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CNC CHARLESTON
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ZONE C BACKGROUND INFORMATION 1997 CNC CHARLESTON SC
12/1/1997
NAVFAC SOUTHERN

ZONE C BACKGROUND

Zone C: Proposed background reference values for soil and groundwater 5-12-97

Background reference values for groundwater are based on four sampling rounds in 2 wells at each depth.

Inorganic chemical	Surface soil [mg/kg] (n = 45)	Subsurface soil [mg/kg] (n = 30)	Shallow GW [µg/L] (n = 8)	Deep GW [µg/L] (n = 8)
Aluminum	9,990 P	23,700 P	620 N	18.1 N
Antimony	0.55 N	0.92 N	ND	ND
Arsenic	14.2 P	14.1 N	5.6 N	ND
Barium	77.2 P	68.5 P	16.4 N	70.4 N
Beryllium	X	0.98 N	0.36 N	0.33 N
Cadmium	0.65 N	0.28 N	ND	ND
Chromium	26.4 P	39.8 N	2.1 N	ND
Cobalt	3.22 P	7.1 N	1.6 N	ND
Copper	34.7 P	42.2 P	1.5 N	ND
Lead	330 P	73.2 P	4.4 N	ND
Manganese	92.5 P	106 P	789 N	123 N
Mercury	0.24 N	0.30 N	ND	ND
Nickel	12.3 P	16.7 P	5.0 N	ND
Selenium	1.44 P	2.90 N	ND	ND
Silver	X	ND	1.5 N	ND
Thallium	ND	X	ND	ND
Tin	2.95 P	2.37 P	ND	ND
Vanadium	23.4 P	56.9 N	1.9 N	0.43 N
Zinc	159 P	243 P	14.6 N	ND
Cyanide	ND	ND	ND	ND

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

Outliers removed from background datasets: Zone C 5-12-97

Upper interval soil

Antimony	GDCSB00501	1.4 mg/kg
Arsenic	GDCSB00201	39.4 mg/kg
	GDCSB02801	22.4 mg/kg
	GDCSB03101	22.3 mg/kg
Barium	GDCSB04001	193 mg/kg
Lead	GDCSB01501	588 mg/kg
Manganese	GDCSB04101	101 mg/kg
Mercury	GDCSB03601	0.75 mg/kg
Nickel	GDCSB00601	27.7 mg/kg
Tin	GDCSB00101	8.1 mg/kg
Zinc	GDCSB02901	414 mg/kg
	GDCSB04001	779 mg/kg

Lower interval soil

Arsenic	GDCSB03002	31.6 mg/kg
Manganese	GDCSB00402	502 mg/kg
	GDCSB01002	520 mg/kg
Mercury	GDCSB01002	8.5 mg/kg

Shallow groundwater

Arsenic	GDCGW00204	15U μg/L (nondetect)
Cobalt	GDCGW00103	5.2U μg/L (nondetect)
	GDCGW00104	5.2U μg/L (nondetect)
	GDCGW00203	5.2U μg/L (nondetect)
	GDCGW00204	5.2U μg/L (nondetect)
Copper	GDCGW00104	4.75U μg/L (nondetect)
Lead	GDCGW00101	9.1U μg/L (nondetect)
Nickel	GDCGW00203	11.6U μg/L (nondetect)

Deep groundwater

Aluminum	GDCGW01D01	54.3U μg/L (nondetect)
Vanadium	GDCGW01D03	3.4U μg/L (nondetect)
	GDCGW02D03	3.4U μg/L (nondetect)

MEMO 5-12-97

FROM: EnSafe
TO: Project Team technical subcommittee

RE: Zone C: Critical background reference values

Upper interval soil

Aluminum was detected in all 45 upper interval soil samples, with a maximum value of 9720 mg/kg in sample GDCSB03101. LN-transforming the data produces a distribution (Figs. 2a, 2b) with extremely low CV and skewness, and an excellent box-and-whisker plot. Although the four highest values form a small cluster at the top end of the scale (Figs. 1a, 1b), they are not outliers in any conventional sense. For the LN-transformed version of the original dataset (n = 45),

UTL = exp[8.448 + (2.092)(0.364)] = **9,990 mg/kg**

The residential RBC for aluminum in soil is 7,800 mg/kg; the industrial RBC is 100,000 mg/kg (noncarcinogenic; THQ = 0.1). The relatively low aluminum levels in Zone C surface soil samples probably reflect the sandier composition of the soils here.

Arsenic was detected in 31 of 45 samples, with a distribution strongly skewed to the right (Fig. 1a). The highest concentrations reported were 39.4 mg/kg in sample GDCSB00201, 22.4 mg/kg in GDCSB02801, and 22.3 mg/kg in GDCSB03101; all other results were below 13 mg/kg. A background value based on the LN-transformed original dataset (Figs. 2a, 2b) (n = 45) would be UTL = exp[0.479 + (2.092)(1.328)] = 26.0 mg/kg. The three highest values may be considered outliers, especially since they do not correlate with particularly high concentrations of aluminum or iron, as do most high-As samples in soils of other zones. If they are removed from the dataset for the sake of conservatism and the data are LN-transformed (Figs. 3a, 3b),

UTL = exp[0.278 + (2.112)(1.125)] = **14.2 mg/kg**

The residential RBC for arsenic in soil is 0.43 mg/kg, while the industrial RBC is 3.8 mg/kg (carcinogenic).

Lead was detected in all 45 samples; the maximum value was 588 mg/kg in sample GDCSB01501. The data distribution is strongly skewed to the right (Fig. 1a), and remains slightly skewed in the same direction after LN-transformation (Figs. 2a, 2b). Although not a conventional outlier (Fig. 2b), the maximum value of 588 mg/kg was removed from the dataset because it is both higher than EPA's *de facto* residential and industrial soil RBC of 400 mg/kg and higher than background sample concentrations seen in other investigatory zones. For the reduced dataset (n = 44), the LN-transformation (Figs. 3a, 3b) provides the best approximation to normality.

UTL = exp[3.418 + (2.099)(1.134)] = **330 mg/kg**

Lower interval soil

Arsenic was detected in 13 of the 30 subsurface soil grid samples, with a maximum value of 31.6 mg/kg in sample GDCSB03002. This sample was removed from the dataset as an outlier (Figs. 1a, 1b). Because nondetects exceed 50% of the total, a nonparametric UTL is appropriate:

UTL = maximum remaining detection = **14.1 mg/kg**

The generic (draft) SSL for arsenic at the time the Zone C RFI report was submitted was 15 mg/kg (assuming DAF = 10); the current generic SSL (assuming DAF = 20) is 29.

Chromium was detected in all 30 samples. The four highest values were:

GDCSB01002 = 39.8 mg/kg
GDCSB02702 = 34.2 mg/kg
GDCSB03602 = 31.8 mg/kg
GDCSB00402 = 30.0 mg/kg

The next highest value below these four was 11.1 mg/kg. The four high-concentration samples reported greater than 10,000 mg/kg for both aluminum and iron — the only samples above 10,000 mg/kg in either aluminum *or* iron. Field descriptions confirm that three of the samples consisted of green or black clay (the fourth, sample GDCSB03602, was described as "green, orange, tan, and brown sandy soil," implying the presence of clay minerals as coloring agents). These same four samples provided three of the four highest arsenic detections (after removing the outlier); three of the four total beryllium detections; two of the three total cadmium detections; the four highest detections of cobalt, selenium, and vanadium; the two highest detections of copper and manganese; the highest detections of lead, mercury, and nickel; and the only thallium detection. Although the distribution is dramatically bimodal (Figs. 1a,1b,2a,2b), the four high chromium values should not be considered outliers. The background dataset represents two distinct soil types found in the zone: sand (the majority) and clay (represented by the four high values). Because of the nonnormal distribution, it is appropriate to use a nonparametric UTL consisting of the maximum value, **39.8 mg/kg**. The 1994 generic SSL for hexachrome was 19 mg/kg, while the current standard is 38 mg/kg; trivalent chromium is of no concern at any concentration. Hexachrome was detected in three of the 22 Zone C soil samples in which it was analyzed, at a maximum concentration of 1.19 mg/kg in an upper interval site sample. No grid samples at either depth reported hexachrome.

Selenium was detected in 12 of 30 samples, with a maximum concentration of 2.9 mg/kg in sample GDCSB03602. The four highest values were found in the four high-Al, high-Fe samples discussed above; like the high chromium values, they should not be considered outliers (Figs. 1a,1b,2a,2b). Because nondetects exceed 50% of the total, the UTL is nonparametric: the maximum value is **2.9 mg/kg**. The 1994 generic SSL for selenium was 3 mg/kg; the current SSL is 5 mg/kg.

Shallow groundwater

Background datasets for shallow and deep groundwater in Zone C consist of four sets of samples from each of two wells. Although EPA considers a sample size of eight or more to result in an adequate tolerance interval for detection monitoring (*Interim Final Guidance*, 1989, p. 5-20), the large tolerance factor k for a dataset of this size generally produces a high UTL when parametric

methods are used. The parametric approach is also inappropriate since each dataset consists of two groups of four samples, with each group autocorrelated because it comes from the same well. This lack of randomness frequently results in bimodal datasets with significant gaps between results from the two wells. For these reasons, nonparametric UTLs were chosen to represent background reference values for all of the metals with detections in groundwater. Using nonparametric UTLs with datasets this small, however, entails a significant loss of coverage (the percentage of the population included in the tolerance interval): the minimum coverage for a sample size of eight is 68.8% ($\alpha = .05$) rather than the desired 95%. Consequently, the UTLs for groundwater in Zone C are somewhat lower (and therefore more conservative) than they would otherwise be.

Arsenic was detected in four of eight samples, with a maximum value of 5.6 μg/L in sample GDCGW00202. The nondetect result from sample GDCGW00204 (15U μg/L) was removed from the dataset because the estimated value (using one-half the reported PQL) was greater than the largest detected value (Fig. 1a). The nonparametric UTL is the maximum value of **5.6 μg/L**. For the reduced dataset of n = 7, the corresponding parametric UTL for LN-transformed values would be 19.0 μg/L, but the bimodal distribution (Figs. 2a, 2b) does not allow use of this approach. The tap water RBC for arsenic is 0.045 μg/L (carcinogenic); the MCL is 50 μg/L.

Beryllium was detected in a single sample, GDCGW00202, at **0.36 μg/L** (Fig. 1a). Since a single detection represents more than 10% of the dataset, it constitutes a nonparametric UTL. The tap water RBC for beryllium is 0.016 μg/L (carcinogenic); the MCL is 4 μg/L.

Seven of eight samples reported **manganese** detections, with a maximum of 789 μg/L in sample GDCGW00202. The distribution is bimodal (Figs. 1a, 1b), grouped by well. The nonparametric UTL is the maximum value of **789 μg/L**. The tap water RBC for manganese is 84 μg/L (noncarcinogenic; THQ = 0.1); there is no MCL.

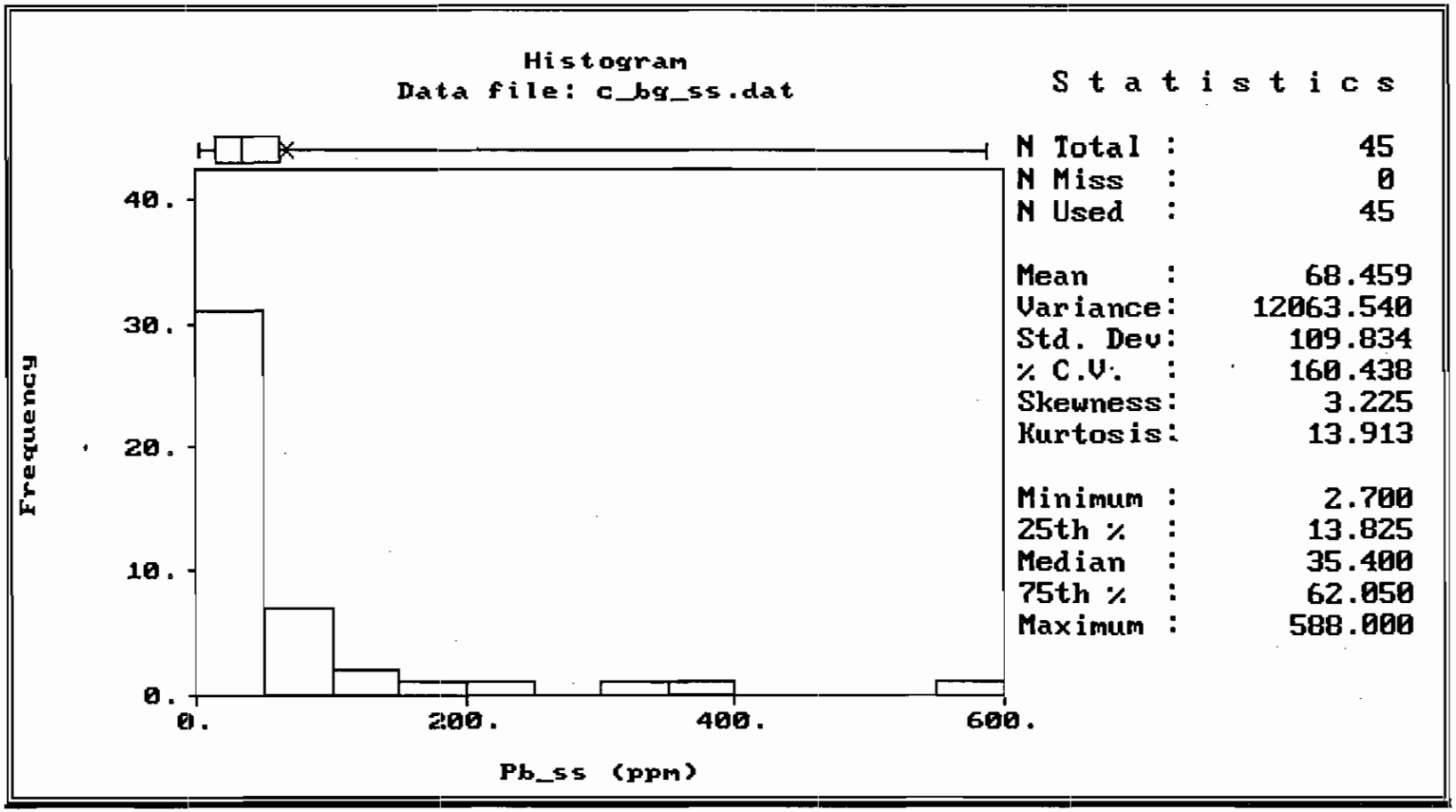
Deep groundwater

Beryllium was detected at 0.33 μg/L in one sample, GDCGW02D02 (Fig. 1). PQLs for the nondetects were slightly lower than the detected value, ranging from 0.2 to 0.3 μg/L. The single detected value of **0.33 μg/L** serves as the nonparametric UTL. Beryllium's tap water RBC is 0.016 μg/L (carcinogenic); its MCL is 4 μg/L.

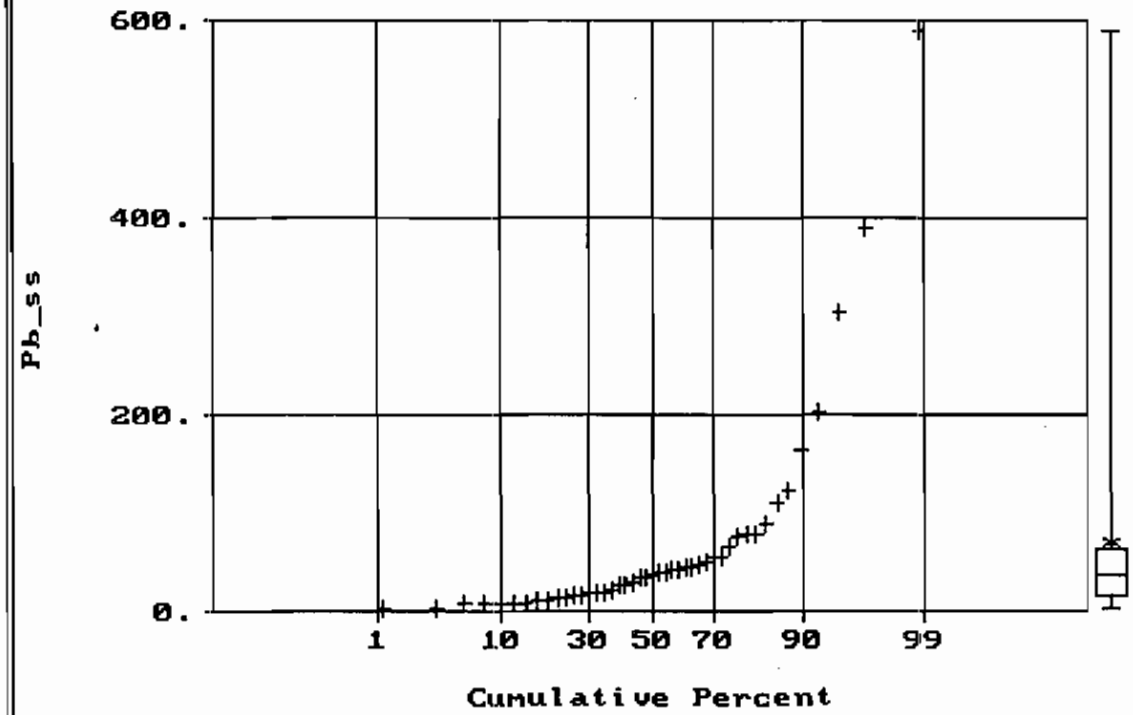
All eight samples reported **manganese** detections. The distribution was moderately continuous (Figs. 1a, 1b), with a maximum concentration of 123 μg/L in sample GDCGW02D02. The maximum value serves as the UTL: **123 μg/L**. The corresponding value of a parametric UTL based on LN-transformed data (Figs. 2a, 2b) is 284 μg/L. The tap water RBC for manganese is 84 μg/L (noncarcinogenic; THQ = 0.1); there is no MCL.

Zone C
Lead in surface soil grid samples
Original dataset (N=45)
Original values

1a



Normal Probability Plot for Pb_ss
Data file: c_bg_ss.dat

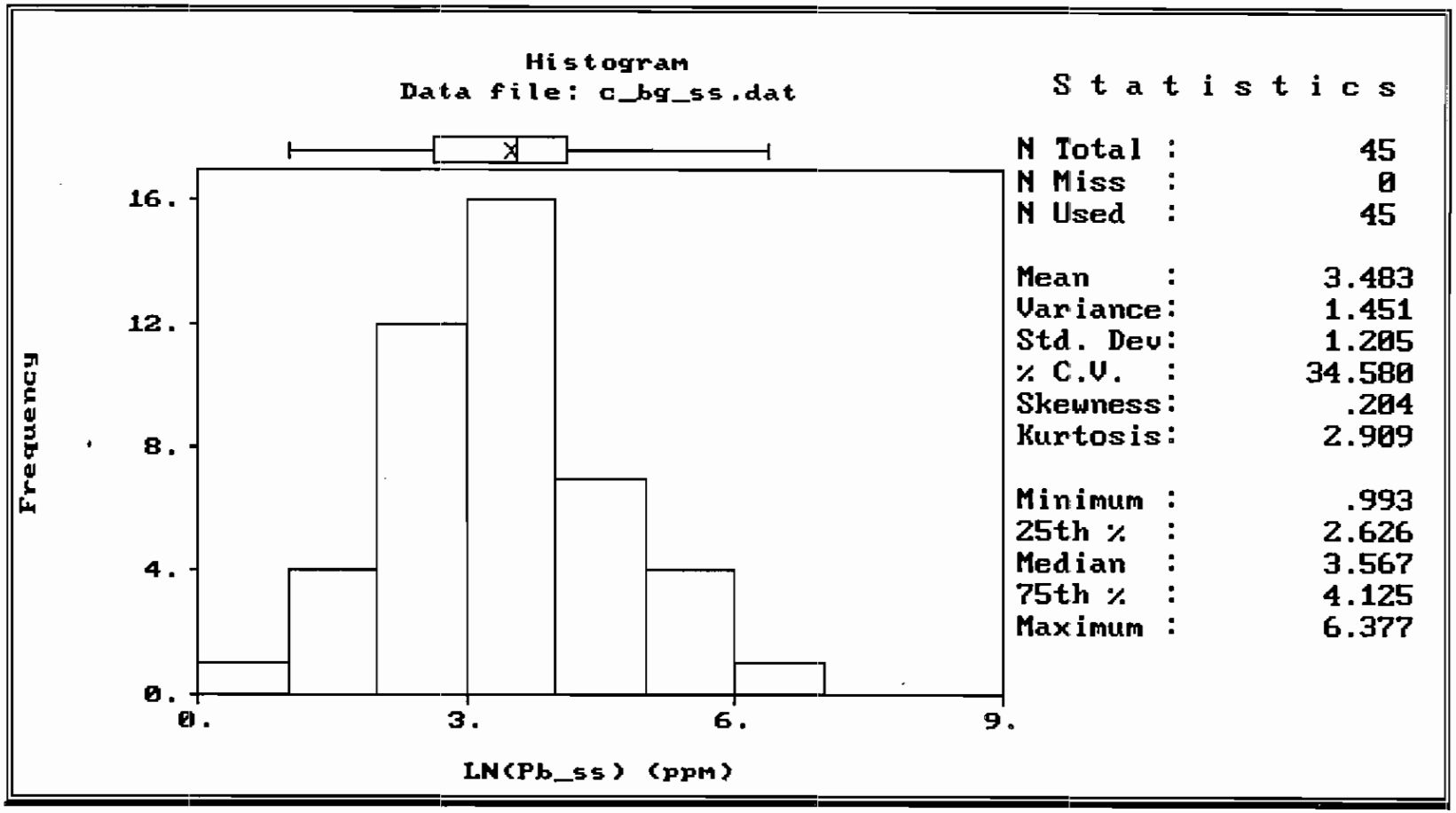


Statistics

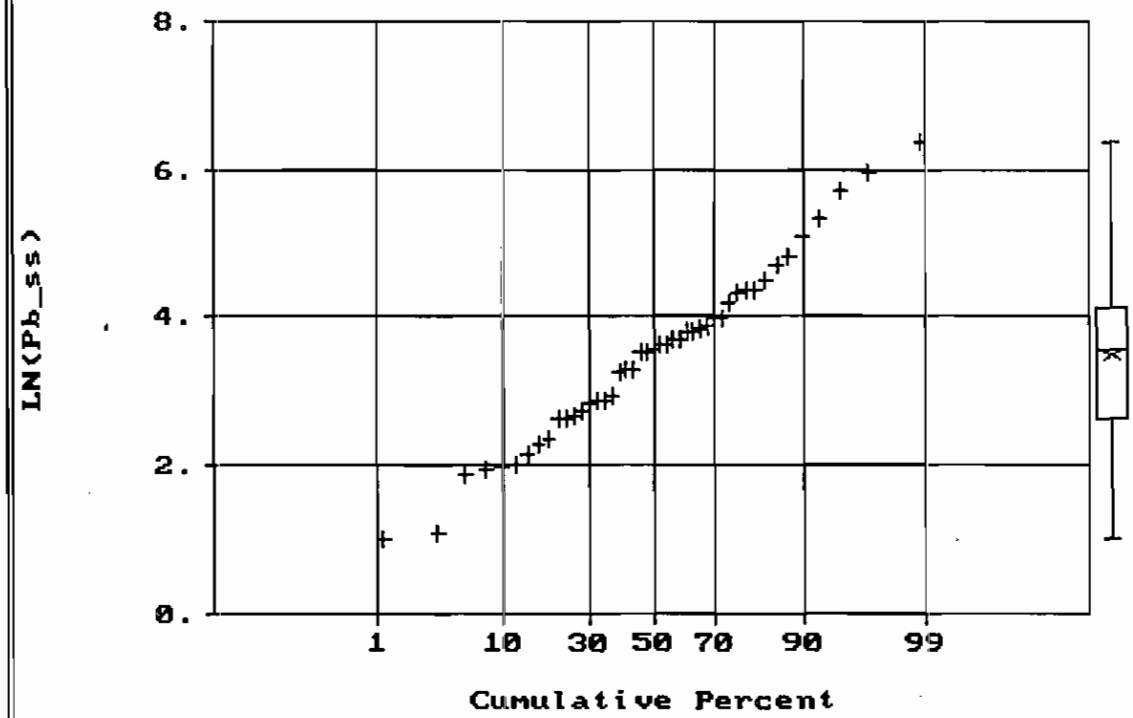
N Total :	45
N Miss :	0
N Used :	45
Mean :	68.459
Variance:	12063.540
Std. Dev:	109.834
% C.V. :	160.438
Skewness:	3.225
Kurtosis:	13.913
Minimum :	2.700
25th % :	13.825
Median :	35.400
75th % :	62.050
Maximum :	588.000

Zone C
Lead in surface soil grid samples
Original dataset (N=45)
LN-transformed values

2a



Normal Probability Plot for LN(Pb_ss)
Data file: c_bg_ss.dat

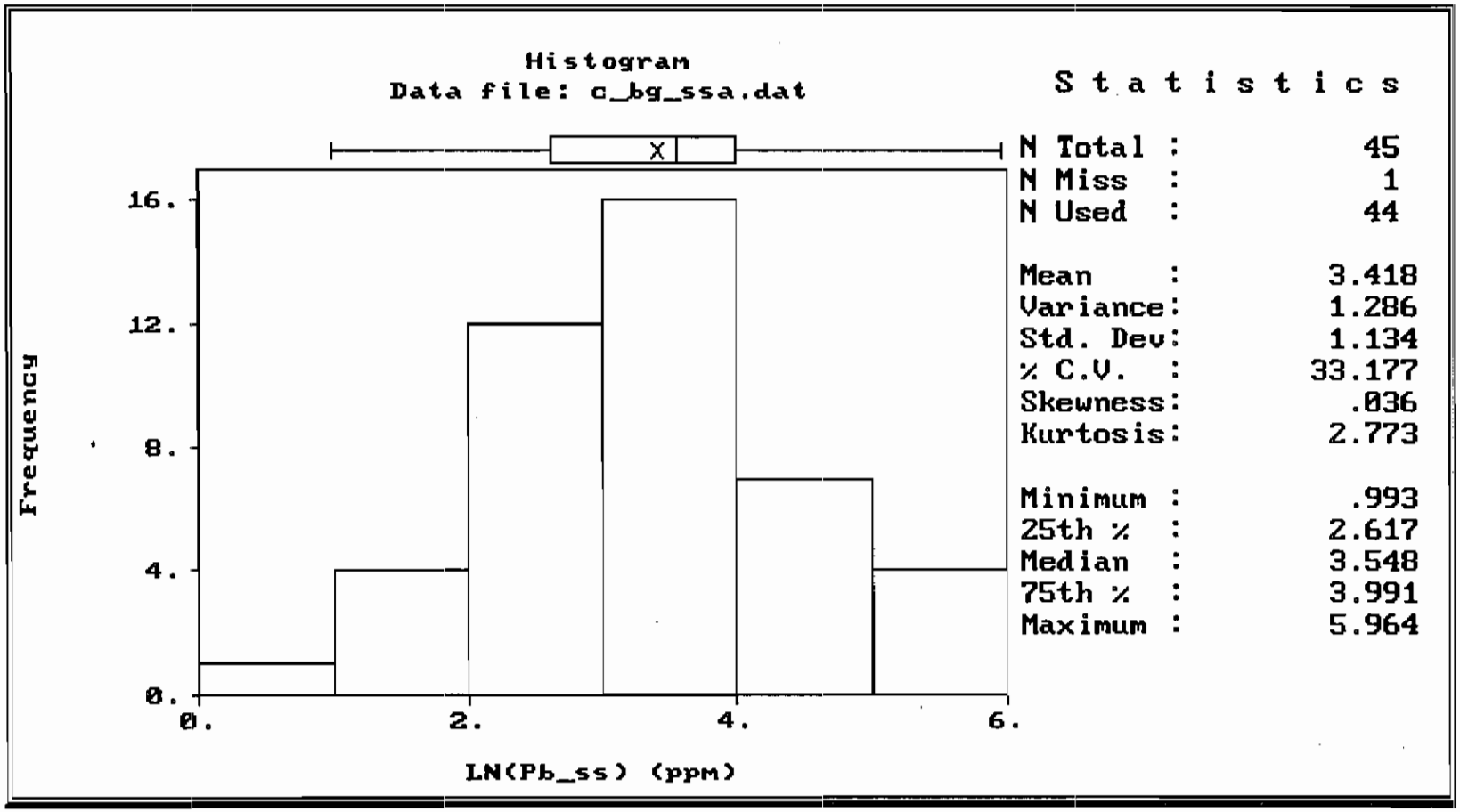


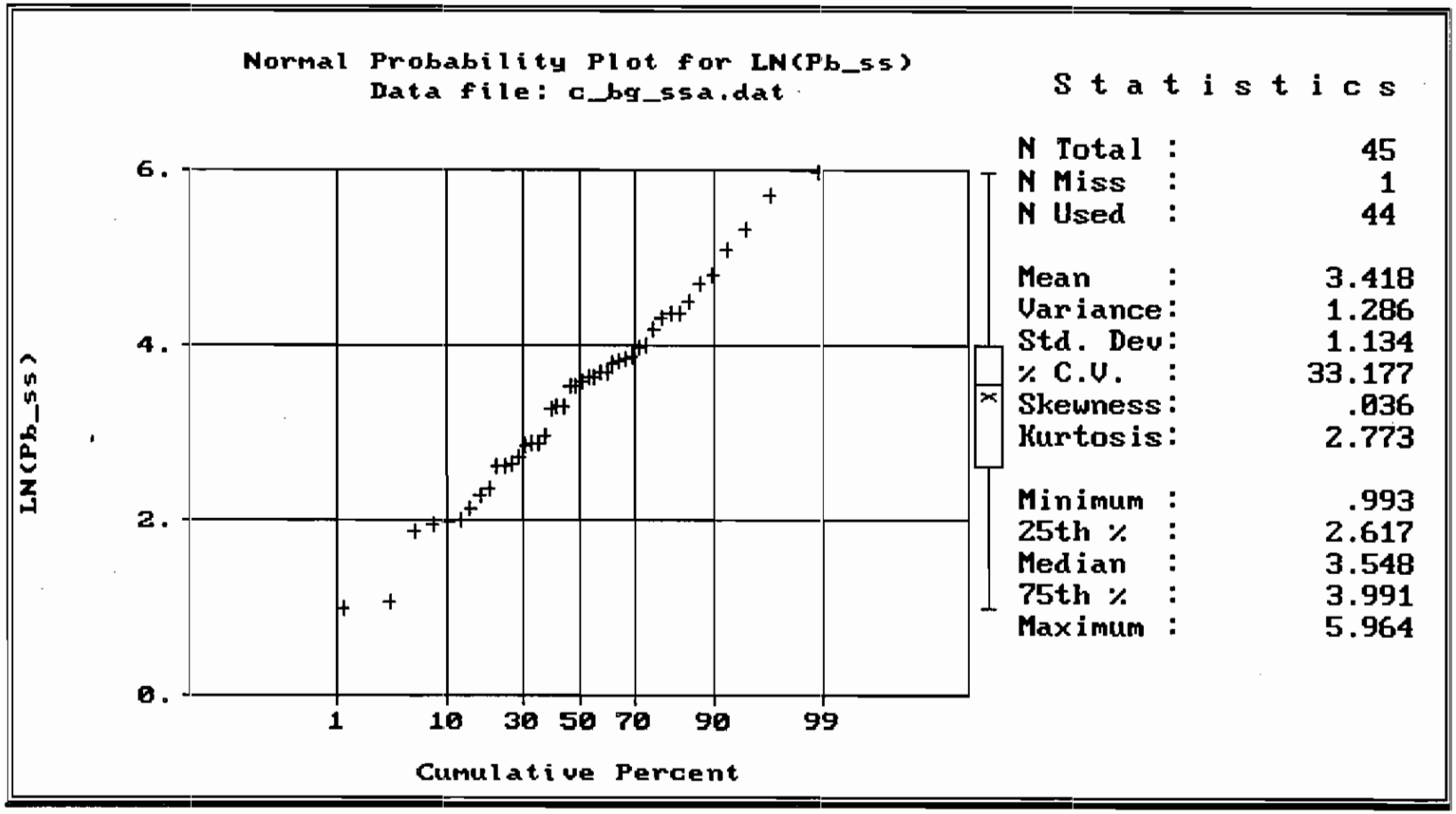
Statistics

N Total :	45
N Miss :	0
N Used :	45
Mean :	3.483
Variance:	1.451
Std. Dev:	1.205
% C.V. :	34.580
Skewness:	.204
Kurtosis:	2.909
Minimum :	.993
25th % :	2.626
Median :	3.567
75th % :	4.125
Maximum :	6.377

