SFIM-AEC-ER-CR-98018

Final
Remedial Investigation Report
Presidio Main Installation

Presidio of San Francisco

Volume VI
Appendices A-F

Contract No. DAAA15-90-D-0018
Task Order 0002, Data Item A009

DISTRIBUTION STATEMENT A
Approved for Public Release
Distribution Unlimited

Prepared by
DAMES & MOORE

Prepared for
U.S. Army Environmental Center
Aberdeen Proving Ground, Maryland 21010-5401

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January 1997

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13. ABSTRACT *(Maximum 200 words)*

Dames and Moore has conducted a Remedial Investigation (RI) of the Presidio of San Francisco (PSF), CA. The objectives of the RI included the determination of the nature and extent of contamination at PSF and to quantify both the human health and ecological risk posed by that contamination. The report concludes that, in general, the Presidio does not pose a significant risk to either human health or the environment. There are, however, a number of locations where elevated risks are present. The remedial actions to abate those risks will be identified in a follow -on document called the "Presidio Main Installation, Feasibility Study".

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INSTRUCTIONS FOR UPDATING APPENDICES VOLUMES

VOLUME VI - FINAL REPORT
APPENDICES A - F

Volume IV of the Second Revised Draft Final RI Report will become Volume VI of the Final RI Report.

Volume VI - Volume Cover and Spine

The enclosed Volume VI cover and spine will replace Volume IV - Second Revised Draft Final volume cover and spine.

Volume VI - Front Matter (Volume Title Page, Table of Contents and Introduction)

The enclosed Volume VI Front Matter will replace Volume IV-Second Revised Draft Final Front Matter.

Volume VI - Appendix A

The enclosed Volume VI Appendix A will replace Volume IV-Second Revised Draft Final Appendix A.

Volume VI - Appendix C

The enclosed Volume VI Appendix C Title Page will replace Volume IV-Second Revised Draft Final Appendix C Title Page.

The enclosed page 312 and page 313 will be added to Appendix C.

Final
Remedial Investigation Report
Presidio Main Installation

Presidio of San Francisco

Volume VI
Appendices A-F

Contract No. DAAA15-90-D-0018
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Prepared by
DAMES & MOORE

Prepared for
U.S. Army Environmental Center
Aberdeen Proving Ground, Maryland 21010-5401

January 1997

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1. INTRODUCTION

This Final Remedial Investigation (RI) Report presents the results of the Main Installation RI conducted under the direction of the U.S. Army Environmental Center (USAEC), formerly U.S. Army Toxic and Hazardous Materials Agency (USATHAMA) at the Presidio of San Francisco (PSF). This RI report was prepared by Dames & Moore under contract No. DAAA15-90-D-0018 with the USAEC.

Volume VI, this volume, of the Final Remedial Investigation Report contains the following appendices:

- Appendix A Background/PSF Water Supply
- Appendix B Nike Facility
- Appendix C Crissy Field Study Area
- Appendix D Building 900s Series Study Area
- Appendix E DEH Study Area
- Appendix F Main Post Study Area.

The remaining seven volumes contain information as follows: Volume I contains the text of the body of the report. Volume II contains the tables referenced in Volume I. Volumes III through V contain the figures referenced by sections 1 through 15 of Volume I. Volumes VII and VIII contain supporting documentation for the RI in Appendices G through Q and R through U, respectively.

The following report outline shows section and Appendix titles for all eight report volumes and is included in the introduction section of each volume of this RI report.

1.1 Report Outline: Final Remedial Investigation Report Presidio Main Installation, Presidio of San Francisco

The following outline lists the major sections in each of the eight volumes of this RI report.

VOLUME I TEXT

1. Introduction
2. Background
3. Investigation Methods
4. Nike Facility
5. Crissy Field Study Area
6. Building 900s Series Study Area
7. Directorate of Engineering and Housing Study Area
8. Main Post Study Area
9. Fill Sites and Landfills
10. Miscellaneous Sites
11. Golden Gate Bridge Highway and Transportation District Study Area
12. Baker Beach Study Area
13. Battery Howe/Wagner
14. Miscellaneous Follow-on Sites
15. Baseline Risk Assessment
16. References

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1. Introduction
2. Background
3. Investigation Methods
4. Nike Facility
5. Crissy Field Study Area
6. Building 900s Series Study Area
7. Directorate of Engineering and Housing Study Area
8. Main Post Study Area
9. Fill Sites and Landfills
10. Miscellaneous Sites
11. Golden Gate Bridge Highway and Transportation District Study Area
12. Baker Beach Study Area
13. Battery Howe/Wagner
14. Miscellaneous Follow-on Sites
15. Baseline Risk Assessment

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1. Introduction
2. Background
3. Investigation Methods
4. Nike Facility
5. Crissy Field Study Area

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Introduction

6. Building 900s Series Study Area

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7. Directorate of Engineering and Housing Study Area
8. Main Post Study Area
9. Fill Sites and Landfills
10. Miscellaneous Sites
11. Golden Gate Bridge Highway and Transportation District Study Area
12. Baker Beach Study Area
13. Battery Howe/Wagner
14. Miscellaneous Follow-on Sites
15. Baseline Risk Assessment

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A Background/PSF Water Supply
B Nike Facility
C Crissy Field Study Area
D Building 900s Series Study Area
E DEH Study Area
F Main Post Study Area

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G Fill Sites and Landfills
H Miscellaneous Sites
I Golden Gate Bridge Highway and Transportation District Study Area
J Baker Beach Study Area
K Battery Howe/Wagner
L Miscellaneous Follow-on Sites
M Physical Properties Data
N Geophysical Data
O Well and Sample Data
P Transducer Study
Q Fate and Transport Data

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Introduction

R IRA Data
S Soil Gas Data
T QA/QC Program
U Risk Calculation Spreadsheets

1.2 Index of Study Areas, Buildings, and Sites, with Section Numbers

The following index shows where each study area, building, and site is discussed in the RI report. Note, however, that although all listed items are discussed, not all listed items are areas which were investigated in this RI. The index can also be cross referenced with Figure 1.2-1.

For space requirements in the index, and for brevity in the rest of this RI report, the Golden Gate Bridge, Highway, and Transportation District Study Area is abbreviated as GGBHTD Study Area. For the same reasons, the Directorate of Engineering and Housing Study Area is abbreviated as DEH Study Area.

Study Area/Building/Site	RI Report Section
Baker Beach Study Area	12. Baker Beach Study Area
Battery Howe/Wagner	13. Battery Howe/Wagner
Bone Yard Area	11. GGBHTD Study Area
Bridge District Area (see GGBHTD Study Area)	11. GGBHTD Study Area
Building 1029	8. Main Post Study Area
Building 1040	8. Main Post Study Area
Building 1057	8. Main Post Study Area
Building 1065	8. Main Post Study Area
Building 1151	8. Main Post Study Area
Building 1152	8. Main Post Study Area
Building 1153	8. Main Post Study Area
Building 1167	8. Main Post Study Area
Building 1244	10. Miscellaneous Sites
Building 1245	14. Miscellaneous Follow-on Sites
Building 1285	13. Battery Howe/Wagner
Building 1287	13. Battery Howe/Wagner
Building 1351	10. Miscellaneous Sites
Building 1369	14. Miscellaneous Follow-on Sites
Building 1388	14. Miscellaneous Follow-on Sites
Building 1450	4. Nike Facility
Building 1451	4. Nike Facility
Building 1750	14. Miscellaneous Follow-on Sites
Building 201	8. Main Post Study Area
Building 205 (see Sewer Lift Station 2)	5. Crissy Field Study Area
Building 206	8. Main Post Study Area
Building 207	8. Main Post Study Area
Building 208	8. Main Post Study Area
Building 215	8. Main Post Study Area
Building 228	8. Main Post Study Area
Building 229	8. Main Post Study Area

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Building 231	8. Main Post Study Area
Building 267	7. DEH Study Area
Building 268	7. DEH Study Area
Building 269	7. DEH Study Area
Building 269	7. DEH Study Area
Building 283	7. DEH Study Area
Building 285	7. DEH Study Area
Building 286	7. DEH Study Area
Building 287	7. DEH Study Area
Building 293	7. DEH Study Area
Building 302	14. Miscellaneous Follow-on Sites
Building 609	5. Crissy Field Study Area
Building 611	5. Crissy Field Study Area
Building 633	5. Crissy Field Study Area
Building 634	5. Crissy Field Study Area
Building 637	5. Crissy Field Study Area
Building 638	5. Crissy Field Study Area
Building 640	5. Crissy Field Study Area
Building 642	5. Crissy Field Study Area
Building 643	5. Crissy Field Study Area
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Building 662	10. Miscellaneous Sites
Building 663	10. Miscellaneous Sites
Building 664	10. Miscellaneous Sites
Building 665	10. Miscellaneous Sites
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Building 900s Series Study Area	6. Building 900s Series Study Area
Building 920	6. Building 900s Series Study Area
Building 923	6. Building 900s Series Study Area
Building 924	6. Building 900s Series Study Area
Building 925	6. Building 900s Series Study Area
Building 926	6. Building 900s Series Study Area
Building 927	6. Building 900s Series Study Area
Building 929	6. Building 900s Series Study Area
Building 930	6. Building 900s Series Study Area
Building 931	6. Building 900s Series Study Area
Building 933	6. Building 900s Series Study Area
Building 934	6. Building 900s Series Study Area
Building 937	6. Building 900s Series Study Area
Building 949	6. Building 900s Series Study Area
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Building 973	6. Building 900s Series Study Area
Building 974	6. Building 900s Series Study Area

Study Area/Building/Site	RI Report Section
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Building 979	6. Building 900s Series Study Area
Building 979 Area	6. Building 900s Series Study Area
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Building 992	10. Miscellaneous Sites
Building 993	10. Miscellaneous Sites
Building 994	10. Miscellaneous Sites
Building 995	10. Miscellaneous Sites
Building 996	10. Miscellaneous Sites
Building 997	10. Miscellaneous Sites
Building 998	10. Miscellaneous Sites
Building 999	10. Miscellaneous Sites
Consolidated Motor Pool	5. Crissy Field Study Area
Crissy Field Study Area	5. Crissy Field Study Area
Directorate of Engineering and Housing Study Area	7. DEH Study Area
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Disturbed Area 2	12. Baker Beach
Disturbed Area 3	12. Baker Beach
Disturbed Area 4	12. Baker Beach
Disturbed Area E (see Landfill E)	9. Fill Sites and Landfills
East of Mason	14. Miscellaneous Follow-on Sites
Fill Site 1	9. Fill Sites and Landfills
Fill Site 5	9. Fill Sites and Landfills
Fill Site 6	9. Fill Sites and Landfills
Fill Site 7	5. Crissy Field Study Area
Fill Sites and Landfills	9. Fill Sites and Landfills
Fort Point U.S. Coast Guard Station (FPCGS)	10. Miscellaneous Sites
GGBHTD Study Area	11. GGBHTD Study Area
Graded Area 9	9. Fill Sites and Landfills
Landfill 1 (see Fill Site 1)	9. Fill Sites and Landfills
Landfill 2	9. Fill Sites and Landfills
Landfill 3 (see Transfer Station)	9. Fill Sites and Landfills
Landfill 4	9. Fill Sites and Landfills
Landfill 5 (see Fill Site 5)	9. Fill Sites and Landfills
Landfill 6 (see Fill Site 6)	9. Fill Sites and Landfills
Landfill 7 (see Fill Site 7)	5. Crissy Field Study Area
Landfill 9 (see Graded Area 9)	9. Fill Sites and Landfills
Landfill E	9. Fill Sites and Landfills
Letterman Army Institute of Research	2. Background
Letterman Army Medical Center	2. Background
Lobos Creek	10. Miscellaneous Sites
Main Post Study Area	8. Main Post Study Area
Miscellaneous Follow-on Sites	14. Miscellaneous Follow-on Sites
Miscellaneous Sites	10. Miscellaneous Sites
Mountain Lake	10. Miscellaneous Sites
Nike Facility	4. Nike Facility

Study Area/Building/Site	RI Report Section
Paint Operations Area	11. GGBHTD Study Area
POL Area	5. Crissy Field Study Area
Sewer Lift Station 1	5. Crissy Field Study Area
Sewer Lift Station 2	5. Crissy Field Study Area
Silo 1	4. Nike Facility
Silo 2	4. Nike Facility
Silo 3	4. Nike Facility
Transfer Station	9. Fill Sites and Landfills
Transformer Area	11. GGBHTD Study Area
UST Area	11. GGBHTD Study Area
Vehicle Maintenance Area	6. Building 900s Series Study Area

Appendix A
Background/PSF Water Supply

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Serpentinite A-245
Fill A-327

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Appendix A
Background/PSF Water Supply

Soil Borings

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Watkins-Johnson Environmental, Inc.
SOIL AND SEDIMENT SAMPLE LOG FORM

Site ID: BKGDSB01

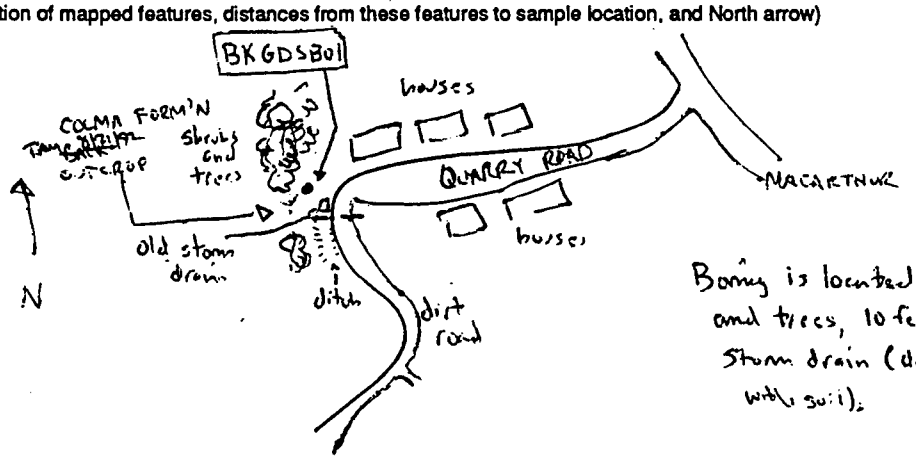
Project Name	Project No.	Total Drilled Depth	
PSF-SR1	0330-130	6.5 feet	
Drilling Equipment	**Boring Diameter**	**Date/Time Drilling Started**	**Date/Time Total Depth Reached**
CME 55, HJM 8/21/92	6 inch	8/21/92 1520	8/21/92 1558
Type of Sampling Device		**Geologist**	**Checked by/Date**
California penetrator core barrel, 18"x2", 140 lb hammer, 30" inch drop		T. Miller	WEF / 9-14-92

Location Description (include sketch in field logbook)
Logbook pg 09-045. At end of Quarry road in Colma Form'n outcrop; between ditch and trees, 10' from storm drain

Depth (ft)	Sample Intreval	% Recovery	Description (include in order lithology, grain size, sorting, angularity, Munsell color name & notation, mineralogy (structure, density, consistency, etc. as applicable))	USCS Symbol	Lithology	Water Content	Estimate % of Gr	Sa	Fi	Remarks (Include all sample types & depth, tag number, odor, organic vapor measurements, etc.)
1		NA	SILT, sandy with clay. Dark yellowish brown (10YR4/4), Firm. Uniform, medium grains. Subround.	ML		MM	-	40	60	drill straight down to 2 feet, description from cuttings.
2		100	SAND with silt and clay. Dark yellowish brown (10YR4/6), Medium dense. Medium fine, poorly graded, subround grains. Highly uniform, and continuous.	SM		M	-	70	30	Analytical sample 2.0 to 3.5 feet.
3				SP-SM		MM	-	90	10	
4		100	SAND, trace silt. Dark yellowish brown (10YR4/4). Poorly graded, medium-fine, subround grains. Highly uniform. dense.							
5			SAND, as above, with clay, Very dense.	SP-SM		M	-	90	10	Analytical sample
6										
7										

Blow Counts: 16, 28, 29, 25, 37, 41, 12, 22, 24

SAMPLE LOCATION SKETCH
(show location of mapped features, distances from these features to sample location, and North arrow)



Boring is located between ditch and trees, 10 feet west of storm drain (drain is filled with soil).

0330-003/JUN1992

Watkins-Johnson Environmental, Inc.
LITHOLOGY LOG

Site ID: BKGDSBØ2

Project Name: PSF SRI	Project No.: 0330,130	Coordinates:	
Drilling Company: HEW	Driller: JASPER BOOKER	Ground Elevation:	Total Drilled Depth: 48.0 ft
Drilling Equipment: CME 55	Drilling Method: HSA	Boring Diameter: 8 in	Date/Time Drilling Started: 8-28-92 0920
			Date/Time Total Depth Reached: 8-28-92 1215
Type of Sampling Device: 5ft x 3in split barrel and 18in x 2in stainless steel split spoon w/ brass liners		Water Level (BGS): First NONE	Final NONE
Sample Hammer: Type Automatic	Driving Wt. 140 lb	Drop 30in	Hydrogeologist: GREG PUDLIK
			Checked by/Date: WEF / 9-14-92

Location Description (include sketch in field logbook): ~350'S of Bldg 680 and ~170' E of Park Blvd.

Depth (ft)	Interval	% Recovery	Blow Counts	Description (include in order lithology, grain size, sorting, angularity, Munsell color name & notation, mineralogy (structure, density, consistency, etc. as applicable)	USCS Symbol	Lithology	Water Content	Estimate % of Gr	Sa	Fi	Remarks (Include all sample types & depth, tag number, odor, organic vapor measurements, etc.)
0		NA	NA	(0-2') sand, medium grained, wellsorted subrounded, subarkose (dune sand) 10YR 5/3 brown, loose	SP		D		95	5	
1											
2		100	3 5 6	(2-3.5') same as above, (dune sand) some roots	SP		D		95	5	collect lab sample 0930 (2-3.5')
3											
4		60	continuous	(3.5-8') same as above, (dune sand)	SP		D		95	5	
5							SM				
6											
7											
8		60	continuous	(8-12.5') same as above, (dune sand)	SP		MM		95	5	
9											
10											
11											
12				(12.5-13') sand, ~~medium~~ fine grained wellsorted, subrounded subarkose, medium dune, 10YR 6/2 light brownish gray	SP/SM		MM		90	10	
13											

0330-001/JUN1992

A-6

Watkins-Johnson Environmental, Inc.
LITHOLOGY LOG (continued)

Site ID: BKGDSBØ2

Depth (ft)	Interval	% Recovery	Blow Counts	Description (include in order lithology, grain size, sorting, angularity, Munsell color name & notation, mineralogy (structure, density, consistency, etc. as applicable)	USCS Symbol	Lithology	Water Content	Estimate % of Gr	Sa	Fi	Remarks (Include all sample types & depth, tag number, odor, organic vapor measurements, etc.)
13											
14											
15		50	continuous	(15.5-17.5') sand, medium, well sorted, subrounded, 10YR 5/4 yellowish brown some alternating bands of dark sand up to 3mm thick (10YR 3/1, very dark grey) loose, (dune sand)	SP		M		95	5	
16											
17				(17.5-17.8') sand, medium, well sorted, subround 10YR 3/1 very dark grey, loose	SP		M		95	5	
18				(17.8-18') sand fine, well sorted, subrounded w/ alternating light & dark colored bands 1mm thick 10YR 6/1 grey, medium dense	SP/SM				90	10	
19		50	continuous	(18-23') sand, medium, well sorted, subrounded, 10YR/5/4 yellowish brown, some alternating bands of dark sand to 3mm (10YR 3/1, very dark grey) loose, (dune sand)	SP		M		95	5	
20											
21											
22											
23		50	continuous	(23-28') same as above, (dune sand)	SP		M		95	5	
24											
25											
26											
27											
28		60	continuous	(28-33') same as above, (dune sand)	SP		M		95	5	
29											
30											

interval continued next page

0330-001/JUN1992

Watkins-Johnson Environmental, Inc.
LITHOLOGY LOG (continued)

Site ID: BKGDSB02

Depth (ft)	Interval	% Recovery	Blow Counts	Description (include in order lithology, grain size, sorting, angularity, Munsell color name & notation, mineralogy (structure, density, consistency, etc. as applicable)	USCS Symbol	Lithology	Water Content	Estimate % of Gr	Sa	Fi	Remarks (Include all sample key, depth, tag number, organic vapor measurements, etc.)
30		60	continuous	(28-33' cont) same as above, (dune sand)	SP		M		95	5	
31											
32											
33		50	continuous	(33-38') same as above, (dune sand)	SP		M		95	5	
34											
35											
36											
37											
38		60	continuous	(38-43') same as above, (dune sand)	SP		M		95	5	
39											
40											
41											
42											
43		55	continuous	(43-48') same as above, (dune sand) darker, 10YR 3/3, dark brown	SP		M		95	5	
44											
45											
46											
47											

interval continued next page

0330-001/JUN1992

Watkins-Johnson Environmental, Inc.
LITHOLOGY LOG (continued)

Site ID: BKGDSB002

Depth (ft)	Interval	% Recovery	Blow Counts	Description (include in order lithology, grain size, sorting, angularity, Munsell color name & notation, mineralogy (structure, density, consistency, etc. as applicable)	USCS Symbol	Lithology	Water Content	Estimate % of Gr	Sa	Fi	Remarks (Include all sample types & depth, tag number, odor, organic vapor measurements, etc.)
47	↓	55	contin.	(43-48 cont) same as above	SP		M		95	5	
48				Total drilled depth = 48.0 ft							

0330-001/JUN1992

Watkins-Johnson Environmental, Inc.
SOIL AND SEDIMENT SAMPLE LOG FORM

Site ID: BKGD SB03

Project Name: TEPS - PSF	Project No.: 0330.130	Total Drilled Depth: NA *	
Drilling Equipment: NA	Boring Diameter: NA	Date/Time Drilling Started: NA	Date/Time Total Depth R: NA
Type of Sampling Device: Stainless scoop and Brass liner		Geologist: Erik Fuller	Checked by/Date: DLA/ 9-11-92

Location Description (include sketch in field logbook): built up pile of dirt on side of road used for fire access

Depth (ft)	Sample Interval	% Recovery	Description (include in order lithology, grain size, sorting, angularity, Munsell color name & notation, mineralogy (structure, density, consistency, etc. as applicable)	USCS Symbol	Lithology	Water Content	Estimate % of Gr	Sa	Fi	Remarks (Include all sample types & depth, tag number, odor, organic vapor measurements, etc.)
0.1			surface (0.0-0.1') nearly even mixture of gravel, sand and silt, chert roadbase. poorly sorted, angular to subangular, brown (7.5YR 4/3)	Fill		D	30	40	30	2 samples taken 1435

SAMPLE LOCATION SKETCH
(show location of mapped features, distances from these features to sample location, and North arrow)

see logbook page 12-006
and map included in folder

* sample date = 9-2-92 . no drilling done

0330-003/JUN1992

Watkins-Johnson Environmental, Inc.
SOIL AND SEDIMENT SAMPLE LOG FORM

Site ID: BKGASB02 4 EF 9-2-92

Project Name	Project No.	Total Drilled Depth
TEPS - PSF	0330.130	0.5 ft

Drilling Equipment	Boring Diameter	Date/Time Drilling Started	Date/Time Total Depth Reached
HAND AUGER	2 inches	9-2-92 - 1524	9-2-92 1554

Type of Sampling Device	Geologist	Checked by/Date
4 inch Brass liner	Erik Fuller	DLA / 9-11-92

Location Description (include sketch in field logbook)
2/3 way up 15' cliff of serpentinite coming up from Baker Beach

Depth (ft)	Sample Interval	% Recovery	Description (include in order lithology, grain size, sorting, angularity, Munsell color name & notation, mineralogy (structure, density, consistency, etc. as applicable)	USCS Symbol	Lithology	Water Content	Estimate % of Gr	Sa	Fi	Remarks (Include all sample types & depth, tag number, odor, organic vapor measurements, etc.)
0.5			(0.0-0.5 ft) weathered serpentinite bedrock, grayish green (5G 5/2)	mmpc		D				

SAMPLE LOCATION SKETCH
(show location of mapped features, distances from these features to sample location, and North arrow)

see logbook pages 12-007 and 12-008
and map in folder

0330-003/JUN1992

Watkins-Johnson Environmental, Inc.
LITHOLOGY LOG

Sheet 1 of 1

Site ID: BKGRDSB05

Project Name: PSF/ Follow-on	Project No.: 0330-339	Coordinates	
Drilling Company: On Site Services	Driller: Doug Moore	Ground Elevation	Total Drilled Depth
Drilling Equipment: Geoprobe / Drilling Method: Percussion / Boring Diameter: 1"		Date/Time Drilling Started: 12/7/94 1605	Date/Time Total Depth Reached
Type of Sampling Device: 1" x 2" Stainless		Water Level (BGS): First / Final	
Sample Hammer: Type: Percusion / Driving Wt. / Drop		Hydrogeologist: Mike Boubin	Checked by/Date

Location Description (include sketch in field logbook): 280FT N of Beach Enterance & 2 ft west of the fence.

Depth (ft)	Interval	Recovery	Blow Counts	Description (include lithology, grain size, sorting, angularity, Munsell color name & notation, mineralogy, bedding, plasticity, density, consistency, etc. as applicable)	USCS Symbol	Lithology	Water Content	Estimate % of Gr	Sa	Fi	Remarks (Include all sample types & depth, odor, organic vapor measurements, etc.)
				SEE lithology for BKGRDSB06							
				log Book F09-36							

12-7-94 BKGD CPT-1 10ft

Watkins-Johnson Environmental, Inc.
LITHOLOGY LOG

Page 1 of 1

Site ID: BKGROSBOG (1-) WEF 4/19/95

Project Name: PRESIDIO R.I.F.S.	Project No.: 0330.339	Coordinates	
Drilling Company: ONSITE SERVICES	Driller: DOUG MOORE	Ground Elevation	Total Drilled Depth: 10ft
Drilling Equipment: GEOPROBE	Drilling Method: PERCUSSION	Boring Diameter: 1"	Date/Time Drilling Started: 12-7-94/1535
			Date/Time Total Depth Reached: 12-7-94/1605
Type of Sampling Device: 1"x2" STAINLESS		Water Level (BGS) First: NE	Final: NE
Sample Hammer Type: PERCUSSION	Driving Wt.: N.A.	Drop: N.A.	Hydrogeologist: M. BOUBIN/D. OLGUIN
			Checked by/Date: RT Larson 3/2/95

Location Description (include sketch in field logbook): 30ft N of BEACH ENTRANCE & 2ft WEST of THE FENCE SEE SKETCH FOG-36

Depth (ft)	Interval	% Recovery	Blow Counts	USCS Symbol	Lithology	Description (Sands & Gravels: name, color, density, roundness, gradation, grain size, minerology, minor constitutents structure, notable char., moisture, odor, geo. unit. Silts & Clays: name, color, consistency, toughness, plasticity, minor constituents, notable char., moisture, odor, geo. unit.)	Water Content	Estimate % of Gr	Sa	Fi	Remarks (Include all sample types & depth, tag number, odor, organic vapor measurements, etc.)
1			NA	SP		SAND, BROWN, FINE POORLY GRADED LOW DENSITY, ROUNDED, -50 TO +200 SAND, SMALL AMOUNTS OF IRON 10YR 5/4	M		95	5	G/b @ SURFACE
2						SAND, BROWN SAME AS ABOVE	M		95	5	
3				SP							
4						SAND BROWN SAME AS ABOVE	M		95	5	
5				SP							
6						SAND, BROWN SAME AS ABOVE	M		97	3	
7				SP							
8						~~SAND~~, BROWN SAME AS ABOVE DO 12-7-94 WITH MORE ~~COARSE~~ COARSE SAND AND MORE IRON OR ORANGE COLORED PARTICLES	M		98	2	
9				SP							
10											
11											
12											

P. 2 of 2

FORM002

A-13

12-8-94 CPT-1 11.0 ft BKGD

BKGDSB07

Watkins-Johnson Environmental, Inc.
LITHOLOGY LOG

Page 1 of 1

Site ID: ~~BKGDSB07~~ D.O. 12-8-94

Project Name	Project No.	Coordinates	
PRESIDIO	0330.339		
Drilling Company	**Driller**	**Ground Elevation**	**Total Drilled Depth**
ON SITE SERVICES	DOUG MOORE		11.0 FT.

Drilling Equipment	Drilling Method	Boring Diameter	Date/Time Drilling Started	Date/Time Total Depth Reached
GEOPROBE 5400	PERCUSION	1" & 2"	12-8-94/0830	12-8-94/0915

Type of Sampling Device	Water Level (BGS)	
2" X 4FT & 1" X 2FT STAINLESS	First NE	Final NE

Sample Hammer	Hydrogeologist	Checked by/Date
Type PERCUSION Driving Wt. NA Drop NA	D. OLGUIN / M. BOUBIN	3/31/95 PA DAVENPORT

Location Description (include sketch in field logbook): 55 ft EAST OF BONLEY ST, SOUTH OF THE LINCOLN BLD INTERSECTION — SEE SKETCH p. F09-37

Depth (ft)	Interval	% Recovery	Blow Counts	USCS Symbol	Lithology	Description (Sands & Gravels: name, color, density, roundness, gradation, grain size, minerology, minor constitutents structure, notable char., moisture, odor, geo. unit. Silts & Clays: name, color, consistency, toughness, plasticity, minor constituents, notable char., moisture, odor, geo. unit.)	Water Content	Estimate % of Gr	Sa	Fi	Remarks (Include all sample types & depth, tag number, odor, organic vapor measurements, etc.)
1–5			NA	SP		SAND - BROWN, LOW DENSITY, ROUNDED FINE SAND, VERY CLEAN W/SMALL AMOUNTS OF CLAY. 16-40 TYPE SAND. POORLY GRADED VERY LOOSE SAND. 10YR 5/8.	M		90	10	PINE NEEDLES AND Qd SAND AT SURFACE. DUNE SAND
5–7			NA	SP		SAND, BROWN SAME AS ABOVE	D		95	5	ANALYTICAL SAMPLE COLLECTED @ 5.0 ft bgs
7–9			NA	SP		SAND, SAME AS ABOVE	D		95	5	
9–11			NA	SP		SAND, SAME AS ABOVE	D		95	5	ANALYTICAL SAMPLE COLLECTED @ 9.5 ft bgs.
11–12											

RM002

12-8-94 CPT-1 11.0ft BKGD

BKGDSB08

Watkins-Johnson Environmental, Inc.
LITHOLOGY LOG

Page 1 of 1

Site ID: ~~BKGDSB09~~ DQ 12-8-94

Project Name: PRESIDIO	Project No.: 0330.339	Coordinates:	
Drilling Company: ON SITE SERVICES	Driller: DOUG MOORE	Ground Elevation:	Total Drilled Depth: 11.0 FT
Drilling Equipment: GEOPROBE 5400	Drilling Method: PERCUSION	Boring Diameter: 1" & 2"	Date/Time Drilling Started: 12-8-94/0945
			Date/Time Total Depth Reached: 12-8-94/1030
Type of Sampling Device: 2"X4FT & 1"X2FT STAINLESS		Water Level (BGS): First NE	Final NE
Sample Hammer: Type PERCUSION	Driving Wt. NA	Drop NA	Hydrogeologist: DOLGUN/M. BOOZER
			Checked by/Date: [illegible]

Location Description (include sketch in field logbook): SEE SKETCH
36ft SW of THE SENSITIVE HABITAT FENCE, SOUTH OF WEDEMEYER ST. & FOA-38

Depth (ft)	Interval	% Recovery	Blow Counts	USCS Symbol	Lithology	Description (Sands & Gravels: name, color, density, roundness, gradation, grain size, minerology, minor constitutents structure, notable char., moisture, odor, geo. unit. Silts & Clays: name, color, consistency, toughness, plasticity, minor constituents, notable char., moisture, odor, geo. unit.)	Water Content	Estimate % of Gr	Sa	Fi	Remarks (Include all sample types & depth, tag number, odor, organic vapor measurements, etc.)
1, 2, 3, 4				SP		SAND - BROWN, LOW DENSITY ROUNDED POORLY GRADED WITH LITTLE CLAY CLEAN SAND BELOW 10", VERY LOOSE SAND, TREE ROOTS PRESENT TROUGH OUT SAMPLE 7.5YR 4/6	D		95	5	PINE NEEDLES AND Qd AT SURFACE DUNE SAND
5, 6				SP		SAND - BROWN SAME AS ABOVE WITH NO TREE ROOTS	D		97	3	ANALYTICAL SAMPLE COLLECTED @ 5.5 ft bgs
7, 8				SP		SAND - BROWN SAME AS ABOVE	D		97	3	
9, 10, 11				SP		SAND - BROWN - SAME AS ABOVE	D		97	3	ANALYTICAL SAMPLE COLLECTED @ 9.5 ft bgs
12											

FORM002

12-8-94 CPT-1 9.5 ft BKGD

Watkins-Johnson Environmental, Inc.
LITHOLOGY LOG

Page 1 of 1

Site ID: BKGDSB09

Project Name: PRESIDIO	Project No.: 0330.339	Coordinates:	
Drilling Company: ON SITE SERVICES	Driller: DOUG MOORE	Ground Elevation:	Total Drilled Depth: 9.5 ft
Drilling Equipment: GEOPROBE 5400	Drilling Method: PERCUSION	Boring Diameter: 1" \ 2"	Date/Time Drilling Started: 12-8-94/1100
Date/Time Total Depth Reached: 12-8-94/1215			
Type of Sampling Device: 2" X 4 FT & 1" X 2 FT STAINLESS		Water Level (BGS): First NE	Final NE
Sample Hammer: Type PERCUSION	Driving Wt. NA	Drop NA	Hydrogeologist: D. OLGUIN / M. BOOBIN
Checked by/Date: 3/31/95 PA DAVENPORT			

Location Description (include sketch in field logbook): 31 FT W OF MORAGA & INFANTRY TERRACE INTESECTION SEE SKETCH F09-39

Depth (ft)	Interval	% Recovery	Blow Counts	USCS Symbol	Lithology	Description (Sands & Gravels: name, color, density, roundness, gradation, grain size, minerology, minor constitutents structure, notable char., moisture, odor, geo. unit. Silts & Clays: name, color, consistency, toughness, plasticity, minor constituents, notable char., moisture, odor, geo. unit.)	Water Content	Estimate % of Gr	Sa	Fi	Remarks (Include all sample types & depth, tag number, odor, organic vapor measurements, etc.)
1			NA	SC		TOP 2 FT. SAND WITH CLAY, DARK BROWN, MEDIUM DENSE SAND, ROUNDED CLAY IN SAND IS CL 5YR 3/4	M		80	20	GRASS AND Qd AT SURFACE DUNE SAND?
2				CH		BOTTOM 3 FT - CLAY, LIGHT BROWN WITH LITTLE TO NO SAND, STIFF CLAY WITH MEDIUM TO HIGH PLASTICITY BLOCKY TEXTURE WITH SMALL AMOUNTS OF IRON AND WEATHERED SERPENTINITE. 7.5 YR 5/6	M		2	98	• THIS APPEARS TO BE COLMA FORMATION BUT COULD BE CONSIDERED UNDIVIDE[illegible] SURFICI[illegible] DEPOSI[illegible]
5			NA	CL		CLAY, LIGHT BROWN, LITTLE TO NO SAND MEDIUM PLASTICITY WITH A BLOCKY TEXTURE, SAND IS SC AND FINE, SMALL AMOUNTS OF IRON NO SERPENTINITE. 7.5 YR 5/6	D		10	90	ANALYTICAL SAMPLE COLLECTED @ 5.5 ft bgs.
7			NA	SC		SAND WITH CLAY, BROWN, DENSE TO VERY DENSE, ROUNDED, MEDIUM COARSE SAND, BLOCKY TEXTURE. CLAY ~~10~~ 15 CL. 7.5 YR 5/6	D		80	20	AT 7-9 FT DRILLING DIFFICULT
9				SC		SAND SAME AS ABOVE WITH HARD PAN.	D		80	20	HARD PAN AREA UNABLE TO DRILL PAST 9.5 FT. ANALYTICAL SAMPLE COLLECTED @ 9.5 ft BGS.
10											
11											
12											

RM002

12-7-94 BKGD CPT-1 18ft ③

Watkins-Johnson Environmental, Inc.
LITHOLOGY LOG

Page 1 of 2

Site ID: BKGDSB10

Project Name: PRESIDIO R.I.F.O.	Project No.: 0330.339	Coordinates:	
Drilling Company: ONSITE SERVICES	Driller: DOUG MOORE	Ground Elevation:	Total Drilled Depth: 18 ft
Drilling Equipment: GEOPROBE 5400	Drilling Method: PERCUSSION	Boring Diameter: 2"	Date/Time Drilling Started: 12-7-94/1315
Date/Time Total Depth Reached: 12-7-94			
Type of Sampling Device: 2"X4' & 1"X2' STAINLESS		Water Level (BGS) First: NE	Final: NE
Sample Hammer Type: PERCUSSION	Driving Wt.: NA	Drop: NA	Hydrogeologist: P. OGUIN/M. BOUBIN
Checked by/Date: RT Leeson 3/2/95			

Location Description (include sketch in field logbook): 5 ft NORTH OF NKGW3 SEE SKETCH p F09-25

Depth (ft)	Interval	% Recovery	Blow Counts	USCS Symbol	Lithology	Description (Sands & Gravels: name, color, density, roundness, gradation, grain size, minerology, minor constitutents structure, notable char., moisture, odor, geo. unit. Silts & Clays: name, color, consistency, toughness, plasticity, minor constituents, notable char., moisture, odor, geo. unit.)	Water Content	Estimate % of Gr	Sa	Fi	Remarks (Include all sample types & depth, tag number, odor, organic vapor measurements, etc.)
0–2			NA	SW		SAND - BROWN, BEACH TYPE, FINE ROUNDED, 7.5YR 5/8, WELL GRADED	W		95	5	SEE LITHOLOGY LOG NKGW3, Qd @ SURFACE
2–6											LITHOLOGY LOG ALREADY COMPLETED FOR THIS SITE ONLY ANALYTICAL SAMPLES LOGGED
6–8				SP SM		SAND, DARK BROWN, WITH FINES ROUNDED, POORLY GRADED, -50 TO +200 SIEVE SIZE, BEACH TYPE 5YR 2.5/2	M		80	20	

FORM002

Watkins-Johnson Environmental, Inc.
LITHOLOGY LOG (continued)

Page 2 of 2

Site ID: BKGD SB10

Depth (ft)	Interval	% Recovery	Blow Counts	USCS Symbol	Lithology	Description Sands & Gravels: name, color, density, roundness, gradation, grain size, minerology, minor constitutents structure, notable char., moisture, odor, geo. unit. Silts & Clays: name, color, consistency, toughness, plasticity, minor constituents, notable char., moisture, odor, geo. unit.	Water Content	Estimate % of Gr	Sa	Fi	Remarks (Include all sa[illegible] & depth, tag num[illegible] odor, organic vapor measurements, etc.)
16						WEATHER BED ROCK, COARSE GRAVEL w/FINES, PALE GREEN COLOR; -3/4", 5Y 5/6	D	70	25	5	BEDROCK @ 18 FT.
17							NE				~~RT [illegible]~~ NE
18											
19											
20											
											Qd @ SURFACE
				SM							

A-18

12-7-94 BKGD CPT-1 11 ft

(1)

Watkins-Johnson Environmental, Inc.
LITHOLOGY LOG

Page 1 of 1

Site ID: BKGDSB11

Project Name: PRESIDIO R.I.F.S.	Project No.: 0339.339	Coordinates: N.1434261.9 E477824.7 STP	
Drilling Company: ONSITE SERVICES	Driller: DOUG MOORE	Ground Elevation	Total Drilled Depth: 11 ft
Drilling Equipment: GEOPROBE 5400	Drilling Method: ~~MB 12-7-94~~ 2" PERCUSSION	Boring Diameter: 2"	Date/Time Drilling Started: 12-7-94/0815
			Date/Time Total Depth Reached: 12-7-94/0900
Type of Sampling Device: 2"x4' & 1"x2" STAINLESS		Water Level (BGS) First: NE	Final: NE
Sample Hammer Type: PERCUSSION	Driving Wt.: NA	Drop: NA	Hydrogeologist: D.OLGUIN/M.BOLSON
			Checked by/Date: RT LEESON 3/2/95

Location Description (include sketch in field logbook): NW OF DAE off of HICK'S ROAD

Depth (ft)	Interval	% Recovery	Blow Counts	USCS Symbol	Lithology	Description (Sands & Gravels: name, color, density, roundness, gradation, grain size, minerology, minor constitutents structure, notable char., moisture, odor, geo. unit. Silts & Clays: name, color, consistency, toughness, plasticity, minor constituents, notable char., moisture, odor, geo. unit.)	Water Content	Estimate % of Gr	Sa	Fi	Remarks (Include all sample types & depth, tag number, odor, organic vapor measurements, etc.)
1				ML		TOP 18" - CLAY, DARK BROWN, MEDIUM FIRM, LOW PLASTICITY, 10% COARSE SANDS WITH 90% CLAYS 7.5YR2/0	D		10	90	GLASS @ SURFACE Qc
2						MIDDLE 12" - CLAY DARK BROWN MIXED WITH LIGHT BROWN OR COALMA, MEDIUM FIRM, MEDIUM PLASTICITY, 5% FINE SAND, 7.5YR3/2	M		20	80	
3						BOTTOM 18" - SANDS, LIGHT BROWN, LOW DENSITY, SMALL EDGED SAND WITH CLAY MOSTLY COALMA. 10YR 5/6	M		80	20	
4						CLAY, BROWN, MEDIUM FIRM,	D				
5				CL		LOW TO MEDIUM PLASTICITY, 100% COALMA 7.5YR 5/6					
6						SAND W/ CLAY, LT BROWN, 10YR5/4, MED. LOOSE, POORLY GRADED, CLAY IS CL, SAND IS FINE.	M		70	30	
7				SC							
8						SAND W/ CLAY AS ABOVE	M		70	30	
9				SC							
10						SAND W/ CLAY AS ABOV	M		70	30	
11				SC							
12											

FORM002

A-19

12-7-94 BKGD CPT-1 11ft

Watkins-Johnson Environmental, Inc.
LITHOLOGY LOG

Page 1 of 1

Site ID: BKGDSB12

Project Name: PRESIDIO	Project No.: 0330.339	Coordinates:	
Drilling Company: ON SITE SERVICES	Driller: DOUG MOORE	Ground Elevation:	Total Drilled Depth: 11 ft
Drilling Equipment: GEOPROBE 5400	Drilling Method: PERCUSION	Boring Diameter: 2"	Date/Time Drilling Started: 12-7-94/0930
Date/Time Total Depth Reached: 12-7-94/10			
Type of Sampling Device: 1" X 2' 3 2" X 4'		Water Level (BGS): First NE	Final NE
Sample Hammer: Type PERCUSSION	Driving Wt. NA	Drop NA	Hydrogeologist: D. OLGUIN/M. BOUBIN
Checked by/Date: RT Leeson 3/2/95			
Location Description (include sketch in field logbook): See site map			

Depth (ft)	Interval	% Recovery	Blow Counts	USCS Symbol	Lithology	Description (Sands & Gravels: name, color, density, roundness, gradation, grain size, minerology, minor constitutents structure, notable char., moisture, odor, geo. unit. Silts & Clays: name, color, consistency, toughness, plasticity, minor constituents, notable char., moisture, odor, geo. unit.)	Water Content	Estimate % of Gr	Sa	Fi	Remarks (Include all sample types & depth, tag number, odor, organic vapor measurements, etc.)
0–4			NA	SC		SAND W/CLAY, LT BROWN, 10YR5/4, LOOSE, ROUNDED, POORLY GRADED, ROOTS PRESENT SOFT, LOOSE TEXTURE BREAKS UP EASILY, NOW PLASTIC.	M		70	30	GRASS @ SURFACE TOPSOIL & Qc @ 0.3 ft bgs
5–7			NA	SC		SAND W/CLAY SAME AS ABOVE	M		70	30	
7–9				SC		SAND W/CLAY SAME AS ABOVE	M		70	30	
9–11				SC		SAND W/CLAY SAME AS ABOVE	M		70	3	

Depth scale: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

12-8-94 CPT-1 11.5 ft BKGD

Watkins-Johnson Environmental, Inc.
LITHOLOGY LOG

Page 1 of 1

Site ID: BKGDSB13

Project Name: PRESIDIO R.I.F.D.	Project No.: 0330.339	Coordinates:	
Drilling Company: ON SITE SERVICES	Driller: DOUG MOORE	Ground Elevation:	Total Drilled Depth: 11.5 ft ~~[illegible]~~ MB 12-7-94
Drilling Equipment: GEOPROBE 5400	Drilling Method: PERCUSION	Boring Diameter: 1" & 2"	Date/Time Drilling Started: 12-7-94/1045
Date/Time Total Depth Reached: 12-7-94/1115			
Type of Sampling Device: 2" X 4FT & 1" X 2FT		Water Level (BGS): First N.E.	Final N.E.
Sample Hammer: Type PERCUSION	Driving Wt. N/A	Drop N/A	Hydrogeologist: D. OLGUIN / M. BOUBIN
Checked by/Date: 3/31/95 PA DAVENPORT			

Location Description (include sketch in field logbook): APPROX 520 ft NORTH & 250 ft EAST OF THE WASHINGTON BLVD./ARGUELLO BLVD. INTERSECTION

Depth (ft)	Interval	% Recovery	Blow Counts	USCS Symbol	Lithology	Description (Sands & Gravels: name, color, density, roundness, gradation, grain size, minerology, minor constitutents structure, notable char., moisture, odor, geo. unit. Silts & Clays: name, color, consistency, toughness, plasticity, minor constituents, notable char., moisture, odor, geo. unit.)	Water Content	Estimate % of Gr	Sa	Fi	Remarks (Include all sample types & depth, tag number, odor, organic vapor measurements, etc.)
1				SC		TOP 36" - SAND WITH CLAY, BROWN LOW DENSITY, POORLY GRADED, LOOSE FINE. CLAY IS A CL - 10YR 2/2	M		70	30	TOP 2" GRASS & ROOTS COLMA FORMATION Qc
2						BOTTOM 12" - CLAY WITH SAND, LIGHT BROWN, SOFT, MEDIUM PLASTICITY, BLOCKY TEXTURE EASILY MOLDED - 10YR 4/6					
3				CL		MOISTURE THRU ALL 48"	M		20	80	
4											
5				SC		SAND WITH CLAY, LIGHT BROWN, LOW DENSITY POORLY GRADED VERY LOOSE SAND, ROUNDED FINE SAND CLAY IS A CL 10YR 5/6	D		90	10	ANALYTICAL SAMPLE COLLECTED 5.0 ft bgs
6											
7				SC		SAND WITH CLAY, LIGHT BROWN, LOW DENSITY POORLY GRADED VERY LOOSE ROUNDED SAND VERY DIRTY ~~16-40 TYPE~~ FINE SAND CLAY IS CL 10YR 5/6 MB 12-7-94	D		90	10	
8											
9											
10				SP		SAND, LIGHT BROWN, LOW DENSITY, POORLY GRADED, FINE LOOSE TO VERY LOOSE SAND WITH A SMALL AMOUNT OF CLAY STILL ~~16-40 TYPE~~ 10YR 5/6 MB 12-7-94	D		90	10	ANALYTICAL SAMPLE COLLECTED @ 9.5 ft bgs
11											
12											

FORM002

12-8-94 CPT-1 2.0ft BKGD

Watkins-Johnson Environmental, Inc.
LITHOLOGY LOG

Page 1 of 1

Site ID: BKGDSB14

Project Name: PRESIDIO	Project No.: 0330.339	Coordinates:	
Drilling Company: ON SITE SERVICES	Driller: DOUG MOORE	Ground Elevation:	Total Drilled Depth: 2 ft
Drilling Equipment: GEOPROBE 5400	Drilling Method: PERCUSION	Boring Diameter: 1" & 2"	Date/Time Drilling Started: 12-8-94/1345
Date/Time Total Depth Reached: 12-8-94/1530			
Type of Sampling Device: 1" X 2 FT & 2" X 4 FT STAINLESS		Water Level (BGS): First NE	Final NE
Sample Hammer: Type PERCUSION	Driving Wt. NA	Drop NA	Hydrogeologist: D. OLGUIN / H. BOUBIN
Checked by/Date: 3/31/95 DA DAVENPORT			

Location Description (include sketch in field logbook): APPROX 30 ft W of ARGUELLO BLVD ACROSS FROM INSPIRATION PT SKETCH FU9-40

Depth (ft)	Interval	% Recovery	Blow Counts	USCS Symbol	Lithology	Description (Sands & Gravels: name, color, density, roundness, gradation, grain size, minerology, minor constitutents structure, notable char., moisture, odor, geo. unit. Silts & Clays: name, color, consistency, toughness, plasticity, minor constituents, notable char., moisture, odor, geo. unit.)	Water Content	Estimate % of Gr	Sa	Fi	Remarks (Include all sample types & depth, tag number, odor, organic vapor measurements, etc.)
1			NA	CL		CLAY OVERBURDEN ON TOP 12"-DARK BROWN, SOFT w/ MEDIUM PLASTICITY.	M			100	Sp @ 1.5 FT BEDROCK @ 2 FT
2						WEATHERED SERPENTINITE - OLIVE GREEN, BROWN AND BLACK, SOFT, MEDIUM PLASTICITY, MOIST.			5	95	ANALYTICAL SAMPLES FROM 1-2 ft bgs
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											

.002

12-8-94 CPT-1 20.5ft BKGD

Watkins-Johnson Environmental, Inc.
LITHOLOGY LOG

Page 1 of 1

Site ID: BKGDSB14 MB

Project Name: PRESIDIO R.I.F.O.	Project No.: 0330.339	Coordinates:	
Drilling Company: ONSITE SERVICES	Driller: DOUG MOORE	Ground Elevation:	Total Drilled Depth: 21.0 ft
Drilling Equipment: GEOPROBE 5400	Drilling Method: PERCUSSION	Boring Diameter:	Date/Time Drilling Started: 12-8-94 / 1630
Date/Time Total Depth Reached: 12-8-94 / 1655			
Type of Sampling Device: 1"x2" STAINLESS		Water Level (BGS) First: NE	Final: NE
Sample Hammer Type: PERCUSSION	Driving Wt.: N.A.	Drop: N.A.	Hydrogeologist: M. BOUBIN / O. ULGUN
Checked by/Date: 3/31/95 DA DAVENPORT			

Location Description (include sketch in field logbook): WEST SIDE OF WASHINGTON BLVD. SOUTH PART OF LF5 - SKETCH page F09-41

Depth (ft)	Interval	% Recovery	Blow Counts	USCS Symbol	Lithology	Description (Sands & Gravels: name, color, density, roundness, gradation, grain size, minerology, minor constitutents structure, notable char., moisture, odor, geo. unit. Silts & Clays: name, color, consistency, toughness, plasticity, minor constituents, notable char., moisture, odor, geo. unit.)	Water Content	Estimate % of Gr	Sa	Fi	Remarks (Include all sample types & depth, tag number, odor, organic vapor measurements, etc.)
2						FOR COMPLETE LOG SEE LOG FOR LF5GW02					Qc@ SURFACE COLMA FORMATION
4											
6											
8											
10											
12											
14											
16			NA	CL		CLAY, OLIVE, 5Y 5/4, HARD, LOW PLASTICITY SERPENTINITE GRAINS PRESENT, WEATHERED SERPENTINITE	D		5	95	ANALYTICAL SAMPLE COLLECTED @ 14.5 ft bgs
18											
20			NA	CL		CLAY, AS ABOVE, VERY HARD	D		5	95	ANALYTICAL SAMPLE COLLECTED @ 20.5 ft bgs
22											
24											

FORM002

R. L. STOLLAR & ASSOCIATES, INC.

FIELD LOG OF BORING

SITE TYPE: BORING | SITE ID: BKGS001A&B

SHEET 1 OF 1

PROJECT NAME AND LOCATION: TERS · Presidio / ≈80' W of Marshall St. between Allen & Mason St.	PROJECT NUMBER: 90330	ELEVATION AND DATUM:	
DRILLING COMPANY: RLSA	DRILLER: Gary Clendenin	DATE AND TIME STARTED: 90330 / 1420	DATE AND TIME COMPLETED: 90330 / 1550
DRILLING EQUIPMENT: METHOD: Hand Auger		COMPLETION DEPTH: 4.8'	TOTAL NO. OF SAMPLES: 2
SIZE AND TYPE OF BIT: 3½"		NO. OF SAMPLES: BULK 2, SS	DRIVE, LABORATORY 2
DRILLING FLUID: NA		WATER LEVEL: FIRST 4.8' @ 1550	AFTER ____ HOURS
SAMPLER HAMMER: TYPE NA, DRIVING WT., DROP		HYDROGEOLOGIST/DATE: Gary Clendenin / 90330	CHECKED BY/DATE: CSchmitt 90333

DEPTH/FEET	SAMPLES: TYPE AND NUMBER	INTERVAL	RECOVERY	BLOW COUNT	DESCRIPTION	USCS SYMBOL	ESTIMATED PERCENT OF: GR	SA	FI	MOISTURE	CONSISTENCY	COLOR	COMMENTS
0					Surface - Grassy w/ small pebbles								BKGS001A 7"-12"
1		↓			SAND - brown, poorly sorted sand w/ serpentine gravel	SW ~~GM~~	15	80	5	Dry			10YR/5/3, sample contained small roots
2		↓			SAND - Pale yellow, mod. sorted, sug. [illegible] fairly clean, gtz & serpentine gravel	SP		95	5	Dry			5Y/7/4, Clean beach sand
3													
4		↓			SAND - same as above, except moist	SP		95	5	Moist			Moist clean beach sand
5		↓			SAND - @ 4.8' Wet/1550 same as above except gray								Wet, gray sand
6					Total Depth 4.8'								BKGS001B = 4.5-4.8'
7													
8													
9													
10													
11													
12													
13													
14													
15													

FORM 11 / JAN 1988

R. L. STOLLAR & ASSOCIATES, INC.

FIELD LOG OF BORING

SITE TYPE: BORING | SITE ID: BKGS002A&B

SHEET 1 OF 1

PROJECT NAME AND LOCATION: TEPS - Presidio / ≈150' west of tennis courts in Julius Kahn Playground	PROJECT NUMBER: 90330	ELEVATION AND DATUM:	
DRILLING COMPANY: RLSA	DRILLER: Gary Clendenin	DATE AND TIME STARTED: 90331 / 1000	DATE AND TIME COMPLETED: 90331 / 1055
DRILLING EQUIPMENT: METHOD: Hand Auger		COMPLETION DEPTH: 3.5'	TOTAL NO. OF SAMPLES: 2
SIZE AND TYPE OF BIT: 3½"		NO. OF SAMPLES: BULK 2 / SS	DRIVE / LABORATORY 2
DRILLING FLUID: NA		WATER LEVEL: FIRST	AFTER ____ HOURS
SAMPLER HAMMER: TYPE NA	DRIVING WT. / DROP	HYDROGEOLOGIST/DATE: Gary Clendenin	CHECKED BY/DATE: C Schmutt 90333

DEPTH/FEET	SAMPLES: TYPE AND NUMBER	INTERVAL	RECOVERY	BLOW COUNT	DESCRIPTION	USCS SYMBOL	ESTIMATED PERCENT OF: GR	SA	FI	MOISTURE	CONSISTENCY	COLOR	COMMENTS
0					Surface - SAND - brown, well sorted, sub-rounded grains of qtz sci [illegible]	SP		95	5	Moist			10YR/5/3
1					8"-10" SAND - same as above	SP		95	5	moist			Some partially decayed organics
													0.5-1.0 BKGS0 Ø2A
2													
3					SAND - same as above II	SP		95	5	moist			3.0-3.5 BKGS0 Ø2B
4					TD = 3.5' Could not auger below								
5					3.5' because the loose sand caved								
					into bottom of hole.								
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													

R. L. STOLLAR & ASSOCIATES, INC.

FIELD LOG OF BORING

SITE TYPE	SITE ID
BORING	BKGS003A

SHEET 1 OF 1

PROJECT NAME AND LOCATION: TERS PRESIDIO / South of Crissy Field Avenue behind Bldg. 934	PROJECT NUMBER: 90330	ELEVATION AND DATUM:	
DRILLING COMPANY: RLSA	DRILLER: Gary Clardain	DATE AND TIME STARTED: 90331 / 0830	DATE AND TIME COMPLETED: 90331 / 0840
DRILLING EQUIPMENT: METHOD: Hand trowel		COMPLETION DEPTH: 4"	TOTAL NO. OF SAMPLES: 1
SIZE AND TYPE OF BIT: NA		NO. OF SAMPLES: BULK 1, SS	DRIVE; LABORATORY 1
DRILLING FLUID: NA		WATER LEVEL: FIRST	AFTER ____ HOURS
SAMPLER HAMMER: TYPE NA; DRIVING WT.; DROP		HYDROGEOLOGIST/DATE: Gary Clardain / 90331	CHECKED BY/DATE: C. Schmidt / 90333

DEPTH/FEET	SAMPLES: TYPE AND NUMBER	INTERVAL	RECOVERY	BLOW COUNT	DESCRIPTION	USCS SYMBOL	ESTIMATED PERCENT OF: GR	SA	FI	MOISTURE	CONSISTENCY	COLOR	COMMENTS
0		←			Surface-weathered serpentinite bedrock 1"-3"-Bedrock-serpentinite, greenish gray								5GY/6/1, highly weathered, powdery
1													BKGS003A 1"-4"
					TP = 4" @ 0840/90331								
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													

FORM117 JAN 1988

Appendix A
Background/PSF Water Supply

Source Water Sampling Sheets

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R. L. STOLLAR & ASSOCIATES, INC.

WATER QUALITY FIELD SAMPLING DATA SHEET

PROJECT PRESIDIO SAMPLERS BS

PROJECT NUMBER 90330.030

WELL NO. 316 SUPERVISOR BS

DATE SAMPLED 2/8/91 91039 TIME SAMPLED 0900

PURGE 2/7/91

PUMP TEST - pump ran ~ 5.5 hours

~ 80,000 gal (holding tanks full)

SAMPLE PARAMETERS

1317 EC = 900 @ 13°C

pH = 7.07 @ 11.2°C

CALIBRATION: ECSTD = 1410 umhos/cm

pH7 = 7.0 @ 25°C slope

pH10 = 9.84 @ 14.1°C

sampled for pest., metals, & ions

MEASURING POINT TOC WELL DIAMETER (ID) 12-18" ?

WATER LEVEL 15.50 DATE 2/8/91 TIME 0823 WELL DEPTH +200

SCREENED INTERVAL NA SINGLE WELL VOLUME (Gallons) NA

PURGE PUMPING RATE ~ 100 GPM PURGE VOLUME (Gallons) ~ 80,000

DEPTH OF SAMPLING NA

SAMPLE PUMPING RATE NA NO. OF SAMPLES 6

NO. OF SAMPLES RELINQUISHED 6 TO DATACHEM DATE 2/8/91

FIELD EQUIPMENT

Eh/pH METER ORION SA230 SERIAL NO. 4938

EC. METER YSI 33 SERIAL NO. 13003

PUMP NA SERIAL NO. NA

TUBING TYPE —

WATER LEVEL METER SOLINST SERIAL NO. 09718

FILTER APPARATUS GEOPUMP 2 FILTERS GELMAN 0.45 um

BAILER — SIZE —

FOPM24 / JAN 88

ENVIRONMENTAL PROGRAM AT PRESIDIO OF SAN FRANCISCO

GROUND-WATER SAMPLING FIELD DATA SHEET

Log Book # 10
Page 1 of 1

Well ID. No. SO RO 601

Casing Diameter ____ in.

Casing Stickup ____ ft.

Total Well Depth ____ ft.

Static Water Level ____ ft.

Saturated Thickness ____ ft.

Casing Volume ____ gal.

Screened Interval ____ ft.

Purge Equipment

- ☐ Bennett Pump (Teflon Tubing)
- ☐ Isco Pump (Teflon Tubing)
- ☐ Standard Pump (PVC Tubing)
- ☐ Grundfos Pump (Neoprene Tubing)
- ☐ Stainless Bailer:

O.D.		Length	
1.65"	☐	☐ 2 ft.	
1.85"	☐	☐ 3 ft.	
3.75"	☐	☐ 4 ft.	
____	☐	☐ ____ ft.	

Serial No. ____

Sample Equipment

- ☐ Same as Purge
- ☐ Bennett Pump (Teflon Tubing)
- ☐ Isco Pump (Teflon Tubing)
- ☐ Standard Pump (PVC Tubing)
- ☐ Stainless Bailer:

O.D.		Length	
1.65"	☐	☐ 2 ft.	
1.85"	☐	☐ 3 ft.	
3.75"	☐	☐ 4 ft.	
____	☐	☐ ____ ft.	

Serial No. ____

Analytical Equipment

pH Meter:
- ☐ Beckman phi 21
- ☐ Omega pH-65A
- ☒ Orion ~~SA250~~-230
- ☐ Other ____

Serial No. 4938

Conductivity Meter:
- ☐ YSI Model 33
- ☒ Other Orion 127

Serial No. 9811077

Dissolved Oxygen Meter:
- ☐ YSI Model 51B

Serial No. ____

Temperature Meter:
- ☐ Beckman
- ☒ Other Orion 54230

Serial No. 4938

Filtration Equipment:
- ☐ Geotech Peristaltic Pump
- ☐ Geotech 0.45 micron filter

Water Level Meter:
Solinst RLSA # ___ HLA # ___

Samplers Initials	Time	Date
TAM	1030	90330

Meter Calibration

pH 7.00 = 7.0 at 9.7 °C 10[illegible]

pH 10.00 = 10.0 at 9.7 °C Time 10:17

Conductance Standard: 1390 umhos/cm at 25°C

Measured Value: 14.86 umhos/cm at 11.5 °C Time 10:20

Calculated Conductivity = Measured Conductance + (0.02) (measured conductance) (25°C - Actual Temp)):

____ umhos/cm at 25°C ____

Dissolved Oxygen ____ mg/l at ____ °C ____

Titration Results (Acid Concentration: ☐ 0.16, ☐ 1.6)

pH	7.0	5.1	4.8	4.5
#Clicks				
Color				

Time	Number of Casing Volumes	Gallons Removed	°C	E.C. umhos/cm	pH	Dissolved O_2 mg/Liter	Pump Rate GPM	Approx Pump Depth ft.	Visual Description
10:31			14.4	521	7.05				
1058			14.5	527	7.00				
	Site is	approved	USATHAMA	source for	decon water.				

ANALYSIS REQUESTED

HS Comments:

Sample Depth: (cm)

HSO Signature:

Protective Level: (D) C B

Condition of Well, Remarks:

Sampler Signature: Todd A. Zgull

OPM41

A-30

ENVIRONMENTAL PROGRAM AT PRESIDIO OF SAN FRANCISCO

GROUND-WATER SAMPLING FIELD DATA SHEET

Log Book # 06
Page 1 of 1

Well ID. No. Approved water SOR0601

Casing Diameter ____ in.

Casing Stickup ____ ft.

Total Well Depth ____ ft.

Static Water Level ____ ft.

Saturated Thickness ____ ft.

Casing Volume ____ gal.

Screened Interval ____ ft.

Purge Equipment

- ☐ Bennett Pump (Teflon Tubing)
- ☐ Isco Pump (Teflon Tubing)
- ☐ Standard Pump (PVC Tubing)
- ☐ Grundfos Pump (Neoprene Tubing)
- ☐ Stainless Bailer:

O.D.		Length	
1.65"	☐	☐ 2 ft.	
1.85"	☐	☐ 3 ft.	
3.75"	☐	☐ 4 ft.	
____	☐	☐ ____ ft.	

Serial No. ____

Sample Equipment

- ☐ Same as Purge
- ☐ Bennett Pump (Teflon Tubing)
- ☐ Isco Pump (Teflon Tubing)
- ☐ Standard Pump (PVC Tubing)
- ☐ Stainless Bailer:

O.D.		Length	
1.65"	☐	☐ 2 ft.	
1.85"	☐	☐ 3 ft.	
3.75"	☐	☐ 4 ft.	
____	☐	☐ ____ ft.	

Serial No. ____

Analytical Equipment

pH Meter:
- ☐ Beckman phi 21
- ☐ Omega pH-65A
- ☐ Orion SA250
- ☑ Other Orion SA230

Serial No. 4938

Conductivity Meter:
- ☐ YSI Model 33
- ☑ Other Orion 122 @ 19.99 mS/cm

Serial No. 9511077

Dissolved Oxygen Meter:
- ☐ YSI Model 51B

Serial No. ____

Temperature Meter:
- ☐ Beckman
- ☐ Other ____

Serial No. ____

Filtration Equipment:
- ☐ Geotech Peristaltic Pump
- ☐ Geotech 0.45 micron filter

Water Level Meter:
Solinst RLSA # __ HLA # __

Samplers Initials	Time	Date
JMT	1530	90332

Meter Calibration

pH 7.00 = 7.00 at 13.1 °C Time 1008

pH 10.00 = 10.00 at 12.2 °C Time 1015

Conductance Standard: 1340 umhos/cm at 25°C

Measured Value: 1473 umhos/cm at 11.1 °C Time 0936

Calculated Conductivity = Measured Conductance + (0.02) (measured conductance) (25°C - Actual Temp)):

____ umhos/cm at 25°C ____

Dissolved Oxygen ____ mg/l at ____ °C ____

Titration Results (Acid Concentration: ☐ 0.16, ☐ 1.6)

pH	7.0	5.1	4.8	4.5
#Clicks				
Color				

Time	Number of Casing Volumes	Gallons Removed	°C	E.C. umhos/cm	pH	Dissolved O_2 mg/Liter	Pump Rate GPM	Approx Pump Depth ft.	Visual Description
1540			12.7	0.52	6.87				

ANALYSIS REQUESTED	VOC	SVOC	Pesticides	Herbicides	Cyanide	PCBs	Nitrate	Anions	TOT Phenolic	TDS	Sulfides	Phenols	MBAS	ALKAL			
	2	2	1	1	1	1	1	1	1	1	1	1	1	1			

HS Comments:

Sample Depth: (cm)

HSO Signature:

Protective Level: D C B

Condition of Well, Remarks:

Sampler Signature: Juliane Turko

OPM41

ENVIRONMENTAL PROGRAM AT PRESIDIO OF SAN FRANCISCO
GROUND-WATER SAMPLING FIELD DATA SHEET

Log Book # 08
Page 1 of 1

Well ID. No.	Purge Equipment	Analytical Equipment	Samplers Initials	Time	Date
30R0603	☐ Bennett Pump (Teflon Tubing) ☐ Isco Pump (Teflon Tubing) ☐ Standard Pump (PVC Tubing) ☐ Grundfos Pump (Neoprene Tubing) ☐ Stainless Bailer: O.D. / Length 1.65" ☐ ☐ 2 ft. 1.85" ☐ ☐ 3 ft. 3.75" ☐ ☐ 4 ft. ___ ☐ ☐ ___ ft. Serial No.	pH Meter: ☐ Beckman phi 21 ☐ Omega pH-65A ☐ Orion SA250 ☐ Other Serial No. Conductivity Meter: ☐ YSI Model 33 ☐ Other Serial No. Dissolved Oxygen Meter: ☐ YSI Model 51B Serial No. Temperature Meter: ☐ Beckman ☐ Other Serial No. Filtration Equipment: ☐ Geotech Peristaltic Pump ☐ Geotech 0.45 micron filter Water Level Meter: Solinst RLSA # __ HLA # __	JMT/TAM	1341	90347

Casing Diameter: Approved water tap in.

Casing Stickup: ft.

Total Well Depth: ft.

Static Water Level: ft.

Saturated Thickness: ft.

Casing Volume: gal.

Screened Interval: ft.

Sample Equipment

☐ Same as Purge
☐ Bennett Pump (Teflon Tubing)
☐ Isco Pump (Teflon Tubing)
☐ Standard Pump (PVC Tubing)
☐ Stainless Bailer:

O.D.		Length
1.65"	☐	☐ 2 ft.
1.85"	☐	☐ 3 ft.
3.75"	☐	☐ 4 ft.
___	☐	☐ ___ ft.

Serial No.

Meter Calibration

pH 7.00 = 7.00 at 6.7 °C [illegible] Time

pH 10.00 = 10.00 at 6.4 °C 1005 Time

Conductance Standard: 1370 umhos/cm at 25°C

Measured Value: 1443 umhos/cm at 7.5 °C 1003 Time

Calculated Conductivity = Measured Conductance + (0.02) (measured conductance) (25°C - Actual Temp)):
948 umhos/cm at 25°C

Dissolved Oxygen ___ mg/l at ___ °C ___

Titration Results (Acid Concentration: ☐ 0.16, ☐ 1.6)

pH	7.0	5.1	4.8	4.5
#Clicks				
Color				

Time	Number of Casing Volumes	Gallons Removed	°C	E.C. umhos/cm	pH	Dissolved O_2 mg/Liter	Pump Rate GPM	Approx Pump Depth ft.	Visual Description
1341	Sampled approved water								
1341			14.1	521	6.99				clear

ANALYSIS REQUESTED: 2 VOC, 1 Pesticides

HS Comments:

Sample Depth: (cm)

HSO Signature:

Protective Level: D C B

Condition of Well, Remarks:

Sampler Signature: Julianne Turko

OPM41

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GROUND-WATER SAMPLING FIELD DATA SHEET
Environmental Program at Presidio of San Francisco

Log Book # 14
Page 1 of 1

Well ID No. SORGWOG	Date 8-28-92	Purge Equipment: Type from tap Serial No. w/ hose	pH Meter: Type Hydac Serial No. 000261	Conductivity Meter: Type same as Serial No. pH meter
Samplers' Initials WEF / TDF	Time 1430			
Casing Diameter NA in.	Casing Stickup NA ft.	Sample Equipment: ☐ Same as purge ☑ Other Type no hose Serial No.	Turbidity Meter: AF Instruments Type DRT-15C Serial No. 000307 0.02 NTU of Standard	Temperature Meter: Type same as Serial No. pH meter
Total Well Depth NA ft-btoc	Screened Interval NA ft-bgs			
Initial Water Level NA ft-btoc	Top of Filter Pack NA ft-bgs			
Saturated Thickness [H]= NA ft.	Filter Pack Thickness [F]= NA ft.	Filtration Equipment: ☑ Peristaltic Pump with 0.45 micron filter		
Wellbore Volume NA gal.	Casing Volume NA gal.	☐ Other Type geopump/ Serial No. 000906		
Final Water Level NA ft-btoc	Sample Depth NA ft-bgs			

Meter Calibration Check (circle one)

Standard	Reading	Temperature °C/F (circle one)	Time
1000 uS/cm at ___ °C	1000	68.7	1435
pH 4.0	←	NA	→
pH 7.0	7.00	69.0	1431
pH 10.0	10.00	68.6	1433

Water-Level Meter Type NA Serial No. NA

Time	Number of Casing Volumes	Gallons Removed	Temp C/F	EC uS/cm	pH	Turbidity NTU	Pump Rate GPM	Approx. Pump Depth ft.	Visual Description
EF 8/28/92 1438 ~~1238~~	NA	initial	65.5	545	6.76	0.69	15	NA	clear
1445	NA	105	65.1	538	7.06	0.59	"	NA	clear
1448	NA	150	64.7	534	7.08	0.36	"	NA	clear
1451	NA	195	65.1	538	7.09	0.35	"	NA	clear
1454	NA	240	65.4	538	7.08	0.35	"	NA	clear
Post-Sample Water:		1545	66.9	567	7.42	0.55	—	NA	clear

WEF 8-28-92

HS Comments: NO H/S present

HS Signature:

☑ Full Sample Suite Obtained
☐ Partial Sample Suite Obtained
☐ No Sample Obtained
☐ QC Samples D, R, TB, MS, MSD (circle)

See chain-of-custody for analyses requested.

Condition of Well, Remarks: established well, sampling from tap, purging through a hose

Samplers Signature: [signature]

Protective Level Dermal: D C B
Respiratory: D C B

☑ Metal sample(s) filtered in accordance with chain-of-custody

Checked by/Date: DLA / 9-11-92

ft-btoc = feet-below top of casing
ft-bgs = feet-below ground surface

FORM014/AUG 1992

GROUND-WATER SAMPLING FIELD DATA SHEET

Environmental Program at Presidio of San Francisco

Log Book # 13-048
Page 131 of 048
9/9/92

Well ID No. PSFGW13	Date 9/9/92	Purge Equipment: Type Metal pipe ≈ 6" diameter; Serial No.	pH Meter: Type Orion SA 230; Serial No. 4938	Conductivity Meter: Type Orion; Serial No. 9811077
Samplers' Initials ESK/KRG	Time 1452			
Casing Diameter NA in.	Casing Stickup NA ft.	Sample Equipment: ☑ Same as purge ok 9/14/92; ☐ Other Type ____ Serial No. ____	Turbidity Meter: Type HF Scientific Drt 15C; Serial No. 000316; 0.02 NTU of Standard	Temperature Meter: Type Same as pH; Serial No. ____
Total Well Depth NA ft-btoc	Screened Interval NA ft-bgs			
Initial Water Level NA ft-btoc	Top of Filter Pack NA ft-bgs			
Saturated Thickness [H]= NA ft.	Filter Pack Thickness [F]= NA ft.	Filtration Equipment: ☑ Peristaltic Pump with 0.45 micron filter; ☐ Other Type geopump1 Serial No. EILCO 000905		
Wellbore Volume NA gal.	Casing Volume NA gal.			
Final Water Level NA ft-btoc	Sample Depth NA ft-bgs			

Meter Calibration/Check (circle one)

Standard	Reading	Temperature °C/°F (circle one)	Time
1084 uS/cm at 19.6 °C	1456	16.5	1501
pH 4.0	—	NA	—
pH 7.0	ok 9/14/92 ~~7.0~~ 7.01	15.2	1458
pH 10.0	9.99	15.4	1500

Water-Level Meter Type Solinst Serial No. 000218

Time	Number of Casing Volumes	Gallons Removed	Temp °C/°F	EC uS/cm	pH	Turbidity NTU	Pump Rate GPM	Approx. Pump Depth ft.	Visual Description
1504	NA	1500	17.0	583	6.41	2	150	NA	Clear
1509	NA	2250	16.2	580	6.78	3	150	NA	Clear
1512	NA	2700	16.3	581	6.92	1	150	NA	Clear
1515	NA	3150	16.0	580	6.94	<1	150	NA	Clear
1520	NA	3900	17.1	580	6.96	<1	150	NA	Clear
Post-Sample Water: 1554			16.2	584	7.01	<1			Clear

HS Comments:

HS Signature:

☑ Full Sample Suite Obtained
☐ Partial Sample Suite Obtained
☐ No Sample Obtained
☐ QC Samples D, R, TB, MS, MSD (circle)

See chain-of-custody for analyses requested.

Condition of Well, Remarks: Obtain key from MR: Smith / Phil Ray

Samplers Signature: [signature]

Protective Level Dermal: D C B
Respiratory: D C B

☑ Metal sample(s) filtered in accordance with chain-of-custody

Checked by/Date: WEP/9-14-92

ft-btoc = feet-below top of casing
ft-bgs = feet-below ground surface

FORM014/AUG 1992

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Appendix A
Background/PSF Water Supply

LAMC and LAIR Data

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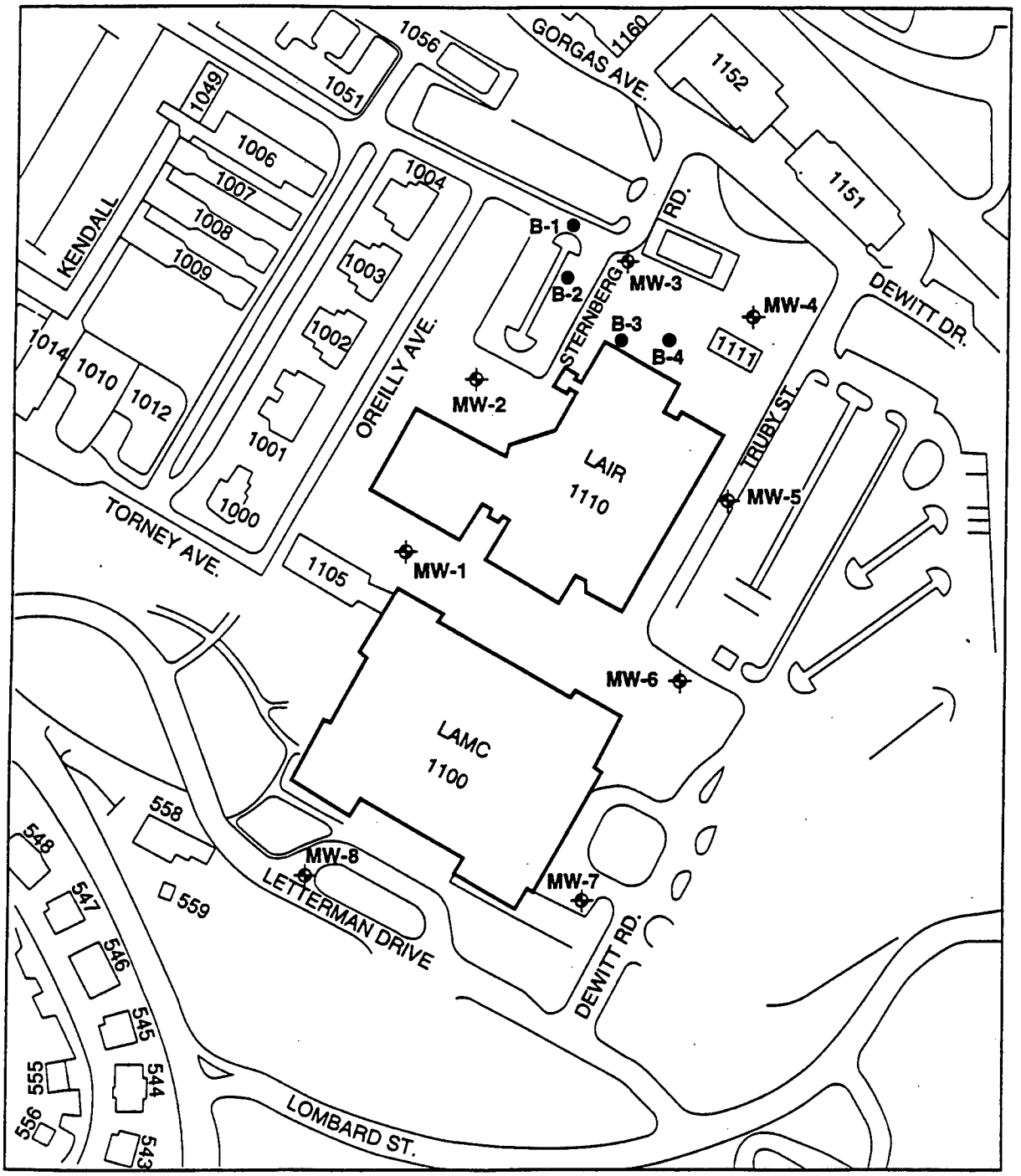

KEY

- Monitoring Well
- Soil Boring with Hydropunch Sample

Note:
Monitoring wells MW-6, MW-7, and MW-8 were installed during a separate investigation.

N

0 100
Feet

SITE PLAN

National Park Service
641|20481|DSC|AUGUST 1995
02050-189-043

Golden Gate National Recreation Area
Presidio of San Francisco
ENVIRONMENTAL CONDITION ASSESSMENT

DAMES & MOORE

SUMMARY OF CHEMICAL ANALYSIS RESULTS FOR GROUNDWATER
METALS
LETTERMAN ARMY INSTITUTE OF RESEARCH
PRESIDIO OF SAN FRANCISCO

	Well Number	MW-1			MW-2			MW-3		MW-4	MW-5	MCL[2] (µg/l)
	Date Sampled	8/15/94	2/8/95	2/8/95	8/15/94	2/7/95	2/7/95	8/15/94	8/15/94[7]	8/15/94	8/15/94	
Analytical Method	Laboratory Reporting Limit			(Filtered)			(Filtered)					
Aluminum	200 µg/l	71,600	6,700	ND	32,800	4,900	ND	49,100	45,000	23,500	15,900	1,000/ 200[3]
Antimony	5.0 µg/l	ND[1,8]	--	--	ND[1,8]	--	--	ND[1,8]	ND[1,8]	ND[1,8]	ND	6
Arsenic	3.0 µg/l	5.8	--	--	7.4	--	--	9.3	9.5	3.6	ND	50
Barium	20 µg/l	250	--	--	129	--	--	219	197	54.3	223	1,000
Beryllium	1.0 µg/l	2.3	--	--	1.2	--	--	1.7	1.6	ND	ND	4
Cadmium	1.0 µg/l	ND	--	--	ND	--	--	ND	ND	ND	ND	5
Calcium	2,000 µg/l	55,700	37,000	35,000	55,400	50,000	46,000	58,900	56,600	50,700	34,800	*
Chromium (total)	10 µg/l	246	78	26	206	72	19	240	226	60.7	105	50
Cobalt	5.0 µg/l	103	--	--	59.0	--	--	80.1	68.8	15.7	27.0	*
Copper	10.0 µg/l	45.4[J]	18	--	43.1[J]	ND[4,6]	--	35.9[J]	33.6[J]	20.4[J]	36.8[J]	1,000[3]
Iron	100 µg/l	209,000	14,000	ND[4,6]	103,000	11,000	ND[4,6]	148,000	136,000	33,900	24,500	300[3]
Lead	2.0 µg/l	28.4	--	--	32.2	--	--	40.6	37.2	11.6	11.4	*
Magnesium	2,000 µg/l	72,900	40,000	--	71,700	60,000	--	71,500	68,300	56,700	59,100	*
Manganese	15 µg/l	2,400	170	7[4,6]	1,020	130	ND[4,6]	1,580	1,430	652	701	50[3]
Mercury	0.20 µg/l	ND	--	--	ND	--	--	ND	ND	ND	ND	2
Nickel	20 µg/l	317	54	ND[4,6]	237	57	ND[4,6]	312	295	60.2	82.8	100
Potassium	2,000 µg/l	7,660	1,300[4,6]	1,300[4,6]	5,650	1,600[4,6]	1,400[4,6]	5,520	5,290	7,300	3,110	*
Selenium	3.0 µg/l	4.1	--	--	ND	--	--	ND	ND	ND	ND	50
Silver	10 µg/l	ND	--	--	ND	--	--	ND	ND	ND	ND	100[3]
Sodium	500 µg/l	84,500	58,000	66,000	62,100	43,000	42,000	64,700	63,900	75,500	113,000	--
Thallium	10 µg/l	ND	--	--	ND	--	--	ND	ND	ND	ND	2
Vanadium	10 µg/l	440	--	--	211	--	--	343	316	75.2	57.2	--
Zinc	20 µg/l	223[J]	240	--	180[J]	170	--	167[J]	152[J]	66.2[J]	133[J]	5,000[3]

Notes:

(1) Value indicated is less than the Practical Quantitation Limit for that constituent.
(2) California primary Maximum Contaminant Level for drinking water supplies unless otherwise noted.
(3) California secondary MCL.
(4) Reporting Limit = 200 µg/l.
(5) Reporting Limit = 5 µg/l.
(6) Reporting Limit = 10 µg/l.
(7) Duplicate Sample
(8) Reporting Limit = 100 µg/l

J Estimated value
(J) Estimated reporting limit

ND = Not Detected
-- = Not Analyzed
* = No MCL est
Shaded box 'cate detection greater than or equal to the MCL.
All samples are unfilt unless otherwise specified.

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SUMMARY OF CHEMICAL ANALYSIS RESULTS FOR GROUNDWATER
METALS
LETTERMAN ARMY MEDICAL CENTER
PRESIDIO OF SAN FRANCISCO

	Well Number	MW-1			MW-6	MW-8	MCL[2] (µg/l)
	Date Sampled	8/15/94	2/8/95	2/8/95	2/8/95	2/7/95	
Analytical Method	Laboratory Reporting Limit			(Filtered)			
Aluminum	200 µg/l	71,600	6,700	ND	13,000	19,000	1,000/ 200[3]
Antimony	5.0 µg/l	ND[UJ]	--	--	ND	ND	6
Arsenic	3.0 µg/l	5.8	--	--	ND[5]	ND[5]	50
Barium	20 µg/l	250	--	--	90	140	1,000
Beryllium	1.0 µg/l	2.3	--	--	ND	ND	4
Cadmium	1.0 µg/l	ND	--	--	ND[5]	ND[5]	5
Calcium	2,000 µg/l	55,700	37,000	35,000	72,000	35,000	*
Chromium (total)	10 µg/l	246	78	26	130	120	50
Cobalt	5.0 µg/l	103	--	--	27	31	*
Copper	10.0 µg/l	45.4[J]	18	--	12	11	1,000[3]
Iron	100 µg/l	209,000	14,000	ND[4]	25,000	34,000	300[3]
Lead	2.0 µg/l	28.4	--	--	ND[6]	ND[6]	*
Magnesium	2,000 µg/l	72,900	40,000	--	78,000	49,000	*
Manganese	15 µg/l	2,400	170	7[5]	370	770	50[3]
Mercury	0.20 µg/l	ND	--	--	ND	ND	2
Nickel	20 µg/l	317	54	ND[4]	100	130	100
Potassium	2,000 µg/l	7,660	1,300[8]	1,300[8]	3,900[8]	1,800[8]	*
Selenium	3.0 µg/l	4.1	--	--	ND[2]	ND[5]	50
Silver	10 µg/l	ND	--	--	ND[5]	ND[5]	100[3]
Sodium	500 µg/l	84,500	58,000	66,000	180,000	100,000	--
Thallium	10 µg/l	ND	--	--	ND	ND	2
Vanadium	10 µg/l	440	--	--	71	73	--
Zinc	20 µg/l	223[J]	240	--	84	85	5,000[3]

Notes:

(1) Value indicated is less than the Practical Quantitation Limit for that constituent.
(2) California primary Maximum Contaminant Level for drinking water supplies unless otherwise noted.
(3) California secondary MCL.
(4) Reporting Limit = 200 µg/l.
(5) Reporting Limit = 5 µg/l.
(6) Reporting Limit = 10 µg/l.
(7) Duplicate Sample
(8) Reporting Limit = 100 µg/l

J Estimated value
UJ Estimated reporting limit

ND = Not Detected
-- = Not Analyzed
* = No MCL established
Shaded boxes indicate detection greater than or equal to the MCL.
All samples are unfiltered unless otherwise specified.

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SUMMARY OF CHEMICAL ANALYSIS RESULTS FOR GROUNDWATER
INORGANIC CONSTITUENTS
LETTERMAN ARMY INSTITUTE OF RESEARCH
PRESIDIO OF SAN FRANCISCO

	Well Number	MW-1		MW-2		MW-3		MW-4	MW-5	MCL[1] (µg/l)
	Date Sampled	8/15/94	2/8/95	8/15/94	2/7/95	8/15/94	8/15/94[5]	8/16/94	8/16/94	
Analytical Method	Laboratory Reporting Limit									
Ammonia	100 µg/l	--	ND	--	ND	--	--	--	--	*
Chloride	2,000 µg/l	--	47,000	--	43,000	43,000	--	--	--	250,000-600,000[4]
Cyanide	10 µg/l	26.5	--	54.3	--	26.5	37.1	36.5	37.7	200
Nitrate (as N)	20 µg/l	6,900	--	3,500	--	2,800	2,800	170	5,300	10,000[2]
Nitrite (as N)	10 µg/l	ND	--	ND	--	27	27	ND	ND	1,000[3]
Sulfate	2,500 µg/l	--	64,000	--	83,000	--	--	--	--	250,000-600,000[4]
Total Dissolved Solids	200,000 µg/l	--	420,000	--	500,000	--	--	--	--	500,000-1,500,000[4]
Total Suspended Solids	7,000 µg/l	--	390,000	--	97,000	--	--	--	--	*
BOD	5,000 µg/l	--	ND	--	ND	--	--	--	--	*
COD	20,000 µg/l	--	70,000	--	26,000	--	--	--	--	*
Redox	mV	--	--	--	265	--	--	--	--	*
Alkalinity	5,000 µg $CaCO_3$/l	--	230,000	--	300,000	--	--	--	--	*
Conductivity	10 µmhos/cm	--	700	--	800	--	--	--	--	900-2,200[4]
Hardness	5,400 µg/l	--	259,000	--	373,000	--	--	--	--	*
pH (laboratory)	--	7.0	7.1	7.1	7.2	7.0	7.0	7.1	7.1	6.5-8.5

Notes:

(1) California primary Maximum Contaminant Level for drinking water supplies unless otherwise noted.
(2) MCL for nitrate is 45,000 µg/l as NO_3, equivalent to 10,000 µg/l nitrate as N.
(3) MCL is for nitrite as N. The MCL for the sum of nitrate and nitrite (both as N) is 10,000 µg/l.
(4) California secondary MCL.
(5) Duplicate sample.

ND = Not Detected
-- = Not Analyzed
* = No MCL established
All samples are unfiltered.
Shaded boxes indicate [illegible]ction greater than or equal to the MCL

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SUMMARY OF CHEMICAL ANALYSIS RESULTS FOR GROUNDWATER
INORGANIC CONSTITUENTS
LETTERMAN ARMY MEDICAL CENTER
PRESIDIO OF SAN FRANCISCO

	Well Number	MW-1		MW-6	MW-7	MW-8	MCL[1] (µg/l)
	Date Sampled	8/15/94	2/8/95	2/8/95	2/8/95	2/7/95	
Analytical Method	Laboratory Reporting Limit						
Ammonia	100 µg/l	--	ND	--	--	ND	*
Chloride	2,000 µg/l	--	47,000	--	--	66,000	250,000-600,000[4]
Cyanide	10 µg/l	26.5	--	ND	--	ND	200
Nitrate (as N)	20 µg/l	6,900	--	4,100[5]	3,600[5]	5,900[5]	10,000[2]
Nitrite (as N)	10 µg/l	ND	--	ND[6]	ND[7]	ND[7]	1,000[3]
Sulfate	2,500 µg/l	--	64,000	--	--	72,000	250,000-600,000[4]
Total Dissolved Solids	200,000 µg/l	--	420,000	--	--	490,000	500,000-1,500,000[4]
Total Suspended Solids	7,000 µg/l	--	390,000	--	--	340,000	*
BOD	5,000 µg/l	--	ND	--	--	ND	*
COD	20,000 µg/l	--	70,000	--	--	70,000	*
Redox	mV	--	--	--	--	246	*
Alkalinity	5,000 µg $CaCO_3$/l	--	230,000	--	--	270,000	*
Conductivity	10 µmhos/cm	--	700	--	--	830	900-2,200[4]
Hardness	5,400 µg/l	--	259,000	--	--	288,000	*
pH (laboratory)	--	7.0	7.1	7.4	7.0	7.1	6.5-8.5

Notes:

(1) California primary Maximum Contaminant Level for drinking water supplies unless otherwise noted.
(2) MCL for nitrate is 45,000 µg/l as NO_3, equivalent to 10,000 µg/l nitrate as N.
(3) MCL is for nitrite as N. The MCL for the sum of nitrate and nitrite (both as N) is 10,000 µg/l.
(4) California secondary MCL.
(5) Nitrate concentrations reported by D&M Laboratories as NO_3, converted to nitrate as N for comparison with data from Lockheed Analytical Services data for well MW-1.
(6) Nitrite detection limit is approximately 900 µg/l (as N).
(7) Nitrite detection limit is approximately 460 µg/l (as N).
(8) Duplicate sample.

ND = Not Detected
-- = Not Analyzed
* = No MCL established
All samples are unfiltered.
Shaded boxes indicate detection greater than or equal to the MCL.

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SUMMARY OF CHEMICAL ANALYSIS RESULTS FOR GROUNDWATER
ORGANIC CONSTITUENTS
LETTERMAN ARMY INSTITUTE OF RESEARCH
PRESIDIO OF SAN FRANCISCO

	Well Number	MW-1		MW-2		MW-3			MW-4	MW-5	MCL[2]
	Date Sampled	8/15/94	2/8/95	8/15/94	2/7/95	8/15/94	8/15/94[4]	2/7/95	8/16/94	8/16/94	(µg/l)
Analytical Method	Laboratory Reporting Limit										
Volatile Organic Compounds											
Chloroform	5.0 µg/l	ND	--	ND	--	13	12	ND	ND	ND	100
Semi-Volatile Organic Compounds											
bis(2-ethylhexyl) phthalate	10 µg/l	7.7[3]	ND[3]	11	ND[3]	810[J]	ND[R]	4.2[3]	ND	ND	4
diethylphthalate	10 µg/l	ND	ND[3]	8.3[3]	ND[3]	ND[R]	ND[R]	ND[3]	ND	ND	*
caprolactam	4.0 µg/l	ND	300[J]	ND	31[J]	ND	ND	47[J]	ND	ND	*
unknown organic compound	4.0 µg/l	ND	28[J]	ND	ND	ND	ND	ND	ND	ND	*
benzenesulfonic acid, 4-methyl, -ethyl ester	4.0 µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	*
Organochlorine Pesticides/PCBs	0.050-5.0 µg/l	ND[UJ]	--	ND[UJ]	--	ND[R]	ND[UJ]	--	ND[UJ]	ND[UJ]	*
Total Volatile Hydrocarbons	100 µg/l	ND	--	ND	--	ND	ND	--	ND	ND	*
Total Extractable Hydrocarbons	1,000 µg/l	ND	--	ND	--	ND	ND	--	ND	ND	*

Notes:

(1) Value indicated is less than the Practical Quantitation Limit for that constituent.
(2) California primary Maximum Contaminant Level for drinking water supplies unless otherwise noted.
(3) Reporting Limit = 4 µg/l.
(4) Duplicate Sample.

J Estimated value
UJ Estimated reporting limit
R Rejected and unusable because of analytical failure

ND = Not Detected
-- = Not Analyzed
* = No MCL established
Shaded boxes indicate detection greater than or equal to the MCL.
All samples are unfiltered.

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SUMMARY OF CHEMICAL ANALYSIS RESULTS FOR GROUNDWATER
ORGANIC CONSTITUENTS
LETTERMAN ARMY MEDICAL CENTER
PRESIDIO OF SAN FRANCISCO

	Well Number	MW-1		MW-6	MW-8	MCL (2)
	Date Sampled	8/15/94	2/8/95	2/8/95	2/7/95	(µg/l)
Analytical Method	Laboratory Reporting Limit					
Volatile Organic Compounds						
Chloroform	5.0 µg/l	ND	--	ND	ND	100
Semi-Volatile Organic Compounds						
bis(2-ethylhexyl) phthalate	10 µg/l	7.7(1)	ND(3)	ND(3)	ND(3)	4
diethylphthalate	10 µg/l	ND	ND(3)	ND(3)	ND(3)	*
caprolactam	4.0 µg/l	ND	300J	170J	230J	*
unknown organic compound	4.0 µg/l	ND	28J	19J	19J	*
benzenesulfonic acid, 4-methyl, -ethyl ester	4.0 µg/l	ND	ND	ND	47J	*
Organochlorine Pesticides/PCBs	0.050-5.0 µg/l	ND(1)	--	ND	ND	*
Total Volatile Hydrocarbons	100 µg/l	ND	--	ND(4)	ND(4)	*
Total Extractable Hydrocarbons	1,000 µg/l	ND	--	ND(4)	ND(4)	*

Notes:

(1) Value indicated is less than the Practical Quantitation Limit for that constituent.
(2) California primary Maximum Contaminant Level for drinking water supplies unless otherwise noted.
(3) Reporting Limit = 4 µg/l.
(4) Reporting Limit = 50 to 500 µg/l.

ND = Not Detected
-- = Not Analyzed
* = No MCL established
Shaded boxes indicate detection greater than or equal to the MCL.
All samples are unfiltered.

J Estimated value
UJ Estimated reporting limit
R Rejected and unusable because of analytical failure

A-43

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SUMMARY OF CHEMICAL ANALYSIS RESULTS FOR GROUNDWATER
RADIONUCLIDE CONSTITUENTS
LETTERMAN ARMY INSTITUTE OF RESEARCH
PRESIDIO OF SAN FRANCISCO

Analytical Method	Well Number	MW-1		MW-2	MW-3		MW-4	MW-5	MCL[1] (pCi/l)
	Date Sampled	8/15/94	2/8/95	8/15/94	8/15/94	8/15/94[2]	8/16/94	8/16/94	
	Minimum Detectable Activity								
Gross Alpha	8.8-25.0 pCi/l	46.0±23.0	1.5±3.8	7.2±7.7	17.0±15.0	33.0±19.0	7.5±6.3	13.5±9.2	15
Gross Beta	8.1-19.0 pCi/l	36.0±13.0	5.1±3.5	17.7±7.2	32.0±13.0	40.0±13.0	13.1±5.4	21.9±8.3	50
Gamma Scan									
Ac-228	190-280 pCi/l	-90±9.6	--	50±150	-30±140	-30±150	-20±150	-11±97	*
Bi-212	250-530 pCi/l	-90±100	--	-160±140	290±350	10±320	-80±190	0±180	*
Bi-214	96-150 pCi/l	66±69	--	-25±90	50±100	72±95	-10±80	5±61	*
Co-60	35-65 pCi/l	16±22	--	-9±28	-8±27	-1±23	9±26	-2±15	*
Cs-137	35-70 pCi/l	22±34	--	-13±45	12±45	2±38	4±41	0±23	*
K-40	510-860 pCi/l	230±360	--	20±510	-260±430	36-±430	50±520	100±370	*
Pb-210	1,900-11,000 pCi/l	100±1,300	--	-500±2,700	-900±2,800	410±1,400	-2,100±2,600	-1,000±7,700	*
Pb-212	72-100 pCi/l	16±57	--	13±64	-26±67	45±67	-29±61	-4±47	*
Pb-214	93-130 pCi/l	11±62	--	14±67	12±76	-15±74	-8±69	19±54	*
Ra-226 (Gamma)	710-1,100 pCi/l	280±630	--	260±760	-190±760	430±770	-110±700	-420±470	*
Th-234	710-900 pCi/l	-180±320	--	170±370	-170±380	220±370	160±380	-170±300	*
Tl-208	52-77 pCi/l	-24±47	--	-7±49	28±56	44±56	3±53	7±34	*
U-235 (Gamma)	180-260 pCi/l	20±140	--	-60±130	20±170	-190±130	-52±90	30±130	20

Notes:

(1) California primary Maximum Contaminant Level for drinking water supplies unless otherwise noted.

(2) Duplicate sample

-- = Not Analyzed

* = No MCL established

Shaded box indicates detection greater than MCL.

All samples are unfiltered unless otherwise specified.

