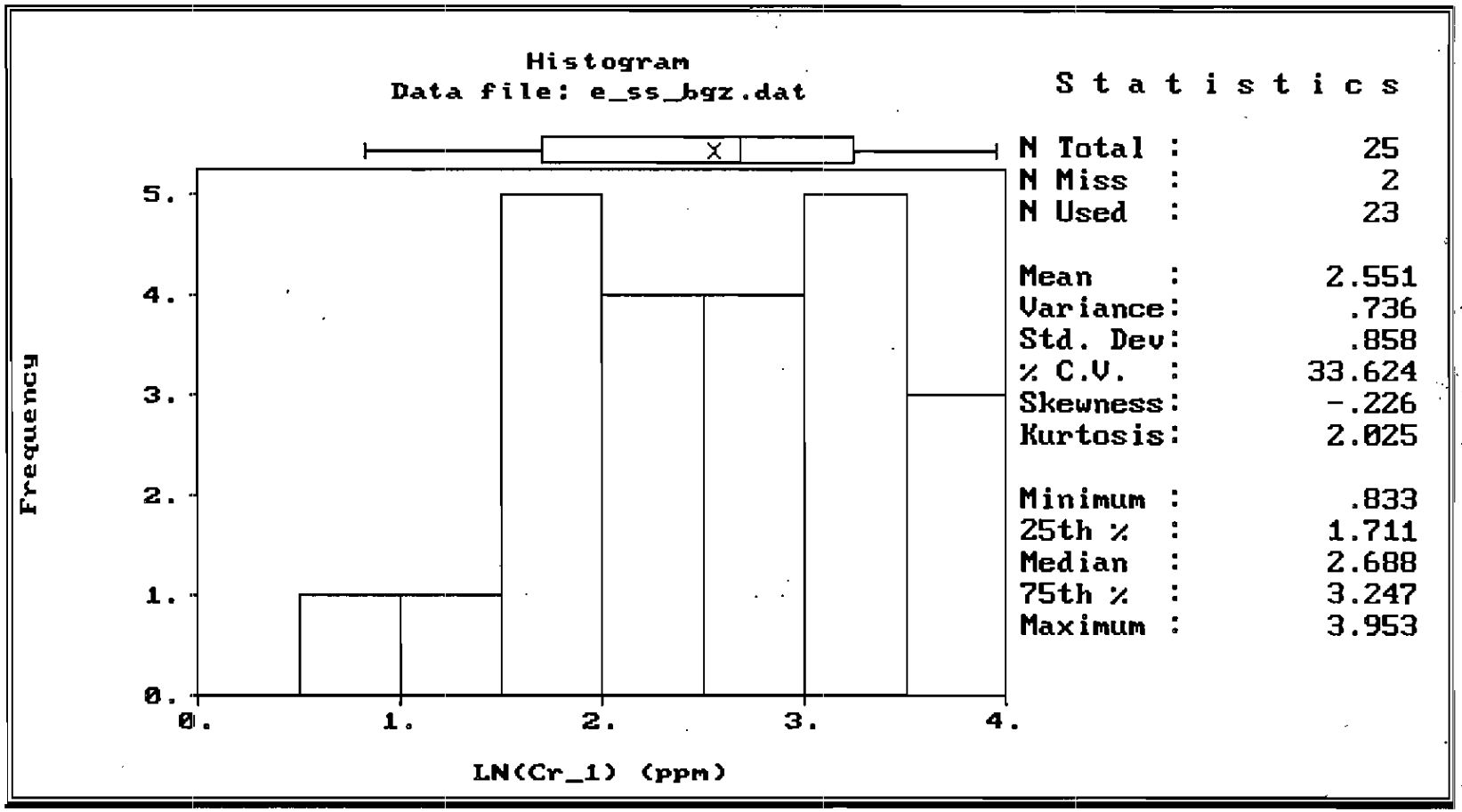
4a

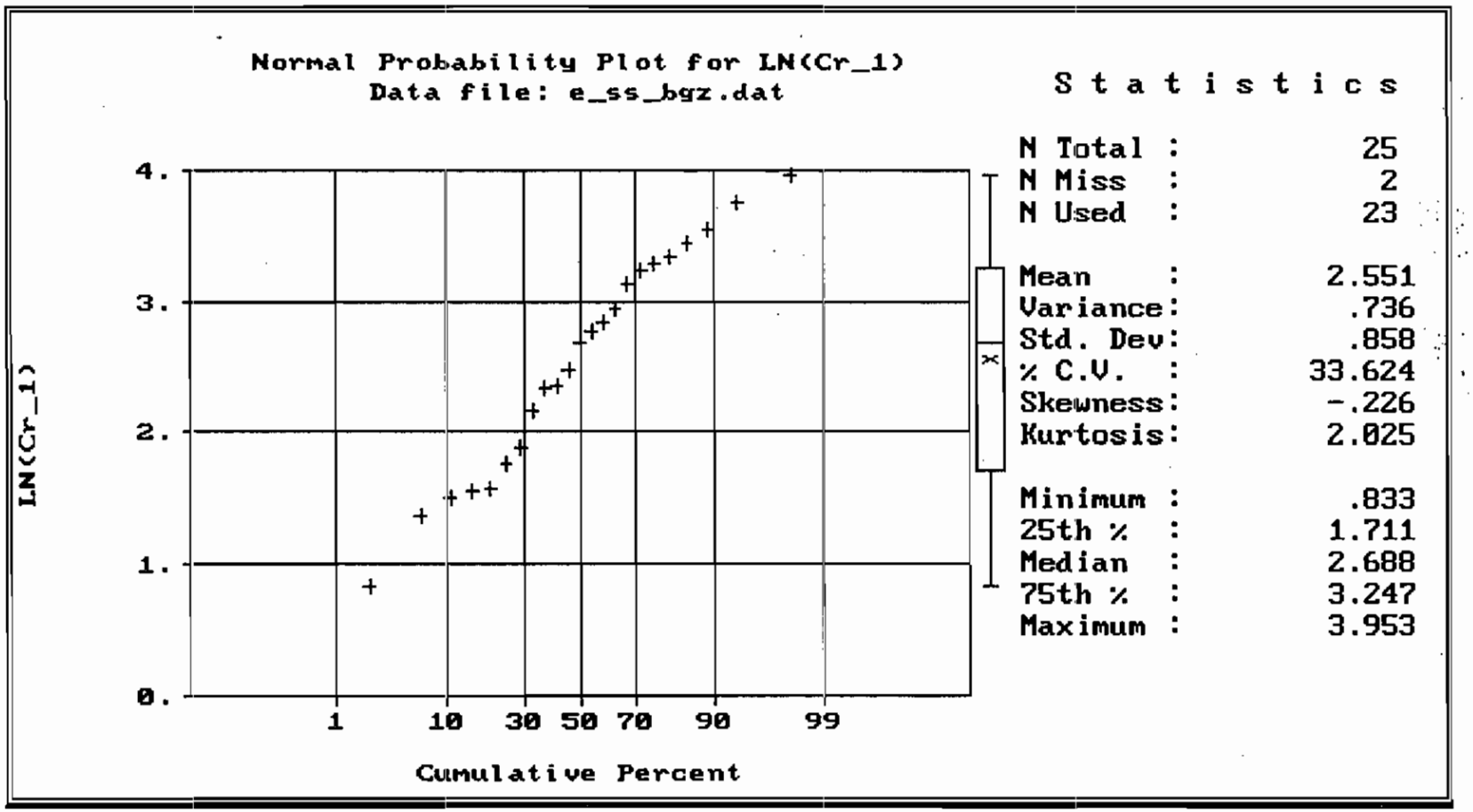



Normal Probability Plot for Cr_1
Data file: e_ss_bgz.dat
Cr_1
60.
40.
20.
0.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 25
N Miss : 2
N Used : 23
Mean : 17.561
Variance: 181.179
Std. Dev: 13.460
% C.V. : 76.649
Skewness: .951
Kurtosis: 3.156
Minimum : 2.300
25th % : 5.550
Median : 14.700
75th % : 25.725
Maximum : 52.100

Zone E
Chromium in surface soil BG samples
Samples #006-01 and 010-01 removed (N=23)
LN-transformed values

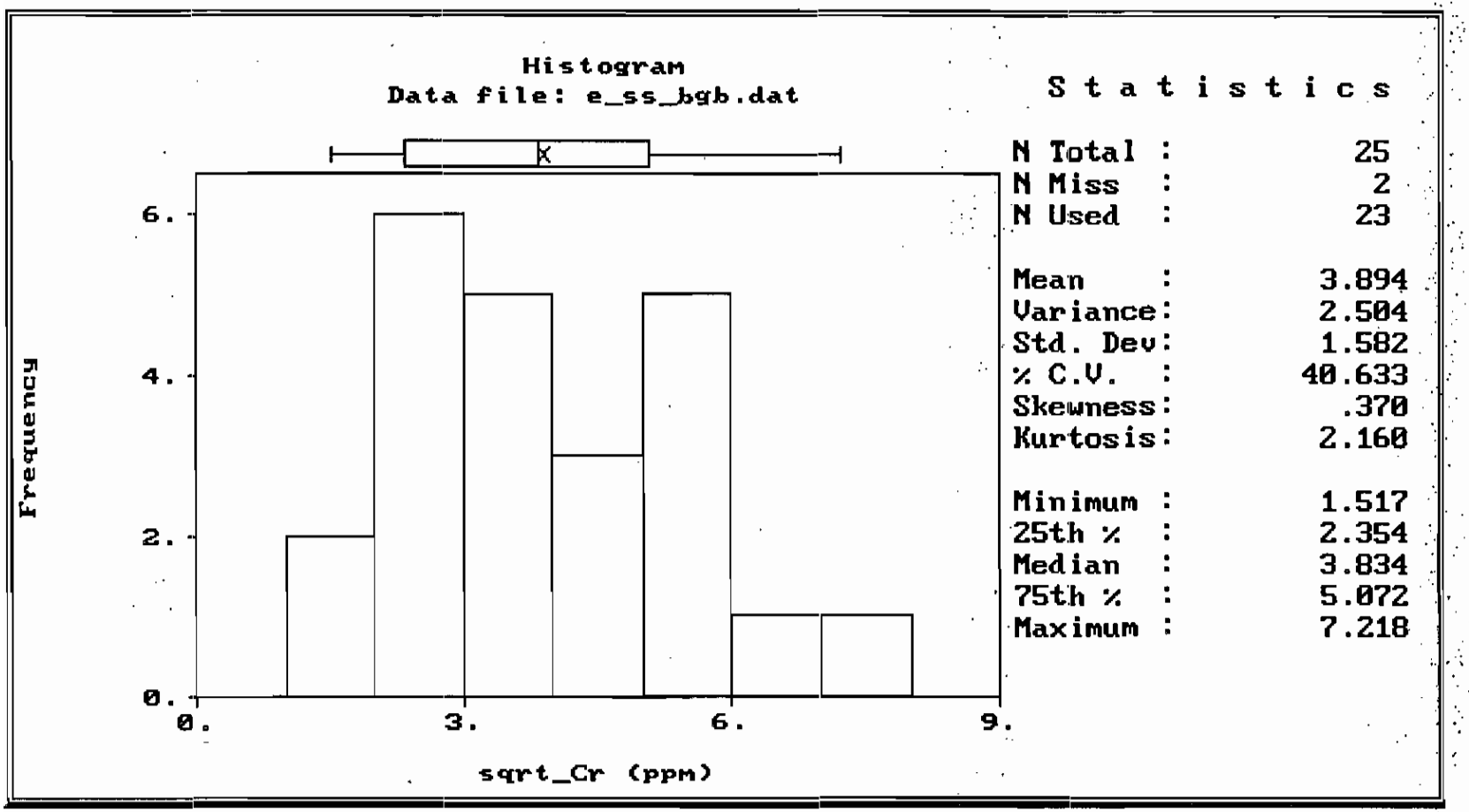
5a



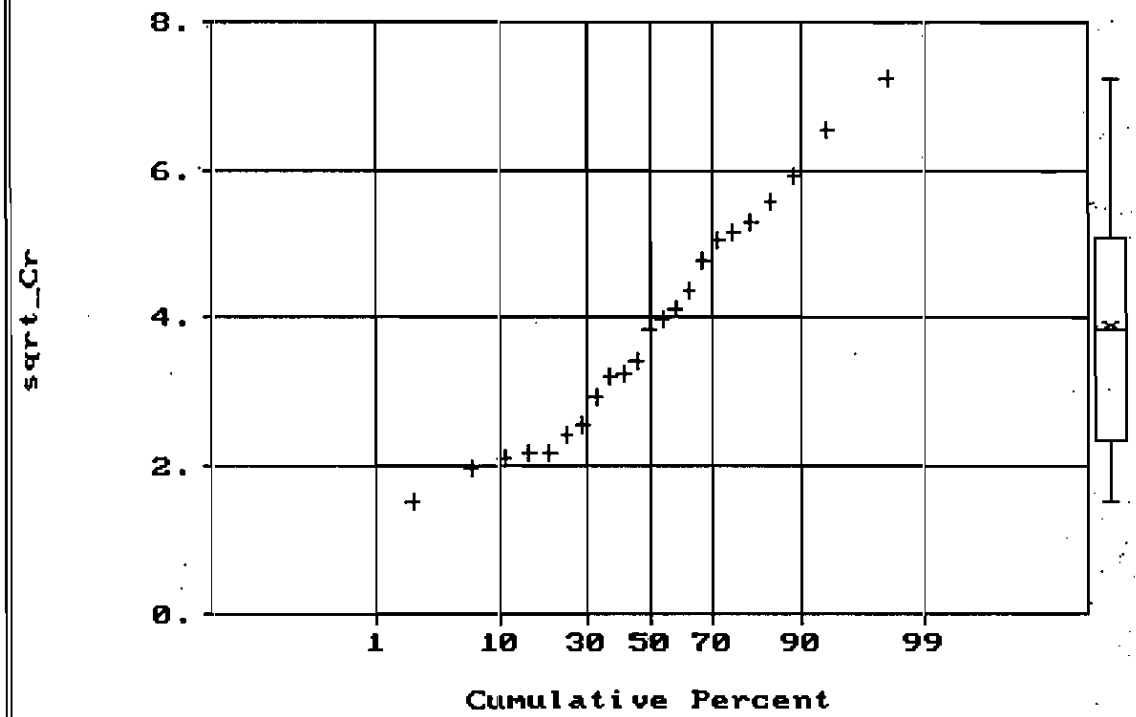

Normal Probability Plot for LN(Cr_1)
Data file: e_ss_bgz.dat
LN(Cr_1)
4.
3.
2.
1.
0.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 25
N Miss : 2
N Used : 23
Mean : 2.551
Variance: .736
Std. Dev: .858
% C.V. : 33.624
Skewness: -.226
Kurtosis: 2.025
Minimum : .833
25th % : 1.711
Median : 2.688
75th % : 3.247
Maximum : 3.953

Zone E
Chromium in surface soil BG samples
Samples #006-01 and 010-01 removed (N=23)
Square-root transformed values

6a



Normal Probability Plot for sqrt_Cr
Data file: e_ss_bgb.dat

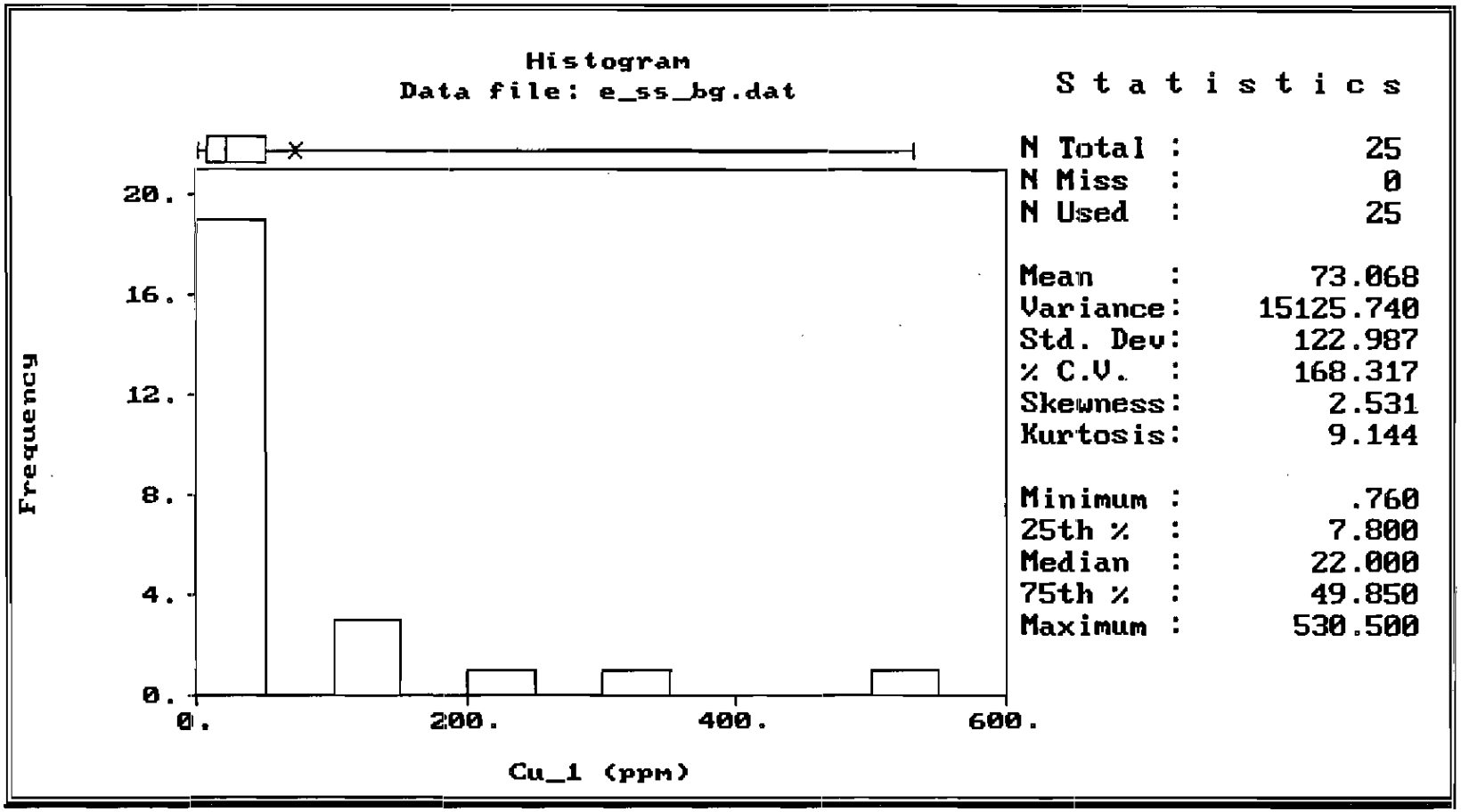


S t a t i s t i c s

N Total :	25
N Miss :	2
N Used :	23
Mean :	3.894
Variance:	2.504
Std. Dev:	1.582
% C.V. :	40.633
Skewness:	.370
Kurtosis:	2.160
Minimum :	1.517
25th % :	2.354
Median :	3.834
75th % :	5.072
Maximum :	7.218

Zone E
Copper in surface soil BG samples
Original dataset (N=25)
Original values

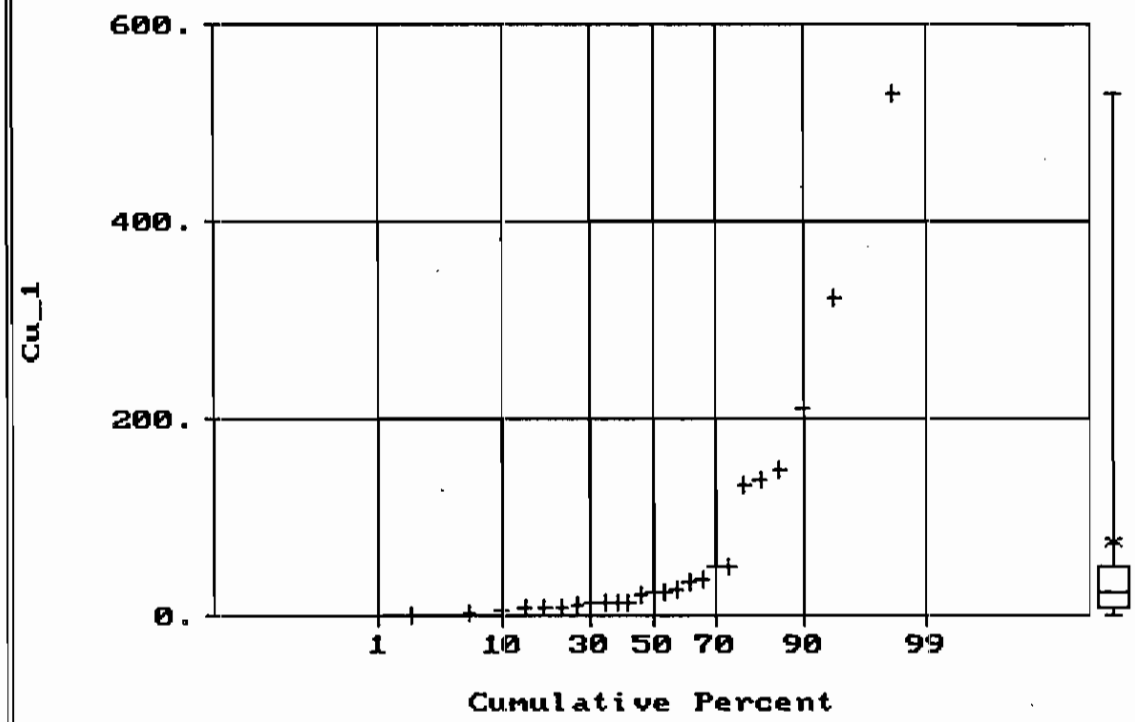
1a



Statistics

N Total :	25
N Miss :	0
N Used :	25
Mean :	73.068
Variance:	15125.740
Std. Dev:	122.987
% C.V. :	168.317
Skewness:	2.531
Kurtosis:	9.144
Minimum :	.760
25th % :	7.800
Median :	22.000
75th % :	49.850
Maximum :	530.500

Normal Probability Plot for Cu_1
Data file: e_ss_bg.dat

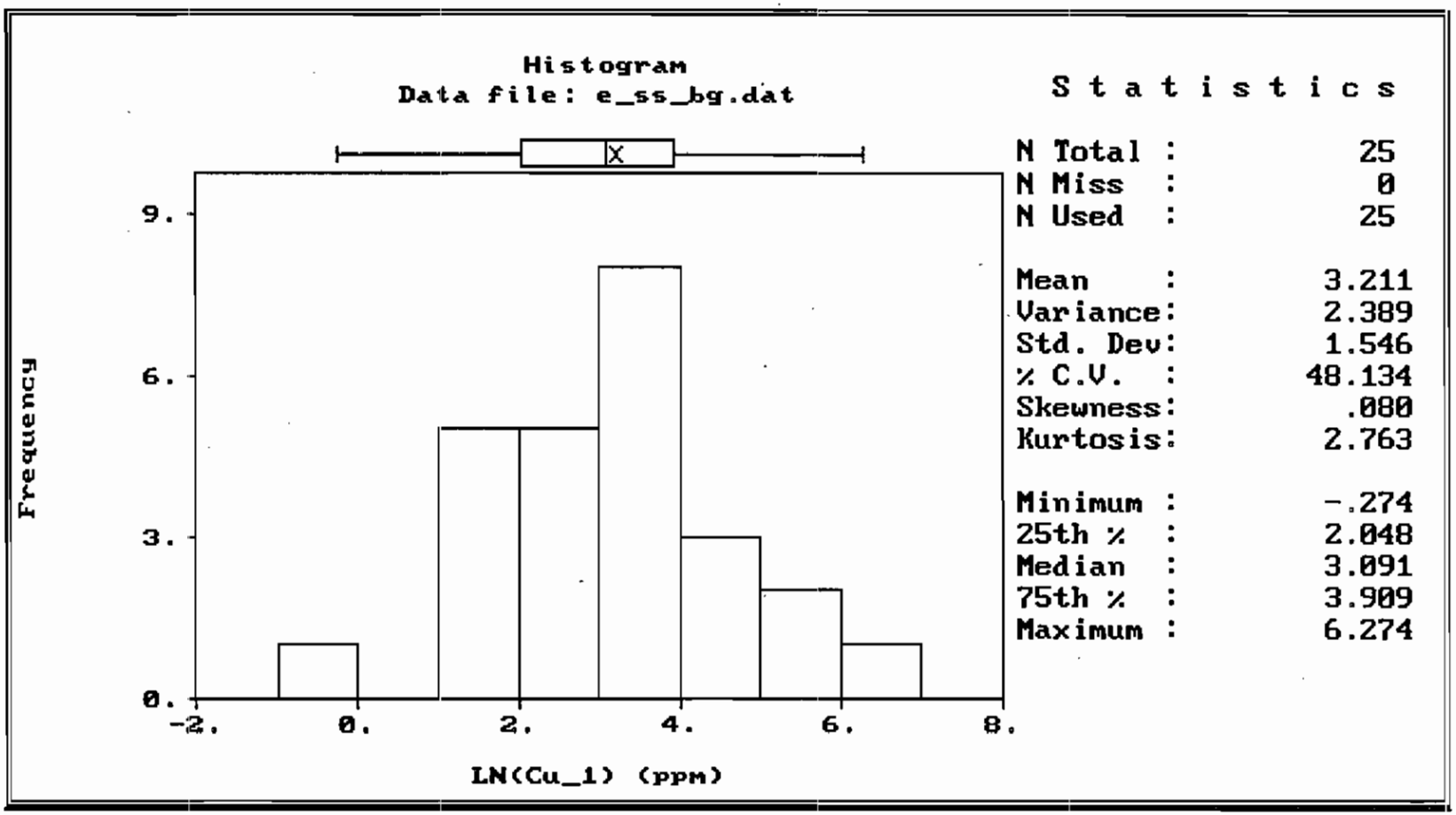


Statistics

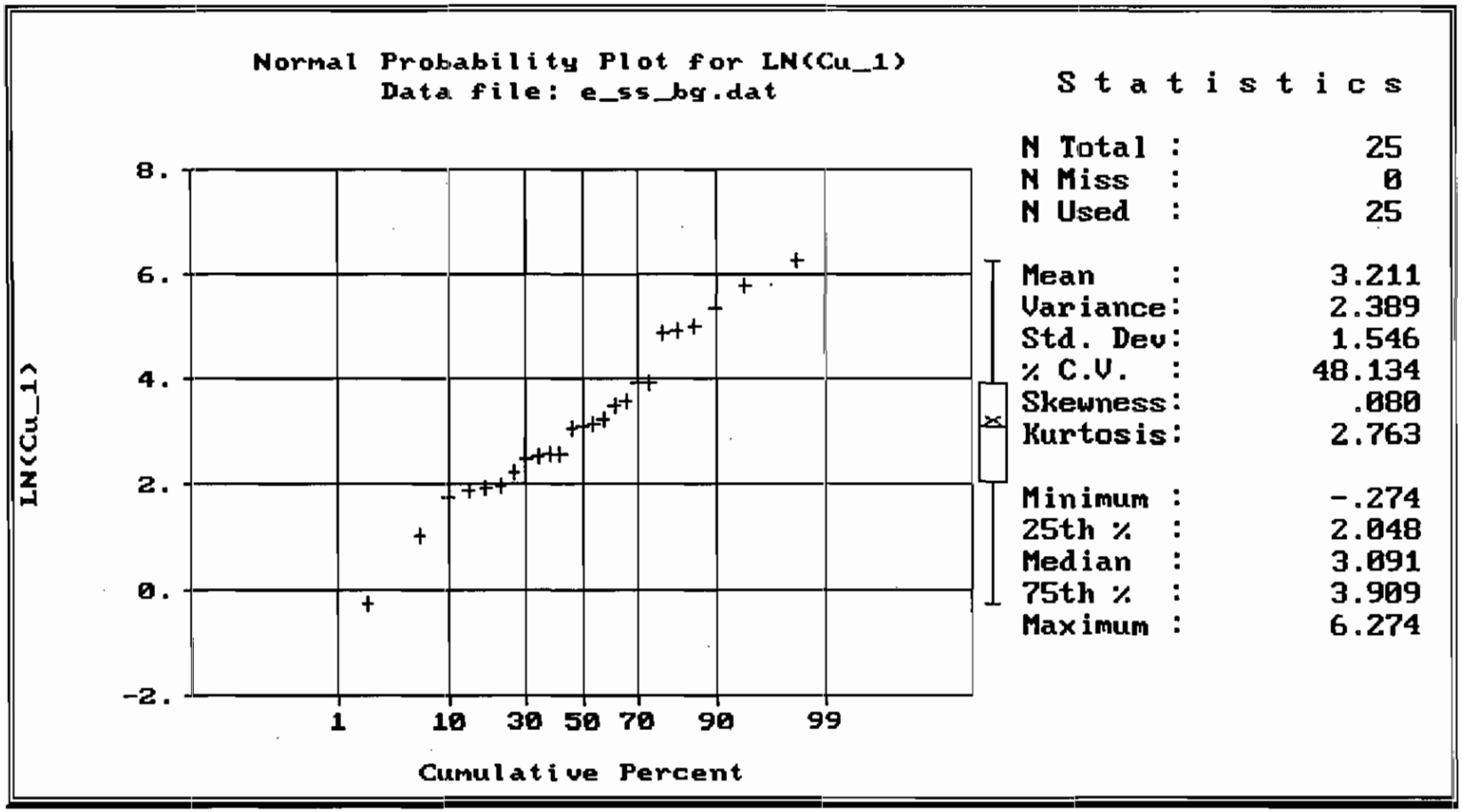
N Total :	25
N Miss :	0
N Used :	25
Mean :	73.068
Variance:	15125.740
Std. Dev:	122.987
% C.V. :	168.317
Skewness:	2.531
Kurtosis:	9.144
Minimum :	.760
25th % :	7.800
Median :	22.000
75th % :	49.850
Maximum :	530.500

Zone E
Copper in surface soil BG samples
Original dataset (N = 25)
LN-transformed values

2a

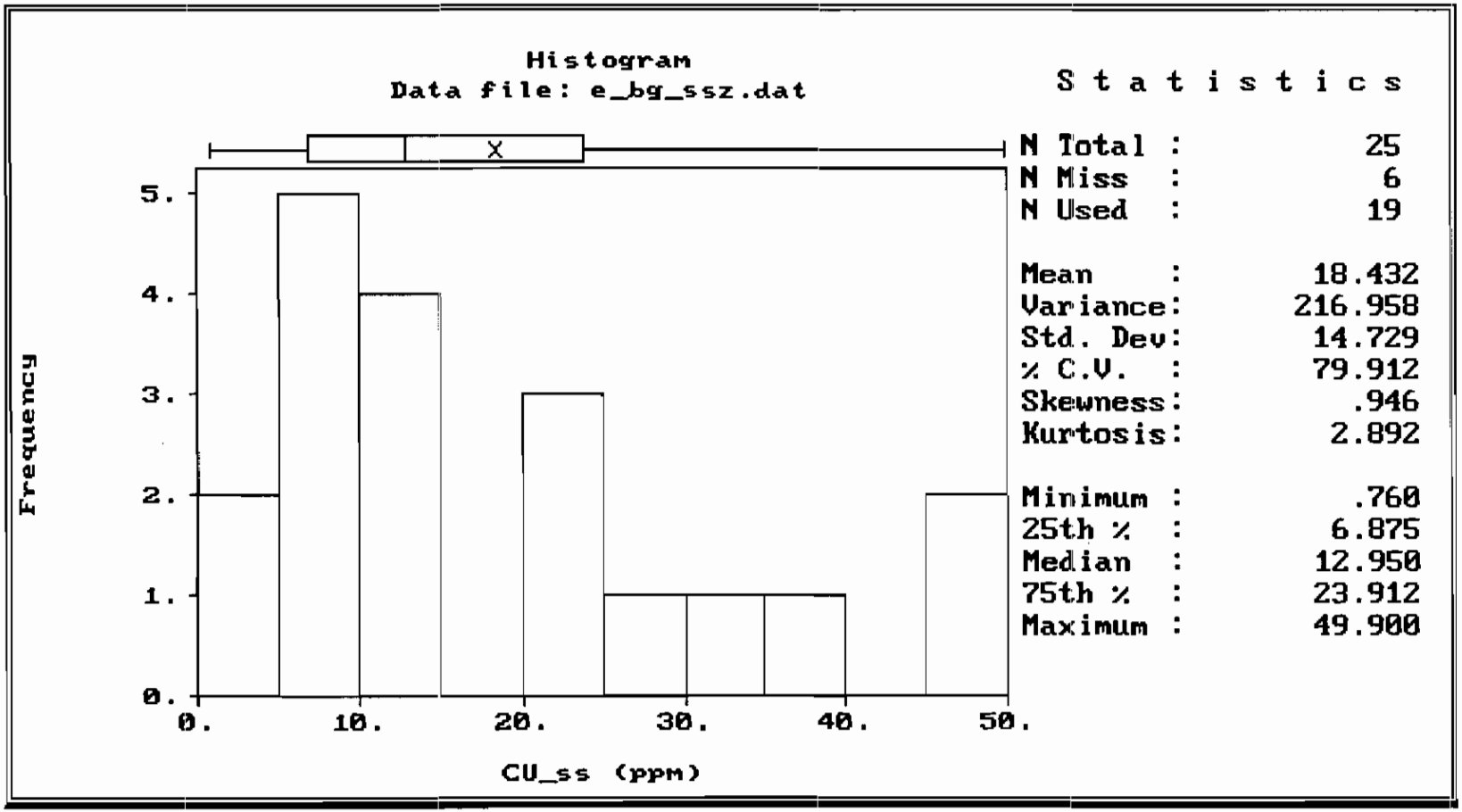


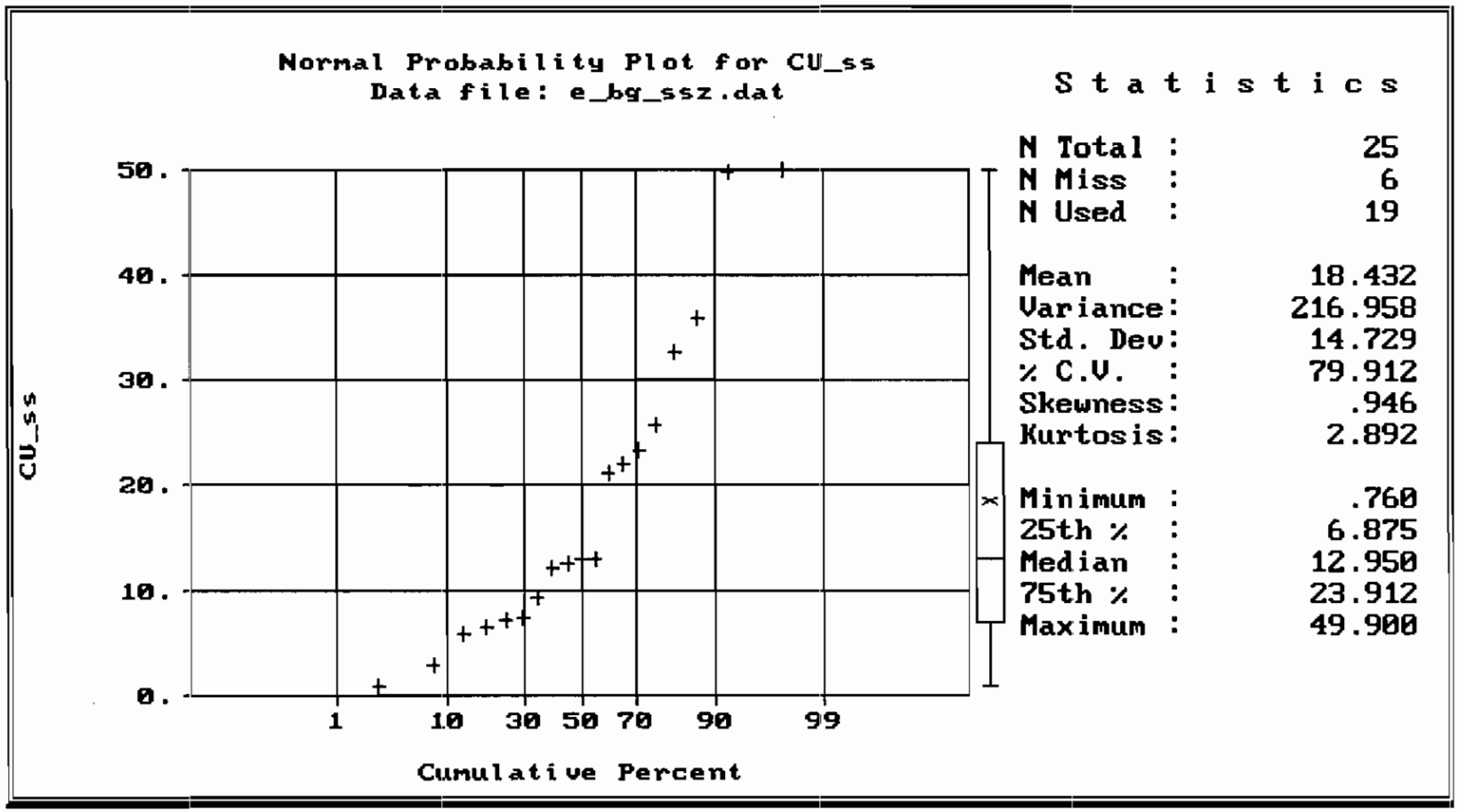
2b


Normal Probability Plot for LN(Cu_1)
Data file: e_ss_bg.dat
LN(Cu_1)
8.
6.
4.
2.
0.
-2.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 25
N Miss : 0
N Used : 25
Mean : 3.211
Variance: 2.389
Std. Dev: 1.546
% C.V. : 48.134
Skewness: .080
Kurtosis: 2.763
Minimum : -.274
25th % : 2.048
Median : 3.091
75th % : 3.909
Maximum : 6.274

Zone E
Copper in surface soil BG samples
Six highest samples removed (N=19)
Original values

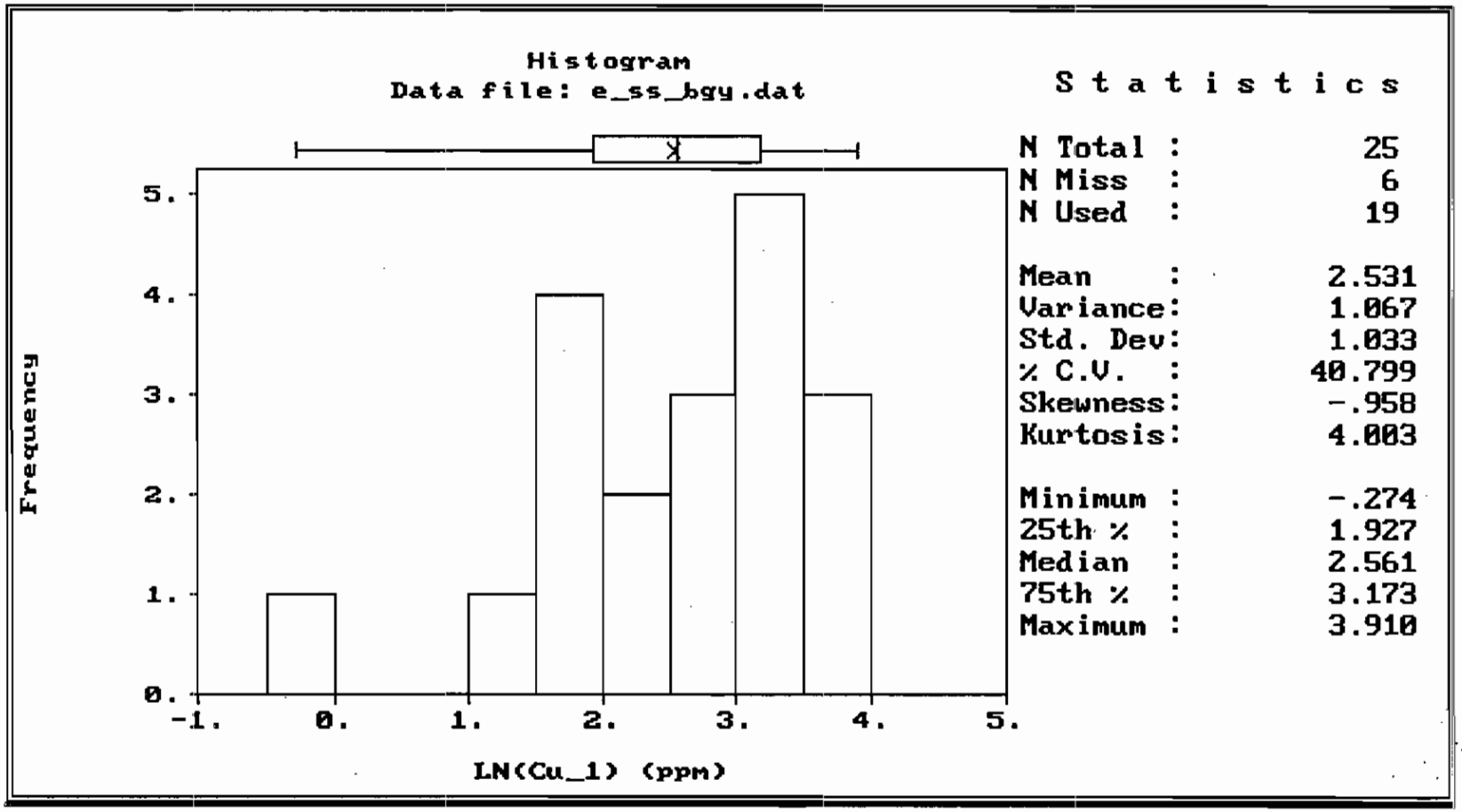
3a



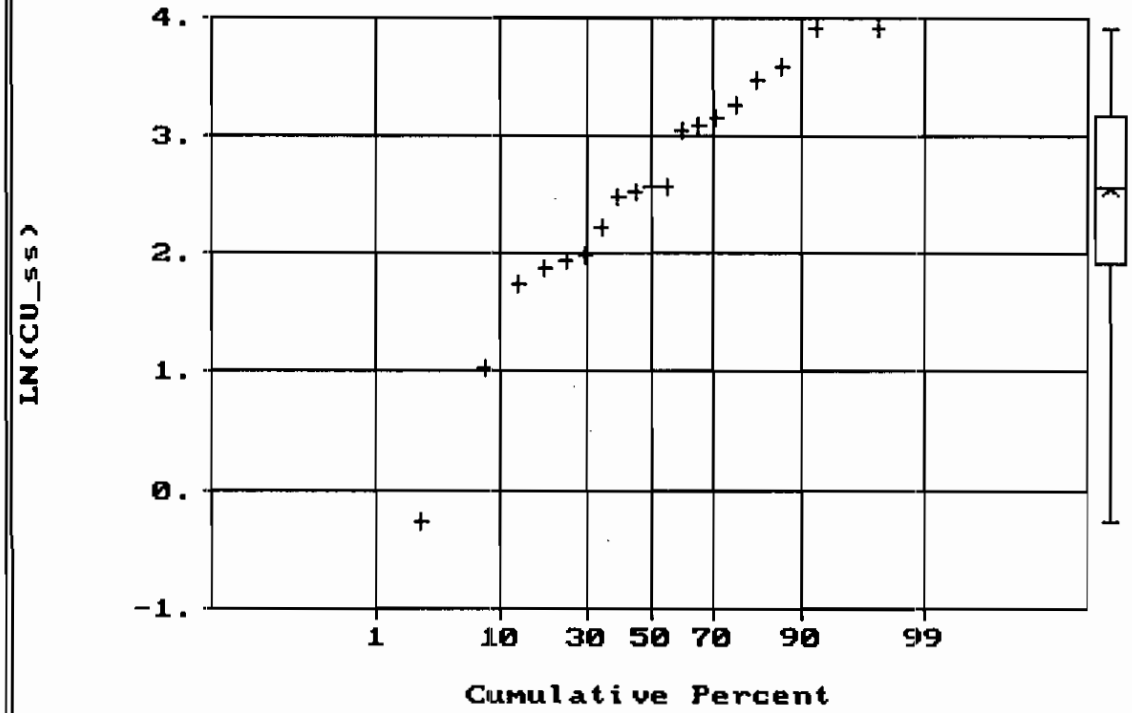

Normal Probability Plot for CU_ss
Data file: e_bg_ssz.dat
CU_ss
50.
40.
30.
20.
10.
0.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 25
N Miss : 6
N Used : 19
Mean : 18.432
Variance: 216.958
Std. Dev: 14.729
% C.V. : 79.912
Skewness: .946
Kurtosis: 2.892
Minimum : .760
25th % : 6.875
Median : 12.950
75th % : 23.912
Maximum : 49.900

Zone E
Copper in surface soil BG samples
Six highest samples removed (N = 19)
LN - transformed values

4a



Normal Probability Plot for LN(CU_ss)
Data file: e_bg_ssz.dat

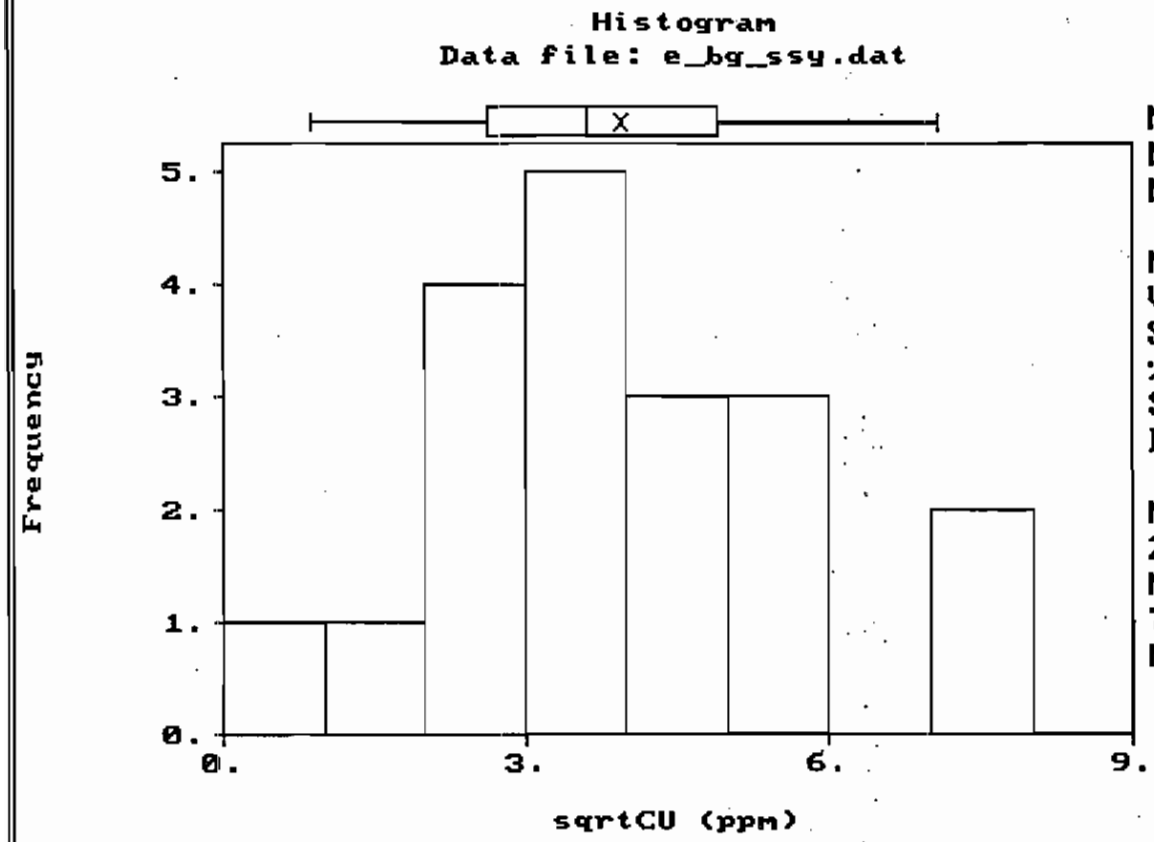


S t a t i s t i c s

N Total :	25
N Miss :	6
N Used :	19
Mean :	2.531
Variance:	1.067
Std. Dev:	1.033
% C.V. :	40.799
Skewness:	-.958
Kurtosis:	4.003
Minimum :	-.274
25th % :	1.927
Median :	2.561
75th % :	3.173
Maximum :	3.910

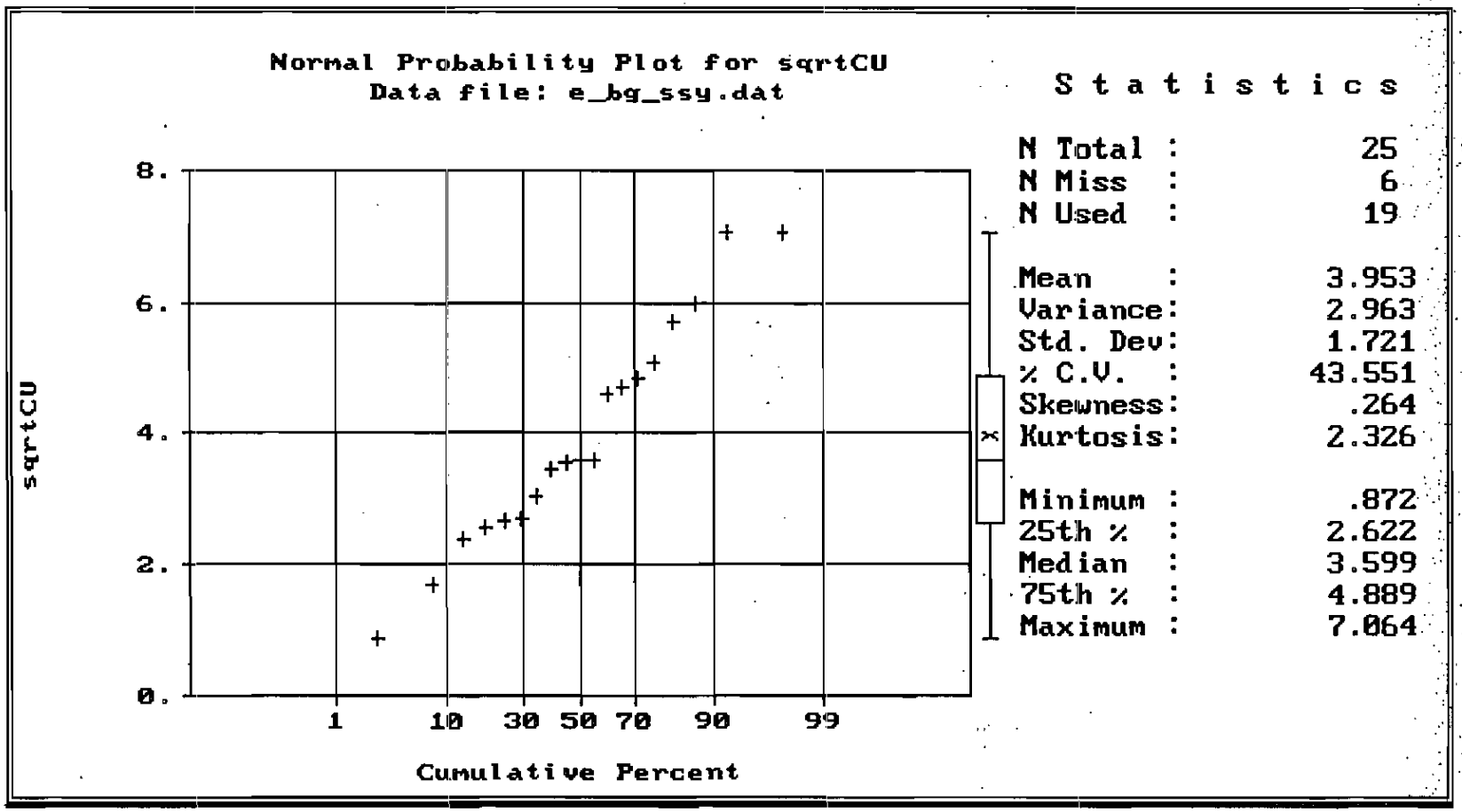
Zone E
Copper in surface soil BG samples
Six highest samples removed (N=19)
Square-root transformed values

5a



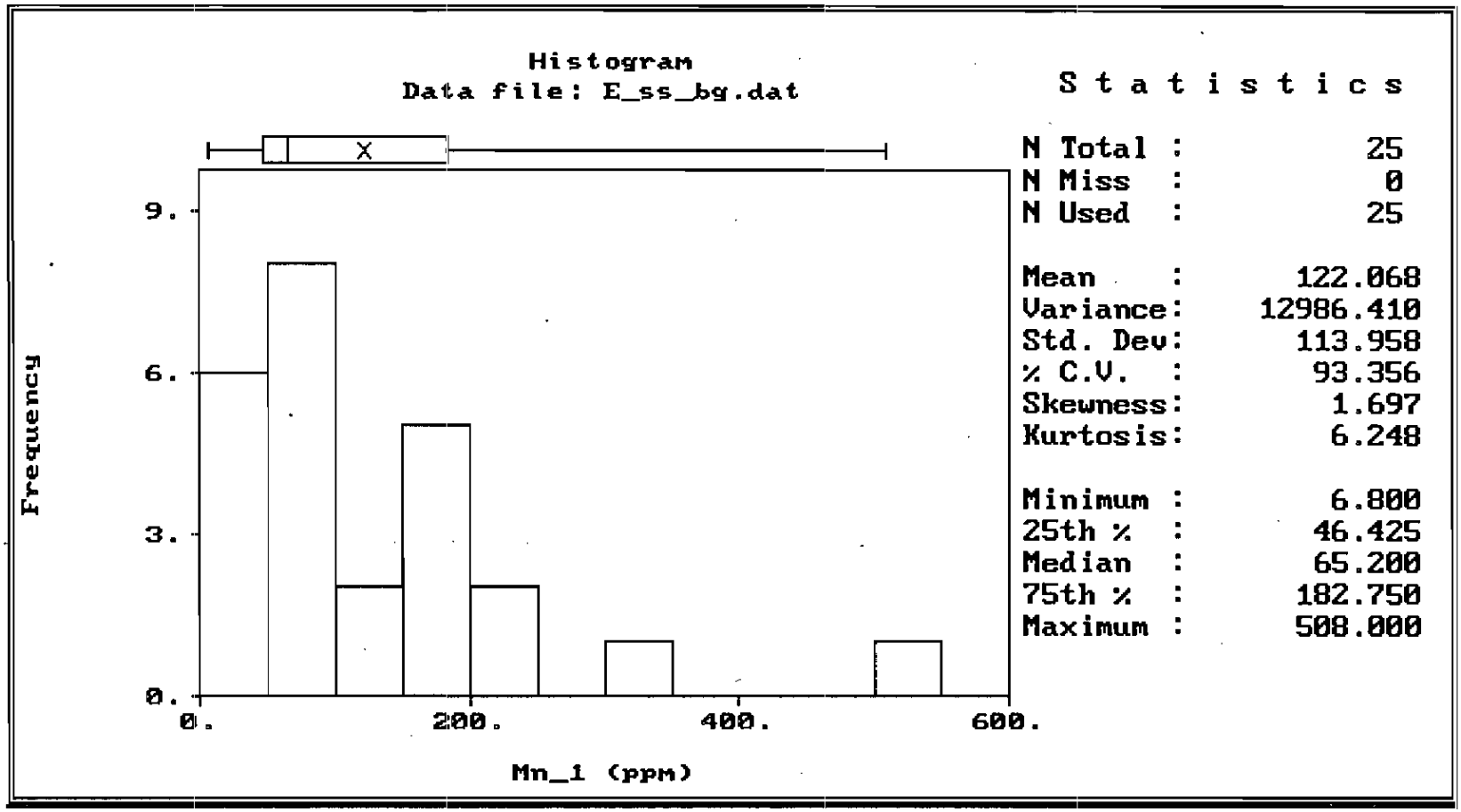
Statistics

N Total :	25
N Miss :	6
N Used :	19
Mean :	3.953
Variance:	2.963
Std. Dev:	1.721
% C.V. :	43.551
Skewness:	.264
Kurtosis:	2.326
Minimum :	.872
25th % :	2.622
Median :	3.599
75th % :	4.889
Maximum :	7.064


Normal Probability Plot for sqrtCU
Data file: e_bg_ssy.dat
sqrtCU
8.
6.
4.
2.
0.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 25
N Miss : 6
N Used : 19
Mean : 3.953
Variance: 2.963
Std. Dev: 1.721
% C.V. : 43.551
Skewness: .264
Kurtosis: 2.326
Minimum : .872
25th % : 2.622
Median : 3.599
75th % : 4.889
Maximum : 7.064

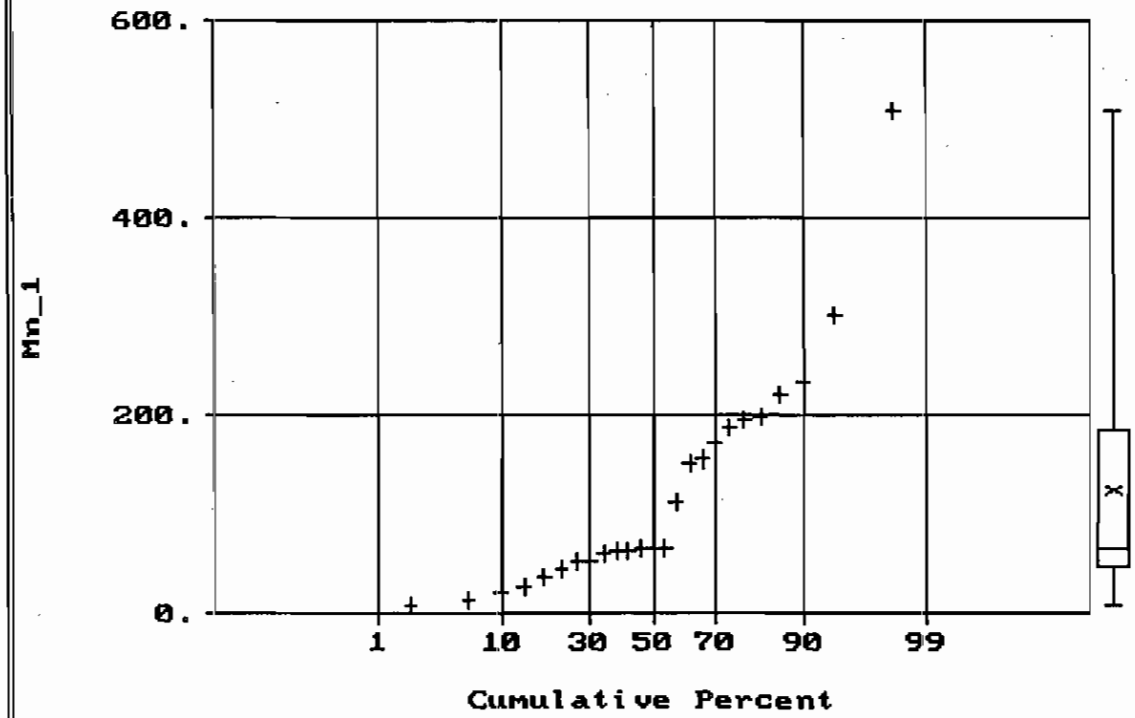
Zone E
Manganese in surface soil BG samples
Original dataset (N=25)
Original values

1a



1b

Normal Probability Plot for Mn_1
Data file: E_ss_bg.dat

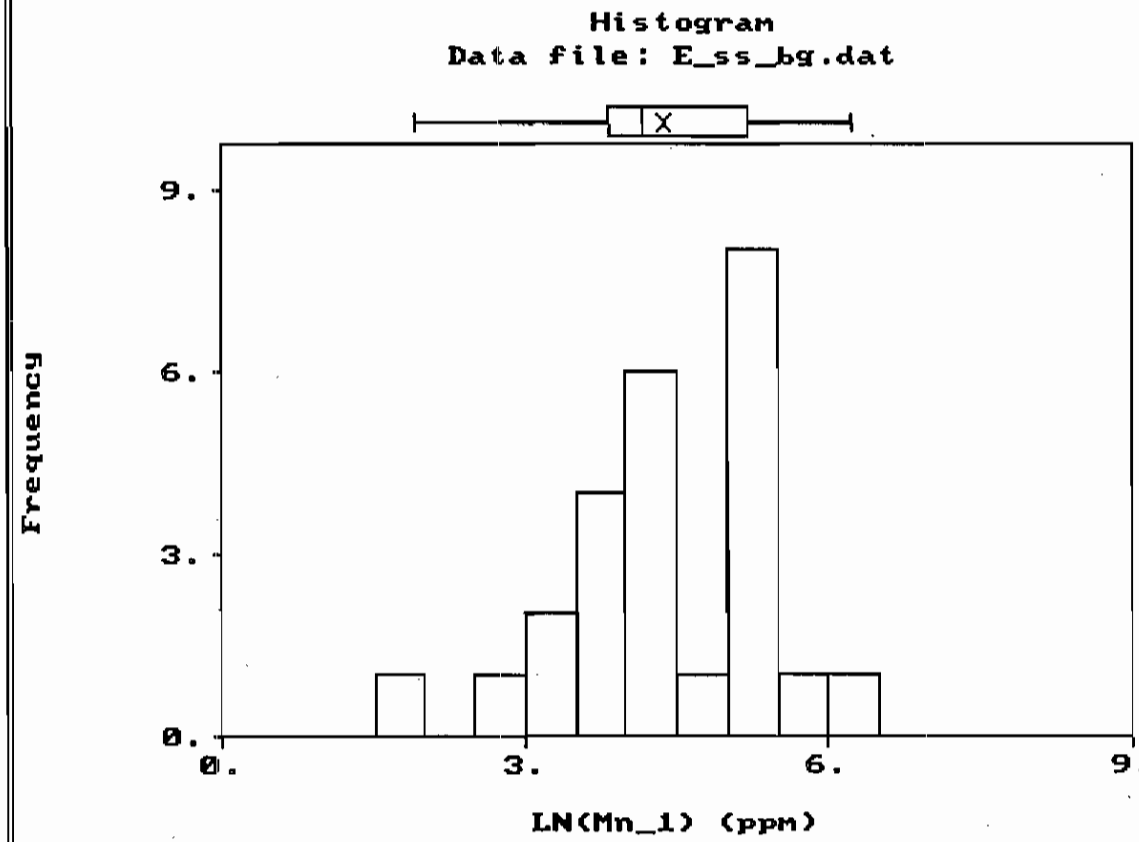


S t a t i s t i c s

N Total :	25
N Miss :	0
N Used :	25
Mean :	122.068
Variance:	12986.410
Std. Dev:	113.958
% C.V. :	93.356
Skewness:	1.697
Kurtosis:	6.248
Minimum :	6.800
25th % :	46.425
Median :	65.200
75th % :	182.750
Maximum :	508.000

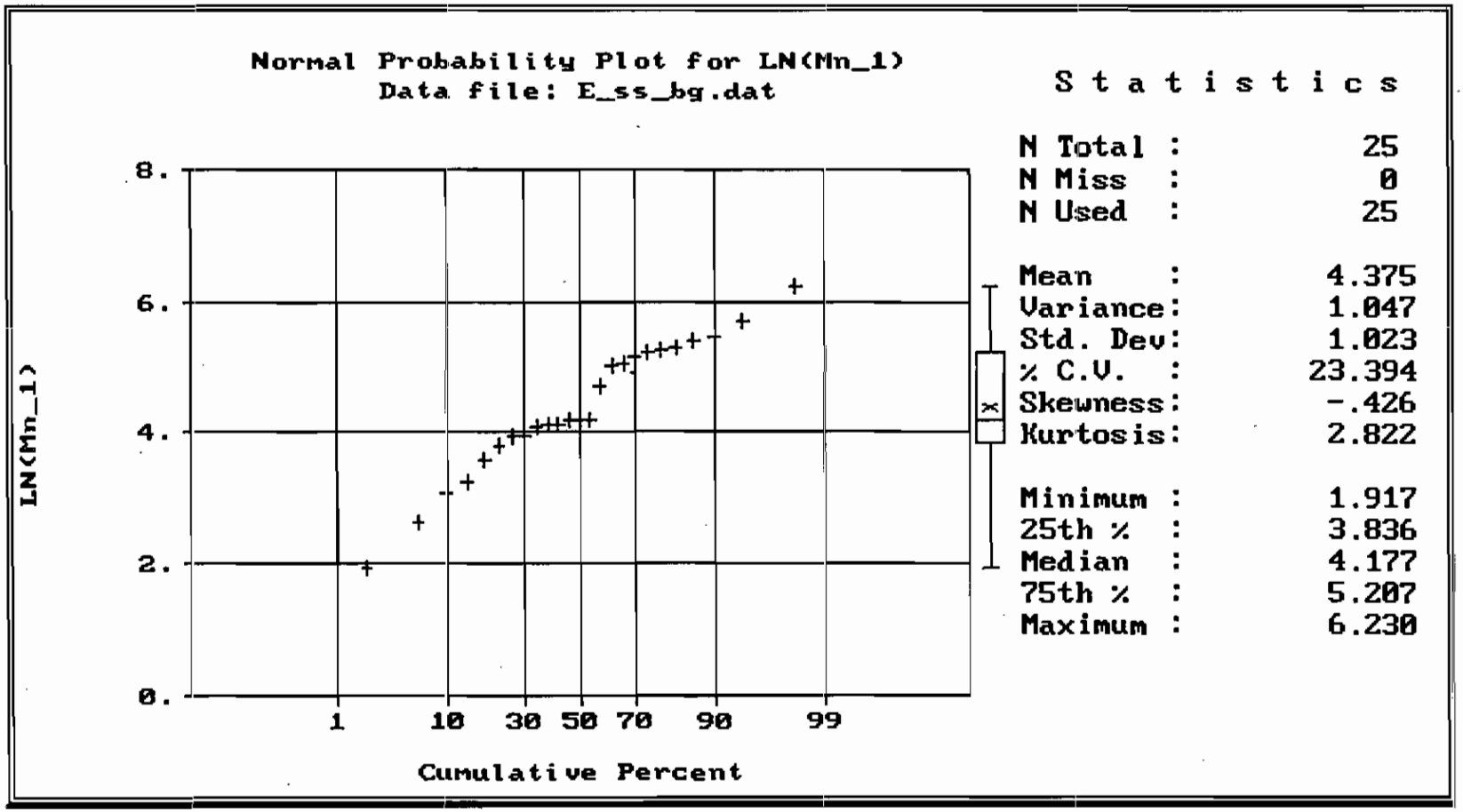
Zone E
Mn in surface soil BG samples
Original dataset (N=25)
LN-transformed values

2a



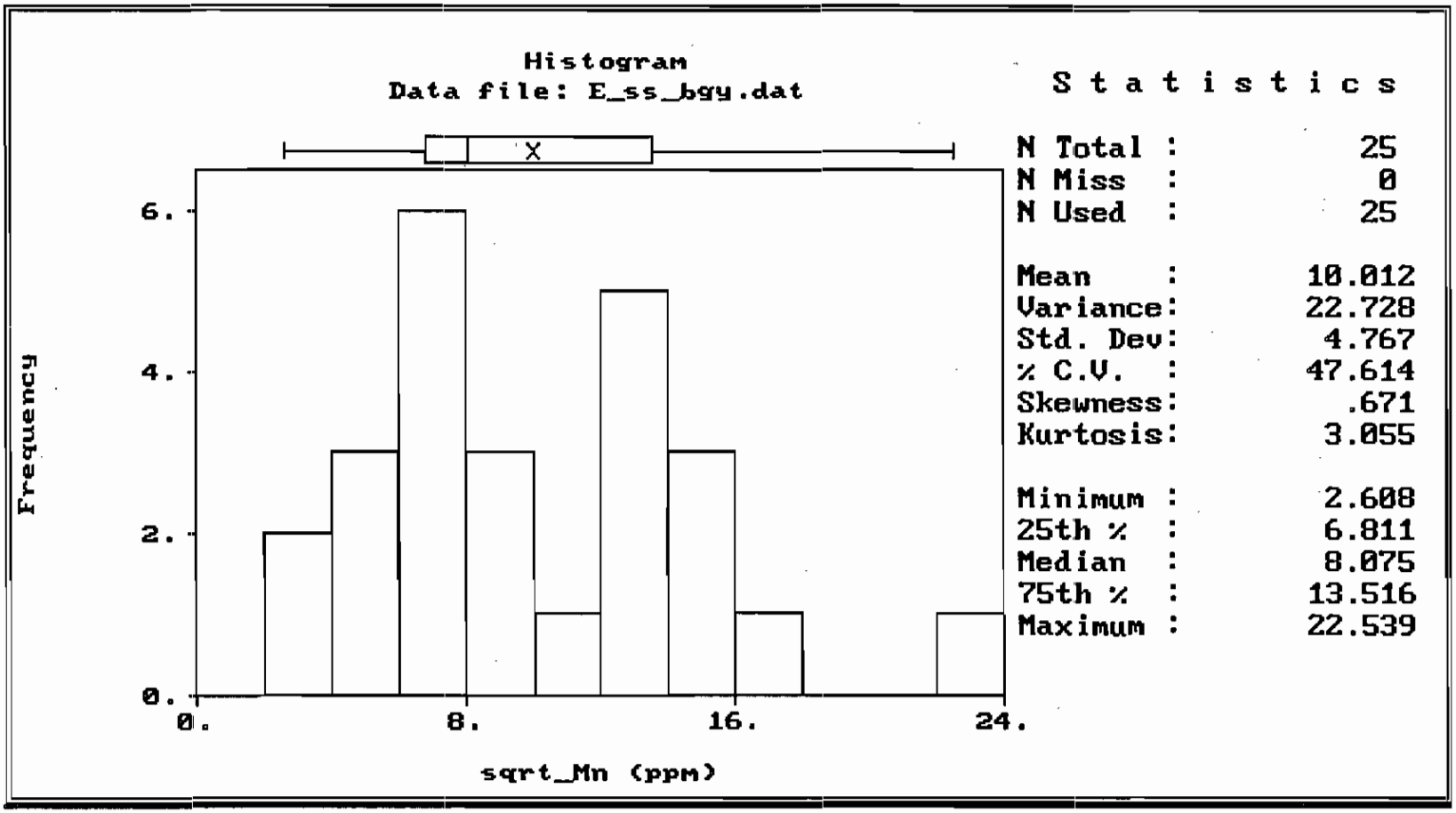
Statistics

N Total :	25
N Miss :	0
N Used :	25
Mean :	4.375
Variance:	1.047
Std. Dev:	1.023
% C.V. :	23.394
Skewness:	-.426
Kurtosis:	2.822
Minimum :	1.917
25th % :	3.836
Median :	4.177
75th % :	5.207
Maximum :	6.230

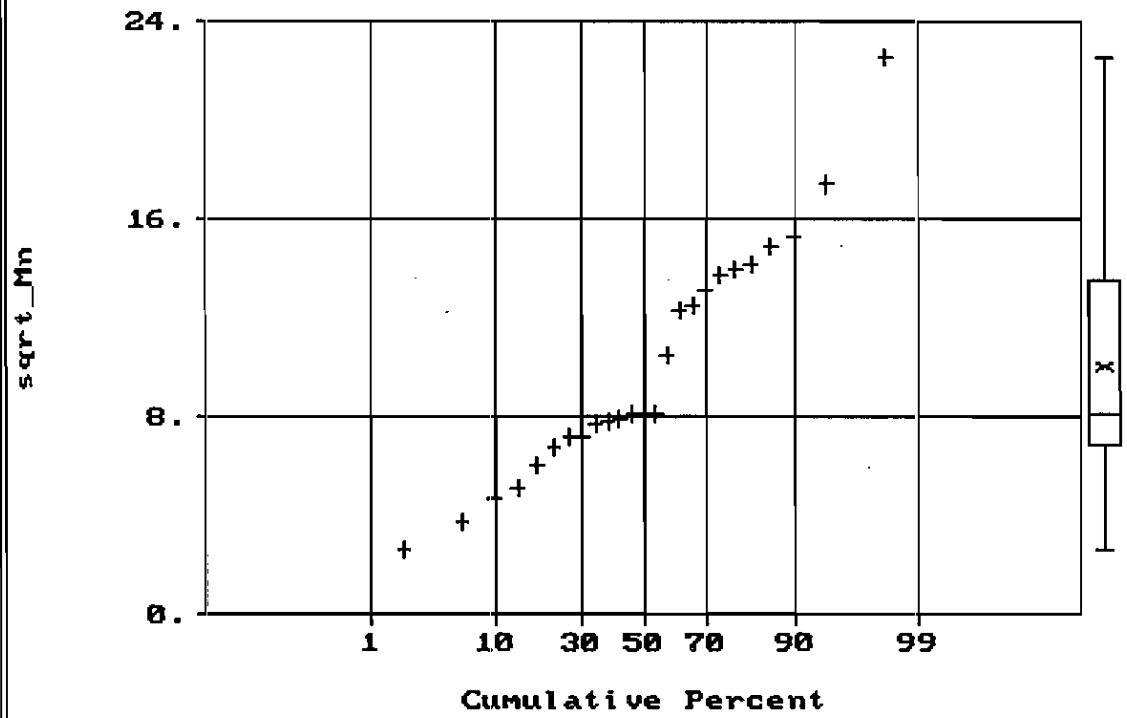

Normal Probability Plot for LN(Mn_1)
Data file: E_ss_bg.dat
LN(Mn_1)
8.
6.
4.
2.
0.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 25
N Miss : 0
N Used : 25
Mean : 4.375
Variance: 1.047
Std. Dev: 1.023
% C.V. : 23.394
Skewness: -.426
Kurtosis: 2.822
Minimum : 1.917
25th % : 3.836
Median : 4.177
75th % : 5.207
Maximum : 6.230

Zone E
Mn in surface soil BG samples
Original dataset (N = 25)
Square-root transformed values

3a



Normal Probability Plot for sqrt_Mn
Data file: E_ss_bgy.dat

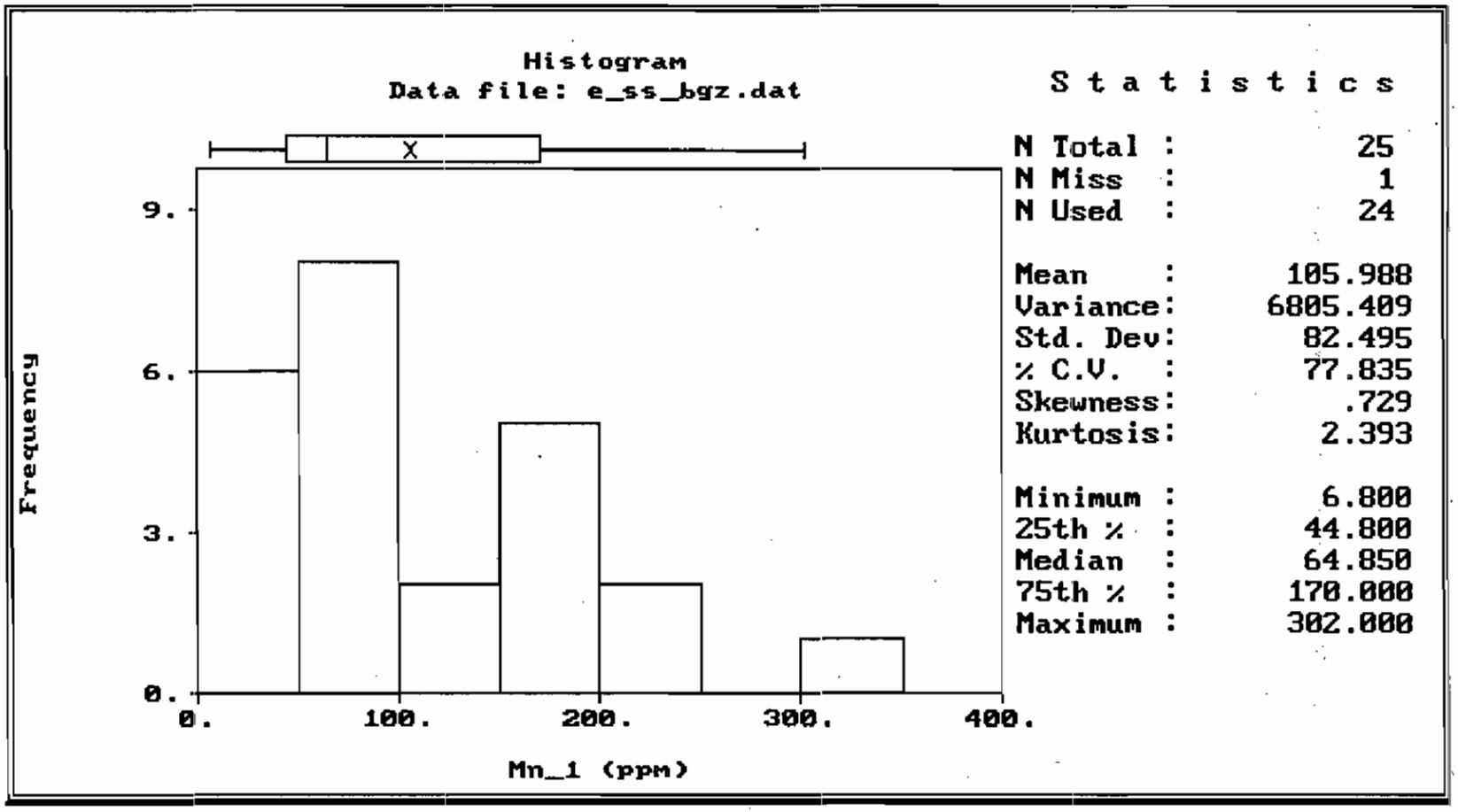


Statistics

N Total :	25
N Miss :	0
N Used :	25
Mean :	10.012
Variance:	22.728
Std. Dev:	4.767
% C.V. :	47.614
Skewness:	.671
Kurtosis:	3.055
Minimum :	2.608
25th % :	6.811
Median :	8.075
75th % :	13.516
Maximum :	22.539