Zone C
Lead in surface soil grid samples
Sample # 15-01 removed from dataset
LN-transformed values

3a




Normal Probability Plot for LN(Pb_ss)
Data file: c_bg_ssa.dat
LN(Pb_ss)
6.
4.
2.
0.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 45
N Miss : 1
N Used : 44
Mean : 3.418
Variance: 1.286
Std. Dev: 1.134
% C.V. : 33.177
Skewness: .036
Kurtosis: 2.773
Minimum : .993
25th % : 2.617
Median : 3.548
75th % : 3.991
Maximum : 5.964

CHARLESTON - ZONE C
Background Sample Results
Surface Soil: Samples 1-45

SW846-META													
		SAMPLE ID ------->	GDC-S-B001-01		GDC-S-B002-01		GDC-S-B003-01		GDC-S-B004-01		GDC-S-B005-01		GDC-S-B006-01	
		ORIGINAL ID ----->	GRDSB00101		GRDSB00201		GRDSB00301		GRDSB00401		GRDSB00501		GRDSB00601	
		LAB SAMPLE ID --->	690546		689925		691120		703505		691100		691083	
		ID FROM REPORT -->	GRDSB00101		GRDSB00201		GRDSB00301		GRDSB00401		GRDSB00501		GRDSB00601	
		SAMPLE DATE ----->	03/15/95		03/13/95		03/17/95		04/14/95		03/17/95		03/17/95	
		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		0001MI	VAL	0001MI	VAL	0002MI	VAL	50012M	VAL	0002MI	VAL	0001MI	VAL
7429-90-5	Aluminum (Al)		5960.		2110.		5910.		4080.		4000.		3270.	
7440-36-0	Antimony (Sb)		0.67	UJ	0.23	UJ	0.28	J	0.22	UJ	1.4	J	0.22	UJ
7440-38-2	Arsenic (As)		3.		39.4		2.4		0.73	J	7.2		3.4	
7440-39-3	Barium (Ba)		69.1		9.4	J	15.7	J	11.1	J	15.9	J	4.4	J
7440-41-7	Beryllium (Be)		0.26	J	0.18	U	0.18	J	0.07	U	0.16	J	0.12	U
7440-43-9	Cadmium (Cd)		0.65		0.06	U	0.16	J	0.03	U	0.06	U	0.06	U
7440-70-2	Calcium (Ca)		2270.		20800.		50100.		12700.		25100.		10200.	
7440-47-3	Chromium (Cr)		18.8		8.8		14.4		4.4		9.5		7.4	J
7440-48-4	Cobalt (Co)		1.2	J	0.92	J	1.2	J	0.57	J	1.4	J	1.4	J
7440-50-8	Copper (Cu)		39.7	J	6.2	J	6.2		1.7	J	11.8		11.9	J
7439-89-6	Iron (Fe)		4270.		3280.		4230.		1510.		6210.		5710.	
7439-92-1	Lead (Pb)		389.	J	13.7	J	54.1		7.1		14.2		7.4	J
7439-95-4	Magnesium (Mg)		268.	J	792.		1080.		248.	J	639.		183.	J
7439-96-5	Manganese (Mn)		62.8		48.9		53.		72.7		41.8		42.9	
7439-97-6	Mercury (Hg)		0.09	U	0.11		0.11	U	0.11	U	0.12	U	0.11	U
7440-02-0	Nickel (Ni)		3.9	J	3.	J	5.5		1.4	J	4.9		27.7	
7440-09-7	Potassium (K)		132.	J	283.	J	490.	J	180.	J	305.	J	64.6	J
7782-49-2	Selenium (Se)		0.62	J	0.63	J	0.51	UJ	0.5	U	0.6	J	0.55	J
7440-22-4	Silver (Ag)		0.07	UJ	0.07	UJ	0.07	UJ	0.06	U	0.07	UJ	0.07	UJ
7440-23-5	Sodium (Na)		159.	U	254.	J	424.	J	120.	U	536.	J	186.	U
7440-28-0	Thallium (Tl)		0.61	U	0.61	U	0.64	U	0.51	U	0.63	U	0.64	U
7440-62-2	Vanadium (V)		7.3		7.2		11.1		4.7	J	8.5		4.5	J
7440-66-6	Zinc (Zn)		142.		33.1		62.5	J	9.6		35.4	J	33.5	
7440-31-5	Tin (Sn)		8.1		1.	J	1.1	J	1.3	J	1.2	J	0.91	U
57-12-5	Cyanide (CN)		??????????		??????????		??????????		??????????		??????????		??????????	

*** Validation Complete ***

CHARLESTON - ZONE C
Background Sample Results
Surface Soil: Samples 1-45

SW846-META	SAMPLE ID ------->	GDC-S-B007-01		GDC-S-B008-01		GDC-S-B009-01		GDC-S-B010-01		GDC-S-B011-01		GDC-S-B012-01	
	ORIGINAL ID ----->	GRDSB00701		GRDSB00801		GRDSB00901		GRDSB01001		GRDSB01101		GRDSB01201	
	LAB SAMPLE ID --->	703440		691126		696973		702562		702571		702019	
	ID FROM REPORT -->	GRDSB00701		GRDSB00801		MAC001		MAC009		MAC013		MAC015	
	SAMPLE DATE ----->	04/14/95		03/17/95		03/31/95		04/10/95		04/10/95		04/11/95	
	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	50010M	VAL	0002MI	VAL	50003M	VAL	0011MI	VAL	0011MI	VAL	50009M	VAL
7429-90-5	Aluminum (Al)	3540.		4240.		5420.		3890.	J	4890.	J	6730.	
7440-36-0	Antimony (Sb)	0.21	UJ	0.2	UJ	0.21	UJ	0.24	UJ	0.23	UJ	0.21	UJ
7440-38-2	Arsenic (As)	1.	J	0.58	J	2.7	UJ	0.41	UJ	0.38	UJ	1.5	
7440-39-3	Barium (Ba)	11.7	J	11.6	J	13.5	J	6.	J	15.6	J	17.1	J
7440-41-7	Beryllium (Be)	0.12	U	0.11	J	0.17	UJ	0.05	UJ	0.12	UJ	0.2	U
7440-43-9	Cadmium (Cd)	0.03	U	0.05	U	0.03	U	0.04	UJ	0.04	UJ	0.03	U
7440-70-2	Calcium (Ca)	3800.	J	16400.		18600.		1210.	J	887.	J	133.	UJ
7440-47-3	Chromium (Cr)	4.3		7.6		8.7		5.3	J	9.	J	6.	
7440-48-4	Cobalt (Co)	0.78	J	0.62	J	1.2	J	0.41	UJ	0.68	UJ	0.51	J
7440-50-8	Copper (Cu)	10.9		0.81	J	5.8		2.1	J	11.5	J	3.5	
7439-89-6	Iron (Fe)	2930.		2140.		4700.		1540.	J	2670.	J	3290.	
7439-92-1	Lead (Pb)	17.6		2.7		13.6		7.	J	35.4	J	46.7	J
7439-95-4	Magnesium (Mg)	431.	J	394.	J	555.		184.	J	236.	J	240.	J
7439-96-5	Manganese (Mn)	61.8		19.7		45.5		19.9	J	32.3	J	37.7	
7439-97-6	Mercury (Hg)	0.11	U	0.11	U	0.11	U	0.13	U	0.12	U	0.11	U
7440-02-0	Nickel (Ni)	1.1	J	1.2	J	2.9	J	0.54	J	2.	J	1.9	J
7440-09-7	Potassium (K)	292.	J	236.	J	315.	J	144.	J	162.	J	124.	J
7782-49-2	Selenium (Se)	0.49	UJ	0.46	UJ	0.79	J	0.56	UJ	0.53	J	0.49	UJ
7440-22-4	Silver (Ag)	0.06	U	0.06	UJ	0.05	UJ	0.06	UJ	0.06	UJ	0.06	U
7440-23-5	Sodium (Na)	103.	U	139.	U	368.	J	133.	U	174.	U	124.	U
7440-28-0	Thallium (Tl)	0.5	U	0.58	U	0.49	U	0.57	U	0.54	U	0.5	U
7440-62-2	Vanadium (V)	5.7		5.7		9.2		4.7	J	8.1	J	6.4	
7440-66-6	Zinc (Zn)	24.7		4.1	J	19.9		9.	J	36.4	J	13.4	J
7440-31-5	Tin (Sn)	1.2	J	0.94	J	1.7	U	0.92	J	0.7	UJ	1.3	J
57-12-5	Cyanide (CN)	??????????		??????????		??????????		??????????		??????????		??????????	

*** Validation Complete ***

CHARLESTON - ZONE C
Background Sample Results
Surface Soil: Samples 1-45

SW846-META	SAMPLE ID ------->	GDC-S-B013-01		GDC-C-B013-01		GDC-S-B014-01		GDC-S-B015-01		GDC-S-B016-01		GDC-S-B017-01	
	ORIGINAL ID ----->	GRDSB01301		GRDCB01301		GRDSB01401		GRDSB01501		GRDSB01601		GRDSB01701	
	LAB SAMPLE ID --->	702008		702014		703517		702559		702570		702572	
	ID FROM REPORT -->	MAC001		GRDCB01301		MAC017		MAC007		MAC012		MAC001	
	SAMPLE DATE ----->	04/11/95		04/11/95		04/14/95		04/10/95		04/10/95		04/10/95	
	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	50009M	VAL	0006M	VAL	0011MI	VAL	0011MI	VAL	0011MI	VAL	0011MI	VAL
7429-90-5	Aluminum (Al)	3450.		1850.	J	5320.	J	7530.	J	6160.	J	9850.	J
7440-36-0	Antimony (Sb)	0.33	J	0.35	J	0.21	UJ	0.21	UJ	0.23	UJ	0.21	UJ
7440-38-2	Arsenic (As)	0.77	J	0.33	U	0.35	UJ	2.4	J	0.62	J	9.6	J
7440-39-3	Barium (Ba)	16.4	J	14.1	J	7.	J	51.1	J	25.	J	20.3	J
7440-41-7	Beryllium (Be)	0.1	U	0.06	U	0.07	UJ	0.27	UJ	0.13	UJ	0.37	UJ
7440-43-9	Cadmium (Cd)	0.28	U	0.27	J	0.03	UJ	0.2	UJ	0.04	UJ	0.12	UJ
7440-70-2	Calcium (Ca)	6090.	J	13300.		34800.	J	2670.	J	27600.	J	23800.	J
7440-47-3	Chromium (Cr)	7.1		7.		6.6	J	21.	J	9.1	J	15.9	J
7440-48-4	Cobalt (Co)	0.75	J	0.71	J	0.75	J	2.	J	1.7	J	2.	J
7440-50-8	Copper (Cu)	13.7	J	12.6		1.5	J	15.	J	5.8	J	12.7	J
7439-89-6	Iron (Fe)	2450.		2400.		841.	J	6370.	J	4170.	J	9020.	J
7439-92-1	Lead (Pb)	97.6	J	121.		8.4	J	588.	J	26.6	J	50.7	J
7439-95-4	Magnesium (Mg)	435.	J	477.	J	432.	J	591.	J	901.	J	1070.	J
7439-96-5	Manganese (Mn)	33.6		39.1		55.2	J	82.1	J	69.5	J	86.1	J
7439-97-6	Mercury (Hg)	0.1	U	0.11	U	0.11	U	0.24		0.12	U	0.11	U
7440-02-0	Nickel (Ni)	3.1	J	3.2	J	1.4	J	5.2	J	2.4	J	6.6	J
7440-09-7	Potassium (K)	199.	J	185.	J	141.	J	369.	J	360.	J	621.	J
7782-49-2	Selenium (Se)	0.46	UJ	0.58	J	0.48	J	1.	J	0.67	J	0.51	J
7440-22-4	Silver (Ag)	0.05	U	0.05	UJ	0.05	UJ	0.05	UJ	0.06	J	0.05	UJ
7440-23-5	Sodium (Na)	110.	U	138.	U	158.	U	158.	U	178.	U	729.	J
7440-28-0	Thallium (Tl)	0.47	U	0.47	U	0.49	U	0.49	U	0.55	UJ	0.49	U
7440-62-2	Vanadium (V)	9.1		7.8		2.7	J	17.1	J	9.3	J	21.2	J
7440-66-6	Zinc (Zn)	133.	J	123.		9.2	J	128.	J	58.5	J	42.7	J
7440-31-5	Tin (Sn)	0.71	J	2.4	J	0.79	J	1.1	J	0.72	J	0.64	UJ
57-12-5	Cyanide (CN)	??????????		??????????		??????????		??????????		??????????		??????????	

*** Validation Complete ***

CHARLESTON - ZONE C
Background Sample Results
Surface Soil: Samples 1-45

SW846-META	SAMPLE ID ------->	GDC-C-B017-01		GDC-S-B018-01		GDC-S-B019-01		GDC-S-B020-01		GDC-S-B021-01		GDC-S-B022-01	
	ORIGINAL ID ----->	GRDCB01701		GRDSB01801		GRDSB01901		GRDSB02001		GRDSB02101		GRDSB02201	
	LAB SAMPLE ID --->	702599		703516		703514		702563		701983		702006	
	ID FROM REPORT -->	GRDCB01701		MAC016		MAC014		MAC010		MAC002		MAC012	
	SAMPLE DATE ----->	04/10/95		04/14/95		04/14/95		04/11/95		04/11/95		04/11/95	
	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	50010M	VAL	0011MI	VAL	0011MI	VAL	0011MI	VAL	50009M	VAL	50009M	VAL
7429-90-5	Aluminum (Al)	7000.		2720.	J	3500.	J	4940.	J	4590.		4030.	
7440-36-0	Antimony (Sb)	0.24	UJ	0.29	J	0.2	UJ	0.21	UJ	0.2	UJ	0.2	UJ
7440-38-2	Arsenic (As)	3.8	J	1.7	J	3.8	J	1.4	J	12.5		0.4	J
7440-39-3	Barium (Ba)	15.7	J	11.1	J	14.4	J	33.5	J	19.4	J	20.4	J
7440-41-7	Beryllium (Be)	0.3	U	0.08	UJ	0.15	UJ	0.24	UJ	0.1	U	0.1	U
7440-43-9	Cadmium (Cd)	0.07	U	0.03	UJ	0.13	UJ	0.08	UJ	0.03	U	0.05	U
7440-70-2	Calcium (Ca)	12500.	J	9370.	J	71400.	J	16900.	J	728.	J	799.	J
7440-47-3	Chromium (Cr)	14.1		7.3	J	8.9	J	11.2	J	8.5		7.4	
7440-48-4	Cobalt (Co)	1.7	J	0.62	UJ	1.4	J	1.6	J	0.4	J	0.46	J
7440-50-8	Copper (Cu)	9.9		21.4	J	26.1	J	12.5	J	38.3		4.3	
7439-89-6	Iron (Fe)	6110.		4630.	J	3660.	J	4100.	J	2340.		2190.	
7439-92-1	Lead (Pb)	38.6		37.9	J	34.1	J	88.1	J	34.	J	64.7	J
7439-95-4	Magnesium (Mg)	884.		261.	J	1140.	J	462.	J	177.	J	180.	J
7439-96-5	Manganese (Mn)	74.2		16.2	J	73.	J	43.1	J	22.2		32.2	
7439-97-6	Mercury (Hg)	0.12	U	0.11	U	0.1	U	0.11	U	0.11	U	0.09	U
7440-02-0	Nickel (Ni)	6.7		2.1	J	4.8	J	6.1	J	1.6	U	1.3	U
7440-09-7	Potassium (K)	429.	J	127.	J	461.	J	301.	J	83.9	J	135.	J
7782-49-2	Selenium (Se)	0.55	UJ	0.64	J	0.55	J	0.71	J	0.46	UJ	0.46	UJ
7440-22-4	Silver (Ag)	0.06	U	0.05	J	0.05	UJ	0.05	UJ	0.05	U	0.05	U
7440-23-5	Sodium (Na)	251.	U	142.	J	237.	U	185.	U	110.	U	118.	U
7440-28-0	Thallium (Tl)	0.56	U	0.48	U	0.47	U	0.49	U	0.47	U	0.47	U
7440-62-2	Vanadium (V)	18.3		8.6	J	7.	J	9.5	J	5.3		5.6	
7440-66-6	Zinc (Zn)	41.9		37.6	J	34.4	J	40.1	J	40.	J	122.	J
7440-31-5	Tin (Sn)	0.73	U	1.9	J	1.7	J	1.6	J	1.4	J	1.2	J
57-12-5	Cyanide (CN)	??????????		??????????		??????????		??????????		??????????		??????????	

*** Validation Complete ***

CHARLESTON - ZONE C
Background Sample Results
Surface Soil: Samples 1-45

SW846-META	SAMPLE ID ------->	GDC-S-B023-01		GDC-S-B024-01		GDC-S-B025-01		GDC-S-B026-01		GDC-S-B027-01		GDC-S-B028-01	
	ORIGINAL ID ----->	GRDSB02301		GRDSB02401		GRDSB02501		GRDSB02601		GRDSB02701		GRDSB02801	
	LAB SAMPLE ID --->	701989		702004		702454		704087		705231		705233	
	ID FROM REPORT -->	MAC004		MAC010		MAC004		MAC019		GRDSB02701		GRDSB02B01	
	SAMPLE DATE ----->	04/11/95		04/11/95		04/12/95		04/17/95		04/20/95		04/20/95	
	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	50009M	VAL	50009M	VAL	0011MI	VAL	0011MI	VAL	50013M	VAL	50013M	VAL
7429-90-5	Aluminum (Al)	4760.		5520.		5990.	J	5590.	J	2770.		2250.	
7440-36-0	Antimony (Sb)	0.44	J	0.2	UJ	0.21	UJ	0.28	J	0.2	UJ	0.2	UJ
7440-38-2	Arsenic (As)	0.79	J	1.8		3.3	J	0.74	J	0.7	U	22.4	
7440-39-3	Barium (Ba)	22.3		17.5	J	65.5	J	29.9	J	6.9	J	10.9	J
7440-41-7	Beryllium (Be)	0.14	U	0.16	U	0.29	UJ	0.21	UJ	0.08	U	0.09	U
7440-43-9	Cadmium (Cd)	0.03	U	0.03	U	0.15	UJ	0.33	UJ	0.03	U	0.03	U
7440-70-2	Calcium (Ca)	1620.	J	484.	J	2070.	J	4050.	J	1060.	J	1660.	J
7440-47-3	Chromium (Cr)	5.4		8.4		7.4	J	13.8	J	3.2		3.1.	
7440-48-4	Cobalt (Co)	0.57	J	0.86	J	2.9	J	1.4	J	0.35	J	0.34	J
7440-50-8	Copper (Cu)	14.8		7.3		18.4	J	33.8	J	1.	U	3.6	
7439-89-6	Iron (Fe)	2580.		3680.		3690.	J	3990.	J	1640.		1640.	
7439-92-1	Lead (Pb)	44.7	J	77.7	J	163.	J	78.	J	2.9		9.9	
7439-95-4	Magnesium (Mg)	201.	J	282.	J	333.	J	445.	J	160.	J	143.	J
7439-96-5	Manganese (Mn)	23.		42.8		45.3	J	64.9	J	11.3	J	10.4	J
7439-97-6	Mercury (Hg)	0.12		0.11	U	0.15		0.11		0.11	U	0.13	J
7440-02-0	Nickel (Ni)	2.3	J	2.5	J	3.4	J	4.8	J	0.82	J	0.82	J
7440-09-7	Potassium (K)	89.4	J	149.	J	160.	J	255.	J	86.6	J	118.	J
7782-49-2	Selenium (Se)	0.47	UJ	0.47	UJ	0.78	J	0.62	J	0.59	J	0.46	UJ
7440-22-4	Silver (Ag)	0.05	U	0.05	U	0.06	UJ	0.05	UJ	0.05	U	0.05	U
7440-23-5	Sodium (Na)	118.	U	105.	U	172.	U	154.	U	108.	J	119.	J
7440-28-0	Thallium (Tl)	0.48	U	0.48	U	0.5	U	0.48	U	0.47	U	0.47	U
7440-62-2	Vanadium (V)	5.3		8.7		6.2	J	9.5	J	3.6	J	3.8	J
7440-66-6	Zinc (Zn)	43.6	J	47.8	J	135.	J	109.	J	3.4	J	12.5	J
7440-31-5	Tin (Sn)	1.6	J	2.8	J	2.6	J	1.4	J	1.4	U	1.8	U
57-12-5	Cyanide (CN)	??????????		??????????		??????????		??????????		??????????		??????????	

*** Validation Complete ***

CHARLESTON - ZONE C
Background Sample Results
Surface Soil: Samples 1-45

SW846-META													
	SAMPLE ID ------->	GDC-S-B029-01		GDC-S-B030-01		GDC-S-B031-01		GDC-S-B032-01		GDC-S-B033-01		GDC-S-B034-01	
	ORIGINAL ID ----->	GRDSB02901		GRDSB03001		GRDSB03101		GRDSB03201		GRDSB03301		GRDSB03401	
	LAB SAMPLE ID --->	704089		704098		704096		702447		702002		702000	
	ID FROM REPORT -->	GRDSB02901		GRDSB03001		GRDSB03101		MAC002		MAC008		MAC006	
	SAMPLE DATE ----->	04/17/95		04/17/95		04/17/95		04/12/95		04/11/95		04/11/95	
	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	50013M	VAL	50013M	VAL	50013M	VAL	0011MI	VAL	50009M	VAL	50009M	VAL
7429-90-5	Aluminum (Al)	3630.		3390.		9720.		3810.	J	3860.		3480.	
7440-36-0	Antimony (Sb)	0.2	UJ	0.2	UJ	0.44	J	0.2	UJ	0.26	J	0.2	UJ
7440-38-2	Arsenic (As)	2.5	U	2.1	U	22.3		0.33	UJ	0.6	J	0.33	U
7440-39-3	Barium (Ba)	93.1	J	9.	J	31.6	J	12.8	J	97.4		9.8	J
7440-41-7	Beryllium (Be)	0.12	U	0.08	U	0.47	U	0.16	UJ	0.12	U	0.07	U
7440-43-9	Cadmium (Cd)	0.24	J	0.03	U	0.52	J	0.03	UJ	0.23	U	0.03	U
7440-70-2	Calcium (Ca)	34800.	J	4200.	J	38500.	J	12100.	J	1190.	J	497.	J
7440-47-3	Chromium (Cr)	6.3		5.4		31.8		5.9	J	5.3		2.7	
7440-48-4	Cobalt (Co)	0.79	J	0.5	J	2.3	J	0.96	J	0.71	J	0.18	J
7440-50-8	Copper (Cu)	10.2		7.9		23.9		2.4	J	5.8		1.5	J
7439-89-6	Iron (Fe)	2960.		1750.		7960.		2510.	J	2060.		1440.	
7439-92-1	Lead (Pb)	17.7		19.		53.4		17.2	J	202.	J	6.5	J
7439-95-4	Magnesium (Mg)	623.		197.	J	2390.		296.	J	205.	J	130.	J
7439-96-5	Manganese (Mn)	33.3	J	12.2	J	53.	J	16.8	J	19.		15.1	
7439-97-6	Mercury (Hg)	0.11	J	0.11	J	0.2	J	0.1	U	0.1	U	0.1	U
7440-02-0	Nickel (Ni)	1.8	J	1.5	J	11.6	J	1.3	J	1.2	U	1.	U
7440-09-7	Potassium (K)	229.	J	96.8	J	775.	J	155.	J	114.	J	67.9	J
7782-49-2	Selenium (Se)	0.55	J	0.46	UJ	1.3	J	0.46	UJ	0.46	UJ	0.46	UJ
7440-22-4	Silver (Ag)	0.05	U	0.05	U	0.08	U	0.05	UJ	0.05	U	0.05	U
7440-23-5	Sodium (Na)	221.	J	98.6	J	583.	J	263.	J	131.	U	99.6	U
7440-28-0	Thallium (Tl)	0.47	U	0.47	U	0.69	U	0.47	U	0.47	U	0.47	U
7440-62-2	Vanadium (V)	6.9		4.	J	24.3		5.2	J	3.6	J	2.8	J
7440-66-6	Zinc (Zn)	414.	J	42.	J	73.1	J	11.7	J	88.7	J	6.2	J
7440-31-5	Tin (Sn)	3.	U	1.2	U	1.5	U	0.7	J	1.3	J	1.4	J
57-12-5	Cyanide (CN)	??????????		??????????		??????????		??????????		??????????		??????????	