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SUMMARY OF CHEMICAL ANALYSIS RESULTS FOR GROUNDWATER
RADIONUCLIDE CONSTITUENTS
LETTERMAN ARMY MEDICAL CENTER
PRESIDIO OF SAN FRANCISCO

Analytical Method	Well Number	MW-1		MW-6	MW-8	MCL[1] (pCi/l)
	Date Sampled	8/15/94	2/8/95	2/8/95	2/7/95	
	Minimum Detectable Activity					
Gross Alpha	8.8-25.0 pCi/l	46.0±23.0	1.5±3.8	5.5±6.6	7.6±6.1	15
Gross Beta	8.1-19.0 pCi/l	36.0±13.0	5.1±3.5	1.3±6.3	9.2±4.4	50
Gamma Scan						
Ac-228	190-280 pCi/l	-90±9.6	--	-1.8±6.9	-3.6±7.6	*
Bi-212	250-530 pCi/l	-90±100	--	-9.5±8.9[R]	11±16[DL]	*
Bi-214	96-150 pCi/l	66±69	--	4.9±5.6[DL]	4.7±5.5[DL]	*
Co-60	35-65 pCi/l	16±22	--	-0.1±2.0	1.2±1.2	*
Cs-137	35-70 pCi/l	22±34	--	0.1±2.5	0.9±2.3[DL]	*
K-40	510-860 pCi/l	230±360	--	-32±14[R]	17±29[DL]	*
Pb-210	1,900-11,000 pCi/l	100±1,300	--	-30±280	40±280[DL]	*
Pb-212	72-100 pCi/l	16±57	--	2.0±5.2[DL]	1.9±5.4[DL]	*
Pb-214	93-130 pCi/l	11±62	--	5.7±4.9	6.0±5.1	*
Ra-226 (Gamma)	710-1,100 pCi/l	280±630	--	-123±55[R]	-33±57	*
Th-234	710-900 pCi/l	-180±320	--	29±48	-30±44	*
Tl-208	52-77 pCi/l	-24±47	--	0.7±2.9	0.0±2.9	*
U-235 (Gamma)	180-260 pCi/l	20±140	--	2±15	1±15	20

Notes:

(1) California primary Maximum Contaminant Level for drinking water supplies unless otherwise noted.
(2) Duplicate sample

-- = Not Analyzed
* = No MCL established
Shaded box indicates detection greater than MCL.
All samples are unfiltered unless otherwise specified.
[R] Data rejected and unusable because of analytical failure
[DL] Data valid, however, detection limits were exceeded

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Appendix A
Summary Statistics and Box-and-Whisker Plots for Background Soil Samples

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Table A-4-1 Summary Statistics for Beach-Dune Background Metals

Analyte	Number of Samples	Frequency of Detection[a] (%)	Min	Max	Mean	Standard Deviation	Shapiro-Wilks (sig.)	LN Mean	LN Std. Dev	Shapiro-Wilks (sig.)	Distribution	95th Percentile[c]	Units
Aluminum	14	100	3030	7660	5160	1350	0.5933	8.516	0.269	0.6411	normal	7380	mg/kg
Antimony	4	0	9.8	20.7	12.5	5.43	b	2.469	0.373	b	—	—	mg/kg
Arsenic	14	71.4	1.25	5.43	2.46	1.29	0.0468	0.781	0.497	0.2469	log	4.95	mg/kg
Barium	14	100	8.12	22.8	14	4.21	0.0941	2.601	0.283	0.5856	log	21.5	mg/kg
Beryllium	14	85.7	0.134	0.7	0.261	0.177	<0.01	-1.481	0.481	<0.01	np	0.552	mg/kg
Cadmium	14	0	0.258	0.6	0.433	0.098	<0.01	-0.861	0.223	<0.01	—	—	mg/kg
Calcium	14	100	1750	7020	4100	1630	0.5913	8.240	0.426	0.6040	normal	6780	mg/kg
Chromium	14	100	17.9	81.1	46.3	20	0.7200	3.736	0.477	0.6049	normal	79.2	mg/kg
Cobalt	14	100	3.99	8.47	6.51	1.36	0.4255	1.851	0.223	0.2743	normal	8.75	mg/kg
Copper	14	100	4.6	57.3	20.5	15.9	0.0458	2.736	0.812	0.5589	log	58.7	mg/kg
Cyanide	14	0	0.125	0.46	0.149	0.09	<0.01	-1.986	0.348	<0.01	—	—	mg/kg
Iron	14	100	6030	27000	13700	6140	0.3850	9.432	0.446	0.9212	normal	23800	mg/kg
Lead	14	85.7	1.59	11.8	3.64	2.52	<0.01	1.155	0.495	0.1227	log	7.17	mg/kg
Magnesium	14	100	1520	4040	2590	804	0.3093	7.816	0.303	0.7240	normal	3910	mg/kg
Manganese	14	100	91.5	248	164	46.1	0.8012	5.061	0.297	0.5751	normal	240	mg/kg
Mercury	14	0	0.014	0.03	0.027	0.004	<0.01	-3.615	0.211	<0.01	—	—	mg/kg
Nickel	14	100	15	30.1	22.3	4.15	0.6494	3.089	0.197	0.3086	normal	29.1	mg/kg
Potassium	14	100	137	684	391	128	0.4423	5.912	0.369	0.0800	normal	602	mg/kg
Selenium	14	0	0.125	0.225	0.206	0.024	<0.01	-1.590	0.144	<0.01	—	—	mg/kg
Silver	10	0	0.25	0.402	0.297	0.073	<0.01	-1.240	0.226	<0.01	—	—	mg/kg
Sodium	14	100	48.3	190	116	41.9	0.5742	4.691	0.392	0.4477	normal	185	mg/kg
Thallium	14	0	0.081	17.2	4.26	7.25	<0.01	-1.044	2.420	<0.01	—	—	mg/kg
Vanadium	14	100	15.7	85.4	38.7	21.1	0.1977	3.519	0.545	0.4936	normal	73.4	mg/kg
Zinc	14	100	16.2	40.3	25.5	7.08	0.5088	3.203	0.273	0.8384	normal	37.1	mg/kg

Summary statistics calculated with 1/2 DL for non-detects.

a. Frequency of detection is calculated from all accepted valid data except equipment rinsates.

b. Not enough samples available to perform test.

c. The normal distribution equation was used for nonparametric distributions.

"—" Not applicable because greater than 20% of data were non-detects.

np nonparametric

Table A-4-2 Summary Statistics for Colma Background Metals

Analyte	Number of Samples	Frequency of Detection[a] (%)	Min	Max	Mean	Standard Deviation	Shapiro-Wilks (sig.)	LN Mean	LN Std. Dev	Shapiro-Wilks (sig.)	Distribution	95th Percentile[c]	Units
Aluminum	8	100	8910	25900	13500	5640	0.307	9.446	0.357	0.2641	log	22800	mg/kg
Antimony	2	0	20.7	20.7	20.7	0	b	3.028	0	b	—	—	mg/kg
Arsenic	8	25	1.25	5	1.97	1.41	<0.01	0.517	0.555	<0.01	np	4.29	mg/kg
Barium	8	100	26.9	121	63.9	33.8	0.3782	4.036	0.529	0.7765	normal	120	mg/kg
Beryllium	8	75	0.248	0.681	0.33	0.152	<0.01	-1.175	0.362	<0.01	np	0.58	mg/kg
Cadmium	8	0	0.258	0.4	0.364	0.066	<0.01	-1.026	0.204	<0.01	—	—	mg/kg
Calcium	8	100	1790	3680	3030	617	0.1522	7.995	0.236	0.0401	normal	4040	mg/kg
Chromium	8	100	51.8	943	184	307	<0.01	4.626	0.921	<0.01	np	689	mg/kg
Cobalt	8	100	10.9	17	13	1.91	0.2352	2.553	0.139	0.4328	normal	16.1	mg/kg
Copper	8	100	10.4	80.8	27.3	23.7	<0.01	3.070	0.676	0.2824	log	65.5	mg/kg
Cyanide	8	0	0.125	0.46	0.209	0.155	<0.01	-1.754	0.155	<0.01	—	—	mg/kg
Iron	8	100	14700	31200	21300	6510	0.2147	9.927	0.297	0.3181	normal	32000	mg/kg
Lead	8	100	3.04	5.82	4.39	1.02	0.6873	1.456	0.235	0.7486	normal	6.07	mg/kg
Magnesium	8	100	3470	4230	3940	287	0.2046	8.276	0.075	0.1492	normal	4410	mg/kg
Manganese	8	100	227	390	270	54.4	0.0341	5.585	0.182	0.0907	log (np)	359	mg/kg
Mercury	8	0	0.014	0.0897	0.035	0.023	<0.01	-3.476	0.512	<0.01	—	—	mg/kg
Nickel	8	100	34.6	97.5	65.6	22.6	0.8007	4.126	0.376	0.5417	np	103	mg/kg
Potassium	8	100	320	726	432	132	0.0315	6.033	0.267	0.1989	log	647	mg/kg
Selenium	8	25	0.208	0.832	0.341	0.222	<0.01	-1.217	0.53	<0.01	np	0.706	mg/kg
Silver	8	0	0.25	0.261	0.253	0.005	<0.01	-1.376	0.019	<0.01	—	—	mg/kg
Sodium	8	100	123	340	239	75.8	0.7235	5.424	0.353	0.4768	normal	364	mg/kg
Thallium	7	0	0.081	7.35	1.12	2.75	<0.01	-1.869	1.704	<0.01	—	—	mg/kg
Vanadium	8	100	37.2	64.9	51.2	11	0.2689	3.915	0.217	0.2940	normal	69.3	mg/kg
Zinc	8	100	29.1	64.8	42.9	13.9	0.2433	3.716	0.311	0.4013	normal	65.8	mg/kg

Summary statistics calculated with 1/2 DL for non-detects.

a. Frequency of detection is calculated from all accepted valid data except equipment rinsates.

b. Not enough samples available to test.

c. The normal distribution equation was used for nonparametric distributions.

"—" Not applicable because greater than 20% of data were non-detects.

np nonparametric

Table A-4-3 Summary Statistics for Serp Background Metals

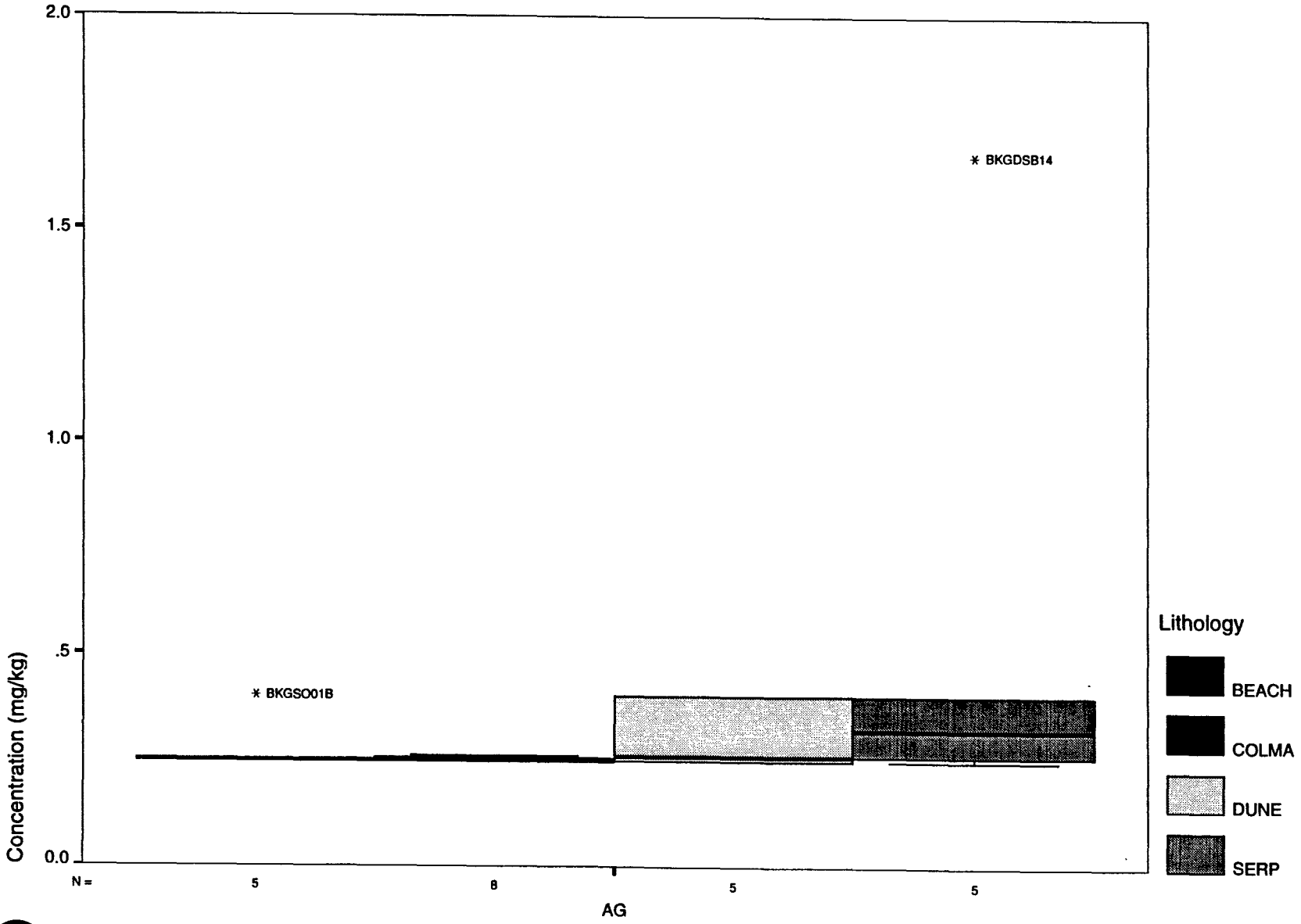
Analyte	Number of Samples	Frequency of Detection[a] (%)	Min	Max	Mean	Standard Deviation	Shapiro-Wilks (sig.)	LN Mean	LN Std. Dev	Shapiro-Wilks (sig.)	Distribution	95th Percentile[c]	Units
Aluminum	6	100	2530	8660	5190	2470	0.3489	8.459	0.482	0.4773	normal	9250	mg/kg
Antimony	2	0	9.8	20.7	15.2	7.67	b	2.655	0.527	b	—	—	mg/kg
Arsenic	6	66.7	0.125	2.49	0.997	0.876	0.3843	-0.417	1.094	0.7261	normal	2.44	mg/kg
Barium	6	83.3	1.65	92.3	32.9	36.3	0.1278	2.770	1.498	0.6942	normal	92.6	mg/kg
Beryllium	6	0	0.05	5	1.84	2.46	<0.01	-0.567	1.845	0.3361	—	—	mg/kg
Cadmium	6	0	0.258	400	14.2	20	<0.01	0.997	2.286	0.1010	—	—	mg/kg
Calcium	6	100	368	9200	2280	3420	<0.01	7.058	1.157	0.3923	log	7800	mg/kg
Chromium	6	100	674	1290	914	226	0.5671	6.794	0.237	0.8338	normal	1290	mg/kg
Cobalt	6	100	59.8	140	101	33.2	0.4156	4.565	0.345	0.4558	normal	156	mg/kg
Copper	6	100	5.08	64.6	32.5	24.1	0.3931	3.151	0.986	0.4249	normal	72.1	mg/kg
Cyanide	6	0	0.125	0.46	0.181	0.137	<0.01	-1.862	0.532	<0.01	—	—	mg/kg
Iron	6	100	36000	80700	59600	15800	0.8074	10.964	0.283	0.6311	normal	85600	mg/kg
Lead	4	75	1.82	4.48	3.51	1.17	b	1.200	0.408	b	—	—	mg/kg
Magnesium	6	100	15300	270000	140000	86300	>0.99	11.558	1.013	0.1578	normal	282000	mg/kg
Manganese	6	100	505	2090	899	596	<0.01	6.671	0.513	0.0900	np	1880	mg/kg
Mercury	6	25	0.014	0.03	0.026	0.006	<0.01	-3.681	0.313	<0.01	np	0.0359	mg/kg
Nickel	6	100	1120	3950	2570	1070	0.6011	7.769	0.462	0.6064	np	4330	mg/kg
Potassium	6	16.7	25	2500	576	963	<0.01	5.192	1.699	0.6560	—	—	mg/kg
Selenium	6	0	0.125	0.225	0.197	0.036	<0.01	-1.642	0.216	<0.01	—	—	mg/kg
Silver	5	20	0.25	1.67	0.581	0.613	<0.01	-0.852	0.787	0.0547	np	1.59	mg/kg
Sodium	6	83.3	19.4	450	208	174	0.3850	4.904	1.170	0.4960	normal	494	mg/kg
Thallium	6	0	0.081	17.2	4.14	7.01	<0.01	-0.869	2.561	<0.01	—	—	mg/kg
Vanadium	6	100	11.8	40.2	29.5	10.1	0.4463	3.317	0.444	0.0815	normal	46.1	mg/kg
Zinc	6	100	6.64	95	38.9	32.1	0.4052	3.338	0.937	0.9032	normal	91.7	mg/kg

Summary statistics calculated with 1/2 DL for non-detects.

a. Frequency of detection is calculated from all accepted valid data except equipment rinsates.
b. Not enough samples available to test.
c. The normal distribution equation was used for nonparametric distributions.
"—" Not applicable because greater than 20% of data were non-detects.
np nonparametric

Presidio Background Soils

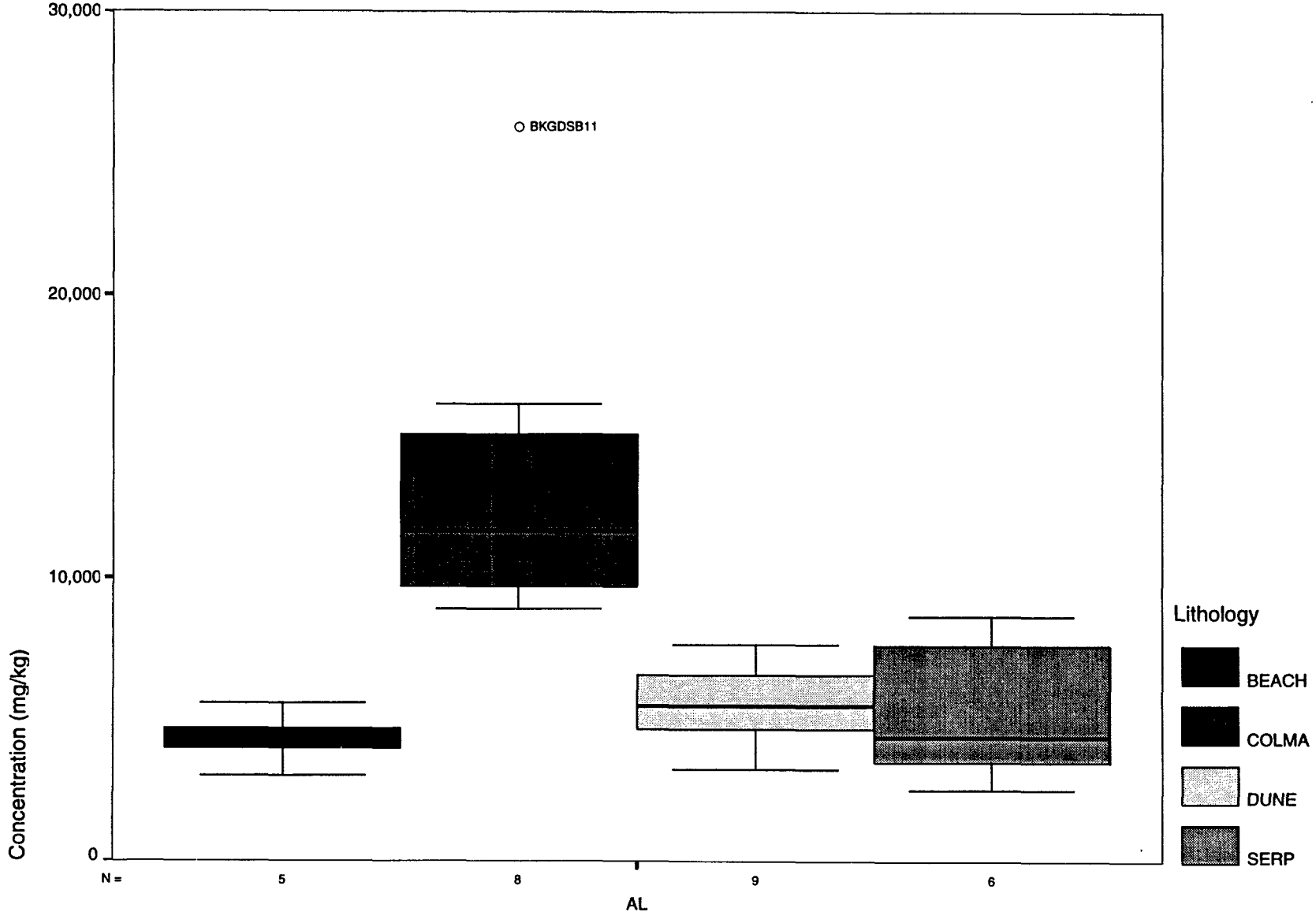
Silver



A-54

Presidio Background Soils

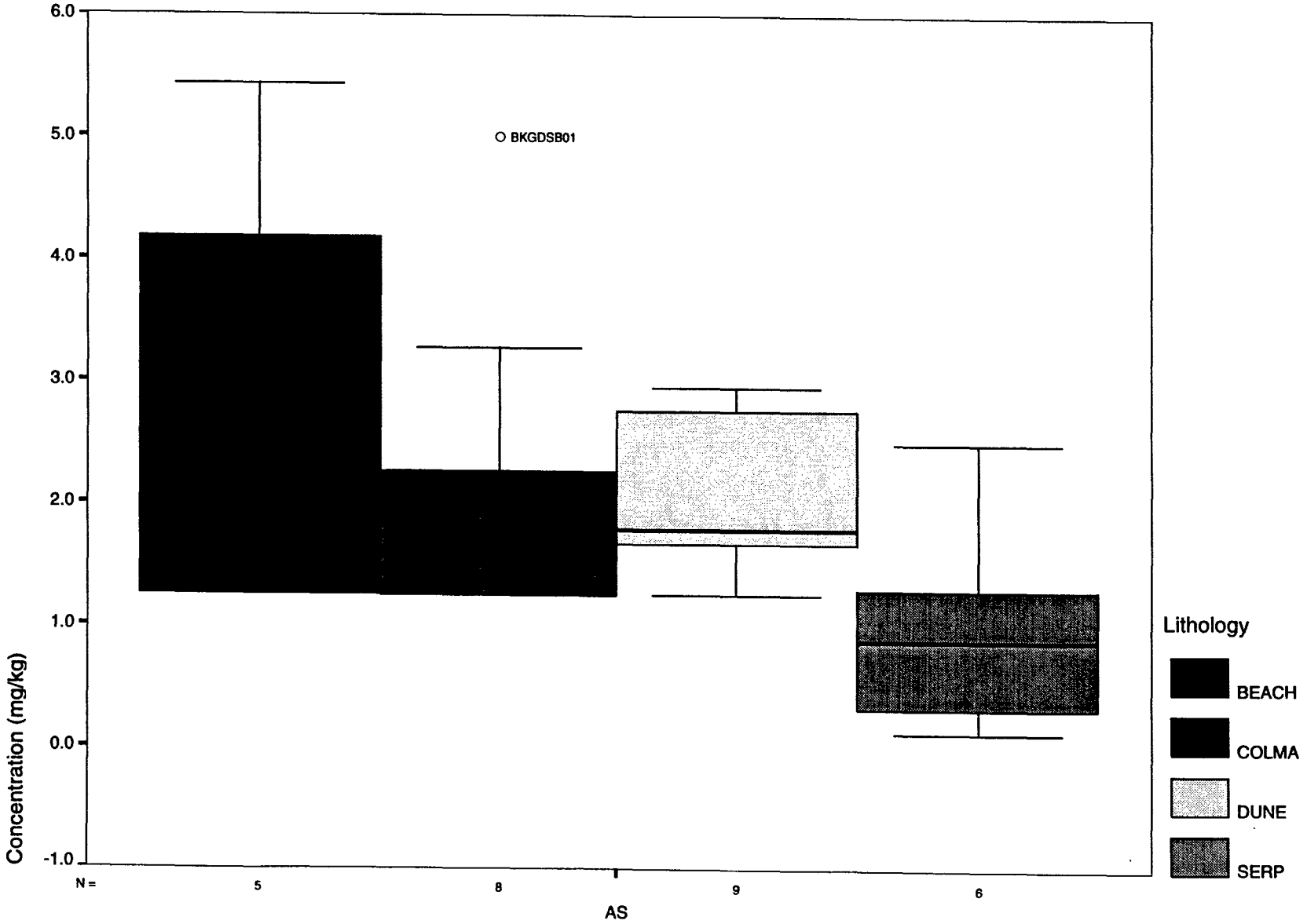
Aluminum



A-55

Presidio Background Soils

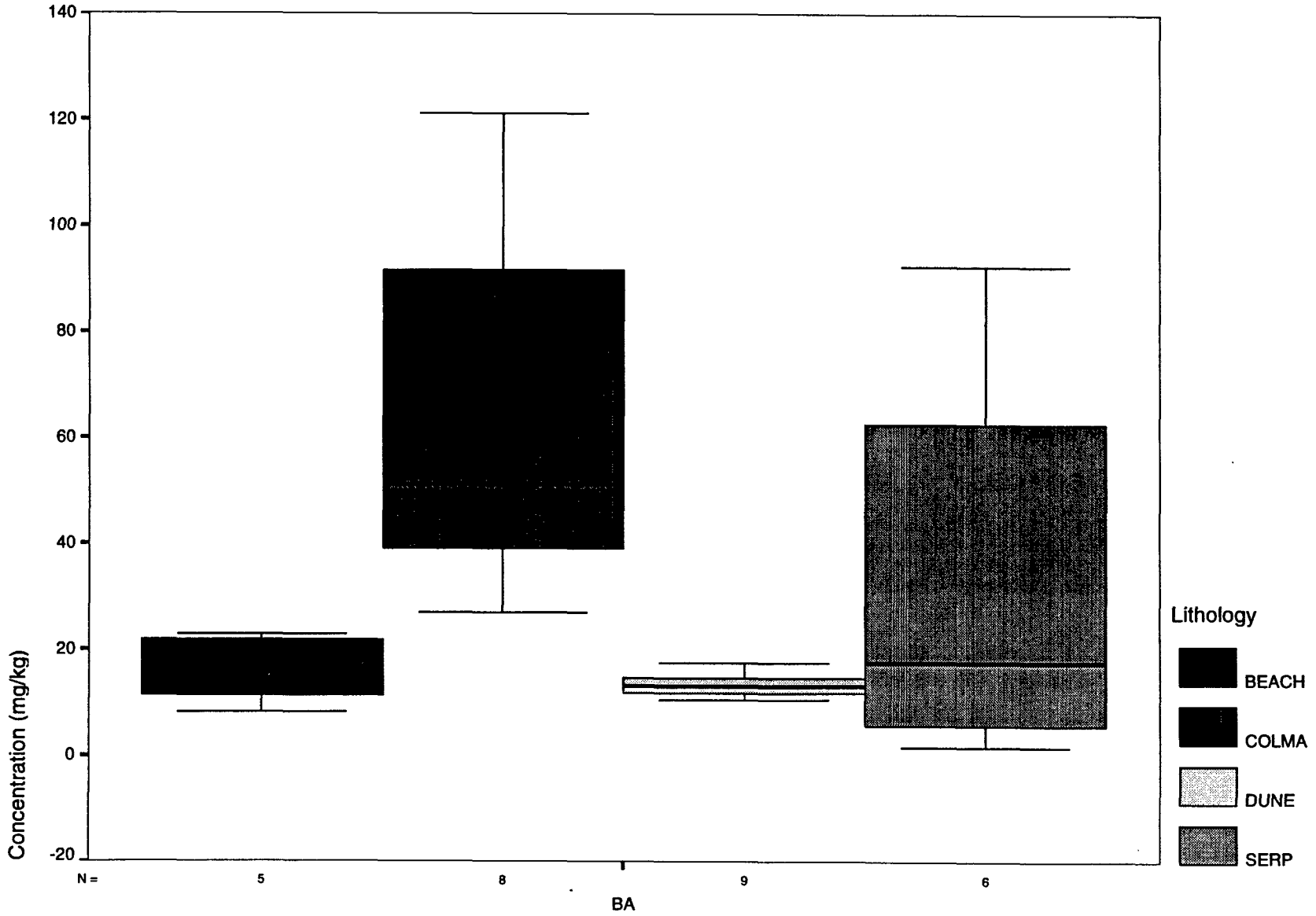
Arsenic



A-56

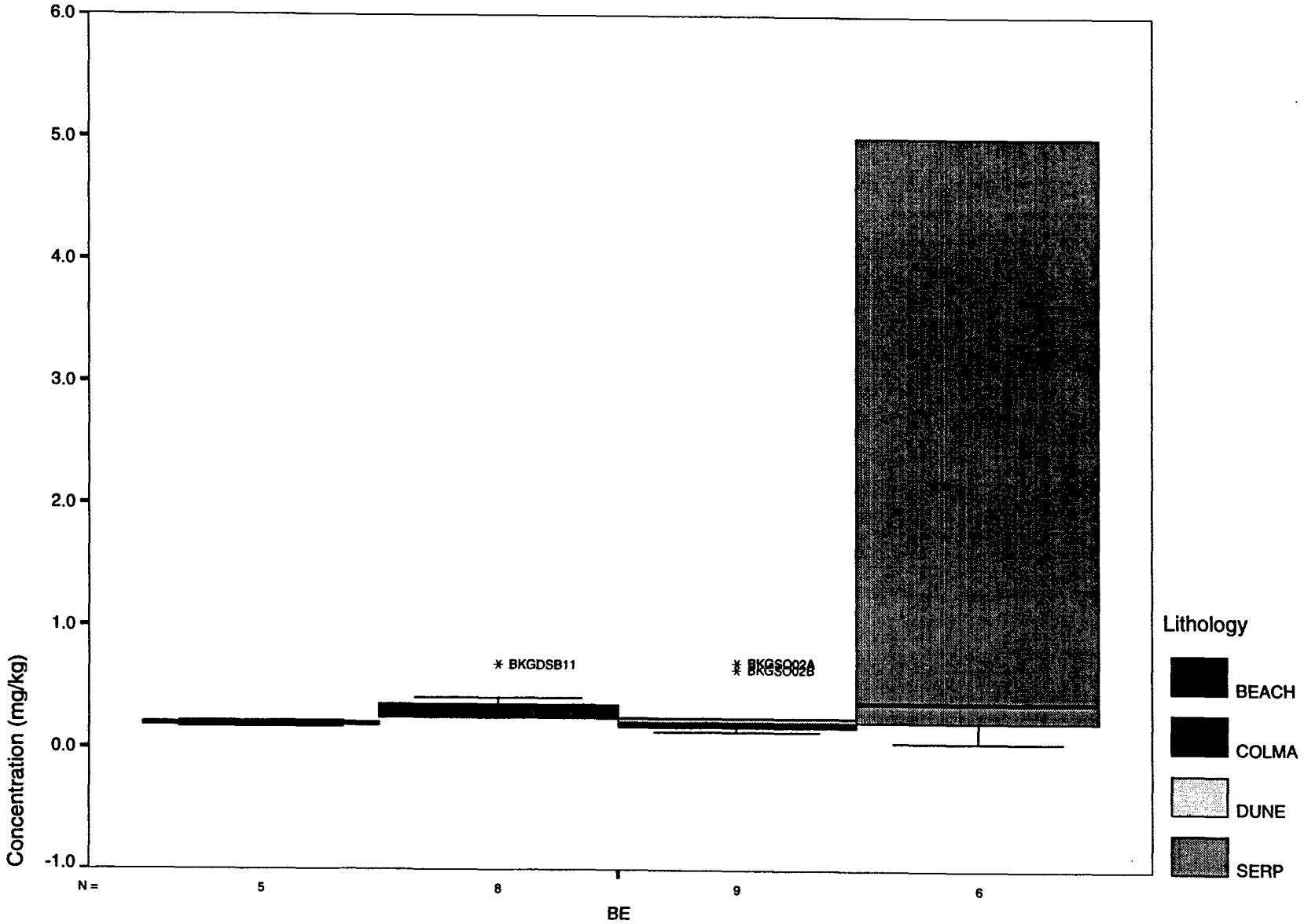
Presidio Background Soils

Barium



Presidio Background Soils

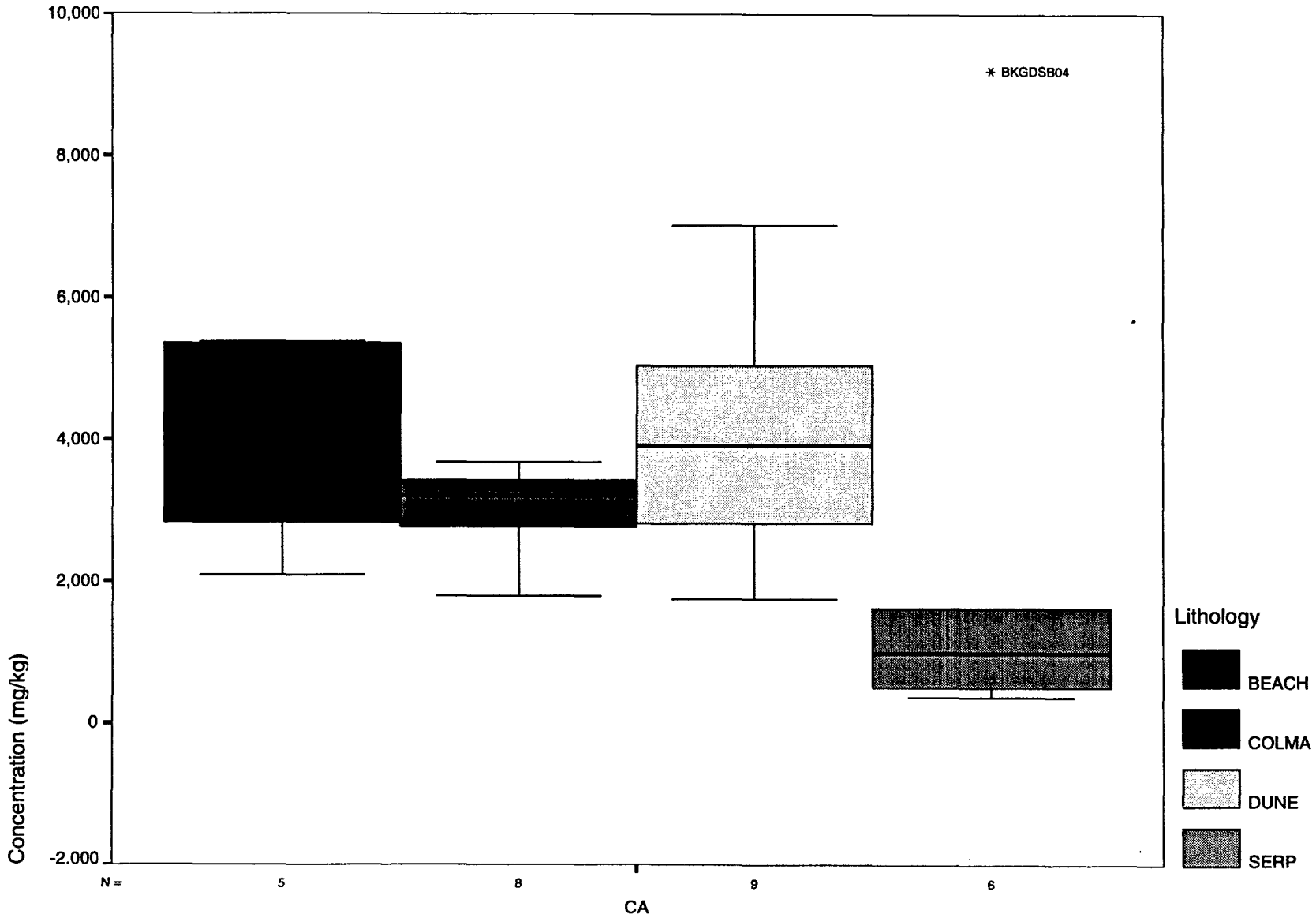
Beryllium



A-58

Presidio Background Soils

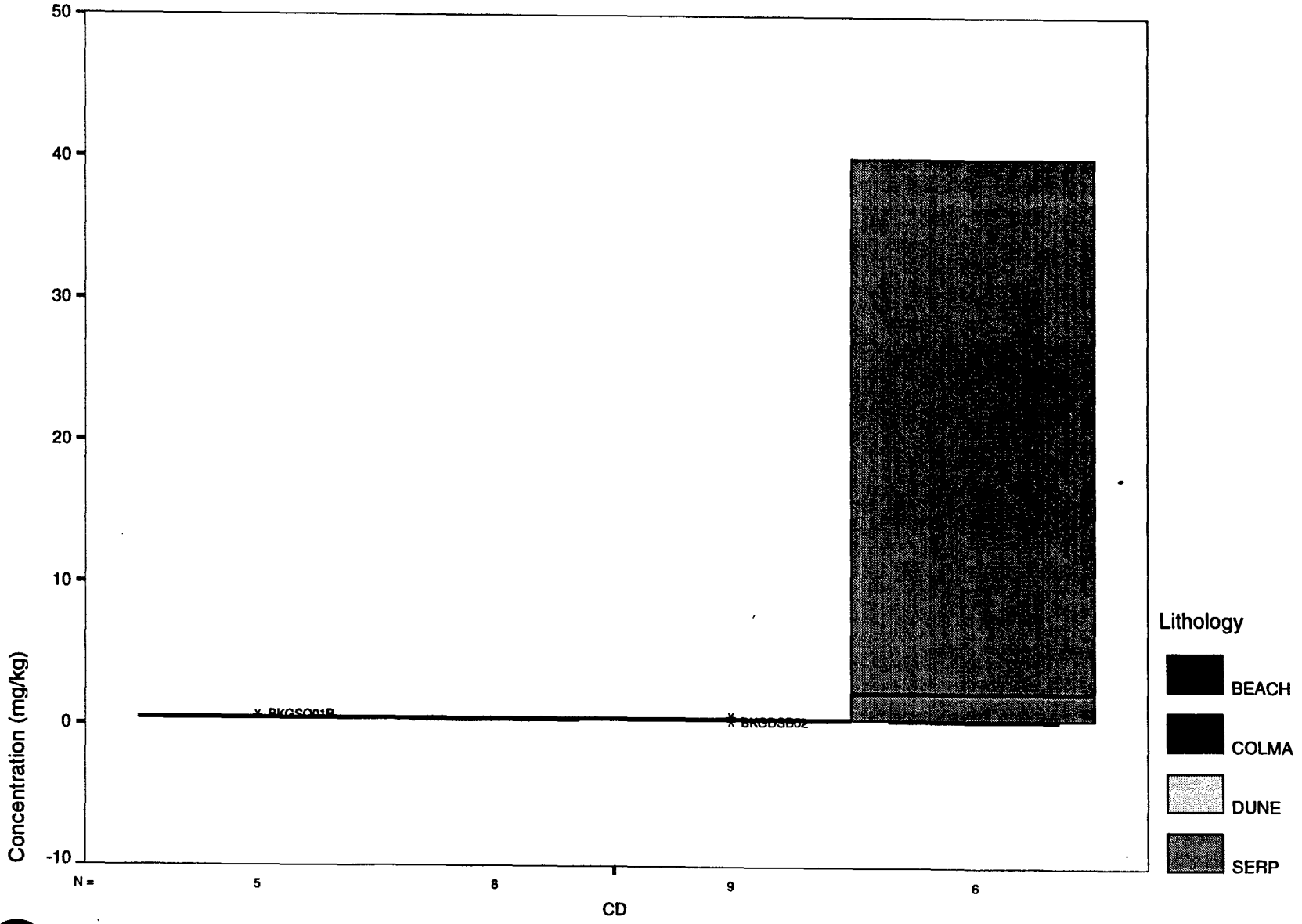
Calcium



A-59

Presidio Background Soils

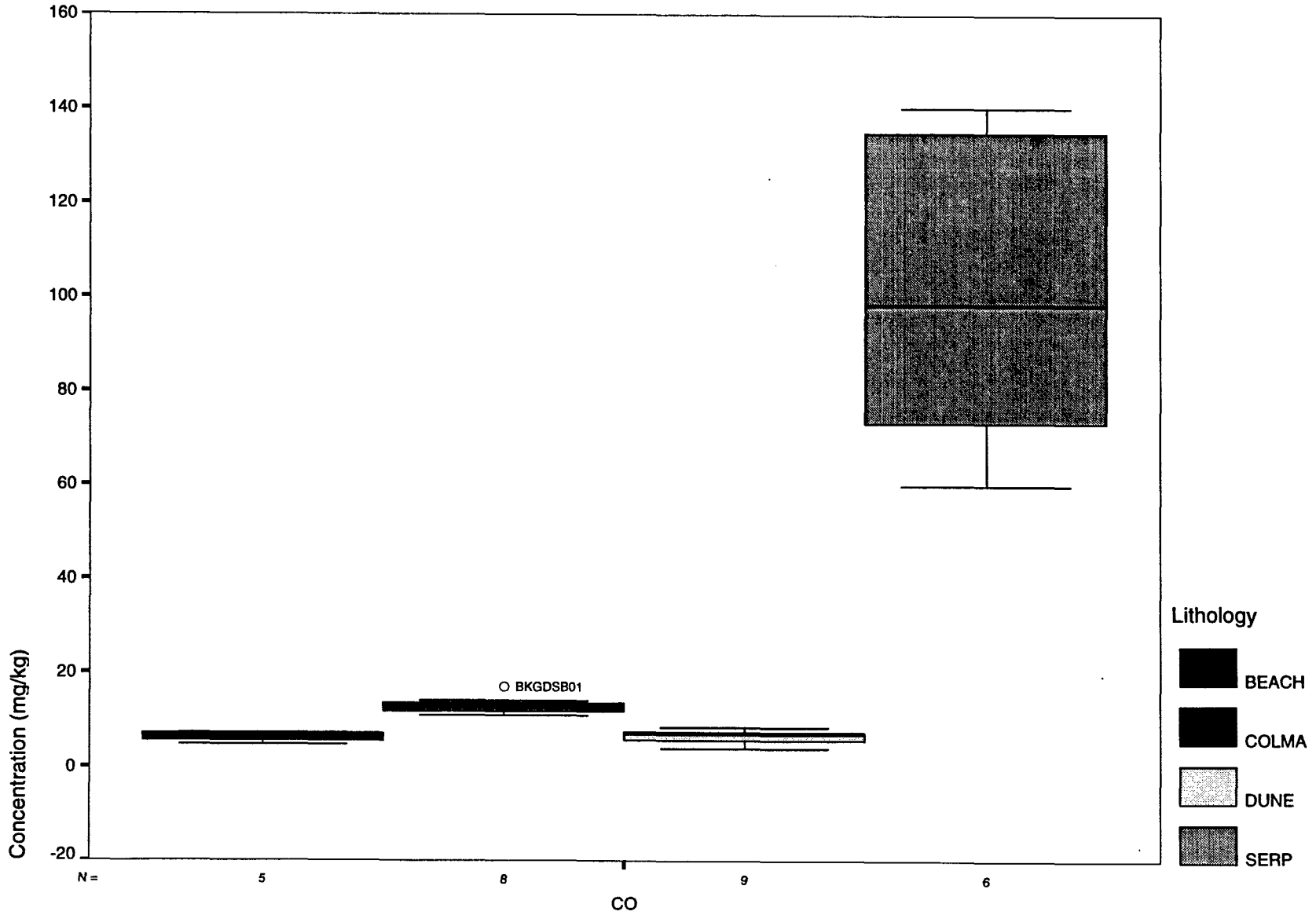
Cadmium



A-60

Presidio Background Soils

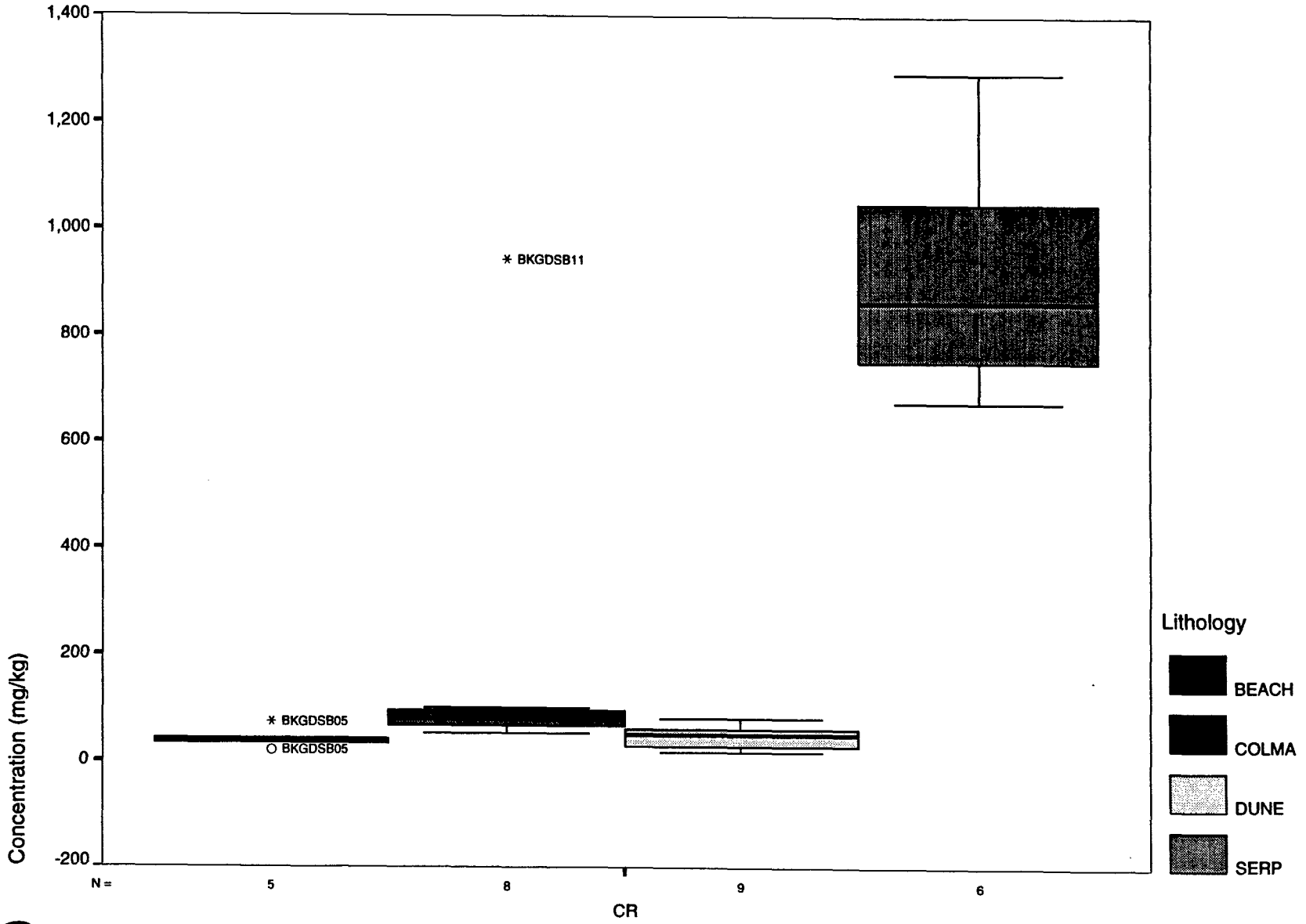
Cobalt



A-61

Presidio Background Soils

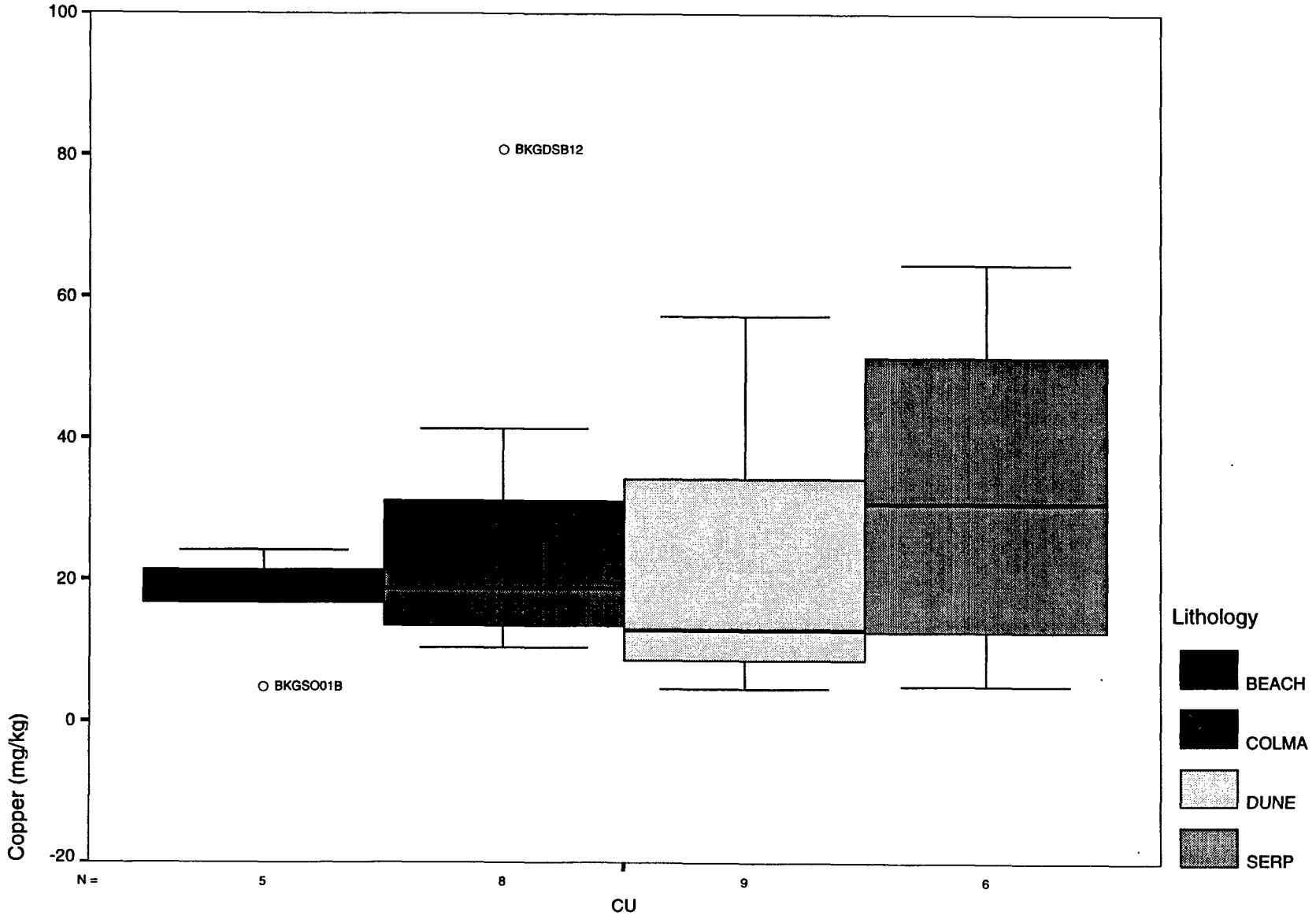
Chromium



A-62

Presidio Background Soils

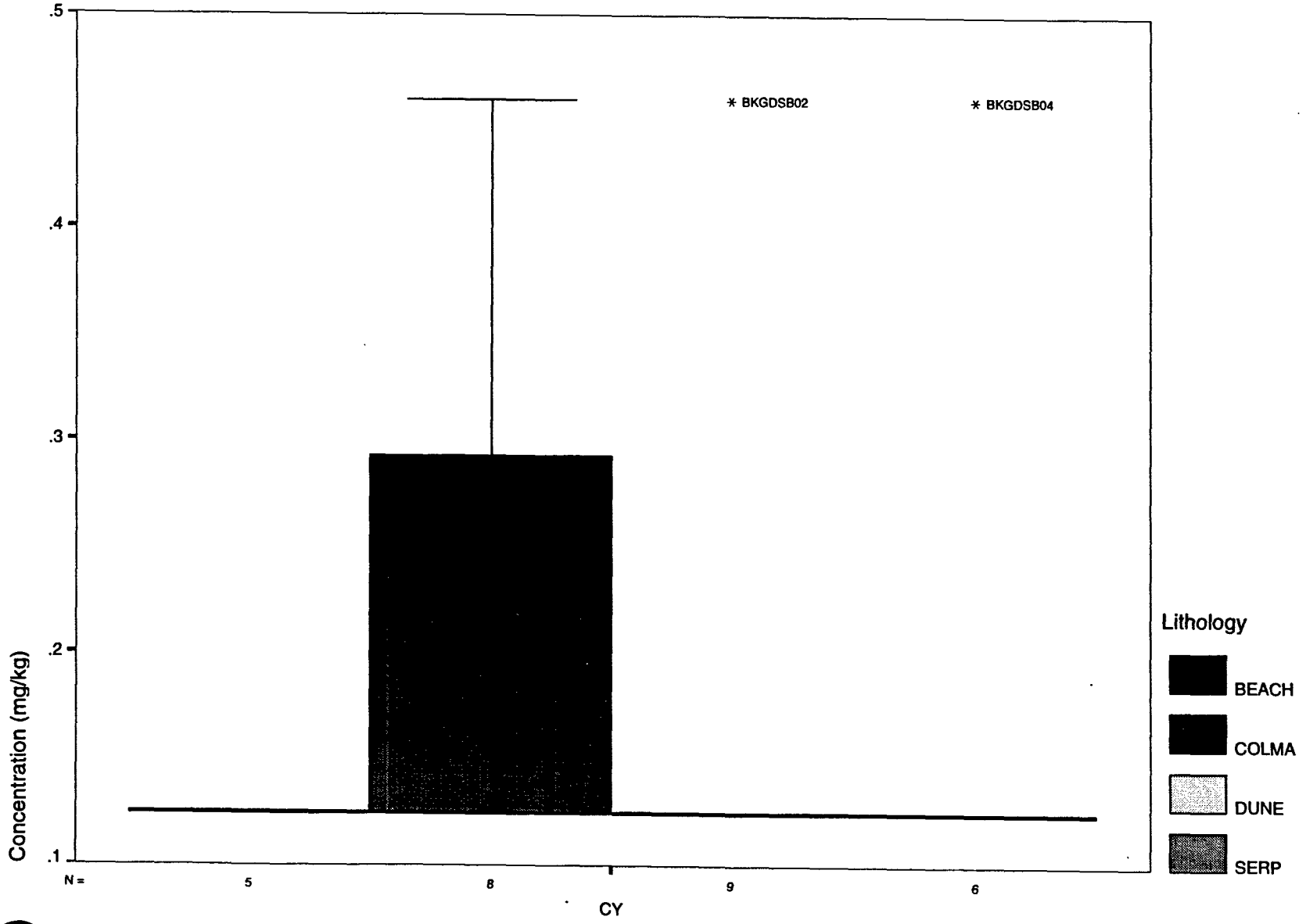
Copper



A-63

Presidio Background Soils

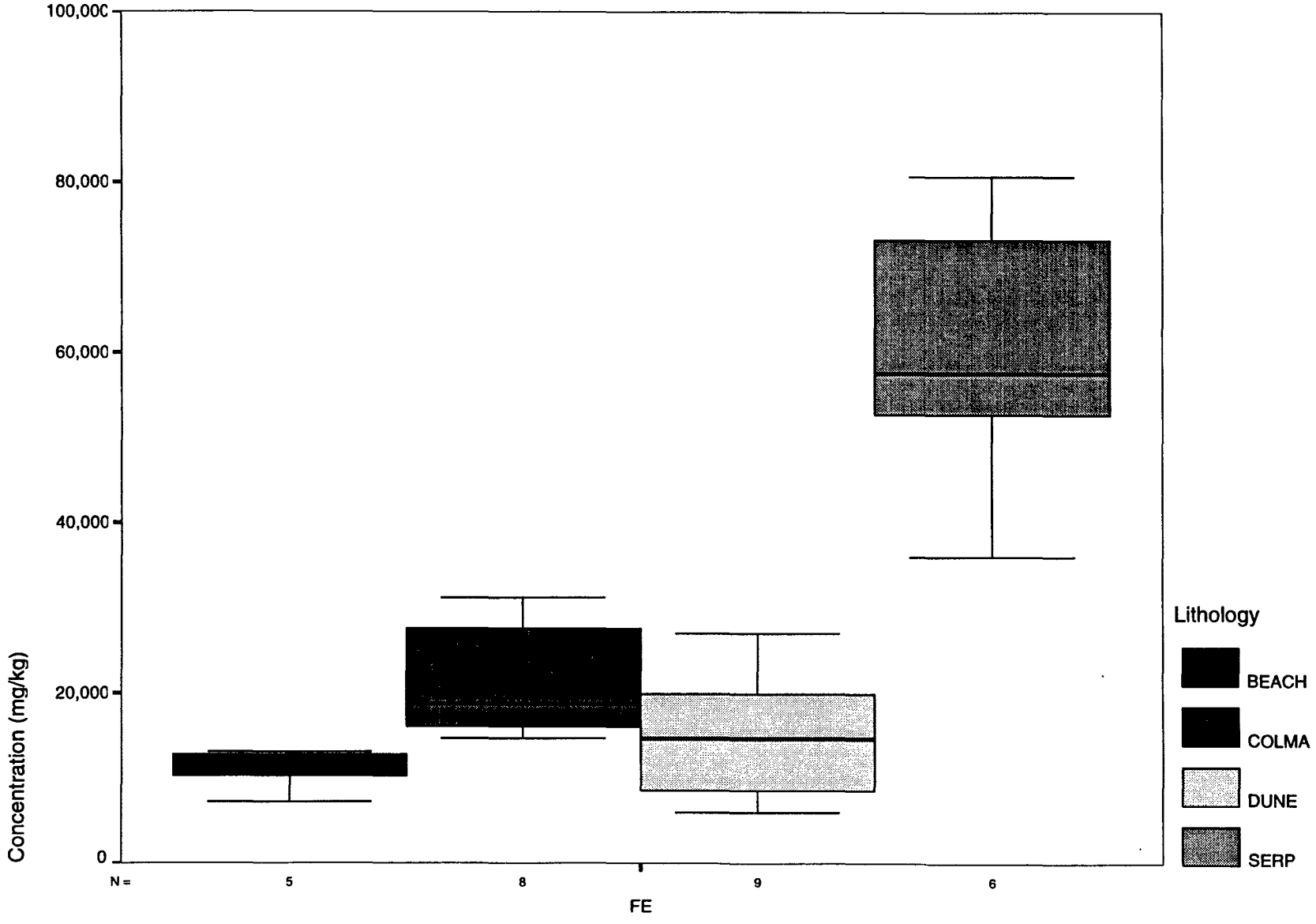
Cyanide



A-64

Presidio Background Soils

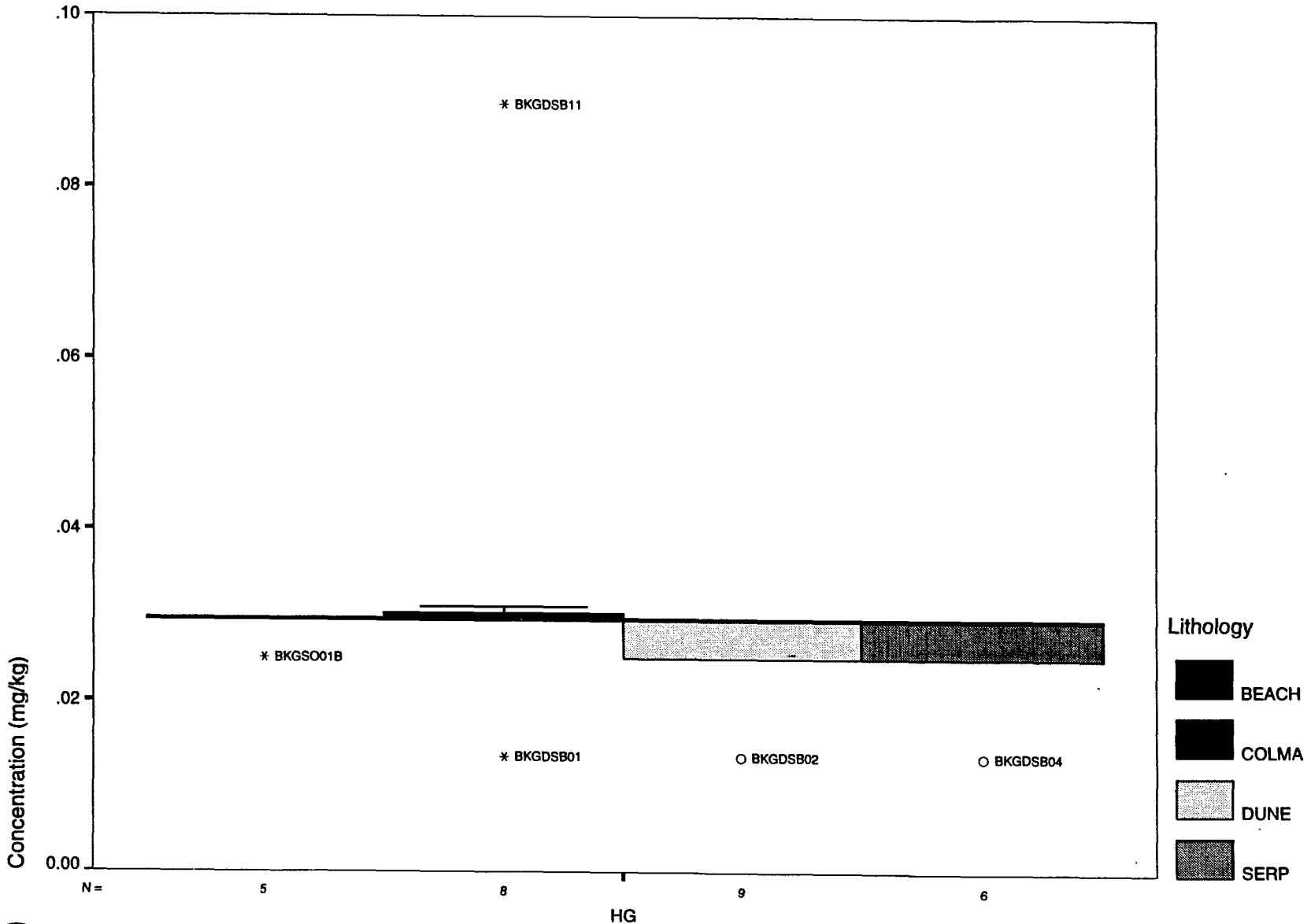
Iron



A-65

Presidio Background Soils

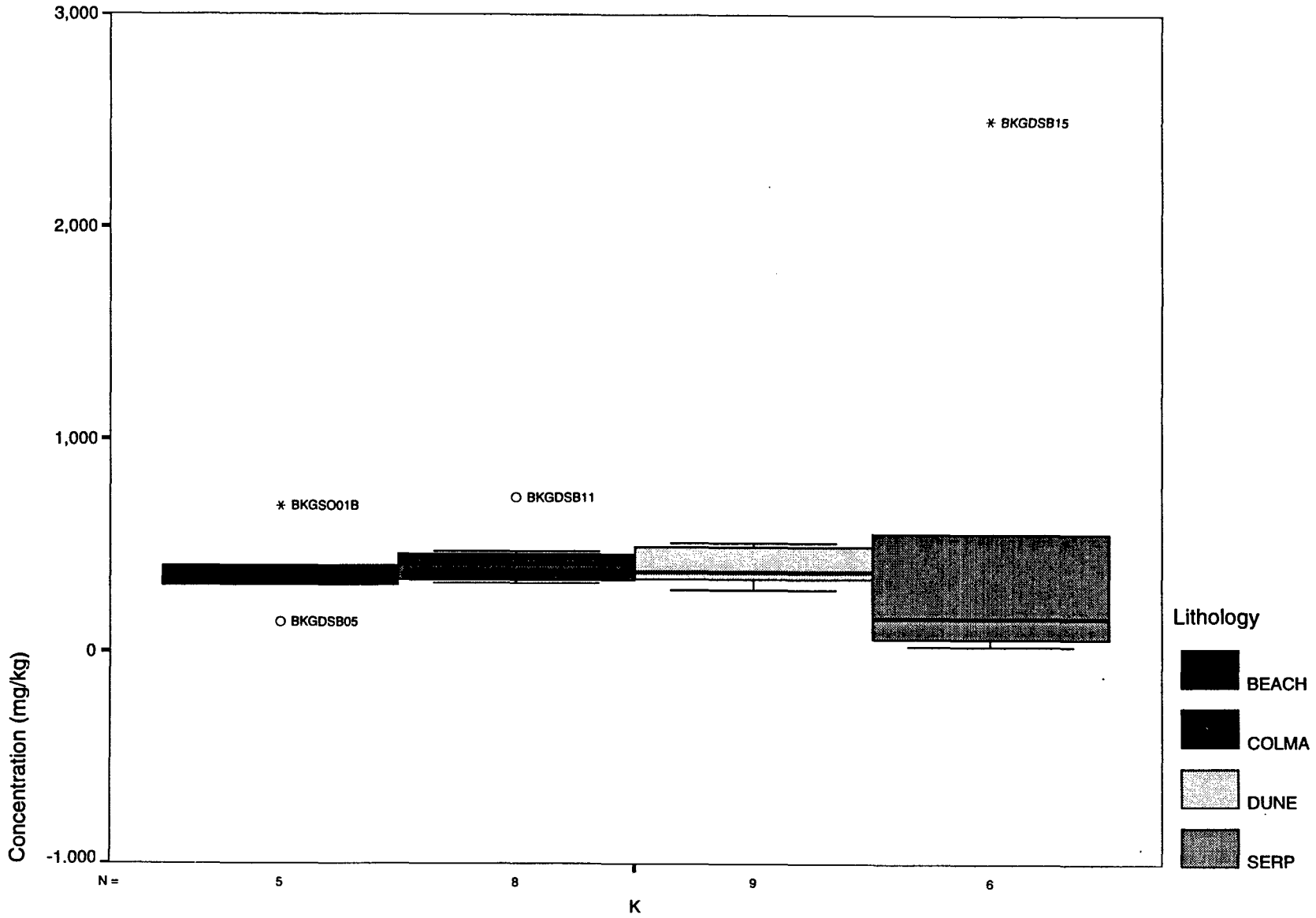
Mercury



A-66

Presidio Background Soils

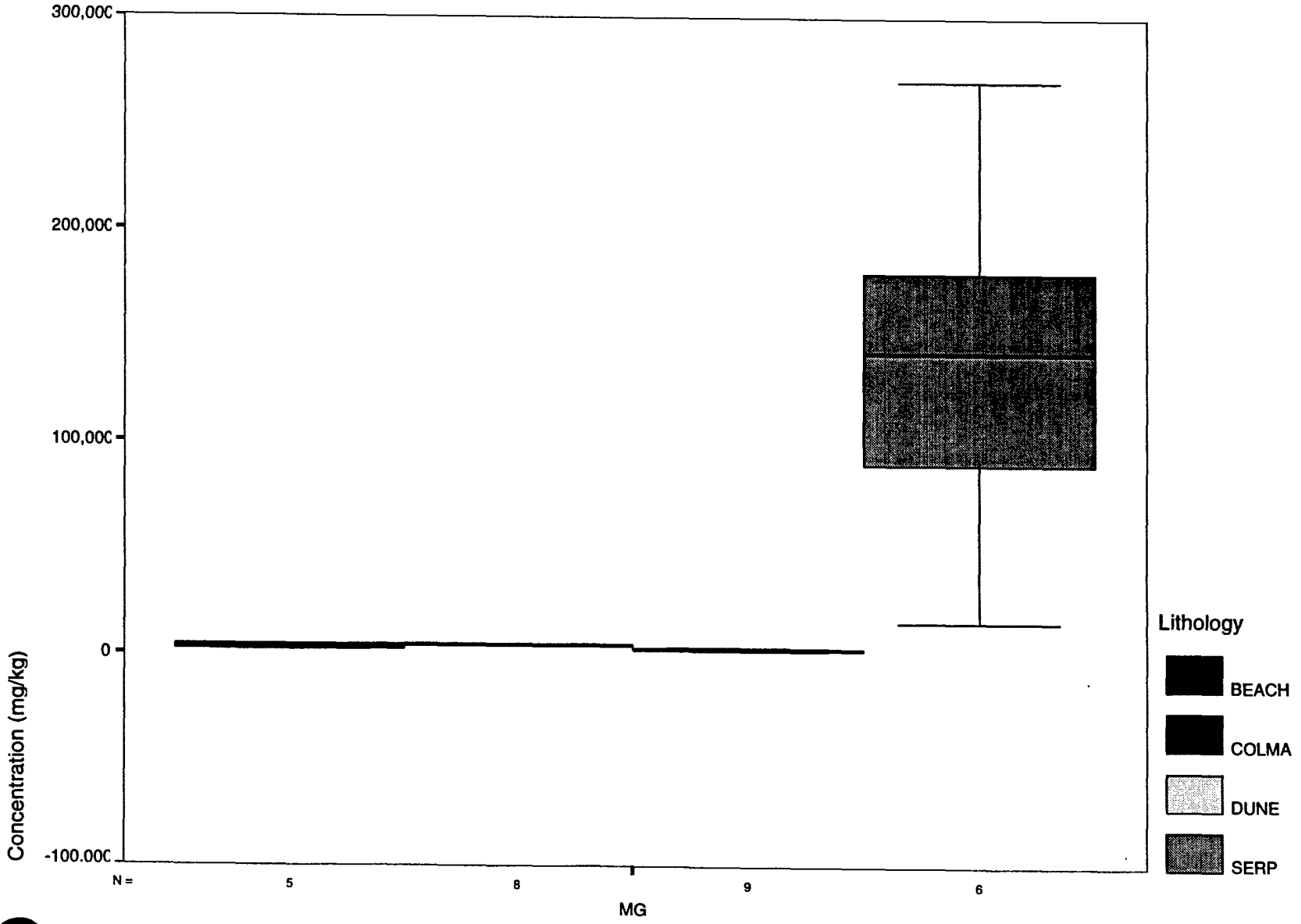
Potassium



A-67

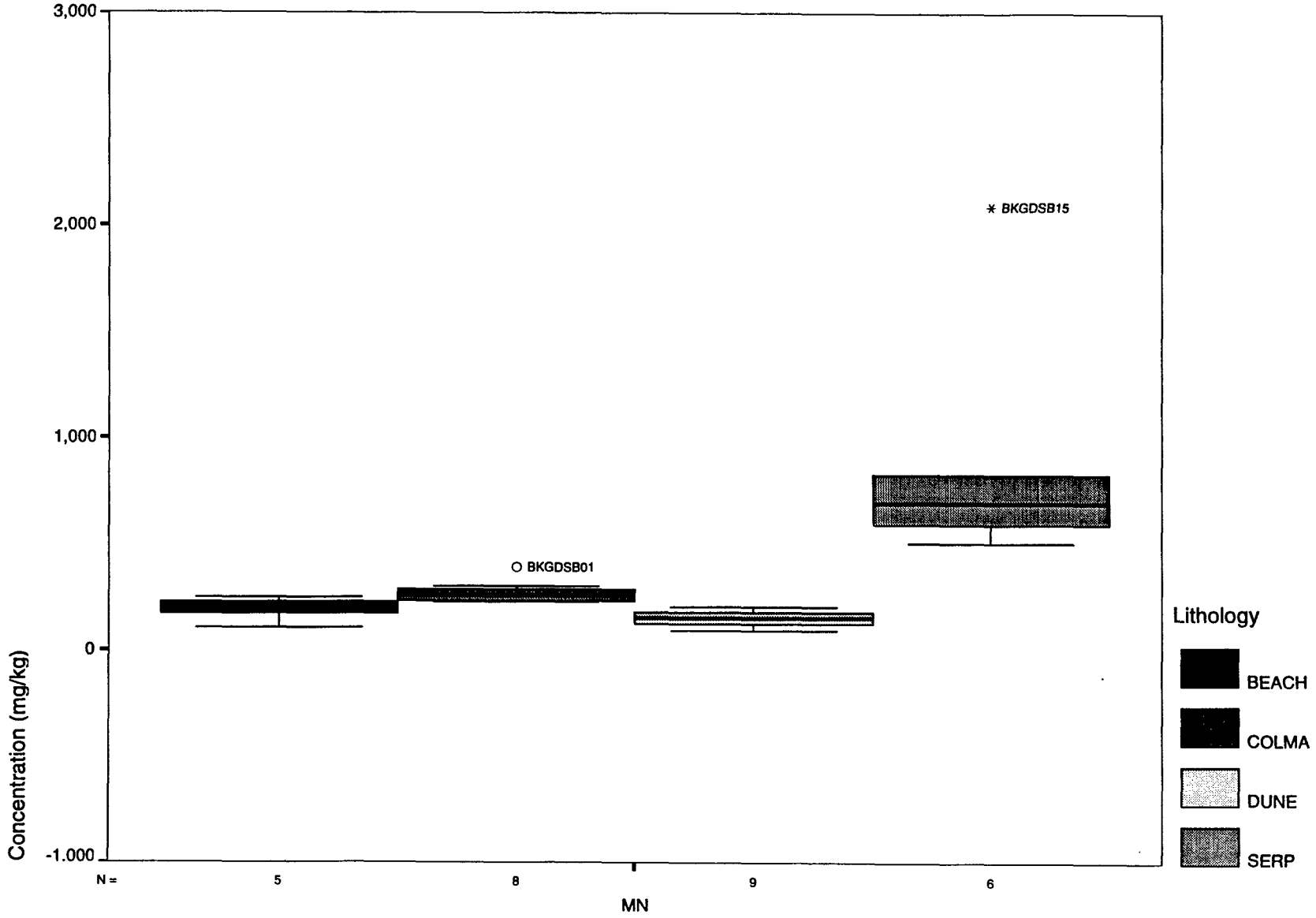
Presidio Background Soils

Magnesium



Presidio Background Soils

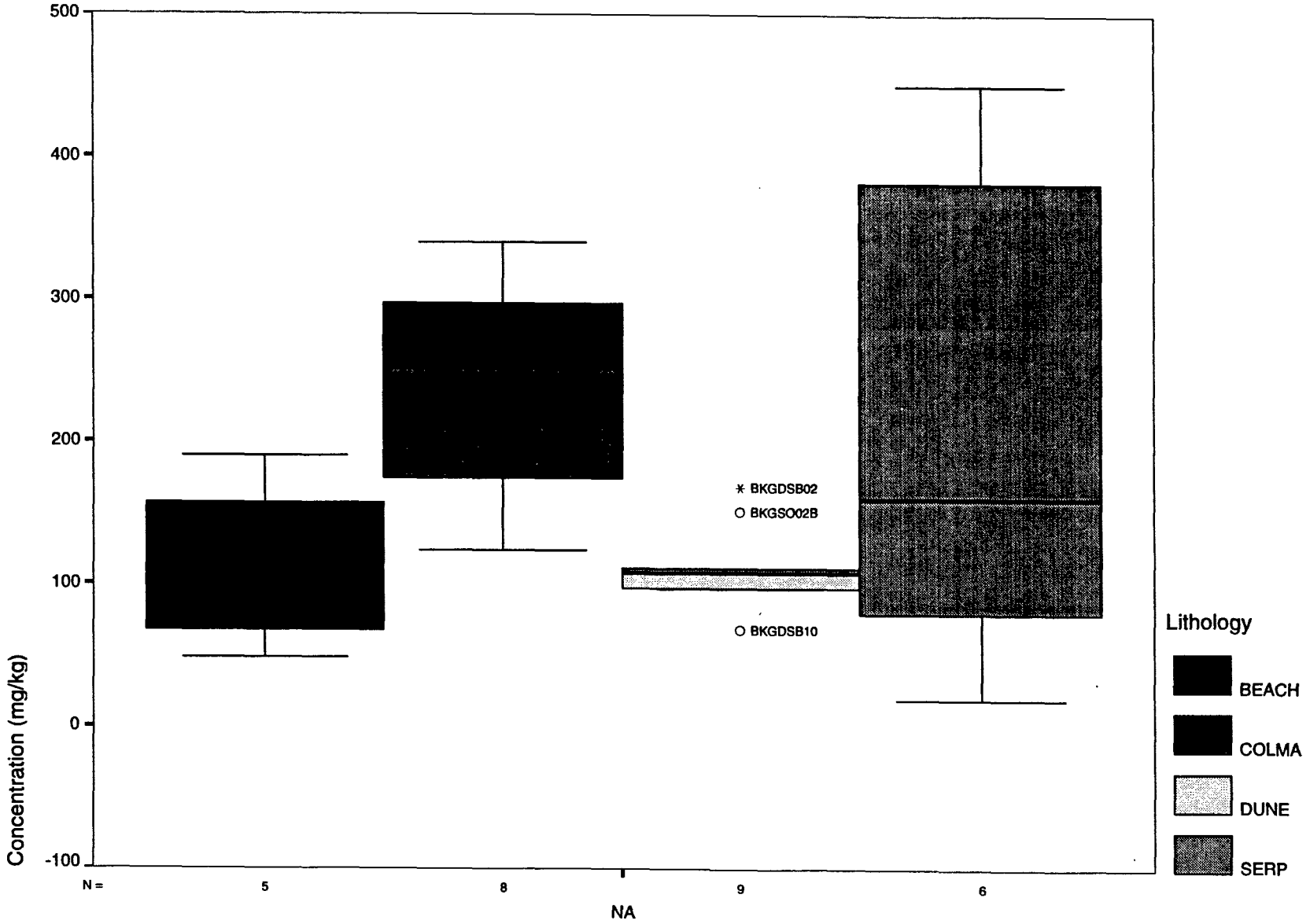
Manganese



A-69

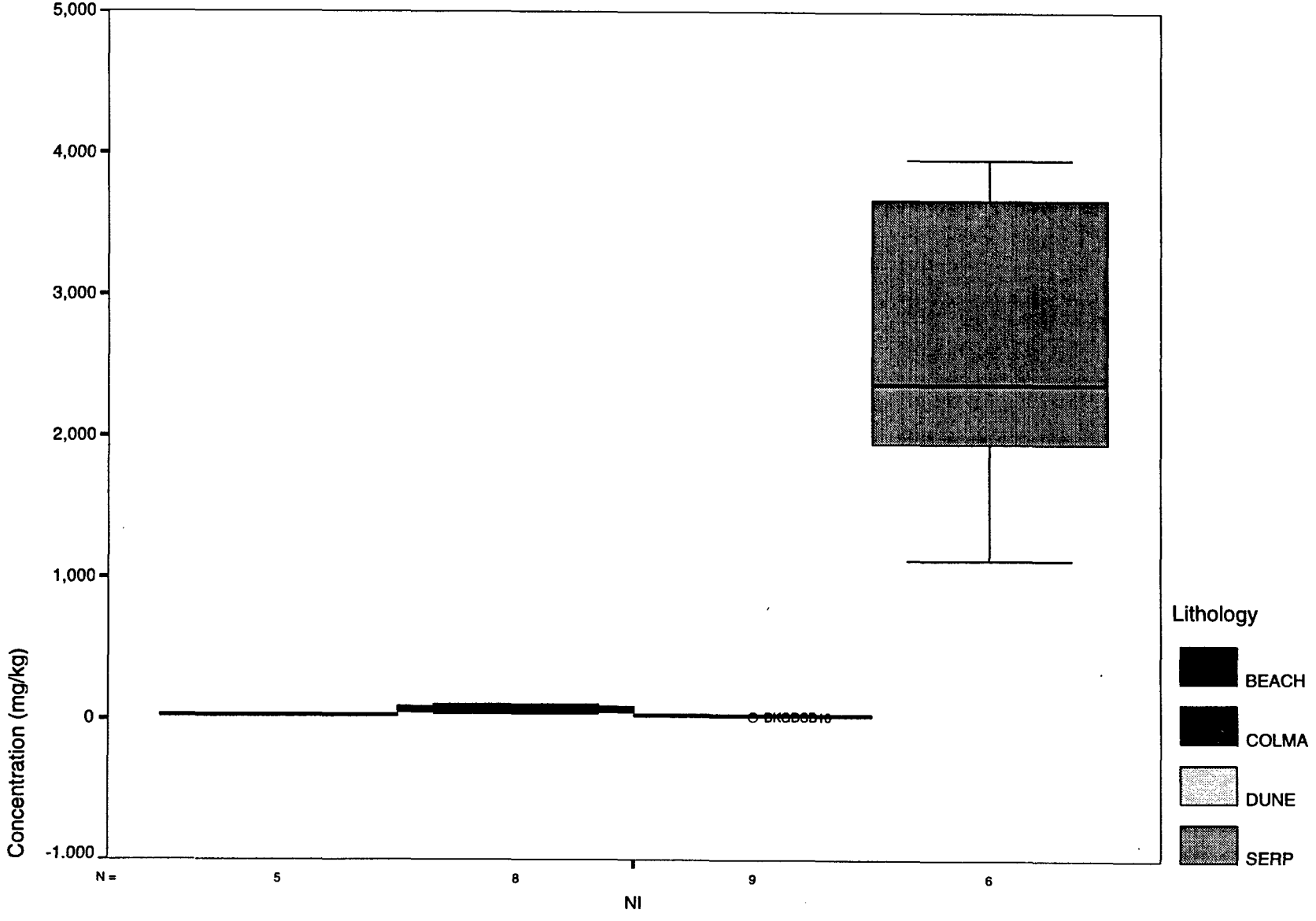
Presidio Background Soils

Sodium



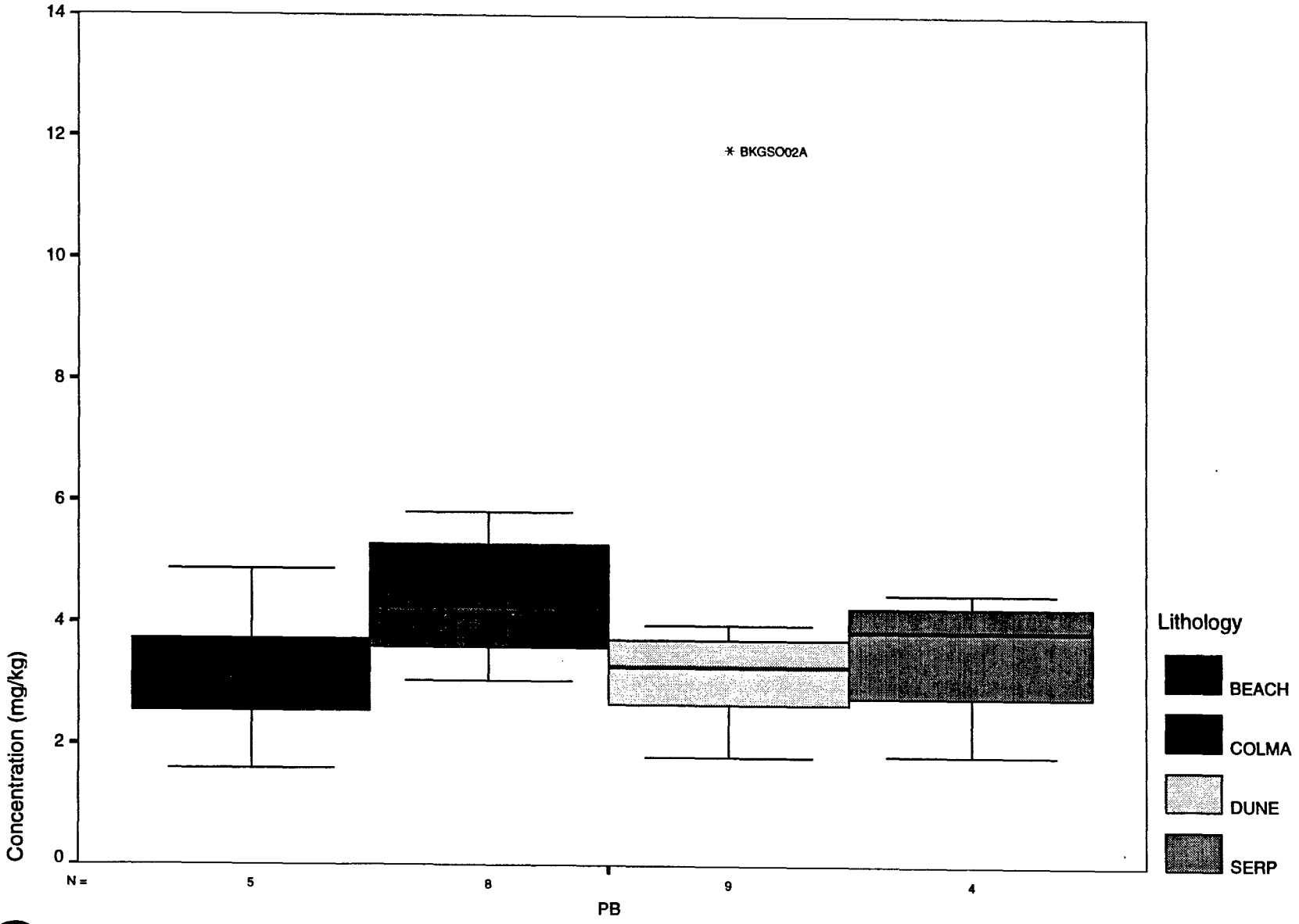
Presidio Background Soils

Nickel



Presidio Background Soils

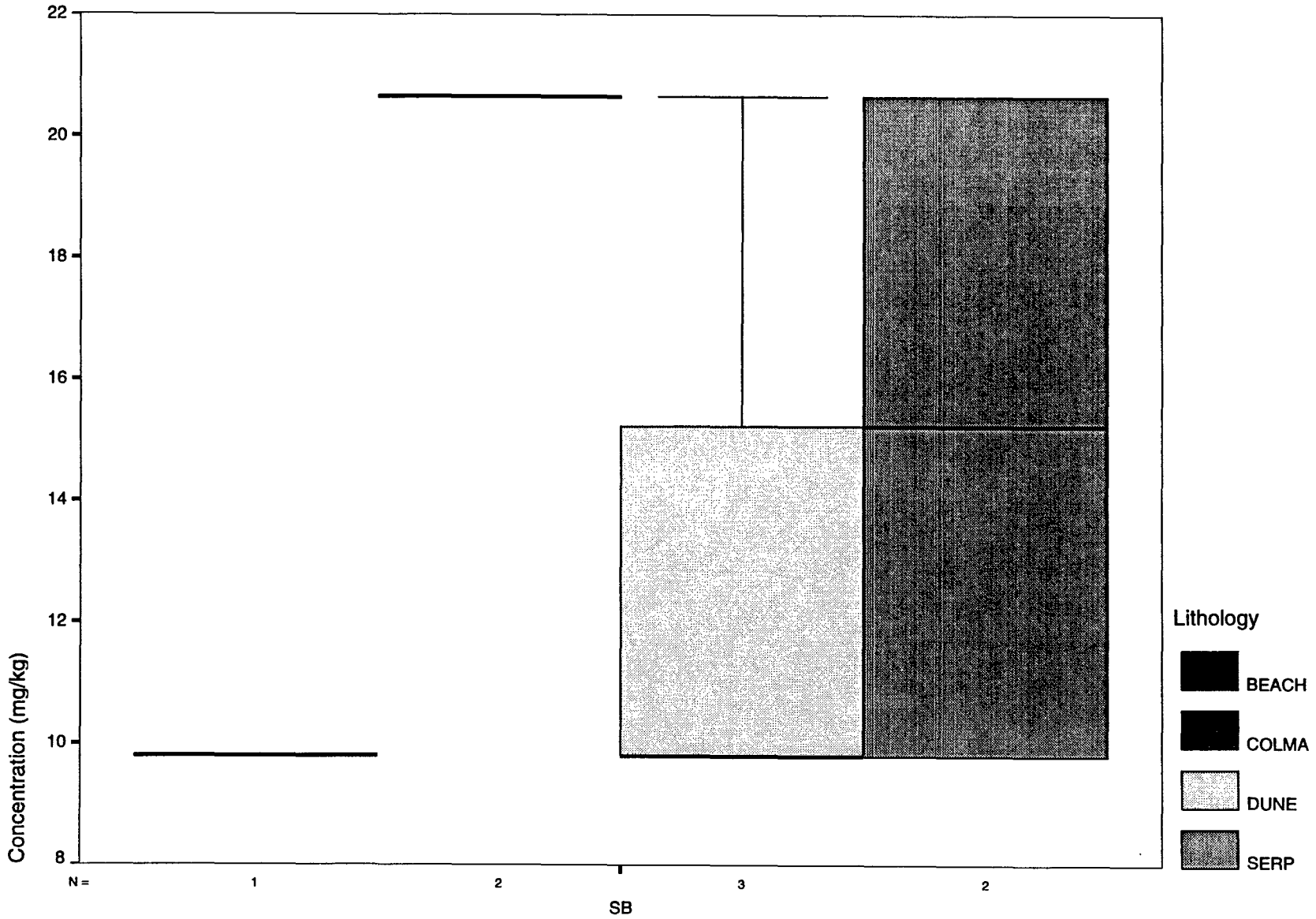
Lead



A-72

Presidio Background Soils

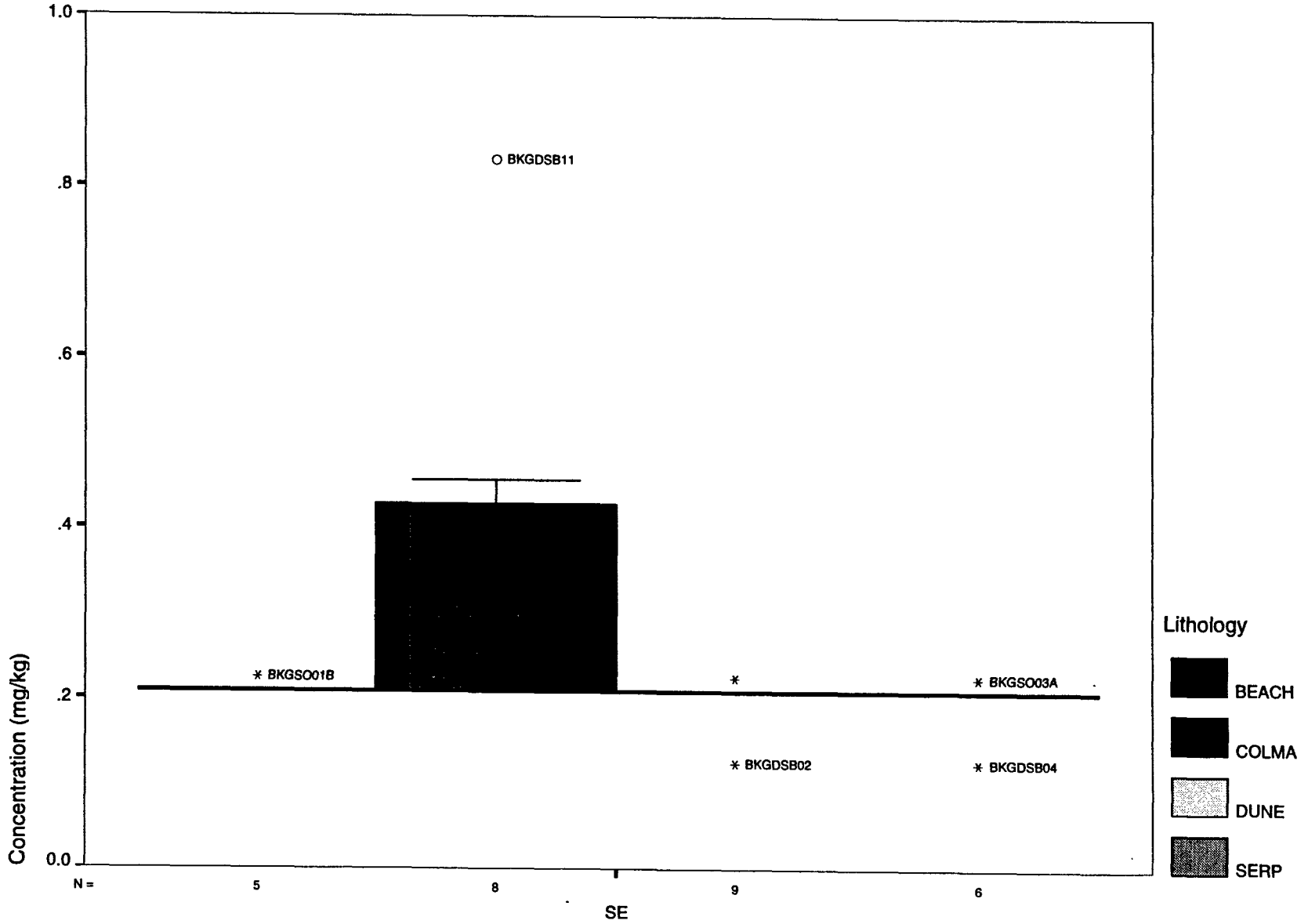
Antimony



A-73

Presidio Background Soils

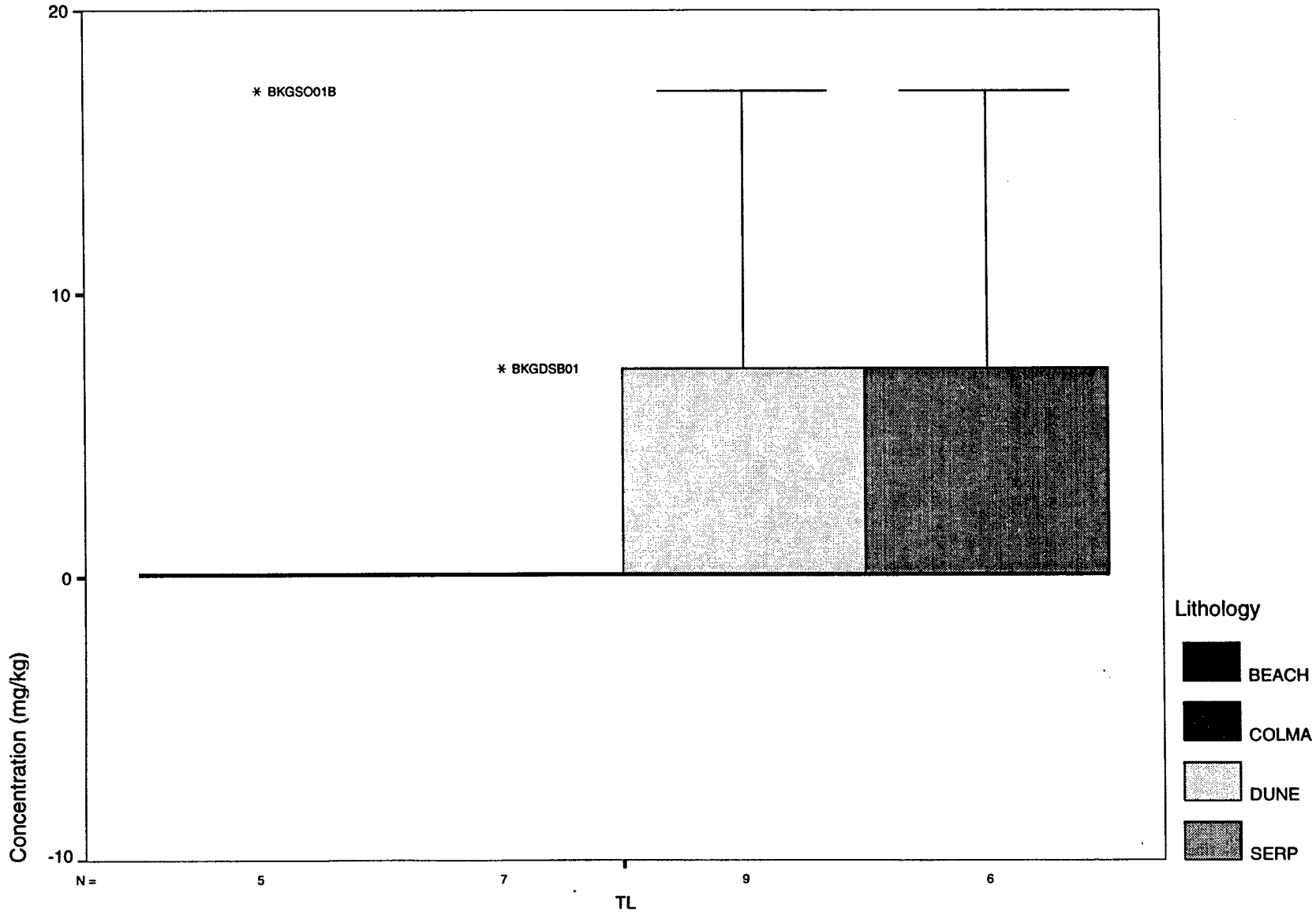
Selenium



A-74

Presidio Background Soils

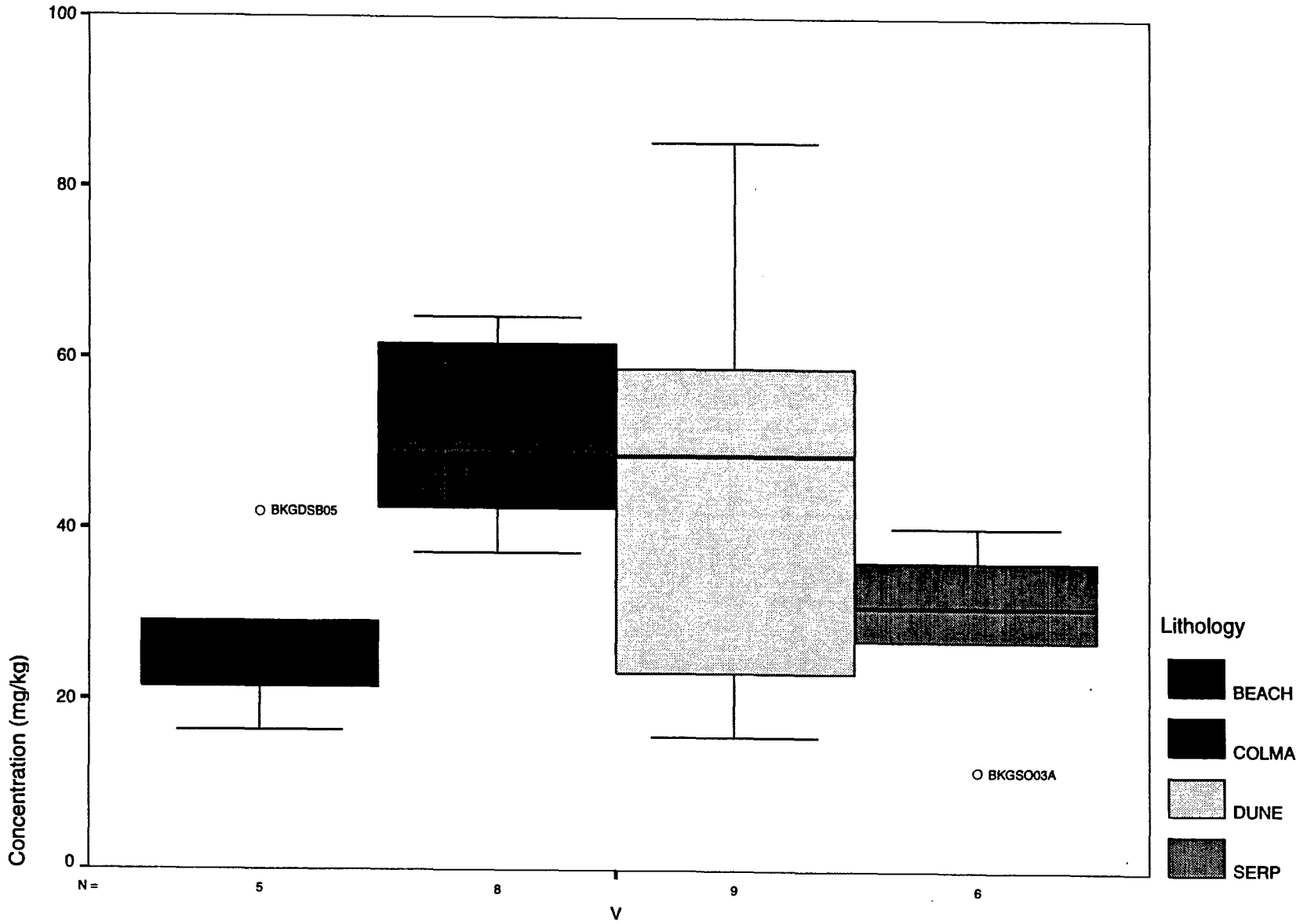
Thallium



A-75

Presidio Background Soils

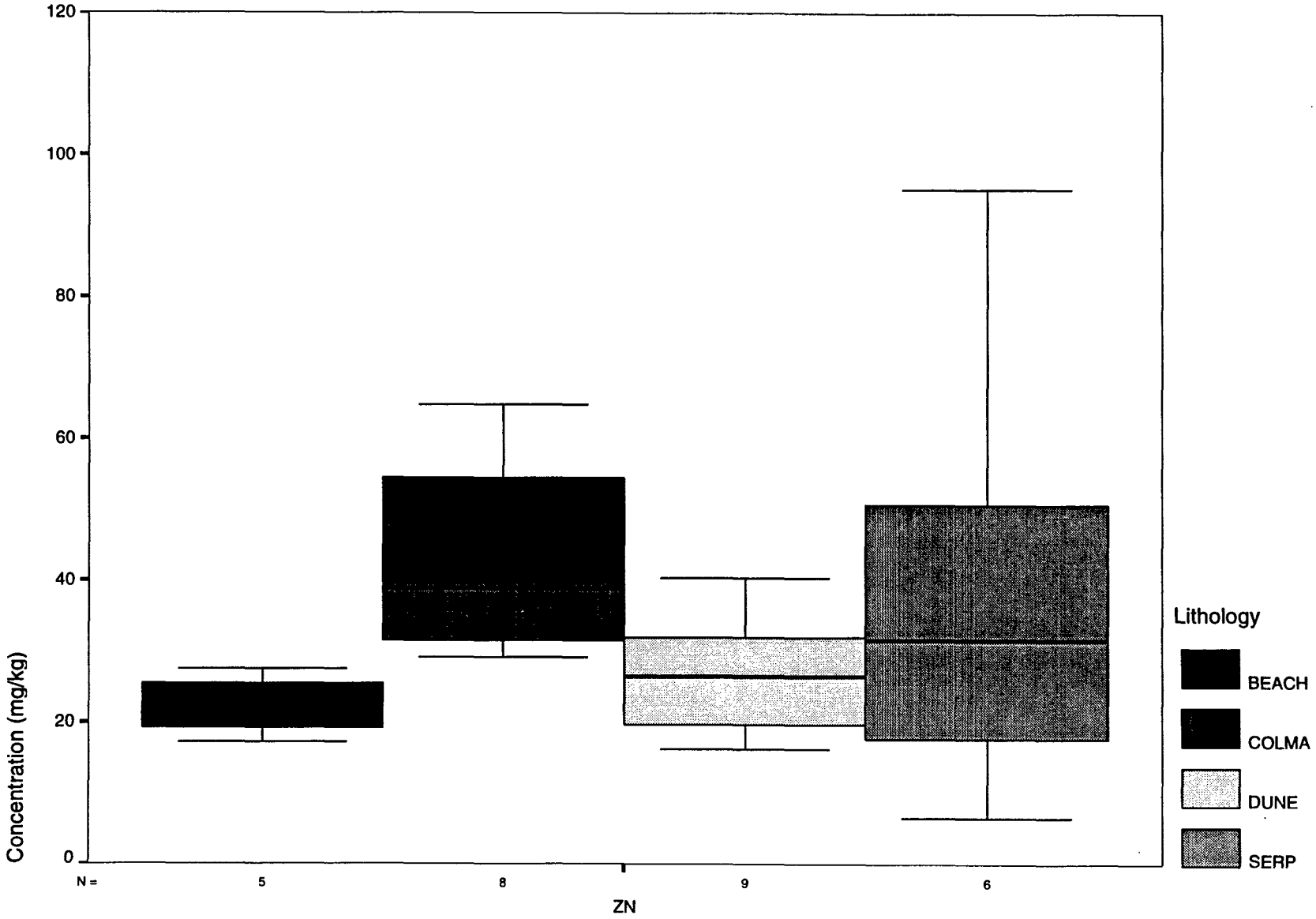
Vanadium



A-76

Presidio Background Soils

Zinc



A-77

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Appendix A
Distributional Testing Output and Cumulative Probability Plots

Beach/Dune Deposits A-81
Colma Formation A-163
Serpentinite A-245
Fill A-327

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Beach / Dune Deposits

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	A	B
1	DATA	ID
2	3027.0907	Sed-Al
3	3203.7815	Sed-Al
4	3256.5445	Sed-Al
5	3290	Sed-Al
6	3292.3077	Sed-Al
7	3330	Sed-Al
8	3400	Sed-Al
9	3490	Sed-Al
10	3510	Sed-Al
11	3600	Sed-Al
12	3688.7922	Sed-Al
13	3800	Sed-Al
14	3830	Sed-Al
15	3840	Sed-Al
16	3854.3897	Sed-Al
17	3880	Sed-Al
18	3917.1975	Sed-Al
19	3930	Sed-Al
20	3950	Sed-Al
21	3986.711	Sed-Al
22	4020	Sed-Al
23	4030	Sed-Al
24	4050	Sed-Al
25	4050	Sed-Al
26	4088.0503	Sed-Al
27	4100	Sed-Al
28	4110	Sed-Al
29	4120	Sed-Al
30	4120	Sed-Al
31	4144.0378	Sed-Al
32	4220	Sed-Al
33	4299.3631	Sed-Al
34	4340	Sed-Al
35	4340	Sed-Al
36	4364.5833	Sed-Al
37	4373.847	Sed-Al
38	4430.7692	Sed-Al
39	4440	Sed-Al
40	4480	Sed-Al
41	4522.293	Sed-Al
42	4560	Sed-Al
43	4580	Sed-Al
44	4609.6654	Sed-Al
45	4627.7205	Sed-Al
46	4642.487	Sed-Al
47	4645.8333	Sed-Al
48	4674.3697	Sed-Al
49	4693.6656	Sed-Al
50	4750	Sed-Al
51	4850.0517	Sed-Al
52	4900	Sed-Al
53	4940.265	Sed-Al
54	4983.3887	Sed-Al
55	4990	Sed-Al
56	5047.7327	Sed-Al
57	5070	Sed-Al
58	5077.527	Sed-Al
59	5084.2105	Sed-Al
60	5120	Sed-Al
61	5186.7305	Sed-Al
62	5200	Sed-Al
63	5200.913	Sed-Al
64	5229.3578	Sed-Al
65	5241.0901	Sed-Al
66	5252.351	Sed-Al
67	5273.769	Sed-Al

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	171	Mean	8157.662
Censored	------	Lognormal mean	8055.348
Detection limit or PQL	------	Std. devn.	5095.871
Method detection limit		Median	6039.689
TOTAL	171	Min.	3027.0907
ENTER DATA		Max	31000

Distribution Decision

Probability plot method	W test	D'Agostino's test
Lognormal distribution?	Normal distribution?	
r-squared is: 0.942	r-squared is: 0.809	

Recommendations

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	3027.0907	Sed-Al
3	3203.7815	Sed-Al
4	3256.5445	Sed-Al
5	3290	Sed-Al
6	3292.3077	Sed-Al
7	3330	Sed-Al
8	3400	Sed-Al
9	3490	Sed-Al
10	3510	Sed-Al
11	3600	Sed-Al
12	3688.7922	Sed-Al
13	3800	Sed-Al
14	3830	Sed-Al
15	3840	Sed-Al
16	3854.3897	Sed-Al
17	3880	Sed-Al
18	3917.1975	Sed-Al
19	3930	Sed-Al
20	3950	Sed-Al
21	3986.711	Sed-Al
22	4020	Sed-Al
23	4030	Sed-Al
24	4050	Sed-Al
25	4050	Sed-Al
26	4088.0503	Sed-Al
27	4100	Sed-Al
28	4110	Sed-Al
29	4120	Sed-Al
30	4120	Sed-Al
31	4144.0378	Sed-Al
32	4220	Sed-Al
33	4299.3631	Sed-Al
34	4340	Sed-Al
35	4340	Sed-Al
36	4364.5833	Sed-Al
37	4373.847	Sed-Al
38	4430.7692	Sed-Al
39	4440	Sed-Al
40	4480	Sed-Al
41	4522.293	Sed-Al
42	4560	Sed-Al
43	4580	Sed-Al
44	4609.6654	Sed-Al
45	4627.7205	Sed-Al
46	4642.487	Sed-Al
47	4645.8333	Sed-Al
48	4674.3697	Sed-Al
49	4693.6656	Sed-Al
50	4750	Sed-Al
51	4850.0517	Sed-Al
52	4900	Sed-Al
53	4940.265	Sed-Al
54	4983.3887	Sed-Al
55	4990	Sed-Al
56	5047.7327	Sed-Al
57	5070	Sed-Al
58	5077.527	Sed-Al
59	5084.2105	Sed-Al
60	5120	Sed-Al
61	5186.7305	Sed-Al
62	5200	Sed-Al
63	5200.913	Sed-Al
64	5229.3578	Sed-Al
65	5241.0901	Sed-Al
66	5252.351	Sed-Al
67	5273.769	Sed-Al

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	171	Mean	8157.662
Censored	------	Lognormal mean	8055.348
Detection limit or PQL	------	Std. devn.	5095.871
Method detection limit		Median	6039.689
TOTAL	171	Min.	3027.0907
ENTER DATA		Max.	31000

Distribution Decision

Probability plot method	W test	D'Agostino's test
Lognormal distribution?	Normal distribution?	
r-squared is: 0.942	r-squared is: 0.809	

Recommendations:

Assume lognormal distribution.