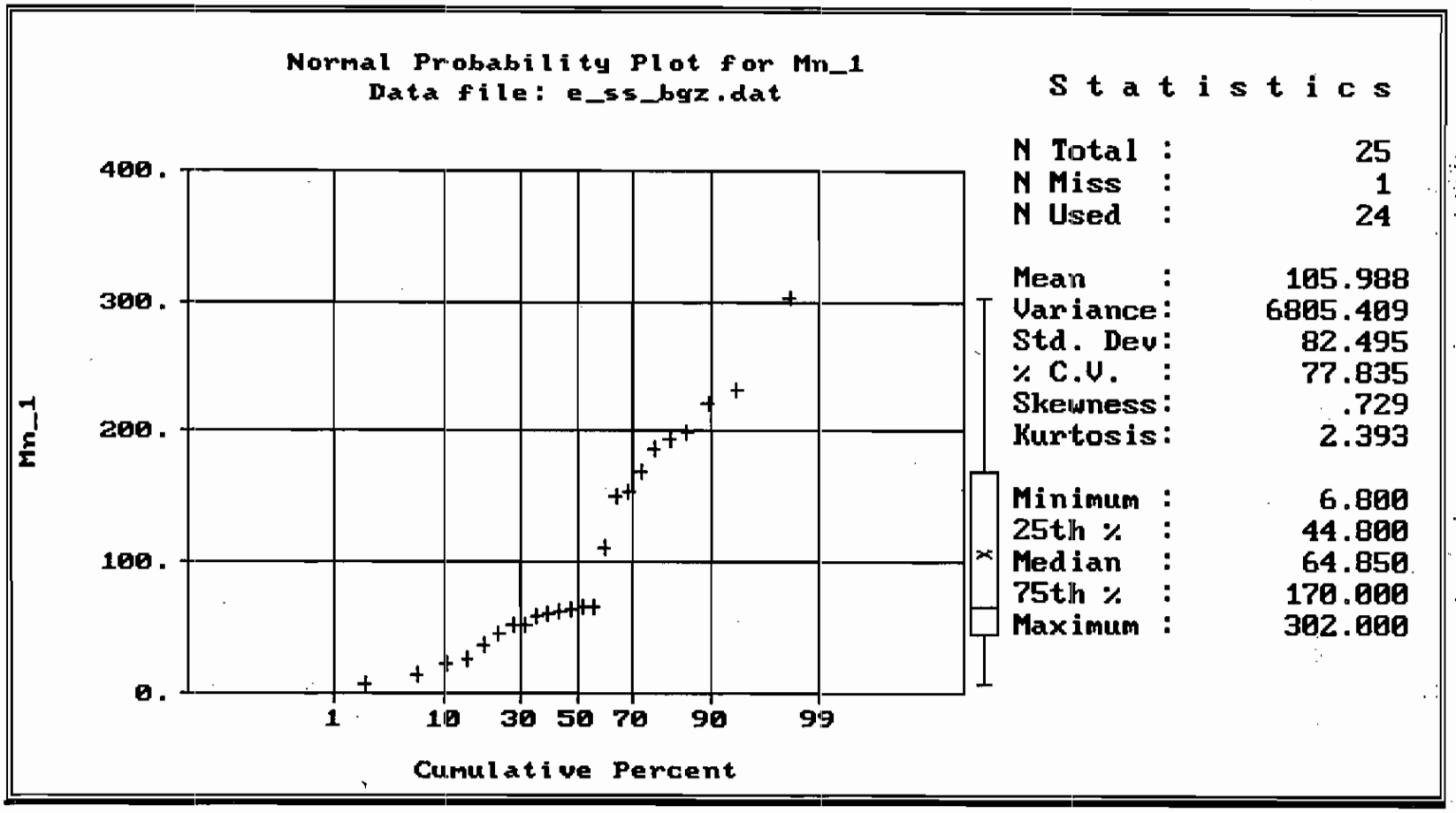
Zone E
Mn in surface soil BG samples
Sample # 007-01 removed (N=24)
Original values

4a



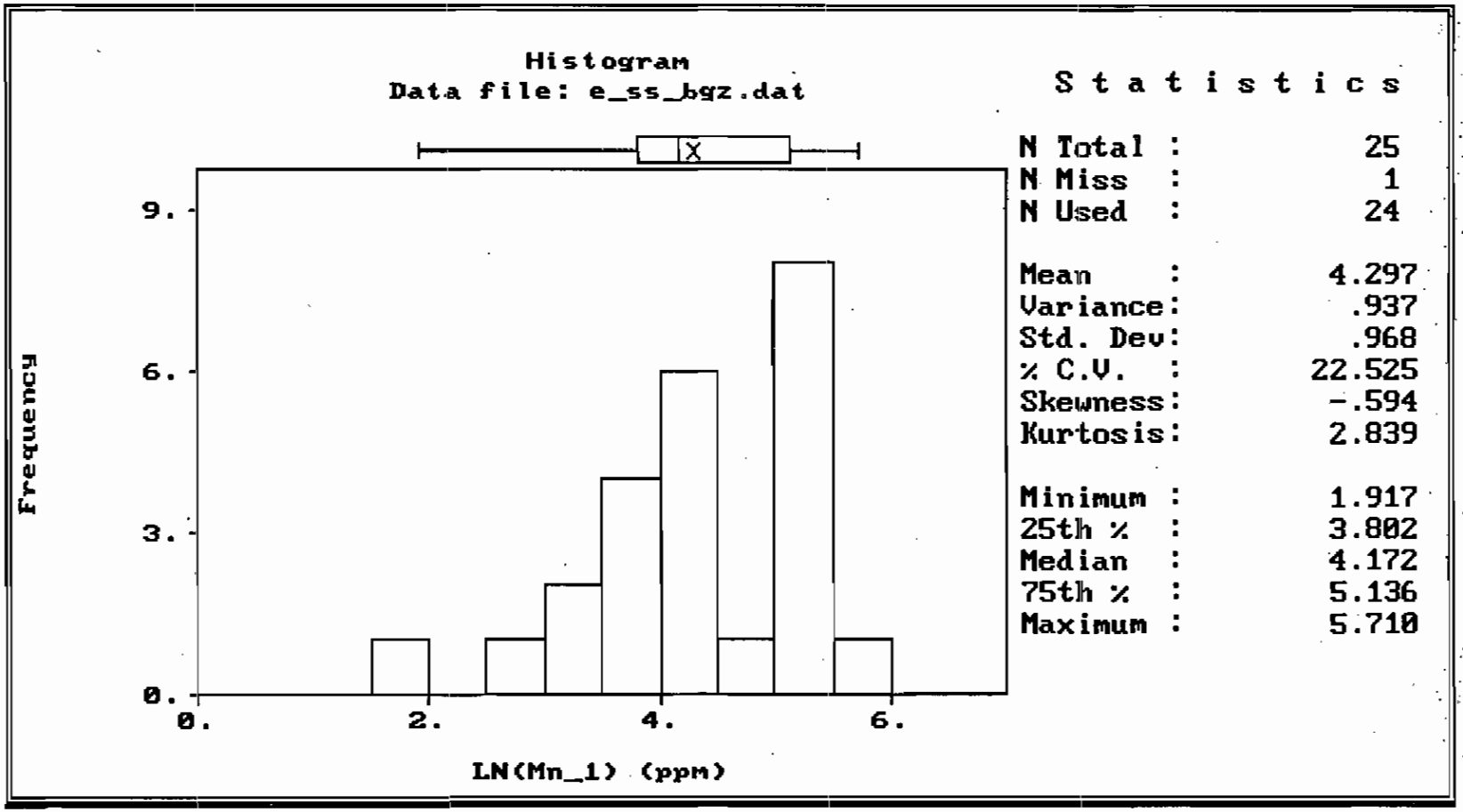
Statistics

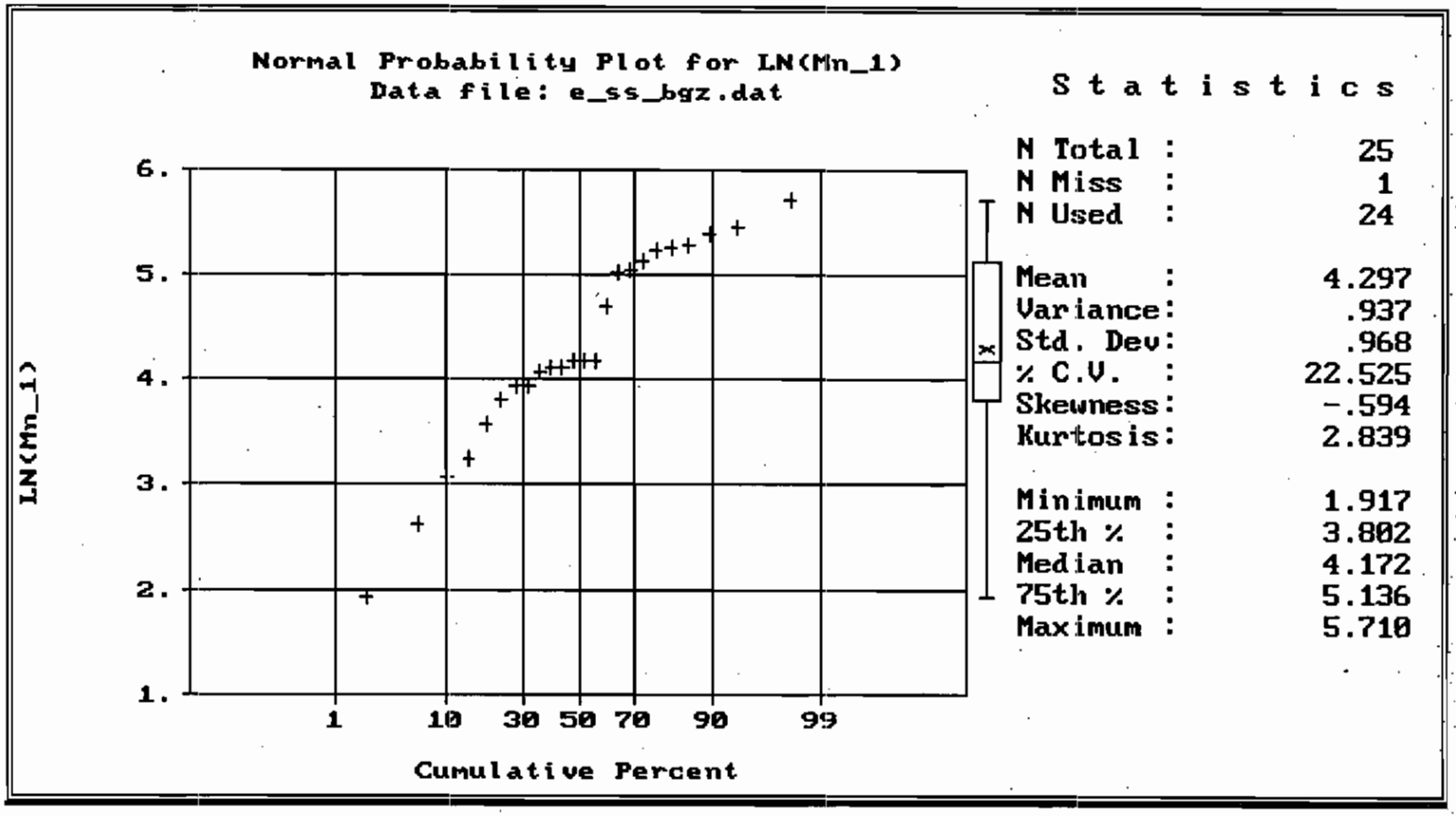
N Total :	25
N Miss :	1
N Used :	24
Mean :	105.988
Variance:	6805.409
Std. Dev:	82.495
% C.V. :	77.835
Skewness:	.729
Kurtosis:	2.393
Minimum :	6.800
25th % :	44.800
Median :	64.850
75th % :	170.000
Maximum :	302.000


Normal Probability Plot for Mn_1
Data file: e_ss_bgz.dat
Mn_1
400.
300.
200.
100.
0.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 25
N Miss : 1
N Used : 24
Mean : 105.988
Variance: 6805.409
Std. Dev: 82.495
% C.V. : 77.835
Skewness: .729
Kurtosis: 2.393
Minimum : 6.800
25th % : 44.800
Median : 64.850
75th % : 170.000
Maximum : 302.000

Zone E
Mn in surface soil BG samples
Sample #007-01 removed (N = 24)
LN-transformed values

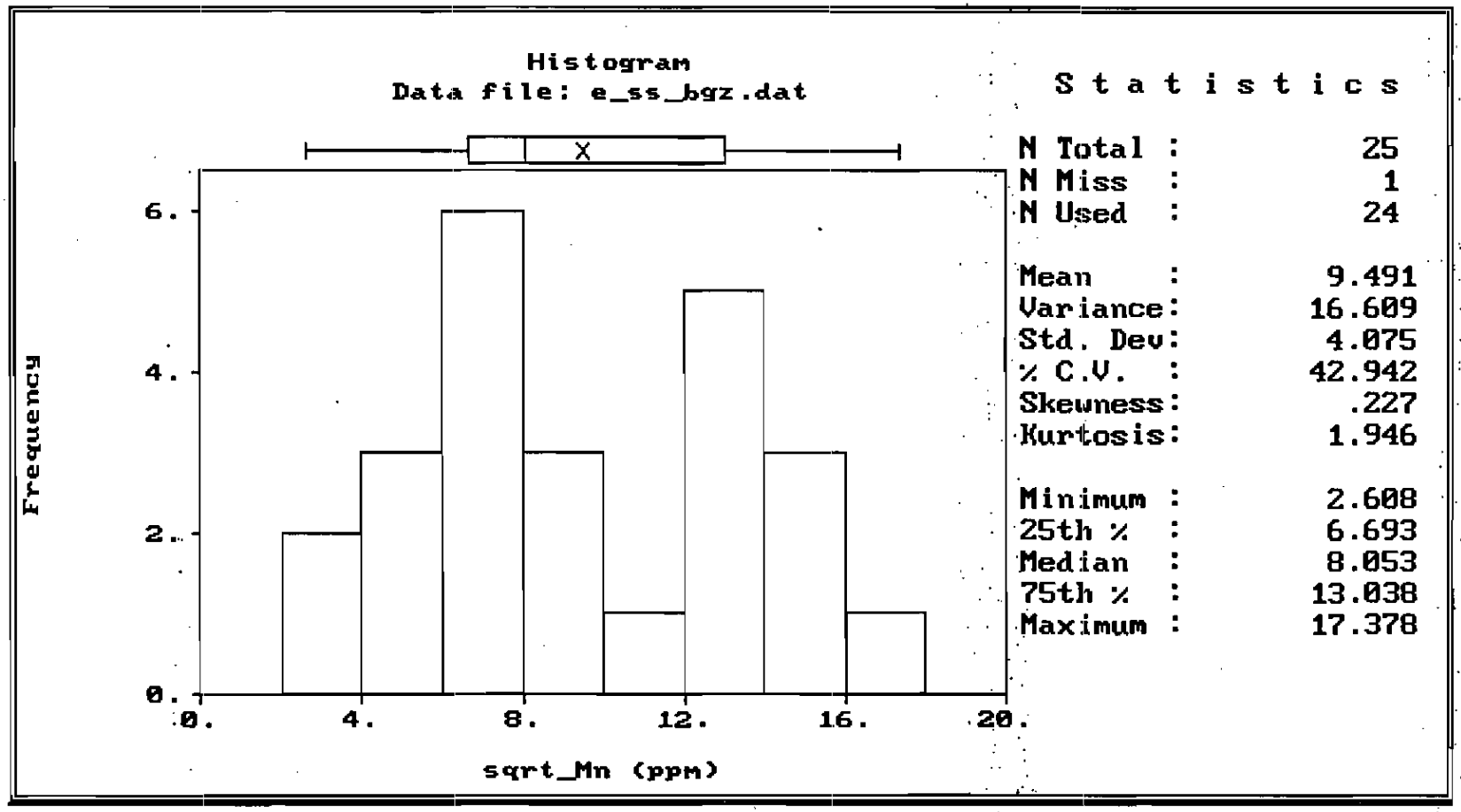
5a



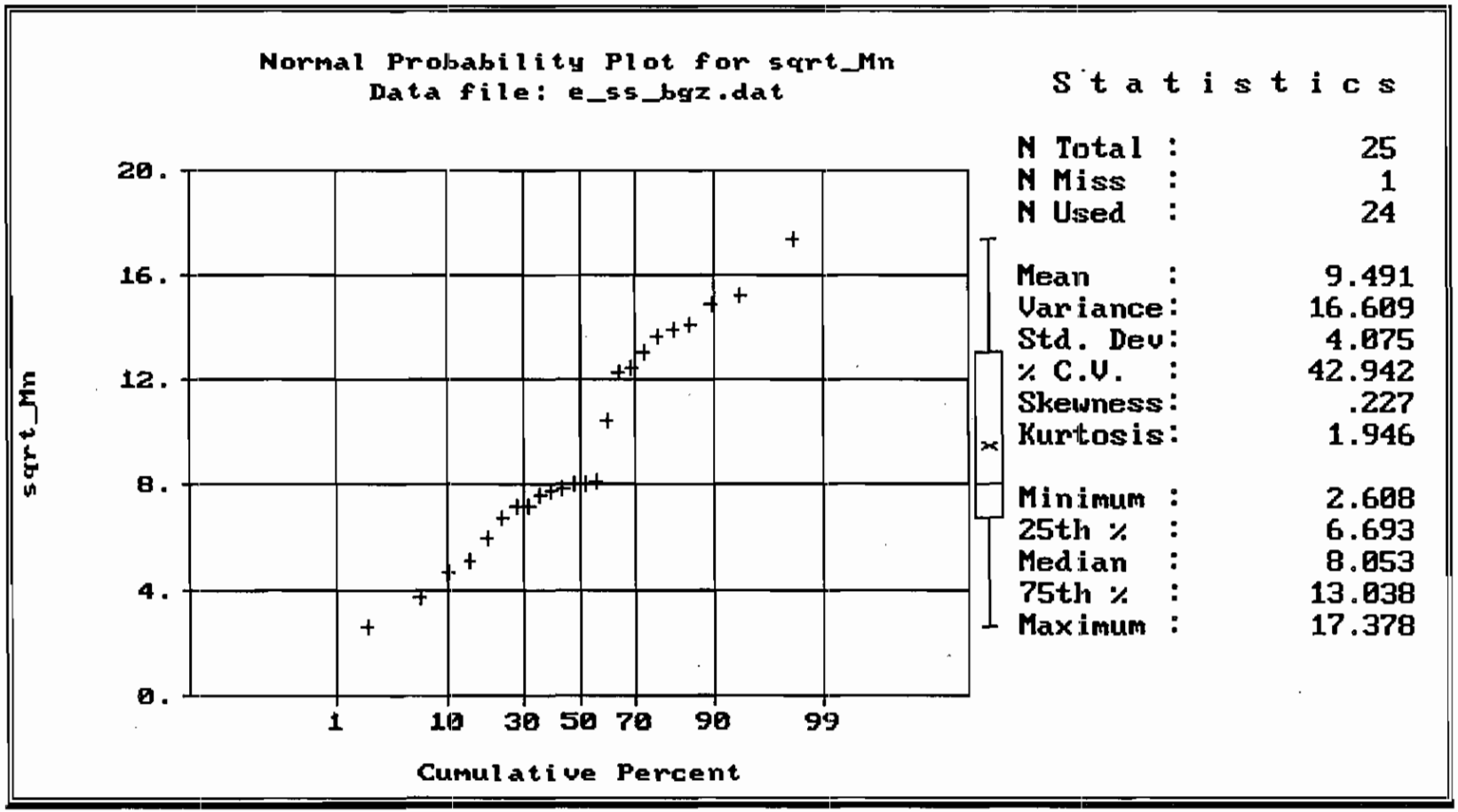

Normal Probability Plot for LN(Mn_1)
Data file: e_ss_bgz.dat
LN(Mn_1)
6.
5.
4.
3.
2.
1.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 25
N Miss : 1
N Used : 24
Mean : 4.297
Variance: .937
Std. Dev: .968
% C.V. : 22.525
Skewness: -.594
Kurtosis: 2.839
Minimum : 1.917
25th % : 3.802
Median : 4.172
75th % : 5.136
Maximum : 5.710

Zone E
Mn in surface soil BG samples
Sample #007-01 removed (N=24)
Square-root transformed values

6a



6b


Normal Probability Plot for sqrt_Mn
Data file: e_ss_bgz.dat
sqrt_Mn
20.
16.
12.
8.
4.
0.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 25
N Miss : 1
N Used : 24
Mean : 9.491
Variance: 16.609
Std. Dev: 4.075
% C.V. : 42.942
Skewness: .227
Kurtosis: 1.946
Minimum : 2.608
25th % : 6.693
Median : 8.053
75th % : 13.038
Maximum : 17.378

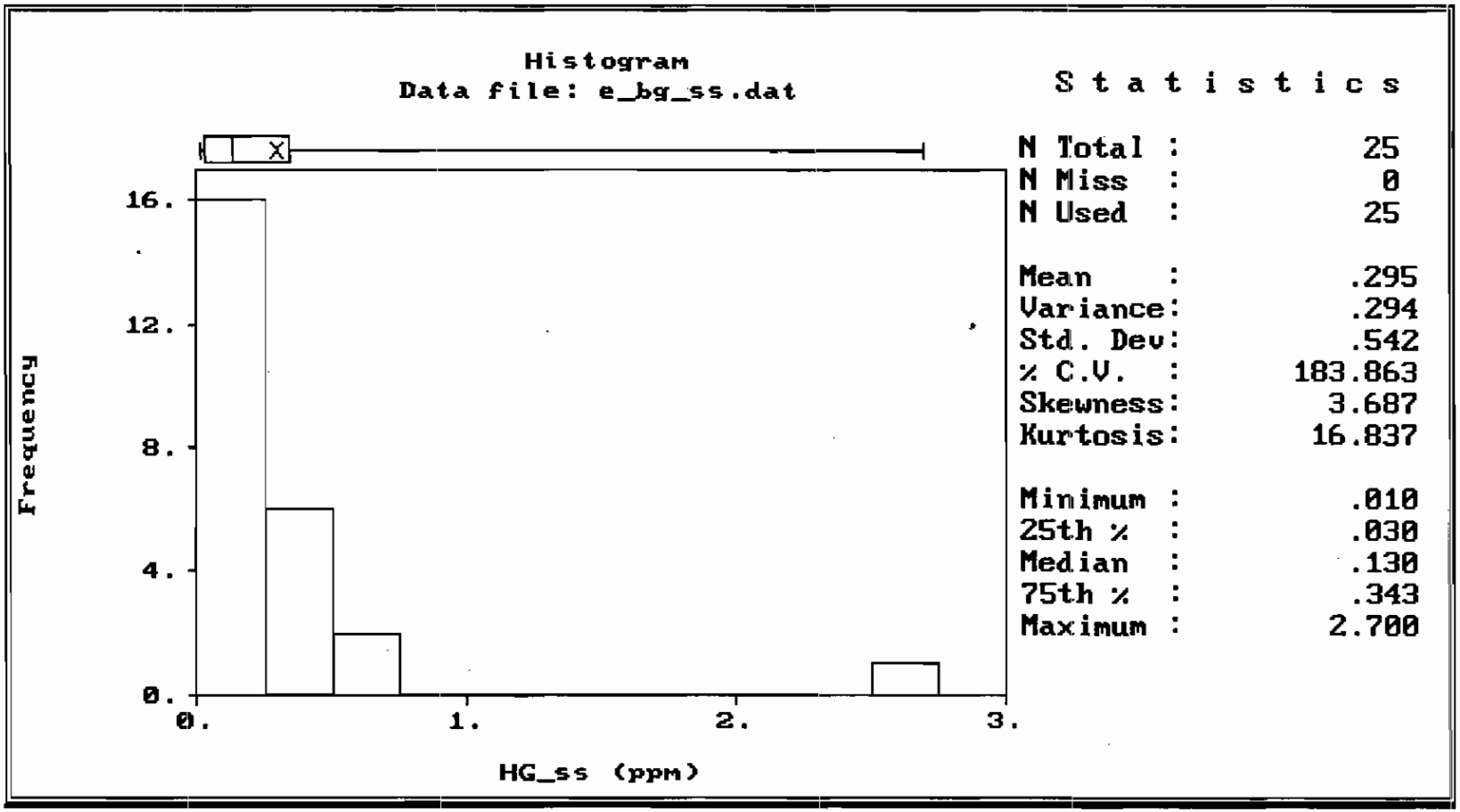
Zone E

Mercury in surface soil BG samples

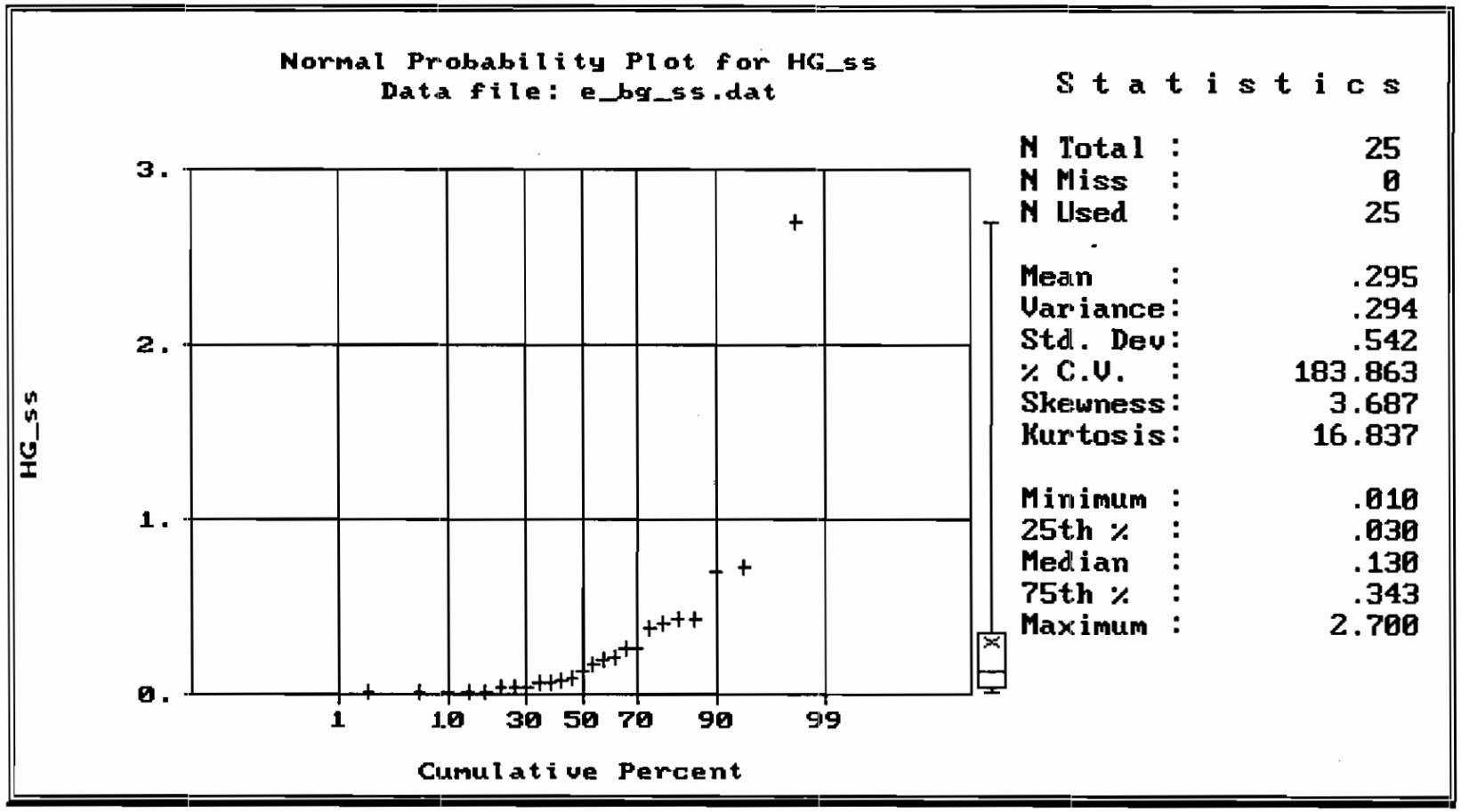
Original dataset (N=25)

Original values

1a



16


Normal Probability Plot for HG_ss
Data file: e_bg_ss.dat
HG_ss
3.
2.
1.
0.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 25
N Miss : 0
N Used : 25
Mean : .295
Variance: .294
Std. Dev: .542
% C.V. : 183.863
Skewness: 3.687
Kurtosis: 16.837
Minimum : .010
25th % : .030
Median : .130
75th % : .343
Maximum : 2.700

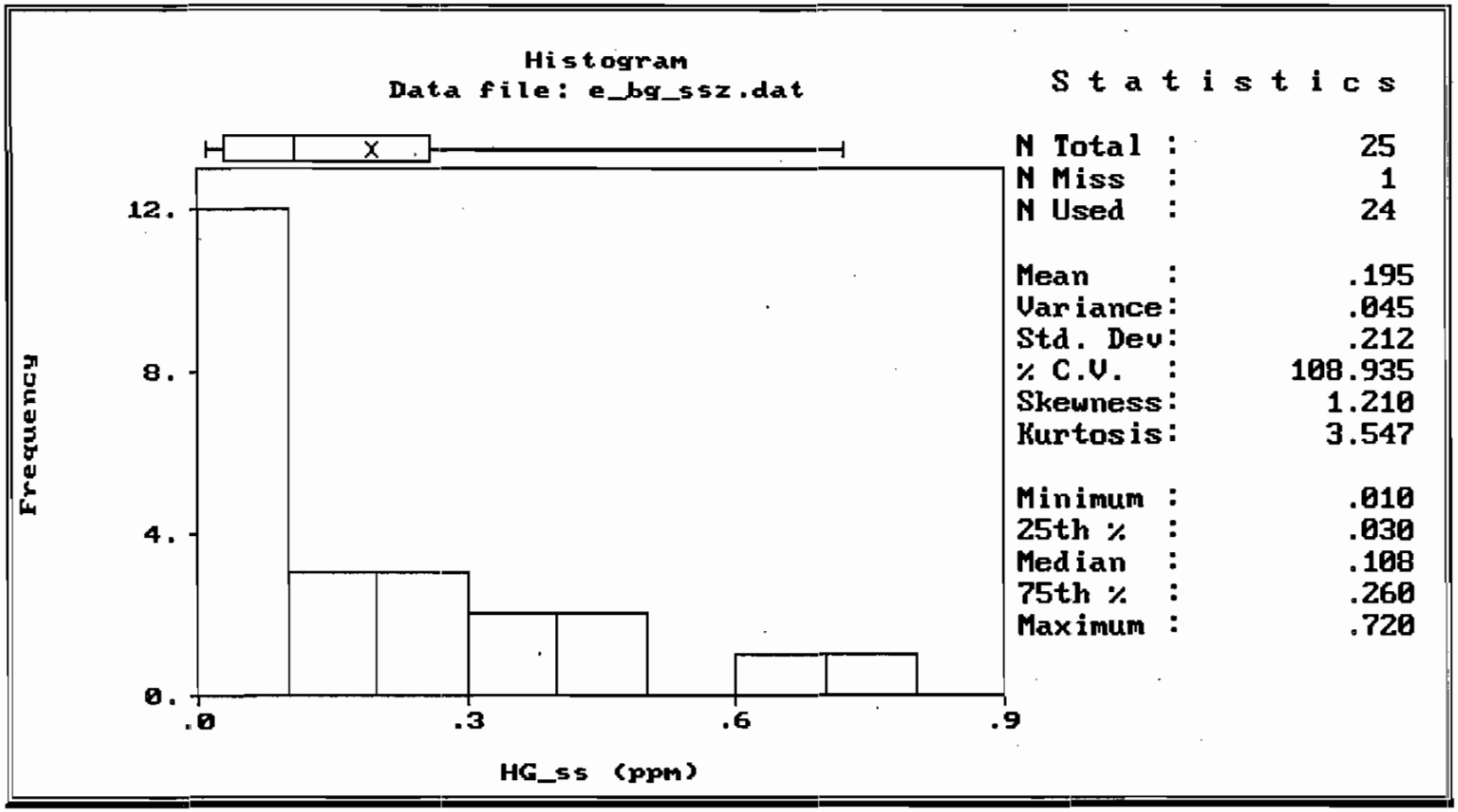
Zone E

Hg in surface soil BG samples

Sample # 003-01 removed (N=24)

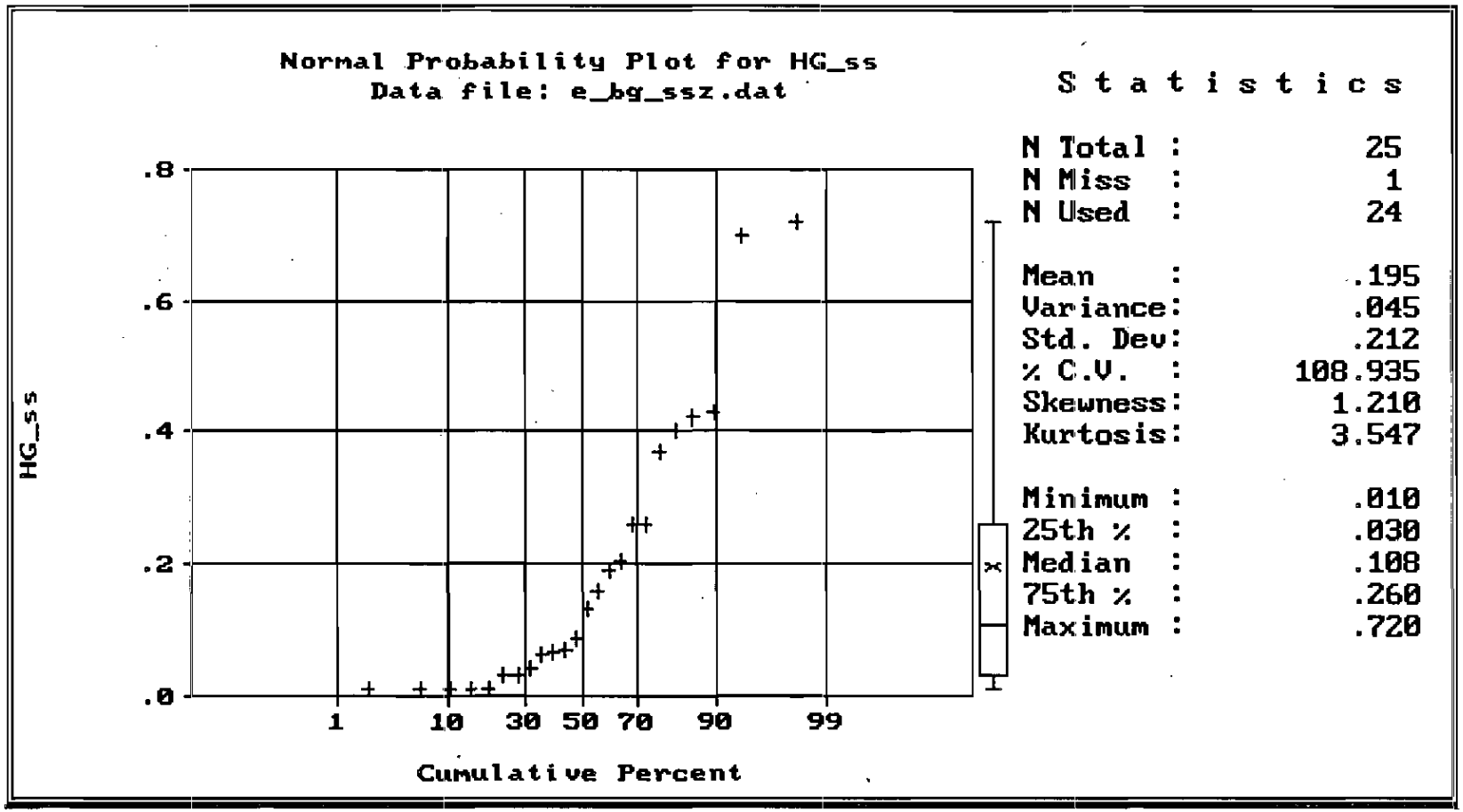
Original values

2a



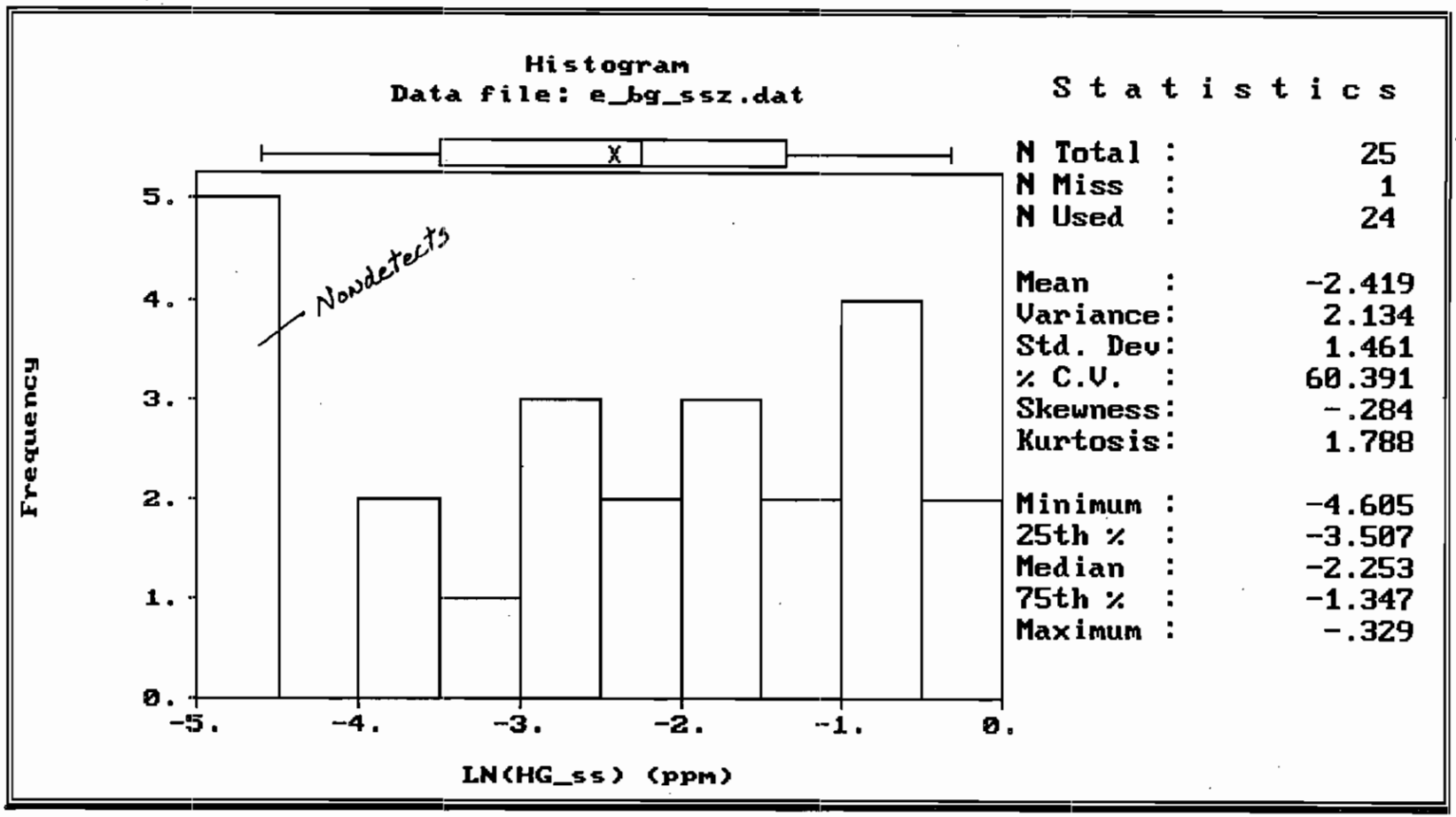
Statistics

N Total :	25
N Miss :	1
N Used :	24
Mean :	.195
Variance:	.045
Std. Dev:	.212
% C.V. :	108.935
Skewness:	1.210
Kurtosis:	3.547
Minimum :	.010
25th % :	.030
Median :	.108
75th % :	.260
Maximum :	.720

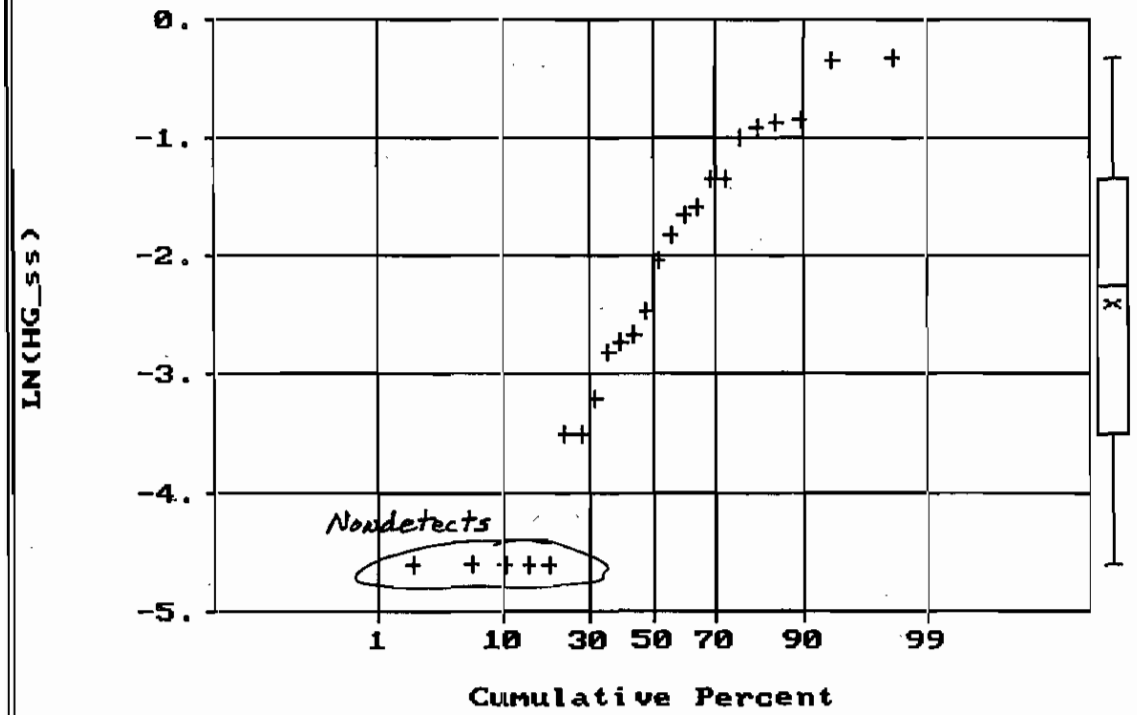

Normal Probability Plot for HG_ss
Data file: e_bg_ssz.dat
HG_ss
.8
.6
.4
.2
.0
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 25
N Miss : 1
N Used : 24
Mean : .195
Variance: .045
Std. Dev: .212
% C.V. : 108.935
Skewness: 1.210
Kurtosis: 3.547
Minimum : .010
25th % : .030
Median : .108
75th % : .260
Maximum : .720

Zone E
Hg in surface soil BG samples
Sample # 003-01 removed (N=24)
LN-transformed values

3a



Normal Probability Plot for LN(HG_ss)
Data file: e_bg_ssz.dat

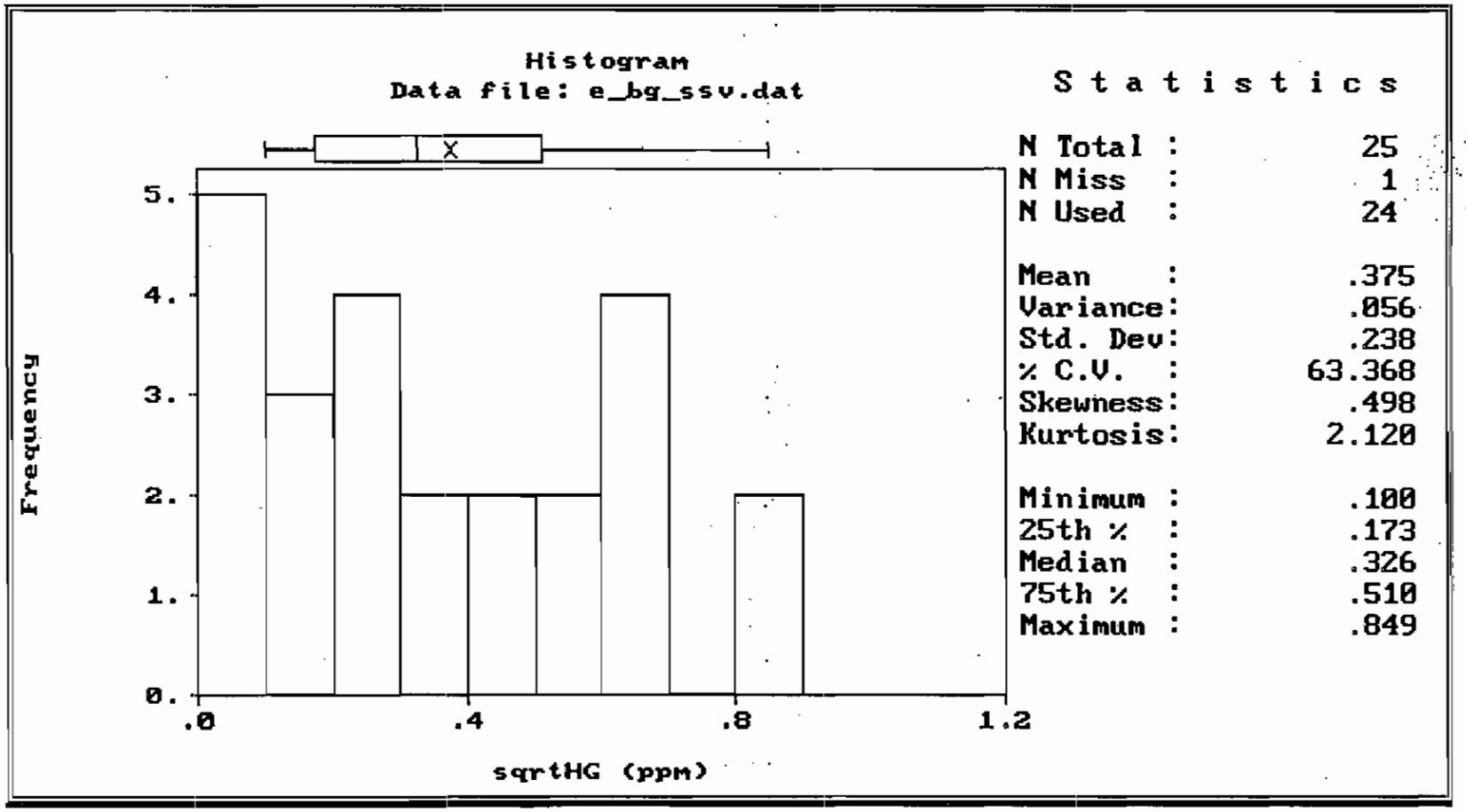


Statistics

N Total :	25
N Miss :	1
N Used :	24
Mean :	-2.419
Variance:	2.134
Std. Dev:	1.461
% C.V. :	60.391
Skewness:	-.284
Kurtosis:	1.788
Minimum :	-4.605
25th % :	-3.507
Median :	-2.253
75th % :	-1.347
Maximum :	-.329

Zone E
Hg in surface soil BG samples
Sample #003-01 removed (N=24)
Square-root transformed values

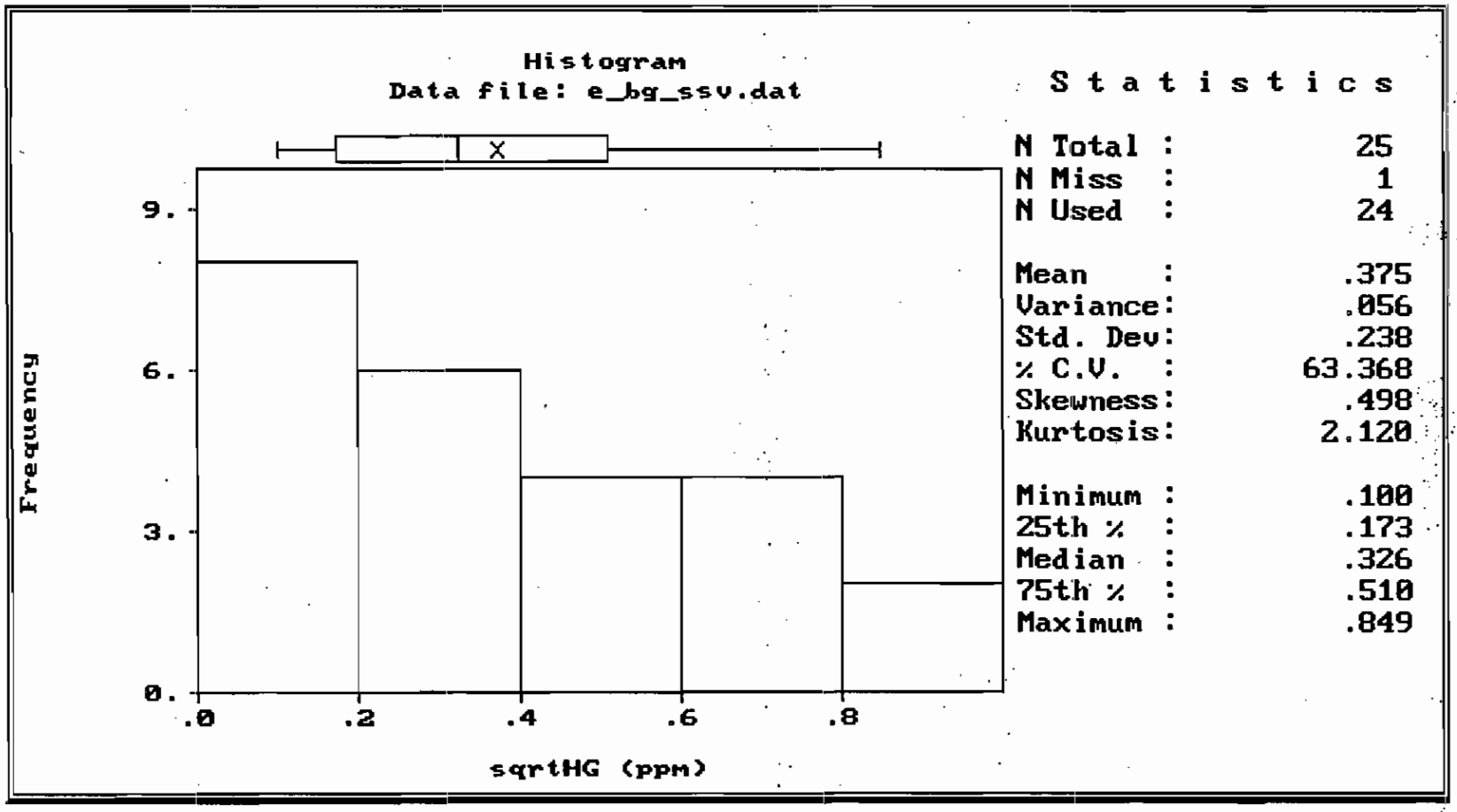
4a,



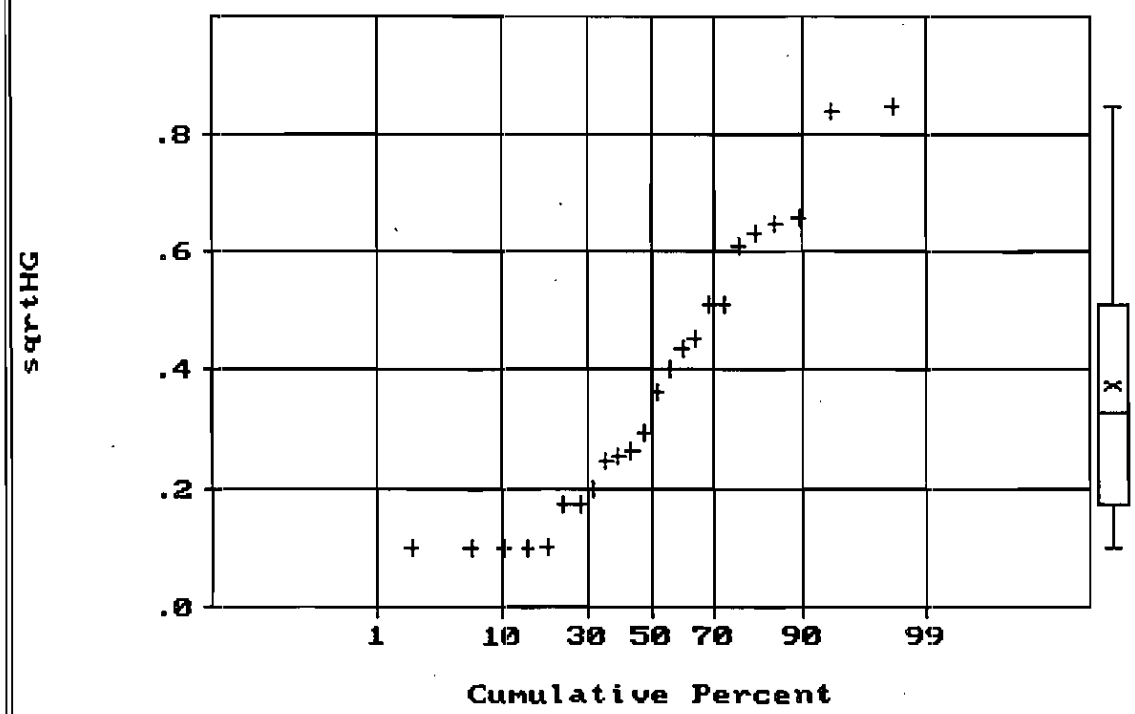
Zone E

Hg in surface soil BG samples - generalized view of Fig. 4a₁

4a₂



Normal Probability Plot for sqrtHG
Data file: e_bg_ssv.dat

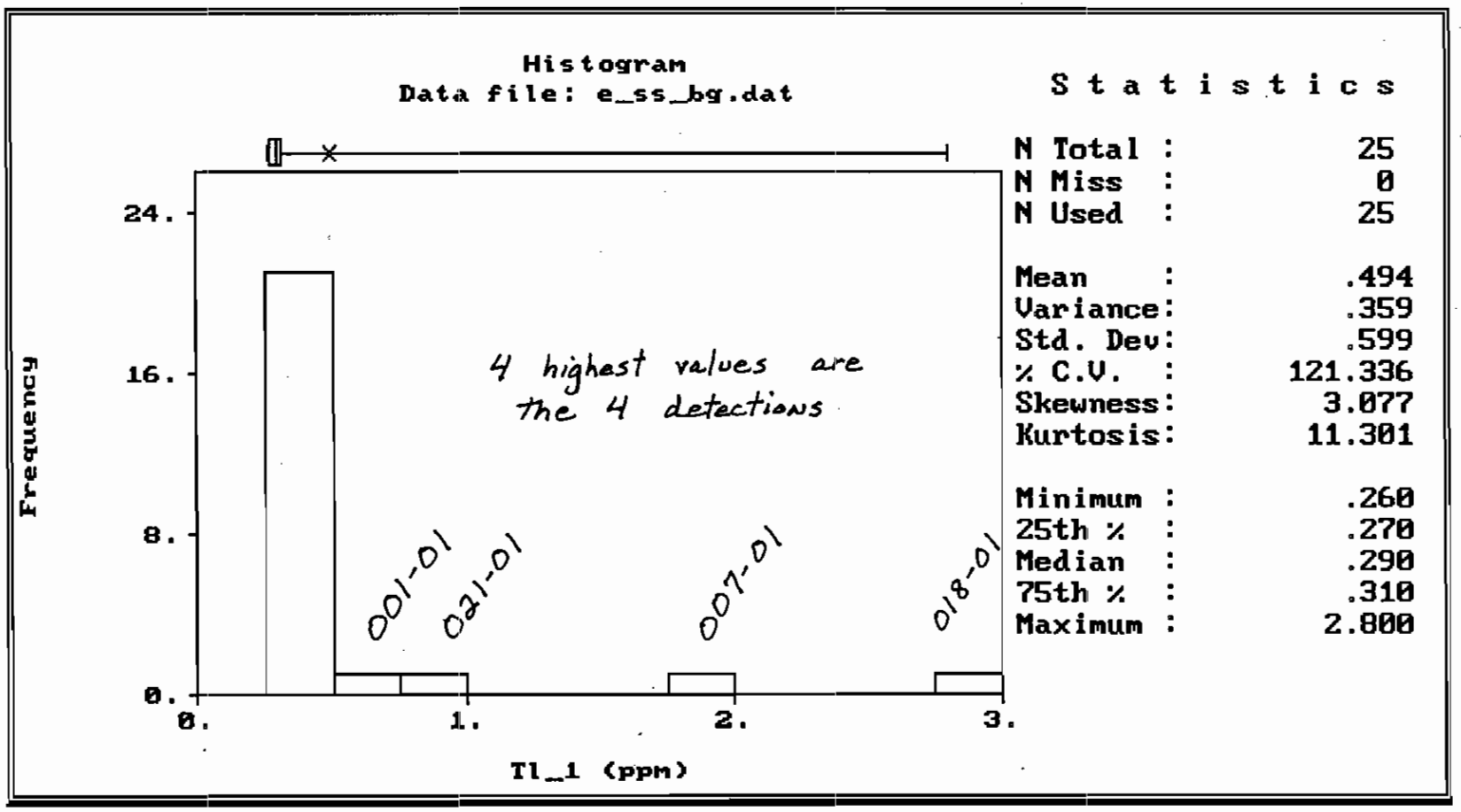


Statistics

N Total :	25
N Miss :	1
N Used :	24
Mean :	.375
Variance:	.056
Std. Dev:	.238
% C.V. :	63.368
Skewness:	.498
Kurtosis:	2.120
Minimum :	.100
25th % :	.173
Median :	.326
75th % :	.510
Maximum :	.849

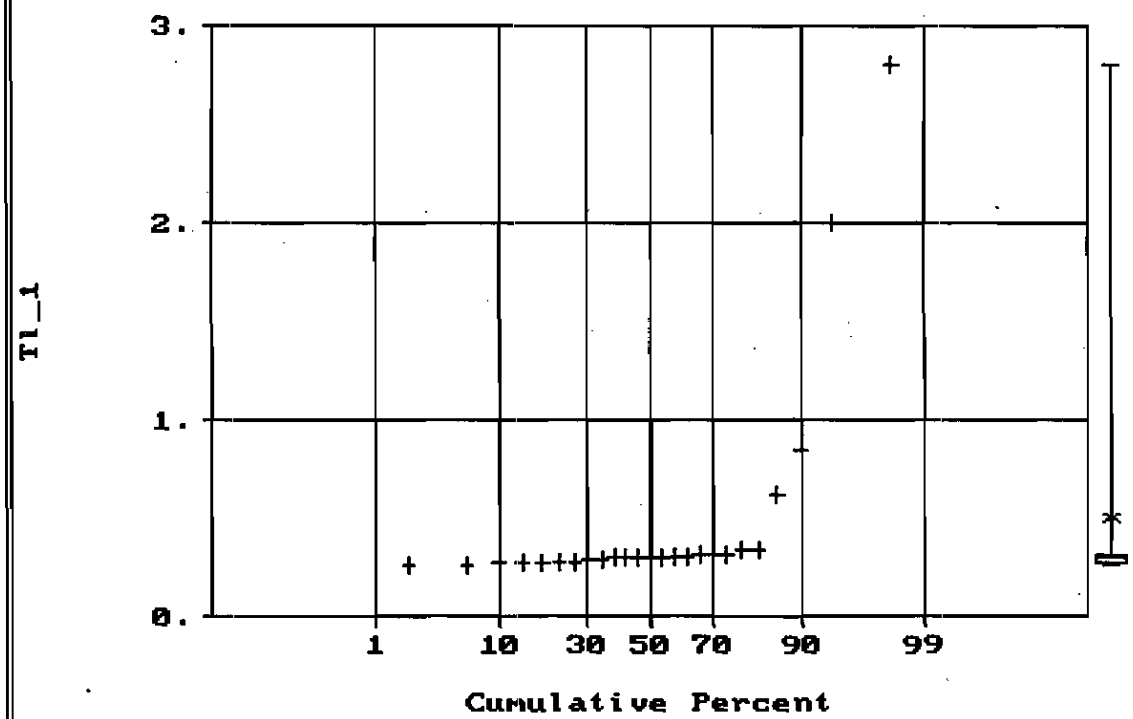
Zone E
Thallium in surface soil BG samples
Original dataset (N = 25)
Original values

1a



16

Normal Probability Plot for Tl_1
Data file: e_ss_bg.dat

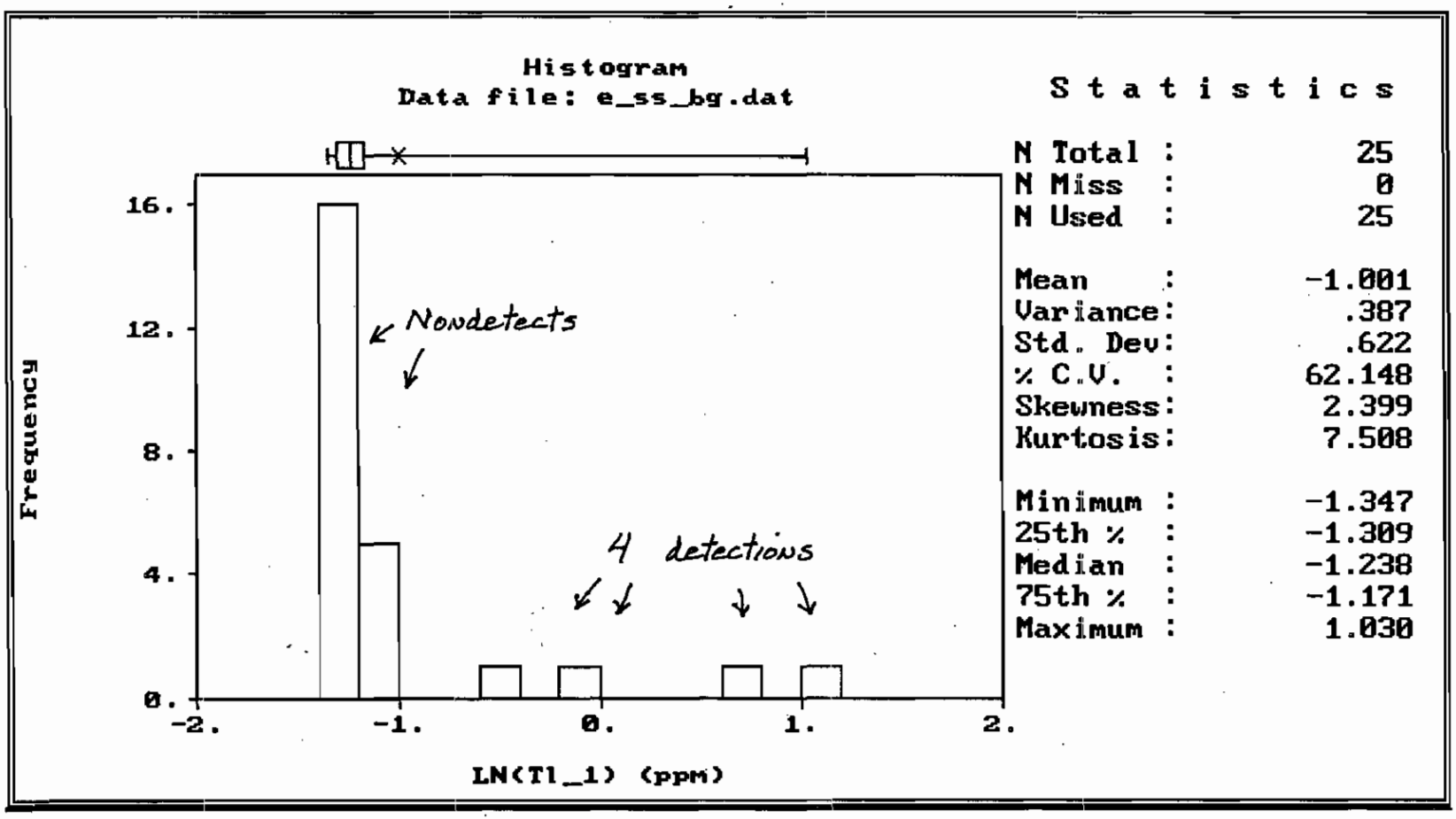


Statistics

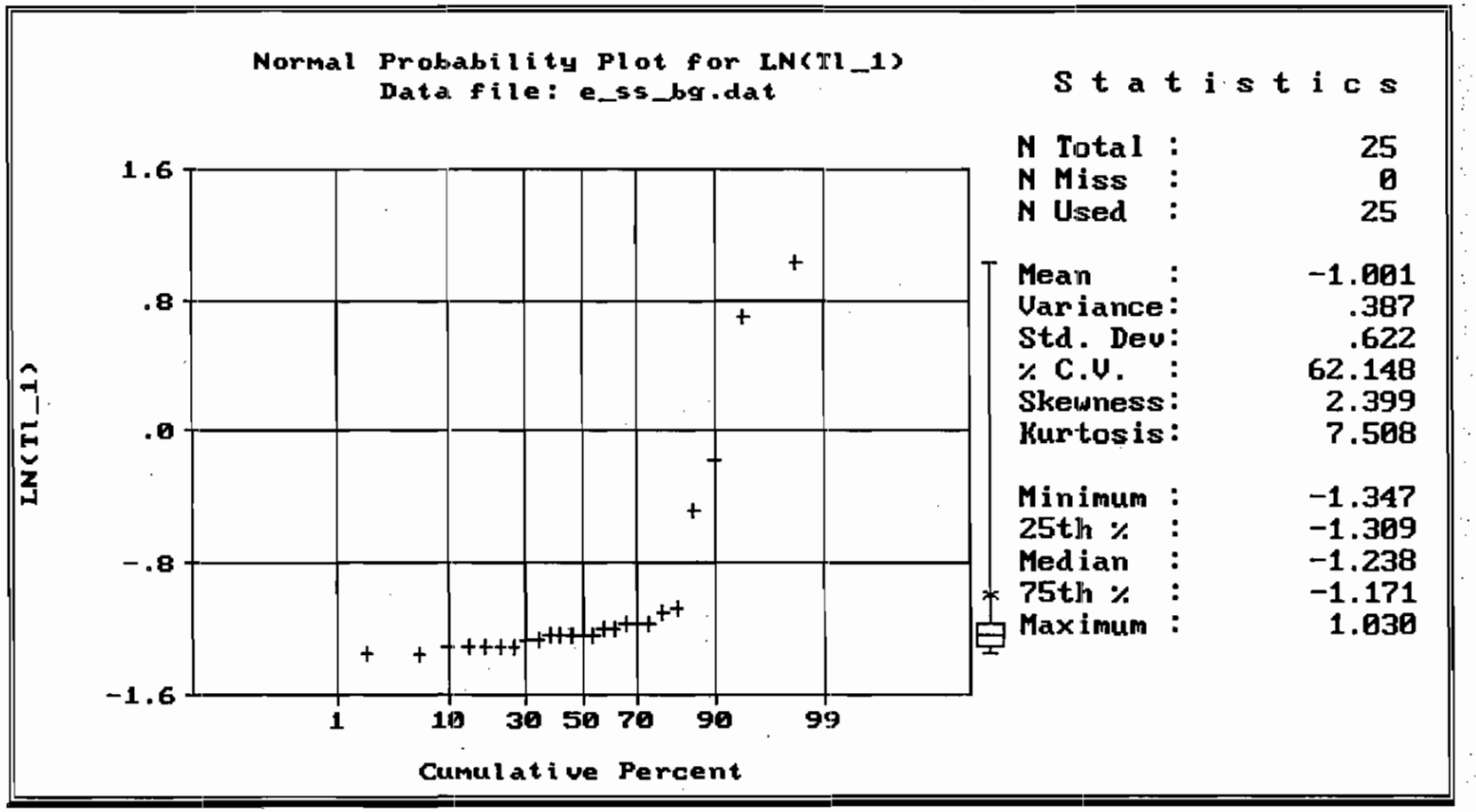
N Total :	25
N Miss :	0
N Used :	25
Mean :	.494
Variance:	.359
Std. Dev:	.599
% C.V. :	121.336
Skewness:	3.077
Kurtosis:	11.301
Minimum :	.260
25th % :	.270
Median :	.290
75th % :	.310
Maximum :	2.800

Zone E
Thallium in surface soil BG samples
Original dataset (N=25)
LN-transformed values

2a

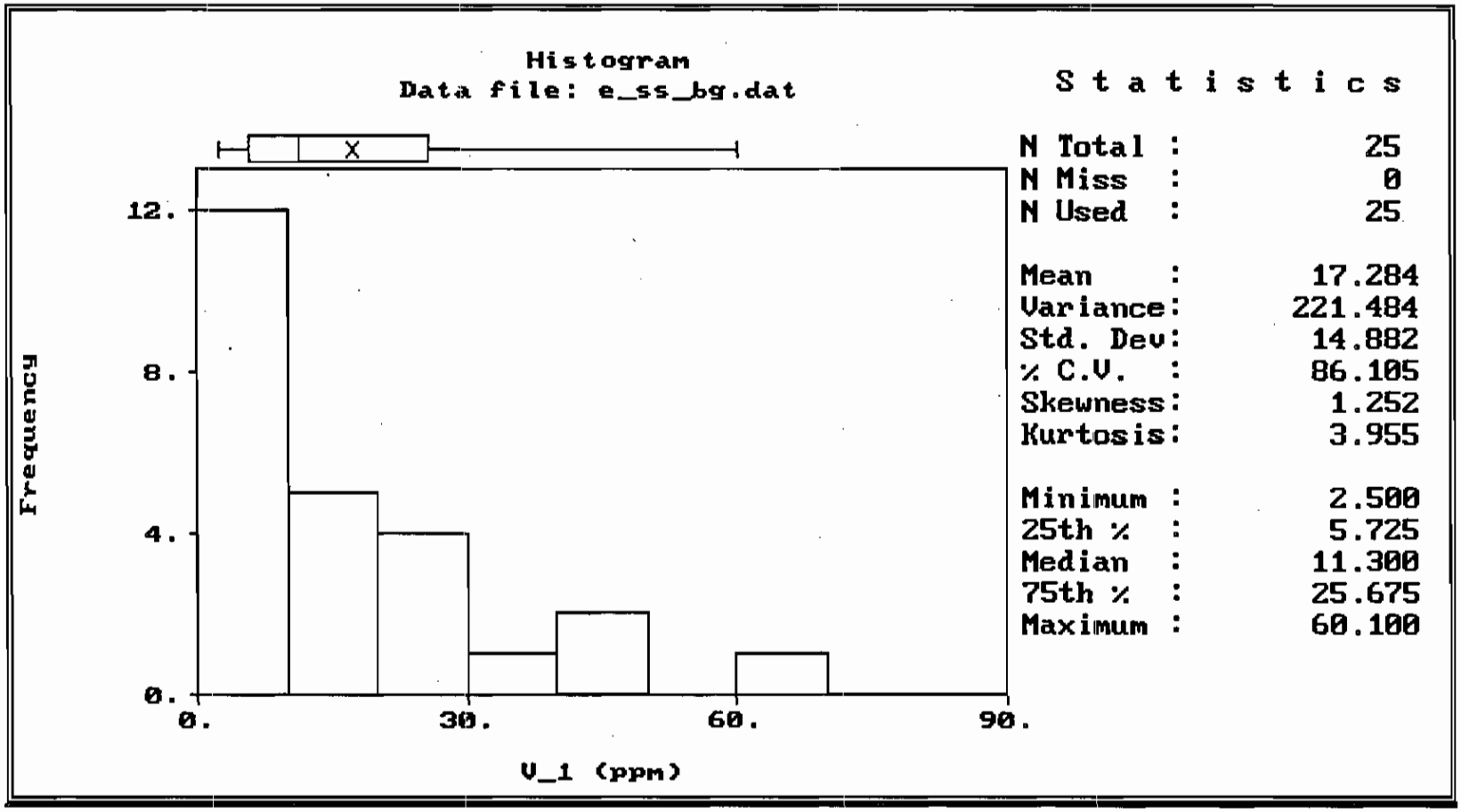


2b

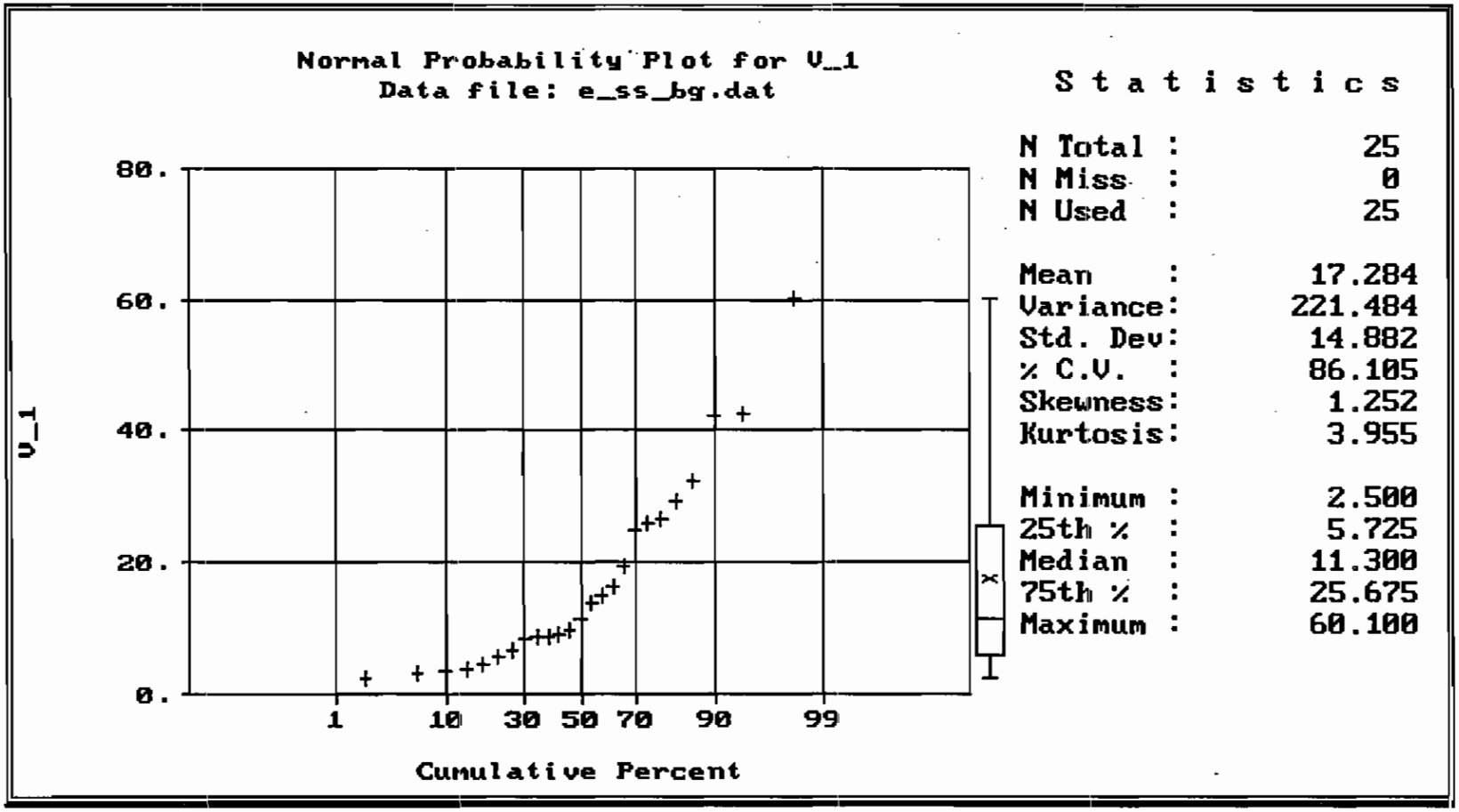

Normal Probability Plot for LN(Tl_1)
Data file: e_ss_bg.dat
LN(Tl_1)
1.6
.8
.0
-.8
-1.6
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 25
N Miss : 0
N Used : 25
Mean : -1.001
Variance: .387
Std. Dev: .622
% C.V. : 62.148
Skewness: 2.399
Kurtosis: 7.508
Minimum : -1.347
25th % : -1.309
Median : -1.238
75th % : -1.171
Maximum : 1.030

Zone E
Vanadium in surface soil BG samples
Original dataset (N=25)
Original values

1a



16


Normal Probability Plot for V_1
Data file: e_ss_bg.dat
80.
60.
40.
20.
0.
V_1
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 25
N Miss : 0
N Used : 25
Mean : 17.284
Variance: 221.484
Std. Dev: 14.882
% C.V. : 86.105
Skewness: 1.252
Kurtosis: 3.955
Minimum : 2.500
25th % : 5.725
Median : 11.300
75th % : 25.675
Maximum : 60.100