*** Validation Complete ***

CHARLESTON - ZONE C
Background Sample Results
Surface Soil: Samples 1-45

SW846-META	SAMPLE ID ------->	GDC-S-B035-01		GDC-S-B036-01		GDC-S-B037-01		GDC-S-B038-01		GDC-S-B039-01		GDC-S-B040-01	
	ORIGINAL ID ----->	GRDSB03501		GRDSB03601		GRDSB03701		GDCSB03801		GDCSB03901		GDCSB04001	
	LAB SAMPLE ID --->	702438		704097		702441		737129		737225		737248	
	ID FROM REPORT -->	MAC017		GRDSB03601		MAC019		GDCSB03801		GDCSB03901		GDCSB04001	
	SAMPLE DATE ----->	04/12/95		04/17/95		04/12/95		06/29/95		06/29/95		06/29/95	
	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	50009M	VAL	50013M	VAL	50009M	VAL	21521M	VAL	50022M	VAL	50022M	VAL
7429-90-5	Aluminum (Al)	8660.		8930.		4530.		3100.		5220.		4560.	
7440-36-0	Antimony (Sb)	0.21	UJ	0.29	J	0.21	UJ	0.35	J	0.33	J	0.45	J
7440-38-2	Arsenic (As)	10.2		6.6		2.7		2.3	U	2.6		2.6	
7440-39-3	Barium (Ba)	23.8		27.5	J	15.7	J	22.3		18.2	J	193.	
7440-41-7	Beryllium (Be)	0.35	U	0.34	U	0.22	U	0.15	U	0.12	U	0.15	U
7440-43-9	Cadmium (Cd)	0.23	U	0.45	J	0.03	U	0.12	U	0.06	U	0.37	J
7440-70-2	Calcium (Ca)	32400.	J	29700.	J	21600.		85600.		8360.		48100.	
7440-47-3	Chromium (Cr)	22.8		22.7		13.2		5.		7.4		7.5	
7440-48-4	Cobalt (Co)	1.8	J	1.7	J	0.84	J	1.1	J	0.62	J	1.	J
7440-50-8	Copper (Cu)	16.5		17.4		6.7		5.4		6.5		18.1	
7439-89-6	Iron (Fe)	5800.		7720.		3220.		2400.		4330.		3300.	
7439-92-1	Lead (Pb)	27.	J	121.		40.2	J	10.5		15.2		25.9	
7439-95-4	Magnesium (Mg)	1680.		1930.		1380.		1040.		345.	J	945.	
7439-96-5	Manganese (Mn)	45.4		48.5	J	27.6		54.8		25.3		47.2	
7439-97-6	Mercury (Hg)	0.22		0.75	J	0.1	U	0.11	U	0.1	U	0.12	
7440-02-0	Nickel (Ni)	7.8		7.4	J	4.3	J	3.3	J	2.6	J	4.4	
7440-09-7	Potassium (K)	836.	J	752.	J	322.	J	208.	J	155.	J	276.	J
7782-49-2	Selenium (Se)	0.48	UJ	1.1	J	0.71	J	0.49	UJ	0.37	U	1.1	
7440-22-4	Silver (Ag)	0.05	U	0.06	U	0.05	U	0.06	U	0.07	U	0.06	U
7440-23-5	Sodium (Na)	373.	J	321.	J	240.	J	283.	J	209.	J	360.	J
7440-28-0	Thallium (Tl)	0.49	U	0.52	U	0.49	U	0.5	U	0.4	U	0.39	U
7440-62-2	Vanadium (V)	17.2		19.5		10.		5.2	J	9.3		7.9	
7440-66-6	Zinc (Zn)	46.	J	86.2	J	23.7	J	115.	J	40.		779.	
7440-31-5	Tin (Sn)	0.64	U	2.5	U	0.9	J	1.7	J	1.4	J	3.4	J
57-12-5	Cyanide (CN)	??????????		??????????		??????????		??????????		??????????		??????????	

*** Validation Complete ***

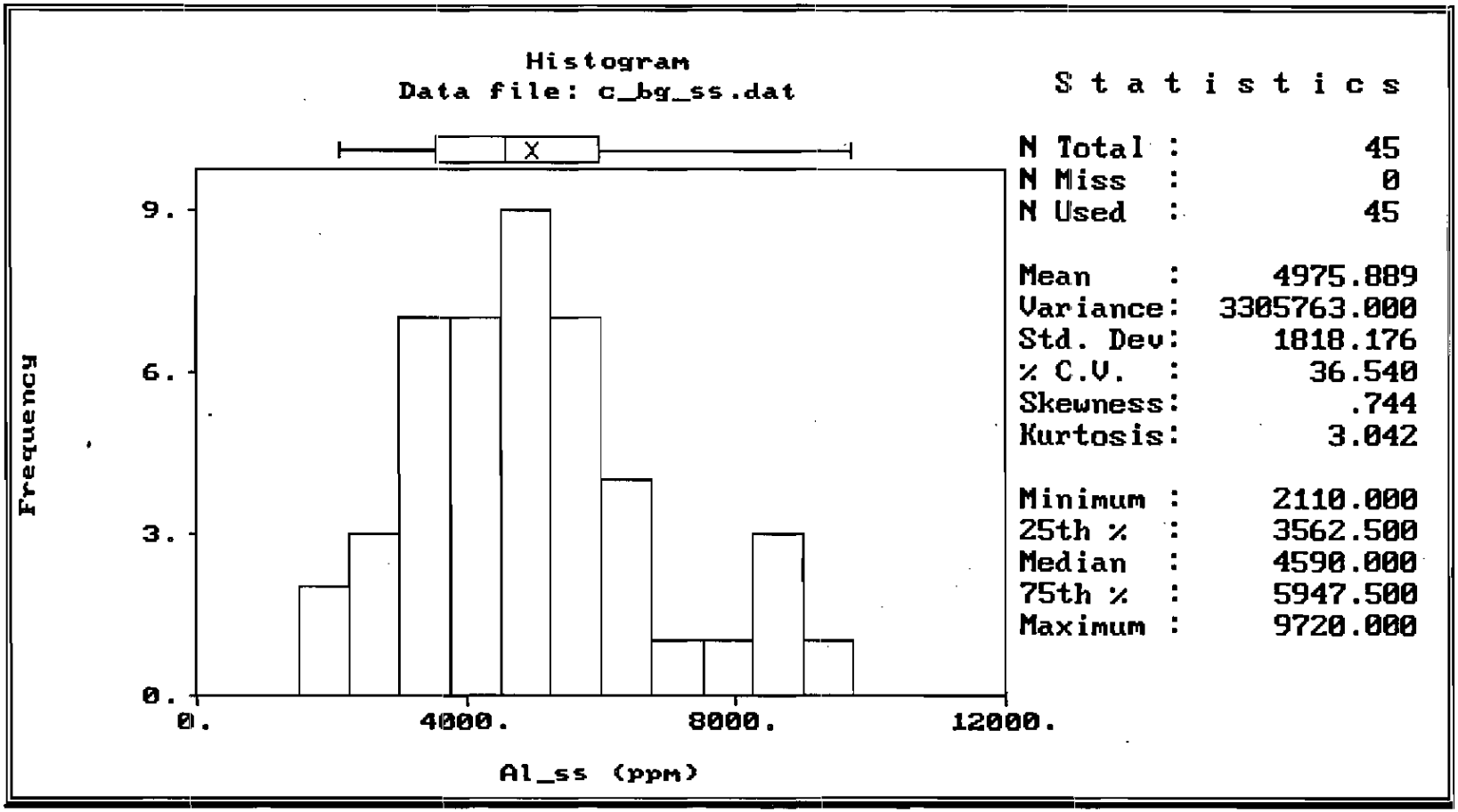
CHARLESTON - ZONE C
Background Sample Results
Surface Soil: Samples 1-45

SW846-META											
	SAMPLE ID ------->	GDC-S-B041-01		GDC-S-B042-01		GDC-S-B043-01		GDC-S-B044-01		GDC-C-B045-01	
	ORIGINAL ID ----->	GDCSB04101		GDCSB04201		GDCSB04301		GDCSB04401		GDCCB04501	
	LAB SAMPLE ID --->	736736		736739		736745		736788		736420	
	ID FROM REPORT -->	GDCSB04101		GDCSB04201		GDCSB04301		GDCSB04401		GDCCB04501	
	SAMPLE DATE ----->	06/28/95		06/28/95		06/28/95		06/28/95		06/27/95	
	MATRIX ---------->	Soil		Soil		Soil		Soil		Soil	
	UNITS ---------->	MG/KG	A	MG/KG	A	MG/KG	A	MG/KG	A	MG/KG	A
CAS #	Parameter	21521M	VAL	21521M	VAL	21521M	VAL	21521M	VAL	21521M	VAL
7429-90-5	Aluminum (Al)	7230.		5060.		6710.		4570.		6670.	
7440-36-0	Antimony (Sb)	0.38	J	0.22	UJ	0.55	J	0.3	J	0.3	J
7440-38-2	Arsenic (As)	5.3		1.6	U	3.	U	2.	U	2.8	U
7440-39-3	Barium (Ba)	17.7	J	18.4	J	39.1		22.3		20.3	J
7440-41-7	Beryllium (Be)	0.36	U	0.16	U	0.27	U	0.18	U	0.22	U
7440-43-9	Cadmium (Cd)	0.03	U	0.03	U	0.14	U	0.03	U	0.03	U
7440-70-2	Calcium (Ca)	1590.		914.		2810.		1780.		449.	J
7440-47-3	Chromium (Cr)	17.6		6.8		17.		6.2		8.	
7440-48-4	Cobalt (Co)	1.2	J	0.45	J	1.3	J	0.52	J	0.29	J
7440-50-8	Copper (Cu)	7.		6.8		15.7		3.9		9.2	
7439-89-6	Iron (Fe)	12000.		2800.		5650.		3920.		2990.	
7439-92-1	Lead (Pb)	37.9		47.8		304.		74.8		40.1	
7439-95-4	Magnesium (Mg)	529.	J	305.	J	542.	J	259.	J	232.	J
7439-96-5	Manganese (Mn)	101.		26.		78.2		27.9		25.7	
7439-97-6	Mercury (Hg)	0.19		0.11	U	0.19		0.13		0.1	U
7440-02-0	Nickel (Ni)	3.3	J	2.5	J	4.8		1.7	J	2.5	J
7440-09-7	Potassium (K)	295.	J	178.	J	344.	J	162.	J	108.	J
7782-49-2	Selenium (Se)	0.94		0.51	J	0.5	J	0.62		0.76	
7440-22-4	Silver (Ag)	0.06	U	0.06	U	0.06	J	0.05	U	0.05	U
7440-23-5	Sodium (Na)	202.	U	175.	U	214.	U	184.	U	172.	U
7440-28-0	Thallium (Tl)	0.51	U	0.51	U	0.5	U	0.49	U	0.47	U
7440-62-2	Vanadium (V)	25.4		8.3		15.8		8.2		9.3	
7440-66-6	Zinc (Zn)	27.1	J	15.3	J	138.	J	23.7	J	17.5	J
7440-31-5	Tin (Sn)	2.1	J	1.6	J	2.6	J	2.	J	1.9	J
57-12-5	Cyanide (CN)	??????????		??????????		??????????		??????????		??????????	

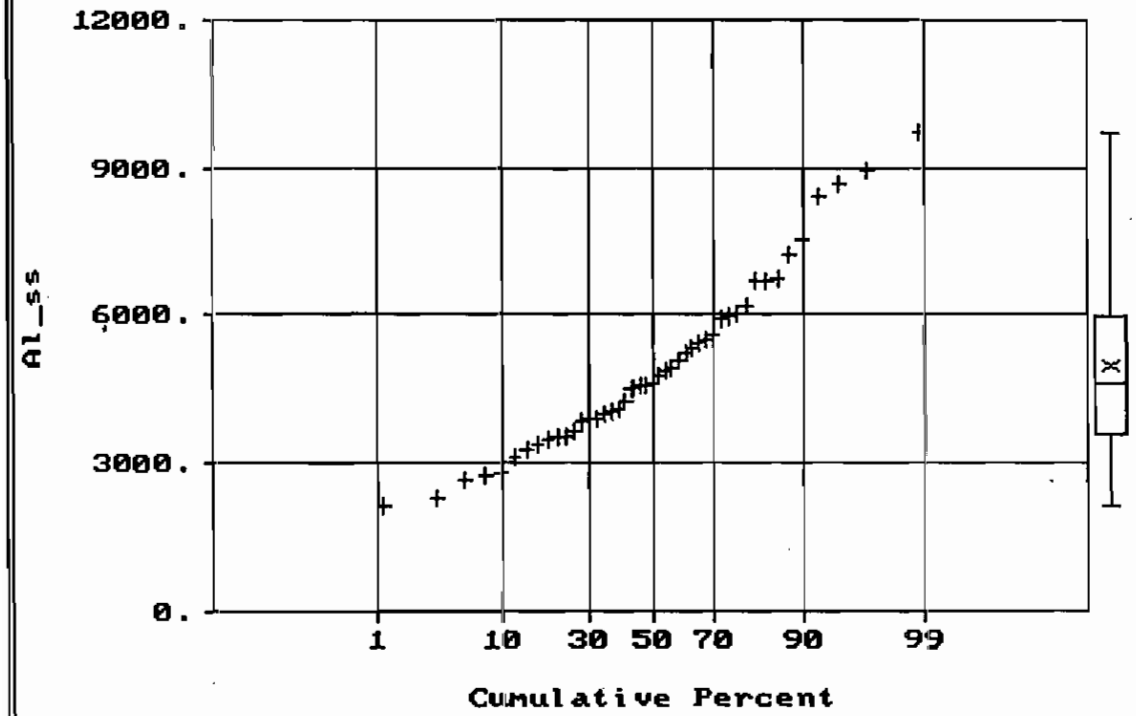
*** Validation Complete ***

Zone C
Aluminum in surface soil grid samples
Original dataset (N = 45)
Original values

1a



Normal Probability Plot for Al_ss
Data file: c_bg_ss.dat

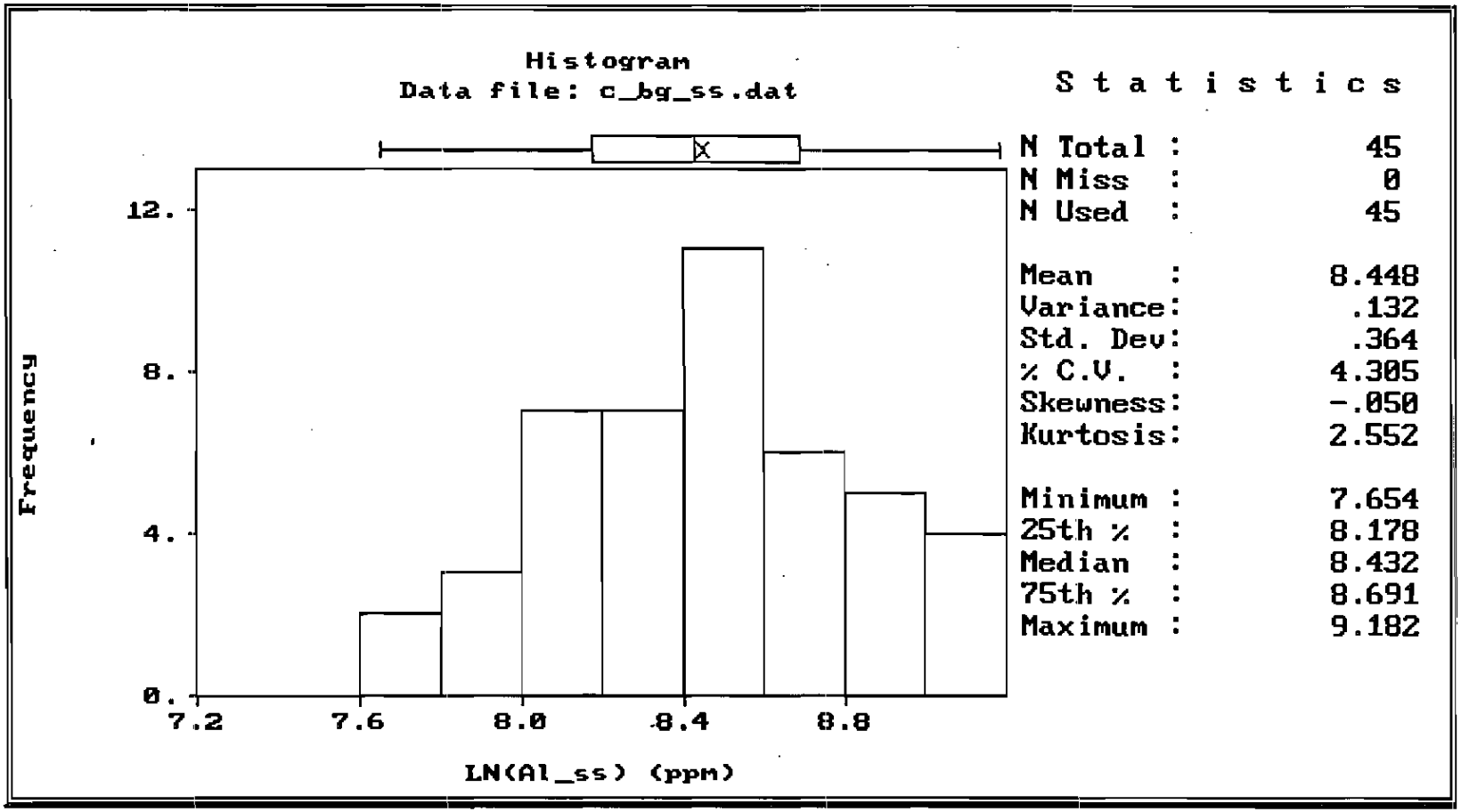


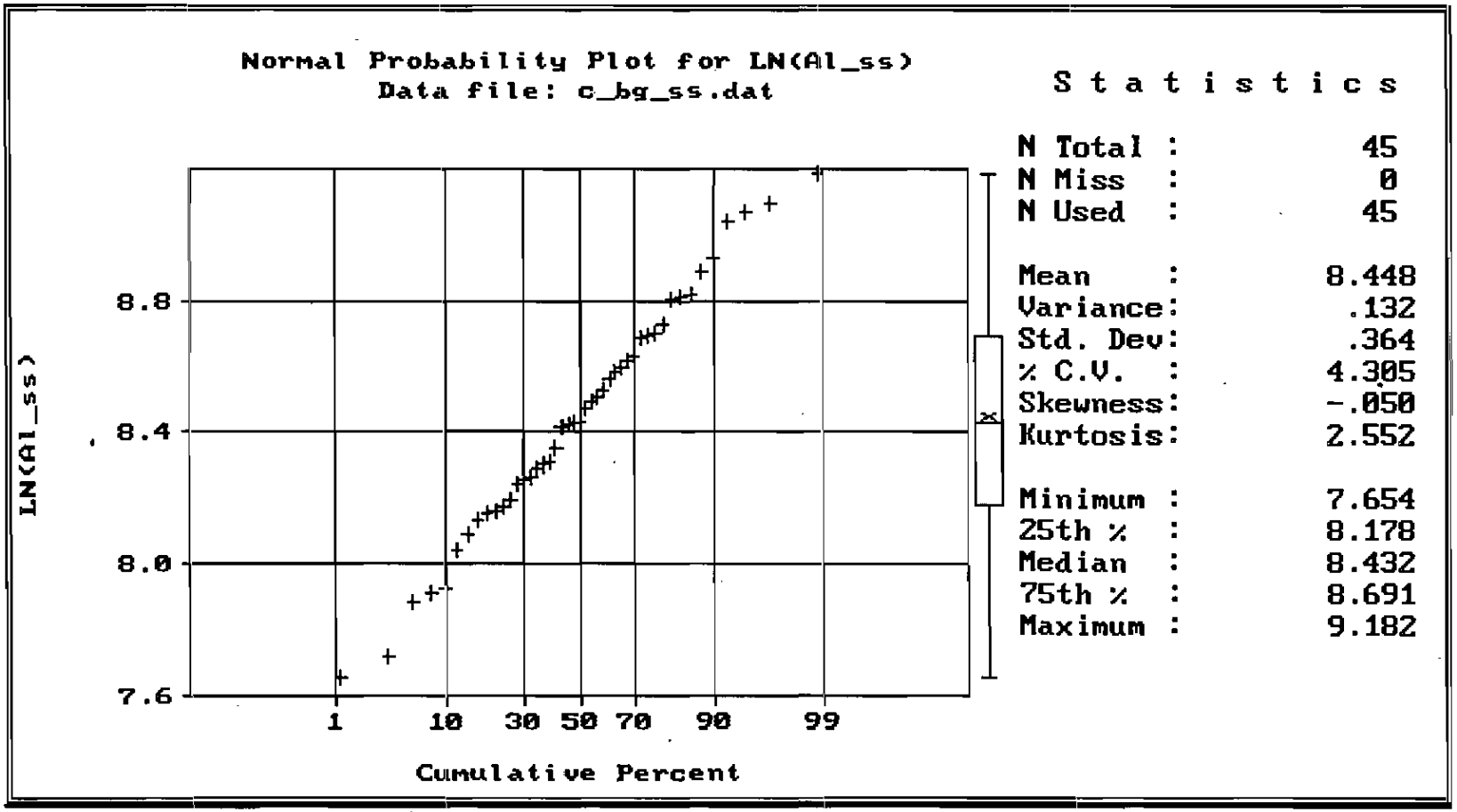
Statistics

N Total :	45
N Miss :	0
N Used :	45
Mean :	4975.889
Variance:	3305763.000
Std. Dev:	1818.176
% C.V. :	36.540
Skewness:	.744
Kurtosis:	3.042
Minimum :	2110.000
25th % :	3562.500
Median :	4590.000
75th % :	5947.500
Maximum :	9720.000

Zone C
Aluminum in surface soil grid samples
Original dataset (N = 45)
LN-transformed values

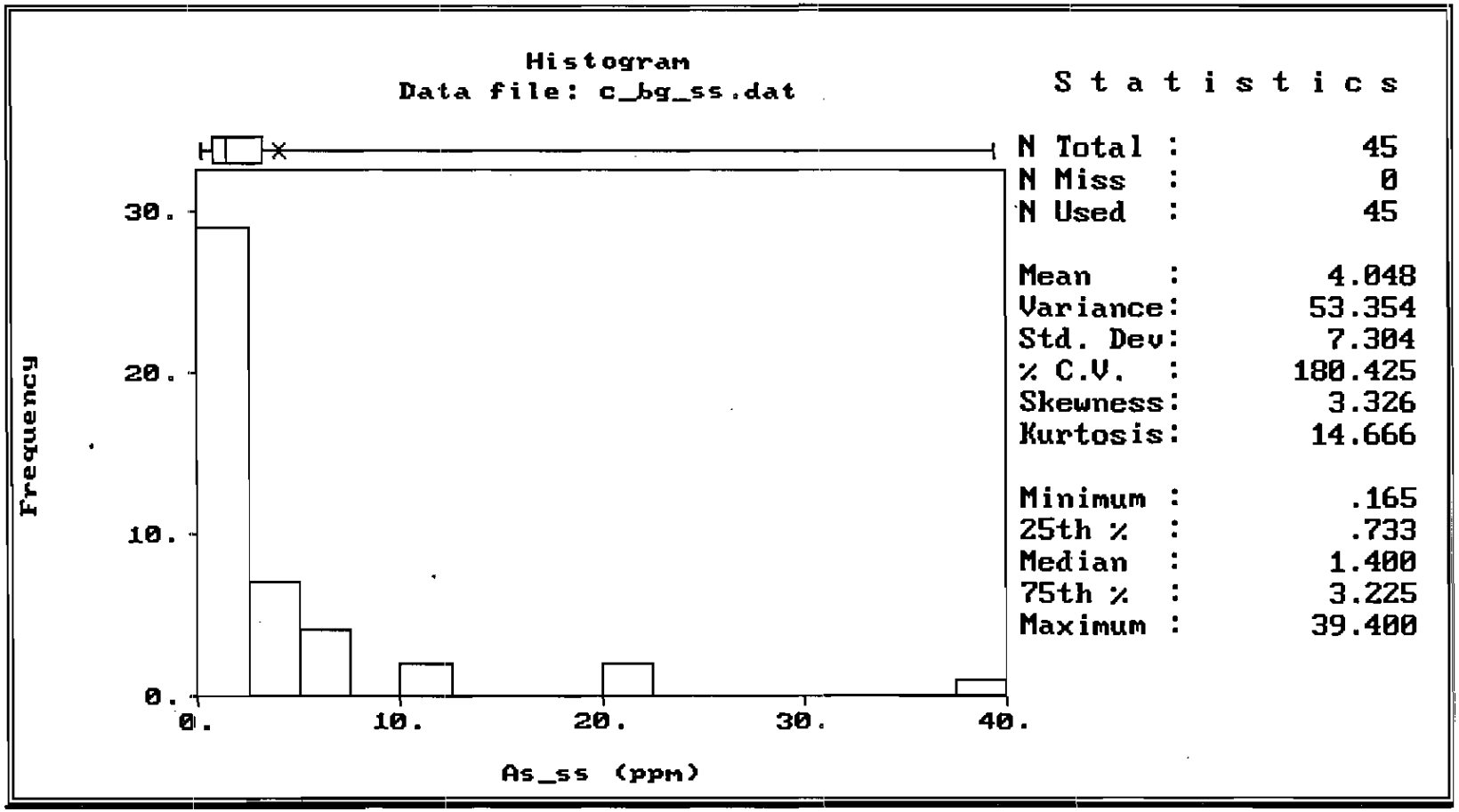
2a




Normal Probability Plot for LN(Al_ss)
Data file: c_bg_ss.dat
LN(Al_ss)
8.8
8.4
8.0
7.6
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 45
N Miss : 0
N Used : 45
Mean : 8.448
Variance: .132
Std. Dev: .364
% C.V. : 4.305
Skewness: -.050
Kurtosis: 2.552
Minimum : 7.654
25th % : 8.178
Median : 8.432
75th % : 8.691
Maximum : 9.182

Zone C
Arsenic in surface soil grid samples
Original dataset (N=45)
Original values

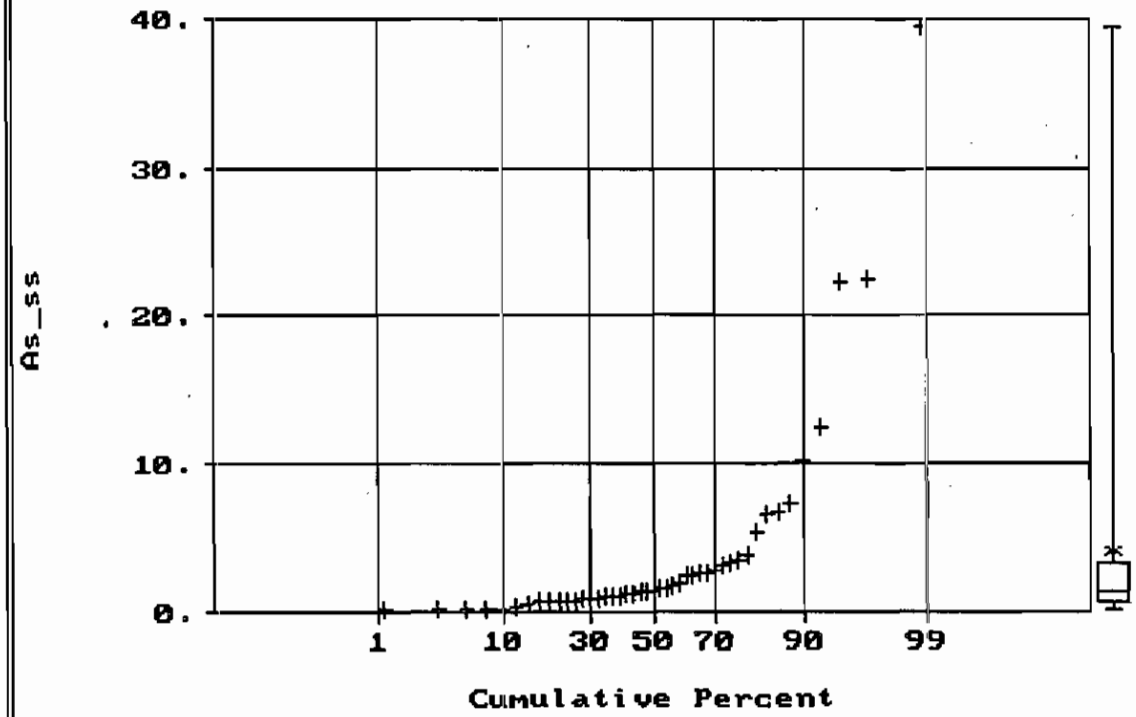
1a



Statistics

N Total :	45
N Miss :	0
N Used :	45
Mean :	4.048
Variance:	53.354
Std. Dev:	7.304
% C.V. :	180.425
Skewness:	3.326
Kurtosis:	14.666
Minimum :	.165
25th % :	.733
Median :	1.400
75th % :	3.225
Maximum :	39.400