Y value is -0.8388. This lies within the tabled values of 1.4537 and -2.4264

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

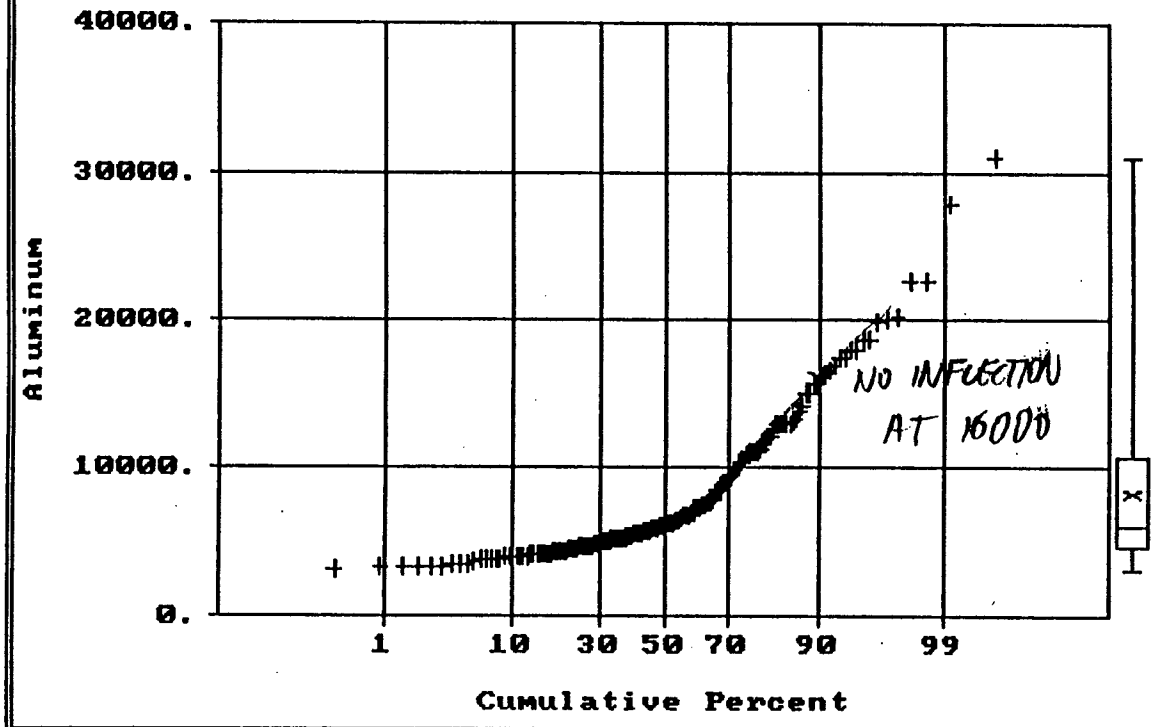
Lognormal

Normal

Neither

Sample size

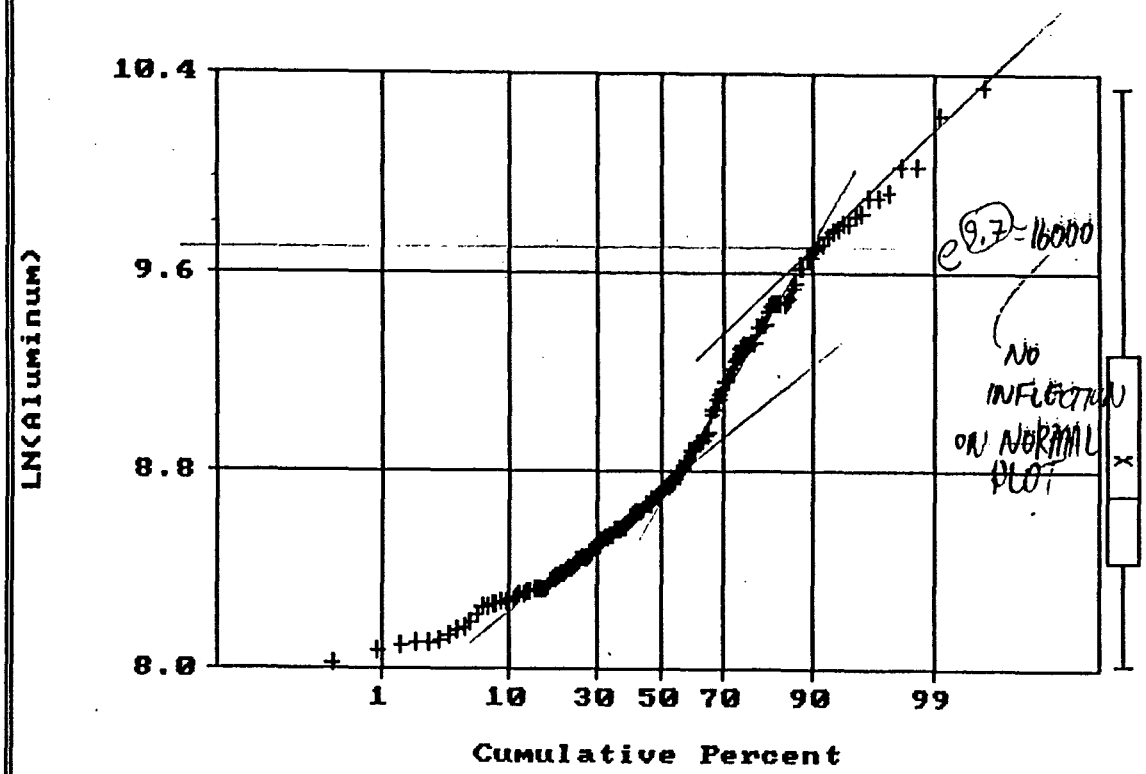
Normal Probability Plot for Aluminum
Data file: sed-all.dat



Statistics

N Total :	259
N Miss :	88
N Used :	171
Mean :	8157.662
Variance:	25967900.000
Std. Dev:	5095.871
% C.V. :	62.467
Skewness:	1.679
Kurtosis:	5.985
Minimum :	3027.091
25th % :	4602.249
Median :	6039.689
75th % :	10645.530
Maximum :	31000.000

Normal Probability Plot for LN(Aluminum)
Data file: sed-all.dat



Statistics

N Total :	259
N Miss :	88
N Used :	171
Mean :	8.854
Variance:	.281
Std. Dev:	.530
% C.V. :	5.985
Skewness:	.653
Kurtosis:	2.491
Minimum :	8.015
25th % :	8.434
Median :	8.706
75th % :	9.273
Maximum :	10.342

	A	B
1	DATA	ID
2	0.625	Sed-As
3	0.708	Sed-As
4	1.11	Sed-As
5	1.11	Sed-As
6	1.1706	Sed-As
7	1.2495	Sed-As
8	1.25	Sed-As
9	1.25	Sed-As
10	1.25	Sed-As
11	1.25	Sed-As
12	1.25	Sed-As
13	1.25	Sed-As
14	1.25	Sed-As
15	1.25	Sed-As
16	1.25	Sed-As
17	1.25	Sed-As
18	1.25	Sed-As
19	1.25	Sed-As
20	1.25	Sed-As
21	1.25	Sed-As
22	1.25	Sed-As
23	1.25	Sed-As
24	1.25	Sed-As
25	1.25	Sed-As
26	1.25	Sed-As
27	1.25	Sed-As
28	1.25	Sed-As
29	1.25	Sed-As
30	1.25	Sed-As
31	1.25	Sed-As
32	1.25	Sed-As
33	1.25	Sed-As
34	1.25	Sed-As
35	1.25	Sed-As
36	1.25	Sed-As
37	1.25	Sed-As
38	1.25	Sed-As
39	1.25	Sed-As
40	1.25	Sed-As
41	1.25	Sed-As
42	1.25	Sed-As
43	1.25	Sed-As
44	1.25	Sed-As
45	1.41	Sed-As
46	1.44	Sed-As
47	1.4797	Sed-As
48	1.4867	Sed-As
49	1.5063	Sed-As
50	1.6649	Sed-As
51	1.6807	Sed-As
52	1.7167	Sed-As
53	1.72	Sed-As
54	1.72	Sed-As
55	1.7813	Sed-As
56	1.7941	Sed-As
57	1.85	Sed-As
58	1.8801	Sed-As
59	1.9	Sed-As
60	1.9958	Sed-As
61	2.13	Sed-As
62	2.1823	Sed-As
63	2.19	Sed-As
64	2.2293	Sed-As
65	2.24	Sed-As
66	2.26	Sed-As
67	2.2917	Sed-As

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	173	Mean	2.825
Censored	------	Lognormal mean	2.804
Detection limit or PQL	------	Std. devn.	1.955
Method detection limit		Median	2.69
TOTAL	173	Min.	0.625
ENTER DATA		Max.	21.645

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.933

Normal distribution? r-squared is: 0.605

Recommendations:

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	0.625	Sed-As
3	0.708	Sed-As
4	1.11	Sed-As
5	1.11	Sed-As
6	1.1706	Sed-As
7	1.2495	Sed-As
8	1.25	Sed-As
9	1.25	Sed-As
10	1.25	Sed-As
11	1.25	Sed-As
12	1.25	Sed-As
13	1.25	Sed-As
14	1.25	Sed-As
15	1.25	Sed-As
16	1.25	Sed-As
17	1.25	Sed-As
18	1.25	Sed-As
19	1.25	Sed-As
20	1.25	Sed-As
21	1.25	Sed-As
22	1.25	Sed-As
23	1.25	Sed-As
24	1.25	Sed-As
25	1.25	Sed-As
26	1.25	Sed-As
27	1.25	Sed-As
28	1.25	Sed-As
29	1.25	Sed-As
30	1.25	Sed-As
31	1.25	Sed-As
32	1.25	Sed-As
33	1.25	Sed-As
34	1.25	Sed-As
35	1.25	Sed-As
36	1.25	Sed-As
37	1.25	Sed-As
38	1.25	Sed-As
39	1.25	Sed-As
40	1.25	Sed-As
41	1.25	Sed-As
42	1.25	Sed-As
43	1.25	Sed-As
44	1.25	Sed-As
45	1.41	Sed-As
46	1.44	Sed-As
47	1.4797	Sed-As
48	1.4867	Sed-As
49	1.5063	Sed-As
50	1.6649	Sed-As
51	1.6807	Sed-As
52	1.7167	Sed-As
53	1.72	Sed-As
54	1.72	Sed-As
55	1.7813	Sed-As
56	1.7941	Sed-As
57	1.85	Sed-As
58	1.8801	Sed-As
59	1.9	Sed-As
60	1.9958	Sed-As
61	2.13	Sed-As
62	2.1823	Sed-As
63	2.19	Sed-As
64	2.2293	Sed-As
65	2.24	Sed-As
66	2.26	Sed-As
67	2.2917	Sed-As

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	173	Mean	2.825
Censored	------	Lognormal mean	2.804
Detection limit or PQL	------	Std. devn.	1.955
Method detection limit		Median	2.69
TOTAL	173	Min.	0.625
ENTER DATA		Max.	21.645

Distribution Decision

Probability plot method	W test	D'Agostino's test
Lognormal distribution?	Normal distribution?	
r-squared is: 0.933	r-squared is: 0.605	

Recommendations

Reject lognormal distribution.

Y value is -2.7928. This lies outside the tabled values of 1.4566 and -2.4239

Reject normal distribution.

Y value is -32.2516. This lies outside the tabled values of 1.4566 and -2.4239

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

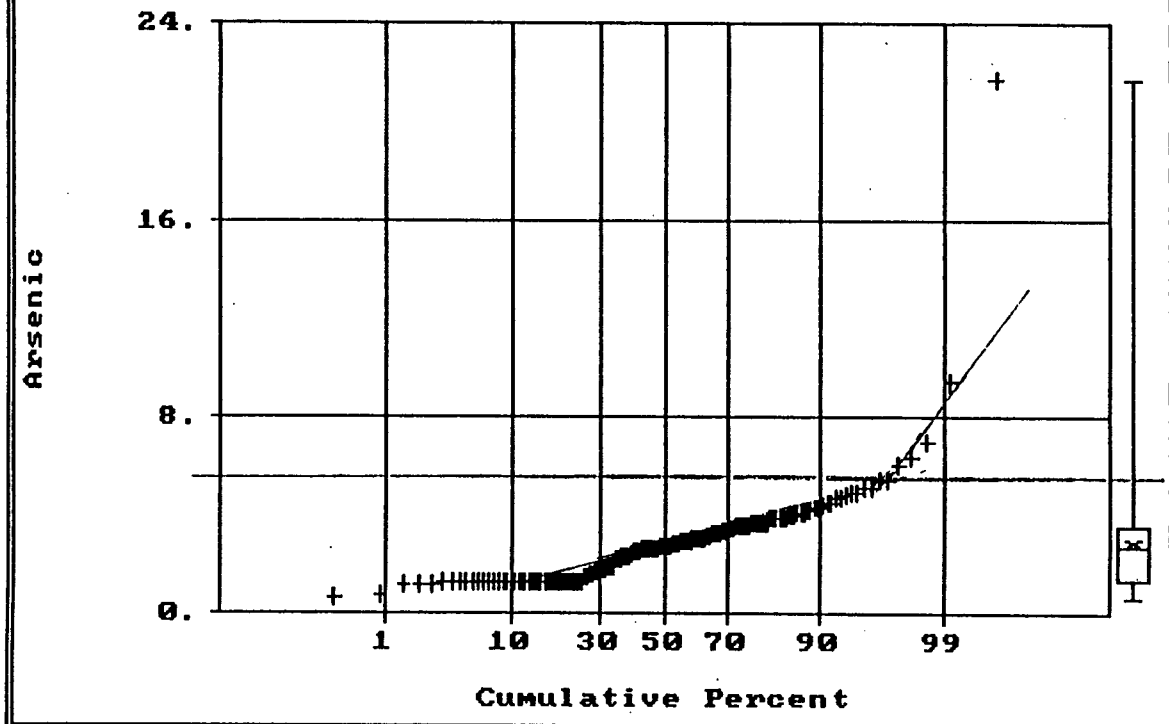
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Arsenic
Data file: sed-all.dat



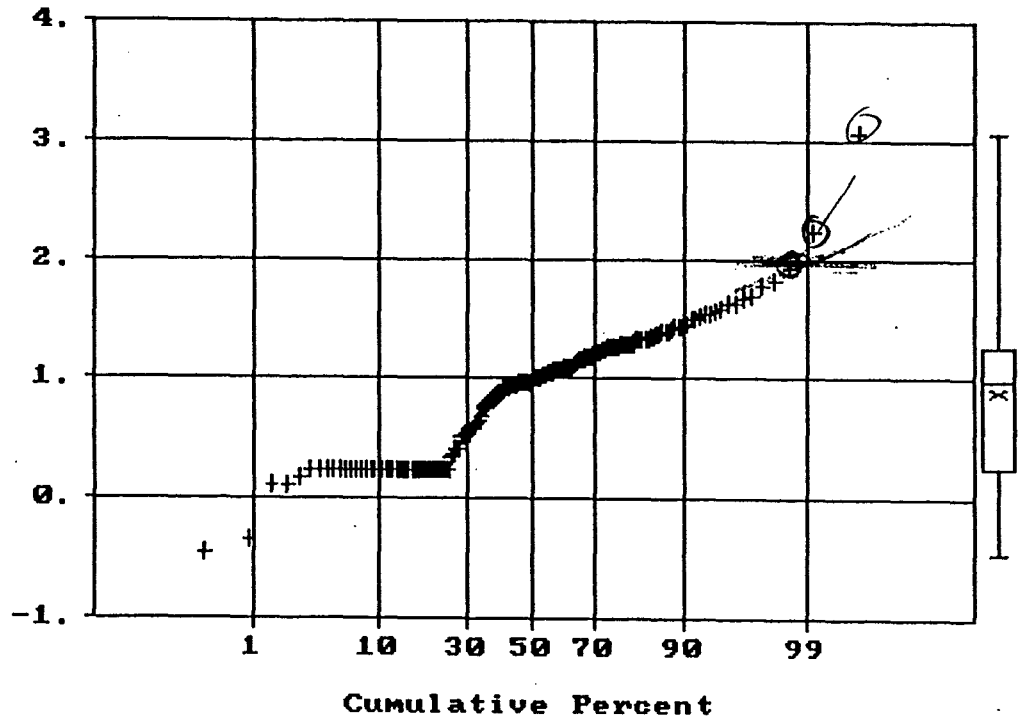
Statistics

N Total :	259
N Miss :	86
N Used :	173
Mean :	2.825
Variance:	3.821
Std. Dev:	1.955
% C.V. :	69.210
Skewness:	5.481
Kurtosis:	51.439
Minimum :	.625
25th % :	1.290
Median :	2.690
75th % :	3.520
Maximum :	21.645

Threshold = 6.0

A-89

Normal Probability Plot for LN(Arsenic)
Data file: sed-all.dat



Statistics

N Total :	259
N Miss :	86
N Used :	173
Mean :	.893
Variance:	.277
Std. Dev:	.526
% C.V. :	58.956
Skewness:	.177
Kurtosis:	3.640
Minimum :	-.470
25th % :	.253
Median :	.990
75th % :	1.258
Maximum :	3.075

Threshold= 6.0

	A	B
1	DATA	ID
2	7.1817	Sed-Ba
3	7.2821	Sed-Ba
4	7.8676	Sed-Ba
5	7.89	Sed-Ba
6	8.1174	Sed-Ba
7	9.1328	Sed-Ba
8	9.23	Sed-Ba
9	9.35	Sed-Ba
10	9.403	Sed-Ba
11	9.5597	Sed-Ba
12	9.77	Sed-Ba
13	9.88	Sed-Ba
14	10.223	Sed-Ba
15	10.3	Sed-Ba
16	10.3	Sed-Ba
17	10.4459	Sed-Ba
18	10.5208	Sed-Ba
19	10.7853	Sed-Ba
20	10.8	Sed-Ba
21	10.8	Sed-Ba
22	10.9	Sed-Ba
23	10.9	Sed-Ba
24	11	Sed-Ba
25	11.2721	Sed-Ba
26	11.317	Sed-Ba
27	11.7647	Sed-Ba
28	11.875	Sed-Ba
29	11.934	Sed-Ba
30	12.18	Sed-Ba
31	12.8931	Sed-Ba
32	13.083	Sed-Ba
33	13.089	Sed-Ba
34	13.1579	Sed-Ba
35	13.1606	Sed-Ba
36	13.239	Sed-Ba
37	13.3	Sed-Ba
38	14	Sed-Ba
39	14.1	Sed-Ba
40	14.397	Sed-Ba
41	14.5218	Sed-Ba
42	14.6	Sed-Ba
43	14.7	Sed-Ba
44	14.726	Sed-Ba
45	14.8	Sed-Ba
46	14.8958	Sed-Ba
47	15.0685	Sed-Ba
48	15.084	Sed-Ba
49	15.2	Sed-Ba
50	15.303	Sed-Ba
51	15.348	Sed-Ba
52	15.3931	Sed-Ba
53	15.5	Sed-Ba
54	16	Sed-Ba
55	16.1	Sed-Ba
56	16.2	Sed-Ba
57	16.2134	Sed-Ba
58	16.376	Sed-Ba
59	16.9905	Sed-Ba
60	17.0631	Sed-Ba
61	17.1	Sed-Ba
62	17.5	Sed-Ba
63	17.5385	Sed-Ba
64	17.7198	Sed-Ba
65	18	Sed-Ba
66	18.2	Sed-Ba
67	18.5	Sed-Ba

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	171	Mean	60.765
Censored	------	Lognormal mean	55.660
Detection limit or PQL	------	Std. devn.	90.661
Method detection limit		Median	26
TOTAL	171	Min.	7.1817
ENTER DATA		Max	673

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.939

Normal distribution? r-squared is: 0.566

Recommendations:

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	7.1817	Sed-Ba
3	7.2821	Sed-Ba
4	7.8676	Sed-Ba
5	7.89	Sed-Ba
6	8.1174	Sed-Ba
7	9.1328	Sed-Ba
8	9.23	Sed-Ba
9	9.35	Sed-Ba
10	9.403	Sed-Ba
11	9.5597	Sed-Ba
12	9.77	Sed-Ba
13	9.88	Sed-Ba
14	10.223	Sed-Ba
15	10.3	Sed-Ba
16	10.3	Sed-Ba
17	10.4459	Sed-Ba
18	10.5208	Sed-Ba
19	10.7853	Sed-Ba
20	10.8	Sed-Ba
21	10.8	Sed-Ba
22	10.9	Sed-Ba
23	10.9	Sed-Ba
24	11	Sed-Ba
25	11.2721	Sed-Ba
26	11.317	Sed-Ba
27	11.7647	Sed-Ba
28	11.875	Sed-Ba
29	11.934	Sed-Ba
30	12.18	Sed-Ba
31	12.8931	Sed-Ba
32	13.083	Sed-Ba
33	13.089	Sed-Ba
34	13.1579	Sed-Ba
35	13.1606	Sed-Ba
36	13.239	Sed-Ba
37	13.3	Sed-Ba
38	14	Sed-Ba
39	14.1	Sed-Ba
40	14.397	Sed-Ba
41	14.5218	Sed-Ba
42	14.6	Sed-Ba
43	14.7	Sed-Ba
44	14.726	Sed-Ba
45	14.8	Sed-Ba
46	14.8958	Sed-Ba
47	15.0685	Sed-Ba
48	15.084	Sed-Ba
49	15.2	Sed-Ba
50	15.303	Sed-Ba
51	15.348	Sed-Ba
52	15.3931	Sed-Ba
53	15.5	Sed-Ba
54	16	Sed-Ba
55	16.1	Sed-Ba
56	16.2	Sed-Ba
57	16.2134	Sed-Ba
58	16.376	Sed-Ba
59	16.9905	Sed-Ba
60	17.0631	Sed-Ba
61	17.1	Sed-Ba
62	17.5	Sed-Ba
63	17.5385	Sed-Ba
64	17.7198	Sed-Ba
65	18	Sed-Ba
66	18.2	Sed-Ba
67	18.5	Sed-Ba

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	171	Mean	60.765
Censored	------	Lognormal mean	55.660
Detection limit or PQL	------	Std. devn.	90.661
Method detection limit		Median	26
TOTAL	171	Min.	7.1817
ENTER DATA		Max	673

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.939

Normal distribution? r-squared is: 0.566

Recommendations:

Assume lognormal distribution.

Y value is -1.2622. This lies within the tabled values of 1.4537 and -2.4264

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

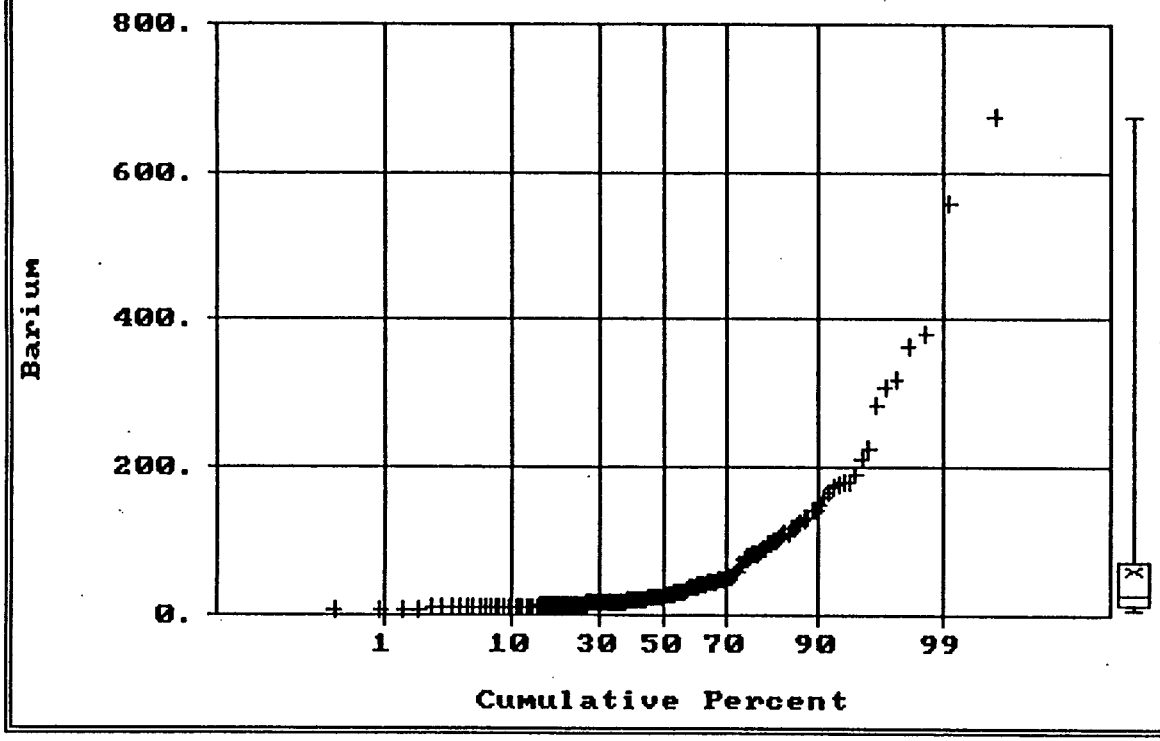
Lognormal

Normal

Neither

Sample size

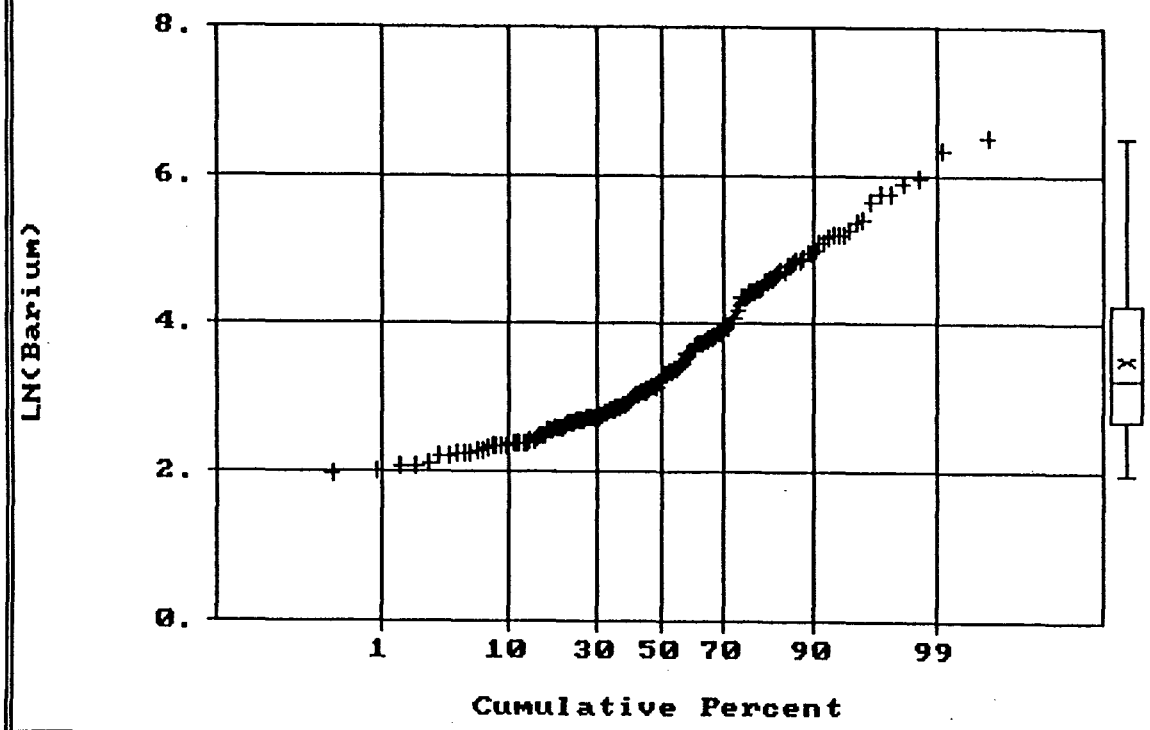
Normal Probability Plot for Barium
Data file: sed-all.dat



Statistics

N Total :	259
N Miss :	88
N Used :	171
Mean :	60.765
Variance:	8219.330
Std. Dev:	90.661
% C.V. :	149.198
Skewness:	3.707
Kurtosis:	20.458
Minimum :	7.182
25th % :	14.719
Median :	26.000
75th % :	71.375
Maximum :	673.000

Normal Probability Plot for LN(Barium)
Data file: sed-all.dat



Statistics

N Total :	259
N Miss :	88
N Used :	171
Mean :	3.496
Variance:	1.047
Std. Dev:	1.023
% C.V. :	29.275
Skewness:	.721
Kurtosis:	2.707
Minimum :	1.972
25th % :	2.689
Median :	3.258
75th % :	4.267
Maximum :	6.512

None

	A	B
1	DATA	ID
2	0.1262	Sed-Be
3	0.1295	Sed-Be
4	0.1313	Sed-Be
5	0.1338	Sed-Be
6	0.1344	Sed-Be
7	0.1351	Sed-Be
8	0.1355	Sed-Be
9	0.1488	Sed-Be
10	0.1534	Sed-Be
11	0.1628	Sed-Be
12	0.1646	Sed-Be
13	0.1661	Sed-Be
14	0.1696	Sed-Be
15	0.1703	Sed-Be
16	0.1712	Sed-Be
17	0.1716	Sed-Be
18	0.1717	Sed-Be
19	0.176	Sed-Be
20	0.1762	Sed-Be
21	0.1803	Sed-Be
22	0.1906	Sed-Be
23	0.193	Sed-Be
24	0.1938	Sed-Be
25	0.1943	Sed-Be
26	0.1951	Sed-Be
27	0.1982	Sed-Be
28	0.2007	Sed-Be
29	0.201	Sed-Be
30	0.2015	Sed-Be
31	0.2021	Sed-Be
32	0.208	Sed-Be
33	0.2086	Sed-Be
34	0.2135	Sed-Be
35	0.2135	Sed-Be
36	0.2135	Sed-Be
37	0.2135	Sed-Be
38	0.2135	Sed-Be
39	0.2135	Sed-Be
40	0.2135	Sed-Be
41	0.2135	Sed-Be
42	0.2135	Sed-Be
43	0.2135	Sed-Be
44	0.2135	Sed-Be
45	0.2135	Sed-Be
46	0.2135	Sed-Be
47	0.2135	Sed-Be
48	0.2135	Sed-Be
49	0.2135	Sed-Be
50	0.2135	Sed-Be
51	0.2135	Sed-Be
52	0.2135	Sed-Be
53	0.2135	Sed-Be
54	0.2135	Sed-Be
55	0.2135	Sed-Be
56	0.2135	Sed-Be
57	0.2135	Sed-Be
58	0.2135	Sed-Be
59	0.2135	Sed-Be
60	0.2135	Sed-Be
61	0.2135	Sed-Be
62	0.2135	Sed-Be
63	0.2135	Sed-Be
64	0.2135	Sed-Be
65	0.2135	Sed-Be
66	0.2135	Sed-Be
67	0.2135	Sed-Be

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	171	Mean	0.385
Censored	------	Lognormal mean	0.375
Detection limit or PQL	------	Std. devn.	0.287
Method detection limit		Median	0.25
TOTAL	171	Min.	0.1262
ENTER DATA		Max.	1.3505

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.852

Normal distribution? r-squared is: 0.738

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	0.1262	Sed-Be
3	0.1295	Sed-Be
4	0.1313	Sed-Be
5	0.1338	Sed-Be
6	0.1344	Sed-Be
7	0.1351	Sed-Be
8	0.1355	Sed-Be
9	0.1488	Sed-Be
10	0.1534	Sed-Be
11	0.1628	Sed-Be
12	0.1646	Sed-Be
13	0.1661	Sed-Be
14	0.1696	Sed-Be
15	0.1703	Sed-Be
16	0.1712	Sed-Be
17	0.1716	Sed-Be
18	0.1717	Sed-Be
19	0.176	Sed-Be
20	0.1762	Sed-Be
21	0.1803	Sed-Be
22	0.1906	Sed-Be
23	0.193	Sed-Be
24	0.1938	Sed-Be
25	0.1943	Sed-Be
26	0.1951	Sed-Be
27	0.1982	Sed-Be
28	0.2007	Sed-Be
29	0.201	Sed-Be
30	0.2015	Sed-Be
31	0.2021	Sed-Be
32	0.208	Sed-Be
33	0.2086	Sed-Be
34	0.2135	Sed-Be
35	0.2135	Sed-Be
36	0.2135	Sed-Be
37	0.2135	Sed-Be
38	0.2135	Sed-Be
39	0.2135	Sed-Be
40	0.2135	Sed-Be
41	0.2135	Sed-Be
42	0.2135	Sed-Be
43	0.2135	Sed-Be
44	0.2135	Sed-Be
45	0.2135	Sed-Be
46	0.2135	Sed-Be
47	0.2135	Sed-Be
48	0.2135	Sed-Be
49	0.2135	Sed-Be
50	0.2135	Sed-Be
51	0.2135	Sed-Be
52	0.2135	Sed-Be
53	0.2135	Sed-Be
54	0.2135	Sed-Be
55	0.2135	Sed-Be
56	0.2135	Sed-Be
57	0.2135	Sed-Be
58	0.2135	Sed-Be
59	0.2135	Sed-Be
60	0.2135	Sed-Be
61	0.2135	Sed-Be
62	0.2135	Sed-Be
63	0.2135	Sed-Be
64	0.2135	Sed-Be
65	0.2135	Sed-Be
66	0.2135	Sed-Be
67	0.2135	Sed-Be

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	171	Mean	0.385
Censored	------	Lognormal mean	0.375
Detection limit or PQL	------	Std. devn.	0.287
Method detection limit		Median	0.25
TOTAL	171	Min.	0.1262
ENTER DATA		Max	1.3505

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.852

Normal distribution? r-squared is: 0.738

Recommendations:

Reject lognormal distribution.

Y value is -7.6046. This lies outside the tabled values of 1.4537 and -2.4264

Reject normal distribution.

Y value is -18.1098. This lies outside the tabled values of 1.4537 and -2.4264

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

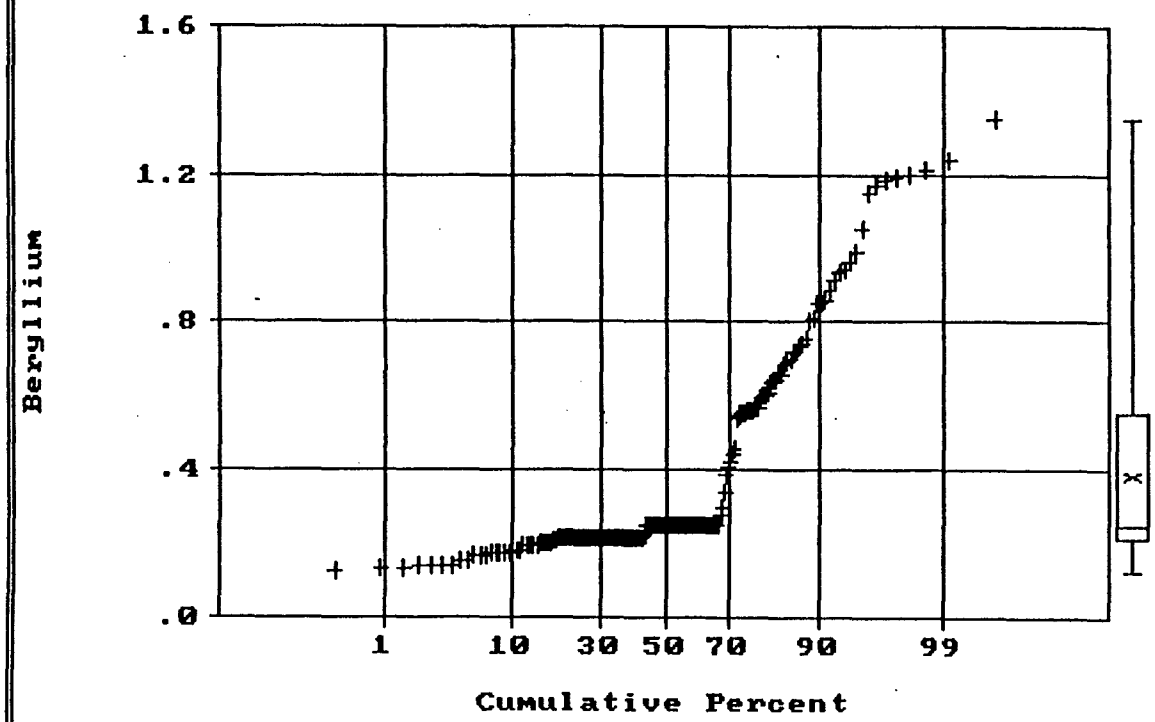
Lognormal

Normal

Neither

Sample size

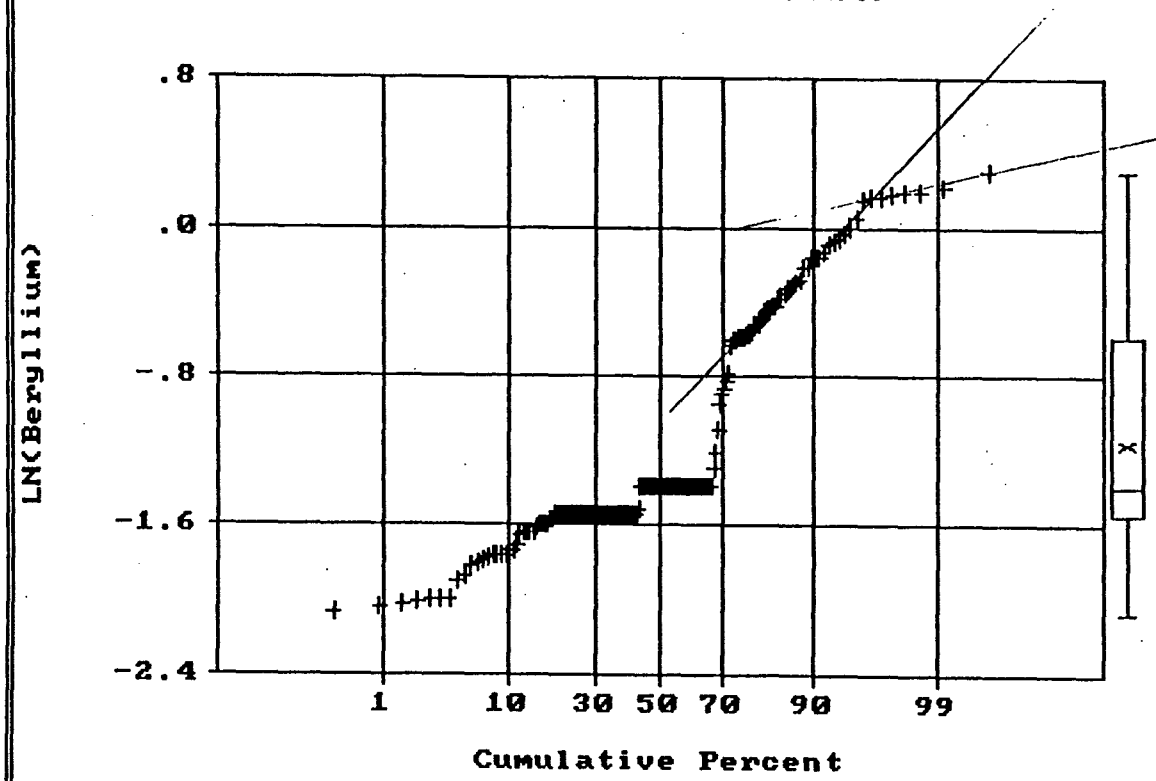
Normal Probability Plot for Beryllium
Data file: sed-all.dat



Statistics

N Total :	259
N Miss :	88
N Used :	171
Mean :	.385
Variance:	.082
Std. Dev:	.287
% C.V. :	74.639
Skewness:	1.552
Kurtosis:	4.445
Minimum :	.126
25th % :	.213
Median :	.250
75th % :	.555
Maximum :	1.350

Normal Probability Plot for LN(Beryllium)
Data file: sed-all.dat



Statistics

N Total :	259
N Miss :	88
N Used :	171
Mean :	-1.166
Variance:	.371
Std. Dev:	.609
% C.V. :	52.219
Skewness:	.870
Kurtosis:	2.480
Minimum :	-2.070
25th % :	-1.544
Median :	-1.386
75th % :	-.589
Maximum :	.300

$e^{0.2} = 1.2$

	A	B
1	DATA	ID
2	0.25	Sed-Cd
3	0.25	Sed-Cd
4	0.25	Sed-Cd
5	0.25	Sed-Cd
6	0.25	Sed-Cd
7	0.25	Sed-Cd
8	0.25	Sed-Cd
9	0.2575	Sed-Cd
10	0.2575	Sed-Cd
11	0.2575	Sed-Cd
12	0.2575	Sed-Cd
13	0.2575	Sed-Cd
14	0.2575	Sed-Cd
15	0.2575	Sed-Cd
16	0.2575	Sed-Cd
17	0.2575	Sed-Cd
18	0.2575	Sed-Cd
19	0.2575	Sed-Cd
20	0.2575	Sed-Cd
21	0.2575	Sed-Cd
22	0.2575	Sed-Cd
23	0.2575	Sed-Cd
24	0.2575	Sed-Cd
25	0.2575	Sed-Cd
26	0.2575	Sed-Cd
27	0.2575	Sed-Cd
28	0.2575	Sed-Cd
29	0.2575	Sed-Cd
30	0.2575	Sed-Cd
31	0.2575	Sed-Cd
32	0.2575	Sed-Cd
33	0.2575	Sed-Cd
34	0.2575	Sed-Cd
35	0.2575	Sed-Cd
36	0.2575	Sed-Cd
37	0.2575	Sed-Cd
38	0.2575	Sed-Cd
39	0.2575	Sed-Cd
40	0.2575	Sed-Cd
41	0.2575	Sed-Cd
42	0.2575	Sed-Cd
43	0.2575	Sed-Cd
44	0.2575	Sed-Cd
45	0.2575	Sed-Cd
46	0.2575	Sed-Cd
47	0.2575	Sed-Cd
48	0.2575	Sed-Cd
49	0.2575	Sed-Cd
50	0.2575	Sed-Cd
51	0.2575	Sed-Cd
52	0.2575	Sed-Cd
53	0.2575	Sed-Cd
54	0.2575	Sed-Cd
55	0.2575	Sed-Cd
56	0.2575	Sed-Cd
57	0.2575	Sed-Cd
58	0.2575	Sed-Cd
59	0.2575	Sed-Cd
60	0.4	Sed-Cd
61	0.4	Sed-Cd
62	0.4	Sed-Cd
63	0.4	Sed-Cd
64	0.4	Sed-Cd
65	0.4	Sed-Cd
66	0.4	Sed-Cd
67	0.4	Sed-Cd

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	171	Mean	0.628
Censored	------	Lognormal mean	0.530
Detection limit or PQL	------	Std. devn.	1.419
Method detection limit		Median	0.4
TOTAL	171	Min.	0.25
ENTER DATA		Max.	17.6

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.731

Normal distribution? r-squared is: 0.177

Recommendations.

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	0.25	Sed-Cd
3	0.25	Sed-Cd
4	0.25	Sed-Cd
5	0.25	Sed-Cd
6	0.25	Sed-Cd
7	0.25	Sed-Cd
8	0.25	Sed-Cd
9	0.2575	Sed-Cd
10	0.2575	Sed-Cd
11	0.2575	Sed-Cd
12	0.2575	Sed-Cd
13	0.2575	Sed-Cd
14	0.2575	Sed-Cd
15	0.2575	Sed-Cd
16	0.2575	Sed-Cd
17	0.2575	Sed-Cd
18	0.2575	Sed-Cd
19	0.2575	Sed-Cd
20	0.2575	Sed-Cd
21	0.2575	Sed-Cd
22	0.2575	Sed-Cd
23	0.2575	Sed-Cd
24	0.2575	Sed-Cd
25	0.2575	Sed-Cd
26	0.2575	Sed-Cd
27	0.2575	Sed-Cd
28	0.2575	Sed-Cd
29	0.2575	Sed-Cd
30	0.2575	Sed-Cd
31	0.2575	Sed-Cd
32	0.2575	Sed-Cd
33	0.2575	Sed-Cd
34	0.2575	Sed-Cd
35	0.2575	Sed-Cd
36	0.2575	Sed-Cd
37	0.2575	Sed-Cd
38	0.2575	Sed-Cd
39	0.2575	Sed-Cd
40	0.2575	Sed-Cd
41	0.2575	Sed-Cd
42	0.2575	Sed-Cd
43	0.2575	Sed-Cd
44	0.2575	Sed-Cd
45	0.2575	Sed-Cd
46	0.2575	Sed-Cd
47	0.2575	Sed-Cd
48	0.2575	Sed-Cd
49	0.2575	Sed-Cd
50	0.2575	Sed-Cd
51	0.2575	Sed-Cd
52	0.2575	Sed-Cd
53	0.2575	Sed-Cd
54	0.2575	Sed-Cd
55	0.2575	Sed-Cd
56	0.2575	Sed-Cd
57	0.2575	Sed-Cd
58	0.2575	Sed-Cd
59	0.2575	Sed-Cd
60	0.4	Sed-Cd
61	0.4	Sed-Cd
62	0.4	Sed-Cd
63	0.4	Sed-Cd
64	0.4	Sed-Cd
65	0.4	Sed-Cd
66	0.4	Sed-Cd
67	0.4	Sed-Cd

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	171	Mean	0.628
Censored	------	Lognormal mean	0.530
Detection limit or PQL	------	Std. devn.	1.419
Method detection limit		Median	0.4
TOTAL	171	Min.	0.25
ENTER DATA		Max.	17.6

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.731

Normal distribution? r-squared is: 0.177

Recommendations.

Reject lognormal distribution.

Y value is -20.2147. This lies outside the tabled values of 1.4537 and -2.4264

Reject normal distribution.

Y value is -81.5642. This lies outside the tabled values of 1.4537 and -2.4264

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

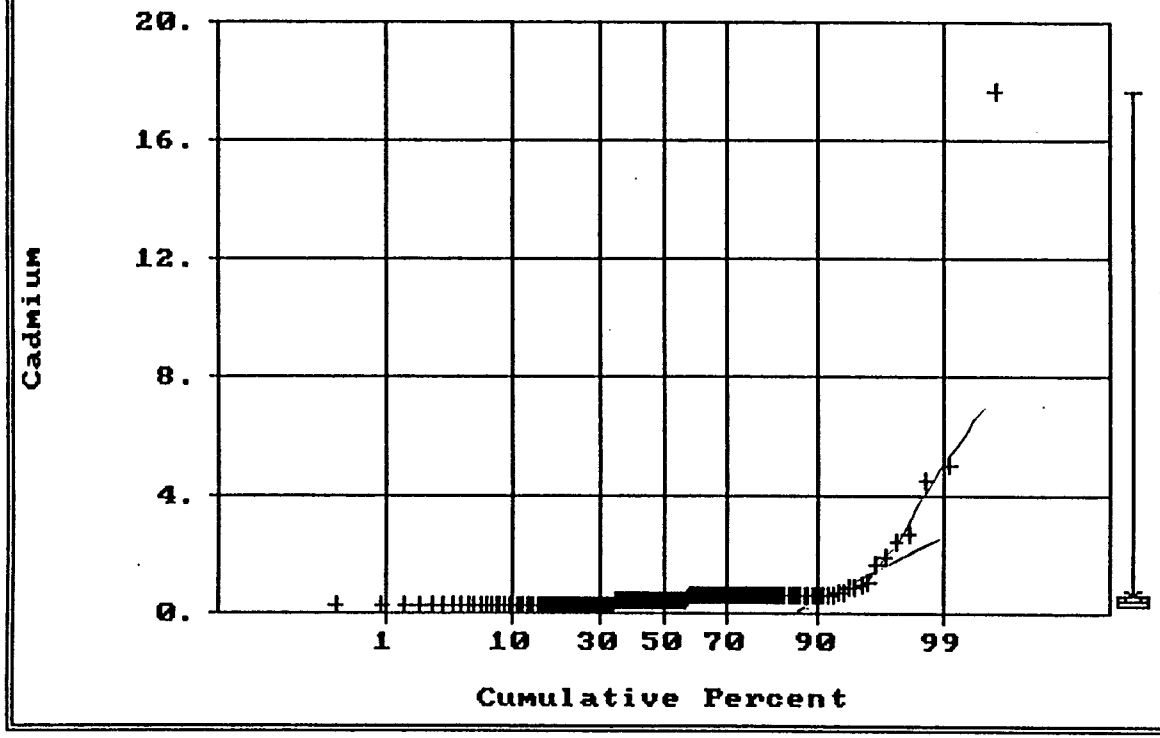
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Cadmium
Data file: sed-all.dat



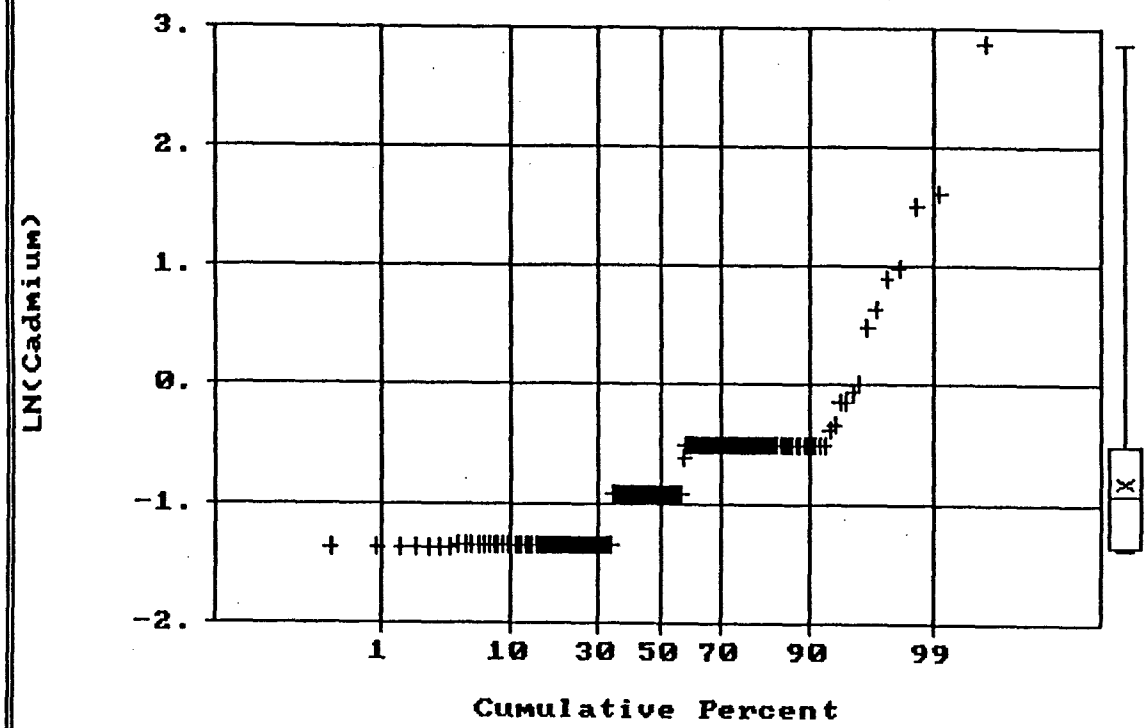
Statistics

N Total :	259
N Miss :	88
N Used :	171
Mean :	.628
Variance:	2.015
Std. Dev:	1.419
% C.V. :	226.025
Skewness:	10.404
Kurtosis:	121.833
Minimum :	.250
25th % :	.257
Median :	.400
75th % :	.600
Maximum :	17.600

ALL DETECTS

A-101

Normal Probability Plot for LN(Cadmium)
Data file: sed-all.dat



Statistics

N Total :	259
N Miss :	88
N Used :	171
Mean :	-.812
Variance:	.355
Std. Dev:	.596
% C.V. :	73.410
Skewness:	2.396
Kurtosis:	13.100
Minimum :	-1.386
25th % :	-1.357
Median :	-.916
75th % :	-.511
Maximum :	2.868

A-102

	A	B
1	DATA	ID
2	0.125	Sed-CN
3	0.125	Sed-CN
4	0.125	Sed-CN
5	0.125	Sed-CN
6	0.125	Sed-CN
7	0.125	Sed-CN
8	0.125	Sed-CN
9	0.125	Sed-CN
10	0.125	Sed-CN
11	0.125	Sed-CN
12	0.125	Sed-CN
13	0.125	Sed-CN
14	0.125	Sed-CN
15	0.125	Sed-CN
16	0.125	Sed-CN
17	0.125	Sed-CN
18	0.125	Sed-CN
19	0.125	Sed-CN
20	0.125	Sed-CN
21	0.125	Sed-CN
22	0.125	Sed-CN
23	0.125	Sed-CN
24	0.125	Sed-CN
25	0.125	Sed-CN
26	0.125	Sed-CN
27	0.125	Sed-CN
28	0.2	Sed-CN
29	0.2	Sed-CN
30	0.2	Sed-CN
31	0.3361	Sed-CN
32	0.3452	Sed-CN
33	0.3564	Sed-CN
34	0.3654	Sed-CN
35	0.406	Sed-CN
36	0.4145	Sed-CN
37	0.4145	Sed-CN
38	0.4145	Sed-CN
39	0.4145	Sed-CN
40	0.4145	Sed-CN
41	0.4145	Sed-CN
42	0.4145	Sed-CN
43	0.4145	Sed-CN
44	0.4145	Sed-CN
45	0.4145	Sed-CN
46	0.4145	Sed-CN
47	0.46	Sed-CN
48	0.5088	Sed-CN
49	0.5967	Sed-CN
50	0.811	Sed-CN

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	49	Mean	0.257
Censored	------	Lognormal mean	0.256
Detection limit or PQL	------	Std. devn.	0.166
Method detection limit		Median	0.125
TOTAL	49	Min.	0.125
ENTER DATA		Max.	0.811

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.758

Normal distribution? r-squared is: 0.757

Recommendations:

Reject lognormal distribution.

W value is 0.7393. This is less than the tabled value of 0.947

Reject normal distribution.

W value is 0.7547. This is less than the tabled value of 0.947

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	0.125	Sed-CN
3	0.125	Sed-CN
4	0.125	Sed-CN
5	0.125	Sed-CN
6	0.125	Sed-CN
7	0.125	Sed-CN
8	0.125	Sed-CN
9	0.125	Sed-CN
10	0.125	Sed-CN
11	0.125	Sed-CN
12	0.125	Sed-CN
13	0.125	Sed-CN
14	0.125	Sed-CN
15	0.125	Sed-CN
16	0.125	Sed-CN
17	0.125	Sed-CN
18	0.125	Sed-CN
19	0.125	Sed-CN
20	0.125	Sed-CN
21	0.125	Sed-CN
22	0.125	Sed-CN
23	0.125	Sed-CN
24	0.125	Sed-CN
25	0.125	Sed-CN
26	0.125	Sed-CN
27	0.125	Sed-CN
28	0.2	Sed-CN
29	0.2	Sed-CN
30	0.2	Sed-CN
31	0.3361	Sed-CN
32	0.3452	Sed-CN
33	0.3564	Sed-CN
34	0.3654	Sed-CN
35	0.406	Sed-CN
36	0.4145	Sed-CN
37	0.4145	Sed-CN
38	0.4145	Sed-CN
39	0.4145	Sed-CN
40	0.4145	Sed-CN
41	0.4145	Sed-CN
42	0.4145	Sed-CN
43	0.4145	Sed-CN
44	0.4145	Sed-CN
45	0.4145	Sed-CN
46	0.4145	Sed-CN
47	0.46	Sed-CN
48	0.5088	Sed-CN
49	0.5967	Sed-CN
50	0.811	Sed-CN

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	49	Mean	0.257
Censored	------	Lognormal mean	0.256
Detection limit or PQL	------	Std. devn.	0.166
Method detection limit		Median	0.125
TOTAL	49	Min.	0.125
ENTER DATA		Max.	0.811

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.758

Normal distribution? r-squared is: 0.757

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

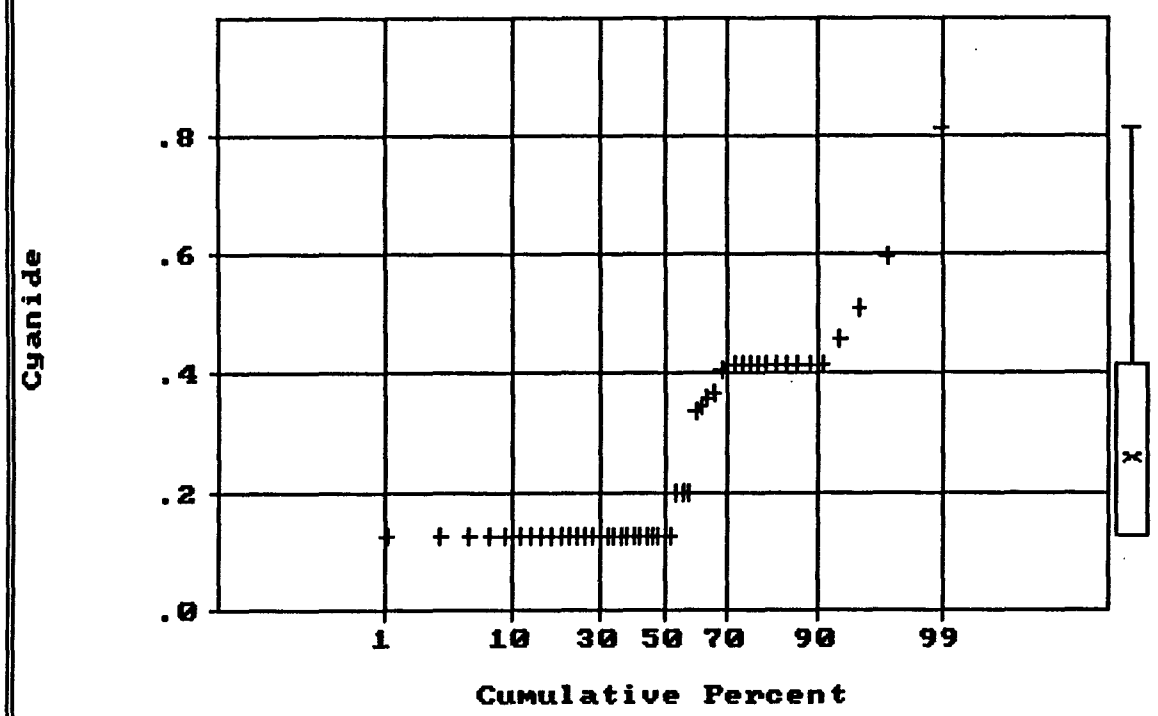
Normal

Neither

Sample size

A-104

Normal Probability Plot for Cyanide
Data file: sed-all.dat

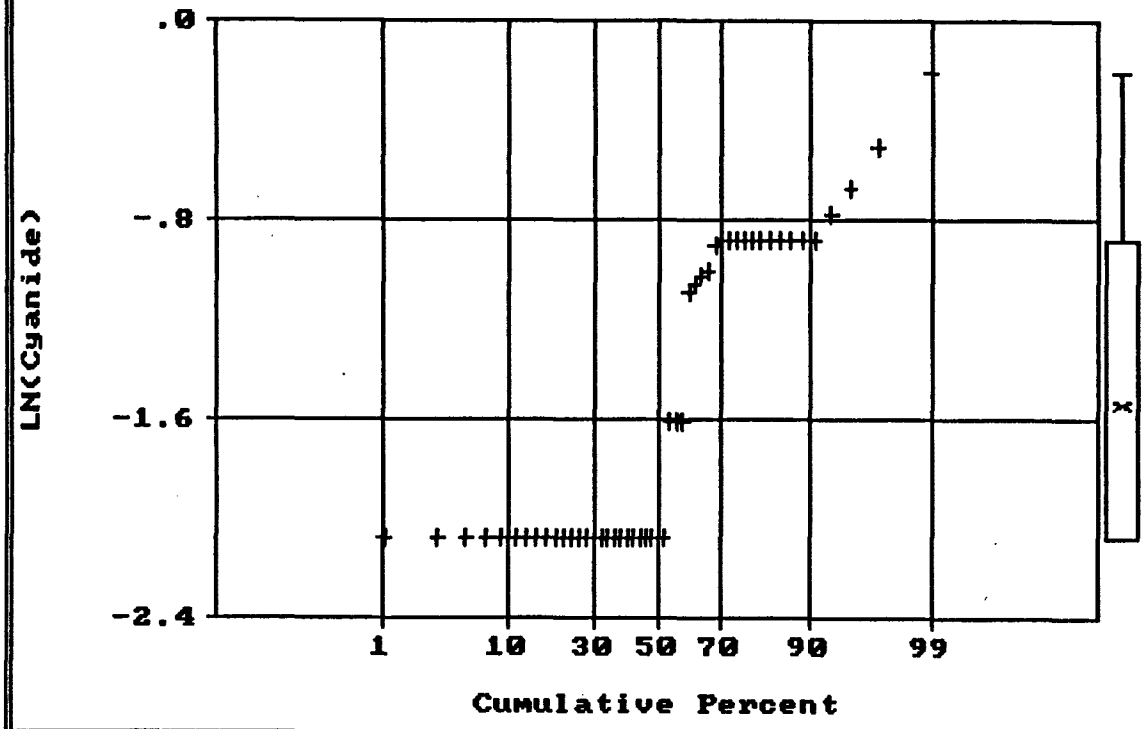


Statistics

N Total :	259
N Miss :	210
N Used :	49
Mean :	.257
Variance:	.028
Std. Dev:	.166
% C.V. :	64.526
Skewness:	1.028
Kurtosis:	3.617
Minimum :	.125
25th % :	.125
Median :	.125
75th % :	.414
Maximum :	.811

A-105

Normal Probability Plot for LN(Cyanide)
Data file: sed-all.dat



Statistics

N Total :	259
N Miss :	210
N Used :	49
Mean :	-1.548
Variance:	.373
Std. Dev:	.610
% C.V. :	39.434
Skewness:	.441
Kurtosis:	1.526
Minimum :	-2.079
25th % :	-2.079
Median :	-2.079
75th % :	-.881
Maximum :	-.209

A-106

	A	B
1	DATA	ID
2	3.35	Sed-Co
3	3.6874	Sed-Co
4	3.8662	Sed-Co
5	3.9005	Sed-Co
6	3.9895	Sed-Co
7	4.198	Sed-Co
8	4.3418	Sed-Co
9	4.3487	Sed-Co
10	4.4328	Sed-Co
11	4.45	Sed-Co
12	4.7468	Sed-Co
13	4.9057	Sed-Co
14	4.9479	Sed-Co
15	5.07	Sed-Co
16	5.36	Sed-Co
17	5.495	Sed-Co
18	5.549	Sed-Co
19	5.5739	Sed-Co
20	5.579	Sed-Co
21	5.6	Sed-Co
22	5.7159	Sed-Co
23	5.7263	Sed-Co
24	5.7652	Sed-Co
25	5.7671	Sed-Co
26	5.77	Sed-Co
27	5.8359	Sed-Co
28	5.8779	Sed-Co
29	5.955	Sed-Co
30	5.973	Sed-Co
31	6.002	Sed-Co
32	6.0687	Sed-Co
33	6.0754	Sed-Co
34	6.09	Sed-Co
35	6.236	Sed-Co
36	6.254	Sed-Co
37	6.318	Sed-Co
38	6.4601	Sed-Co
39	6.47	Sed-Co
40	6.4825	Sed-Co
41	6.5305	Sed-Co
42	6.615	Sed-Co
43	6.7364	Sed-Co
44	6.739	Sed-Co
45	6.79	Sed-Co
46	6.8678	Sed-Co
47	6.993	Sed-Co
48	7.064	Sed-Co
49	7.07	Sed-Co
50	7.08	Sed-Co
51	7.1192	Sed-Co
52	7.1443	Sed-Co
53	7.1639	Sed-Co
54	7.2396	Sed-Co
55	7.32	Sed-Co
56	7.339	Sed-Co
57	7.4	Sed-Co
58	7.57	Sed-Co
59	7.6667	Sed-Co
60	7.98	Sed-Co
61	8.132	Sed-Co
62	8.16	Sed-Co
63	8.38	Sed-Co
64	8.381	Sed-Co
65	8.4398	Sed-Co
66	8.47	Sed-Co
67	8.48	Sed-Co

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	171	Mean	14.895
Censored	------	Lognormal mean	14.291
Detection limit or PQL	------	Std. devn.	14.657
Method detection limit		Median	9.7564
TOTAL	171	Min.	3.35
ENTER DATA		Max.	109

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.957

Normal distribution? r-squared is: 0.623

Recommendations

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	3.35	Sed-Co
3	3.6874	Sed-Co
4	3.8662	Sed-Co
5	3.9005	Sed-Co
6	3.9895	Sed-Co
7	4.198	Sed-Co
8	4.3418	Sed-Co
9	4.3487	Sed-Co
10	4.4328	Sed-Co
11	4.45	Sed-Co
12	4.7468	Sed-Co
13	4.9057	Sed-Co
14	4.9479	Sed-Co
15	5.07	Sed-Co
16	5.36	Sed-Co
17	5.495	Sed-Co
18	5.549	Sed-Co
19	5.5739	Sed-Co
20	5.579	Sed-Co
21	5.6	Sed-Co
22	5.7159	Sed-Co
23	5.7263	Sed-Co
24	5.7652	Sed-Co
25	5.7671	Sed-Co
26	5.77	Sed-Co
27	5.8359	Sed-Co
28	5.8779	Sed-Co
29	5.955	Sed-Co
30	5.973	Sed-Co
31	6.002	Sed-Co
32	6.0687	Sed-Co
33	6.0754	Sed-Co
34	6.09	Sed-Co
35	6.236	Sed-Co
36	6.254	Sed-Co
37	6.318	Sed-Co
38	6.4601	Sed-Co
39	6.47	Sed-Co
40	6.4825	Sed-Co
41	6.5305	Sed-Co
42	6.615	Sed-Co
43	6.7364	Sed-Co
44	6.739	Sed-Co
45	6.79	Sed-Co
46	6.8678	Sed-Co
47	6.993	Sed-Co
48	7.064	Sed-Co
49	7.07	Sed-Co
50	7.08	Sed-Co
51	7.1192	Sed-Co
52	7.1443	Sed-Co
53	7.1639	Sed-Co
54	7.2396	Sed-Co
55	7.32	Sed-Co
56	7.339	Sed-Co
57	7.4	Sed-Co
58	7.57	Sed-Co
59	7.6667	Sed-Co
60	7.98	Sed-Co
61	8.132	Sed-Co
62	8.16	Sed-Co
63	8.38	Sed-Co
64	8.381	Sed-Co
65	8.4398	Sed-Co
66	8.47	Sed-Co
67	8.48	Sed-Co

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	171	Mean	14.895
Censored	------	Lognormal mean	14.291
Detection limit or PQL	------	Std. devn.	14.657
Method detection limit		Median	9.7564
TOTAL	171	Min.	3.35
ENTER DATA		Max.	109

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.957

Normal distribution? r-squared is: 0.623

Recommendations

Assume lognormal distribution.

Y value is -2.3228. This lies within the tabled values of 1.4537 and -2.4264

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

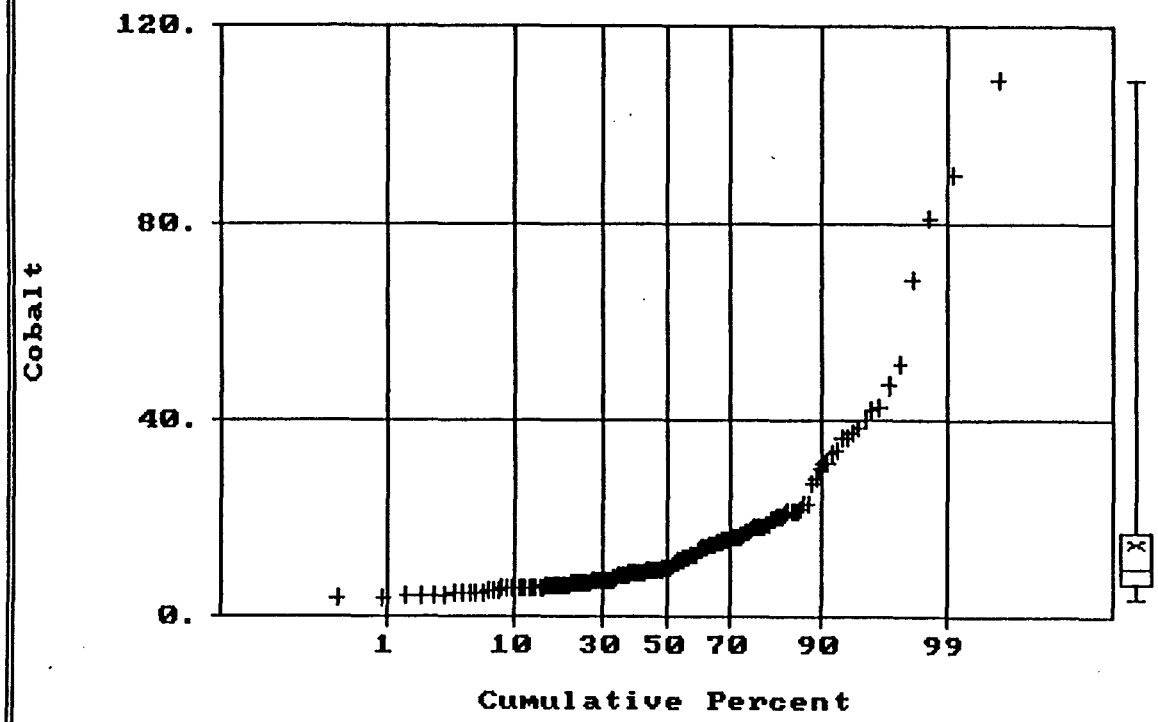
Lognormal

Normal

Neither

Sample size

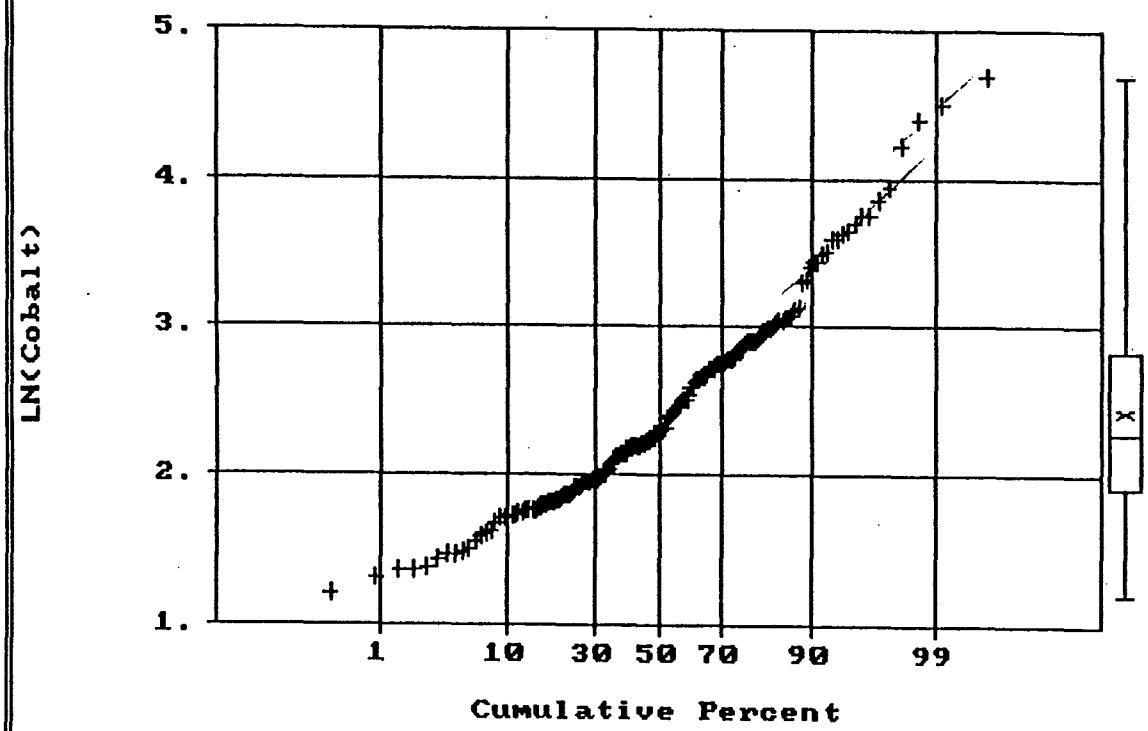
Normal Probability Plot for Cobalt
Data file: sed-all.dat



Statistics

N Total :	259
N Miss :	88
N Used :	171
Mean :	14.895
Variance:	214.839
Std. Dev:	14.657
% C.V. :	98.404
Skewness:	3.486
Kurtosis:	18.424
Minimum :	3.350
25th % :	6.738
Median :	9.756
75th % :	16.950
Maximum :	109.000

Normal Probability Plot for LN(Cobalt)
Data file: sed-all.dat



Statistics

N Total :	259
N Miss :	88
N Used :	171
Mean :	2.431
Variance:	.458
Std. Dev:	.676
% C.V. :	27.828
Skewness:	.785
Kurtosis:	3.512
Minimum :	1.209
25th % :	1.908
Median :	2.278
75th % :	2.830
Maximum :	4.691

A-110

	A	B
1	DATA	ID
2	11.147	Sed-Cr
3	17.906	Sed-Cr
4	19.906	Sed-Cr
5	20.718	Sed-Cr
6	21.125	Sed-Cr
7	23.069	Sed-Cr
8	25.157	Sed-Cr
9	26.576	Sed-Cr
10	26.923	Sed-Cr
11	27.5	Sed-Cr
12	27.708	Sed-Cr
13	27.8	Sed-Cr
14	27.924	Sed-Cr
15	28.316	Sed-Cr
16	28.383	Sed-Cr
17	28.8	Sed-Cr
18	29	Sed-Cr
19	29.9	Sed-Cr
20	30.2	Sed-Cr
21	31.303	Sed-Cr
22	32.646	Sed-Cr
23	32.85	Sed-Cr
24	34.754	Sed-Cr
25	35.017	Sed-Cr
26	35.2	Sed-Cr
27	35.264	Sed-Cr
28	35.332	Sed-Cr
29	35.561	Sed-Cr
30	36.7	Sed-Cr
31	36.8	Sed-Cr
32	36.855	Sed-Cr
33	36.897	Sed-Cr
34	37	Sed-Cr
35	37.717	Sed-Cr
36	38.383	Sed-Cr
37	38.4	Sed-Cr
38	39.065	Sed-Cr
39	39.2	Sed-Cr
40	39.46	Sed-Cr
41	40.4	Sed-Cr
42	40.6	Sed-Cr
43	40.8	Sed-Cr
44	41.4	Sed-Cr
45	41.527	Sed-Cr
46	42	Sed-Cr
47	42.1	Sed-Cr
48	43.285	Sed-Cr
49	43.833	Sed-Cr
50	44.045	Sed-Cr
51	44.1	Sed-Cr
52	44.4	Sed-Cr
53	44.7	Sed-Cr
54	44.8	Sed-Cr
55	45.333	Sed-Cr
56	46.154	Sed-Cr
57	46.239	Sed-Cr
58	46.268	Sed-Cr
59	46.3	Sed-Cr
60	46.5	Sed-Cr
61	46.528	Sed-Cr
62	46.6	Sed-Cr
63	46.657	Sed-Cr
64	48.203	Sed-Cr
65	48.369	Sed-Cr
66	49.475	Sed-Cr
67	49.7	Sed-Cr

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	171	Mean	92.966
Censored	------	Lognormal mean	86.706
Detection limit or PQL	------	Std. devn.	115.103
Method detection limit		Median	60.3141
TOTAL	171	Min.	11.1465
ENTER DATA		Max.	1040

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? Normal distribution?

r-squared is: 0.950 r-squared is: 0.503

Recommendations:

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	11.1465	Sed-Cr
3	17.9058	Sed-Cr
4	19.9058	Sed-Cr
5	20.7179	Sed-Cr
6	21.1253	Sed-Cr
7	23.0686	Sed-Cr
8	25.1572	Sed-Cr
9	26.5756	Sed-Cr
10	26.9231	Sed-Cr
11	27.5	Sed-Cr
12	27.7083	Sed-Cr
13	27.8	Sed-Cr
14	27.9236	Sed-Cr
15	28.3158	Sed-Cr
16	28.383	Sed-Cr
17	28.8	Sed-Cr
18	29	Sed-Cr
19	29.9	Sed-Cr
20	30.2	Sed-Cr
21	31.3025	Sed-Cr
22	32.646	Sed-Cr
23	32.8497	Sed-Cr
24	34.754	Sed-Cr
25	35.017	Sed-Cr
26	35.2	Sed-Cr
27	35.2637	Sed-Cr
28	35.3319	Sed-Cr
29	35.561	Sed-Cr
30	36.7	Sed-Cr
31	36.8	Sed-Cr
32	36.855	Sed-Cr
33	36.8973	Sed-Cr
34	37	Sed-Cr
35	37.7166	Sed-Cr
36	38.3825	Sed-Cr
37	38.4	Sed-Cr
38	39.065	Sed-Cr
39	39.2	Sed-Cr
40	39.46	Sed-Cr
41	40.4	Sed-Cr
42	40.6	Sed-Cr
43	40.8	Sed-Cr
44	41.4	Sed-Cr
45	41.5272	Sed-Cr
46	42	Sed-Cr
47	42.1	Sed-Cr
48	43.285	Sed-Cr
49	43.8326	Sed-Cr
50	44.045	Sed-Cr
51	44.1	Sed-Cr
52	44.4	Sed-Cr
53	44.7	Sed-Cr
54	44.8	Sed-Cr
55	45.3333	Sed-Cr
56	46.1538	Sed-Cr
57	46.2389	Sed-Cr
58	46.268	Sed-Cr
59	46.3	Sed-Cr
60	46.5	Sed-Cr
61	46.528	Sed-Cr
62	46.6	Sed-Cr
63	46.6565	Sed-Cr
64	48.2032	Sed-Cr
65	48.3685	Sed-Cr
66	49.4748	Sed-Cr
67	49.7	Sed-Cr

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	171	Mean	92.966
Censored	------	Lognormal mean	86.706
Detection limit or PQL	------	Std. devn.	115.103
Method detection limit		Median	60.3141
TOTAL	171	Min.	11.1465
ENTER DATA		Max.	1040

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.950

Normal distribution? r-squared is: 0.503

Recommendations:

Reject lognormal distribution.

Y value is -5.0119. This lies outside the tabled values of 1.4537 and -2.4264

Reject normal distribution.

Y value is -44.3125. This lies outside the tabled values of 1.4537 and -2.4264

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

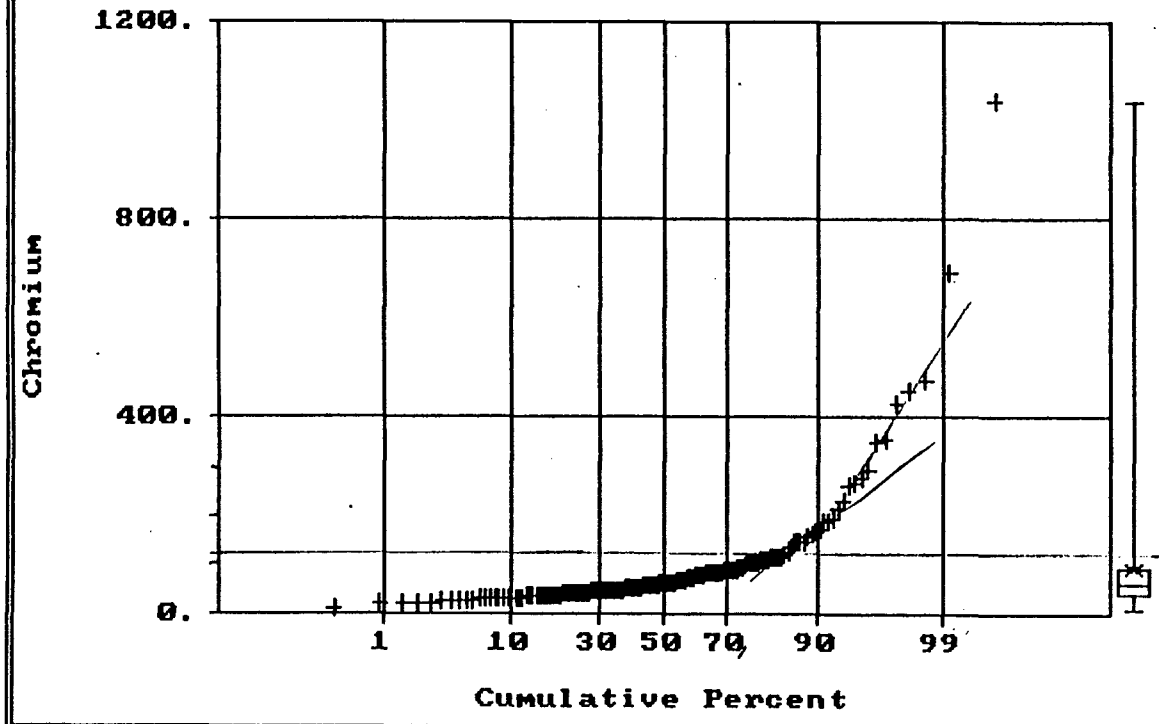
Normal

Neither

Sample size

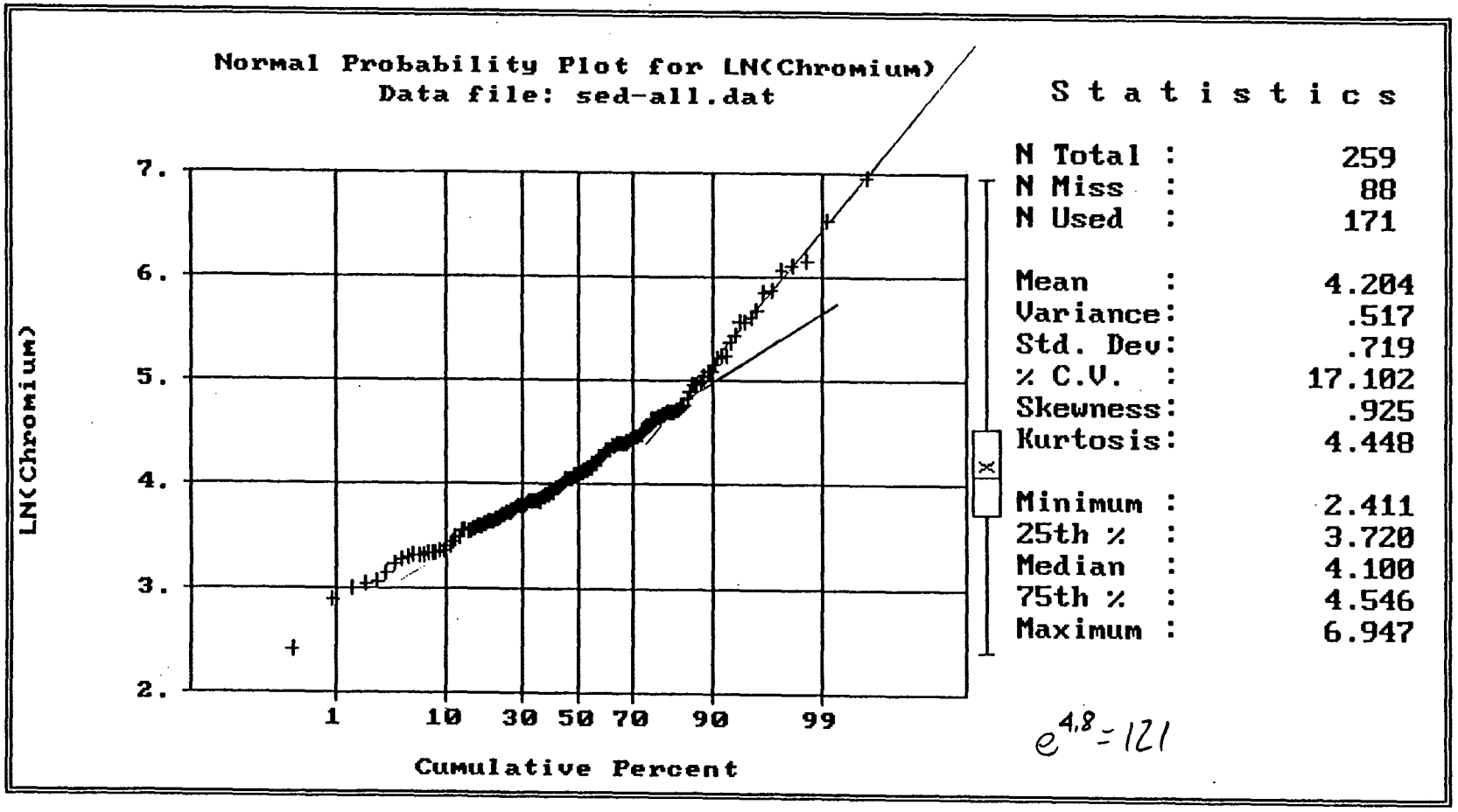
A-112

Normal Probability Plot for Chromium
Data file: sed-all.dat



Statistics

N Total :	259
N Miss :	88
N Used :	171
Mean :	92.966
Variance:	13248.700
Std. Dev:	115.103
% C.V. :	123.812
Skewness:	4.839
Kurtosis:	33.539
Minimum :	11.146
25th % :	41.250
Median :	60.314
75th % :	94.307
Maximum :	1040.000


Normal Probability Plot for LN(Chromium)
Data file: sed-all.dat
LN(Chromium)
7.
6.
5.
4.
3.
2.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 259
N Miss : 88
N Used : 171
Mean : 4.204
Variance: .517
Std. Dev: .719
% C.V. : 17.102
Skewness: .925
Kurtosis: 4.448
Minimum : 2.411
25th % : 3.720
Median : 4.100
75th % : 4.546
Maximum : 6.947
$e^{4.8} = 121$

A-114

	A	B
1	DATA	ID
2	1.42	Sed-Cu
3	1.42	Sed-Cu
4	1.42	Sed-Cu
5	1.42	Sed-Cu
6	1.42	Sed-Cu
7	1.42	Sed-Cu
8	1.42	Sed-Cu
9	1.42	Sed-Cu
10	1.42	Sed-Cu
11	1.42	Sed-Cu
12	1.42	Sed-Cu
13	1.42	Sed-Cu
14	1.42	Sed-Cu
15	1.42	Sed-Cu
16	1.42	Sed-Cu
17	1.42	Sed-Cu
18	3.1237	Sed-Cu
19	3.1599	Sed-Cu
20	3.805	Sed-Cu
21	3.9282	Sed-Cu
22	4.534	Sed-Cu
23	4.5538	Sed-Cu
24	4.6	Sed-Cu
25	4.6795	Sed-Cu
26	4.75	Sed-Cu
27	4.837	Sed-Cu
28	4.84	Sed-Cu
29	4.8475	Sed-Cu
30	4.95	Sed-Cu
31	5	Sed-Cu
32	5.039	Sed-Cu
33	5.2066	Sed-Cu
34	5.232	Sed-Cu
35	5.28	Sed-Cu
36	5.521	Sed-Cu
37	5.61	Sed-Cu
38	5.92	Sed-Cu
39	5.954	Sed-Cu
40	6.22	Sed-Cu
41	6.294	Sed-Cu
42	6.39	Sed-Cu
43	6.42	Sed-Cu
44	6.657	Sed-Cu
45	6.9759	Sed-Cu
46	7.21	Sed-Cu
47	7.219	Sed-Cu
48	7.29	Sed-Cu
49	7.29	Sed-Cu
50	7.295	Sed-Cu
51	7.57	Sed-Cu
52	7.9938	Sed-Cu
53	8	Sed-Cu
54	8.323	Sed-Cu
55	8.433	Sed-Cu
56	8.4519	Sed-Cu
57	8.56	Sed-Cu
58	8.585	Sed-Cu
59	8.6105	Sed-Cu
60	8.64	Sed-Cu
61	8.76	Sed-Cu
62	9.14	Sed-Cu
63	9.1615	Sed-Cu
64	9.36	Sed-Cu
65	9.71	Sed-Cu
66	9.8	Sed-Cu
67	9.89	Sed-Cu

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	171	Mean	25.673
Censored	------	Lognormal mean	23.441
Detection limit or PQL	------	Std. devn.	54.303
Method detection limit		Median	13.626
TOTAL	171	Min.	1.42
ENTER DATA		Max.	455.194

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.962

Normal distribution? r-squared is: 0.351

Recommendations

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	1.42	Sed-Cu
3	1.42	Sed-Cu
4	1.42	Sed-Cu
5	1.42	Sed-Cu
6	1.42	Sed-Cu
7	1.42	Sed-Cu
8	1.42	Sed-Cu
9	1.42	Sed-Cu
10	1.42	Sed-Cu
11	1.42	Sed-Cu
12	1.42	Sed-Cu
13	1.42	Sed-Cu
14	1.42	Sed-Cu
15	1.42	Sed-Cu
16	1.42	Sed-Cu
17	1.42	Sed-Cu
18	3.1237	Sed-Cu
19	3.1599	Sed-Cu
20	3.805	Sed-Cu
21	3.9282	Sed-Cu
22	4.534	Sed-Cu
23	4.5538	Sed-Cu
24	4.6	Sed-Cu
25	4.6795	Sed-Cu
26	4.75	Sed-Cu
27	4.837	Sed-Cu
28	4.84	Sed-Cu
29	4.8475	Sed-Cu
30	4.95	Sed-Cu
31	5	Sed-Cu
32	5.039	Sed-Cu
33	5.2066	Sed-Cu
34	5.232	Sed-Cu
35	5.28	Sed-Cu
36	5.521	Sed-Cu
37	5.61	Sed-Cu
38	5.92	Sed-Cu
39	5.954	Sed-Cu
40	6.22	Sed-Cu
41	6.294	Sed-Cu
42	6.39	Sed-Cu
43	6.42	Sed-Cu
44	6.657	Sed-Cu
45	6.9759	Sed-Cu
46	7.21	Sed-Cu
47	7.219	Sed-Cu
48	7.29	Sed-Cu
49	7.29	Sed-Cu
50	7.295	Sed-Cu
51	7.57	Sed-Cu
52	7.9938	Sed-Cu
53	8	Sed-Cu
54	8.323	Sed-Cu
55	8.433	Sed-Cu
56	8.4519	Sed-Cu
57	8.56	Sed-Cu
58	8.585	Sed-Cu
59	8.6105	Sed-Cu
60	8.64	Sed-Cu
61	8.76	Sed-Cu
62	9.14	Sed-Cu
63	9.1615	Sed-Cu
64	9.36	Sed-Cu
65	9.71	Sed-Cu
66	9.8	Sed-Cu
67	9.89	Sed-Cu

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	171	Mean	25.673
Censored	------	Lognormal mean	23.441
Detection limit or PQL	------	Std. devn.	54.303
Method detection limit		Median	13.626
TOTAL	171	Min.	1.42
ENTER DATA		Max.	455.194

Distribution Decision

Probability plot method	W test	D'Agostino's test
Lognormal distribution?	Normal distribution?	
r-squared is: 0.962	r-squared is: 0.351	

Recommendations:

Reject lognormal distribution.

Y value is -3.9039. This lies outside the tabled values of 1.4537 and -2.4264

Reject normal distribution.