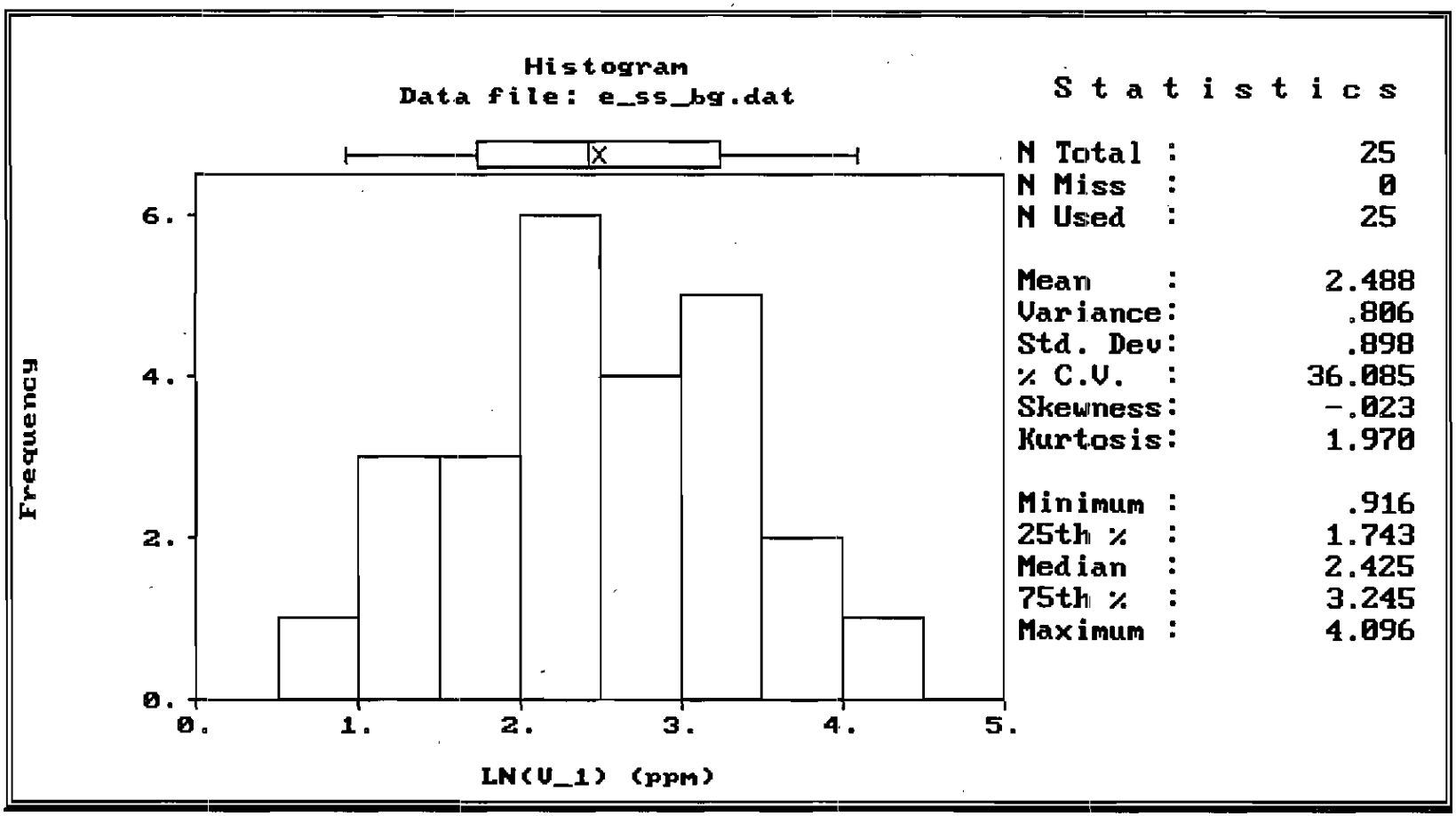
Zone E

Vanadium in surface soil BG samples

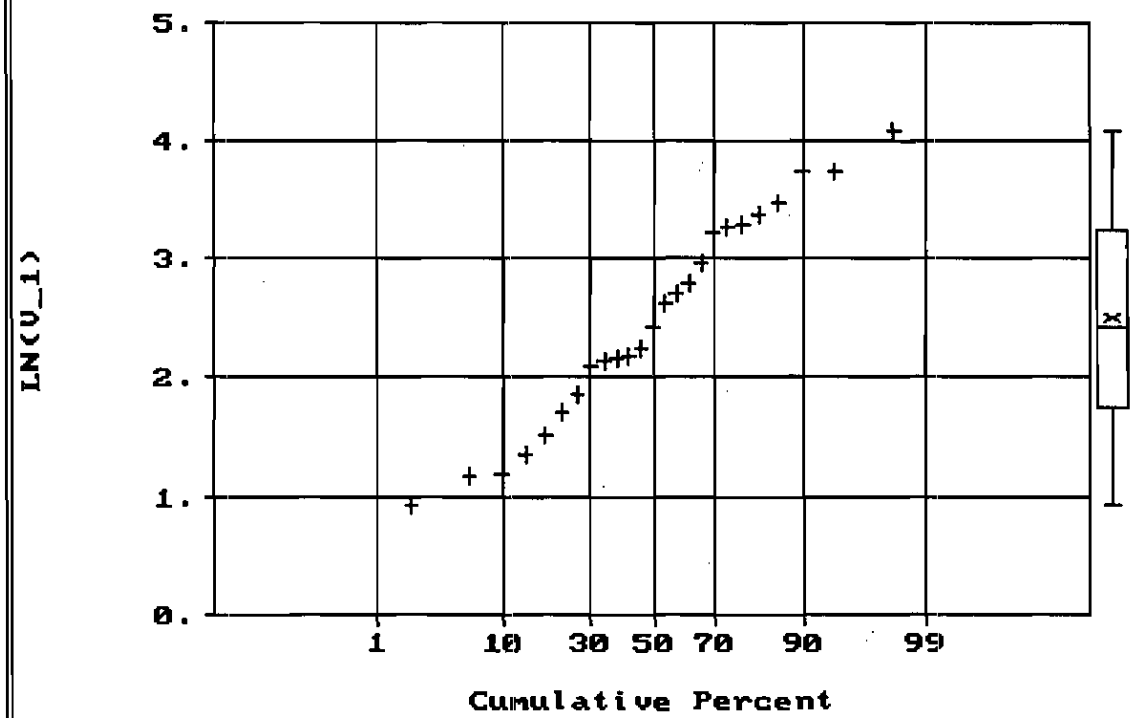
Original dataset (N = 25)

LN-transformed values

2a



Normal Probability Plot for LN(V_1)
Data file: e_ss_bg.dat

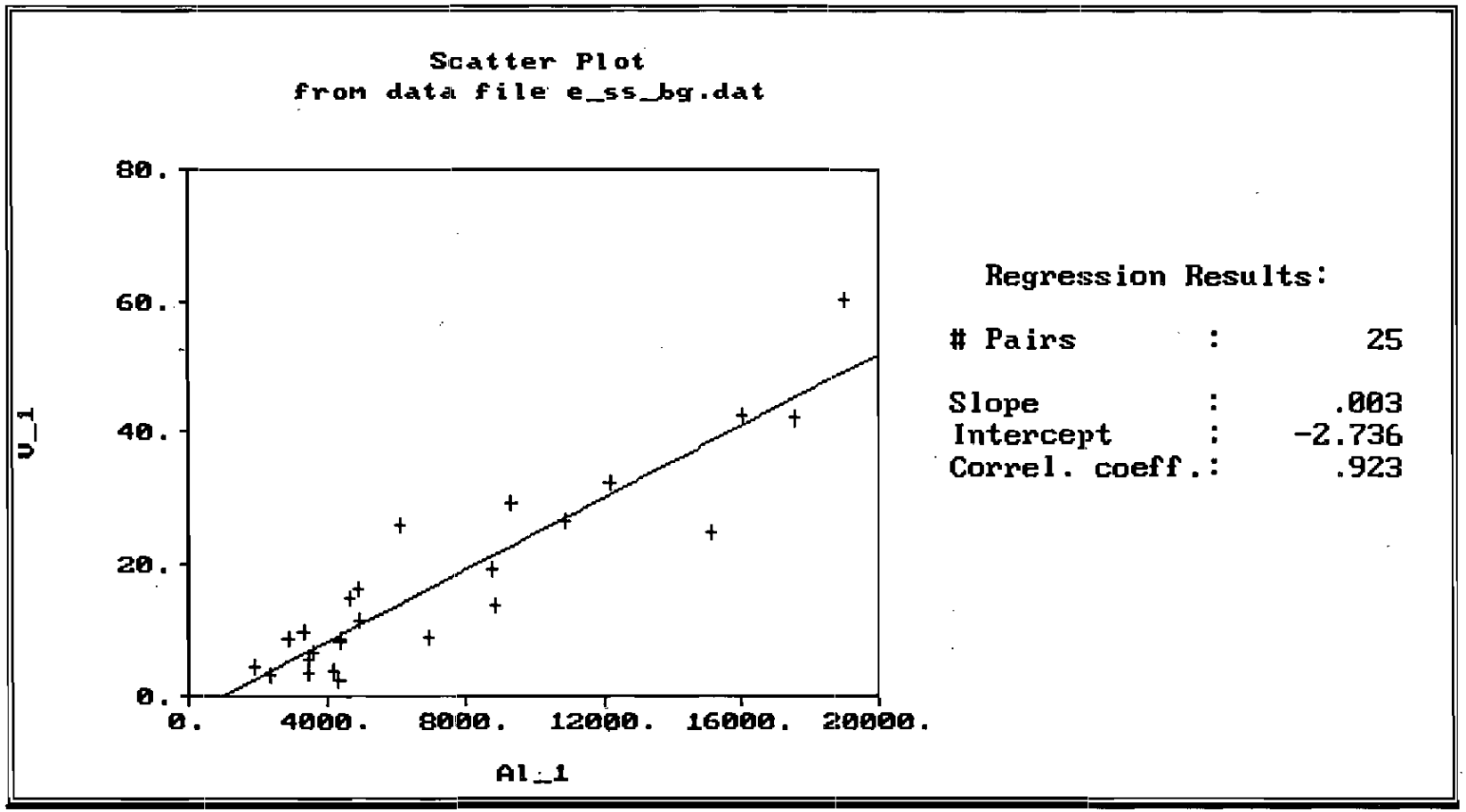


Statistics

N Total :	25
N Miss :	0
N Used :	25
Mean :	2.488
Variance:	.806
Std. Dev:	.898
% C.V. :	36.085
Skewness:	-.023
Kurtosis:	1.970
Minimum :	.916
25th % :	1.743
Median :	2.425
75th % :	3.245
Maximum :	4.096

Zone E
Crossplot: V vs. Al in surface soil BG samples
Original dataset (N = 25)
Original values

3a



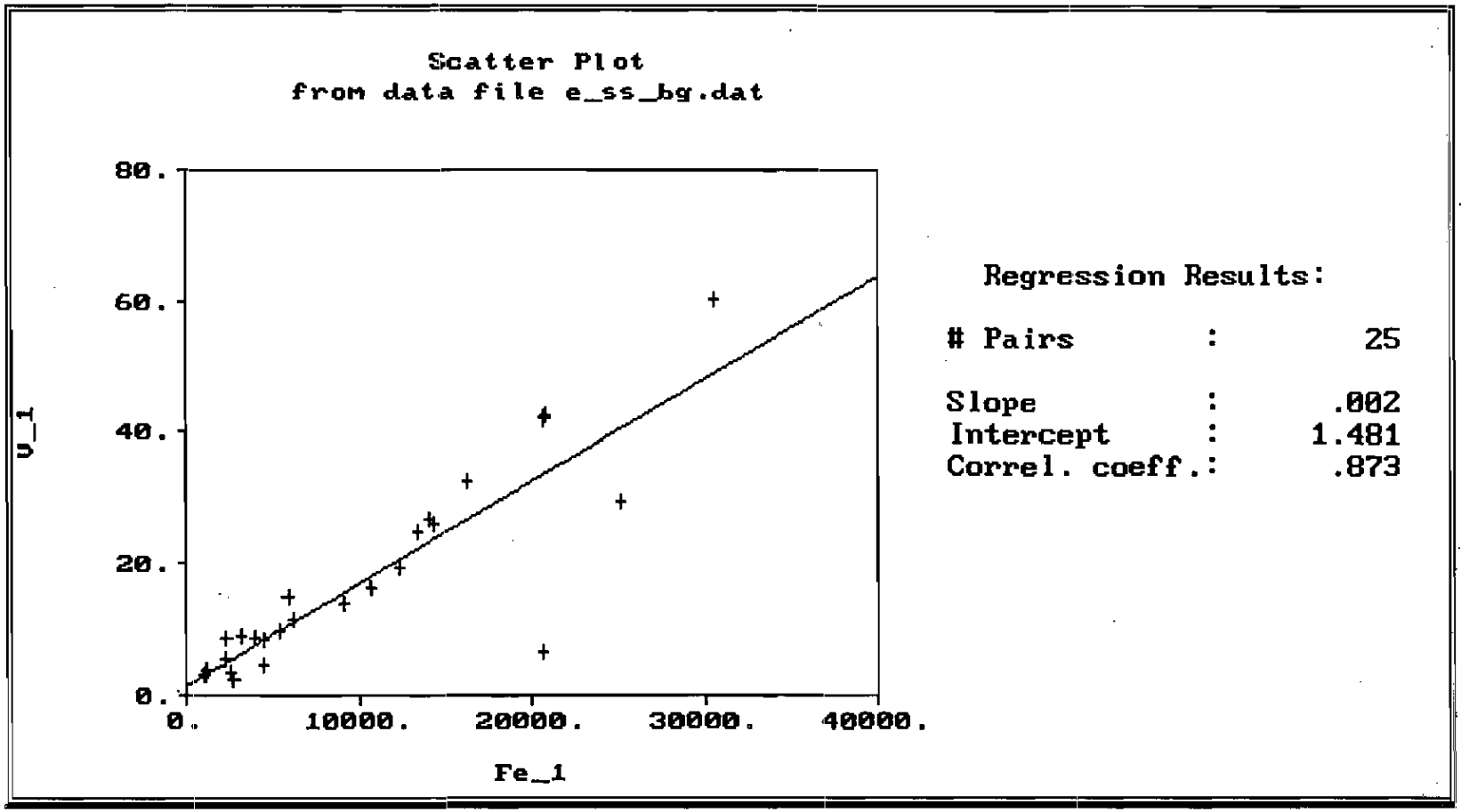
Zone E

Crossplot: V vs. Fe in surface soil BG samples

Original dataset (N = 25)

Original values

3b



CHARLESTON - ZONE E
Background Sample Results
Surface Soil, Samples 1-25

SW846-META													
	SAMPLE ID ------->	GDE-S-B001-01		GDE-C-B001-01		GDE-S-B002-01		GDE-S-B003-01		GDE-S-B004-01		GDE-S-B005-01	
	ORIGINAL ID ----->	GDESB00101		GDECB00101		GDESB00201		GDESB00301		GDESB00401		GDESB00501	
	LAB SAMPLE ID --->	23503.17		23502.01		23503.19		23503.11		23879.01		23503.01	
	ID FROM REPORT -->	GDESB00101		GDECB00101		GDESB00201		GDESB00301		GDESB00401		GDESB00501	
	SAMPLE DATE ----->	09/13/95		09/13/95		09/13/95		09/13/95		10/25/95		09/13/95	
	DATE EXTRACTED -->	09/17/95		09/17/95		09/17/95		09/17/95		10/31/95		09/17/95	
	DATE ANALYZED --->	10/01/95		10/01/95		10/01/95		10/01/95		11/03/95		10/01/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG	A	MG/KG	A	MG/KG	A	MG/KG	A	MG/KG	A	MG/KG	A
CAS #	Parameter	23502	VAL	23502	VAL	23502	VAL	23502	VAL	23879	VAL	23502	VAL
29-90-5	Aluminum (Al)	20500.	J	11600.		4430.	J	9360.	J	2350.		4930.	J
7440-36-0	Antimony (Sb)	4.3	UJ	0.7	J	3.1	UJ	3.4	UJ	0.48	U	3.3	UJ
7440-38-2	Arsenic (As)	17.9		9.9		2.6		14.8		0.6	U	3.	
7440-39-3	Barium (Ba)	30.9		20.9	J	13.8	J	76.1		8.1	J	9.5	J
7440-41-7	Beryllium (Be)	1.2		0.54	J	0.14	J	1.6		0.12	U	0.14	J
7440-43-9	Cadmium (Cd)	0.74		0.48	U	0.42	U	1.1		0.12	U	0.44	U
7440-70-2	Calcium (Ca)	10300.	J	6000.		30400.	J	28300.	J	218.	J	8060.	J
7440-47-3	Chromium (Cr)	32.4		18.3		22.8		52.1		2.3	J	6.6	
7440-48-4	Cobalt (Co)	6.5	J	4.	J	0.91	J	11.2		111.		0.95	J
7440-50-8	Copper (Cu)	28.2		14.1		22.		321.		49.7	J	5.7	
7439-89-6	Iron (Fe)	26500.	J	15100.		3960.	J	25100.	J	1090.	J	6180.	J
7439-92-1	Lead (Pb)	57.3	J	36.		21.7	J	400.	J	2.2		5.5	J
7439-95-4	Magnesium (Mg)	4390.	J	1780.		539.	J	1870.	J	75.7	J	467.	J
7439-96-5	Manganese (Mn)	269.	J	118.		64.5	J	170.	J	6.8	J	21.5	J
7439-97-6	Mercury (Hg)	0.21	J	0.2		0.03	J	2.7	J	0.03		0.06	J
7440-02-0	Nickel (Ni)	11.5		5.9		2.9	J	62.8		8.2	J	2.2	J
7440-09-7	Potassium (K)	2620.	J	1410.		476.	J	1310.	J	257.	J	753.	J
7782-49-2	Selenium (Se)	0.71	U	0.6	U	0.52	U	0.56	U	0.6	U	0.54	U
7440-22-4	Silver (Ag)	0.29	U	0.24	U	0.21	U	0.22	U	0.24	U	0.22	U
440-23-5	Sodium (Na)	358.	J	204.	J	97.2	J	438.	J	37.1	J	81.6	J
440-28-0	Thallium (Tl)	0.71	U	0.62	J	0.52	U	0.56	U	0.6	U	0.54	U
7440-62-2	Vanadium (V)	53.9		30.8		8.5		29.2		3.2	J	11.3	
7440-66-6	Zinc (Zn)	113.	J	52.9		41.3	J	855.	J	14.6		13.9	J
7440-31-5	Tin (Sn)	4.	J	3.9	J	1.9	U	44.7		3.3	J	2.2	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results
Surface Soil, Samples 1-25

SW846-META	SAMPLE ID ------->	GDE-S-B006-01		GDE-C-B006-01		GDE-S-B007-01		GDE-S-B008-01		GDE-S-B009-01		GDE-C-B009-01	
	ORIGINAL ID ----->	GDESB00601		GDECB00601		GDESB00701		GDESB00801		GDESB00901		GDECB00901	
	LAB SAMPLE ID --->	24436.11		24437.01		24456.07		23503.07		23485.17		23484.03	
	ID FROM REPORT -->	GDESB00601		GDECB00601		GDESB00701		GDESB00801		GDESB00901		GDECB00901	
	SAMPLE DATE ----->	01/04/96		01/04/96		01/08/96		09/13/95		09/12/95		09/12/95	
	DATE EXTRACTED -->	01/08/96		01/08/96		01/16/96		09/17/95		09/17/95		09/17/95	
	DATE ANALYZED --->	01/15/96		01/15/96		01/19/96		10/01/95		09/26/95		09/26/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG	A	MG/KG	A	MG/KG	A	MG/KG	A	MG/KG	A	MG/KG	A
CAS #	Parameter	24436	VAL	24436	VAL	24456	VAL	23502	VAL	23484	VAL	23484	VAL
29-90-5	Aluminum (Al)	6980.		6930.		19000.		12200.	J	15100.		20000.	
7440-36-0	Antimony (Sb)	0.44	UJ	0.43	U	0.63	U	4.1	UJ	0.65	J	0.56	J
7440-38-2	Arsenic (As)	1.2		1.5		17.1		23.9		17.		16.9	
7440-39-3	Barium (Ba)	12.2	J	12.	J	33.		54.7		31.9	J	36.8	
7440-41-7	Beryllium (Be)	0.11	U	0.11	U	1.2		0.8		0.88		0.9	J
7440-43-9	Cadmium (Cd)	0.11	U	0.11	U	0.16	U	1.5		0.13	U	0.13	U
7440-70-2	Calcium (Ca)	3410.	J	2710.		11800.		9390.	J	27800.		19600.	
7440-47-3	Chromium (Cr)	567.		554.		42.6		28.		29.1		33.1	
7440-48-4	Cobalt (Co)	4.7	J	5.7		8.1		4.4	J	4.6	J	4.7	J
7440-50-8	Copper (Cu)	4.8		21.1		32.6		131.		28.2		23.3	
7439-89-6	Iron (Fe)	3110.		3180.		30500.		16300.	J	20000.		21400.	
7439-92-1	Lead (Pb)	6.1	J	5.6		57.7		142.	J	74.4		61.9	
7439-95-4	Magnesium (Mg)	14800.		13600.		4560.		2340.	J	3070.		3030.	
7439-96-5	Manganese (Mn)	62.1		68.6		508.		187.	J	347.		257.	
7439-97-6	Mercury (Hg)	0.02	UR	0.02	U	0.26		0.42	J	0.61		0.79	
7440-02-0	Nickel (Ni)	14.4		11.4		14.1		14.2		11.		12.4	
7440-09-7	Potassium (K)	249.	J	179.	J	1850.		1720.	J	2100.	U	2160.	U
7782-49-2	Selenium (Se)	0.54	U	0.54	U	1.1		1.7		0.66	U	0.66	
7440-22-4	Silver (Ag)	0.22	U	0.22	U	0.31	U	0.75	J	0.26	U	0.26	U
440-23-5	Sodium (Na)	73.8	J	75.8	J	353.	J	302.	J	415.	J	383.	J
440-28-0	Thallium (Tl)	0.54	U	0.54	U	2.		0.68	U	0.66	U	0.65	U
7440-62-2	Vanadium (V)	8.8		8.7		60.1		32.6		41.7		42.2	
7440-66-6	Zinc (Zn)	11.4	J	17.3		131.		344.	J	104.		99.1	
7440-31-5	Tin (Sn)	2.8	U	2.9	U	10.8	J	34.		3.3	U	3.1	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results
Surface Soil, Samples 1-25

SW846-META													
	SAMPLE ID ------->	GDE-S-B010-01		GDE-S-B011-01		GDE-S-B012-01		GDE-S-B013-01		GDE-S-B014-01		GDE-S-B015-01	
	ORIGINAL ID ----->	GDESB01001		GDESB01101		GDESB01201		GDESB01301		GDESB01401		GDESB01501	
	LAB SAMPLE ID --->	23485.15		24503.17		23485.01		23485.03		24029.07		24024.11	
	ID FROM REPORT -->	GDESB01001		GDESB01101		GDESB01201		GDESB01301		GDESB01401		GDESB01501	
	SAMPLE DATE ----->	09/12/95		01/16/96		09/12/95		09/12/95		11/10/95		11/09/95	
	DATE EXTRACTED -->	09/17/95		01/18/96		09/17/95		09/17/95		11/14/95		11/14/95	
	DATE ANALYZED --->	09/26/95		01/22/96		09/26/95		09/26/95		11/21/95		11/21/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG	A	MG/KG	A	MG/KG	A	MG/KG	A	MG/KG	A	MG/KG	A
CAS #	Parameter	23484	VAL	24503	VAL	23484	VAL	23484	VAL	24029	VAL	24024	VAL
629-90-5	Aluminum (Al)	6100.		4380.	J	8870.		15100.		4690.		3330.	
7440-36-0	Antimony (Sb)	7.4		0.46	UJ	0.42	U	0.43	U	0.75	J	1.7	J
7440-38-2	Arsenic (As)	67.5		3.2		2.6		4.1		10.9		4.3	
7440-39-3	Barium (Ba)	74.4		1980.		15.7	J	22.		49.7		27.3	
7440-41-7	Beryllium (Be)	0.93		0.22	J	0.35	J	0.48	J	0.66		0.56	J
7440-43-9	Cadmium (Cd)	0.79		0.25	J	0.1	U	0.11	U	0.33	J	0.68	
7440-70-2	Calcium (Ca)	9820.		7510.	J	4830.		11700.		60500.		53600.	
7440-47-3	Chromium (Cr)	90.1		8.7		10.3	J	17.		15.9		26.7	
7440-48-4	Cobalt (Co)	8.5		1.1	J	2.5	J	3.9	J	2.7	J	4.3	J
7440-50-8	Copper (Cu)	210.		7.		7.3	J	6.5		23.3		148.	J
7439-89-6	Iron (Fe)	14300.		4460.	J	9050.		13400.		5880.		5430.	
7439-92-1	Lead (Pb)	265.		30.9	J	6.		7.6		60.5		191.	J
7439-95-4	Magnesium (Mg)	2320.		710.	J	1620.		1720.		2200.		1590.	
7439-96-5	Manganese (Mn)	150.		51.3	J	198.		232.		154.		60.7	J
7439-97-6	Mercury (Hg)	0.37		0.07'		0.02	U	0.02	U	0.16		0.4	J
7440-02-0	Nickel (Ni)	26.1		2.6	J	6.		8.5		11.2		20.9	J
7440-09-7	Potassium (K)	1170.	U	601.	J	926.	U	1020.	U	879.		579.	J
7782-49-2	Selenium (Se)	0.89		0.58	U	0.52	U	0.54	U	1.2		0.79	
7440-22-4	Silver (Ag)	0.23	U	0.23	U	0.21	U	0.22	U	0.24	U	0.23	U
7440-23-5	Sodium (Na)	310.	J	308.	J	177.	J	214.	J	412.	J	417.	J
7440-28-0	Thallium (Tl)	0.57	U	0.58	UJ	0.52	U	0.54	U	0.59	U	0.57	U
7440-62-2	Vanadium (V)	25.9		8.1		13.7		25.		14.8		9.5	
7440-66-6	Zinc (Zn)	786.		27.9	J	35.5		54.4		83.2		722.	J
7440-31-5	Tin (Sn)	22.3		3.6	U	2.1	U	2.6	U	10.9	U	18.6	J

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results
Surface Soil, Samples 1-25

SW846-META	SAMPLE ID ------->	GDE-S-B016-01		GDE-S-B017-01		GDE-C-B017-01		GDE-S-B018-01		GDE-C-B018-01		GDE-S-B019-01	
	ORIGINAL ID ----->	GDESB01601		GDESB01701		GDECB01701		GDESB01801		GDECB01801		GDESB01901	
	LAB SAMPLE ID --->	24431.18		24830.05		24831.01		23899.01		23898.01		23879.03	
	ID FROM REPORT -->	GDESB01601		GDESB01701		GDECB01701		GDESB01801		GDECB01801		GDESB01901	
	SAMPLE DATE ----->	01/03/96		02/28/96		02/28/96		10/26/95		10/26/95		10/25/95	
	DATE EXTRACTED -->	01/05/96		03/08/96		03/08/96		10/31/95		11/01/95		10/31/95	
	DATE ANALYZED --->	01/18/96		03/18/96		03/18/96		11/03/95		11/07/95		11/03/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG	A	MG/KG	A	MG/KG	A	MG/KG	A	MG/KG	A	MG/KG	A
CAS #	Parameter	24431	VAL	24830	VAL	24830	VAL	23879	VAL	23879	VAL	23879	VAL
29-90-5	Aluminum (Al)	10900.		9240.		8410.		4060.		3170.		4370.	
7440-36-0	Antimony (Sb)	1.6	J	0.46	UJ	0.6	J	2.6	J	0.94	J	0.5	J
7440-38-2	Arsenic (As)	12.2		2.6		2.7		47.6	J	15.6		1.7	J
7440-39-3	Barium (Ba)	56.5		28.8		26.7		69.3		64.6		12.9	J
7440-41-7	Beryllium (Be)	0.98		0.39	J	0.44	J	0.43	J	0.29	J	0.28	J
7440-43-9	Cadmium (Cd)	1.3		0.11	U	0.11	U	0.81		0.61		0.11	U
7440-70-2	Calcium (Ca)	38300.		716.		746.		725.		398.	J	12100.	
7440-47-3	Chromium (Cr)	34.8		9.5		14.		27.6	J	10.2		4.7	J
7440-48-4	Cobalt (Co)	6.6		1.2	J	1.5	J	8.1		4.4	J	1.5	J
7440-50-8	Copper (Cu)	136.		2.6	J	3.		866.	J	195.		12.6	J
7439-89-6	Iron (Fe)	14100.		11200.		13500.		30600.	J	10700.		2690.	J
7439-92-1	Lead (Pb)	164.		5.8		6.3		322.		172.		13.5	
7439-95-4	Magnesium (Mg)	2400.		224.	J	222.	J	258.	J	114.	J	227.	J
7439-96-5	Manganese (Mn)	110.		49.5		40.1		326.	J	116.		58.1	J
7439-97-6	Mercury (Hg)	0.72		0.07		0.06		0.37		0.15		0.02	U
7440-02-0	Nickel (Ni)	25.3		2.9	J	2.9	J	71.5	J	29.9		3.3	J
7440-09-7	Potassium (K)	1400.	J	374.	J	289.	U	377.	J	293.	U	407.	J
7782-49-2	Selenium (Se)	0.93		0.96		0.92		1.3		0.6		0.55	U
7440-22-4	Silver (Ag)	0.25	U	0.23	U	0.23	U	0.22	U	0.22	U	0.22	U
40-23-5	Sodium (Na)	380.	J	73.9	J	58.8	U	11.9	J	32.9	U	33.5	J
40-28-0	Thallium (Tl)	0.62	U	0.57	U	0.57	U	2.8		0.81	U	0.55	U
7440-62-2	Vanadium (V)	26.7		17.8		20.8		8.9		3.8	J	2.5	J
7440-66-6	Zinc (Zn)	248.		9.6		8.6		534.		305.		41.6	
7440-31-5	Tin (Sn)	11.8		2.3	U	2.3	U	23.5	J	7.2	J	3.2	J

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results
Surface Soil, Samples 1-25

SW846-META																	
	SAMPLE ID ------->	GDE-S-B020-01		GDE-S-B021-01		GDE-S-B022-01		GDE-S-B023-01		GDE-S-B024-01		GDE-S-B025-01	
	ORIGINAL ID ----->	GDESB02001		GDESB02101		GDESB02201		GDESB02301		GDESB02401		GDESB02501	
	LAB SAMPLE ID --->	24094.01		24855.21		24830.11		24471.13		23879.05		23860.15	
	ID FROM REPORT -->	GDESB02001		GDESB02101		GDESB02201		GDESB02301		GDESB02401		GDESB02501	
	SAMPLE DATE ----->	11/16/95		03/01/96		02/28/96		01/10/96		10/25/95		10/23/95	
	DATE EXTRACTED -->	11/20/95		03/06/96		03/08/96		01/15/96		10/31/95		10/26/95	
	DATE ANALYZED --->	11/27/95		03/07/96		03/18/96		01/21/96		11/03/95		11/02/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG	A	MG/KG	A	MG/KG	A	MG/KG	A	MG/KG	A	MG/KG	A
CAS #	Parameter	24094	VAL	24855	VAL	24830	VAL	24471	VAL	23879	VAL	23859	VAL
429-90-5	Aluminum (Al)	3480.	J	4950.		2870.		3470.		4210.		1880.	
7440-36-0	Antimony (Sb)	0.49	UJ	0.6	U	0.48	UJ	0.43	U	0.46	U	0.86	J
7440-38-2	Arsenic (As)	1.3		11.5		1.9		1.5		0.58	U	6.5	
7440-39-3	Barium (Ba)	7.9	J	23.1	J	19.	J	12.9	J	5.7	J	23.9	
7440-41-7	Beryllium (Be)	0.12	U	0.48	J	0.27	J	0.19	J	0.12	U	0.22	J
7440-43-9	Cadmium (Cd)	0.12	U	0.15	U	0.12	U	0.23	J	0.12	U	0.7	
7440-70-2	Calcium (Ca)	994.		5170.		959.		48400.	J	6710.		10000.	
7440-47-3	Chromium (Cr)	4.8		14.7		4.5		5.8		3.9	J	10.2	J
7440-48-4	Cobalt (Co)	2.7	J	23.2		2.9	J	1.	J	0.87	J	1.3	J
7440-50-8	Copper (Cu)	13.		9.3		35.9		12.		0.76	J	43.9	J
7439-89-6	Iron (Fe)	2510.		10700.		2300.		2260.		1250.	J	5920.	
7439-92-1	Lead (Pb)	30.5		37.9		27.3		28.8		2.3		226.	J
7439-95-4	Magnesium (Mg)	236.	J	622.	J	247.	J	763.		331.	J	316.	J
7439-96-5	Manganese (Mn)	25.8		51.3		35.9		65.2		13.6	J	64.8	J
7439-97-6	Mercury (Hg)	0.13	J	0.19	J	0.43		0.04		0.02	U	0.08	J
7440-02-0	Nickel (Ni)	2.8	U	5.5	J	4.9		3.7	J	2.	J	4.4	J
7440-09-7	Potassium (K)	399.	U	990.	J	381.	J	499.	J	396.	J	523.	U
7782-49-2	Selenium (Se)	0.61	U	0.75	U	0.61	U	0.54	U	0.58	U	0.57	
7440-22-4	Silver (Ag)	0.24	U	0.3	U	0.91	J	0.22	U	0.23	U	0.22	U
440-23-5	Sodium (Na)	46.6	U	108.	J	88.3	J	45.8	U	68.2	J	44.8	U
440-28-0	Thallium (Tl)	0.61	U	0.84	J	0.61	U	0.54	U	0.58	U	0.58	U
7440-62-2	Vanadium (V)	3.3	J	16.3		8.6		5.5		3.9	J	4.4	J
7440-66-6	Zinc (Zn)	48.3	J	28.5		66.6		44.2		3.9		205.	J
7440-31-5	Tin (Sn)	4.2	U	7.4	J	2.4	U	3.8	U	2.9	J	3.7	J

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results
Surface Soil, Samples 1-25

SW846-META

SAMPLE ID ------->	GDE-C-B025-01
ORIGINAL ID ----->	GDECB02501
LAB SAMPLE ID --->	23859.01
ID FROM REPORT -->	GDECB02501
SAMPLE DATE ----->	10/23/95
DATE EXTRACTED -->	10/26/95
DATE ANALYZED --->	11/07/95
MATRIX ---------->	Soil
UNITS ----------->	MG/KG A

CAS #	Parameter	23859	VAL
429-90-5	Aluminum (Al)	1950.	
7440-36-0	Antimony (Sb)	0.7	J
7440-38-2	Arsenic (As)	4.4	
7440-39-3	Barium (Ba)	21.7	J
7440-41-7	Beryllium (Be)	0.24	J
7440-43-9	Cadmium (Cd)	0.75	
7440-70-2	Calcium (Ca)	12300.	
7440-47-3	Chromium (Cr)	10.7	
7440-48-4	Cobalt (Co)	1.2	J
7440-50-8	Copper (Cu)	55.9	
7439-89-6	Iron (Fe)	3010.	
7439-92-1	Lead (Pb)	211.	
7439-95-4	Magnesium (Mg)	369.	J
7439-96-5	Manganese (Mn)	57.7	
7439-97-6	Mercury (Hg)	0.09	
7440-02-0	Nickel (Ni)	6.	
7440-09-7	Potassium (K)	498.	U
7782-49-2	Selenium (Se)	0.54	U
7440-22-4	Silver (Ag)	0.22	U
440-23-5	Sodium (Na)	57.8	U
440-28-0	Thallium (Tl)	0.54	UJ
7440-62-2	Vanadium (V)	4.6	J
7440-66-6	Zinc (Zn)	210.	
7440-31-5	Tin (Sn)	5.	U

*** Validation Complete ***

E N V I R O N M E N T A L S A F E T Y & D E S I G N S

2905-00001 - CHARLESTON ZONE E - SOIL & SED

Samples by Chemical Report

18540-29-9 - Chromium (Hexavalent)

>= 0.0000 for MG/KG

Sample ID	Ext. Orig. ID	Type	Date	Result	VQual	Units	SDG #
018-C-B005-01	018CB00501	Soil	09/25/95	0.0530	U	MG/KG	23626 VAL
018-C-B005-02	018CB00502	Soil	09/25/95	0.0582	U	MG/KG	23626 VAL
022-C-B001-01	022CB00101	Soil	09/07/95	0.0620	U	MG/KG	23447 VAL
023-C-B001-02	023CB00102	Soil	10/13/95	0.0540	U	MG/KG	23801 VAL
025-C-B004-01	025CB00401	Soil	02/01/96	0.0550	U	MG/KG	24621 VAL
053-C-B001-01	053CB00101	Soil	11/16/95	0.0530	U	MG/KG	24094 VAL
053-C-B001-02	053CB00102	Soil	11/16/95	0.0570	U	MG/KG	24094 VAL
053-C-B003-01	053CB00301	Soil	06/05/96	0.2610	UR	MG/KG	25885 VAL
053-C-B004-01	053CB00401	Soil	06/05/96	0.2790	UR	MG/KG	25885 VAL
054-N-0002-01	054N000201	Sedmt	11/02/95	0.1250	U	MG/KG	23922 VAL
054-C-B007-01	054CB00701	Soil	11/20/95	0.0637	U	MG/KG	24105 VAL
054-C-B008-01	054CB00801	Soil	11/20/95	0.0654	U	MG/KG	24105 VAL
054-C-B017-01	054CB01701	Soil	11/27/95	0.0580	U	MG/KG	24152 VAL
054-C-B018-01	054CB01801	Soil	11/27/95	0.0530	U	MG/KG	24152 VAL
054-C-B021-01	054CB02101	Soil	11/27/95	0.0580	U	MG/KG	24152 VAL
054-C-B028-01	054CB02801	Soil	11/28/95	0.0550	U	MG/KG	24159 VAL
054-C-B031-01	054CB03101	Soil	11/28/95	0.0540	U	MG/KG	24159 VAL
054-C-B033-01	054CB03301	Soil	11/30/95	0.0580	U	MG/KG	24170 VAL
054-C-B037-01	054CB03701	Soil	11/30/95	0.0570	U	MG/KG	24170 VAL
065-C-B001-01	065CB00101	Soil	12/04/95	0.1670		MG/KG	24212 VAL
065-C-B001-02	065CB00102	Soil	12/04/95	0.0790	U	MG/KG	24212 VAL
065-C-B005-01	065CB00501	Soil	09/27/95	0.5600	U	MG/KG	23663 VAL
065-C-B005-02	065CB00502	Soil	09/27/95	0.6700	U	MG/KG	23663 VAL
067-C-B002-02	067CB00202	Soil	10/13/95	0.0540	U	MG/KG	23801 VAL
070-C-B001-01	070CB00101	Soil	08/31/95	0.0550	U	MG/KG	23386 VAL
087-C-B001-01	087CB00101	Soil	09/08/95	0.0590	U	MG/KG	23447 VAL
097-C-B003-01	097CB00301	Soil	09/18/95	0.0580	U	MG/KG	23535 VAL
102-C-B004-01	102CB00401	Soil	01/31/96	0.0746	U	MG/KG	24621 VAL
145-C-B009-01	145CB00901	Soil	01/25/96	0.1220		MG/KG	24568 VAL
145-C-B010-01	145CB01001	Soil	01/25/96	0.0620	U	MG/KG	24568 VAL
170-C-B008-01	170CB00801	Soil	01/03/96	0.0592	U	MG/KG	24431 VAL
170-C-B009-01	170CB00901	Soil	01/03/96	0.0678	U	MG/KG	24431 VAL
171-C-B008-01	171CB00801	Soil	12/12/95	0.0678	U	MG/KG	24293 VAL
171-C-B010-02	171CB01002	Soil	12/12/95	0.0590	U	MG/KG	24293 VAL
171-C-B012-02	171CB01202	Soil	12/12/95	0.0588	U	MG/KG	24293 VAL
171-C-B019-01	171CB01901	Soil	12/13/95	0.0571	U	MG/KG	24312 VAL
171-C-B019-02	171CB01902	Soil	12/13/95	0.0640	U	MG/KG	24312 VAL
172-C-B003-01	172CB00301	Soil	09/08/95	0.0670	U	MG/KG	23447 VAL
526-C-B002-01	526CB00201	Soil	11/16/95	0.0540	U	MG/KG	24094 VAL
528-C-B003-02	528CB00302	Soil	10/12/95	0.0530	U	MG/KG	23720 VAL
530-C-B001-02	530CB00102	Soil	01/09/96	0.0572	U	MG/KG	24464 VAL
538-C-B008-02	538CB00802	Soil	08/28/95	0.0500	U	MG/KG	23359 VAL
540-C-B001-02	540CB00102	Soil	08/30/95	0.0540	U	MG/KG	23386 VAL
542-C-B006-02	542CB00602	Soil	08/30/95	0.0600	U	MG/KG	23359 VAL
543-C-B002-02	543CB00202	Soil	10/12/95	0.0590	U	MG/KG	23720 VAL
543-C-B003-02	543CB00302	Soil	10/11/95	0.0560	U	MG/KG	23720 VAL
543-C-B004-02	543CB00402	Soil	08/30/95	0.0550	U	MG/KG	23386 VAL
550-C-B001-01	550CB00101	Soil	01/10/96	0.0540	U	MG/KG	24471 VAL
551-C-B002-01	551CB00201	Soil	09/29/95	0.0570	U	MG/KG	23704 VAL

E N V I R O N M E N T A L S A F E T Y & D E S I G N S

2905-00001 - CHARLESTON ZONE E - SOIL & SED

Samples by Chemical Report

18540-29-9 - Chromium (Hexavalent)

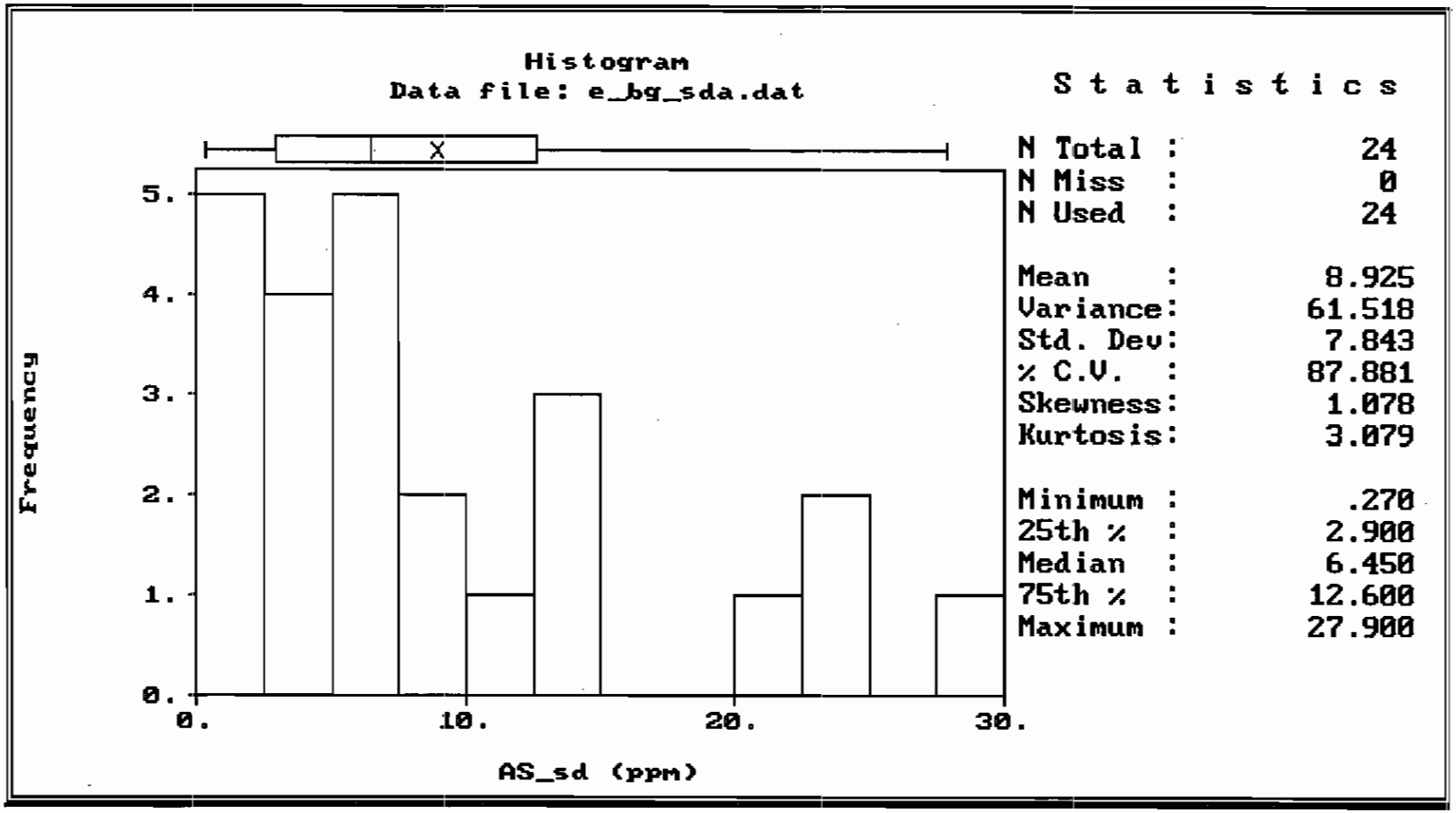
>= 0.0000 for MG/KG

Sample ID	Ext. Orig. ID	Type	Date	Result	VQual	Units	SDG #	
551-C-B006-01	551CB00601	Soil	09/29/95	0.0580	U	MG/KG	23704	VAL
556-N-0008-01	556N000801	Sedmt	11/03/95	0.1830	U	MG/KG	23969	VAL
559-C-B004-01	559CB00401	Soil	11/10/95	0.0550	U	MG/KG	24029	VAL
559-C-B006-01	559CB00601	Soil	11/06/95	0.0560	U	MG/KG	23980	VAL
559-C-B013-01	559CB01301	Soil	11/06/95	0.0550	U	MG/KG	23980	VAL
559-C-B027-01	559CB02701	Soil	05/30/96	0.2640	U	MG/KG	25805	VAL
561-C-B002-01	561CB00201	Soil	11/15/95	0.0560	U	MG/KG	24074	VAL
561-C-B006-01	561CB00601	Soil	06/04/96	0.4100	UR	MG/KG	25846	VAL
563-C-B006-02	563CB00602	Soil	01/30/96	0.0610	U	MG/KG	24605	VAL
563-C-B007-01	563CB00701	Soil	01/30/96	0.0576	U	MG/KG	24605	VAL
570-C-B009-01	570CB00901	Soil	01/16/96	0.0951		MG/KG	24503	VAL
570-C-B015-02	570CB01502	Soil	11/14/95	0.0530	U	MG/KG	24056	VAL
573-C-B001-01	573CB00101	Soil	10/31/95	0.0570	U	MG/KG	23922	VAL
573-C-B002-01	573CB00201	Soil	09/11/95	0.0550	U	MG/KG	23471	VAL
573-C-B003-02	573CB00302	Soil	09/11/95	0.0760	U	MG/KG	23471	VAL
573-C-B005-02	573CB00502	Soil	09/11/95	0.0590	U	MG/KG	23471	VAL
576-C-B003-01	576CB00301	Soil	09/06/95	0.0620	U	MG/KG	23424	VAL
579-C-B004-01	579CB00401	Soil	09/12/95	0.0560	U	MG/KG	23484	VAL
580-C-B002-01	580CB00201	Soil	09/14/95	0.0608	U	MG/KG	23502	VAL
583-C-B006-01	583CB00601	Soil	09/15/95	0.0542	U	MG/KG	23535	VAL
597-C-B002-01	597CB00201	Soil	10/24/95	0.0580	U	MG/KG	23859	VAL
598-C-B002-02	598CB00202	Soil	09/19/95	0.0628	U	MG/KG	23560	VAL
599-C-B005-02	599CB00502	Soil	09/20/95	0.0639	U	MG/KG	23560	VAL
602-C-B001-01	602CB00101	Soil	01/08/96	0.0644	U	MG/KG	24456	VAL
602-C-B003-01	602CB00301	Soil	01/08/96	0.0588	U	MG/KG	24456	VAL
602-C-B004-01	602CB00401	Soil	01/08/96	0.0555	U	MG/KG	24456	VAL
605-C-B010-01	605CB01001	Soil	09/21/95	0.0700	U	MG/KG	23593	VAL
605-C-B011-02	605CB01102	Soil	09/21/95	0.0600	U	MG/KG	23593	VAL
605-C-B012-01	605CB01201	Soil	05/31/96	0.5860		MG/KG	25805	VAL
605-C-B014-01	605CB01401	Soil	05/31/96	0.3070	U	MG/KG	25805	VAL
GDE-C-B001-01	GDECB00101	Soil	09/13/95	0.0608	U	MG/KG	23502	VAL
GDE-C-B002-02	GDECB00202	Soil	09/13/95	0.0610	U	MG/KG	23502	VAL
GDE-C-B006-01	GDECB00601	Soil	01/04/96	0.0533	U	MG/KG	24436	VAL
GDE-C-B009-01	GDECB00901	Soil	09/12/95	0.0690	U	MG/KG	23484	VAL
GDE-C-B010-02	GDECB01002	Soil	09/12/95	0.0940	U	MG/KG	23484	VAL
GDE-C-B017-01	GDECB01701	Soil	02/28/96	0.0578	U	MG/KG	24830	VAL
GDE-C-B018-01	GDECB01801	Soil	10/26/95	0.0560	U	MG/KG	23879	VAL
GDE-C-B023-02	GDECB02302	Soil	01/10/96	0.0567	U	MG/KG	24471	VAL
GDE-C-B025-01	GDECB02501	Soil	10/23/95	0.0550	U	MG/KG	23859	VAL

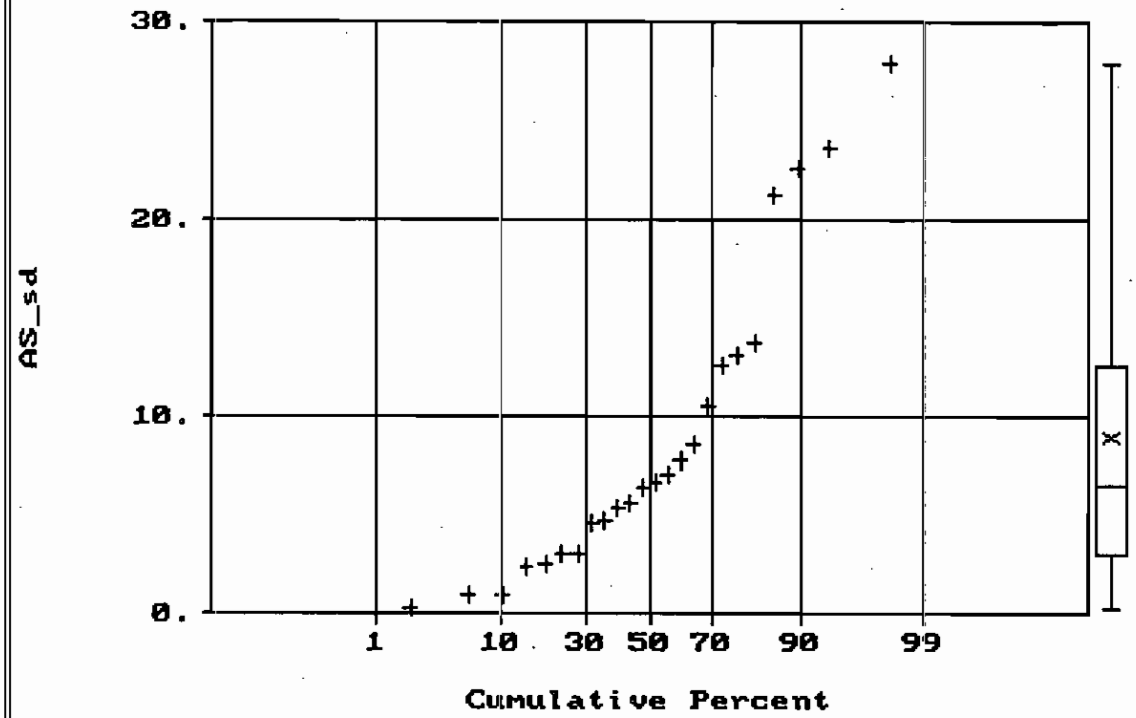
*** End of Report ***

Zone E
Arsenic in subsurface soil background samples
Original dataset (N = 24)
Original values

1a



Normal Probability Plot for AS_sd
Data file: e_bg_sda.dat

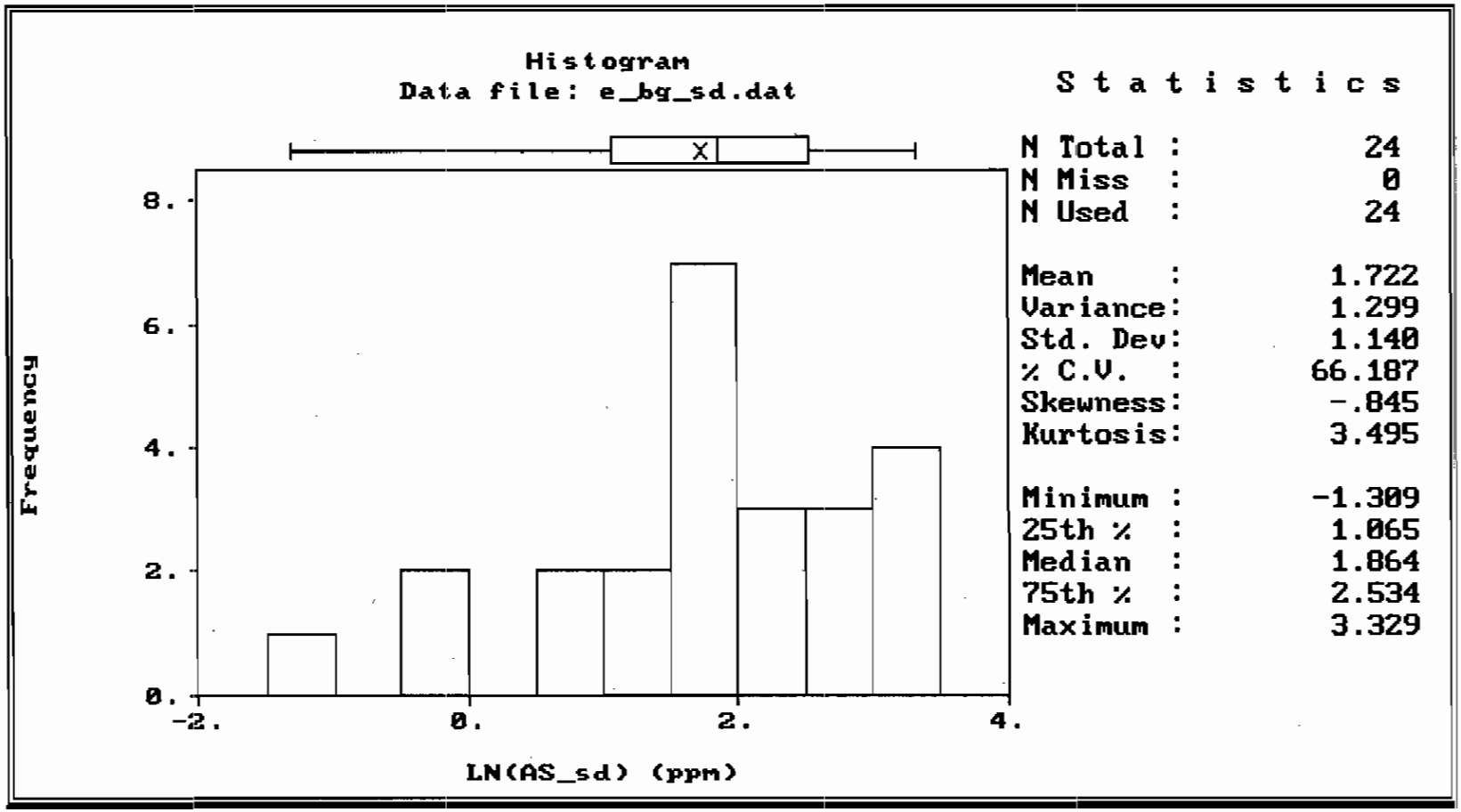


Statistics

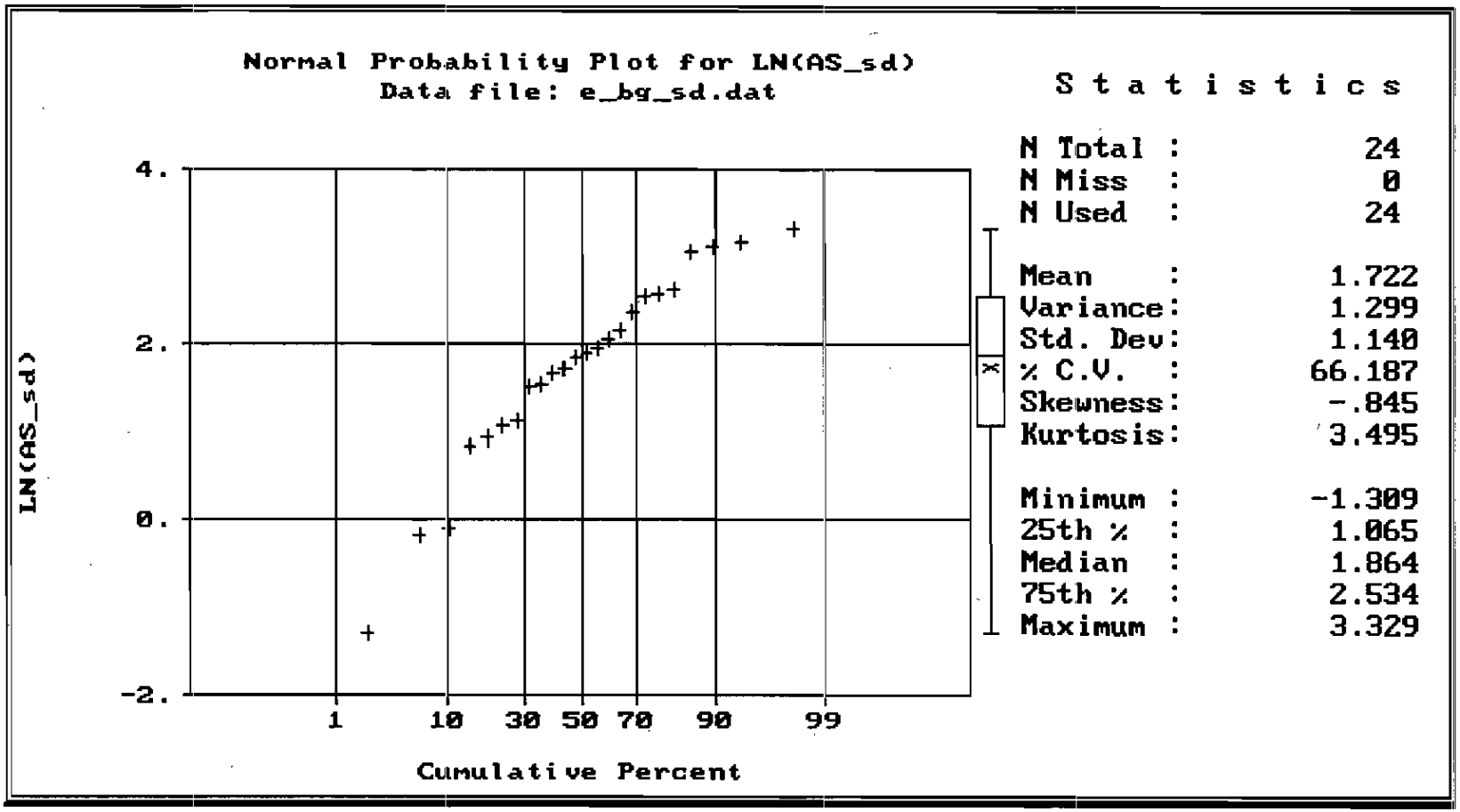
N Total :	24
N Miss :	0
N Used :	24
Mean :	8.925
Variance:	61.518
Std. Dev:	7.843
% C.V. :	87.881
Skewness:	1.078
Kurtosis:	3.079
Minimum :	.270
25th % :	2.900
Median :	6.450
75th % :	12.600
Maximum :	27.900

Zone E
Arsenic in subsurface soil BG samples
Original dataset (N=24)
LN-transformed values

2a

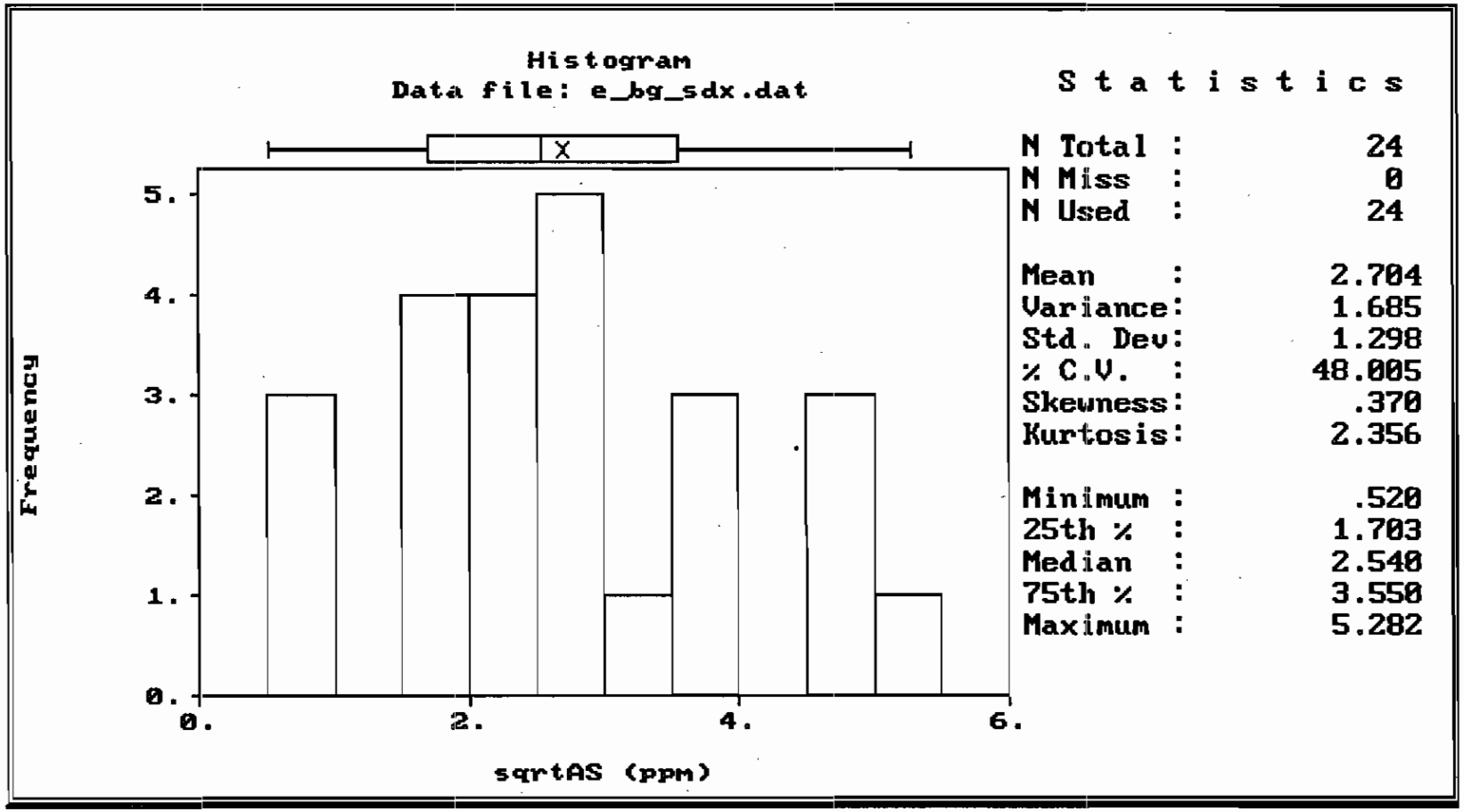


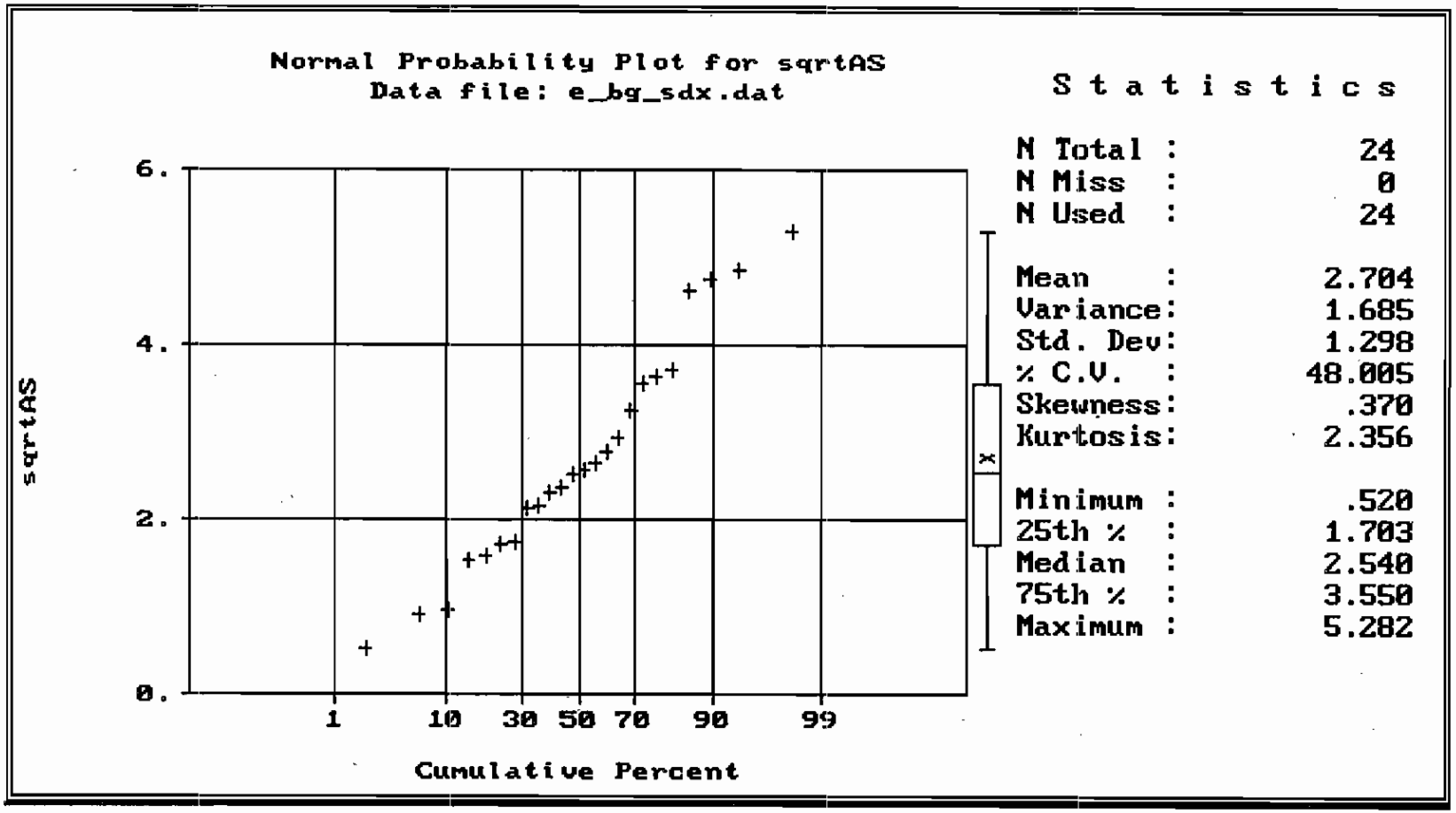
2b


Normal Probability Plot for LN(AS_sd)
Data file: e_bg_sd.dat
LN(AS_sd)
4.
2.
0.
-2.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 24
N Miss : 0
N Used : 24
Mean : 1.722
Variance: 1.299
Std. Dev: 1.140
% C.V. : 66.187
Skewness: -.845
Kurtosis: 3.495
Minimum : -1.309
25th % : 1.065
Median : 1.864
75th % : 2.534
Maximum : 3.329

Zone E
Arsenic in subsurface soil BG samples
Original dataset (N = 24)
Square-root transformed values

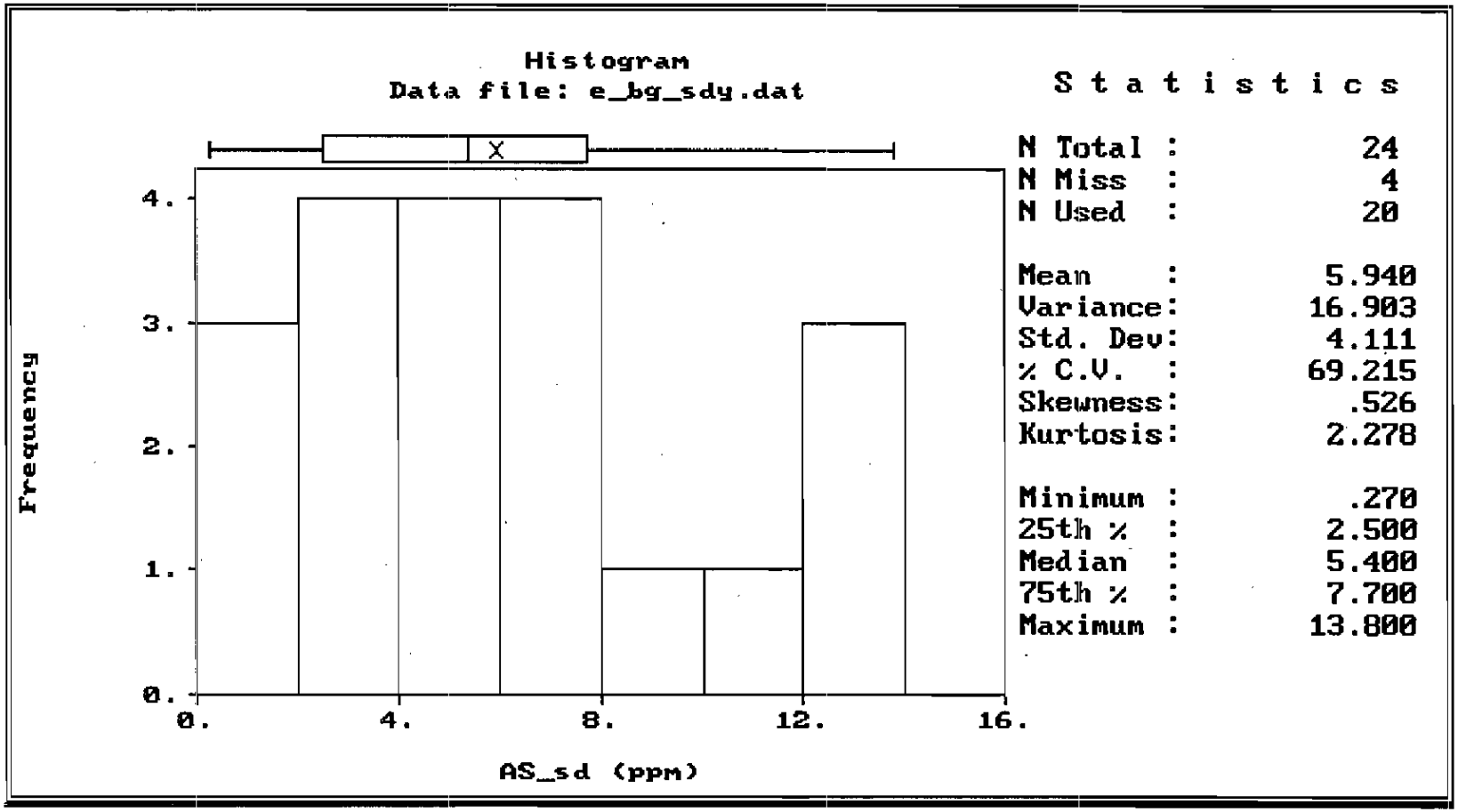
3a



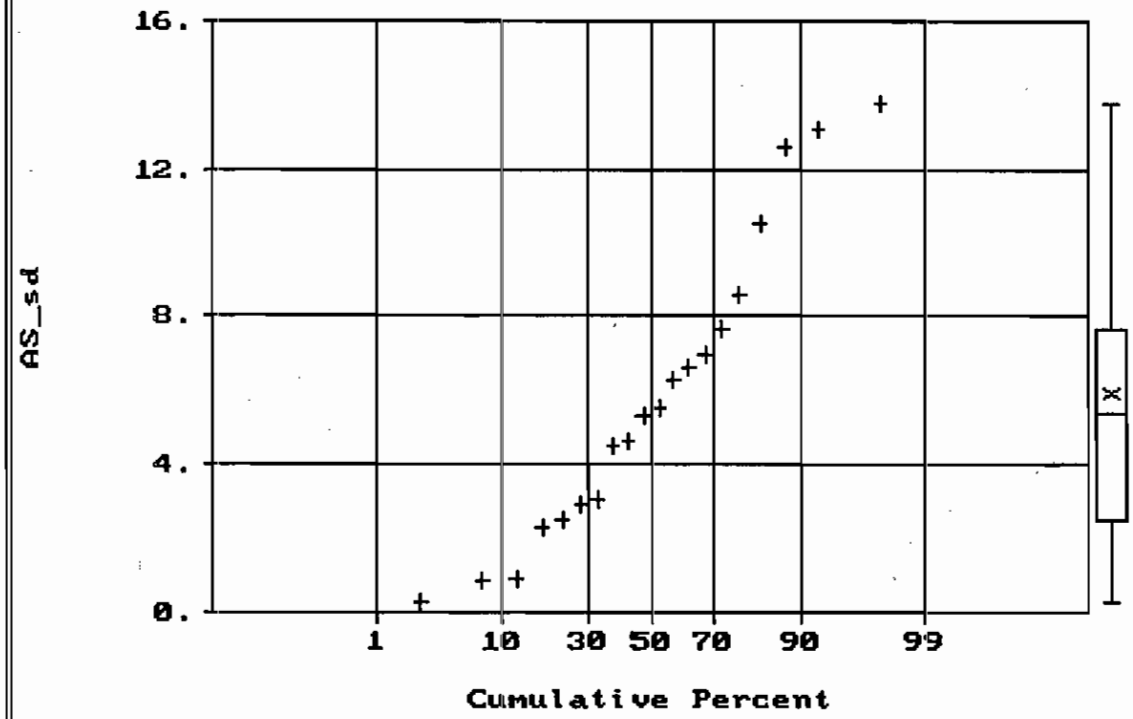

Normal Probability Plot for sqrtAS
Data file: e_bg_sdx.dat
sqrtAS
6.
4.
2.
0.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 24
N Miss : 0
N Used : 24
Mean : 2.704
Variance: 1.685
Std. Dev: 1.298
% C.V. : 48.005
Skewness: .370
Kurtosis: 2.356
Minimum : .520
25th % : 1.703
Median : 2.540
75th % : 3.550
Maximum : 5.282

Zone E
Arsenic in subsurface soil BG samples
Samples # 05-02, 08-02, 10-02, and 15-02 removed (N=20)
Original values