Normal Probability Plot for As_ss
Data file: c_bg_ss.dat

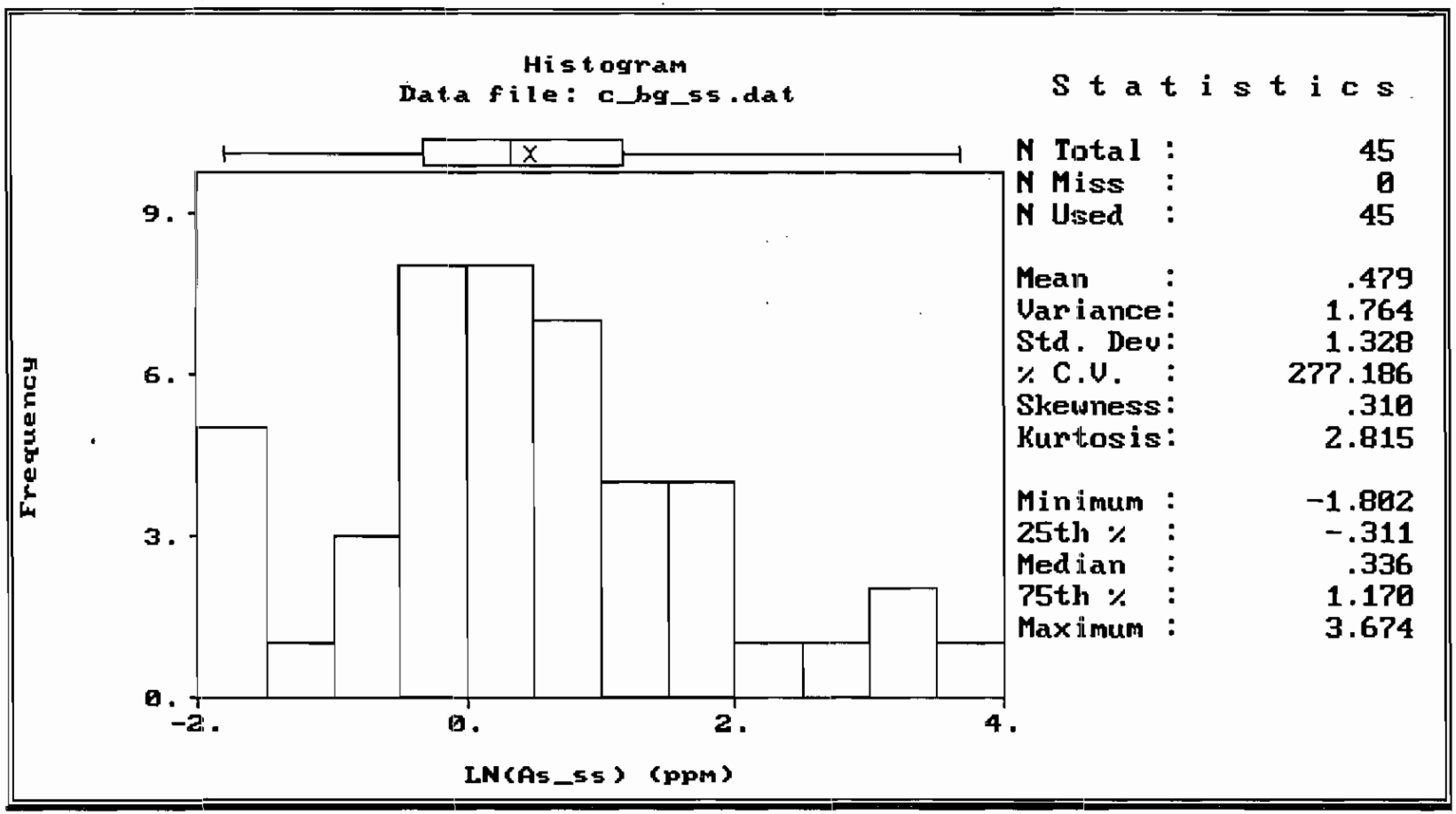


S t a t i s t i c s

N Total :	45
N Miss :	0
N Used :	45
Mean :	4.048
Variance:	53.354
Std. Dev:	7.304
% C.V. :	180.425
Skewness:	3.326
Kurtosis:	14.666
Minimum :	.165
25th % :	.733
Median :	1.400
75th % :	3.225
Maximum :	39.400

Zone C
Arsenic in surface soil grid samples
Original dataset (N=45)
LN-transformed values

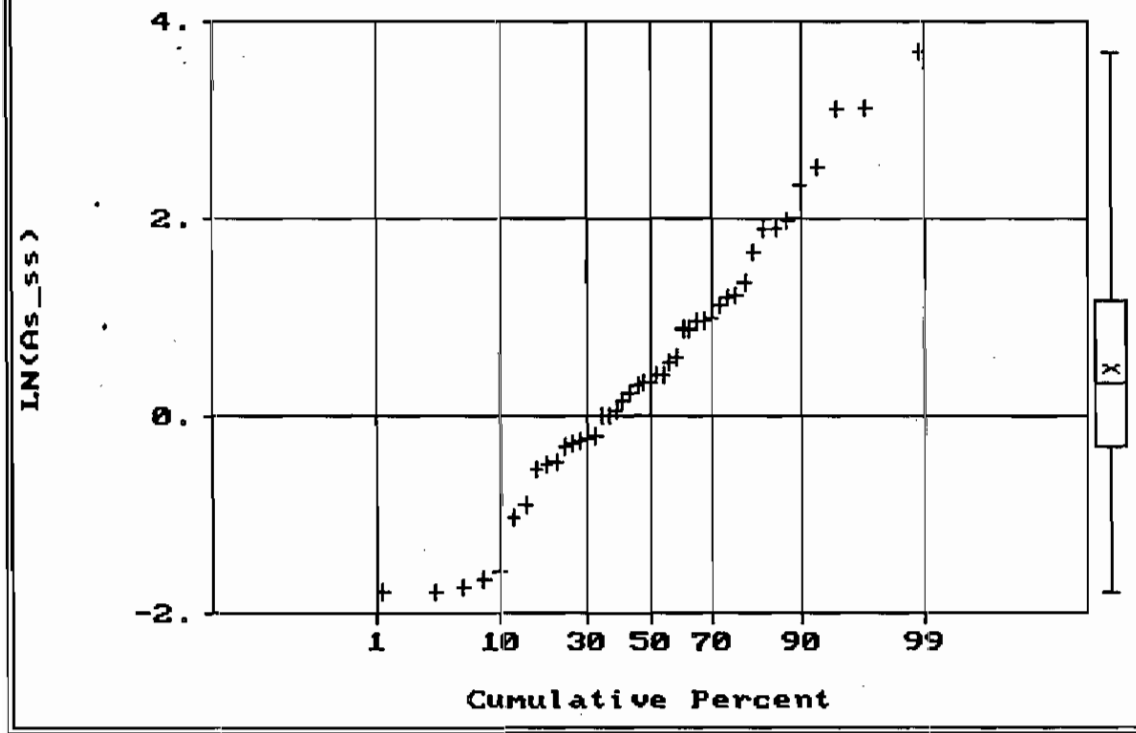
2a



Statistics

N Total :	45
N Miss :	0
N Used :	45
Mean :	.479
Variance:	1.764
Std. Dev:	1.328
% C.V. :	277.186
Skewness:	.310
Kurtosis:	2.815
Minimum :	-1.802
25th % :	-.311
Median :	.336
75th % :	1.170
Maximum :	3.674

Normal Probability Plot for LN(As_ss)
Data file: c_bg_ss.dat

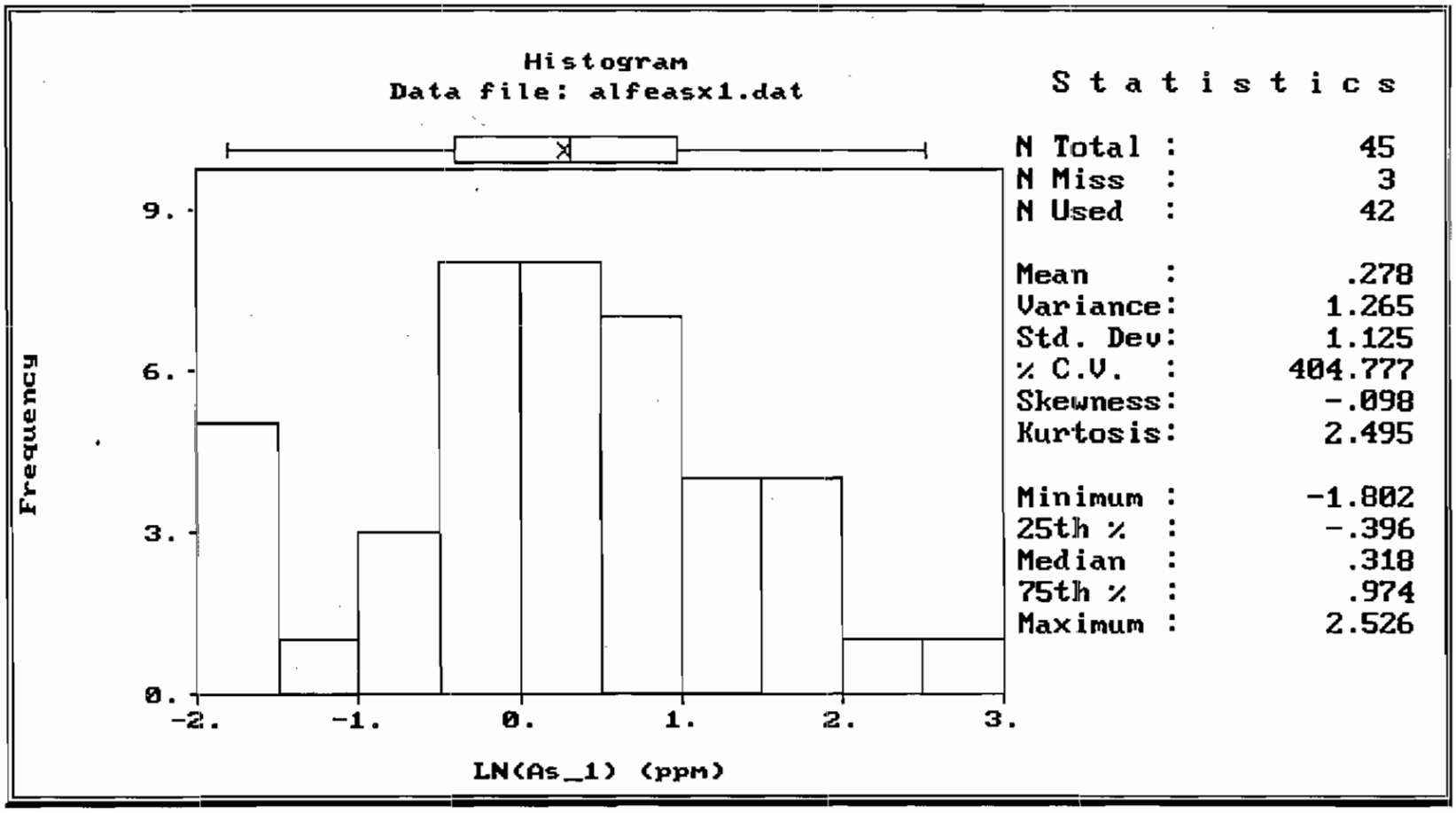


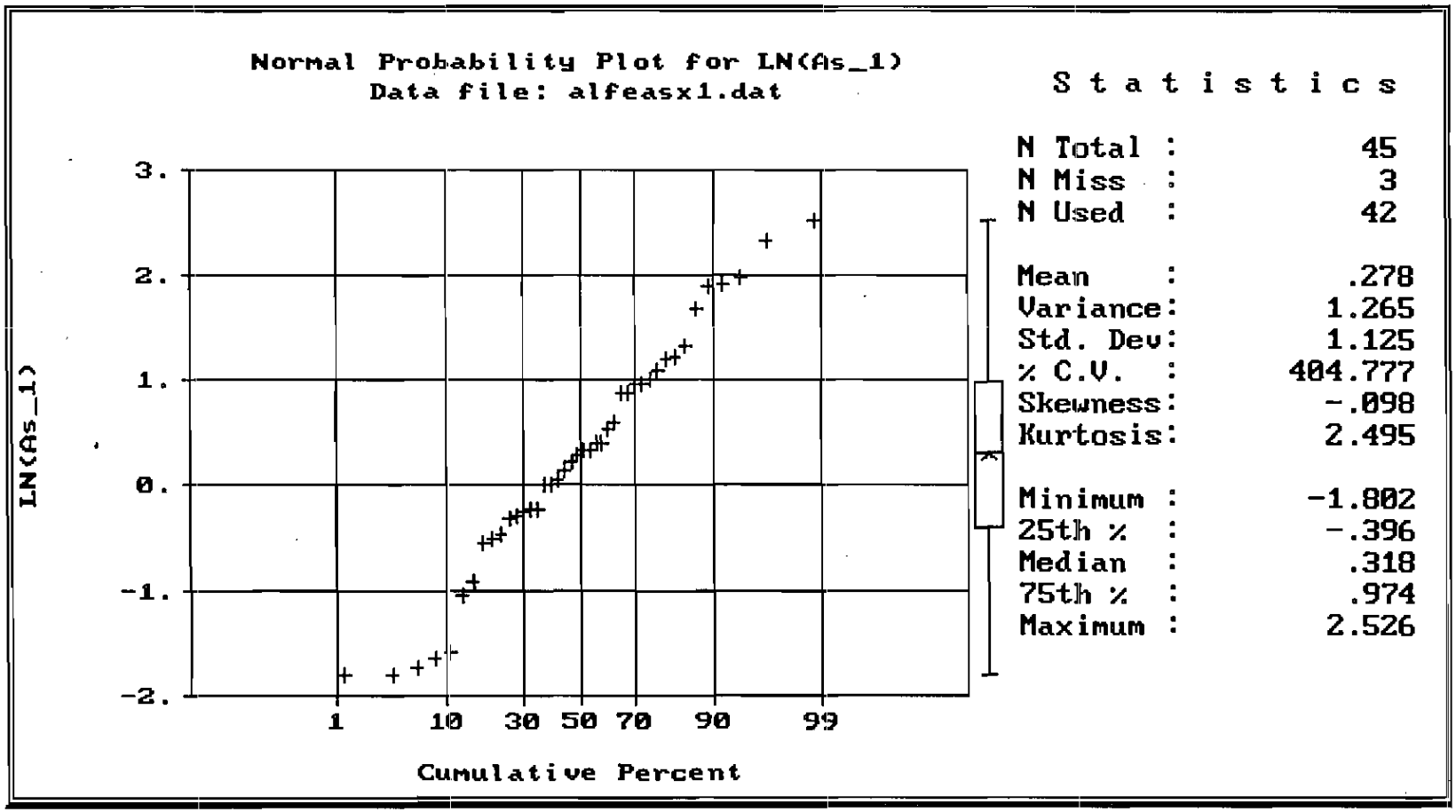
Statistics

N Total :	45
N Miss :	0
N Used :	45
Mean :	.479
Variance:	1.764
Std. Dev:	1.328
% C.V. :	277.186
Skewness:	.310
Kurtosis:	2.815
Minimum :	-1.802
25th % :	-.311
Median :	.336
75th % :	1.170
Maximum :	3.674

Zone C
Arsenic in surface soil grid samples
Samples 02-01, 28-01, and 31-01 removed from dataset (N = 42)
LN-transformed values

3a




Normal Probability Plot for LN(As_1)
Data file: alfeasx1.dat
LN(As_1)
3.
2.
1.
0.
-1.
-2.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 45
N Miss : 3
N Used : 42
Mean : .278
Variance: 1.265
Std. Dev: 1.125
% C.V. : 404.777
Skewness: -.098
Kurtosis: 2.495
Minimum : -1.802
25th % : -.396
Median : .318
75th % : .974
Maximum : 2.526

CHARLESTON - ZONE C
Background Sample Results
Subsurface Soil: 30 Samples

SW846-META	SAMPLE ID ------->	GDC-S-0012-02		GDC-S-B001-02		GDC-S-B004-02		GDC-S-B008-02		GDC-S-B009-02		GDC-S-B010-02	
	ORIGINAL ID ----->	GRDSB01202		GRDSB00102		GRDSB00402		GRDSB00802		GRDSB00902		GRDSB01002	
	LAB SAMPLE ID --->	702020		690547		703511		691132		697006		702558	
	ID FROM REPORT -->	MAC016		GRDSB00102		GRDSB00402		GRDSB00802		MAC006		MAC006	
	SAMPLE DATE ----->	04/11/95		03/15/95		04/14/95		03/17/95		03/31/95		04/10/95	
	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	50009M	VAL	0001MI	VAL	50012M	VAL	0002MI	VAL	50003M	VAL	0011MI	VAL
7429-90-5	Aluminum (Al)	5220.		3630.		14000.		9320.		5630.		25400.	J
7440-36-0	Antimony (Sb)	0.2	UJ	0.2	UJ	0.36	UJ	0.23	UJ	0.54	UJ	0.34	U
7440-38-2	Arsenic (As)	0.44	J	0.37	U	12.1	J	5.4		3.1	J	14.1	J
7440-39-3	Barium (Ba)	11.5	J	6.9	J	30.2	J	17.1	J	16.7	J	39.6	J
7440-41-7	Beryllium (Be)	0.07	U	0.07	U	0.86	J	0.24	J	0.16	UJ	0.98	J
7440-43-9	Cadmium (Cd)	0.03	U	0.05	U	0.3	U	0.06	U	0.04	U	0.34	UJ
7440-70-2	Calcium (Ca)	64.4	UJ	392.	J	40300.		2490.		9380.		17200.	J
7440-47-3	Chromium (Cr)	6.5		3.7	J	30.		9.8		11.1		39.8	J
7440-48-4	Cobalt (Co)	0.67	J	0.23	J	6.	J	1.4	J	1.	J	7.1	J
7440-50-8	Copper (Cu)	0.71	J	0.55	J	18.6		3.7		17.5		31.5	J
7439-89-6	Iron (Fe)	3460.		732.		20900.		4530.		4700.		26200.	J
7439-92-1	Lead (Pb)	4.3	J	4.3	J	32.6		8.6		57.4		94.6	J
7439-95-4	Magnesium (Mg)	203.	J	109.	J	3940.		494.	J	489.	J	3870.	J
7439-96-5	Manganese (Mn)	18.9		5.1		502.		42.3		31.7		520.	J
7439-97-6	Mercury (Hg)	0.1	U	0.09	U	0.3		0.12	U	0.14		8.5	
7440-02-0	Nickel (Ni)	1.6	U	0.16	UJ	9.3		3.3	J	3.8	J	12.5	J
7440-09-7	Potassium (K)	125.	J	67.1	J	2460.	J	302.	J	237.	J	2170.	J
7782-49-2	Selenium (Se)	0.46	UJ	0.46	UJ	1.5	J	0.69	J	0.52	UJ	2.	J
7440-22-4	Silver (Ag)	0.05	U	0.06	UJ	0.09	U	0.07	UJ	0.06	UJ	0.09	UJ
7440-23-5	Sodium (Na)	91.9	U	124.	U	2160.	J	130.	U	406.	J	290.	J
7440-28-0	Thallium (Tl)	0.47	U	0.58	U	0.85	U	0.68	U	0.53	U	0.8	U
7440-62-2	Vanadium (V)	6.3		1.5	J	40.4		11.		10.6		56.9	J
7440-66-6	Zinc (Zn)	5.	J	3.6		82.3		17.7	J	49.1		149.	J
7440-31-5	Tin (Sn)	1.3	J	0.83	U	1.1	UJ	1.5	J	2.4	U	1.6	J
57-12-5	Cyanide (CN)	??????????		??????????		??????????		??????????		??????????		??????????	

*** Validation Complete ***

CHARLESTON - ZONE C
Background Sample Results
Subsurface Soil: 30 Samples

SW846-META															
	SAMPLE ID ------->	GDC-S-B013-02		GDC-S-B014-02		GDC-S-B015-02		GDC-S-B019-02		GDC-S-B020-02		GDC-S-B021-02	
	ORIGINAL ID ----->	GRDSB01302		GRDSB01402		GRDSB01502		GRDSB01902		GRDSB02002		GRDSB02102	
	LAB SAMPLE ID --->	702018		703518		702560		703515		702569		701988	
	ID FROM REPORT -->	MAC014		MAC018		MAC008		MAC015		MAC011		MAC003	
	SAMPLE DATE ----->	04/12/95		04/14/95		04/10/95		04/14/95		04/11/95		04/11/95	
	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	50009M	VAL	0011MI	VAL	0011MI	VAL	0011MI	VAL	0011MI	VAL	50009M	VAL
7429-90-5	Aluminum (Al)	3470.		5050.	J	7530.	J	4010.	J	3860.	J	1720.	
7440-36-0	Antimony (Sb)	0.2	UJ	0.2	UJ	0.21	UJ	0.21	UJ	0.2	UJ	0.19	UJ
7440-38-2	Arsenic (As)	0.34	U	0.33	UJ	0.62	J	0.36	UJ	0.34	UJ	0.33	U
7440-39-3	Barium (Ba)	10.5	J	3.9	J	18.7	J	16.9	J	18.5	J	3.6	J
7440-41-7	Beryllium (Be)	0.06	U	0.08	UJ	0.21	UJ	0.21	UJ	0.13	UJ	0.03	U
7440-43-9	Cadmium (Cd)	0.03	U	0.03	UJ	0.03	UJ	0.03	UJ	0.03	UJ	0.03	U
7440-70-2	Calcium (Ca)	269.	J	331.	J	738.	J	884.	J	713.	J	96.4	UJ
7440-47-3	Chromium (Cr)	4.1		5.9	J	7.1	J	5.5	J	5.	J	2.5	
7440-48-4	Cobalt (Co)	0.26	J	0.38	UJ	0.66	UJ	0.86	J	0.58	UJ	0.14	J
7440-50-8	Copper (Cu)	0.6	UJ	0.35	J	3.7	J	1.	J	1.3	J	1.5	J
7439-89-6	Iron (Fe)	2410.		726.	J	3220.	J	4280.	J	2740.	J	1170.	
7439-92-1	Lead (Pb)	4.5	J	2.8	J	14.9	J	6.9	J	5.3	J	2.9	J
7439-95-4	Magnesium (Mg)	130.	J	144.	J	330.	J	191.	J	299.	J	74.3	J
7439-96-5	Manganese (Mn)	9.5		3.2	J	57.4	J	72.8	J	24.3	J	5.	
7439-97-6	Mercury (Hg)	0.1	U	0.1	U	0.11	U	0.11	U	0.11	U	0.1	U
7440-02-0	Nickel (Ni)	0.79	U	0.6	J	2.1	J	1.2	J	1.4	J	0.76	U
7440-09-7	Potassium (K)	77.2	J	103.	J	166.	J	111.	J	149.	J	55.5	J
7782-49-2	Selenium (Se)	0.47	UJ	0.49	J	0.72	J	0.58	J	0.47	UJ	0.45	UJ
7440-22-4	Silver (Ag)	0.05	U	0.05	UJ	0.06	UJ	0.06	UJ	0.05	UJ	0.05	U
7440-23-5	Sodium (Na)	114.	U	101.	U	118.	U	136.	J	114.	U	117.	U
7440-28-0	Thallium (Tl)	0.48	U	0.46	U	0.5	U	0.51	U	0.48	U	0.46	U
7440-62-2	Vanadium (V)	5.3	J	1.9	J	5.9	J	8.8	J	4.	J	2.4	J
7440-66-6	Zinc (Zn)	6.1	J	1.3	J	11.4	J	4.7	J	7.4	J	3.6	J
7440-31-5	Tin (Sn)	1.9	J	0.61	UJ	0.65	UJ	0.66	UJ	0.86	J	1.1	J
57-12-5	Cyanide (CN)	??????????		??????????		??????????		??????????		??????????		??????????	

*** Validation Complete ***

CHARLESTON - ZONE C
Background Sample Results
Subsurface Soil: 30 Samples

SW846-META	SAMPLE ID ------->	GDC-S-B022-02		GDC-S-B023-02		GDC-C-B023-02		GDC-S-B024-02		GDC-S-B025-02		GDC-S-B026-02	
	ORIGINAL ID ----->	GRDSB02202		GRDSB02302		GRDCB02302		GRDSB02402		GRDSB02502		GRDSB02602	
	LAB SAMPLE ID --->	702007		701990		701996		702005		702456		704088	
	ID FROM REPORT -->	MAC013		MAC005		GRDCB02302		MAC011		MAC005		MAC020	
	SAMPLE DATE ----->	04/11/95		04/11/95		04/11/95		04/11/95		04/12/95		04/17/95	
	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	50009M	VAL	50009M	VAL	0006M	VAL	50009M	VAL	0011MI	VAL	0011MI	VAL
7429-90-5	Aluminum (Al)	3350.		2990.		2180.	J	5020.		5940.	J	4970.	J
7440-36-0	Antimony (Sb)	0.2	UJ	0.2	UJ	0.19	UJ	0.24	UJ	0.21	UJ	0.21	U
7440-38-2	Arsenic (As)	0.33	U	0.33	U	0.32	U	0.4	U	1.9	J	0.36	U
7440-39-3	Barium (Ba)	7.3	J	7.8	J	6.3	J	5.	J	29.8	J	18.2	J
7440-41-7	Beryllium (Be)	0.06	U	0.06	U	0.05	U	0.06	U	0.17	UJ	0.12	UJ
7440-43-9	Cadmium (Cd)	0.03	U	0.03	U	0.03	U	0.04	U	0.28	UJ	0.03	UJ
7440-70-2	Calcium (Ca)	181.	J	89.2	UJ	93.8	J	141.	UJ	1250.	J	490.	J
7440-47-3	Chromium (Cr)	4.2		3.8		2.9		6.2		7.3	J	8.	J
7440-48-4	Cobalt (Co)	0.24	J	0.23	J	0.17	J	0.35	J	1.2	J	0.86	J
7440-50-8	Copper (Cu)	0.57	UJ	0.79	J	0.78	J	1.1	J	11.4	J	1.7	J
7439-89-6	Iron (Fe)	2450.		1880.		1640.		1980.		3350.	J	3820.	J
7439-92-1	Lead (Pb)	3.7	J	3.2	J	2.5		7.1	J	30.	J	4.8	J
7439-95-4	Magnesium (Mg)	156.	J	138.	J	77.	J	69.	J	374.	J	425.	J
7439-96-5	Manganese (Mn)	6.9		9.4		8.5		13.4		38.	J	30.9	J
7439-97-6	Mercury (Hg)	0.09	U	0.1	U	0.1	U	0.12	U	0.26		0.11	U
7440-02-0	Nickel (Ni)	0.81	U	0.97	U	0.57	J	0.5	U	4.1	J	2.1	J
7440-09-7	Potassium (K)	116.	J	68.4	J	41.5	J	52.7	J	160.	J	307.	J
7782-49-2	Selenium (Se)	0.46	UJ	0.45	UJ	0.68	J	0.55	UJ	0.77	J	0.49	UJ
7440-22-4	Silver (Ag)	0.05	U	0.05	U	0.05	UJ	0.06	U	0.06	UJ	0.06	UJ
7440-23-5	Sodium (Na)	109.	U	106.	U	129.	U	125.	U	128.	U	113.	U
7440-28-0	Thallium (Tl)	0.47	U	0.46	U	0.45	U	0.56	U	0.5	U	0.5	U
7440-62-2	Vanadium (V)	5.2		3.9	J	2.7	J	3.3	J	5.8	J	7.1	J
7440-66-6	Zinc (Zn)	6.6	J	3.2	J	2.4		47.6	J	58.1	J	10.2	J
7440-31-5	Tin (Sn)	1.3	J	1.6	J	1.7	J	1.3	J	2.	J	0.66	UJ
57-12-5	Cyanide (CN)	??????????		??????????		??????????		??????????		??????????		??????????	