Y value is -60.3521. This lies outside the tabled values of 1.4537 and -2.4264

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

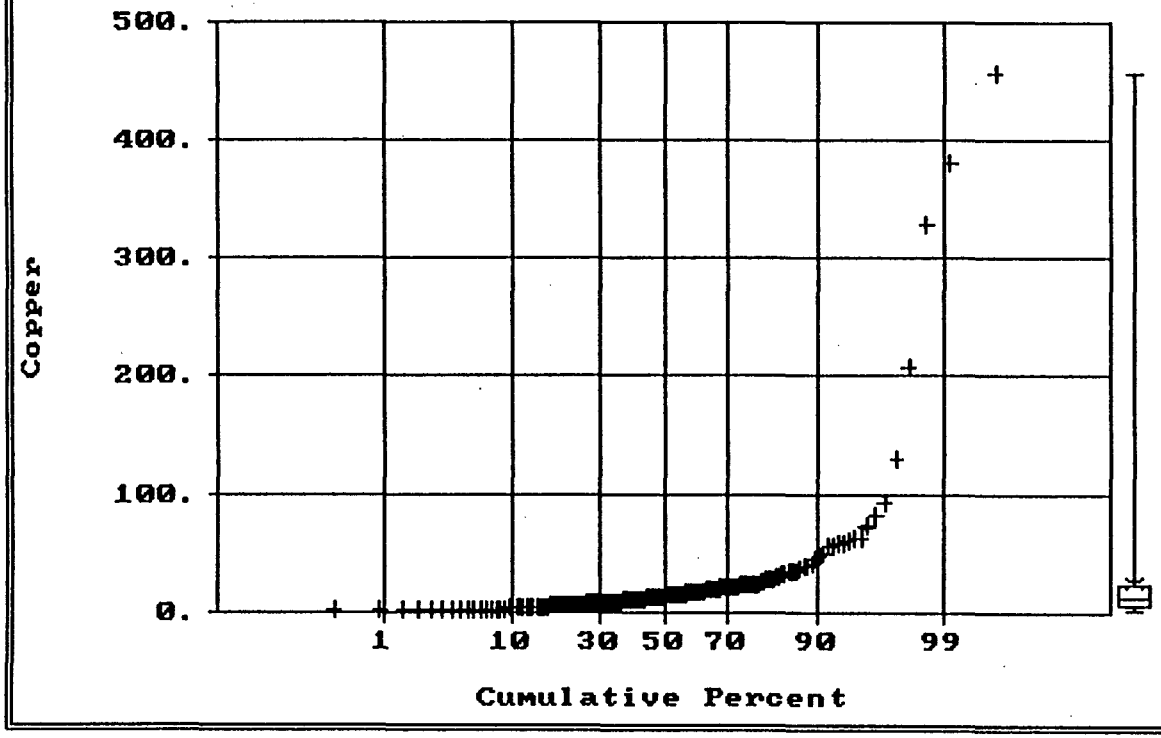
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Copper
Data file: sed-all.dat

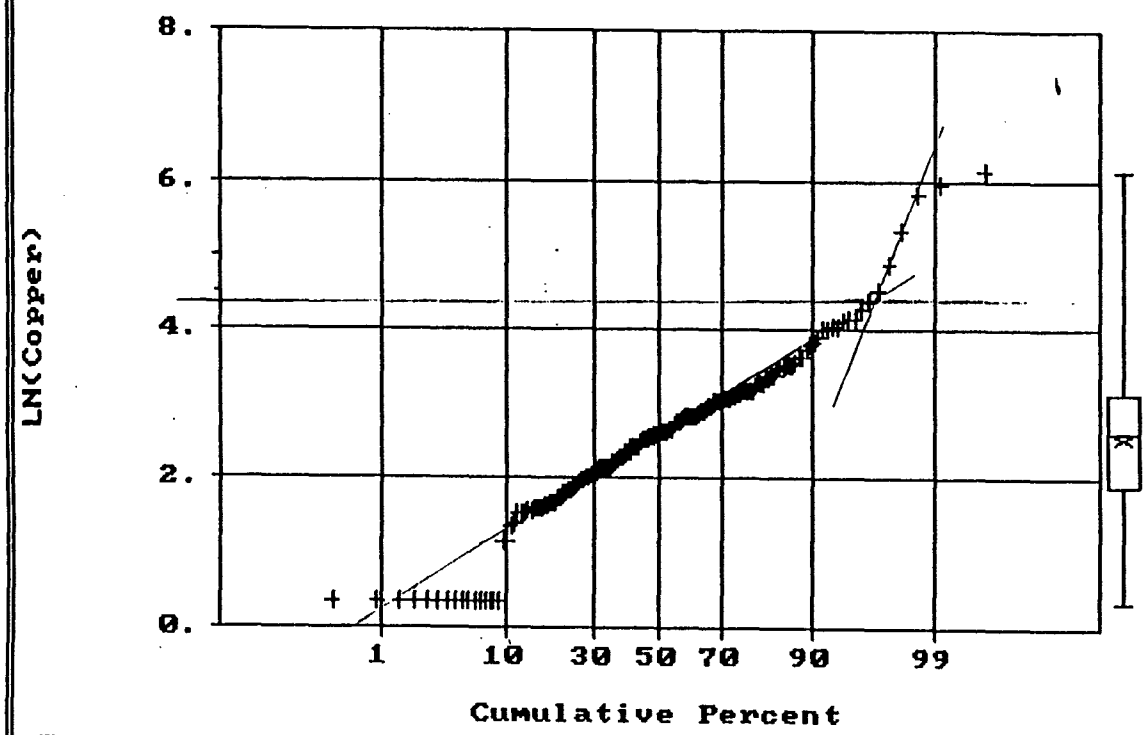


Statistics

N Total :	259
N Miss :	88
N Used :	171
Mean :	25.673
Variance:	2948.852
Std. Dev:	54.303
% C.V. :	211.516
Skewness:	5.876
Kurtosis:	40.674
Minimum :	1.420
25th % :	6.598
Median :	13.626
75th % :	23.352
Maximum :	455.194

A-117

Normal Probability Plot for LN(Copper)
Data file: sed-all.dat



S t a t i s t i c s

N Total :	259
N Miss :	88
N Used :	171
Mean :	2.537
Variance:	1.236
Std. Dev:	1.112
% C.V. :	43.821
Skewness:	.140
Kurtosis:	3.867
Minimum :	.351
25th % :	1.887
Median :	2.612
75th % :	3.151
Maximum :	6.121

$e^{4.3} = 73.7$

A-118

	A	B
1	DATA	ID
2	4065.8174	Sed-Fe
3	6031.4136	Sed-Fe
4	6114.6497	Sed-Fe
5	6257.7447	Sed-Fe
6	6418.0672	Sed-Fe
7	6953.8462	Sed-Fe
8	7012.5786	Sed-Fe
9	7208.4806	Sed-Fe
10	7228.5419	Sed-Fe
11	7583.3333	Sed-Fe
12	7684.9642	Sed-Fe
13	8200	Sed-Fe
14	8200	Sed-Fe
15	8244.1113	Sed-Fe
16	8578.9474	Sed-Fe
17	9053.3188	Sed-Fe
18	9200	Sed-Fe
19	9400	Sed-Fe
20	9404.3528	Sed-Fe
21	9489.5833	Sed-Fe
22	9500	Sed-Fe
23	9504.1322	Sed-Fe
24	9600	Sed-Fe
25	9600	Sed-Fe
26	9671.7949	Sed-Fe
27	9700	Sed-Fe
28	9700	Sed-Fe
29	9785.9327	Sed-Fe
30	9800	Sed-Fe
31	9800	Sed-Fe
32	9955.7522	Sed-Fe
33	9958.0713	Sed-Fe
34	10000	Sed-Fe
35	10248.7047	Sed-Fe
36	10278.013	Sed-Fe
37	10440.8	Sed-Fe
38	10481.859	Sed-Fe
39	10827.3275	Sed-Fe
40	10828.0255	Sed-Fe
41	10857.5	Sed-Fe
42	10984.756	Sed-Fe
43	11000	Sed-Fe
44	11000	Sed-Fe
45	11000	Sed-Fe
46	11000	Sed-Fe
47	11000	Sed-Fe
48	11000	Sed-Fe
49	11000	Sed-Fe
50	11000	Sed-Fe
51	11000	Sed-Fe
52	11001.2837	Sed-Fe
53	11239.4958	Sed-Fe
54	11293.8596	Sed-Fe
55	11358.811	Sed-Fe
56	11422.6376	Sed-Fe
57	11610.8787	Sed-Fe
58	11848.9605	Sed-Fe
59	12000	Sed-Fe
60	12000	Sed-Fe
61	12000	Sed-Fe
62	12000	Sed-Fe
63	12000	Sed-Fe
64	12000	Sed-Fe
65	12000	Sed-Fe
66	12239.61	Sed-Fe
67	12243.792	Sed-Fe

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	171	Mean	18260.895
Censored	------	Lognormal mean	18215.778
Detection limit or PQL	------	Std. devn.	10054.009
Method detection limit	------	Median	14313.4965
TOTAL	171	Min.	4065.8174
ENTER DATA		Max	58454.816

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.982

Normal distribution? r-squared is: 0.879

Recommendations:

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	4065.8174	Sed-Fe
3	6031.4136	Sed-Fe
4	6114.6497	Sed-Fe
5	6257.7447	Sed-Fe
6	6418.0672	Sed-Fe
7	6953.8462	Sed-Fe
8	7012.5786	Sed-Fe
9	7208.4806	Sed-Fe
10	7228.5419	Sed-Fe
11	7583.3333	Sed-Fe
12	7684.9642	Sed-Fe
13	8200	Sed-Fe
14	8200	Sed-Fe
15	8244.1113	Sed-Fe
16	8578.9474	Sed-Fe
17	9053.3188	Sed-Fe
18	9200	Sed-Fe
19	9400	Sed-Fe
20	9404.3528	Sed-Fe
21	9489.5833	Sed-Fe
22	9500	Sed-Fe
23	9504.1322	Sed-Fe
24	9600	Sed-Fe
25	9600	Sed-Fe
26	9671.7949	Sed-Fe
27	9700	Sed-Fe
28	9700	Sed-Fe
29	9785.9327	Sed-Fe
30	9800	Sed-Fe
31	9800	Sed-Fe
32	9955.7522	Sed-Fe
33	9958.0713	Sed-Fe
34	10000	Sed-Fe
35	10248.7047	Sed-Fe
36	10278.013	Sed-Fe
37	10440.8	Sed-Fe
38	10481.859	Sed-Fe
39	10827.3275	Sed-Fe
40	10828.0255	Sed-Fe
41	10857.5	Sed-Fe
42	10984.756	Sed-Fe
43	11000	Sed-Fe
44	11000	Sed-Fe
45	11000	Sed-Fe
46	11000	Sed-Fe
47	11000	Sed-Fe
48	11000	Sed-Fe
49	11000	Sed-Fe
50	11000	Sed-Fe
51	11000	Sed-Fe
52	11001.2837	Sed-Fe
53	11239.4958	Sed-Fe
54	11293.8596	Sed-Fe
55	11358.811	Sed-Fe
56	11422.6376	Sed-Fe
57	11610.8787	Sed-Fe
58	11848.9605	Sed-Fe
59	12000	Sed-Fe
60	12000	Sed-Fe
61	12000	Sed-Fe
62	12000	Sed-Fe
63	12000	Sed-Fe
64	12000	Sed-Fe
65	12000	Sed-Fe
66	12239.61	Sed-Fe
67	12243.792	Sed-Fe

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	171	Mean	18260.895
Censored	------	Lognormal mean	18215.778
Detection limit or PQL	------	Std. devn.	10054.009
Method detection limit		Median	14313.4965
TOTAL	171	Min.	4065.8174
ENTER DATA		Max	58454.816

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.982

Normal distribution? r-squared is: 0.879

Recommendations:

Assume lognormal distribution.

Y value is 0.753. This lies within the tabled values of 1.4537 and -2.4264

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

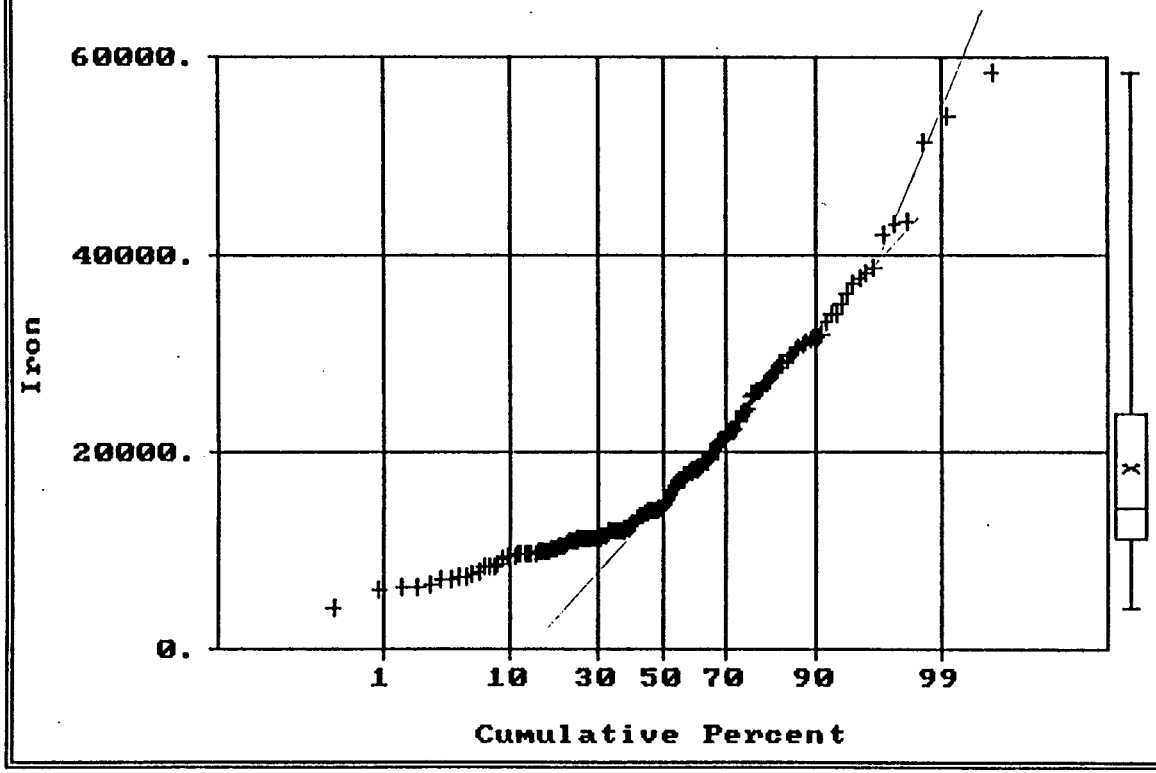
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Iron
Data file: sed-all.dat

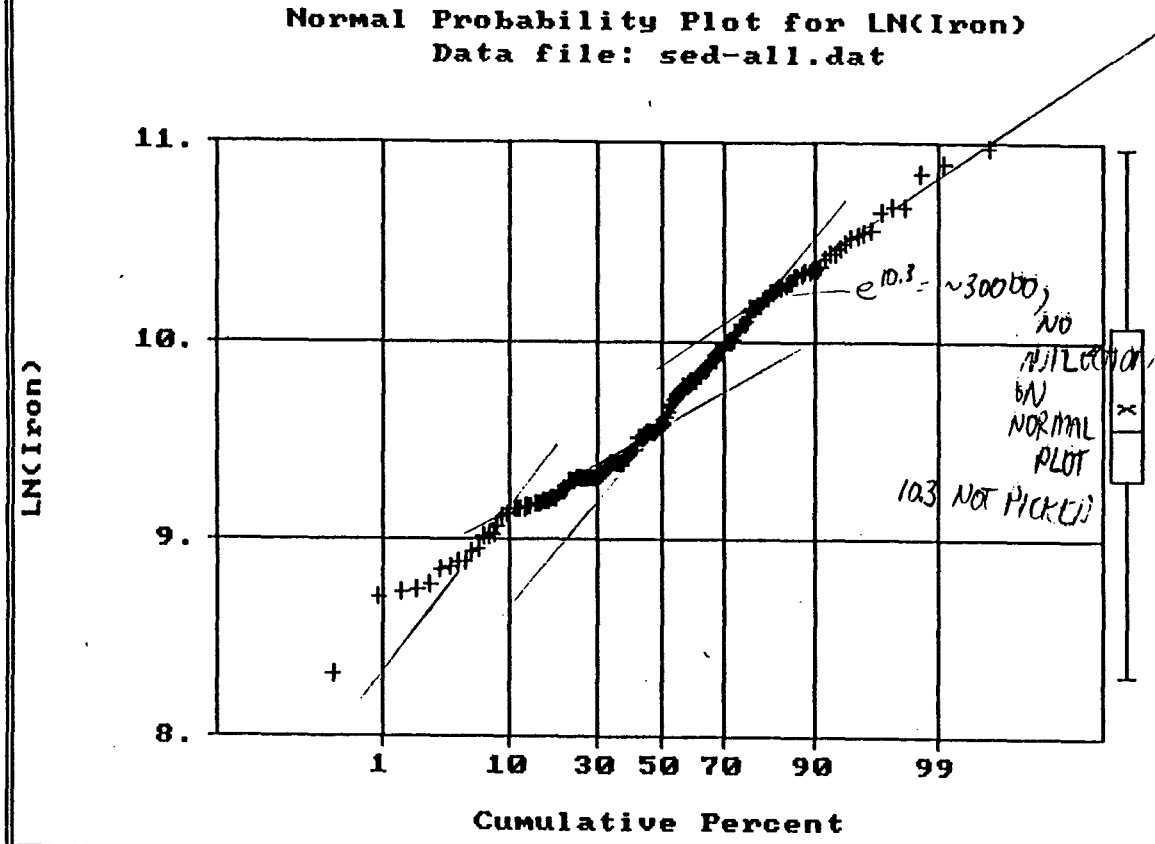


Statistics

N Total :	259
N Miss :	88
N Used :	171
Mean :	18260.890
Variance:	101083100.000
Std. Dev:	10054.010
% C.V. :	55.058
Skewness:	1.327
Kurtosis:	4.798
Minimum :	4065.817
25th % :	11000.000
Median :	14313.500
75th % :	23850.000
Maximum :	58454.820

A-121

Normal Probability Plot for LN(Iron)
Data file: sed-all.dat



Statistics

N Total :	259
N Miss :	88
N Used :	171
Mean :	9.679
Variance:	.262
Std. Dev:	.512
% C.V. :	5.292
Skewness:	.229
Kurtosis:	2.466
Minimum :	8.310
25th % :	9.306
Median :	9.569
75th % :	10.080
Maximum :	10.976

	A	B
1	DATA	ID
2	0.005	Sed-Hg
3	0.005	Sed-Hg
4	0.005	Sed-Hg
5	0.005	Sed-Hg
6	0.0135	Sed-Hg
7	0.0135	Sed-Hg
8	0.0135	Sed-Hg
9	0.0135	Sed-Hg
10	0.0135	Sed-Hg
11	0.0135	Sed-Hg
12	0.0135	Sed-Hg
13	0.0135	Sed-Hg
14	0.0135	Sed-Hg
15	0.0135	Sed-Hg
16	0.0135	Sed-Hg
17	0.0135	Sed-Hg
18	0.0135	Sed-Hg
19	0.0135	Sed-Hg
20	0.0135	Sed-Hg
21	0.0135	Sed-Hg
22	0.0135	Sed-Hg
23	0.0135	Sed-Hg
24	0.0135	Sed-Hg
25	0.0135	Sed-Hg
26	0.0135	Sed-Hg
27	0.0135	Sed-Hg
28	0.0135	Sed-Hg
29	0.0135	Sed-Hg
30	0.0135	Sed-Hg
31	0.0135	Sed-Hg
32	0.0135	Sed-Hg
33	0.0135	Sed-Hg
34	0.0135	Sed-Hg
35	0.0135	Sed-Hg
36	0.0135	Sed-Hg
37	0.0135	Sed-Hg
38	0.0135	Sed-Hg
39	0.0135	Sed-Hg
40	0.0135	Sed-Hg
41	0.0135	Sed-Hg
42	0.0135	Sed-Hg
43	0.0135	Sed-Hg
44	0.0135	Sed-Hg
45	0.0135	Sed-Hg
46	0.025	Sed-Hg
47	0.025	Sed-Hg
48	0.025	Sed-Hg
49	0.025	Sed-Hg
50	0.025	Sed-Hg
51	0.025	Sed-Hg
52	0.025	Sed-Hg
53	0.025	Sed-Hg
54	0.025	Sed-Hg
55	0.025	Sed-Hg
56	0.025	Sed-Hg
57	0.025	Sed-Hg
58	0.025	Sed-Hg
59	0.025	Sed-Hg
60	0.025	Sed-Hg
61	0.025	Sed-Hg
62	0.025	Sed-Hg
63	0.025	Sed-Hg
64	0.025	Sed-Hg
65	0.025	Sed-Hg
66	0.025	Sed-Hg
67	0.025	Sed-Hg

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	172	Mean	0.066
Censored	------	Lognormal mean	0.051
Detection limit or PQL	------	Std. devn.	0.152
Method detection limit		Median	0.0295
TOTAL	172	Min.	0.005
ENTER DATA		Max	1.1

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.858

Normal distribution? r-squared is: 0.330

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	0.005	Sed-Hg
3	0.005	Sed-Hg
4	0.005	Sed-Hg
5	0.005	Sed-Hg
6	0.0135	Sed-Hg
7	0.0135	Sed-Hg
8	0.0135	Sed-Hg
9	0.0135	Sed-Hg
10	0.0135	Sed-Hg
11	0.0135	Sed-Hg
12	0.0135	Sed-Hg
13	0.0135	Sed-Hg
14	0.0135	Sed-Hg
15	0.0135	Sed-Hg
16	0.0135	Sed-Hg
17	0.0135	Sed-Hg
18	0.0135	Sed-Hg
19	0.0135	Sed-Hg
20	0.0135	Sed-Hg
21	0.0135	Sed-Hg
22	0.0135	Sed-Hg
23	0.0135	Sed-Hg
24	0.0135	Sed-Hg
25	0.0135	Sed-Hg
26	0.0135	Sed-Hg
27	0.0135	Sed-Hg
28	0.0135	Sed-Hg
29	0.0135	Sed-Hg
30	0.0135	Sed-Hg
31	0.0135	Sed-Hg
32	0.0135	Sed-Hg
33	0.0135	Sed-Hg
34	0.0135	Sed-Hg
35	0.0135	Sed-Hg
36	0.0135	Sed-Hg
37	0.0135	Sed-Hg
38	0.0135	Sed-Hg
39	0.0135	Sed-Hg
40	0.0135	Sed-Hg
41	0.0135	Sed-Hg
42	0.0135	Sed-Hg
43	0.0135	Sed-Hg
44	0.0135	Sed-Hg
45	0.0135	Sed-Hg
46	0.025	Sed-Hg
47	0.025	Sed-Hg
48	0.025	Sed-Hg
49	0.025	Sed-Hg
50	0.025	Sed-Hg
51	0.025	Sed-Hg
52	0.025	Sed-Hg
53	0.025	Sed-Hg
54	0.025	Sed-Hg
55	0.025	Sed-Hg
56	0.025	Sed-Hg
57	0.025	Sed-Hg
58	0.025	Sed-Hg
59	0.025	Sed-Hg
60	0.025	Sed-Hg
61	0.025	Sed-Hg
62	0.025	Sed-Hg
63	0.025	Sed-Hg
64	0.025	Sed-Hg
65	0.025	Sed-Hg
66	0.025	Sed-Hg
67	0.025	Sed-Hg

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	172	Mean	0.066
Censored	------	Lognormal mean	0.051
Detection limit or PQL	------	Std. devn.	0.152
Method detection limit		Median	0.0295
TOTAL	172	Min.	0.005
ENTER DATA		Max.	1.1

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.858

Normal distribution? r-squared is: 0.330

Recommendations:

Reject lognormal distribution.

Y value is -12.8054. This lies outside the tabled values of 1.4551 and -2.4252

Reject normal distribution.

Y value is -63.3579. This lies outside the tabled values of 1.4551 and -2.4252

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

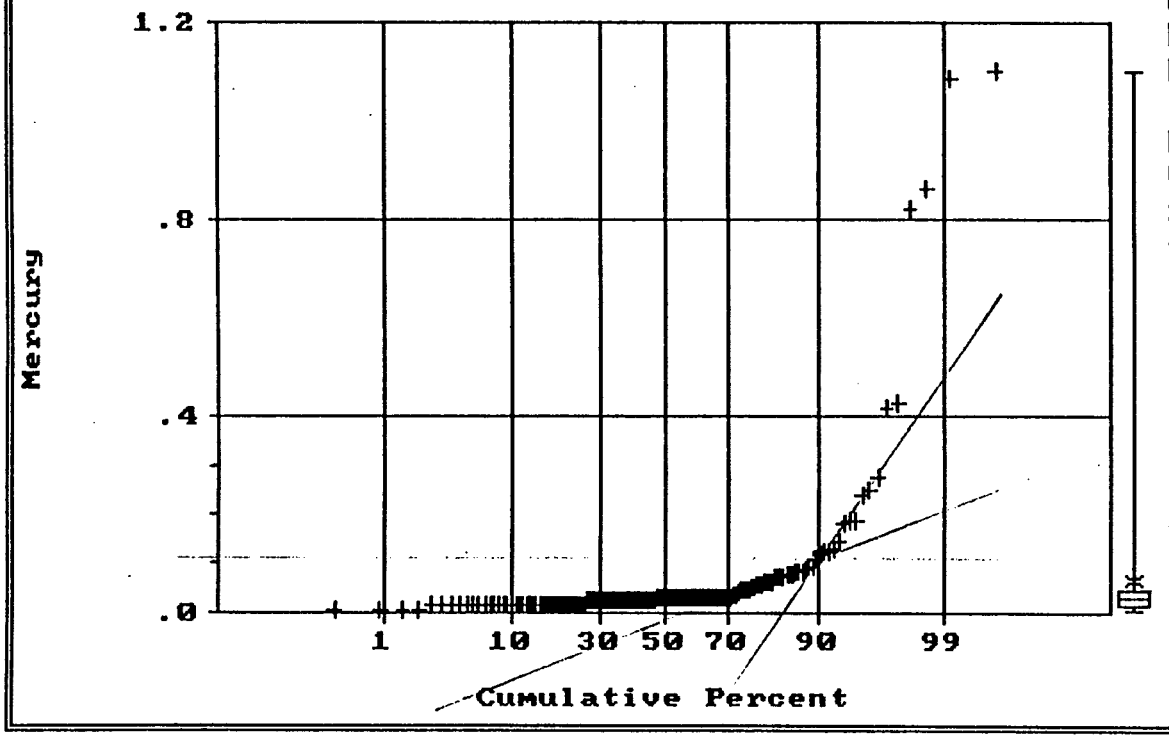
Lognormal

Normal

Neither

Sample size

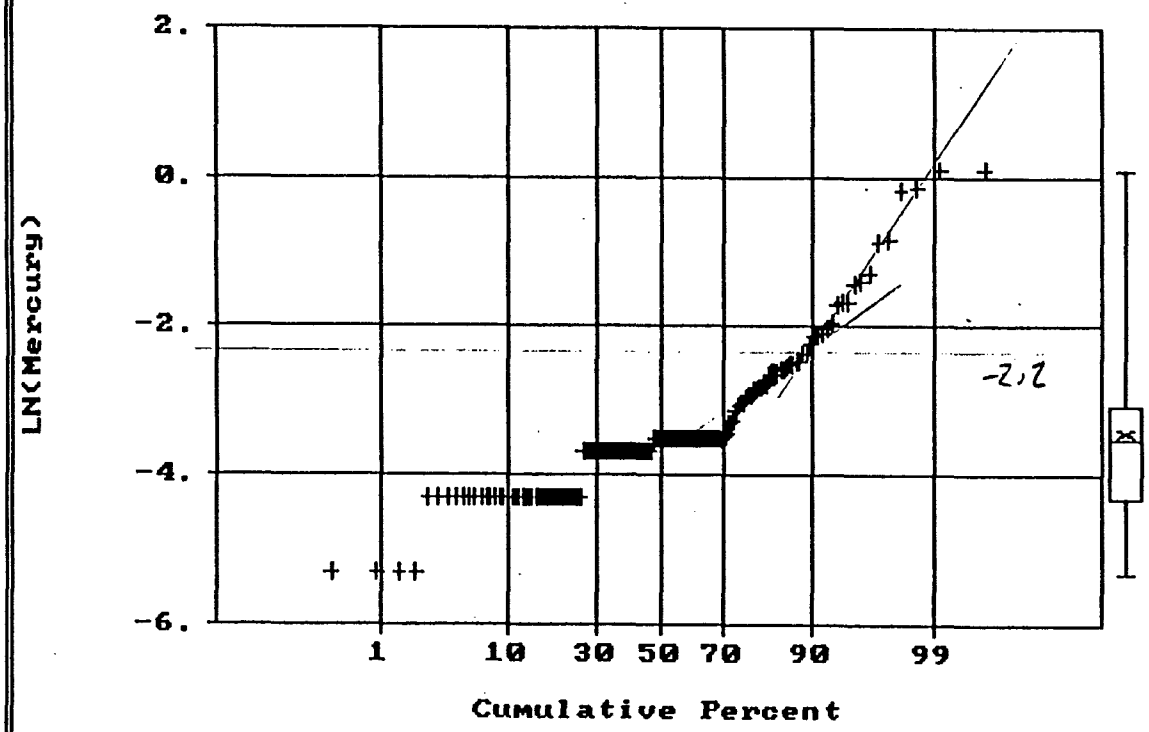
Normal Probability Plot for Mercury
Data file: sed-all.dat



Statistics

N Total :	259
N Miss :	87
N Used :	172
Mean :	.066
Variance:	.023
Std. Dev:	.152
% C.V. :	229.320
Skewness:	5.278
Kurtosis:	32.356
Minimum :	.005
25th % :	.014
Median :	.030
75th % :	.047
Maximum :	1.100

Normal Probability Plot for LN(Mercury)
Data file: sed-all.dat



Statistics

N Total :	259
N Miss :	87
N Used :	172
Mean :	-3.420
Variance:	.897
Std. Dev:	.947
% C.V. :	27.691
Skewness:	1.378
Kurtosis:	5.791
Minimum :	-5.298
25th % :	-4.305
Median :	-3.523
75th % :	-3.058
Maximum :	.095

$e^{-2.2} = 0.11$

A-126

	A	B
1	DATA	ID
2	75.093	Sed-Mn
3	81.282	Sed-Mn
4	85.881	Sed-Mn
5	86.555	Sed-Mn
6	89.26	Sed-Mn
7	91.518	Sed-Mn
8	94.8	Sed-Mn
9	97.4	Sed-Mn
10	98.9	Sed-Mn
11	99.3	Sed-Mn
12	99.6	Sed-Mn
13	101.36	Sed-Mn
14	102.26	Sed-Mn
15	102.6	Sed-Mn
16	102.89	Sed-Mn
17	104	Sed-Mn
18	105.87	Sed-Mn
19	107.71	Sed-Mn
20	109.38	Sed-Mn
21	109.81	Sed-Mn
22	110.06	Sed-Mn
23	111.18	Sed-Mn
24	114.32	Sed-Mn
25	115.63	Sed-Mn
26	117.52	Sed-Mn
27	120	Sed-Mn
28	120.03	Sed-Mn
29	123	Sed-Mn
30	123.16	Sed-Mn
31	123.17	Sed-Mn
32	125	Sed-Mn
33	126	Sed-Mn
34	126.15	Sed-Mn
35	127	Sed-Mn
36	127.47	Sed-Mn
37	128	Sed-Mn
38	130	Sed-Mn
39	130	Sed-Mn
40	130.41	Sed-Mn
41	131	Sed-Mn
42	131.42	Sed-Mn
43	132	Sed-Mn
44	132.29	Sed-Mn
45	133	Sed-Mn
46	134	Sed-Mn
47	134.14	Sed-Mn
48	138.08	Sed-Mn
49	139	Sed-Mn
50	140	Sed-Mn
51	144	Sed-Mn
52	144	Sed-Mn
53	145.06	Sed-Mn
54	147.92	Sed-Mn
55	150	Sed-Mn
56	150.81	Sed-Mn
57	151	Sed-Mn
58	151.26	Sed-Mn
59	151.66	Sed-Mn
60	155.96	Sed-Mn
61	156	Sed-Mn
62	158	Sed-Mn
63	158.19	Sed-Mn
64	160	Sed-Mn
65	162.08	Sed-Mn
66	163.85	Sed-Mn
67	167.31	Sed-Mn

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	171	Mean	290.936
Censored	------	Lognormal mean	273.396
Detection limit or PQL	------	Std. devn.	354.565
Method detection limit		Median	186
TOTAL	171	Min.	75.0929
ENTER DATA		Max	3864.1189

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.930

Normal distribution? r-squared is: 0.441

Recommendations:

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values
Sort data
Create report
Clear all
Histogram
5 10 20
Clear messages
Calculate UCL
Lognormal
Normal
Neither
Sample size

	A	B
1	DATA	ID
2	75.093	Sed-Mn
3	81.282	Sed-Mn
4	85.881	Sed-Mn
5	86.555	Sed-Mn
6	89.26	Sed-Mn
7	91.518	Sed-Mn
8	94.8	Sed-Mn
9	97.4	Sed-Mn
10	98.9	Sed-Mn
11	99.3	Sed-Mn
12	99.6	Sed-Mn
13	101.36	Sed-Mn
14	102.26	Sed-Mn
15	102.6	Sed-Mn
16	102.89	Sed-Mn
17	104	Sed-Mn
18	105.87	Sed-Mn
19	107.71	Sed-Mn
20	109.38	Sed-Mn
21	109.81	Sed-Mn
22	110.06	Sed-Mn
23	111.18	Sed-Mn
24	114.32	Sed-Mn
25	115.63	Sed-Mn
26	117.52	Sed-Mn
27	120	Sed-Mn
28	120.03	Sed-Mn
29	123	Sed-Mn
30	123.16	Sed-Mn
31	123.17	Sed-Mn
32	125	Sed-Mn
33	126	Sed-Mn
34	126.15	Sed-Mn
35	127	Sed-Mn
36	127.47	Sed-Mn
37	128	Sed-Mn
38	130	Sed-Mn
39	130	Sed-Mn
40	130.41	Sed-Mn
41	131	Sed-Mn
42	131.42	Sed-Mn
43	132	Sed-Mn
44	132.29	Sed-Mn
45	133	Sed-Mn
46	134	Sed-Mn
47	134.14	Sed-Mn
48	138.08	Sed-Mn
49	139	Sed-Mn
50	140	Sed-Mn
51	144	Sed-Mn
52	144	Sed-Mn
53	145.06	Sed-Mn
54	147.92	Sed-Mn
55	150	Sed-Mn
56	150.81	Sed-Mn
57	151	Sed-Mn
58	151.26	Sed-Mn
59	151.66	Sed-Mn
60	155.96	Sed-Mn
61	156	Sed-Mn
62	158	Sed-Mn
63	158.19	Sed-Mn
64	160	Sed-Mn
65	162.08	Sed-Mn
66	163.85	Sed-Mn
67	167.31	Sed-Mn

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	171	Mean	290.936
Censored	------	Lognormal mean	273.396
Detection limit or PQL	------	Std. devn.	354.565
Method detection limit		Median	186
TOTAL	171	Min.	75.0929
ENTER DATA		Max	3864.1189

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.930

Normal distribution? r-squared is: 0.441

Recommendations

Reject lognormal distribution.

Y value is -4.1017. This lies outside the tabled values of 1.4537 and -2.4264

Reject normal distribution.

Y value is -49.0552. This lies outside the tabled values of 1.4537 and -2.4264

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

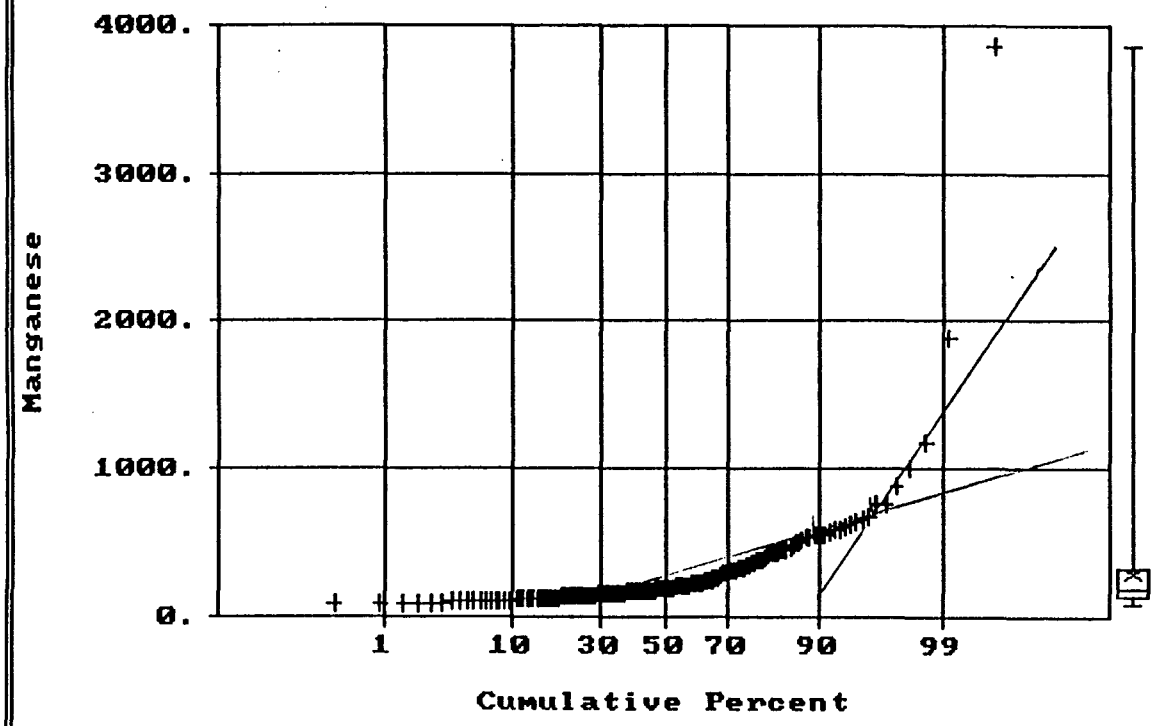
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Manganese
Data file: sed-all.dat



Statistics

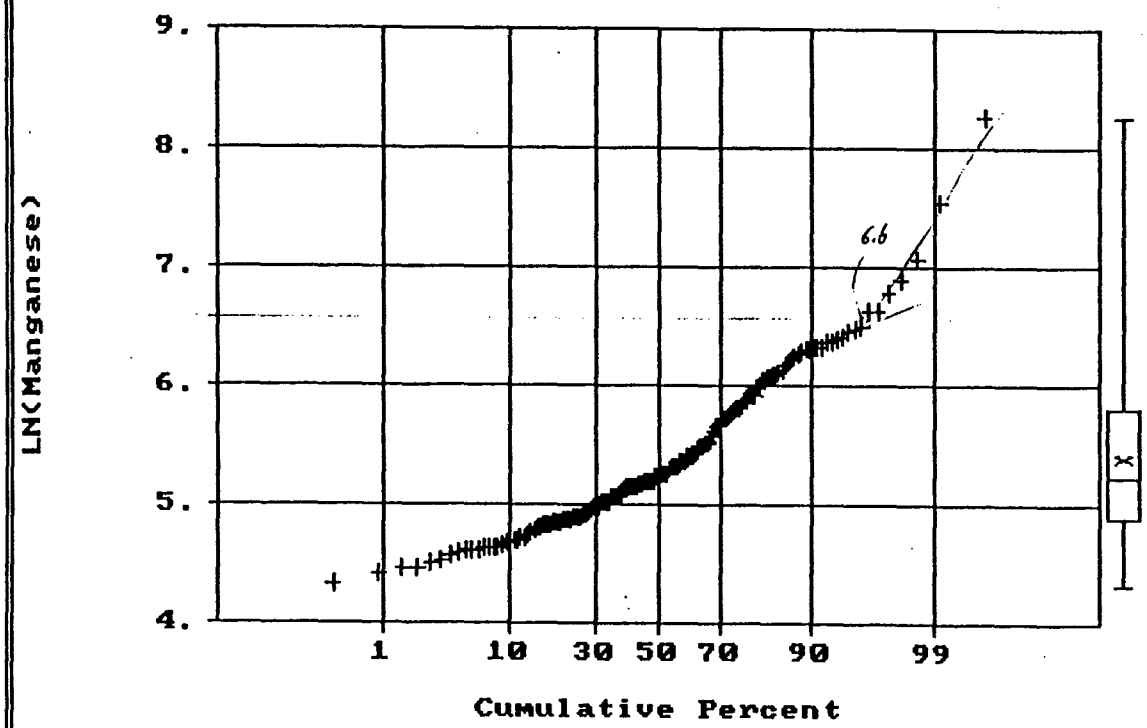
N Total :	259
N Miss :	88
N Used :	171
Mean :	290.936
Variance:	125716.500
Std. Dev:	354.565
% C.V. :	121.871
Skewness:	6.787
Kurtosis:	63.966
Minimum :	75.093
25th % :	132.219
Median :	186.000
75th % :	333.500
Maximum :	3864.119

735

544

A-129

Normal Probability Plot for LN(Manganese)
Data file: sed-all.dat



Statistics

N Total :	259
N Miss :	88
N Used :	171
Mean :	5.396
Variance:	.430
Std. Dev:	.656
% C.V. :	12.156
Skewness:	1.046
Kurtosis:	4.514
Minimum :	4.319
25th % :	4.884
Median :	5.226
75th % :	5.810
Maximum :	8.259

$e^{6.6} = 735$

A-130

	A	B
1	DATA	ID
2	12.119	Sed-Ni
3	14.9738	Sed-Ni
4	15.0526	Sed-Ni
5	15.7113	Sed-Ni
6	16.6157	Sed-Ni
7	17.8197	Sed-Ni
8	18.0191	Sed-Ni
9	18.312	Sed-Ni
10	18.8679	Sed-Ni
11	19.2821	Sed-Ni
12	19.4328	Sed-Ni
13	19.6702	Sed-Ni
14	20.4873	Sed-Ni
15	20.5392	Sed-Ni
16	20.5882	Sed-Ni
17	20.8	Sed-Ni
18	21	Sed-Ni
19	21.1	Sed-Ni
20	21.1134	Sed-Ni
21	21.1458	Sed-Ni
22	21.306	Sed-Ni
23	21.5481	Sed-Ni
24	21.8	Sed-Ni
25	22.3	Sed-Ni
26	22.4	Sed-Ni
27	22.5	Sed-Ni
28	22.9319	Sed-Ni
29	23.2	Sed-Ni
30	23.2301	Sed-Ni
31	23.291	Sed-Ni
32	24.0625	Sed-Ni
33	24.2	Sed-Ni
34	24.4	Sed-Ni
35	24.6	Sed-Ni
36	24.7	Sed-Ni
37	24.7423	Sed-Ni
38	25.1	Sed-Ni
39	25.3	Sed-Ni
40	25.3375	Sed-Ni
41	25.4625	Sed-Ni
42	25.474	Sed-Ni
43	25.641	Sed-Ni
44	25.7	Sed-Ni
45	26.3212	Sed-Ni
46	26.561	Sed-Ni
47	26.566	Sed-Ni
48	27	Sed-Ni
49	27.012	Sed-Ni
50	27.377	Sed-Ni
51	27.5	Sed-Ni
52	28.303	Sed-Ni
53	28.534	Sed-Ni
54	28.777	Sed-Ni
55	28.8205	Sed-Ni
56	28.921	Sed-Ni
57	29.044	Sed-Ni
58	29.1	Sed-Ni
59	29.2	Sed-Ni
60	29.323	Sed-Ni
61	29.3692	Sed-Ni
62	30.1	Sed-Ni
63	30.1	Sed-Nj
64	30.575	Sed-Ni
65	30.709	Sed-Ni
66	30.775	Sed-Ni
67	31.0595	Sed-Ni

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	171	Mean	87.935
Censored	------	Lognormal mean	69.946
Detection limit or PQL	------	Std. devn.	182.608
Method detection limit		Median	37.5
TOTAL	171	Min.	12.119
ENTER DATA		Max.	1520

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.863

Normal distribution? r-squared is: 0.356

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	12.119	Sed-Ni
3	14.9738	Sed-Ni
4	15.0526	Sed-Ni
5	15.7113	Sed-Ni
6	16.6157	Sed-Ni
7	17.8197	Sed-Ni
8	18.0191	Sed-Ni
9	18.312	Sed-Ni
10	18.8679	Sed-Ni
11	19.2821	Sed-Ni
12	19.4328	Sed-Ni
13	19.6702	Sed-Ni
14	20.4873	Sed-Ni
15	20.5392	Sed-Ni
16	20.5882	Sed-Ni
17	20.8	Sed-Ni
18	21	Sed-Ni
19	21.1	Sed-Ni
20	21.1134	Sed-Ni
21	21.1458	Sed-Ni
22	21.306	Sed-Ni
23	21.5481	Sed-Ni
24	21.8	Sed-Ni
25	22.3	Sed-Ni
26	22.4	Sed-Ni
27	22.5	Sed-Ni
28	22.9319	Sed-Ni
29	23.2	Sed-Ni
30	23.2301	Sed-Ni
31	23.291	Sed-Ni
32	24.0625	Sed-Ni
33	24.2	Sed-Ni
34	24.4	Sed-Ni
35	24.6	Sed-Ni
36	24.7	Sed-Ni
37	24.7423	Sed-Ni
38	25.1	Sed-Ni
39	25.3	Sed-Ni
40	25.3375	Sed-Ni
41	25.4625	Sed-Ni
42	25.474	Sed-Ni
43	25.641	Sed-Ni
44	25.7	Sed-Ni
45	26.3212	Sed-Ni
46	26.561	Sed-Ni
47	26.566	Sed-Ni
48	27	Sed-Ni
49	27.012	Sed-Ni
50	27.377	Sed-Ni
51	27.5	Sed-Ni
52	28.303	Sed-Ni
53	28.534	Sed-Ni
54	28.777	Sed-Ni
55	28.8205	Sed-Ni
56	28.921	Sed-Ni
57	29.044	Sed-Ni
58	29.1	Sed-Ni
59	29.2	Sed-Ni
60	29.323	Sed-Ni
61	29.3692	Sed-Ni
62	30.1	Sed-Ni
63	30.1	Sed-Ni
64	30.575	Sed-Ni
65	30.709	Sed-Ni
66	30.775	Sed-Ni
67	31.0595	Sed-Ni

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	171	Mean	87.935
Censored	------	Lognormal mean	69.946
Detection limit or PQL	------	Std. devn.	182.608
Method detection limit	------	Median	37.5
TOTAL	171	Min.	12.119
ENTER DATA		Max.	1520

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.863

Normal distribution? r-squared is: 0.356

Recommendations

Reject lognormal distribution.

Y value is -10.8344. This lies outside the tabled values of 1.4537 and -2.4264

Reject normal distribution.

Y value is -60.2635. This lies outside the tabled values of 1.4537 and -2.4264

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

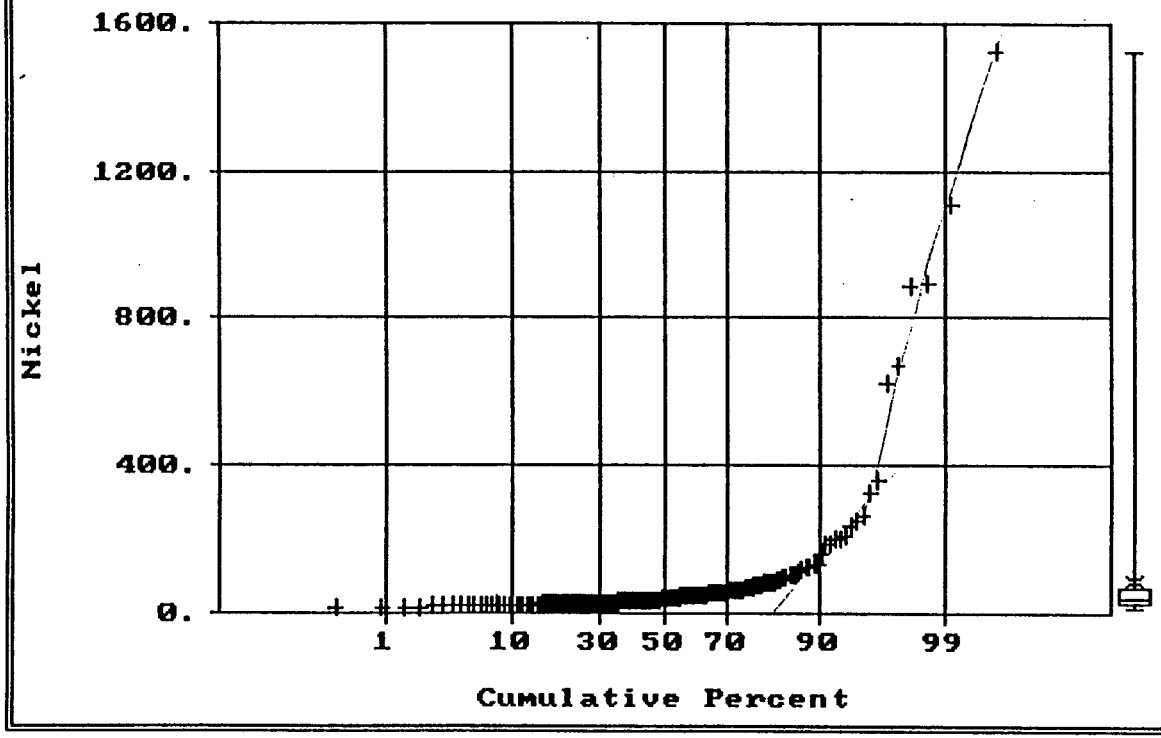
Lognormal

Normal

Neither

Sample size

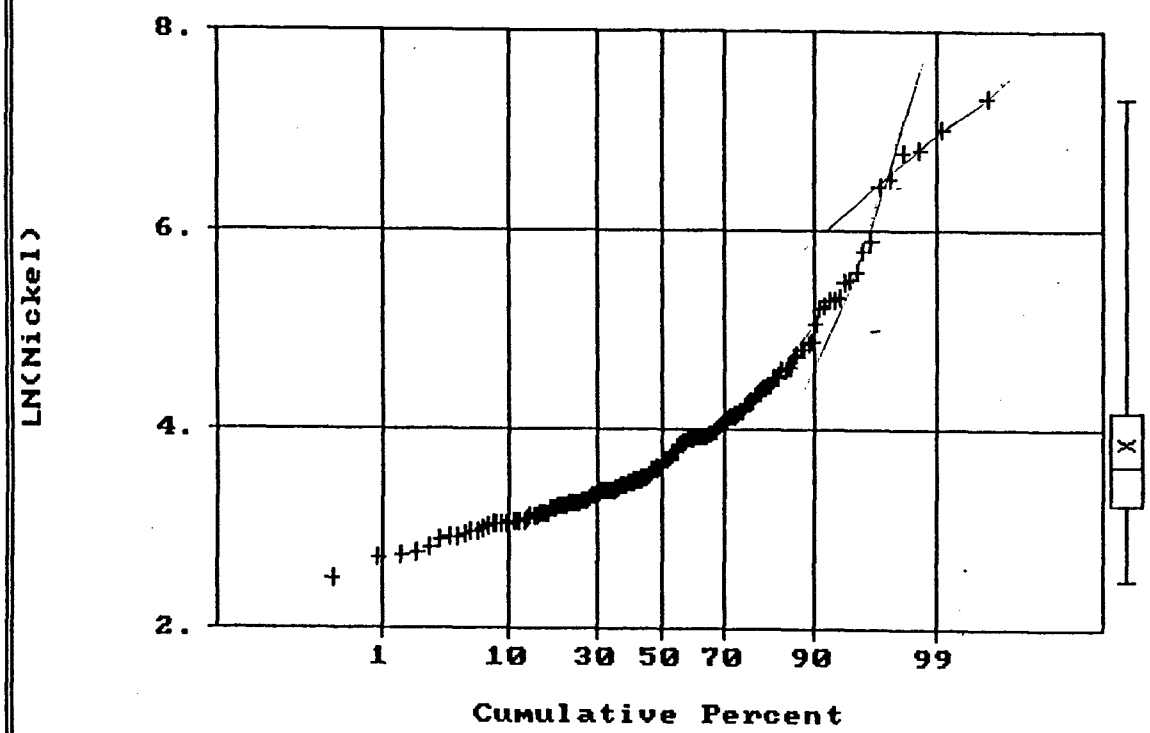
Normal Probability Plot for Nickel
Data file: sed-all.dat



Statistics

N Total :	259
N Miss :	88
N Used :	171
Mean :	87.935
Variance:	33345.500
Std. Dev:	182.608
% C.V. :	207.662
Skewness:	5.240
Kurtosis:	33.669
Minimum :	12.119
25th % :	25.685
Median :	37.500
75th % :	64.406
Maximum :	1520.000

Normal Probability Plot for LN(Nickel)
Data file: sed-all.dat



Statistics

N Total :	259
N Miss :	88
N Used :	171
Mean :	3.864
Variance:	.767
Std. Dev:	.876
% C.V. :	22.660
Skewness:	1.593
Kurtosis:	5.920
Minimum :	2.495
25th % :	3.246
Median :	3.624
75th % :	4.165
Maximum :	7.326

$e^{5.95} \cong 380$

A-134

	A	B
1	DATA	ID
2	0.7	Sed-Pb
3	1.17	Sed-Pb
4	1.33	Sed-Pb
5	1.35	Sed-Pb
6	1.35	Sed-Pb
7	1.53	Sed-Pb
8	1.5901	Sed-Pb
9	1.5966	Sed-Pb
10	1.71	Sed-Pb
11	1.72	Sed-Pb
12	1.77	Sed-Pb
13	1.801	Sed-Pb
14	1.8868	Sed-Pb
15	1.89	Sed-Pb
16	1.9271	Sed-Pb
17	1.95	Sed-Pb
18	1.9703	Sed-Pb
19	2.0476	Sed-Pb
20	2.08	Sed-Pb
21	2.12	Sed-Pb
22	2.15	Sed-Pb
23	2.17	Sed-Pb
24	2.2484	Sed-Pb
25	2.293	Sed-Pb
26	2.32	Sed-Pb
27	2.42	Sed-Pb
28	2.4701	Sed-Pb
29	2.536	Sed-Pb
30	2.57	Sed-Pb
31	2.6205	Sed-Pb
32	2.6526	Sed-Pb
33	2.7254	Sed-Pb
34	2.73	Sed-Pb
35	2.8256	Sed-Pb
36	2.94	Sed-Pb
37	2.9832	Sed-Pb
38	3.02	Sed-Pb
39	3.2212	Sed-Pb
40	3.2813	Sed-Pb
41	3.4	Sed-Pb
42	3.5	Sed-Pb
43	3.58	Sed-Pb
44	3.6482	Sed-Pb
45	3.68	Sed-Pb
46	3.72	Sed-Pb
47	3.72	Sed-Pb
48	3.72	Sed-Pb
49	3.72	Sed-Pb
50	3.72	Sed-Pb
51	3.72	Sed-Pb
52	3.72	Sed-Pb
53	3.72	Sed-Pb
54	3.72	Sed-Pb
55	3.72	Sed-Pb
56	3.72	Sed-Pb
57	3.72	Sed-Pb
58	3.72	Sed-Pb
59	3.72	Sed-Pb
60	3.72	Sed-Pb
61	3.72	Sed-Pb
62	3.72	Sed-Pb
63	3.72	Sed-Pb
64	3.72	Sed-Pb
65	3.72	Sed-Pb
66	3.72	Sed-Pb
67	3.72	Sed-Pb

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	259	Mean	51.910
Censored	------	Lognormal mean	40.635
Detection limit or PQL	------	Std. devn.	131.086
Method detection limit		Median	12.5
TOTAL	259	Min.	0.7
ENTER DATA		Max.	1200

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.939

Normal distribution? r-squared is: 0.395

Recommendations:

Reject lognormal distribution.

Y value is -3.6032. This lies outside the tabled values of 1.5508 and -2.3422

Reject normal distribution.

Y value is -68.8311. This lies outside the tabled values of 1.5508 and -2.3422

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	0.7	Sed-Pb
3	1.17	Sed-Pb
4	1.33	Sed-Pb
5	1.35	Sed-Pb
6	1.35	Sed-Pb
7	1.53	Sed-Pb
8	1.5901	Sed-Pb
9	1.5966	Sed-Pb
10	1.71	Sed-Pb
11	1.72	Sed-Pb
12	1.77	Sed-Pb
13	1.801	Sed-Pb
14	1.8868	Sed-Pb
15	1.89	Sed-Pb
16	1.9271	Sed-Pb
17	1.95	Sed-Pb
18	1.9703	Sed-Pb
19	2.0476	Sed-Pb
20	2.08	Sed-Pb
21	2.12	Sed-Pb
22	2.15	Sed-Pb
23	2.17	Sed-Pb
24	2.2484	Sed-Pb
25	2.293	Sed-Pb
26	2.32	Sed-Pb
27	2.42	Sed-Pb
28	2.4701	Sed-Pb
29	2.536	Sed-Pb
30	2.57	Sed-Pb
31	2.6205	Sed-Pb
32	2.6526	Sed-Pb
33	2.7254	Sed-Pb
34	2.73	Sed-Pb
35	2.8256	Sed-Pb
36	2.94	Sed-Pb
37	2.9832	Sed-Pb
38	3.02	Sed-Pb
39	3.2212	Sed-Pb
40	3.2813	Sed-Pb
41	3.4	Sed-Pb
42	3.5	Sed-Pb
43	3.58	Sed-Pb
44	3.6482	Sed-Pb
45	3.68	Sed-Pb
46	3.72	Sed-Pb
47	3.72	Sed-Pb
48	3.72	Sed-Pb
49	3.72	Sed-Pb
50	3.72	Sed-Pb
51	3.72	Sed-Pb
52	3.72	Sed-Pb
53	3.72	Sed-Pb
54	3.72	Sed-Pb
55	3.72	Sed-Pb
56	3.72	Sed-Pb
57	3.72	Sed-Pb
58	3.72	Sed-Pb
59	3.72	Sed-Pb
60	3.72	Sed-Pb
61	3.72	Sed-Pb
62	3.72	Sed-Pb
63	3.72	Sed-Pb
64	3.72	Sed-Pb
65	3.72	Sed-Pb
66	3.72	Sed-Pb
67	3.72	Sed-Pb

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	259	Mean	51.910
Censored	------	Lognormal mean	40.635
Detection limit or PQL	------	Std. devn.	131.086
Method detection limit		Median	12.5
TOTAL	259	Min.	0.7
ENTER DATA		Max.	1200

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.939

Normal distribution? r-squared is: 0.395

Recommendations:

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

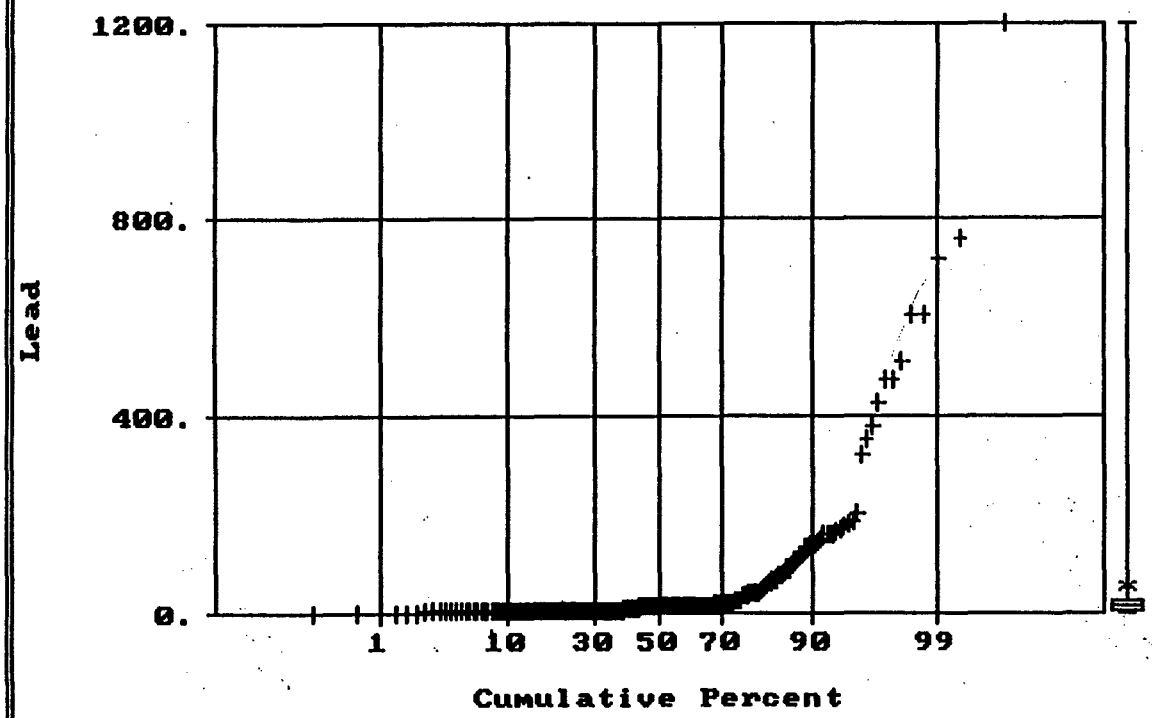
Lognormal

Normal

Neither

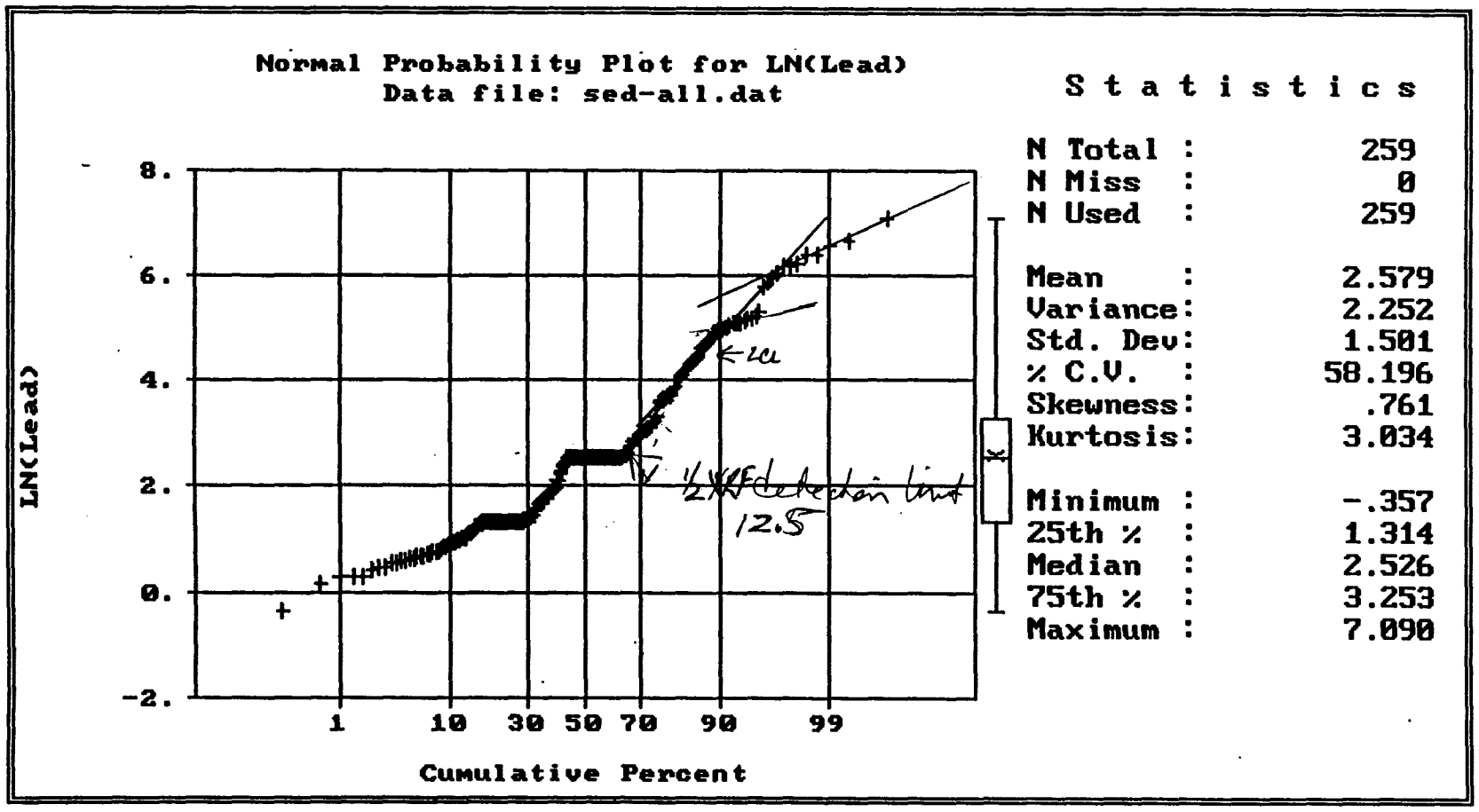
Sample size

Normal Probability Plot for Lead
Data file: sed-all.dat



Statistics

N Total :	259
N Miss :	0
N Used :	259
Mean :	51.910
Variance:	17183.560
Std. Dev:	131.086
% C.V. :	252.527
Skewness:	4.950
Kurtosis:	33.112
Minimum :	.700
25th % :	3.720
Median :	12.500
75th % :	25.875
Maximum :	1200.000



8 outliers

A-138

	A	B
1	DATA	ID
2	0.05	Sed-Sb
3	0.05	Sed-Sb
4	0.05	Sed-Sb
5	0.05	Sed-Sb
6	0.05	Sed-Sb
7	0.05	Sed-Sb
8	0.05	Sed-Sb
9	0.05	Sed-Sb
10	0.2	Sed-Sb
11	0.2	Sed-Sb
12	0.2	Sed-Sb
13	0.2	Sed-Sb
14	0.2	Sed-Sb
15	0.2	Sed-Sb
16	0.2	Sed-Sb
17	0.25	Sed-Sb
18	0.25	Sed-Sb
19	0.25	Sed-Sb
20	0.25	Sed-Sb
21	0.25	Sed-Sb
22	0.25	Sed-Sb
23	0.25	Sed-Sb
24	0.25	Sed-Sb
25	0.25	Sed-Sb
26	0.25	Sed-Sb
27	0.25	Sed-Sb
28	0.25	Sed-Sb
29	0.25	Sed-Sb
30	2.5	Sed-Sb
31	2.5	Sed-Sb
32	2.5	Sed-Sb
33	9.8	Sed-Sb
34	9.8	Sed-Sb
35	9.8	Sed-Sb
36	9.8	Sed-Sb
37	9.8	Sed-Sb
38	9.8	Sed-Sb
39	9.8	Sed-Sb
40	9.8	Sed-Sb
41	9.8	Sed-Sb
42	9.8	Sed-Sb
43	9.8	Sed-Sb
44	9.8	Sed-Sb
45	9.8	Sed-Sb
46	9.8	Sed-Sb
47	9.8	Sed-Sb
48	9.8	Sed-Sb
49	9.8	Sed-Sb
50	9.8	Sed-Sb
51	9.8	Sed-Sb
52	9.8	Sed-Sb
53	9.8	Sed-Sb
54	9.8	Sed-Sb
55	9.8	Sed-Sb
56	9.8	Sed-Sb
57	9.8	Sed-Sb
58	9.8	Sed-Sb
59	9.8	Sed-Sb
60	9.8	Sed-Sb
61	9.8	Sed-Sb
62	9.8	Sed-Sb
63	9.8	Sed-Sb
64	9.8	Sed-Sb
65	9.8	Sed-Sb
66	9.8	Sed-Sb
67	9.8	Sed-Sb

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	157	Mean	14.215
Censored	------	Lognormal mean	34.360
Detection limit or PQL	------	Std. devn.	17.890
Method detection limit		Median	9.8
TOTAL	157	Min.	0.05
ENTER DATA		Max.	166

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.698

Normal distribution? r-squared is: 0.435

Recommendations

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	0.05	Sed-Sb
3	0.05	Sed-Sb
4	0.05	Sed-Sb
5	0.05	Sed-Sb
6	0.05	Sed-Sb
7	0.05	Sed-Sb
8	0.05	Sed-Sb
9	0.05	Sed-Sb
10	0.2	Sed-Sb
11	0.2	Sed-Sb
12	0.2	Sed-Sb
13	0.2	Sed-Sb
14	0.2	Sed-Sb
15	0.2	Sed-Sb
16	0.2	Sed-Sb
17	0.25	Sed-Sb
18	0.25	Sed-Sb
19	0.25	Sed-Sb
20	0.25	Sed-Sb
21	0.25	Sed-Sb
22	0.25	Sed-Sb
23	0.25	Sed-Sb
24	0.25	Sed-Sb
25	0.25	Sed-Sb
26	0.25	Sed-Sb
27	0.25	Sed-Sb
28	0.25	Sed-Sb
29	0.25	Sed-Sb
30	2.5	Sed-Sb
31	2.5	Sed-Sb
32	2.5	Sed-Sb
33	9.8	Sed-Sb
34	9.8	Sed-Sb
35	9.8	Sed-Sb
36	9.8	Sed-Sb
37	9.8	Sed-Sb
38	9.8	Sed-Sb
39	9.8	Sed-Sb
40	9.8	Sed-Sb
41	9.8	Sed-Sb
42	9.8	Sed-Sb
43	9.8	Sed-Sb
44	9.8	Sed-Sb
45	9.8	Sed-Sb
46	9.8	Sed-Sb
47	9.8	Sed-Sb
48	9.8	Sed-Sb
49	9.8	Sed-Sb
50	9.8	Sed-Sb
51	9.8	Sed-Sb
52	9.8	Sed-Sb
53	9.8	Sed-Sb
54	9.8	Sed-Sb
55	9.8	Sed-Sb
56	9.8	Sed-Sb
57	9.8	Sed-Sb
58	9.8	Sed-Sb
59	9.8	Sed-Sb
60	9.8	Sed-Sb
61	9.8	Sed-Sb
62	9.8	Sed-Sb
63	9.8	Sed-Sb
64	9.8	Sed-Sb
65	9.8	Sed-Sb
66	9.8	Sed-Sb
67	9.8	Sed-Sb

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	157	Mean	14.215
Censored	------	Lognormal mean	34.360
Detection limit or PQL	------	Std. devn.	17.890
Method detection limit		Median	9.8
TOTAL	157	Min.	0.05
ENTER DATA		Max.	166

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.698

Normal distribution? r-squared is: 0.435

Recommendations:

Reject lognormal distribution.

Y value is -21.0604. This lies outside the tabled values of 1.4332 and -2.4435

Reject normal distribution.

Y value is -46.9058. This lies outside the tabled values of 1.4332 and -2.4435

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

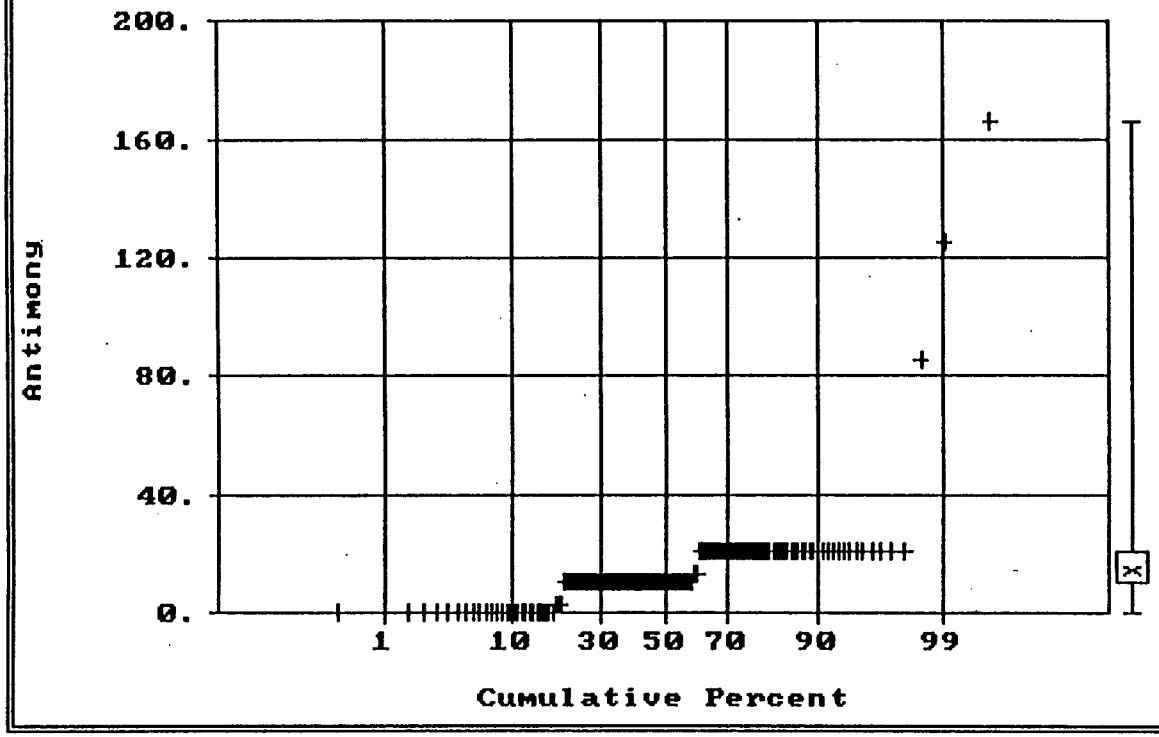
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Antimony
Data file: sed-all.dat



Statistics

N Total :	259
N Miss :	102
N Used :	157
Mean :	14.215
Variance:	320.035
Std. Dev:	17.890
% C.V. :	125.850
Skewness:	5.779
Kurtosis:	44.618
Minimum :	.050
25th % :	9.800
Median :	9.800
75th % :	20.650
Maximum :	166.000

ALL DETECTS

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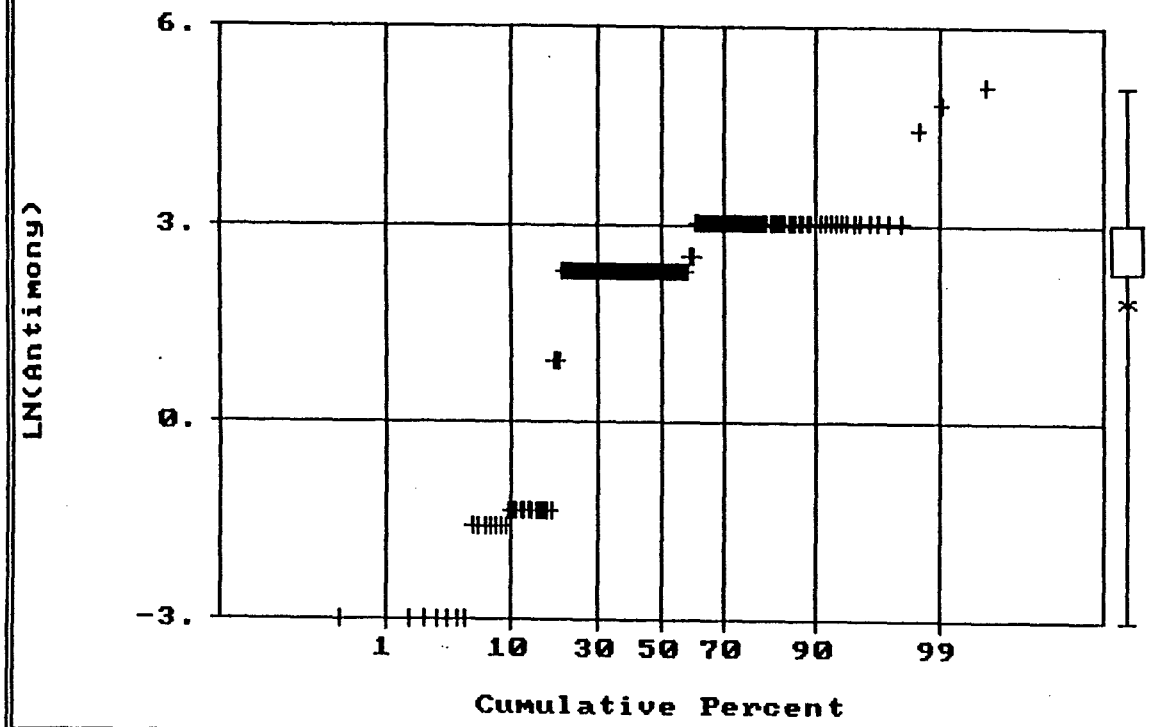
Normal Probability Plot for LN(Antimony)
Data file: sed-all.dat



S t a t i s t i c s

N Total :	259
N Miss :	102
N Used :	157
Mean :	1.838
Variance:	3.398
Std. Dev:	1.843
% C.V. :	100.284
Skewness:	-1.484
Kurtosis:	3.981
Minimum :	-2.996
25th % :	2.282
Median :	2.282
75th % :	3.028
Maximum :	5.112

	A	B
1	DATA	ID
2	0.125	Sed-Se
3	0.125	Sed-Se
4	0.125	Sed-Se
5	0.125	Sed-Se
6	0.125	Sed-Se
7	0.125	Sed-Se
8	0.125	Sed-Se
9	0.125	Sed-Se
10	0.125	Sed-Se
11	0.125	Sed-Se
12	0.125	Sed-Se
13	0.125	Sed-Se
14	0.125	Sed-Se
15	0.125	Sed-Se
16	0.125	Sed-Se
17	0.125	Sed-Se
18	0.125	Sed-Se
19	0.125	Sed-Se
20	0.125	Sed-Se
21	0.125	Sed-Se
22	0.125	Sed-Se
23	0.125	Sed-Se
24	0.125	Sed-Se
25	0.125	Sed-Se
26	0.125	Sed-Se
27	0.125	Sed-Se
28	0.125	Sed-Se
29	0.125	Sed-Se
30	0.125	Sed-Se
31	0.125	Sed-Se
32	0.125	Sed-Se
33	0.125	Sed-Se
34	0.125	Sed-Se
35	0.125	Sed-Se
36	0.125	Sed-Se
37	0.125	Sed-Se
38	0.125	Sed-Se
39	0.125	Sed-Se
40	0.125	Sed-Se
41	0.125	Sed-Se
42	0.125	Sed-Se
43	0.125	Sed-Se
44	0.125	Sed-Se
45	0.125	Sed-Se
46	0.125	Sed-Se
47	0.125	Sed-Se
48	0.125	Sed-Se
49	0.125	Sed-Se
50	0.125	Sed-Se
51	0.125	Sed-Se
52	0.125	Sed-Se
53	0.125	Sed-Se
54	0.125	Sed-Se
55	0.125	Sed-Se
56	0.125	Sed-Se
57	0.208	Sed-Se
58	0.208	Sed-Se
59	0.208	Sed-Se
60	0.208	Sed-Se
61	0.208	Sed-Se
62	0.208	Sed-Se
63	0.208	Sed-Se
64	0.208	Sed-Se
65	0.208	Sed-Se
66	0.208	Sed-Se
67	0.208	Sed-Se

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	172	Mean	0.321
Censored	------	Lognormal mean	0.277
Detection limit or PQL	------	Std. devn.	0.523
Method detection limit		Median	0.208
TOTAL	172	Min.	0.125
ENTER DATA		Max.	4.2857

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.688

Normal distribution? r-squared is: 0.337

Recommendations

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	0.125	Sed-Se
3	0.125	Sed-Se
4	0.125	Sed-Se
5	0.125	Sed-Se
6	0.125	Sed-Se
7	0.125	Sed-Se
8	0.125	Sed-Se
9	0.125	Sed-Se
10	0.125	Sed-Se
11	0.125	Sed-Se
12	0.125	Sed-Se
13	0.125	Sed-Se
14	0.125	Sed-Se
15	0.125	Sed-Se
16	0.125	Sed-Se
17	0.125	Sed-Se
18	0.125	Sed-Se
19	0.125	Sed-Se
20	0.125	Sed-Se
21	0.125	Sed-Se
22	0.125	Sed-Se
23	0.125	Sed-Se
24	0.125	Sed-Se
25	0.125	Sed-Se
26	0.125	Sed-Se
27	0.125	Sed-Se
28	0.125	Sed-Se
29	0.125	Sed-Se
30	0.125	Sed-Se
31	0.125	Sed-Se
32	0.125	Sed-Se
33	0.125	Sed-Se
34	0.125	Sed-Se
35	0.125	Sed-Se
36	0.125	Sed-Se
37	0.125	Sed-Se
38	0.125	Sed-Se
39	0.125	Sed-Se
40	0.125	Sed-Se
41	0.125	Sed-Se
42	0.125	Sed-Se
43	0.125	Sed-Se
44	0.125	Sed-Se
45	0.125	Sed-Se
46	0.125	Sed-Se
47	0.125	Sed-Se
48	0.125	Sed-Se
49	0.125	Sed-Se
50	0.125	Sed-Se
51	0.125	Sed-Se
52	0.125	Sed-Se
53	0.125	Sed-Se
54	0.125	Sed-Se
55	0.125	Sed-Se
56	0.125	Sed-Se
57	0.208	Sed-Se
58	0.208	Sed-Se
59	0.208	Sed-Se
60	0.208	Sed-Se
61	0.208	Sed-Se
62	0.208	Sed-Se
63	0.208	Sed-Se
64	0.208	Sed-Se
65	0.208	Sed-Se
66	0.208	Sed-Se
67	0.208	Sed-Se

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	172	Mean	0.321
Censored	------	Lognormal mean	0.277
Detection limit or PQL	------	Std. devn.	0.523
Method detection limit		Median	0.208
TOTAL	172	Min.	0.125
ENTER DATA		Max	4.2857

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.688

Normal distribution? r-squared is: 0.337

Recommendations.

Reject lognormal distribution.

Y value is -25.3805. This lies outside the tabled values of 1.4551 and -2.4252

Reject normal distribution.

Y value is -62.5802. This lies outside the tabled values of 1.4551 and -2.4252

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

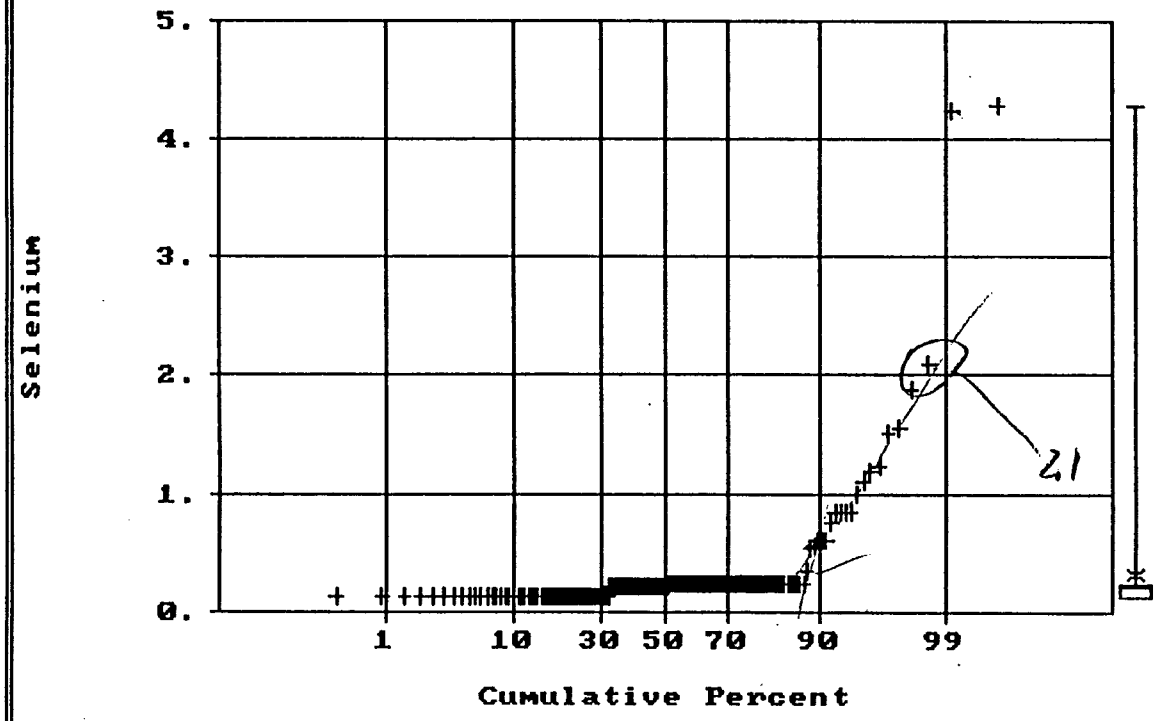
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Selenium
Data file: sed-all.dat

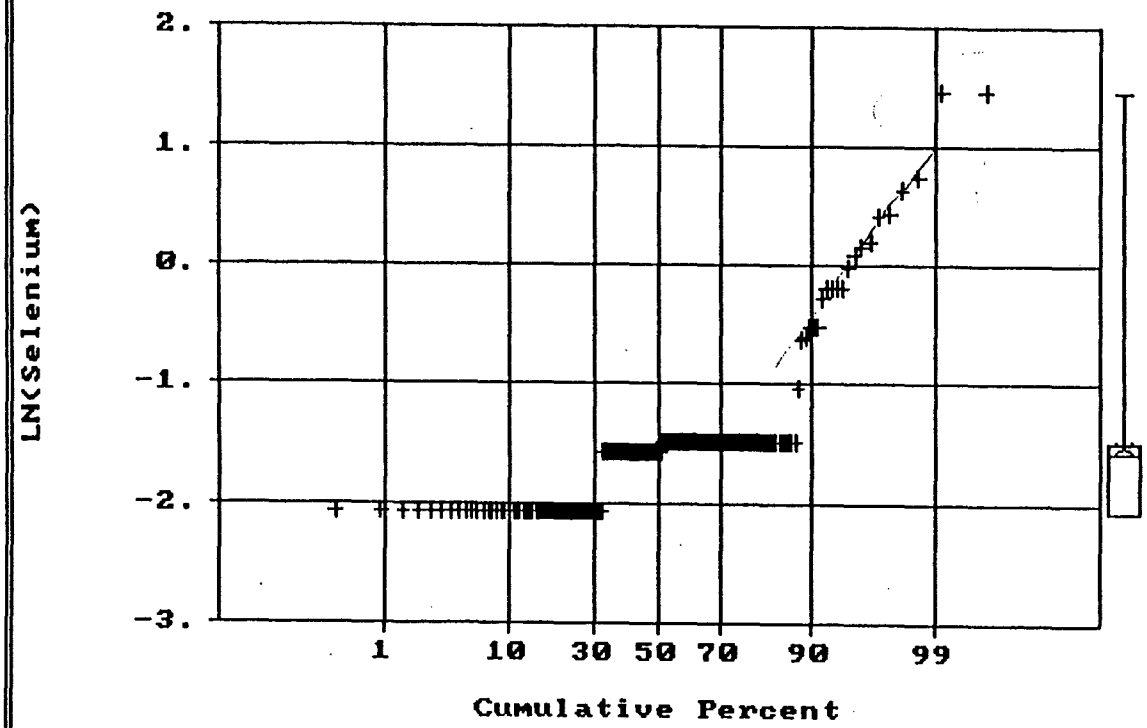


Statistics

N Total :	259
N Miss :	87
N Used :	172
Mean :	.321
Variance:	.274
Std. Dev:	.523
% C.V. :	162.935
Skewness:	5.627
Kurtosis:	39.541
Minimum :	.125
25th % :	.125
Median :	.208
75th % :	.225
Maximum :	4.286

A-145

Normal Probability Plot for LN(Selenium)
Data file: sed-all.dat



Statistics

N Total :	259
N Miss :	87
N Used :	172
Mean :	-1.509
Variance:	.448
Std. Dev:	.669
% C.V. :	44.336
Skewness:	2.156
Kurtosis:	8.238
Minimum :	-2.079
25th % :	-2.079
Median :	-1.570
75th % :	-1.494
Maximum :	1.455

$e^{1.43} = 4.2$

A-146

	A	B
1	DATA	ID
2	0.081	Sed-Tl
3	0.081	Sed-Tl
4	0.081	Sed-Tl
5	0.081	Sed-Tl
6	0.081	Sed-Tl
7	0.081	Sed-Tl
8	0.081	Sed-Tl
9	0.081	Sed-Tl
10	0.081	Sed-Tl
11	0.081	Sed-Tl
12	0.081	Sed-Tl
13	0.081	Sed-Tl
14	0.081	Sed-Tl
15	0.081	Sed-Tl
16	0.081	Sed-Tl
17	0.081	Sed-Tl
18	0.081	Sed-Tl
19	0.081	Sed-Tl
20	0.081	Sed-Tl
21	0.081	Sed-Tl
22	0.081	Sed-Tl
23	0.081	Sed-Tl
24	0.081	Sed-Tl
25	0.081	Sed-Tl
26	0.081	Sed-Tl
27	0.081	Sed-Tl
28	0.081	Sed-Tl
29	0.081	Sed-Tl
30	0.081	Sed-Tl
31	0.081	Sed-Tl
32	0.081	Sed-Tl
33	0.081	Sed-Tl
34	0.081	Sed-Tl
35	0.081	Sed-Tl
36	0.081	Sed-Tl
37	0.081	Sed-Tl
38	0.081	Sed-Tl
39	0.081	Sed-Tl
40	0.087	Sed-Tl
41	0.087	Sed-Tl
42	0.087	Sed-Tl
43	0.1	Sed-Tl
44	0.1	Sed-Tl
45	0.1	Sed-Tl
46	0.1	Sed-Tl
47	2.5	Sed-Tl
48	2.5	Sed-Tl
49	2.5	Sed-Tl
50	7.35	Sed-Tl
51	17.15	Sed-Tl
52	17.15	Sed-Tl
53	17.15	Sed-Tl
54	17.15	Sed-Tl
55	17.15	Sed-Tl
56	17.15	Sed-Tl
57	17.15	Sed-Tl
58	17.15	Sed-Tl
59	17.15	Sed-Tl
60	17.15	Sed-Tl
61	17.15	Sed-Tl
62	17.15	Sed-Tl
63	17.15	Sed-Tl
64	17.15	Sed-Tl
65	17.15	Sed-Tl
66	17.15	Sed-Tl
67	17.15	Sed-Tl

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	111	Mean	9.747
Censored	------	Lognormal mean	54.646
Detection limit or PQL	------	Std. devn.	8.401
Method detection limit		Median	17.15
TOTAL	111	Min.	0.081
ENTER DATA		Max.	17.15

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.657

Normal distribution? r-squared is: 0.652

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	0.081	Sed-Tl
3	0.081	Sed-Tl
4	0.081	Sed-Tl
5	0.081	Sed-Tl
6	0.081	Sed-Tl
7	0.081	Sed-Tl
8	0.081	Sed-Tl
9	0.081	Sed-Tl
10	0.081	Sed-Tl
11	0.081	Sed-Tl
12	0.081	Sed-Tl
13	0.081	Sed-Tl
14	0.081	Sed-Tl
15	0.081	Sed-Tl
16	0.081	Sed-Tl
17	0.081	Sed-Tl
18	0.081	Sed-Tl
19	0.081	Sed-Tl
20	0.081	Sed-Tl
21	0.081	Sed-Tl
22	0.081	Sed-Tl
23	0.081	Sed-Tl
24	0.081	Sed-Tl
25	0.081	Sed-Tl
26	0.081	Sed-Tl
27	0.081	Sed-Tl
28	0.081	Sed-Tl
29	0.081	Sed-Tl
30	0.081	Sed-Tl
31	0.081	Sed-Tl
32	0.081	Sed-Tl
33	0.081	Sed-Tl
34	0.081	Sed-Tl
35	0.081	Sed-Tl
36	0.081	Sed-Tl
37	0.081	Sed-Tl
38	0.081	Sed-Tl
39	0.081	Sed-Tl
40	0.087	Sed-Tl
41	0.087	Sed-Tl
42	0.087	Sed-Tl
43	0.1	Sed-Tl
44	0.1	Sed-Tl
45	0.1	Sed-Tl
46	0.1	Sed-Tl
47	2.5	Sed-Tl
48	2.5	Sed-Tl
49	2.5	Sed-Tl
50	7.35	Sed-Tl
51	17.15	Sed-Tl
52	17.15	Sed-Tl
53	17.15	Sed-Tl
54	17.15	Sed-Tl
55	17.15	Sed-Tl
56	17.15	Sed-Tl
57	17.15	Sed-Tl
58	17.15	Sed-Tl
59	17.15	Sed-Tl
60	17.15	Sed-Tl
61	17.15	Sed-Tl
62	17.15	Sed-Tl
63	17.15	Sed-Tl
64	17.15	Sed-Tl
65	17.15	Sed-Tl
66	17.15	Sed-Tl
67	17.15	Sed-Tl

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	111	Mean	9.747
Censored	------	Lognormal mean	54.646
Detection limit or PQL	------	Std. devn.	8.401
Method detection limit		Median	17.15
TOTAL	111	Min.	0.081
ENTER DATA		Max	17.15

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.657

Normal distribution? r-squared is: 0.652

Recommendations

Reject lognormal distribution.

Y value is -11.0126. This lies outside the tabled values of 1.3294 and -2.53

Reject normal distribution.

Y value is -11.1079. This lies outside the tabled values of 1.3294 and -2.53

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

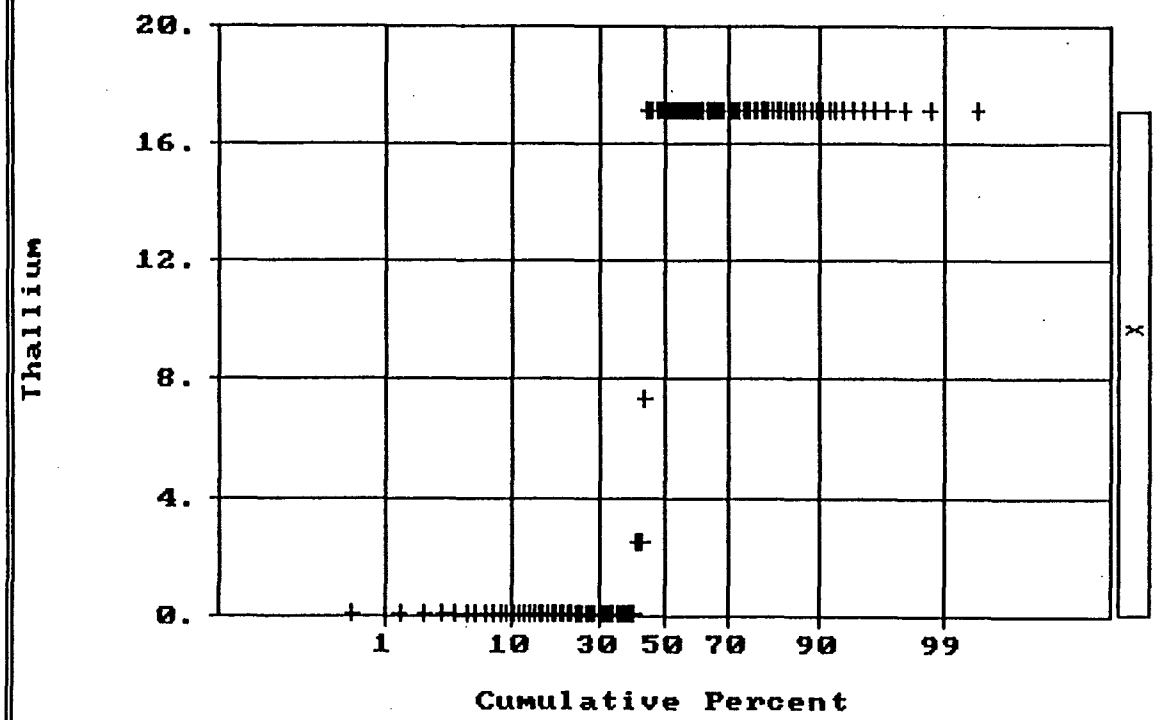
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Thallium
Data file: sed-all.dat

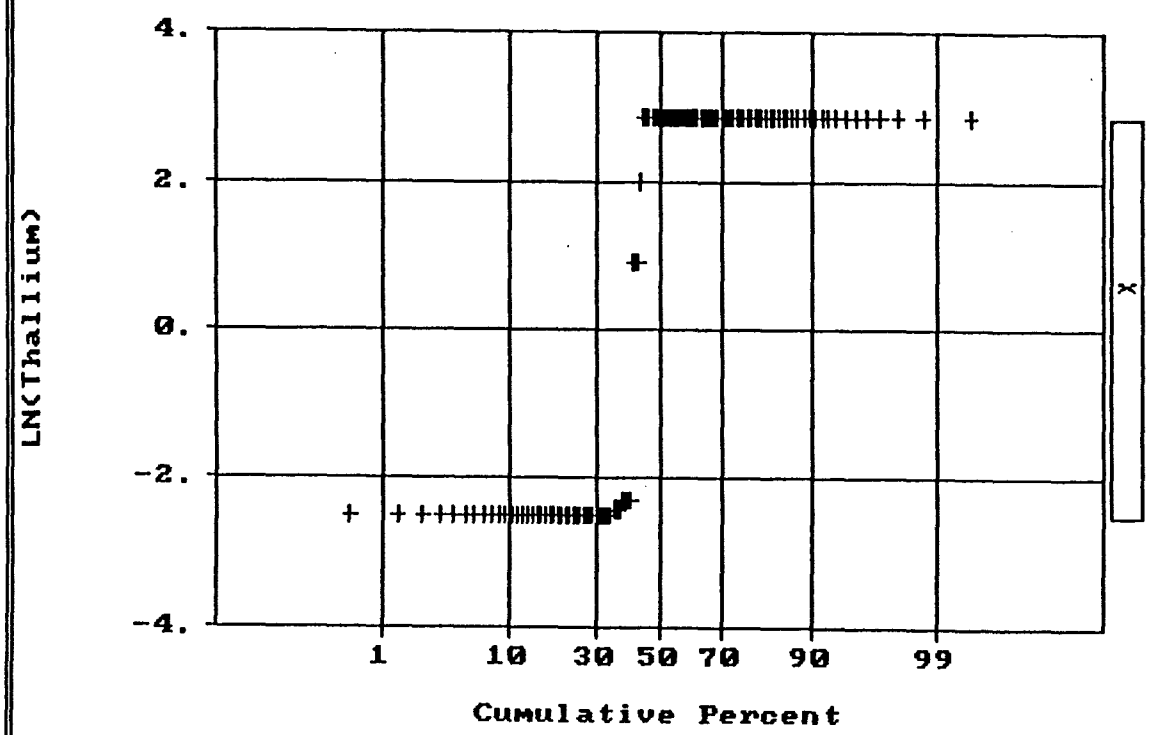


Statistics

N Total :	259
N Miss :	148
N Used :	111
Mean :	9.747
Variance:	70.580
Std. Dev:	8.401
% C.V. :	86.195
Skewness:	-.256
Kurtosis:	1.081
Minimum :	.081
25th % :	.081
Median :	17.150
75th % :	17.150
Maximum :	17.150

A-149

Normal Probability Plot for LN(Thallium)
Data file: sed-all.dat



Statistics

N Total :	259
N Miss :	148
N Used :	111
Mean :	.621
Variance:	6.760
Std. Dev:	2.600
% C.V. :	418.839
Skewness:	-.350
Kurtosis:	1.151
Minimum :	-2.513
25th % :	-2.513
Median :	2.842
75th % :	2.842
Maximum :	2.842

USELESS

A-150

	A	B
1	DATA	ID
2	14.1807	Sed-V
3	14.5641	Sed-V
4	15.7068	Sed-V
5	15.7113	Sed-V
6	16.167	Sed-V
7	16.2133	Sed-V
8	16.3722	Sed-V
9	18.4713	Sed-V
10	18.6	Sed-V
11	18.696	Sed-V
12	18.7	Sed-V
13	19.062	Sed-V
14	19.3585	Sed-V
15	19.4969	Sed-V
16	19.7166	Sed-V
17	20.1042	Sed-V
18	20.3077	Sed-V
19	20.6	Sed-V
20	20.625	Sed-V
21	20.7637	Sed-V
22	20.809	Sed-V
23	20.913	Sed-V
24	21	Sed-V
25	21.2645	Sed-V
26	21.341	Sed-V
27	21.4	Sed-V
28	21.4	Sed-V
29	21.6	Sed-V
30	21.881	Sed-V
31	22	Sed-V
32	22.3	Sed-V
33	22.3	Sed-V
34	22.351	Sed-V
35	22.6474	Sed-V
36	23.1	Sed-V
37	23.1579	Sed-V
38	23.2	Sed-V
39	23.2295	Sed-V
40	23.266	Sed-V
41	23.5233	Sed-V
42	23.6	Sed-V
43	23.612	Sed-V
44	23.7	Sed-V
45	23.741	Sed-V
46	23.8055	Sed-V
47	24.1228	Sed-V
48	24.2	Sed-V
49	24.2	Sed-V
50	24.3	Sed-V
51	24.524	Sed-V
52	24.8	Sed-V
53	25	Sed-V
54	25.1	Sed-V
55	25.251	Sed-V
56	25.928	Sed-V
57	26.081	Sed-V
58	26.094	Sed-V
59	26.291	Sed-V
60	26.4	Sed-V
61	26.6593	Sed-V
62	27.0903	Sed-V
63	27.518	Sed-V
64	27.584	Sed-V
65	27.8361	Sed-V
66	27.8634	Sed-V
67	27.9	Sed-V

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	171	Mean	39.630
Censored	------	Lognormal mean	39.600
Detection limit or PQL	------	Std. devn.	19.214
Method detection limit		Median	34
TOTAL	171	Min.	14.1807
ENTER DATA		Max	100

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.971

Normal distribution? r-squared is: 0.909

Recommendations

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear message

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	14.1807	Sed-V
3	14.5641	Sed-V
4	15.7068	Sed-V
5	15.7113	Sed-V
6	16.167	Sed-V
7	16.2133	Sed-V
8	16.3722	Sed-V
9	18.4713	Sed-V
10	18.6	Sed-V
11	18.696	Sed-V
12	18.7	Sed-V
13	19.062	Sed-V
14	19.3585	Sed-V
15	19.4969	Sed-V
16	19.7166	Sed-V
17	20.1042	Sed-V
18	20.3077	Sed-V
19	20.6	Sed-V
20	20.625	Sed-V
21	20.7637	Sed-V
22	20.809	Sed-V
23	20.913	Sed-V
24	21	Sed-V
25	21.2645	Sed-V
26	21.341	Sed-V
27	21.4	Sed-V
28	21.4	Sed-V
29	21.6	Sed-V
30	21.881	Sed-V
31	22	Sed-V
32	22.3	Sed-V
33	22.3	Sed-V
34	22.351	Sed-V
35	22.6474	Sed-V
36	23.1	Sed-V
37	23.1579	Sed-V
38	23.2	Sed-V
39	23.2295	Sed-V
40	23.266	Sed-V
41	23.5233	Sed-V
42	23.6	Sed-V
43	23.612	Sed-V
44	23.7	Sed-V
45	23.741	Sed-V
46	23.8055	Sed-V
47	24.1228	Sed-V
48	24.2	Sed-V
49	24.2	Sed-V
50	24.3	Sed-V
51	24.524	Sed-V
52	24.8	Sed-V
53	25	Sed-V
54	25.1	Sed-V
55	25.251	Sed-V
56	25.928	Sed-V
57	26.081	Sed-V
58	26.094	Sed-V
59	26.291	Sed-V
60	26.4	Sed-V
61	26.6593	Sed-V
62	27.0903	Sed-V
63	27.518	Sed-V
64	27.584	Sed-V
65	27.8361	Sed-V
66	27.8634	Sed-V
67	27.9	Sed-V

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	171	Mean	39.630
Censored	------	Lognormal mean	39.600
Detection limit or PQL	------	Std. devn.	19.214
Method detection limit		Median	34
TOTAL	171	Min.	14.1807
ENTER DATA		Max	100

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.971

Normal distribution? r-squared is: 0.909

Recommendations:

Reject lognormal distribution.