4a



Normal Probability Plot for AS_sd
Data file: e_bg_sdy.dat

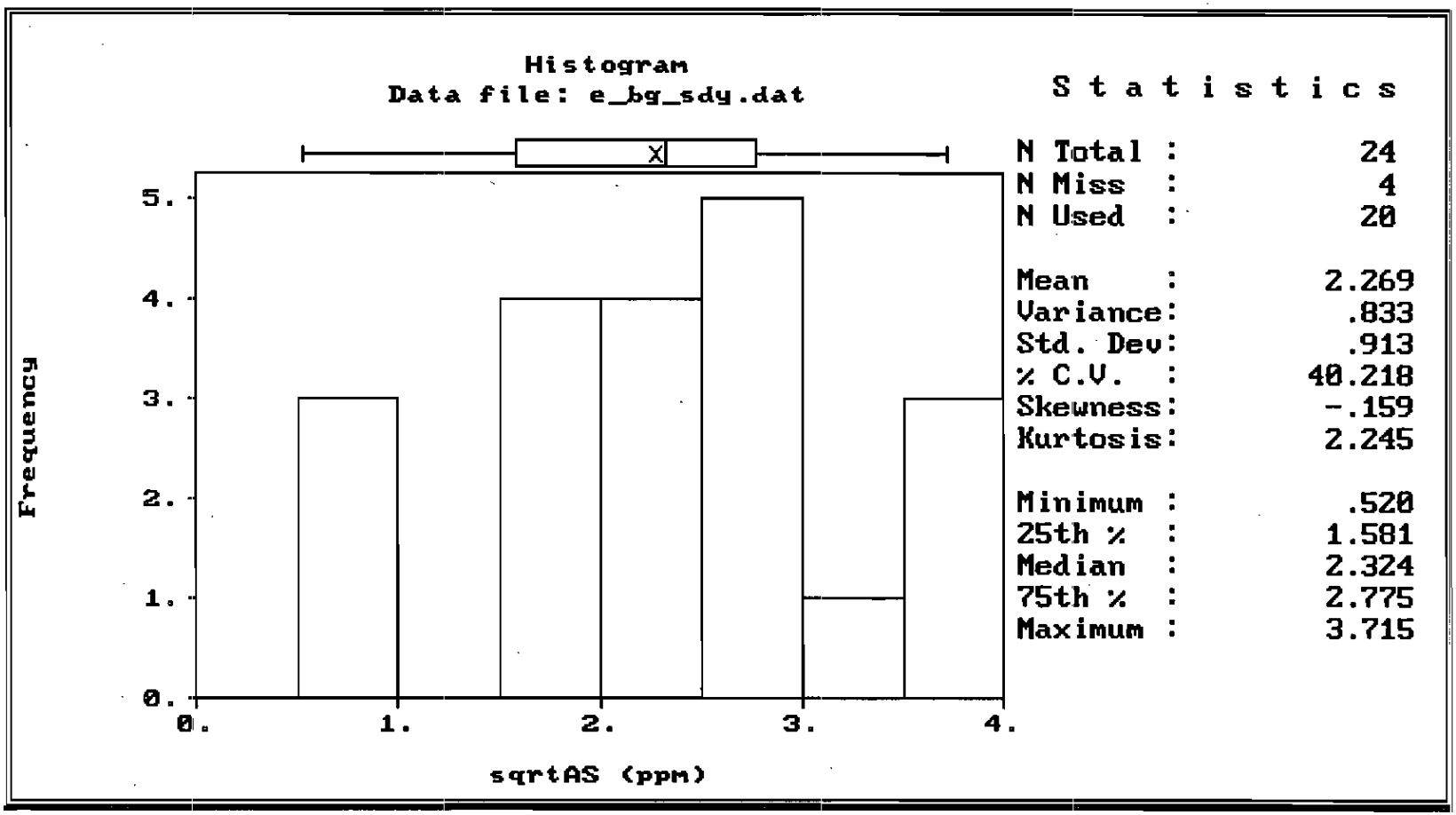


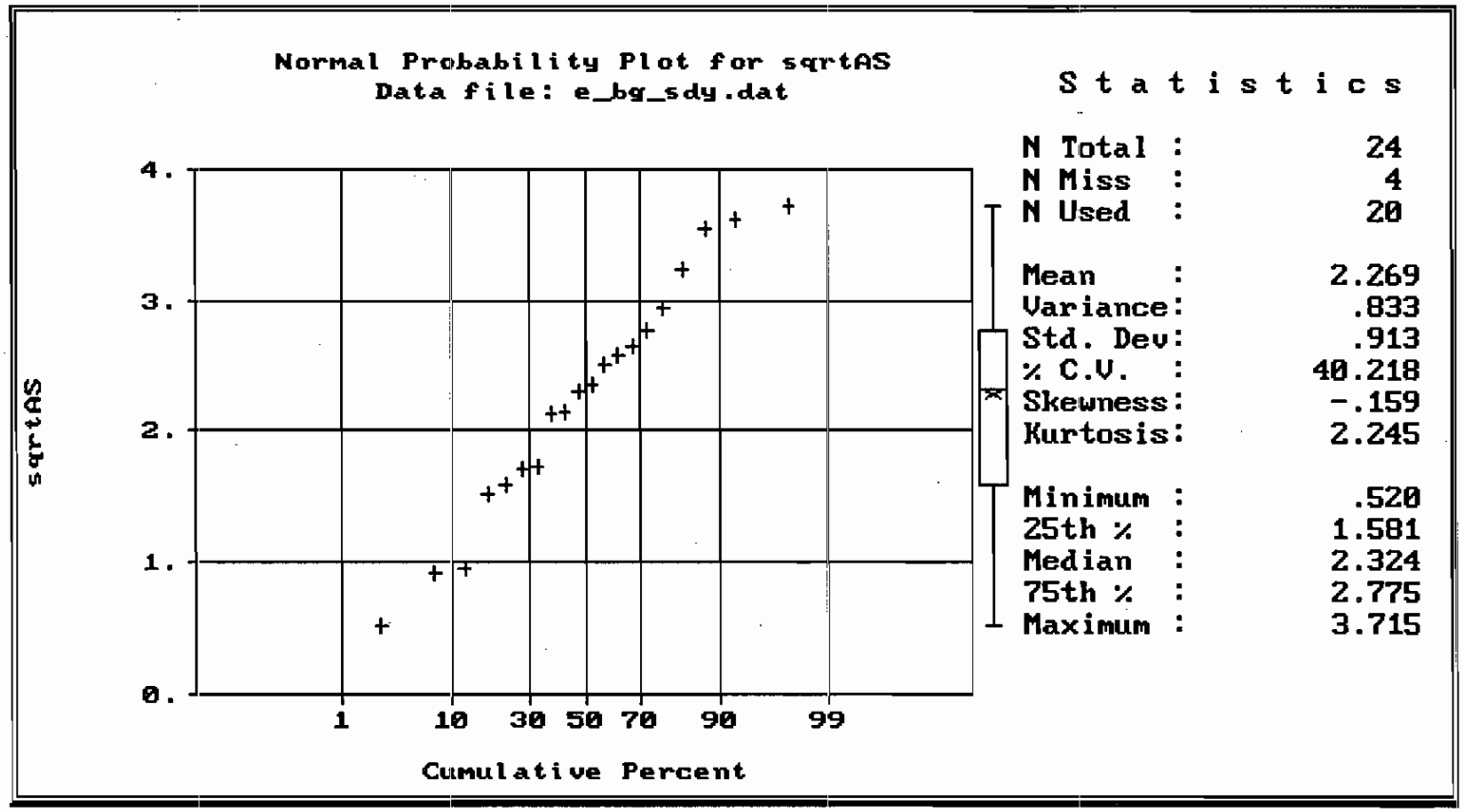
Statistics

N Total :	24
N Miss :	4
N Used :	20
Mean :	5.940
Variance:	16.903
Std. Dev:	4.111
% C.V. :	69.215
Skewness:	.526
Kurtosis:	2.278
Minimum :	.270
25th % :	2.500
Median :	5.400
75th % :	7.700
Maximum :	13.800

Zone E
Arsenic in subsurface soil BG samples
Samples # 05-02, 08-02, 10-02, and 15-02 removed (N=20)

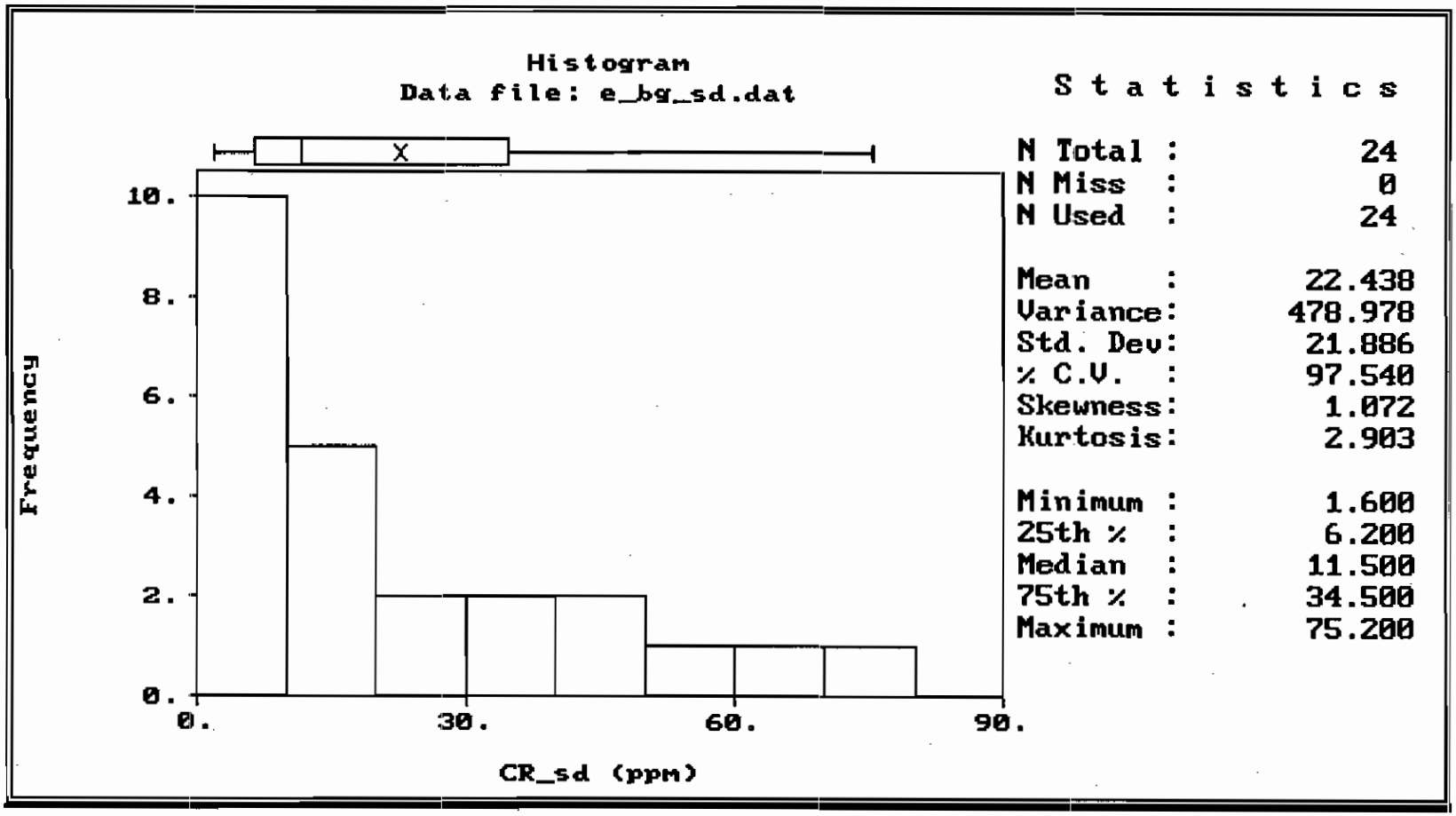
5a



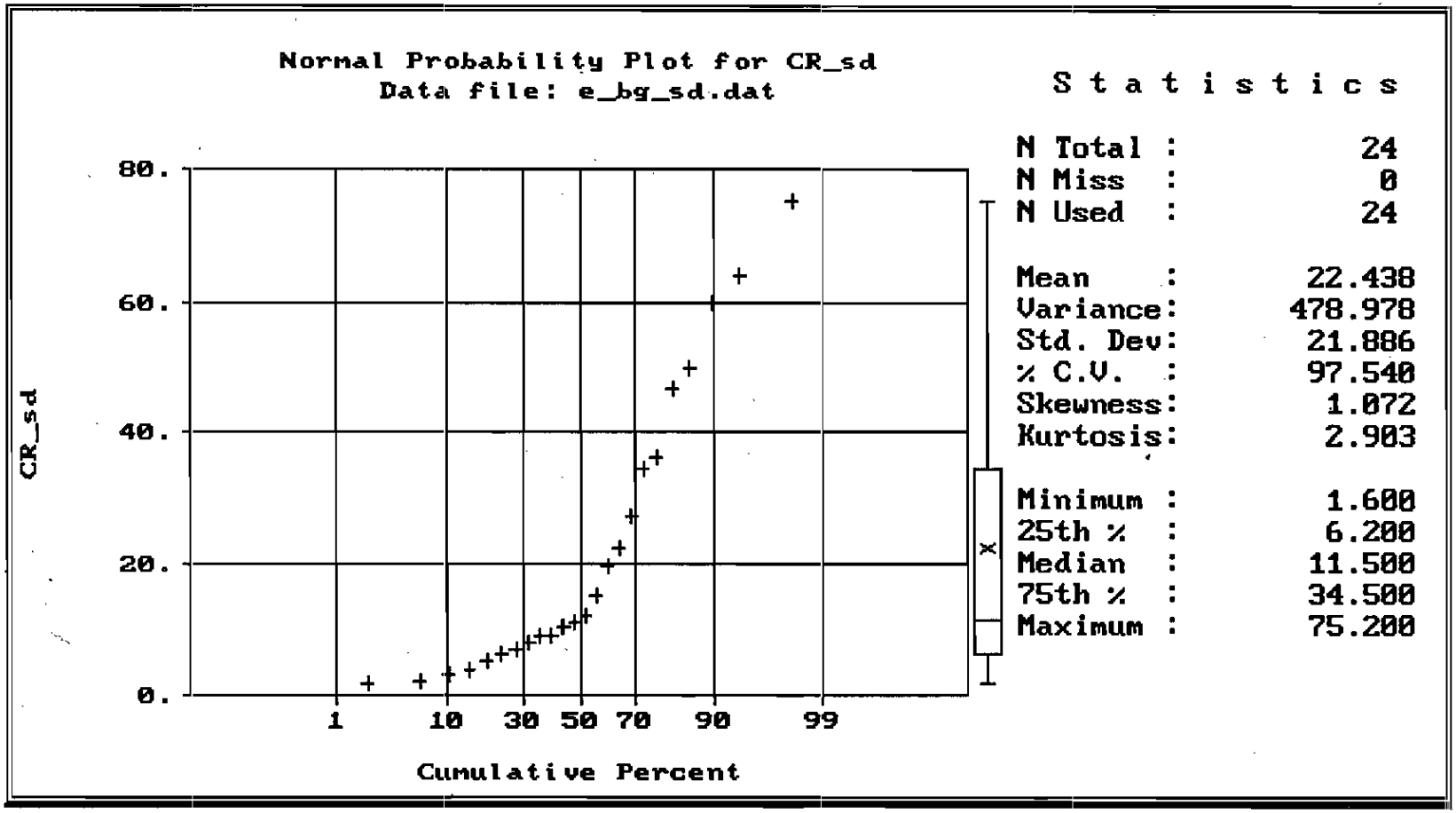

Normal Probability Plot for sqrtAS
Data file: e_bg_sdy.dat
sqrtAS
4.
3.
2.
1.
0.
1
10
30
50
70
90
99
Cumulative Percent
S t a t i s t i c s
N Total : 24
N Miss : 4
N Used : 20
Mean : 2.269
Variance: .833
Std. Dev: .913
% C.V. : 40.218
Skewness: -.159
Kurtosis: 2.245
Minimum : .520
25th % : 1.581
Median : 2.324
75th % : 2.775
Maximum : 3.715

Zone E
Chromium in subsurface soil BG samples
Original dataset (N = 24)
Original values

1a

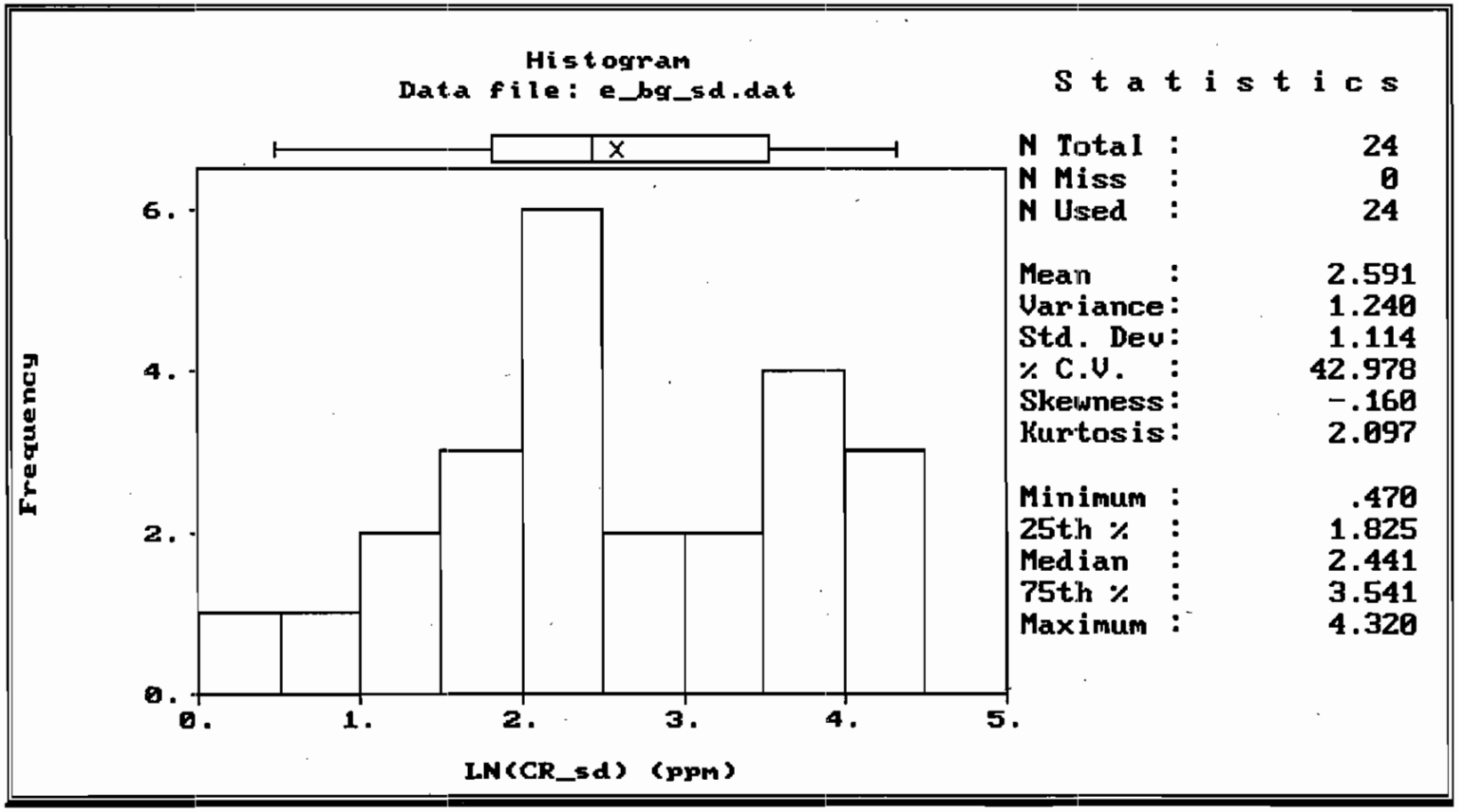


16

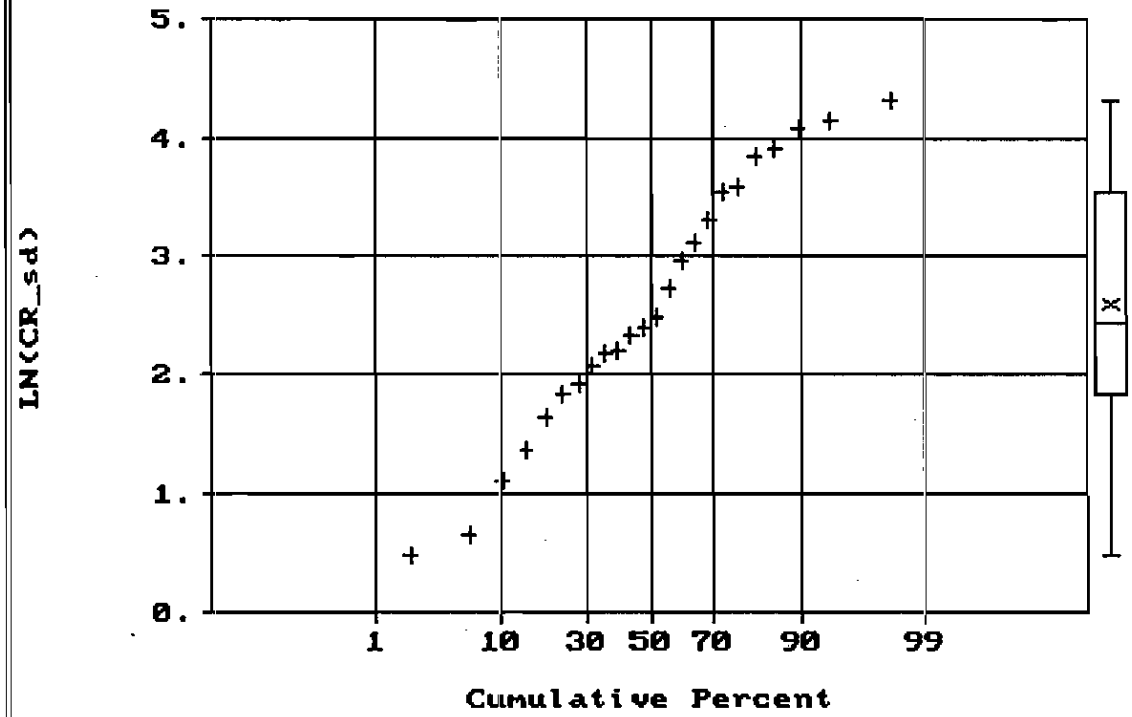

Normal Probability Plot for CR_sd
Data file: e_bg_sd.dat
CR_sd
80.
60.
40.
20.
0.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 24
N Miss : 0
N Used : 24
Mean : 22.438
Variance: 478.978
Std. Dev: 21.886
% C.V. : 97.540
Skewness: 1.072
Kurtosis: 2.903
Minimum : 1.600
25th % : 6.200
Median : 11.500
75th % : 34.500
Maximum : 75.200

Zone E
Chromium in subsurface soil BG samples
Original dataset (N=24)
LN-transformed values

2a



Normal Probability Plot for LN(CR_sd)
Data file: e_bg_sd.dat



Statistics

N Total :	24
N Miss :	0
N Used :	24
Mean :	2.591
Variance:	1.240
Std. Dev:	1.114
% C.V. :	42.978
Skewness:	-.160
Kurtosis:	2.097
Minimum :	.470
25th % :	1.825
Median :	2.441
75th % :	3.541
Maximum :	4.320

E N V I R O N M E N T A L S A F E T Y & D E S I G N S

2905-00001 - CHARLESTON ZONE E - SOIL & SED

Samples by Chemical Report

18540-29-9 - Chromium (Hexavalent)

>= 0.0000 for All Concentration Units

Sample ID	Ext. Orig. ID	Type	Date	Result	VQual	Units	SDG #	
018-C-B005-01	018CB00501	Soil	09/25/95	0.0530	U	MG/KG	23626	VAL
018-C-B005-02	018CB00502	Soil	09/25/95	0.0582	U	MG/KG	23626	VAL
022-C-B001-01	022CB00101	Soil	09/07/95	0.0620	U	MG/KG	23447	VAL
023-C-B001-02	023CB00102	Soil	10/13/95	0.0540	U	MG/KG	23801	VAL
025-C-B004-01	025CB00401	Soil	02/01/96	0.0550	U	MG/KG	24621	VAL
025-C-B010-01	025CB01001	Soil	02/05/96	0.0570	U	MK/KG	24648	VAL
025-C-B010-02	025CB01002	Soil	02/05/96	0.0580	U	MK/KG	24648	VAL
053-C-B001-01	053CB00101	Soil	11/16/95	0.0530	U	MG/KG	24094	VAL
053-C-B001-02	053CB00102	Soil	11/16/95	0.0570	U	MG/KG	24094	VAL
053-C-B003-01	053CB00301	Soil	06/05/96	0.2610	UR	MG/KG	25885	VAL
053-C-B004-01	053CB00401	Soil	06/05/96	0.2790	UR	MG/KG	25885	VAL
054-N-0002-01	054N000201	Sedmt	11/02/95	0.1250	U	MG/KG	23922	VAL
054-C-B007-01	054CB00701	Soil	11/20/95	0.0637	U	MG/KG	24105	VAL
054-C-B008-01	054CB00801	Soil	11/20/95	0.0654	U	MG/KG	24105	VAL
054-C-B017-01	054CB01701	Soil	11/27/95	0.0580	U	MG/KG	24152	VAL
054-C-B018-01	054CB01801	Soil	11/27/95	0.0530	U	MG/KG	24152	VAL
054-C-B021-01	054CB02101	Soil	11/27/95	0.0580	U	MG/KG	24152	VAL
054-C-B028-01	054CB02801	Soil	11/28/95	0.0550	U	MG/KG	24159	VAL
054-C-B031-01	054CB03101	Soil	11/28/95	0.0540	U	MG/KG	24159	VAL
054-C-B033-01	054CB03301	Soil	11/30/95	0.0580	U	MG/KG	24170	VAL
054-C-B037-01	054CB03701	Soil	11/30/95	0.0570	U	MG/KG	24170	VAL
065-C-B001-01	065CB00101	Soil	12/04/95	0.1670		MG/KG	24212	VAL
065-C-B001-02	065CB00102	Soil	12/04/95	0.0790	U	MG/KG	24212	VAL
065-C-B005-01	065CB00501	Soil	09/27/95	0.5600	U	MG/KG	23663	VAL
065-C-B005-02	065CB00502	Soil	09/27/95	0.6700	U	MG/KG	23663	VAL
067-C-B002-02	067CB00202	Soil	10/13/95	0.0540	U	MG/KG	23801	VAL
070-C-B001-01	070CB00101	Soil	08/31/95	0.0550	U	MG/KG	23386	VAL
087-C-B001-01	087CB00101	Soil	09/08/95	0.0590	U	MG/KG	23447	VAL
097-C-B003-01	097CB00301	Soil	09/18/95	0.0580	U	MG/KG	23535	VAL
102-C-B004-01	102CB00401	Soil	01/31/96	0.0746	U	MG/KG	24621	VAL
145-C-B009-01	145CB00901	Soil	01/25/96	0.1220		MG/KG	24568	VAL
145-C-B010-01	145CB01001	Soil	01/25/96	0.0620	U	MG/KG	24568	VAL
170-C-B008-01	170CB00801	Soil	01/03/96	0.0592	U	MG/KG	24431	VAL
170-C-B009-01	170CB00901	Soil	01/03/96	0.0678	U	MG/KG	24431	VAL
171-C-B008-01	171CB00801	Soil	12/12/95	0.0678	U	MG/KG	24293	VAL
171-C-B010-02	171CB01002	Soil	12/12/95	0.0590	U	MG/KG	24293	VAL
171-C-B012-02	171CB01202	Soil	12/12/95	0.0588	U	MG/KG	24293	VAL
171-C-B019-01	171CB01901	Soil	12/13/95	0.0571	U	MG/KG	24312	VAL
171-C-B019-02	171CB01902	Soil	12/13/95	0.0640	U	MG/KG	24312	VAL
172-C-B003-01	172CB00301	Soil	09/08/95	0.0670	U	MG/KG	23447	VAL
526-C-B002-01	526CB00201	Soil	11/16/95	0.0540	U	MG/KG	24094	VAL
528-C-B003-02	528CB00302	Soil	10/12/95	0.0530	U	MG/KG	23720	VAL
530-C-B001-02	530CB00102	Soil	01/09/96	0.0572	U	MG/KG	24464	VAL
538-C-B008-02	538CB00802	Soil	08/28/95	0.0500	U	MG/KG	23359	VAL
540-C-B001-02	540CB00102	Soil	08/30/95	0.0540	U	MG/KG	23386	VAL
542-C-B006-02	542CB00602	Soil	08/30/95	0.0600	U	MG/KG	23359	VAL
543-C-B002-02	543CB00202	Soil	10/12/95	0.0590	U	MG/KG	23720	VAL
543-C-B003-02	543CB00302	Soil	10/11/95	0.0560	U	MG/KG	23720	VAL
543-C-B004-02	543CB00402	Soil	08/30/95	0.0550	U	MG/KG	23386	VAL

E N V I R O N M E N T A L S A F E T Y & D E S I G N S

2905-00001 - CHARLESTON ZONE E - SOIL & SED

Samples by Chemical Report

18540-29-9 - Chromium (Hexavalent)

>= 0.0000 for All Concentration Units

Sample ID	Ext. Orig. ID	Type	Date	Result	VQual	Units	SDG #	
550-C-B001-01	550CB00101	Soil	01/10/96	0.0540	U	MG/KG	24471	VAL
551-C-B002-01	551CB00201	Soil	09/29/95	0.0570	U	MG/KG	23704	VAL
551-C-B006-01	551CB00601	Soil	09/29/95	0.0580	U	MG/KG	23704	VAL
556-R-0005-01	556R000501	Water	11/08/95	0.0250	U	MG/L	24010	VAL
556-N-0008-01	556N000801	Sedmt	11/03/95	0.1830	U	MG/KG	23969	VAL
556-R-0009-03	556R000903	Water	11/08/95	0.0250	U	MG/L	24010	VAL
559-C-B004-01	559CB00401	Soil	11/10/95	0.0550	U	MG/KG	24029	VAL
559-C-B006-01	559CB00601	Soil	11/06/95	0.0560	U	MG/KG	23980	VAL
559-C-B013-01	559CB01301	Soil	11/06/95	0.0550	U	MG/KG	23980	VAL
559-C-B027-01	559CB02701	Soil	05/30/96	0.2640	U	MG/KG	25805	VAL
561-C-B002-01	561CB00201	Soil	11/15/95	0.0560	U	MG/KG	24074	VAL
561-C-B006-01	561CB00601	Soil	06/04/96	0.4100	UR	MG/KG	25846	VAL
563-C-B006-02	563CB00602	Soil	01/30/96	0.0610	U	MG/KG	24605	VAL
563-C-B007-01	563CB00701	Soil	01/30/96	0.0576	U	MG/KG	24605	VAL
570-C-B009-01	570CB00901	Soil	01/16/96	0.0951		MG/KG	24503	VAL
570-C-B015-02	570CB01502	Soil	11/14/95	0.0530	U	MG/KG	24056	VAL
573-C-B001-01	573CB00101	Soil	10/31/95	0.0570	U	MG/KG	23922	VAL
573-C-B002-01	573CB00201	Soil	09/11/95	0.0550	U	MG/KG	23471	VAL
573-C-B003-02	573CB00302	Soil	09/11/95	0.0760	U	MG/KG	23471	VAL
573-C-B005-02	573CB00502	Soil	09/11/95	0.0590	U	MG/KG	23471	VAL
576-C-B003-01	576CB00301	Soil	09/06/95	0.0620	U	MG/KG	23424	VAL
579-C-B004-01	579CB00401	Soil	09/12/95	0.0560	U	MG/KG	23484	VAL
580-C-B002-01	580CB00201	Soil	09/14/95	0.0608	U	MG/KG	23502	VAL
583-C-B006-01	583CB00601	Soil	09/15/95	0.0542	U	MG/KG	23535	VAL
597-C-B002-01	597CB00201	Soil	10/24/95	0.0580	U	MG/KG	23859	VAL
598-C-B002-02	598CB00202	Soil	09/19/95	0.0628	U	MG/KG	23560	VAL
599-C-B005-02	599CB00502	Soil	09/20/95	0.0639	U	MG/KG	23560	VAL
602-C-B001-01	602CB00101	Soil	01/08/96	0.0644	U	MG/KG	24456	VAL
602-C-B003-01	602CB00301	Soil	01/08/96	0.0588	U	MG/KG	24456	VAL
602-C-B004-01	602CB00401	Soil	01/08/96	0.0555	U	MG/KG	24456	VAL
605-C-B010-01	605CB01001	Soil	09/21/95	0.0700	U	MG/KG	23593	VAL
605-C-B011-02	605CB01102	Soil	09/21/95	0.0600	U	MG/KG	23593	VAL
605-C-B012-01	605CB01201	Soil	05/31/96	0.5860		MG/KG	25805	VAL
605-C-B014-01	605CB01401	Soil	05/31/96	0.3070	U	MG/KG	25805	VAL
GDE-C-B001-01	GDECB00101	Soil	09/13/95	0.0608	U	MG/KG	23502	VAL
GDE-C-B002-02	GDECB00202	Soil	09/13/95	0.0610	U	MG/KG	23502	VAL
GDE-C-B006-01	GDECB00601	Soil	01/04/96	0.0533	U	MG/KG	24436	VAL
GDE-C-B009-01	GDECB00901	Soil	09/12/95	0.0690	U	MG/KG	23484	VAL
GDE-C-B010-02	GDECB01002	Soil	09/12/95	0.0940	U	MG/KG	23484	VAL
GDE-C-B017-01	GDECB01701	Soil	02/28/96	0.0578	U	MG/KG	24830	VAL
GDE-C-B018-01	GDECB01801	Soil	10/26/95	0.0560	U	MG/KG	23879	VAL
GDE-C-B023-02	GDECB02302	Soil	01/10/96	0.0567	U	MG/KG	24471	VAL
GDE-C-B025-01	GDECB02501	Soil	10/23/95	0.0550	U	MG/KG	23859	VAL

*** End of Report ***

E N V I R O N M E N T A L S A F E T Y & D E S I G N S

2905-00001 - CHARLESTON ZONE E - SOIL & SED

Samples by Chemical Report

18540-29-9 - Chromium (Hexavalent)

>= 0.0000 for All Concentration Units - Hits Only

Sample ID	Ext. Orig. ID	Type	Date	Result	VQual	Units	SDG #
065-C-B001-01	065CB00101	Soil	12/04/95	0.1670		MG/KG	24212	VAL
145-C-B009-01	145CB00901	Soil	01/25/96	0.1220		MG/KG	24568	VAL
570-C-B009-01	570CB00901	Soil	01/16/96	0.0951		MG/KG	24503	VAL
605-C-B012-01	605CB01201	Soil	05/31/96	0.5860		MG/KG	25805	VAL

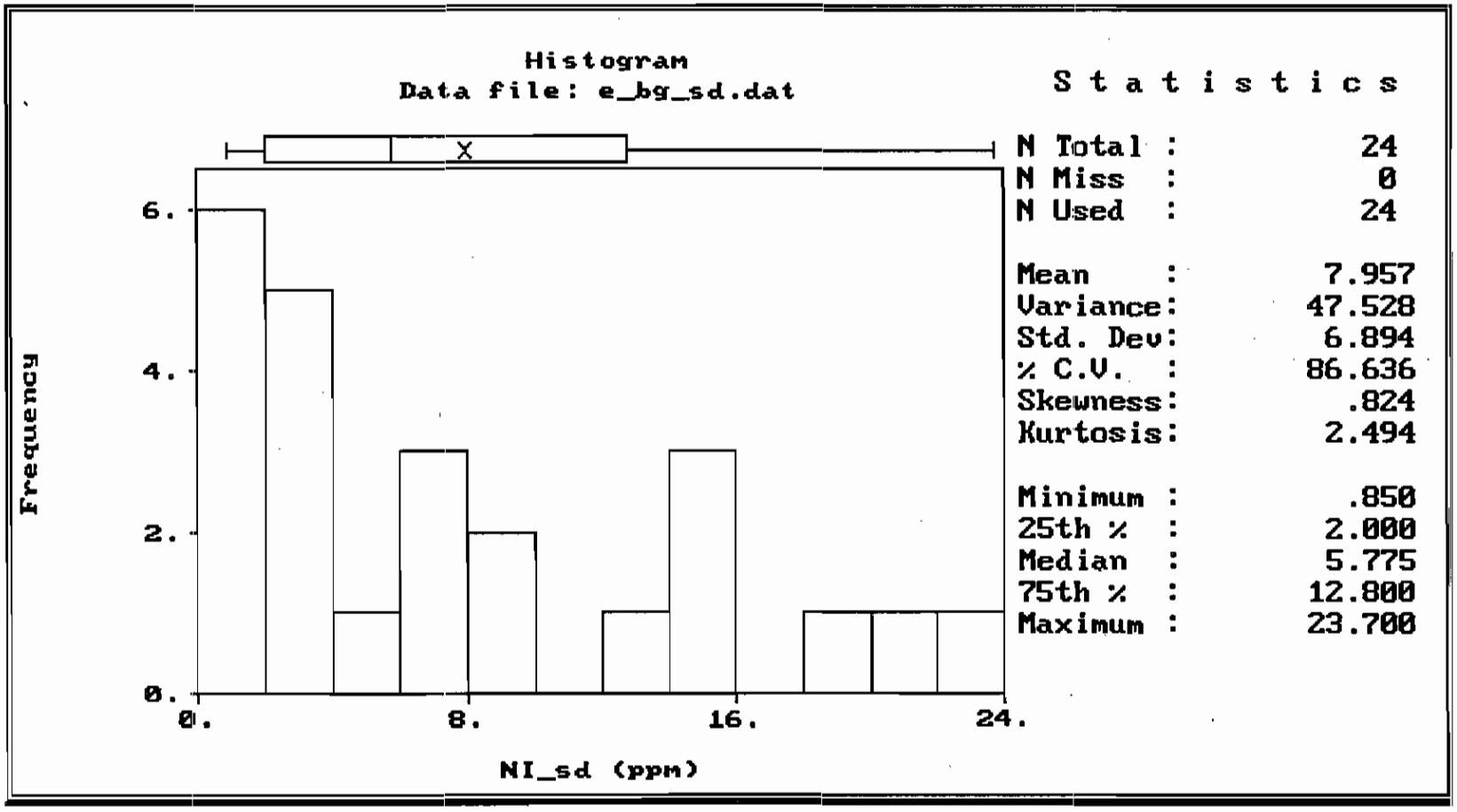
*** End of Report ***

These are the only hexachrome detections in Zone E soil samples: 4 detections in 88 samples.

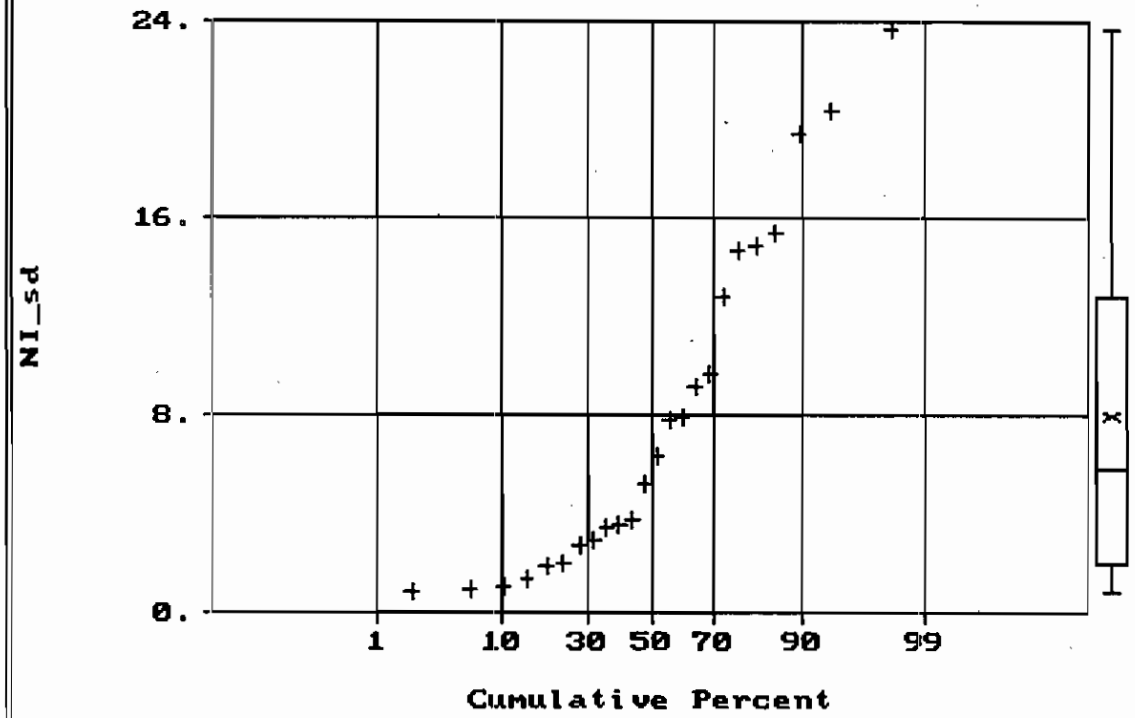
60 surface soil samples (4 detections)
28 subsurface soil samples (0 detections)

Zone E
Nickel in subsurface soil BG samples
Original dataset (N=24)
Original values

1a



Normal Probability Plot for NI_sd
Data file: e_bg_sd.dat

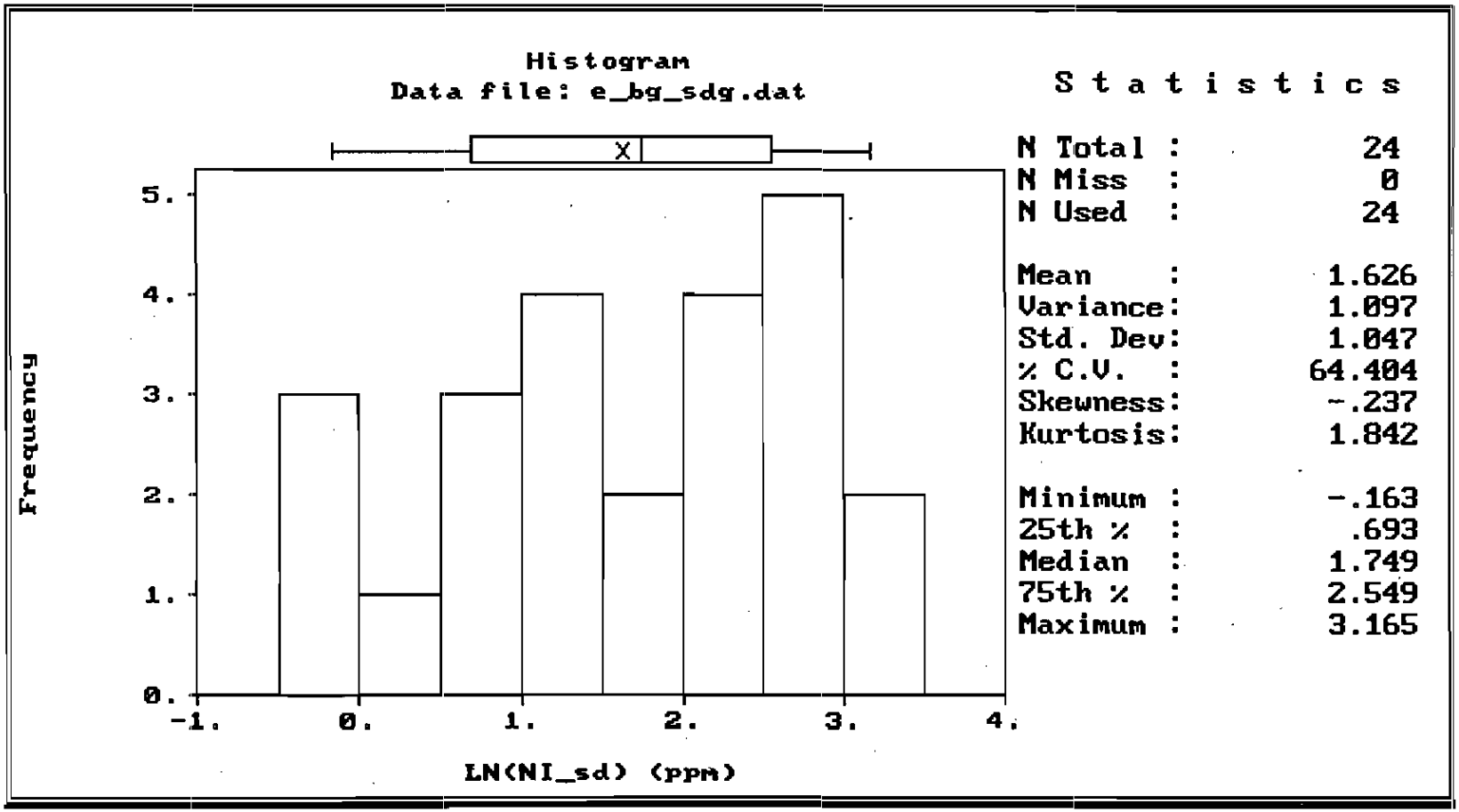


S t a t i s t i c s

N Total :	24
N Miss :	0
N Used :	24
Mean :	7.957
Variance:	47.528
Std. Dev:	6.894
% C.V. :	86.636
Skewness:	.824
Kurtosis:	2.494
Minimum :	.850
25th % :	2.000
Median :	5.775
75th % :	12.800
Maximum :	23.700

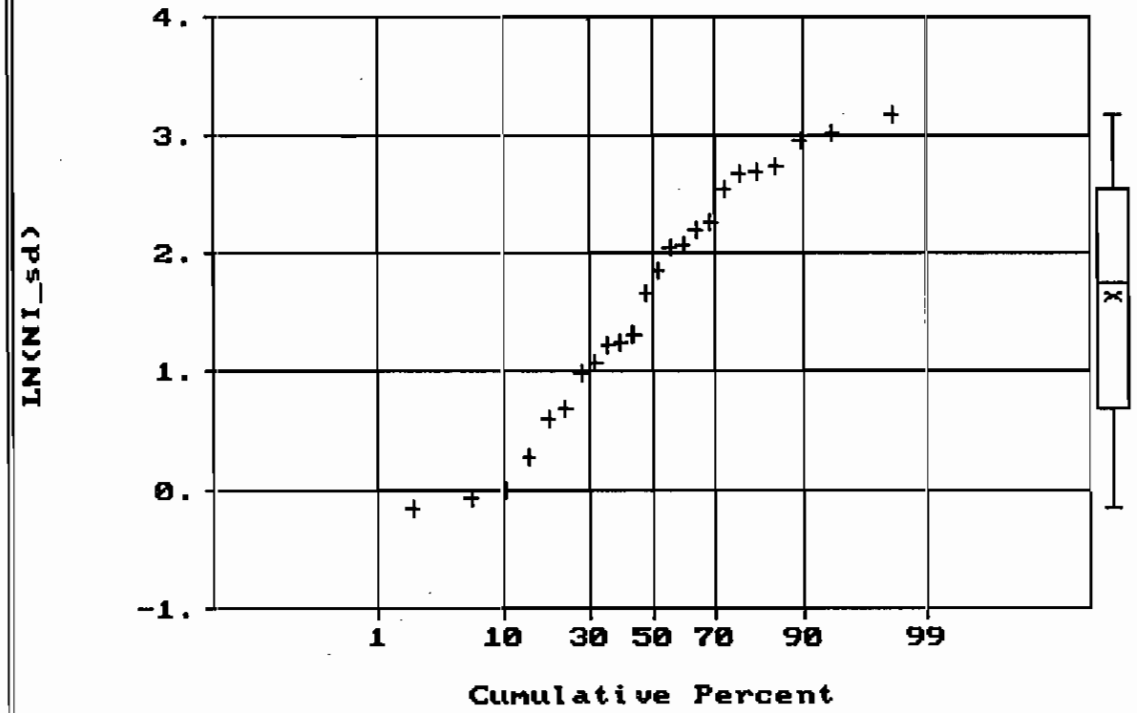
Zone E
Nickel in subsurface soil BG samples
Original dataset (N=24)
LN-transformed values

2a



2b

Normal Probability Plot for LN(NI_sd)
Data file: e_bg_sdg.dat

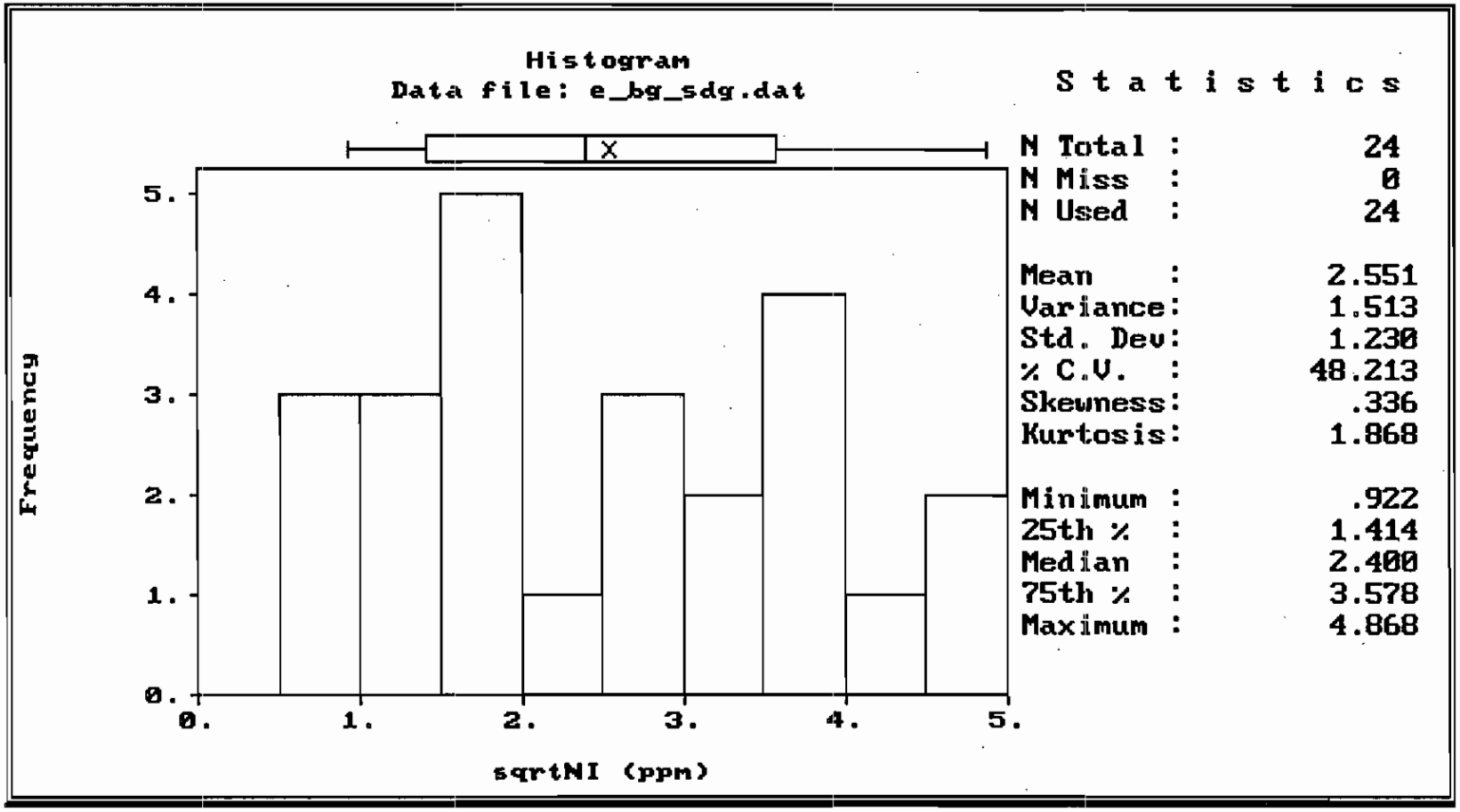


Statistics

N Total :	24
N Miss :	0
N Used :	24
Mean :	1.626
Variance:	1.097
Std. Dev:	1.047
% C.V. :	64.404
Skewness:	-.237
Kurtosis:	1.842
Minimum :	-.163
25th % :	.693
Median :	1.749
75th % :	2.549
Maximum :	3.165

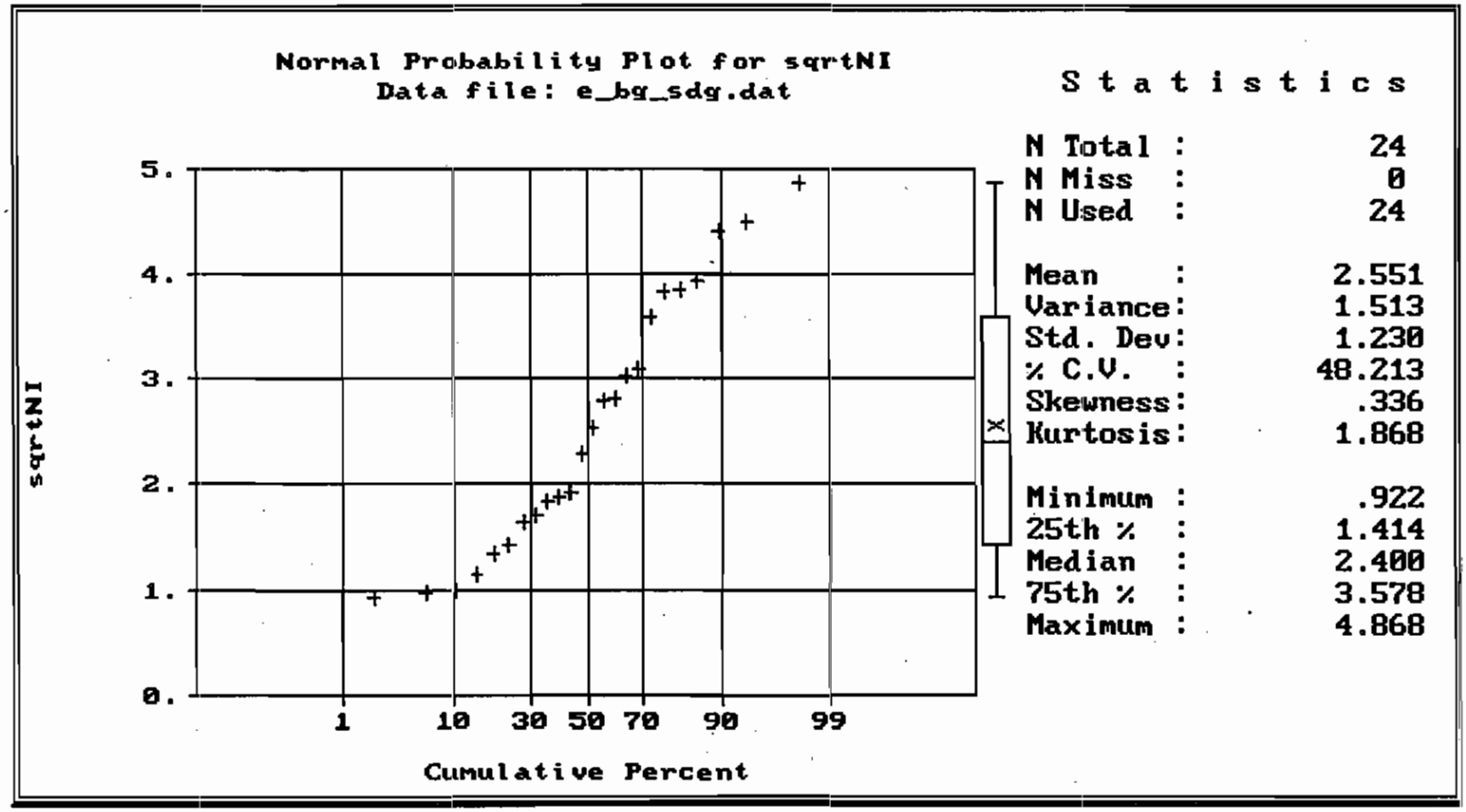
Zone E
Nickel in subsurface soil BG samples
Original dataset (N=24)
Square-root transformed values

3a



Statistics

N Total :	24
N Miss :	0
N Used :	24
Mean :	2.551
Variance:	1.513
Std. Dev:	1.230
% C.V. :	48.213
Skewness:	.336
Kurtosis:	1.868
Minimum :	.922
25th % :	1.414
Median :	2.400
75th % :	3.578
Maximum :	4.868


Normal Probability Plot for sqrtNI
Data file: e_bg_sdg.dat
sqrtNI
5.
4.
3.
2.
1.
0.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 24
N Miss : 0
N Used : 24
Mean : 2.551
Variance: 1.513
Std. Dev: 1.230
% C.V. : 48.213
Skewness: .336
Kurtosis: 1.868
Minimum : .922
25th % : 1.414
Median : 2.400
75th % : 3.578
Maximum : 4.868

CHARLESTON - ZONE E
Background Sample Results
Subsurface Soil, Samples 1-25

SW846-META	SAMPLE ID ------->	GDE-S-B001-02		GDE-S-B002-02		GDE-C-B002-02		GDE-S-B003-02		GDE-S-B004-02		GDE-S-B005-02	
	ORIGINAL ID ----->	GDESB00102		GDESB00202		GDECB00202		GDESB00302		GDESB00402		GDESB00502	
	LAB SAMPLE ID --->	23503.18		23503.20		23502.02		23503.14		23879.02		23503.04	
	ID FROM REPORT -->	GDESB00102		GDESB00202		GDECB00202		GDESB00302		GDESB00402		GDESB00502	
	SAMPLE DATE ----->	09/13/95		09/13/95		09/13/95		09/13/95		10/25/95		09/13/95	
	DATE EXTRACTED -->	09/17/95		09/17/95		09/17/95		09/17/95		10/31/95		09/17/95	
	DATE ANALYZED --->	10/01/95		10/01/95		10/01/95		10/01/95		11/03/95		10/01/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG	A	MG/KG	A	MG/KG	A	MG/KG	A	MG/KG	A	MG/KG	A
CAS #	Parameter	23502	VAL	23502	VAL	23502	VAL	23502	VAL	23879	VAL	23502	VAL
7429-90-5	Aluminum (Al)	13700.	J	7670.	J	8020.		8170.	J	5640.		3480.	J
7440-36-0	Antimony (Sb)	4.3	UJ	3.6	UJ	0.47	U	3.6	UJ	0.47	U	3.3	UJ
7440-38-2	Arsenic (As)	13.1		6.3		4.7		7.7		3.	J	22.6	
7440-39-3	Barium (Ba)	22.8	J	23.9	J	25.		44.1		18.7	J	17.8	J
7440-41-7	Beryllium (Be)	0.66	J	0.35	J	0.28	J	0.47	J	0.32	J	0.18	J
7440-43-9	Cadmium (Cd)	0.58	U	0.49	J	0.47	U	0.92		0.12	U	0.44	U
7440-70-2	Calcium (Ca)	8110.	J	31800.	J	17500.		24400.	J	390.	J	6180.	J
7440-47-3	Chromium (Cr)	22.3		15.		15.6		27.4		6.2	J	7.9	
7440-48-4	Cobalt (Co)	8.7		1.6	J	1.7	J	2.4	J	1.8	J	9.4	
7440-50-8	Copper (Cu)	26.		22.		14.9		121.		1.4	J	38.7	
7439-89-6	Iron (Fe)	16600.	J	9280.	J	8200.		14400.	J	5570.	J	3580.	J
7439-92-1	Lead (Pb)	54.	J	23.4	J	20.6		173.	J	2.4		40.3	J
7439-95-4	Magnesium (Mg)	2110.	J	1860.	J	1470.		1430.	J	400.	J	345.	J
7439-96-5	Manganese (Mn)	288.	J	65.9	J	48.4		87.5	J	23.2	J	64.3	J
7439-97-6	Mercury (Hg)	0.14	J	0.21	J	0.13		0.9	J	0.07		0.11	J
7440-02-0	Nickel (Ni)	9.1		7.8		4.9		14.6		2.9	J	5.2	
7440-09-7	Potassium (K)	1680.	J	1280.	J	1190.		1220.	J	827.		438.	J
7782-49-2	Selenium (Se)	0.72	U	0.6	U	0.59	U	0.6	U	0.58	U	0.55	U
7440-22-4	Silver (Ag)	0.29	U	0.24	U	0.24	U	0.24	U	0.23	U	0.22	U
7440-23-5	Sodium (Na)	254.	J	375.	J	323.	J	359.	J	161.	J	91.2	J
7440-28-0	Thallium (Tl)	0.72	U	0.6	U	0.59	U	0.6	U	0.58	U	0.55	U
7440-62-2	Vanadium (V)	34.1		17.1		18.		19.1		10.9		6.9	
7440-66-6	Zinc (Zn)	82.9	J	57.	J	63.9		302.	J	6.5		85.	J
7440-31-5	Tin (Sn)	4.2	J	2.8	U	3.2	J	7.3		3.1	J	5.5	

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results
Subsurface Soil, Samples 1-25

SW846-META																			
	SAMPLE ID ------->	GDE-S-B006-02			GDE-S-B007-02			GDE-S-B008-02			GDE-S-B009-02			GDE-S-B010-02			GDE-C-B010-02		
	ORIGINAL ID ----->	GDESB00602			GDESB00702			GDESB00802			GDESB00902			GDESB01002			GDECB01002		
	LAB SAMPLE ID --->	24436.12			24456.10			23503.10			23485.18			23485.16			23484.02		
	ID FROM REPORT -->	GDESB00602			GDESB00702			GDESB00802			GDESB00902			GDESB01002			GDECB01002		
	SAMPLE DATE ----->	01/04/96			01/08/96			09/13/95			09/12/95			09/12/95			09/12/95		
	DATE EXTRACTED -->	01/08/96			01/16/96			09/17/95			09/17/95			09/17/95			09/17/95		
	DATE ANALYZED --->	01/15/96			01/19/96			10/01/95			09/26/95			09/26/95			09/26/95		
	MATRIX ---------->	Soil			Soil			Soil			Soil			Soil			Soil		
	UNITS ---------->	MG/KG		A	MG/KG		A	MG/KG		A	MG/KG		A	MG/KG		A	MG/KG		A
CAS #	Parameter	24436		VAL	24456		VAL	23502		VAL	23484		VAL	23484		VAL	23484		VAL
7429-90-5	Aluminum (Al)	25600.			5620.			29900.	J		4530.			16100.			27400.		
7440-36-0	Antimony (Sb)	0.82	J		0.83	J		4.9	UJ		0.54	U		1.3	J		0.94	J	
7440-38-2	Arsenic (As)	13.8			8.6			21.3			6.6			26.3			29.4		
7440-39-3	Barium (Ba)	34.7			11.5	J		40.8			15.3	J		33.5	J		44.4		
7440-41-7	Beryllium (Be)	1.2			0.6	J		1.6			0.66	J		1.1	J		1.3	J	
7440-43-9	Cadmium (Cd)	0.3	J		0.49	J		0.66	U		0.14	U		0.19	U		0.18	U	
7440-70-2	Calcium (Ca)	39700.	J		229000.			9710.	J		10700.			23000.			28500.		
7440-47-3	Chromium (Cr)	75.2			59.9			46.7			12.1			43.1			84.8		
7440-48-4	Cobalt (Co)	5.8	J		0.94	J		7.5	J		3.5	J		12.7			9.9		
7440-50-8	Copper (Cu)	28.3			9.3			42.8			2.5	J		42.4			82.9		
7439-89-6	Iron (Fe)	18800.			4590.			35800.	J		8110.			24200.			27900.		
7439-92-1	Lead (Pb)	26.8	J		1.8			70.	J		4.3			80.6			66.5		
7439-95-4	Magnesium (Mg)	4100.			9140.			4830.	J		1160.			3580.			4980.		
7439-96-5	Manganese (Mn)	160.			88.6			478.	J		89.7			207.			236.		
7439-97-6	Mercury (Hg)	0.15	J		0.03	U		0.41	J		0.03	U		0.34			0.16		
7440-02-0	Nickel (Ni)	15.4			19.4			14.8			3.7	J		19.7			20.8		
7440-09-7	Potassium (K)	2060.	J		1150.			3440.	J		1160.	J		2460.	U		2760.	U	
7782-49-2	Selenium (Se)	1.1			2.4			0.82	U		0.68	U		0.93	U		0.92	U	
7440-22-4	Silver (Ag)	0.32	U		0.27	U		0.33	U		0.27	U		0.37	U		0.37	U	
7440-23-5	Sodium (Na)	1340.			1430.			1180.			624.	J		1040.			1130.		
7440-28-0	Thallium (Tl)	0.8	U		0.67	U		0.82	U		0.68	U		0.93	U		0.92	U	
7440-62-2	Vanadium (V)	48.3			35.9			71.4			11.9			53.7			63.		
7440-66-6	Zinc (Zn)	101.	J		43.7			128.	J		14.			154.			170.		
7440-31-5	Tin (Sn)	5.2	U		33.6	U		5.	J		3.1	U		4.2	U		5.1	J	

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results
Subsurface Soil, Samples 1-25

SW846-META													
	SAMPLE ID ------->	GDE-S-B011-02		GDE-S-B012-02		GDE-S-B013-02		GDE-S-B014-02		GDE-S-B015-02		GDE-S-B016-02	
	ORIGINAL ID ----->	GDESB01102		GDESB01202		GDESB01302		GDESB01402		GDESB01502		GDESB01602	
	LAB SAMPLE ID --->	24503.18		23485.02		23485.06		24029.10		24024.12		24431.19	
	ID FROM REPORT -->	GDESB01102		GDESB01202		GDESB01302		GDESB01402		GDESB01502		GDESB01602	
	SAMPLE DATE ----->	01/16/96		09/12/95		09/12/95		11/10/95		11/09/95		01/03/96	
	DATE EXTRACTED -->	01/18/96		09/17/95		09/17/95		11/14/95		11/14/95		01/05/96	
	DATE ANALYZED --->	01/22/96		09/26/95		09/26/95		11/21/95		11/21/95		01/18/96	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG	A	MG/KG	A	MG/KG	A	MG/KG	A	MG/KG	A	MG/KG	A
CAS #	Parameter	24503	VAL	23484	VAL	23484	VAL	24029	VAL	24024	VAL	24431	VAL
7429-90-5	Aluminum (Al)	6050.	J	3260.		6100.		4420.		14900.		13900.	
7440-36-0	Antimony (Sb)	0.49	UJ	0.45	U	0.44	U	0.6	J	1.6	J	0.72	J
7440-38-2	Arsenic (As)	4.5		4.6		2.9		7.		23.6		10.5	
7440-39-3	Barium (Ba)	37.3		15.4	J	15.6	J	8.7	J	91.		60.9	
7440-41-7	Beryllium (Be)	0.33	J	0.65	J	0.18	J	0.5	J	1.2		0.88	
7440-43-9	Cadmium (Cd)	0.96		0.11	U	0.11	U	0.53	J	0.66	J	0.77	
7440-70-2	Calcium (Ca)	10300.	J	451.	J	1440.		239000.		12400.		34600.	
7440-47-3	Chromium (Cr)	10.9		6.8		9.		49.8		34.5		36.2	
7440-48-4	Cobalt (Co)	1.2	J	1.4	J	0.86	J	0.81	J	7.8	J	2.8	J
7440-50-8	Copper (Cu)	8.7		1.3	J	4.5		11.4		192.	J	26.5	
7439-89-6	Iron (Fe)	6470.	J	10600.		5040.		4650.		30400.		13500.	
7439-92-1	Lead (Pb)	29.2	J	2.9		12.		3.3		322.	J	121.	
7439-95-4	Magnesium (Mg)	1120.	J	254.	J	392.	J	6560.		3750.		2960.	
7439-96-5	Manganese (Mn)	61.8	J	38.9		24.8		46.4		625.	J	65.5	
7439-97-6	Mercury (Hg)	0.06		0.02	U	0.04		0.04		0.5	J	0.29	
7440-02-0	Nickel (Ni)	3.4	J	1.3	J	2.7	J	23.7		12.8	J	9.6	
7440-09-7	Potassium (K)	887.	J	730.	U	512.	U	1270.		2370.		1770.	J
7782-49-2	Selenium (Se)	0.62		0.57	U	0.56	U	1.6		1.7		0.66	U
7440-22-4	Silver (Ag)	0.25	U	0.23	U	0.22	U	0.3	U	0.33	U	0.26	U
7440-23-5	Sodium (Na)	535.	J	209.	J	200.	J	1010.		404.	J	426.	J
7440-28-0	Thallium (Tl)	0.62	UJ	0.57	U	0.56	U	0.74	U	0.83	U	0.66	U
7440-62-2	Vanadium (V)	12.4		9.6		10.9		27.2		60.2		28.	
7440-66-6	Zinc (Zn)	37.4	J	7.6		14.8		53.3		438.	J	133.	
7440-31-5	Tin (Sn)	3.7	U	2.2	U	2.3	U	12.3	U	23.9	J	5.1	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results
Subsurface Soil, Samples 1-25

SW846-META																	
	SAMPLE ID ------->	GDE-S-B017-02			GDE-S-B018-02			GDE-S-B019-02			GDE-S-B020-02			GDE-S-B021-02			GDE-S-B023-02		
	ORIGINAL ID ----->	GDESB01702			GDESB01802			GDESB01902			GDESB02002			GDESB02102			GDESB02302		
	LAB SAMPLE ID --->	24830.08			23899.02			23879.04			24094.02			24855.22			24471.14		
	ID FROM REPORT -->	GDESB01702			GDESB01802			GDESB01902			GDESB02002			GDESB02102			GDESB02302		
	SAMPLE DATE ----->	02/28/96			10/26/95			10/25/95			11/16/95			03/01/96			01/10/96		
	DATE EXTRACTED -->	03/08/96			10/31/95			10/31/95			11/20/95			03/06/96			01/15/96		
	DATE ANALYZED --->	03/18/96			11/03/95			11/03/95			11/27/95			03/07/96			01/21/96		
	MATRIX ---------->	Soil			Soil			Soil			Soil			Soil			Soil		
	UNITS ---------->	MG/KG		A	MG/KG		A	MG/KG		A	MG/KG		A	MG/KG		A	MG/KG		A
CAS #	Parameter	24830		VAL	23879		VAL	23879		VAL	24094		VAL	24855		VAL	24471		VAL
7429-90-5	Aluminum (Al)	2740.			2370.			1220.			2210.	J		10100.			4750.		
7440-36-0	Antimony (Sb)	0.44	UJ		0.51	U		0.42	U		0.46	UJ		0.58	U		0.52	J	
7440-38-2	Arsenic (As)	0.83	J		0.9	J		0.53	U		2.3			12.6			4.1		
7440-39-3	Barium (Ba)	20.8	J		16.1	J		6.1	J		12.6	J		29.	J		17.2	J	
7440-41-7	Beryllium (Be)	0.31	J		0.17	J		0.11	U		0.21	J		0.75			0.28	J	
7440-43-9	Cadmium (Cd)	0.11	U		0.13	U		0.11	U		0.13	J		0.15	U		0.4	J	
7440-70-2	Calcium (Ca)	658.			323.	J		1100.			3120.			4800.			87900.	J	
7440-47-3	Chromium (Cr)	3.			1.9	J		1.6	J		3.9			19.5			9.5		
7440-48-4	Cobalt (Co)	0.8	J		0.46	J		0.41	J		0.65	J		14.9			2.1	J	
7440-50-8	Copper (Cu)	3.1			2.5	J		1.6	J		12.8			10.4			18.7		
7439-89-6	Iron (Fe)	1700.			924.	J		1330.	J		2750.			15000.			4560.		
7439-92-1	Lead (Pb)	9.2			4.9			2.1			82.4			25.8			61.2		
7439-95-4	Magnesium (Mg)	158.	J		76.5	J		85.7	J		298.	J		1170.			1380.		
7439-96-5	Manganese (Mn)	7.8			4.9	J		22.5	J		28.4			74.1			139.		
7439-97-6	Mercury (Hg)	0.04	U		0.03	U		0.02	U		0.06	J		0.16	J		0.21		
7440-02-0	Nickel (Ni)	1.8	J		0.93	J		0.85	J		2.	U		7.9			8.6		
7440-09-7	Potassium (K)	270.	U		106.	J		248.	J		835.	U		1510.	J		807.		
7782-49-2	Selenium (Se)	0.59			0.64	U		0.53	U		0.57	U		0.73	U		0.56	U	
7440-22-4	Silver (Ag)	0.22	U		0.26	U		0.21	U		0.23	U		0.29	U		0.23	U	
7440-23-5	Sodium (Na)	50.6	U		12.8	U		20.8	J		83.3	U		109.	J		117.	J	
7440-28-0	Thallium (Tl)	0.55	U		0.64	U		0.53	U		0.57	U		0.73	U		0.56	U	
7440-62-2	Vanadium (V)	3.5	J		2.3	J		1.6	J		3.5	J		26.9			8.7		
7440-66-6	Zinc (Zn)	13.1			21.3			5.8			223.	J		141.			86.4		
7440-31-5	Tin (Sn)	2.2	U		3.4	J		2.8	J		3.9	U		7.1	J		4.5	U	

*** Validation Complete ***

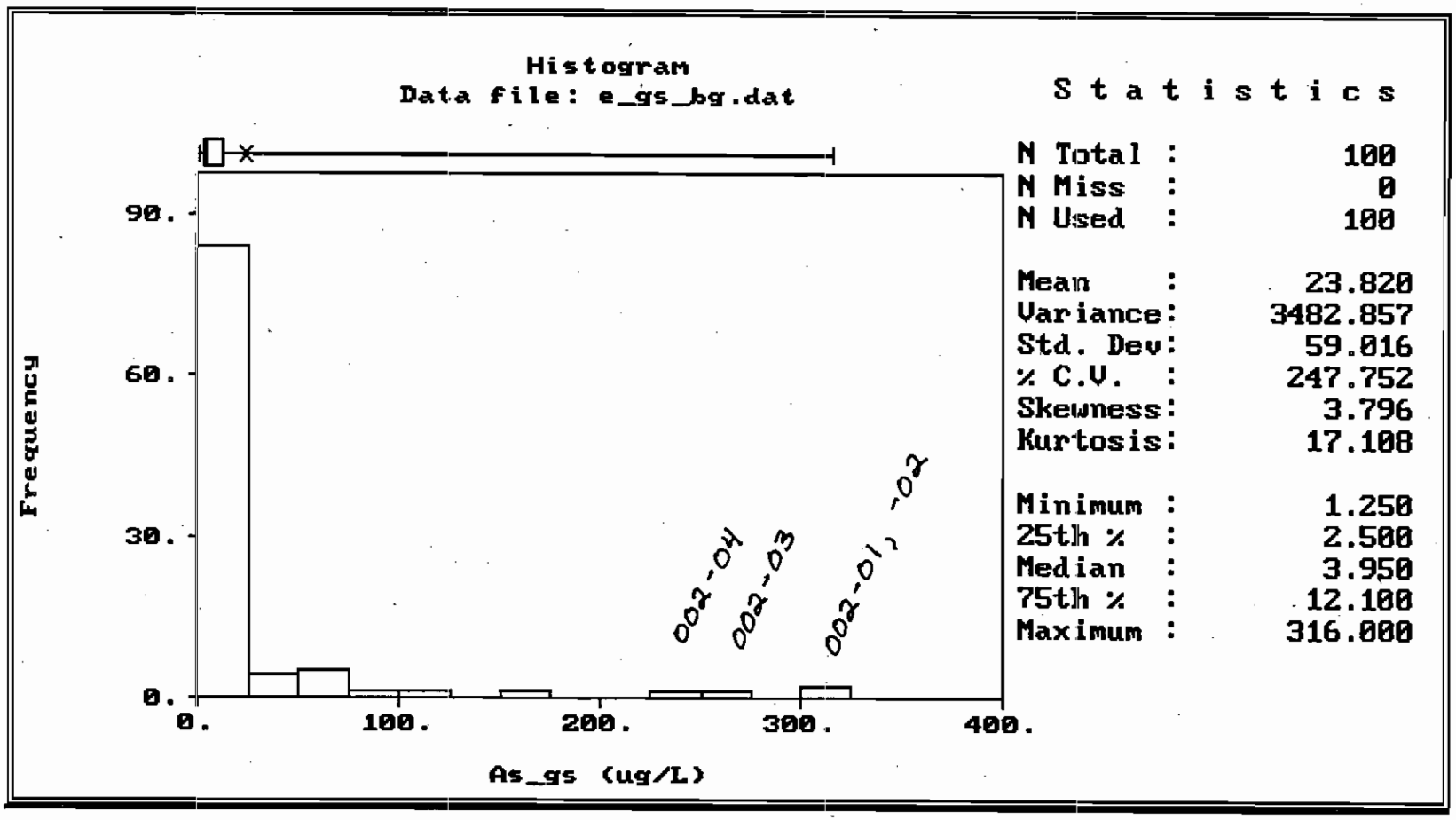
CHARLESTON - ZONE E
Background Sample Results
Subsurface Soil, Samples 1-25

SW846-META											
	SAMPLE ID ------->	GDE-C-B023-02		GDE-S-B024-02		GDE-S-B025-02					
	ORIGINAL ID ----->	GDECB02302		GDESB02402		GDESB02502					
	LAB SAMPLE ID --->	24472.02		23879.06		23860.16					
	ID FROM REPORT -->	GDECB02302		GDESB02402		GDESB02502					
	SAMPLE DATE ----->	01/10/96		10/25/95		10/23/95					
	DATE EXTRACTED -->	01/15/96		10/31/95		10/26/95					
	DATE ANALYZED --->	01/21/96		11/03/95		11/02/95					
	MATRIX ---------->	Soil		Soil		Soil					
	UNITS ---------->	MG/KG	A	MG/KG	A	MG/KG	A				
CAS #	Parameter	24471	VAL	23879	VAL	23859	VAL				
7429-90-5	Aluminum (Al)	5060.		3510.		2890.					
7440-36-0	Antimony (Sb)	0.88	J	0.46	U	0.73	J				
7440-38-2	Arsenic (As)	8.5		2.5	J	5.3					
7440-39-3	Barium (Ba)	19.6	J	8.9	J	20.4	J				
7440-41-7	Beryllium (Be)	0.28	J	0.15	J	0.32	J				
7440-43-9	Cadmium (Cd)	0.5	J	0.11	U	0.16	J				
7440-70-2	Calcium (Ca)	44500.		3520.		11000.					
7440-47-3	Chromium (Cr)	11.1		5.2	J	8.9	J				
7440-48-4	Cobalt (Co)	1.7	J	0.62	J	1.5	J				
7440-50-8	Copper (Cu)	27.1		13.2	J	13.4	J				
7439-89-6	Iron (Fe)	6310.		3790.	J	5370.					
7439-92-1	Lead (Pb)	75.2		35.		47.3	J				
7439-95-4	Magnesium (Mg)	1140.		395.	J	705.					
7439-96-5	Manganese (Mn)	80.8		27.8	J	65.7	J				
7439-97-6	Mercury (Hg)	0.19		0.02	U	0.05	J				
7440-02-0	Nickel (Ni)	6.9		2.	J	3.5	J				
7440-09-7	Potassium (K)	729.		635.	J	663.	U				
7782-49-2	Selenium (Se)	0.57	U	0.57	U	0.64	U				
7440-22-4	Silver (Ag)	0.23	U	0.23	U	0.26	U				
7440-23-5	Sodium (Na)	143.	J	180.	J	139.	J				
7440-28-0	Thallium (Tl)	0.57	U	0.57	U	0.64	U				
7440-62-2	Vanadium (V)	9.4		8.1		9.6					
7440-66-6	Zinc (Zn)	147.		38.8		62.2	J				
7440-31-5	Tin (Sn)	5.8	U	4.1	J	3.9	J				