*** Validation Complete ***

CHARLESTON - ZONE C
Background Sample Results
Subsurface Soil: 30 Samples

SW846-META	SAMPLE ID ------->	GDC-S-B027-02		GDC-S-B028-02		GDC-S-B029-02		GDC-S-B030-02		GDC-S-B031-02		GDC-S-B032-02	
	ORIGINAL ID ----->	GRDSB02702		GRDSB02802		GRDSB02902		GRDSB03002		GRDSB03102		GRDSB03202	
	LAB SAMPLE ID --->	705232		705234		704094		704095		704100		702453	
	ID FROM REPORT -->	GRDSB02702		GRDSB02802		GRDSB02902		GRDSB03002		GRDSB03102		MAC003	
	SAMPLE DATE ----->	04/20/95		04/20/95		04/17/95		04/17/95		04/17/95		04/12/95	
	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	50013M	VAL	50013M	VAL	50013M	VAL	50013M	VAL	50013M	VAL	0011MI	VAL
7429-90-5	Aluminum (Al)	17300.		8280.		3120.		4020.		1450.		5740.	J
7440-36-0	Antimony (Sb)	0.26	UJ	0.22	UJ	0.92	J	0.22	J	0.23	UJ	0.2	U
7440-38-2	Arsenic (As)	4.9	U	6.4		1.6	U	31.6		0.83	U	0.36	J
7440-39-3	Barium (Ba)	24.5	J	22.2	J	17.5	J	14.9	J	7.6	J	24.5	J
7440-41-7	Beryllium (Be)	0.61	J	0.12	U	0.11	U	0.13	U	0.06	U	0.17	UJ
7440-43-9	Cadmium (Cd)	0.28	J	0.03	U	0.03	U	0.13	J	0.04	U	0.03	UJ
7440-70-2	Calcium (Ca)	23400.	J	742.	J	1740.	J	2870.	J	638.	J	8740.	J
7440-47-3	Chromium (Cr)	34.2		11.1		3.5		5.5		3.1		6.1	J
7440-48-4	Cobalt (Co)	4.4	J	0.6	J	0.29	J	0.56	J	0.34	J	0.65	UJ
7440-50-8	Copper (Cu)	5.9		1.7		4.8		15.5		0.83	U	2.	J
7439-89-6	Iron (Fe)	16500.		6410.		2160.		2320.		1390.		2810.	J
7439-92-1	Lead (Pb)	20.3		6.4		7.9		24.8		2.4		11.7	J
7439-95-4	Magnesium (Mg)	2480.		331.	J	142.	J	180.	J	137.	J	307.	J
7439-96-5	Manganese (Mn)	40.5	J	3.8	J	18.1	J	18.3	J	11.9	J	26.	J
7439-97-6	Mercury (Hg)	0.19	J	0.12	U	0.11	U	0.18	J	0.12	U	0.11	U
7440-02-0	Nickel (Ni)	7.4	J	1.6	J	0.79	J	1.8	J	0.68	J	1.7	J
7440-09-7	Potassium (K)	1690.	J	253.	J	75.2	J	105.	J	67.2	J	153.	J
7782-49-2	Selenium (Se)	1.2	J	0.51	UJ	0.46	UJ	0.46	UJ	0.53	UJ	0.47	UJ
7440-22-4	Silver (Ag)	0.07	U	0.06	U	0.05	U	0.05	U	0.06	U	0.05	UJ
7440-23-5	Sodium (Na)	125.	J	113.	J	109.	J	126.	J	133.	J	214.	U
7440-28-0	Thallium (Tl)	0.63	U	0.52	U	0.47	U	0.47	U	0.54	U	0.48	U
7440-62-2	Vanadium (V)	35.2		16.9		4.1	J	4.7	J	2.9	J	5.	J
7440-66-6	Zinc (Zn)	57.5	J	8.2	J	17.4	J	86.9	J	4.8	J	9.7	J
7440-31-5	Tin (Sn)	0.82	U	1.7	U	1.6	U	2.8	U	1.6	U	0.64	J
57-12-5	Cyanide (CN)	??????????		??????????		??????????		??????????		??????????		??????????	

*** Validation Complete ***

CHARLESTON - ZONE C
Background Sample Results
Subsurface Soil: 30 Samples

SW846-META	SAMPLE ID ------->	GDC-S-B033-02		GDC-S-B034-02		GDC-C-B035-02		GDC-S-B035-02		GDC-S-B036-02		GDC-S-B037-02	
	ORIGINAL ID ----->	GRDSB03302		GRDSB03402		GRDSB03502		GRDSB03502		GRDSB03602		GRDSB03702	
	LAB SAMPLE ID --->	702003		702001		702433		702439		704099		702445	
	ID FROM REPORT -->	MAC009		MAC007		GRDSB03502		MAC018		GRDSB03602		MAC020	
	SAMPLE DATE ----->	04/11/95		04/11/95		04/12/95		04/12/95		04/17/95		04/12/95	
	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	50009M	VAL	50009M	VAL	50010M	VAL	50009M	VAL	50013M	VAL	50009M	VAL
7429-90-5	Aluminum (Al)	3950.		1480.		9340.		8460.		16600.		4060.	
7440-36-0	Antimony (Sb)	0.2	UJ	0.2	UJ	0.24	UJ	0.24	UJ	0.25	UJ	0.2	U
7440-38-2	Arsenic (As)	0.34	U	0.33	U	2.2	J	1.9		11.2		0.34	U
7440-39-3	Barium (Ba)	9.8	J	3.7	J	37.9		30.		64.6	J	12.9	J
7440-41-7	Beryllium (Be)	0.06	U	0.03	U	0.37	U	0.32	U	0.43	U	0.13	U
7440-43-9	Cadmium (Cd)	0.03	U	0.03	U	0.04	U	0.04	U	0.23	J	0.03	U
7440-70-2	Calcium (Ca)	248.	J	86.7	U	13400.	J	20700.	J	1590.	J	537.	
7440-47-3	Chromium (Cr)	5.1		2.		7.2		9.4		31.8		4.8	
7440-48-4	Cobalt (Co)	0.4	J	0.14	J	0.6	U	0.68	J	4.7	J	0.44	J
7440-50-8	Copper (Cu)	0.54	UJ	0.26	UJ	5.5		5.3		1.1	U	0.72	J
7439-89-6	Iron (Fe)	1570.		1010.		3040.		2910.		36700.		1360.	
7439-92-1	Lead (Pb)	5.5	J	1.9	J	15.4		13.	J	9.6		3.	J
7439-95-4	Magnesium (Mg)	101.	J	62.2	J	623.	J	896.		1070.		210.	J
7439-96-5	Manganese (Mn)	11.4		3.2		35.3		31.6		17.8	J	8.6	
7439-97-6	Mercury (Hg)	0.11	U	0.1	U	0.13	U	0.12	U	0.13	U	0.1	U
7440-02-0	Nickel (Ni)	0.85	U	0.62	U	3.1	J	4.1	J	4.6	J	1.3	U
7440-09-7	Potassium (K)	70.	J	41.3	J	187.	J	278.	J	615.	J	109.	J
7782-49-2	Selenium (Se)	0.47	UJ	0.46	UJ	0.94	J	0.61	J	2.9	J	0.47	UJ
7440-22-4	Silver (Ag)	0.05	U	0.05	U	0.06	U	0.06	U	0.07	U	0.05	U
7440-23-5	Sodium (Na)	108.	U	124.	U	206.	U	237.	J	107.	J	108.	U
7440-28-0	Thallium (Tl)	0.48	U	0.47	U	0.57	U	0.57	U	0.93	J	0.48	U
7440-62-2	Vanadium (V)	2.3	J	1.7	J	4.9	J	6.4		51.2		2.5	J
7440-66-6	Zinc (Zn)	26.8	J	2.1	J	16.9		19.3	J	23.4	J	4.6	J
7440-31-5	Tin (Sn)	1.1	J	1.	J	0.75	U	0.74	U	0.79	U	0.86	J
57-12-5	Cyanide (CN)	??????????		??????????		??????????		??????????		??????????		??????????	

*** Validation Complete ***

CHARLESTON - ZONE C
Background Sample Results
Subsurface Soil: 30 Samples

SW846-META											
	SAMPLE ID ------->	GDC-S-B038-02		GDC-S-B039-02							
	ORIGINAL ID ----->	GDCSB03802		GDCSB03902							
	LAB SAMPLE ID --->	737186		737243							
	ID FROM REPORT -->	GDCSB03802		GDCSB03902							
	SAMPLE DATE ----->	06/29/95		06/29/95							
	MATRIX ---------->	Soil		Soil							
	UNITS ---------->	MG/KG	A	MG/KG	A						
CAS #	Parameter	21521M	VAL	50022M	VAL						
7429-90-5	Aluminum (Al)	2260.		6590.							
7440-36-0	Antimony (Sb)	0.2	UJ	0.59	J						
7440-38-2	Arsenic (As)	0.34	U	2.7							
7440-39-3	Barium (Ba)	8.6	J	18.	J						
7440-41-7	Beryllium (Be)	0.1	U	0.08	U						
7440-43-9	Cadmium (Cd)	0.03	U	0.05	U						
7440-70-2	Calcium (Ca)	404.	J	2600.							
7440-47-3	Chromium (Cr)	2.4		7.3							
7440-48-4	Cobalt (Co)	0.06	U	0.46	J						
7440-50-8	Copper (Cu)	0.68	U	3.							
7439-89-6	Iron (Fe)	1290.		4180.							
7439-92-1	Lead (Pb)	2.5		21.1							
7439-95-4	Magnesium (Mg)	95.1	J	247.	J						
7439-96-5	Manganese (Mn)	9.8		15.2							
7439-97-6	Mercury (Hg)	0.11	U	0.11	U						
7440-02-0	Nickel (Ni)	0.75	J	1.9	J						
7440-09-7	Potassium (K)	63.6	J	135.	J						
7782-49-2	Selenium (Se)	0.46	U	0.63							
7440-22-4	Silver (Ag)	0.05	U	0.07	U						
7440-23-5	Sodium (Na)	189.	U	201.	J						
7440-28-0	Thallium (Tl)	0.47	U	0.39	U						
7440-62-2	Vanadium (V)	2.7	J	8.7							
7440-66-6	Zinc (Zn)	3.	J	168.							
7440-31-5	Tin (Sn)	1.	J	1.5	J						
57-12-5	Cyanide (CN)	??????????		??????????							

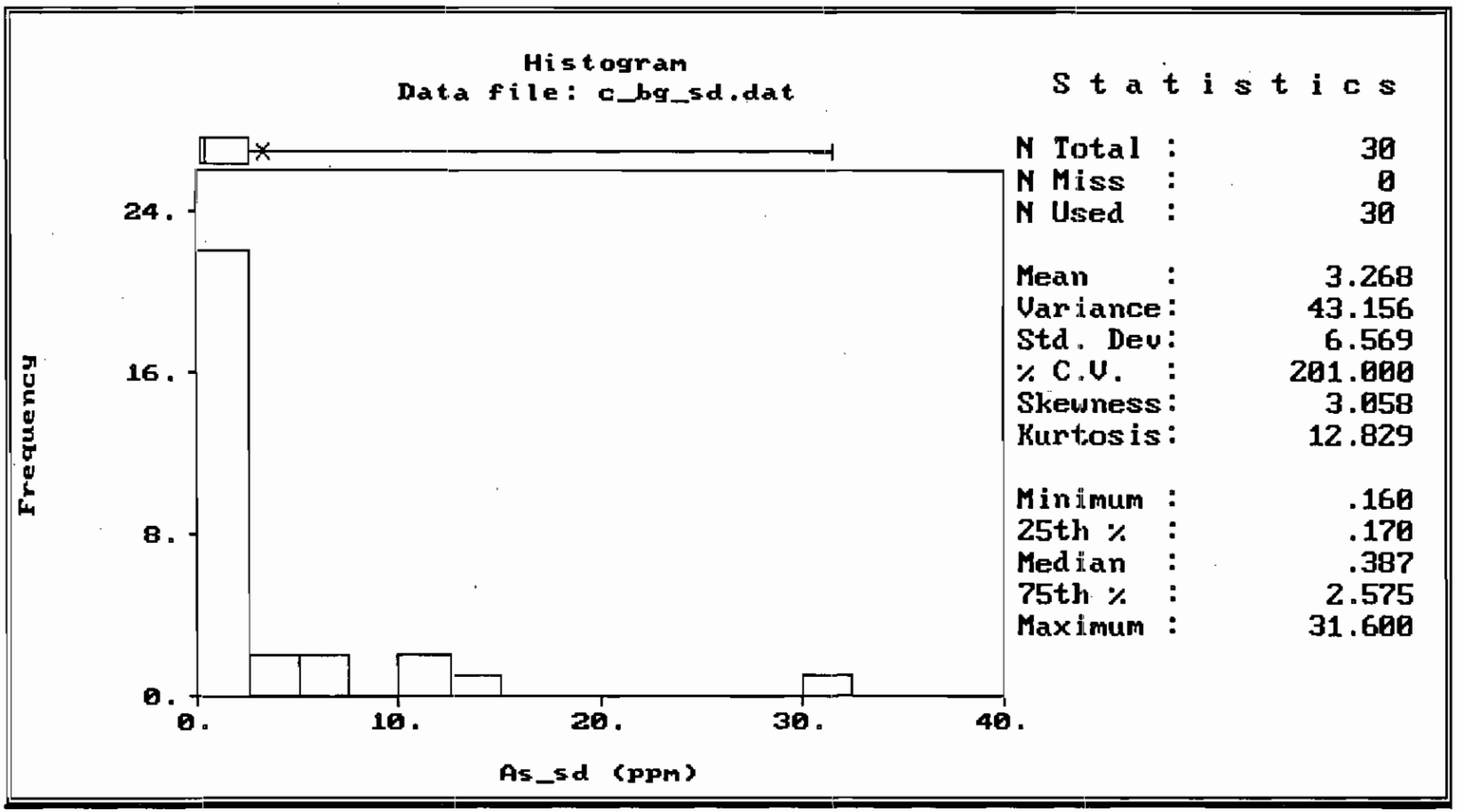
O

O

*** Validation Complete ***

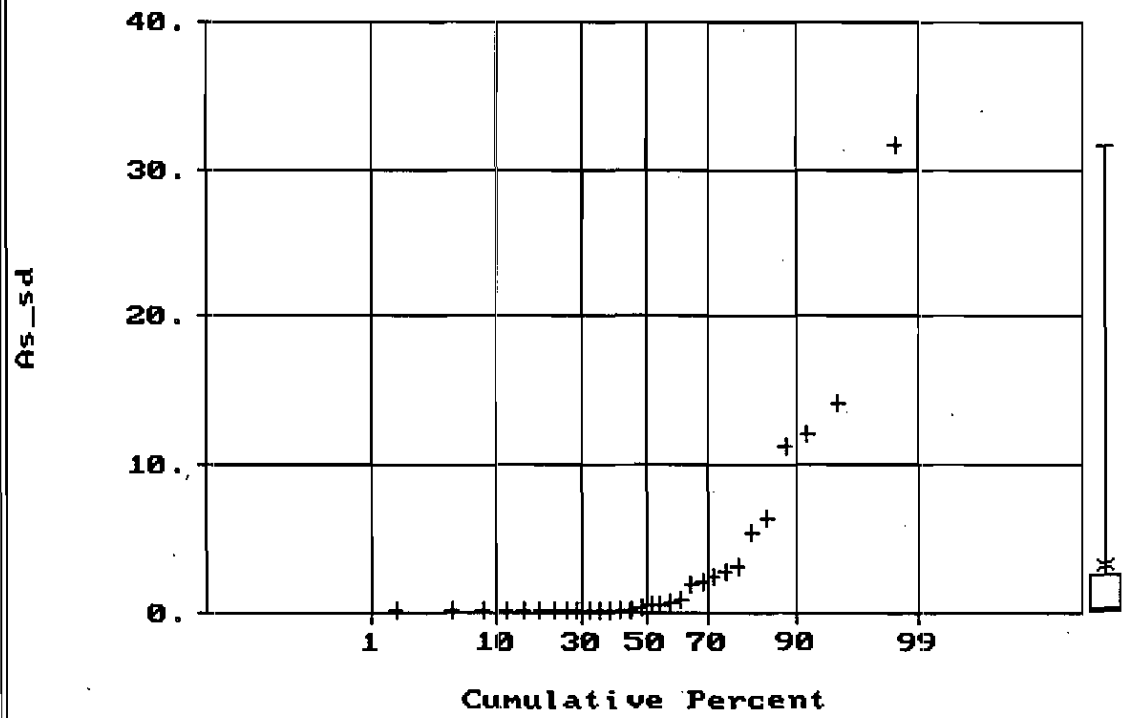
Zone C
Arsenic in subsurface soil grid samples
Original dataset (N = 30)
Original values

1a



1b

Normal Probability Plot for As_sd
Data file: c_bg_sd.dat

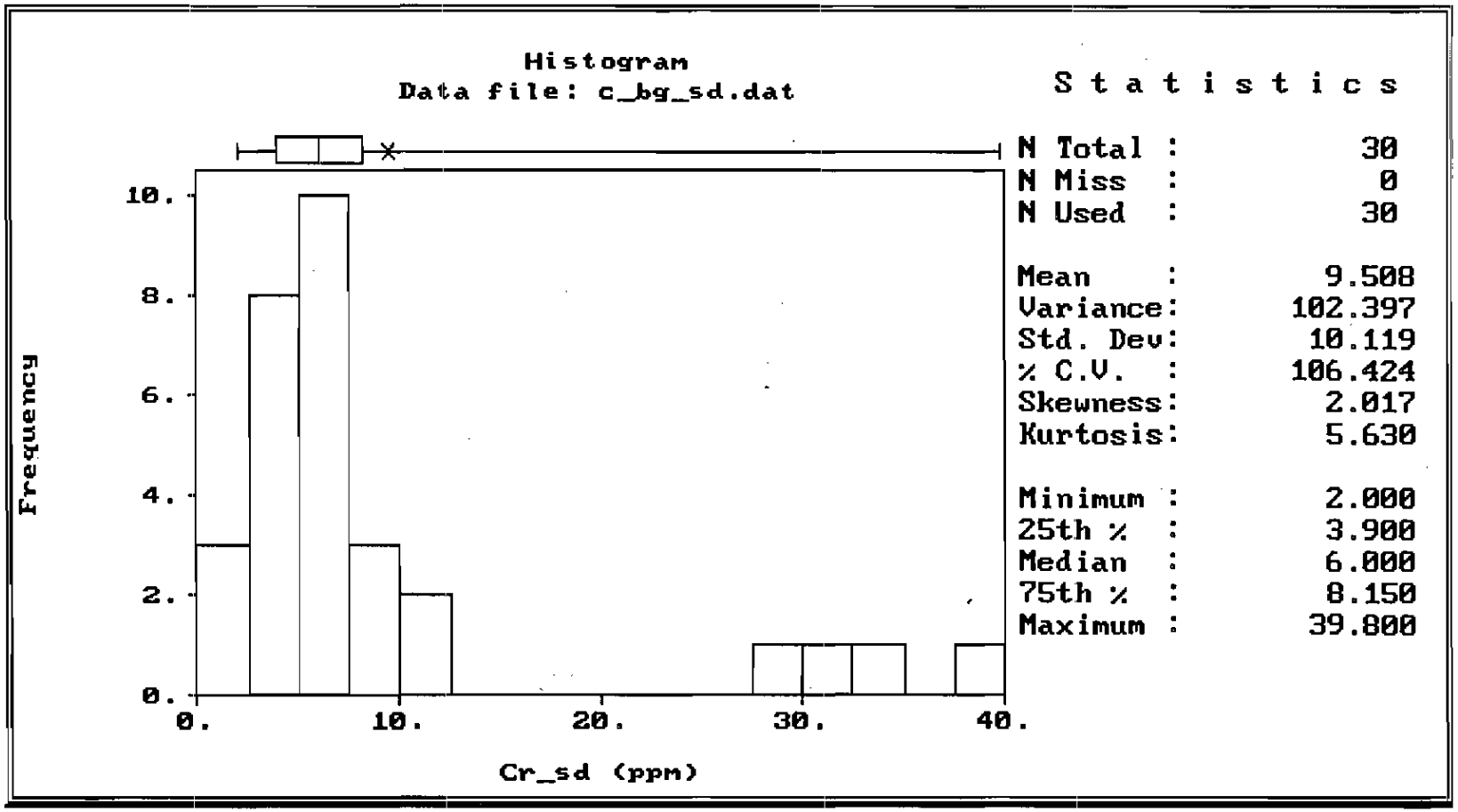


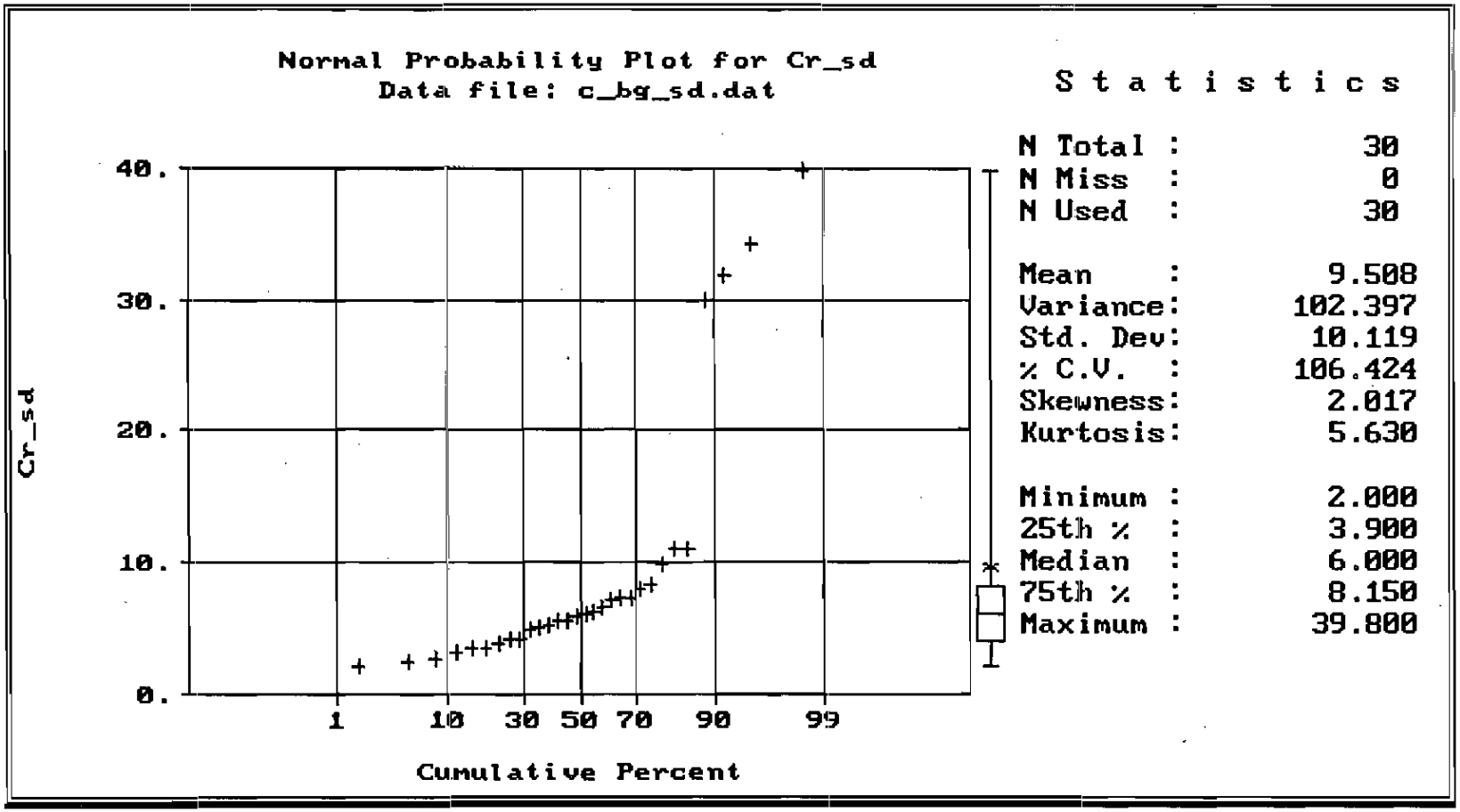
S t a t i s t i c s

N Total :	30
N Miss :	0
N Used :	30
Mean :	3.268
Variance:	43.156
Std. Dev:	6.569
% C.V. :	201.000
Skewness:	3.058
Kurtosis:	12.829
Minimum :	.160
25th % :	.170
Median :	.387
75th % :	2.575
Maximum :	31.600

Zone C
Chromium in subsurface soil grid samples
Original dataset (N = 30)
Original values

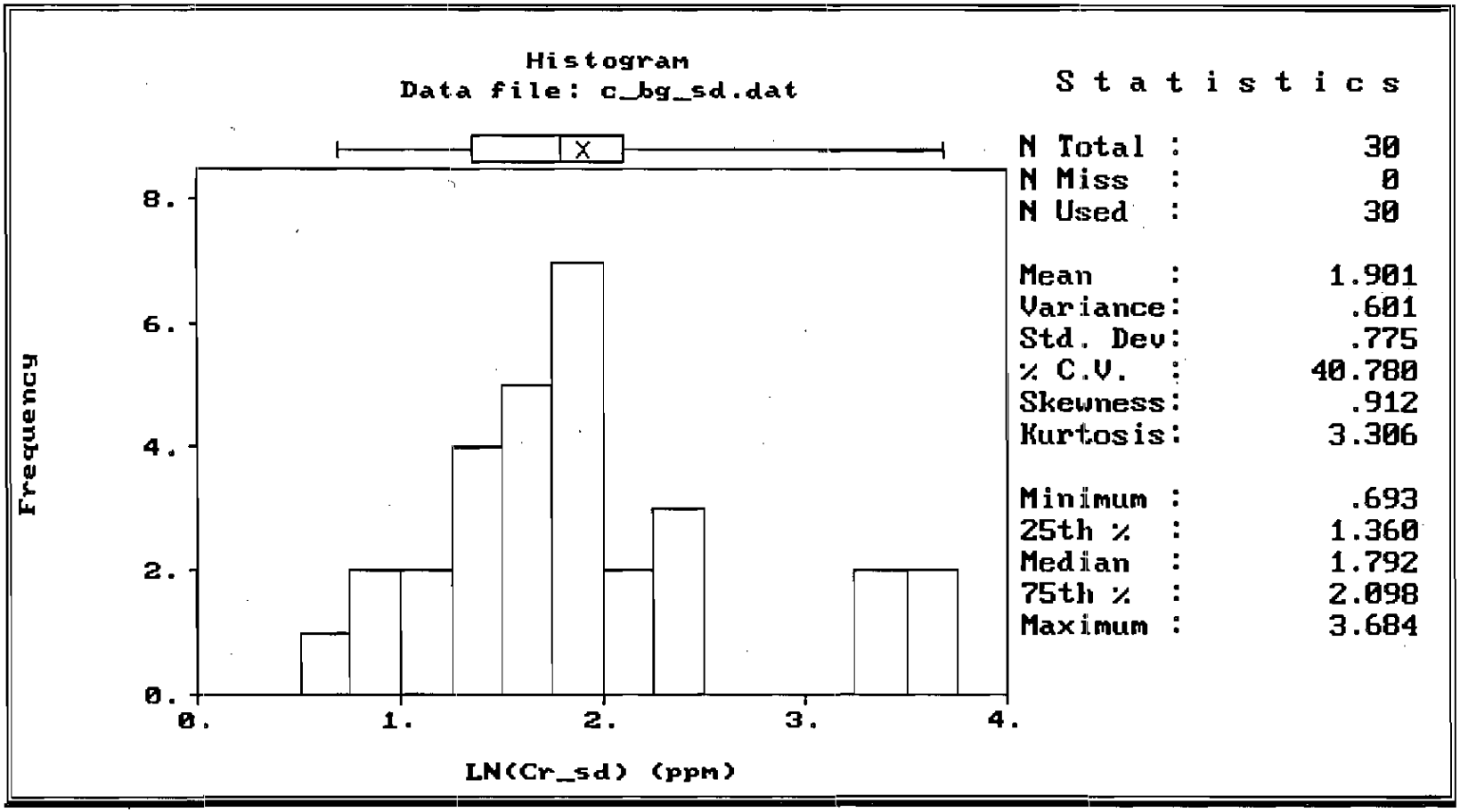
1a



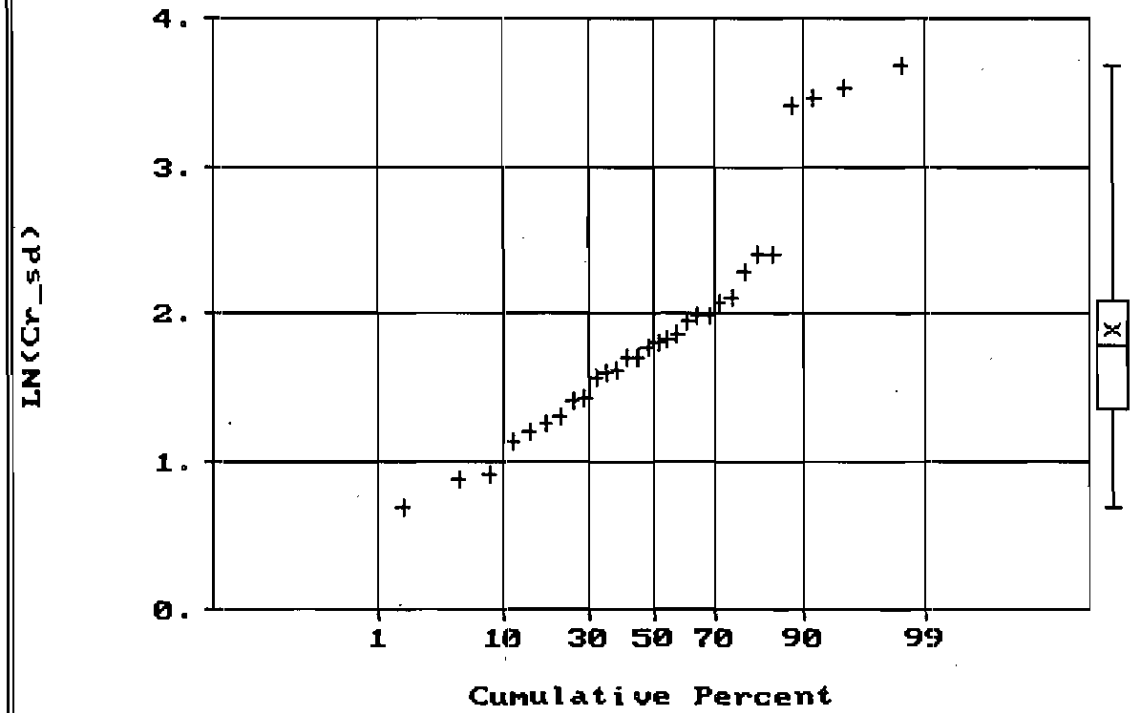

Normal Probability Plot for Cr_sd
Data file: c_bg_sd.dat
Cr_sd
40.
30.
20.
10.
0.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 30
N Miss : 0
N Used : 30
Mean : 9.508
Variance: 102.397
Std. Dev: 10.119
% C.V. : 106.424
Skewness: 2.017
Kurtosis: 5.630
Minimum : 2.000
25th % : 3.900
Median : 6.000
75th % : 8.150
Maximum : 39.800