Y value is 2.0967. This lies outside the tabled values of 1.4537 and -2.4264

Reject normal distribution.

Y value is -3.1159. This lies outside the tabled values of 1.4537 and -2.4264

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

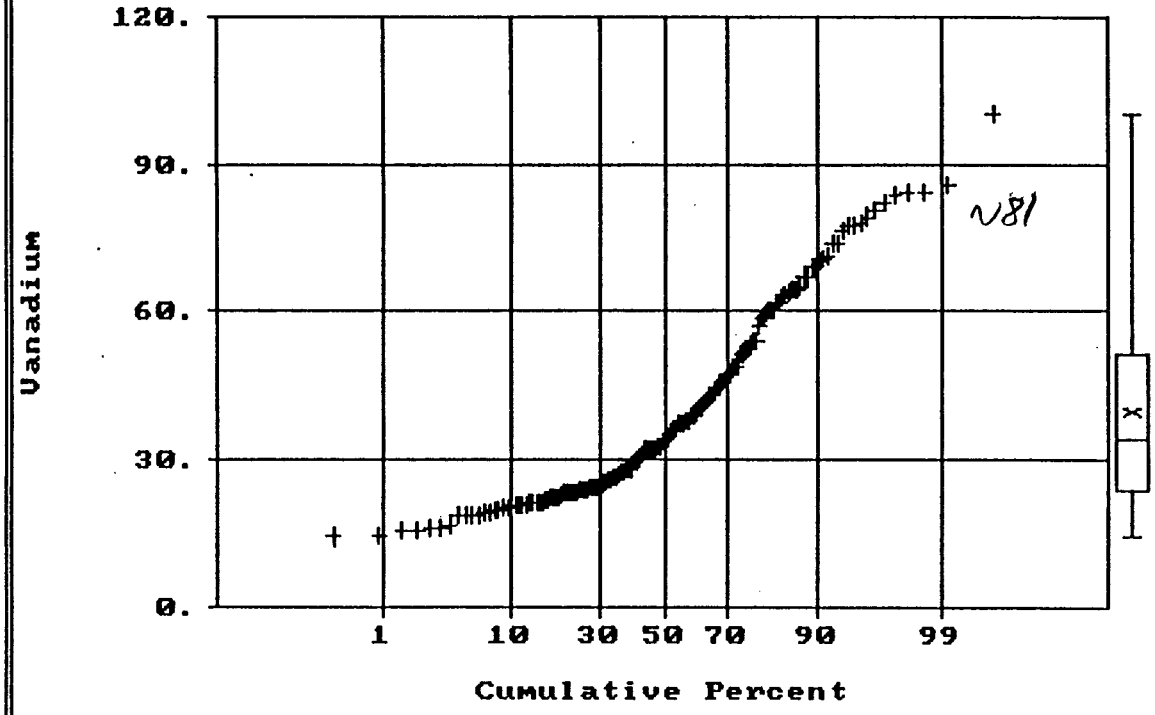
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Vanadium
Data file: sed-all.dat



Statistics

N Total :	259
N Miss :	88
N Used :	171
Mean :	39.630
Variance:	369.184
Std. Dev:	19.214
% C.V. :	48.484
Skewness:	.872
Kurtosis:	2.832
Minimum :	14.181
25th % :	23.678
Median :	34.000
75th % :	51.525
Maximum :	100.000

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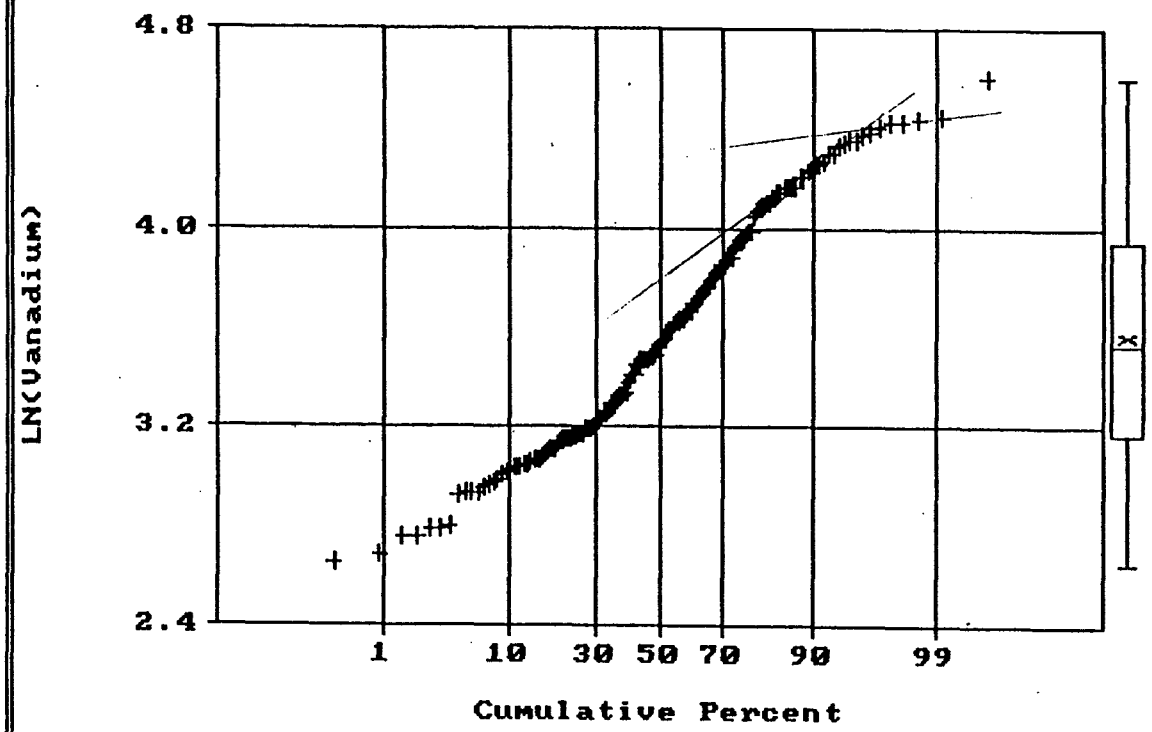
Normal Probability Plot for LN(Vanadium)
Data file: sed-all.dat



Statistics

N Total :	259
N Miss :	88
N Used :	171
Mean :	3.569
Variance:	.219
Std. Dev:	.468
% C.V. :	13.126
Skewness:	.206
Kurtosis:	2.012
Minimum :	2.652
25th % :	3.165
Median :	3.526
75th % :	3.942
Maximum :	4.605

$e^{4.4} = 81$

A-154

	A	B
1	DATA	ID
2	11.12	Sed-Zn
3	12.63	Sed-Zn
4	12.71	Sed-Zn
5	13.15	Sed-Zn
6	13.52	Sed-Zn
7	13.8	Sed-Zn
8	14.21	Sed-Zn
9	14.24	Sed-Zn
10	14.71	Sed-Zn
11	14.76	Sed-Zn
12	14.86	Sed-Zn
13	14.9	Sed-Zn
14	15.01	Sed-Zn
15	15.16	Sed-Zn
16	15.84	Sed-Zn
17	16.23	Sed-Zn
18	16.63	Sed-Zn
19	16.73	Sed-Zn
20	16.93	Sed-Zn
21	17.08	Sed-Zn
22	17.2	Sed-Zn
23	17.32	Sed-Zn
24	17.53	Sed-Zn
25	17.53	Sed-Zn
26	17.89	Sed-Zn
27	18	Sed-Zn
28	18	Sed-Zn
29	18	Sed-Zn
30	18	Sed-Zn
31	18	Sed-Zn
32	18	Sed-Zn
33	18	Sed-Zn
34	18.1	Sed-Zn
35	18.59	Sed-Zn
36	18.6	Sed-Zn
37	19.16	Sed-Zn
38	19.19	Sed-Zn
39	19.3	Sed-Zn
40	19.5	Sed-Zn
41	19.52	Sed-Zn
42	19.57	Sed-Zn
43	19.7	Sed-Zn
44	19.83	Sed-Zn
45	20.3	Sed-Zn
46	20.44	Sed-Zn
47	20.8	Sed-Zn
48	21.08	Sed-Zn
49	21.2	Sed-Zn
50	22	Sed-Zn
51	22.1	Sed-Zn
52	22.29	Sed-Zn
53	22.4	Sed-Zn
54	22.5	Sed-Zn
55	22.8	Sed-Zn
56	22.9	Sed-Zn
57	23	Sed-Zn
58	23.1	Sed-Zn
59	23.14	Sed-Zn
60	23.3	Sed-Zn
61	24.5	Sed-Zn
62	24.6	Sed-Zn
63	24.9	Sed-Zn
64	25	Sed-Zn
65	25.4	Sed-Zn
66	25.44	Sed-Zn
67	25.5	Sed-Zn

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	185	Mean	72.954
Censored	------	Lognormal mean	60.856
Detection limit or PQL	------	Std. devn.	143.655
Method detection limit		Median	33.9
TOTAL	185	Min.	11.12
ENTER DATA		Max	1500

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.900

Normal distribution? r-squared is: 0.367

Recommendations:

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	11.12	Sed-Zn
3	12.63	Sed-Zn
4	12.71	Sed-Zn
5	13.15	Sed-Zn
6	13.52	Sed-Zn
7	13.8	Sed-Zn
8	14.21	Sed-Zn
9	14.24	Sed-Zn
10	14.71	Sed-Zn
11	14.76	Sed-Zn
12	14.86	Sed-Zn
13	14.9	Sed-Zn
14	15.01	Sed-Zn
15	15.16	Sed-Zn
16	15.84	Sed-Zn
17	16.23	Sed-Zn
18	16.63	Sed-Zn
19	16.73	Sed-Zn
20	16.93	Sed-Zn
21	17.08	Sed-Zn
22	17.2	Sed-Zn
23	17.32	Sed-Zn
24	17.53	Sed-Zn
25	17.53	Sed-Zn
26	17.89	Sed-Zn
27	18	Sed-Zn
28	18	Sed-Zn
29	18	Sed-Zn
30	18	Sed-Zn
31	18	Sed-Zn
32	18	Sed-Zn
33	18	Sed-Zn
34	18.1	Sed-Zn
35	18.59	Sed-Zn
36	18.6	Sed-Zn
37	19.16	Sed-Zn
38	19.19	Sed-Zn
39	19.3	Sed-Zn
40	19.5	Sed-Zn
41	19.52	Sed-Zn
42	19.57	Sed-Zn
43	19.7	Sed-Zn
44	19.83	Sed-Zn
45	20.3	Sed-Zn
46	20.44	Sed-Zn
47	20.8	Sed-Zn
48	21.08	Sed-Zn
49	21.2	Sed-Zn
50	22	Sed-Zn
51	22.1	Sed-Zn
52	22.29	Sed-Zn
53	22.4	Sed-Zn
54	22.5	Sed-Zn
55	22.8	Sed-Zn
56	22.9	Sed-Zn
57	23	Sed-Zn
58	23.1	Sed-Zn
59	23.14	Sed-Zn
60	23.3	Sed-Zn
61	24.5	Sed-Zn
62	24.6	Sed-Zn
63	24.9	Sed-Zn
64	25	Sed-Zn
65	25.4	Sed-Zn
66	25.44	Sed-Zn
67	25.5	Sed-Zn

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	185	Mean	72.954
Censored	------	Lognormal mean	60.856
Detection limit or PQL	------	Std. devn.	143.655
Method detection limit		Median	33.9
TOTAL	185	Min.	11.12
ENTER DATA		Max.	1500

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.900

Normal distribution? r-squared is: 0.367

Recommendations:

Reject lognormal distribution.

Y value is -7.1435. This lies outside the tabled values of 1.4741 and -2.4093

Reject normal distribution.

Y value is -60.6935. This lies outside the tabled values of 1.4741 and -2.4093

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

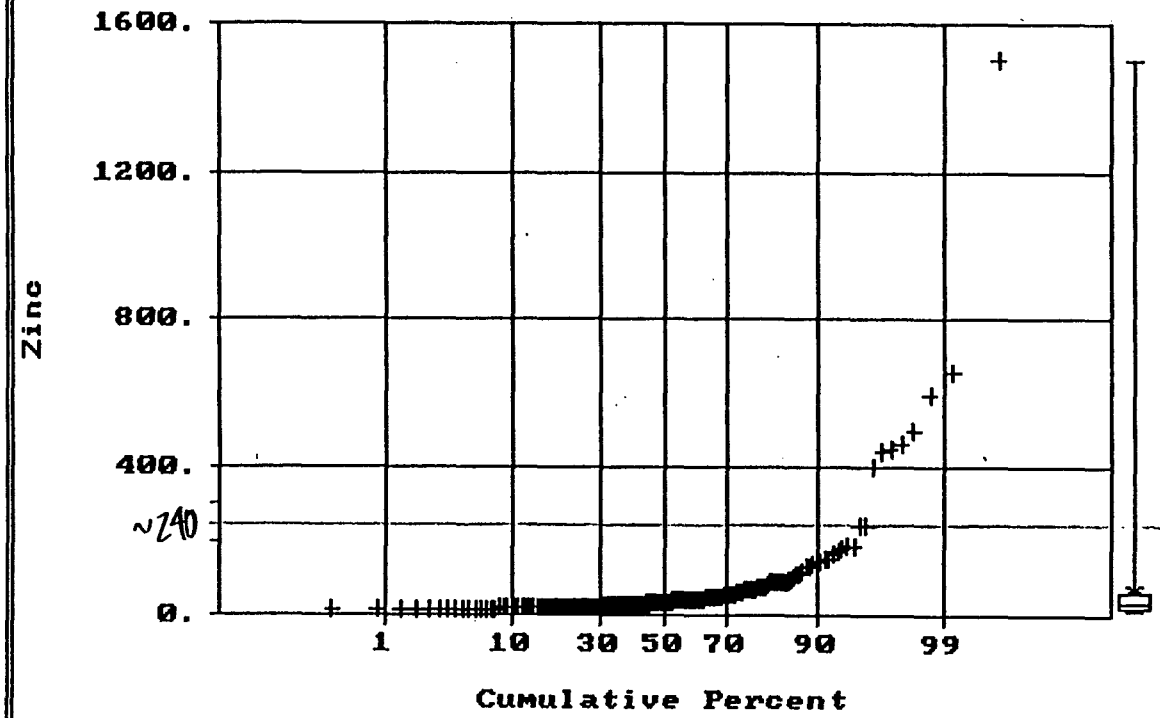
Lognormal

Normal

Neither

Sample size

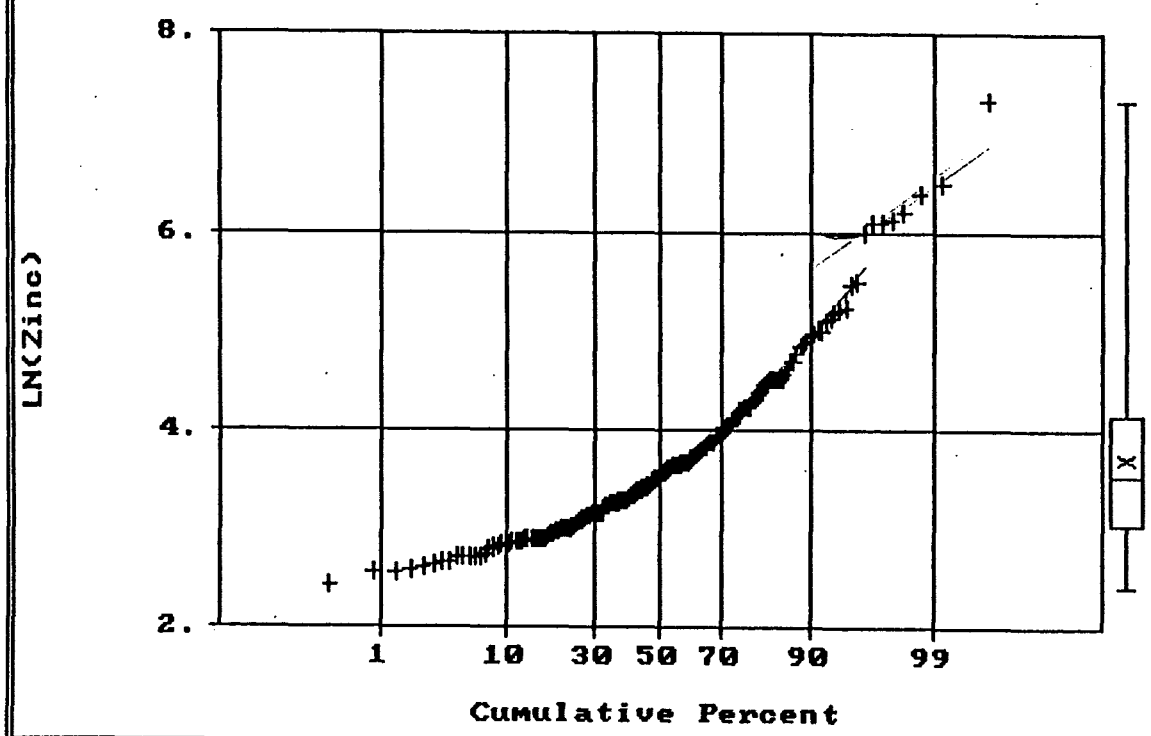
Normal Probability Plot for Zinc
Data file: sed-all.dat



Statistics

N Total :	259
N Miss :	74
N Used :	185
Mean :	72.954
Variance:	20636.840
Std. Dev:	143.655
% C.V. :	196.912
Skewness:	6.470
Kurtosis:	57.001
Minimum :	11.120
25th % :	20.870
Median :	33.900
75th % :	64.215
Maximum :	1500.000

Normal Probability Plot for LN(Zinc)
Data file: sed-all.dat



Statistics

N Total :	259
N Miss :	74
N Used :	185
Mean :	3.711
Variance:	.795
Std. Dev:	.892
% C.V. :	24.036
Skewness:	1.283
Kurtosis:	4.742
Minimum :	2.409
25th % :	3.038
Median :	3.523
75th % :	4.162
Maximum :	7.313

$e^{6} \approx 400$

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	A	B
1	DATA	ID
2	0.005	Sed-Ag
3	0.005	Sed-Ag
4	0.005	Sed-Ag
5	0.005	Sed-Ag
6	0.2	Sed-Ag
7	0.2	Sed-Ag
8	0.2	Sed-Ag
9	0.2	Sed-Ag
10	0.2	Sed-Ag
11	0.2	Sed-Ag
12	0.2	Sed-Ag
13	0.2	Sed-Ag
14	0.2	Sed-Ag
15	0.25	Sed-Ag
16	0.25	Sed-Ag
17	0.25	Sed-Ag
18	0.25	Sed-Ag
19	0.25	Sed-Ag
20	0.25	Sed-Ag
21	0.25	Sed-Ag
22	0.25	Sed-Ag
23	0.25	Sed-Ag
24	0.25	Sed-Ag
25	0.25	Sed-Ag
26	0.25	Sed-Ag
27	0.25	Sed-Ag
28	0.25	Sed-Ag
29	0.25	Sed-Ag
30	0.25	Sed-Ag
31	0.25	Sed-Ag
32	0.25	Sed-Ag
33	0.25	Sed-Ag
34	0.25	Sed-Ag
35	0.25	Sed-Ag
36	0.25	Sed-Ag
37	0.25	Sed-Ag
38	0.25	Sed-Ag
39	0.25	Sed-Ag
40	0.25	Sed-Ag
41	0.25	Sed-Ag
42	0.25	Sed-Ag
43	0.25	Sed-Ag
44	0.25	Sed-Ag
45	0.2605	Sed-Ag
46	0.2605	Sed-Ag
47	0.2605	Sed-Ag
48	0.2605	Sed-Ag
49	0.2605	Sed-Ag
50	0.2605	Sed-Ag
51	0.2605	Sed-Ag
52	0.2605	Sed-Ag
53	0.2605	Sed-Ag
54	0.2605	Sed-Ag
55	0.2605	Sed-Ag
56	0.2605	Sed-Ag
57	0.2605	Sed-Ag
58	0.2605	Sed-Ag
59	0.2605	Sed-Ag
60	0.2605	Sed-Ag
61	0.2605	Sed-Ag
62	0.2605	Sed-Ag
63	0.2605	Sed-Ag
64	0.2605	Sed-Ag
65	0.2605	Sed-Ag
66	0.2605	Sed-Ag
67	0.2605	Sed-Ag

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	167	Mean	0.398
Censored	------	Lognormal mean	0.447
Detection limit or PQL	------	Std. devn.	0.252
Method detection limit		Median	0.4015
TOTAL	167	Min.	0.005
ENTER DATA		Max.	1.65

Distribution Decision

Probability plot method	W test	D'Agostino's test
Lognormal distribution? r-squared is: 0.618	Normal distribution? r-squared is: 0.717	

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	0.005	Sed-Ag
3	0.005	Sed-Ag
4	0.005	Sed-Ag
5	0.005	Sed-Ag
6	0.2	Sed-Ag
7	0.2	Sed-Ag
8	0.2	Sed-Ag
9	0.2	Sed-Ag
10	0.2	Sed-Ag
11	0.2	Sed-Ag
12	0.2	Sed-Ag
13	0.2	Sed-Ag
14	0.2	Sed-Ag
15	0.25	Sed-Ag
16	0.25	Sed-Ag
17	0.25	Sed-Ag
18	0.25	Sed-Ag
19	0.25	Sed-Ag
20	0.25	Sed-Ag
21	0.25	Sed-Ag
22	0.25	Sed-Ag
23	0.25	Sed-Ag
24	0.25	Sed-Ag
25	0.25	Sed-Ag
26	0.25	Sed-Ag
27	0.25	Sed-Ag
28	0.25	Sed-Ag
29	0.25	Sed-Ag
30	0.25	Sed-Ag
31	0.25	Sed-Ag
32	0.25	Sed-Ag
33	0.25	Sed-Ag
34	0.25	Sed-Ag
35	0.25	Sed-Ag
36	0.25	Sed-Ag
37	0.25	Sed-Ag
38	0.25	Sed-Ag
39	0.25	Sed-Ag
40	0.25	Sed-Ag
41	0.25	Sed-Ag
42	0.25	Sed-Ag
43	0.25	Sed-Ag
44	0.25	Sed-Ag
45	0.2605	Sed-Ag
46	0.2605	Sed-Ag
47	0.2605	Sed-Ag
48	0.2605	Sed-Ag
49	0.2605	Sed-Ag
50	0.2605	Sed-Ag
51	0.2605	Sed-Ag
52	0.2605	Sed-Ag
53	0.2605	Sed-Ag
54	0.2605	Sed-Ag
55	0.2605	Sed-Ag
56	0.2605	Sed-Ag
57	0.2605	Sed-Ag
58	0.2605	Sed-Ag
59	0.2605	Sed-Ag
60	0.2605	Sed-Ag
61	0.2605	Sed-Ag
62	0.2605	Sed-Ag
63	0.2605	Sed-Ag
64	0.2605	Sed-Ag
65	0.2605	Sed-Ag
66	0.2605	Sed-Ag
67	0.2605	Sed-Ag

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	167	Mean	0.398
Censored	------	Lognormal mean	0.447
Detection limit or PQL	------	Std. devn.	0.252
Method detection limit		Median	0.4015
TOTAL	167	Min.	0.005
ENTER DATA		Max.	1.65

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.618

Normal distribution? r-squared is: 0.717

Recommendations:

Reject lognormal distribution.

Y value is -34.0512. This lies outside the tabled values of 1.4478 and -2.4313

Reject normal distribution.

Y value is -24.1223. This lies outside the tabled values of 1.4478 and -2.4313

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

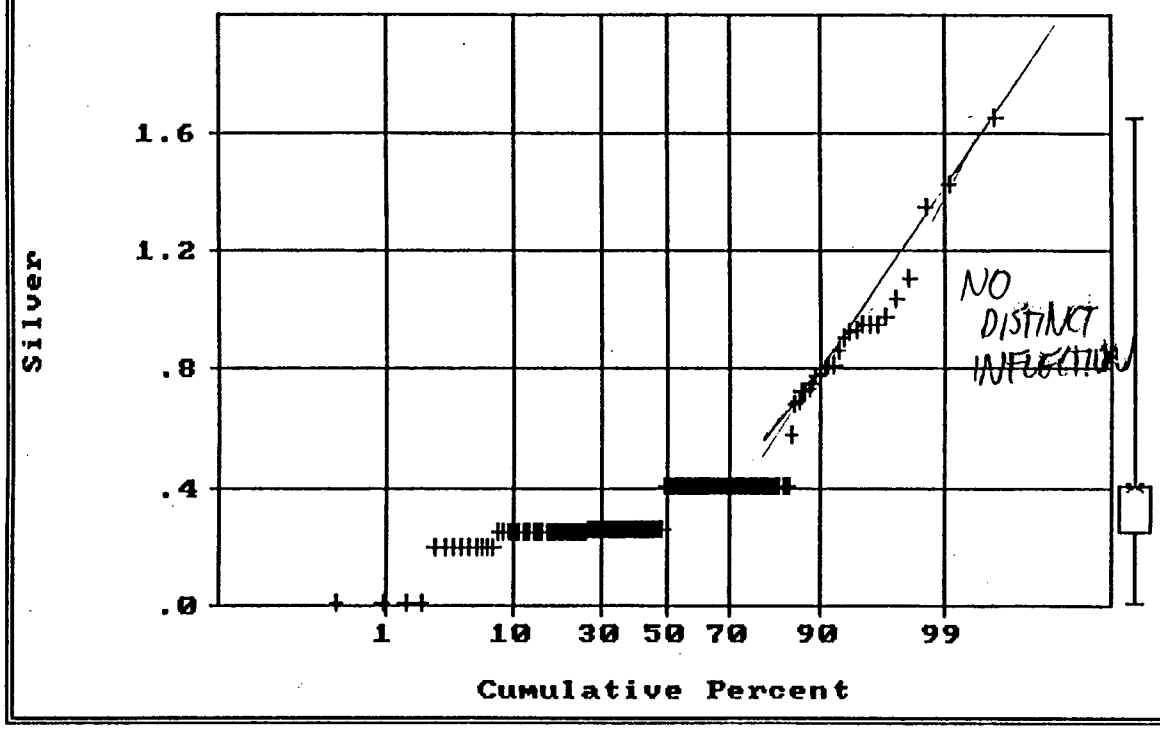
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Silver
Data file: sed-all.dat



Statistics

N Total :	259
N Miss :	92
N Used :	167
Mean :	.398
Variance:	.064
Std. Dev:	.252
% C.V. :	63.394
Skewness:	2.177
Kurtosis:	8.706
Minimum :	.005
25th % :	.250
Median :	.401
75th % :	.401
Maximum :	1.650

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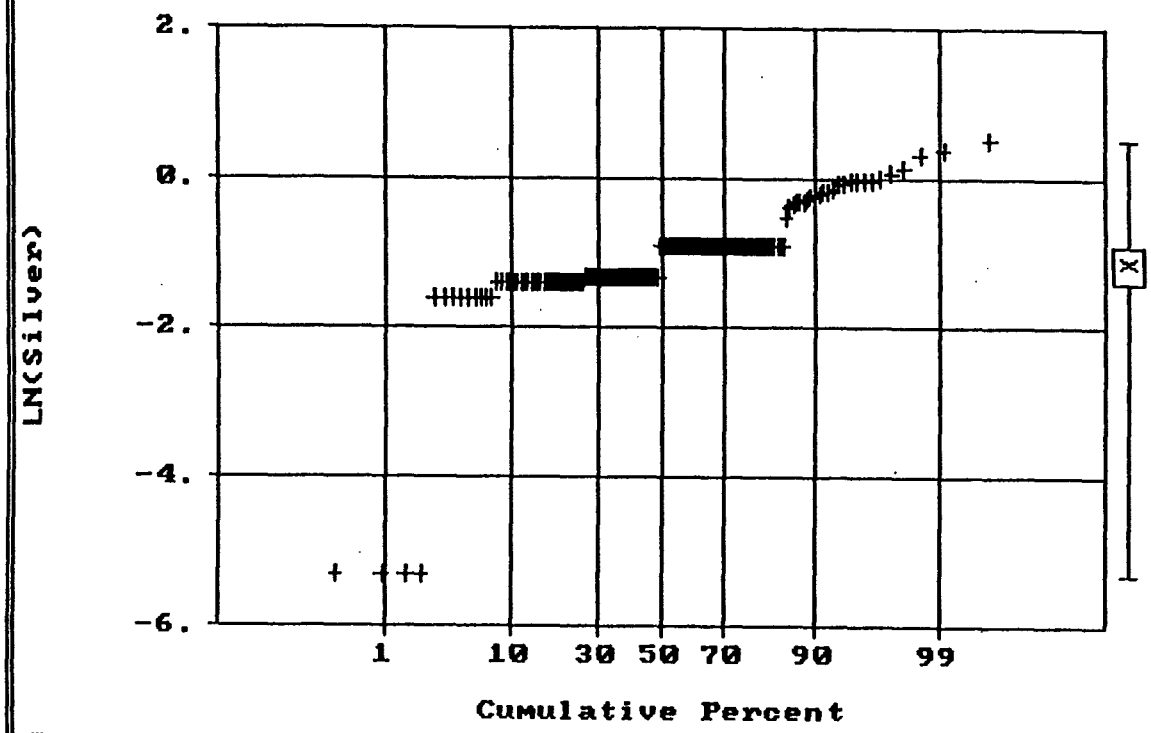
Normal Probability Plot for LN(Silver)
Data file: sed-all.dat



Statistics

N Total :	259
N Miss :	92
N Used :	167
Mean :	-1.122
Variance:	.634
Std. Dev:	.796
% C.V. :	70.967
Skewness:	-3.146
Kurtosis:	18.887
Minimum :	-5.298
25th % :	-1.386
Median :	-.913
75th % :	-.913
Maximum :	.501

A-162

Colma Formation

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	A	B
1	DATA	ID
2	0.25	Col-Ag
3	0.25	Col-Ag
4	0.25	Col-Ag
5	0.25	Col-Ag
6	0.25	Col-Ag
7	0.25	Col-Ag
8	0.25	Col-Ag
9	0.25	Col-Ag
10	0.25	Col-Ag
11	0.25	Col-Ag
12	0.25	Col-Ag
13	0.25	Col-Ag
14	0.25	Col-Ag
15	0.25	Col-Ag
16	0.2605	Col-Ag
17	0.2605	Col-Ag
18	0.2605	Col-Ag
19	0.2605	Col-Ag
20	0.2605	Col-Ag
21	0.2605	Col-Ag
22	0.2605	Col-Ag
23	0.2605	Col-Ag
24	0.2605	Col-Ag
25	0.2605	Col-Ag
26	0.2605	Col-Ag
27	0.2605	Col-Ag
28	0.2605	Col-Ag
29	0.2605	Col-Ag
30	0.4015	Col-Ag
31	0.4015	Col-Ag
32	0.4015	Col-Ag
33	0.4015	Col-Ag
34	0.4015	Col-Ag
35	0.4015	Col-Ag
36	0.793	Col-Ag
37	0.855	Col-Ag
38	1.09	Col-Ag
39	1.14	Col-Ag
40	1.32	Col-Ag
41	1.35	Col-Ag
42	1.46	Col-Ag
43	1.89	Col-Ag
44	2.5	Col-Ag
45	2.76	Col-Ag
46	3.96	Col-Ag
47	4.03	Col-Ag
48	4.36	Col-Ag
49	5.08	Col-Ag
50	6.05	Col-Ag
51	6.38	Col-Ag
52	6.79	Col-Ag
53	6.94	Col-Ag
54	7.01	Col-Ag
55	7.09	Col-Ag
56	7.09	Col-Ag
57	7.73	Col-Ag
58	9.81	Col-Ag
59	11.1	Col-Ag
60	12.3	Col-Ag
61		
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	59	Mean	2.211
Censored	------	Lognormal mean	2.170
Detection limit or PQL	------	Std. devn.	3.135
Method detection limit		Median	0.4015
TOTAL	59	Min.	0.25
ENTER DATA		Max.	12.3

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.789

Normal distribution? r-squared is: 0.585

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	0.25	Col-Ag
3	0.25	Col-Ag
4	0.25	Col-Ag
5	0.25	Col-Ag
6	0.25	Col-Ag
7	0.25	Col-Ag
8	0.25	Col-Ag
9	0.25	Col-Ag
10	0.25	Col-Ag
11	0.25	Col-Ag
12	0.25	Col-Ag
13	0.25	Col-Ag
14	0.25	Col-Ag
15	0.25	Col-Ag
16	0.2605	Col-Ag
17	0.2605	Col-Ag
18	0.2605	Col-Ag
19	0.2605	Col-Ag
20	0.2605	Col-Ag
21	0.2605	Col-Ag
22	0.2605	Col-Ag
23	0.2605	Col-Ag
24	0.2605	Col-Ag
25	0.2605	Col-Ag
26	0.2605	Col-Ag
27	0.2605	Col-Ag
28	0.2605	Col-Ag
29	0.2605	Col-Ag
30	0.4015	Col-Ag
31	0.4015	Col-Ag
32	0.4015	Col-Ag
33	0.4015	Col-Ag
34	0.4015	Col-Ag
35	0.4015	Col-Ag
36	0.793	Col-Ag
37	0.855	Col-Ag
38	1.09	Col-Ag
39	1.14	Col-Ag
40	1.32	Col-Ag
41	1.35	Col-Ag
42	1.46	Col-Ag
43	1.89	Col-Ag
44	2.5	Col-Ag
45	2.76	Col-Ag
46	3.96	Col-Ag
47	4.03	Col-Ag
48	4.36	Col-Ag
49	5.08	Col-Ag
50	6.05	Col-Ag
51	6.38	Col-Ag
52	6.79	Col-Ag
53	6.94	Col-Ag
54	7.01	Col-Ag
55	7.09	Col-Ag
56	7.09	Col-Ag
57	7.73	Col-Ag
58	9.81	Col-Ag
59	11.1	Col-Ag
60	12.3	Col-Ag
61		
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	59	Mean	2.211
Censored	------	Lognormal mean	2.170
Detection limit or PQL	------	Std. devn.	3.135
Method detection limit		Median	0.4015
TOTAL	59	Min.	0.25
ENTER DATA		Max.	12.3

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.789

Normal distribution? r-squared is: 0.685

Recommendations

Reject lognormal distribution.

Y value is -4.3408. This lies outside the tabled values of 1.1073 and -2.7048

Reject normal distribution.

Y value is -12.4943. This lies outside the tabled values of 1.1073 and -2.7048

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

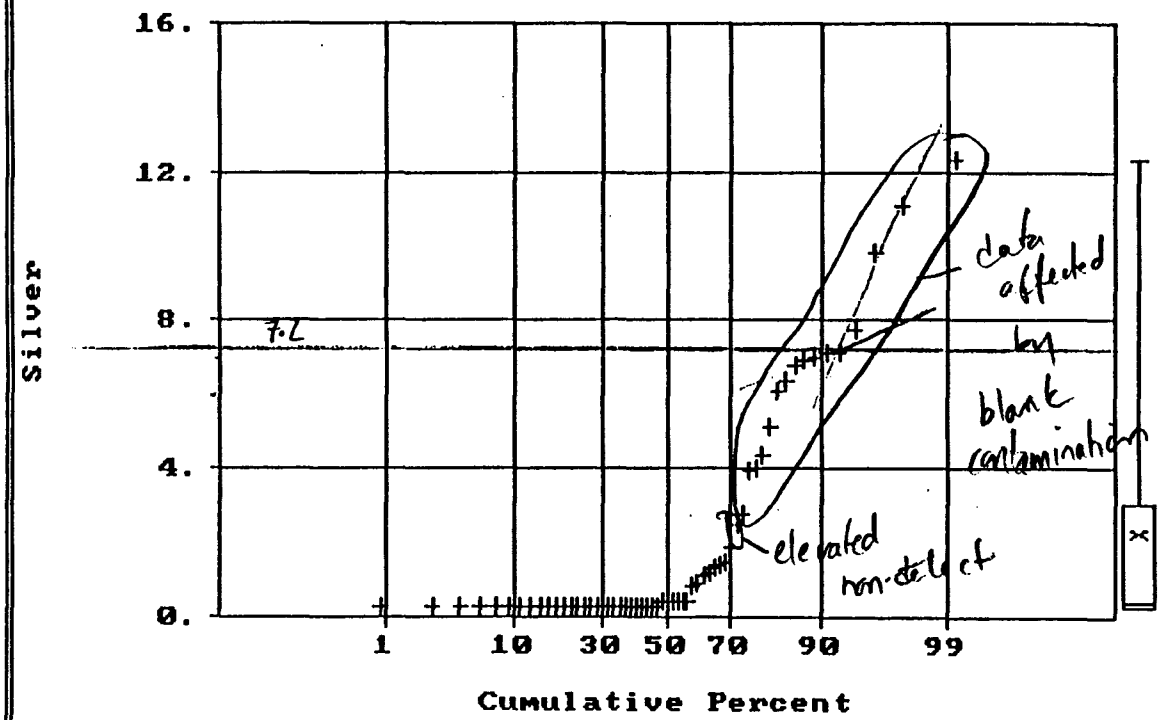
Normal

Neither

Sample size

A-161

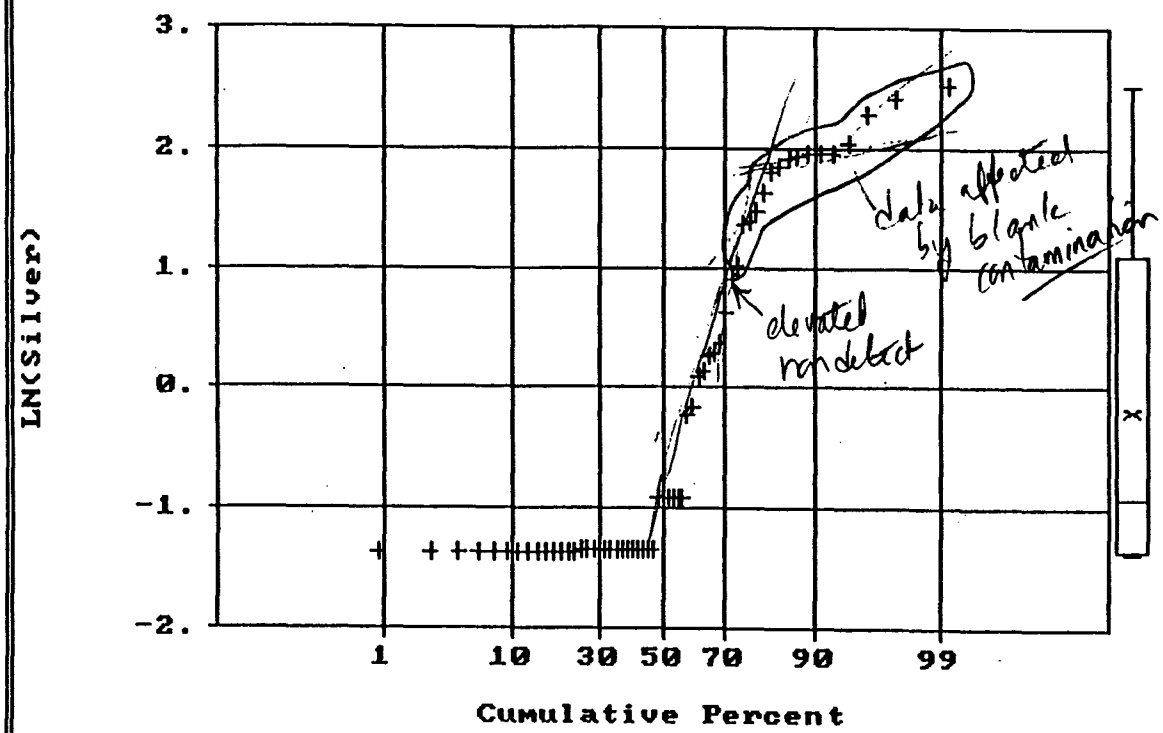
Normal Probability Plot for Silver
Data file: col-all.dat



Statistics

N Total :	62
N Miss :	3
N Used :	59
Mean :	2.211
Variance:	9.826
Std. Dev:	3.135
% C.V. :	141.790
Skewness:	1.581
Kurtosis:	4.466
Minimum :	.250
25th % :	.258
Median :	.401
75th % :	3.060
Maximum :	12.300

Normal Probability Plot for LN(Silver)
Data file: col-all.dat



Statistics

N Total :	62
N Miss :	3
N Used :	59
Mean :	-.201
Variance:	1.952
Std. Dev:	1.397
% C.V. :	693.951
Skewness:	.682
Kurtosis:	1.808
Minimum :	-1.386
25th % :	-1.355
Median :	-.913
75th % :	1.105
Maximum :	2.510

A-168

	A	B
1	DATA	ID
2	3830	Col-Al
3	4030	Col-Al
4	4200	Col-Al
5	4800	Col-Al
6	5120	Col-Al
7	5130	Col-Al
8	5132.7434	Col-Al
9	5170	Col-Al
10	5170	Col-Al
11	5290	Col-Al
12	6160	Col-Al
13	6540	Col-Al
14	6700	Col-Al
15	6940	Col-Al
16	6950	Col-Al
17	7013.5747	Col-Al
18	7200	Col-Al
19	7200	Col-Al
20	7230	Col-Al
21	7623.3184	Col-Al
22	7900	Col-Al
23	8425.027	Col-Al
24	8500	Col-Al
25	8602.52	Col-Al
26	8907.7413	Col-Al
27	8962.2642	Col-Al
28	9100	Col-Al
29	9300	Col-Al
30	9485.2136	Col-Al
31	9900	Col-Al
32	10000	Col-Al
33	10340.3756	Col-Al
34	11100	Col-Al
35	11653.222	Col-Al
36	12000	Col-Al
37	12000	Col-Al
38	12000	Col-Al
39	12000	Col-Al
40	12974.6835	Col-Al
41	13000	Col-Al
42	13000	Col-Al
43	13000	Col-Al
44	13000	Col-Al
45	13000	Col-Al
46	13400	Col-Al
47	13853.531	Col-Al
48	14000	Col-Al
49	14549.6536	Col-Al
50	15220.172	Col-Al
51	15271.4932	Col-Al
52	16143.4978	Col-Al
53	16399.0826	Col-Al
54	17843.244	Col-Al
55	18000	Col-Al
56	25942.8571	Col-Al
57	26000	Col-Al
58	29315.357	Col-Al
59	31000	Col-Al
60	33975.785	Col-Al
61		
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	59	Mean	11466.023
Censored	------	Lognormal mean	11426.592
Detection limit or PQL	------	Std. devn.	6633.431
Method detection limit	------	Median	9900
TOTAL	59	Min.	3830
ENTER DATA		Max	33975.785

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Distribution Decision

Probability plot method	W test	D'Agostino's test
Lognormal distribution?	Normal distribution?	
r-squared is: 0.979	r-squared is: 0.833	

Recommendations

Use lognormal distribution.

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

Upper Confidence Limit (UCL)

	A	B
1	DATA	ID
2	3830	Col-Al
3	4030	Col-Al
4	4200	Col-Al
5	4800	Col-Al
6	5120	Col-Al
7	5130	Col-Al
8	5132.7434	Col-Al
9	5170	Col-Al
10	5170	Col-Al
11	5290	Col-Al
12	6160	Col-Al
13	6540	Col-Al
14	6700	Col-Al
15	6940	Col-Al
16	6950	Col-Al
17	7013.5747	Col-Al
18	7200	Col-Al
19	7200	Col-Al
20	7230	Col-Al
21	7623.3184	Col-Al
22	7900	Col-Al
23	8425.027	Col-Al
24	8500	Col-Al
25	8602.52	Col-Al
26	8907.7413	Col-Al
27	8962.2642	Col-Al
28	9100	Col-Al
29	9300	Col-Al
30	9485.2136	Col-Al
31	9900	Col-Al
32	10000	Col-Al
33	10340.3756	Col-Al
34	11100	Col-Al
35	11653.222	Col-Al
36	12000	Col-Al
37	12000	Col-Al
38	12000	Col-Al
39	12000	Col-Al
40	12974.6835	Col-Al
41	13000	Col-Al
42	13000	Col-Al
43	13000	Col-Al
44	13000	Col-Al
45	13000	Col-Al
46	13400	Col-Al
47	13853.531	Col-Al
48	14000	Col-Al
49	14549.6536	Col-Al
50	15220.172	Col-Al
51	15271.4932	Col-Al
52	16143.4978	Col-Al
53	16399.0826	Col-Al
54	17843.244	Col-Al
55	18000	Col-Al
56	25942.8571	Col-Al
57	26000	Col-Al
58	29315.357	Col-Al
59	31000	Col-Al
60	33975.785	Col-Al
61		
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	59	Mean	11466.023
Censored	------	Lognormal mean	11426.592
Detection limit or PQL	------	Std. devn.	6633.431
Method detection limit		Median	9900
TOTAL	59	Min.	3830
ENTER DATA		Max	33975.785

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.979

Normal distribution? r-squared is: 0.833

Recommendations:

Assume lognormal distribution.

Y value is -0.1464. This lies within the tabled values of 1.1073 and -2.7048

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

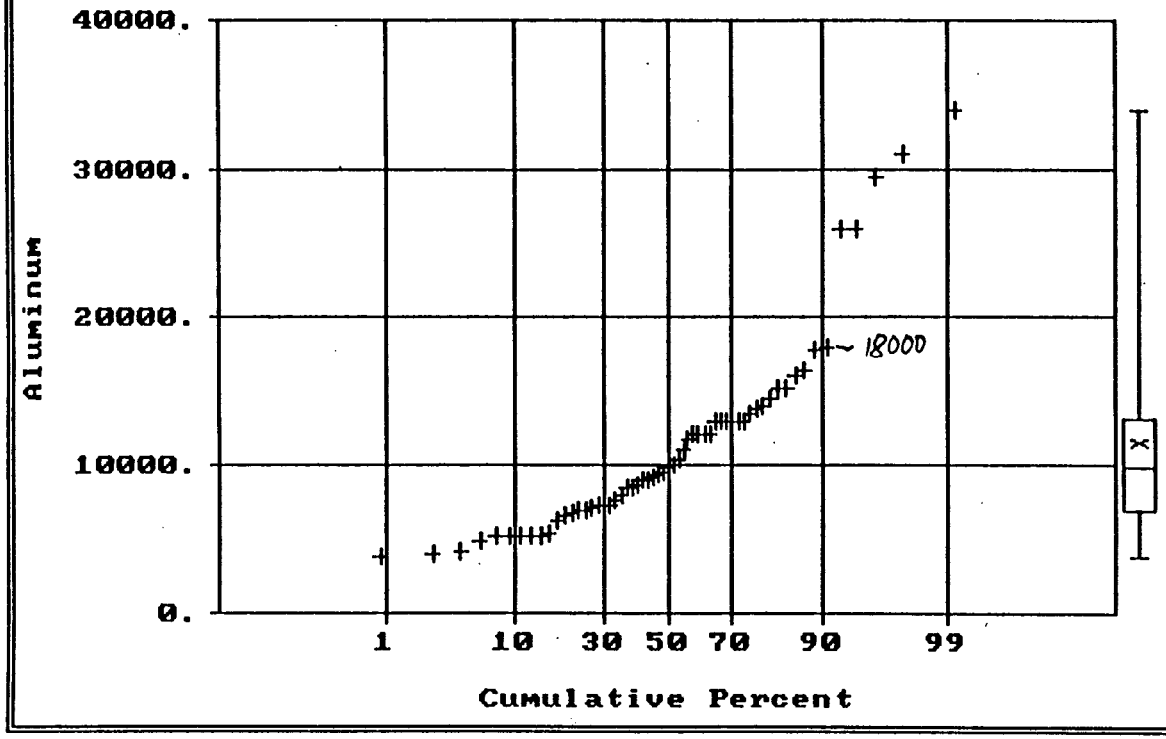
Normal

Neither

Sample size

A-170

Normal Probability Plot for Aluminum
Data file: col-all.dat

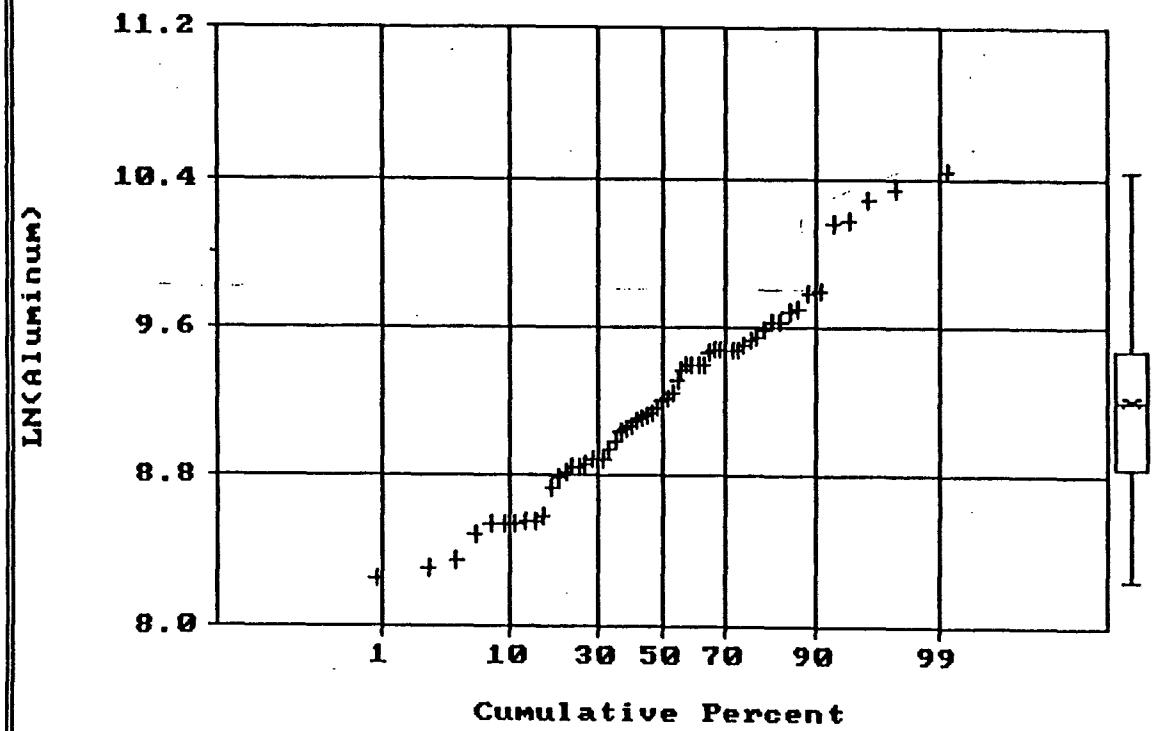


Statistics

N Total :	62
N Miss :	3
N Used :	59
Mean :	11466.020
Variance:	44002410.000
Std. Dev:	6633.431
% C.V. :	57.853
Skewness:	1.635
Kurtosis:	5.644
Minimum :	3830.000
25th % :	6947.500
Median :	9900.000
75th % :	13100.000
Maximum :	33975.790

A-171

Normal Probability Plot for LN(Aluminum)
Data file: col-all.dat



Statistics

N Total :	62
N Miss :	3
N Used :	59
Mean :	9.210
Variance:	.267
Std. Dev:	.517
% C.V. :	5.610
Skewness:	.299
Kurtosis:	2.733
Minimum :	8.251
25th % :	8.846
Median :	9.200
75th % :	9.480
Maximum :	10.433

$e^{9.8} \approx 18{,}000$

A-172

	A	B
1	DATA	ID
2	1.25	Col-As
3	1.25	Col-As
4	1.25	Col-As
5	1.25	Col-As
6	1.25	Col-As
7	1.25	Col-As
8	1.25	Col-As
9	1.41	Col-As
10	1.4873	Col-As
11	1.5808	Col-As
12	2.1256	Col-As
13	2.13	Col-As
14	2.2013	Col-As
15	2.3113	Col-As
16	2.3756	Col-As
17	2.4423	Col-As
18	2.67	Col-As
19	2.7064	Col-As
20	2.73	Col-As
21	2.8	Col-As
22	2.89	Col-As
23	3	Col-As
24	3.013	Col-As
25	3.14	Col-As
26	3.16	Col-As
27	3.254	Col-As
28	3.27	Col-As
29	3.4	Col-As
30	3.43	Col-As
31	3.72	Col-As
32	3.78	Col-As
33	3.79	Col-As
34	3.8643	Col-As
35	3.87	Col-As
36	4.26	Col-As
37	4.31	Col-As
38	4.46	Col-As
39	4.51	Col-As
40	4.51	Col-As
41	5	Col-As
42	6.09	Col-As

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	41	Mean	2.889
Censored	------	Lognormal mean	2.918
Detection limit or PQL	------	Std. devn.	1.212
Method detection limit	------	Median	2.89
TOTAL	41	Min.	1.25
ENTER DATA		Max.	6.09

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.930

Normal distribution? r-squared is: 0.956

Recommendations:

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	1.25	Col-As
3	1.25	Col-As
4	1.25	Col-As
5	1.25	Col-As
6	1.25	Col-As
7	1.25	Col-As
8	1.25	Col-As
9	1.41	Col-As
10	1.4873	Col-As
11	1.5808	Col-As
12	2.1256	Col-As
13	2.13	Col-As
14	2.2013	Col-As
15	2.3113	Col-As
16	2.3756	Col-As
17	2.4423	Col-As
18	2.67	Col-As
19	2.7064	Col-As
20	2.73	Col-As
21	2.8	Col-As
22	2.89	Col-As
23	3	Col-As
24	3.013	Col-As
25	3.14	Col-As
26	3.16	Col-As
27	3.254	Col-As
28	3.27	Col-As
29	3.4	Col-As
30	3.43	Col-As
31	3.72	Col-As
32	3.78	Col-As
33	3.79	Col-As
34	3.8643	Col-As
35	3.87	Col-As
36	4.26	Col-As
37	4.31	Col-As
38	4.46	Col-As
39	4.51	Col-As
40	4.51	Col-As
41	5	Col-As
42	6.09	Col-As

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	41	Mean	2.889
Censored	------	Lognormal mean	2.918
Detection limit or PQL	------	Std. devn.	1.212
Method detection limit		Median	2.89
TOTAL	41	Min.	1.25
ENTER DATA		Max	6.09

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.930

Normal distribution? r-squared is: 0.956

Recommendations

Reject lognormal distribution.

W value is 0.9098. This is less than the tabled value of 0.941

Assume normal distribution.

W value is 0.9446. This exceeds the tabled value of 0.941

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

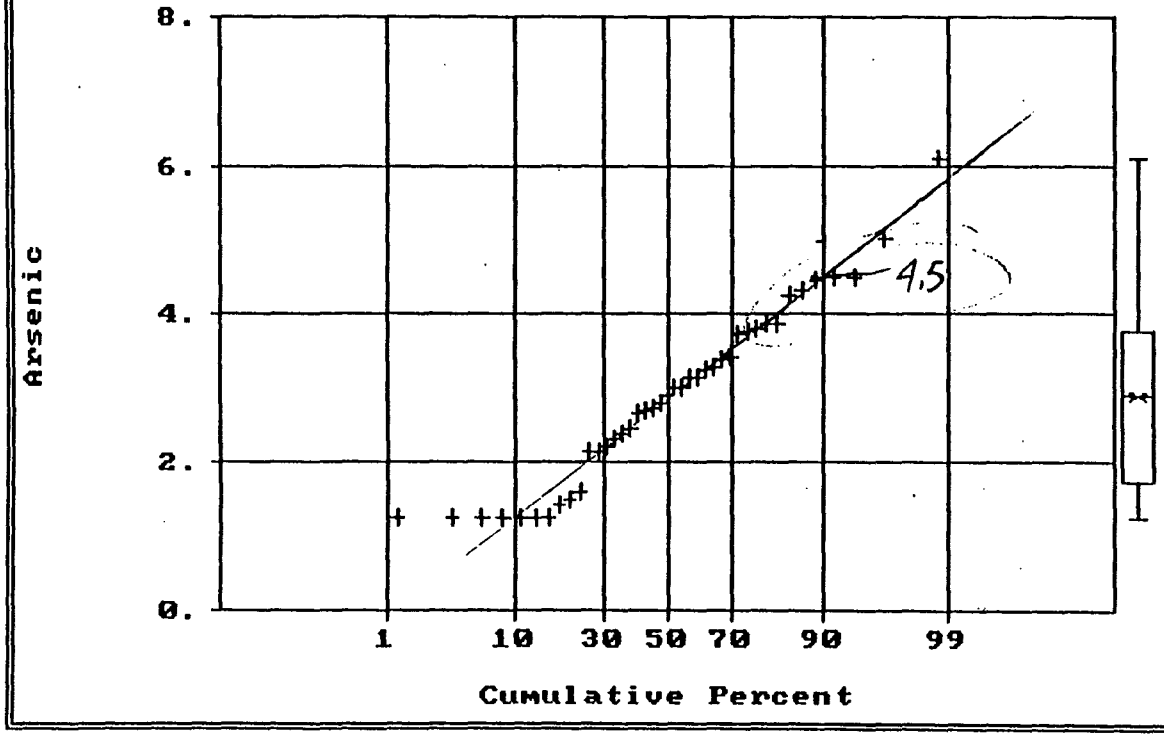
Lognormal

Normal

Neither

Sample size

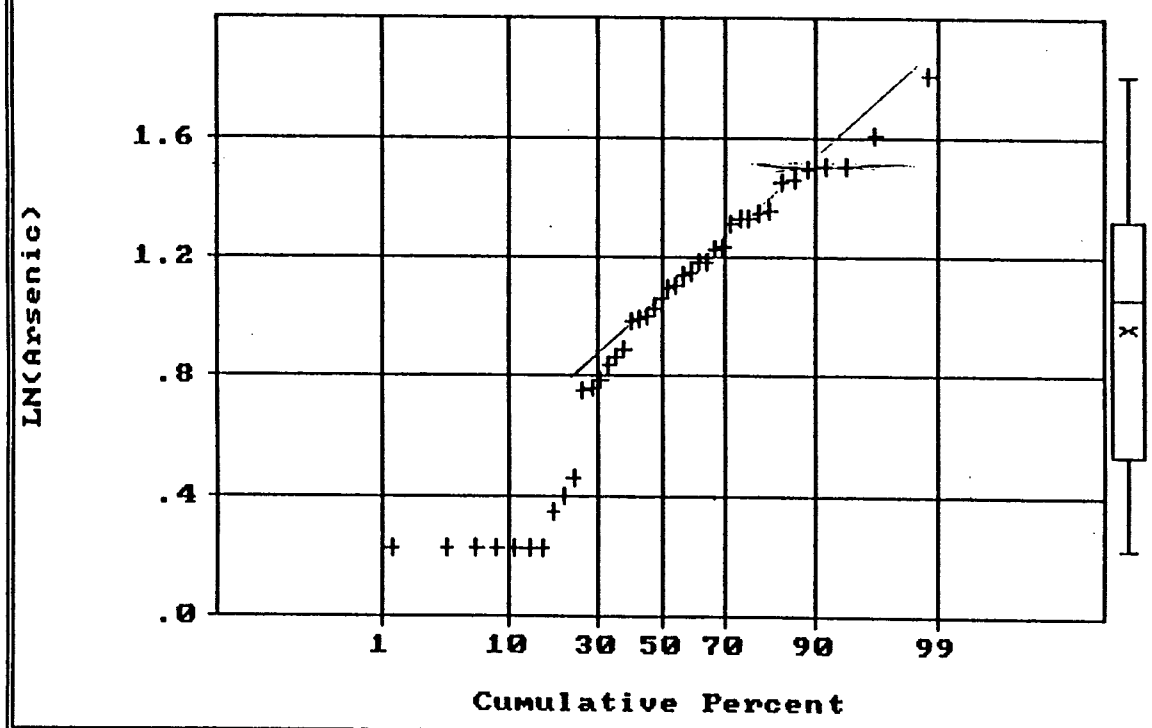
Normal Probability Plot for Arsenic
Data file: col-all.dat



S t a t i s t i c s

N Total :	62
N Miss :	21
N Used :	41
Mean :	2.889
Variance:	1.469
Std. Dev:	1.212
% C.V. :	41.949
Skewness:	.337
Kurtosis:	2.607
Minimum :	1.250
25th % :	1.717
Median :	2.890
75th % :	3.765
Maximum :	6.090

Normal Probability Plot for LN(Arsenic)
Data file: col-all.dat



Statistics

N Total :	62
N Miss :	21
N Used :	41
Mean :	.965
Variance:	.212
Std. Dev:	.461
% C.V. :	47.726
Skewness:	-.399
Kurtosis:	2.050
Minimum :	.223
25th % :	.532
Median :	1.061
75th % :	1.326
Maximum :	1.807

$e^{1.5} \approx 4.5$

A-176

	A	B
1	DATA	ID
2	13.9	Col-Ba
3	14.6	Col-Ba
4	14.6018	Col-Ba
5	15.6	Col-Ba
6	18.5	Col-Ba
7	21.4	Col-Ba
8	23.6	Col-Ba
9	26.9353	Col-Ba
10	27	Col-Ba
11	27.5	Col-Ba
12	28.9	Col-Ba
13	29.4	Col-Ba
14	30.5	Col-Ba
15	31.9	Col-Ba
16	35.1661	Col-Ba
17	36.842	Col-Ba
18	36.8545	Col-Ba
19	39.2	Col-Ba
20	39.3	Col-Ba
21	40.3	Col-Ba
22	40.9	Col-Ba
23	41.1392	Col-Ba
24	43.7021	Col-Ba
25	43.8	Col-Ba
26	47.5	Col-Ba
27	49.6	Col-Ba
28	54.5	Col-Ba
29	55.6561	Col-Ba
30	56	Col-Ba
31	58.6	Col-Ba
32	60.5	Col-Ba
33	65.765	Col-Ba
34	65.8665	Col-Ba
35	68.8	Col-Ba
36	68.8242	Col-Ba
37	74.528	Col-Ba
38	77.4	Col-Ba
39	78.4	Col-Ba
40	81.1	Col-Ba
41	81.1927	Col-Ba
42	82.2	Col-Ba
43	82.3	Col-Ba
44	83.1839	Col-Ba
45	86.6	Col-Ba
46	91.8632	Col-Ba
47	95.8145	Col-Ba
48	95.843	Col-Ba
49	100	Col-Ba
50	101	Col-Ba
51	114.42	Col-Ba
52	118.8341	Col-Ba
53	121.1429	Col-Ba
54	128	Col-Ba
55	129	Col-Ba
56	139	Col-Ba
57	143	Col-Ba
58	144	Col-Ba
59	157.976	Col-Ba
60	233	Col-Ba
61		
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	59	Mean	68.016
Censored	------	Lognormal mean	69.327
Detection limit or PQL	------	Std. devn.	43.671
Method detection limit	------	Median	58.6
TOTAL	59	Min.	13.9
ENTER DATA		Max.	233

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.983

Normal distribution? r-squared is: 0.903

Recommendations:

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	13.9	Col-Ba
3	14.6	Col-Ba
4	14.6018	Col-Ba
5	15.6	Col-Ba
6	18.5	Col-Ba
7	21.4	Col-Ba
8	23.6	Col-Ba
9	26.9353	Col-Ba
10	27	Col-Ba
11	27.5	Col-Ba
12	28.9	Col-Ba
13	29.4	Col-Ba
14	30.5	Col-Ba
15	31.9	Col-Ba
16	35.1661	Col-Ba
17	36.842	Col-Ba
18	36.8545	Col-Ba
19	39.2	Col-Ba
20	39.3	Col-Ba
21	40.3	Col-Ba
22	40.9	Col-Ba
23	41.1392	Col-Ba
24	43.7021	Col-Ba
25	43.8	Col-Ba
26	47.5	Col-Ba
27	49.6	Col-Ba
28	54.5	Col-Ba
29	55.6561	Col-Ba
30	56	Col-Ba
31	58.6	Col-Ba
32	60.5	Col-Ba
33	65.765	Col-Ba
34	65.8665	Col-Ba
35	68.8	Col-Ba
36	68.8242	Col-Ba
37	74.528	Col-Ba
38	77.4	Col-Ba
39	78.4	Col-Ba
40	81.1	Col-Ba
41	81.1927	Col-Ba
42	82.2	Col-Ba
43	82.3	Col-Ba
44	83.1839	Col-Ba
45	86.6	Col-Ba
46	91.8632	Col-Ba
47	95.8145	Col-Ba
48	95.843	Col-Ba
49	100	Col-Ba
50	101	Col-Ba
51	114.42	Col-Ba
52	118.8341	Col-Ba
53	121.1429	Col-Ba
54	128	Col-Ba
55	129	Col-Ba
56	139	Col-Ba
57	143	Col-Ba
58	144	Col-Ba
59	157.976	Col-Ba
60	233	Col-Ba
61		
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	59	Mean	68.016
Censored	------	Lognormal mean	69.327
Detection limit or PQL	------	Std. devn.	43.671
Method detection limit		Median	58.6
TOTAL	59	Min.	13.9
ENTER DATA		Max.	233

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.983

Normal distribution? r-squared is: 0.903

Recommendations

Assume lognormal distribution.

Y value is 0.696. This lies within the tabled values of 1.1073 and -2.7048

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

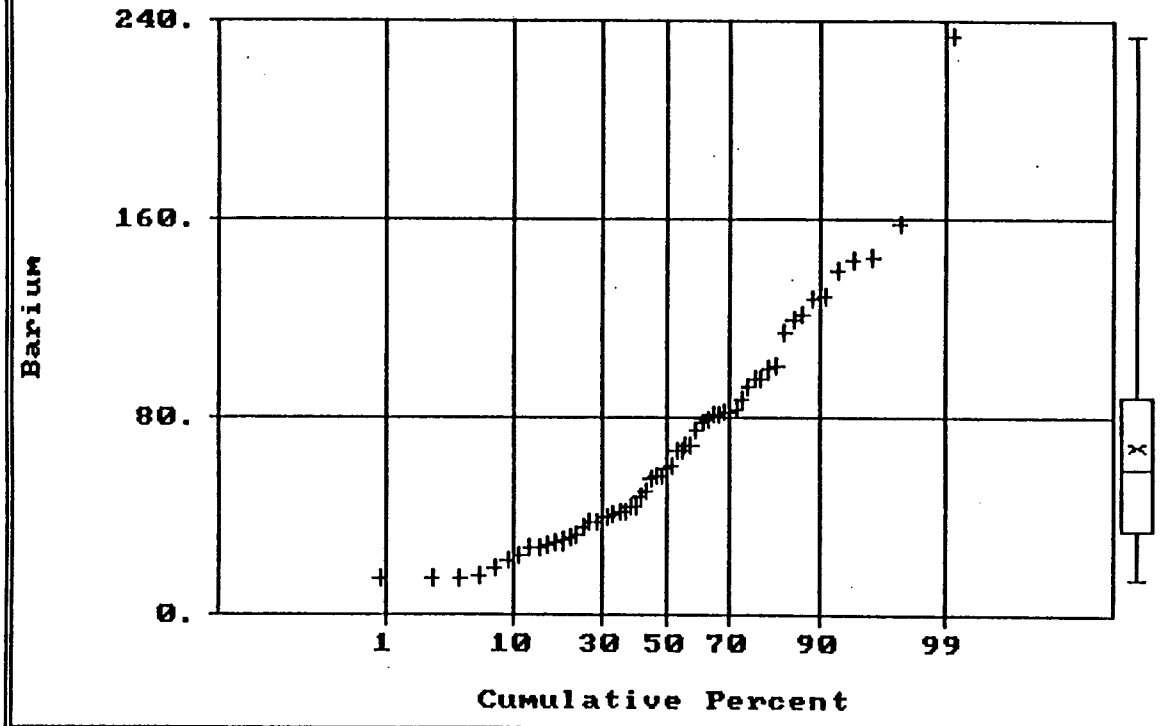
Normal

Neither

Sample size

A-178

Normal Probability Plot for Barium
Data file: col-all.dat

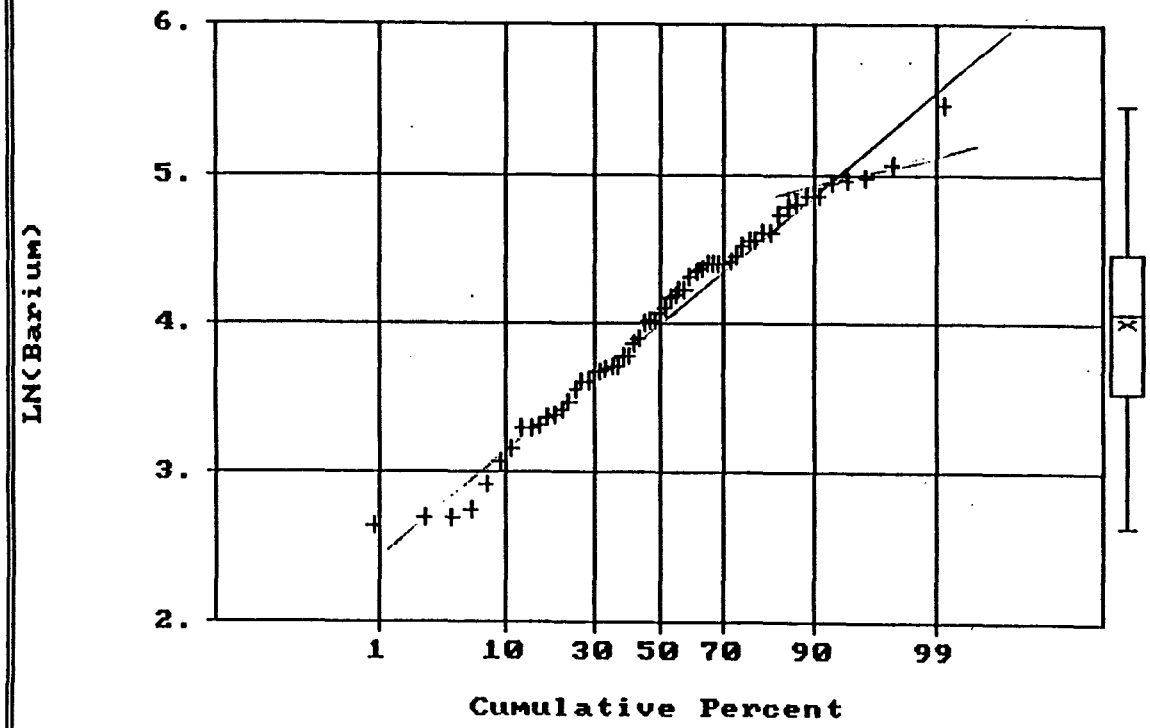


Statistics

N Total :	62
N Miss :	3
N Used :	59
Mean :	68.016
Variance:	1907.141
Std. Dev:	43.671
% C.V. :	64.207
Skewness:	1.214
Kurtosis:	4.907
Minimum :	13.900
25th % :	34.350
Median :	58.600
75th % :	87.916
Maximum :	233.000

A-179

Normal Probability Plot for LN(Barium)
Data file: col-all.dat



Statistics

N Total :	62
N Miss :	3
N Used :	59
Mean :	4.014
Variance:	.450
Std. Dev:	.671
% C.V. :	16.714
Skewness:	-.234
Kurtosis:	2.368
Minimum :	2.632
25th % :	3.536
Median :	4.071
75th % :	4.476
Maximum :	5.451

$e^{4.95} \cong 140$

A-180

	A	B
1	DATA	ID
2	0.05	Col-Be
3	0.05	Col-Be
4	0.05	Col-Be
5	0.05	Col-Be
6	0.05	Col-Be
7	0.05	Col-Be
8	0.05	Col-Be
9	0.05	Col-Be
10	0.05	Col-Be
11	0.123	Col-Be
12	0.123	Col-Be
13	0.124	Col-Be
14	0.1776	Col-Be
15	0.2029	Col-Be
16	0.2073	Col-Be
17	0.2135	Col-Be
18	0.2135	Col-Be
19	0.2135	Col-Be
20	0.2135	Col-Be
21	0.2135	Col-Be
22	0.222	Col-Be
23	0.2276	Col-Be
24	0.24	Col-Be
25	0.2481	Col-Be
26	0.25	Col-Be
27	0.25	Col-Be
28	0.25	Col-Be
29	0.25	Col-Be
30	0.25	Col-Be
31	0.25	Col-Be
32	0.25	Col-Be
33	0.25	Col-Be
34	0.25	Col-Be
35	0.25	Col-Be
36	0.2512	Col-Be
37	0.2563	Col-Be
38	0.3006	Col-Be
39	0.348	Col-Be
40	0.4058	Col-Be
41	0.4127	Col-Be
42	0.4292	Col-Be
43	0.4604	Col-Be
44	0.4815	Col-Be
45	0.504	Col-Be
46	0.5849	Col-Be
47	0.613	Col-Be
48	0.67	Col-Be
49	0.6811	Col-Be
50	0.749	Col-Be
51	0.788	Col-Be
52	0.831	Col-Be
53	1	Col-Be
54	1.01	Col-Be
55	1.1	Col-Be
56	1.14	Col-Be
57	1.22	Col-Be
58	1.22	Col-Be
59	1.29	Col-Be
60	1.7	Col-Be
61		
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	59	Mean	0.413
Censored	------	Lognormal mean	0.436
Detection limit or PQL	------	Std. devn.	0.379
Method detection limit	------	Median	0.25
TOTAL	59	Min.	0.05
ENTER DATA		Max	1.7

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.935

Normal distribution? r-squared is: 0.809

Recommendations

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	0.05	Col-Be
3	0.05	Col-Be
4	0.05	Col-Be
5	0.05	Col-Be
6	0.05	Col-Be
7	0.05	Col-Be
8	0.05	Col-Be
9	0.05	Col-Be
10	0.05	Col-Be
11	0.123	Col-Be
12	0.123	Col-Be
13	0.124	Col-Be
14	0.1776	Col-Be
15	0.2029	Col-Be
16	0.2073	Col-Be
17	0.2135	Col-Be
18	0.2135	Col-Be
19	0.2135	Col-Be
20	0.2135	Col-Be
21	0.2135	Col-Be
22	0.222	Col-Be
23	0.2276	Col-Be
24	0.24	Col-Be
25	0.2481	Col-Be
26	0.25	Col-Be
27	0.25	Col-Be
28	0.25	Col-Be
29	0.25	Col-Be
30	0.25	Col-Be
31	0.25	Col-Be
32	0.25	Col-Be
33	0.25	Col-Be
34	0.25	Col-Be
35	0.25	Col-Be
36	0.2512	Col-Be
37	0.2563	Col-Be
38	0.3006	Col-Be
39	0.348	Col-Be
40	0.4058	Col-Be
41	0.4127	Col-Be
42	0.4292	Col-Be
43	0.4604	Col-Be
44	0.4815	Col-Be
45	0.504	Col-Be
46	0.5849	Col-Be
47	0.613	Col-Be
48	0.67	Col-Be
49	0.6811	Col-Be
50	0.749	Col-Be
51	0.788	Col-Be
52	0.831	Col-Be
53	1	Col-Be
54	1.01	Col-Be
55	1.1	Col-Be
56	1.14	Col-Be
57	1.22	Col-Be
58	1.22	Col-Be
59	1.29	Col-Be
60	1.7	Col-Be
61		
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	59	Mean	0.413
Censored	------	Lognormal mean	0.436
Detection limit or PQL	------	Std. devn.	0.379
Method detection limit		Median	0.25
TOTAL	59	Min.	0.05
ENTER DATA		Max	1.7

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.935

Normal distribution? r-squared is: 0.809

Recommendations:

Assume lognormal distribution.

Y value is -1.2909. This lies within the tabled values of 1.1073 and -2.7048

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

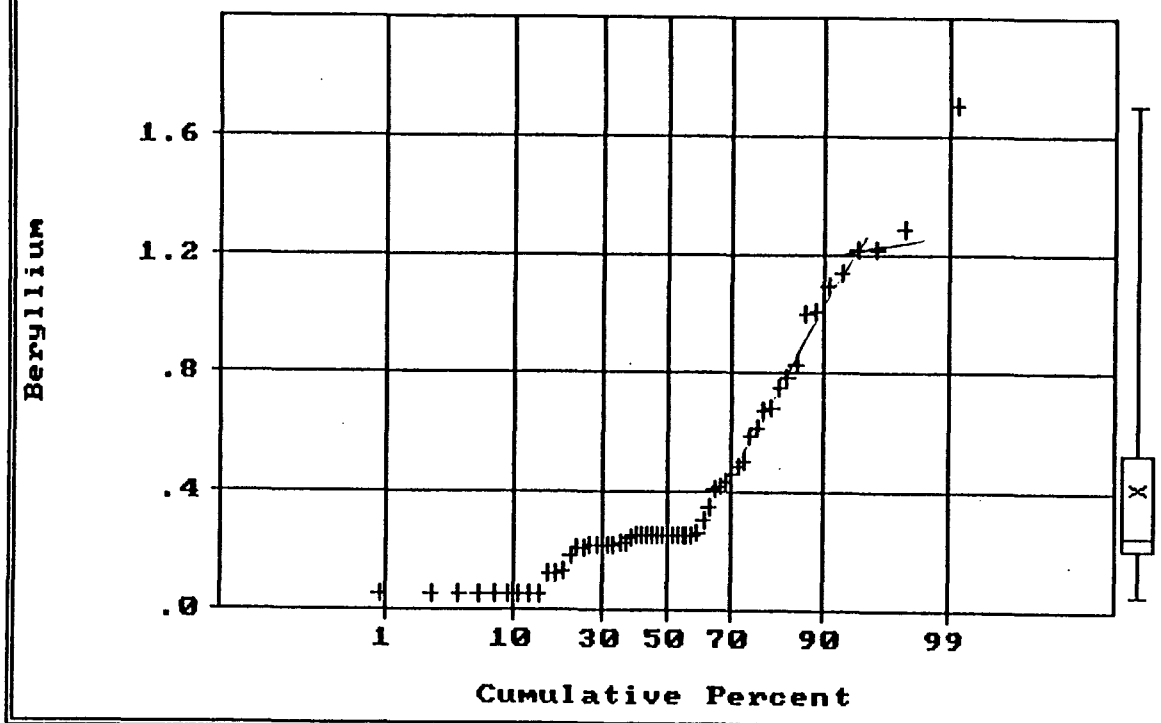
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Beryllium
Data file: col-all.dat

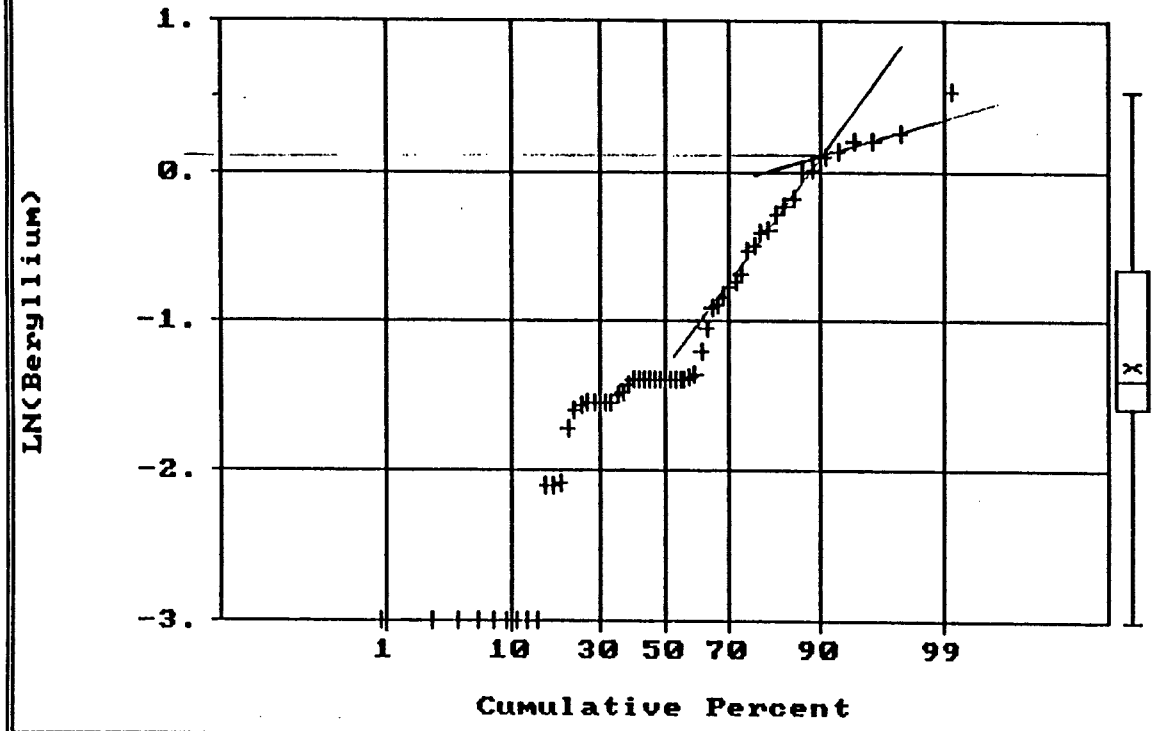


Statistics

N Total :	62
N Miss :	3
N Used :	59
Mean :	.413
Variance:	.143
Std. Dev:	.379
% C.V. :	91.736
Skewness:	1.456
Kurtosis:	4.443
Minimum :	.050
25th % :	.206
Median :	.250
75th % :	.524
Maximum :	1.700

A-183

Normal Probability Plot for LN(Beryllium)
Data file: col-all.dat



Statistics

N Total :	62
N Miss :	3
N Used :	59
Mean :	-1.296
Variance:	.933
Std. Dev:	.966
% C.V. :	74.542
Skewness:	-.244
Kurtosis:	2.483
Minimum :	-2.996
25th % :	-1.579
Median :	-1.386
75th % :	-.648
Maximum :	.531

$e^{0.1} = 1.1$

A-184

	A	B
1	DATA	ID
2	0.05	Col-Cd
3	0.05	Col-Cd
4	0.05	Col-Cd
5	0.05	Col-Cd
6	0.05	Col-Cd
7	0.05	Col-Cd
8	0.22	Col-Cd
9	0.235	Col-Cd
10	0.25	Col-Cd
11	0.25	Col-Cd
12	0.25	Col-Cd
13	0.25	Col-Cd
14	0.25	Col-Cd
15	0.2575	Col-Cd
16	0.2575	Col-Cd
17	0.2575	Col-Cd
18	0.2575	Col-Cd
19	0.2575	Col-Cd
20	0.2575	Col-Cd
21	0.2575	Col-Cd
22	0.2575	Col-Cd
23	0.2575	Col-Cd
24	0.2575	Col-Cd
25	0.2575	Col-Cd
26	0.2575	Col-Cd
27	0.2575	Col-Cd
28	0.2575	Col-Cd
29	0.2575	Col-Cd
30	0.2575	Col-Cd
31	0.2575	Col-Cd
32	0.2575	Col-Cd
33	0.2575	Col-Cd
34	0.371	Col-Cd
35	0.4	Col-Cd
36	0.4	Col-Cd
37	0.4	Col-Cd
38	0.4	Col-Cd
39	0.4	Col-Cd
40	0.4	Col-Cd
41	0.4	Col-Cd
42	0.4	Col-Cd
43	0.4	Col-Cd
44	0.4	Col-Cd
45	0.4	Col-Cd
46	0.4	Col-Cd
47	0.4	Col-Cd
48	0.4	Col-Cd
49	0.444	Col-Cd
50	0.493	Col-Cd
51	0.6	Col-Cd
52	0.6	Col-Cd
53	0.6	Col-Cd
54	0.6	Col-Cd
55	0.6	Col-Cd
56	0.6	Col-Cd
57	0.74	Col-Cd
58	0.757	Col-Cd
59	1.62	Col-Cd
60	4	Col-Cd
61		
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	59	Mean	0.416
Censored	------	Lognormal mean	0.410
Detection limit or PQL	------	Std. devn.	0.529
Method detection limit		Median	0.2575
TOTAL	59	Min.	0.05
ENTER DATA		Max.	4

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.818

Normal distribution? r-squared is: 0.389

Recommendations

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	0.05	Col-Cd
3	0.05	Col-Cd
4	0.05	Col-Cd
5	0.05	Col-Cd
6	0.05	Col-Cd
7	0.05	Col-Cd
8	0.22	Col-Cd
9	0.235	Col-Cd
10	0.25	Col-Cd
11	0.25	Col-Cd
12	0.25	Col-Cd
13	0.25	Col-Cd
14	0.25	Col-Cd
15	0.2575	Col-Cd
16	0.2575	Col-Cd
17	0.2575	Col-Cd
18	0.2575	Col-Cd
19	0.2575	Col-Cd
20	0.2575	Col-Cd
21	0.2575	Col-Cd
22	0.2575	Col-Cd
23	0.2575	Col-Cd
24	0.2575	Col-Cd
25	0.2575	Col-Cd
26	0.2575	Col-Cd
27	0.2575	Col-Cd
28	0.2575	Col-Cd
29	0.2575	Col-Cd
30	0.2575	Col-Cd
31	0.2575	Col-Cd
32	0.2575	Col-Cd
33	0.2575	Col-Cd
34	0.371	Col-Cd
35	0.4	Col-Cd
36	0.4	Col-Cd
37	0.4	Col-Cd
38	0.4	Col-Cd
39	0.4	Col-Cd
40	0.4	Col-Cd
41	0.4	Col-Cd
42	0.4	Col-Cd
43	0.4	Col-Cd
44	0.4	Col-Cd
45	0.4	Col-Cd
46	0.4	Col-Cd
47	0.4	Col-Cd
48	0.4	Col-Cd
49	0.444	Col-Cd
50	0.493	Col-Cd
51	0.6	Col-Cd
52	0.6	Col-Cd
53	0.6	Col-Cd
54	0.6	Col-Cd
55	0.6	Col-Cd
56	0.6	Col-Cd
57	0.74	Col-Cd
58	0.757	Col-Cd
59	1.62	Col-Cd
60	4	Col-Cd
61		
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	59	Mean	0.416
Censored	------	Lognormal mean	0.410
Detection limit or PQL	------	Std. devn.	0.529
Method detection limit		Median	0.2575
TOTAL	59	Min.	0.05
ENTER DATA		Max.	4

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.818

Normal distribution? r-squared is: 0.389

Recommendations:

Reject lognormal distribution.

Y value is -9.9685. This lies outside the tabled values of 1.1073 and -2.7048

Reject normal distribution.

Y value is -32.5255. This lies outside the tabled values of 1.1073 and -2.7048

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

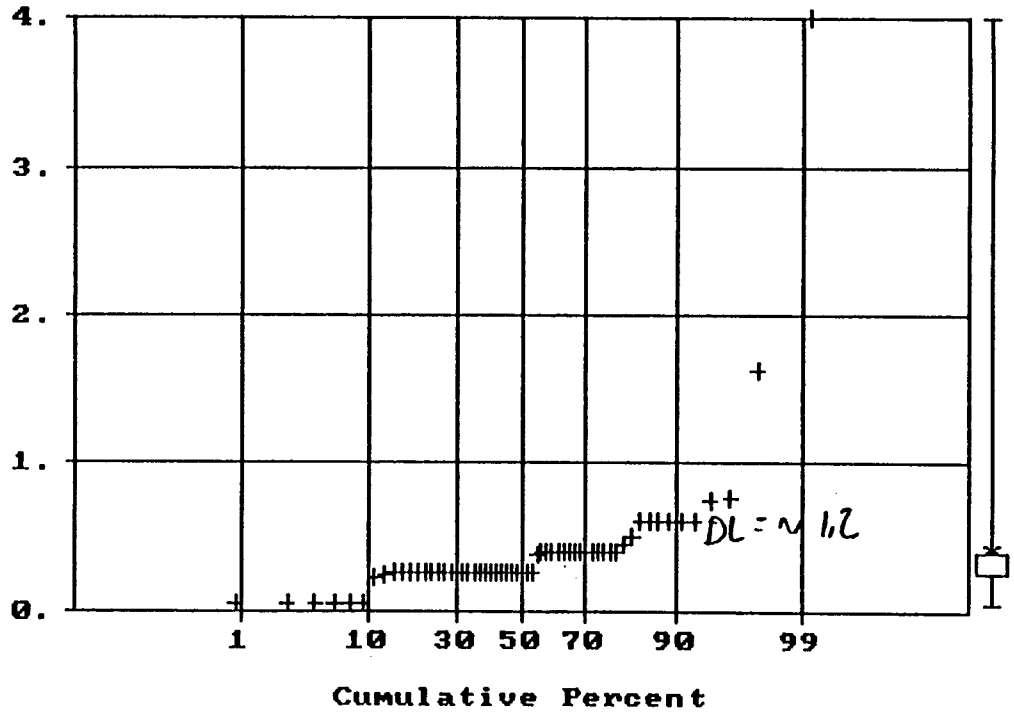
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Cadmium
Data file: col-all.dat



Statistics

N Total :	62
N Miss :	3
N Used :	59
Mean :	.416
Variance:	.280
Std. Dev:	.529
% C.V. :	127.238
Skewness:	5.585
Kurtosis:	37.517
Minimum :	.050
25th % :	.257
Median :	.257
75th % :	.400
Maximum :	4.000

ALL DETECTS

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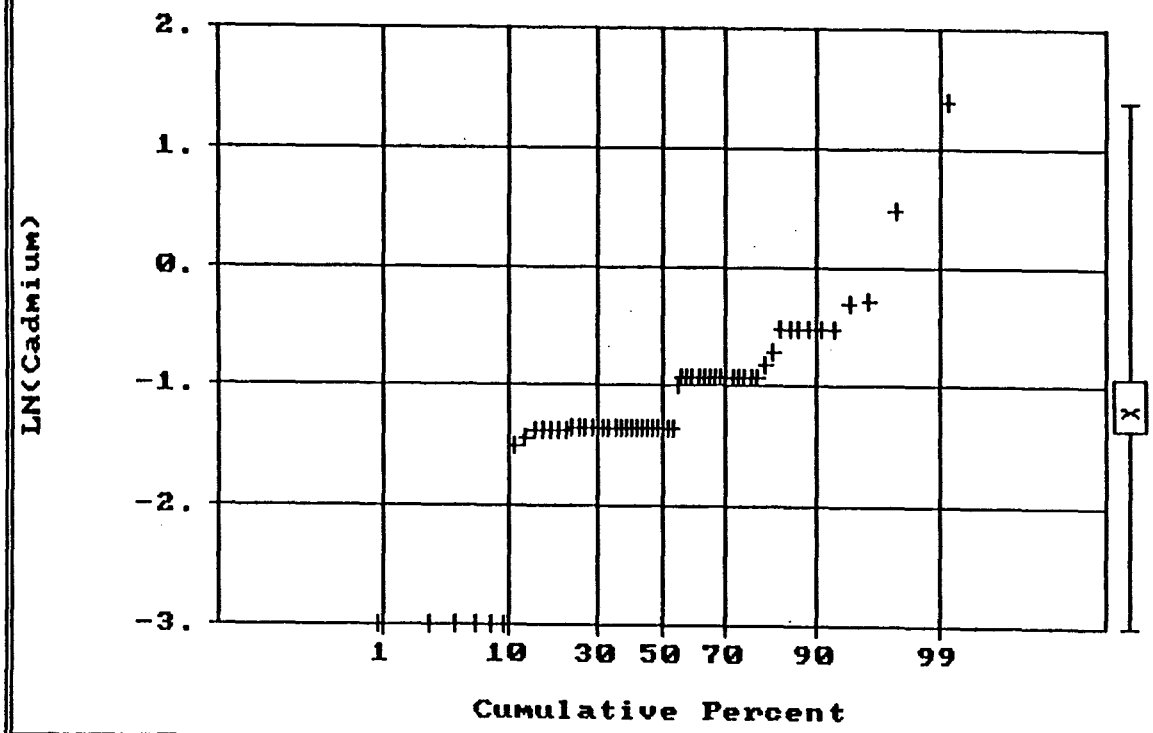
Normal Probability Plot for LN(Cadmium)
Data file: col-all.dat



Statistics

N Total :	62
N Miss :	3
N Used :	59
Mean :	-1.199
Variance:	.616
Std. Dev:	.785
% C.V. :	65.451
Skewness:	-.321
Kurtosis:	5.455
Minimum :	-2.996
25th % :	-1.357
Median :	-1.357
75th % :	-.916
Maximum :	1.386

	A	B
1	DATA	ID
2	0.125	Col-CN
3	0.125	Col-CN
4	0.125	Col-CN
5	0.125	Col-CN
6	0.125	Col-CN
7	0.125	Col-CN
8	0.125	Col-CN
9	0.125	Col-CN
10	0.125	Col-CN
11	0.125	Col-CN
12	0.3208	Col-CN
13	0.4299	Col-CN
14	0.46	Col-CN
15	0.46	Col-CN
16	0.4751	Col-CN
17	0.485	Col-CN
18	0.5	Col-CN
19	0.5	Col-CN
20	0.5	Col-CN
21	0.5	Col-CN
22	0.5	Col-CN
23	0.5	Col-CN
24	0.5	Col-CN
25	0.5	Col-CN
26	0.5	Col-CN
27	0.5	Col-CN
28	0.5	Col-CN
29	0.5	Col-CN
30	0.5	Col-CN
31	0.5	Col-CN
32	0.5	Col-CN
33	0.5	Col-CN
34	0.5161	Col-CN

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	33	Mean	0.376
Censored	------	Lognormal mean	0.392
Detection limit or PQL	------	Std. devn.	0.171
Method detection limit		Median	0.5
TOTAL	33	Min.	0.125
ENTER DATA		Max.	0.5161

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.645

Normal distribution? r-squared is: 0.671

Recommendations:

Reject lognormal distribution.

W value is 0.6235. This is less than the tabled value of 0.931

Reject normal distribution.

W value is 0.6489. This is less than the tabled value of 0.931

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	0.125	Col-CN
3	0.125	Col-CN
4	0.125	Col-CN
5	0.125	Col-CN
6	0.125	Col-CN
7	0.125	Col-CN
8	0.125	Col-CN
9	0.125	Col-CN
10	0.125	Col-CN
11	0.125	Col-CN
12	0.3208	Col-CN
13	0.4299	Col-CN
14	0.46	Col-CN
15	0.46	Col-CN
16	0.4751	Col-CN
17	0.485	Col-CN
18	0.5	Col-CN
19	0.5	Col-CN
20	0.5	Col-CN
21	0.5	Col-CN
22	0.5	Col-CN
23	0.5	Col-CN
24	0.5	Col-CN
25	0.5	Col-CN
26	0.5	Col-CN
27	0.5	Col-CN
28	0.5	Col-CN
29	0.5	Col-CN
30	0.5	Col-CN
31	0.5	Col-CN
32	0.5	Col-CN
33	0.5	Col-CN
34	0.5161	Col-CN

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	33	Mean	0.376
Censored	------	Lognormal mean	0.392
Detection limit or PQL	------	Std. devn.	0.171
Method detection limit		Median	0.5
TOTAL	33	Min.	0.125
ENTER DATA		Max	0.5161

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.645

Normal distribution? r-squared is: 0.671

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

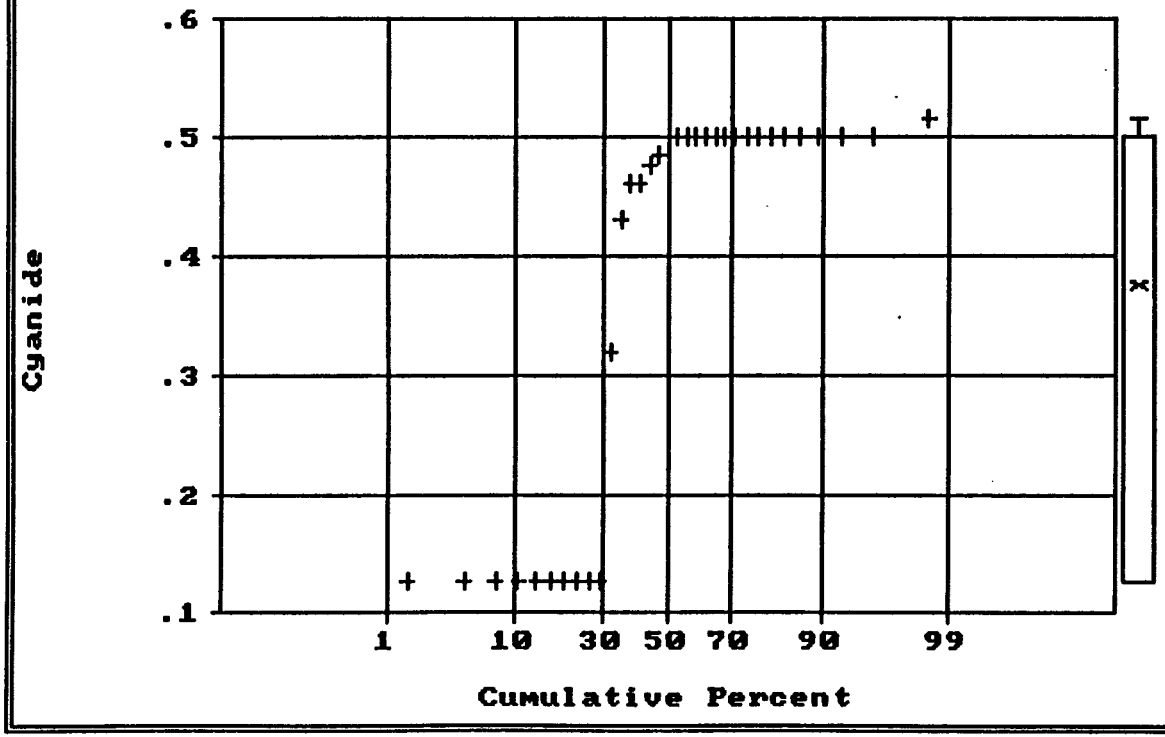
Lognormal

Normal

Neither

Sample size

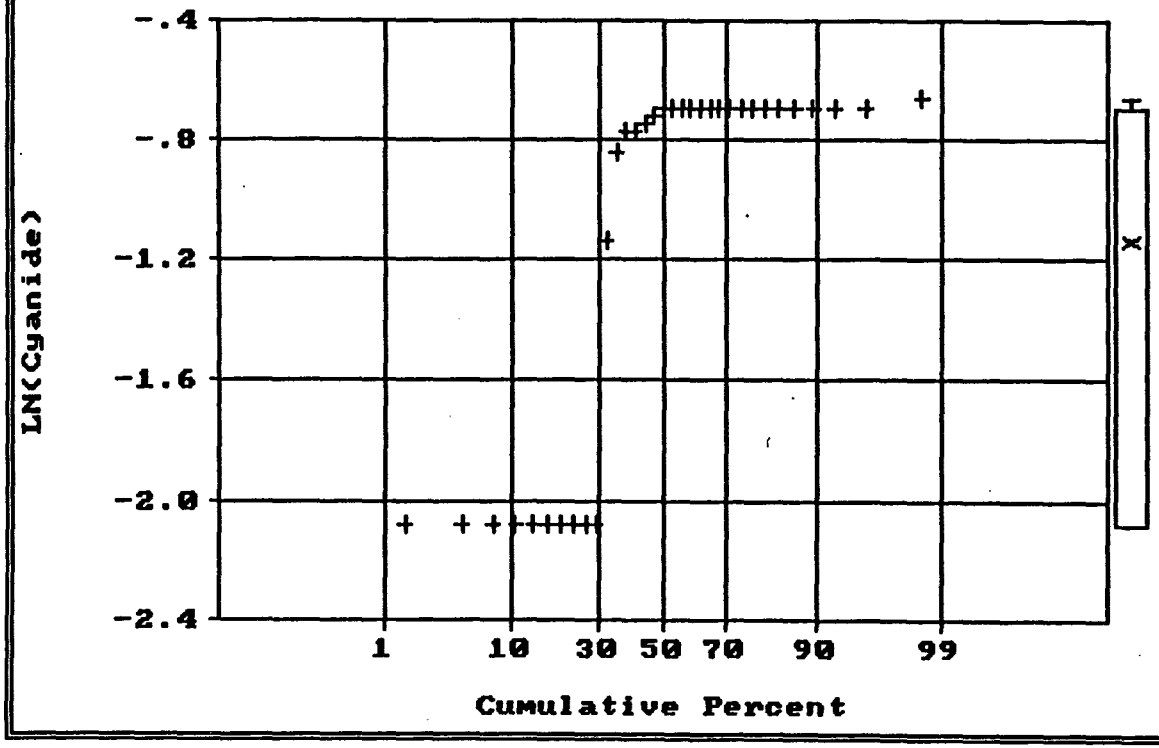
Normal Probability Plot for Cyanide
Data file: col-all.dat



Statistics

N Total :	62
N Miss :	29
N Used :	33
Mean :	.376
Variance:	.029
Std. Dev:	.171
% C.V. :	45.561
Skewness:	-.763
Kurtosis:	1.654
Minimum :	.125
25th % :	.125
Median :	.500
75th % :	.500
Maximum :	.516

Normal Probability Plot for LN(Cyanide)
Data file: col-all.dat



Statistics

N Total :	62
N Miss :	29
N Used :	33
Mean :	-1.138
Variance:	.404
Std. Dev:	.636
% C.V. :	55.868
Skewness:	-.813
Kurtosis:	1.704
Minimum :	-2.079
25th % :	-2.079
Median :	-.693
75th % :	-.693
Maximum :	-.661

	A	B
1	DATA	ID
2	2.4541	Col-Co
3	5.83	Col-Co
4	6.36	Col-Co
5	6.48	Col-Co
6	6.73	Col-Co
7	6.781	Col-Co
8	6.83	Col-Co
9	7.73	Col-Co
10	7.85	Col-Co
11	8.14	Col-Co
12	8.2127	Col-Co
13	8.8	Col-Co
14	8.83	Col-Co
15	8.94	Col-Co
16	9.2152	Col-Co
17	9.64	Col-Co
18	9.77	Col-Co
19	9.85	Col-Co
20	10.2	Col-Co
21	10.8857	Col-Co
22	11.2264	Col-Co
23	11.2793	Col-Co
24	12	Col-Co
25	12.0275	Col-Co
26	12.1	Col-Co
27	12.2363	Col-Co
28	12.3	Col-Co
29	12.3012	Col-Co
30	12.8371	Col-Co
31	12.8925	Col-Co
32	12.9244	Col-Co
33	13.0286	Col-Co
34	13.687	Col-Co
35	13.807	Col-Co
36	14	Col-Co
37	14.2032	Col-Co
38	14.5	Col-Co
39	14.7059	Col-Co
40	15.5	Col-Co
41	15.62	Col-Co
42	15.936	Col-Co
43	17	Col-Co
44	20.8	Col-Co
45	23.5	Col-Co
46	25.9	Col-Co
47	26.282	Col-Co
48	27.1	Col-Co
49	31.4	Col-Co
50	33.8	Col-Co
51	34.3	Col-Co
52	34.4	Col-Co
53	36.5	Col-Co
54	37.9	Col-Co
55	39.1	Col-Co
56	40	Col-Co
57	41.2	Col-Co
58	49.5	Col-Co
59	55.2	Col-Co
60	120	Col-Co
61		
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	59	Mean	19.195
Censored	------	Lognormal mean	18.697
Detection limit or PQL	------	Std. devn.	17.958
Method detection limit		Median	12.8925
TOTAL	59	Min.	2.4541
ENTER DATA		Max	120

Distribution Decision

Probability plot method	W test	D'Agostino's test
Lognormal distribution?	Normal distribution?	
r-squared is: 0.946	r-squared is: 0.636	

Recommendations

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	2.4541	Col-Co
3	5.83	Col-Co
4	6.36	Col-Co
5	6.48	Col-Co
6	6.73	Col-Co
7	6.781	Col-Co
8	6.83	Col-Co
9	7.73	Col-Co
10	7.85	Col-Co
11	8.14	Col-Co
12	8.2127	Col-Co
13	8.8	Col-Co
14	8.83	Col-Co
15	8.94	Col-Co
16	9.2152	Col-Co
17	9.64	Col-Co
18	9.77	Col-Co
19	9.85	Col-Co
20	10.2	Col-Co
21	10.8857	Col-Co
22	11.2264	Col-Co
23	11.2793	Col-Co
24	12	Col-Co
25	12.0275	Col-Co
26	12.1	Col-Co
27	12.2363	Col-Co
28	12.3	Col-Co
29	12.3012	Col-Co
30	12.8371	Col-Co
31	12.8925	Col-Co
32	12.9244	Col-Co
33	13.0286	Col-Co
34	13.687	Col-Co
35	13.807	Col-Co
36	14	Col-Co
37	14.2032	Col-Co
38	14.5	Col-Co
39	14.7059	Col-Co
40	15.5	Col-Co
41	15.62	Col-Co
42	15.936	Col-Co
43	17	Col-Co
44	20.8	Col-Co
45	23.5	Col-Co
46	25.9	Col-Co
47	26.282	Col-Co
48	27.1	Col-Co
49	31.4	Col-Co
50	33.8	Col-Co
51	34.3	Col-Co
52	34.4	Col-Co
53	36.5	Col-Co
54	37.9	Col-Co
55	39.1	Col-Co
56	40	Col-Co
57	41.2	Col-Co
58	49.5	Col-Co
59	55.2	Col-Co
60	120	Col-Co
61		
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	59	Mean	19.195
Censored	------	Lognormal mean	18.697
Detection limit or PQL	------	Std. devn.	17.958
Method detection limit		Median	12.8925
TOTAL	59	Min.	2.4541
ENTER DATA		Max.	120

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.946

Normal distribution? r-squared is: 0.636

Recommendations:

Assume lognormal distribution.