*** Validation Complete ***

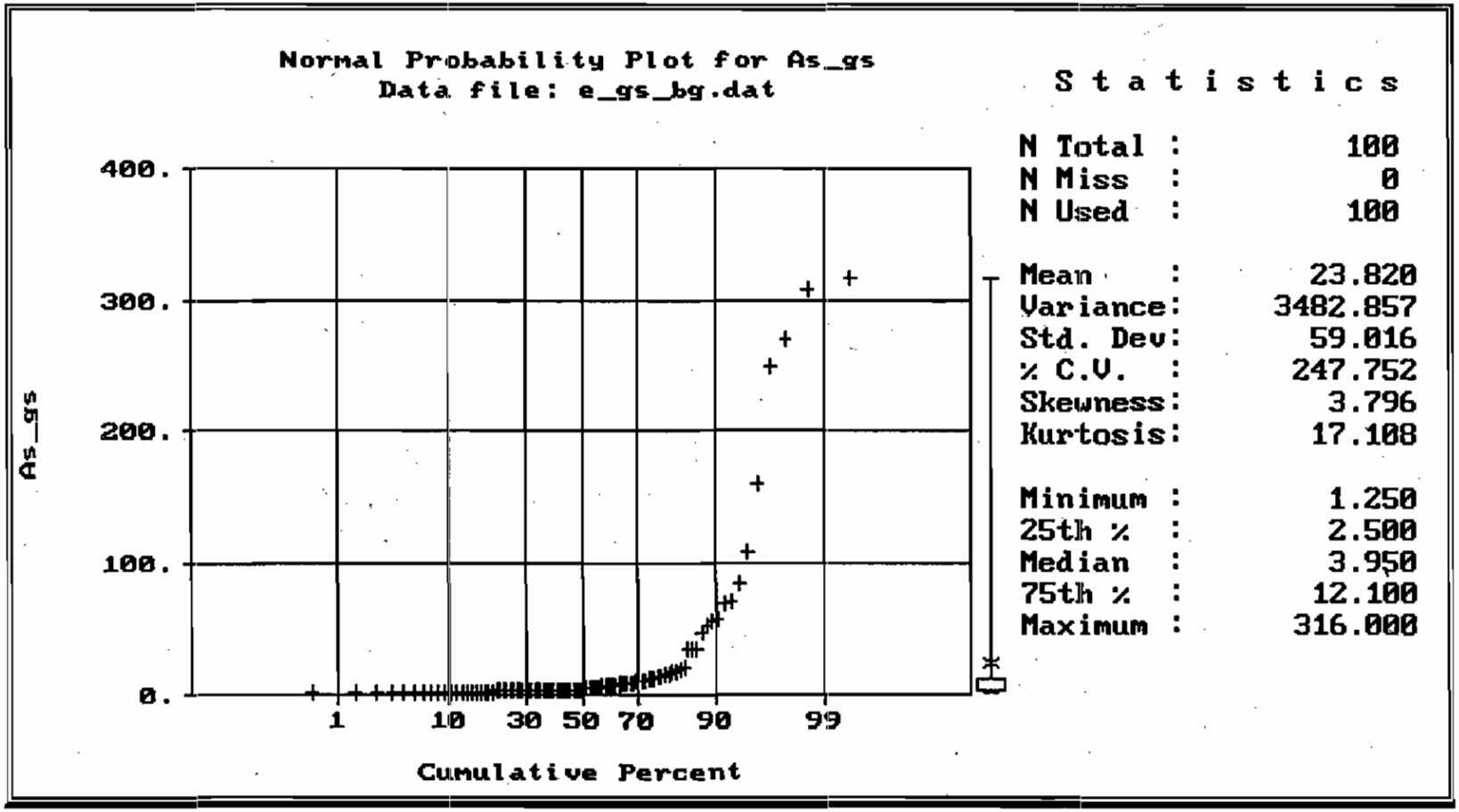
Zone E
Arsenic in shallow GW grid samples
Original dataset (N=100)
Original values

1a



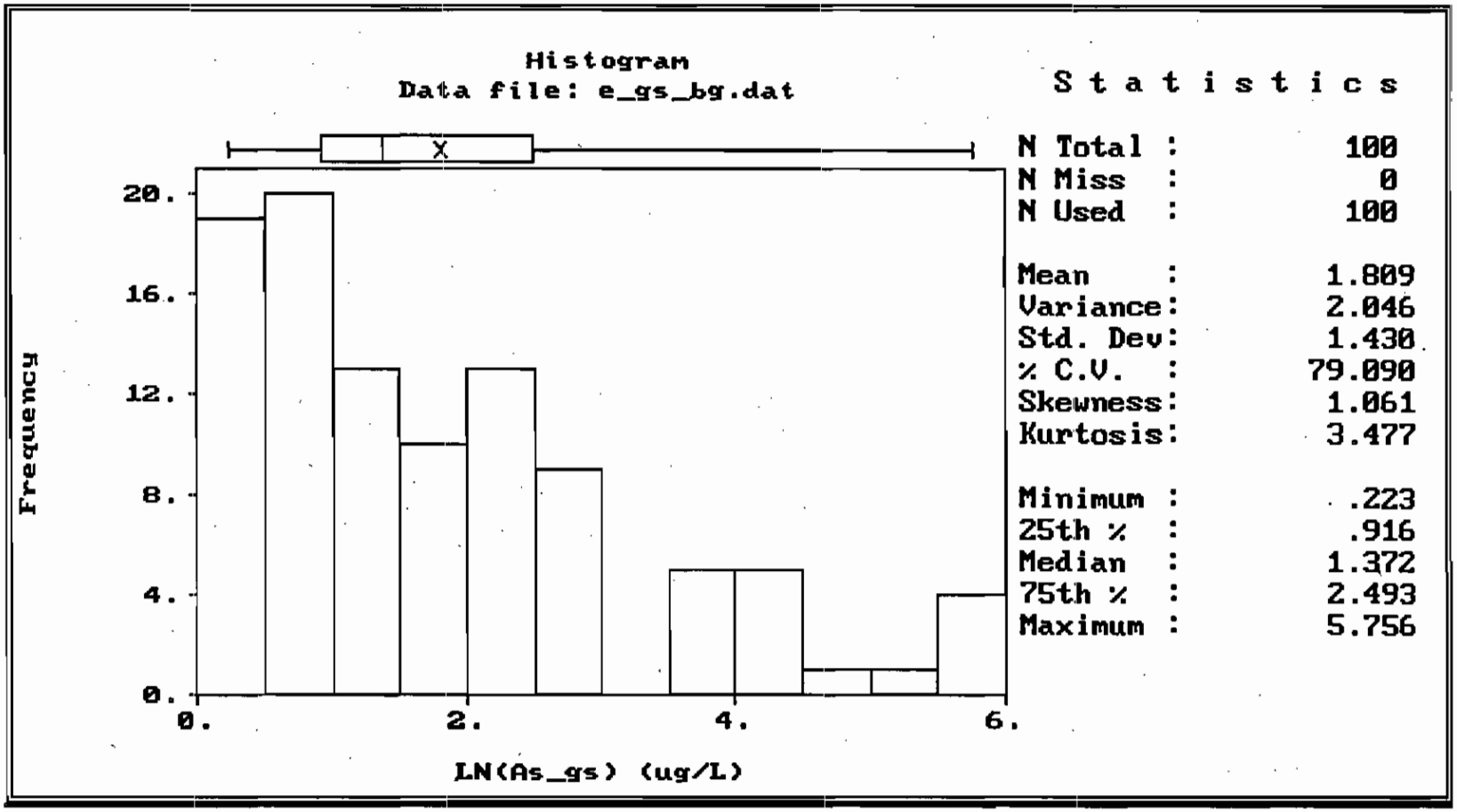
Statistics

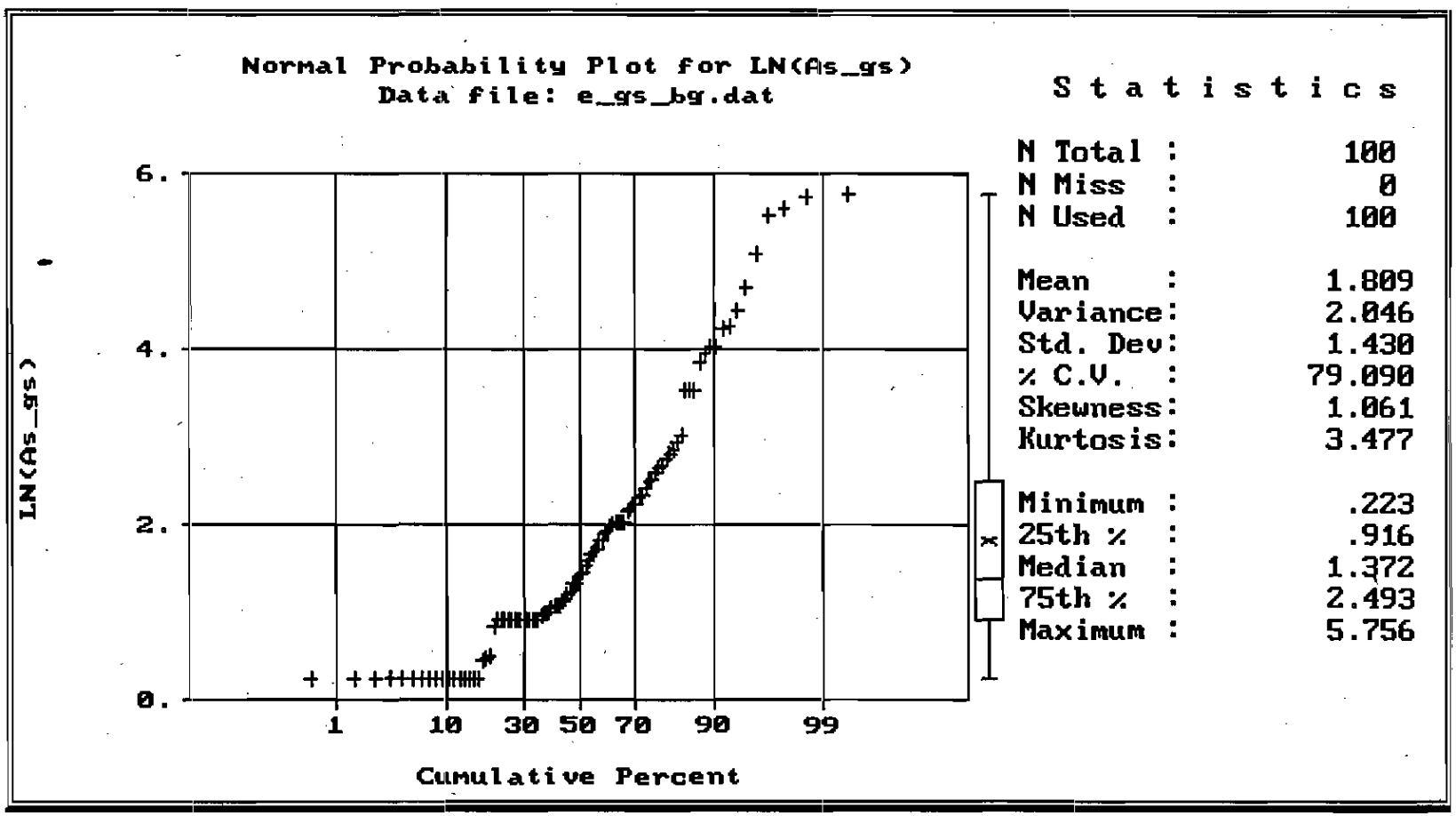
N Total :	100
N Miss :	0
N Used :	100
Mean :	23.820
Variance:	3482.857
Std. Dev:	59.016
% C.V. :	247.752
Skewness:	3.796
Kurtosis:	17.108
Minimum :	1.250
25th % :	2.500
Median :	3.950
75th % :	12.100
Maximum :	316.000


Normal Probability Plot for As_gs
Data file: e_gs_bg.dat
400.
300.
200.
100.
0.
As_gs
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 100
N Miss : 0
N Used : 100
Mean : 23.820
Variance: 3482.857
Std. Dev: 59.016
% C.V. : 247.752
Skewness: 3.796
Kurtosis: 17.108
Minimum : 1.250
25th % : 2.500
Median : 3.950
75th % : 12.100
Maximum : 316.000

Zone E
Arsenic in shallow GW grid samples
Original dataset (N=100)
LN-transformed values

2a




Normal Probability Plot for LN(As_gs)
Data file: e_gs_bg.dat
LN(As_gs)
6.
4.
2.
0.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 100
N Miss : 0
N Used : 100
Mean : 1.809
Variance: 2.046
Std. Dev: 1.430
% C.V. : 79.090
Skewness: 1.061
Kurtosis: 3.477
Minimum : .223
25th % : .916
Median : 1.372
75th % : 2.493
Maximum : 5.756

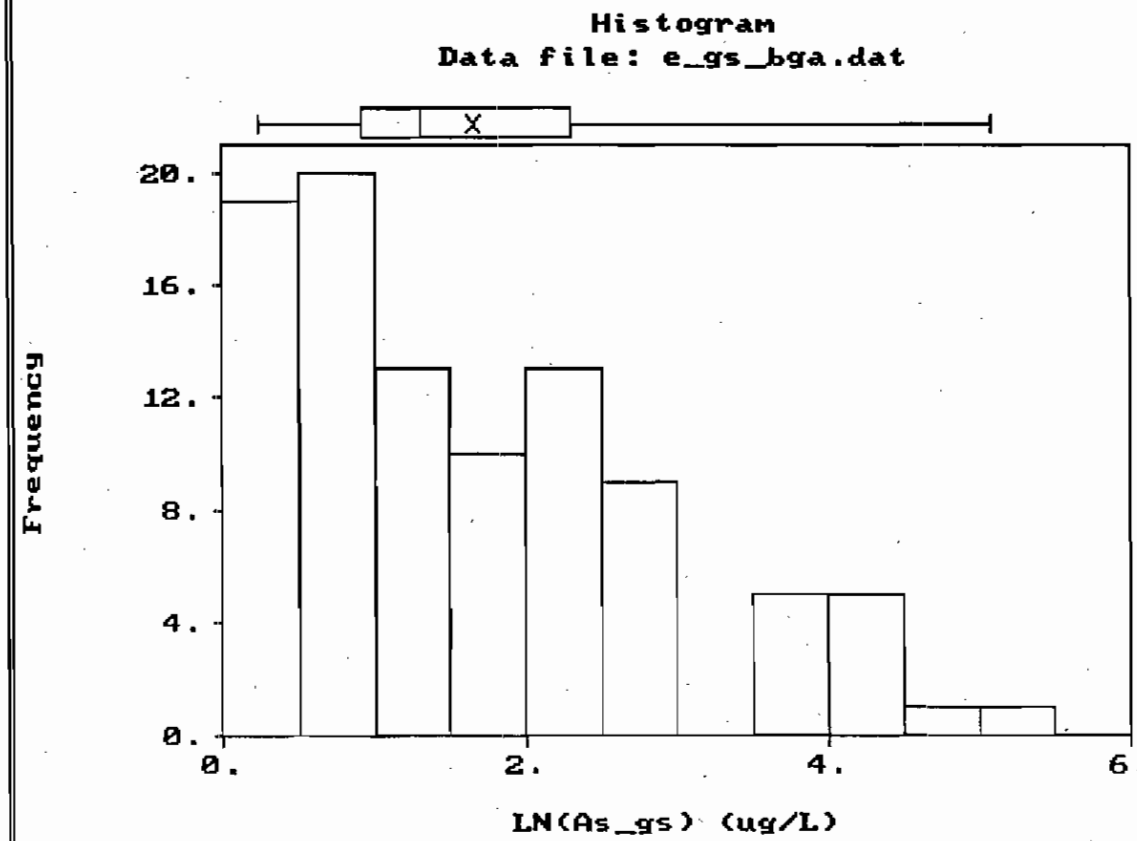
Zone E

Arsenic in shallow GW grid samples

Samples # 002-01, -02, -03, and -04 removed (N=96)

LN-transformed values

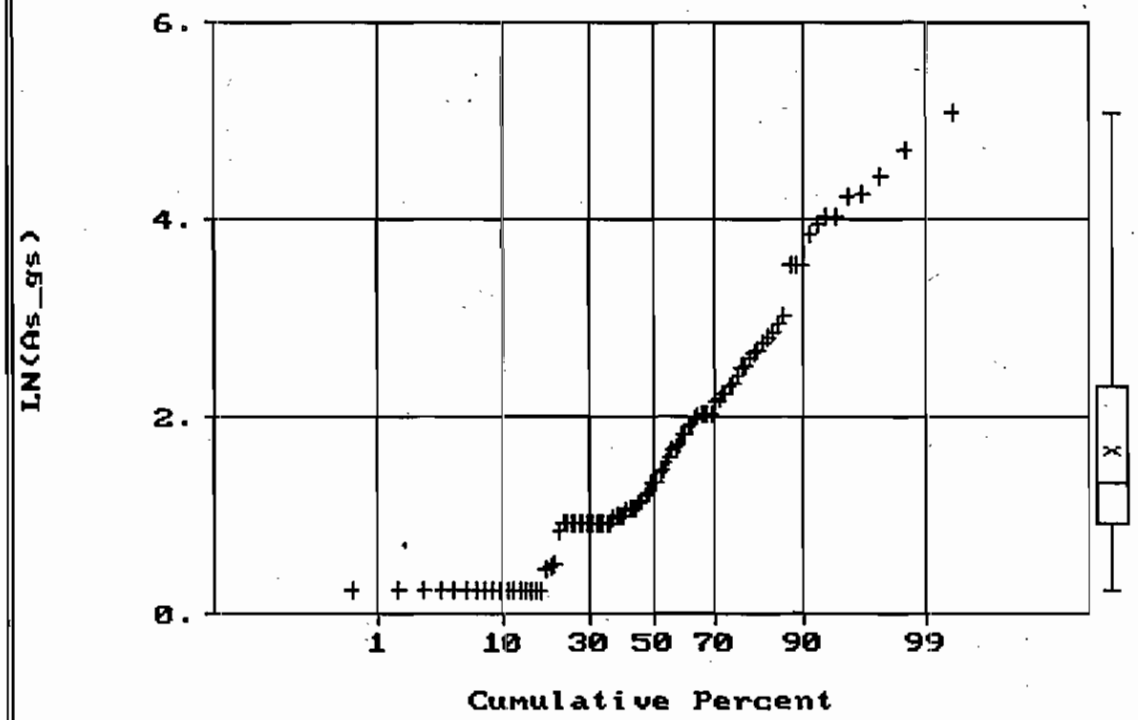
3a



Statistics

N Total :	100
N Miss :	4
N Used :	96
Mean :	1.649
Variance:	1.485
Std. Dev:	1.219
% C.V. :	73.921
Skewness:	.859
Kurtosis:	3.018
Minimum :	.223
25th % :	.916
Median :	1.308
75th % :	2.303
Maximum :	5.075

Normal Probability Plot for LN(As_gs)
Data file: e_gs_bga.dat



Statistics

N Total :	100
N Miss :	4
N Used :	96
Mean :	1.649
Variance:	1.485
Std. Dev:	1.219
% C.V. :	73.921
Skewness:	.859
Kurtosis:	3.018
Minimum :	.223
25th % :	.916
Median :	1.308
75th % :	2.303
Maximum :	5.075

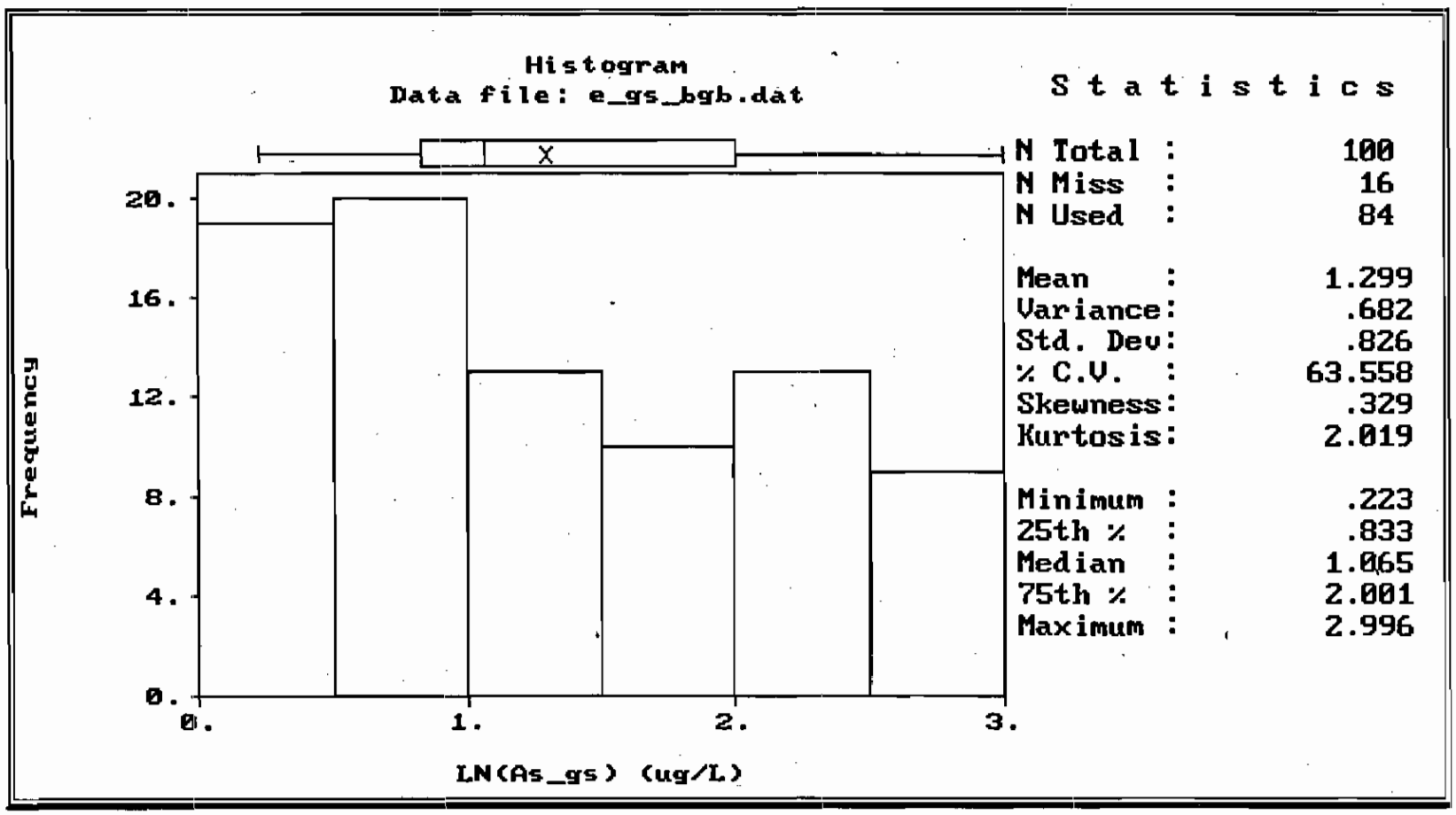
Zone E

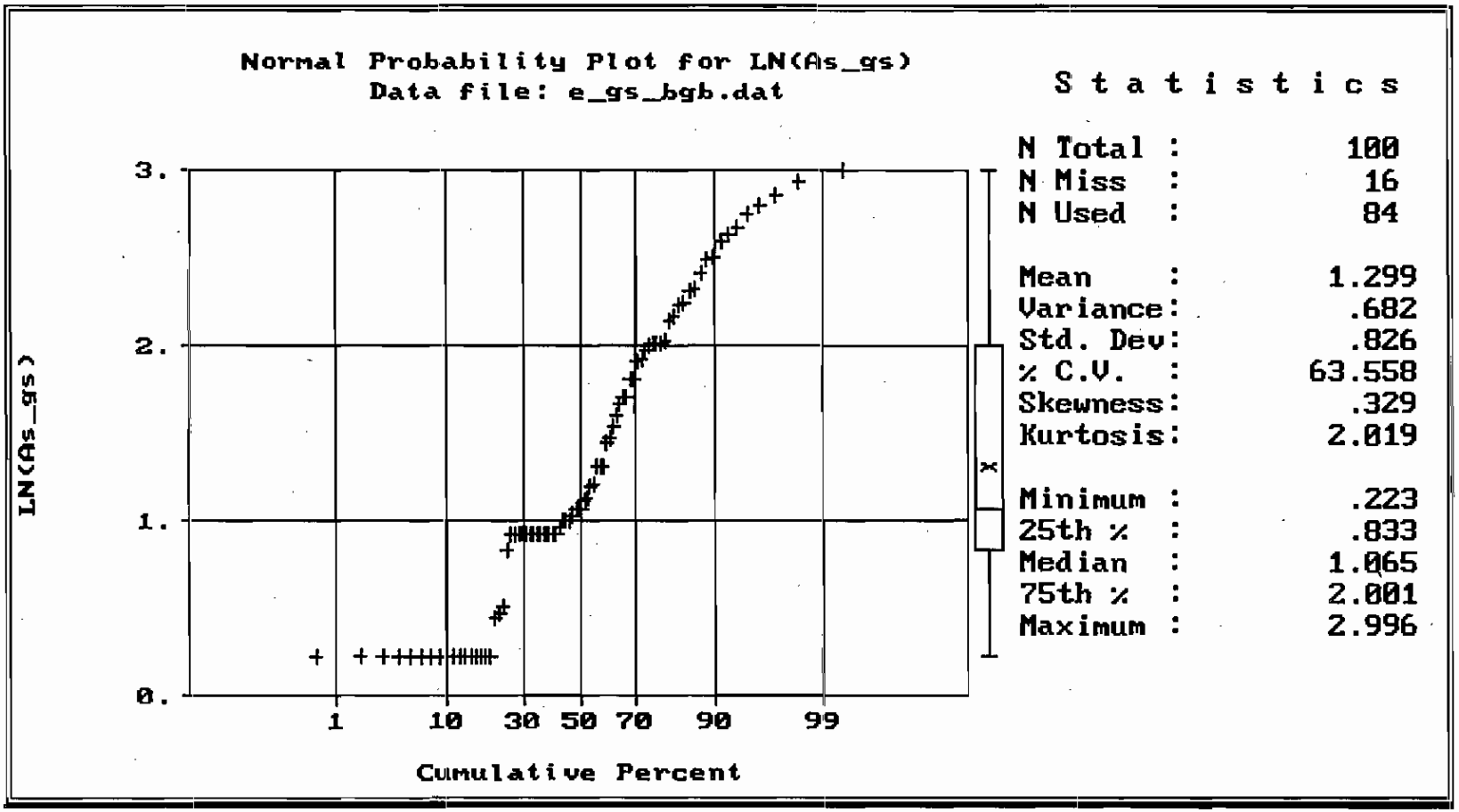
Arsenic in shallow GW grid samples

16 high values removed (N = 84)

LN- transformed values

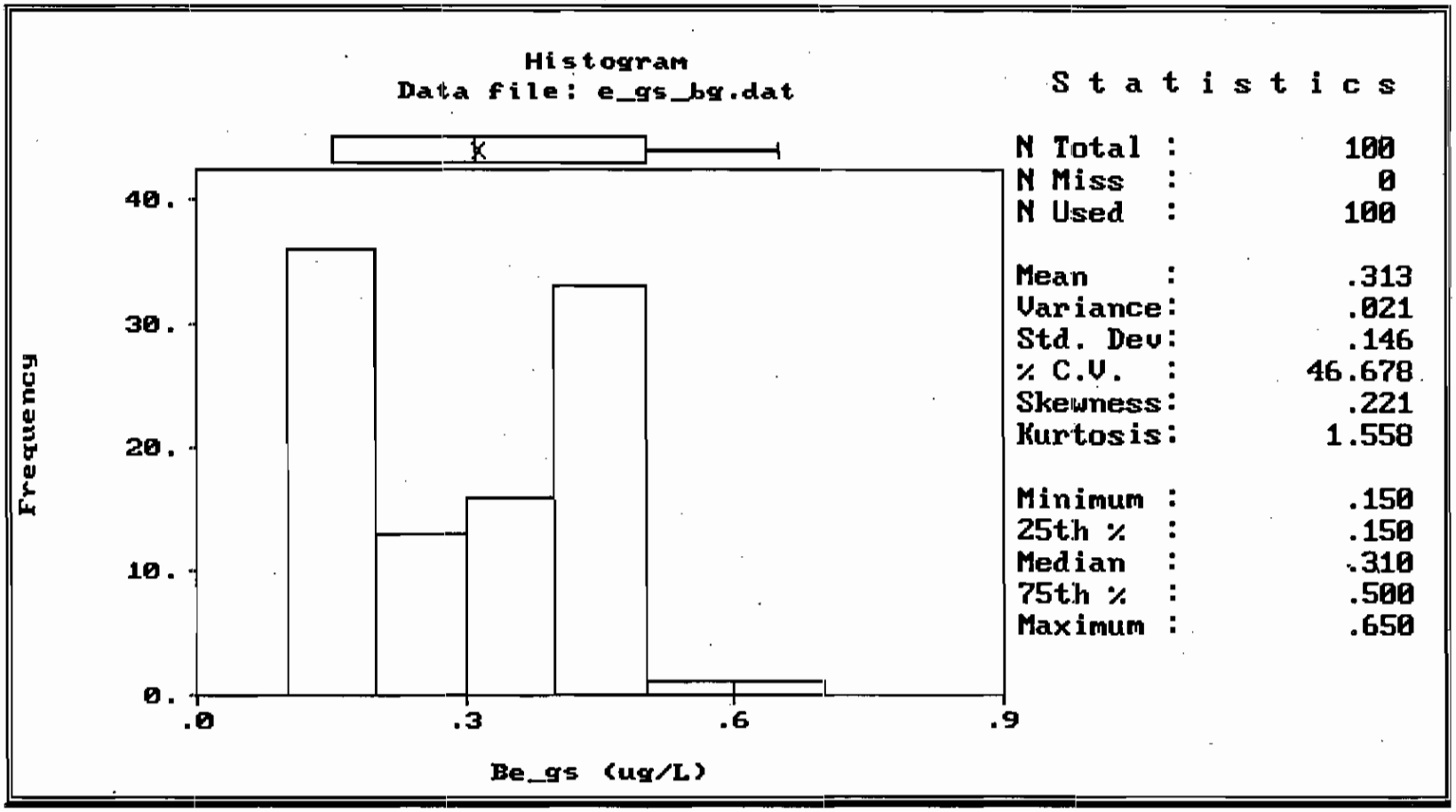
4a



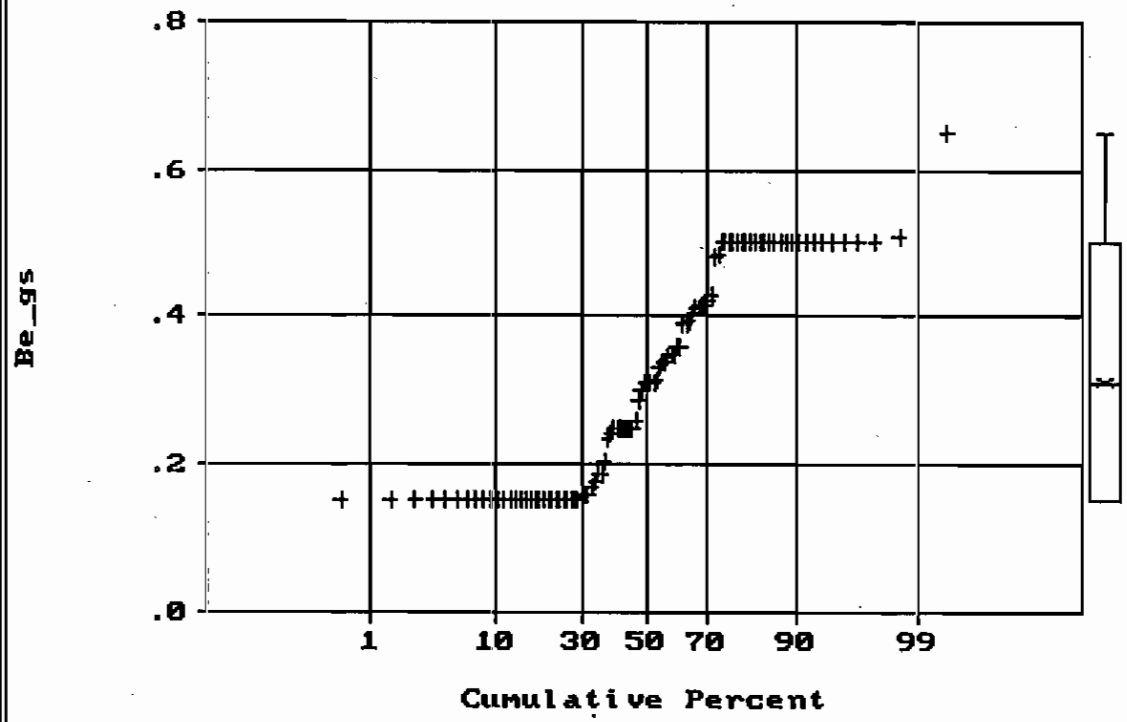

Normal Probability Plot for LN(As_gs)
Data file: e_gs_bgb.dat
LN(As_gs)
3.
2.
1.
0.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 100
N Miss : 16
N Used : 84
Mean : 1.299
Variance: .682
Std. Dev: .826
% C.V. : 63.558
Skewness: .329
Kurtosis: 2.019
Minimum : .223
25th % : .833
Median : 1.065
75th % : 2.001
Maximum : 2.996

Zone E
Beryllium in shallow GW grid samples
Original dataset (N=100)
Original values

1a



Normal Probability Plot for Be_gs
Data file: e_gs_bg.dat

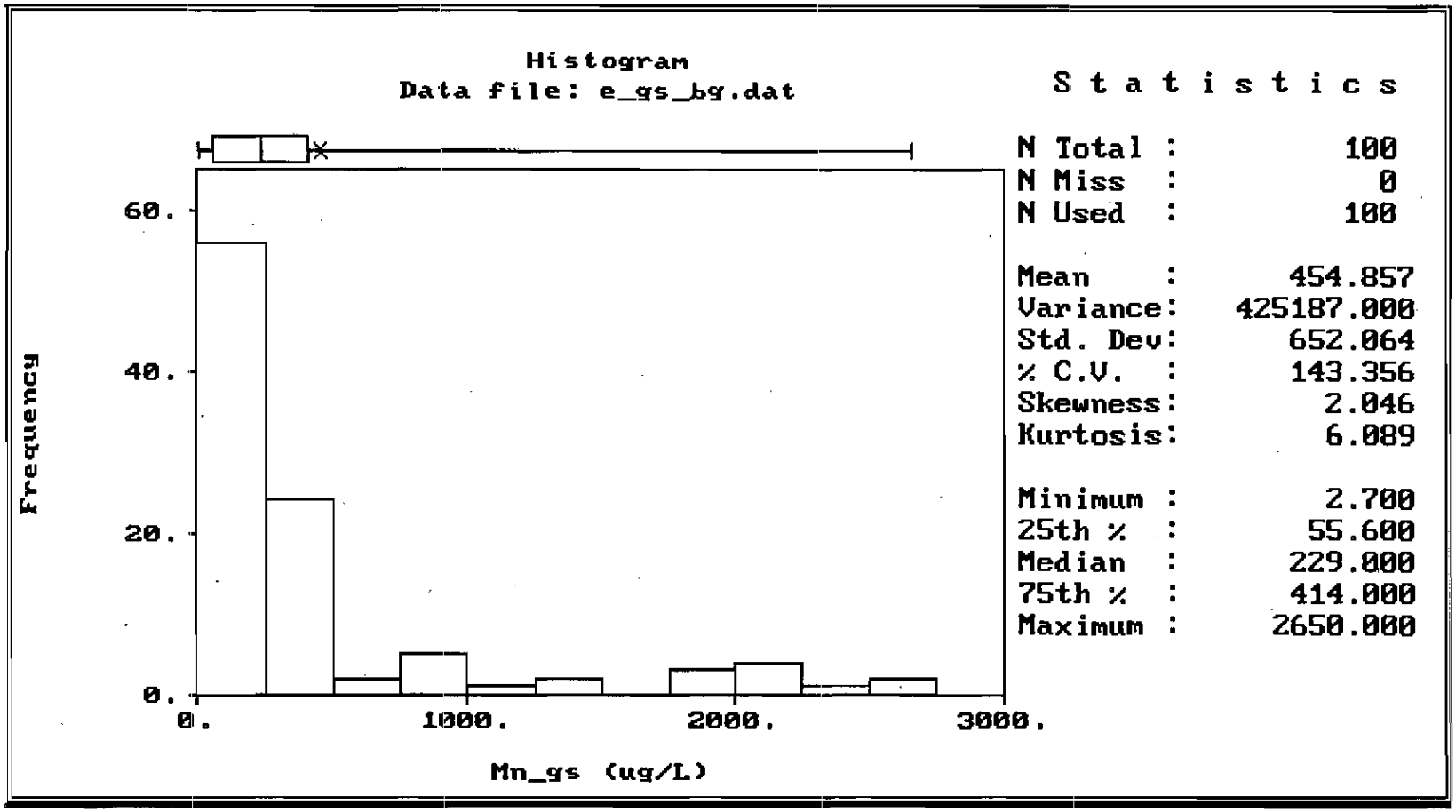


Statistics

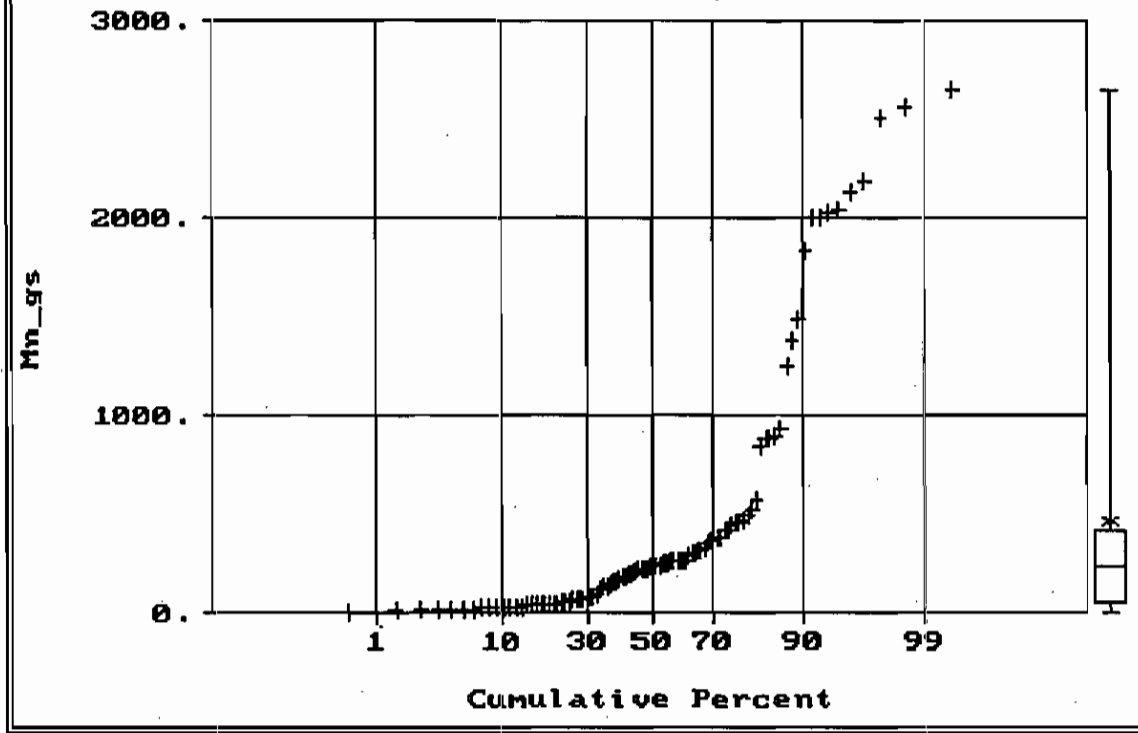
N Total :	100
N Miss :	0
N Used :	100
Mean :	.313
Variance:	.021
Std. Dev:	.146
% C.V. :	46.678
Skewness:	.221
Kurtosis:	1.558
Minimum :	.150
25th % :	.150
Median :	.310
75th % :	.500
Maximum :	.650

Zone E
Manganese in shallow GW grid samples
Original dataset (N=100)
Original values

1a



Normal Probability Plot for Mn_gs
Data file: e_gs_bg.dat

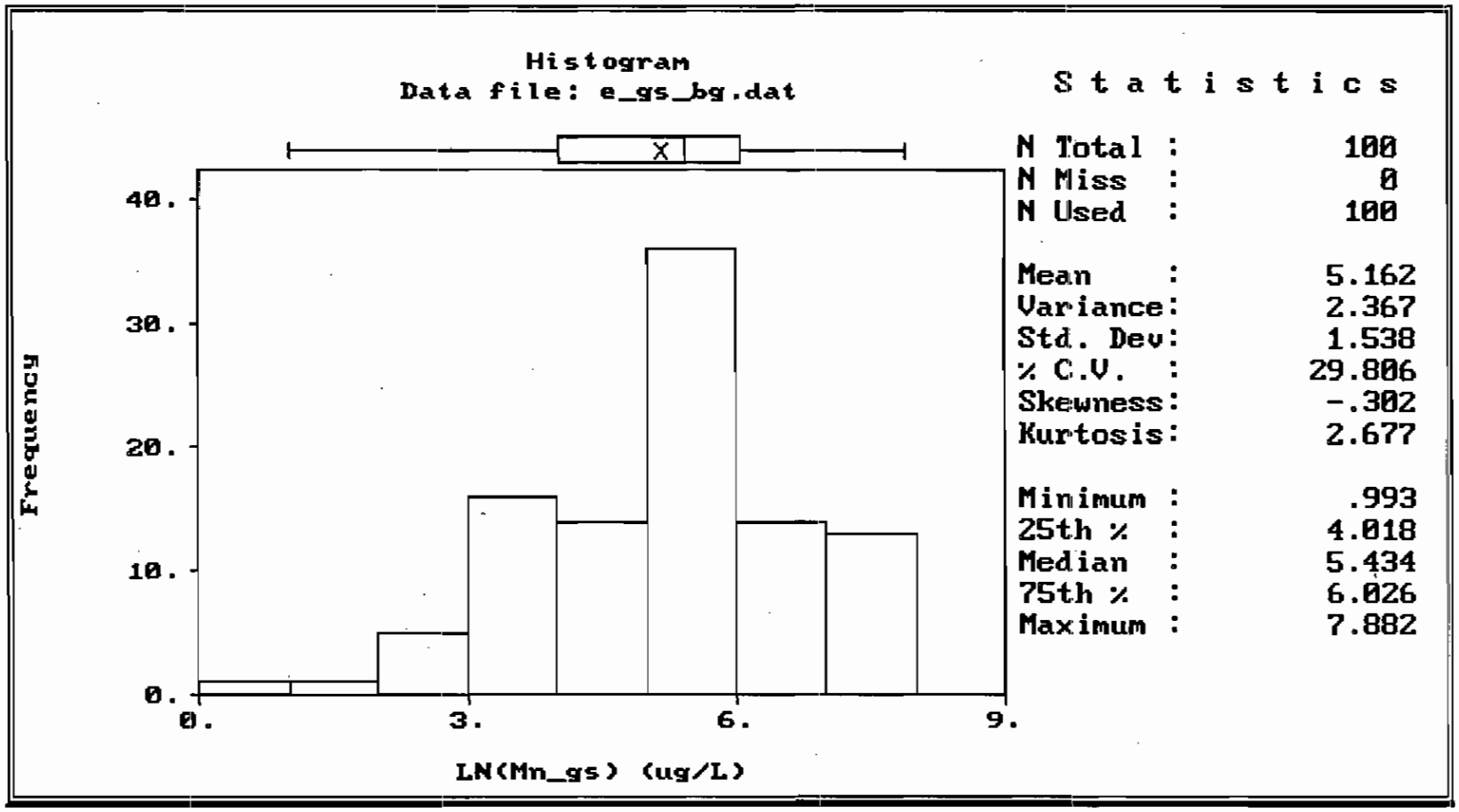


Statistics

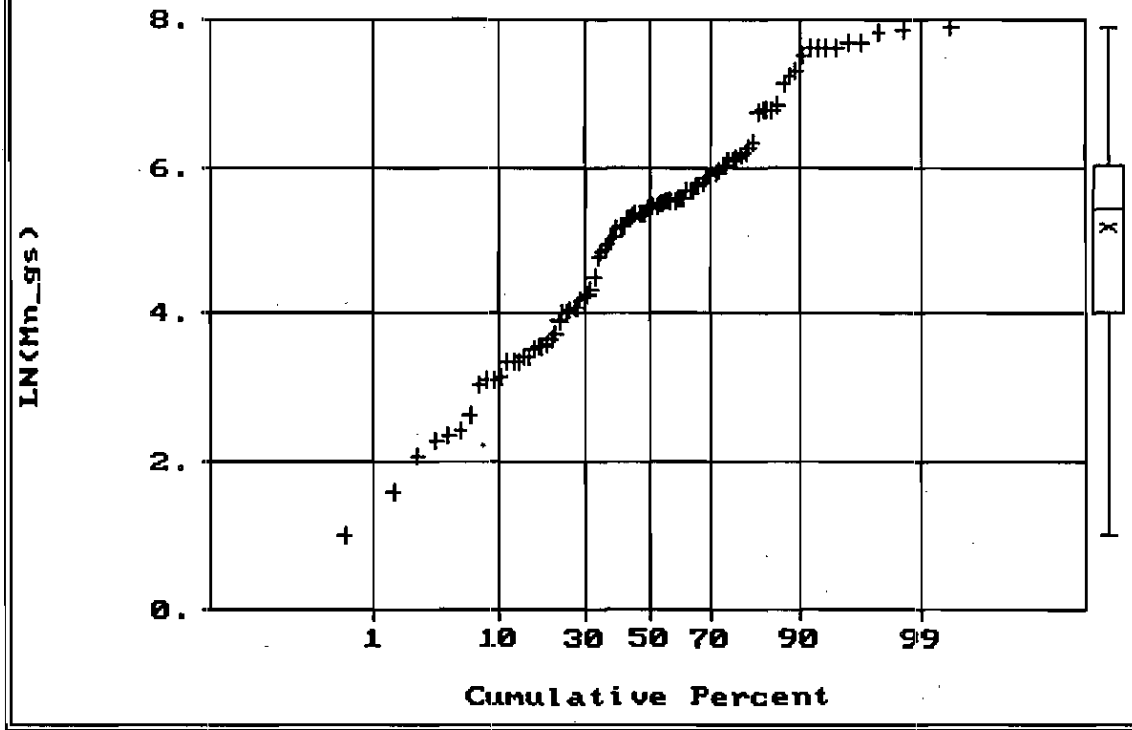
N Total :	100
N Miss :	0
N Used :	100
Mean :	454.857
Variance:	425187.000
Std. Dev:	652.064
% C.V. :	143.356
Skewness:	2.046
Kurtosis:	6.089
Minimum :	2.700
25th % :	55.600
Median :	229.000
75th % :	414.000
Maximum :	2650.000

Zone E
Manganese in shallow GW grid samples
Original dataset (N = 100)
LN-transformed values

2a



Normal Probability Plot for LN(Mn_gs)
Data file: e_gs_bg.dat

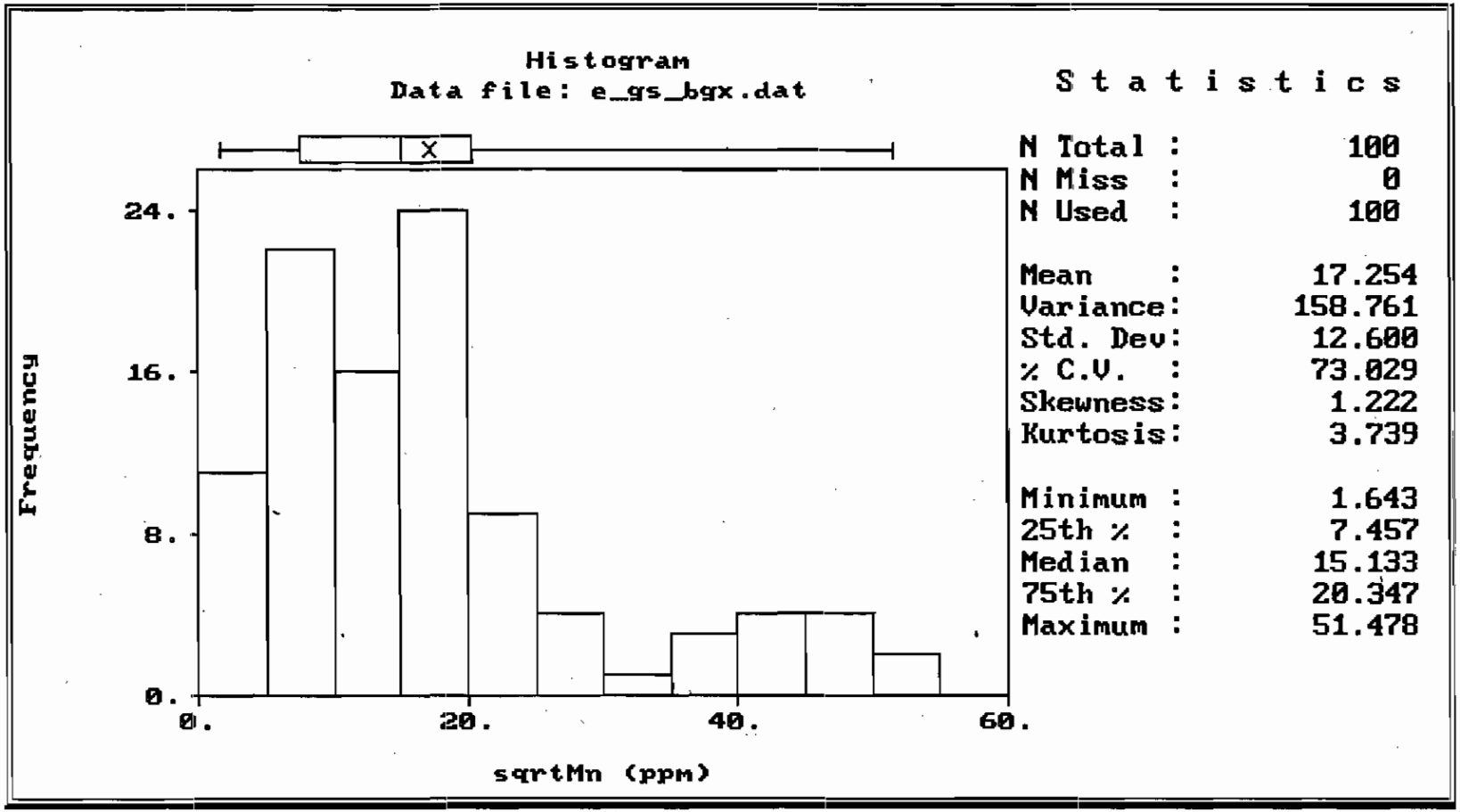


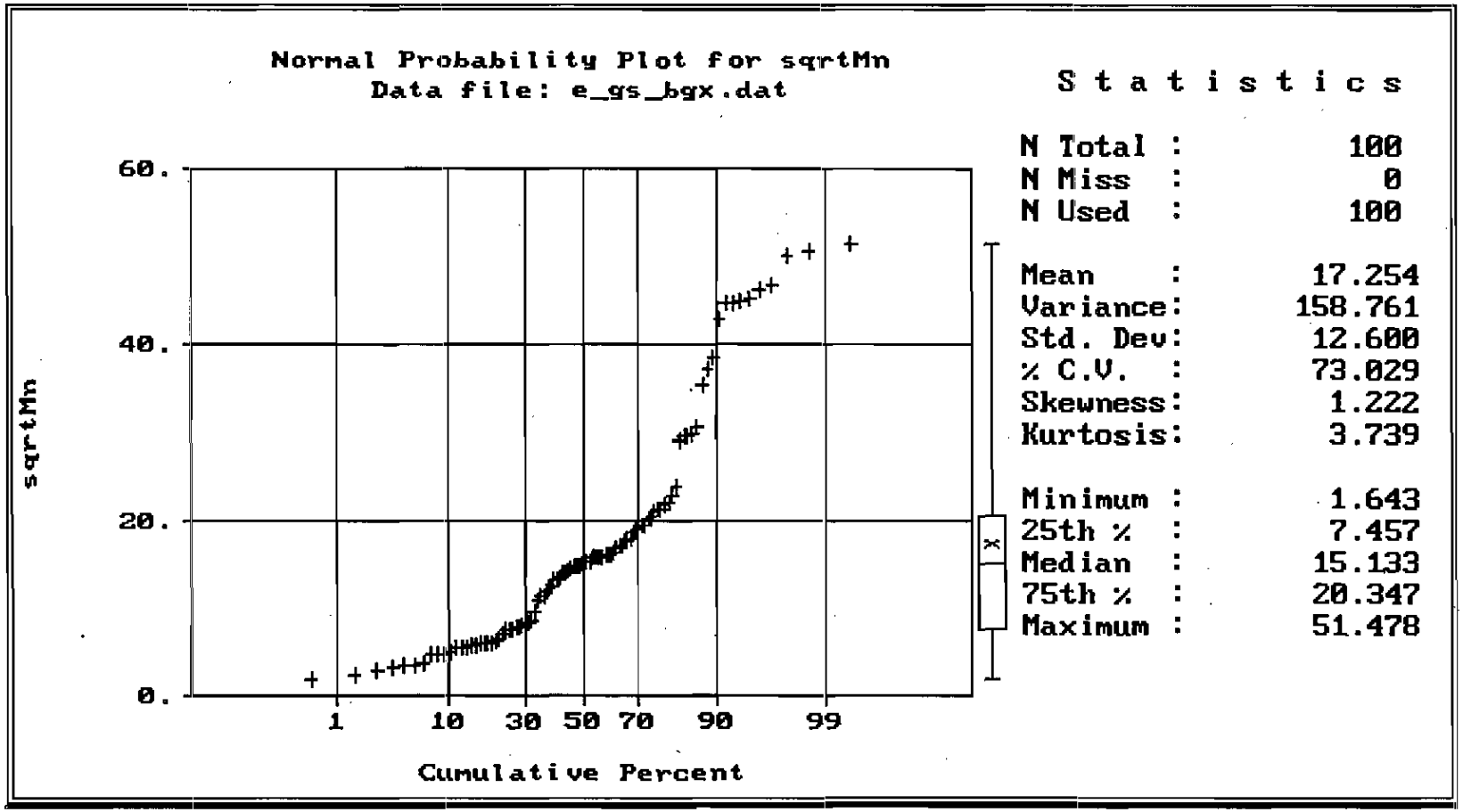
Statistics

N Total :	100
N Miss :	0
N Used :	100
Mean :	5.162
Variance:	2.367
Std. Dev:	1.538
% C.V. :	29.806
Skewness:	-.302
Kurtosis:	2.677
Minimum :	.993
25th % :	4.018
Median :	5.434
75th % :	6.026
Maximum :	7.882

Zone E
Manganese in shallow GW grid samples
Original dataset (N=100)
Square-root transformed values

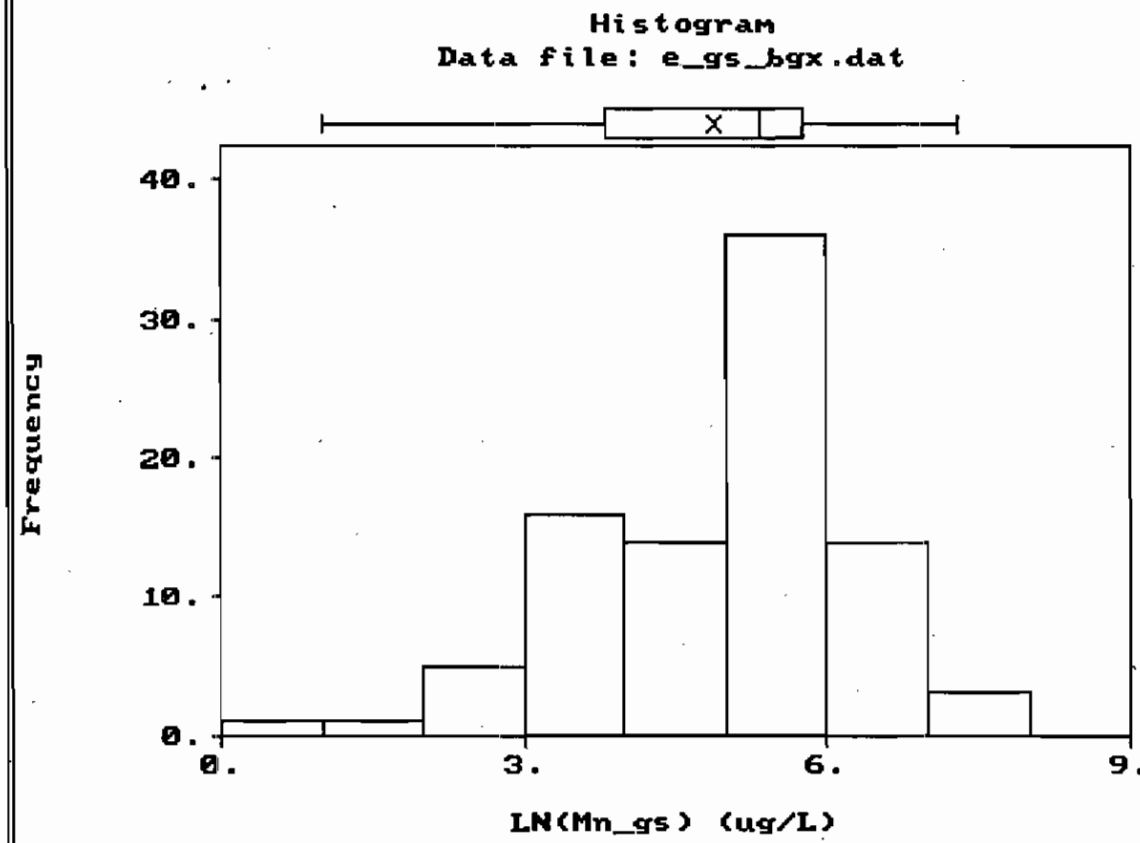
3a




Normal Probability Plot for sqrtMn
Data file: e_gs_bgx.dat
sqrtMn
60.
40.
20.
0.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 100
N Miss : 0
N Used : 100
Mean : 17.254
Variance: 158.761
Std. Dev: 12.600
% C.V. : 73.029
Skewness: 1.222
Kurtosis: 3.739
Minimum : 1.643
25th % : 7.457
Median : 15.133
75th % : 20.347
Maximum : 51.478

Zone E
Manganese in shallow GW grid samples
10 highest values removed (N=90)
LN-transformed values

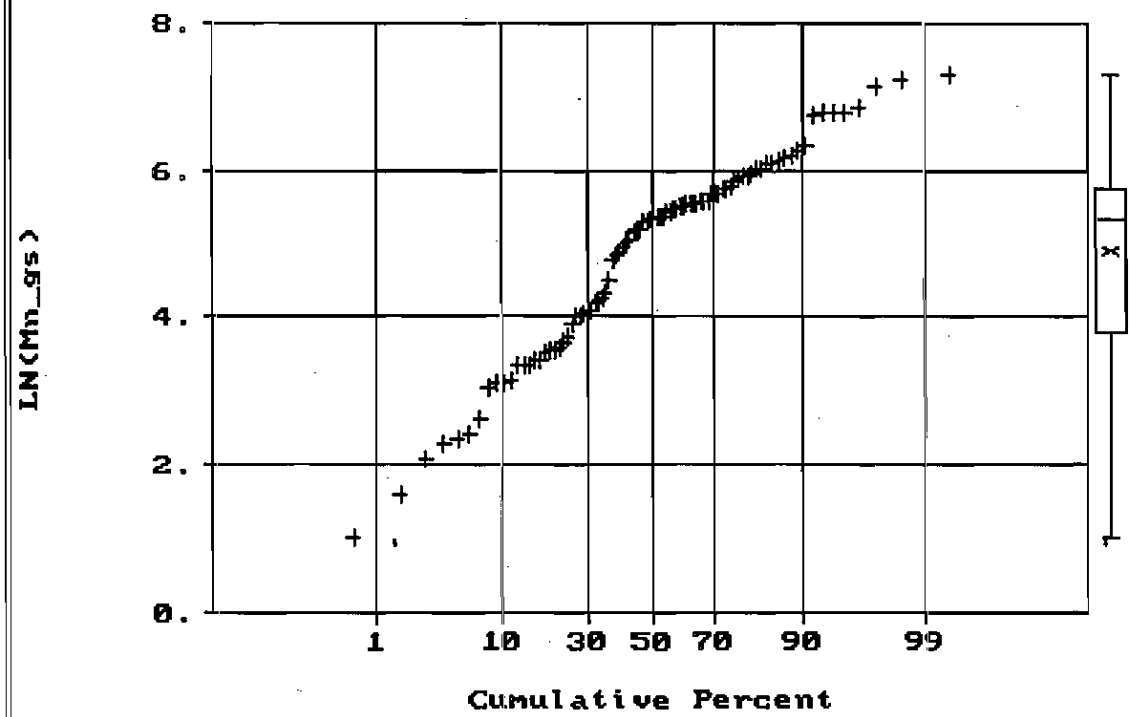
4a



Statistics

N Total :	100
N Miss :	10
N Used :	90
Mean :	4.881
Variance:	1.836
Std. Dev:	1.355
% C.V. :	27.761
Skewness:	-.594
Kurtosis:	2.813
Minimum :	.993
25th % :	3.814
Median :	5.340
75th % :	5.755
Maximum :	7.300

Normal Probability Plot for LN(Mn_gs)
Data file: e_gs_bgx.dat



Statistics

N Total :	100
N Miss :	10
N Used :	90
Mean :	4.881
Variance:	1.836
Std. Dev:	1.355
% C.V. :	27.761
Skewness:	-.594
Kurtosis:	2.813
Minimum :	.993
25th % :	3.814
Median :	5.340
75th % :	5.755
Maximum :	7.300

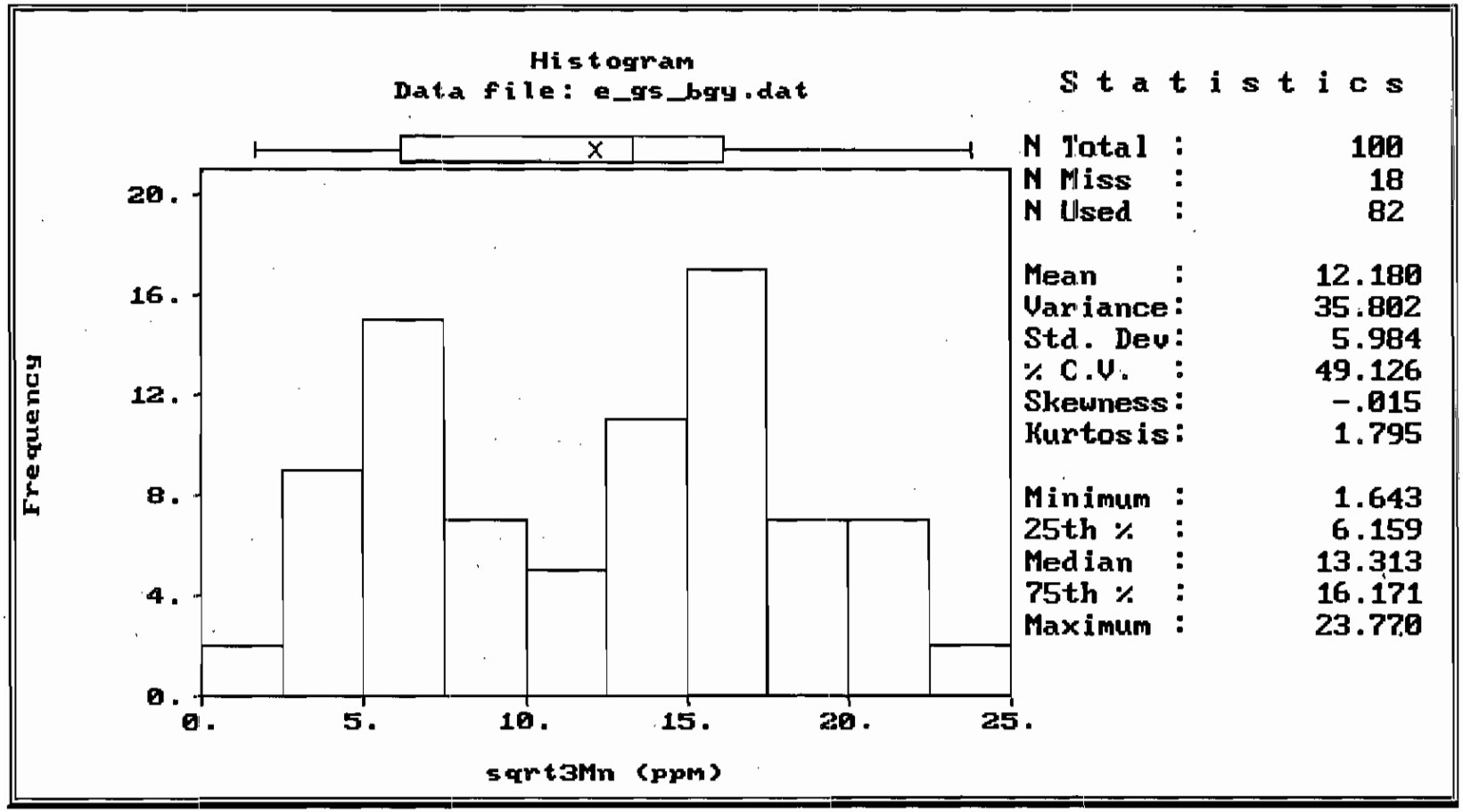
Zone E

Manganese in shallow GW grid samples

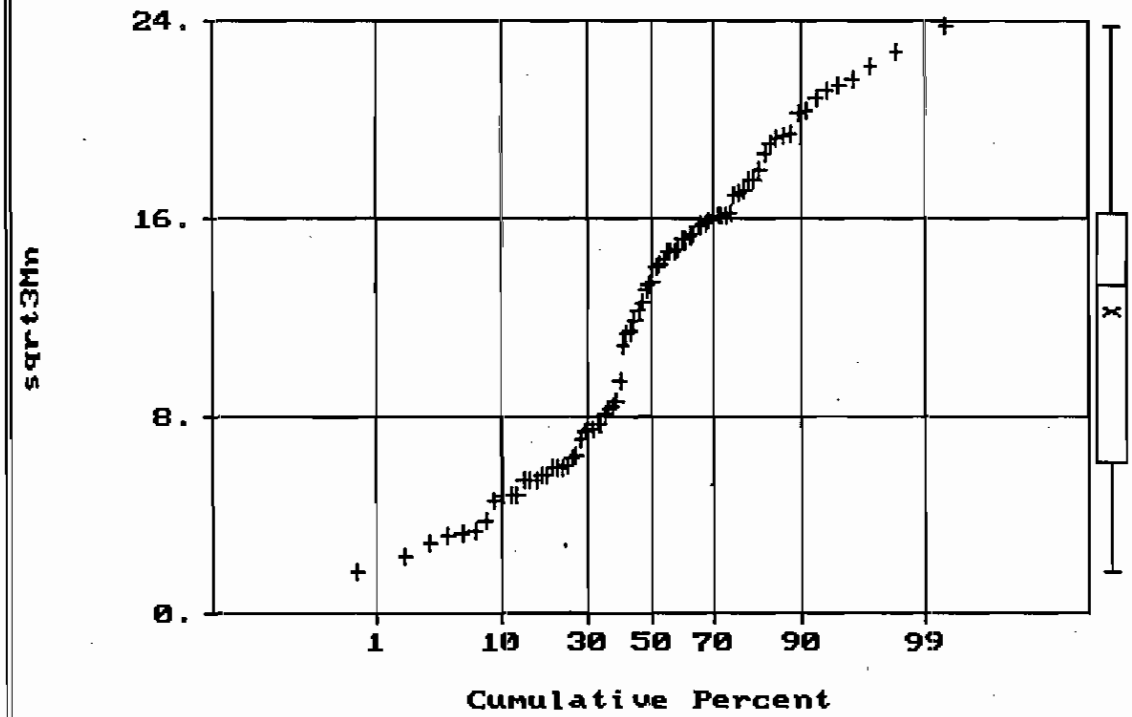
18 samples removed (N = 82)

Square-root transformed values

5a



Normal Probability Plot for sqrt3Mn
Data file: e_gs_bgy.dat

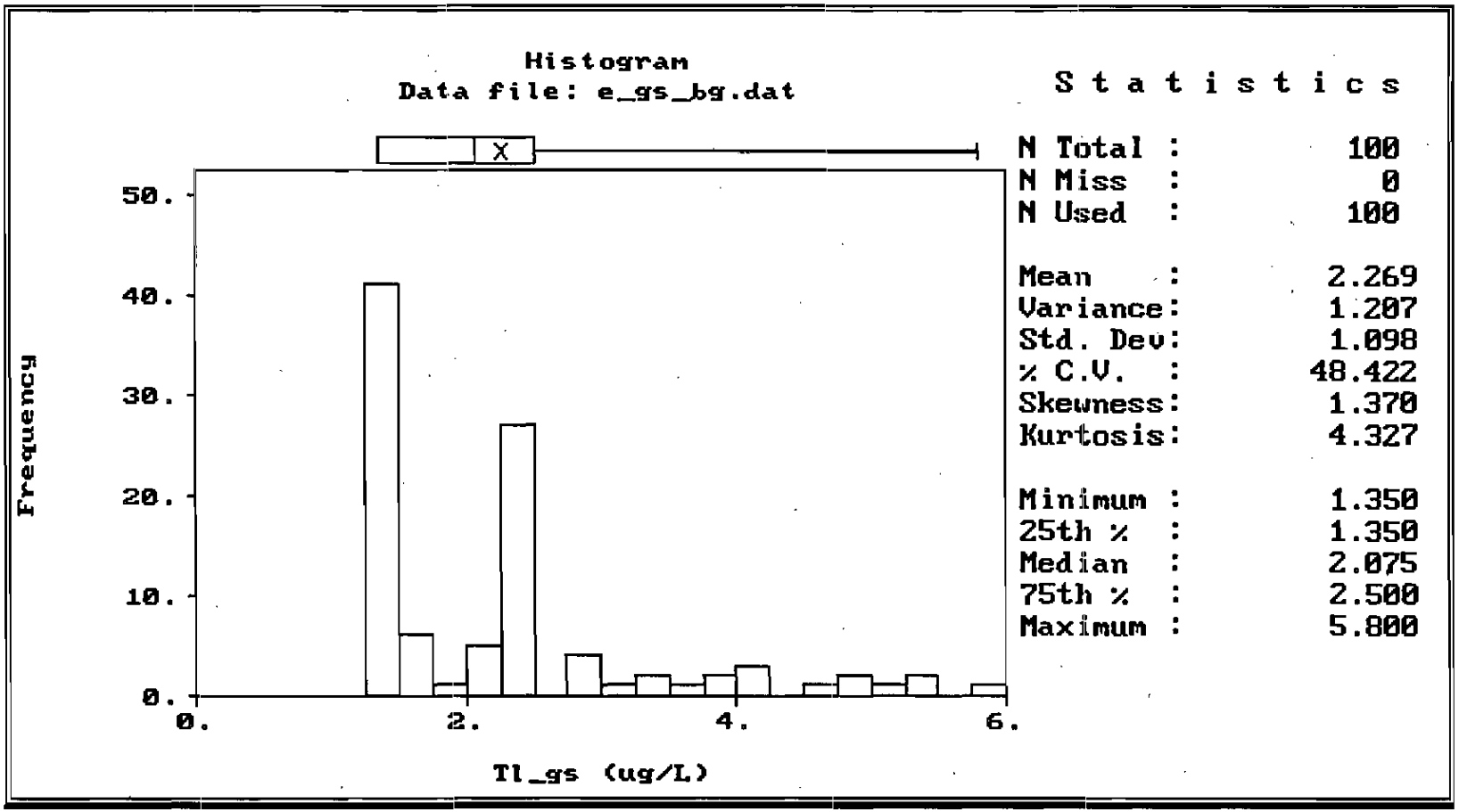


Statistics

N Total :	100
N Miss :	18
N Used :	82
Mean :	12.180
Variance:	35.802
Std. Dev:	5.984
% C.V. :	49.126
Skewness:	-.015
Kurtosis:	1.795
Minimum :	1.643
25th % :	6.159
Median :	13.313
75th % :	16.171
Maximum :	23.770

Zone E
Thallium in shallow GW grid samples
Original dataset (N=100)
Original values

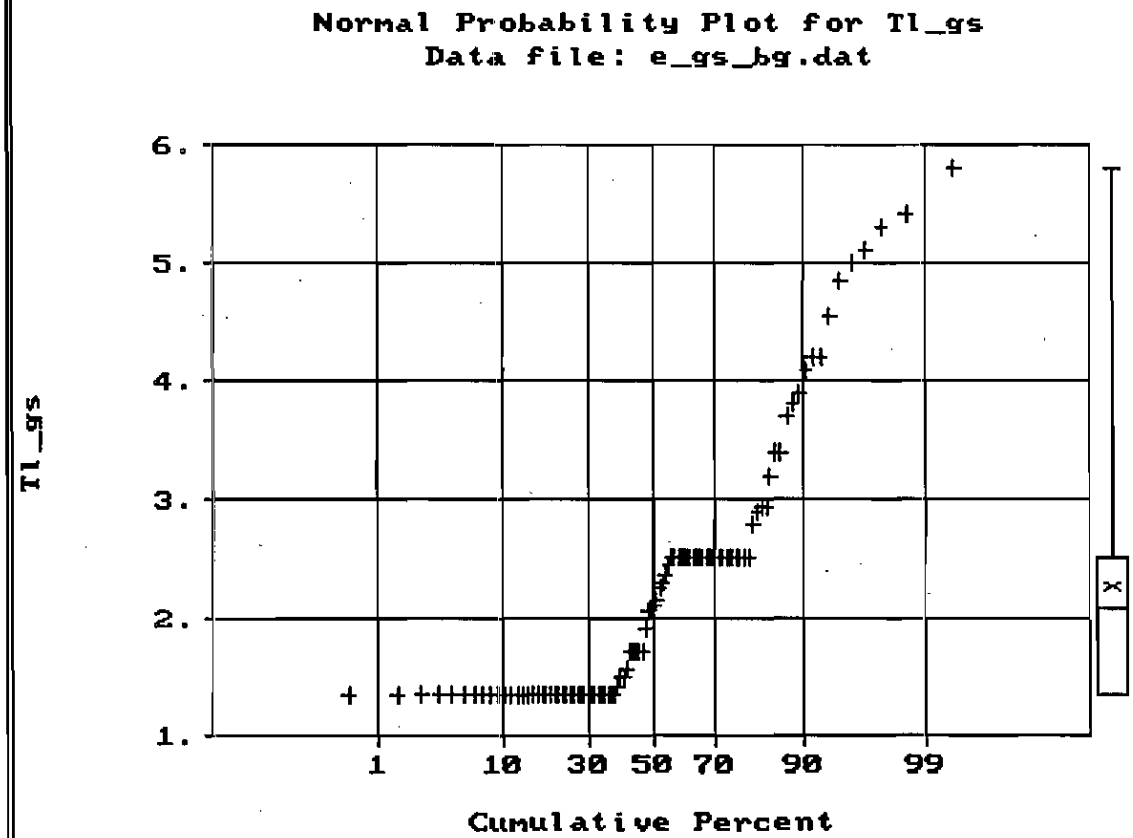
1a



Statistics

N Total :	100
N Miss :	0
N Used :	100
Mean :	2.269
Variance:	1.207
Std. Dev:	1.098
% C.V. :	48.422
Skewness:	1.370
Kurtosis:	4.327
Minimum :	1.350
25th % :	1.350
Median :	2.075
75th % :	2.500
Maximum :	5.800

16



Statistics

N Total :	100
N Miss :	0
N Used :	100
Mean :	2.269
Variance:	1.207
Std. Dev:	1.098
% C.V. :	48.422
Skewness:	1.370
Kurtosis:	4.327
Minimum :	1.350
25th % :	1.350
Median :	2.075
75th % :	2.500
Maximum :	5.800

CHARLESTON - ZONE E
Background Sample Results – 4 Rounds
Shallow Groundwater, Wells 1-25

SW846-META													
	SAMPLE ID ------->	GDE-G-W001-01		GDE-G-W001-02		GDE-G-W001-03		GDE-G-W001-04		GDE-G-W002-01		GDE-G-W002-02	
	ORIGINAL ID ----->	GDEGW00101		GDEGW00102		GDEGW00103		GDEGW00104		GDEGW00201		GDEGW00202	
	LAB SAMPLE ID --->	25020.06		26203.01		27441.06		28100.05		25020.08		26214.02	
	ID FROM REPORT -->	GDEGW00101		GDEGW00102		GDEGW00103		GDEGW00104		GDEGW00201		GDEGW00202	
	SAMPLE DATE ----->	03/21/96		07/01/96		10/28/96		01/07/97		03/21/96		07/02/96	
	DATE EXTRACTED -->	03/28/96		07/23/96		10/31/96		01/09/97		03/28/96		07/23/96	
	DATE ANALYZED --->	04/04/96		07/23/96		11/01/96		01/13/97		04/04/96		07/24/96	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	25020	VAL	26203	VAL	27441	VAL	28100	VAL	25020	VAL	26203	VAL
7429-90-5	Aluminum (Al)	30.	U	23.	U	70.5	J	41.9	J	99.3	J	57.5	U
7440-36-0	Antimony (Sb)	4.	U	13.	U	2.1	U	2.1	U	4.	U	13.	U
7440-38-2	Arsenic (As)	5.	U	13.4		13.9		15.6	J	316.		307.	
7440-39-3	Barium (Ba)	68.1	U	48.5	U	54.5	J	51.1	J	28.	U	29.6	U
7440-41-7	Beryllium (Be)	1.	U	0.5	U	0.41	J	0.3	U	1.	U	0.5	U
7440-43-9	Cadmium (Cd)	1.	U	2.2	U	0.5	U	0.5	U	1.	U	2.2	U
7440-70-2	Calcium (Ca)	122000.	U	135000.		138000.		95900.		41100.	U	37400.	
7440-47-3	Chromium (Cr)	1.	U	2.2	U	0.8	U	0.8	U	1.	U	2.2	U
7440-48-4	Cobalt (Co)	36.	J	39.2		43.7	J	27.	J	5.	U	5.2	U
7440-50-8	Copper (Cu)	2.	U	4.6	U	0.6	U	0.6	U	2.	U	2.5	U
7439-89-6	Iron (Fe)	70900.		70200.		76600.		52800.	J	10100.		9510.	
7439-92-1	Lead (Pb)	3.	U	1.4	U	1.7	U	1.7	U	3.	U	1.4	U
7439-95-4	Magnesium (Mg)	84900.	U	84400.		92700.		63800.		52400.	U	50200.	
7439-96-5	Manganese (Mn)	1130.	U	1240.		1370.		937.	J	72.6	U	70.1	
7439-97-6	Mercury (Hg)	0.2	U	0.1	U	0.1	U	0.33	UJ	0.2	U	0.1	U
7440-02-0	Nickel (Ni)	13.4	U	15.2	J	16.6	U	8.9	J	1.	U	1.1	U
7440-09-7	Potassium (K)	7360.	U	4460.	U	7140.		5850.		39200.	U	30400.	
7782-49-2	Selenium (Se)	5.	U	2.8	U	2.8	U	3.8	U	5.	U	2.8	U
7440-22-4	Silver (Ag)	2.	U	3.4	U	1.2	U	1.2	U	2.	U	3.4	U
7440-23-5	Sodium (Na)	1140000.	U	1060000.		1200000.		765000.	J	920000.	U	808000.	
7440-28-0	Thallium (Tl)	5.	U	3.4	U	5.4	J	4.2	J	5.	U	3.4	U
7440-31-5	Tin (Sn)	20.	U	19.	U	3.2	J	1.	U	20.	U	19.	U
7440-62-2	Vanadium (V)	3.4	J	3.4	U	1.1	U	0.82	J	2.6	J	3.4	U
7440-66-6	Zinc (Zn)	27.3		31.9	U	36.4	U	22.2	U	10.	U	6.9	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results
Shallow Groundwater, Wells 1-25