Zone C
Chromium in subsurface soil grid samples
Original dataset (N=30)
LN-transformed values

2a



Normal Probability Plot for LN(Cr_sd)
Data file: c_bg_sd.dat



Statistics

N Total :	30
N Miss :	0
N Used :	30
Mean :	1.901
Variance:	.601
Std. Dev:	.775
% C.V. :	40.780
Skewness:	.912
Kurtosis:	3.306
Minimum :	.693
25th % :	1.360
Median :	1.792
75th % :	2.098
Maximum :	3.684

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

2903-00001 - CHARLESTON ZONE C - SOIL ~~& 1ST GW~~

Samples by Chemical Report

18540-29-9 - Chromium (Hexavalent)

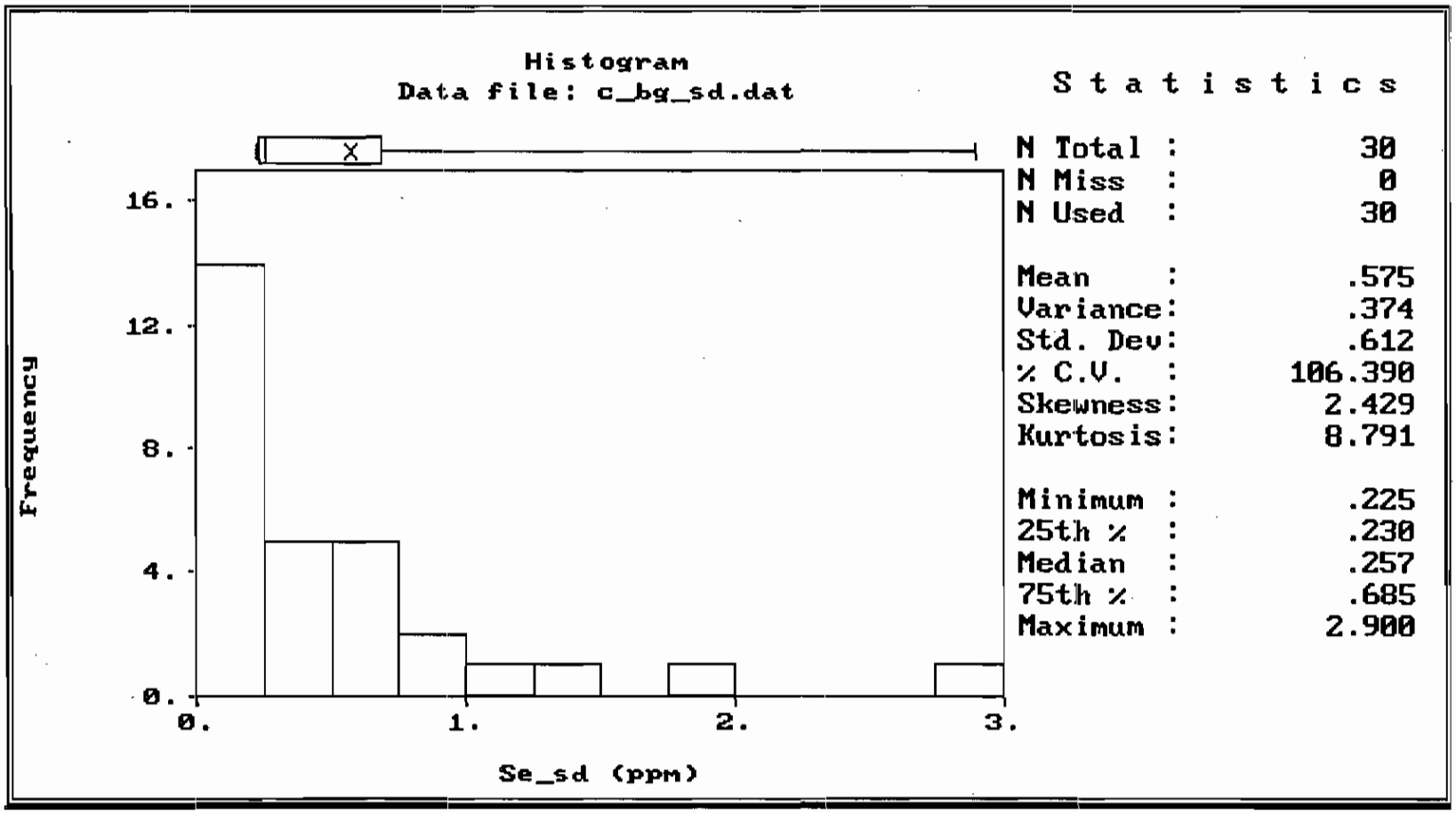
>= 0.0000 for MG/KG

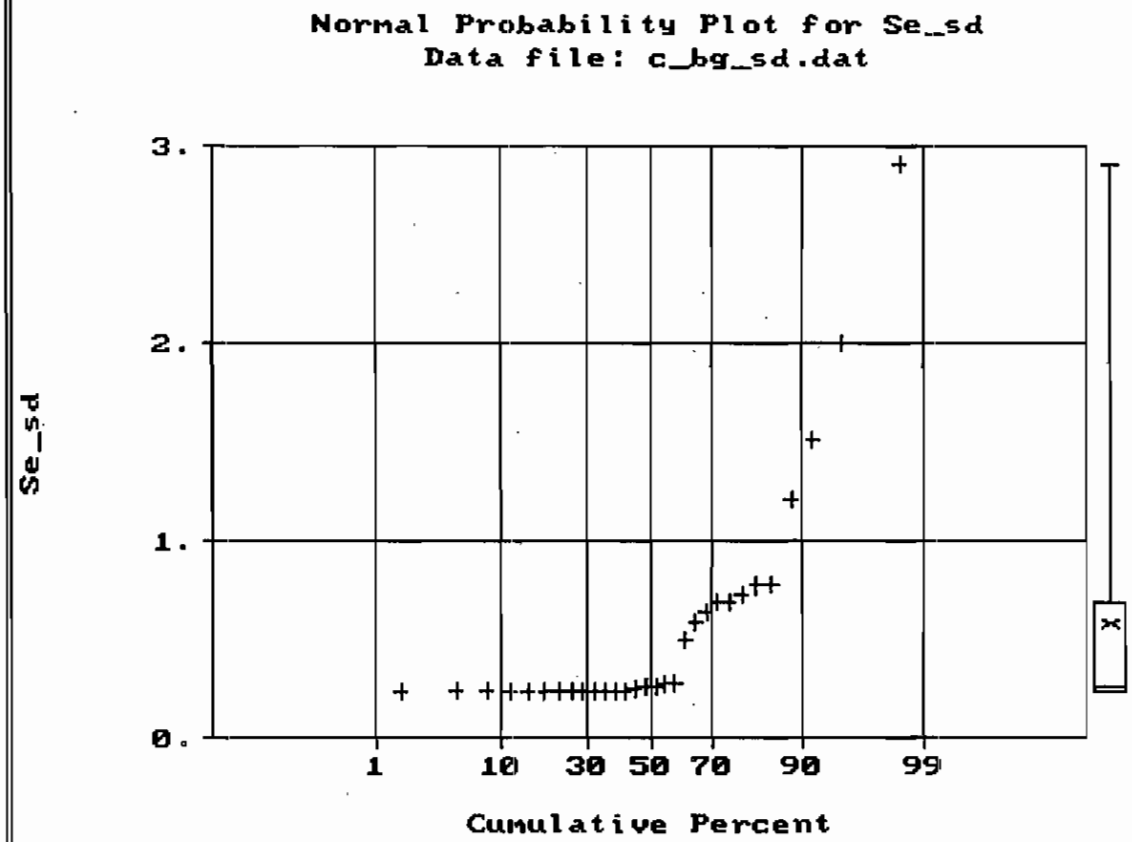
Sample ID	Ext. Orig. ID	Type	Date	Result	VQual	Units	SDG #	
044-C-B007-01	044CB00701	Soil	03/14/95	0.0100	UJ	MG/KG	30215.IT	VAL
047-C-B004-01	047CB00401	Soil	04/13/95	0.0100	UJ	MG/KG	30215.10T	VAL
047-C-B009-01	047CB00901	Soil	04/14/95	0.2590		MG/KG	30215.12T	VAL
508-C-B006-01	508CB00601	Soil	03/21/95	0.0100	UJ	MG/KG	30215.1T	VAL
510-C-B005-02	510CB00502	Soil	03/14/95	0.0100	UJ	MG/KG	30215.IT	VAL
511-C-B005-02	511CB00502	Soil	03/21/95	0.0100	UJ	MG/KG	30215.1T	VAL
512-C-B003-01	512CB00301	Soil	03/15/95	0.0100	UJ	MG/KG	30215.IT	VAL
513-C-B002-02	513CB00202	Soil	04/12/95	0.0100	UJ	MG/KG	30215.10T	VAL
515-C-B006-02	515CB00602	Soil	04/18/95	0.0100	UJ	MG/KG	30215.12T	VAL
517-C-B002-02	517CB00202	Soil	04/11/95	0.0100	U	MG/KG	30215.4T	VAL
518-C-B004-01	518CB00401	Water	04/05/95	0.0100	U	MG/KG	0005T	VAL
518-C-B006-01	518CB00601	Water	04/01/95	0.0100	UJ	MG/KG	30215.21T	VAL
519-C-B001-01	519CB00101	Soil	04/22/95	1.1900		MG/KG	30215.15T	VAL
520-C-B003-02	520CB00302	Soil	04/07/95	0.0100	U	MG/KG	0006T	VAL
522-C-B003-01	522CB00301	Soil	06/06/96	0.2740	U	MG/KG	25887	VAL
523-C-B002-02	523CB00202	Soil	04/11/95	0.2610		MG/KG	30215.4T	VAL
700-C-B003-01	700CB00301	Soil	06/05/96	0.2660	U	MG/KG	25887	VAL
GDC-C-B013-01	GRDCB01301	Soil	04/11/95	0.0100	U	MG/KG	0006T	VAL
GDC-C-B017-01	GRDCB01701	Soil	04/10/95	0.0100	UJ	MG/KG	30215.10T	VAL
GDC-C-B023-02	GRDCB02302	Soil	04/11/95	0.0100	U	MG/KG	0006T	VAL
GDC-C-B035-02	GRDCB03502	Soil	04/12/95	0.0100	UJ	MG/KG	30215.10T	VAL
GDC-C-B045-01	GDCCB04501	Water	04/01/95	0.0100	UJ	MG/KG	30215.21T	VAL

*** End of Report ***

Zone C
Selenium in subsurface soil grid samples
Original dataset (N=30)
Original values

1a



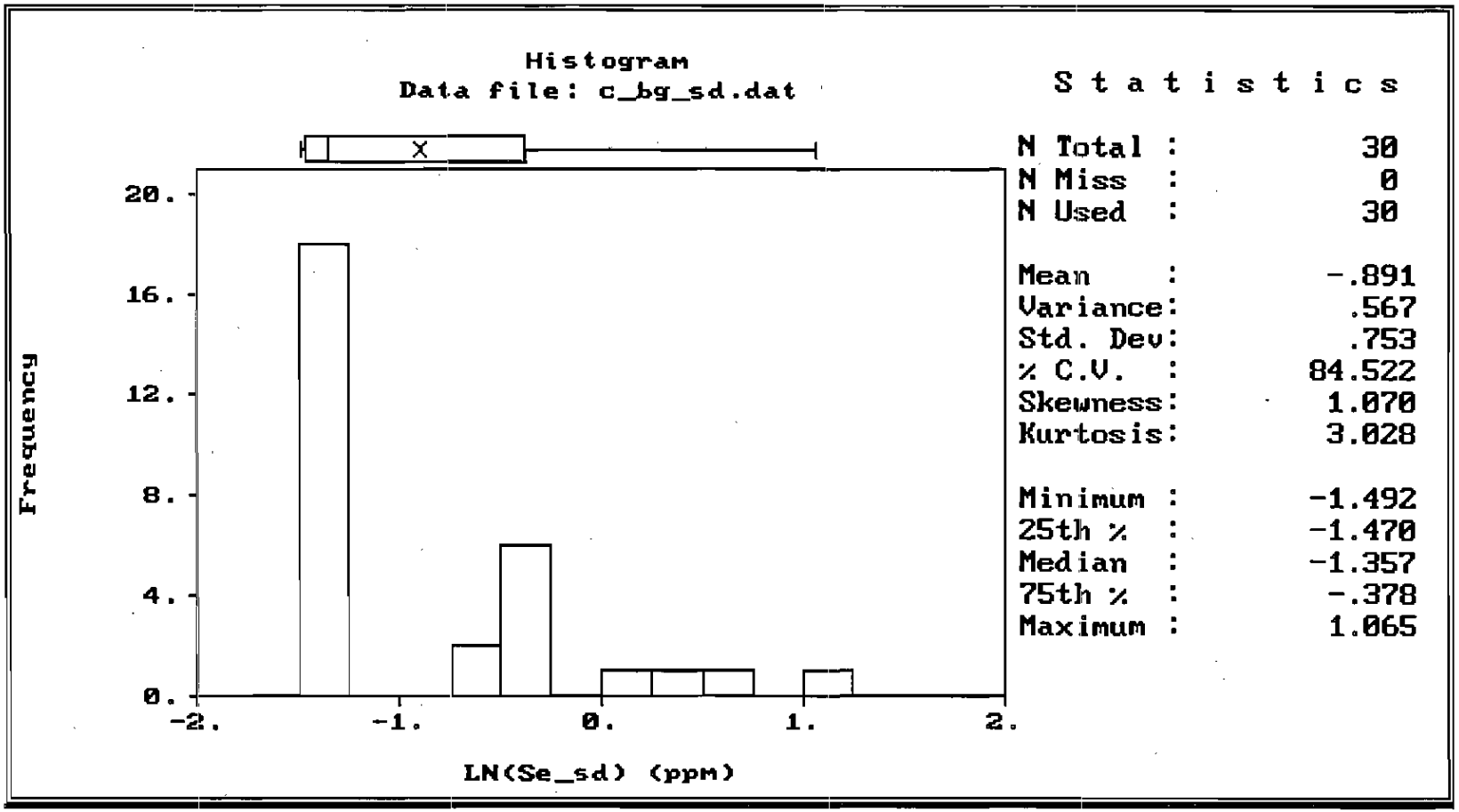


Statistics

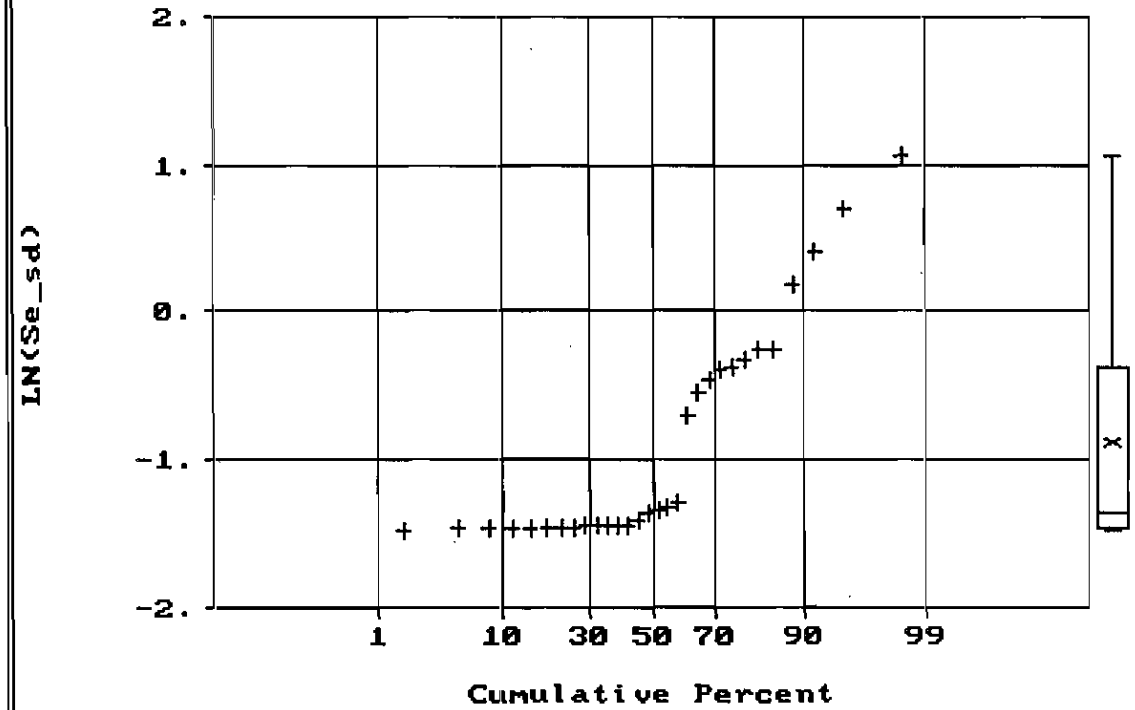
N Total :	30
N Miss :	0
N Used :	30
Mean :	.575
Variance:	.374
Std. Dev:	.612
% C.V. :	106.390
Skewness:	2.429
Kurtosis:	8.791
Minimum :	.225
25th % :	.230
Median :	.257
75th % :	.685
Maximum :	2.900

Zone C
Selenium in subsurface soil grid samples
Original dataset (N = 30)
LN-transformed values

2a



Normal Probability Plot for LN(Se_sd)
Data file: c_bg_sd.dat



S t a t i s t i c s

N Total :	30
N Miss :	0
N Used :	30
Mean :	-.891
Variance:	.567
Std. Dev:	.753
% C.V. :	84.522
Skewness:	1.070
Kurtosis:	3.028
Minimum :	-1.492
25th % :	-1.470
Median :	-1.357
75th % :	-.378
Maximum :	1.065

DATALCP3
04/29/97

CHARLESTON - ZONE C
Background Sample Results - Round 1
Shallow Groundwater, Wells 1-2

SW846-META					
	SAMPLE ID ------->	GDC-G-W001-01		GDC-C-W002-01	
	ORIGINAL ID ----->	GDCGW00101		GRDGW00201	
	LAB SAMPLE ID --->	730822		709211	
	ID FROM REPORT -->	GDCGW00101		GRDGW00201	
	SAMPLE DATE ----->	06/12/95		04/25/95	
	MATRIX ---------->	Water		Water	
	UNITS ---------->	UG/L	A	UG/L	A
CAS #	Parameter	1517MI	VAL	50016M	VAL
7429-90-5	Aluminum (Al)	620.		63.9	J
7440-36-0	Antimony (Sb)	1.9	U	1.9	U
7440-38-2	Arsenic (As)	3.2	U	3.2	U
7440-39-3	Barium (Ba)	8.4	U	13.4	J
7440-41-7	Beryllium (Be)	0.2	U	0.2	U
7440-43-9	Cadmium (Cd)	0.3	U	0.3	U
7440-70-2	Calcium (Ca)	35200.		128000.	
7440-47-3	Chromium (Cr)	2.1	J	0.9	U
7440-48-4	Cobalt (Co)	0.6	U	0.6	U
7440-50-8	Copper (Cu)	2.7	UJ	1.8	U
7439-89-6	Iron (Fe)	566.		3480.	
7439-92-1	Lead (Pb)	9.1	U	1.9	U
7439-95-4	Magnesium (Mg)	1000.	J	7710.	
7439-96-5	Manganese (Mn)	30.4		527.	
7439-97-6	Mercury (Hg)	0.2	U	0.2	U
7440-02-0	Nickel (Ni)	1.6	J	1.4	U
7440-09-7	Potassium (K)	560.	J	5380.	
7782-49-2	Selenium (Se)	4.4	U	4.4	U
7440-22-4	Silver (Ag)	0.5	U	0.5	U
7440-23-5	Sodium (Na)	3550.	U	9640.	
7440-28-0	Thallium (Tl)	4.5	U	4.5	UJ
7440-62-2	Vanadium (V)	1.9	J	0.86	U
7440-66-6	Zinc (Zn)	13.4	J	5.8	J
7440-31-5	Tin (Sn)	56.3	U	5.9	UJ
57-12-5	Cyanide (CN)	??????????		??????????	

*** Validation Complete ***

DATALCP3
04/29/97

CHARLESTON - ZONE C
Background Sample Results - Rounds 2-4
Shallow Groundwter, Wells 1-2

SW846-META													
	SAMPLE ID ------->	GDC-G-W001-02		GDC-H-W001-02		GDC-G-W001-03		GDC-H-W001-03		GDC-G-W001-04		GDC-H-W001-04	
	ORIGINAL ID ----->	GDCGW00102		GDCHW00102		GDCGW00103		GDCHW00103		GDCGW00104		GDCHW00104	
	LAB SAMPLE ID --->	24543.01		24544.01		25504.03		25505.01		25997.01		25998.01	
	ID FROM REPORT -->	GDCGW00102		GDCHW00102		GDCGW00103		GDCHW00103		GDCGW00104		GDCHW00104	
	SAMPLE DATE ----->	01/22/96		01/22/96		05/06/96		05/06/96		06/12/96		06/12/96	
	DATE EXTRACTED -->	01/24/96		01/24/96		05/16/96		05/16/96		06/30/96		06/30/96	
	DATE ANALYZED --->	01/26/96		01/26/96		05/30/96		05/30/96		07/03/96		07/03/96	
	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	24514	VAL	24514	VAL	25504	VAL	25504	VAL	25997	VAL	25997	VAL
7429-90-5	Aluminum (Al)	272.		288.		317.	U	322.	U	392.		408.	
7440-36-0	Antimony (Sb)	2.1	U	2.2	U	13.	U	13.	U	2.1	U	2.1	U
7440-38-2	Arsenic (As)	3.9	J	3.2	J	3.2	J	3.5	J	2.8	UJ	4.3	J
7440-39-3	Barium (Ba)	4.6		4.3		5.7	U	5.2	U	4.9	J	5.	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)	27000.	J	27100.		27700.		24700.		25700.		26500.	
7440-47-3	Chromium (Cr)	0.8	U	1.5	J	2.2	U	2.2	U	0.8	UJ	0.92	J
7440-48-4	Cobalt (Co)	0.9	U	0.9	U	5.2	U	5.2	U	5.2	U	5.2	U
7440-50-8	Copper (Cu)	1.6	UJ	1.5	J	1.4	UJ	1.4	U	4.5	U	5.	U
7439-89-6	Iron (Fe)	288.		316.		416.		371.		785.		765.	
7439-92-1	Lead (Pb)	1.7	U	1.7	U	1.7	U	1.7	U	2.7	J	1.7	U
7439-95-4	Magnesium (Mg)	722.		705.		756.	U	642.	U	697.		713.	
7439-96-5	Manganese (Mn)	18.3		18.2		22.8	U	19.9	U	25.8		26.5	
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)	0.8	U	0.8	U	6.6	U	5.3	U	0.8	UJ	0.8	UJ
7440-09-7	Potassium (K)	2330.	U	1600.	U	1600.	U	1600.	U	1600.	U	1600.	U
7782-49-2	Selenium (Se)	2.8	UJ	2.8	U	2.8	U	2.8	U	2.8	U	2.8	U
7440-22-4	Silver (Ag)	1.2	U	1.5	J	1.7	U	1.3	U	1.2	UJ	1.2	UJ
7440-23-5	Sodium (Na)	3000.		2820.		3910.	U	2100.	UJ	2870.		2930.	
7440-28-0	Thallium (Tl)	3.5	U	2.7	U	3.2	UJ	4.3	UJ	2.7	UJ	2.7	UJ
7440-31-5	Tin (Sn)	2.6	U	2.6	U	2.6	U	2.6	U	2.6	UJ	2.6	UJ
7440-62-2	Vanadium (V)	1.4	J	1.3	J	3.4	U	4.	U	0.5	UJ	0.5	U
7440-66-6	Zinc (Zn)	5.3	U	5.3	U	20.	U	6.9	U	5.3	U	5.3	U

*** Validation Complete ***

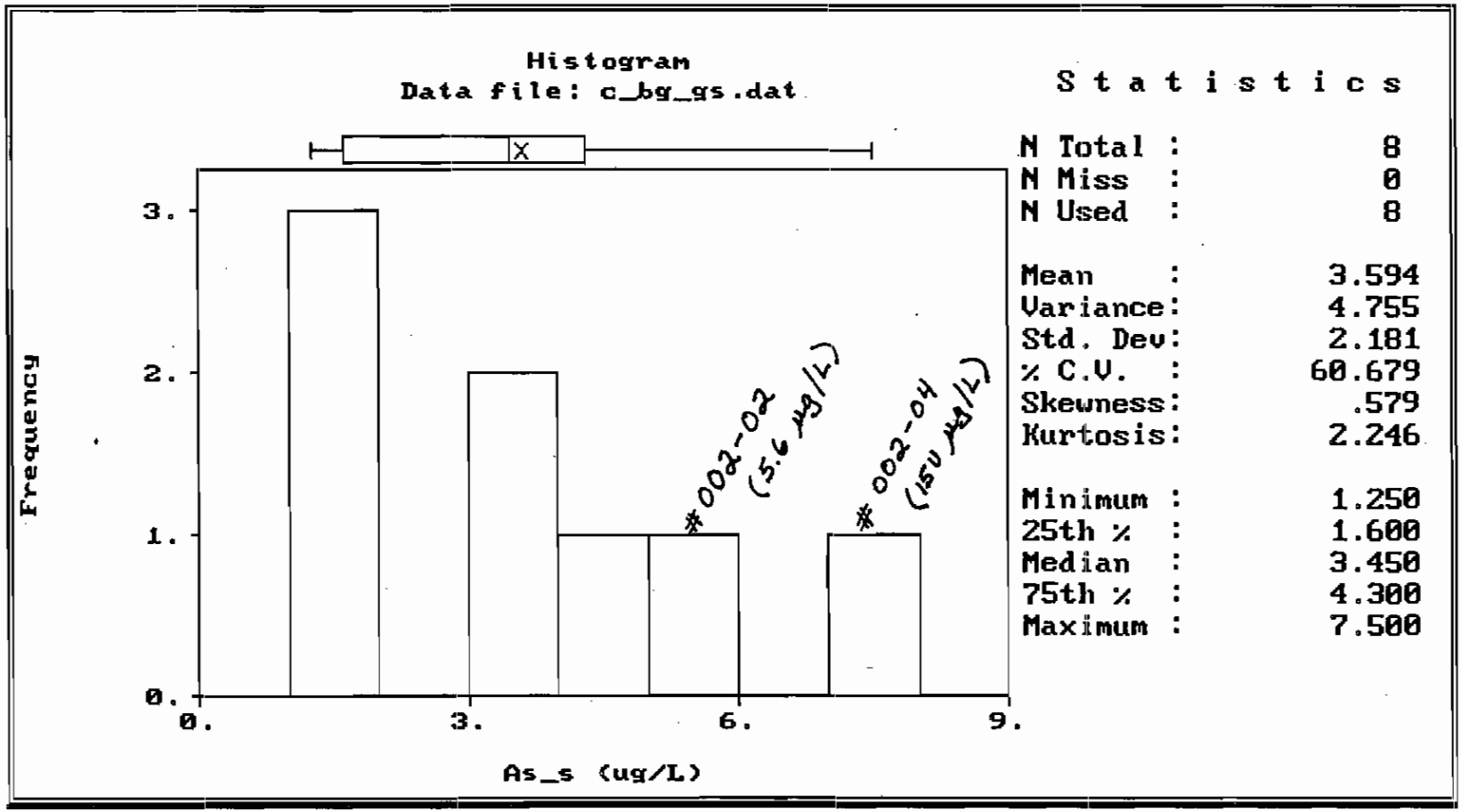
CHARLESTON - ZONE C
Background Sample Results - Rounds 2-4
Shallow Groundwter, Wells 1-2