Y value is -2.3462. This lies within the tabled values of 1.1073 and -2.7048

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

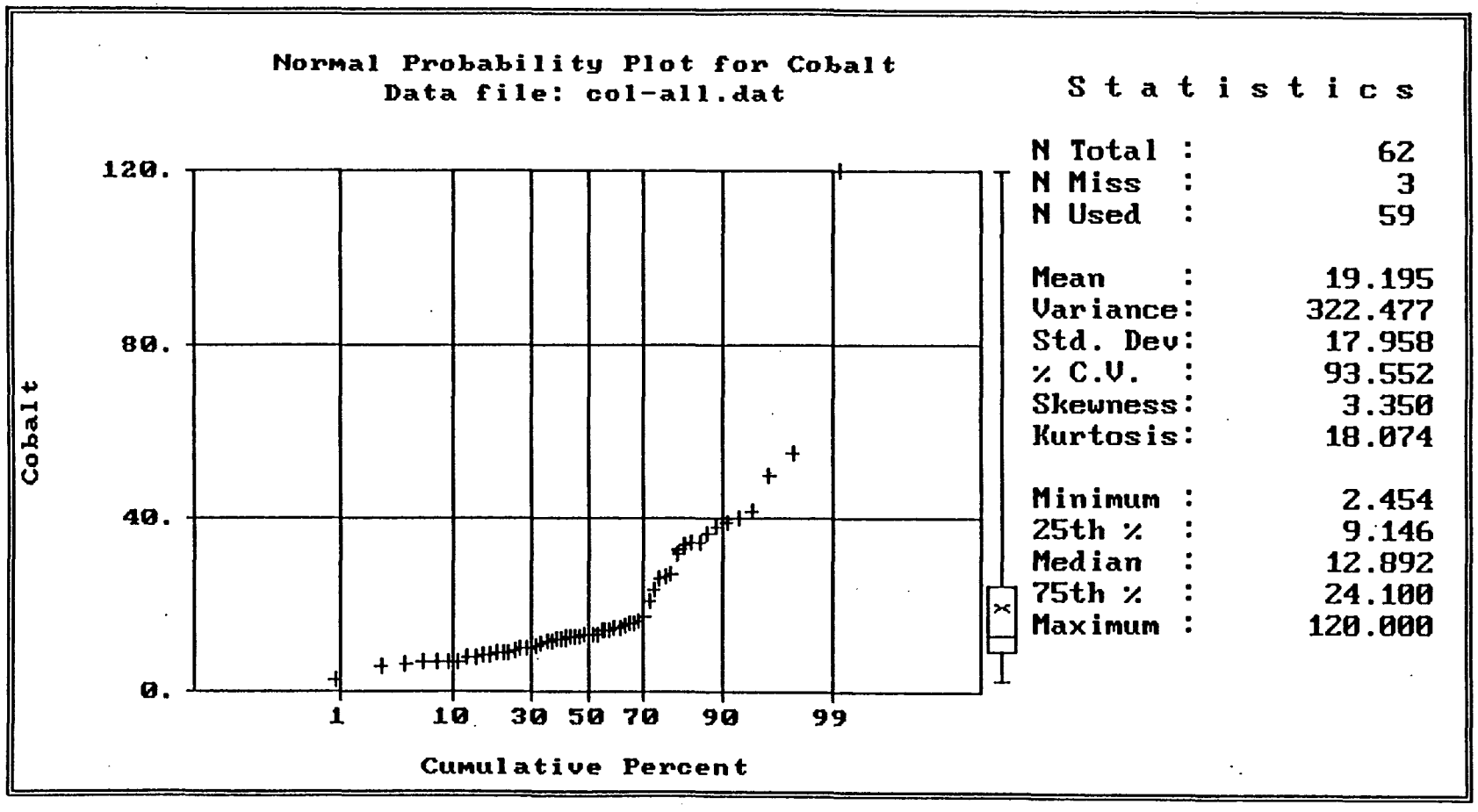
Calculate UCL

Lognormal

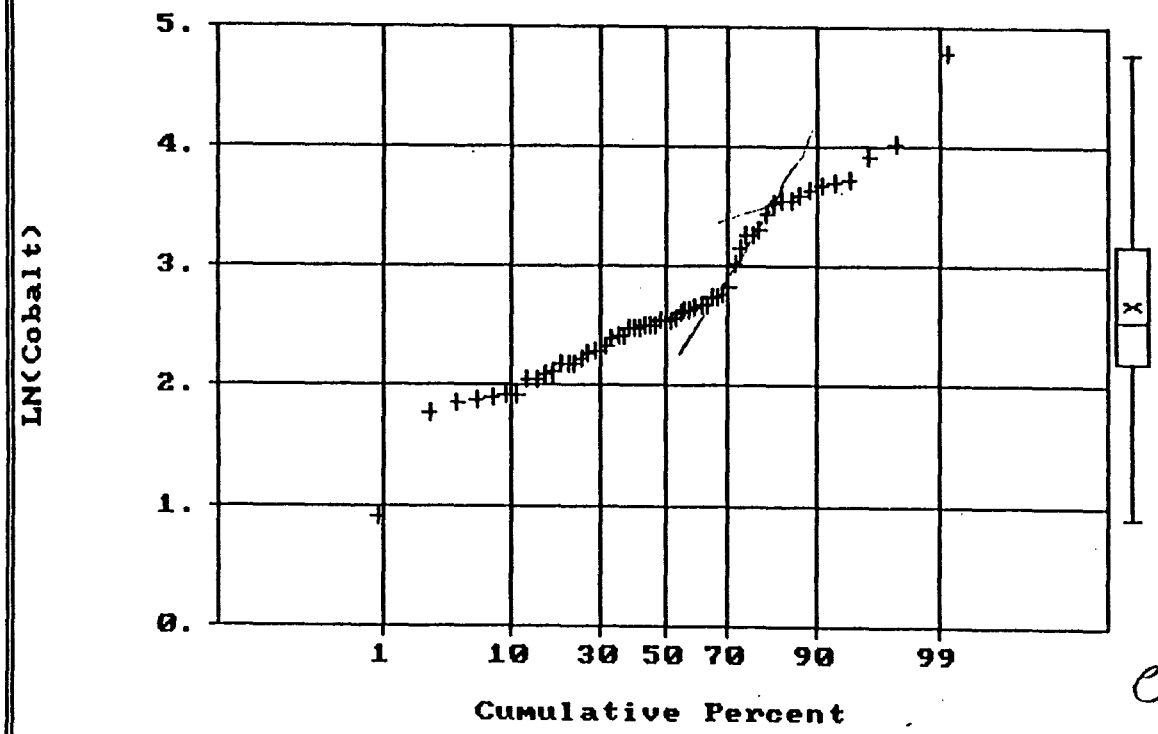
Normal

Neither

Sample size


Normal Probability Plot for Cobalt
Data file: col-all.dat
Cobalt
120.
80.
40.
0.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 62
N Miss : 3
N Used : 59
Mean : 19.195
Variance: 322.477
Std. Dev: 17.958
% C.V. : 93.552
Skewness: 3.350
Kurtosis: 18.074
Minimum : 2.454
25th % : 9.146
Median : 12.892
75th % : 24.100
Maximum : 120.000

Normal Probability Plot for LN(Cobalt)
Data file: col-all.dat



Statistics

N Total :	62
N Miss :	3
N Used :	59
Mean :	2.692
Variance:	.472
Std. Dev:	.687
% C.V. :	25.517
Skewness:	.525
Kurtosis:	3.563
Minimum :	.898
25th % :	2.213
Median :	2.557
75th % :	3.181
Maximum :	4.787

$e^{3.5} = \sim 33$

A-196

	A	B
1	DATA	ID
2	24	Col-Cr
3	26.4	Col-Cr
4	28	Col-Cr
5	30.5	Col-Cr
6	36.9	Col-Cr
7	40.1549	Col-Cr
8	41.4	Col-Cr
9	41.8	Col-Cr
10	41.8	Col-Cr
11	42.1	Col-Cr
12	43.7	Col-Cr
13	49.1745	Col-Cr
14	49.7	Col-Cr
15	50.2	Col-Cr
16	50.8	Col-Cr
17	51.5	Col-Cr
18	51.7606	Col-Cr
19	52.3	Col-Cr
20	53.5797	Col-Cr
21	53.8462	Col-Cr
22	57	Col-Cr
23	57.6	Col-Cr
24	57.9611	Col-Cr
25	58.2579	Col-Cr
26	58.9	Col-Cr
27	59.4	Col-Cr
28	64.1256	Col-Cr
29	64.6221	Col-Cr
30	64.8	Col-Cr
31	67.7625	Col-Cr
32	78.2857	Col-Cr
33	78.3755	Col-Cr
34	79.9	Col-Cr
35	81	Col-Cr
36	82.7	Col-Cr
37	84.5	Col-Cr
38	89.1046	Col-Cr
39	90.2	Col-Cr
40	91.8	Col-Cr
41	91.8	Col-Cr
42	93.836	Col-Cr
43	94.6	Col-Cr
44	96.2	Col-Cr
45	96.9	Col-Cr
46	98.002	Col-Cr
47	100	Col-Cr
48	101	Col-Cr
49	106	Col-Cr
50	107	Col-Cr
51	121.681	Col-Cr
52	137.6147	Col-Cr
53	141	Col-Cr
54	142	Col-Cr
55	156.75	Col-Cr
56	255.949	Col-Cr
57	295	Col-Cr
58	300	Col-Cr
59	590	Col-Cr
60	942.8251	Col-Cr
61		
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	59	Mean	106.679
Censored	------	Lognormal mean	97.534
Detection limit or PQL	------	Std. devn.	140.415
Method detection limit		Median	67.7625
TOTAL	59	Min.	24
ENTER DATA		Max	942.8251

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.895

Normal distribution? r-squared is: 0.443

Recommendations

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	24	Col-Cr
3	26.4	Col-Cr
4	28	Col-Cr
5	30.5	Col-Cr
6	36.9	Col-Cr
7	40.1549	Col-Cr
8	41.4	Col-Cr
9	41.8	Col-Cr
10	41.8	Col-Cr
11	42.1	Col-Cr
12	43.7	Col-Cr
13	49.1745	Col-Cr
14	49.7	Col-Cr
15	50.2	Col-Cr
16	50.8	Col-Cr
17	51.5	Col-Cr
18	51.7606	Col-Cr
19	52.3	Col-Cr
20	53.5797	Col-Cr
21	53.8462	Col-Cr
22	57	Col-Cr
23	57.6	Col-Cr
24	57.9611	Col-Cr
25	58.2579	Col-Cr
26	58.9	Col-Cr
27	59.4	Col-Cr
28	64.1256	Col-Cr
29	64.6221	Col-Cr
30	64.8	Col-Cr
31	67.7625	Col-Cr
32	78.2857	Col-Cr
33	78.3755	Col-Cr
34	79.9	Col-Cr
35	81	Col-Cr
36	82.7	Col-Cr
37	84.5	Col-Cr
38	89.1046	Col-Cr
39	90.2	Col-Cr
40	91.8	Col-Cr
41	91.8	Col-Cr
42	93.836	Col-Cr
43	94.6	Col-Cr
44	96.2	Col-Cr
45	96.9	Col-Cr
46	98.002	Col-Cr
47	100	Col-Cr
48	101	Col-Cr
49	106	Col-Cr
50	107	Col-Cr
51	121.681	Col-Cr
52	137.6147	Col-Cr
53	141	Col-Cr
54	142	Col-Cr
55	156.75	Col-Cr
56	255.949	Col-Cr
57	295	Col-Cr
58	300	Col-Cr
59	590	Col-Cr
60	942.8251	Col-Cr
61		
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	59	Mean	106.679
Censored	------	Lognormal mean	97.534
Detection limit or PQL	------	Std. devn.	140.415
Method detection limit		Median	67.7625
TOTAL	59	Min.	24
ENTER DATA		Max.	942.8251

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.895

Normal distribution? r-squared is: 0.443

Recommendations:

Reject lognormal distribution.

Y value is -5.6243. This lies outside the tabled values of 1.1073 and -2.7048

Reject normal distribution.

Y value is -29.2295. This lies outside the tabled values of 1.1073 and -2.7048

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

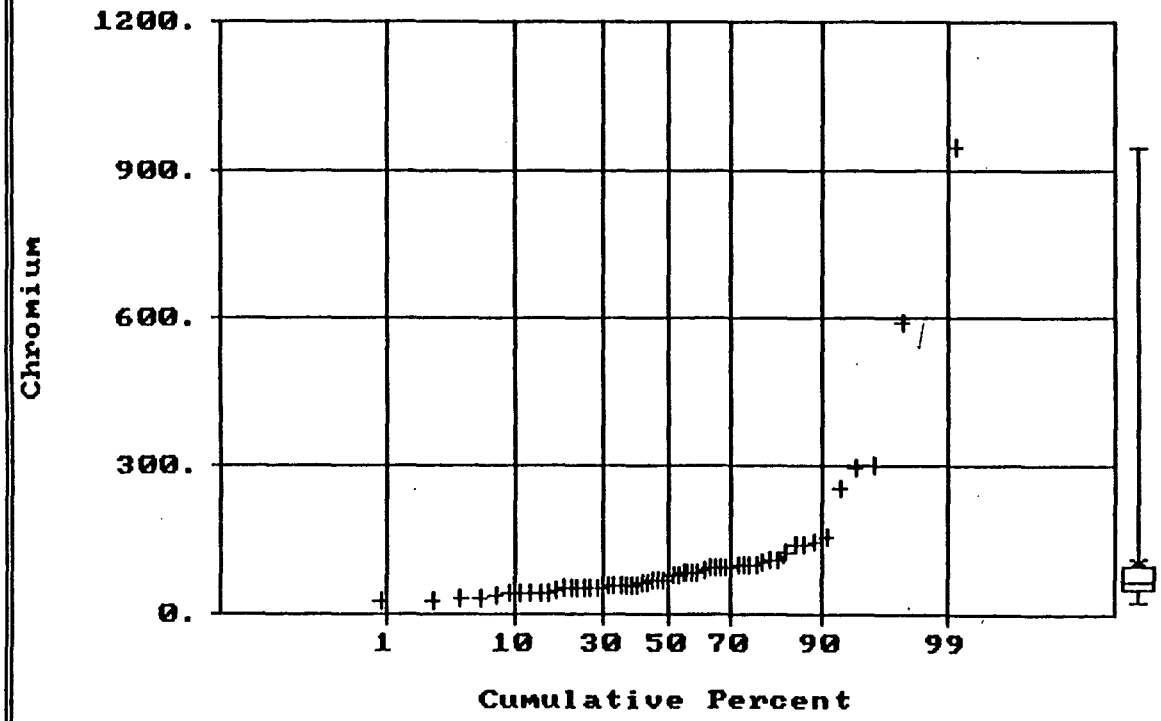
Lognormal

Normal

Neither

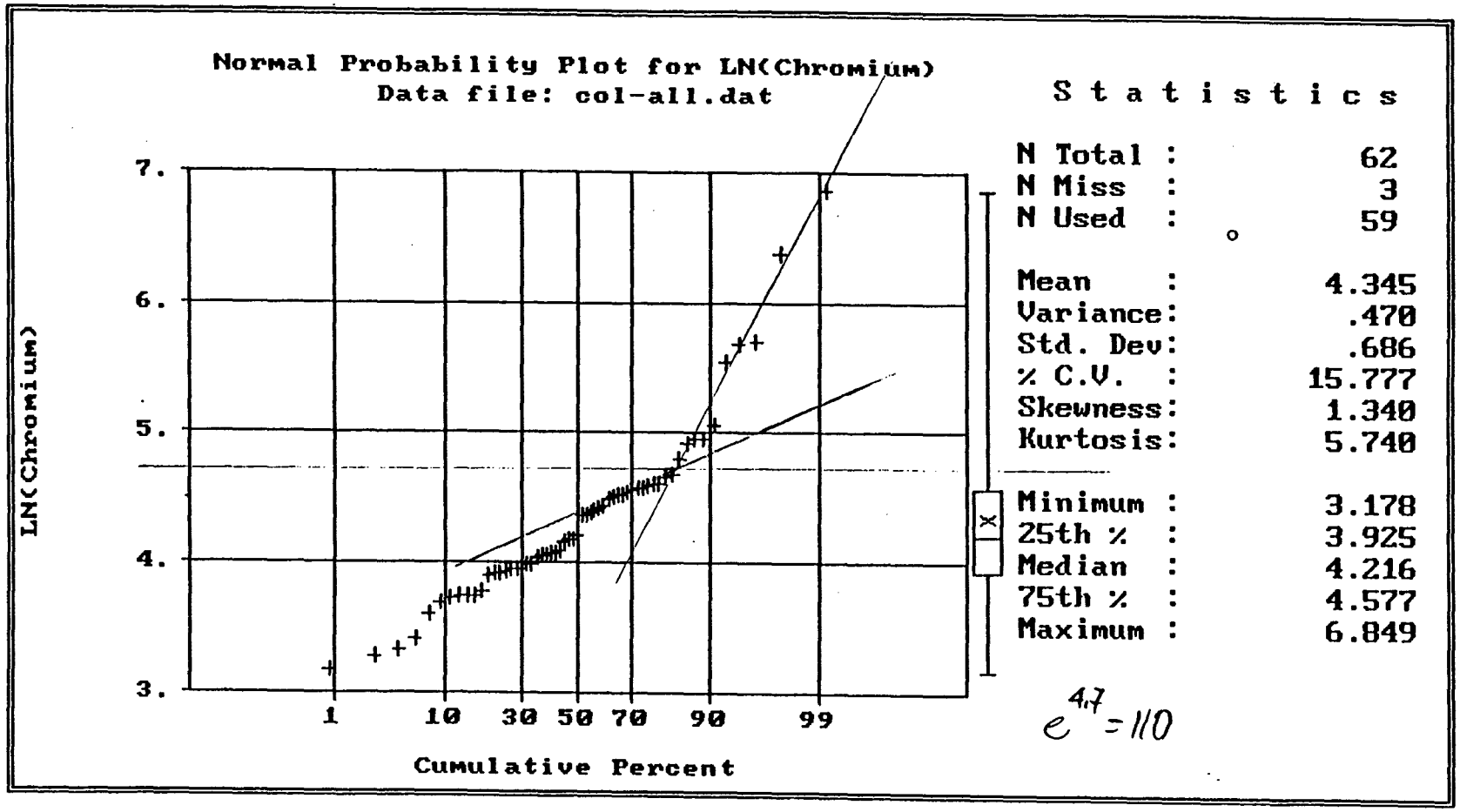
Sample size

Normal Probability Plot for Chromium
Data file: col-all.dat



Statistics

N Total :	62
N Miss :	3
N Used :	59
Mean :	106.679
Variance:	19716.500
Std. Dev:	140.415
% C.V. :	131.624
Skewness:	4.449
Kurtosis:	24.676
Minimum :	24.000
25th % :	50.650
Median :	67.762
75th % :	97.175
Maximum :	942.825


Normal Probability Plot for LN(Chromium)
Data file: col-all.dat
LN(Chromium)
7.
6.
5.
4.
3.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 62
N Miss : 3
N Used : 59
Mean : 4.345
Variance: .470
Std. Dev: .686
% C.V. : 15.777
Skewness: 1.340
Kurtosis: 5.740
Minimum : 3.178
25th % : 3.925
Median : 4.216
75th % : 4.577
Maximum : 6.849
$e^{4.7} = 110$

A-200

	A	B
1	DATA	ID
2	3.02	Col-Cu
3	3.36	Col-Cu
4	3.47	Col-Cu
5	3.74	Col-Cu
6	3.9159	Col-Cu
7	4.03	Col-Cu
8	4.32	Col-Cu
9	4.52	Col-Cu
10	4.62	Col-Cu
11	4.91	Col-Cu
12	4.93	Col-Cu
13	5.2	Col-Cu
14	5.67	Col-Cu
15	5.82	Col-Cu
16	5.84	Col-Cu
17	6.98	Col-Cu
18	7.54	Col-Cu
19	8.43	Col-Cu
20	9.0263	Col-Cu
21	9.54	Col-Cu
22	9.74	Col-Cu
23	10.4	Col-Cu
24	10.4	Col-Cu
25	10.4114	Col-Cu
26	10.8824	Col-Cu
27	11.833	Col-Cu
28	13.0282	Col-Cu
29	13.876	Col-Cu
30	13.9	Col-Cu
31	15.2104	Col-Cu
32	16.3	Col-Cu
33	16.6	Col-Cu
34	17.3	Col-Cu
35	17.5	Col-Cu
36	17.7	Col-Cu
37	18	Col-Cu
38	18.1	Col-Cu
39	18.3	Col-Cu
40	19.4	Col-Cu
41	19.5	Col-Cu
42	19.9	Col-Cu
43	20.2545	Col-Cu
44	20.8145	Col-Cu
45	20.9143	Col-Cu
46	23.8	Col-Cu
47	24	Col-Cu
48	24.3649	Col-Cu
49	24.4	Col-Cu
50	26.6	Col-Cu
51	27.529	Col-Cu
52	27.7	Col-Cu
53	31.7	Col-Cu
54	31.8	Col-Cu
55	32.3	Col-Cu
56	33.1839	Col-Cu
57	41.3677	Col-Cu
58	80.8324	Col-Cu
59	151.3761	Col-Cu
60	165.0943	Col-Cu
61		
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	59	Mean	20.936
Censored	------	Lognormal mean	19.775
Detection limit or PQL	------	Std. devn.	28.854
Method detection limit		Median	15.2104
TOTAL	59	Min.	3.02
ENTER DATA		Max	165.0943

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.953

Normal distribution? r-squared is: 0.497

Recommendations

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

A-201

	A	B
1	DATA	ID
2	3.02	Col-Cu
3	3.36	Col-Cu
4	3.47	Col-Cu
5	3.74	Col-Cu
6	3.9159	Col-Cu
7	4.03	Col-Cu
8	4.32	Col-Cu
9	4.52	Col-Cu
10	4.62	Col-Cu
11	4.91	Col-Cu
12	4.93	Col-Cu
13	5.2	Col-Cu
14	5.67	Col-Cu
15	5.82	Col-Cu
16	5.84	Col-Cu
17	6.98	Col-Cu
18	7.54	Col-Cu
19	8.43	Col-Cu
20	9.0263	Col-Cu
21	9.54	Col-Cu
22	9.74	Col-Cu
23	10.4	Col-Cu
24	10.4	Col-Cu
25	10.4114	Col-Cu
26	10.8824	Col-Cu
27	11.833	Col-Cu
28	13.0282	Col-Cu
29	13.876	Col-Cu
30	13.9	Col-Cu
31	15.2104	Col-Cu
32	16.3	Col-Cu
33	16.6	Col-Cu
34	17.3	Col-Cu
35	17.5	Col-Cu
36	17.7	Col-Cu
37	18	Col-Cu
38	18.1	Col-Cu
39	18.3	Col-Cu
40	19.4	Col-Cu
41	19.5	Col-Cu
42	19.9	Col-Cu
43	20.2545	Col-Cu
44	20.8145	Col-Cu
45	20.9143	Col-Cu
46	23.8	Col-Cu
47	24	Col-Cu
48	24.3649	Col-Cu
49	24.4	Col-Cu
50	26.6	Col-Cu
51	27.529	Col-Cu
52	27.7	Col-Cu
53	31.7	Col-Cu
54	31.8	Col-Cu
55	32.3	Col-Cu
56	33.1839	Col-Cu
57	41.3677	Col-Cu
58	80.8324	Col-Cu
59	151.3761	Col-Cu
60	165.0943	Col-Cu
61		
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	59	Mean	20.936
Censored	------	Lognormal mean	19.775
Detection limit or PQL	------	Std. devn.	28.854
Method detection limit	------	Median	15.2104
TOTAL	59	Min.	3.02
ENTER DATA		Max	165.0943

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.953

Normal distribution? r-squared is: 0.497

Recommendations

Assume lognormal distribution.

Y value is -1.4233. This lies within the tabled values of 1.1073 and -2.7048

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

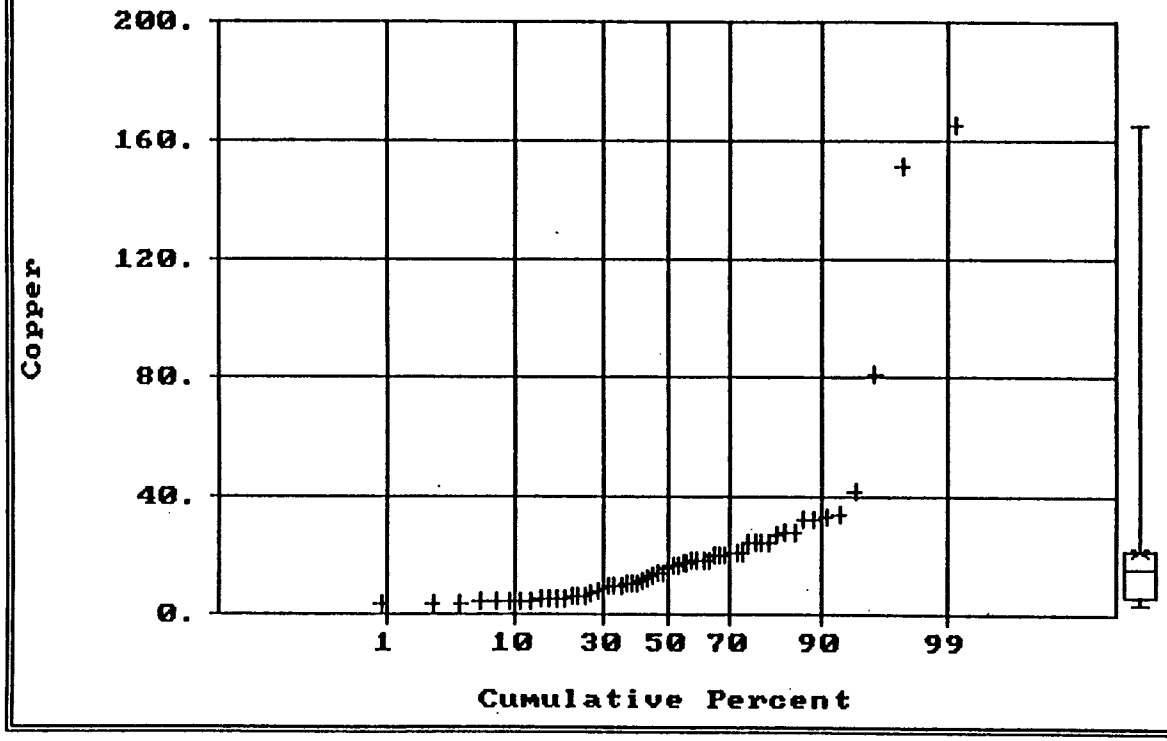
Normal

Neither

Sample size

A-202

Normal Probability Plot for Copper
Data file: col-all.dat

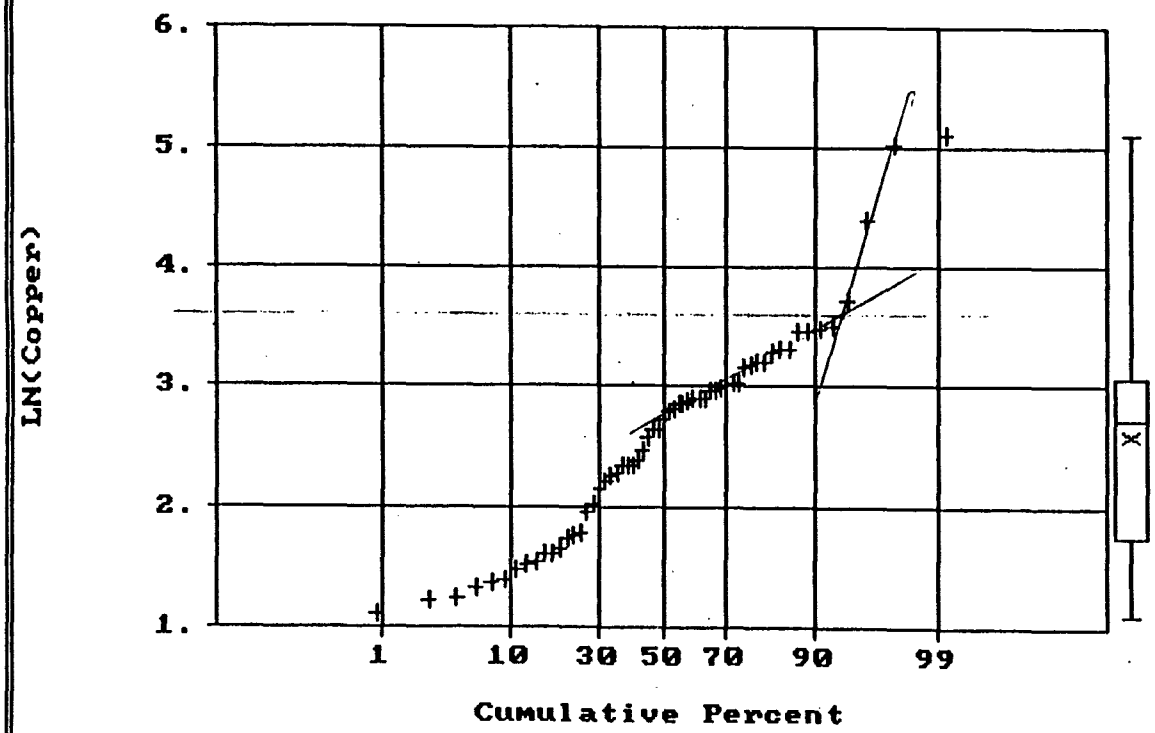


Statistics

N Total :	62
N Miss :	3
N Used :	59
Mean :	20.936
Variance:	832.576
Std. Dev:	28.854
% C.V. :	137.825
Skewness:	3.879
Kurtosis:	18.618
Minimum :	3.020
25th % :	5.835
Median :	15.210
75th % :	21.636
Maximum :	165.094

A-203

Normal Probability Plot for LN(Copper)
Data file: col-all.dat



Statistics

N Total :	62
N Miss :	3
N Used :	59
Mean :	2.596
Variance:	.776
Std. Dev:	.881
% C.V. :	33.937
Skewness:	.481
Kurtosis:	3.438
Minimum :	1.105
25th % :	1.764
Median :	2.722
75th % :	3.073
Maximum :	5.107

$e^{3.6} = 36$

A-204

	A	B
1	DATA	ID
2	7560	Col-Fe
3	9630	Col-Fe
4	9790	Col-Fe
5	10763.2743	Col-Fe
6	10900	Col-Fe
7	11400	Col-Fe
8	11900	Col-Fe
9	12104.0724	Col-Fe
10	12256.5865	Col-Fe
11	12892.3767	Col-Fe
12	13797.1698	Col-Fe
13	14000	Col-Fe
14	14300	Col-Fe
15	14563.1068	Col-Fe
16	14671.3615	Col-Fe
17	15376.4581	Col-Fe
18	15500	Col-Fe
19	16000	Col-Fe
20	16000	Col-Fe
21	16000	Col-Fe
22	16400	Col-Fe
23	16628.1755	Col-Fe
24	16700	Col-Fe
25	16757.9409	Col-Fe
26	16800	Col-Fe
27	17000	Col-Fe
28	17405.0633	Col-Fe
29	18100	Col-Fe
30	19000	Col-Fe
31	19004.5249	Col-Fe
32	20000	Col-Fe
33	20200	Col-Fe
34	21000	Col-Fe
35	21000	Col-Fe
36	22000	Col-Fe
37	24000	Col-Fe
38	25000	Col-Fe
39	26000	Col-Fe
40	26000	Col-Fe
41	26000	Col-Fe
42	26000	Col-Fe
43	27578.457	Col-Fe
44	28245.5405	Col-Fe
45	29000	Col-Fe
46	29035.8744	Col-Fe
47	29074.754	Col-Fe
48	30000	Col-Fe
49	30200	Col-Fe
50	31000	Col-Fe
51	31200	Col-Fe
52	33486.2385	Col-Fe
53	34900	Col-Fe
54	35069.703	Col-Fe
55	35500	Col-Fe
56	36000	Col-Fe
57	39000	Col-Fe
58	39335.574	Col-Fe
59	44000	Col-Fe
60	50355.094	Col-Fe
61		
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	59	Mean	22091.209
Censored	------	Lognormal mean	22149.082
Detection limit or PQL	------	Std. devn.	9552.362
Method detection limit		Median	19004.5249
TOTAL	59	Min.	7560
ENTER DATA		Max.	50355.094

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.985

Normal distribution? r-squared is: 0.939

Recommendations:

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

A-205

	A	B
1	DATA	ID
2	7560	Col-Fe
3	9630	Col-Fe
4	9790	Col-Fe
5	10763.2743	Col-Fe
6	10900	Col-Fe
7	11400	Col-Fe
8	11900	Col-Fe
9	12104.0724	Col-Fe
10	12256.5865	Col-Fe
11	12892.3767	Col-Fe
12	13797.1698	Col-Fe
13	14000	Col-Fe
14	14300	Col-Fe
15	14563.1068	Col-Fe
16	14671.3615	Col-Fe
17	15376.4581	Col-Fe
18	15500	Col-Fe
19	16000	Col-Fe
20	16000	Col-Fe
21	16000	Col-Fe
22	16400	Col-Fe
23	16628.1755	Col-Fe
24	16700	Col-Fe
25	16757.9409	Col-Fe
26	16800	Col-Fe
27	17000	Col-Fe
28	17405.0633	Col-Fe
29	18100	Col-Fe
30	19000	Col-Fe
31	19004.5249	Col-Fe
32	20000	Col-Fe
33	20200	Col-Fe
34	21000	Col-Fe
35	21000	Col-Fe
36	22000	Col-Fe
37	24000	Col-Fe
38	25000	Col-Fe
39	26000	Col-Fe
40	26000	Col-Fe
41	26000	Col-Fe
42	26000	Col-Fe
43	27578.457	Col-Fe
44	28245.5405	Col-Fe
45	29000	Col-Fe
46	29035.8744	Col-Fe
47	29074.754	Col-Fe
48	30000	Col-Fe
49	30200	Col-Fe
50	31000	Col-Fe
51	31200	Col-Fe
52	33486.2385	Col-Fe
53	34900	Col-Fe
54	35069.703	Col-Fe
55	35500	Col-Fe
56	36000	Col-Fe
57	39000	Col-Fe
58	39335.574	Col-Fe
59	44000	Col-Fe
60	50355.094	Col-Fe
61		
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	59	Mean	22091.209
Censored	------	Lognormal mean	22149.082
Detection limit or PQL	------	Std. devn.	9552.362
Method detection limit		Median	19004.5249
TOTAL	59	Min.	7560
ENTER DATA		Max	50355.094

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.985

Normal distribution? r-squared is: 0.939

Recommendations

Assume lognormal distribution.

Y value is 0.9047. This lies within the tabled values of 1.1073 and -2.7048

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

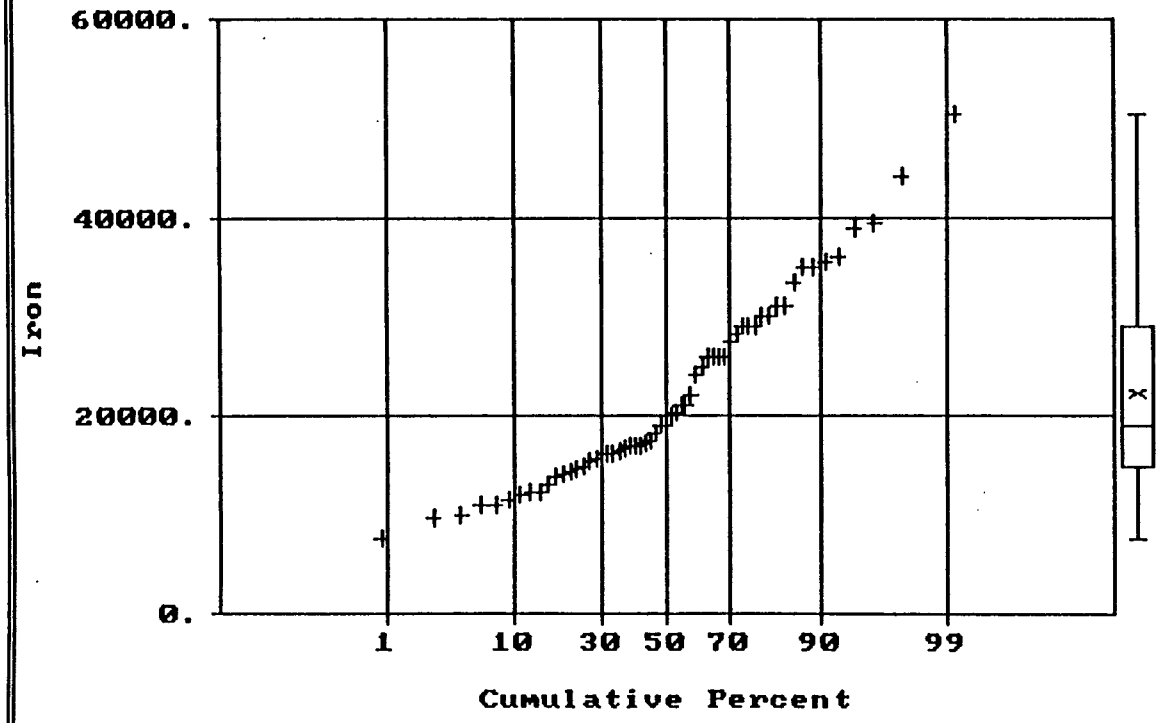
Normal

Neither

Sample size

A-206

Normal Probability Plot for Iron
Data file: col-all.dat

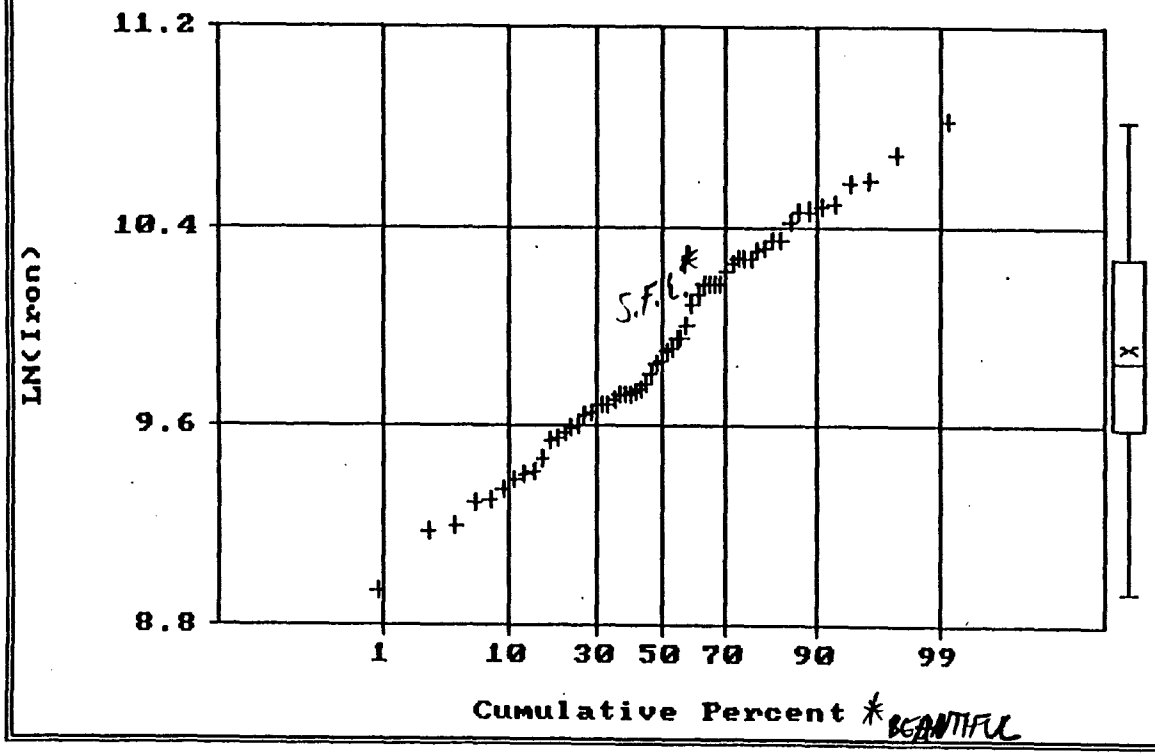


Statistics

N Total :	62
N Miss :	3
N Used :	59
Mean :	22091.210
Variance:	91247620.000
Std. Dev:	9552.362
% C.V. :	43.241
Skewness:	.768
Kurtosis:	2.990
Minimum :	7560.000
25th % :	14644.300
Median :	19004.530
75th % :	29008.970
Maximum :	50355.090

A-207

Normal Probability Plot for LN(Iron)
Data file: col-all.dat



Statistics

N Total :	62
N Miss :	3
N Used :	59
Mean :	9.913
Variance:	.186
Std. Dev:	.431
% C.V. :	4.348
Skewness:	.002
Kurtosis:	2.233
Minimum :	8.931
25th % :	9.592
Median :	9.852
75th % :	10.275
Maximum :	10.827

A-208

	A	B
1	DATA	ID
2	0.0135	Col-Hg
3	0.0135	Col-Hg
4	0.0135	Col-Hg
5	0.0135	Col-Hg
6	0.0135	Col-Hg
7	0.0135	Col-Hg
8	0.0135	Col-Hg
9	0.0135	Col-Hg
10	0.0135	Col-Hg
11	0.0135	Col-Hg
12	0.025	Col-Hg
13	0.025	Col-Hg
14	0.025	Col-Hg
15	0.025	Col-Hg
16	0.025	Col-Hg
17	0.025	Col-Hg
18	0.025	Col-Hg
19	0.025	Col-Hg
20	0.025	Col-Hg
21	0.025	Col-Hg
22	0.025	Col-Hg
23	0.025	Col-Hg
24	0.025	Col-Hg
25	0.025	Col-Hg
26	0.025	Col-Hg
27	0.025	Col-Hg
28	0.025	Col-Hg
29	0.025	Col-Hg
30	0.025	Col-Hg
31	0.025	Col-Hg
32	0.025	Col-Hg
33	0.029	Col-Hg
34	0.0295	Col-Hg
35	0.0295	Col-Hg
36	0.0295	Col-Hg
37	0.0295	Col-Hg
38	0.0295	Col-Hg
39	0.0295	Col-Hg
40	0.0295	Col-Hg
41	0.0295	Col-Hg
42	0.0295	Col-Hg
43	0.0295	Col-Hg
44	0.0295	Col-Hg
45	0.031	Col-Hg
46	0.031	Col-Hg
47	0.035	Col-Hg
48	0.042	Col-Hg
49	0.049	Col-Hg
50	0.057	Col-Hg
51	0.067	Col-Hg
52	0.076	Col-Hg
53	0.0897	Col-Hg
54	0.1041	Col-Hg
55	0.106	Col-Hg
56	0.108	Col-Hg
57	0.1297	Col-Hg
58	0.1682	Col-Hg
59	0.17	Col-Hg
60	0.258	Col-Hg
61		
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	59	Mean	0.043
Censored	------	Lognormal mean	0.040
Detection limit or PQL	------	Std. devn.	0.045
Method detection limit		Median	0.025
TOTAL	59	Min.	0.0135
ENTER DATA		Max	0.258

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.830

Normal distribution? r-squared is: 0.581

Recommendations

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	0.0135	Col-Hg
3	0.0135	Col-Hg
4	0.0135	Col-Hg
5	0.0135	Col-Hg
6	0.0135	Col-Hg
7	0.0135	Col-Hg
8	0.0135	Col-Hg
9	0.0135	Col-Hg
10	0.0135	Col-Hg
11	0.0135	Col-Hg
12	0.025	Col-Hg
13	0.025	Col-Hg
14	0.025	Col-Hg
15	0.025	Col-Hg
16	0.025	Col-Hg
17	0.025	Col-Hg
18	0.025	Col-Hg
19	0.025	Col-Hg
20	0.025	Col-Hg
21	0.025	Col-Hg
22	0.025	Col-Hg
23	0.025	Col-Hg
24	0.025	Col-Hg
25	0.025	Col-Hg
26	0.025	Col-Hg
27	0.025	Col-Hg
28	0.025	Col-Hg
29	0.025	Col-Hg
30	0.025	Col-Hg
31	0.025	Col-Hg
32	0.025	Col-Hg
33	0.029	Col-Hg
34	0.0295	Col-Hg
35	0.0295	Col-Hg
36	0.0295	Col-Hg
37	0.0295	Col-Hg
38	0.0295	Col-Hg
39	0.0295	Col-Hg
40	0.0295	Col-Hg
41	0.0295	Col-Hg
42	0.0295	Col-Hg
43	0.0295	Col-Hg
44	0.0295	Col-Hg
45	0.031	Col-Hg
46	0.031	Col-Hg
47	0.035	Col-Hg
48	0.042	Col-Hg
49	0.049	Col-Hg
50	0.057	Col-Hg
51	0.067	Col-Hg
52	0.076	Col-Hg
53	0.0897	Col-Hg
54	0.1041	Col-Hg
55	0.106	Col-Hg
56	0.108	Col-Hg
57	0.1297	Col-Hg
58	0.1682	Col-Hg
59	0.17	Col-Hg
60	0.258	Col-Hg
61		
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	59	Mean	0.043
Censored	------	Lognormal mean	0.040
Detection limit or PQL	------	Std. devn.	0.045
Method detection limit		Median	0.025
TOTAL	59	Min.	0.0135
ENTER DATA		Max	0.258

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.830

Normal distribution? r-squared is: 0.581

Recommendations:

Reject lognormal distribution.

Y value is -7.5591. This lies outside the tabled values of 1.1073 and -2.7048

Reject normal distribution.

Y value is -20.8397. This lies outside the tabled values of 1.1073 and -2.7048

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

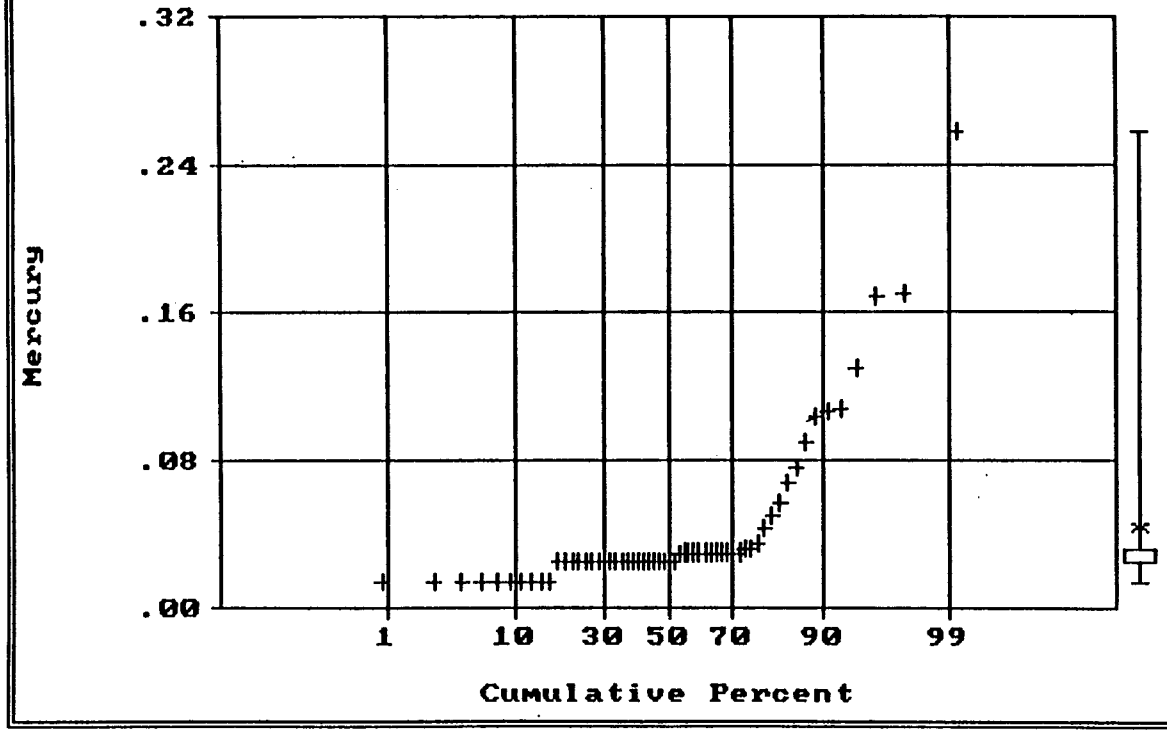
Normal

Neither

Sample size

A-210

Normal Probability Plot for Mercury
Data file: col-all.dat

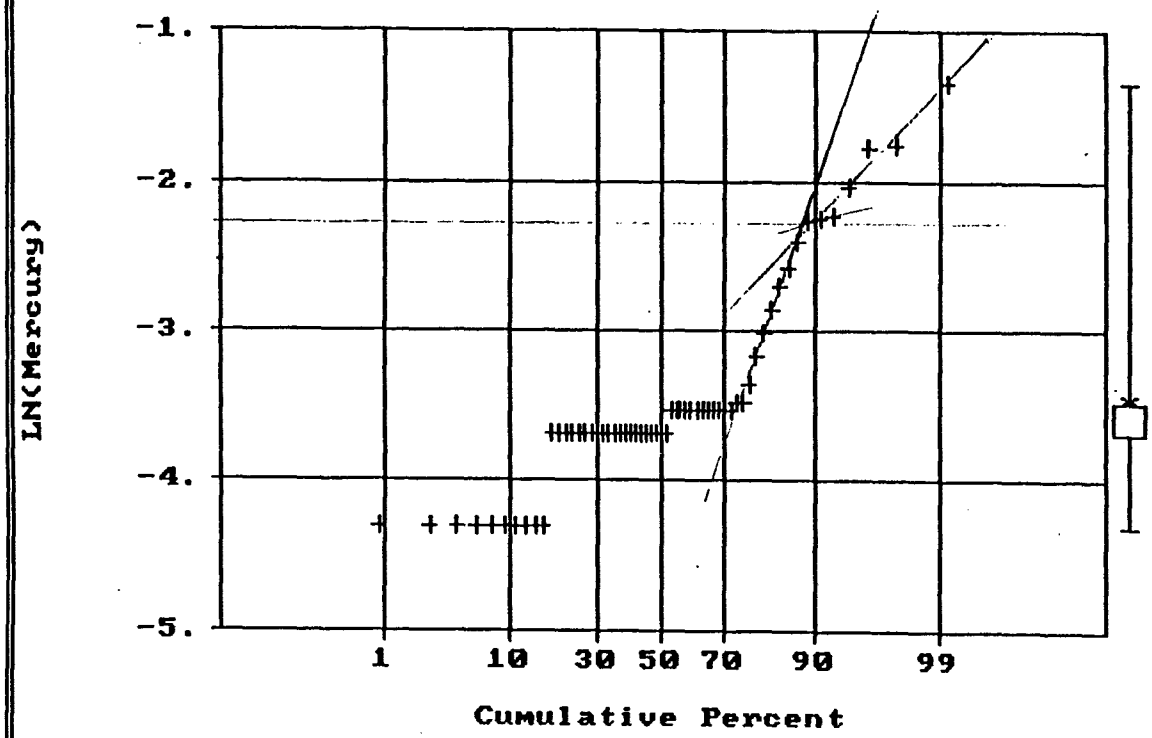


Statistics

N Total :	62
N Miss :	3
N Used :	59
Mean :	.043
Variance:	.002
Std. Dev:	.045
% C.V. :	105.685
Skewness:	2.805
Kurtosis:	11.403
Minimum :	.014
25th % :	.025
Median :	.025
75th % :	.031
Maximum :	.258

A-211

Normal Probability Plot for LN(Mercury)
Data file: col-all.dat



Statistics

N Total :	62
N Miss :	3
N Used :	59
Mean :	-3.450
Variance:	.481
Std. Dev:	.694
% C.V. :	20.114
Skewness:	1.174
Kurtosis:	3.996
Minimum :	-4.305
25th % :	-3.689
Median :	-3.689
75th % :	-3.474
Maximum :	-1.355

$e^{-2.25} = 0.1$

A-212

	A	B
1	DATA	ID
2	81.6	Col-Mn
3	88.0871	Col-Mn
4	91.8	Col-Mn
5	110	Col-Mn
6	120	Col-Mn
7	131	Col-Mn
8	132	Col-Mn
9	133.8496	Col-Mn
10	154	Col-Mn
11	164	Col-Mn
12	167	Col-Mn
13	180.65	Col-Mn
14	207	Col-Mn
15	216	Col-Mn
16	224	Col-Mn
17	224	Col-Mn
18	226	Col-Mn
19	226.5258	Col-Mn
20	227.3756	Col-Mn
21	231.0127	Col-Mn
22	232.2375	Col-Mn
23	240	Col-Mn
24	243	Col-Mn
25	244.3946	Col-Mn
26	245	Col-Mn
27	253.3632	Col-Mn
28	261	Col-Mn
29	269.7143	Col-Mn
30	270.5367	Col-Mn
31	288.9151	Col-Mn
32	299	Col-Mn
33	299.8921	Col-Mn
34	302	Col-Mn
35	303	Col-Mn
36	311.877	Col-Mn
37	323	Col-Mn
38	334.548	Col-Mn
39	335	Col-Mn
40	348	Col-Mn
41	364	Col-Mn
42	373	Col-Mn
43	374	Col-Mn
44	376	Col-Mn
45	381	Col-Mn
46	382.3529	Col-Mn
47	390	Col-Mn
48	402.846	Col-Mn
49	419	Col-Mn
50	422	Col-Mn
51	425	Col-Mn
52	446.607	Col-Mn
53	516	Col-Mn
54	535	Col-Mn
55	588.9145	Col-Mn
56	596	Col-Mn
57	618	Col-Mn
58	741.033	Col-Mn
59	1130	Col-Mn
60	5412.844	Col-Mn
61		
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	59	Mean	400.576
Censored	------	Lognormal mean	357.132
Detection limit or PQL	------	Std. devn.	686.797
Method detection limit		Median	288.9151
TOTAL	59	Min.	81.6
ENTER DATA		Max	5412.844

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.885

Normal distribution? r-squared is: 0.269

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	81.6	Col-Mn
3	88.0871	Col-Mn
4	91.8	Col-Mn
5	110	Col-Mn
6	120	Col-Mn
7	131	Col-Mn
8	132	Col-Mn
9	133.8496	Col-Mn
10	154	Col-Mn
11	164	Col-Mn
12	167	Col-Mn
13	180.65	Col-Mn
14	207	Col-Mn
15	216	Col-Mn
16	224	Col-Mn
17	224	Col-Mn
18	226	Col-Mn
19	226.5258	Col-Mn
20	227.3756	Col-Mn
21	231.0127	Col-Mn
22	232.2375	Col-Mn
23	240	Col-Mn
24	243	Col-Mn
25	244.3946	Col-Mn
26	245	Col-Mn
27	253.3632	Col-Mn
28	261	Col-Mn
29	269.7143	Col-Mn
30	270.5367	Col-Mn
31	288.9151	Col-Mn
32	299	Col-Mn
33	299.8921	Col-Mn
34	302	Col-Mn
35	303	Col-Mn
36	311.877	Col-Mn
37	323	Col-Mn
38	334.548	Col-Mn
39	335	Col-Mn
40	348	Col-Mn
41	364	Col-Mn
42	373	Col-Mn
43	374	Col-Mn
44	376	Col-Mn
45	381	Col-Mn
46	382.3529	Col-Mn
47	390	Col-Mn
48	402.846	Col-Mn
49	419	Col-Mn
50	422	Col-Mn
51	425	Col-Mn
52	446.607	Col-Mn
53	516	Col-Mn
54	535	Col-Mn
55	588.9145	Col-Mn
56	596	Col-Mn
57	618	Col-Mn
58	741.033	Col-Mn
59	1130	Col-Mn
60	5412.844	Col-Mn
61		
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	59	Mean	400.576
Censored	------	Lognormal mean	357.132
Detection limit or PQL	------	Std. devn.	686.797
Method detection limit		Median	288.9151
TOTAL	59	Min.	81.6
ENTER DATA		Max	5412.844

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.885

Normal distribution? r-squared is: 0.269

Recommendations:

Reject lognormal distribution.

Y value is -6.6863. This lies outside the tabled values of 1.1073 and -2.7048

Reject normal distribution.

Y value is -40.2107. This lies outside the tabled values of 1.1073 and -2.7048

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

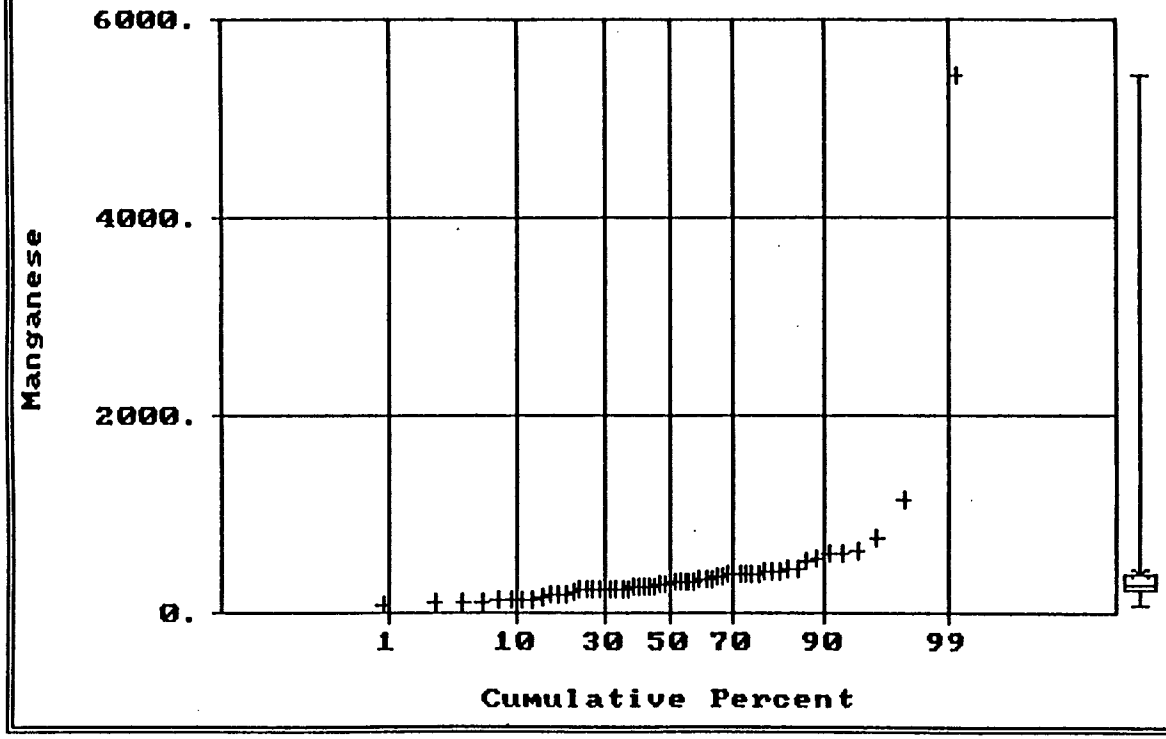
Normal

Neither

Sample size

A-214

Normal Probability Plot for Manganese
Data file: col-all.dat

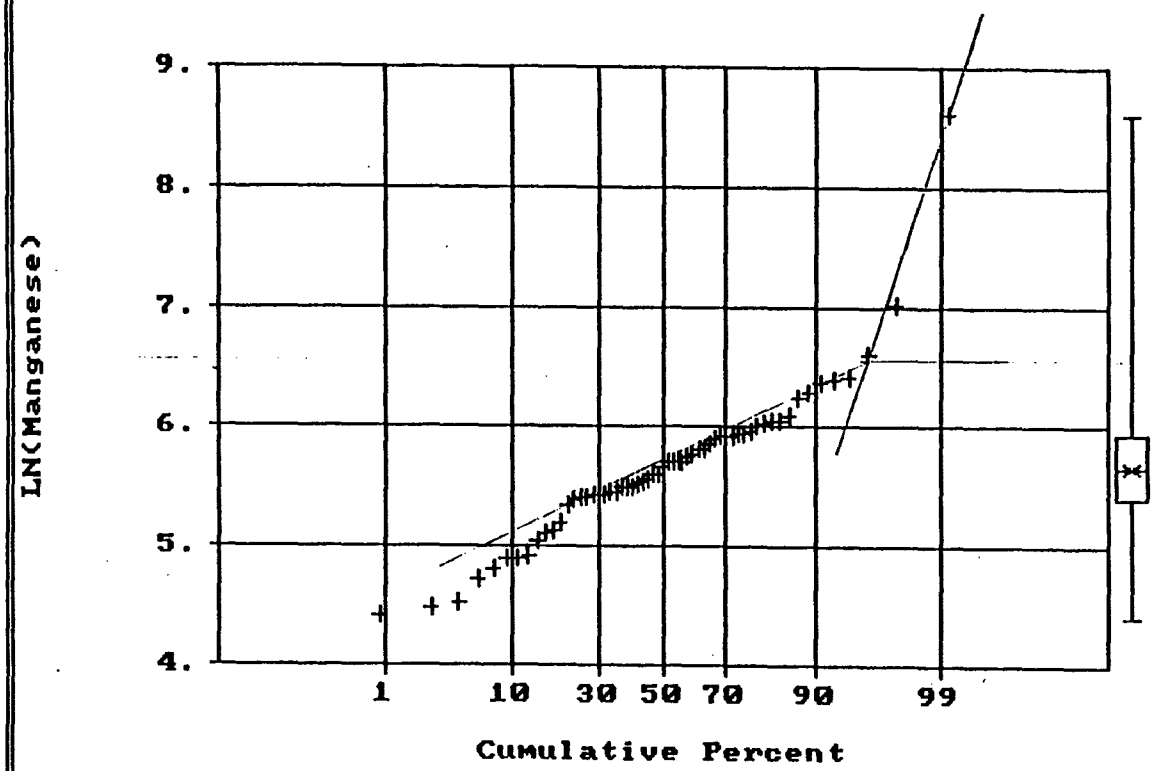


Statistics

N Total :	62
N Miss :	3
N Used :	59
Mean :	400.576
Variance:	471690.500
Std. Dev:	686.797
% C.V. :	171.452
Skewness:	6.766
Kurtosis:	49.783
Minimum :	81.600
25th % :	222.000
Median :	288.915
75th % :	381.338
Maximum :	5412.844

A-215

Normal Probability Plot for LN(Manganese)
Data file: col-all.dat



Statistics

N Total :	62
N Miss :	3
N Used :	59
Mean :	5.664
Variance:	.428
Std. Dev:	.655
% C.V. :	11.556
Skewness:	1.343
Kurtosis:	8.482
Minimum :	4.402
25th % :	5.403
Median :	5.666
75th % :	5.944
Maximum :	8.597

$e^{6.6} = 735$

A-216

	A	B
1	DATA	ID
2	20.5752	Col-Ni
3	31.1569	Col-Ni
4	31.1778	Col-Ni
5	32.5	Col-Ni
6	33.5	Col-Ni
7	34.6286	Col-Ni
8	36.6745	Col-Ni
9	37.2	Col-Ni
10	37.4	Col-Ni
11	38.4942	Col-Ni
12	40.3	Col-Ni
13	41.2556	Col-Ni
14	41.3	Col-Ni
15	42.1	Col-Ni
16	43.6	Col-Ni
17	43.7	Col-Ni
18	43.8	Col-Ni
19	47.6	Col-Ni
20	48.0769	Col-Ni
21	48.5	Col-Ni
22	50.2	Col-Ni
23	51	Col-Ni
24	51.5	Col-Ni
25	51.81	Col-Ni
26	53.9	Col-Ni
27	54.3722	Col-Ni
28	55.4	Col-Ni
29	59.1	Col-Ni
30	60.5	Col-Ni
31	61	Col-Ni
32	62.2	Col-Ni
33	63.0282	Col-Ni
34	63.6	Col-Ni
35	64	Col-Ni
36	67.8	Col-Ni
37	69.3319	Col-Ni
38	71.7	Col-Ni
39	72.1	Col-Ni
40	74.619	Col-Ni
41	76.8485	Col-Ni
42	78.481	Col-Ni
43	79.7	Col-Ni
44	81.889	Col-Ni
45	81.9	Col-Ni
46	84.195	Col-Ni
47	88.422	Col-Ni
48	89.1	Col-Ni
49	91.3	Col-Ni
50	97.5	Col-Ni
51	105	Col-Ni
52	106	Col-Ni
53	106.563	Col-Ni
54	110.0324	Col-Ni
55	136	Col-Ni
56	155	Col-Ni
57	393	Col-Ni
58	414	Col-Ni
59	641.055	Col-Ni
60	1370	Col-Ni
61		
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	59	Mean	107.062
Censored	------	Lognormal mean	89.510
Detection limit or PQL	------	Std. devn.	194.783
Method detection limit	------	Median	61
TOTAL	59	Min.	20.5752
ENTER DATA		Max	1370

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.807

Normal distribution? r-squared is: 0.334

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	20.5752	Col-Ni
3	31.1569	Col-Ni
4	31.1778	Col-Ni
5	32.5	Col-Ni
6	33.5	Col-Ni
7	34.6286	Col-Ni
8	36.6745	Col-Ni
9	37.2	Col-Ni
10	37.4	Col-Ni
11	38.4942	Col-Ni
12	40.3	Col-Ni
13	41.2556	Col-Ni
14	41.3	Col-Ni
15	42.1	Col-Ni
16	43.6	Col-Ni
17	43.7	Col-Ni
18	43.8	Col-Ni
19	47.6	Col-Ni
20	48.0769	Col-Ni
21	48.5	Col-Ni
22	50.2	Col-Ni
23	51	Col-Ni
24	51.5	Col-Ni
25	51.81	Col-Ni
26	53.9	Col-Ni
27	54.3722	Col-Ni
28	55.4	Col-Ni
29	59.1	Col-Ni
30	60.5	Col-Ni
31	61	Col-Ni
32	62.2	Col-Ni
33	63.0282	Col-Ni
34	63.6	Col-Ni
35	64	Col-Ni
36	67.8	Col-Ni
37	69.3319	Col-Ni
38	71.7	Col-Ni
39	72.1	Col-Ni
40	74.619	Col-Ni
41	76.8485	Col-Ni
42	78.481	Col-Ni
43	79.7	Col-Ni
44	81.889	Col-Ni
45	81.9	Col-Ni
46	84.195	Col-Ni
47	88.422	Col-Ni
48	89.1	Col-Ni
49	91.3	Col-Ni
50	97.5	Col-Ni
51	105	Col-Ni
52	106	Col-Ni
53	106.563	Col-Ni
54	110.0324	Col-Ni
55	136	Col-Ni
56	155	Col-Ni
57	393	Col-Ni
58	414	Col-Ni
59	641.055	Col-Ni
60	1370	Col-Ni
61		
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	59	Mean	107.062
Censored	------	Lognormal mean	89.510
Detection limit or PQL	------	Std. devn.	194.783
Method detection limit		Median	61
TOTAL	59	Min.	20.5752
ENTER DATA		Max	1370

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.807

Normal distribution? r-squared is: 0.334

Recommendations:

Reject lognormal distribution.

Y value is -9.8736. This lies outside the tabled values of 1.1073 and -2.7048

Reject normal distribution.

Y value is -36.3161. This lies outside the tabled values of 1.1073 and -2.7048

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

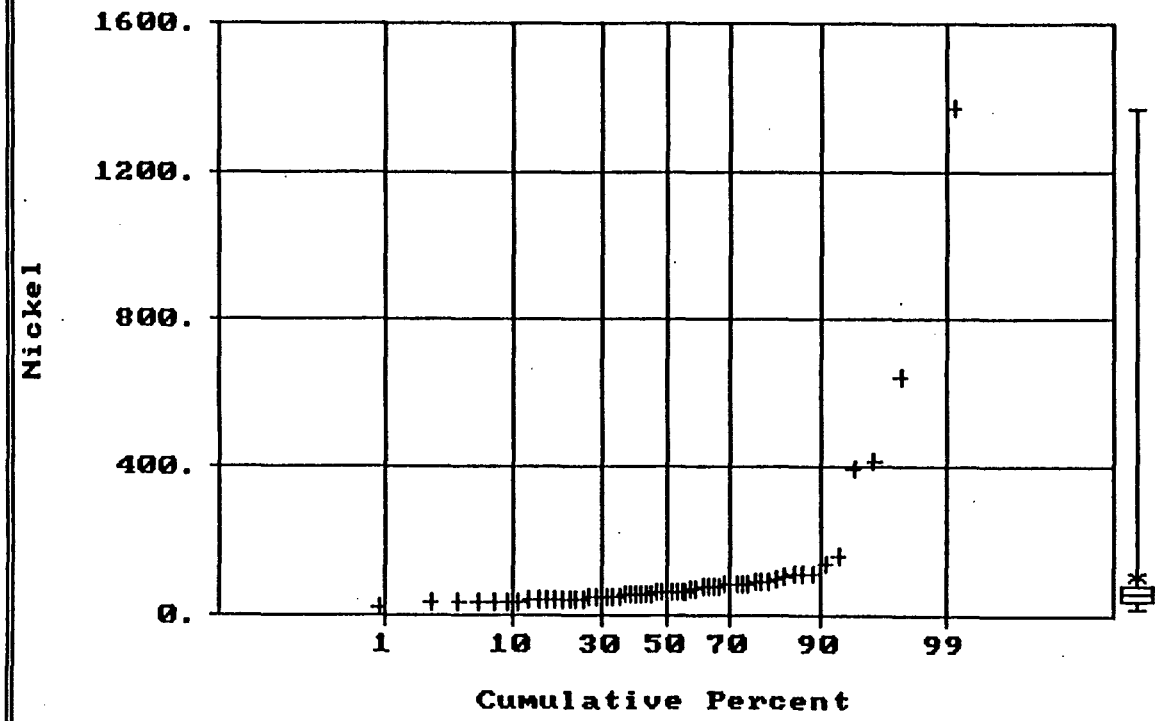
Lognormal

Normal

Neither

Sample size

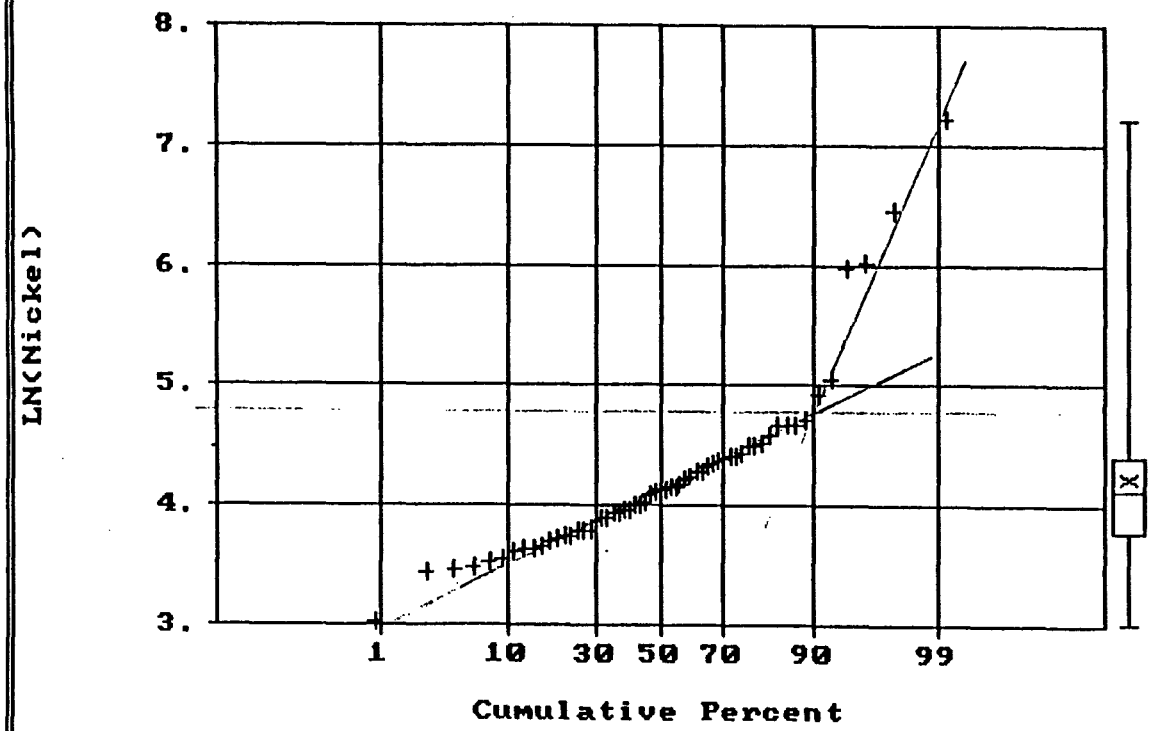
Normal Probability Plot for Nickel
Data file: col-all.dat



S t a t i s t i c s

N Total :	62
N Miss :	3
N Used :	59
Mean :	107.062
Variance:	37940.540
Std. Dev:	194.783
% C.V. :	181.934
Skewness:	5.201
Kurtosis:	32.184
Minimum :	20.575
25th % :	43.225
Median :	61.000
75th % :	82.474
Maximum :	1370.000

Normal Probability Plot for LN(Nickel)
Data file: col-all.dat



Statistics

N Total :	62
N Miss :	3
N Used :	59
Mean :	4.227
Variance:	.534
Std. Dev:	.731
% C.V. :	17.289
Skewness:	1.994
Kurtosis:	8.039
Minimum :	3.024
25th % :	3.766
Median :	4.111
75th % :	4.412
Maximum :	7.223

$e^{4.8} \approx 120$

A-220

	A	B
1	DATA	ID
2	1.2	Col-Pb
3	1.68	Col-Pb
4	1.8	Col-Pb
5	1.97	Col-Pb
6	2.1	Col-Pb
7	2.18	Col-Pb
8	2.26	Col-Pb
9	2.35	Col-Pb
10	2.37	Col-Pb
11	2.42	Col-Pb
12	2.42	Col-Pb
13	2.48	Col-Pb
14	2.58	Col-Pb
15	2.6	Col-Pb
16	2.73	Col-Pb
17	2.7655	Col-Pb
18	2.97	Col-Pb
19	3.02	Col-Pb
20	3.0399	Col-Pb
21	3.06	Col-Pb
22	3.08	Col-Pb
23	3.24	Col-Pb
24	3.3404	Col-Pb
25	3.44	Col-Pb
26	3.72	Col-Pb
27	3.72	Col-Pb
28	3.72	Col-Pb
29	3.72	Col-Pb
30	3.72	Col-Pb
31	3.76	Col-Pb
32	3.8445	Col-Pb
33	3.9404	Col-Pb
34	3.9723	Col-Pb
35	3.9873	Col-Pb
36	4.13	Col-Pb
37	4.2	Col-Pb
38	4.55	Col-Pb
39	4.95	Col-Pb
40	5.0226	Col-Pb
41	5.55	Col-Pb
42	5.6114	Col-Pb
43	5.8184	Col-Pb
44	6.31	Col-Pb
45	6.4	Col-Pb
46	6.51	Col-Pb
47	7.0588	Col-Pb
48	7.89	Col-Pb
49	8.1078	Col-Pb
50	8.13	Col-Pb
51	8.18	Col-Pb
52	9.7	Col-Pb
53	10.971	Col-Pb
54	11	Col-Pb
55	11.1	Col-Pb
56	12.5	Col-Pb
57	13	Col-Pb
58	19	Col-Pb
59	30.6365	Col-Pb
60	40.8019	Col-Pb
61	58	Col-Pb
62	90	Col-Pb
63	603.139	Col-Pb
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	62	Mean	17.862
Censored	------	Lognormal mean	9.105
Detection limit or PQL	------	Std. devn.	76.838
Method detection limit		Median	3.89245
TOTAL	62	Min.	1.2
ENTER DATA		Max.	603.139

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.796

Normal distribution? r-squared is: 0.165

Recommendations:

Reject lognormal distribution.

Y value is -10.3647. This lies outside the tabled values of 1.1272 and -2.6896

Reject normal distribution.

Y value is -50.1699. This lies outside the tabled values of 1.1272 and -2.6896

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	1.2	Col-Pb
3	1.68	Col-Pb
4	1.8	Col-Pb
5	1.97	Col-Pb
6	2.1	Col-Pb
7	2.18	Col-Pb
8	2.26	Col-Pb
9	2.35	Col-Pb
10	2.37	Col-Pb
11	2.42	Col-Pb
12	2.42	Col-Pb
13	2.48	Col-Pb
14	2.58	Col-Pb
15	2.6	Col-Pb
16	2.73	Col-Pb
17	2.7655	Col-Pb
18	2.97	Col-Pb
19	3.02	Col-Pb
20	3.0399	Col-Pb
21	3.06	Col-Pb
22	3.08	Col-Pb
23	3.24	Col-Pb
24	3.3404	Col-Pb
25	3.44	Col-Pb
26	3.72	Col-Pb
27	3.72	Col-Pb
28	3.72	Col-Pb
29	3.72	Col-Pb
30	3.72	Col-Pb
31	3.76	Col-Pb
32	3.8445	Col-Pb
33	3.9404	Col-Pb
34	3.9723	Col-Pb
35	3.9873	Col-Pb
36	4.13	Col-Pb
37	4.2	Col-Pb
38	4.55	Col-Pb
39	4.95	Col-Pb
40	5.0226	Col-Pb
41	5.55	Col-Pb
42	5.6114	Col-Pb
43	5.8184	Col-Pb
44	6.31	Col-Pb
45	6.4	Col-Pb
46	6.51	Col-Pb
47	7.0588	Col-Pb
48	7.89	Col-Pb
49	8.1078	Col-Pb
50	8.13	Col-Pb
51	8.18	Col-Pb
52	9.7	Col-Pb
53	10.971	Col-Pb
54	11	Col-Pb
55	11.1	Col-Pb
56	12.5	Col-Pb
57	13	Col-Pb
58	19	Col-Pb
59	30.6365	Col-Pb
60	40.8019	Col-Pb
61	58	Col-Pb
62	90	Col-Pb
63	603.139	Col-Pb
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	62	Mean	17.862
Censored	------	Lognormal mean	9.105
Detection limit or PQL	------	Std. devn.	76.838
Method detection limit		Median	3.89245
TOTAL	62	Min.	1.2
ENTER DATA		Max.	603.139

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.796

Normal distribution? r-squared is: 0.166

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

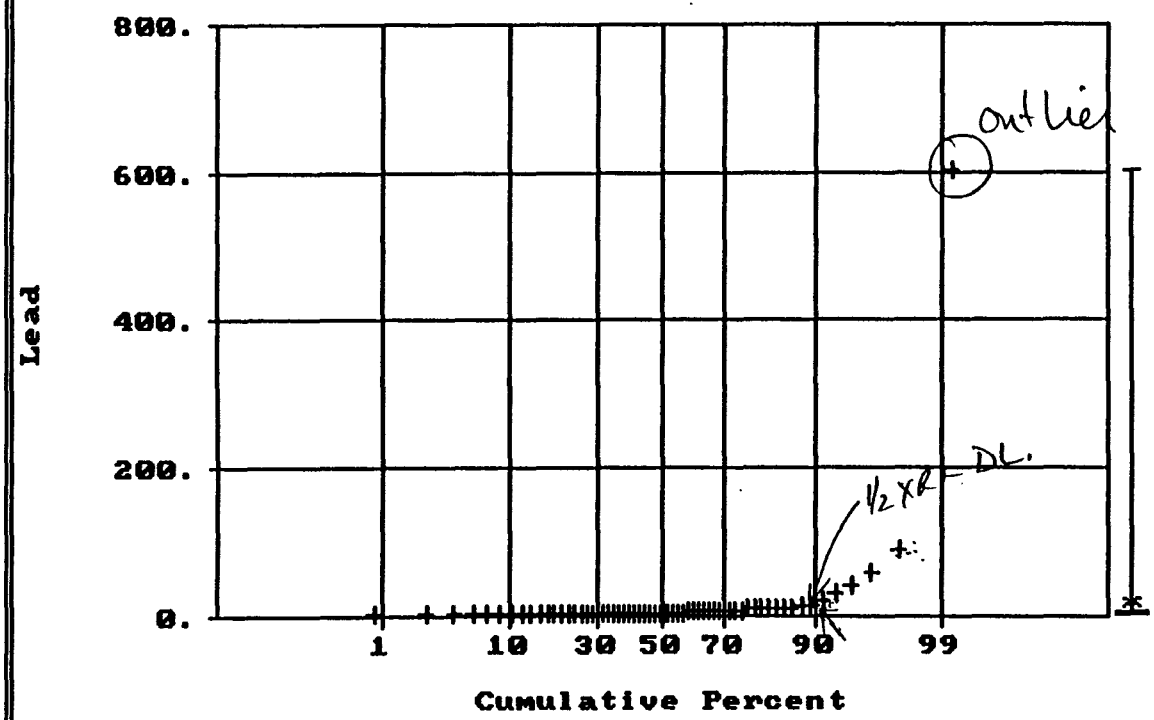
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Lead
Data file: col-all.dat

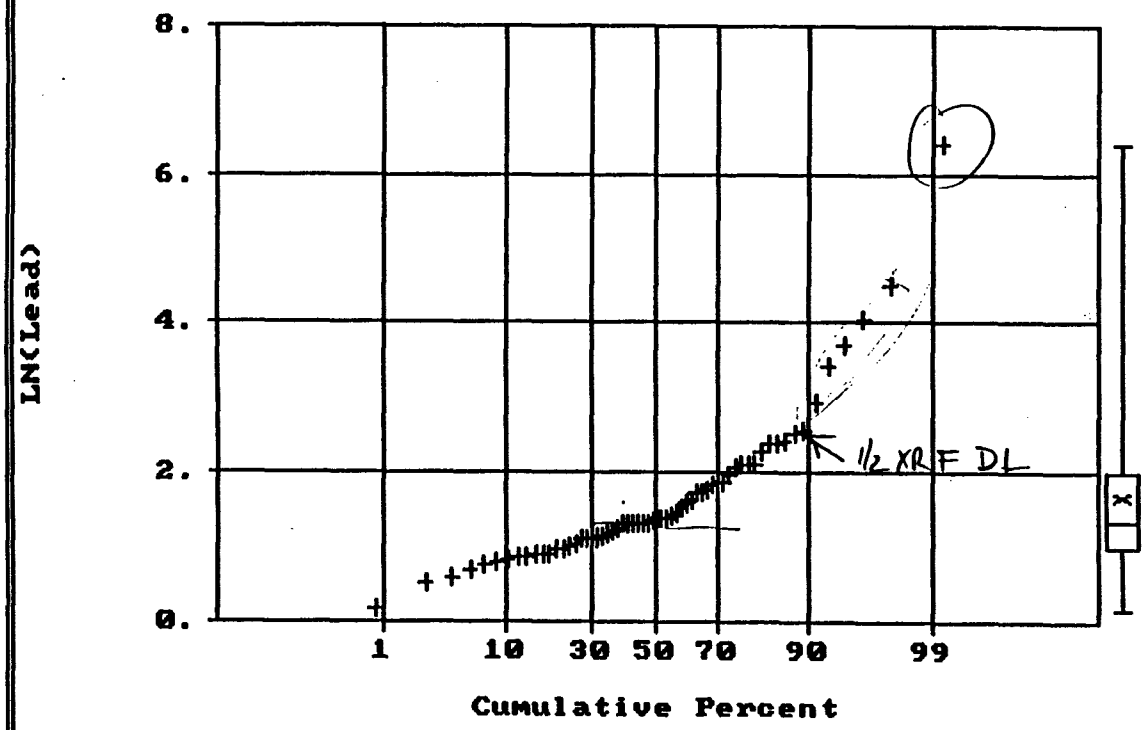


Statistics

N Total :	62
N Miss :	0
N Used :	62
Mean :	17.862
Variance:	5904.101
Std. Dev:	76.838
% C.V. :	430.167
Skewness:	7.315
Kurtosis:	56.103
Minimum :	1.200
25th % :	2.748
Median :	3.892
75th % :	7.474
Maximum :	603.139

A-223

Normal Probability Plot for LN(Lead)
Data file: col-all.dat



Statistics

N Total :	62
N Miss :	0
N Used :	62
Mean :	1.668
Variance:	1.081
Std. Dev:	1.040
% C.V. :	62.336
Skewness:	2.162
Kurtosis:	9.199
Minimum :	.182
25th % :	1.011
Median :	1.359
75th % :	2.010
Maximum :	6.402

1 outlier

A-224

	A	B
1	DATA	ID
2	0.05	Col-Sb
3	0.2	Col-Sb
4	0.2	Col-Sb
5	0.2	Col-Sb
6	0.2	Col-Sb
7	0.245	Col-Sb
8	0.25	Col-Sb
9	0.25	Col-Sb
10	0.25	Col-Sb
11	0.25	Col-Sb
12	0.25	Col-Sb
13	0.25	Col-Sb
14	0.25	Col-Sb
15	0.25	Col-Sb
16	0.25	Col-Sb
17	0.25	Col-Sb
18	0.25	Col-Sb
19	0.25	Col-Sb
20	0.25	Col-Sb
21	0.25	Col-Sb
22	0.25	Col-Sb
23	0.25	Col-Sb
24	0.25	Col-Sb
25	0.25	Col-Sb
26	0.25	Col-Sb
27	0.25	Col-Sb
28	9.8	Col-Sb
29	9.8	Col-Sb
30	9.8	Col-Sb
31	9.8	Col-Sb
32	9.8	Col-Sb
33	9.8	Col-Sb
34	12.5	Col-Sb
35	12.5	Col-Sb
36	12.5	Col-Sb
37	12.5	Col-Sb
38	12.5	Col-Sb
39	12.5	Col-Sb
40	20.65	Col-Sb
41	20.65	Col-Sb
42	20.65	Col-Sb
43	20.65	Col-Sb
44	20.65	Col-Sb
45	20.65	Col-Sb
46	20.65	Col-Sb
47	20.65	Col-Sb
48	20.65	Col-Sb
49	20.65	Col-Sb
50	20.65	Col-Sb
51	20.65	Col-Sb
52	20.65	Col-Sb
53	20.65	Col-Sb
54	20.65	Col-Sb
55	20.65	Col-Sb
56	20.65	Col-Sb
57	20.65	Col-Sb
58	20.65	Col-Sb
59	20.65	Col-Sb
60	20.65	Col-Sb
61	107	Col-Sb
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	60	Mean	11.342
Censored	------	Lognormal mean	30.076
Detection limit or PQL	------	Std. devn.	15.514
Method detection limit		Median	9.8
TOTAL	60	Min.	0.05
ENTER DATA		Max.	107

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.756

Normal distribution? r-squared is: 0.549

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	0.05	Col-Sb
3	0.2	Col-Sb
4	0.2	Col-Sb
5	0.2	Col-Sb
6	0.2	Col-Sb
7	0.245	Col-Sb
8	0.25	Col-Sb
9	0.25	Col-Sb
10	0.25	Col-Sb
11	0.25	Col-Sb
12	0.25	Col-Sb
13	0.25	Col-Sb
14	0.25	Col-Sb
15	0.25	Col-Sb
16	0.25	Col-Sb
17	0.25	Col-Sb
18	0.25	Col-Sb
19	0.25	Col-Sb
20	0.25	Col-Sb
21	0.25	Col-Sb
22	0.25	Col-Sb
23	0.25	Col-Sb
24	0.25	Col-Sb
25	0.25	Col-Sb
26	0.25	Col-Sb
27	0.25	Col-Sb
28	9.8	Col-Sb
29	9.8	Col-Sb
30	9.8	Col-Sb
31	9.8	Col-Sb
32	9.8	Col-Sb
33	9.8	Col-Sb
34	12.5	Col-Sb
35	12.5	Col-Sb
36	12.5	Col-Sb
37	12.5	Col-Sb
38	12.5	Col-Sb
39	12.5	Col-Sb
40	20.65	Col-Sb
41	20.65	Col-Sb
42	20.65	Col-Sb
43	20.65	Col-Sb
44	20.65	Col-Sb
45	20.65	Col-Sb
46	20.65	Col-Sb
47	20.65	Col-Sb
48	20.65	Col-Sb
49	20.65	Col-Sb
50	20.65	Col-Sb
51	20.65	Col-Sb
52	20.65	Col-Sb
53	20.65	Col-Sb
54	20.65	Col-Sb
55	20.65	Col-Sb
56	20.65	Col-Sb
57	20.65	Col-Sb
58	20.65	Col-Sb
59	20.65	Col-Sb
60	20.65	Col-Sb
61	107	Col-Sb
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	60	Mean	11.342
Censored	------	Lognormal mean	30.076
Detection limit or PQL	------	Std. devn.	15.514
Method detection limit		Median	9.8
TOTAL	60	Min.	0.05
ENTER DATA		Max	107

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.756

Normal distribution? r-squared is: 0.549

Recommendations

Reject lognormal distribution.

Y value is -5.1942. This lies outside the tabled values of 1.115 and -2.699

Reject normal distribution.

Y value is -19.7157. This lies outside the tabled values of 1.115 and -2.699

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

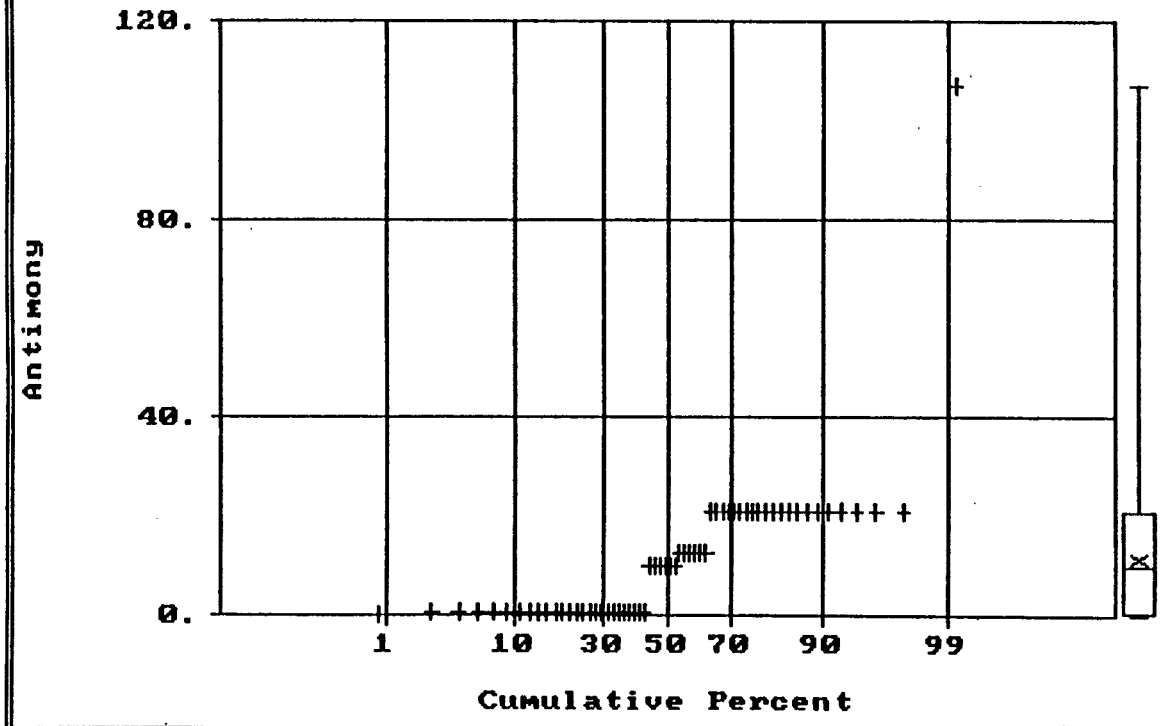
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Antimony
Data file: col-all.dat

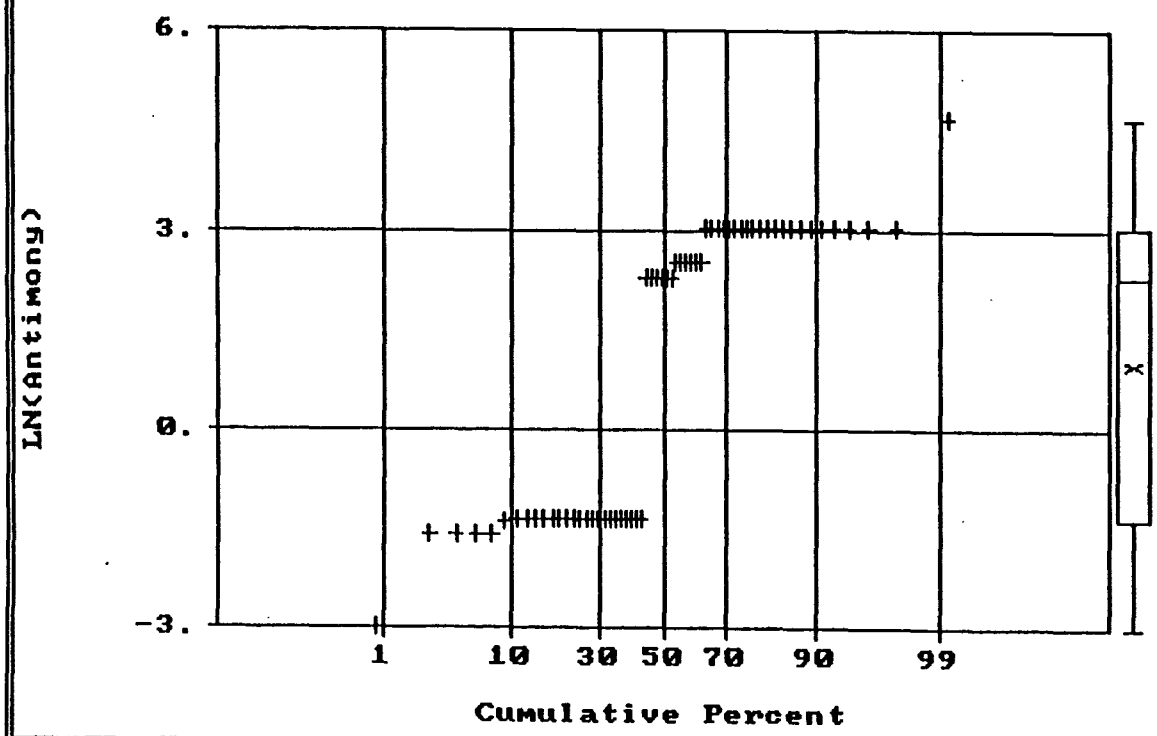


Statistics

N Total :	62
N Miss :	2
N Used :	60
Mean :	11.342
Variance:	240.679
Std. Dev:	15.514
% C.V. :	136.777
Skewness:	3.921
Kurtosis:	25.079
Minimum :	.050
25th % :	.250
Median :	9.800
75th % :	20.650
Maximum :	107.000

A-227

Normal Probability Plot for LN(Antimony)
Data file: col-all.dat



Statistics

N Total :	62
N Miss :	2
N Used :	60
Mean :	.976
Variance:	4.856
Std. Dev:	2.204
% C.V. :	225.872
Skewness:	-.225
Kurtosis:	1.238
Minimum :	-2.996
25th % :	-1.386
Median :	2.282
75th % :	3.028
Maximum :	4.673

A-228

	A	B
1	DATA	ID
2	0.125	Col-Se
3	0.125	Col-Se
4	0.125	Col-Se
5	0.125	Col-Se
6	0.125	Col-Se
7	0.125	Col-Se
8	0.125	Col-Se
9	0.125	Col-Se
10	0.125	Col-Se
11	0.125	Col-Se
12	0.125	Col-Se
13	0.125	Col-Se
14	0.125	Col-Se
15	0.125	Col-Se
16	0.125	Col-Se
17	0.125	Col-Se
18	0.208	Col-Se
19	0.208	Col-Se
20	0.208	Col-Se
21	0.208	Col-Se
22	0.208	Col-Se
23	0.208	Col-Se
24	0.208	Col-Se
25	0.208	Col-Se
26	0.208	Col-Se
27	0.208	Col-Se
28	0.208	Col-Se
29	0.208	Col-Se
30	0.208	Col-Se
31	0.2245	Col-Se
32	0.2245	Col-Se
33	0.2245	Col-Se
34	0.2245	Col-Se
35	0.2245	Col-Se
36	0.2245	Col-Se
37	0.25	Col-Se
38	0.25	Col-Se
39	0.25	Col-Se
40	0.25	Col-Se
41	0.25	Col-Se
42	0.25	Col-Se
43	0.25	Col-Se
44	0.25	Col-Se
45	0.25	Col-Se
46	0.25	Col-Se
47	0.25	Col-Se
48	0.25	Col-Se
49	0.25	Col-Se
50	0.25	Col-Se
51	0.25	Col-Se
52	0.25	Col-Se
53	0.4	Col-Se
54	0.456	Col-Se
55	0.546	Col-Se
56	0.564	Col-Se
57	0.817	Col-Se
58	0.832	Col-Se
59	0.987	Col-Se
60	3.6792	Col-Se
61		
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	59	Mean	0.311
Censored	------	Lognormal mean	0.277
Detection limit or PQL	------	Std. devn.	0.478
Method detection limit	------	Median	0.2245
TOTAL	59	Min.	0.125
ENTER DATA		Max.	3.6792

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.750

Normal distribution? r-squared is: 0.302

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	0.125	Col-Se
3	0.125	Col-Se
4	0.125	Col-Se
5	0.125	Col-Se
6	0.125	Col-Se
7	0.125	Col-Se
8	0.125	Col-Se
9	0.125	Col-Se
10	0.125	Col-Se
11	0.125	Col-Se
12	0.125	Col-Se
13	0.125	Col-Se
14	0.125	Col-Se
15	0.125	Col-Se
16	0.125	Col-Se
17	0.125	Col-Se
18	0.208	Col-Se
19	0.208	Col-Se
20	0.208	Col-Se
21	0.208	Col-Se
22	0.208	Col-Se
23	0.208	Col-Se
24	0.208	Col-Se
25	0.208	Col-Se
26	0.208	Col-Se
27	0.208	Col-Se
28	0.208	Col-Se
29	0.208	Col-Se
30	0.208	Col-Se
31	0.2245	Col-Se
32	0.2245	Col-Se
33	0.2245	Col-Se
34	0.2245	Col-Se
35	0.2245	Col-Se
36	0.2245	Col-Se
37	0.25	Col-Se
38	0.25	Col-Se
39	0.25	Col-Se
40	0.25	Col-Se
41	0.25	Col-Se
42	0.25	Col-Se
43	0.25	Col-Se
44	0.25	Col-Se
45	0.25	Col-Se
46	0.25	Col-Se
47	0.25	Col-Se
48	0.25	Col-Se
49	0.25	Col-Se
50	0.25	Col-Se
51	0.25	Col-Se
52	0.25	Col-Se
53	0.4	Col-Se
54	0.456	Col-Se
55	0.546	Col-Se
56	0.564	Col-Se
57	0.817	Col-Se
58	0.832	Col-Se
59	0.987	Col-Se
60	3.6792	Col-Se
61		
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	59	Mean	0.311
Censored	------	Lognormal mean	0.277
Detection limit or PQL	------	Std. devn.	0.478
Method detection limit		Median	0.2245
TOTAL	59	Min.	0.125
ENTER DATA		Max.	3.6792

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.750

Normal distribution? r-squared is: 0.302

Recommendations

Reject lognormal distribution.