SW846-META													
	SAMPLE ID ------->	GDE-G-W002-03		GDE-G-W002-04		GDE-G-W003-01		GDE-G-W003-02		GDE-G-W003-03		GDE-G-W003-04	
	ORIGINAL ID ----->	GDEGW00203		GDEGW00204		GDEGW00301		GDEGW00302		GDEGW00303		GDEGW00304	
	LAB SAMPLE ID --->	27441.07		28482.04		25167.06		26243.01		27488.01		28100.06	
	ID FROM REPORT -->	GDEGW00203		GDEGW00204		GDEGW00301		GDEGW00302		GDEGW00303		GDEGW00304	
	SAMPLE DATE ----->	10/28/96		02/12/97		04/04/96		07/08/96		11/01/96		01/07/97	
	DATE EXTRACTED -->	10/31/96		02/22/97		04/09/96		07/23/96		11/08/96		01/09/97	
	DATE ANALYZED --->	11/01/96		02/24/97		04/11/96		07/23/96		11/13/96		01/13/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	27441	VAL	28482	VAL	25153	VAL	26203	VAL	27488	VAL	28100	VAL
7429-90-5	Aluminum (Al)	262.		83.1	J	363.	J	956.		173.	J	59.6	J
7440-36-0	Antimony (Sb)	2.6	U	2.1	U	4.	U	13.	U	2.1	U	2.1	U
7440-38-2	Arsenic (As)	269.		249.		51.7		69.3		34.4		46.1	J
7440-39-3	Barium (Ba)	38.5	J	50.8	J	70.8	J	118.	U	140.	J	99.2	J
7440-41-7	Beryllium (Be)	0.3	U	0.3	U	1.	U	0.5	U	0.3	UJ	0.3	U
7440-43-9	Cadmium (Cd)	0.5	U	0.5	U	1.	U	2.2	U	0.5	U	0.5	U
7440-70-2	Calcium (Ca)	37300.		44400.		74200.	J	71000.		113000.		86100.	
7440-47-3	Chromium (Cr)	1.3	J	1.1	J	1.	U	2.2	U	1.	J	0.8	U
7440-48-4	Cobalt (Co)	1.1	U	0.9	U	2.	U	5.2	U	0.9	UJ	0.9	U
7440-50-8	Copper (Cu)	3.4	U	0.6	UJ	2.	U	2.7	U	1.4	U	0.6	U
7439-89-6	Iron (Fe)	10200.		12300.		18800.	J	18200.		9070.		12900.	J
7439-92-1	Lead (Pb)	1.7	U	1.7	U	4.7		3.2	U	1.7	U	1.7	U
7439-95-4	Magnesium (Mg)	52300.		64500.		95400.		75000.		93800.		87100.	
7439-96-5	Manganese (Mn)	68.		74.1		377.		323.		468.	J	367.	J
7439-97-6	Mercury (Hg)	0.1	U	0.58		0.2	U	0.1	U	0.1	U	0.86	UJ
7440-02-0	Nickel (Ni)	1.3	U	0.8	U	3.	J	2.	J	2.7	J	1.2	U
7440-09-7	Potassium (K)	41200.		44300.		60200.		46800.		56800.		60500.	
7782-49-2	Selenium (Se)	2.8	U	2.8	U	5.	U	2.8	U	2.8	U	6.3	U
7440-22-4	Silver (Ag)	1.2	U	1.2	U	2.	U	3.4	U	2.6	U	1.2	U
7440-23-5	Sodium (Na)	942000.		1160000.		1930000.	J	1340000.		1350000.		1080000.	J
7440-28-0	Thallium (Tl)	2.7	U	3.8	J	5.	U	3.4	U	2.7	UJ	2.7	U
7440-31-5	Tin (Sn)	2.6	U	3.8	U	20.	U	19.	U	2.6	U	1.	U
7440-62-2	Vanadium (V)	2.4	U	2.3	J	2.6	J	3.4	U	0.89	J	1.1	J
7440-66-6	Zinc (Zn)	7.	U	8.	J	22.5		12.1	U	26.7		5.3	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results
Shallow Groundwater, Wells 1-25

SW846-META

SAMPLE ID ------->	GDE-G-W004-01	GDE-G-W004-02	GDE-G-W004-03	GDE-G-W004-04	GDE-G-W005-01	GDE-H-W005-01
ORIGINAL ID ----->	GDEGW00401	GDEGW00402	GDEGW00403	GDEGW00404	GDEGW00501	GDEHW00501
LAB SAMPLE ID --->	25031.04	26253.03	27478.03	28111.03	25020.05	25021.01
ID FROM REPORT -->	GDEGW00401	GDEGW00402	GDEGW00403	GDEGW00404	GDEGW00501	GDEHW00501
SAMPLE DATE ----->	03/22/96	07/09/96	10/31/96	01/08/97	03/21/96	03/21/96
DATE EXTRACTED -->	03/28/96	07/15/96	11/06/96	01/10/97	03/28/96	03/28/96
DATE ANALYZED --->	04/04/96	07/24/96	11/12/96	01/14/97	04/04/96	04/04/96
MATRIX ---------->	Water	Water	Water	Water	Water	Water
UNITS ---------->	UG/L A	UG/L A	UG/L A	UG/L A	UG/L A	UG/L A

CAS #	Parameter	25020	VAL	26253	VAL	27478	VAL	28100	VAL	25020	VAL	25020	VAL
7429-90-5	Aluminum (Al)	436.		2810.		1180.		1950.		167.	J	196.	J
7440-36-0	Antimony (Sb)	4.	U	2.1	U	3.	U	2.1	U	4.	U	4.	U
7440-38-2	Arsenic (As)	5.	U	2.7	J	12.1	U	5.5	J	5.	U	5.	U
7440-39-3	Barium (Ba)	4.8	U	15.2		10.	J	18.2	J	149.	U	125.	U
7440-41-7	Beryllium (Be)	1.	U	0.33	J	0.31	J	0.34	U	1.	U	1.	U
7440-43-9	Cadmium (Cd)	1.	U	0.5	U	0.5	U	0.5	U	1.	U	1.	U
7440-70-2	Calcium (Ca)	353.	U	1170.	J	2700.	J	1840.	J	120000.	U	115000.	U
7440-47-3	Chromium (Cr)	1.	U	4.7	J	4.2	J	1.7	J	1.	U	1.	U
7440-48-4	Cobalt (Co)	5.	U	0.9	U	1.1	U	0.9	U	5.	U	5.	U
7440-50-8	Copper (Cu)	2.	U	3.2	U	4.5	UJ	5.6	U	2.	U	2.	U
7439-89-6	Iron (Fe)	846.	U	3550.	J	3790.	J	4120.	J	12000.	J	8800.	J
7439-92-1	Lead (Pb)	3.	U	3.5		1.7	U	2.6	J	3.	U	3.	U
7439-95-4	Magnesium (Mg)	492.	U	790.		1850.	J	1860.	J	248000.	U	202000.	U
7439-96-5	Manganese (Mn)	9.9	U	13.6	J	28.5		39.6	J	393.	U	353.	U
7439-97-6	Mercury (Hg)	0.61		0.1	U	0.1	U	0.18	UJ	0.2	U	0.2	U
7440-02-0	Nickel (Ni)	1.	U	1.5	J	13.3	U	1.9	U	1.	U	1.	U
7440-09-7	Potassium (K)	2570.	U	2970.	J	4790.	J	4120.	J	118000.	U	104000.	U
7782-49-2	Selenium (Se)	5.	U	2.8	UJ	2.8	U	3.8	U	5.	U	5.	U
7440-22-4	Silver (Ag)	2.	U	3.4	U	4.5	U	1.2	U	2.	U	2.	U
7440-23-5	Sodium (Na)	92500.	U	83500.		92200.		82900.	J	2490000.	U	2210000.	U
7440-28-0	Thallium (Tl)	5.	U	2.7	UJ	6.8	U	2.7	U	5.	U	5.	U
7440-31-5	Tin (Sn)	20.	U	2.6	U	2.6	U	1.	U	20.	U	20.	U
7440-62-2	Vanadium (V)	1.	U	4.5	J	3.2	J	6.	J	1.2	J	1.3	J
7440-66-6	Zinc (Zn)	10.	U	17.2	U	10.2	U	14.8	U	10.	U	10.	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results
Shallow Groundwater, Wells 1-25

SW846-META													
	SAMPLE ID ------->	GDE-G-W005-02		GDE-H-W005-02		GDE-G-W005-03		GDE-H-W005-03		GDE-G-W005-04		GDE-H-W005-04	
	ORIGINAL ID ----->	GDEGW00502		GDEHW00502		GDEGW00503		GDEHW00503		GDEGW00504		GDEHW00504	
	LAB SAMPLE ID --->	26267.02		26268.02		27827.09		27828.02		28459.01		28460.01	
	ID FROM REPORT -->	GDEGW00502		GDEHW00502		GDEGW00503		GDEHW00503		GDEGW00504		GDEHW00504	
	SAMPLE DATE ----->	07/10/96		07/10/96		12/03/96		12/03/96		02/10/97		02/10/97	
	DATE EXTRACTED -->	07/15/96		07/15/96		12/06/96		12/06/96		02/20/97		02/20/97	
	DATE ANALYZED --->	07/24/96		07/24/96		12/17/96		12/17/96		02/21/97		02/21/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	26253	VAL	26253	VAL	27827	VAL	27827	VAL	28438	VAL	28438	VAL
7429-90-5	Aluminum (Al)	66.9	J	66.4	J	418.		336.		114.	J	107.	J
7440-36-0	Antimony (Sb)	2.1	U	2.1	U	2.9	U	2.1	U	2.1	U	2.1	U
7440-38-2	Arsenic (As)	2.5	U	6.8	J	2.5	U	3.7	J	2.5	U	2.7	J
7440-39-3	Barium (Ba)	173.		170.		157.	J	152.	J	135.	J	127.	J
7440-41-7	Beryllium (Be)	0.45	J	0.38	J	0.44	J	0.42	J	0.3	U	0.3	U
7440-43-9	Cadmium (Cd)	0.5	U	0.51	J	0.5	U	0.5	U	0.5	U	0.5	U
7440-70-2	Calcium (Ca)	126000.	J	124000.		139000.		135000.		158000.		152000.	
7440-47-3	Chromium (Cr)	3.2	J	4.	J	5.3	U	5.2	U	0.8	U	0.8	U
7440-48-4	Cobalt (Co)	0.9	U	1.5	J	0.9	U	0.9	U	0.92	J	0.9	U
7440-50-8	Copper (Cu)	1.1	U	2.4	U	0.6	UJ	0.6	UJ	1.1	U	1.6	U
7439-89-6	Iron (Fe)	9500.	J	9420.		4200.		4000.		3320.		3180.	
7439-92-1	Lead (Pb)	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U
7439-95-4	Magnesium (Mg)	236000.		219000.		295000.		283000.		293000.		276000.	
7439-96-5	Manganese (Mn)	412.	J	407.		445.		429.		535.		502.	
7439-97-6	Mercury (Hg)	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
7440-02-0	Nickel (Ni)	1.2	J	2.1	J	3.6	U	2.8	U	0.8	U	0.8	U
7440-09-7	Potassium (K)	100000.		92700.		97500.		94400.		100000.		96300.	
7782-49-2	Selenium (Se)	2.8	UJ	2.8	UJ	2.8	U	2.8	U	2.8	U	2.8	U
7440-22-4	Silver (Ag)	3.4	U	3.4	U	1.2	U	1.2	U	1.2	U	1.2	U
7440-23-5	Sodium (Na)	2670000.		2630000.		2820000.		2670000.		2890000.		2760000.	
7440-28-0	Thallium (Tl)	5.8	J	3.9	J	5.4	J	4.8	J	3.4	U	4.	U
7440-31-5	Tin (Sn)	2.6	U	2.6	U	2.6	U	3.2	U	2.6	U	2.6	U
7440-62-2	Vanadium (V)	3.4	U	3.4	U	3.	J	3.	J	1.9	J	1.7	J
7440-66-6	Zinc (Zn)	5.3	U	5.3	U	5.3	U	5.3	U	5.5	U	11.5	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results
Shallow Groundwater, Wells 1-25

SW846-META

	SAMPLE ID ------->	GDE-G-W006-01		GDE-G-W006-02		GDE-G-W006-03		GDE-G-W006-04		GDE-G-W007-01		GDE-G-W007-02	
	ORIGINAL ID ----->	GDEGW00601		GDEGW00602		GDEGW00603		GDEGW00604		GDEGW00701		GDEGW00702	
	LAB SAMPLE ID --->	25049.10		26317.02		27478.04		28111.04		25066.01		26356.01	
	ID FROM REPORT -->	GDEGW00601		GDEGW00602		GDEGW00603		GDEGW00604		GDEGW00701		GDEGW00702	
	SAMPLE DATE ----->	03/25/96		07/16/96		10/31/96		01/08/97		03/26/96		07/18/96	
	DATE EXTRACTED -->	03/28/96		07/18/96		11/06/96		01/10/97		03/29/96		07/28/96	
	DATE ANALYZED --->	04/03/96		07/24/96		11/12/96		01/14/97		04/04/96		08/04/96	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	25049	VAL	26304	VAL	27478	VAL	28100	VAL	25049	VAL	26356	VAL
7429-90-5	Aluminum (Al)	74.3	U	109.	J	368.		18.	U	99.9	U	60.8	J
7440-36-0	Antimony (Sb)	4.	U	5.2	U	2.1	U	2.1	U	4.	U	3.2	U
7440-38-2	Arsenic (As)	18.7		17.	U	10.9	U	7.6	J	5.	U	2.5	UJ
7440-39-3	Barium (Ba)	26.9	U	37.1		36.9	J	25.8	J	30.	U	22.5	U
7440-41-7	Beryllium (Be)	1.	U	0.42	J	0.36	J	0.3	U	1.	U	0.41	U
7440-43-9	Cadmium (Cd)	1.	U	0.5	U	0.5	U	0.5	U	1.	U	0.5	U
7440-70-2	Calcium (Ca)	128000.	J	134000.		121000.		122000.		83800.	J	72300.	
7440-47-3	Chromium (Cr)	1.	U	2.5	U	2.3	J	0.8	U	1.8	J	0.8	UJ
7440-48-4	Cobalt (Co)	2.	U	2.5	J	0.9	U	0.9	U	2.	U	1.	U
7440-50-8	Copper (Cu)	2.	U	8.4	U	2.2	UJ	0.78	U	2.	U	1.3	J
7439-89-6	Iron (Fe)	14000.		11900.		11200.	J	12300.	J	6650.		1920.	
7439-92-1	Lead (Pb)	3.	U	2.5	J	1.7	U	1.7	U	3.	U	2.	U
7439-95-4	Magnesium (Mg)	53900.		70200.		90800.		61200.		184000.		38800.	
7439-96-5	Manganese (Mn)	878.		894.		838.		874.	J	446.		89.9	
7439-97-6	Mercury (Hg)	0.2	U	0.1	U	0.1	U	0.22	UJ	0.2	U	0.17	U
7440-02-0	Nickel (Ni)	1.	U	2.5	UJ	2.1	U	0.8	U	1.6	J	2.6	U
7440-09-7	Potassium (K)	40100.		48700.		53000.		41800.		113000.		29400.	
7782-49-2	Selenium (Se)	5.	U	2.8	UJ	2.8	U	3.	U	5.	U	2.8	U
7440-22-4	Silver (Ag)	2.	U	4.2	J	3.2	U	1.2	U	2.	U	1.2	U
7440-23-5	Sodium (Na)	545000.		710000.		931000.		528000.	J	2560000.		262000.	
7440-28-0	Thallium (Tl)	5.	U	2.7	UJ	5.	U	2.7	U	5.	U	2.7	U
7440-31-5	Tin (Sn)	20.	U	2.6	U	2.8	U	1.	U	20.	U	2.6	U
7440-62-2	Vanadium (V)	2.2	J	3.3	J	1.9	J	1.1	J	4.2	J	2.7	U
7440-66-6	Zinc (Zn)	4.	U	31.3	U	5.3	U	11.4	U	4.2	UJ	7.7	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results
Shallow Groundwater, Wells 1-25

SW846-META															
	SAMPLE ID ------->	GDE-G-W007-03		GDE-G-W007-04		GDE-G-W008-01		GDE-G-W008-02		GDE-G-W008-03		GDE-G-W008-04	
	ORIGINAL ID ----->	GDEGW00703		GDEGW00704		GDEGW00801		GDEGW00802		GDEGW00803		GDEGW00804	
	LAB SAMPLE ID --->	27513.04		28253.04		25132.07		26356.03		27513.05		28158.04	
	ID FROM REPORT -->	GDEGW00703		GDEGW00704		GDEGW00801		GDEGW00802		GDEGW00803		GDEGW00804	
	SAMPLE DATE ----->	11/05/96		01/22/97		04/02/96		07/18/96		11/05/96		01/13/97	
	DATE EXTRACTED -->	11/12/96		01/25/97		04/04/96		07/28/96		11/12/96		01/17/97	
	DATE ANALYZED --->	11/14/96		02/04/97		04/10/96		08/04/96		11/14/96		01/21/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	27513	VAL	28253	VAL	25097	VAL	26356	VAL	27513	VAL	28149	VAL
7429-90-5	Aluminum (Al)	177.	J	25.8	J	162.	U	11.	U	18.	UJ	28.6	J
7440-36-0	Antimony (Sb)	2.1	U	2.1	U	4.	U	2.1	U	2.1	U	2.1	U
7440-38-2	Arsenic (As)	2.9	J	2.5	U	56.3		17.3		160.		109.	
7440-39-3	Barium (Ba)	22.4	J	13.2	J	19.6	U	90.4	U	14.9	J	16.6	J
7440-41-7	Beryllium (Be)	0.48	U	0.3	U	1.	U	1.3	U	0.47	U	0.31	U
7440-43-9	Cadmium (Cd)	0.5	U	0.5	U	1.	U	0.5	U	0.5	U	0.5	U
7440-70-2	Calcium (Ca)	88700.		70200.	J	97500.		260000.		101000.		109000.	
7440-47-3	Chromium (Cr)	1.3	U	1.8	U	1.2	J	18.4		1.2	U	2.4	U
7440-48-4	Cobalt (Co)	0.9	U	0.9	U	2.	U	0.9	U	0.9	U	1.1	J
7440-50-8	Copper (Cu)	9.6	U	0.6	U	2.	U	0.6	UJ	1.4	U	0.6	U
7439-89-6	Iron (Fe)	663.		5430.		24100.		5410.		31300.		34200.	
7439-92-1	Lead (Pb)	1.7	U	1.7	U	3.	U	1.7	U	1.7	U	1.7	UJ
7439-95-4	Magnesium (Mg)	57600.		87300.	J	155000.		1160000.		91100.		110000.	
7439-96-5	Manganese (Mn)	118.		232.	J	1480.		66.		2020.		2040.	
7439-97-6	Mercury (Hg)	0.1	U	0.1	U	0.2	U	0.1	U	0.1	U	0.24	U
7440-02-0	Nickel (Ni)	5.3	UJ	5.3	UJ	1.	UJ	10.1	J	0.8	UJ	3.3	U
7440-09-7	Potassium (K)	38000.		72200.		70000.		289000.		45500.		43900.	
7782-49-2	Selenium (Se)	2.8	UJ	2.8	U	5.2		2.8	U	2.8	UJ	2.8	UJ
7440-22-4	Silver (Ag)	1.2	U	1.2	U	2.	U	1.2	U	5.2	U	1.2	UJ
7440-23-5	Sodium (Na)	387000.		1080000.		1420000.		7440000.		769000.		923000.	
7440-28-0	Thallium (Tl)	2.7	U	3.7	J	5.	U	4.1	U	5.8	U	4.2	J
7440-31-5	Tin (Sn)	2.9	U	5.9	U	20.	U	4.5	U	2.6	U	2.6	UJ
7440-62-2	Vanadium (V)	13.8	J	2.1	J	3.7	J	0.5	U	3.	U	2.1	J
7440-66-6	Zinc (Zn)	14.9	J	9.5	J	4.	U	5.3	U	9.3	J	9.5	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results
Shallow Groundwater, Wells 1-25

SW846-META

	SAMPLE ID ------->	GDE-G-W009-01		GDE-G-W009-02		GDE-G-W009-03		GDE-G-W009-04		GDE-G-W010-01		GDE-G-W010-02	
	ORIGINAL ID ----->	GDEGW00901		GDEGW00902		GDEGW00903		GDEGW00904		GDEGW01001		GDEGW01002	
	LAB SAMPLE ID --->	25167.07		26368.01		27488.03		28149.04		25193.01		26382.01	
	ID FROM REPORT -->	GDEGW00901		GDEGW00902		GDEGW00903		GDEGW00904		GDEGW01001		GDEGW01002	
	SAMPLE DATE ----->	04/04/96		07/19/96		11/01/96		01/10/97		04/08/96		07/22/96	
	DATE EXTRACTED -->	04/09/96		07/28/96		11/08/96		01/14/97		04/11/96		08/07/96	
	DATE ANALYZED --->	04/11/96		08/04/96		11/13/96		01/15/97		04/16/96		08/10/96	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	25153	VAL	26356	VAL	27488	VAL	28149	VAL	25193	VAL	26382	VAL
7429-90-5	Aluminum (Al)	28.	J	20.	J	50.	J	33.7	J	37.5	U	360.	
7440-36-0	Antimony (Sb)	4.	U	2.1	U	2.1	U	2.1	U	4.	U	2.1	UJ
7440-38-2	Arsenic (As)	9.4	J	12.1	J	10.		10.2		7.2	J	6.1	U
7440-39-3	Barium (Ba)	82.9	J	78.6	U	87.9	J	79.3	J	45.9	U	35.4	J
7440-41-7	Beryllium (Be)	1.	U	0.57	U	0.3	UJ	0.3	U	1.	U	0.52	U
7440-43-9	Cadmium (Cd)	1.	U	0.5	U	0.5	U	0.5	U	1.	U	1.4	J
7440-70-2	Calcium (Ca)	229000.	J	198000.		232000.		220000.		104000.		107000.	
7440-47-3	Chromium (Cr)	1.	U	2.7	J	1.9	J	1.8	U	1.	U	5.6	U
7440-48-4	Cobalt (Co)	2.	U	0.9	U	0.9	UJ	0.9	U	2.	U	0.9	UJ
7440-50-8	Copper (Cu)	2.	U	0.6	UJ	1.4	U	0.6	U	2.	U	3.	UJ
7439-89-6	Iron (Fe)	11900.	J	8600.		12500.		11500.		4500.		4760.	J
7439-92-1	Lead (Pb)	3.	U	1.7	U	1.7	U	1.7	UJ	3.	U	4.8	
7439-95-4	Magnesium (Mg)	147000.		124000.		139000.		147000.		164000.		258000.	
7439-96-5	Manganese (Mn)	2560.		2000.		2650.	J	2500.		249.		230.	
7439-97-6	Mercury (Hg)	0.2	U	0.23	U	0.1	U	0.1	U	0.2	U	0.1	U
7440-02-0	Nickel (Ni)	2.1	J	4.8	J	2.9	J	2.9	U	1.	U	2.6	J
7440-09-7	Potassium (K)	76100.		80000.	U	65600.		71800.	J	94200.		159000.	
7782-49-2	Selenium (Se)	5.	U	2.8	U	2.8	U	2.9	UJ	5.	U	2.8	U
7440-22-4	Silver (Ag)	2.	U	2.3	U	10.9	U	1.2	UJ	2.	U	1.2	UJ
7440-23-5	Sodium (Na)	1900000.	J	991000.		1100000.		1180000.		1810000.		2950000.	
7440-28-0	Thallium (Tl)	5.	U	2.7	U	2.7	UJ	2.7	UJ	5.	U	5.	J
7440-31-5	Tin (Sn)	20.	U	3.3	U	2.6	U	2.6	U	20.	U	2.6	U
7440-62-2	Vanadium (V)	1.2	J	2.3	U	1.2	J	1.3	J	2.2	J	7.4	J
7440-66-6	Zinc (Zn)	4.	U	5.3	U	5.3	U	5.6	U	4.	U	5.3	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results
Shallow Groundwater, Wells 1-25

SW846-META

	SAMPLE ID ------->	GDE-G-W010-03		GDE-G-W010-04		GDE-G-W011-01		GDE-G-W011-02		GDE-G-W011-03		GDE-G-W011-04	
	ORIGINAL ID ----->	GDEGW01003		GDEGW01004		GDEGW01101		GDEGW01102		GDEGW01103		GDEGW01104	
	LAB SAMPLE ID --->	27530.01		28235.07		25122.08		26399.01		27551.06		28210.07	
	ID FROM REPORT -->	GDEGW01003		GDEGW01004		GDEGW01101		GDEGW01102		GDEGW01103		GDEGW01104	
	SAMPLE DATE ----->	11/06/96		01/21/97		04/01/96		07/23/96		11/07/96		01/17/97	
	DATE EXTRACTED -->	11/12/96		01/25/97		04/03/96		07/29/96		11/16/96		01/22/97	
	DATE ANALYZED --->	11/14/96		02/04/97		04/10/96		08/05/96		11/19/96		01/28/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	27513	VAL	28210	VAL	25097	VAL	26382	VAL	27551	VAL	28210	VAL
7429-90-5	Aluminum (Al)	28.7	J	22.5	UJ	55.4	U	30.7	J	19.1	J	51.9	UJ
7440-36-0	Antimony (Sb)	2.1	U	3.3	U	4.	U	2.1	UJ	4.4	U	2.1	U
7440-38-2	Arsenic (As)	4.9	J	4.6	U	6.1	J	3.3	U	12.3		10.5	U
7440-39-3	Barium (Ba)	42.2	J	44.3	J	85.1	U	81.4	J	94.	J	98.8	J
7440-41-7	Beryllium (Be)	0.81	U	0.32	U	1.	U	0.63	U	0.97	U	0.78	U
7440-43-9	Cadmium (Cd)	0.5	U	0.5	U	1.	U	0.5	U	0.5	U	0.5	U
7440-70-2	Calcium (Ca)	113000.		116000.		135000.		126000.		158000.		148000.	
7440-47-3	Chromium (Cr)	2.5	U	2.1	U	1.	U	1.1	U	2.8	J	9.2	J
7440-48-4	Cobalt (Co)	0.9	U	0.9	U	2.	U	0.9	UJ	1.4	J	1.5	J
7440-50-8	Copper (Cu)	3.3	U	0.6	U	2.	U	0.97	UJ	1.4	UJ	0.6	U
7439-89-6	Iron (Fe)	4140.		4070.		7150.		2450.	J	16400.		18300.	
7439-92-1	Lead (Pb)	1.7	U	1.7	UJ	3.	U	1.7	U	1.7	U	1.7	UJ
7439-95-4	Magnesium (Mg)	191000.		128000.		154000.		122000.		217000.		190000.	
7439-96-5	Manganese (Mn)	309.		373.		215.		247.		306.		258.	
7439-97-6	Mercury (Hg)	0.1	U	0.1	U	0.2	U	0.1	U	0.1	U	0.14	J
7440-02-0	Nickel (Ni)	1.3	UJ	0.8	UJ	1.	UJ	2.	J	0.92	J	3.9	J
7440-09-7	Potassium (K)	105000.		84100.	J	91500.		80000.	U	118000.	J	73300.	J
7782-49-2	Selenium (Se)	2.8	UJ	2.8	U	5.	U	2.8	U	2.8	U	2.8	U
7440-22-4	Silver (Ag)	3.9	U	1.2	U	2.	U	1.2	UJ	2.1	U	1.2	U
7440-23-5	Sodium (Na)	1750000.		1310000.		2190000.		1450000.		2840000.		2180000.	
7440-28-0	Thallium (Tl)	4.9	U	4.5	UJ	5.	U	2.7	U	5.9	UJ	2.7	UJ
7440-31-5	Tin (Sn)	3.4	U	4.9	U	20.	U	2.6	U	2.6	UJ	2.6	U
7440-62-2	Vanadium (V)	11.3	J	2.5	J	2.5	J	7.8	J	2.9	U	2.2	J
7440-66-6	Zinc (Zn)	5.3	U	5.3	U	4.	U	5.3	U	5.3	U	5.3	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results
Shallow Groundwater, Wells 1-25

SW846-META													
	SAMPLE ID ------->	GDE-G-W012-01		GDE-G-W012-02		GDE-G-W012-03		GDE-G-W012-04		GDE-G-W013-01		GDE-G-W013-02	
	ORIGINAL ID ----->	GDEGW01201		GDEGW01202		GDEGW01203		GDEGW01204		GDEGW01301		GDEGW01302	
	LAB SAMPLE ID --->	25153.01		26403.01		27618.04		28262.10		25208.01		26399.03	
	ID FROM REPORT -->	GDEGW01201		GDEGW01202		GDEGW01203		GDEGW01204		GDEGW01301		GDEGW01302	
	SAMPLE DATE ----->	04/03/96		07/24/96		11/13/96		01/23/97		04/09/96		07/23/96	
	DATE EXTRACTED -->	04/11/96		07/29/96		11/16/96		02/12/97		04/15/96		07/29/96	
	DATE ANALYZED --->	04/16/96		08/05/96		11/19/96		02/14/97		04/24/96		08/05/96	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	25153	VAL	26403	VAL	27551	VAL	28253	VAL	25193	VAL	26382	VAL
7429-90-5	Aluminum (Al)	245.	J	85.	J	1620.		2020.		44.5	U	134.	
7440-36-0	Antimony (Sb)	4.	U	2.1	UJ	3.3	U	2.1	U	4.	U	2.1	UJ
7440-38-2	Arsenic (As)	5.	U	3.2	U	2.5	U	2.5	U	5.	U	3.1	U
7440-39-3	Barium (Ba)	312.		398.		214.		134.	J	95.6	U	85.3	J
7440-41-7	Beryllium (Be)	1.	U	0.96	U	0.79	U	0.51	J	1.	U	0.82	U
7440-43-9	Cadmium (Cd)	1.	U	0.5	U	0.5	U	0.5	U	1.	U	0.5	U
7440-70-2	Calcium (Ca)	175000.	J	186000.		152000.		103000.	J	207000.		207000.	
7440-47-3	Chromium (Cr)	1.	U	0.8	U	2.4	J	4.	U	1.	U	1.	U
7440-48-4	Cobalt (Co)	2.	U	0.9	UJ	0.9	U	0.9	U	2.	U	0.9	UJ
7440-50-8	Copper (Cu)	2.	U	0.6	UJ	1.4	UJ	1.9	J	2.	U	0.95	UJ
7439-89-6	Iron (Fe)	7590.	J	8510.		7610.		4600.		5960.		4600.	J
7439-92-1	Lead (Pb)	3.	U	1.7	U	1.7	U	1.9	J	3.	U	1.7	U
7439-95-4	Magnesium (Mg)	224000.		208000.		149000.		103000.	J	28800.		24800.	
7439-96-5	Manganese (Mn)	215.		246.		216.		127.	J	228.		198.	
7439-97-6	Mercury (Hg)	0.2	U	0.1	U	0.1	U	0.1	U	0.2	U	0.1	U
7440-02-0	Nickel (Ni)	1.	U	0.96	J	1.4	J	5.3	UJ	1.	U	1.4	J
7440-09-7	Potassium (K)	63100.		80000.	U	47400.	J	45100.		9840.		11300.	
7782-49-2	Selenium (Se)	5.	U	2.8	U	2.8	U	2.8	U	5.	U	2.8	U
7440-22-4	Silver (Ag)	2.	U	1.2	UJ	1.2	U	1.2	U	2.	U	1.2	UJ
7440-23-5	Sodium (Na)	2230000.	J	1880000.	J	1760000.		1140000.		146000.		105000.	
7440-28-0	Thallium (Tl)	5.3	J	2.7	U	4.3	UJ	2.7	U	5.	U	3.4	J
7440-31-5	Tin (Sn)	20.	U	3.8	J	2.6	UJ	2.6	U	20.	U	3.1	J
7440-62-2	Vanadium (V)	3.7	J	2.8	UJ	3.4	J	4.2	J	1.	J	0.5	U
7440-66-6	Zinc (Zn)	4.	U	5.3	U	5.3	U	17.1	J	4.	U	5.3	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results
Shallow Groundwater, Wells 1-25

SW846-META													
	SAMPLE ID ------->	GDE-G-W013-03		GDE-G-W013-04		GDE-G-W014-01		GDE-G-W014-02		GDE-G-W014-03		GDE-G-W014-04	
	ORIGINAL ID ----->	GDEGW01303		GDEGW01304		GDEGW01401		GDEGW01402		GDEGW01403		GDEGW01404	
	LAB SAMPLE ID --->	27600.08		28281.04		25515.01		26436.01		27652.07		28314.06	
	ID FROM REPORT -->	GDEGW01303		GDEGW01304		GDEGW01401		GDEGW01402		GDEGW01403		GDEGW01404	
	SAMPLE DATE ----->	11/12/96		01/24/97		05/07/96		07/26/96		11/15/96		01/28/97	
	DATE EXTRACTED -->	11/16/96		01/30/97		05/16/96		08/07/96		11/22/96		02/04/97	
	DATE ANALYZED --->	11/19/96		02/06/97		05/31/96		08/12/96		11/22/96		02/07/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	27551	VAL	28253	VAL	25477	VAL	26436	VAL	27639	VAL	28301	VAL
7429-90-5	Aluminum (Al)	18.	UJ	48.8	J	1740.		2440.		457.		90.8	J
7440-36-0	Antimony (Sb)	3.	U	2.1	U	4.	U	2.1	U	2.1	U	2.4	U
7440-38-2	Arsenic (As)	2.5	U	2.5	U	16.4	J	33.8		20.		14.4	
7440-39-3	Barium (Ba)	84.7	J	70.	J	18.6	U	33.	J	22.4		11.	J
7440-41-7	Beryllium (Be)	0.83	U	0.3	U	1.	U	0.36	J	0.35	J	0.32	U
7440-43-9	Cadmium (Cd)	0.5	U	0.5	U	1.	U	0.5	U	0.5	U	0.5	U
7440-70-2	Calcium (Ca)	190000.		163000.	J	79400.		95600.	J	88700.		89000.	
7440-47-3	Chromium (Cr)	0.8	UJ	0.8	U	4.3	J	5.6	U	1.9	U	0.8	U
7440-48-4	Cobalt (Co)	0.9	U	0.91	J	5.	U	0.9	UJ	0.9	U	0.9	U
7440-50-8	Copper (Cu)	1.4	UJ	2.7	J	8.1	J	2.3	U	2.7	U	0.6	U
7439-89-6	Iron (Fe)	4090.		2670.		16700.		21400.	J	9410.		12600.	
7439-92-1	Lead (Pb)	1.7	U	1.7	U	3.	U	2.1	U	1.7	U	1.7	U
7439-95-4	Magnesium (Mg)	23600.		20900.	J	23300.		19600.	J	24700.		26200.	
7439-96-5	Manganese (Mn)	251.		171.	J	204.		260.	J	197.		213.	
7439-97-6	Mercury (Hg)	0.1	U	0.1	U	0.2	U	0.1	UJ	0.23	U	0.1	U
7440-02-0	Nickel (Ni)	0.8	UJ	5.3	UJ	6.6	J	12.3	J	9.3	J	3.8	J
7440-09-7	Potassium (K)	10200.	J	9020.		16300.	U	15200.		19800.		18600.	
7782-49-2	Selenium (Se)	2.8	U	2.8	U	5.	U	2.8	U	2.8	U	2.8	U
7440-22-4	Silver (Ag)	1.2	U	1.2	U	2.	U	1.2	UJ	1.2	UJ	1.2	U
7440-23-5	Sodium (Na)	124000.		110000.		195000.	J	1470000.		156000.		171000.	
7440-28-0	Thallium (Tl)	2.7	UJ	3.9	J	5.	U	2.7	UJ	2.7	UJ	3.4	U
7440-31-5	Tin (Sn)	2.6	UJ	2.6	U	20.	U	2.6	U	2.6	U	31.6	U
7440-62-2	Vanadium (V)	1.4	U	0.63	J	7.3	J	5.9	J	3.5	J	1.9	J
7440-66-6	Zinc (Zn)	5.3	U	6.6	J	20.5	U	21.6	U	8.9	U	15.9	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results
Shallow Groundwater, Wells 1-25

SW846-META													
	SAMPLE ID ------->	GDE-G-W015-01		GDE-H-W015-01		GDE-G-W015-02		GDE-G-W015-03		GDE-G-W015-04		GDE-G-W016-01	
	ORIGINAL ID ----->	GDEGW01501		GDEHW01501		GDEGW01502		GDEGW01503		GDEGW01504		GDEGW01601	
	LAB SAMPLE ID --->	25496.02		25497.01		26418.02		27618.08		28314.04		25250.03	
	ID FROM REPORT -->	GDEGW01501		GDEHW01501		GDEGW01502		GDEGW01503		GDEGW01504		GDEGW01601	
	SAMPLE DATE ----->	05/06/96		05/06/96		07/25/96		11/13/96		01/28/97		04/12/96	
	DATE EXTRACTED -->	05/16/96		05/16/96		08/04/96		11/16/96		02/04/97		04/16/96	
	DATE ANALYZED --->	05/30/96		05/30/96		08/10/96		11/19/96		02/07/97		04/29/96	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	25477	VAL	25477	VAL	26403	VAL	27551	VAL	28301	VAL	25250	VAL
7429-90-5	Aluminum (Al)	55.1	U	53.	U	79.5	J	48.1	J	61.8	J	61.5	U
7440-36-0	Antimony (Sb)	30.	U	30.	U	2.1	UJ	5.6	U	2.1	U	4.	U
7440-38-2	Arsenic (As)	5.	UJ	5.	UJ	14.9	U	11.1		7.5	J	55.8	
7440-39-3	Barium (Ba)	8.2	U	8.2	U	9.7		6.6	J	5.9	J	13.7	U
7440-41-7	Beryllium (Be)	1.	U	1.	U	0.37	U	0.78	U	0.37	U	1.	U
7440-43-9	Cadmium (Cd)	1.	U	1.	U	0.5	U	0.5	U	0.5	U	1.	U
7440-70-2	Calcium (Ca)	106000.		112000.		105000.		78500.		86800.		90400.	
7440-47-3	Chromium (Cr)	5.	U	5.	U	0.8	U	0.8	UJ	0.8	U	1.	U
7440-48-4	Cobalt (Co)	5.	U	5.	U	0.9	UJ	0.9	U	0.9	U	2.	U
7440-50-8	Copper (Cu)	10.	U	10.	U	2.6	UJ	1.4	UJ	0.6	U	2.	U
7439-89-6	Iron (Fe)	1630.		1720.		1940.		1000.		1090.		17900.	
7439-92-1	Lead (Pb)	3.	U	3.	U	1.7	U	1.7	U	1.7	U	3.	U
7439-95-4	Magnesium (Mg)	6770.		7050.		6960.		5000.		5440.		17500.	
7439-96-5	Manganese (Mn)	55.5	U	59.3		56.1		35.		31.		2130.	
7439-97-6	Mercury (Hg)	0.2	U	0.2	U	0.1	U	0.1	U	0.1	U	0.2	U
7440-02-0	Nickel (Ni)	10.	U	10.	U	1.3	J	0.8	UJ	0.8	U	1.	J
7440-09-7	Potassium (K)	3080.	U	3600.	U	4020.	J	3030.	J	2940.	J	12400.	U
7782-49-2	Selenium (Se)	5.	U	5.	U	2.8	U	2.8	U	2.8	U	5.	U
7440-22-4	Silver (Ag)	2.	U	2.	U	1.2	UJ	2.3	U	1.2	U	2.	U
7440-23-5	Sodium (Na)	7230.	U	7480.	U	10100.		6940.		5990.		22400.	U
7440-28-0	Thallium (Tl)	5.	U	5.	U	4.7	U	2.7	UJ	3.	U	5.	U
7440-31-5	Tin (Sn)	20.	U	20.	U	2.6	U	2.6	UJ	29.3	U	20.	U
7440-62-2	Vanadium (V)	5.	U	5.	U	1.2	UJ	1.2	U	0.5	U	1.7	J
7440-66-6	Zinc (Zn)	10.	U	10.	U	9.3	U	5.3	U	6.9	U	4.	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results
Shallow Groundwater, Wells 1-25

SW846-META															
	SAMPLE ID ------->	GDE-G-W016-02		GDE-G-W016-03		GDE-G-W016-04		GDE-G-W017-01		GDE-G-W017-02		GDE-G-W017-03	
	ORIGINAL ID ----->	GDEGW01602		GDEGW01603		GDEGW01604		GDEGW01701		GDEGW01702		GDEGW01703	
	LAB SAMPLE ID --->	26436.03		27678.10		28367.09		25228.04		26467.01		27678.06	
	ID FROM REPORT -->	GDEGW01602		GDEGW01603		GDEGW01604		GDEGW01701		GDEGW01702		GDEGW01703	
	SAMPLE DATE ----->	07/26/96		11/18/96		01/31/97		04/10/96		07/29/96		11/18/96	
	DATE EXTRACTED -->	08/07/96		11/23/96		02/07/97		04/15/96		08/14/96		11/23/96	
	DATE ANALYZED --->	08/12/96		11/26/96		02/19/97		04/24/96		08/15/96		11/26/96	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	26436	VAL	27678	VAL	28346	VAL	25228	VAL	26436	VAL	27678	VAL
7429-90-5	Aluminum (Al)	68.5	U	1270.		104.	J	39.4	J	62.9	U	67.5	U
7440-36-0	Antimony (Sb)	2.1	U	2.9	J	2.1	U	4.	U	2.1	U	3.	J
7440-38-2	Arsenic (As)	85.3		70.3		33.8		5.	U	4.3	J	4.2	J
7440-39-3	Barium (Ba)	15.	J	19.6	J	15.7	J	54.2	J	67.5		62.	J
7440-41-7	Beryllium (Be)	0.3	U	0.31	J	0.3	U	1.	U	0.31	J	0.3	U
7440-43-9	Cadmium (Cd)	0.5	U	0.5	U	0.5	U	1.	U	0.5	U	0.5	U
7440-70-2	Calcium (Ca)	93900.	J	191000.		98600.		119000.	J	110000.		103000.	
7440-47-3	Chromium (Cr)	0.8	U	0.8	U	0.8	U	1.	U	2.2	U	0.8	U
7440-48-4	Cobalt (Co)	0.9	UJ	0.9	U	0.9	U	2.	U	0.9	UJ	0.9	U
7440-50-8	Copper (Cu)	0.6	U	0.6	U	0.6	U	2.	U	1.4	U	0.6	U
7439-89-6	Iron (Fe)	12400.	J	16500.		16100.		2980.	J	3390.		5430.	
7439-92-1	Lead (Pb)	1.7	U	1.7	U	1.7	U	3.	U	1.7	U	1.7	U
7439-95-4	Magnesium (Mg)	15300.	J	18800.		22200.		5730.	J	4450.		5580.	
7439-96-5	Manganese (Mn)	1830.	J	2180.		2000.		28.4	J	20.6		35.2	
7439-97-6	Mercury (Hg)	0.1	UJ	0.2	U	0.1	U	0.2	J	0.1	UJ	0.2	U
7440-02-0	Nickel (Ni)	1.4	U	1.5	U	0.89	J	1.	U	1.3	U	0.91	U
7440-09-7	Potassium (K)	11800.		11800.	J	14000.		5180.		5370.		4620.	J
7782-49-2	Selenium (Se)	2.8	U	2.8	U	2.8	U	5.	U	2.8	U	2.8	U
7440-22-4	Silver (Ag)	1.2	UJ	1.6	J	1.2	U	2.	U	3.4	UJ	1.2	UJ
7440-23-5	Sodium (Na)	10300.		18700.		32200.		18600.		9480.		21600.	
7440-28-0	Thallium (Tl)	2.7	UJ	2.7	U	9.1	U	5.	U	2.7	UJ	2.7	U
7440-31-5	Tin (Sn)	2.6	U	2.6	U	2.6	U	20.	U	2.6	U	3.3	U
7440-62-2	Vanadium (V)	0.5	UJ	2.6	U	0.66	J	1.	U	0.74	J	1.7	U
7440-66-6	Zinc (Zn)	5.7	U	8.9	U	5.3	U	4.	U	14.6	U	6.7	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results
Shallow Groundwater, Wells 1-25

SW846-META													
	SAMPLE ID ------->	GDE-G-W017-04		GDE-G-W018-01		GDE-G-W018-02		GDE-G-W018-03		GDE-G-W018-04		GDE-G-W019-01	
	ORIGINAL ID ----->	GDEGW01704		GDEGW01801		GDEGW01802		GDEGW01803		GDEGW01804		GDEGW01901	
	LAB SAMPLE ID --->	28367.05		25463.03		26475.02		27652.08		28331.03		25297.08	
	ID FROM REPORT -->	GDEGW01704		GDEGW01801		GDEGW01802		GDEGW01803		GDEGW01804		GDEGW01901	
	SAMPLE DATE ----->	01/31/97		05/02/96		07/30/96		11/15/96		01/29/97		04/16/96	
	DATE EXTRACTED -->	02/07/97		05/08/96		08/14/96		11/22/96		02/04/97		05/02/96	
	DATE ANALYZED --->	02/19/97		05/14/96		08/15/96		11/22/96		02/07/97		05/06/96	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	28346	VAL	25425	VAL	26475	VAL	27639	VAL	28301	VAL	25297	VAL
7429-90-5	Aluminum (Al)	47.7	J	495.	J	561.		1030.		660.		3710.	
7440-36-0	Antimony (Sb)	2.1	U	2.1	J	2.1	U	2.1	U	2.1	U	4.	J
7440-38-2	Arsenic (As)	2.9	J	6.6	U	9.3	J	7.5	J	7.4	J	5.	U
7440-39-3	Barium (Ba)	46.5	J	38.5	U	42.8		68.2		47.1	J	27.9	U
7440-41-7	Beryllium (Be)	0.3	U	0.3	U	0.3	U	0.3	U	0.35	U	1.	U
7440-43-9	Cadmium (Cd)	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	1.	U
7440-70-2	Calcium (Ca)	102000.		24500.		23400.		29400.		25900.		52000.	
7440-47-3	Chromium (Cr)	0.8	U	1.2	U	1.9	U	1.7	U	0.8	U	11.	
7440-48-4	Cobalt (Co)	0.9	U	2.9	J	0.9	U	0.97	J	0.9	U	2.	U
7440-50-8	Copper (Cu)	0.6	U	3.8	U	1.6	UJ	8.3	U	3.6	U	10.	U
7439-89-6	Iron (Fe)	4250.		1260.	J	916.		1850.		1140.		8570.	
7439-92-1	Lead (Pb)	1.7	U	1.7	U	2.3	U	3.7	U	1.7	J	4.9	
7439-95-4	Magnesium (Mg)	5390.		2400.		2080.		2550.		2010.	J	6500.	
7439-96-5	Manganese (Mn)	22.4		178.	J	41.5		55.6		23.1		19.5	U
7439-97-6	Mercury (Hg)	0.1	U	0.1	UJ	0.1	U	0.18	U	0.1	U	0.2	U
7440-02-0	Nickel (Ni)	0.93	J	1.7	U	2.1	U	17.4	J	0.8	U	2.	J
7440-09-7	Potassium (K)	4070.	J	7100.	UJ	3940.	J	4370.	J	3040.	J	2910.	J
7782-49-2	Selenium (Se)	2.8	U	2.8	UJ	2.8	U	2.8	U	2.8	U	5.	U
7440-22-4	Silver (Ag)	1.2	U	1.2	U	3.4	U	1.2	UJ	1.2	U	2.	U
7440-23-5	Sodium (Na)	16500.		4110.	U	6460.		5100.		2890.	J	12000.	U
7440-28-0	Thallium (Tl)	4.6	U	2.7	U	3.8	U	2.7	UJ	2.7	U	5.	U
7440-31-5	Tin (Sn)	2.6	U	2.6	U	2.6	U	2.6	U	32.8	U	20.	U
7440-62-2	Vanadium (V)	0.95	J	2.7	U	3.3	UJ	5.	J	2.5	J	18.7	J
7440-66-6	Zinc (Zn)	7.6	U	47.8		41.7	U	141.		73.7		12.5	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results
Shallow Groundwater, Wells 1-25

SW846-META

	SAMPLE ID ------->	GDE-G-W019-02		GDE-G-W019-03		GDE-G-W019-04		GDE-G-W020-01		GDE-G-W020-02		GDE-G-W020-03	
	ORIGINAL ID ----->	GDEGW01902		GDEGW01903		GDEGW01904		GDEGW02001		GDEGW02002		GDEGW02003	
	LAB SAMPLE ID --->	26490.01		27699.05		28390.02		25361.05		26513.01		27716.05	
	ID FROM REPORT -->	GDEGW01902		GDEGW01903		GDEGW01904		GDEGW02001		GDEGW02002		GDEGW02003	
	SAMPLE DATE ----->	07/31/96		11/19/96		02/03/97		04/23/96		08/01/96		11/20/96	
	DATE EXTRACTED -->	08/16/96		11/23/96		02/07/97		04/30/96		08/16/96		11/27/96	
	DATE ANALYZED --->	08/20/96		11/26/96		02/19/97		05/08/96		08/20/96		12/01/96	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	26475	VAL	27678	VAL	28346	VAL	25361	VAL	26475	VAL	27716	VAL
7429-90-5	Aluminum (Al)	6150.		2280.		2240.		399.	J	812.		360.	J
7440-36-0	Antimony (Sb)	2.6	U	3.2	J	2.1	U	4.	U	2.1	U	5.6	U
7440-38-2	Arsenic (As)	3.7	J	4.6	J	2.6	J	5.	U	2.5	U	2.5	UJ
7440-39-3	Barium (Ba)	34.9		24.3	J	20.8	J	46.9	J	42.4		28.2	J
7440-41-7	Beryllium (Be)	0.3	U	0.34	J	0.35	J	1.	U	0.3	U	0.3	U
7440-43-9	Cadmium (Cd)	0.5	U	0.5	U	0.5	U	1.	U	0.5	U	0.5	U
7440-70-2	Calcium (Ca)	55500.		54200.		50800.		47000.		38400.		44000.	
7440-47-3	Chromium (Cr)	12.3		5.4	U	5.5	J	5.	U	0.8	U	0.91	J
7440-48-4	Cobalt (Co)	1.3	U	0.9	U	0.9	U	2.	U	0.9	U	0.9	U
7440-50-8	Copper (Cu)	3.3	UJ	2.4	J	0.92	U	2.	U	0.6	UJ	0.88	J
7439-89-6	Iron (Fe)	9520.		4310.		5240.		359.		577.		248.	J
7439-92-1	Lead (Pb)	8.5	U	3.2		2.2	J	3.	U	1.7	U	1.7	U
7439-95-4	Magnesium (Mg)	7700.		6560.		6840.		5130.		3740.		7960.	
7439-96-5	Manganese (Mn)	22.3		10.3	J	11.2	J	58.2		54.8		2.7	J
7439-97-6	Mercury (Hg)	0.1	U	0.2	U	0.1	U	0.2	U	0.1	U	0.2	U
7440-02-0	Nickel (Ni)	4.6	U	1.5	U	0.96	J	1.	U	1.6	U	1.1	J
7440-09-7	Potassium (K)	3730.	J	2980.	J	3090.	J	7710.		7000.		7960.	
7782-49-2	Selenium (Se)	2.8	U	4.6	J	2.8	U	5.	U	2.9	U	4.9	J
7440-22-4	Silver (Ag)	3.4	U	1.2	UJ	1.2	U	2.	UJ	1.2	U	1.2	UJ
7440-23-5	Sodium (Na)	15300.		14700.		14800.		22100.		21200.		34600.	
7440-28-0	Thallium (Tl)	2.7	U	4.1	U	5.6	U	5.	U	2.7	U	2.7	UJ
7440-31-5	Tin (Sn)	2.6	U	2.9	U	2.6	U	20.	U	2.6	U	2.9	U
7440-62-2	Vanadium (V)	19.6		9.6	J	9.8	J	1.	U	1.7	UJ	0.87	J
7440-66-6	Zinc (Zn)	57.6	U	12.5	U	6.7	U	4.	U	7.2	U	70.3	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results
Shallow Groundwater, Wells 1-25

SW846-META													
	SAMPLE ID ------->	GDE-G-W020-04		GDE-G-W021-01		GDE-G-W021-02		GDE-G-W021-03		GDE-G-W021-04		GDE-G-W022-01	
	ORIGINAL ID ------>	GDEGW02004		GDEGW02101		GDEGW02102		GDEGW02103		GDEGW02104		GDEGW02201	
	LAB SAMPLE ID --->	28394.06		25284.01		26513.03		27716.07		28404.05		25250.01	
	ID FROM REPORT -->	GDEGW02004		GDEGW02101		GDEGW02102		GDEGW02103		GDEGW02104		GDEGW02201	
	SAMPLE DATE ----->	02/04/97		04/15/96		08/01/96		11/20/96		02/05/97		04/12/96	
	DATE EXTRACTED -->	02/11/97		04/19/96		08/16/96		11/27/96		02/11/97		04/16/96	
	DATE ANALYZED --->	02/20/97		05/02/96		08/20/96		12/02/96		02/20/97		04/29/96	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	28394	VAL	25250	VAL	26475	VAL	27716	VAL	28394	VAL	25250	VAL
7429-90-5	Aluminum (Al)	350.		1040.		608.		136.	J	127.	J	89.7	U
7440-36-0	Antimony (Sb)	2.1	U	4.	U	2.1	U	2.1	U	2.1	U	4.	U
7440-38-2	Arsenic (As)	2.5	U	5.	U	2.5	U	8.7	J	2.5	U	6.7	J
7440-39-3	Barium (Ba)	38.1	J	11.9	U	13.6		14.2	J	10.	J	116.	U
7440-41-7	Beryllium (Be)	0.3	U	1.	U	0.3	U	0.3	U	0.3	J	1.	U
7440-43-9	Cadmium (Cd)	0.5	U	1.	U	0.5	U	0.5	U	0.5	U	1.	U
7440-70-2	Calcium (Ca)	45400.		83800.		99000.		104000.		82400.		95600.	
7440-47-3	Chromium (Cr)	0.8	U	1.	U	1.	U	1.2	J	0.8	U	1.	U
7440-48-4	Cobalt (Co)	0.9	U	2.	U	0.9	U	0.9	U	0.9	U	2.	U
7440-50-8	Copper (Cu)	0.87	J	2.	U	0.6	UJ	0.6	UJ	2.5	J	2.6	U
7439-89-6	Iron (Fe)	268.		7870.		8660.		14400.	J	9180.		8080.	
7439-92-1	Lead (Pb)	1.7	U	3.	U	1.7	U	1.7	U	3.1		3.	U
7439-95-4	Magnesium (Mg)	4460.	J	24800.		17800.		13500.		13600.		38300.	
7439-96-5	Manganese (Mn)	7.9	J	362.		456.		488.		414.		290.	
7439-97-6	Mercury (Hg)	0.1	U	0.2	U	0.1	U	0.2	U	0.1	U	0.2	U
7440-02-0	Nickel (Ni)	0.8	U	1.	U	1.3	U	0.95	J	0.92	J	2.	J
7440-09-7	Potassium (K)	7730.		18900.		18700.		15700.		14000.		23200.	
7782-49-2	Selenium (Se)	4.6	J	5.	U	2.8	U	2.8	U	2.8	U	5.	U
7440-22-4	Silver (Ag)	1.2	UJ	2.	U	1.5	U	1.2	UJ	1.2	UJ	2.	U
7440-23-5	Sodium (Na)	23400.		89500.	U	62600.		52300.		66500.		318000.	
7440-28-0	Thallium (Tl)	2.7	UJ	5.	U	2.7	U	5.9	UJ	2.7	UJ	5.	U
7440-31-5	Tin (Sn)	3.	J	20.	U	2.6	U	5.1	U	3.1	J	20.	U
7440-62-2	Vanadium (V)	0.5	U	1.9	J	1.3	UJ	0.5	UJ	0.65	J	3.1	J
7440-66-6	Zinc (Zn)	30.2		4.	U	7.7	U	6.1	U	11.4	J	28.4	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results
Shallow Groundwater, Wells 1-25

SW846-META													
	SAMPLE ID ------->	GDE-G-W022-02		GDE-G-W022-03		GDE-G-W022-04		GDE-G-W023-01		GDE-G-W023-02		GDE-G-W023-03	
	ORIGINAL ID ----->	GDEGW02202		GDEGW02203		GDEGW02204		GDEGW02301		GDEGW02302		GDEGW02303	
	LAB SAMPLE ID --->	26515.01		27737.01		28418.01		25238.03		26541.01		27754.05	
	ID FROM REPORT -->	GDEGW02202		GDEGW02203		GDEGW02204		GDEGW02301		GDEGW02302		GDEGW02303	
	SAMPLE DATE ----->	08/02/96		11/21/96		02/06/97		04/11/96		08/06/96		11/22/96	
	DATE EXTRACTED -->	08/20/96		11/27/96		02/11/97		04/17/96		08/20/96		12/04/96	
	DATE ANALYZED --->	08/22/96		12/01/96		02/20/97		04/30/96		08/22/96		12/08/96	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	26515	VAL	27716	VAL	28394	VAL	25228	VAL	26515	VAL	27754	VAL
7429-90-5	Aluminum (Al)	50.5	J	30.7	J	25.	J	205.		272.		18.	U
7440-36-0	Antimony (Sb)	13.	U	4.2	U	2.1	U	4.	U	13.	U	2.1	U
7440-38-2	Arsenic (As)	3.7	J	3.1	J	2.5	U	5.	U	2.5	UJ	2.5	U
7440-39-3	Barium (Ba)	85.8		65.6	J	130.	J	34.	J	37.8		54.4	J
7440-41-7	Beryllium (Be)	0.5	U	0.3	U	0.31	J	1.	U	0.5	U	0.3	U
7440-43-9	Cadmium (Cd)	2.2	U	0.5	U	0.5	U	1.	U	2.2	U	0.5	U
7440-70-2	Calcium (Ca)	87800.		62300.		76600.		68800.	J	72100.		84600.	
7440-47-3	Chromium (Cr)	2.2	UJ	0.9	J	0.8	U	1.	U	2.2	UJ	1.6	J
7440-48-4	Cobalt (Co)	5.2	U	0.9	U	0.9	U	2.	U	5.2	U	0.9	U
7440-50-8	Copper (Cu)	4.9	UJ	2.	J	1.7	J	2.	U	3.1	UJ	0.98	U
7439-89-6	Iron (Fe)	7620.		2520.	J	9690.		4460.	J	2090.		252.	
7439-92-1	Lead (Pb)	1.7	UJ	1.7	U	2.1	J	3.	U	3.4	J	1.7	UJ
7439-95-4	Magnesium (Mg)	33600.		16100.		32000.		46500.	J	58800.		88400.	
7439-96-5	Manganese (Mn)	263.	J	157.		345.		286.	J	253.	J	257.	J
7439-97-6	Mercury (Hg)	0.1	U	0.2	U	0.1	U	0.2	J	0.1	U	0.2	U
7440-02-0	Nickel (Ni)	5.3	U	1.6	J	1.	J	1.7	J	5.4	J	1.5	J
7440-09-7	Potassium (K)	18900.		10500.		18600.		25100.		31200.		46300.	
7782-49-2	Selenium (Se)	2.8	U	2.8	U	2.8	U	5.	U	2.8	U	2.8	UJ
7440-22-4	Silver (Ag)	3.4	U	1.2	UJ	1.2	UJ	2.	U	3.4	U	1.2	U
7440-23-5	Sodium (Na)	241000.		117000.		281000.		350000.		408000.		374000.	
7440-28-0	Thallium (Tl)	3.2	J	3.	UJ	2.7	UJ	5.	U	4.1	J	2.8	U
7440-31-5	Tin (Sn)	19.	U	4.2	U	2.6	U	20.	U	19.	U	2.7	U
7440-62-2	Vanadium (V)	3.4	U	1.2	J	0.81	J	2.3	J	4.9	J	1.1	J
7440-66-6	Zinc (Zn)	33.	U	20.9	U	17.3	J	4.	U	10.5	U	7.3	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results
Shallow Groundwater, Wells 1-25

SW846-META													
	SAMPLE ID ------->	GDE-G-W023-04		GDE-G-W024-01		GDE-G-W024-02		GDE-G-W024-03		GDE-G-W024-04		GDE-G-W025-01	
	ORIGINAL ID ----->	GDEGW02304		GDEGW02401		GDEGW02402		GDEGW02403		GDEGW02404		GDEGW02501	
	LAB SAMPLE ID --->	28438.01		25297.03		26528.01		27811.06		28466.05		25284.04	
	ID FROM REPORT -->	GDEGW02304		GDEGW02401		GDEGW02402		GDEGW02403		GDEGW02404		GDEGW02501	
	SAMPLE DATE ----->	02/07/97		04/16/96		08/05/96		12/02/96		02/11/97		04/15/96	
	DATE EXTRACTED -->	02/20/97		05/02/96		08/20/96		12/04/96		02/20/97		04/19/96	
	DATE ANALYZED --->	02/21/97		05/06/96		08/22/96		12/10/96		02/21/97		05/02/96	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	28438	VAL	25297	VAL	26515	VAL	27786	VAL	28438	VAL	25250	VAL
7429-90-5	Aluminum (Al)	23.	U	1060.		2050.		727.		321.		41.	U
7440-36-0	Antimony (Sb)	2.8	U	4.9	J	20.1	U	2.5	U	2.1	U	4.	U
7440-38-2	Arsenic (As)	2.8	J	5.	U	2.7	J	5.8	U	2.5	U	5.	U
7440-39-3	Barium (Ba)	63.6	J	19.3	U	37.8		19.2	J	13.7	J	10.	U
7440-41-7	Beryllium (Be)	0.3	U	1.	U	0.5	U	0.68	U	0.3	U	1.	U
7440-43-9	Cadmium (Cd)	0.5	U	1.	U	2.2	U	0.5	U	0.5	U	1.	U
7440-70-2	Calcium (Ca)	95700.		19900.		23900.		22400.		25900.		96000.	
7440-47-3	Chromium (Cr)	0.8	U	1.5	J	2.2	UJ	2.8	J	0.8	U	1.	U
7440-48-4	Cobalt (Co)	0.9	U	2.	U	5.2	U	0.92	J	0.9	U	2.	U
7440-50-8	Copper (Cu)	2.9	U	10.	U	12.4	UJ	8.6	U	3.4	U	2.	U
7439-89-6	Iron (Fe)	250.		1630.		1640.		868.		421.		150.	U
7439-92-1	Lead (Pb)	1.7	U	34.4		46.7	J	26.3		6.9		3.	U
7439-95-4	Magnesium (Mg)	121000.		13300.		15200.		15600.		16400.		15700.	
7439-96-5	Manganese (Mn)	292.		49.5		34.3	J	30.7		28.8		242.	
7439-97-6	Mercury (Hg)	0.1	U	0.2	U	0.14	J	0.1	U	0.1	U	0.2	U
7440-02-0	Nickel (Ni)	1.2	U	1.	U	5.3	U	2.6	U	1.1	U	1.	U
7440-09-7	Potassium (K)	44400.		9430.		14300.		8710.		7740.		10400.	U
7782-49-2	Selenium (Se)	2.8	U	5.	U	2.8	U	2.8	U	2.8	U	5.	U
7440-22-4	Silver (Ag)	1.2	U	2.	U	3.4	U	1.2	U	1.2	U	2.	U
7440-23-5	Sodium (Na)	982000.		122000.	U	116000.		52600.		58200.		28000.	U
7440-28-0	Thallium (Tl)	4.2	U	5.	U	2.7	U	2.7	U	3.1	U	5.	U
7440-31-5	Tin (Sn)	9.7	J	20.	U	19.	U	2.6	U	2.6	U	20.	U
7440-62-2	Vanadium (V)	0.69	J	3.6	U	8.	J	2.3	J	0.91	J	6.2	J
7440-66-6	Zinc (Zn)	19.3	U	25.5	U	39.5	U	26.	U	21.8	U	4.2	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results
Shallow Groundwater, Wells 1-25

SW846-META															
	SAMPLE ID ------->	GDE-H-W025-01		GDE-G-W025-02		GDE-H-W025-02		GDE-G-W025-03		GDE-H-W025-03		GDE-G-W025-04	
	ORIGINAL ID ----->	GDEHW02501		GDEGW02502		GDEHW02502		GDEGW02503		GDEHW02503		GDEGW02504	
	LAB SAMPLE ID --->	25285.01		26541.03		26542.01		27827.05		27828.01		28482.08	
	ID FROM REPORT -->	GDEHW02501		GDEGW02502		GDEHW02502		GDEGW02503		GDEHW02503		GDEGW02504	
	SAMPLE DATE ----->	04/15/96		08/06/96		08/06/96		12/03/96		12/03/96		02/12/97	
	DATE EXTRACTED -->	04/24/96		08/20/96		08/20/96		12/06/96		12/06/96		02/22/97	
	DATE ANALYZED --->	05/06/96		08/22/96		08/22/96		12/17/96		12/17/96		02/24/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	25250	VAL	26515	VAL	26515	VAL	27827	VAL	27827	VAL	28482	VAL
7429-90-5	Aluminum (Al)	34.4	U	107.	J	127.		48.3	U	53.9	U	43.	J
7440-36-0	Antimony (Sb)	4.	U	13.	U	13.	U	2.1	U	2.1	U	2.1	U
7440-38-2	Arsenic (As)	5.	U	2.5	UJ	2.5	UJ	3.6	J	3.1	J	2.5	U
7440-39-3	Barium (Ba)	8.7	U	18.6		18.3		33.8	J	34.1	J	25.5	J
7440-41-7	Beryllium (Be)	1.	U	0.5	U	0.5	U	0.33	J	0.36	J	0.3	U
7440-43-9	Cadmium (Cd)	1.	U	2.2	U	2.2	U	0.5	U	0.5	U	0.5	U
7440-70-2	Calcium (Ca)	92000.		86800.		84800.		105000.		109000.		106000.	
7440-47-3	Chromium (Cr)	1.	U	2.2	UJ	2.2	UJ	5.4	U	5.	U	0.84	J
7440-48-4	Cobalt (Co)	2.	U	5.2	U	5.2	U	0.9	U	0.9	U	0.9	U
7440-50-8	Copper (Cu)	10.	U	7.1	UJ	3.6	U	1.8	UJ	1.7	UJ	0.89	UJ
7439-89-6	Iron (Fe)	117.	U	484.		463.		2140.		2120.		375.	
7439-92-1	Lead (Pb)	3.	U	1.7	UJ	1.7	U	1.7	U	1.7	U	1.7	U
7439-95-4	Magnesium (Mg)	14200.		9010.		8900.		12900.		13300.		13600.	
7439-96-5	Manganese (Mn)	231.		141.	J	137.		147.		151.		131.	
7439-97-6	Mercury (Hg)	0.16	J	0.1	U	0.1	U	0.1	U	0.1	U	0.26	
7440-02-0	Nickel (Ni)	1.4	J	5.3	U	5.3	U	6.1	U	6.6	U	1.2	J
7440-09-7	Potassium (K)	9430.		7570.		7450.		9090.		9690.		8900.	
7782-49-2	Selenium (Se)	5.	U	2.8	U	2.8	U	2.8	U	2.8	U	2.8	U
7440-22-4	Silver (Ag)	2.	U	3.4	U	3.4	U	1.2	U	1.2	U	1.2	U
7440-23-5	Sodium (Na)	23800.	UJ	18000.		17800.		21500.		22700.		23600.	
7440-28-0	Thallium (Tl)	5.	U	2.7	U	2.7	U	2.7	UJ	2.7	UJ	2.7	U
7440-31-5	Tin (Sn)	20.	U	19.	U	19.	U	2.6	U	2.6	U	3.7	U
7440-62-2	Vanadium (V)	6.4	J	5.3	J	4.3	J	1.3	J	1.6	J	2.2	J
7440-66-6	Zinc (Zn)	4.	U	6.9	U	7.2	U	6.1	J	6.6	J	13.8	J

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results
Shallow Groundwater, Wells 1-25

SW846-META

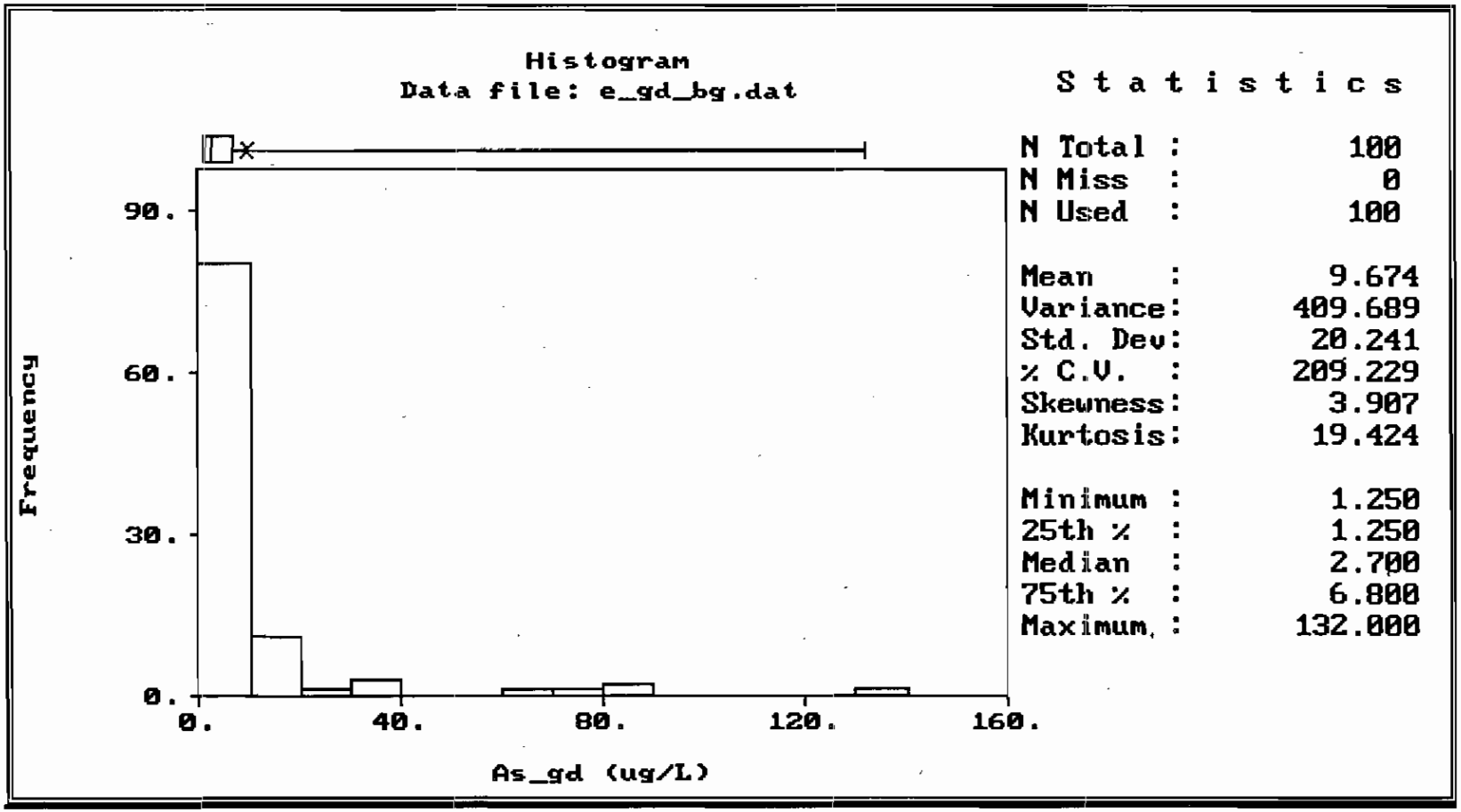
SAMPLE ID ------->	GDE-H-W025-04
ORIGINAL ID ----->	GDEHW02504
LAB SAMPLE ID --->	28483.01
ID FROM REPORT -->	GDEHW02504
SAMPLE DATE ----->	02/12/97
DATE EXTRACTED -->	02/22/97
DATE ANALYZED --->	02/24/97
MATRIX ---------->	Water
UNITS ---------->	UG/L A

CAS #	Parameter	28482	VAL
7429-90-5	Aluminum (Al)	46.7	J
7440-36-0	Antimony (Sb)	2.1	U
7440-38-2	Arsenic (As)	2.5	U
7440-39-3	Barium (Ba)	24.8	
7440-41-7	Beryllium (Be)	0.3	U
7440-43-9	Cadmium (Cd)	0.5	U
7440-70-2	Calcium (Ca)	102000.	
7440-47-3	Chromium (Cr)	0.8	U
7440-48-4	Cobalt (Co)	0.9	U
7440-50-8	Copper (Cu)	2.3	UJ
7439-89-6	Iron (Fe)	387.	
7439-92-1	Lead (Pb)	2.2	J
7439-95-4	Magnesium (Mg)	13200.	
7439-96-5	Manganese (Mn)	127.	
7439-97-6	Mercury (Hg)	0.26	
7440-02-0	Nickel (Ni)	1.1	J
7440-09-7	Potassium (K)	8280.	
7782-49-2	Selenium (Se)	2.8	U
7440-22-4	Silver (Ag)	1.5	J
7440-23-5	Sodium (Na)	22400.	
7440-28-0	Thallium (Tl)	5.8	J
7440-31-5	Tin (Sn)	3.8	U
7440-62-2	Vanadium (V)	2.5	J
7440-66-6	Zinc (Zn)	13.7	J

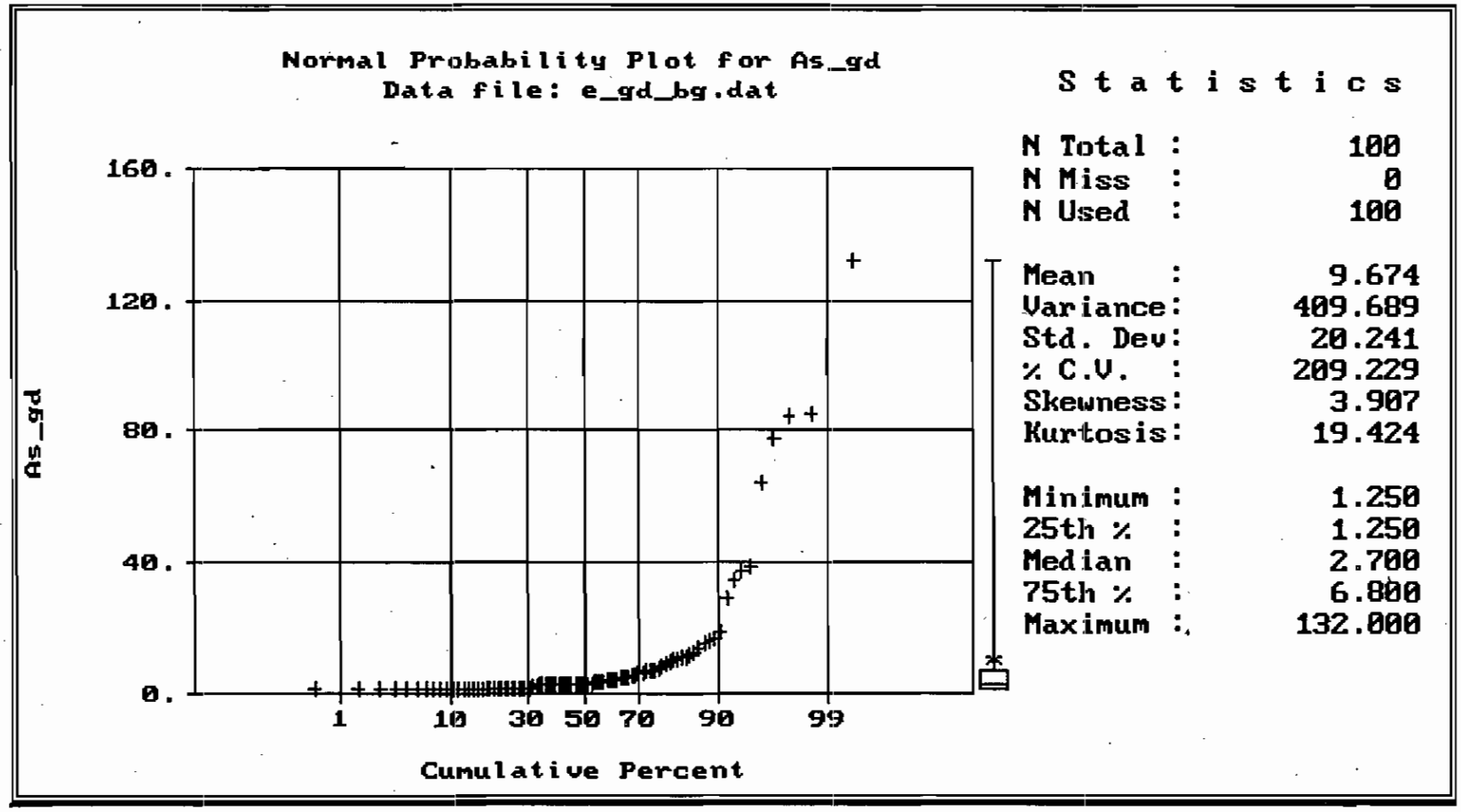
*** Validation Complete ***

Zone E
Arsenic in deep GW background samples
Original dataset (N = 100)
Original values