SW846-META											
	SAMPLE ID ------->	GDC-G-W002-02		GDC-G-W002-03		GDC-G-W002-04					
	ORIGINAL ID ----->	GDCGW00202		GDCGW00203		GDCGW00204					
	LAB SAMPLE ID --->	24536.01		25513.03		26016.01					
	ID FROM REPORT -->	GDCGW00202		GDCGW00203		GDCGW00204					
	SAMPLE DATE ----->	01/19/96		05/07/96		06/13/96					
	DATE EXTRACTED -->	01/22/96		05/16/96		06/28/96					
	DATE ANALYZED --->	01/25/96		05/30/96		07/04/96					
	MATRIX ---------->	Water		Water		Water					
	UNITS ---------->	UG/L	A	UG/L	A	UG/L	A				
CAS #	Parameter	24514	VAL	25504	VAL	25997	VAL				
7429-90-5	Aluminum (Al)	18.	U	24.9	U	95.7	J				
7440-36-0	Antimony (Sb)	2.1	U	13.	U	2.1	U				
7440-38-2	Arsenic (As)	5.6	J	2.5	UJ	15.	U				
7440-39-3	Barium (Ba)	16.4		13.1	U	14.1					
7440-41-7	Beryllium (Be)	0.36	J	0.3	U	0.3	U				
7440-43-9	Cadmium (Cd)	0.5	U	0.5	U	0.5	U				
7440-70-2	Calcium (Ca)	152000.	J	127000.		137000.					
7440-47-3	Chromium (Cr)	0.8	U	2.2	U	0.8	UJ				
7440-48-4	Cobalt (Co)	1.6	J	5.2	U	5.2	U				
7440-50-8	Copper (Cu)	1.2	UJ	1.4	UJ	1.8	U				
7439-89-6	Iron (Fe)	1700.		1860.		4660.					
7439-92-1	Lead (Pb)	1.7	U	1.7	U	4.4					
7439-95-4	Magnesium (Mg)	9250.		7390.		8990.					
7439-96-5	Manganese (Mn)	789.		368.		665.					
7439-97-6	Mercury (Hg)	0.1	U	0.1	U	0.1	U				
7440-02-0	Nickel (Ni)	5.	J	11.6	U	3.6	UJ				
7440-09-7	Potassium (K)	6710.	U	5420.	U	6400.					
7782-49-2	Selenium (Se)	2.8	UJ	2.8	U	2.8	U				
7440-22-4	Silver (Ag)	1.2	U	1.2	U	1.2	UJ				
7440-23-5	Sodium (Na)	9910.		9410.	U	11300.					
7440-28-0	Thallium (Tl)	2.7	U	2.7	UJ	2.7	UJ				
7440-31-5	Tin (Sn)	2.6	U	2.6	U	2.6	UJ				
7440-62-2	Vanadium (V)	0.5	U	3.4	U	0.5	UJ				
7440-66-6	Zinc (Zn)	5.6	J	9.4	U	14.6	J				

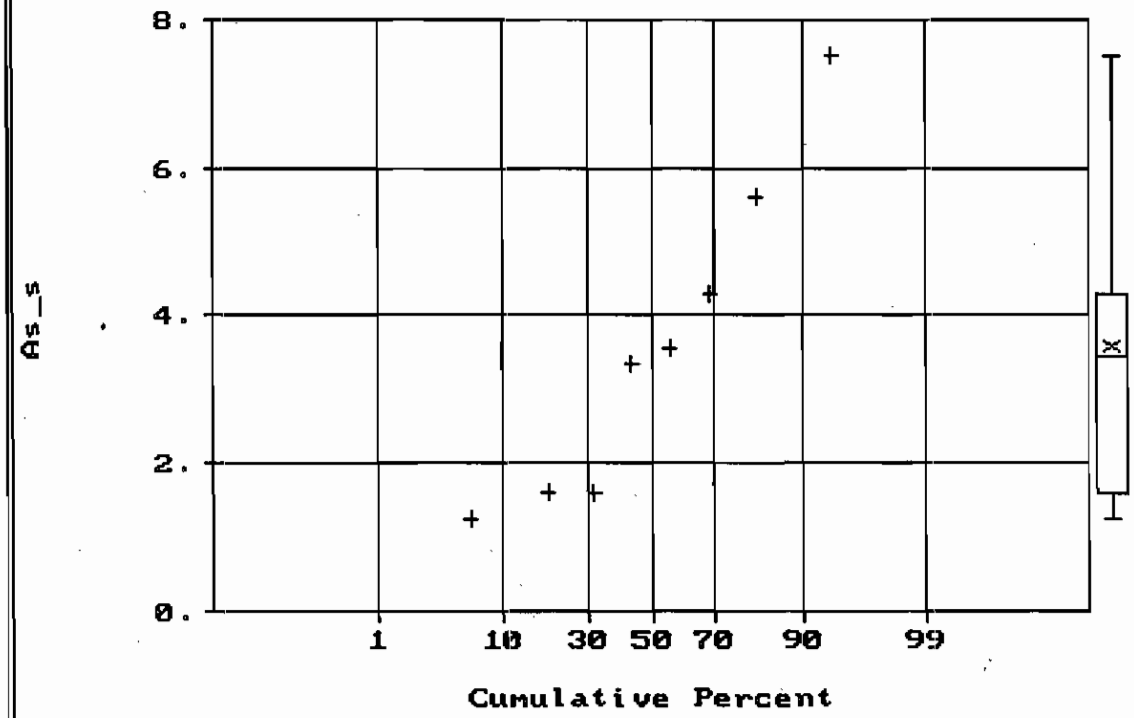
*** Validation Complete ***

Zone C
Arsenic in shallow GW grid samples
Original dataset (N=8)
Original values

1a



Normal Probability Plot for As_s
Data file: c_bg_gs.dat

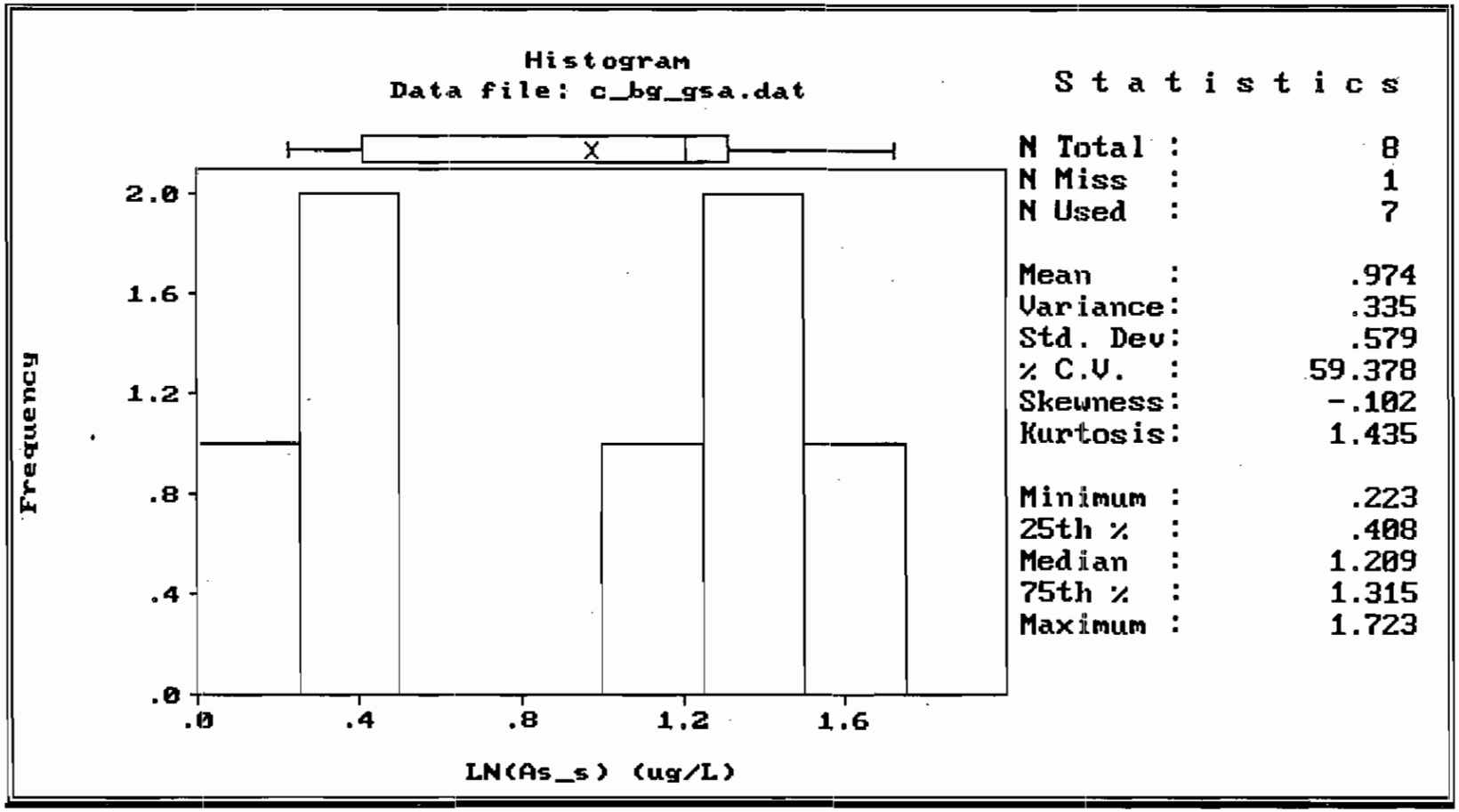


Statistics

N Total :	8
N Miss :	0
N Used :	8
Mean :	3.594
Variance:	4.755
Std. Dev:	2.181
% C.V. :	60.679
Skewness:	.579
Kurtosis:	2.246
Minimum :	1.250
25th % :	1.600
Median :	3.450
75th % :	4.300
Maximum :	7.500

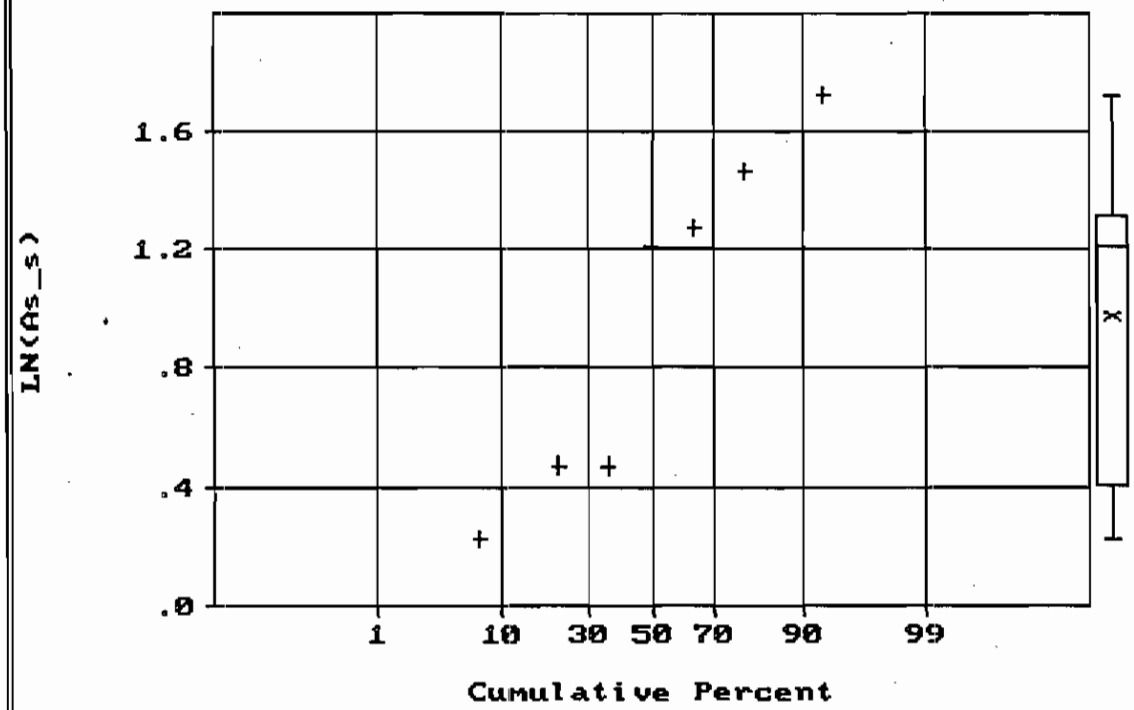
Zone C
Arsenic in shallow GW grid samples
Sample # 002-04 removed from dataset (N = 7)
LN - transformed values

2a



2b

Normal Probability Plot for LN(As_s)
Data file: c_bg_gsa.dat



Statistics

N Total :	8
N Miss :	1
N Used :	7
Mean :	.974
Variance:	.335
Std. Dev:	.579
% C.V. :	59.378
Skewness:	-.102
Kurtosis:	1.435
Minimum :	.223
25th % :	.408
Median :	1.209
75th % :	1.315
Maximum :	1.723

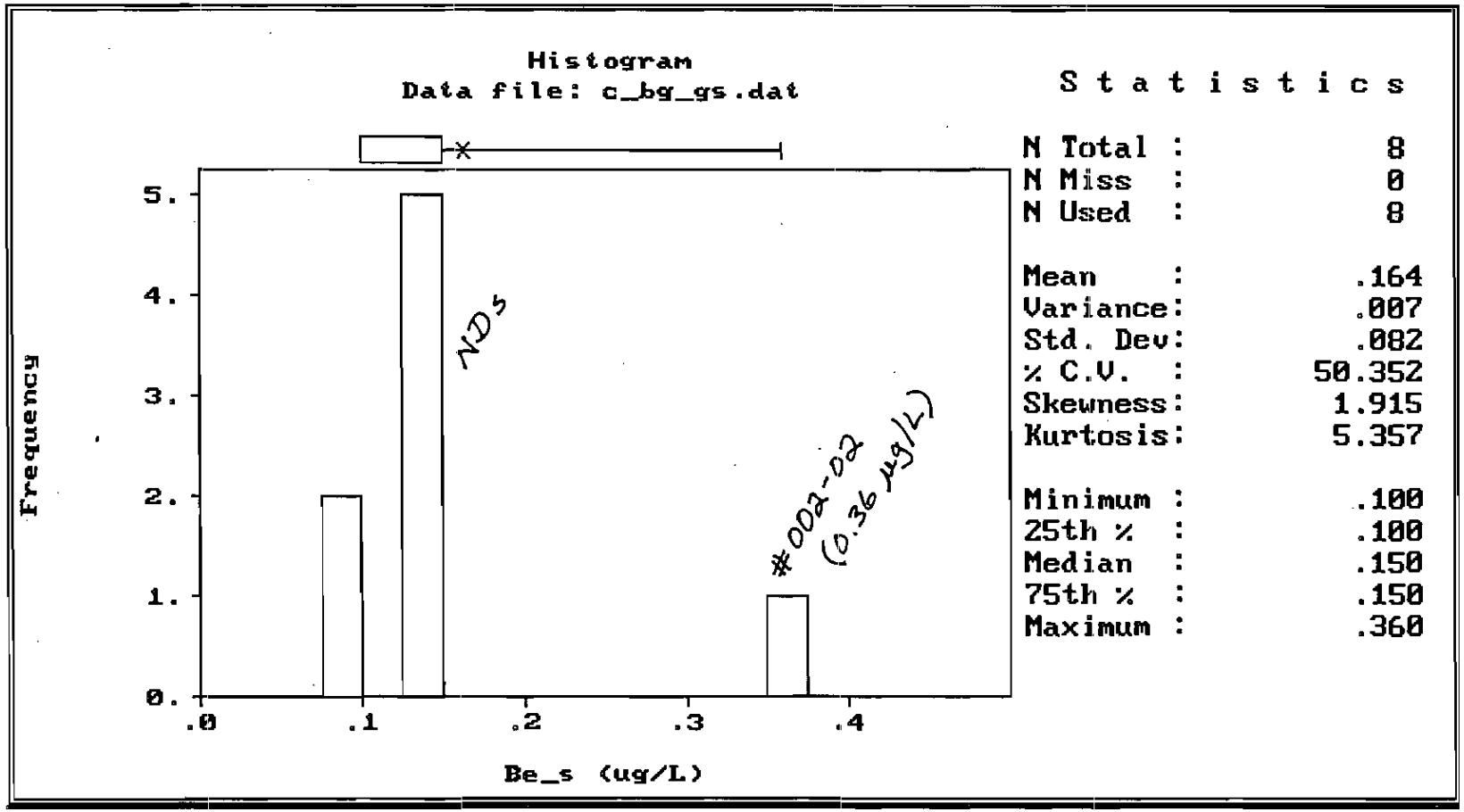
Zone C

Beryllium in shallow GW grid samples

Original dataset (N=8)

Original values

1a

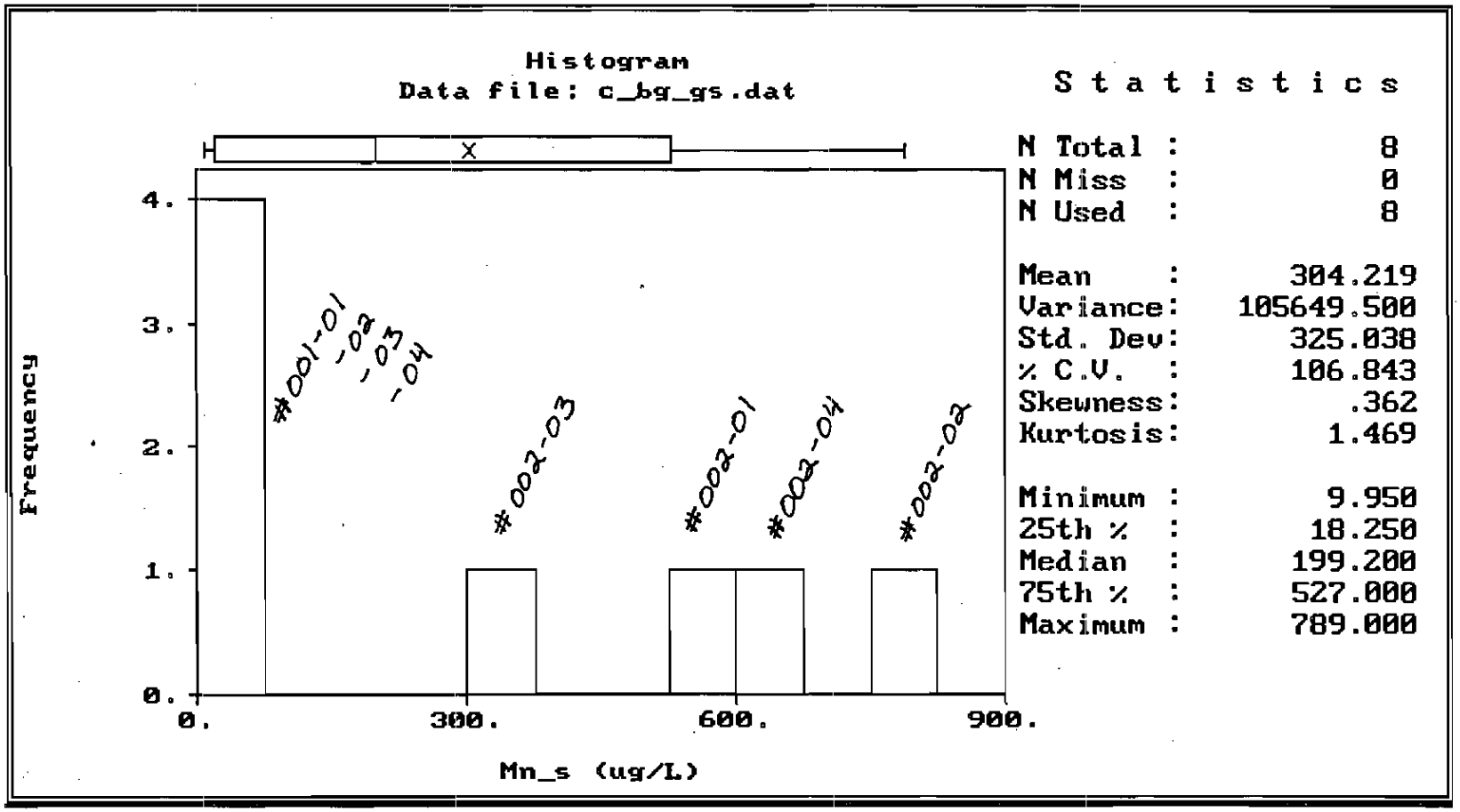


Statistics

N Total :	8
N Miss :	0
N Used :	8
Mean :	.164
Variance:	.007
Std. Dev:	.082
% C.V. :	50.352
Skewness:	1.915
Kurtosis:	5.357
Minimum :	.100
25th % :	.100
Median :	.150
75th % :	.150
Maximum :	.360

Zone C
Manganese in shallow GW grid samples
Original dataset (N=8)
Original values

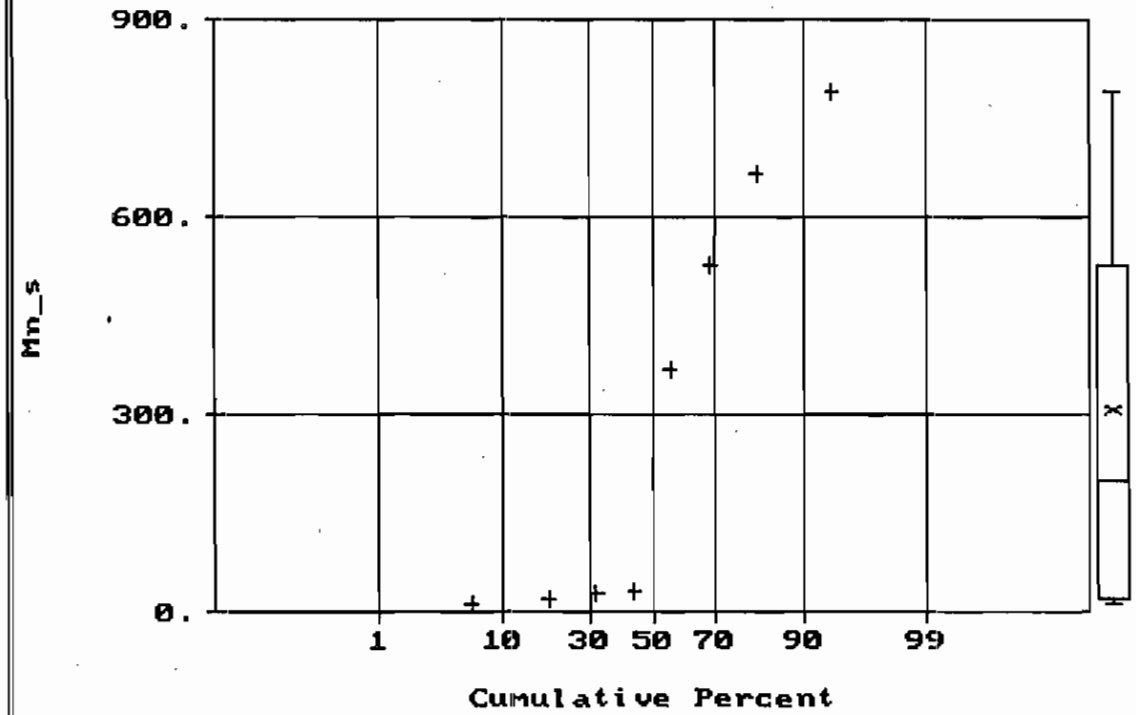
1a



Statistics

N Total :	8
N Miss :	0
N Used :	8
Mean :	304.219
Variance:	105649.500
Std. Dev:	325.038
% C.V. :	106.843
Skewness:	.362
Kurtosis:	1.469
Minimum :	9.950
25th % :	18.250
Median :	199.200
75th % :	527.000
Maximum :	789.000

Normal Probability Plot for Mn_s
Data file: c_bg_gs.dat



S t a t i s t i c s

N Total :	8
N Miss :	0
N Used :	8
Mean :	304.219
Variance:	105649.500
Std. Dev:	325.038
% C.V. :	106.843
Skewness:	.362
Kurtosis:	1.469
Minimum :	9.950
25th % :	18.250
Median :	199.200
75th % :	527.000
Maximum :	789.000

CHARLESTON - ZONE C
Background Sample Results - Round 1
Deep Groundwater, Wells 1D-2D

SW846-META											
	SAMPLE ID ------->	GDC-G-W01D-01		GDC-G-W02D-01							
	ORIGINAL ID ----->	GDCGW01D01		GDCGW02D01							
	LAB SAMPLE ID --->	730830		731350							
	ID FROM REPORT -->	GDCGW01D01		GDCGW02D01							
	SAMPLE DATE ----->	06/12/95		06/13/95							
	MATRIX ---------->	Water		Water							
	UNITS ---------->	UG/L	A	UG/L	A						
CAS #	Parameter	1517MI	VAL	1517MI	VAL						
7429-90-5	Aluminum (Al)	54.3	UJ	19.2	U						
7440-36-0	Antimony (Sb)	1.9	U	1.9	U						
7440-38-2	Arsenic (As)	3.2	U	3.2	U						
7440-39-3	Barium (Ba)	11.9	U	38.5	U						
7440-41-7	Beryllium (Be)	0.2	U	0.2	U						
7440-43-9	Cadmium (Cd)	0.3	U	0.3	U						
7440-70-2	Calcium (Ca)	44800.		101000.							
7440-47-3	Chromium (Cr)	0.9	UJ	0.9	UJ						
7440-48-4	Cobalt (Co)	0.6	U	0.6	U						
7440-50-8	Copper (Cu)	0.7	UJ	0.7	UJ						
7439-89-6	Iron (Fe)	587.		220.							
7439-92-1	Lead (Pb)	3.6	U	2.3	U						
7439-95-4	Magnesium (Mg)	1420.	J	13200.							
7439-96-5	Manganese (Mn)	35.4		67.5							
7439-97-6	Mercury (Hg)	0.2	U	0.2	U						
7440-02-0	Nickel (Ni)	1.4	U	1.4	U						
7440-09-7	Potassium (K)	918.	J	11200.	J						
7782-49-2	Selenium (Se)	4.4	U	4.4	U						
7440-22-4	Silver (Ag)	0.5	U	0.5	U						
7440-23-5	Sodium (Na)	8200.		181000.							
7440-28-0	Thallium (Tl)	4.5	U	4.5	U						
7440-62-2	Vanadium (V)	0.43	J	0.4	UJ						
7440-66-6	Zinc (Zn)	3.7	U	2.8	U						
7440-31-5	Tin (Sn)	56.3	U	56.3	U						
57-12-5	Cyanide (CN)	??????????		??????????							