Y value is -11.8617. This lies outside the tabled values of 1.1073 and -2.7048

Reject normal distribution.

Y value is -38.1333. This lies outside the tabled values of 1.1073 and -2.7048

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

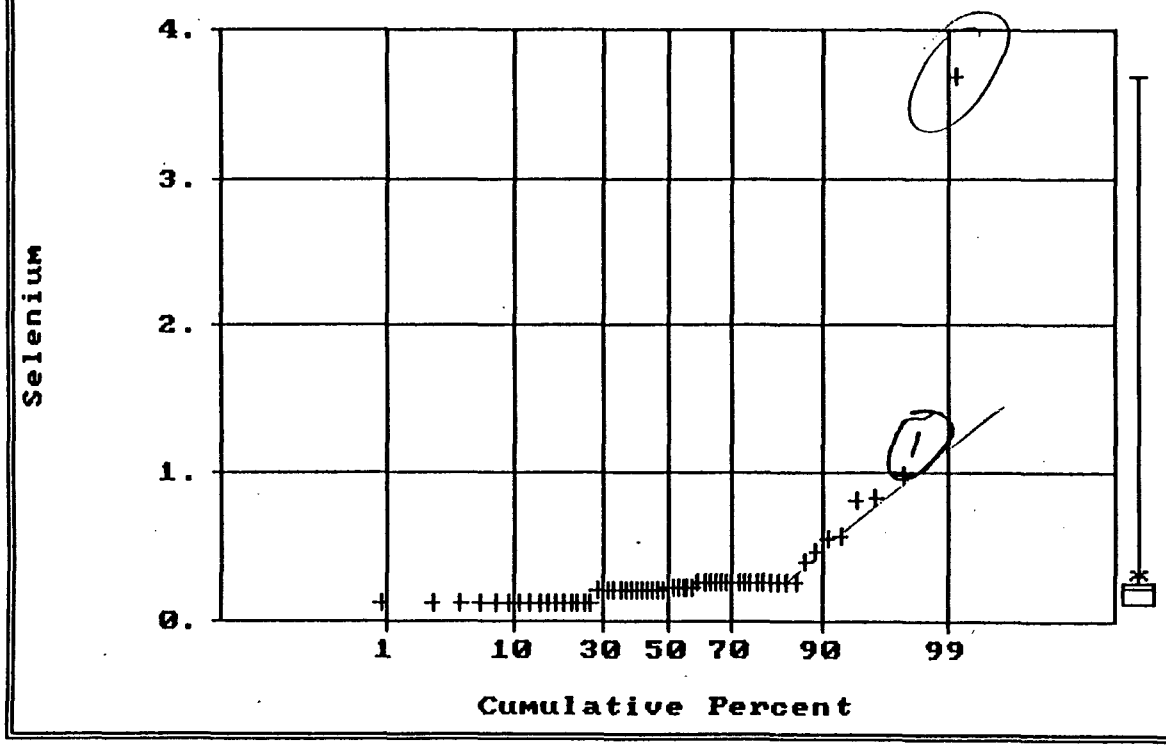
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Selenium
Data file: col-all.dat

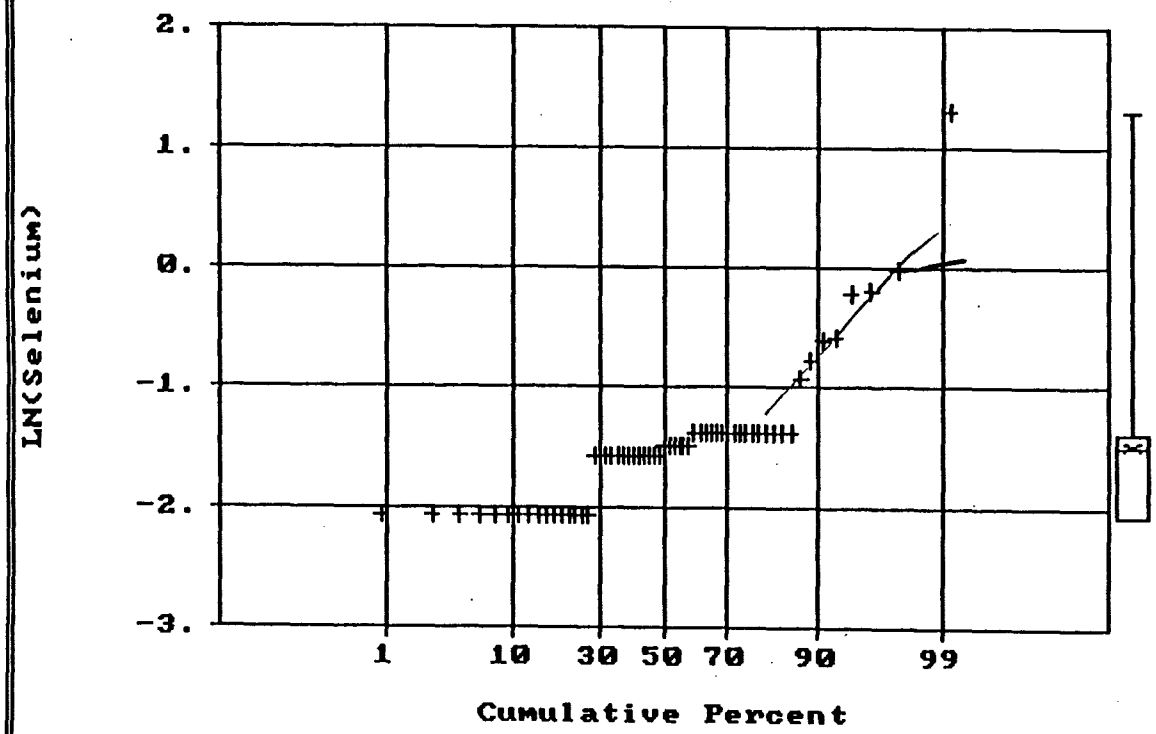


Statistics

N Total :	62
N Miss :	3
N Used :	59
Mean :	.311
Variance:	.229
Std. Dev:	.478
% C.V. :	153.962
Skewness:	6.149
Kurtosis:	43.242
Minimum :	.125
25th % :	.125
Median :	.225
75th % :	.250
Maximum :	3.679

A-231

Normal Probability Plot for LN(Selenium)
Data file: col-all.dat



Statistics

N Total :	62
N Miss :	3
N Used :	59
Mean :	-1.471
Variance:	.372
Std. Dev:	.610
% C.V. :	41.469
Skewness:	2.059
Kurtosis:	9.214
Minimum :	-2.079
25th % :	-2.079
Median :	-1.494
75th % :	-1.386
Maximum :	1.303

$e^0 = 1$

A-232

	A	B
1	DATA	ID
2	0.081	Col-Tl
3	0.081	Col-Tl
4	0.081	Col-Tl
5	0.081	Col-Tl
6	0.081	Col-Tl
7	0.081	Col-Tl
8	0.081	Col-Tl
9	0.081	Col-Tl
10	0.081	Col-Tl
11	0.081	Col-Tl
12	0.081	Col-Tl
13	0.081	Col-Tl
14	0.081	Col-Tl
15	0.081	Col-Tl
16	0.081	Col-Tl
17	0.25	Col-Tl
18	0.25	Col-Tl
19	0.25	Col-Tl
20	0.25	Col-Tl
21	0.25	Col-Tl
22	0.25	Col-Tl
23	0.25	Col-Tl
24	0.25	Col-Tl
25	0.25	Col-Tl
26	0.25	Col-Tl
27	0.25	Col-Tl
28	0.25	Col-Tl
29	0.25	Col-Tl
30	0.25	Col-Tl
31	0.25	Col-Tl
32	0.25	Col-Tl
33	7.35	Col-Tl
34	17.15	Col-Tl
35	17.15	Col-Tl
36	17.15	Col-Tl
37	17.15	Col-Tl
38	17.15	Col-Tl
39	17.15	Col-Tl

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	38	Mean	3.039
Censored	------	Lognormal mean	2.090
Detection limit or PQL	------	Std. devn.	6.301
Method detection limit		Median	0.25
TOTAL	38	Min.	0.081
ENTER DATA		Max	17.15

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.682

Normal distribution? r-squared is: 0.488

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear message

Calculate UCL

Lognormal

Normal

Neither

Sample size

A-233

	A	B
1	DATA	ID
2	0.081	Col-Tl
3	0.081	Col-Tl
4	0.081	Col-Tl
5	0.081	Col-Tl
6	0.081	Col-Tl
7	0.081	Col-Tl
8	0.081	Col-Tl
9	0.081	Col-Tl
10	0.081	Col-Tl
11	0.081	Col-Tl
12	0.081	Col-Tl
13	0.081	Col-Tl
14	0.081	Col-Tl
15	0.081	Col-Tl
16	0.081	Col-Tl
17	0.25	Col-Tl
18	0.25	Col-Tl
19	0.25	Col-Tl
20	0.25	Col-Tl
21	0.25	Col-Tl
22	0.25	Col-Tl
23	0.25	Col-Tl
24	0.25	Col-Tl
25	0.25	Col-Tl
26	0.25	Col-Tl
27	0.25	Col-Tl
28	0.25	Col-Tl
29	0.25	Col-Tl
30	0.25	Col-Tl
31	0.25	Col-Tl
32	0.25	Col-Tl
33	7.35	Col-Tl
34	17.15	Col-Tl
35	17.15	Col-Tl
36	17.15	Col-Tl
37	17.15	Col-Tl
38	17.15	Col-Tl
39	17.15	Col-Tl

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	38	Mean	3.039
Censored	------	Lognormal mean	2.090
Detection limit or PQL	------	Std. devn.	6.301
Method detection limit		Median	0.25
TOTAL	38	Min.	0.081
ENTER DATA		Max.	17.15

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.682

Normal distribution? r-squared is: 0.488

Recommendations:

Reject lognormal distribution.

W value is 0.666. This is less than the tabled value of 0.938

Reject normal distribution.

W value is 0.481. This is less than the tabled value of 0.938

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

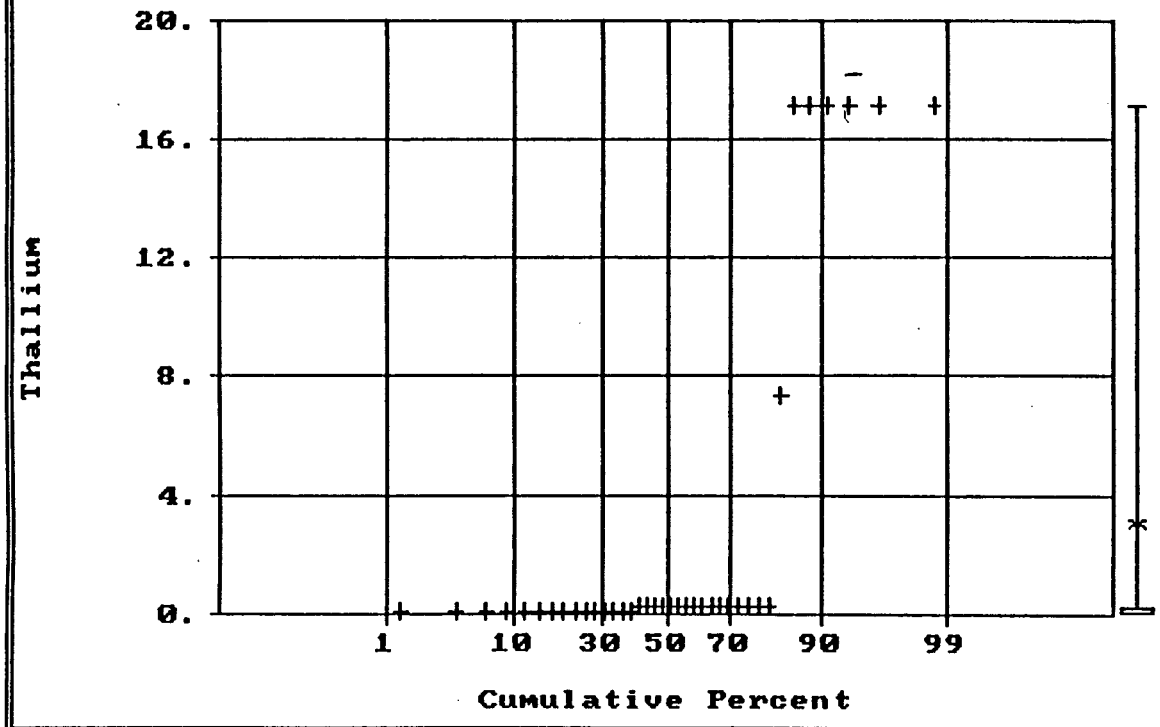
Normal

Neither

Sample size

A-234

Normal Probability Plot for Thallium
Data file: col-all.dat



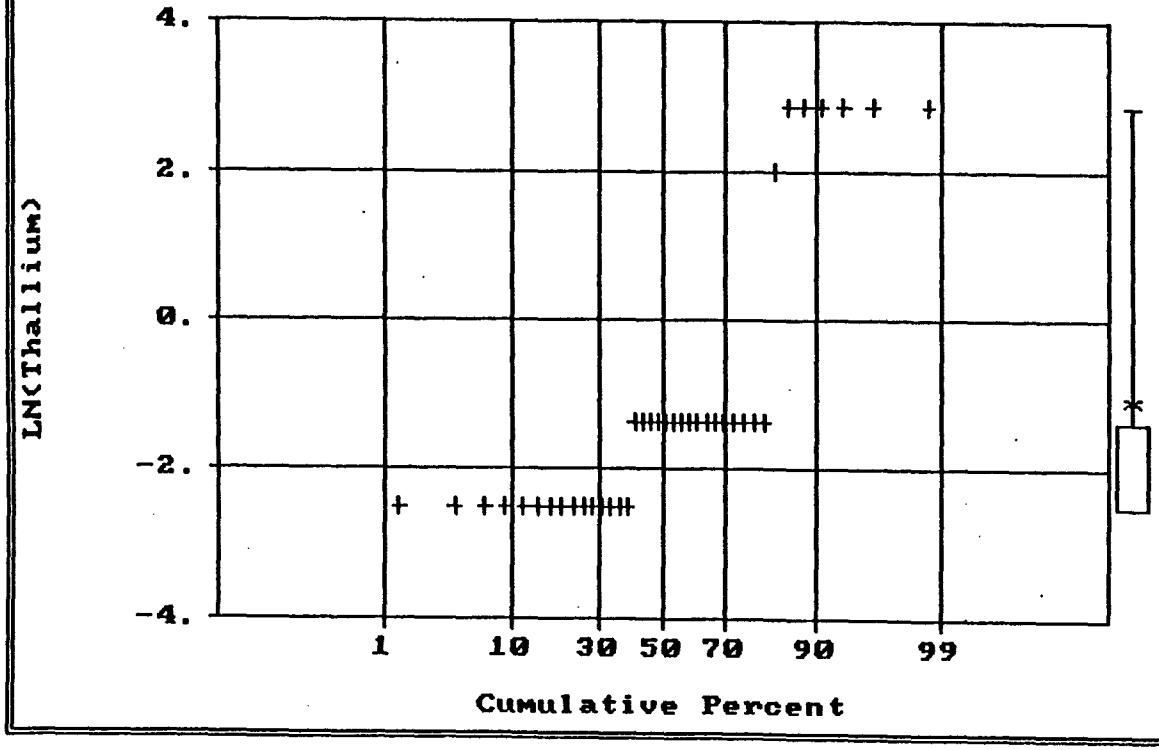
Statistics

N Total :	62
N Miss :	24
N Used :	38
Mean :	3.039
Variance:	39.703
Std. Dev:	6.301
% C.V. :	207.369
Skewness:	1.774
Kurtosis:	4.233
Minimum :	.081
25th % :	.081
Median :	.250
75th % :	.250
Maximum :	17.150

ALL DETECTS

A-235

Normal Probability Plot for LN(Thallium)
Data file: col-all.dat



Statistics

N Total :	62
N Miss :	24
N Used :	38
Mean :	-1.075
Variance:	3.623
Std. Dev:	1.903
% C.V. :	177.140
Skewness:	1.367
Kurtosis:	3.309
Minimum :	-2.513
25th % :	-2.513
Median :	-1.386
75th % :	-1.386
Maximum :	2.842

A-236

	A	B
1	DATA	ID
2	12	Col-V
3	16.5	Col-V
4	19	Col-V
5	19.6	Col-V
6	23.8	Col-V
7	27.5	Col-V
8	29	Col-V
9	29.1	Col-V
10	29.2	Col-V
11	31	Col-V
12	31.6	Col-V
13	32.7	Col-V
14	33.296	Col-V
15	34.0708	Col-V
16	34.6698	Col-V
17	34.7	Col-V
18	34.9548	Col-V
19	36.2	Col-V
20	37.2066	Col-V
21	39.8058	Col-V
22	40.3	Col-V
23	40.9	Col-V
24	41.5695	Col-V
25	42.3826	Col-V
26	43.1	Col-V
27	43.264	Col-V
28	43.6709	Col-V
29	44.7964	Col-V
30	45.843	Col-V
31	46.9	Col-V
32	48	Col-V
33	48	Col-V
34	49	Col-V
35	49.2	Col-V
36	49.9	Col-V
37	54.9	Col-V
38	55.4	Col-V
39	55.821	Col-V
40	56.1	Col-V
41	57.5	Col-V
42	60.2018	Col-V
43	60.3	Col-V
44	61.1	Col-V
45	63.3	Col-V
46	64.9143	Col-V
47	69.9	Col-V
48	69.9785	Col-V
49	70.6	Col-V
50	71.9	Col-V
51	72.792	Col-V
52	72.8	Col-V
53	73.6	Col-V
54	80	Col-V
55	80.274	Col-V
56	81.9954	Col-V
57	85.324	Col-V
58	85.8	Col-V
59	92.8	Col-V
60	107.952	Col-V
61		
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	59	Mean	50.305
Censored	------	Lognormal mean	50.795
Detection limit or PQL	------	Std. devn.	20.722
Method detection limit	------	Median	46.9
TOTAL	59	Min.	12
ENTER DATA		Max	107.952

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.973

Normal distribution? r-squared is: 0.975

Recommendations:

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

A-237

	A	B
1	DATA	ID
2	12	Col-V
3	16.5	Col-V
4	19	Col-V
5	19.6	Col-V
6	23.8	Col-V
7	27.5	Col-V
8	29	Col-V
9	29.1	Col-V
10	29.2	Col-V
11	31	Col-V
12	31.6	Col-V
13	32.7	Col-V
14	33.296	Col-V
15	34.0708	Col-V
16	34.6698	Col-V
17	34.7	Col-V
18	34.9548	Col-V
19	36.2	Col-V
20	37.2066	Col-V
21	39.8058	Col-V
22	40.3	Col-V
23	40.9	Col-V
24	41.5695	Col-V
25	42.3826	Col-V
26	43.1	Col-V
27	43.264	Col-V
28	43.6709	Col-V
29	44.7964	Col-V
30	45.843	Col-V
31	46.9	Col-V
32	48	Col-V
33	48	Col-V
34	49	Col-V
35	49.2	Col-V
36	49.9	Col-V
37	54.9	Col-V
38	55.4	Col-V
39	55.821	Col-V
40	56.1	Col-V
41	57.5	Col-V
42	60.2018	Col-V
43	60.3	Col-V
44	61.1	Col-V
45	63.3	Col-V
46	64.9143	Col-V
47	69.9	Col-V
48	69.9785	Col-V
49	70.6	Col-V
50	71.9	Col-V
51	72.792	Col-V
52	72.8	Col-V
53	73.6	Col-V
54	80	Col-V
55	80.274	Col-V
56	81.9954	Col-V
57	85.324	Col-V
58	85.8	Col-V
59	92.8	Col-V
60	107.952	Col-V
61		
62		
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	59	Mean	50.305
Censored	------	Lognormal mean	50.795
Detection limit or PQL	------	Std. devn.	20.722
Method detection limit	------	Median	46.9
TOTAL	59	Min.	12
ENTER DATA		Max.	107.952

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.973

Normal distribution? r-squared is: 0.975

Recommendations:

Assume lognormal distribution.

Y value is -0.8204. This lies within the tabled values of 1.1073 and -2.7048

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

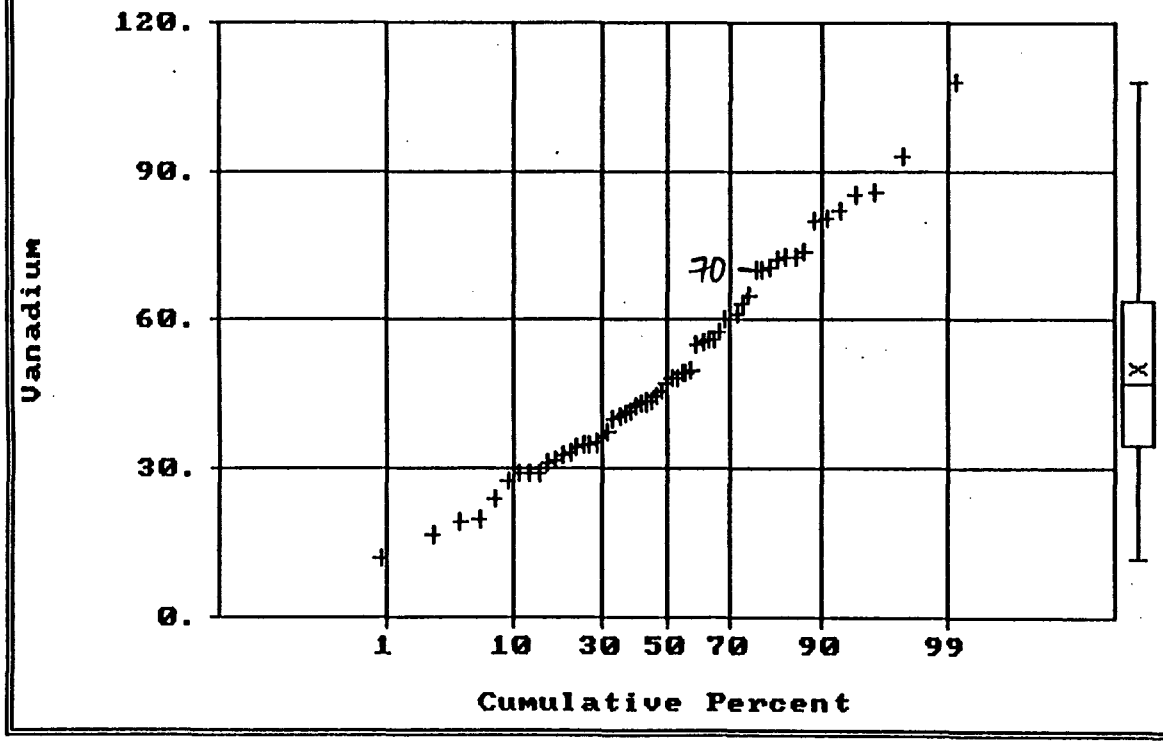
Normal

Neither

Sample size

A-238

Normal Probability Plot for Vanadium
Data file: col-all.dat

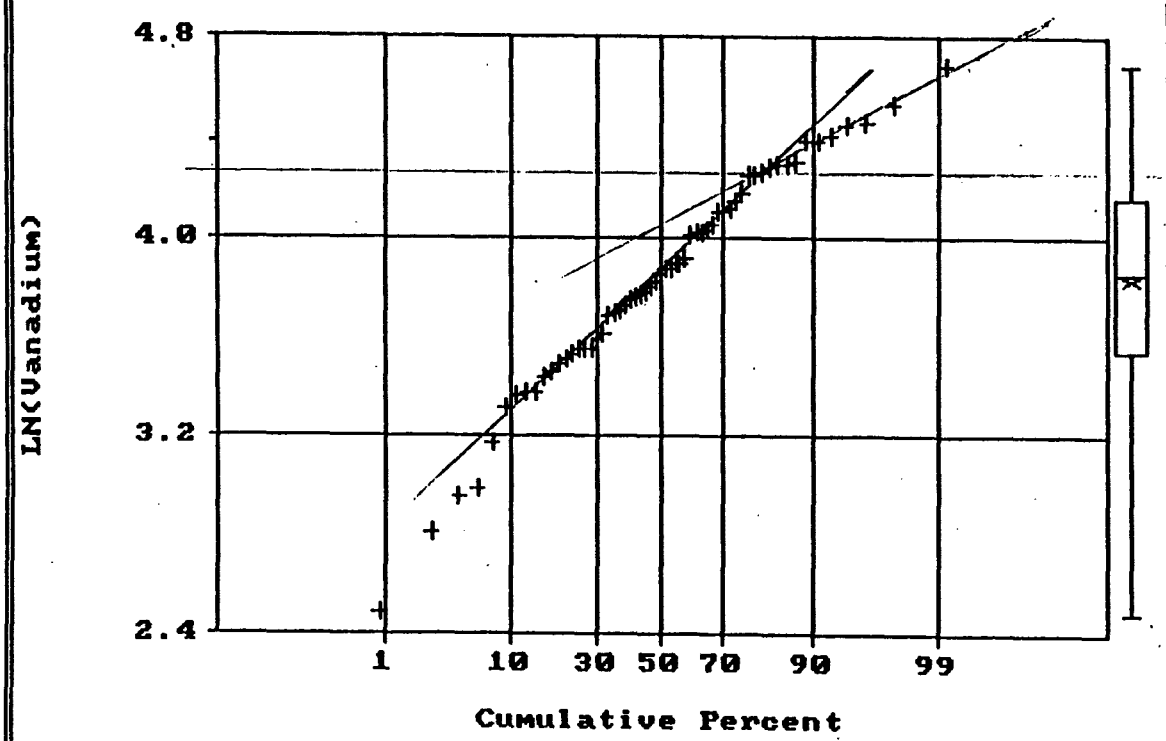


Statistics

N Total :	62
N Miss :	3
N Used :	59
Mean :	50.305
Variance:	429.403
Std. Dev:	20.722
% C.V. :	41.193
Skewness:	.500
Kurtosis:	2.765
Minimum :	12.000
25th % :	34.520
Median :	46.900
75th % :	63.704
Maximum :	107.952

A-239

Normal Probability Plot for LN(Vanadium)
Data file: col-all.dat



Statistics

N Total :	62
N Miss :	3
N Used :	59
Mean :	3.827
Variance:	.202
Std. Dev:	.449
% C.V. :	11.734
Skewness:	-.579
Kurtosis:	3.308
Minimum :	2.485
25th % :	3.542
Median :	3.848
75th % :	4.154
Maximum :	4.682

$e^{4.25} = 70$

A-240

	A	B
1	DATA	ID
2	15.4867	Col-Zn
3	16.8	Col-Zn
4	16.8	Col-Zn
5	17.4	Col-Zn
6	18	Col-Zn
7	18.5	Col-Zn
8	18.7	Col-Zn
9	20.2	Col-Zn
10	20.5	Col-Zn
11	20.7	Col-Zn
12	21.3	Col-Zn
13	21.8	Col-Zn
14	22	Col-Zn
15	22.4	Col-Zn
16	22.6	Col-Zn
17	22.9095	Col-Zn
18	25.2262	Col-Zn
19	26.4	Col-Zn
20	29.108	Col-Zn
21	29.1139	Col-Zn
22	31.1	Col-Zn
23	31.4	Col-Zn
24	32	Col-Zn
25	32.1	Col-Zn
26	32.173	Col-Zn
27	32.4	Col-Zn
28	33.1	Col-Zn
29	33.497	Col-Zn
30	33.5	Col-Zn
31	33.9	Col-Zn
32	35.089	Col-Zn
33	36.9	Col-Zn
34	38.0225	Col-Zn
35	38.9	Col-Zn
36	39.4796	Col-Zn
37	39.7229	Col-Zn
38	40.2	Col-Zn
39	40.6	Col-Zn
40	40.8271	Col-Zn
41	41.9	Col-Zn
42	41.9	Col-Zn
43	43	Col-Zn
44	43.4	Col-Zn
45	43.7	Col-Zn
46	44.4	Col-Zn
47	47.1	Col-Zn
48	47.3143	Col-Zn
49	48.4	Col-Zn
50	48.727	Col-Zn
51	54.1532	Col-Zn
52	54.9312	Col-Zn
53	55.2	Col-Zn
54	55.431	Col-Zn
55	59.4	Col-Zn
56	61.5553	Col-Zn
57	64.7982	Col-Zn
58	68.6321	Col-Zn
59	75.2	Col-Zn
60	80.3	Col-Zn
61	97.7	Col-Zn
62	139.0135	Col-Zn
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	61	Mean	39.623
Censored	------	Lognormal mean	39.459
Detection limit or PQL	------	Std. devn.	21.353
Method detection limit		Median	35.089
TOTAL	61	Min.	15.4867
ENTER DATA		Max	139.0135

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.977

Normal distribution? r-squared is: 0.813

Recommendations:

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	15.4867	Col-Zn
3	16.8	Col-Zn
4	16.8	Col-Zn
5	17.4	Col-Zn
6	18	Col-Zn
7	18.5	Col-Zn
8	18.7	Col-Zn
9	20.2	Col-Zn
10	20.5	Col-Zn
11	20.7	Col-Zn
12	21.3	Col-Zn
13	21.8	Col-Zn
14	22	Col-Zn
15	22.4	Col-Zn
16	22.6	Col-Zn
17	22.9095	Col-Zn
18	25.2262	Col-Zn
19	26.4	Col-Zn
20	29.108	Col-Zn
21	29.1139	Col-Zn
22	31.1	Col-Zn
23	31.4	Col-Zn
24	32	Col-Zn
25	32.1	Col-Zn
26	32.173	Col-Zn
27	32.4	Col-Zn
28	33.1	Col-Zn
29	33.497	Col-Zn
30	33.5	Col-Zn
31	33.9	Col-Zn
32	35.089	Col-Zn
33	36.9	Col-Zn
34	38.0225	Col-Zn
35	38.9	Col-Zn
36	39.4796	Col-Zn
37	39.7229	Col-Zn
38	40.2	Col-Zn
39	40.6	Col-Zn
40	40.8271	Col-Zn
41	41.9	Col-Zn
42	41.9	Col-Zn
43	43	Col-Zn
44	43.4	Col-Zn
45	43.7	Col-Zn
46	44.4	Col-Zn
47	47.1	Col-Zn
48	47.3143	Col-Zn
49	48.4	Col-Zn
50	48.727	Col-Zn
51	54.1532	Col-Zn
52	54.9312	Col-Zn
53	55.2	Col-Zn
54	55.431	Col-Zn
55	59.4	Col-Zn
56	61.5553	Col-Zn
57	64.7982	Col-Zn
58	68.6321	Col-Zn
59	75.2	Col-Zn
60	80.3	Col-Zn
61	97.7	Col-Zn
62	139.0135	Col-Zn
63		
64		
65		
66		
67		

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	61	Mean	39.623
Censored	------	Lognormal mean	39.459
Detection limit or PQL	------	Std. devn.	21.353
Method detection limit	------	Median	35.089
TOTAL	61	Min.	15.4867
ENTER DATA		Max.	139.0135

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.977

Normal distribution? r-squared is: 0.813

Recommendations:

Assume lognormal distribution.

Y value is -0.3359. This lies within the tabled values of 1.1211 and -2.6843

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

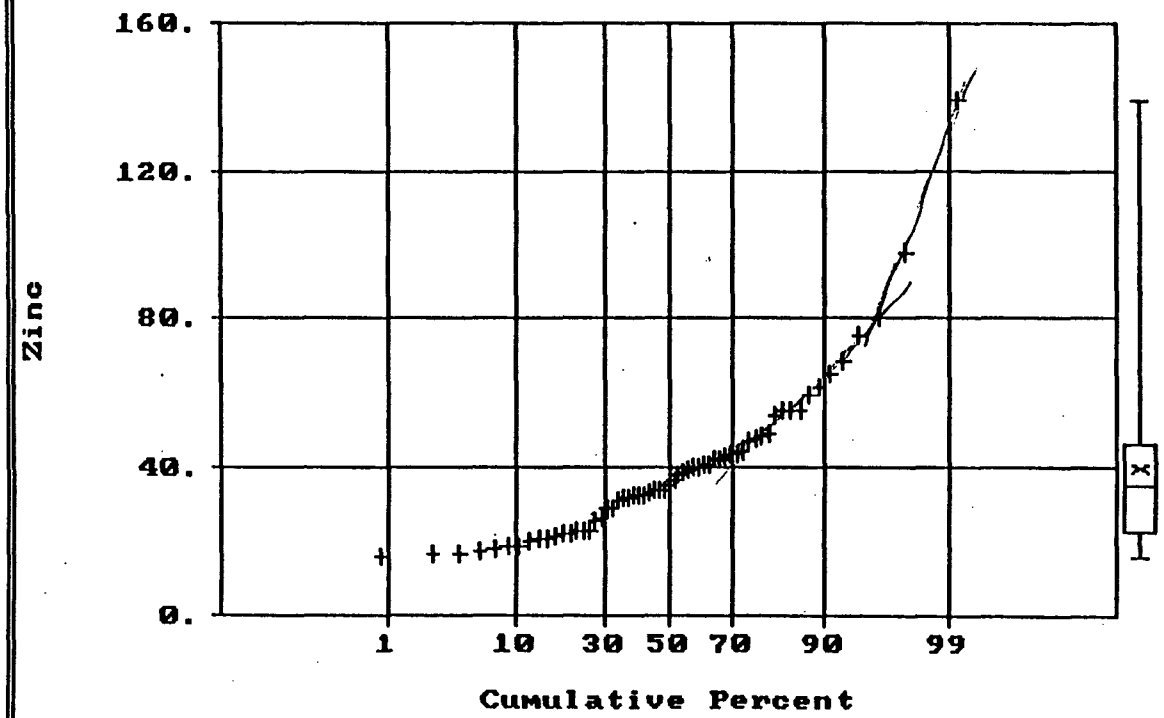
Normal

Neither

Sample size

A-242

Normal Probability Plot for Zinc
Data file: col-all.dat

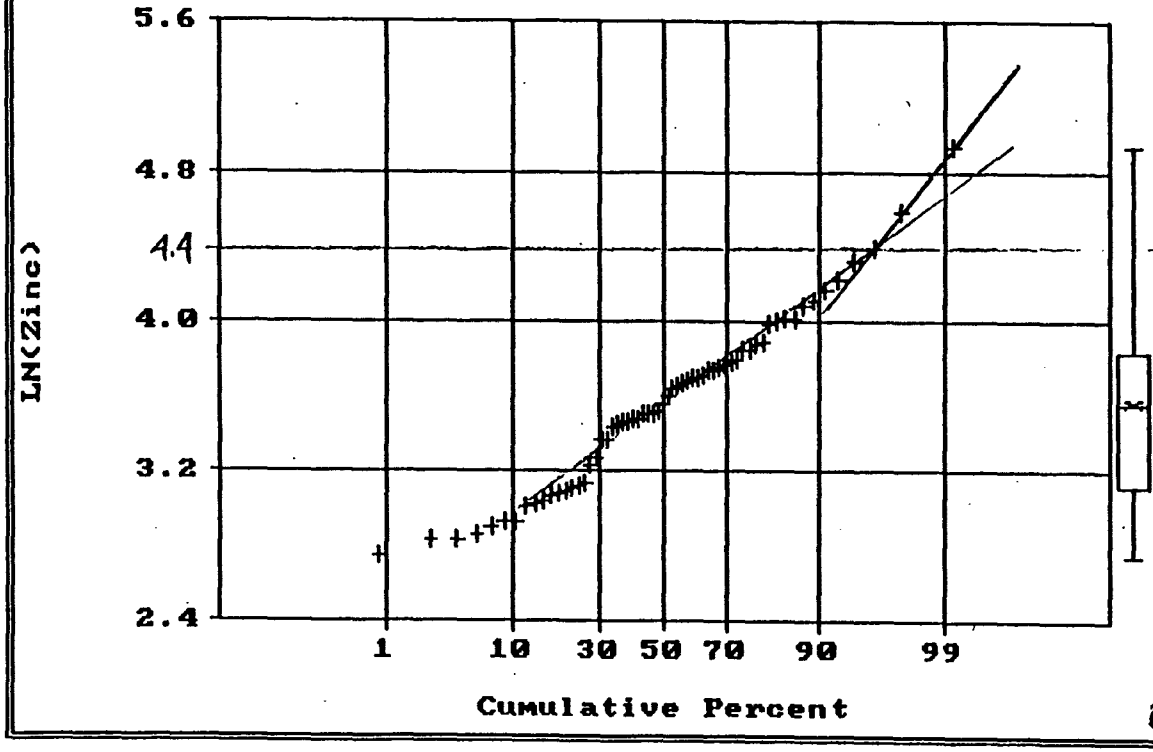


S t a t i s t i c s

N Total :	62
N Miss :	1
N Used :	61
Mean :	39.623
Variance:	455.967
Std. Dev:	21.353
% C.V. :	53.891
Skewness:	2.112
Kurtosis:	9.606
Minimum :	15.487
25th % :	22.677
Median :	35.089
75th % :	46.425
Maximum :	139.014

A-243

Normal Probability Plot for LN(Zinc)
Data file: col-all.dat



Statistics

N Total :	62
N Miss :	1
N Used :	61
Mean :	3.566
Variance:	.219
Std. Dev:	.468
% C.V. :	13.128
Skewness:	.353
Kurtosis:	3.003
Minimum :	2.740
25th % :	3.121
Median :	3.558
75th % :	3.838
Maximum :	4.935

$e^{4.38} = 80$

A-344

Serpentinite

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	A	B
1	DATA	ID
2	2538.4615	Ser-Al
3	3506.0449	Ser-Al
4	3560	Ser-Al
5	5260	Ser-Al
6	6216.5179	Ser-Al
7	6363.6364	Ser-Al
8	6800	Ser-Al
9	7613.7761	Ser-Al
10	8100	Ser-Al
11	8300	Ser-Al
12	8400	Ser-Al
13	8664.0726	Ser-Al
14	9700	Ser-Al
15	10000	Ser-Al
16	12000	Ser-Al
17	12000	Ser-Al
18	13000	Ser-Al
19	14000	Ser-Al
20	18000	Ser-Al
21	20000	Ser-Al
22	21000	Ser-Al
23	22000	Ser-Al
24	33109.48	Ser-Al
25	40000	Ser-Al

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	24	Mean	12505.500
Censored	------	Lognormal mean	12623.067
Detection limit or PQL	------	Std. devn.	9235.050
Method detection limit		Median	9182.0363
TOTAL	24	Min.	2538.4615
ENTER DATA		Max.	40000

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.986

Normal distribution? r-squared is: 0.824

Recommendations:

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	2538.4615	Ser-Al
3	3506.0449	Ser-Al
4	3560	Ser-Al
5	5260	Ser-Al
6	6216.5179	Ser-Al
7	6363.6364	Ser-Al
8	6800	Ser-Al
9	7613.7761	Ser-Al
10	8100	Ser-Al
11	8300	Ser-Al
12	8400	Ser-Al
13	8664.0726	Ser-Al
14	9700	Ser-Al
15	10000	Ser-Al
16	12000	Ser-Al
17	12000	Ser-Al
18	13000	Ser-Al
19	14000	Ser-Al
20	18000	Ser-Al
21	20000	Ser-Al
22	21000	Ser-Al
23	22000	Ser-Al
24	33109.48	Ser-Al
25	40000	Ser-Al

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	24	Mean	12505.500
Censored	------	Lognormal mean	12623.067
Detection limit or PQL	------	Std. devn.	9235.050
Method detection limit		Median	9182.0363
TOTAL	24	Min.	2538.4615
ENTER DATA		Max	40000

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.986

Normal distribution? r-squared is: 0.824

Recommendations

Assume lognormal distribution.

W value is 0.983. This exceeds the tabled value of 0.916

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

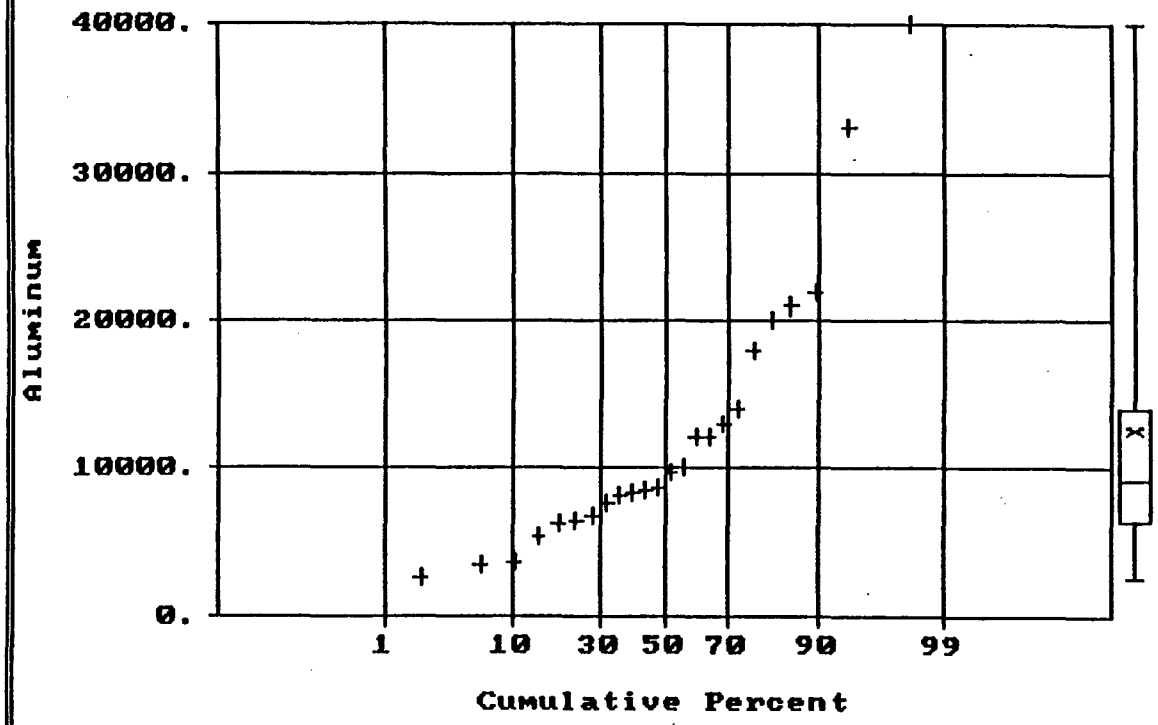
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Aluminum
Data file: ser-all.dat

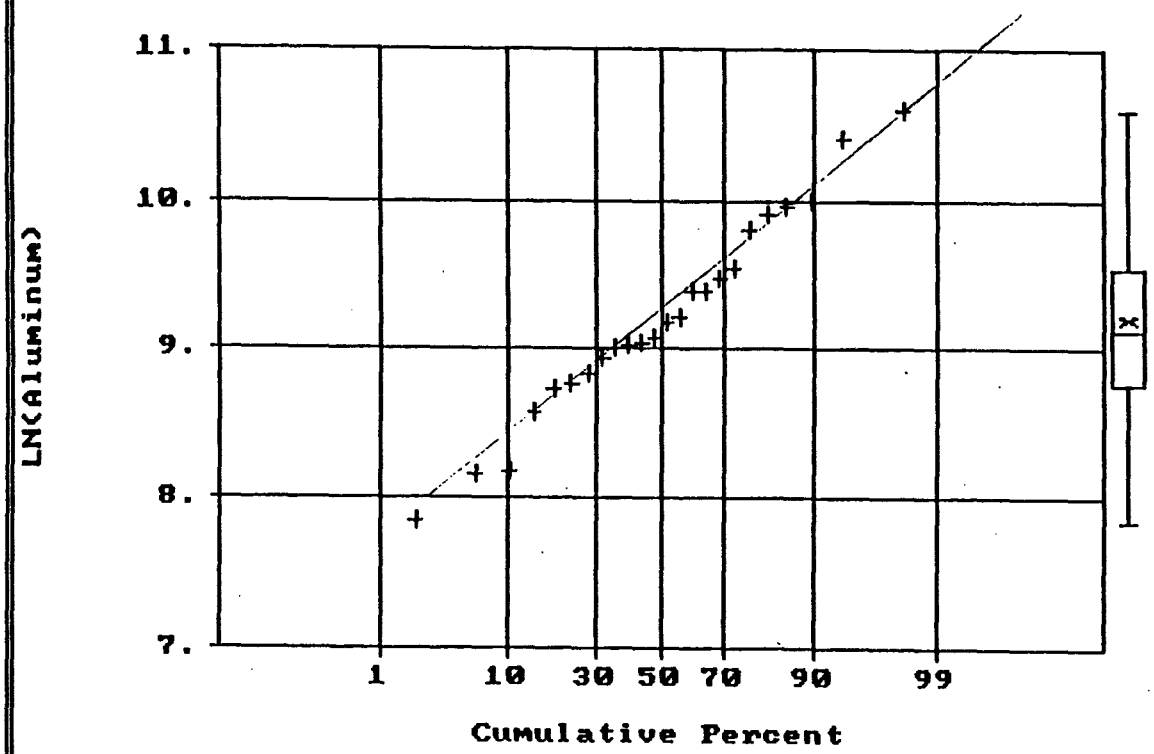


Statistics

N Total :	46
N Miss :	22
N Used :	24
Mean :	12505.500
Variance:	85286140.000
Std. Dev:	9235.050
% C.V. :	73.848
Skewness:	1.560
Kurtosis:	4.993
Minimum :	2538.461
25th % :	6363.636
Median :	9182.036
75th % :	14000.000
Maximum :	40000.000

A-249

Normal Probability Plot for LN(Aluminum)
Data file: ser-all.dat



Statistics

N Total :	46
N Miss :	22
N Used :	24
Mean :	9.208
Variance:	.471
Std. Dev:	.687
% C.V. :	7.457
Skewness:	.079
Kurtosis:	2.651
Minimum :	7.839
25th % :	8.758
Median :	9.123
75th % :	9.547
Maximum :	10.597

A-250

	A	B
1	DATA	ID
2	0.125	Ser-As
3	0.3205	Ser-As
4	0.5078	Ser-As
5	1.25	Ser-As
6	1.25	Ser-As
7	1.27	Ser-As
8	1.29	Ser-As
9	1.36	Ser-As
10	1.4	Ser-As
11	1.53	Ser-As
12	2.07	Ser-As
13	2.15	Ser-As
14	2.4903	Ser-As
15	3.0165	Ser-As
16	3.41	Ser-As
17	3.46	Ser-As
18	3.69	Ser-As
19	3.7054	Ser-As
20	3.88	Ser-As
21	3.91	Ser-As
22	4.09	Ser-As
23	4.6	Ser-As
24	4.69	Ser-As
25	11.3	Ser-As

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	24	Mean	2.782
Censored	------	Lognormal mean	3.151
Detection limit or PQL	------	Std. devn.	2.287
Method detection limit		Median	2.32015
TOTAL	24	Min.	0.125
ENTER DATA		Max.	11.3

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.889

Normal distribution? r-squared is: 0.756

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	0.125	Ser-As
3	0.3205	Ser-As
4	0.5078	Ser-As
5	1.25	Ser-As
6	1.25	Ser-As
7	1.27	Ser-As
8	1.29	Ser-As
9	1.36	Ser-As
10	1.4	Ser-As
11	1.53	Ser-As
12	2.07	Ser-As
13	2.15	Ser-As
14	2.4903	Ser-As
15	3.0165	Ser-As
16	3.41	Ser-As
17	3.46	Ser-As
18	3.69	Ser-As
19	3.7054	Ser-As
20	3.88	Ser-As
21	3.91	Ser-As
22	4.09	Ser-As
23	4.6	Ser-As
24	4.69	Ser-As
25	11.3	Ser-As

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	24	Mean	2.782
Censored	------	Lognormal mean	3.151
Detection limit or PQL	------	Std. devn.	2.287
Method detection limit		Median	2.32015
TOTAL	24	Min.	0.125
ENTER DATA		Max	11.3

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.889

Normal distribution? r-squared is: 0.766

Recommendations

Reject lognormal distribution.

W value is 0.9027. This is less than the tabled value of 0.916

Reject normal distribution.

W value is 0.7872. This is less than the tabled value of 0.916

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

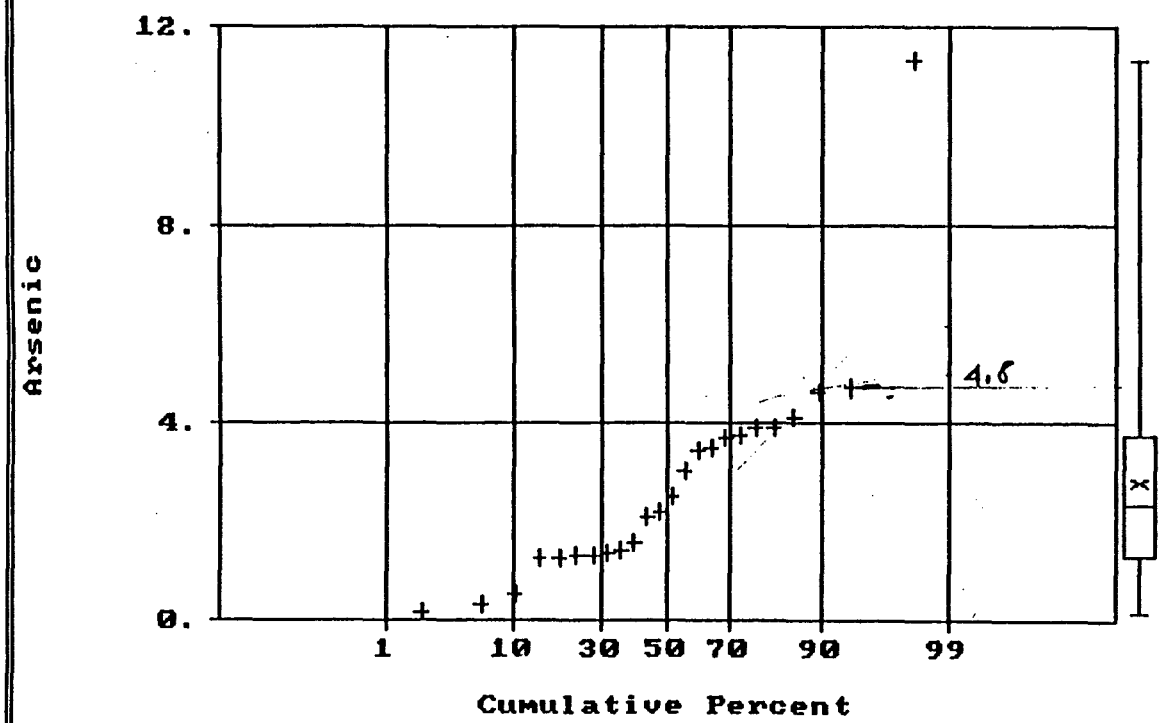
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Arsenic
Data file: ser-all.dat

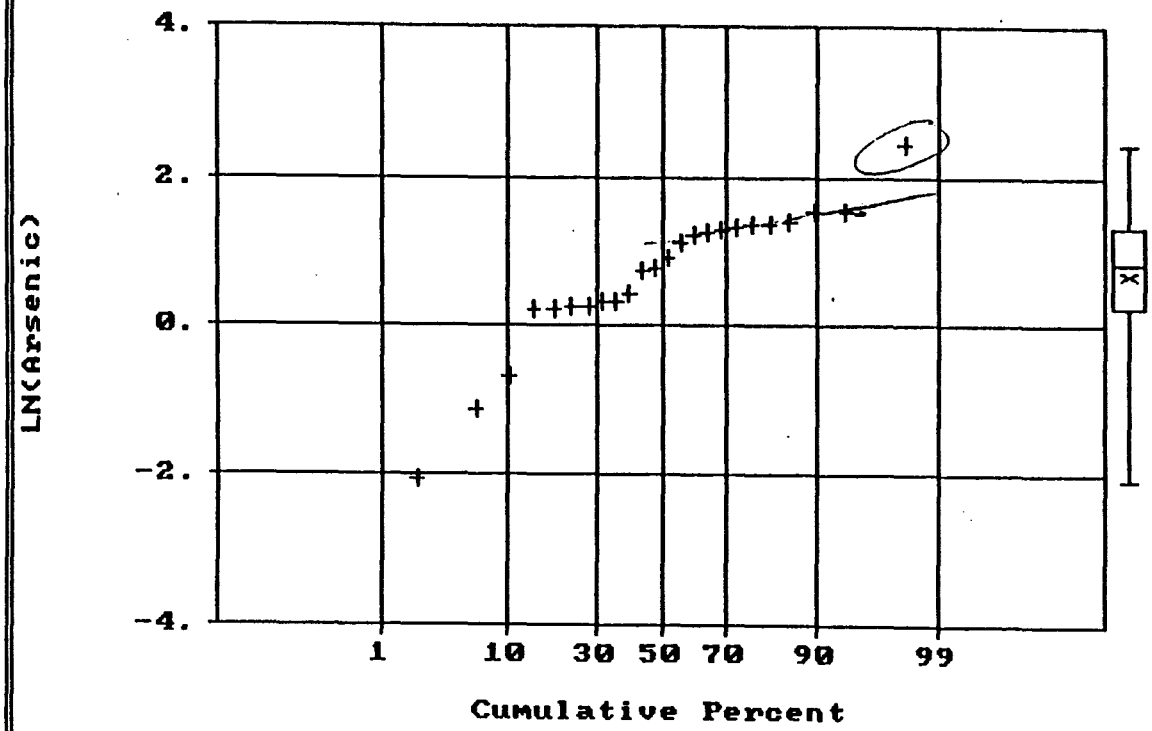


Statistics

N Total :	46
N Miss :	22
N Used :	24
Mean :	2.782
Variance:	5.229
Std. Dev:	2.287
% C.V. :	82.199
Skewness:	2.120
Kurtosis:	9.030
Minimum :	.125
25th % :	1.270
Median :	2.320
75th % :	3.705
Maximum :	11.300

A-253

Normal Probability Plot for LN(Arsenic)
Data file: ser-all.dat



Statistics

N Total :	46
N Miss :	22
N Used :	24
Mean :	.680
Variance:	.934
Std. Dev:	.967
% C.V. :	142.038
Skewness:	-1.058
Kurtosis:	4.373
Minimum :	-2.079
25th % :	.239
Median :	.839
75th % :	1.310
Maximum :	2.425

A-254

DATA	ID
1.645	Ser-Ba
5.65	Ser-Ba
10	Ser-Ba
14.3	Ser-Ba
16.4822	Ser-Ba
17.1488	Ser-Ba
18.7179	Ser-Ba
62.5216	Ser-Ba
66.3	Ser-Ba
75.9	Ser-Ba
78.3482	Ser-Ba
84.8	Ser-Ba
87.8	Ser-Ba
91.7	Ser-Ba
92.3476	Ser-Ba
106	Ser-Ba
107	Ser-Ba
110	Ser-Ba
111	Ser-Ba
116	Ser-Ba
116	Ser-Ba
149.304	Ser-Ba
153	Ser-Ba
203	Ser-Ba

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	24	Mean	78.957
Censored	------	Lognormal mean	106.677
Detection limit or PQL	------	Std. devn.	52.998
Method detection limit		Median	86.3
TOTAL	24	Min.	1.645
ENTER DATA		Max	203

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.819

Normal distribution? r-squared is: 0.941

Recommendations

Use normal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	1.645	Ser-Ba
3	5.65	Ser-Ba
4	10	Ser-Ba
5	14.3	Ser-Ba
6	16.4822	Ser-Ba
7	17.1488	Ser-Ba
8	18.7179	Ser-Ba
9	62.5216	Ser-Ba
10	66.3	Ser-Ba
11	75.9	Ser-Ba
12	78.3482	Ser-Ba
13	84.8	Ser-Ba
14	87.8	Ser-Ba
15	91.7	Ser-Ba
16	92.3476	Ser-Ba
17	106	Ser-Ba
18	107	Ser-Ba
19	110	Ser-Ba
20	111	Ser-Ba
21	116	Ser-Ba
22	116	Ser-Ba
23	149.304	Ser-Ba
24	153	Ser-Ba
25	203	Ser-Ba

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	24	Mean	78.957
Censored	------	Lognormal mean	106.677
Detection limit or PQL	------	Std. devn.	52.998
Method detection limit		Median	86.3
TOTAL	24	Min.	1.645
ENTER DATA		Max	203

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.819

Normal distribution? r-squared is: 0.941

Recommendations:

Reject lognormal distribution.

W value is 0.8224. This is less than the tabled value of 0.916

Assume normal distribution.

W value is 0.9357. This exceeds the tabled value of 0.916

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

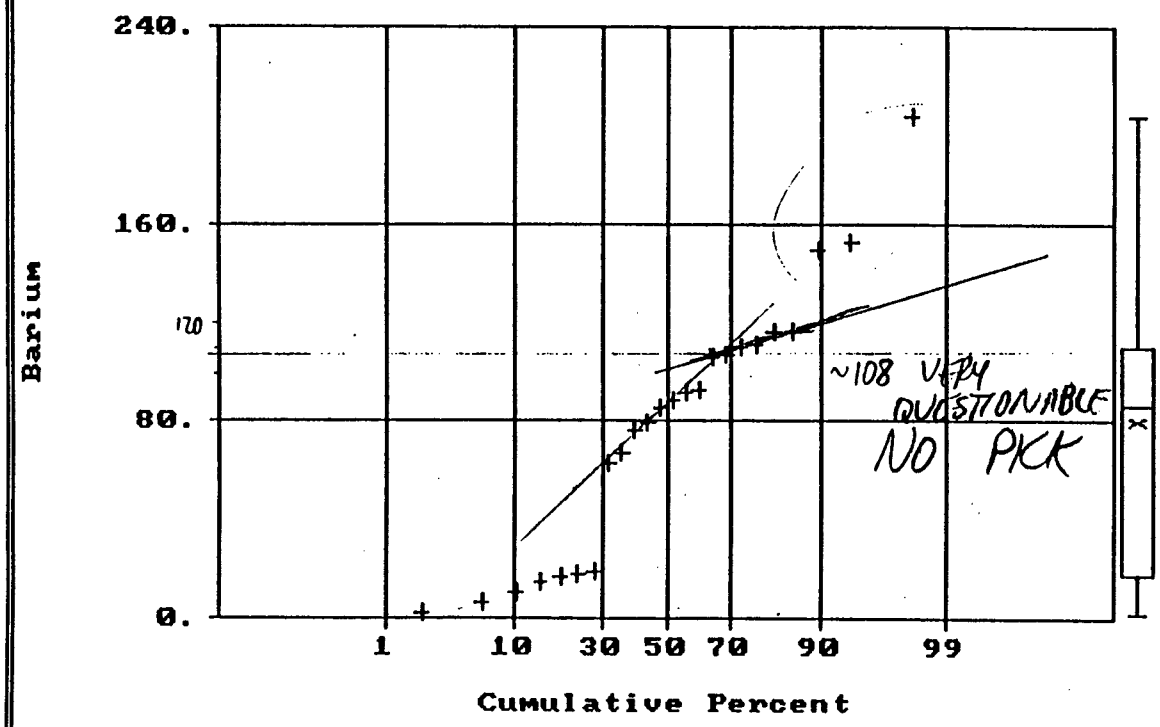
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Barium
Data file: ser-all.dat

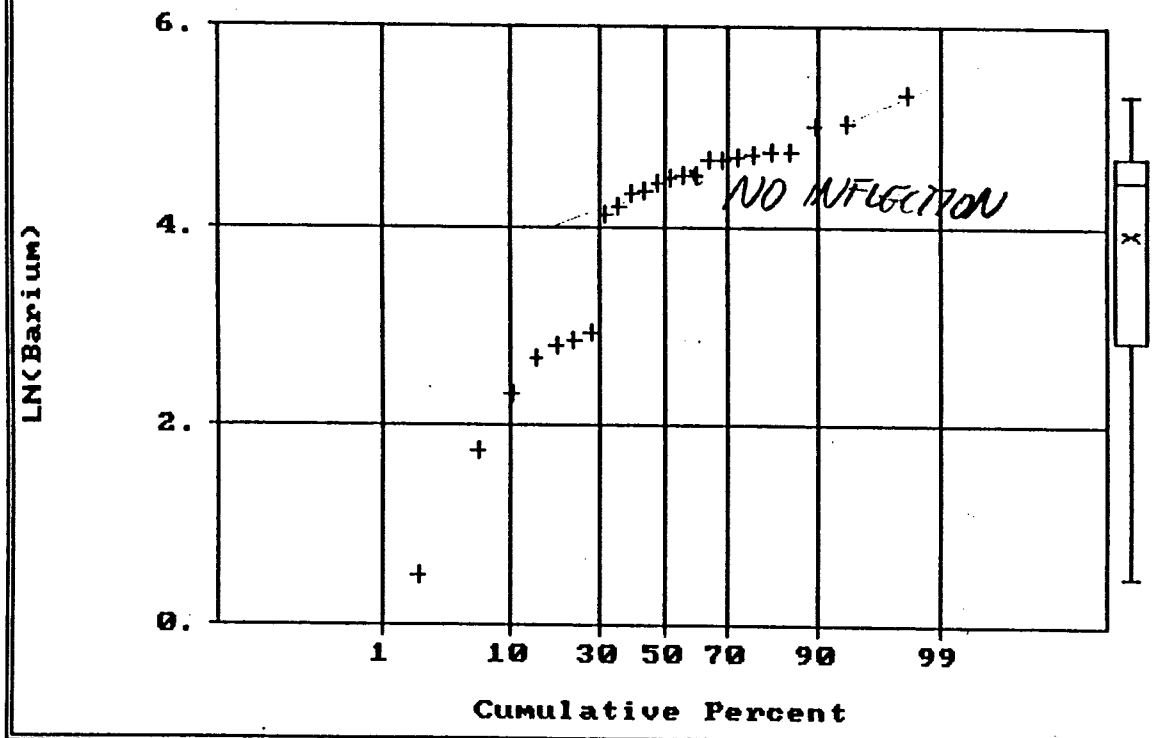


Statistics

N Total :	46
N Miss :	22
N Used :	24
Mean :	78.957
Variance:	2808.830
Std. Dev:	52.998
% C.V. :	67.123
Skewness:	.213
Kurtosis:	2.565
Minimum :	1.645
25th % :	17.149
Median :	86.300
75th % :	110.000
Maximum :	203.000

A-257

Normal Probability Plot for LN(Barium)
Data file: ser-all.dat



Statistics

N Total :	46
N Miss :	22
N Used :	24
Mean :	3.931
Variance:	1.477
Std. Dev:	1.215
% C.V. :	30.917
Skewness:	-1.294
Kurtosis:	3.850
Minimum :	.498
25th % :	2.842
Median :	4.458
75th % :	4.700
Maximum :	5.313

A-258

	A	B
1	DATA	ID
2	0.05	Ser-Be
3	0.1539	Ser-Be
4	0.1607	Ser-Be
5	0.2135	Ser-Be
6	0.25	Ser-Be
7	0.25	Ser-Be
8	0.25	Ser-Be
9	0.25	Ser-Be
10	0.25	Ser-Be
11	0.5	Ser-Be
12	0.675	Ser-Be
13	0.774	Ser-Be
14	0.784	Ser-Be
15	0.826	Ser-Be
16	0.877	Ser-Be
17	0.899	Ser-Be
18	0.959	Ser-Be
19	1.07	Ser-Be
20	1.08	Ser-Be
21	1.17	Ser-Be
22	1.25	Ser-Be
23	1.51	Ser-Be
24	5	Ser-Be
25	5	Ser-Be

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	24	Mean	1.008
Censored	------	Lognormal mean	1.042
Detection limit or PQL	------	Std. devn.	1.296
Method detection limit		Median	0.779
TOTAL	24	Min.	0.05
ENTER DATA		Max	5

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.942

Normal distribution? r-squared is: 0.595

Recommendations:

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	0.05	Ser-Be
3	0.1539	Ser-Be
4	0.1607	Ser-Be
5	0.2135	Ser-Be
6	0.25	Ser-Be
7	0.25	Ser-Be
8	0.25	Ser-Be
9	0.25	Ser-Be
10	0.25	Ser-Be
11	0.5	Ser-Be
12	0.675	Ser-Be
13	0.774	Ser-Be
14	0.784	Ser-Be
15	0.826	Ser-Be
16	0.877	Ser-Be
17	0.899	Ser-Be
18	0.959	Ser-Be
19	1.07	Ser-Be
20	1.08	Ser-Be
21	1.17	Ser-Be
22	1.25	Ser-Be
23	1.51	Ser-Be
24	5	Ser-Be
25	5	Ser-Be

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	24	Mean	1.008
Censored	------	Lognormal mean	1.042
Detection limit or PQL	------	Std. devn.	1.296
Method detection limit		Median	0.779
TOTAL	24	Min.	0.05
ENTER DATA		Max	5

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.942

Normal distribution? r-squared is: 0.595

Recommendations:

Assume lognormal distribution.

W value is 0.9456. This exceeds the tabled value of 0.916

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

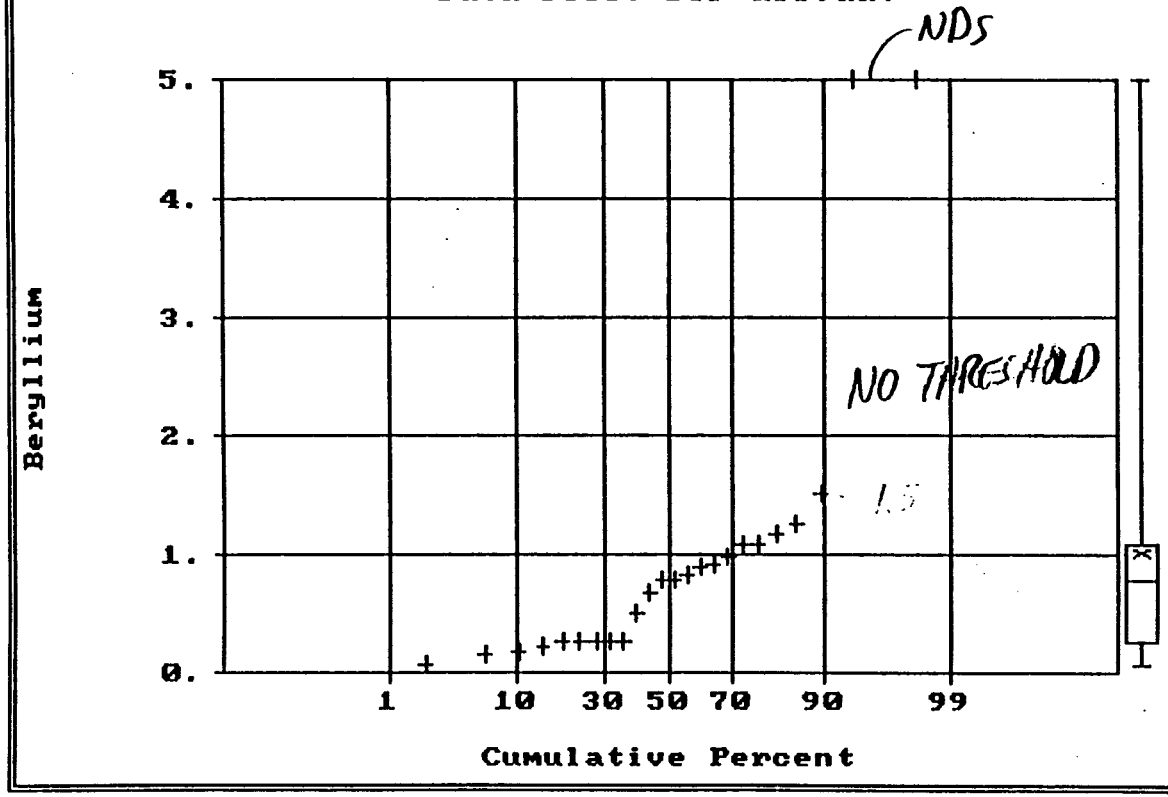
Normal

Neither

Sample size

A-260

Normal Probability Plot for Beryllium
Data file: ser-all.dat

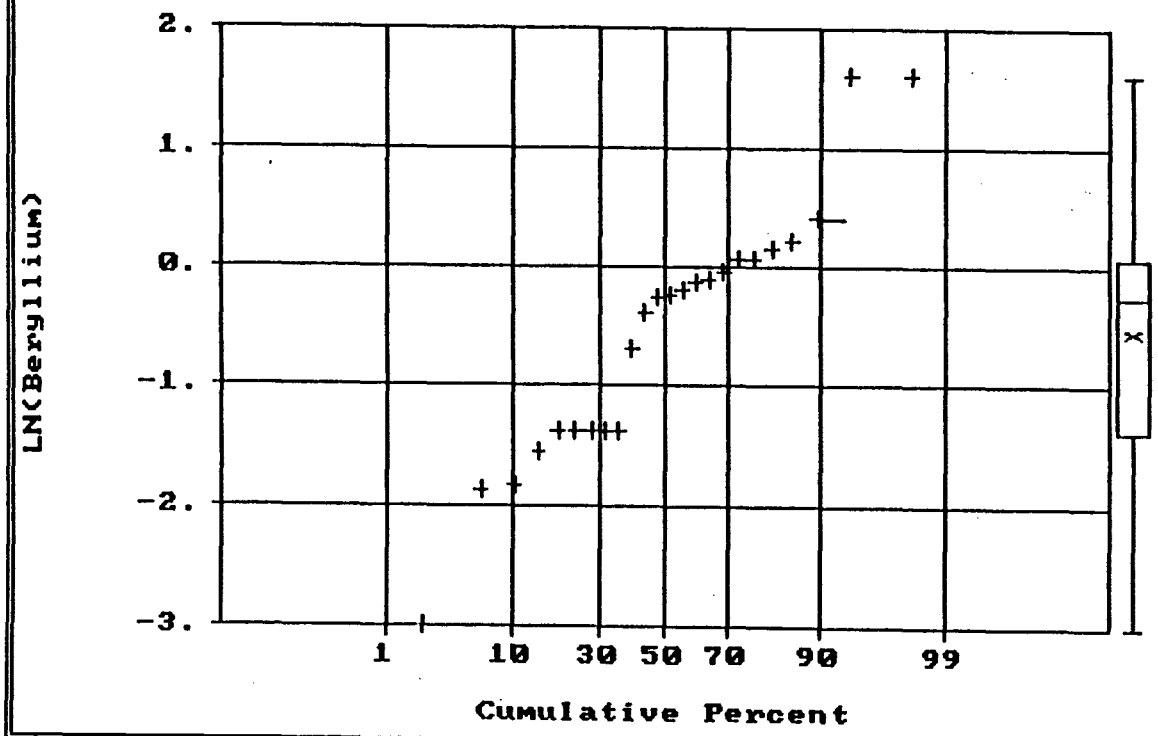


Statistics

N Total :	46
N Miss :	22
N Used :	24
Mean :	1.008
Variance:	1.679
Std. Dev:	1.296
% C.V. :	128.509
Skewness:	2.497
Kurtosis:	8.233
Minimum :	.050
25th % :	.250
Median :	.779
75th % :	1.070
Maximum :	5.000

A-261

Normal Probability Plot for LN(Beryllium)
Data file: ser-all.dat



Statistics

N Total :	46
N Miss :	22
N Used :	24
Mean :	-.545
Variance:	1.172
Std. Dev:	1.083
% C.V. :	198.762
Skewness:	-.023
Kurtosis:	2.985
Minimum :	-2.996
25th % :	-1.386
Median :	-.250
75th % :	.068
Maximum :	1.609

A-262

	A	B
1	DATA	ID
2	0.25	Ser-Cd
3	0.2575	Ser-Cd
4	0.2575	Ser-Cd
5	0.2575	Ser-Cd
6	0.2575	Ser-Cd
7	0.2575	Ser-Cd
8	0.4	Ser-Cd
9	0.4	Ser-Cd
10	0.4	Ser-Cd
11	0.6	Ser-Cd
12	0.6	Ser-Cd
13	0.857	Ser-Cd
14	0.869	Ser-Cd
15	1.13	Ser-Cd
16	1.85	Ser-Cd
17	2.2	Ser-Cd
18	2.33	Ser-Cd
19	2.38	Ser-Cd
20	3.13	Ser-Cd
21	3.3	Ser-Cd
22	4	Ser-Cd
23	4.95	Ser-Cd
24	40	Ser-Cd
25	40	Ser-Cd

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	24	Mean	4.622
Censored	------	Lognormal mean	3.501
Detection limit or PQL	------	Std. devn.	10.979
Method detection limit		Median	0.863
TOTAL	24	Min.	0.25
ENTER DATA		Max.	40

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.880

Normal distribution? r-squared is: 0.400

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	0.25	Ser-Cd
3	0.2575	Ser-Cd
4	0.2575	Ser-Cd
5	0.2575	Ser-Cd
6	0.2575	Ser-Cd
7	0.2575	Ser-Cd
8	0.4	Ser-Cd
9	0.4	Ser-Cd
10	0.4	Ser-Cd
11	0.6	Ser-Cd
12	0.6	Ser-Cd
13	0.857	Ser-Cd
14	0.869	Ser-Cd
15	1.13	Ser-Cd
16	1.85	Ser-Cd
17	2.2	Ser-Cd
18	2.33	Ser-Cd
19	2.38	Ser-Cd
20	3.13	Ser-Cd
21	3.3	Ser-Cd
22	4	Ser-Cd
23	4.95	Ser-Cd
24	40	Ser-Cd
25	40	Ser-Cd

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	24	Mean	4.622
Censored	------	Lognormal mean	3.501
Detection limit or PQL	------	Std. devn.	10.979
Method detection limit		Median	0.863
TOTAL	24	Min.	0.25
ENTER DATA		Max	40

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.880

Normal distribution? r-squared is: 0.400

Recommendations:

Reject lognormal distribution.

W value is 0.8708. This is less than the tabled value of 0.916

Reject normal distribution.

W value is 0.4126. This is less than the tabled value of 0.916

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

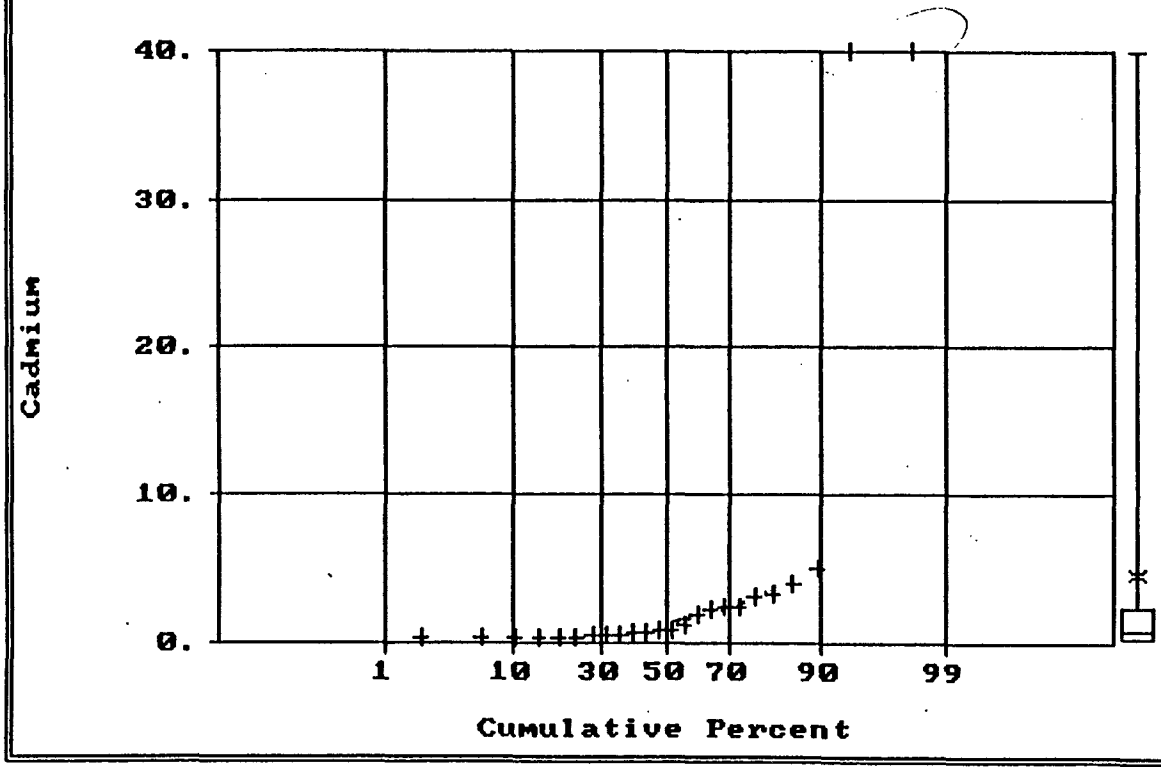
Normal

Neither

Sample size

A-264

Normal Probability Plot for Cadmium
Data file: ser-all.dat

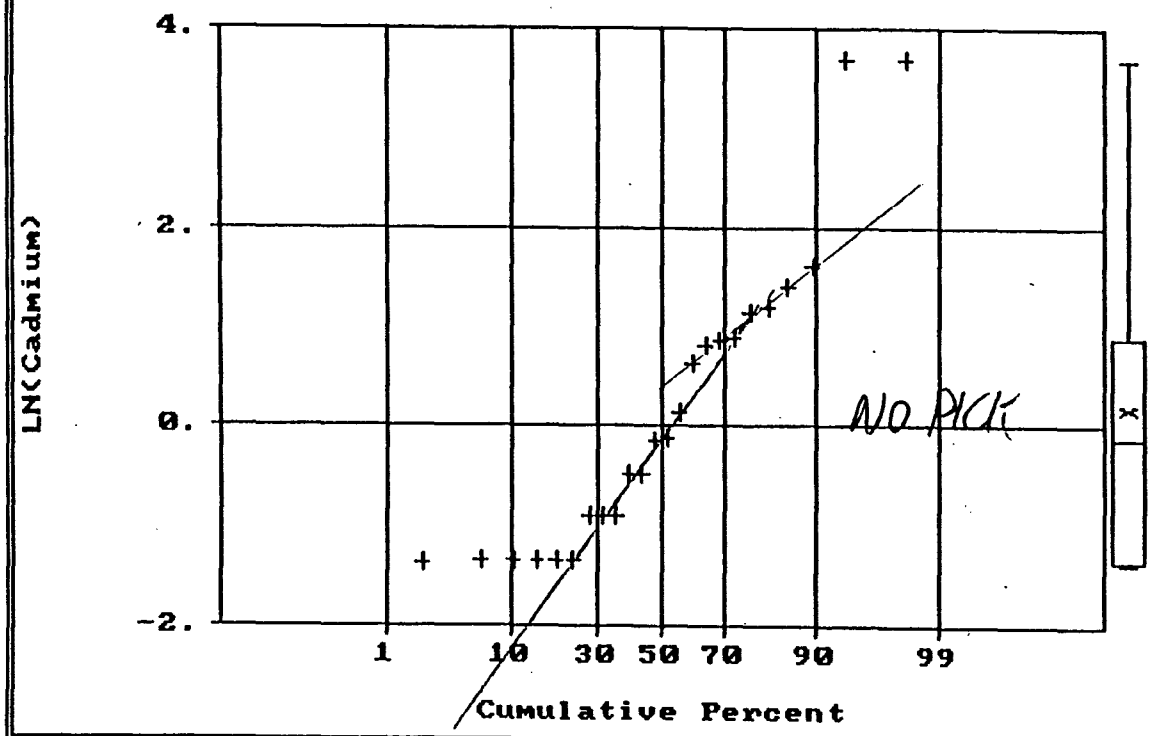


Statistics

N Total :	46
N Miss :	22
N Used :	24
Mean :	4.622
Variance:	120.528
Std. Dev:	10.979
% C.V. :	237.516
Skewness:	2.936
Kurtosis:	9.798
Minimum :	.250
25th % :	.257
Median :	.863
75th % :	2.380
Maximum :	40.000

A-265

Normal Probability Plot for LN(Cadmium)
Data file: ser-all.dat



Statistics

N Total :	46
N Miss :	22
N Used :	24
Mean :	.154
Variance:	2.198
Std. Dev:	1.482
% C.V. :	961.049
Skewness:	.969
Kurtosis:	3.360
Minimum :	-1.386
25th % :	-1.357
Median :	-.147
75th % :	.867
Maximum :	3.689

A-266

	A	B
1	DATA	ID
2	0.125	Ser-CN
3	0.125	Ser-CN
4	0.125	Ser-CN
5	0.125	Ser-CN
6	0.125	Ser-CN
7	0.4145	Ser-CN
8	0.4145	Ser-CN
9	0.46	Ser-CN

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	8	Mean	0.239
Censored	------	Lognormal mean	0.244
Detection limit or PQL	------	Std. devn.	0.158
Method detection limit		Median	0.125
TOTAL	8	Min.	0.125
ENTER DATA		Max	0.46

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.690

Normal distribution? r-squared is: 0.702

Recommendations:

Reject lognormal distribution.

W value is 0.6528. This is less than the tabled value of 0.818

Reject normal distribution.

W value is 0.6778. This is less than the tabled value of 0.818

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	0.125	Ser-CN
3	0.125	Ser-CN
4	0.125	Ser-CN
5	0.125	Ser-CN
6	0.125	Ser-CN
7	0.4145	Ser-CN
8	0.4145	Ser-CN
9	0.46	Ser-CN

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	8	Mean	0.239
Censored	------	Lognormal mean	0.244
Detection limit or PQL	------	Std. devn.	0.158
Method detection limit		Median	0.125
TOTAL	8	Min.	0.125
ENTER DATA		Max.	0.46

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.690

Normal distribution? r-squared is: 0.702

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

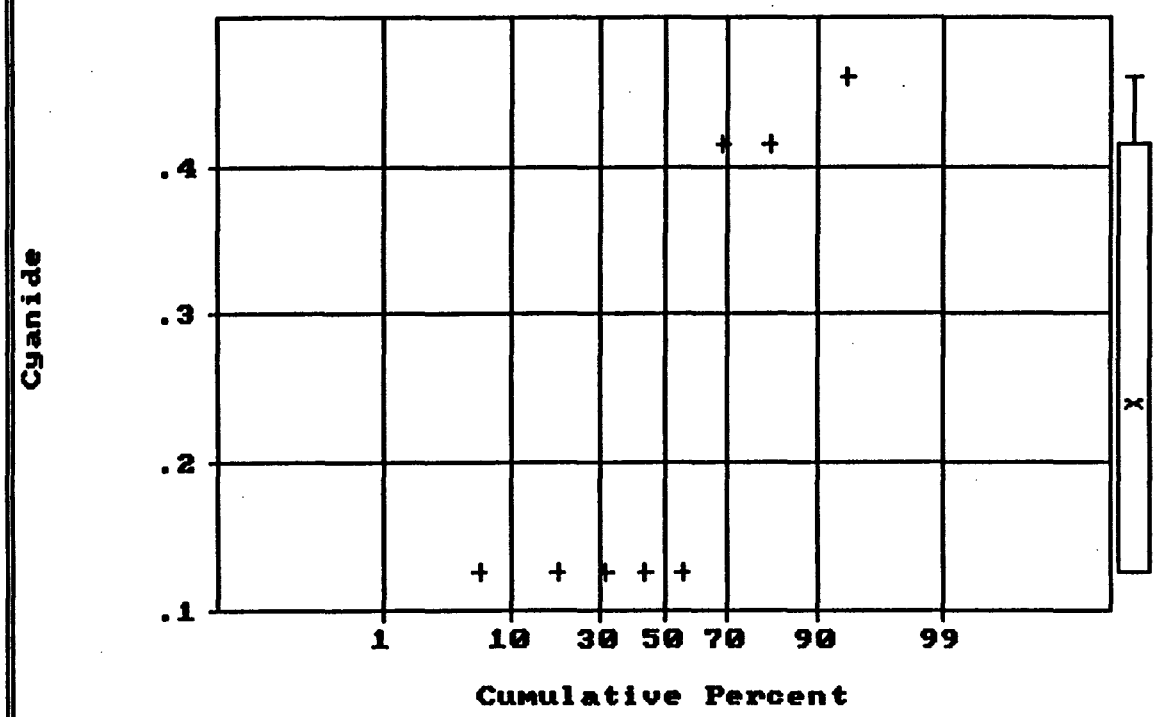
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Cyanide
Data file: ser-all.dat

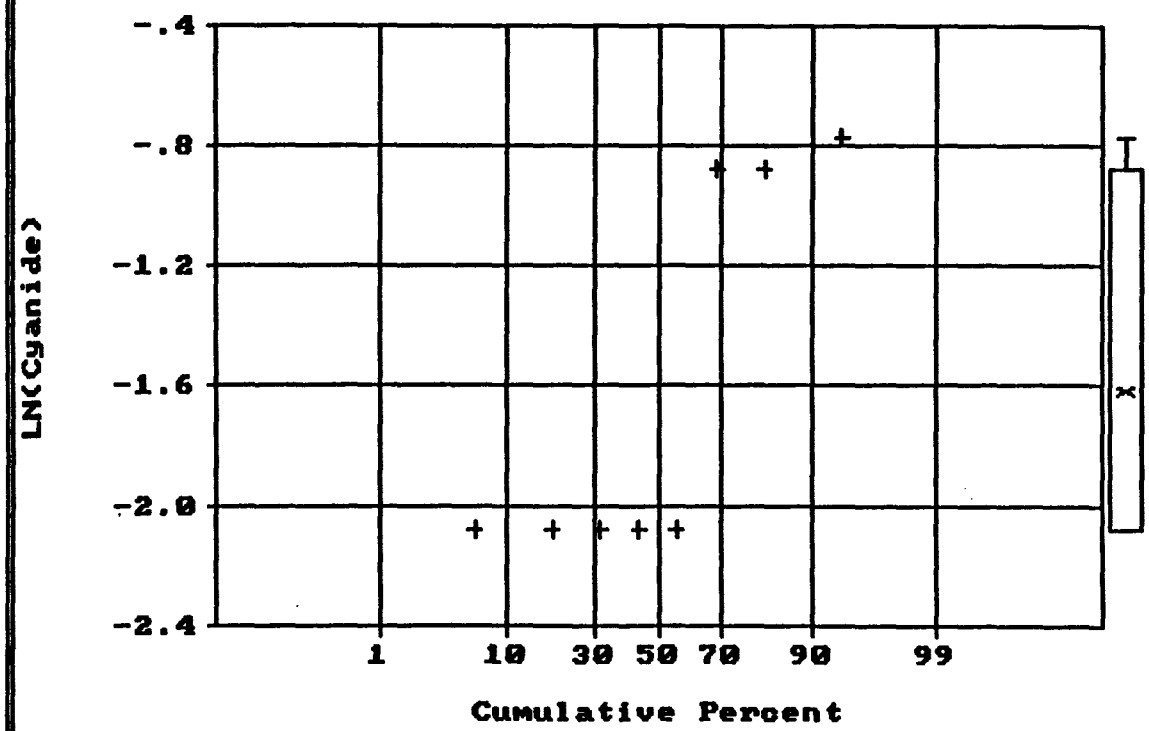


Statistics

N Total :	46
N Miss :	38
N Used :	8
Mean :	.239
Variance:	.025
Std. Dev:	.158
% C.V. :	66.167
Skewness:	.541
Kurtosis:	1.329
Minimum :	.125
25th % :	.125
Median :	.125
75th % :	.414
Maximum :	.460

A-269

Normal Probability Plot for LN(Cyanide)
Data file: ser-all.dat



Statistics

N Total :	46
N Miss :	38
N Used :	8
Mean :	-1.617
Variance:	.409
Std. Dev:	.639
% C.V. :	39.532
Skewness:	.524
Kurtosis:	1.286
Minimum :	-2.079
25th % :	-2.079
Median :	-2.079
75th % :	-.881
Maximum :	-.777

	A	B
1	DATA	ID
2	8.9	Ser-Co
3	17.4107	Ser-Co
4	26.5	Ser-Co
5	29.4	Ser-Co
6	38.7	Ser-Co
7	42.7686	Ser-Co
8	53.1	Ser-Co
9	59.8	Ser-Co
10	67.5	Ser-Co
11	68.2	Ser-Co
12	73.0627	Ser-Co
13	81.7	Ser-Co
14	82.376	Ser-Co
15	85.3	Ser-Co
16	103	Ser-Co
17	110	Ser-Co
18	111.2821	Ser-Co
19	128	Ser-Co
20	134.8898	Ser-Co
21	136	Ser-Co
22	140.2418	Ser-Co
23	153	Ser-Co
24	180	Ser-Co
25	191	Ser-Co

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	24	Mean	88.422
Censored	------	Lognormal mean	95.124
Detection limit or PQL	------	Std. devn.	50.835
Method detection limit		Median	82.038
TOTAL	24	Min.	8.9
ENTER DATA		Max	191

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.921

Normal distribution? r-squared is: 0.978

Recommendations

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear message

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	8.9	Ser-Co
3	17.4107	Ser-Co
4	26.5	Ser-Co
5	29.4	Ser-Co
6	38.7	Ser-Co
7	42.7686	Ser-Co
8	53.1	Ser-Co
9	59.8	Ser-Co
10	67.5	Ser-Co
11	68.2	Ser-Co
12	73.0627	Ser-Co
13	81.7	Ser-Co
14	82.376	Ser-Co
15	85.3	Ser-Co
16	103	Ser-Co
17	110	Ser-Co
18	111.2821	Ser-Co
19	128	Ser-Co
20	134.8898	Ser-Co
21	136	Ser-Co
22	140.2418	Ser-Co
23	153	Ser-Co
24	180	Ser-Co
25	191	Ser-Co

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	24	Mean	88.422
Censored	------	Lognormal mean	95.124
Detection limit or PQL	------	Std. devn.	50.835
Method detection limit		Median	82.038
TOTAL	24	Min.	8.9
ENTER DATA		Max.	191

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.921

Normal distribution? r-squared is: 0.978

Recommendations:

Assume lognormal distribution.

W value is 0.9206. This exceeds the tabled value of 0.916

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

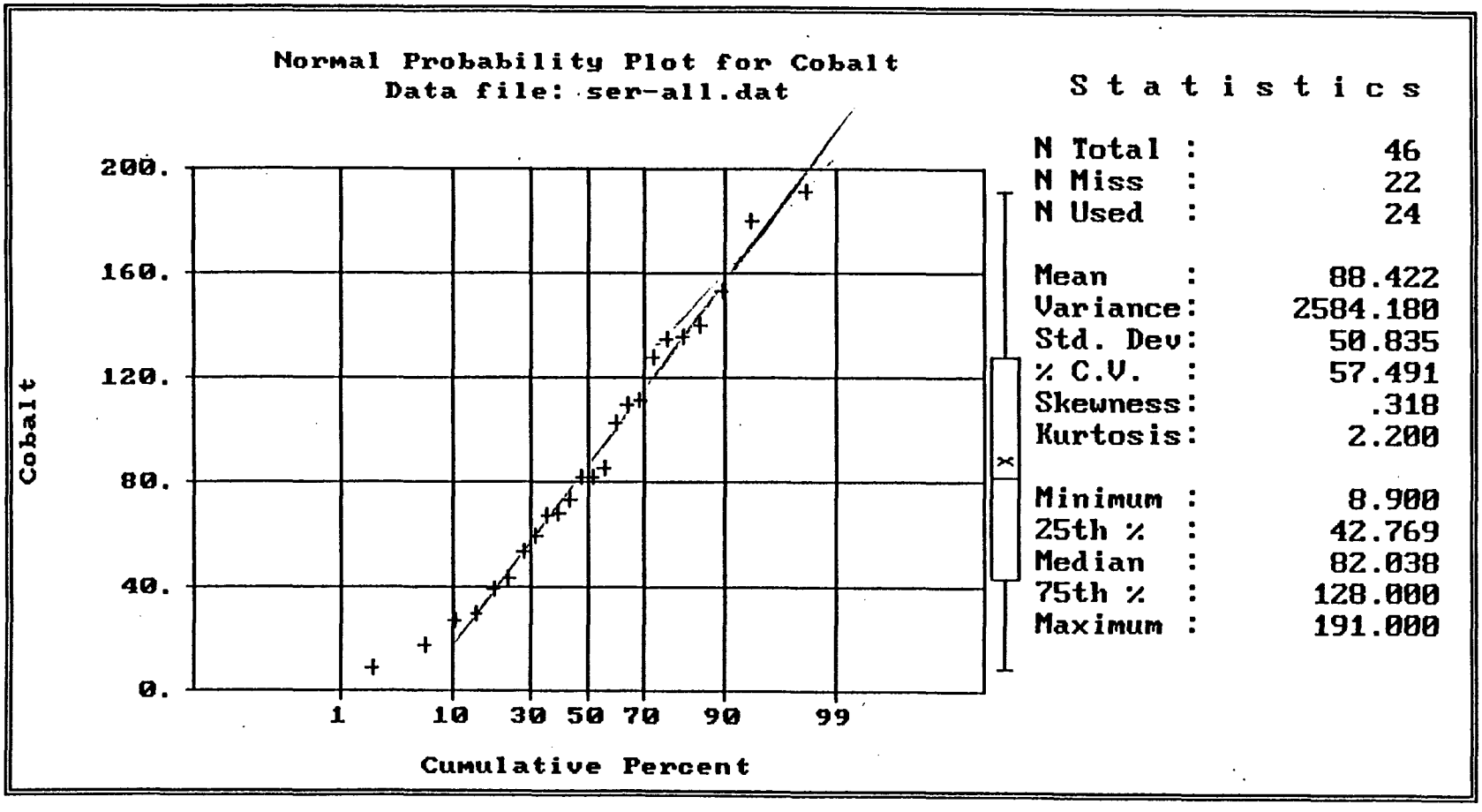
Lognormal

Normal

Neither

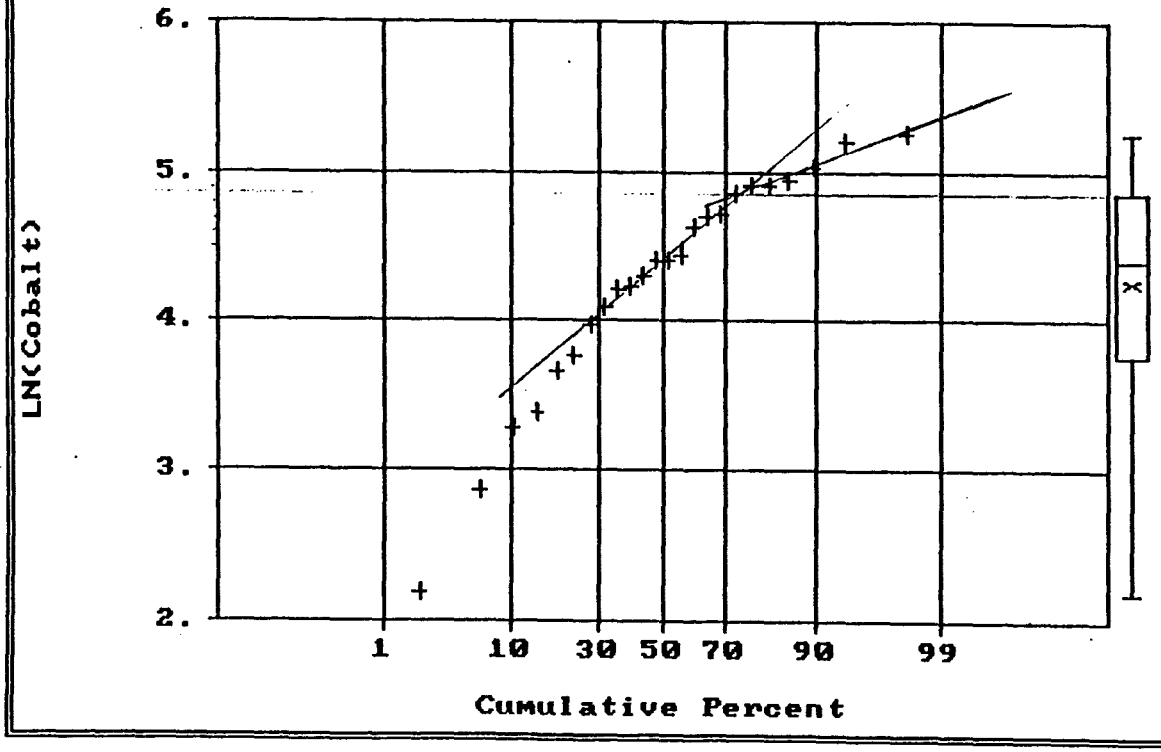
Sample size

A-272


Normal Probability Plot for Cobalt
Data file: ser-all.dat
Cobalt
200.
160.
120.
80.
40.
0.
1
10
30
50
70
90
99
Cumulative Percent
Statistics
N Total : 46
N Miss : 22
N Used : 24
Mean : 88.422
Variance: 2584.180
Std. Dev: 50.835
% C.V. : 57.491
Skewness: .318
Kurtosis: 2.200
Minimum : 8.900
25th % : 42.769
Median : 82.038
75th % : 128.000
Maximum : 191.000

A-273

Normal Probability Plot for LN(Cobalt)
Data file: ser-all.dat



Statistics

N Total :	46
N Miss :	22
N Used :	24
Mean :	4.262
Variance:	.586
Std. Dev:	.765
% C.V. :	17.952
Skewness:	-1.013
Kurtosis:	3.584
Minimum :	2.186
25th % :	3.756
Median :	4.407
75th % :	4.852
Maximum :	5.252

$e^{4.85} \approx 128$

A-37H

	A	B
1	DATA	ID
2	82	Ser-Cr
3	105	Ser-Cr
4	132	Ser-Cr
5	157	Ser-Cr
6	205	Ser-Cr
7	214.2857	Ser-Cr
8	262	Ser-Cr
9	363	Ser-Cr
10	537.1901	Ser-Cr
11	556	Ser-Cr
12	673.5751	Ser-Cr
13	707	Ser-Cr
14	750	Ser-Cr
15	812	Ser-Cr
16	866	Ser-Cr
17	911.5385	Ser-Cr
18	913	Ser-Cr
19	1046.6926	Ser-Cr
20	1274.146	Ser-Cr
21	1291.5129	Ser-Cr
22	1300	Ser-Cr
23	1310	Ser-Cr
24	1580	Ser-Cr
25	1590	Ser-Cr

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	24	Mean	734.956
Censored	------	Lognormal mean	816.385
Detection limit or PQL	------	Std. devn.	484.072
Method detection limit		Median	728.5
TOTAL	24	Min.	82
ENTER DATA		Max	1590

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.911

Normal distribution? r-squared is: 0.949

Recommendations:

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

A-275

	A	B
1	DATA	ID
2	82	Ser-Cr
3	105	Ser-Cr
4	132	Ser-Cr
5	157	Ser-Cr
6	205	Ser-Cr
7	214.2857	Ser-Cr
8	262	Ser-Cr
9	363	Ser-Cr
10	537.1901	Ser-Cr
11	556	Ser-Cr
12	673.5751	Ser-Cr
13	707	Ser-Cr
14	750	Ser-Cr
15	812	Ser-Cr
16	866	Ser-Cr
17	911.5385	Ser-Cr
18	913	Ser-Cr
19	1046.6926	Ser-Cr
20	1274.146	Ser-Cr
21	1291.5129	Ser-Cr
22	1300	Ser-Cr
23	1310	Ser-Cr
24	1580	Ser-Cr
25	1590	Ser-Cr

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	24	Mean	734.958
Censored	------	Lognormal mean	816.385
Detection limit or PQL	------	Std. devn.	484.072
Method detection limit		Median	728.5
TOTAL	24	Min.	82
ENTER DATA		Max.	1590

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.911

Normal distribution? r-squared is: 0.949

Recommendations:

Reject lognormal distribution.