1a

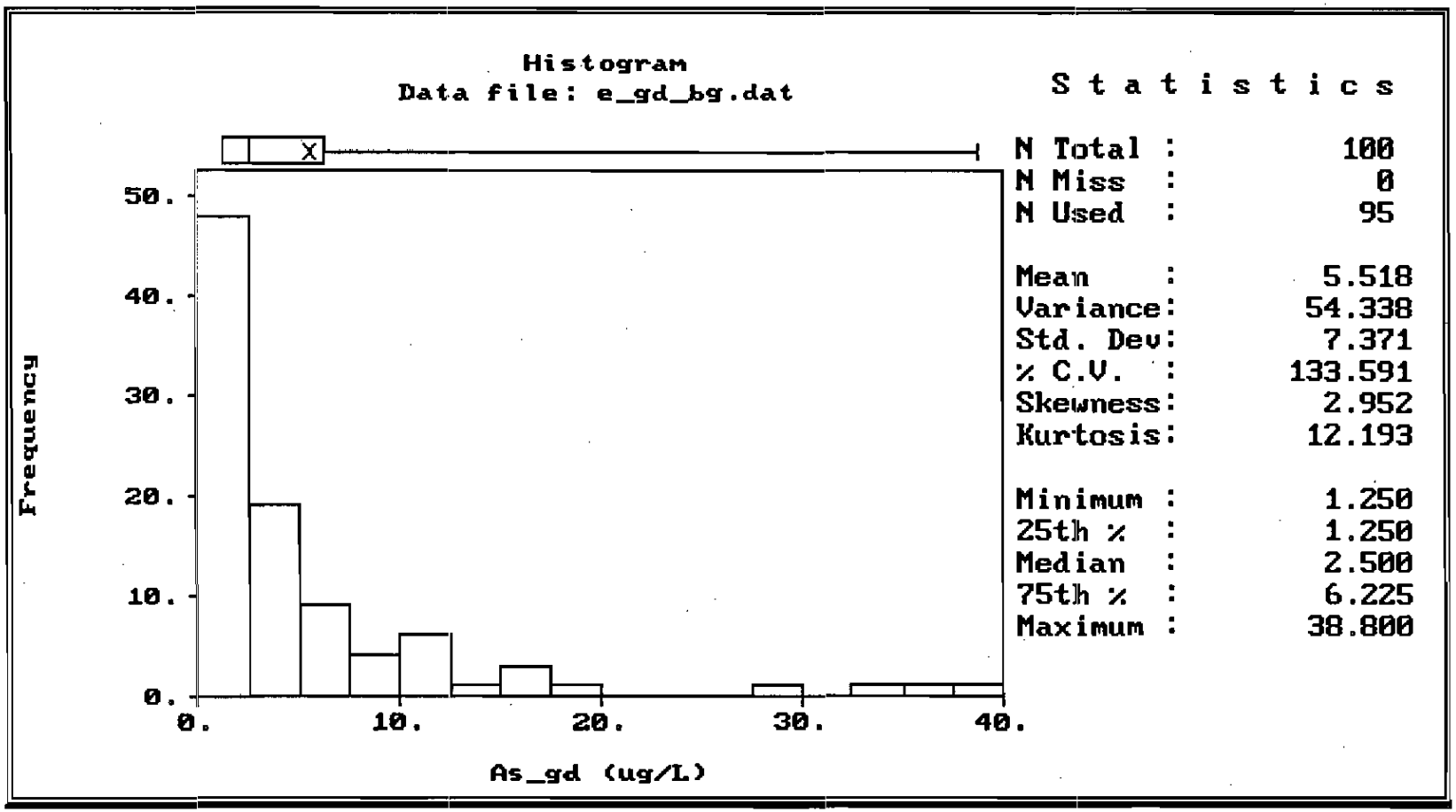


16


Normal Probability Plot for As_gd
Data file: e_gd_bg.dat
160.
120.
80.
40.
0.
As_gd
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 100
N Miss : 0
N Used : 100
Mean : 9.674
Variance: 409.689
Std. Dev: 20.241
% C.V. : 209.229
Skewness: 3.907
Kurtosis: 19.424
Minimum : 1.250
25th % : 1.250
Median : 2.700
75th % : 6.800
Maximum : 132.000

Zone E
Arsenic in deep GW background samples
Five highest values removed (N=95)
Original (untransformed) values

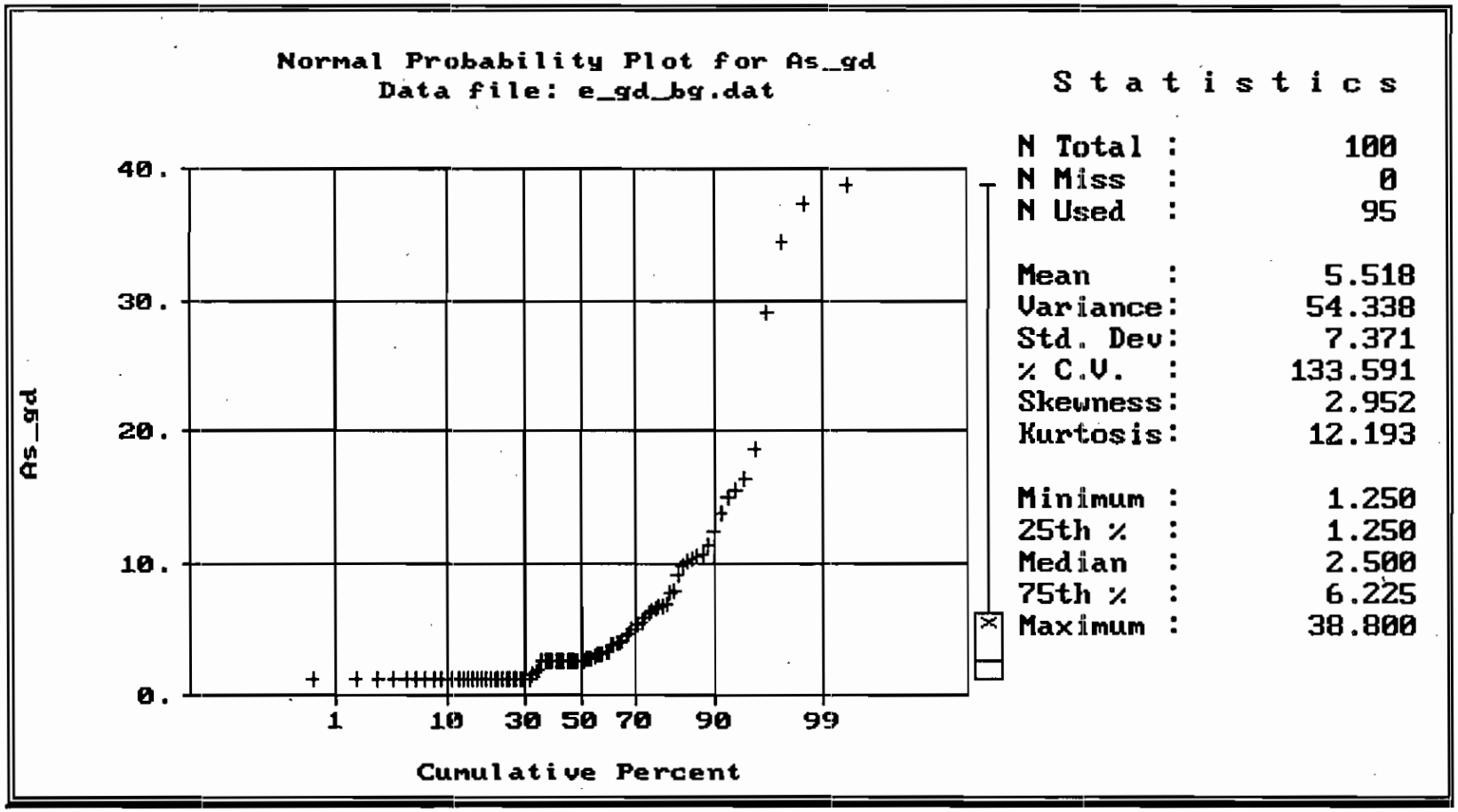
2a



Statistics

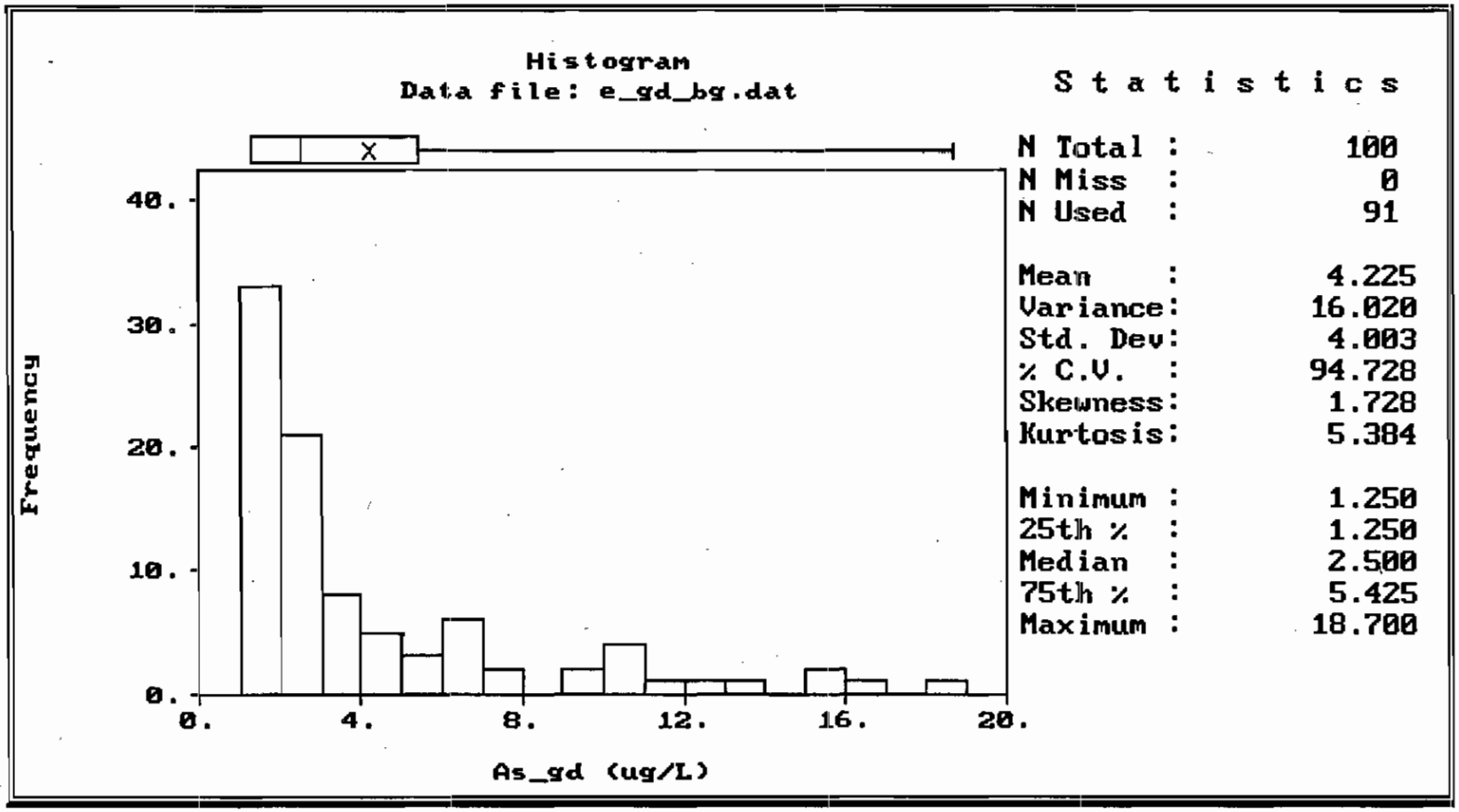
N Total :	100
N Miss :	0
N Used :	95
Mean :	5.518
Variance:	54.338
Std. Dev:	7.371
% C.V. :	133.591
Skewness:	2.952
Kurtosis:	12.193
Minimum :	1.250
25th % :	1.250
Median :	2.500
75th % :	6.225
Maximum :	38.800

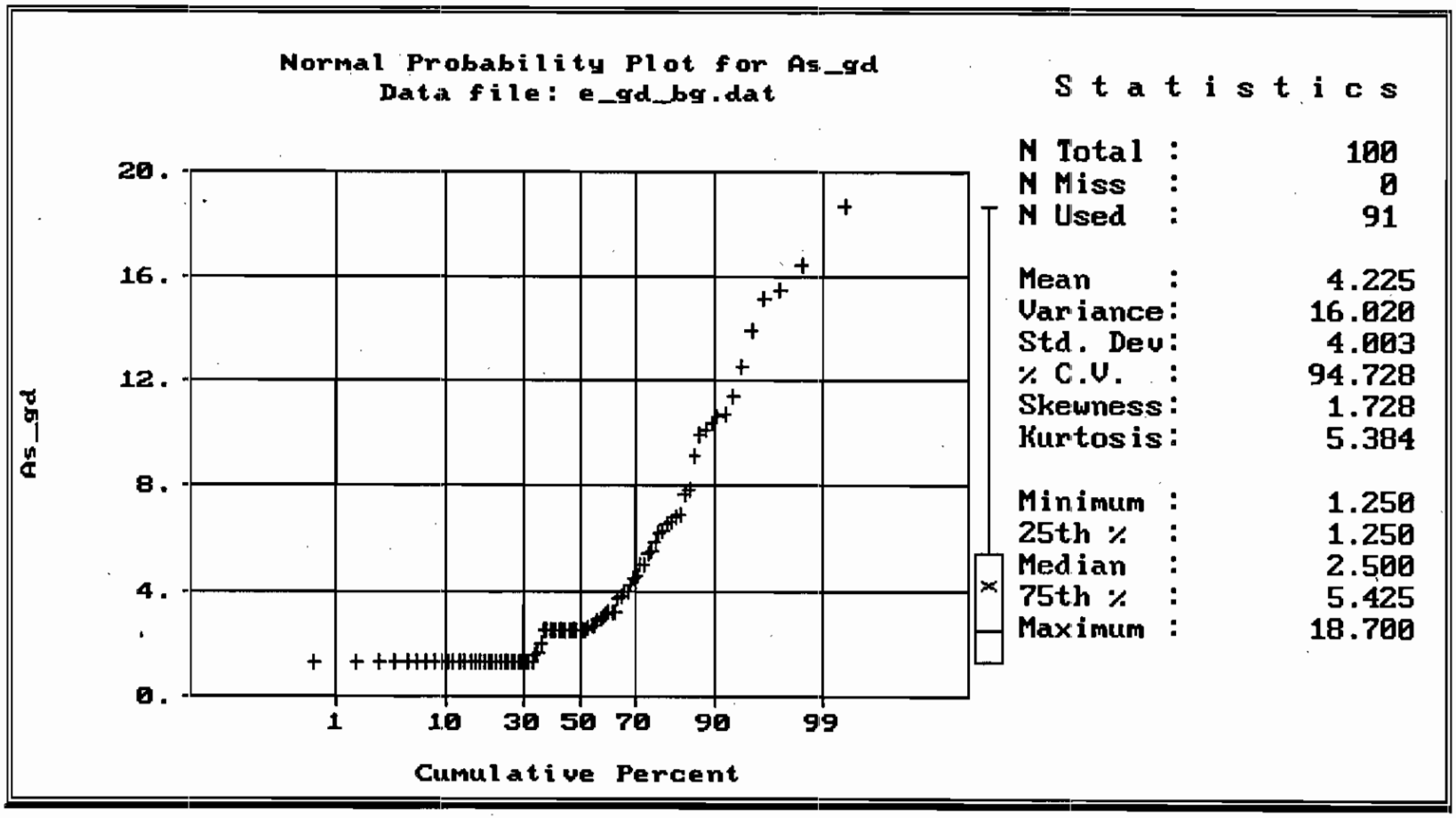
2b


Normal Probability Plot for As_gd
Data file: e_gd_bg.dat
As_gd
40.
30.
20.
10.
0.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 100
N Miss : 0
N Used : 95
Mean : 5.518
Variance: 54.338
Std. Dev: 7.371
% C.V. : 133.591
Skewness: 2.952
Kurtosis: 12.193
Minimum : 1.250
25th % : 1.250
Median : 2.500
75th % : 6.225
Maximum : 38.800

Zone E
Arsenic in deep GW background samples
Nine highest values removed (N = 91)
Original (untransformed) values

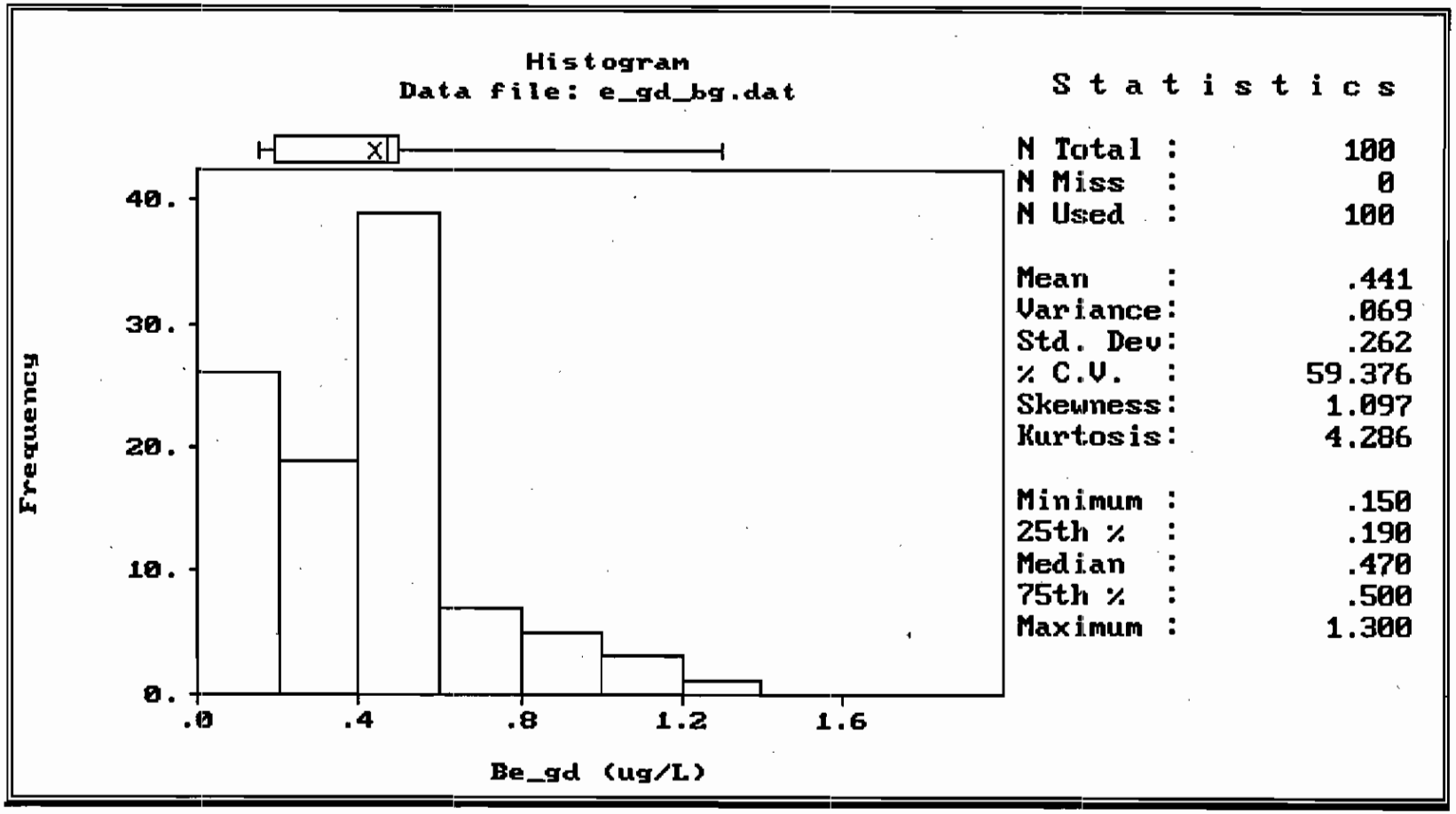
3a

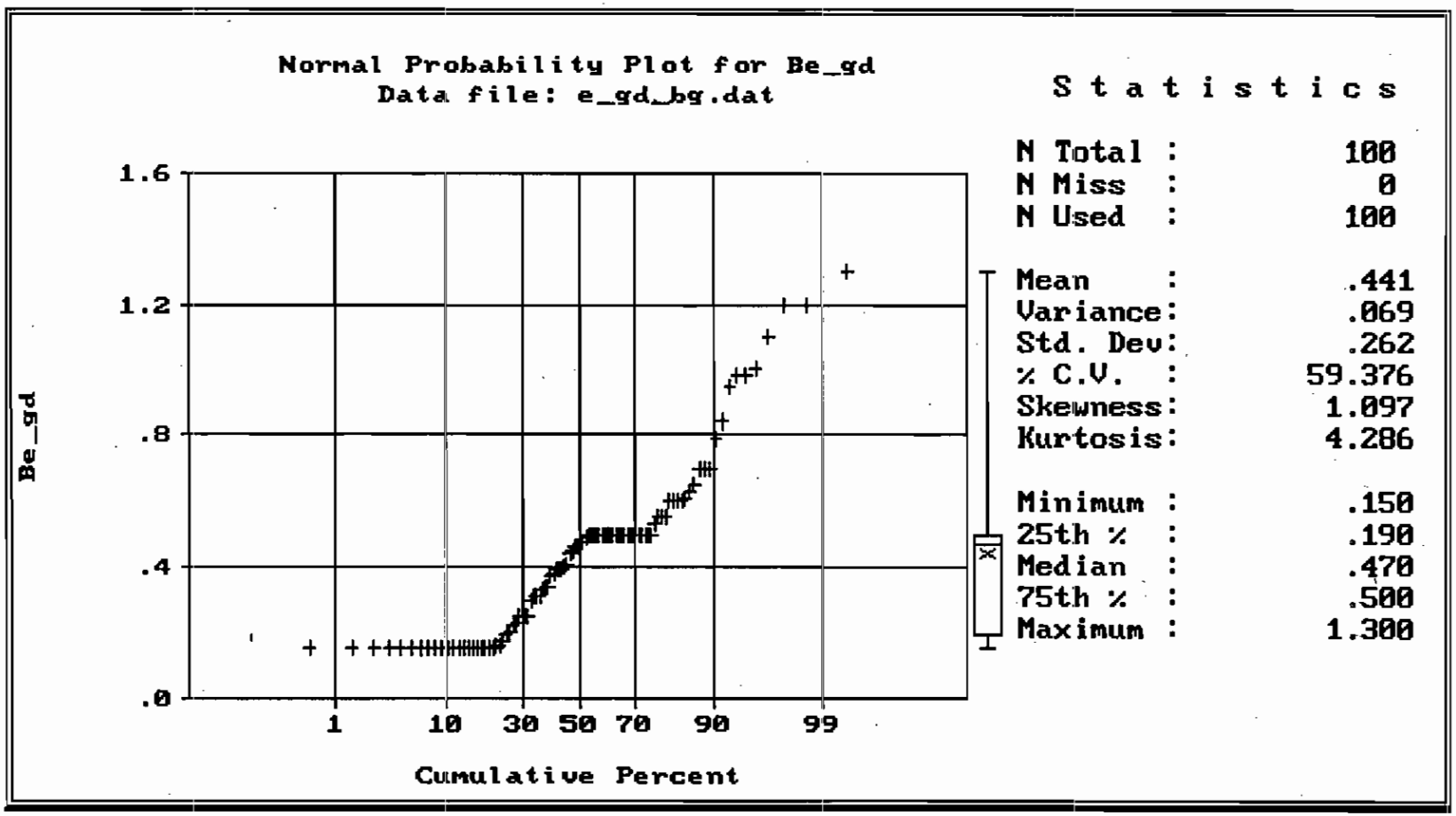



Normal Probability Plot for As_gd
Data file: e_gd_bg.dat
As_gd
20.
16.
12.
8.
4.
0.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 100
N Miss : 0
N Used : 91
Mean : 4.225
Variance: 16.020
Std. Dev: 4.003
% C.V. : 94.728
Skewness: 1.728
Kurtosis: 5.384
Minimum : 1.250
25th % : 1.250
Median : 2.500
75th % : 5.425
Maximum : 18.700

Zone E
Beryllium in deep GW background samples
Original dataset (N = 100)
Original values

1a




Normal Probability Plot for Be_gd
Data file: e_gd_bg.dat
Be_gd
1.6
1.2
.8
.4
.0
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 100
N Miss : 0
N Used : 100
Mean : .441
Variance: .069
Std. Dev: .262
% C.V. : 59.376
Skewness: 1.097
Kurtosis: 4.286
Minimum : .150
25th % : .190
Median : .470
75th % : .500
Maximum : 1.300

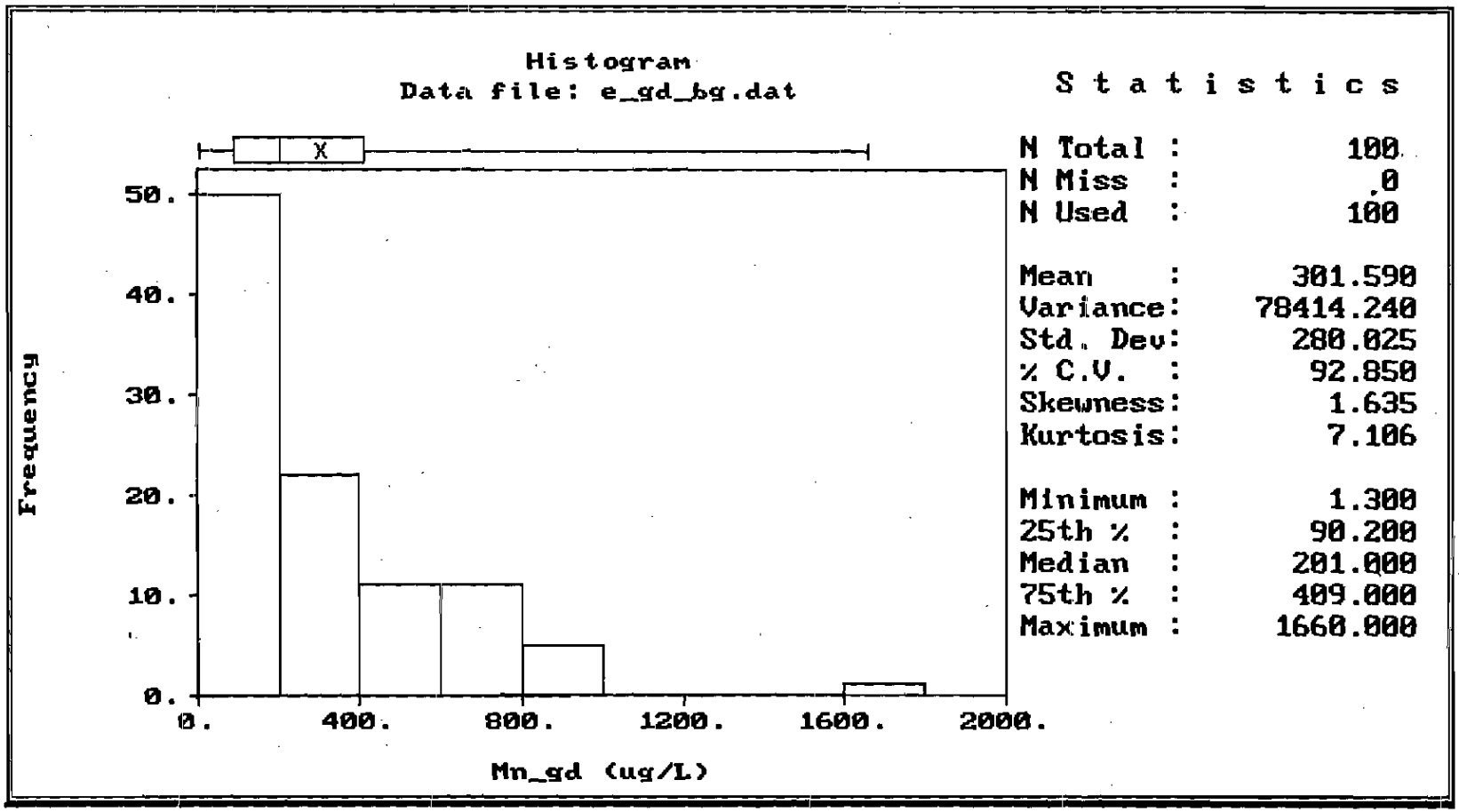
Zone E

Manganese in deep GW background samples

Original dataset (N = 100)

Original values

1a



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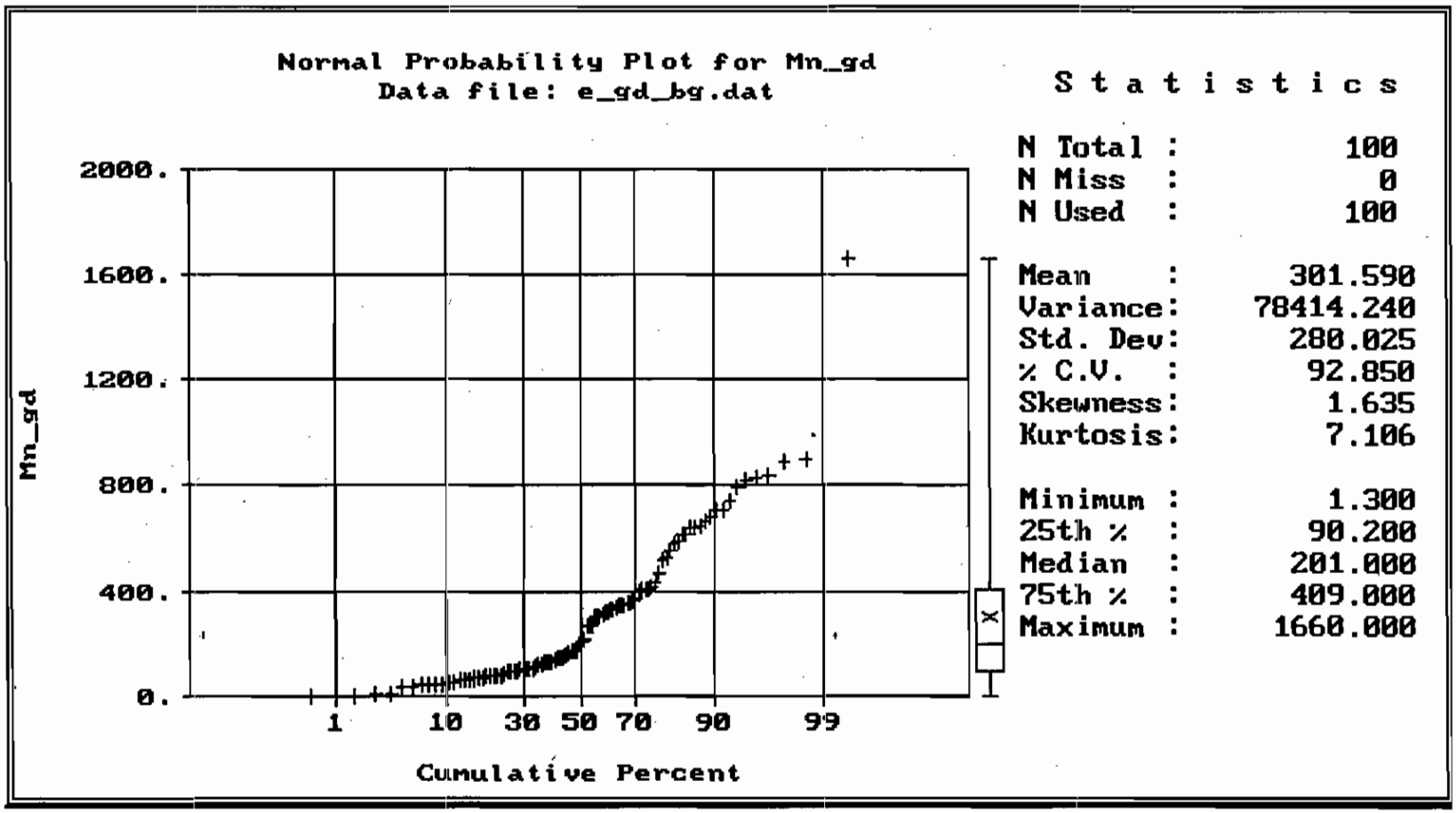
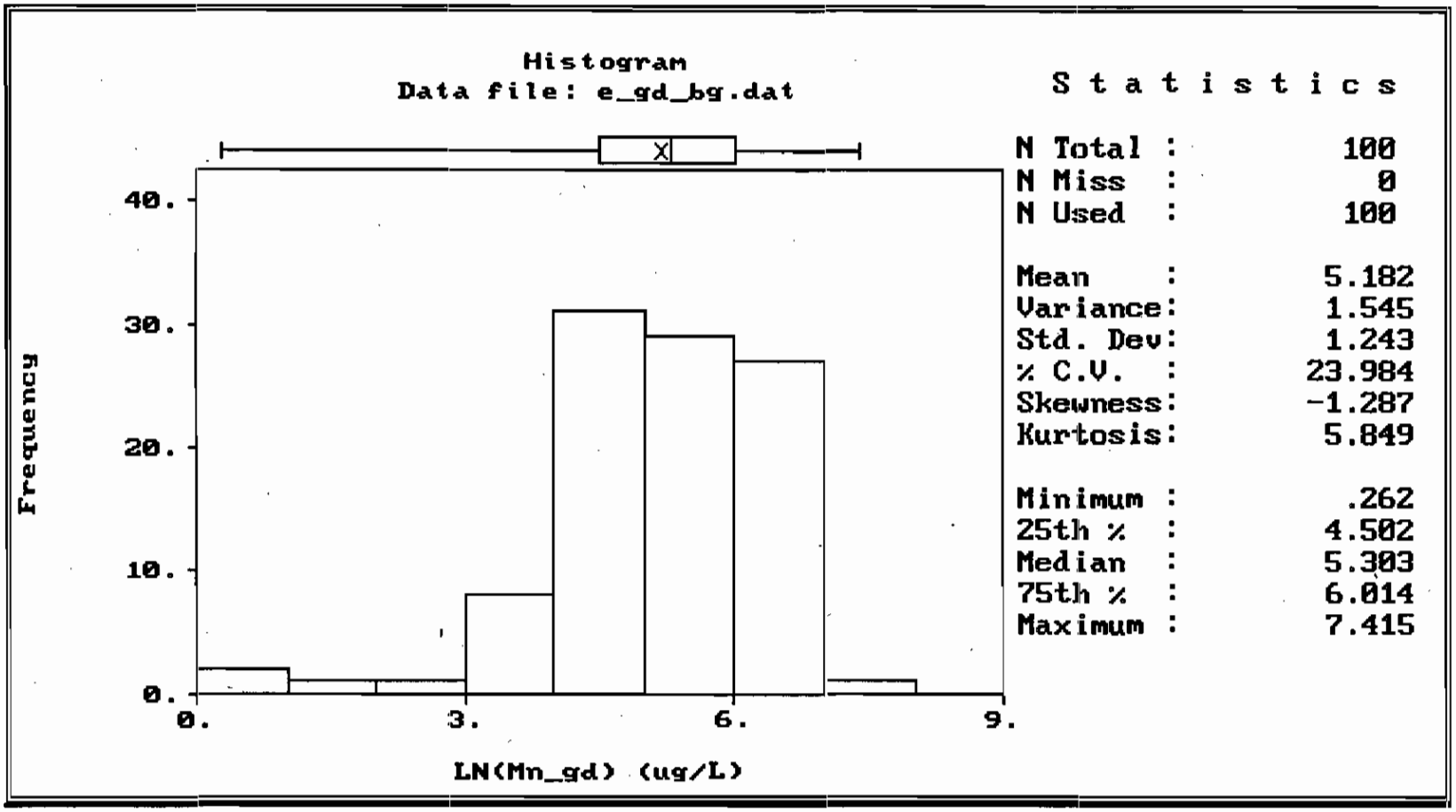
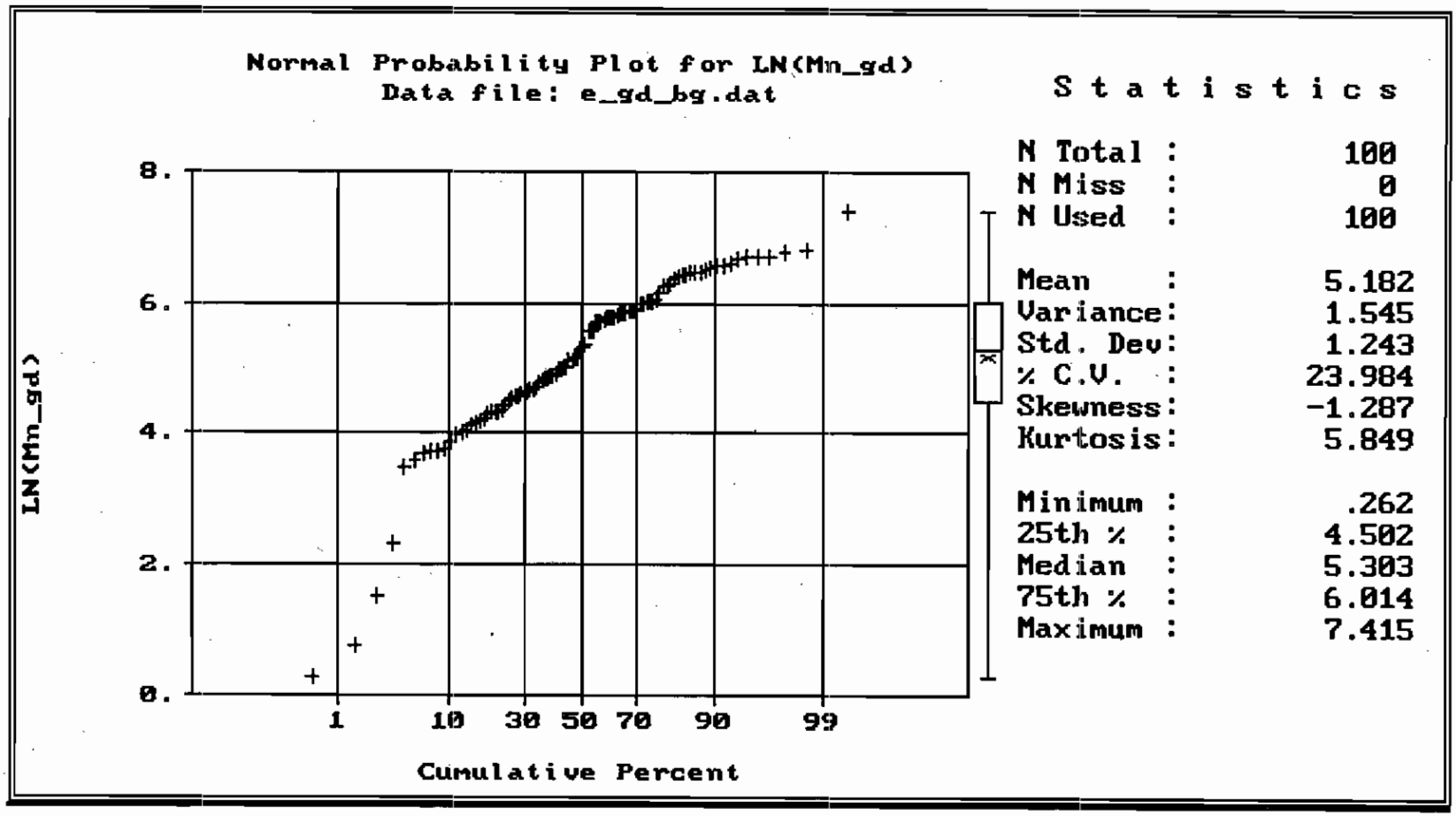

Normal Probability Plot for Mn_gd
Data file: e_gd_bg.dat
Mn_gd
2000.
1600.
1200.
800.
400.
0.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 100
N Miss : 0
N Used : 100
Mean : 301.590
Variance: 78414.240
Std. Dev: 280.025
% C.V. : 92.850
Skewness: 1.635
Kurtosis: 7.106
Minimum : 1.300
25th % : 90.200
Median : 201.000
75th % : 409.000
Maximum : 1660.000

Zone E
Manganese in deep GW background samples
Original dataset (N=100)
LN-transformed values

2a




Normal Probability Plot for LN(Mn_gd)
Data file: e_gd_bg.dat
LN(Mn_gd)
8.
6.
4.
2.
0.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 100
N Miss : 0
N Used : 100
Mean : 5.182
Variance: 1.545
Std. Dev: 1.243
% C.V. : 23.984
Skewness: -1.287
Kurtosis: 5.849
Minimum : .262
25th % : 4.502
Median : 5.303
75th % : 6.014
Maximum : 7.415

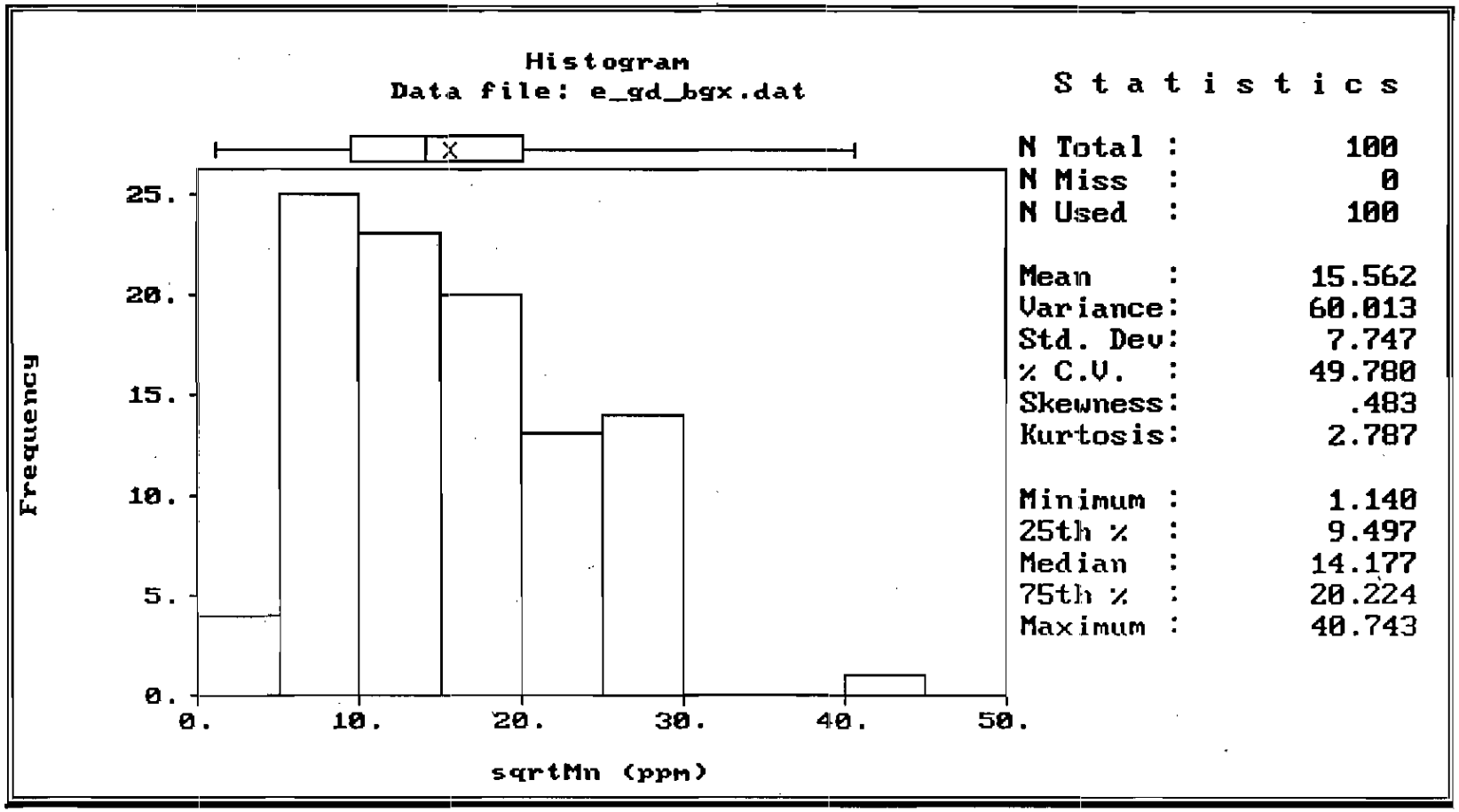
Zone E

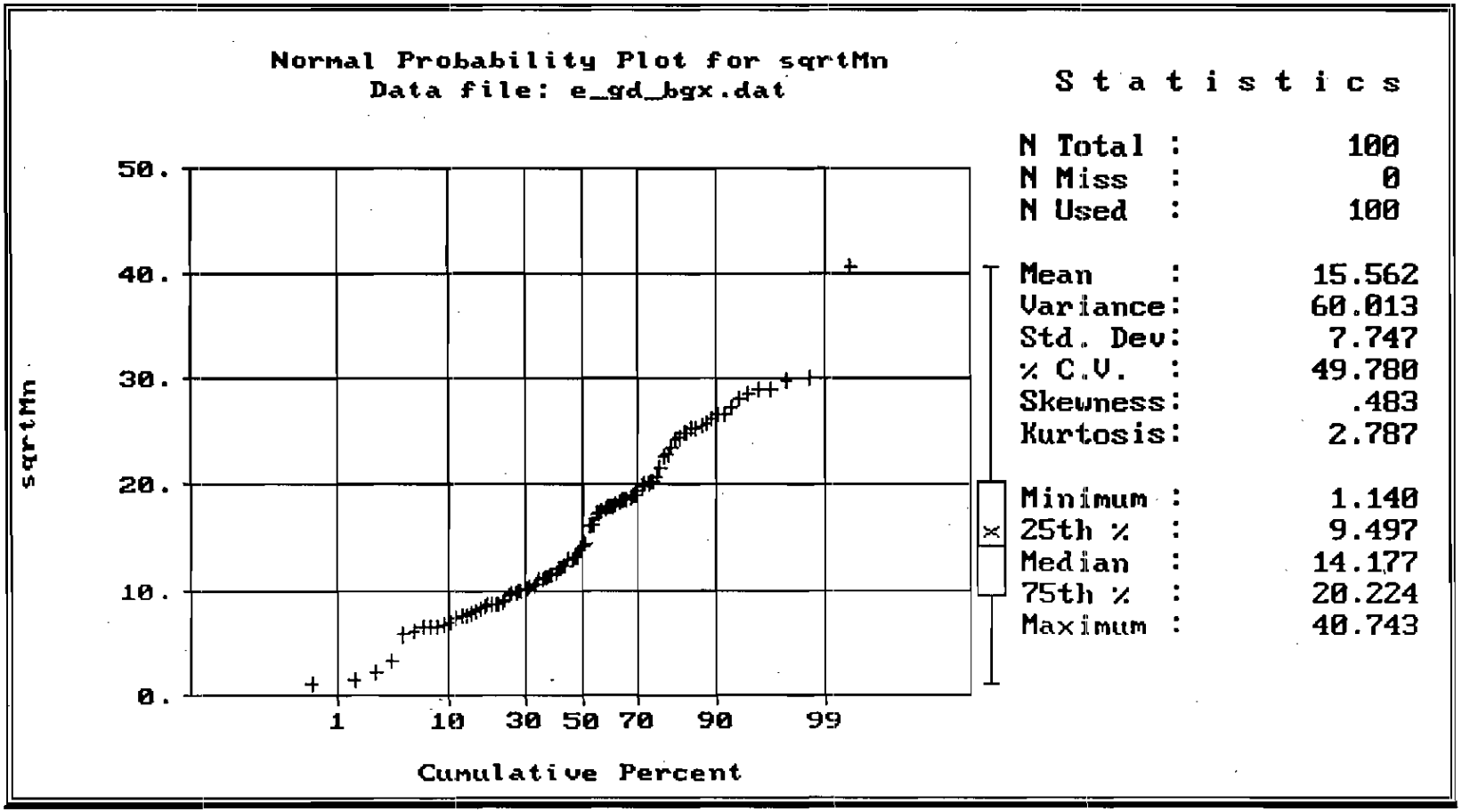
Manganese in deep GW background samples

Original dataset (N=100)

Square-root transformed values

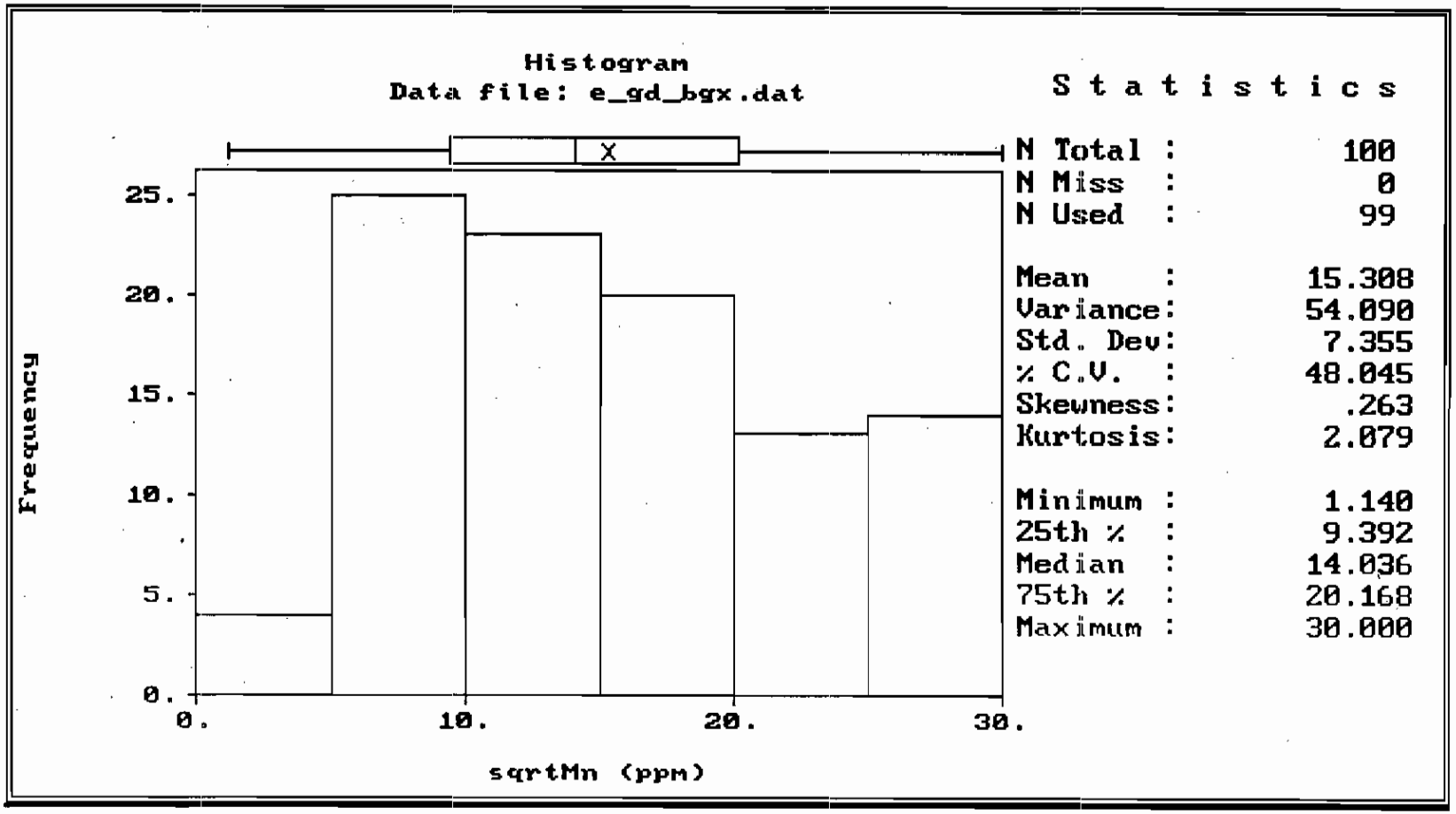
3a

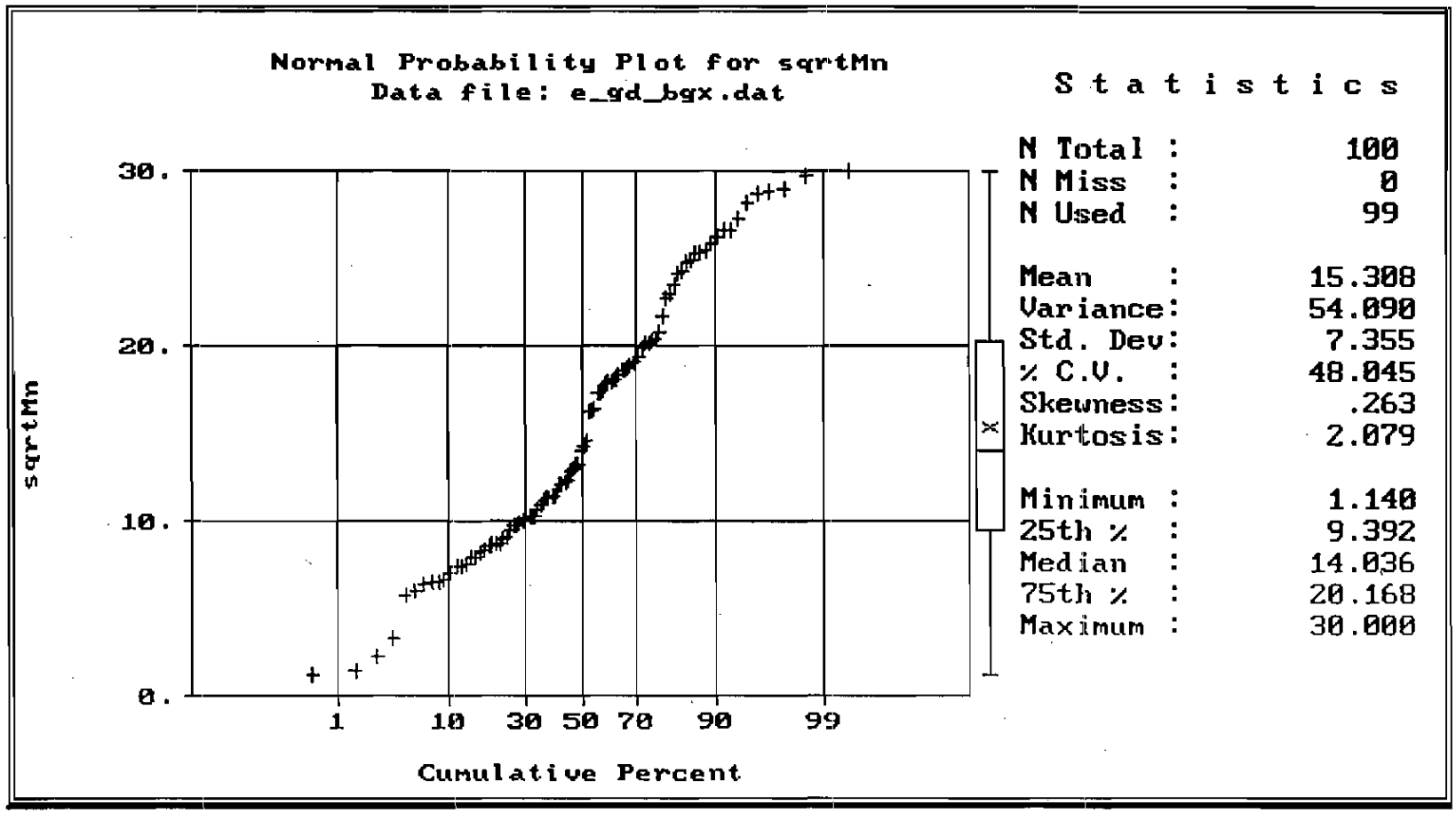



Normal Probability Plot for sqrtMn
Data file: e_gd_bgx.dat
sqrtMn
50.
40.
30.
20.
10.
0.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 100
N Miss : 0
N Used : 100
Mean : 15.562
Variance: 60.013
Std. Dev: 7.747
% C.V. : 49.780
Skewness: .483
Kurtosis: 2.787
Minimum : 1.140
25th % : 9.497
Median : 14.177
75th % : 20.224
Maximum : 40.743

Zone E
Manganese in deep GW background samples
Sample 07D-02 removed from dataset (N=99)
Square-root transformed values

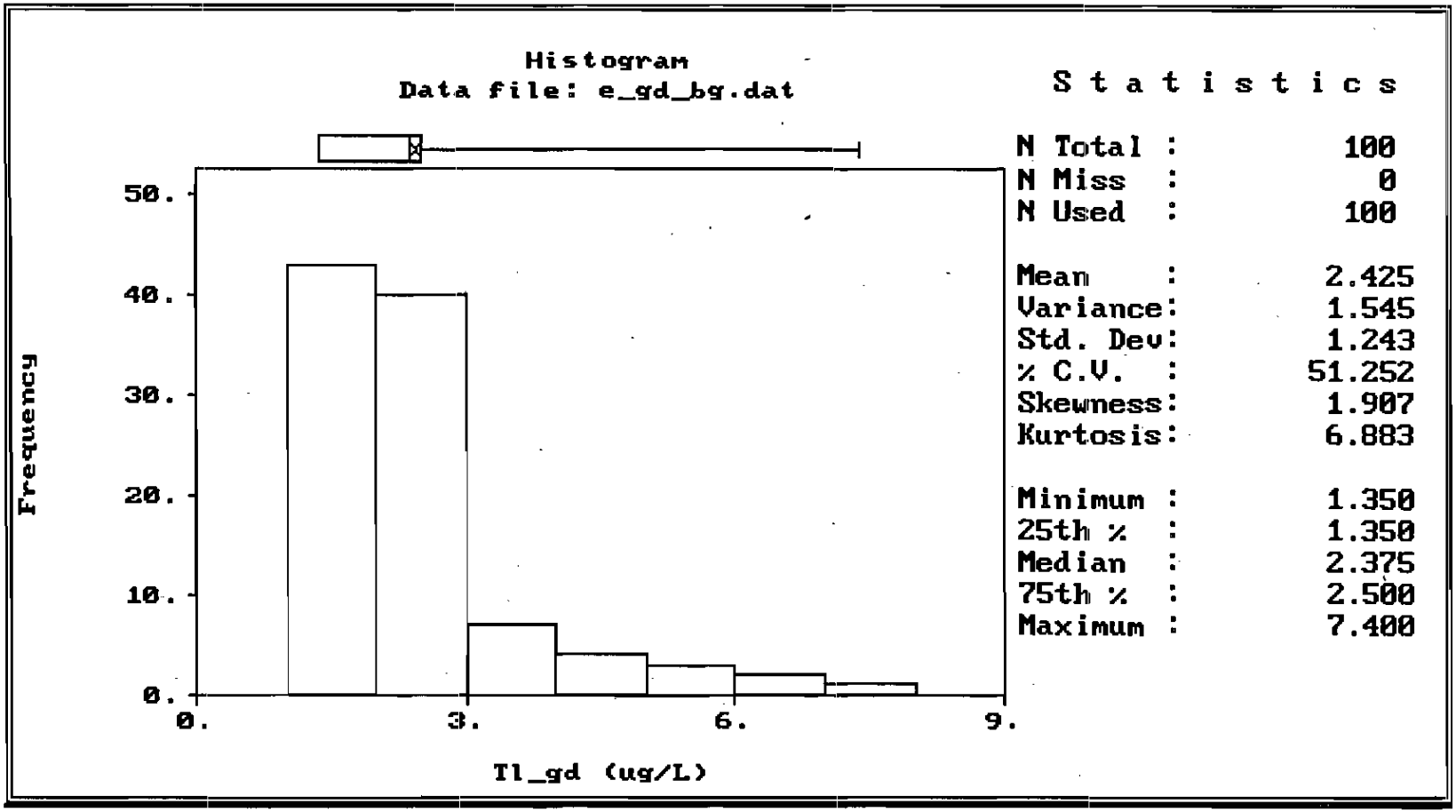
4a

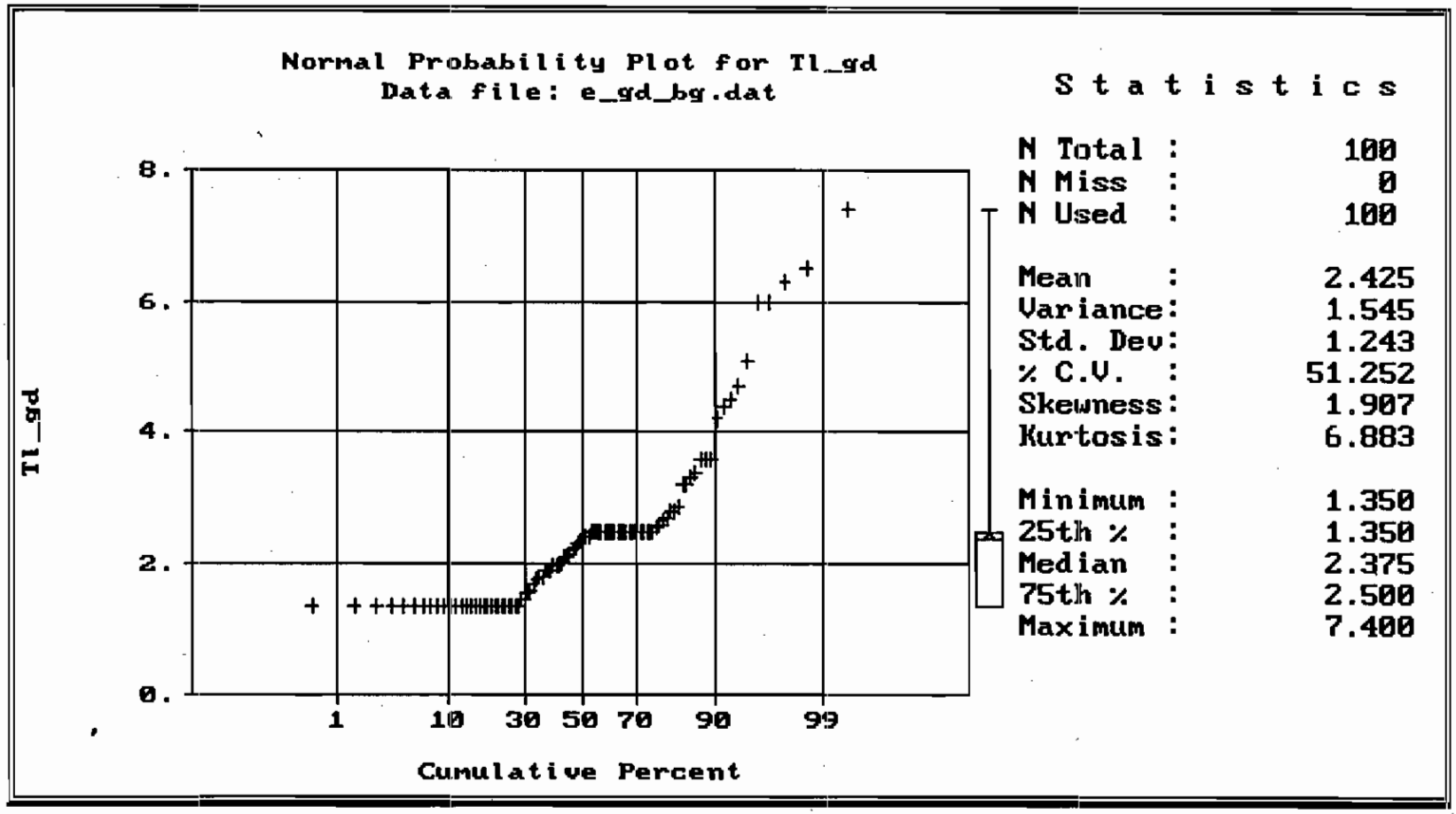



Normal Probability Plot for sqrtMn
Data file: e_gd_bgx.dat
sqrtMn
30.
20.
10.
0.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 100
N Miss : 0
N Used : 99
Mean : 15.308
Variance: 54.090
Std. Dev: 7.355
% C.V. : 48.045
Skewness: .263
Kurtosis: 2.079
Minimum : 1.140
25th % : 9.392
Median : 14.036
75th % : 20.168
Maximum : 30.000

Zone E
Thallium in deep GW background samples
Original dataset (N = 100)
Original values

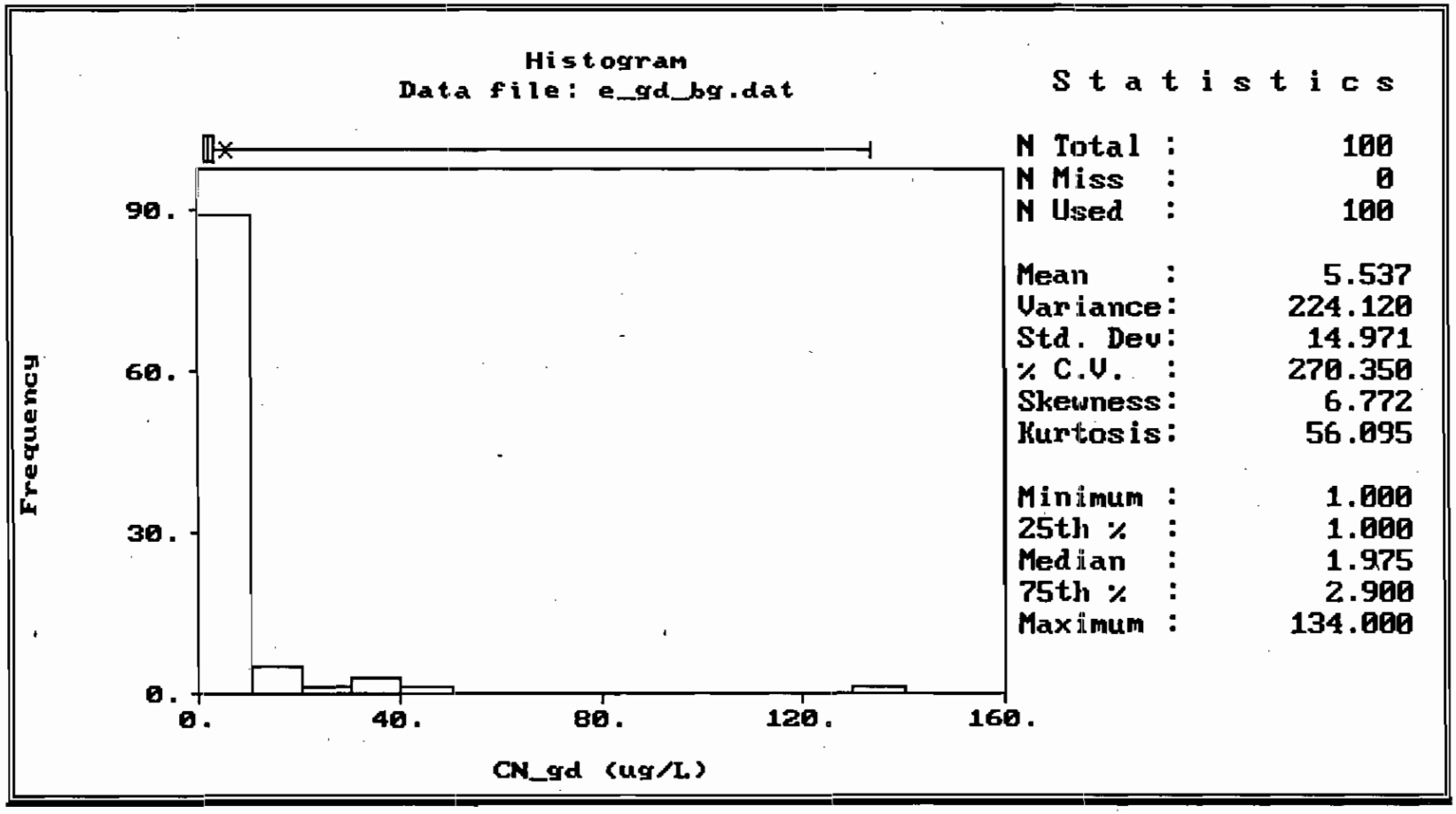
1a



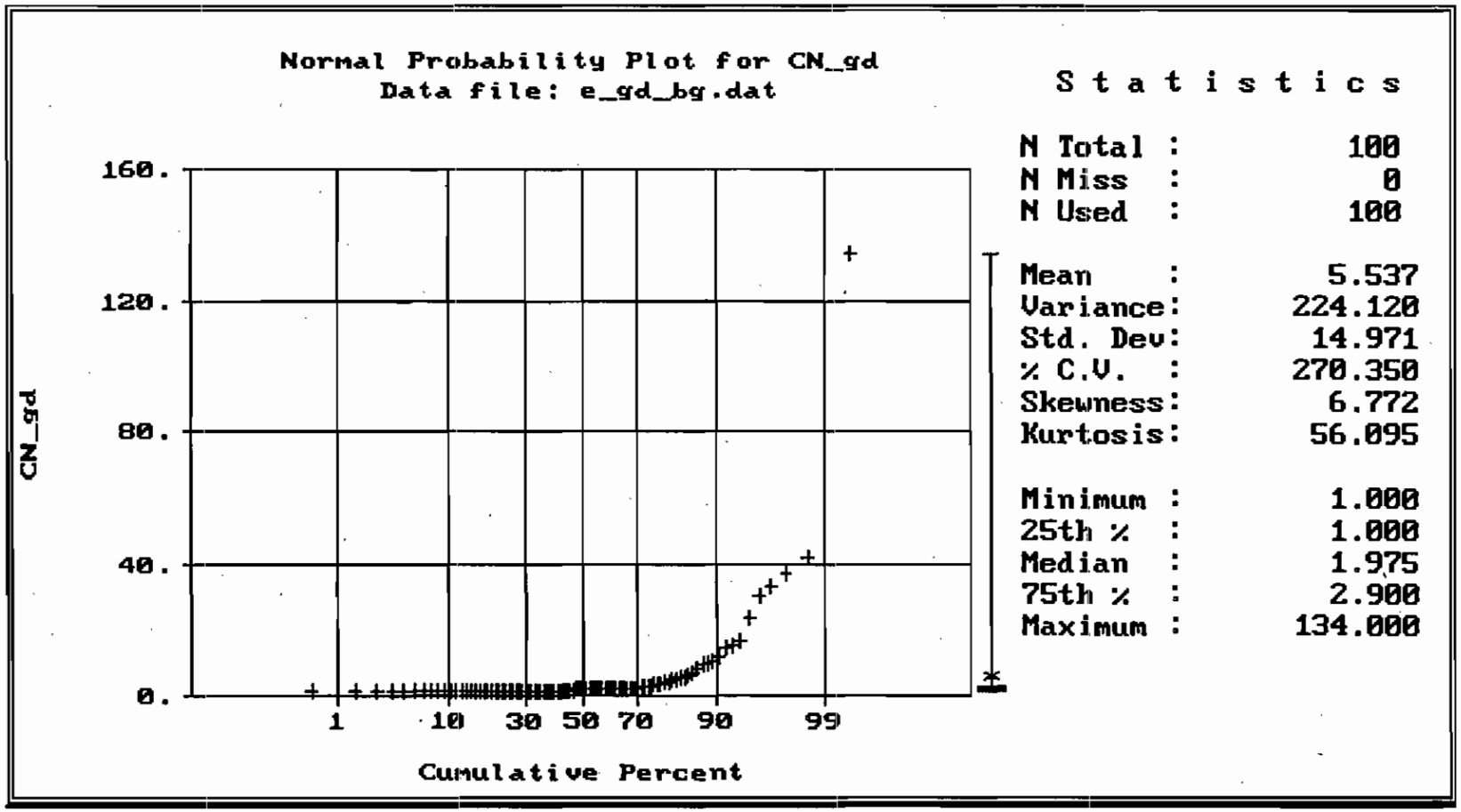

Normal Probability Plot for Tl_gd
Data file: e_gd_bg.dat
Tl_gd
8.
6.
4.
2.
0.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 100
N Miss : 0
N Used : 100
Mean : 2.425
Variance: 1.545
Std. Dev: 1.243
% C.V. : 51.252
Skewness: 1.907
Kurtosis: 6.883
Minimum : 1.350
25th % : 1.350
Median : 2.375
75th % : 2.500
Maximum : 7.400

Zone E
Cyanide in deep GW background samples
Original dataset (N = 100)
Original values

1a



16


Normal Probability Plot for CN_gd
Data file: e_gd_bg.dat
CN_gd
160.
120.
80.
40.
0.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 100
N Miss : 0
N Used : 100
Mean : 5.537
Variance: 224.120
Std. Dev: 14.971
% C.V. : 270.350
Skewness: 6.772
Kurtosis: 56.095
Minimum : 1.000
25th % : 1.000
Median : 1.975
75th % : 2.900
Maximum : 134.000

E N V I R O N M E N T A L S A F E T Y & D E S I G N S

2905-00002 - CHARLESTON ZONE E - QUARTERLY GW

Samples by Chemical Report

57-12-5 - Cyanide (CN)

>= 0.0000 for All Concentration Units - Hits Only

Sample ID	Ext. Orig. ID	Type	Date	Result	VQual	Units	SDG #	
559-G-W02D-02	559GW02D02	Water	07/26/96	2.0000	J	UG/L	26436	VAL
065-G-W001-02	065GW00102	Water	08/14/96	2.1000	J	UG/L	26598	VAL
559-G-W004-02	559GW00402	Water	07/31/96	2.1000	J	UG/L	26475	VAL
559-G-W04D-02	559GW04D02	Water	07/31/96	2.1000	J	UG/L	26475	VAL
GDE-G-W16D-02	GDEGW16D02	Water	07/30/96	2.1000	J	UG/L	26475	VAL
GDE-G-W020-03	GDEGW02003	Water	11/20/96	2.2000	J	UG/L	27716	VAL
GDE-G-W024-02	GDEGW02402	Water	08/05/96	2.2000	J	UG/L	26515	VAL
GDE-G-W28D-A2	GDEGW28DA2	Water	03/05/97	2.2000	B	UG/L	28710	NV
070-G-W002-02	070GW00202	Water	07/29/96	2.3000	J	UG/L	26436	VAL
GDE-G-W002-04	GDEGW00204	Water	02/12/97	2.3000	J	UG/L	28482	VAL
GDE-G-W013-04	GDEGW01304	Water	01/24/97	2.3000	J	UG/L	28253	VAL
GDE-G-W017-02	GDEGW01702	Water	07/29/96	2.3000	J	UG/L	26436	VAL
GDE-G-W027-A2	GDEGW027A2	Water	03/04/97	2.3000	B	UG/L	28710	NV
GDE-H-W029-A2	GDEHW029A2	Water	03/05/97	2.3000	B	UG/L	28710	NV
GDE-G-W002-02	GDEGW00202	Water	07/02/96	2.4000	J	UG/L	26203	VAL
GDE-G-W04D-04	GDEGW04D04	Water	01/15/97	2.5000	J	UG/L	28179	VAL
GDE-G-W010-02	GDEGW01002	Water	07/22/96	2.6000	J	UG/L	26382	VAL
559-H-W03D-01	559HW03D01	Water	05/09/96	2.7000	J	UG/L	25532	VAL
GDE-G-W02D-04	GDEGW02D04	Water	02/13/97	2.7000	J	UG/L	28482	VAL
GDE-H-W19D-02	GDEHW19D02	Water	07/31/96	2.9000	J	UG/L	26475	VAL
GDE-G-W016-02	GDEGW01602	Water	07/26/96	3.0000	J	UG/L	26436	VAL
GDE-G-W20D-03	GDEGW20D03	Water	11/20/96	3.3000	J	UG/L	27716	VAL
GDE-G-W014-02	GDEGW01402	Water	07/26/96	3.4000	J	UG/L	26436	VAL
GDE-G-W15D-02	GDEGW15D02	Water	07/26/96	3.4000	J	UG/L	26436	VAL
GDE-G-W018-04	GDEGW01804	Water	01/29/97	3.7000	J	UG/L	28301	VAL
070-G-W01D-02	070GW01D02	Water	07/29/96	3.8000	J	UG/L	26436	VAL
070-G-W001-02	070GW00102	Water	07/29/96	4.0000	J	UG/L	26436	VAL
599-G-W001-01	599GW00101	Water	03/21/96	4.2000	J	UG/L	25020	VAL
GDE-G-W026-01	GDEGW02601	Water	10/29/96	4.2000	J	UG/L	27441	VAL
GDE-G-W07D-01	GDEGW07D01	Water	03/26/96	4.2000	J	UG/L	25049	VAL
GDE-G-W11D-02	GDEGW11D02	Water	07/23/96	4.2000	J	UG/L	26382	VAL
GDE-G-W26D-01	GDEGW26D01	Water	10/29/96	4.2000	J	UG/L	27441	VAL
070-G-W01D-01	070GW01D01	Water	04/26/96	4.4000	J	UG/L	25361	VAL
GDE-G-W002-01	GDEGW00201	Water	03/21/96	4.5000	J	UG/L	25020	VAL
GDE-G-W2D1-A2	GDEGW2D1A2	Water	03/05/97	4.5000	B	UG/L	28710	NV
065-G-W003-02	065GW00302	Water	08/14/96	4.6000	J	UG/L	26598	VAL
GDE-G-W025-02	GDEGW02502	Water	08/06/96	4.7000	J	UG/L	26515	VAL
GDE-G-W05D-04	GDEGW05D04	Water	01/16/97	4.9000	J	UG/L	28179	VAL
GDE-G-W10D-02	GDEGW10D02	Water	07/22/96	4.9000	J	UG/L	26382	VAL
GDE-G-W06D-04	GDEGW06D04	Water	01/16/97	5.5000	J	UG/L	28179	VAL
GDE-G-W23D-01	GDEGW23D01	Water	04/11/96	5.6000	J	UG/L	25228	VAL
GDE-H-W025-02	GDEHW02502	Water	08/06/96	5.7000	J	UG/L	26515	VAL
GDE-G-W18D-04	GDEGW18D04	Water	01/29/97	5.8000	J	UG/L	28301	VAL
GDE-G-W24D-01	GDEGW24D01	Water	04/15/96	7.1000	J	UG/L	25250	VAL
GDE-G-W002-03	GDEGW00203	Water	10/28/96	7.9000	J	UG/L	27441	VAL
065-G-W004-01	065GW00401	Water	04/17/96	9.4000	J	UG/L	25297	VAL
GDE-G-W02D-03	GDEGW02D03	Water	10/29/96	9.5000	J	UG/L	27441	VAL
GDE-G-W22D-04	GDEGW22D04	Water	02/06/97	9.9000	J	UG/L	28394	VAL
065-H-W004-01	065HW00401	Water	04/17/96	10.2000		UG/L	25297	VAL