*** Validation Complete ***

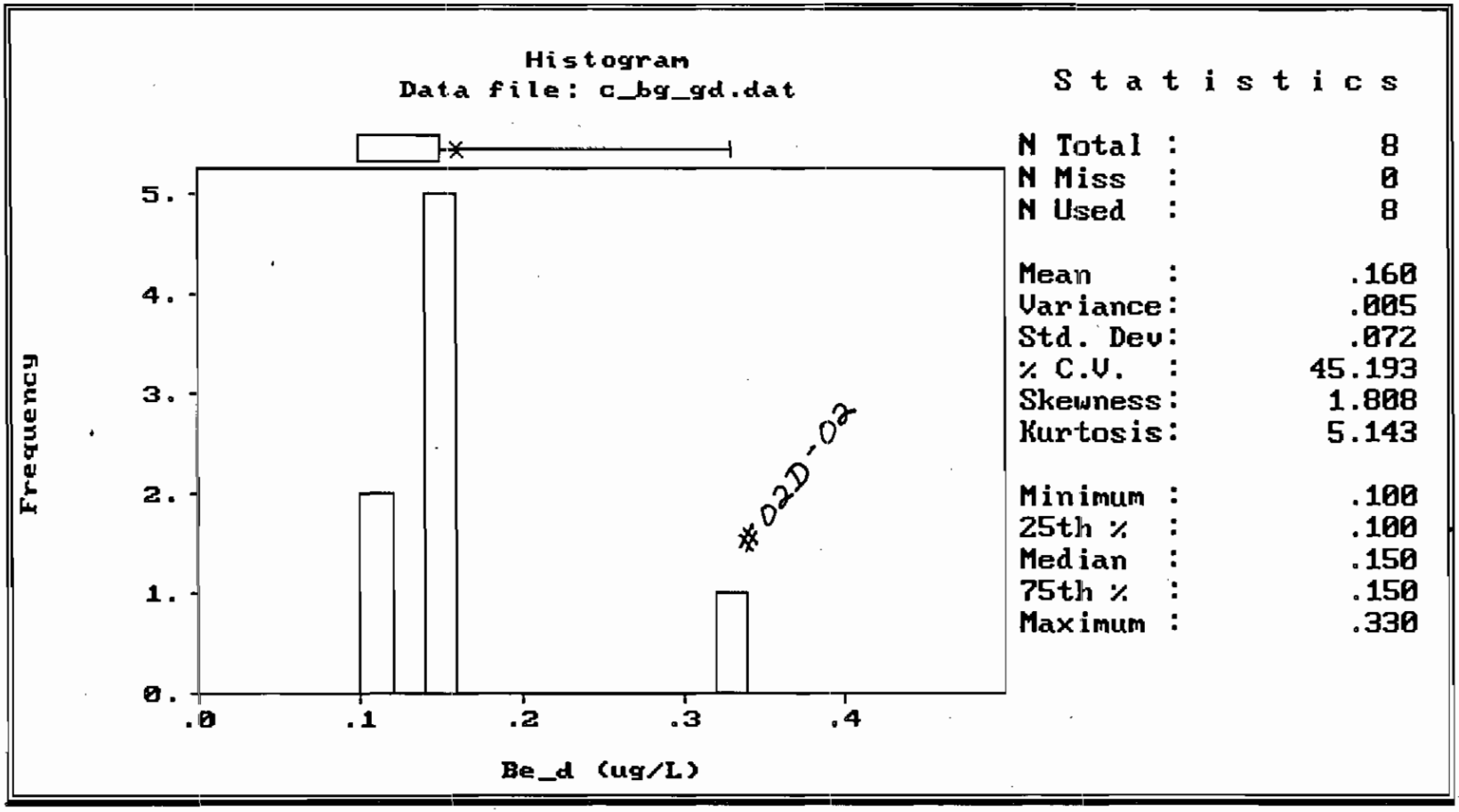
DATALCP3
04/29/97

CHARLESTON - ZONE C
Background Sample Results - Rounds 2-4
Deep Groundwter, Wells 1D-2D

SW846-META													
	SAMPLE ID ------->	GDC-G-W01D-02		GDC-G-W01D-03		GDC-G-W01D-04		GDC-G-W02D-02		GDC-G-W02D-03		GDC-G-W02D-04	
	ORIGINAL ID ----->	GDCGW01D02		GDCGW01D03		GDCGW01D04		GDCGW02D02		GDCGW02D03		GDCGW02D04	
	LAB SAMPLE ID --->	24543.02		25504.04		25997.02		24536.02		25513.04		26016.02	
	ID FROM REPORT -->	GDCGW01D02		GDCGW01D03		GDCGW01D04		GDCGW02D02		GDCGW02D03		GDCGW02D04	
	SAMPLE DATE ----->	01/22/96		05/06/96		06/12/96		01/19/96		05/07/96		06/13/96	
	DATE EXTRACTED -->	01/24/96		05/16/96		06/30/96		01/22/96		05/16/96		06/28/96	
	DATE ANALYZED --->	01/26/96		05/30/96		07/03/96		01/25/96		05/30/96		07/04/96	
	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	24514	VAL	25504	VAL	25997	VAL	24514	VAL	25504	VAL	25997	VAL
7429-90-5	Aluminum (Al)	18.	U	23.	U	18.1	J	18.	U	23.	U	18.	U
7440-36-0	Antimony (Sb)	2.1	U	13.	U	2.1	U	2.1	U	13.	U	2.1	U
7440-38-2	Arsenic (As)	2.5	UJ	2.5	UJ	2.5	UJ	2.5	UJ	2.5	UJ	2.7	UJ
7440-39-3	Barium (Ba)	11.6		11.4	U	12.8		70.4		56.8	U	54.5	
7440-41-7	Beryllium (Be)	0.3	U	0.3	U	0.3	U	0.33	J	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)	55400.	J	57500.		62800.		179000.	J	167000.		171000.	
7440-47-3	Chromium (Cr)	0.8	U	2.2	U	0.8	UJ	0.8	U	2.2	U	0.8	UJ
7440-48-4	Cobalt (Co)	0.9	U	5.2	U	5.2	U	0.9	U	5.2	U	5.2	U
7440-50-8	Copper (Cu)	0.6	UJ	3.9	UJ	0.75	U	0.81	UJ	1.4	UJ	0.89	U
7439-89-6	Iron (Fe)	485.		611.		788.		240.		213.		224.	
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)	1900.		1930.		2190.		22400.		20000.		21600.	
7439-96-5	Manganese (Mn)	48.1		49.		54.6		123.		105.		105.	
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)	0.8	U	7.9	U	0.8	UJ	0.8	U	5.3	U	1.3	UJ
7440-09-7	Potassium (K)	1650.	U	1600.	U	1600.	U	11200.		8210.	U	9700.	
7782-49-2	Selenium (Se)	2.8	UJ	3.3	U	2.8	U	2.8	UJ	2.8	U	2.8	U
7440-22-4	Silver (Ag)	1.2	U	1.2	U	1.2	UJ	1.2	U	1.2	U	1.2	UJ
7440-23-5	Sodium (Na)	8320.		7260.	U	9680.		243000.		221000.		213000.	
7440-28-0	Thallium (Tl)	2.7	U	2.7	UJ	2.7	UJ	2.7	U	2.7	UJ	2.7	U
7440-31-5	Tin (Sn)	2.6	U	2.6	U	2.6	UJ	2.6	U	2.6	U	2.6	UJ
7440-62-2	Vanadium (V)	0.5	U	3.4	U	0.5	UJ	0.5	U	3.4	U	0.5	UJ
7440-66-6	Zinc (Zn)	5.3	U	40.2	U	5.3	U	5.3	U	6.9	U	5.3	U

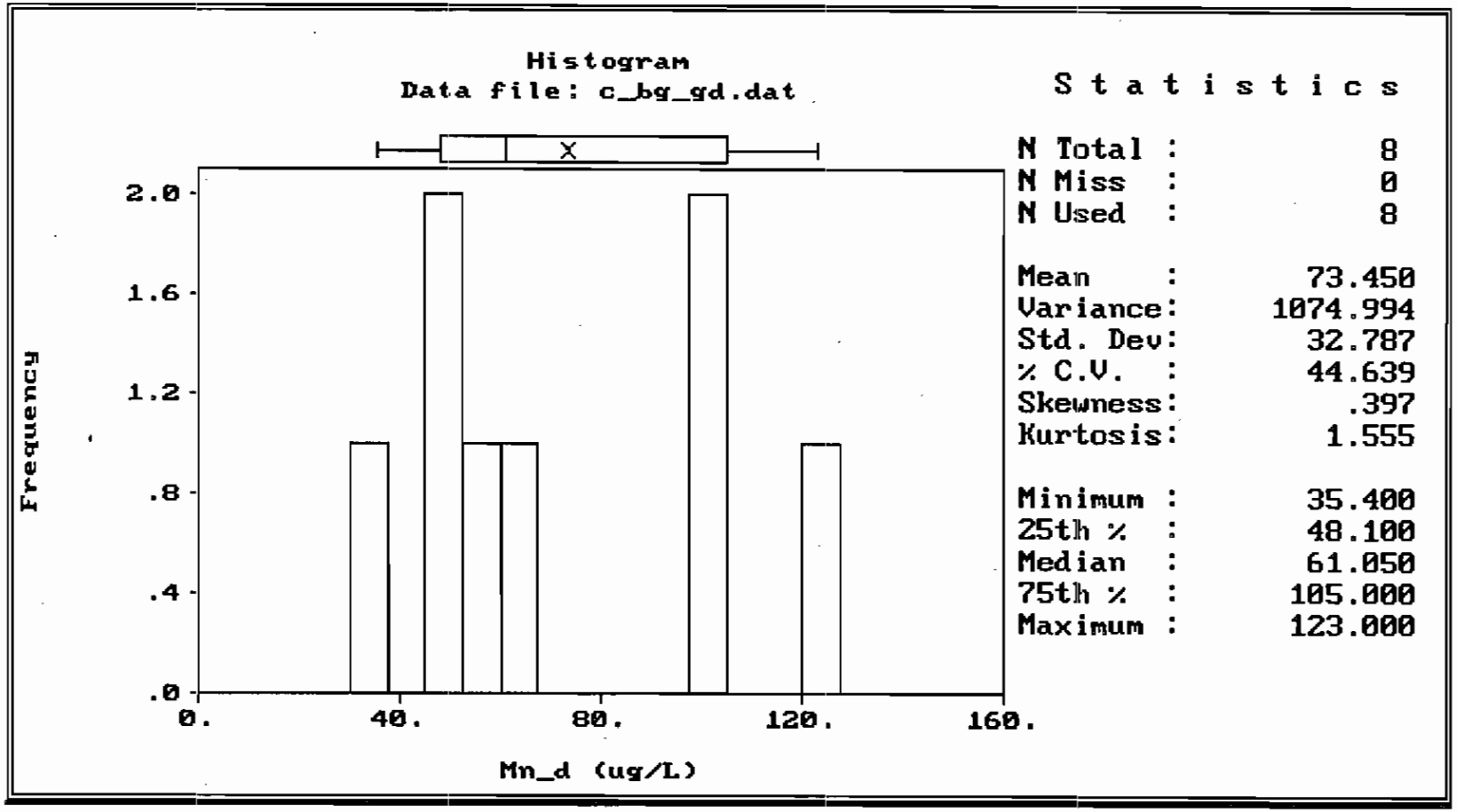
*** Validation Complete ***

Zone C
Beryllium in deep GW grid samples
Original dataset (N = 8)
Original values

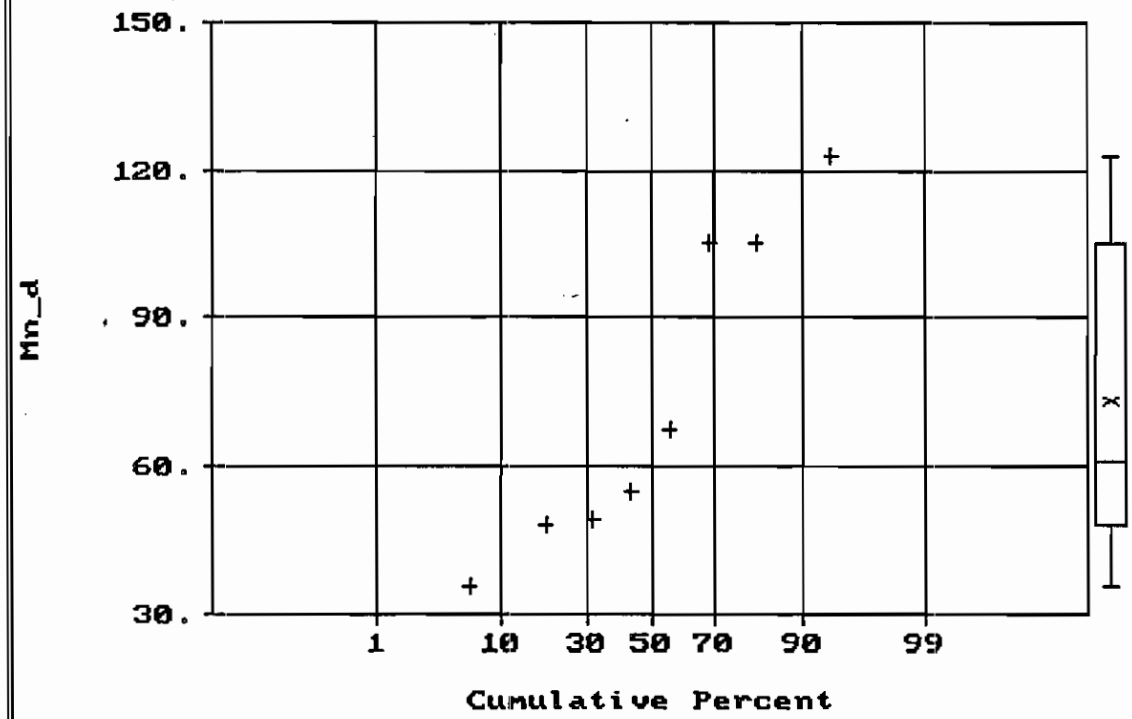


Zone C
Manganese in deep GW grid samples
Original dataset (N=8)
Original values

1a



Normal Probability Plot for Mn_d
Data file: c_bg_gd.dat

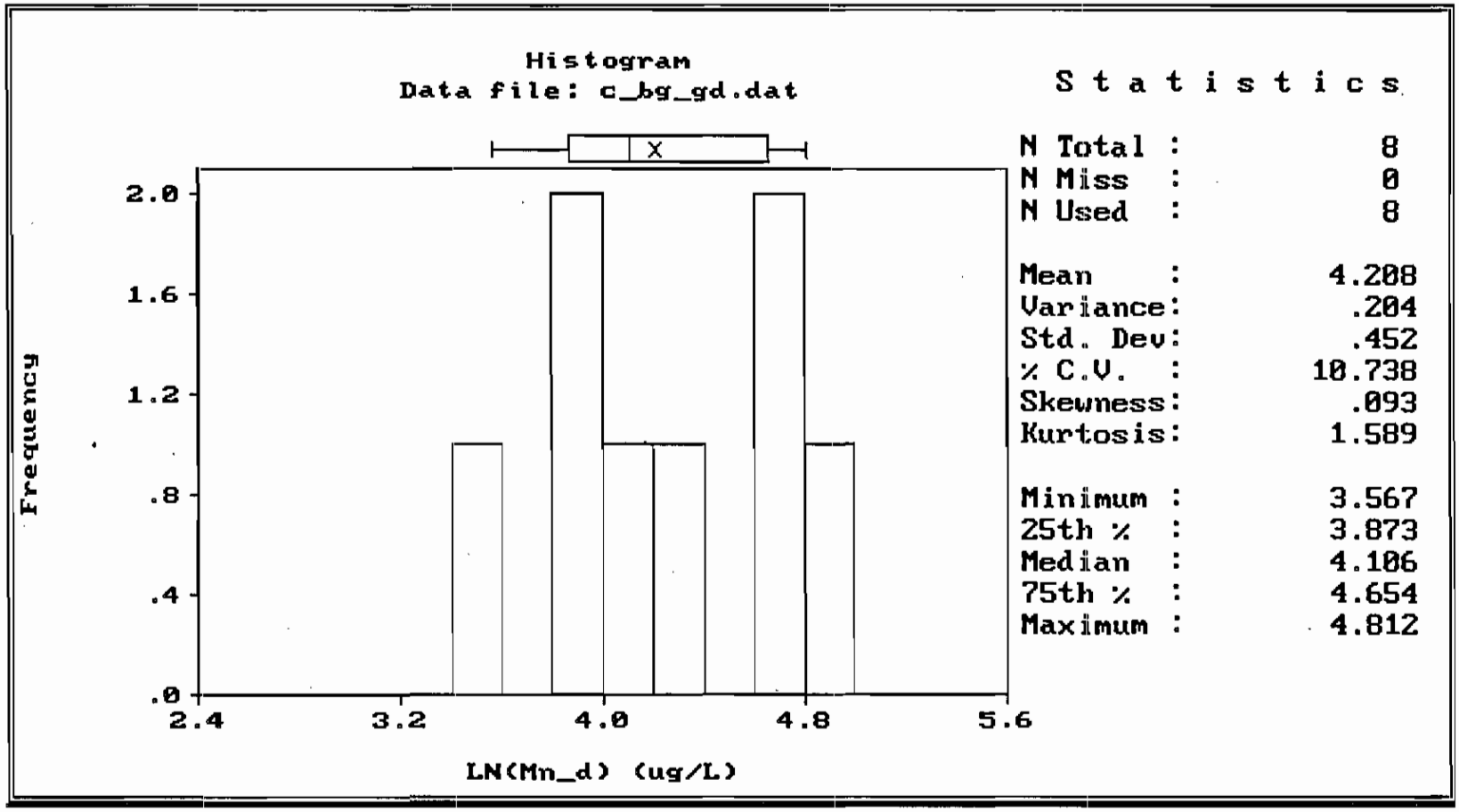


Statistics

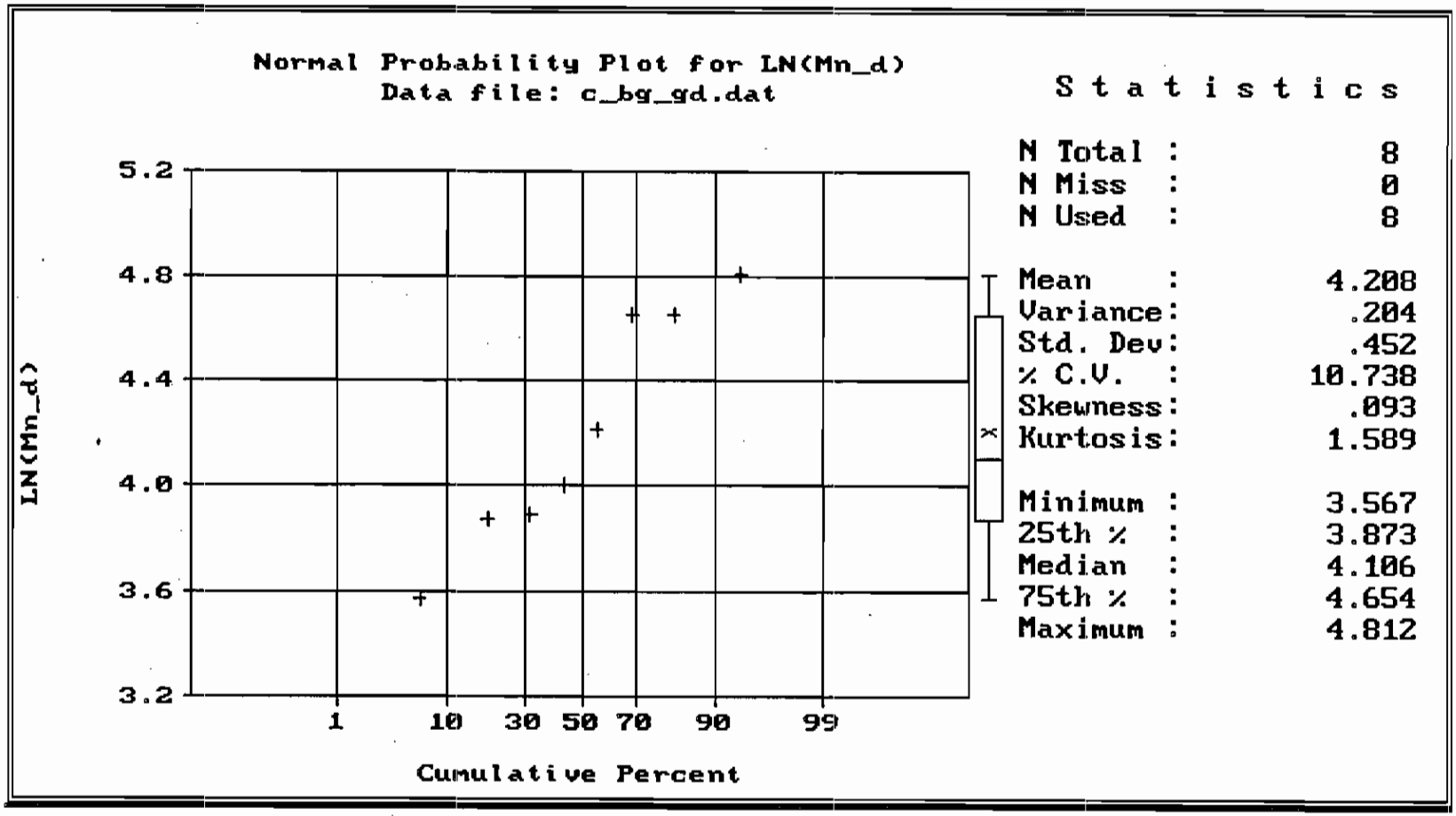
N Total :	8
N Miss :	0
N Used :	8
Mean :	73.450
Variance:	1074.994
Std. Dev:	32.787
% C.V. :	44.639
Skewness:	.397
Kurtosis:	1.555
Minimum :	35.400
25th % :	48.100
Median :	61.050
75th % :	105.000
Maximum :	123.000

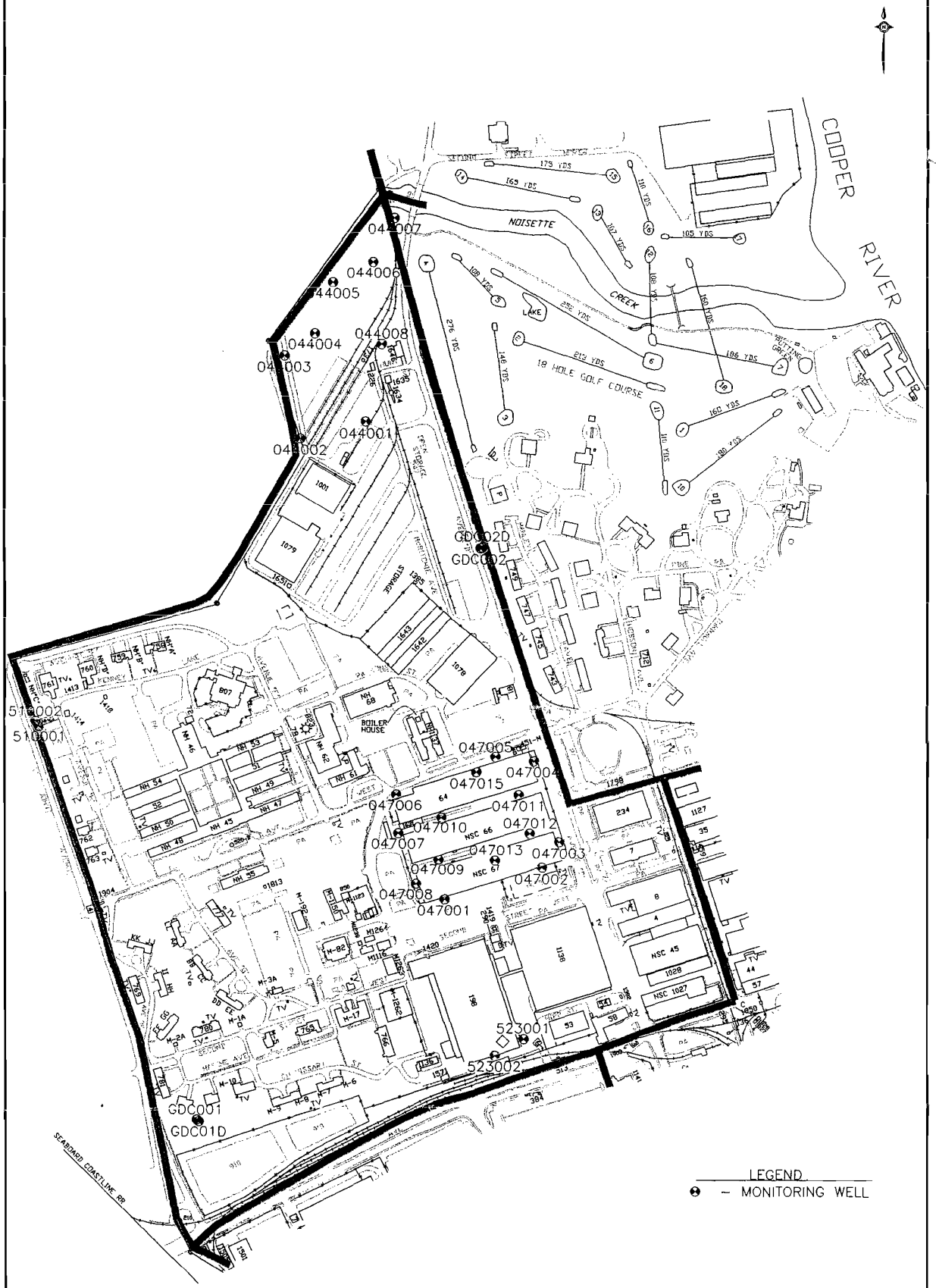
Zone C
Manganese in deep GW grid samples
Original dataset (N = 8)
LN-transformed values

2a



2b


Normal Probability Plot for LN(Mn_d)
Data file: c_bg_gd.dat
LN(Mn_d)
5.2
4.8
4.4
4.0
3.6
3.2
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 8
N Miss : 0
N Used : 8
Mean : 4.208
Variance: .204
Std. Dev: .452
% C.V. : 10.738
Skewness: .093
Kurtosis: 1.589
Minimum : 3.567
25th % : 3.873
Median : 4.106
75th % : 4.654
Maximum : 4.812



LEGEND

⊖ – MONITORING WELL

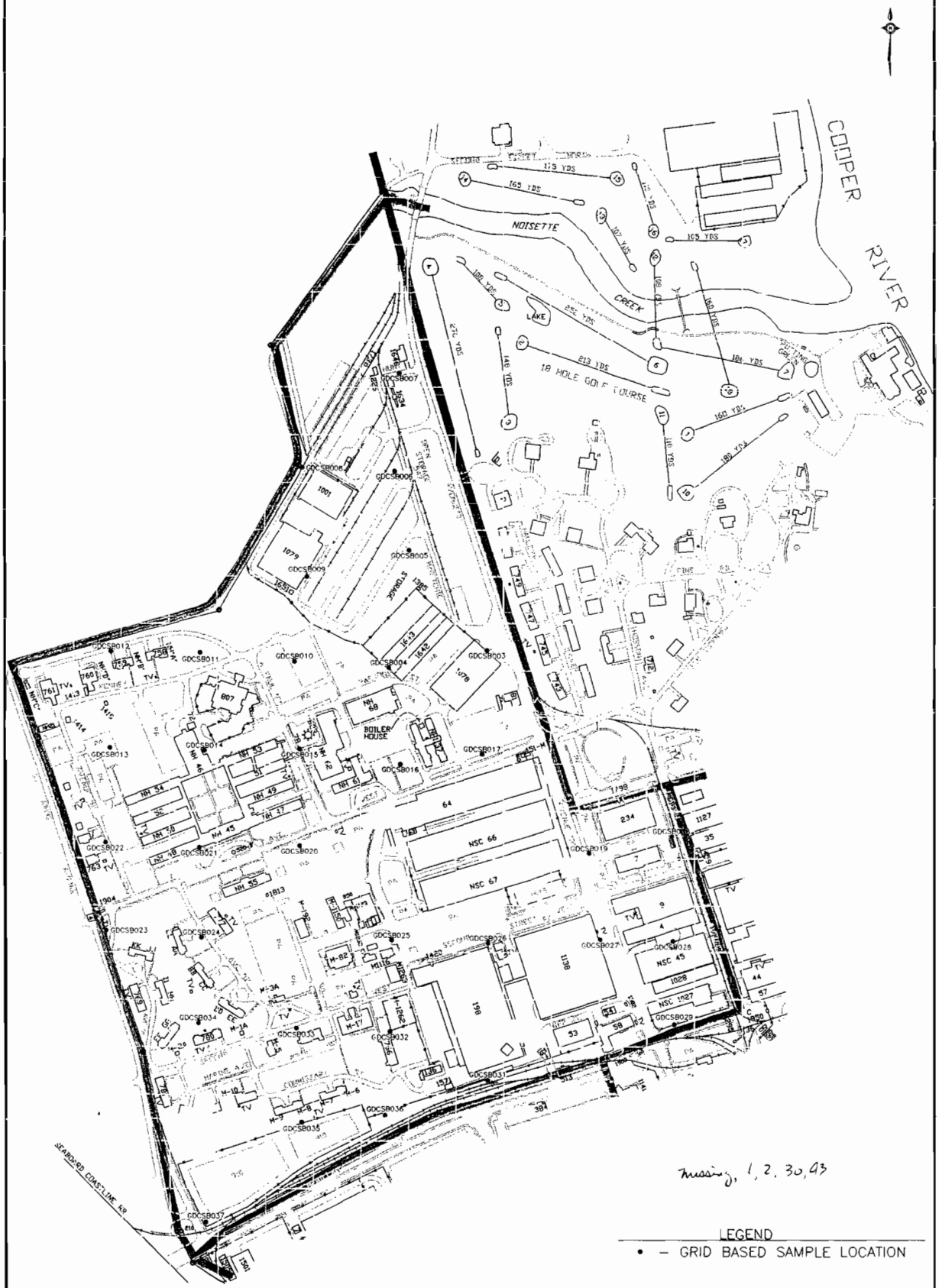
400 0 400

SCALE FEET

ZONE C
DRAFT RCRA FACILITY
INVESTIGATION REPORT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.

FIGURE 2.1
ZONE C
GROUNDWATER MONITORING WELL
LOCATION MAP

DWG DATE: 01/12/96 | DWG NAME: 29ZNCMW1



missing 1, 2, 30, 43

LEGEND

• – GRID BASED SAMPLE LOCATION

400 0 400

SCALE FEET

ZONE C
DRAFT RCRA FACILITY
INVESTIGATION REPORT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.

10.7.1
ZONE C
GRID BASED SAMPLE LOCATIONS

DWG DATE: 01/13/96 | DWG NAME: 29ZNCMW3