E N V I R O N M E N T A L S A F E T Y & D E S I G N S

2905-00002 - CHARLESTON ZONE E - QUARTERLY GW

Samples by Chemical Report

57-12-5 - Cyanide (CN)

>= 0.0000 for All Concentration Units - Hits Only

Sample ID	Ext. Orig. ID	Type	Date	Result	VQual	Units	SDG #
GDE-G-W24D-04	GDEGW24D04	Water	02/11/97	10.4000		UG/L	28438	VAL
GDE-G-W23D-02	GDEGW23D02	Water	08/06/96	11.9000		UG/L	26515	VAL
065-G-W003-01	065GW00301	Water	04/18/96	13.4000		UG/L	25330	VAL
GDE-G-W11D-03	GDEGW11D03	Water	11/07/96	14.4000	J	UG/L	27551	VAL
GDE-G-W01D-04	GDEGW01D04	Water	01/15/97	14.8000		UG/L	28179	VAL
GDE-G-W24D-03	GDEGW24D03	Water	12/02/96	16.2000		UG/L	27786	VAL
GDE-G-W023-03	GDEGW02303	Water	11/22/96	20.9000		UG/L	27754	VAL
GDE-G-W22D-02	GDEGW22D02	Water	08/02/96	23.2000		UG/L	26515	VAL
GDE-G-W22D-03	GDEGW22D03	Water	11/21/96	30.2000		UG/L	27716	VAL
GDE-G-W24D-02	GDEGW24D02	Water	08/05/96	32.8000		UG/L	26515	VAL
GDE-G-W05D-01	GDEGW05D01	Water	04/08/96	37.3000		UG/L	25193	VAL
GDE-G-W08D-03	GDEGW08D03	Water	11/05/96	41.8000		UG/L	27513	VAL
GDE-G-W06D-03	GDEGW06D03	Water	10/30/96	134.0000		UG/L	27464	VAL

*** End of Report ***

DATALCP3
04/17/97

CHARLESTON - ZONE E
Background Sample Results - 4 Rounds
Deep Groundwater, Wells 1D-25D

SW846-META													
	SAMPLE ID ------->	GDE-G-W01D-01		GDE-G-W01D-02		GDE-G-W01D-03		GDE-G-W01D-04		GDE-G-W02D-01		GDE-G-W02D-02	
	ORIGINAL ID ----->	GDEGW01D01		GDEGW01D02		GDEGW01D03		GDEGW01D04		GDEGW02D01		GDEGW02D02	
	LAB SAMPLE ID --->	25031.06		26214.01		27450.03		28179.04		25132.06		26253.01	
	ID FROM REPORT -->	GDEGW01D01		GDEGW01D02		GDEGW01D03		GDEGW01D04		GDEGW02D01		GDEGW02D02	
	SAMPLE DATE ----->	03/22/96		07/02/96		10/29/96		01/15/97		04/02/96		07/09/96	
	DATE EXTRACTED -->	03/28/96		07/23/96		10/31/96		01/17/97		04/04/96		07/15/96	
	DATE ANALYZED --->	04/04/96		07/24/96		11/01/96		01/27/97		04/10/96		07/24/96	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	25020	VAL	26203	VAL	27441	VAL	28179	VAL	25097	VAL	26253	VAL
7429-90-5	Aluminum (Al)	30.	U	23.	U	18.	U	18.	UJ	25.	U	18.	U
7440-36-0	Antimony (Sb)	4.	U	13.	U	2.3	U	2.4	U	4.	U	2.1	U
7440-38-2	Arsenic (As)	5.	U	3.3	U	2.6	J	2.5	UJ	5.	J	2.5	U
7440-39-3	Barium (Ba)	123.	U	102.	U	108.	J	111.	J	77.3	U	67.4	
7440-41-7	Beryllium (Be)	1.	U	0.5	U	0.63	J	0.49	J	1.	U	0.53	J
7440-43-9	Cadmium (Cd)	1.	U	2.2	U	0.5	U	0.5	U	1.	U	0.5	U
7440-70-2	Calcium (Ca)	357000.	U	332000.		339000.		357000.		181000.		170000.	J
7440-47-3	Chromium (Cr)	1.	U	2.2	U	0.8	U	0.8	U	1.	U	0.8	U
7440-48-4	Cobalt (Co)	5.	U	5.2	U	0.9	U	0.9	U	2.	U	0.9	U
7440-50-8	Copper (Cu)	2.	U	4.4	U	1.3	U	0.78	J	2.	U	0.6	U
7439-89-6	Iron (Fe)	20.	U	86.	J	77.	J	32.	U	4560.		4030.	J
7439-92-1	Lead (Pb)	3.	U	1.4	U	1.7	U	1.7	U	3.	U	1.7	U
7439-95-4	Magnesium (Mg)	246000.	U	218000.		240000.		258000.		384000.		361000.	
7439-96-5	Manganese (Mn)	865.	U	637.		705.		740.		314.		265.	J
7439-97-6	Mercury (Hg)	0.2	U	0.1	U	0.1	U	0.1	U	0.2	U	0.1	U
7440-02-0	Nickel (Ni)	2.5	U	1.7	J	1.8	U	2.5	J	2.7	J	2.6	J
7440-09-7	Potassium (K)	36000.	U	25000.		39800.		42600.		176000.		128000.	
7782-49-2	Selenium (Se)	5.	U	2.8	U	2.8	U	2.8	UJ	5.	U	2.8	UJ
7440-22-4	Silver (Ag)	2.	U	3.4	U	1.2	U	1.2	U	2.	U	3.4	U
7440-23-5	Sodium (Na)	2090000.	U	1770000.		1960000.		2000000.		4250000.		4000000.	
7440-28-0	Thallium (Tl)	5.	U	3.4	U	3.3	J	6.4	U	5.	U	3.6	J
7440-31-5	Tin (Sn)	20.	U	19.	U	2.7	J	2.6	U	20.	U	2.6	U
7440-62-2	Vanadium (V)	1.	U	3.4	U	0.57	U	0.5	U	4.8	J	3.4	U
7440-66-6	Zinc (Zn)	10.	U	6.9	U	5.3	U	5.3	U	4.	U	5.3	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results - 4 Rounds
Deep Groundwater, Wells 1D-25D

SW846-META													
	SAMPLE ID ------->	GDE-G-W02D-03		GDE-G-W02D-04		GDE-G-W03D-01		GDE-G-W03D-02		GDE-G-W03D-03		GDE-G-W03D-04	
	ORIGINAL ID ----->	GDEGW02D03		GDEGW02D04		GDEGW03D01		GDEGW03D02		GDEGW03D03		GDEGW03D04	
	LAB SAMPLE ID --->	27450.02		28506.05		25175.03		26253.02		27464.06		28179.05	
	ID FROM REPORT -->	GDEGW02D03		GDEGW02D04		GDEGW03D01		GDEGW03D02		GDEGW03D03		GDEGW03D04	
	SAMPLE DATE ----->	10/29/96		02/13/97		04/05/96		07/09/96		10/30/96		01/15/97	
	DATE EXTRACTED -->	10/31/96		02/22/97		04/09/96		07/15/96		11/04/96		01/17/97	
	DATE ANALYZED --->	11/01/96		02/24/97		04/11/96		07/24/96		11/06/96		01/27/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	27441	VAL	28482	VAL	25153	VAL	26253	VAL	27464	VAL	28179	VAL
429-90-5	Aluminum (Al)	18.	U	18.	U	25.	U	18.	U	18.	U	18.	UJ
7440-36-0	Antimony (Sb)	2.1	U	3.5	U	4.	U	2.1	U	2.1	U	3.1	U
7440-38-2	Arsenic (As)	4.5	J	2.8	J	5.	U	3.1	J	2.7	J	2.5	UJ
7440-39-3	Barium (Ba)	66.2	J	70.6	J	87.7	J	76.7		80.2	J	83.8	J
7440-41-7	Beryllium (Be)	0.7	J	0.31	J	1.	U	0.84	J	1.1	U	0.98	J
7440-43-9	Cadmium (Cd)	0.5	U	0.5	U	1.	U	0.61	J	0.5	U	0.5	U
7440-70-2	Calcium (Ca)	157000.		163000.		332000.	J	253000.	J	253000.		285000.	
7440-47-3	Chromium (Cr)	0.8	U	2.7	J	1.	U	1.3	J	0.97	J	0.8	U
7440-48-4	Cobalt (Co)	0.93	U	0.9	U	2.9	J	10.3	J	6.8	J	6.6	J
7440-50-8	Copper (Cu)	0.6	U	0.6	UJ	2.6	J	3.	U	0.6	UJ	0.6	U
7439-89-6	Iron (Fe)	3910.		4370.		403.	J	3450.	J	544.		881.	
7439-92-1	Lead (Pb)	1.7	U	1.7	U	3.	U	1.7	U	1.7	U	1.7	U
7439-95-4	Magnesium (Mg)	374000.		370000.		812000.		692000.		728000.		733000.	
7439-96-5	Manganese (Mn)	302.		345.		299.		710.	J	886.		900.	
7439-97-6	Mercury (Hg)	0.1	U	0.1	U	0.2	U	0.1	U	0.1	U	0.1	U
7440-02-0	Nickel (Ni)	2.5	U	11.4	J	22.8	J	29.5		15.4	J	17.7	J
7440-09-7	Potassium (K)	163000.		127000.		288000.		191000.		191000.		194000.	
7782-49-2	Selenium (Se)	2.8	U	2.8	U	5.	U	2.8	UJ	2.8	U	2.8	UJ
7440-22-4	Silver (Ag)	1.2	U	1.2	U	2.	U	3.4	U	1.2	U	1.2	U
440-23-5	Sodium (Na)	2320000.		3830000.		7900000.	J	7400000.		6140000.		7070000.	
7440-28-0	Thallium (Tl)	2.7	U	5.1	J	5.	U	6.	J	3.8	U	4.3	U
7440-31-5	Tin (Sn)	3.	J	4.	U	20.	U	2.6	U	2.6	U	2.8	U
7440-62-2	Vanadium (V)	5.3	J	3.9	J	1.	U	3.4	U	1.7	U	2.3	J
7440-66-6	Zinc (Zn)	5.3	U	5.3	U	21.4		5.7	U	5.3	U	5.3	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results - 4 Rounds
Deep Groundwater, Wells 1D-25D

SW846-META													
	SAMPLE ID ------->	GDE-G-W04D-01		GDE-H-W04D-01		GDE-G-W04D-02		GDE-H-W04D-02		GDE-G-W04D-03		GDE-H-W04D-03	
	ORIGINAL ID ----->	GDEGW04D01		GDEHW04D01		GDEGW04D02		GDEHW04D02		GDEGW04D03		GDEHW04D03	
	LAB SAMPLE ID --->	25228.09		25229.01		26267.01		26268.01		27464.09		27465.02	
	ID FROM REPORT -->	GDEGW04D01		GDEHW04D01		GDEGW04D02		GDEHW04D02		GDEGW04D03		GDEHW04D03	
	SAMPLE DATE ----->	04/10/96		04/10/96		07/10/96		07/10/96		10/30/96		10/30/96	
	DATE EXTRACTED -->	04/15/96		04/15/96		07/15/96		07/15/96		11/04/96		11/04/96	
	DATE ANALYZED --->	04/24/96		04/24/96		07/24/96		07/24/96		11/06/96		11/06/96	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	25228	VAL	25228	VAL	26253	VAL	26253	VAL	27464	VAL	27464	VAL
429-90-5	Aluminum (Al)	155.	J	166.	J	18.	U	18.	U	18.	U	18.	U
7440-36-0	Antimony (Sb)	6.	U	4.	U	2.1	U	2.1	U	2.1	U	2.1	U
7440-38-2	Arsenic (As)	5.	U	5.	U	2.5	U	2.5	U	3.8	J	2.5	U
7440-39-3	Barium (Ba)	76.3	J	77.4	J	64.9		65.3		63.6	J	66.3	J
7440-41-7	Beryllium (Be)	1.	U	1.	U	0.39	J	0.3	U	0.59	U	0.64	U
7440-43-9	Cadmium (Cd)	1.	U	1.8	J	0.61	J	0.5	U	0.5	U	0.5	U
7440-70-2	Calcium (Ca)	247000.	J	248000.		222000.	J	224000.		218000.		222000.	
7440-47-3	Chromium (Cr)	1.	U	2.	J	0.89	J	0.8	U	0.8	U	0.8	U
7440-48-4	Cobalt (Co)	2.3	J	2.	U	0.9	U	0.9	U	1.2	J	1.3	J
7440-50-8	Copper (Cu)	2.	U	2.	U	3.1	U	0.6	U	0.6	J	3.4	J
7439-89-6	Iron (Fe)	421.	J	491.		90.1	J	71.1	J	58.3	J	63.3	J
7439-92-1	Lead (Pb)	3.	U	3.	U	1.7	U	1.7	U	1.7	U	1.7	U
7439-95-4	Magnesium (Mg)	281000.	J	282000.		241000.		232000.		252000.		262000.	
7439-96-5	Manganese (Mn)	402.	J	405.		344.	J	348.		358.		368.	
7439-97-6	Mercury (Hg)	0.2	J	0.15	U	0.1	U	0.1	U	0.1	U	0.12	J
7440-02-0	Nickel (Ni)	4.6	J	5.5	J	4.5	J	3.7	J	3.3	J	7.4	J
7440-09-7	Potassium (K)	28200.		28700.		26900.		26500.		26900.		27500.	
7782-49-2	Selenium (Se)	5.	U	5.	U	2.8	UJ	2.8	UJ	2.8	U	2.8	U
7440-22-4	Silver (Ag)	2.	U	2.	U	3.4	U	3.4	U	1.2	U	3.4	U
440-23-5	Sodium (Na)	1920000.		1940000.		1860000.		1850000.		1570000.		1650000.	
7440-28-0	Thallium (Tl)	5.	U	5.	U	2.7	UJ	2.7	UJ	6.7	U	4.6	U
7440-31-5	Tin (Sn)	20.	U	20.	U	2.6	U	2.6	U	2.6	U	2.6	U
7440-62-2	Vanadium (V)	2.6	J	1.5	J	3.4	U	3.4	U	1.4	U	0.74	U
7440-66-6	Zinc (Zn)	4.4	J	4.7	J	6.6	U	5.3	U	5.3	U	7.1	J

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results - 4 Rounds
Deep Groundwater, Wells 1D-25D

SW846-META													
	SAMPLE ID ------->	GDE-G-W04D-04		GDE-H-W04D-04		GDE-G-W05D-01		GDE-G-W05D-02		GDE-G-W05D-03		GDE-G-W05D-04	
	ORIGINAL ID ----->	GDEGW04D04		GDEHW04D04		GDEGW05D01		GDEGW05D02		GDEGW05D03		GDEGW05D04	
	LAB SAMPLE ID --->	28179.06		28180.01		25193.06		26317.01		27464.07		28196.05	
	ID FROM REPORT -->	GDEGW04D04		GDEHW04D04		GDEGW05D01		GDEGW05D02		GDEGW05D03		GDEGW05D04	
	SAMPLE DATE ----->	01/15/97		01/15/97		04/08/96		07/16/96		10/30/96		01/16/97	
	DATE EXTRACTED -->	01/17/97		01/17/97		04/11/96		07/18/96		11/04/96		01/22/97	
	DATE ANALYZED --->	01/27/97		01/27/97		04/16/96		07/24/96		11/06/96		01/28/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	28179	VAL	28179	VAL	25193	VAL	26304	VAL	27464	VAL	28179	VAL
7429-90-5	Aluminum (Al)	31.5	J	32.3	J	319.		18.	U	18.	U	18.	UJ
7440-36-0	Antimony (Sb)	2.1	U	3.	U	4.	U	2.1	U	2.1	U	2.1	U
7440-38-2	Arsenic (As)	2.5	UJ	2.5	UJ	5.	U	3.9	U	4.	J	5.	J
7440-39-3	Barium (Ba)	66.1	J	68.4	J	87.9	U	79.7		89.	J	93.1	J
7440-41-7	Beryllium (Be)	0.49	J	0.46	J	1.	J	0.79	J	1.	U	1.2	J
7440-43-9	Cadmium (Cd)	0.5	U	0.5	U	1.	U	0.5	U	0.5	U	0.5	U
7440-70-2	Calcium (Ca)	226000.		233000.	J	195000.		180000.		215000.		238000.	
7440-47-3	Chromium (Cr)	0.8	U	1.	J	1.5	J	0.95	U	1.5	J	2.8	J
7440-48-4	Cobalt (Co)	0.97	U	1.2	U	2.	U	0.9	U	0.9	U	0.9	U
7440-50-8	Copper (Cu)	0.85	J	0.78	J	2.	U	1.1	U	0.6	UJ	0.6	U
7439-89-6	Iron (Fe)	32.	U	32.	U	332.		174.		33.8	J	52.5	J
7439-92-1	Lead (Pb)	1.7	U	1.7	U	3.	U	1.7	UJ	1.7	U	1.7	U
7439-95-4	Magnesium (Mg)	267000.		276000.		694000.		562000.		782000.		788000.	
7439-96-5	Manganese (Mn)	351.		363.		74.4		90.2		63.2		73.1	
7439-97-6	Mercury (Hg)	0.11	J	0.2	U	0.2	U	0.1	U	0.1	U	0.12	J
7440-02-0	Nickel (Ni)	3.9	J	4.6	J	1.	U	1.2	UJ	0.8	U	0.8	UJ
7440-09-7	Potassium (K)	41100.		43000.		217000.		196000.		232000.		236000.	
7782-49-2	Selenium (Se)	2.8	UJ	2.8	UJ	5.	U	2.8	UJ	2.8	U	2.8	UJ
7440-22-4	Silver (Ag)	1.2	U	1.2	U	2.	U	1.2	UJ	1.2	U	1.2	U
7440-23-5	Sodium (Na)	1700000.		1730000.		9090000.		5990000.		6560000.		7140000.	
7440-28-0	Thallium (Tl)	4.8	U	7.5	U	5.	U	2.7	UJ	5.6	U	2.9	U
7440-31-5	Tin (Sn)	3.3	U	3.4	U	20.	U	2.6	U	2.6	U	3.6	U
7440-62-2	Vanadium (V)	0.5	U	0.96	J	2.5	J	2.6	J	3.7	J	3.8	J
7440-66-6	Zinc (Zn)	5.3	U	5.3	U	4.	U	9.4	U	7.4	J	5.3	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results - 4 Rounds
Deep Groundwater, Wells 1D-25D

SW846-META													
	SAMPLE ID ------->	GDE-G-W06D-01		GDE-G-W06D-02		GDE-G-W06D-03		GDE-G-W06D-04		GDE-G-W07D-01		GDE-G-W07D-02	
	ORIGINAL ID ----->	GDEGW06D01		GDEGW06D02		GDEGW06D03		GDEGW06D04		GDEGW07D01		GDEGW07D02	
	LAB SAMPLE ID --->	25082.01		26339.01		27464.08		28196.06		25066.02		26356.02	
	ID FROM REPORT -->	GDEGW06D01		GDEGW06D02		GDEGW06D03		GDEGW06D04		GDEGW07D01		GDEGW07D02	
	SAMPLE DATE ----->	03/27/96		07/17/96		10/30/96		01/16/97		03/26/96		07/18/96	
	DATE EXTRACTED -->	03/29/96		07/28/96		11/04/96		01/22/97		03/29/96		07/28/96	
	DATE ANALYZED --->	04/04/96		07/30/96		11/06/96		01/28/97		04/04/96		08/04/96	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	25049	VAL	26304	VAL	27464	VAL	28179	VAL	25049	VAL	26356	VAL
7429-90-5	Aluminum (Al)	25.	U	18.	U	18.	U	118.	J	25.	U	32.4	J
7440-36-0	Antimony (Sb)	4.	U	2.1	U	2.1	U	2.1	U	4.	U	2.1	U
7440-38-2	Arsenic (As)	5.	U	2.5	U	2.7	J	3.7	J	18.7		132.	
7440-39-3	Barium (Ba)	180.	U	171.		156.	J	162.	J	101.	U	22.5	U
7440-41-7	Beryllium (Be)	1.	U	1.1	J	1.3	U	1.3	J	1.	U	0.44	U
7440-43-9	Cadmium (Cd)	1.	U	0.5	U	0.5	U	0.5	U	1.	U	0.5	U
7440-70-2	Calcium (Ca)	247000.	J	227000.		227000.		251000.		284000.	J	102000.	
7440-47-3	Chromium (Cr)	1.	U	0.8	U	1.8	J	2.9	J	1.	U	0.8	UJ
7440-48-4	Cobalt (Co)	2.	U	0.9	U	0.9	U	0.9	U	2.	U	0.9	U
7440-50-8	Copper (Cu)	2.	U	0.6	U	0.6	UJ	0.6	U	2.	UJ	0.6	UJ
7439-89-6	Iron (Fe)	20.	U	73.7	J	67.7	J	173.		6210.		26000.	
7439-92-1	Lead (Pb)	3.	U	1.7	UJ	1.7	U	1.7	U	3.	U	1.7	U
7439-95-4	Magnesium (Mg)	1130000.		823000.		950000.		959000.		1370000.		144000.	
7439-96-5	Manganese (Mn)	4.3	U	4.6	J	1.3	J	10.1	J	75.4		1660.	
7439-97-6	Mercury (Hg)	0.2	U	0.1	U	0.1	U	0.12	J	0.2	U	0.28	U
7440-02-0	Nickel (Ni)	1.	U	0.8	UJ	1.4	J	0.8	UJ	2.7	J	0.8	U
7440-09-7	Potassium (K)	247000.		256000.		236000.		229000.		276000.		80000.	U
7782-49-2	Selenium (Se)	5.	U	2.8	UJ	2.8	U	2.8	UJ	5.	UJ	2.8	U
7440-22-4	Silver (Ag)	2.	U	1.2	UJ	1.2	U	1.2	U	2.	U	1.2	U
7440-23-5	Sodium (Na)	8280000.		4950000.		6970000.		7410000.		11100000.		1190000.	
7440-28-0	Thallium (Tl)	5.	U	2.8	J	3.8	U	3.1	U	5.	UJ	4.8	U
7440-31-5	Tin (Sn)	20.	U	4.2	U	2.6	U	2.6	U	20.	U	4.2	U
7440-62-2	Vanadium (V)	1.	U	3.6	J	5.1	J	4.9	J	1.1	J	1.8	U
7440-66-6	Zinc (Zn)	4.	U	5.3	U	5.3	U	5.3	U	4.	UJ	5.3	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results - 4 Rounds
Deep Groundwater, Wells 1D-25D

SW846-META													
	SAMPLE ID ------->	GDE-G-W07D-03		GDE-G-W07D-04		GDE-G-W08D-01		GDE-G-W08D-02		GDE-G-W08D-03		GDE-G-W08D-04	
	ORIGINAL ID ----->	GDEGW07D03		GDEGW07D04		GDEGW08D01		GDEGW08D02		GDEGW08D03		GDEGW08D04	
	LAB SAMPLE ID --->	27507.05		28253.05		25132.08		26356.04		27513.06		28173.04	
	ID FROM REPORT -->	GDEGW07D03		GDEGW07D04		GDEGW08D01		GDEGW08D02		GDEGW08D03		GDEGW08D04	
	SAMPLE DATE ----->	11/04/96		01/22/97		04/02/96		07/18/96		11/05/96		01/14/97	
	DATE EXTRACTED -->	11/08/96		01/25/97		04/04/96		07/28/96		11/12/96		01/17/97	
	DATE ANALYZED --->	11/13/96		02/04/97		04/10/96		08/04/96		11/14/96		01/21/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	27488	VAL	28253	VAL	25097	VAL	26356	VAL	27513	VAL	28149	VAL
429-90-5	Aluminum (Al)	18.	U	18.	U	25.	U	11.	U	18.	UJ	23.	U
7440-36-0	Antimony (Sb)	2.1	U	3.6	U	4.	U	2.1	U	2.1	U	2.1	U
7440-38-2	Arsenic (As)	15.1		12.6	U	5.	U	2.5	UJ	2.5	U	3.	J
7440-39-3	Barium (Ba)	95.	J	97.2	J	200.	U	189.	U	190.	J	179.	J
7440-41-7	Beryllium (Be)	0.98	J	1.2	J	1.	U	0.95	U	1.2	U	1.1	U
7440-43-9	Cadmium (Cd)	0.5	U	0.5	U	1.	U	0.5	U	0.5	U	0.5	U
7440-70-2	Calcium (Ca)	350000.		289000.	J	212000.		213000.		245000.		238000.	
7440-47-3	Chromium (Cr)	10.1		27.1		1.	U	0.8	UJ	4.	U	3.3	U
7440-48-4	Cobalt (Co)	0.9	UJ	1.1	J	2.	U	0.9	U	0.9	U	1.2	J
7440-50-8	Copper (Cu)	1.4	U	0.6	U	2.	U	0.6	UJ	4.7	U	0.6	U
7439-89-6	Iron (Fe)	7180.		5640.		20.	U	80.3	U	32.	UJ	32.	UJ
7439-92-1	Lead (Pb)	1.7	U	1.7	U	3.	U	1.7	U	1.7	U	1.7	UJ
7439-95-4	Magnesium (Mg)	1250000.		1270000.	J	630000.		563000.		688000.		660000.	
7439-96-5	Manganese (Mn)	79.	J	82.4	J	106.		74.1		68.8		56.6	
7439-97-6	Mercury (Hg)	0.1	U	0.1	U	0.2	U	0.1	U	0.1	U	0.12	U
7440-02-0	Nickel (Ni)	5.4	J	12.3	J	1.	UJ	0.8	U	2.6	UJ	2.2	U
7440-09-7	Potassium (K)	263000.		290000.		239000.		196000.	J	172000.		169000.	
7782-49-2	Selenium (Se)	2.8	U	2.8	U	5.	U	2.8	U	2.8	UJ	2.8	UJ
7440-22-4	Silver (Ag)	1.2	U	2.	J	2.	U	1.2	U	1.7	U	1.2	UJ
440-23-5	Sodium (Na)	8820000.		9810000.		6620000.		4510000.		5300000.		5260000.	
7440-28-0	Thallium (Tl)	3.2	J	2.7	U	5.	U	2.7	U	4.5	U	6.5	J
7440-31-5	Tin (Sn)	2.6	U	7.4	U	20.	U	4.	U	2.6	U	2.9	U
7440-62-2	Vanadium (V)	0.5	U	2.	J	3.4	J	0.5	U	0.64	U	2.3	J
7440-66-6	Zinc (Zn)	5.3	U	5.3	U	4.	U	5.3	U	5.3	U	5.3	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results - 4 Rounds
Deep Groundwater, Wells 1D-25D

SW846-META													
	SAMPLE ID ------->	GDE-G-W09D-01		GDE-G-W09D-02		GDE-G-W09D-03		GDE-G-W09D-04		GDE-G-W10D-01		GDE-G-W10D-02	
	ORIGINAL ID ----->	GDEGW09D01		GDEGW09D02		GDEGW09D03		GDEGW09D04		GDEGW10D01		GDEGW10D02	
	LAB SAMPLE ID --->	25175.05		26368.02		27488.04		28149.05		25175.01		26382.02	
	ID FROM REPORT -->	GDEGW09D01		GDEGW09D02		GDEGW09D03		GDEGW09D04		GDEGW10D01		GDEGW10D02	
	SAMPLE DATE ----->	04/05/96		07/19/96		11/01/96		01/10/97		04/05/96		07/22/96	
	DATE EXTRACTED -->	04/09/96		07/28/96		11/08/96		01/14/97		04/09/96		08/07/96	
	DATE ANALYZED --->	04/11/96		08/04/96		11/13/96		01/15/97		04/11/96		08/11/96	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	25153	VAL	26356	VAL	27488	VAL	28149	VAL	25153	VAL	26382	VAL
7429-90-5	Aluminum (Al)	25.	U	125.		18.	U	23.	U	461.	J	18.	U
7440-36-0	Antimony (Sb)	4.	U	2.5	U	2.1	U	2.1	U	4.5	J	2.1	UJ
7440-38-2	Arsenic (As)	77.5		64.2		84.2		85.3		5.	U	2.5	U
7440-39-3	Barium (Ba)	96.	J	89.1	U	99.8	J	94.5	J	44.	J	183.	J
7440-41-7	Beryllium (Be)	1.	U	1.2	U	0.6	J	0.4	U	1.	U	0.89	U
7440-43-9	Cadmium (Cd)	1.	U	0.5	U	0.5	U	0.5	U	1.	U	0.5	U
7440-70-2	Calcium (Ca)	326000.	J	305000.		391000.		323000.		103000.	J	195000.	
7440-47-3	Chromium (Cr)	1.	U	0.8	UJ	0.81	J	0.8	U	1.	U	3.2	U
7440-48-4	Cobalt (Co)	14.2	J	10.2	J	12.8	J	11.2	J	2.	U	0.9	UJ
7440-50-8	Copper (Cu)	2.	UJ	0.6	UJ	1.4	U	0.6	U	2.	U	0.6	UJ
7439-89-6	Iron (Fe)	13500.	J	12300.		18300.		13000.		3600.	J	3020.	J
7439-92-1	Lead (Pb)	3.	U	2.1	U	1.7	U	1.7	UJ	3.	U	1.7	U
7439-95-4	Magnesium (Mg)	788000.		753000.		753000.		991000.		183000.		1090000.	
7439-96-5	Manganese (Mn)	665.		591.		793.	J	637.		263.		44.	
7439-97-6	Mercury (Hg)	0.2	U	0.1	U	0.1	U	0.21	U	0.2	U	0.1	U
7440-02-0	Nickel (Ni)	42.2		36.		45.9		39.7	J	1.	U	1.3	J
7440-09-7	Potassium (K)	176000.		121000.	J	119000.		159000.	J	145000.		351000.	
7782-49-2	Selenium (Se)	5.	U	2.8	U	2.8	U	2.8	UJ	5.	U	2.8	UJ
7440-22-4	Silver (Ag)	2.7	J	1.2	U	2.4	U	1.2	UJ	2.	U	1.2	UJ
7440-23-5	Sodium (Na)	7360000.	J	4620000.		6340000.		6350000.		2310000.	J	9790000.	
7440-28-0	Thallium (Tl)	5.	UJ	2.7	U	6.3	J	2.7	UJ	5.	U	2.7	UJ
7440-31-5	Tin (Sn)	20.	U	2.7	U	2.6	U	2.6	U	20.	U	2.7	J
7440-62-2	Vanadium (V)	1.2	J	0.5	U	0.5	U	0.5	UJ	7.7	J	3.5	J
7440-66-6	Zinc (Zn)	4.	UJ	5.3	U	5.3	U	7.3	U	4.	U	5.3	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results - 4 Rounds
Deep Groundwater, Wells 1D-25D

SW846-META													
	SAMPLE ID ------->	GDE-G-W10D-03		GDE-G-W10D-04		GDE-G-W11D-01		GDE-G-W11D-02		GDE-G-W11D-03		GDE-G-W11D-04	
	ORIGINAL ID ----->	GDEGW10D03		GDEGW10D04		GDEGW11D01		GDEGW11D02		GDEGW11D03		GDEGW11D04	
	LAB SAMPLE ID --->	27530.05		28235.08		25122.09		26399.02		27551.05		28210.08	
	ID FROM REPORT -->	GDEGW10D03		GDEGW10D04		GDEGW11D01		GDEGW11D02		GDEGW11D03		GDEGW11D04	
	SAMPLE DATE ----->	11/06/96		01/21/97		04/01/96		07/23/96		11/07/96		01/17/97	
	DATE EXTRACTED -->	11/12/96		01/25/97		04/03/96		07/29/96		11/16/96		01/22/97	
	DATE ANALYZED --->	11/14/96		02/04/97		04/10/96		08/05/96		11/19/96		01/28/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	27513	VAL	28210	VAL	25097	VAL	26382	VAL	27551	VAL	28210	VAL
429-90-5	Aluminum (Al)	18.	UJ	18.	UJ	25.	U	18.	U	18.	UJ	18.	UJ
7440-36-0	Antimony (Sb)	2.1	U	2.1	U	4.	U	2.1	UJ	2.1	U	2.1	U
7440-38-2	Arsenic (As)	2.5	U	3.1	U	5.	U	2.5	U	6.8	J	6.3	U
7440-39-3	Barium (Ba)	168.	J	172.	J	137.	U	135.	J	119.	J	124.	J
7440-41-7	Beryllium (Be)	1.9	U	1.2	U	1.	U	1.1	U	1.4	U	1.4	U
7440-43-9	Cadmium (Cd)	0.5	U	0.5	U	1.	U	0.5	U	0.5	U	0.5	U
7440-70-2	Calcium (Ca)	233000.		217000.		193000.		181000.		193000.		193000.	
7440-47-3	Chromium (Cr)	2.4	U	6.8	J	2.	J	1.6	U	3.8	J	6.5	U
7440-48-4	Cobalt (Co)	0.9	U	1.1	J	2.	U	0.9	UJ	0.9	U	0.9	U
7440-50-8	Copper (Cu)	1.6	U	0.6	U	2.	U	0.6	UJ	1.4	UJ	0.6	U
7439-89-6	Iron (Fe)	2860.		1600.		3640.		1820.	J	3550.		3280.	
7439-92-1	Lead (Pb)	1.7	U	1.7	UJ	3.	U	1.7	U	1.7	U	1.7	UJ
7439-95-4	Magnesium (Mg)	1170000.		1250000.		990000.		838000.		992000.		865000.	
7439-96-5	Manganese (Mn)	32.4		41.4		65.6		36.		55.2		61.4	
7439-97-6	Mercury (Hg)	0.1	U	0.1	U	0.2	U	0.1	U	0.1	U	0.1	U
7440-02-0	Nickel (Ni)	1.2	UJ	1.7	J	1.	UJ	0.8	UJ	1.3	J	0.8	UJ
7440-09-7	Potassium (K)	262000.		321000.	J	334000.		253000.		339000.	J	233000.	J
7782-49-2	Selenium (Se)	2.8	UJ	2.8	U	5.	U	2.8	UJ	2.8	U	2.8	U
7440-22-4	Silver (Ag)	5.7	U	1.2	U	2.	U	1.2	UJ	1.2	U	1.2	U
440-23-5	Sodium (Na)	9110000.		10000000.		9300000.		27300.		7630000.		7100000.	
7440-28-0	Thallium (Tl)	5.7	U	4.4	UJ	5.	U	2.7	UJ	8.4	UJ	5.3	UJ
7440-31-5	Tin (Sn)	2.6	U	7.7	U	20.	U	2.6	UJ	2.6	UJ	4.6	U
7440-62-2	Vanadium (V)	2.3	U	3.7	J	2.	J	0.5	U	1.5	U	2.3	J
7440-66-6	Zinc (Zn)	5.3	U	5.3	U	4.	U	5.3	U	5.3	U	5.3	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results - 4 Rounds
Deep Groundwater, Wells 1D-25D

SW846-META													
	SAMPLE ID ------->	GDE-G-W12D-01		GDE-G-W12D-02		GDE-G-W12D-03		GDE-G-W12D-04		GDE-G-W13D-01		GDE-G-W13D-02	
	ORIGINAL ID ----->	GDEGW12D01		GDEGW12D02		GDEGW12D03		GDEGW12D04		GDEGW13D01		GDEGW13D02	
	LAB SAMPLE ID --->	25153.04		26403.02		27618.05		28262.07		25208.02		26399.04	
	ID FROM REPORT -->	GDEGW12D01		GDEGW12D02		GDEGW12D03		GDEGW12D04		GDEGW13D01		GDEGW13D02	
	SAMPLE DATE ----->	04/03/96		07/24/96		11/13/96		01/23/97		04/09/96		07/23/96	
	DATE EXTRACTED -->	04/11/96		07/29/96		11/16/96		01/30/97		04/15/96		07/29/96	
	DATE ANALYZED --->	04/16/96		08/05/96		11/19/96		02/06/97		04/24/96		08/05/96	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	25153	VAL	26403	VAL	27551	VAL	28253	VAL	25193	VAL	26382	VAL
7429-90-5	Aluminum (Al)	25.	U	18.	UJ	18.	UJ	21.	J	25.	U	43.5	J
7440-36-0	Antimony (Sb)	4.	U	2.1	UJ	3.2	U	2.1	U	4.	U	2.1	UJ
7440-38-2	Arsenic (As)	10.4		13.3	U	16.4		13.8	U	5.5	J	2.5	U
7440-39-3	Barium (Ba)	91.5	J	93.1		120.	J	114.	J	62.5	U	65.7	J
7440-41-7	Beryllium (Be)	1.	U	0.68	U	0.82	U	0.3	U	1.	U	0.8	U
7440-43-9	Cadmium (Cd)	1.	U	0.5	U	0.5	U	0.5	U	1.	U	0.5	U
7440-70-2	Calcium (Ca)	101000.	J	102000.		130000.		116000.	J	221000.		212000.	
7440-47-3	Chromium (Cr)	1.	U	0.8	U	0.8	UJ	1.6	U	1.	U	0.88	U
7440-48-4	Cobalt (Co)	2.	U	0.9	UJ	0.9	U	0.9	U	12.9	J	2.8	J
7440-50-8	Copper (Cu)	2.	U	0.6	UJ	1.4	UJ	5.7	J	2.	U	0.74	UJ
7439-89-6	Iron (Fe)	6070.	J	7120.		9630.		6370.		4290.		1610.	J
7439-92-1	Lead (Pb)	3.	U	1.7	U	1.7	U	1.7	U	3.	U	1.7	U
7439-95-4	Magnesium (Mg)	98600.		90100.		139000.		120000.	J	31200.		31200.	
7439-96-5	Manganese (Mn)	321.		320.		416.		336.	J	834.		581.	
7439-97-6	Mercury (Hg)	0.2	U	0.1	U	0.1	U	0.1	U	0.2	U	0.1	U
7440-02-0	Nickel (Ni)	2.5	J	3.8	J	2.8	J	5.5	J	11.1	J	5.4	J
7440-09-7	Potassium (K)	49000.		57700.		80700.	J	52800.		4580.	J	6660.	
7782-49-2	Selenium (Se)	5.	U	2.8	U	2.8	U	2.8	U	5.	U	2.8	U
7440-22-4	Silver (Ag)	2.	U	1.2	UJ	1.9	U	1.2	U	2.	U	1.2	UJ
7440-23-5	Sodium (Na)	1130000.	J	961000.	J	1270000.		1220000.		447000.		266000.	
7440-28-0	Thallium (Tl)	5.	U	2.7	U	3.5	UJ	2.7	U	5.	U	3.4	J
7440-31-5	Tin (Sn)	20.	U	2.6	U	2.6	UJ	2.6	U	20.	U	2.6	U
7440-62-2	Vanadium (V)	1.	U	0.5	UJ	0.88	U	0.77	J	1.	U	1.9	U
7440-66-6	Zinc (Zn)	4.	U	5.3	U	5.3	U	9.9	J	13.5	U	8.9	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results - 4 Rounds
Deep Groundwater, Wells 1D-25D

SW846-META													
	SAMPLE ID ------->	GDE-G-W13D-03		GDE-G-W13D-04		GDE-G-W14D-01		GDE-G-W14D-02		GDE-G-W14D-03		GDE-G-W14D-04	
	ORIGINAL ID ----->	GDEGW13D03		GDEGW13D04		GDEGW14D01		GDEGW14D02		GDEGW14D03		GDEGW14D04	
	LAB SAMPLE ID --->	27600.07		28281.05		25515.02		26418.01		27639.05		28301.04	
	ID FROM REPORT -->	GDEGW13D03		GDEGW13D04		GDEGW14D01		GDEGW14D02		GDEGW14D03		GDEGW14D04	
	SAMPLE DATE ----->	11/12/96		01/24/97		05/07/96		07/25/96		11/14/96		01/27/97	
	DATE EXTRACTED -->	11/16/96		01/30/97		05/16/96		08/04/96		11/22/96		02/04/97	
	DATE ANALYZED --->	11/19/96		02/05/97		05/31/96		08/10/96		11/22/96		02/07/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	27551	VAL	28253	VAL	25477	VAL	26403	VAL	27639	VAL	28301	VAL
429-90-5	Aluminum (Al)	18.	UJ	18.	U	30.	U	18.	UJ	18.	U	18.	U
7440-36-0	Antimony (Sb)	3.9	U	2.7	U	4.	U	2.1	UJ	2.1	U	2.1	U
7440-38-2	Arsenic (As)	10.1		9.2	U	7.9	J	11.7	U	9.2	J	5.4	J
7440-39-3	Barium (Ba)	60.8	J	63.3	J	64.2	U	69.1		69.6		57.9	J
7440-41-7	Beryllium (Be)	0.9	U	0.34	J	1.	U	0.31	U	0.3	U	0.32	U
7440-43-9	Cadmium (Cd)	0.5	U	0.5	U	1.	U	0.5	U	0.5	U	0.5	U
7440-70-2	Calcium (Ca)	214000.		210000.	J	74200.		79400.		94000.		76700.	
7440-47-3	Chromium (Cr)	0.83	J	0.8	U	1.	U	1.2	U	5.3	J	0.8	U
7440-48-4	Cobalt (Co)	10.5	J	11.3	J	5.	U	2.5	UJ	2.6	J	2.2	J
7440-50-8	Copper (Cu)	1.4	UJ	0.6	U	2.	U	3.6	UJ	0.6	U	1.3	U
7439-89-6	Iron (Fe)	5990.		5600.		1240.		1810.		2170.		1420.	
7439-92-1	Lead (Pb)	1.7	U	1.7	U	3.	U	1.7	U	1.7	U	1.7	U
7439-95-4	Magnesium (Mg)	33800.		32100.	J	90100.		101000.		122000.		97800.	
7439-96-5	Manganese (Mn)	833.		819.	J	469.		518.		527.		406.	
7439-97-6	Mercury (Hg)	0.1	U	0.1	U	0.2	U	0.1	U	0.22	U	0.1	U
7440-02-0	Nickel (Ni)	7.4	J	7.1	J	3.8	J	5.8	J	8.5	J	4.9	J
7440-09-7	Potassium (K)	6440.	J	6400.		32500.		38200.	J	38400.		49000.	
7782-49-2	Selenium (Se)	2.8	U	2.8	U	5.	U	2.8	U	2.8	U	2.8	U
7440-22-4	Silver (Ag)	1.9	U	1.2	U	2.	U	1.2	UJ	1.2	UJ	1.2	U
440-23-5	Sodium (Na)	389000.		390000.		968000.	J	961000.		1090000.		1050000.	
7440-28-0	Thallium (Tl)	3.9	UJ	2.7	J	5.	U	5.1	U	3.6	J	3.9	U
7440-31-5	Tin (Sn)	2.6	UJ	3.5	U	20.	U	2.6	U	2.6	U	21.4	U
7440-62-2	Vanadium (V)	0.94	U	0.5	U	1.	U	0.5	UJ	0.57	J	0.52	J
7440-66-6	Zinc (Zn)	8.4	J	6.5	J	10.	U	5.3	U	5.3	U	6.9	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results - 4 Rounds
Deep Groundwater, Wells 1D-25D

SW846-META													
	SAMPLE ID ------->	GDE-G-W15D-01		GDE-G-W15D-02		GDE-G-W15D-03		GDE-G-W15D-04		GDE-G-W16D-01		GDE-G-W16D-02	
	ORIGINAL ID ----->	GDEGW15D01		GDEGW15D02		GDEGW15D03		GDEGW15D04		GDEGW16D01		GDEGW16D02	
	LAB SAMPLE ID --->	25569.04		26436.02		27639.06		28314.05		25250.05		26475.01	
	ID FROM REPORT -->	GDEGW15D01		GDEGW15D02		GDEGW15D03		GDEGW15D04		GDEGW16D01		GDEGW16D02	
	SAMPLE DATE ----->	05/10/96		07/26/96		11/14/96		01/28/97		04/12/96		07/30/96	
	DATE EXTRACTED -->	05/16/96		08/07/96		11/22/96		02/04/97		04/16/96		08/14/96	
	DATE ANALYZED --->	05/31/96		08/12/96		11/22/96		02/07/97		04/29/96		08/15/96	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	25532	VAL	26436	VAL	27639	VAL	28301	VAL	25250	VAL	26475	VAL
7429-90-5	Aluminum (Al)	23.	U	18.	U	18.	U	18.	U	55.	U	23.	U
7440-36-0	Antimony (Sb)	2.1	U	2.1	U	2.1	U	2.1	U	4.	U	2.4	U
7440-38-2	Arsenic (As)	29.1		34.5		37.3		38.8		10.6		13.9	
7440-39-3	Barium (Ba)	41.6		38.7	J	39.7		38.2	J	74.	U	126.	
7440-41-7	Beryllium (Be)	0.3	U	0.3	U	0.3	U	0.3	U	1.	U	0.3	U
7440-43-9	Cadmium (Cd)	0.5	U	0.5	U	0.5	U	0.5	U	1.	U	0.5	U
7440-70-2	Calcium (Ca)	45800.	J	56000.	J	61400.		57800.		91200.		85900.	
7440-47-3	Chromium (Cr)	2.2	U	0.8	U	0.8	U	0.8	U	1.	U	1.1	U
7440-48-4	Cobalt (Co)	0.9	U	0.9	UJ	0.9	U	0.9	U	2.	U	0.9	UJ
7440-50-8	Copper (Cu)	1.2	UJ	1.	U	0.6	U	0.91	U	2.	U	1.4	UJ
7439-89-6	Iron (Fe)	2020.		2620.	J	3070.		2610.		6130.		5350.	
7439-92-1	Lead (Pb)	1.7	U	1.7	U	1.7	U	1.7	U	3.	U	1.7	U
7439-95-4	Magnesium (Mg)	12400.		12700.	J	13400.		12500.		57100.		66800.	
7439-96-5	Manganese (Mn)	123.		129.	J	135.		144.		212.		153.	
7439-97-6	Mercury (Hg)	0.1	U	0.1	UJ	0.22	U	0.1	U	0.2	U	0.1	U
7440-02-0	Nickel (Ni)	1.8	U	1.4	U	0.8	U	0.8	U	1.7	J	2.6	U
7440-09-7	Potassium (K)	3740.	J	4500.	J	4920.	J	4930.	J	28300.		35600.	
7782-49-2	Selenium (Se)	2.8	UJ	2.8	U	2.8	U	2.8	U	5.	U	2.8	U
7440-22-4	Silver (Ag)	1.2	U	1.2	UJ	1.2	UJ	1.2	U	2.	U	3.4	U
7440-23-5	Sodium (Na)	146000.		1650000.		149000.		146000.		168000.		267000.	
7440-28-0	Thallium (Tl)	4.7	J	2.7	UJ	4.4	J	3.9	U	5.	U	3.2	U
7440-31-5	Tin (Sn)	4.5	U	2.6	U	2.6	U	27.2	U	20.	U	2.6	U
7440-62-2	Vanadium (V)	3.4	U	0.5	UJ	0.5	U	0.5	U	3.9	J	3.5	UJ
7440-66-6	Zinc (Zn)	11.8	J	5.3	U	5.3	U	6.9	U	4.	U	5.3	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results - 4 Rounds
Deep Groundwater, Wells 1D-25D

SW846-META													
	SAMPLE ID ------->	GDE-G-W16D-03		GDE-G-W16D-04		GDE-G-W17D-01		GDE-G-W17D-02		GDE-G-W17D-03		GDE-G-W17D-04	
	ORIGINAL ID ----->	GDEGW16D03		GDEGW16D04		GDEGW17D01		GDEGW17D02		GDEGW17D03		GDEGW17D04	
	LAB SAMPLE ID --->	27699.04		28346.02		25228.07		26467.04		27678.09		28367.08	
	ID FROM REPORT -->	GDEGW16D03		GDEGW16D04		GDEGW17D01		GDEGW17D02		GDEGW17D03		GDEGW17D04	
	SAMPLE DATE ----->	11/19/96		01/30/97		04/10/96		07/29/96		11/18/96		01/31/97	
	DATE EXTRACTED -->	11/23/96		02/07/97		04/15/96		08/14/96		11/23/96		02/07/97	
	DATE ANALYZED --->	11/26/96		02/19/97		04/24/96		08/15/96		11/26/96		02/19/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	27678	VAL	28346	VAL	25228	VAL	26436	VAL	27678	VAL	28346	VAL
7429-90-5	Aluminum (Al)	37.1	U	31.5	J	25.	U	23.	U	18.	U	18.	U
7440-36-0	Antimony (Sb)	2.1	U	2.8	U	4.	U	2.1	U	2.8	J	2.1	U
7440-38-2	Arsenic (As)	10.7		6.2	J	9.9	J	7.7	J	6.6	J	4.	J
7440-39-3	Barium (Ba)	138.	J	67.5	J	62.2	J	56.1		62.9	J	53.9	J
7440-41-7	Beryllium (Be)	0.3	U	0.3	U	1.	U	0.3	U	0.33	J	0.3	U
7440-43-9	Cadmium (Cd)	0.5	U	0.5	U	1.	U	0.5	U	0.5	U	0.5	U
7440-70-2	Calcium (Ca)	114000.		68600.		70900.	J	75600.		77800.		66200.	
7440-47-3	Chromium (Cr)	0.93	U	0.94	J	1.	U	2.2	U	0.8	U	0.8	U
7440-48-4	Cobalt (Co)	0.9	U	0.9	U	2.	U	0.9	UJ	0.9	U	1.1	J
7440-50-8	Copper (Cu)	0.6	U	0.6	U	2.	U	1.4	U	0.6	U	0.6	U
7439-89-6	Iron (Fe)	2330.		2420.		580.	J	734.		798.		670.	
7439-92-1	Lead (Pb)	1.7	U	1.7	U	3.	U	1.7	U	1.7	U	1.7	U
7439-95-4	Magnesium (Mg)	137000.		5410D.		7560.	J	7350.		7380.		6240.	
7439-96-5	Manganese (Mn)	149.		100.		119.	J	126.		130.		104.	
7439-97-6	Mercury (Hg)	0.2	U	0.1	U	0.2	J	0.1	UJ	0.2	U	0.1	U
7440-02-0	Nickel (Ni)	2.4	U	1.8	J	1.	U	1.2	U	0.8	U	1.1	J
7440-09-7	Potassium (K)	55800.	J	28900.		2340.	J	2230.	J	2350.	J	1970.	J
7782-49-2	Selenium (Se)	2.8	U	2.8	U	5.	U	2.8	U	2.8	U	2.8	U
7440-22-4	Silver (Ag)	1.2	UJ	1.2	U	2.	U	3.4	UJ	1.2	UJ	1.2	U
7440-23-5	Sodium (Na)	732000.		270000.		1030000.		32500.		41000.		34600.	
7440-28-0	Thallium (Tl)	2.7	U	4.2	U	5.	U	2.7	UJ	2.7	U	3.6	U
7440-31-5	Tin (Sn)	5.4	U	2.6	U	20.	U	2.6	U	2.6	U	2.6	U
7440-62-2	Vanadium (V)	4.8	J	3.4	J	1.	U	0.5	UJ	0.5	U	0.5	U
7440-66-6	Zinc (Zn)	5.3	U	10.	U	9.6	J	18.2	U	6.5	U	7.8	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results - 4 Rounds
Deep Groundwater, Wells 1D-25D

SW846-META													
	SAMPLE ID ------->	GDE-G-W18D-01		GDE-G-W18D-02		GDE-G-W18D-03		GDE-G-W18D-04		GDE-G-W19D-01		GDE-H-W19D-01	
	ORIGINAL ID ----->	GDEGW18D01		GDEGW18D02		GDEGW18D03		GDEGW18D04		GDEGW19D01		GDEHW19D01	
	LAB SAMPLE ID --->	25463.04		26475.03		27652.09		28331.04		25297.09		25298.02	
	ID FROM REPORT -->	GDEGW18D01		GDEGW18D02		GDEGW18D03		GDEGW18D04		GDEGW19D01		GDEHW19D01	
	SAMPLE DATE ----->	05/02/96		07/30/96		11/15/96		01/29/97		04/16/96		04/16/96	
	DATE EXTRACTED -->	05/08/96		08/14/96		11/22/96		02/04/97		05/02/96		05/02/96	
	DATE ANALYZED --->	05/14/96		08/15/96		11/22/96		02/07/97		05/06/96		05/06/96	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	25425	VAL	26475	VAL	27639	VAL	28301	VAL	25297	VAL	25297	VAL
7429-90-5	Aluminum (Al)	21.9	U	24.8	J	18.	U	18.	U	30.	U	18.	U
7440-36-0	Antimony (Sb)	2.1	U	2.8	U	2.1	U	2.1	U	6.8	J	4.	U
7440-38-2	Arsenic (As)	2.5	U	2.5	U	2.5	UJ	2.5	U	5.	U	5.	U
7440-39-3	Barium (Ba)	31.7	U	28.2		39.2		49.9	J	11.2	U	11.2	U
7440-41-7	Beryllium (Be)	0.31	J	0.37	J	0.39	J	0.35	U	1.	U	1.	U
7440-43-9	Cadmium (Cd)	0.5	U	0.5	U	0.5	U	0.5	U	1.	U	1.	U
7440-70-2	Calcium (Ca)	158000.		153000.		164000.		158000.		112000.		111000.	
7440-47-3	Chromium (Cr)	0.8	U	1.	U	0.8	U	0.8	U	1.5	J	1.	U
7440-48-4	Cobalt (Co)	0.9	U	0.9	U	0.9	U	0.9	U	2.	U	2.	U
7440-50-8	Copper (Cu)	3.8	U	1.4	UJ	1.3	U	0.6	U	10.	U	3.	U
7439-89-6	Iron (Fe)	500.	J	110.	U	2120.		5300.		226.		240.	
7439-92-1	Lead (Pb)	1.7	U	1.7	U	1.7	U	1.7	U	3.	U	3.	U
7439-95-4	Magnesium (Mg)	11900.		10700.		14700.		15900.		7330.		7150.	
7439-96-5	Manganese (Mn)	173.	J	145.		263.		297.		48.8		47.2	
7439-97-6	Mercury (Hg)	0.1	UJ	0.1	U	0.29	U	0.1	U	0.2	U	0.2	U
7440-02-0	Nickel (Ni)	0.8	U	0.99	U	0.8	U	0.8	U	1.2	J	1.	U
7440-09-7	Potassium (K)	6790.	UJ	3560.	J	4230.	J	4790.	J	3570.	J	3290.	J
7782-49-2	Selenium (Se)	2.8	UJ	2.8	U	2.8	U	2.8	U	5.	U	5.	U
7440-22-4	Silver (Ag)	1.2	U	3.4	U	1.2	UJ	1.2	U	2.	U	2.	U
7440-23-5	Sodium (Na)	193000.		165000.		179000.		200000.		95300.	U	88000.	UJ
7440-28-0	Thallium (Tl)	2.7	U	2.7	U	2.7	UJ	2.7	U	5.	U	5.	U
7440-31-5	Tin (Sn)	2.6	U	2.6	U	2.6	U	19.7	U	20.	U	20.	U
7440-62-2	Vanadium (V)	0.5	U	0.5	UJ	0.5	U	0.5	U	1.	U	1.	U
7440-66-6	Zinc (Zn)	7.9	U	5.3	U	5.3	U	8.4	U	5.3	U	5.1	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results - 4 Rounds
Deep Groundwater, Wells 1D-25D

SW846-META													
	SAMPLE ID ------->	GDE-G-W19D-02		GDE-H-W19D-02		GDE-G-W19D-03		GDE-H-W19D-03		GDE-G-W19D-04		GDE-H-W19D-04	
	ORIGINAL ID ----->	GDEGW19D02		GDEHW19D02		GDEGW19D03		GDEHW19D03		GDEGW19D04		GDEHW19D04	
	LAB SAMPLE ID --->	26490.02		26491.01		27699.06		27700.04		28390.03		28391.04	
	ID FROM REPORT -->	GDEGW19D02		GDEHW19D02		GDEGW19D03		GDEHW19D03		GDEGW19D04		GDEHW19D04	
	SAMPLE DATE ----->	07/31/96		07/31/96		11/19/96		11/19/96		02/03/97		02/03/97	
	DATE EXTRACTED -->	08/16/96		08/16/96		11/23/96		11/23/96		02/07/97		02/07/97	
	DATE ANALYZED --->	08/20/96		08/20/96		11/26/96		11/26/96		02/19/97		02/19/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	26475	VAL	26475	VAL	27678	VAL	27678	VAL	28346	VAL	28346	VAL
7429-90-5	Aluminum (Al)	35.1	J	32.5	J	26.	U	25.3	U	18.5	J	23.1	J
7440-36-0	Antimony (Sb)	2.1	U	2.6	U	2.1	U	2.1	U	2.1	U	2.1	U
7440-38-2	Arsenic (As)	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
7440-39-3	Barium (Ba)	12.		12.2		12.1	J	12.1	J	11.8	J	11.9	J
7440-41-7	Beryllium (Be)	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
7440-43-9	Cadmium (Cd)	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
7440-70-2	Calcium (Ca)	105000.		108000.		108000.		109000.		107000.		106000.	
7440-47-3	Chromium (Cr)	0.95	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U
7440-48-4	Cobalt (Co)	0.9	U	1.6	U	0.9	U	0.9	U	0.9	U	0.9	U
7440-50-8	Copper (Cu)	5.3	UJ	1.1	UJ	0.6	U	0.6	U	0.64	U	0.6	U
7439-89-6	Iron (Fe)	360.		323.	U	185.		189.		160.		148.	
7439-92-1	Lead (Pb)	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U
7439-95-4	Magnesium (Mg)	7470.		7740.		7140.		7270.		7080.		6940.	
7439-96-5	Manganese (Mn)	53.1		54.5		41.9		42.6		40.6		39.9	
7439-97-6	Mercury (Hg)	0.1	U	0.1	U	0.2	U	0.1	U	0.1	U	0.1	U
7440-02-0	Nickel (Ni)	1.6	U	1.3	U	0.8	U	0.8	U	0.8	U	0.8	U
7440-09-7	Potassium (K)	3470.	J	3560.	J	3560.	J	3540.	J	3650.	J	3690.	J
7782-49-2	Selenium (Se)	2.8	U	2.8	U	2.8	U	2.8	U	2.8	U	2.8	U
7440-22-4	Silver (Ag)	3.4	U	2.4	U	1.2	UJ	1.2	UJ	1.2	U	1.2	U
7440-23-5	Sodium (Na)	83700.		84900.		42800.	J	86300.	J	84400.		80700.	
7440-28-0	Thallium (Tl)	2.7	U	2.7	U	6.8	U	2.7	U	4.8	U	4.9	U
7440-31-5	Tin (Sn)	2.6	U	2.6	U	2.6	U	2.9	U	2.6	U	2.6	U
7440-62-2	Vanadium (V)	0.5	UJ	0.7	U	0.5	U	0.79	U	0.5	U	0.5	U
7440-66-6	Zinc (Zn)	13.3	U	14.1	U	5.3	U	8.5	U	6.2	U	8.1	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results - 4 Rounds
Deep Groundwater, Wells 1D-25D

SW846-META													
	SAMPLE ID ------->	GDE-G-W20D-01		GDE-G-W20D-02		GDE-G-W20D-03		GDE-G-W20D-04		GDE-G-W21D-01		GDE-G-W21D-02	
	ORIGINAL ID ----->	GDEGW20D01		GDEGW20D02		GDEGW20D03		GDEGW20D04		GDEGW21D01		GDEGW21D02	
	LAB SAMPLE ID --->	25385.04		26513.02		27716.06		28394.05		25284.02		26513.04	
	ID FROM REPORT -->	GDEGW20D01		GDEGW20D02		GDEGW20D03		GDEGW20D04		GDEGW21D01		GDEGW21D02	
	SAMPLE DATE ----->	04/24/96		08/01/96		11/20/96		02/04/97		04/15/96		08/01/96	
	DATE EXTRACTED -->	04/30/96		08/16/96		11/27/96		02/11/97		04/19/96		08/16/96	
	DATE ANALYZED --->	05/08/96		08/20/96		12/02/96		02/20/97		05/02/96		08/20/96	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	25361	VAL	26475	VAL	27716	VAL	28394	VAL	25250	VAL	26475	VAL
7429-90-5	Aluminum (Al)	25.	U	21.6	J	18.	U	18.	U	30.	U	30.1	J
7440-36-0	Antimony (Sb)	4.	U	2.1	U	3.4	U	2.1	U	4.	U	2.1	U
7440-38-2	Arsenic (As)	5.	U	2.5	U	2.5	UJ	2.5	U	5.	U	2.5	U
7440-39-3	Barium (Ba)	32.	J	31.5		27.9	J	26.8	J	51.2	U	48.5	
7440-41-7	Beryllium (Be)	1.	U	0.3	U	0.3	U	0.3	U	1.	U	0.3	U
7440-43-9	Cadmium (Cd)	1.	U	0.5	U	0.5	U	0.5	U	1.	U	0.5	U
7440-70-2	Calcium (Ca)	68700.		73100.		75700.		71300.		180000.		182000.	
7440-47-3	Chromium (Cr)	5.	U	0.8	U	1.2	J	0.8	U	1.	U	0.8	U
7440-48-4	Cobalt (Co)	2.	U	0.9	U	0.9	U	0.9	U	2.	U	0.9	U
7440-50-8	Copper (Cu)	2.	U	0.6	UJ	0.6	UJ	0.6	UJ	2.	U	0.6	UJ
7439-89-6	Iron (Fe)	383.		424.		365.	J	299.		1320.		1010.	
7439-92-1	Lead (Pb)	3.	U	1.7	U	1.7	U	2.1	J	3.	U	1.7	U
7439-95-4	Magnesium (Mg)	9000.		9790.		9860.		9240.		19400.		19500.	
7439-96-5	Manganese (Mn)	101.		95.4		97.5		93.4		168.		126.	
7439-97-6	Mercury (Hg)	0.2	U	0.1	U	0.2	U	0.1	U	0.2	U	0.1	U
7440-02-0	Nickel (Ni)	1.	U	0.8	U	1.3	J	0.8	U	1.	U	1.	U
7440-09-7	Potassium (K)	4600.	J	4830.	J	5120.		4940.	J	8310.	U	8040.	
7782-49-2	Selenium (Se)	5.	U	2.8	U	2.8	U	2.8	U	5.	U	3.	U
7440-22-4	Silver (Ag)	2.	UJ	1.2	U	1.2	UJ	1.2	UJ	2.	U	1.2	U
7440-23-5	Sodium (Na)	133000.		112000.		112000.		109000.		203000.		241000.	
7440-28-0	Thallium (Tl)	5.	U	2.7	U	2.7	UJ	2.7	UJ	5.	U	2.7	U
7440-31-5	Tin (Sn)	20.	U	2.6	U	4.3	U	2.6	U	20.	U	2.6	U
7440-62-2	Vanadium (V)	1.	U	0.5	UJ	0.5	UJ	0.5	U	1.	U	0.5	UJ
7440-66-6	Zinc (Zn)	4.	U	74.4	U	5.3	U	5.3	U	4.	U	5.9	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results - 4 Rounds
Deep Groundwater, Wells 1D-25D

SW846-META													
	SAMPLE ID ------->	GDE-G-W21D-03		GDE-G-W21D-04		GDE-G-W22D-01		GDE-G-W22D-02		GDE-G-W22D-03		GDE-G-W22D-04	
	ORIGINAL ID ----->	GDEGW21D03		GDEGW21D04		GDEGW22D01		GDEGW22D02		GDEGW22D03		GDEGW22D04	
	LAB SAMPLE ID --->	27716.08		28404.06		25250.02		26515.02		27737.02		28418.02	
	ID FROM REPORT -->	GDEGW21D03		GDEGW21D04		GDEGW22D01		GDEGW22D02		GDEGW22D03		GDEGW22D04	
	SAMPLE DATE ----->	11/20/96		02/05/97		04/12/96		08/02/96		11/21/96		02/06/97	
	DATE EXTRACTED -->	11/27/96		02/11/97		04/16/96		08/20/96		11/27/96		02/11/97	
	DATE ANALYZED --->	12/01/96		02/20/97		04/29/96		08/22/96		12/01/96		02/20/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	27716	VAL	28394	VAL	25250	VAL	26515	VAL	27716	VAL	28394	VAL
7429-90-5	Aluminum (Al)	18.	U	18.	U	30.	U	34.4	J	18.	U	18.	U
7440-36-0	Antimony (Sb)	3.9	U	2.1	U	4.	U	15.5	U	3.3	U	2.1	U
7440-38-2	Arsenic (As)	2.5	UJ	2.5	U	5.	U	2.5	UJ	3.2	J	2.5	U
7440-39-3	Barium (Ba)	48.7	J	44.2	J	270.	U	221.		182.	J	142.	J
7440-41-7	Beryllium (Be)	0.3	U	0.38	J	1.	U	0.5	U	0.39	J	0.46	J
7440-43-9	Cadmium (Cd)	0.5	U	0.5	U	1.	U	2.2	U	0.5	U	0.5	U
7440-70-2	Calcium (Ca)	194000.		176000.		146000.		162000.		150000.		129000.	
7440-47-3	Chromium (Cr)	0.8	U	0.8	U	1.	U	2.2	UJ	1.2	J	0.8	U
7440-48-4	Cobalt (Co)	0.9	U	0.9	U	2.	U	5.2	U	0.9	U	0.9	U
7440-50-8	Copper (Cu)	0.6	UJ	0.6	UJ	2.	U	9.6	UJ	0.6	UJ	1.	J
7439-89-6	Iron (Fe)	485.	J	346.		25.6	U	37.7	U	32.	U	32.	U
7439-92-1	Lead (Pb)	1.7	U	1.7	U	3.	U	1.7	UJ	1.7	U	1.7	U
7439-95-4	Magnesium (Mg)	21100.		18900.		246000.		263000.		259000.		222000.	
7439-96-5	Manganese (Mn)	112.		106.		551.		409.	J	393.		323.	
7439-97-6	Mercury (Hg)	0.2	U	0.1	U	0.2	U	0.1	U	0.2	U	0.1	U
7440-02-0	Nickel (Ni)	1.	J	0.8	U	1.	U	5.3	U	1.2	J	0.8	U
7440-09-7	Potassium (K)	9920.		9130.		125000.		96900.		88600.		88400.	
7782-49-2	Selenium (Se)	3.6	J	2.8	U	5.	U	2.8	U	3.2	J	2.8	U
7440-22-4	Silver (Ag)	1.2	UJ	1.2	UJ	2.1	U	3.4	U	1.2	UJ	1.2	UJ
7440-23-5	Sodium (Na)	283000.		267000.		2540000.		2410000.		2490000.		2270000.	
7440-28-0	Thallium (Tl)	4.2	UJ	2.7	UJ	5.	U	3.6	J	3.6	UJ	2.9	UJ
7440-31-5	Tin (Sn)	4.	U	3.3	J	20.	U	19.	U	2.6	U	2.6	U
7440-62-2	Vanadium (V)	0.5	UJ	0.5	U	3.8	J	4.8	J	1.5	J	0.67	J
7440-66-6	Zinc (Zn)	5.7	U	5.3	U	4.	U	6.9	U	5.3	U	5.3	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results - 4 Rounds
Deep Groundwater, Wells 1D-25D

SW846-META													
	SAMPLE ID ------->	GDE-G-W23D-01		GDE-G-W23D-02		GDE-G-W23D-03		GDE-G-W23D-04		GDE-G-W24D-01		GDE-G-W24D-02	
	ORIGINAL ID ----->	GDEGW23D01		GDEGW23D02		GDEGW23D03		GDEGW23D04		GDEGW24D01		GDEGW24D02	
	LAB SAMPLE ID --->	25238.04		26541.02		27754.06		28438.02		25284.03		26528.02	
	ID FROM REPORT -->	GDEGW23D01		GDEGW23D02		GDEGW23D03		GDEGW23D04		GDEGW24D01		GDEGW24D02	
	SAMPLE DATE ----->	04/11/96		08/06/96		11/22/96		02/07/97		04/15/96		08/05/96	
	DATE EXTRACTED -->	04/17/96		08/20/96		12/04/96		02/20/97		04/19/96		08/20/96	
	DATE ANALYZED --->	04/30/96		08/22/96		12/08/96		02/21/97		05/02/96		08/22/96	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	25228	VAL	26515	VAL	27754	VAL	28438	VAL	25250	VAL	26515	VAL
7429-90-5	Aluminum (Al)	57.6	J	229.		18.	U	23.	U	30.	U	68.2	J
7440-36-0	Antimony (Sb)	4.	U	21.4	U	2.1	U	2.1	U	4.	U	16.6	U
7440-38-2	Arsenic (As)	5.	U	3.2	J	2.5	U	2.9	J	5.	U	12.5	J
7440-39-3	Barium (Ba)	322.		264.		246.		229.		158.	U	142.	
7440-41-7	Beryllium (Be)	1.	U	0.5	U	0.61	J	0.38	U	1.	U	0.5	U
7440-43-9	Cadmium (Cd)	1.	U	2.2	U	0.5	U	0.5	U	1.	U	2.2	U
7440-70-2	Calcium (Ca)	184000.	J	210000.		194000.		203000.		238000.		252000.	
7440-47-3	Chromium (Cr)	1.	U	15.5		1.4	J	0.8	U	1.	U	2.2	UJ
7440-48-4	Cobalt (Co)	2.	U	5.2	U	1.1	J	0.9	U	2.	U	5.2	U
7440-50-8	Copper (Cu)	2.7	J	4.3	UJ	0.6	U	0.64	U	2.	U	5.6	UJ
7439-89-6	Iron (Fe)	224.	J	388.		32.	UJ	19.2	J	20.	U	71.2	U
7439-92-1	Lead (Pb)	3.	U	3.	J	1.7	UJ	1.7	U	3.	U	1.7	UJ
7439-95-4	Magnesium (Mg)	367000.	J	376000.		410000.		342000.		364000.		341000.	
7439-96-5	Manganese (Mn)	205.	J	197.	J	175.	J	166.		615.		646.	J
7439-97-6	Mercury (Hg)	0.2	J	0.12	J	0.2	U	0.1	U	0.2	U	0.14	J
7440-02-0	Nickel (Ni)	1.	U	5.5	J	1.2	J	0.83	U	1.	U	5.3	U
7440-09-7	Potassium (K)	116000.		125000.		123000.		121000.		95300.		87000.	J
7782-49-2	Selenium (Se)	5.	U	2.8	U	2.8	UJ	2.8	U	5.	U	2.8	U
7440-22-4	Silver (Ag)	2.	U	3.4	U	1.2	U	1.2	U	2.	U	3.4	U
7440-23-5	Sodium (Na)	4630000.		3680000.		4380000.		3940000.		3450000.		2930000.	
7440-28-0	Thallium (Tl)	5.	U	6.	J	3.8	U	4.	U	5.	U	4.5	J
7440-31-5	Tin (Sn)	20.	U	19.	U	2.6	U	2.6	U	20.	U	19.	U
7440-62-2	Vanadium (V)	5.2	J	5.6	J	2.2	J	1.6	J	1.5	J	3.4	U
7440-66-6	Zinc (Zn)	4.	U	6.9	U	5.3	U	12.	U	4.	U	6.9	U

*** Validation Complete ***

CHARLESTON - ZONE E
Background Sample Results - 4 Rounds
Deep Groundwater, Wells 1D-25D

SW846-META													
	SAMPLE ID ------->	GDE-G-W24D-03		GDE-G-W24D-04		GDE-G-W25D-01		GDE-G-W25D-02		GDE-G-W25D-03		GDE-G-W25D-04	
	ORIGINAL ID ----->	GDEGW24D03		GDEGW24D04		GDEGW25D01		GDEGW25D02		GDEGW25D03		GDEGW25D04	
	LAB SAMPLE ID --->	27811.05		28466.04		25284.08		26556.01		27827.06		28482.05	
	ID FROM REPORT -->	GDEGW24D03		GDEGW24D04		GDEGW25D01		GDEGW25D02		GDEGW25D03		GDEGW25D04	
	SAMPLE DATE ----->	12/02/96		02/11/97		04/15/96		08/07/96		12/03/96		02/12/97	
	DATE EXTRACTED -->	12/04/96		02/20/97		04/19/96		08/21/96		12/06/96		02/22/97	
	DATE ANALYZED --->	12/10/96		02/21/97		05/02/96		08/26/96		12/17/96		02/24/97	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A	UG/L	A
CAS #	Parameter	27786	VAL	28438	VAL	25250	VAL	26515	VAL	27827	VAL	28482	VAL
7429-90-5	Aluminum (Al)	18.	U	23.	U	30.	U	23.	U	18.	U	18.	U
7440-36-0	Antimony (Sb)	2.1	U	2.1	U	4.	U	2.1	U	2.1	U	2.1	U
7440-38-2	Arsenic (As)	15.5		11.4		5.	U	2.5	UJ	4.2	J	2.5	U
7440-39-3	Barium (Ba)	146.	J	141.	J	33.5	U	28.9		31.4	J	30.	J
7440-41-7	Beryllium (Be)	0.93	U	0.3	U	1.	U	0.46	U	0.31	J	0.3	U
7440-43-9	Cadmium (Cd)	0.5	U	0.5	U	1.	U	0.5	U	0.5	U	0.5	U
7440-70-2	Calcium (Ca)	225000.		248000.		145000.		146000.		151000.		143000.	
7440-47-3	Chromium (Cr)	0.8	U	0.8	U	1.	U	0.8	UJ	4.4	U	1.2	J
7440-48-4	Cobalt (Co)	0.9	U	0.9	U	2.	U	0.9	U	1.6	J	0.9	U
7440-50-8	Copper (Cu)	0.69	U	0.6	U	2.	U	25.1	UJ	1.	UJ	1.	UJ
7439-89-6	Iron (Fe)	32.	U	42.6	J	660.		541.		660.		647.	
7439-92-1	Lead (Pb)	1.7	U	1.7	U	3.	U	1.7	UJ	1.7	U	1.7	U
7439-95-4	Magnesium (Mg)	375000.		315000.		26900.		26200.		28600.		26700.	
7439-96-5	Manganese (Mn)	686.		617.		347.		326.	J	374.		352.	
7439-97-6	Mercury (Hg)	0.1	U	0.1	U	0.2	U	0.1	U	0.1	U	0.17	J
7440-02-0	Nickel (Ni)	0.8	U	0.8	U	1.	U	1.2	J	2.8	U	1.1	J
7440-09-7	Potassium (K)	128000.		95400.		12000.	U	12900.		14700.		13300.	
7782-49-2	Selenium (Se)	2.8	U	2.8	U	5.	U	2.8	U	2.8	U	2.8	U
7440-22-4	Silver (Ag)	1.5	U	1.2	U	2.	U	3.4	U	1.2	U	1.2	U
7440-23-5	Sodium (Na)	3080000.		3050000.		388000.		356000.		410000.		393000.	
7440-28-0	Thallium (Tl)	4.7	U	5.2	U	5.	U	2.7	U	7.4	J	2.7	U
7440-31-5	Tin (Sn)	2.6	U	2.6	U	20.	U	2.6	U	2.6	U	3.6	U
7440-62-2	Vanadium (V)	0.5	UJ	0.7	J	1.	U	0.5	U	0.5	U	0.5	U
7440-66-6	Zinc (Zn)	5.3	U	9.9	U	5.5	U	7.4	U	8.1	J	13.4	J

*** Validation Complete ***

5-22-97

NOTE: Enclosed are materials related to background reference values for groundwater in Zone E. If everyone's schedule allows, we will be going over these background numbers via teleconference on June 2nd or 3rd. Materials for Zone I background should follow later that week. I will be out the week of May 26-30 on vacation.

Barry