W value is 0.8966 This is less than the tabled value of 0.916

Assume normal distribution.

W value is 0.9309. This exceeds the tabled value of 0.916

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

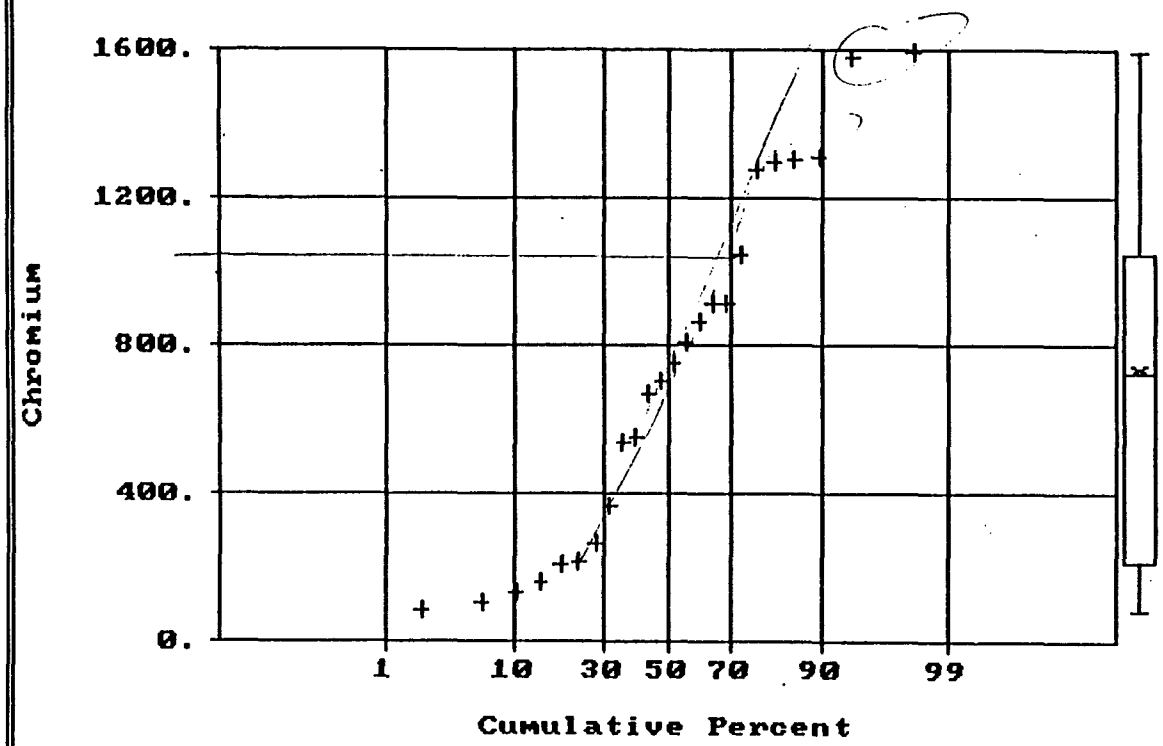
Normal

Neither

Sample size

A-276

Normal Probability Plot for Chromium
Data file: ser-all.dat

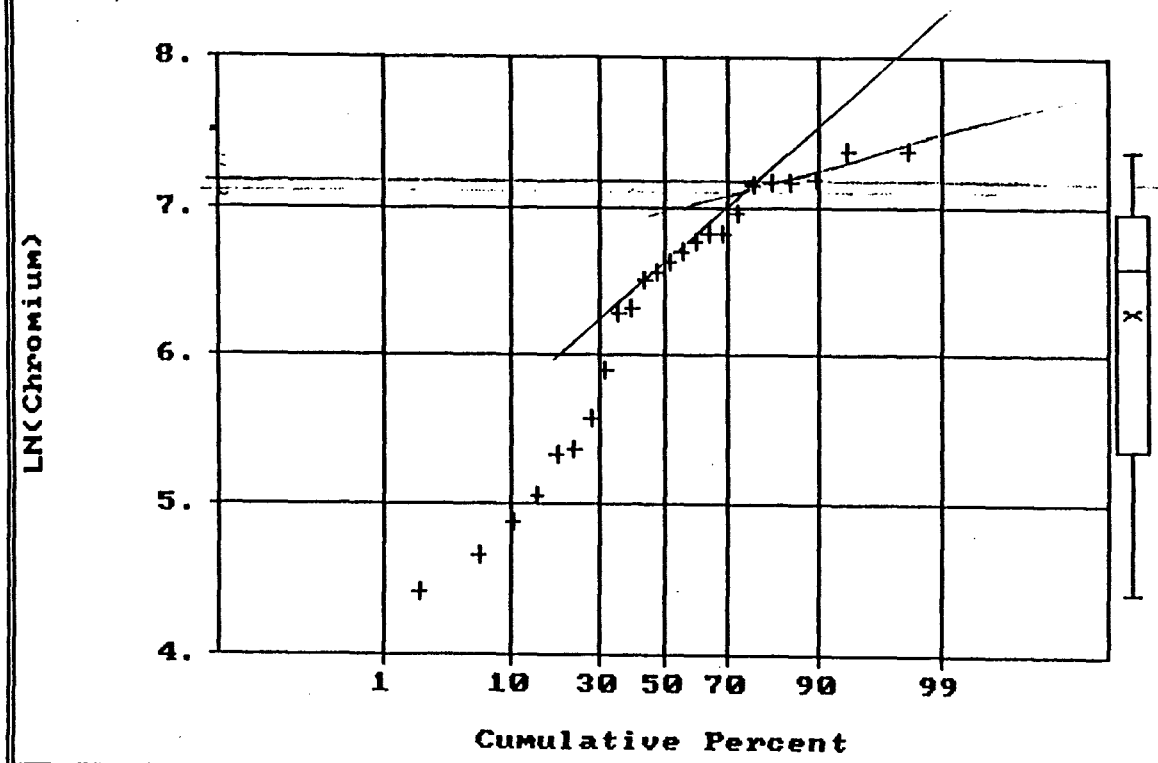


S t a t i s t i c s

N Total :	46
N Miss :	22
N Used :	24
Mean :	734.956
Variance:	234325.500
Std. Dev:	484.072
% C.V. :	65.864
Skewness:	.224
Kurtosis:	1.863
Minimum :	82.000
25th % :	214.286
Median :	728.500
75th % :	1046.693
Maximum :	1590.000

A-27

Normal Probability Plot for LN(Chromium)
Data file: ser-all.dat



Statistics

N Total :	46
N Miss :	22
N Used :	24
Mean :	6.288
Variance:	.835
Std. Dev:	.914
% C.V. :	14.531
Skewness:	-.681
Kurtosis:	2.166
Minimum :	4.407
25th % :	5.367
Median :	6.591
75th % :	6.953
Maximum :	7.371

$e^{7.1} = 1210$

A-278

	A	B
1	DATA	ID
2	5.08	Ser-Cu
3	11.8	Ser-Cu
4	12.6	Ser-Cu
5	17.3077	Ser-Cu
6	20.3	Ser-Cu
7	21.3	Ser-Cu
8	31.4	Ser-Cu
9	34.9	Ser-Cu
10	37.2	Ser-Cu
11	40.5	Ser-Cu
12	41.035	Ser-Cu
13	41.1	Ser-Cu
14	41.1	Ser-Cu
15	44.2283	Ser-Cu
16	44.8	Ser-Cu
17	44.9	Ser-Cu
18	50	Ser-Cu
19	50.1	Ser-Cu
20	51	Ser-Cu
21	51.468	Ser-Cu
22	53	Ser-Cu
23	64.5756	Ser-Cu
24	77.2727	Ser-Cu
25	95.9821	Ser-Cu

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	24	Mean	40.956
Censored	------	Lognormal mean	43.205
Detection limit or PQL	------	Std. devn.	20.771
Method detection limit		Median	41.1
TOTAL	24	Min.	5.08
ENTER DATA		Max.	95.9821

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.874

Normal distribution? r-squared is: 0.941

Recommendations:

Use normal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	5.08	Ser-Cu
3	11.8	Ser-Cu
4	12.6	Ser-Cu
5	17.3077	Ser-Cu
6	20.3	Ser-Cu
7	21.3	Ser-Cu
8	31.4	Ser-Cu
9	34.9	Ser-Cu
10	37.2	Ser-Cu
11	40.5	Ser-Cu
12	41.035	Ser-Cu
13	41.1	Ser-Cu
14	41.1	Ser-Cu
15	44.2283	Ser-Cu
16	44.8	Ser-Cu
17	44.9	Ser-Cu
18	50	Ser-Cu
19	50.1	Ser-Cu
20	51	Ser-Cu
21	51.468	Ser-Cu
22	53	Ser-Cu
23	64.5756	Ser-Cu
24	77.2727	Ser-Cu
25	95.9821	Ser-Cu

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	24	Mean	40.956
Censored	------	Lognormal mean	43.205
Detection limit or PQL	------	Std. devn.	20.771
Method detection limit		Median	41.1
TOTAL	24	Min.	5.08
ENTER DATA		Max	95.9821

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.874

Normal distribution? r-squared is: 0.941

Recommendations:

Reject lognormal distribution.

W value is 0.8842. This is less than the tabled value of 0.916

Assume normal distribution.

W value is 0.9469. This exceeds the tabled value of 0.916

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

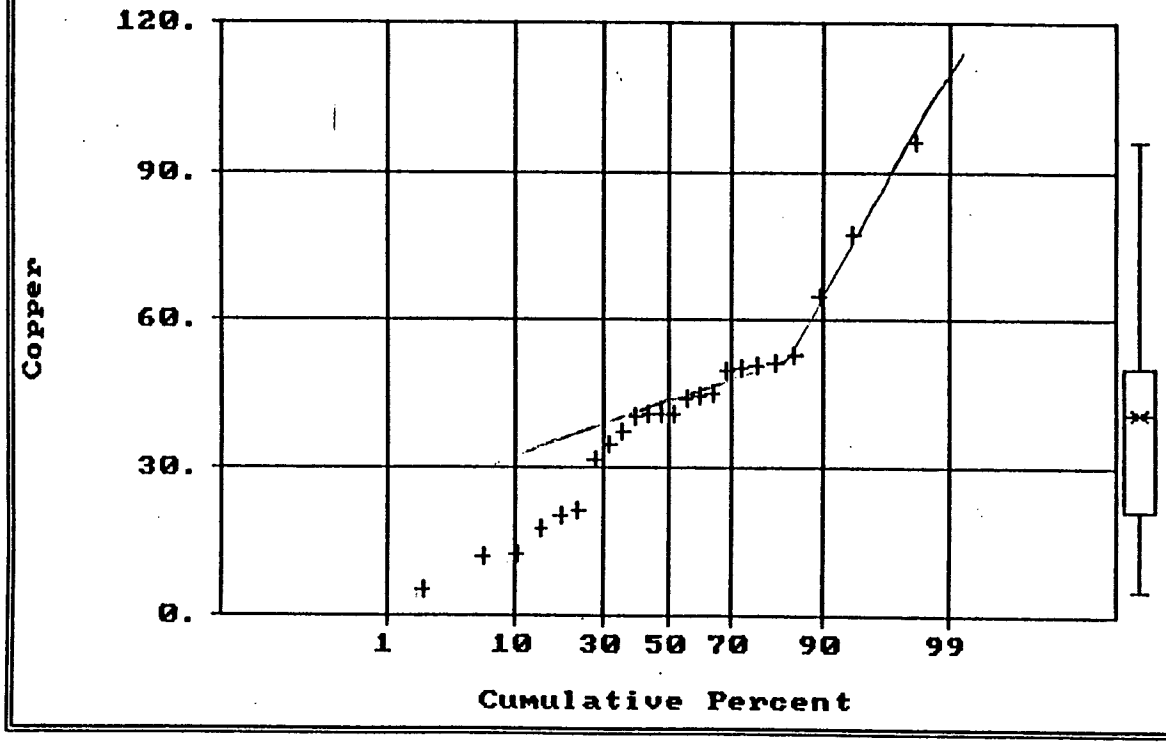
Normal

Neither

Sample size

A-280

Normal Probability Plot for Copper
Data file: ser-all.dat

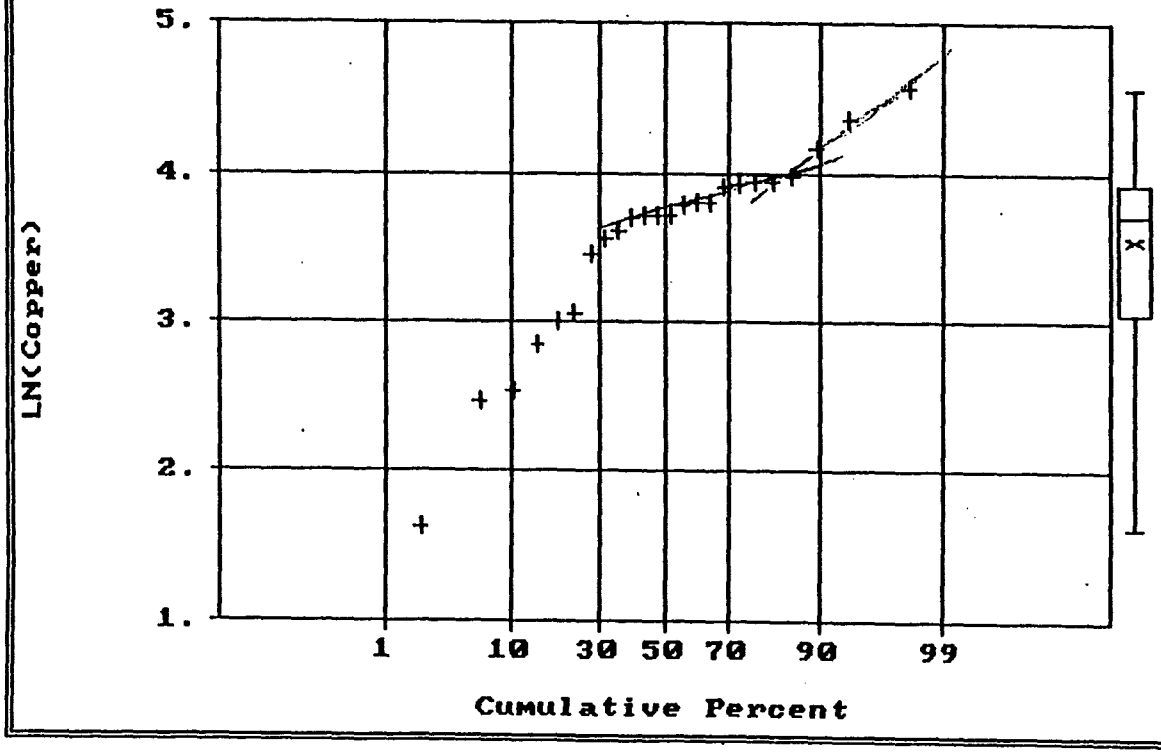


Statistics

N Total :	46
N Miss :	22
N Used :	24
Mean :	40.956
Variance:	431.452
Std. Dev:	20.771
% C.V. :	50.716
Skewness:	.539
Kurtosis:	3.645
Minimum :	5.080
25th % :	21.300
Median :	41.100
75th % :	50.100
Maximum :	95.982

A-281

Normal Probability Plot for LN(Copper)
Data file: ser-all.dat



Statistics

N Total :	46
N Miss :	22
N Used :	24
Mean :	3.548
Variance:	.436
Std. Dev:	.660
% C.V. :	18.601
Skewness:	-1.216
Kurtosis:	4.355
Minimum :	1.625
25th % :	3.059
Median :	3.716
75th % :	3.914
Maximum :	4.564

$e^4 = 55$

A-282

	A	B
1	DATA	ID
2	15625	Ser-Fe
3	18000	Ser-Fe
4	19000	Ser-Fe
5	21000	Ser-Fe
6	29000	Ser-Fe
7	35000	Ser-Fe
8	36000	Ser-Fe
9	37000	Ser-Fe
10	43000	Ser-Fe
11	44000	Ser-Fe
12	46000	Ser-Fe
13	50000	Ser-Fe
14	52700	Ser-Fe
15	54000	Ser-Fe
16	56826.5683	Ser-Fe
17	58000	Ser-Fe
18	58333.3333	Ser-Fe
19	60000	Ser-Fe
20	60000	Ser-Fe
21	60330.5785	Ser-Fe
22	70000	Ser-Fe
23	73229.7064	Ser-Fe
24	80674.4488	Ser-Fe
25	94301.664	Ser-Fe

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	24	Mean	48834.221
Censored	------	Lognormal mean	49737.701
Detection limit or PQL	------	Std. devn.	20280.918
Method detection limit		Median	51350
TOTAL	24	Min.	15625
ENTER DATA		Max.	94301.664

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.927

Normal distribution? r-squared is: 0.975

Recommendations:

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

A-283

	A	B
1	DATA	ID
2	15625	Ser-Fe
3	18000	Ser-Fe
4	19000	Ser-Fe
5	21000	Ser-Fe
6	29000	Ser-Fe
7	35000	Ser-Fe
8	36000	Ser-Fe
9	37000	Ser-Fe
10	43000	Ser-Fe
11	44000	Ser-Fe
12	46000	Ser-Fe
13	50000	Ser-Fe
14	52700	Ser-Fe
15	54000	Ser-Fe
16	56826.5683	Ser-Fe
17	58000	Ser-Fe
18	58333.3333	Ser-Fe
19	60000	Ser-Fe
20	60000	Ser-Fe
21	60330.5785	Ser-Fe
22	70000	Ser-Fe
23	73229.7064	Ser-Fe
24	80674.4488	Ser-Fe
25	94301.664	Ser-Fe

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	24	Mean	48834.221
Censored	------	Lognormal mean	49737.701
Detection limit or PQL	------	Std. devn.	20280.918
Method detection limit		Median	51350
TOTAL	24	Min.	15625
ENTER DATA		Max	94301.664

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.927

Normal distribution? r-squared is: 0.975

Recommendations:

Assume lognormal distribution.

W value is 0.9211. This exceeds the tabled value of 0.916

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

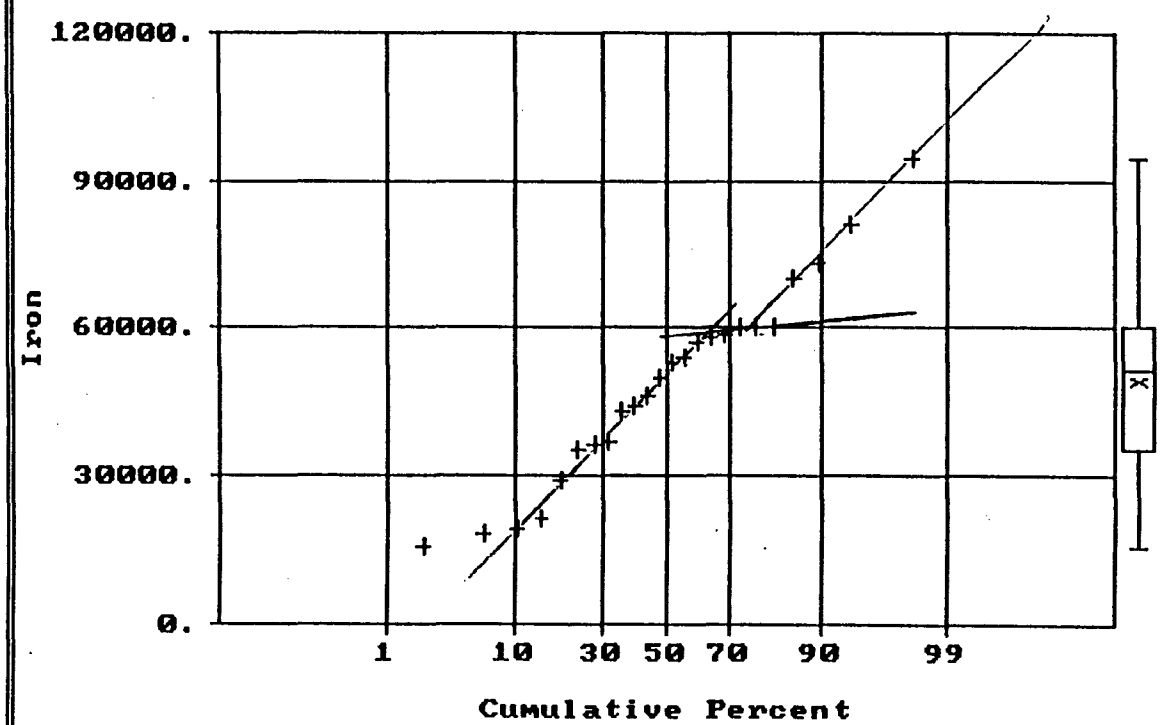
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Iron
Data file: ser-all.dat

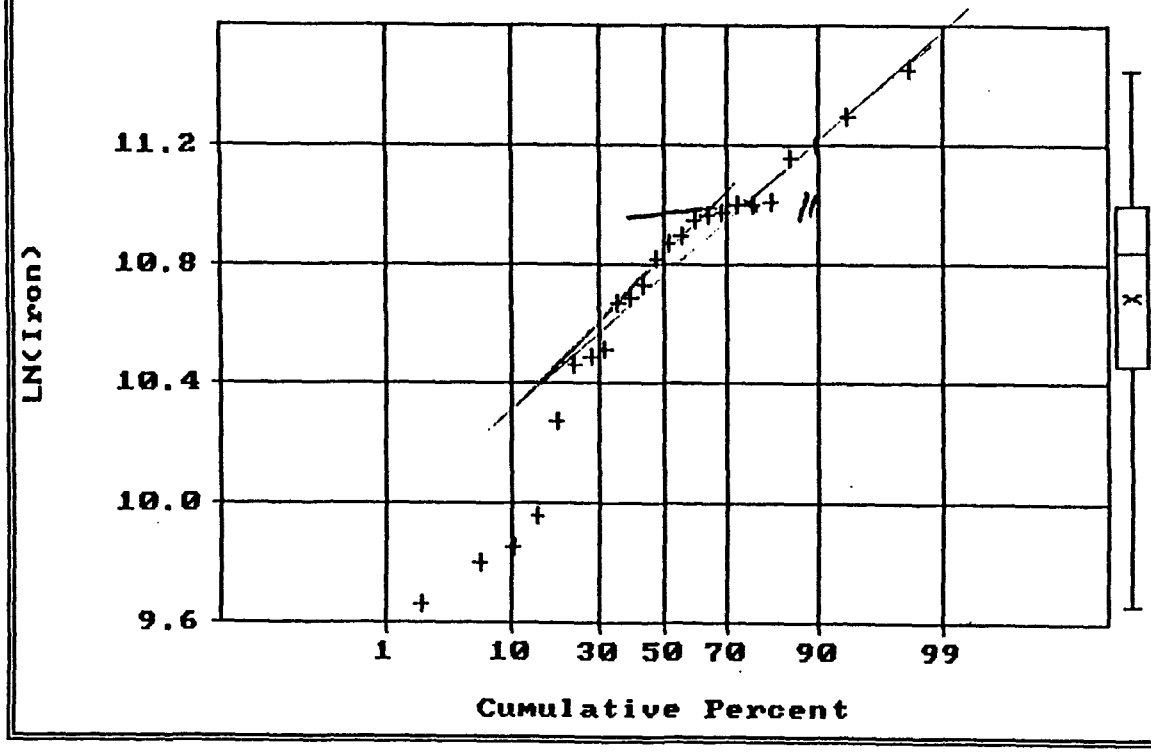


Statistics

N Total :	46
N Miss :	22
N Used :	24
Mean :	48834.220
Variance:	411315600.000
Std. Dev:	20280.920
% C.V. :	41.530
Skewness:	.151
Kurtosis:	2.595
Minimum :	15625.000
25th % :	35000.000
Median :	51350.000
75th % :	60000.000
Maximum :	94301.660

A-285

Normal Probability Plot for LN(Iron)
Data file: ser-all.dat



S t a t i s t i c s

N Total :	46
N Miss :	22
N Used :	24
Mean :	10.696
Variance:	.237
Std. Dev:	.487
% C.V. :	4.551
Skewness:	-.739
Kurtosis:	2.655
Minimum :	9.657
25th % :	10.463
Median :	10.846
75th % :	11.002
Maximum :	11.454

$e^{11} = 60$

A-286

	A	B
1	DATA	ID
2	0.0135	Ser-Hg
3	0.0135	Ser-Hg
4	0.0135	Ser-Hg
5	0.0135	Ser-Hg
6	0.0135	Ser-Hg
7	0.025	Ser-Hg
8	0.025	Ser-Hg
9	0.0295	Ser-Hg
10	0.0295	Ser-Hg
11	0.0295	Ser-Hg
12	0.0295	Ser-Hg
13	0.0295	Ser-Hg
14	0.0295	Ser-Hg
15	0.034	Ser-Hg
16	0.04	Ser-Hg
17	0.042	Ser-Hg
18	0.043	Ser-Hg
19	0.049	Ser-Hg
20	0.057	Ser-Hg
21	0.063	Ser-Hg
22	0.067	Ser-Hg
23	0.069	Ser-Hg
24	0.077	Ser-Hg
25	0.151	Ser-Hg

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	24	Mean	0.041
Censored	------	Lognormal mean	0.041
Detection limit or PQL	------	Std. devn.	0.030
Method detection limit		Median	0.0295
TOTAL	24	Min.	0.0135
ENTER DATA		Max.	0.151

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.942

Normal distribution? r-squared is: 0.758

Recommendations:

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

A-287

	A	B
1	DATA	ID
2	0.0135	Ser-Hg
3	0.0135	Ser-Hg
4	0.0135	Ser-Hg
5	0.0135	Ser-Hg
6	0.0135	Ser-Hg
7	0.025	Ser-Hg
8	0.025	Ser-Hg
9	0.0295	Ser-Hg
10	0.0295	Ser-Hg
11	0.0295	Ser-Hg
12	0.0295	Ser-Hg
13	0.0295	Ser-Hg
14	0.0295	Ser-Hg
15	0.034	Ser-Hg
16	0.04	Ser-Hg
17	0.042	Ser-Hg
18	0.043	Ser-Hg
19	0.049	Ser-Hg
20	0.057	Ser-Hg
21	0.063	Ser-Hg
22	0.067	Ser-Hg
23	0.069	Ser-Hg
24	0.077	Ser-Hg
25	0.151	Ser-Hg

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	24	Mean	0.041
Censored	------	Lognormal mean	0.041
Detection limit or PQL	------	Std. devn.	0.030
Method detection limit		Median	0.0295
TOTAL	24	Min.	0.0135
ENTER DATA		Max.	0.151

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.942

Normal distribution? r-squared is: 0.758

Recommendations:

Assume lognormal distribution.

W value is 0.9369. This exceeds the tabled value of 0.916

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

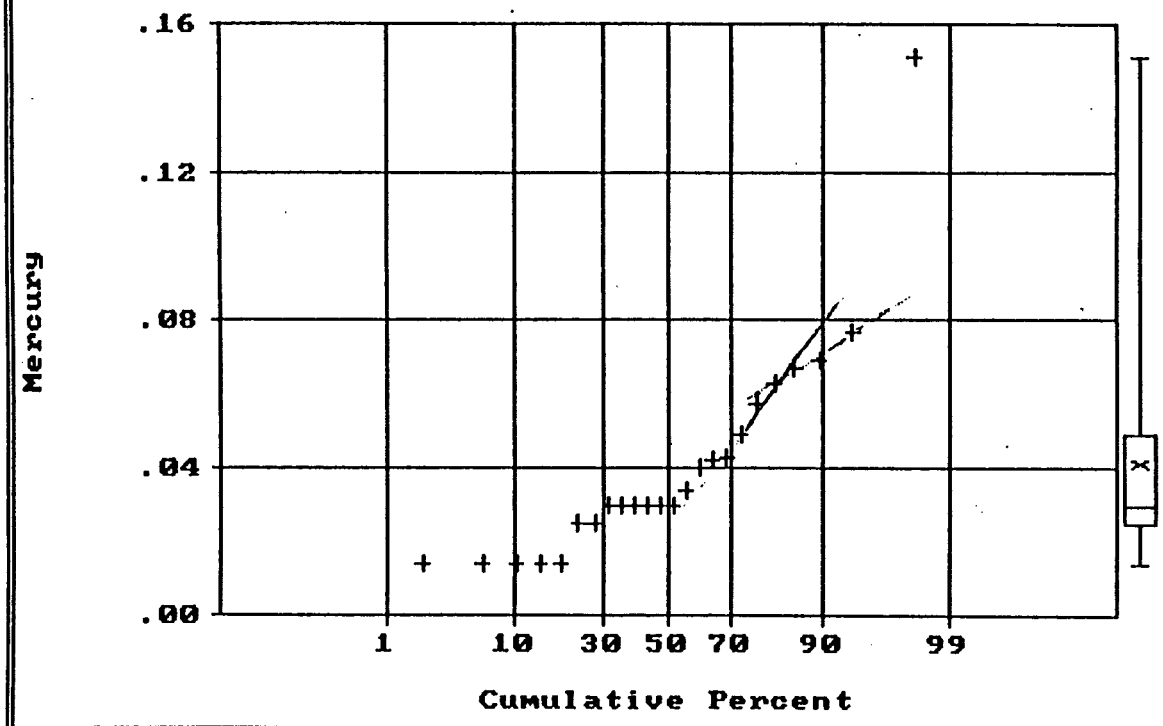
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Mercury
Data file: ser-all.dat



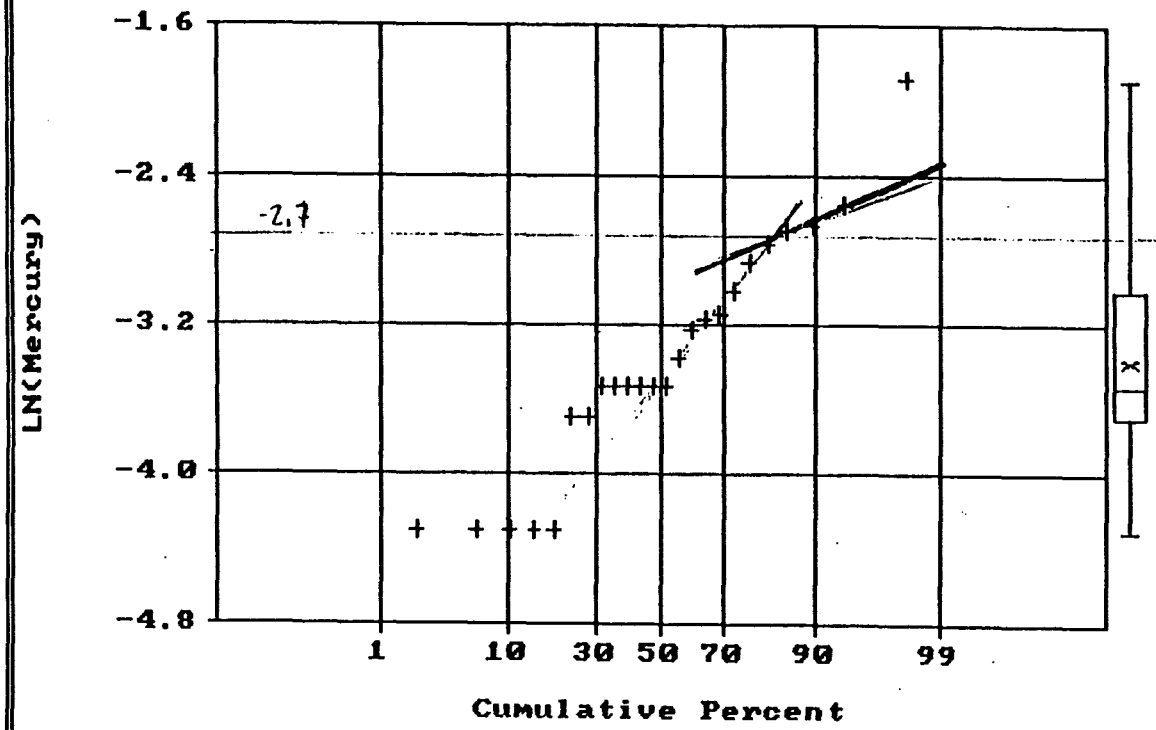
S t a t i s t i c s

N Total :	46
N Miss :	22
N Used :	24
Mean :	.041
Variance:	.001
Std. Dev:	.030
% C.V. :	73.164
Skewness:	2.130
Kurtosis:	8.432
Minimum :	.014
25th % :	.025
Median :	.030
75th % :	.049
Maximum :	.151

0.07

A-289

Normal Probability Plot for LN(Mercury)
Data file: ser-all.dat



Statistics

N Total :	46
N Miss :	22
N Used :	24
Mean :	-3.393
Variance:	.406
Std. Dev:	.637
% C.V. :	18.772
Skewness:	.222
Kurtosis:	2.702
Minimum :	-4.305
25th % :	-3.689
Median :	-3.523
75th % :	-3.016
Maximum :	-1.890

A-290

	A	B
1	DATA	ID
2	249	Ser-Mn
3	252.2321	Ser-Mn
4	355.3719	Ser-Mn
5	370	Ser-Mn
6	473	Ser-Mn
7	504	Ser-Mn
8	505	Ser-Mn
9	590.1427	Ser-Mn
10	594.0959	Ser-Mn
11	601	Ser-Mn
12	612	Ser-Mn
13	613	Ser-Mn
14	762	Ser-Mn
15	791	Ser-Mn
16	802	Ser-Mn
17	811	Ser-Mn
18	811	Ser-Mn
19	822	Ser-Mn
20	825.641	Ser-Mn
21	870	Ser-Mn
22	1024.556	Ser-Mn
23	1140	Ser-Mn
24	1200	Ser-Mn
25	2089.81	Ser-Mn

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	24	Mean	736.160
Censored	------	Lognormal mean	740.173
Detection limit or PQL	------	Std. devn.	382.429
Method detection limit	------	Median	687.5
TOTAL	24	Min.	249
ENTER DATA		Max.	2089.81

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.955

Normal distribution? r-squared is: 0.819

Recommendations:

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	249	Ser-Mn
3	252.2321	Ser-Mn
4	355.3719	Ser-Mn
5	370	Ser-Mn
6	473	Ser-Mn
7	504	Ser-Mn
8	505	Ser-Mn
9	590.1427	Ser-Mn
10	594.0959	Ser-Mn
11	601	Ser-Mn
12	612	Ser-Mn
13	613	Ser-Mn
14	762	Ser-Mn
15	791	Ser-Mn
16	802	Ser-Mn
17	811	Ser-Mn
18	811	Ser-Mn
19	822	Ser-Mn
20	825.641	Ser-Mn
21	870	Ser-Mn
22	1024.556	Ser-Mn
23	1140	Ser-Mn
24	1200	Ser-Mn
25	2089.81	Ser-Mn

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	24	Mean	736.160
Censored	------	Lognormal mean	740.173
Detection limit or PQL	------	Std. devn.	382.429
Method detection limit		Median	687.5
TOTAL	24	Min.	249
ENTER DATA		Max	2089.81

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.955

Normal distribution? r-squared is: 0.819

Recommendations:

Assume lognormal distribution.

W value is 0.9608. This exceeds the tabled value of 0.916

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

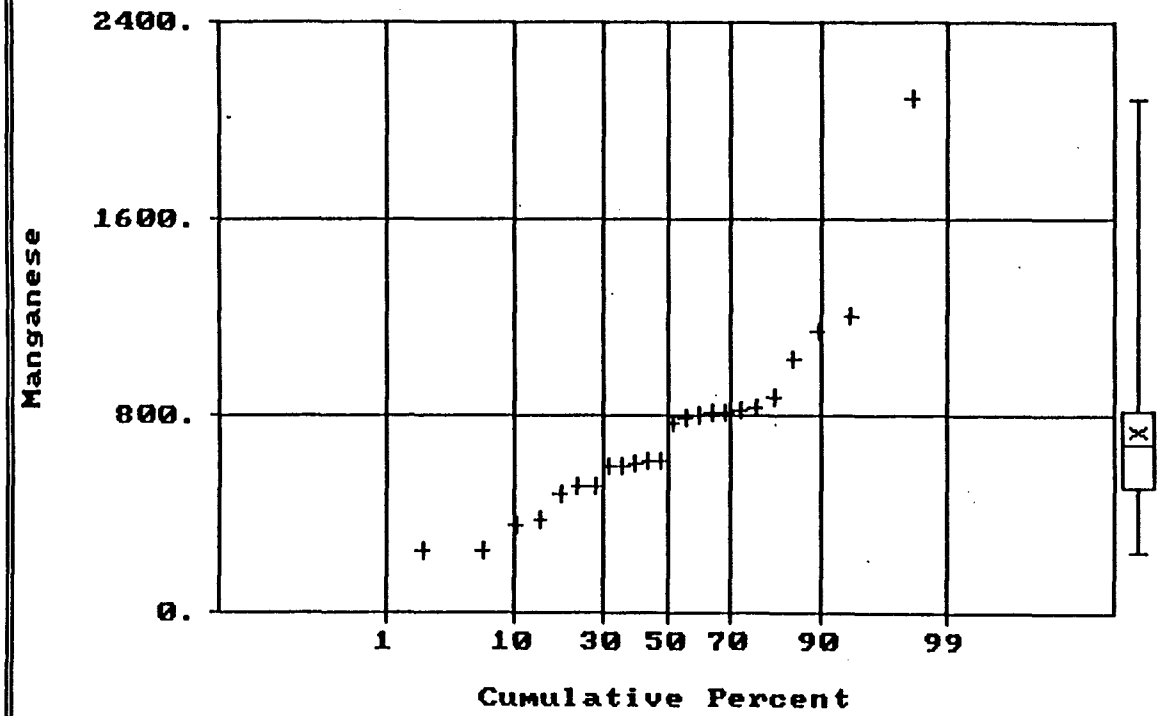
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Manganese
Data file: ser-all.dat

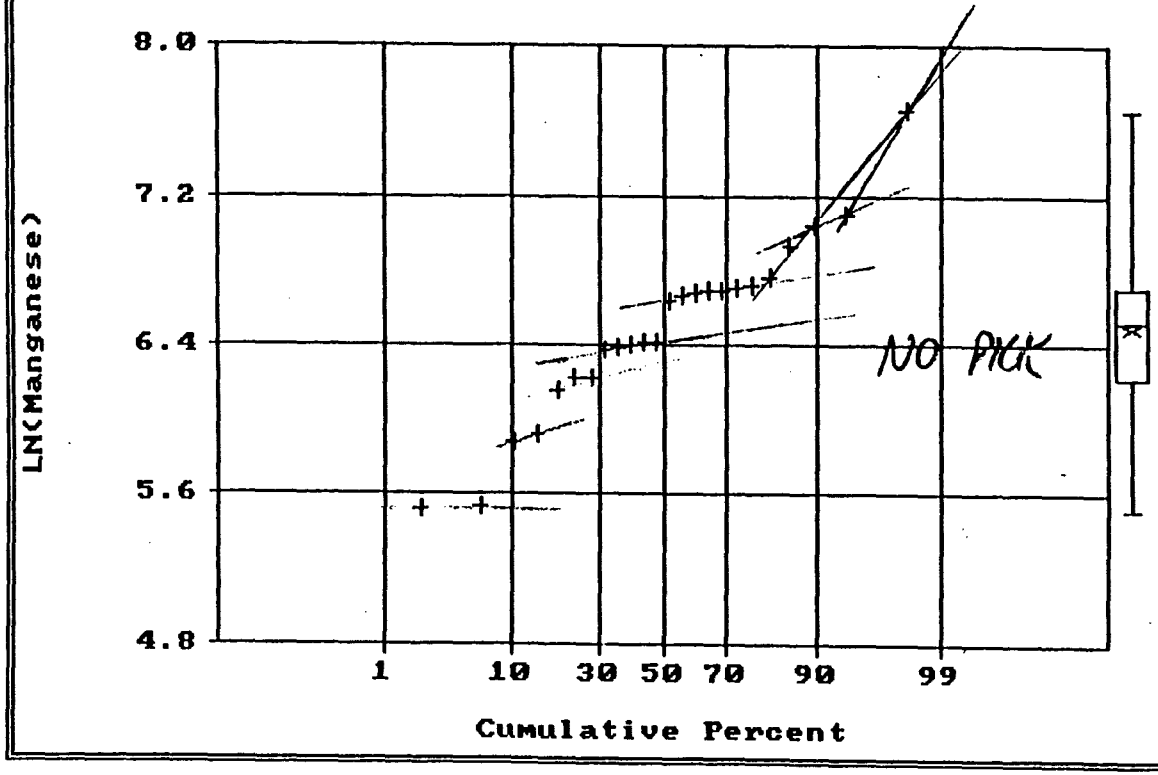


Statistics

N Total :	46
N Miss :	22
N Used :	24
Mean :	736.160
Variance:	146252.200
Std. Dev:	382.429
% C.V. :	51.949
Skewness:	1.816
Kurtosis:	7.636
Minimum :	249.000
25th % :	504.000
Median :	687.500
75th % :	822.000
Maximum :	2089.810

A-293

Normal Probability Plot for LN(Manganese)
Data file: ser-all.dat



Statistics

N Total :	46
N Miss :	22
N Used :	24
Mean :	6.489
Variance:	.236
Std. Dev:	.485
% C.V. :	7.482
Skewness:	-.080
Kurtosis:	3.327
Minimum :	5.517
25th % :	6.223
Median :	6.527
75th % :	6.712
Maximum :	7.645

	A	B
1	DATA	ID
2	71	Ser-Ni
3	99.4	Ser-Ni
4	131	Ser-Ni
5	141	Ser-Ni
6	212	Ser-Ni
7	238.8393	Ser-Ni
8	325	Ser-Ni
9	381.1983	Ser-Ni
10	559	Ser-Ni
11	927	Ser-Ni
12	1020	Ser-Ni
13	1120	Ser-Ni
14	1300	Ser-Ni
15	1840	Ser-Ni
16	1943.4194	Ser-Ni
17	2040	Ser-Ni
18	2100	Ser-Ni
19	2190	Ser-Ni
20	2310	Ser-Ni
21	2526.662	Ser-Ni
22	2538.4615	Ser-Ni
23	3350	Ser-Ni
24	3670.5577	Ser-Ni
25	3955.095	Ser-Ni

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	24	Mean	1457.901
Censored	------	Lognormal mean	1861.205
Detection limit or PQL	------	Std. devn.	1208.348
Method detection limit	------	Median	1210
TOTAL	24	Min.	71
ENTER DATA		Max	3955.095

Distribution Decision

Probability plot method	W test	D'Agostino's test
Lognormal distribution?	Normal distribution?	
r-squared is: 0.912	r-squared is: 0.922	

Recommendations:

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	71	Ser-Ni
3	99.4	Ser-Ni
4	131	Ser-Ni
5	141	Ser-Ni
6	212	Ser-Ni
7	238.8393	Ser-Ni
8	325	Ser-Ni
9	381.1983	Ser-Ni
10	559	Ser-Ni
11	927	Ser-Ni
12	1020	Ser-Ni
13	1120	Ser-Ni
14	1300	Ser-Ni
15	1840	Ser-Ni
16	1943.4194	Ser-Ni
17	2040	Ser-Ni
18	2100	Ser-Ni
19	2190	Ser-Ni
20	2310	Ser-Ni
21	2526.662	Ser-Ni
22	2538.4615	Ser-Ni
23	3350	Ser-Ni
24	3670.5577	Ser-Ni
25	3955.095	Ser-Ni

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	24	Mean	1457.901
Censored	------	Lognormal mean	1861.205
Detection limit or PQL	------	Std. devn.	1208.348
Method detection limit	------	Median	1210
TOTAL	24	Min.	71
ENTER DATA		Max	3955.095

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.912

Normal distribution? r-squared is: 0.922

Recommendations:

Reject lognormal distribution.

W value is 0.8971. This is less than the tabled value of 0.916

Reject normal distribution.

W value is 0.907. This is less than the tabled value of 0.916

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

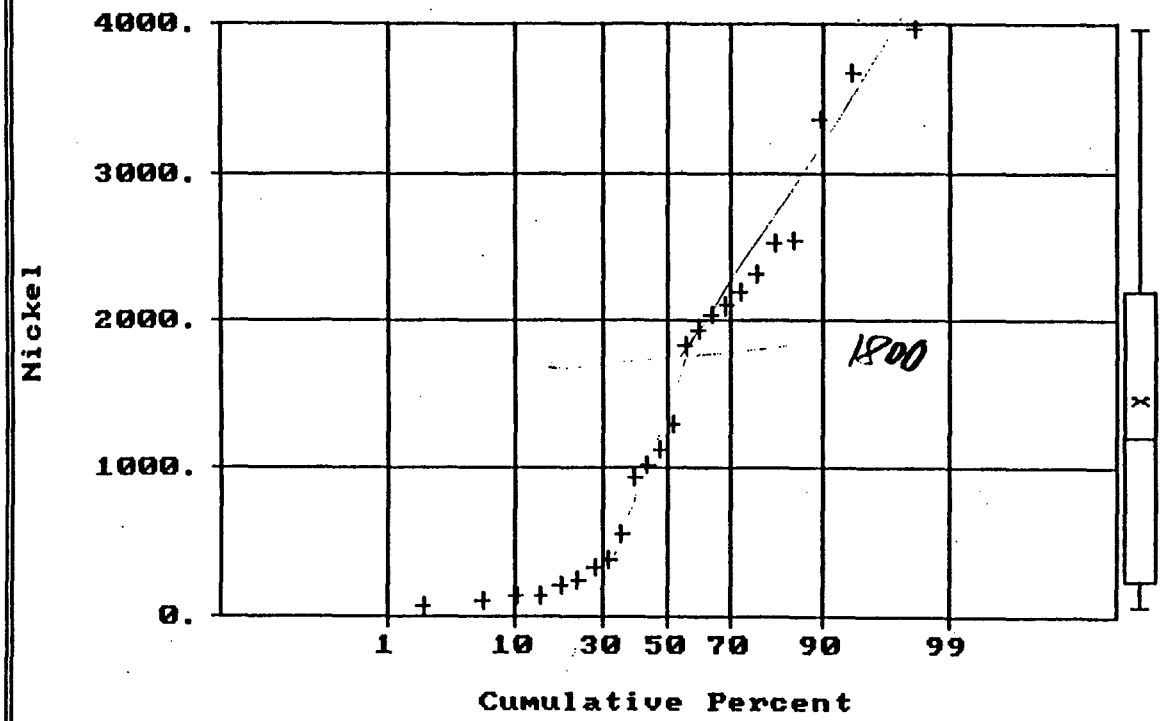
Normal

Neither

Sample size

A-296

Normal Probability Plot for Nickel
Data file: ser-all.dat

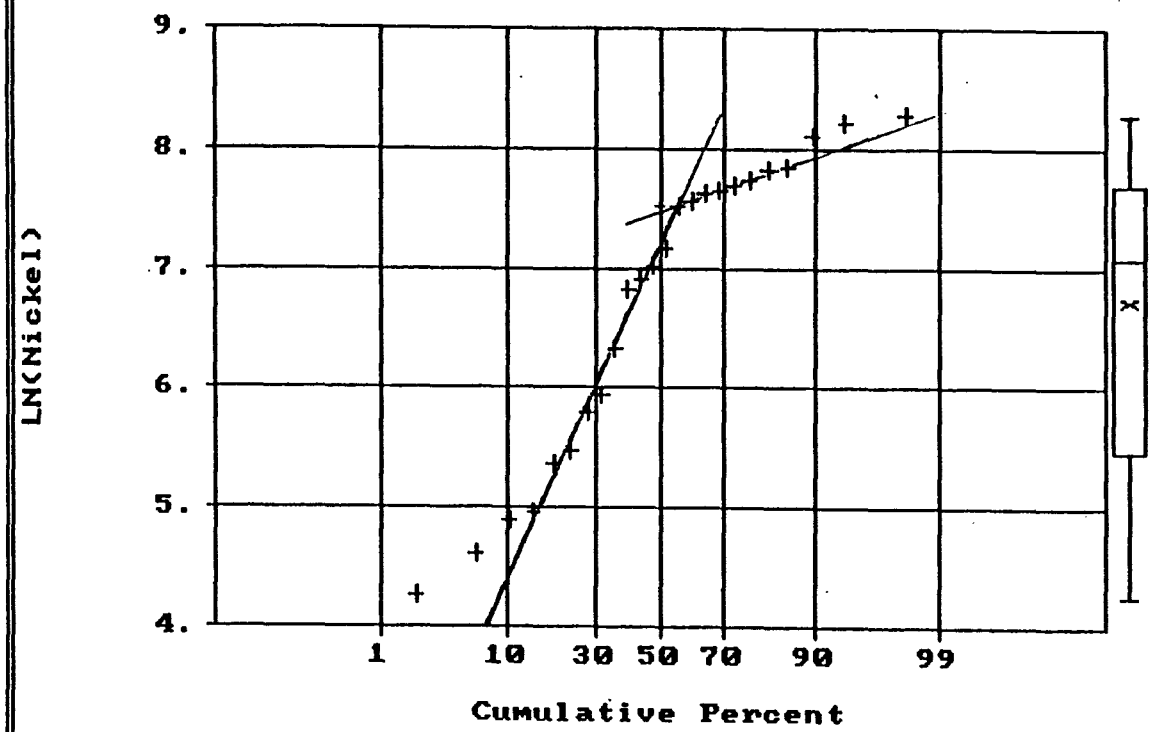


Statistics

N Total :	46
N Miss :	22
N Used :	24
Mean :	1457.901
Variance:	1460105.000
Std. Dev:	1208.348
% C.V. :	82.883
Skewness:	.505
Kurtosis:	2.152
Minimum :	71.000
25th % :	238.839
Median :	1210.000
75th % :	2190.000
Maximum :	3955.095

A-297

Normal Probability Plot for LN(Nickel)
Data file: ser-all.dat



Statistics

N Total :	46
N Miss :	22
N Used :	24
Mean :	6.733
Variance:	1.591
Std. Dev:	1.261
% C.V. :	18.734
Skewness:	-.577
Kurtosis:	1.947
Minimum :	4.263
25th % :	5.476
Median :	7.096
75th % :	7.692
Maximum :	8.283

$e^{7.5} = 1800$

A-298

	A	B
1	DATA	ID
2	0.235	Ser-Pb
3	0.482	Ser-Pb
4	0.769	Ser-Pb
5	1.82	Ser-Pb
6	2.4	Ser-Pb
7	3.44	Ser-Pb
8	3.68	Ser-Pb
9	3.72	Ser-Pb
10	3.72	Ser-Pb
11	3.95	Ser-Pb
12	4.0128	Ser-Pb
13	4.4772	Ser-Pb
14	4.68	Ser-Pb
15	4.77	Ser-Pb
16	4.77	Ser-Pb
17	4.8	Ser-Pb
18	6.29	Ser-Pb
19	8.33	Ser-Pb
20	9.04	Ser-Pb
21	12.5	Ser-Pb
22	12.5	Ser-Pb
23	12.5	Ser-Pb
24	12.5	Ser-Pb
25	12.5	Ser-Pb
26	12.5	Ser-Pb
27	12.5	Ser-Pb
28	12.5	Ser-Pb
29	12.5	Ser-Pb
30	12.5	Ser-Pb
31	12.5	Ser-Pb
32	12.5	Ser-Pb
33	19.0083	Ser-Pb
34	22	Ser-Pb
35	29	Ser-Pb
36	34.5982	Ser-Pb
37	57	Ser-Pb
38	57.3	Ser-Pb
39	82.8	Ser-Pb
40	100	Ser-Pb
41	100	Ser-Pb
42	160	Ser-Pb
43	300	Ser-Pb
44	335	Ser-Pb
45	390	Ser-Pb
46	896	Ser-Pb
47	1090	Ser-Pb

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	46	Mean	84.741
Censored	------	Lognormal mean	75.922
Detection limit or PQL	------	Std. devn.	214.945
Method detection limit		Median	12.5
TOTAL	46	Min.	0.235
ENTER DATA		Max.	1090

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.950

Normal distribution? r-squared is: 0.413

Recommendations:

Assume lognormal distribution.

W value is 0.9481. This exceeds the tabled value of 0.945

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	0.235	Ser-Pb
3	0.482	Ser-Pb
4	0.769	Ser-Pb
5	1.82	Ser-Pb
6	2.4	Ser-Pb
7	3.44	Ser-Pb
8	3.68	Ser-Pb
9	3.72	Ser-Pb
10	3.72	Ser-Pb
11	3.95	Ser-Pb
12	4.0128	Ser-Pb
13	4.4772	Ser-Pb
14	4.68	Ser-Pb
15	4.77	Ser-Pb
16	4.77	Ser-Pb
17	4.8	Ser-Pb
18	6.29	Ser-Pb
19	8.33	Ser-Pb
20	9.04	Ser-Pb
21	12.5	Ser-Pb
22	12.5	Ser-Pb
23	12.5	Ser-Pb
24	12.5	Ser-Pb
25	12.5	Ser-Pb
26	12.5	Ser-Pb
27	12.5	Ser-Pb
28	12.5	Ser-Pb
29	12.5	Ser-Pb
30	12.5	Ser-Pb
31	12.5	Ser-Pb
32	12.5	Ser-Pb
33	19.0083	Ser-Pb
34	22	Ser-Pb
35	29	Ser-Pb
36	34.5982	Ser-Pb
37	57	Ser-Pb
38	57.3	Ser-Pb
39	82.8	Ser-Pb
40	100	Ser-Pb
41	100	Ser-Pb
42	160	Ser-Pb
43	300	Ser-Pb
44	335	Ser-Pb
45	390	Ser-Pb
46	896	Ser-Pb
47	1090	Ser-Pb

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	46	Mean	84.741
Censored	------	Lognormal mean	75.922
Detection limit or PQL	------	Std. devn.	214.945
Method detection limit		Median	12.5
TOTAL	46	Min.	0.235
ENTER DATA		Max.	1090

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.950

Normal distribution? r-squared is: 0.413

Recommendations:

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

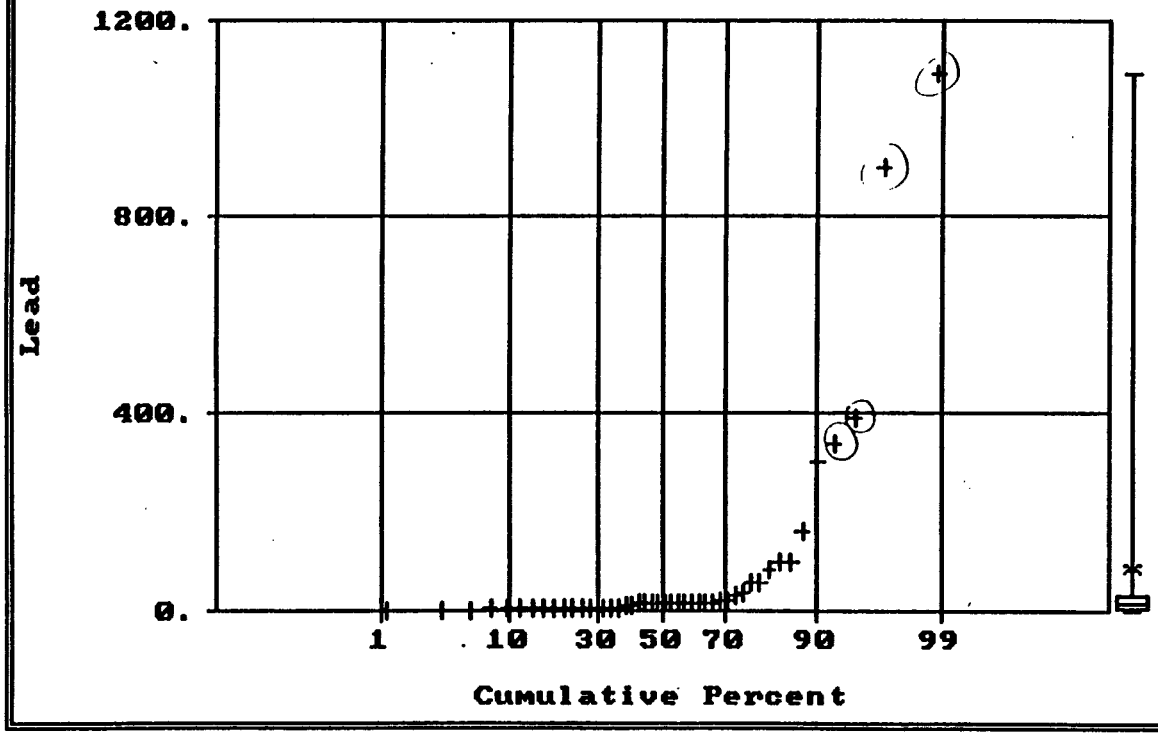
Normal

Neither

Sample size

A-300

Normal Probability Plot for Lead
Data file: ser-all.dat

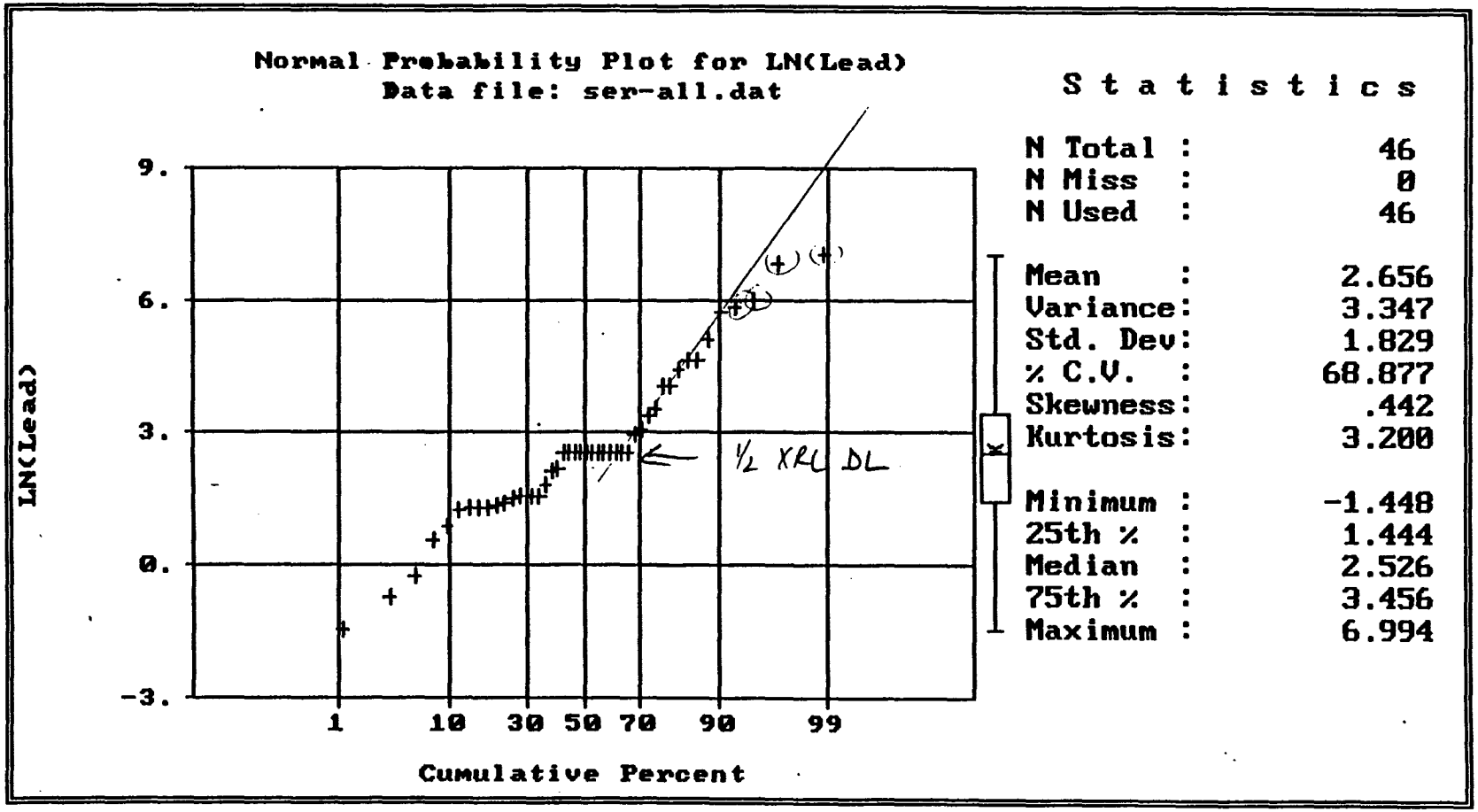


Statistics

N Total :	46
N Miss :	0
N Used :	46
Mean :	84.741
Variance:	46201.210
Std. Dev:	214.945
% C.V. :	253.649
Skewness:	3.595
Kurtosis:	15.647
Minimum :	.235
25th % :	4.245
Median :	12.500
75th % :	31.799
Maximum :	1090.000

4 outliers

A-301



4 outliers

A-302

	A	B
1	DATA	ID
2	2.5	Ser-Sb
3	9.8	Ser-Sb
4	9.8	Ser-Sb
5	12.5	Ser-Sb
6	12.5	Ser-Sb
7	12.5	Ser-Sb
8	12.5	Ser-Sb
9	12.5	Ser-Sb
10	12.5	Ser-Sb
11	12.5	Ser-Sb
12	12.5	Ser-Sb
13	12.5	Ser-Sb
14	20.65	Ser-Sb
15	20.65	Ser-Sb
16	20.65	Ser-Sb
17	20.65	Ser-Sb
18	20.65	Ser-Sb
19	20.65	Ser-Sb
20	20.65	Ser-Sb
21	20.65	Ser-Sb
22	71.9	Ser-Sb
23	100	Ser-Sb
24	123	Ser-Sb
25	125	Ser-Sb
26	167	Ser-Sb
27	190	Ser-Sb
28	195	Ser-Sb

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	27	Mean	47.100
Censored	------	Lognormal mean	45.523
Detection limit or PQL	------	Std. devn.	59.826
Method detection limit	------	Median	20.65
TOTAL	27	Min.	2.5
ENTER DATA		Max	195

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.844

Normal distribution? r-squared is: 0.663

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	2.5	Ser-Sb
3	9.8	Ser-Sb
4	9.8	Ser-Sb
5	12.5	Ser-Sb
6	12.5	Ser-Sb
7	12.5	Ser-Sb
8	12.5	Ser-Sb
9	12.5	Ser-Sb
10	12.5	Ser-Sb
11	12.5	Ser-Sb
12	12.5	Ser-Sb
13	12.5	Ser-Sb
14	20.65	Ser-Sb
15	20.65	Ser-Sb
16	20.65	Ser-Sb
17	20.65	Ser-Sb
18	20.65	Ser-Sb
19	20.65	Ser-Sb
20	20.65	Ser-Sb
21	20.65	Ser-Sb
22	71.9	Ser-Sb
23	100	Ser-Sb
24	123	Ser-Sb
25	125	Ser-Sb
26	167	Ser-Sb
27	190	Ser-Sb
28	195	Ser-Sb

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	27	Mean	47.100
Censored	------	Lognormal mean	45.523
Detection limit or PQL	------	Std. devn.	59.826
Method detection limit		Median	20.65
TOTAL	27	Min.	2.5
ENTER DATA		Max.	195

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.844

Normal distribution? r-squared is: 0.663

Recommendations:

Reject lognormal distribution.

W value is 0.8443. This is less than the tabled value of 0.923

Reject normal distribution.

W value is 0.6586. This is less than the tabled value of 0.923

Upper Confidence Limit (UCL)

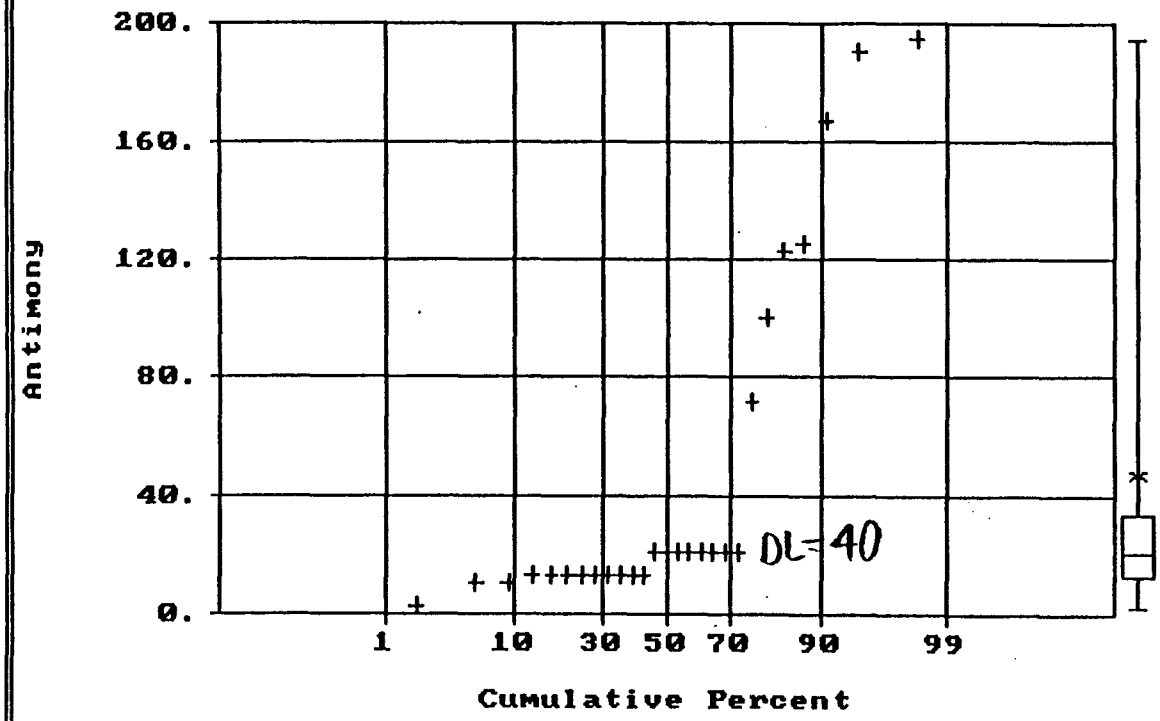
G: Paste values | Sort data | Create report | Clear all | Histogram | 5 | 10 | 20

Clear messages

Calculate UCL: Lognormal | Normal | Neither | Sample size

H

Normal Probability Plot for Antimony
Data file: ser-all.dat

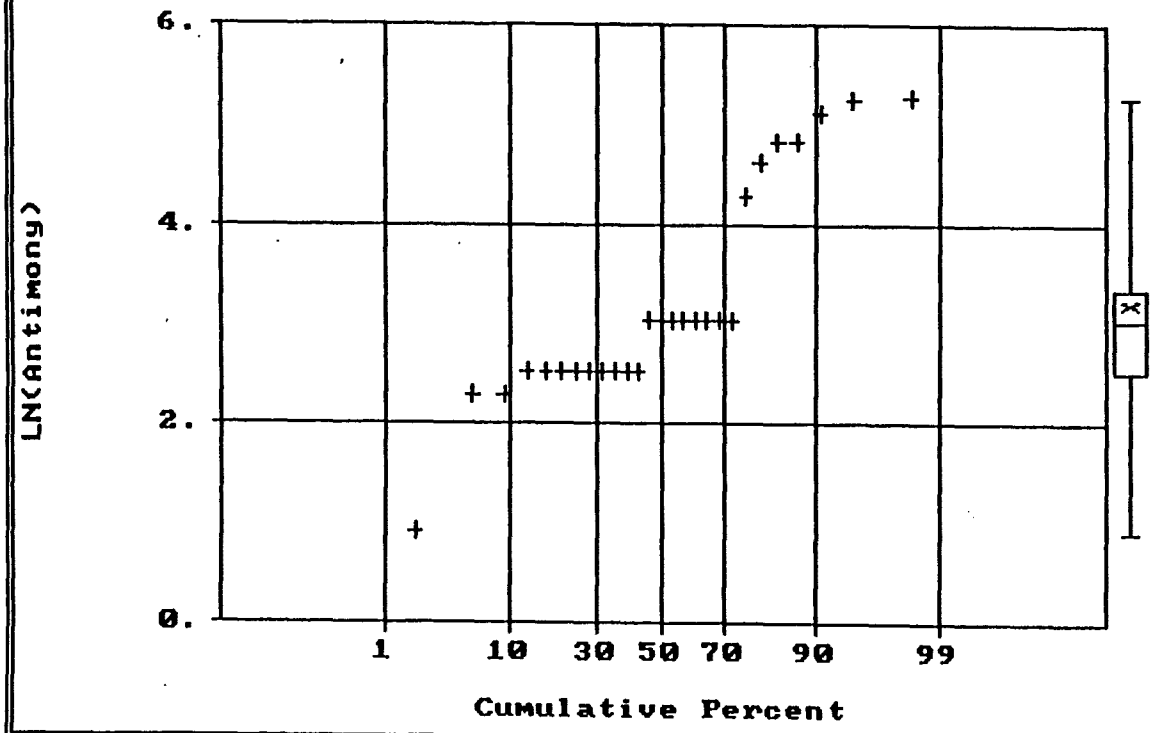


Statistics

N Total :	46
N Miss :	19
N Used :	27
Mean :	47.100
Variance:	3579.096
Std. Dev:	59.826
% C.V. :	127.018
Skewness:	1.508
Kurtosis:	3.757
Minimum :	2.500
25th % :	12.500
Median :	20.650
75th % :	33.463
Maximum :	195.000

A-305

Normal Probability Plot for LN(Antimony)
Data file: ser-all.dat



Statistics

N Total :	46
N Miss :	19
N Used :	27
Mean :	3.207
Variance:	1.222
Std. Dev:	1.105
% C.V. :	34.469
Skewness:	.584
Kurtosis:	2.634
Minimum :	.916
25th % :	2.526
Median :	3.028
75th % :	3.340
Maximum :	5.273

A-306

	A	B
1	DATA	ID
2	0.125	Ser-Se
3	0.125	Ser-Se
4	0.125	Ser-Se
5	0.125	Ser-Se
6	0.125	Ser-Se
7	0.125	Ser-Se
8	0.125	Ser-Se
9	0.125	Ser-Se
10	0.125	Ser-Se
11	0.125	Ser-Se
12	0.125	Ser-Se
13	0.125	Ser-Se
14	0.208	Ser-Se
15	0.208	Ser-Se
16	0.208	Ser-Se
17	0.208	Ser-Se
18	0.208	Ser-Se
19	0.208	Ser-Se
20	0.2245	Ser-Se
21	0.2245	Ser-Se
22	0.6	Ser-Se
23	1.29	Ser-Se
24	1.39	Ser-Se
25	2.37	Ser-Se

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	24	Mean	0.369
Censored	------	Lognormal mean	0.317
Detection limit or PQL	------	Std. devn.	0.546
Method detection limit	------	Median	0.1665
TOTAL	24	Min.	0.125
ENTER DATA		Max.	2.37

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.678

Normal distribution? r-squared is: 0.491

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

Version 1.0

A-307

	A	B
1	DATA	ID
2	0.125	Ser-Se
3	0.125	Ser-Se
4	0.125	Ser-Se
5	0.125	Ser-Se
6	0.125	Ser-Se
7	0.125	Ser-Se
8	0.125	Ser-Se
9	0.125	Ser-Se
10	0.125	Ser-Se
11	0.125	Ser-Se
12	0.125	Ser-Se
13	0.125	Ser-Se
14	0.208	Ser-Se
15	0.208	Ser-Se
16	0.208	Ser-Se
17	0.208	Ser-Se
18	0.208	Ser-Se
19	0.208	Ser-Se
20	0.2245	Ser-Se
21	0.2245	Ser-Se
22	0.6	Ser-Se
23	1.29	Ser-Se
24	1.39	Ser-Se
25	2.37	Ser-Se

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	24	Mean	0.369
Censored	------	Lognormal mean	0.317
Detection limit or PQL	------	Std. devn.	0.546
Method detection limit		Median	0.1665
TOTAL	24	Min.	0.125
ENTER DATA		Max	2.37

Distribution Decision

Probability plot method	W test	D'Agostino's test
Lognormal distribution?	Normal distribution?	
r-squared is: 0.678	r-squared is: 0.491	

Recommendations:

Reject lognormal distribution.

W value is 0.6775. This is less than the tabled value of 0.916

Reject normal distribution.

W value is 0.5076. This is less than the tabled value of 0.916

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

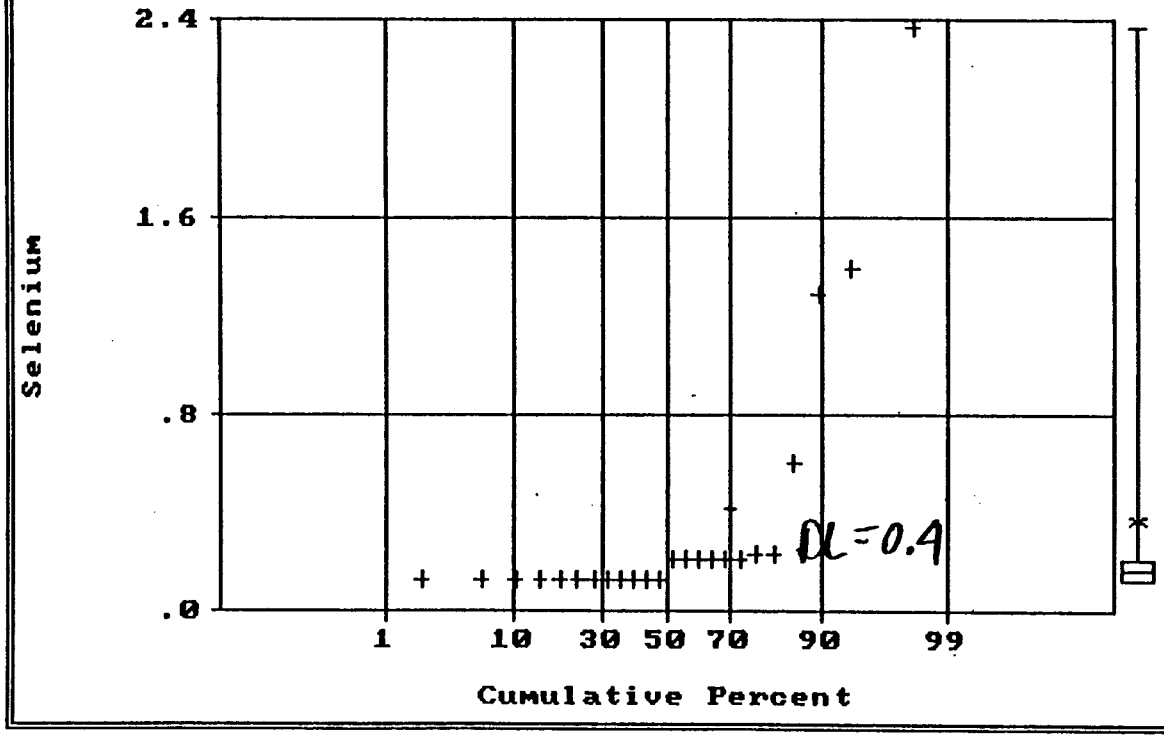
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Selenium
Data file: ser-all.dat



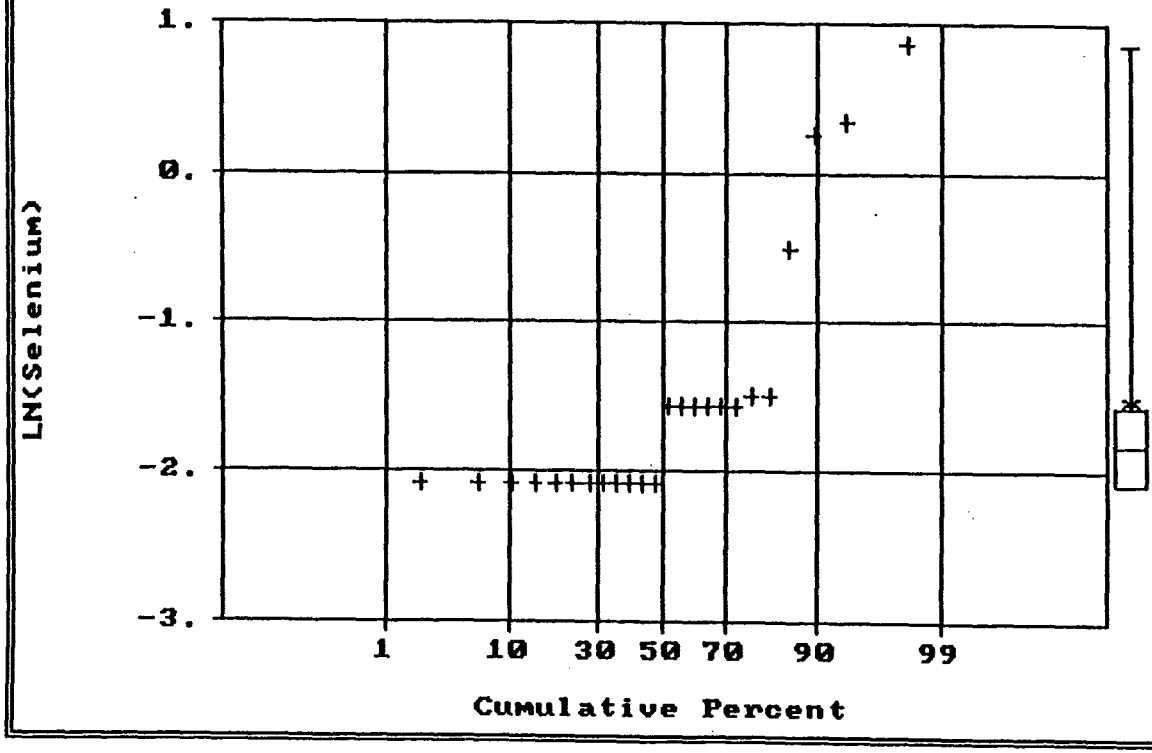
Statistics

N Total :	46
N Miss :	22
N Used :	24
Mean :	.369
Variance:	.298
Std. Dev:	.546
% C.V. :	148.151
Skewness:	2.637
Kurtosis:	9.131
Minimum :	.125
25th % :	.125
Median :	.167
75th % :	.208
Maximum :	2.370

ALL DETECTS

A-309

Normal Probability Plot for LN(Selenium)
Data file: ser-all.dat



Statistics

N Total :	46
N Miss :	22
N Used :	24
Mean :	-1.518
Variance:	.741
Std. Dev:	.861
% C.V. :	56.707
Skewness:	1.690
Kurtosis:	4.618
Minimum :	-2.079
25th % :	-2.079
Median :	-1.825
75th % :	-1.570
Maximum :	.863

A-310

	A	B
1	DATA	ID
2	0.2	Ser-Ag
3	0.25	Ser-Ag
4	0.25	Ser-Ag
5	0.2605	Ser-Ag
6	0.2605	Ser-Ag
7	0.2605	Ser-Ag
8	0.2605	Ser-Ag
9	0.2605	Ser-Ag
10	0.2605	Ser-Ag
11	0.2605	Ser-Ag
12	0.2605	Ser-Ag
13	0.2605	Ser-Ag
14	0.322	Ser-Ag
15	0.4015	Ser-Ag
16	0.4015	Ser-Ag
17	0.654	Ser-Ag
18	0.912	Ser-Ag
19	1.44	Ser-Ag
20	1.6732	Ser-Ag
21	2	Ser-Ag
22	2.33	Ser-Ag
23	2.53	Ser-Ag
24	2.63	Ser-Ag

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	23	Mean	0.797
Censored	------	Lognormal mean	0.773
Detection limit or PQL	------	Std. devn.	0.838
Method detection limit		Median	0.2605
TOTAL	23	Min.	0.2
ENTER DATA		Max	2.63

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.783

Normal distribution? r-squared is: 0.706

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

A-311

	A	B
1	DATA	ID
2	0.2	Ser-Ag
3	0.25	Ser-Ag
4	0.25	Ser-Ag
5	0.2605	Ser-Ag
6	0.2605	Ser-Ag
7	0.2605	Ser-Ag
8	0.2605	Ser-Ag
9	0.2605	Ser-Ag
10	0.2605	Ser-Ag
11	0.2605	Ser-Ag
12	0.2605	Ser-Ag
13	0.2605	Ser-Ag
14	0.322	Ser-Ag
15	0.4015	Ser-Ag
16	0.4015	Ser-Ag
17	0.654	Ser-Ag
18	0.912	Ser-Ag
19	1.44	Ser-Ag
20	1.6732	Ser-Ag
21	2	Ser-Ag
22	2.33	Ser-Ag
23	2.53	Ser-Ag
24	2.63	Ser-Ag

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	23	Mean	0.797
Censored	------	Lognormal mean	0.773
Detection limit or PQL	------	Std. devn.	0.838
Method detection limit		Median	0.2605
TOTAL	23	Min.	0.2
ENTER DATA		Max.	2.63

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.783

Normal distribution? r-squared is: 0.706

Recommendations:

Reject lognormal distribution.

W value is 0.7679. This is less than the tabled value of 0.914

Reject normal distribution.

W value is 0.6966. This is less than the tabled value of 0.914

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear message

Calculate UCL

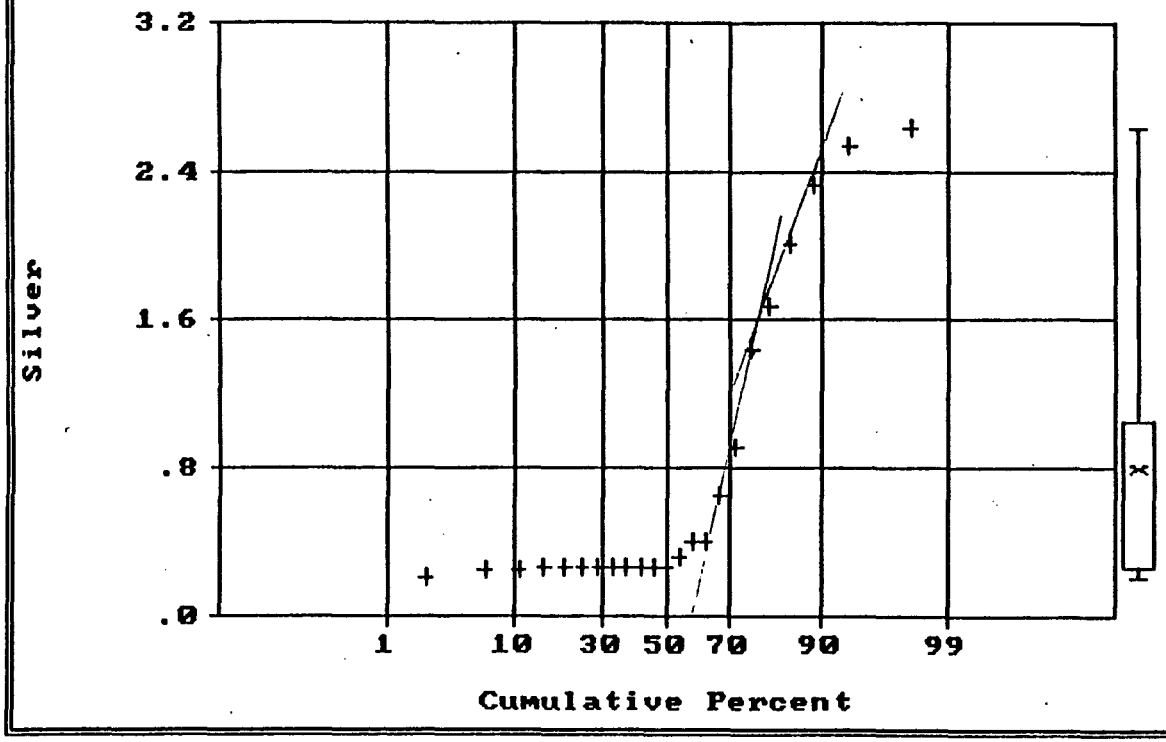
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Silver
Data file: ser-all.dat

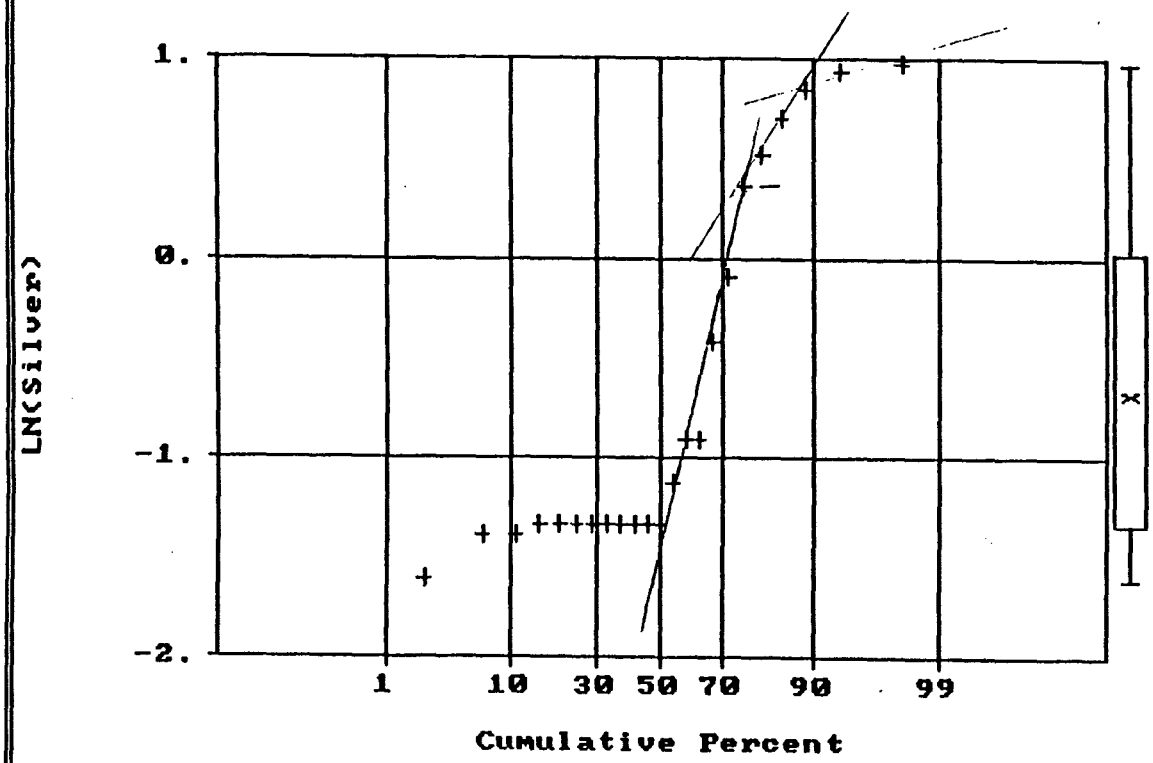


Statistics

N Total :	46
N Miss :	23
N Used :	23
Mean :	.797
Variance:	.703
Std. Dev:	.838
% C.V. :	105.133
Skewness:	1.220
Kurtosis:	2.870
Minimum :	.200
25th % :	.261
Median :	.261
75th % :	1.044
Maximum :	2.630

A-313

Normal Probability Plot for LN(Silver)
Data file: ser-all.dat



Statistics

N Total :	46
N Miss :	23
N Used :	23
Mean :	-.680
Variance:	.845
Std. Dev:	.919
% C.V. :	135.130
Skewness:	.812
Kurtosis:	1.958
Minimum :	-1.609
25th % :	-1.345
Median :	-1.345
75th % :	.022
Maximum :	.967

$e^{0.35} = 1.42$

A-314

	A	B
1	DATA	ID
2	0.081	Ser-Tl
3	0.081	Ser-Tl
4	0.081	Ser-Tl
5	0.081	Ser-Tl
6	0.081	Ser-Tl
7	0.081	Ser-Tl
8	2.5	Ser-Tl
9	7.35	Ser-Tl
10	17.15	Ser-Tl
11	17.15	Ser-Tl

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	10	Mean	4.464
Censored	------	Lognormal mean	10.898
Detection limit or PQL	------	Std. devn.	7.066
Method detection limit	------	Median	0.081
TOTAL	10	Min.	0.081
ENTER DATA		Max.	17.15

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.735

Normal distribution? r-squared is: 0.676

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	0.081	Ser-Tl
3	0.081	Ser-Tl
4	0.081	Ser-Tl
5	0.081	Ser-Tl
6	0.081	Ser-Tl
7	0.081	Ser-Tl
8	2.5	Ser-Tl
9	7.35	Ser-Tl
10	17.15	Ser-Tl
11	17.15	Ser-Tl

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	10	Mean	4.464
Censored	------	Lognormal mean	10.898
Detection limit or PQL	------	Std. devn.	7.066
Method detection limit		Median	0.081
TOTAL	10	Min.	0.081
ENTER DATA		Max	17.15

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.735

Normal distribution? r-squared is: 0.676

Recommendations:

Reject lognormal distribution.

W value is 0.7079. This is less than the tabled value of 0.842

Reject normal distribution.

W value is 0.6635. This is less than the tabled value of 0.842

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

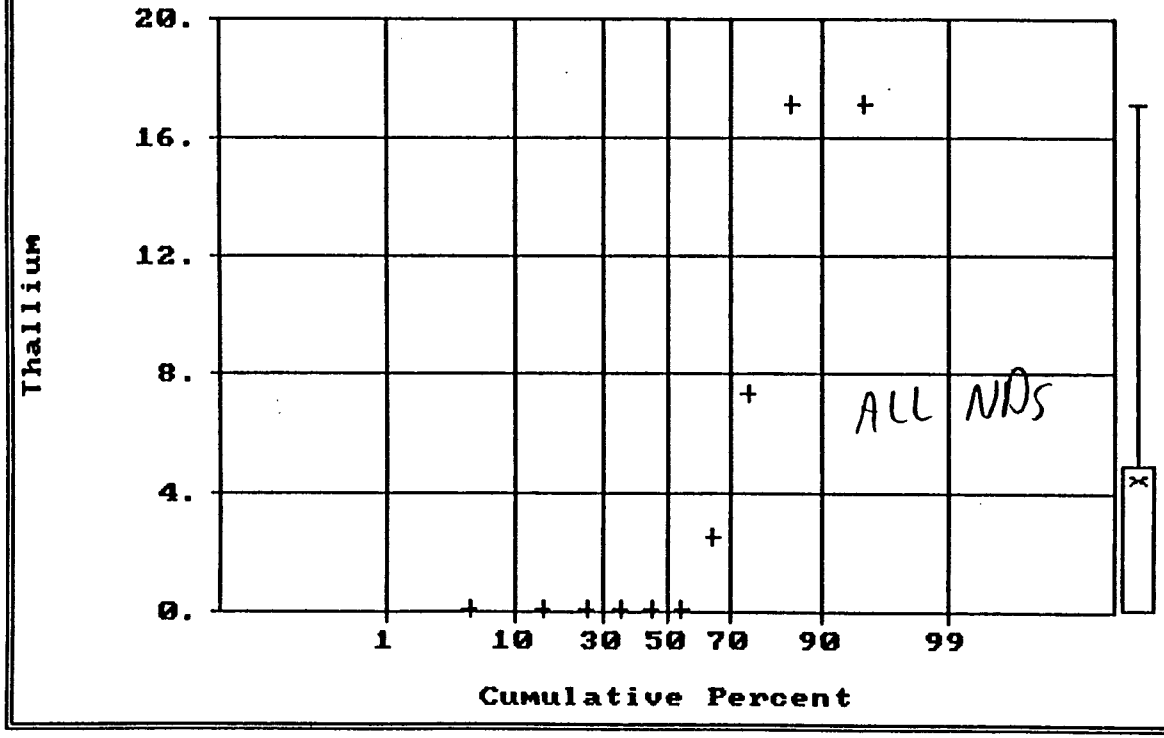
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Thallium
Data file: ser-all.dat

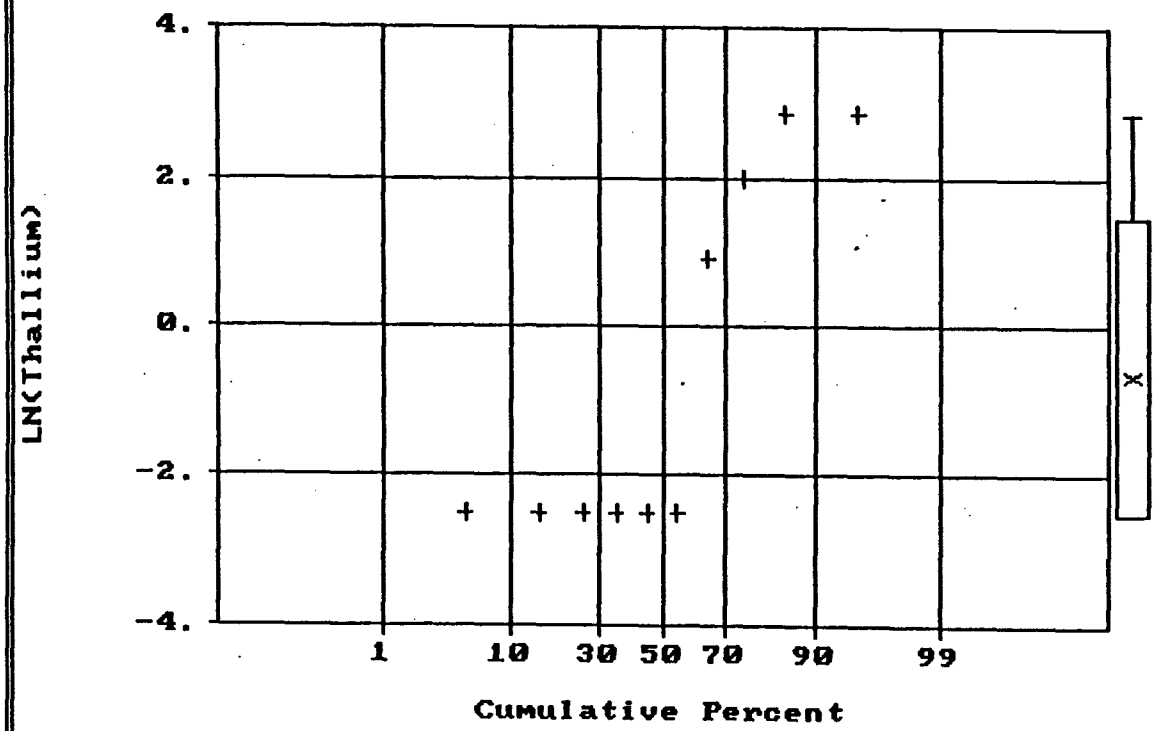


Statistics

N Total :	46
N Miss :	36
N Used :	10
Mean :	4.464
Variance:	49.924
Std. Dev:	7.066
% C.V. :	158.296
Skewness:	1.194
Kurtosis:	2.680
Minimum :	.081
25th % :	.081
Median :	.081
75th % :	4.925
Maximum :	17.150

A-319

Normal Probability Plot for LN(Thallium)
Data file: ser-all.dat



Statistics

N Total :	46
N Miss :	36
N Used :	10
Mean :	-.648
Variance:	6.074
Std. Dev:	2.465
% C.V. :	380.051
Skewness:	.535
Kurtosis:	1.420
Minimum :	-2.513
25th % :	-2.513
Median :	-2.513
75th % :	1.455
Maximum :	2.842

A-318

	A	B
1	DATA	ID
2	11.8	Ser-V
3	25.3348	Ser-V
4	25.5165	Ser-V
5	26.978	Ser-V
6	27.7	Ser-V
7	33.7	Ser-V
8	34.2308	Ser-V
9	35.9	Ser-V
10	36	Ser-V
11	36.1624	Ser-V
12	40.2418	Ser-V
13	43.4	Ser-V
14	51.6	Ser-V
15	56.02	Ser-V
16	59.1	Ser-V
17	61.4	Ser-V
18	68.3	Ser-V
19	69	Ser-V
20	72.7	Ser-V
21	81.4	Ser-V
22	83.3	Ser-V
23	84.4	Ser-V
24	98.6	Ser-V
25	99.4	Ser-V

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	24	Mean	52.591
Censored	------	Lognormal mean	53.552
Detection limit or PQL	------	Std. devn.	24.949
Method detection limit	------	Median	47.5
TOTAL	24	Min.	11.8
ENTER DATA		Max.	99.4

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.948

Normal distribution? r-squared is: 0.953

Recommendations

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	11.8	Ser-V
3	25.3348	Ser-V
4	25.5165	Ser-V
5	26.978	Ser-V
6	27.7	Ser-V
7	33.7	Ser-V
8	34.2308	Ser-V
9	35.9	Ser-V
10	36	Ser-V
11	36.1624	Ser-V
12	40.2418	Ser-V
13	43.4	Ser-V
14	51.6	Ser-V
15	56.02	Ser-V
16	59.1	Ser-V
17	61.4	Ser-V
18	68.3	Ser-V
19	69	Ser-V
20	72.7	Ser-V
21	81.4	Ser-V
22	83.3	Ser-V
23	84.4	Ser-V
24	98.6	Ser-V
25	99.4	Ser-V

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	24	Mean	52.591
Censored	------	Lognormal mean	53.552
Detection limit or PQL	------	Std. devn.	24.949
Method detection limit		Median	47.5
TOTAL	24	Min.	11.8
ENTER DATA		Max	99.4

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.948

Normal distribution? r-squared is: 0.953

Recommendations:

Assume lognormal distribution.

W value is 0.9477. This exceeds the tabled value of 0.916

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

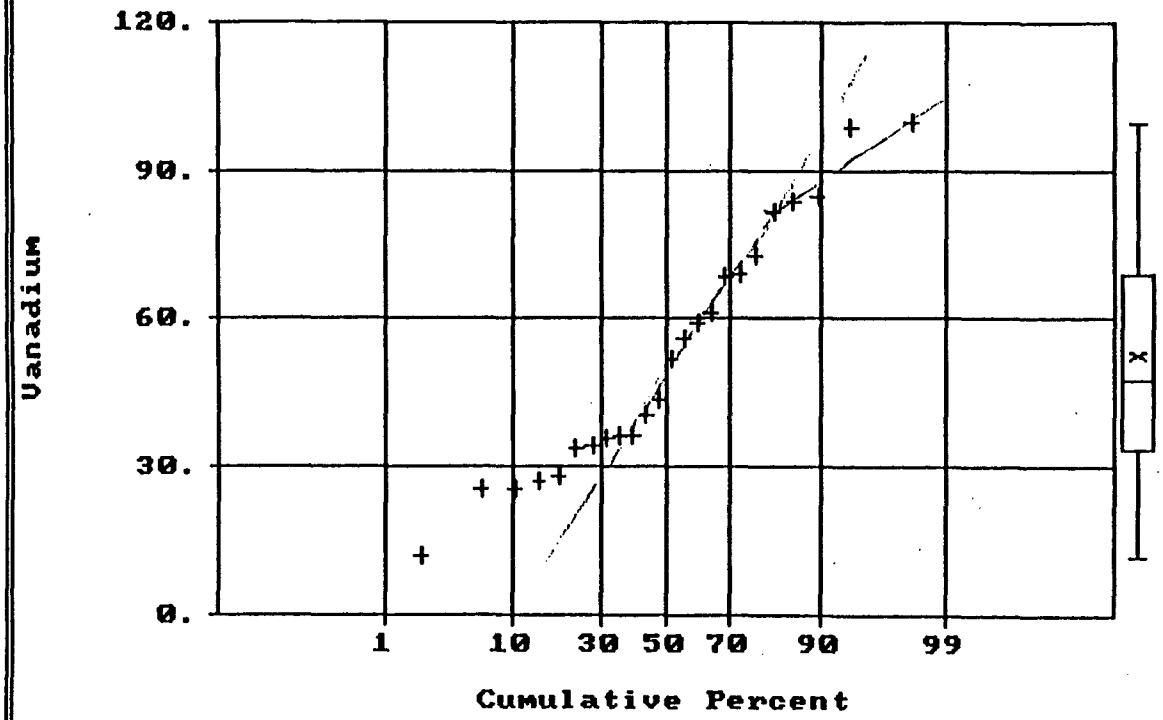
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Vanadium
Data file: ser-all.dat

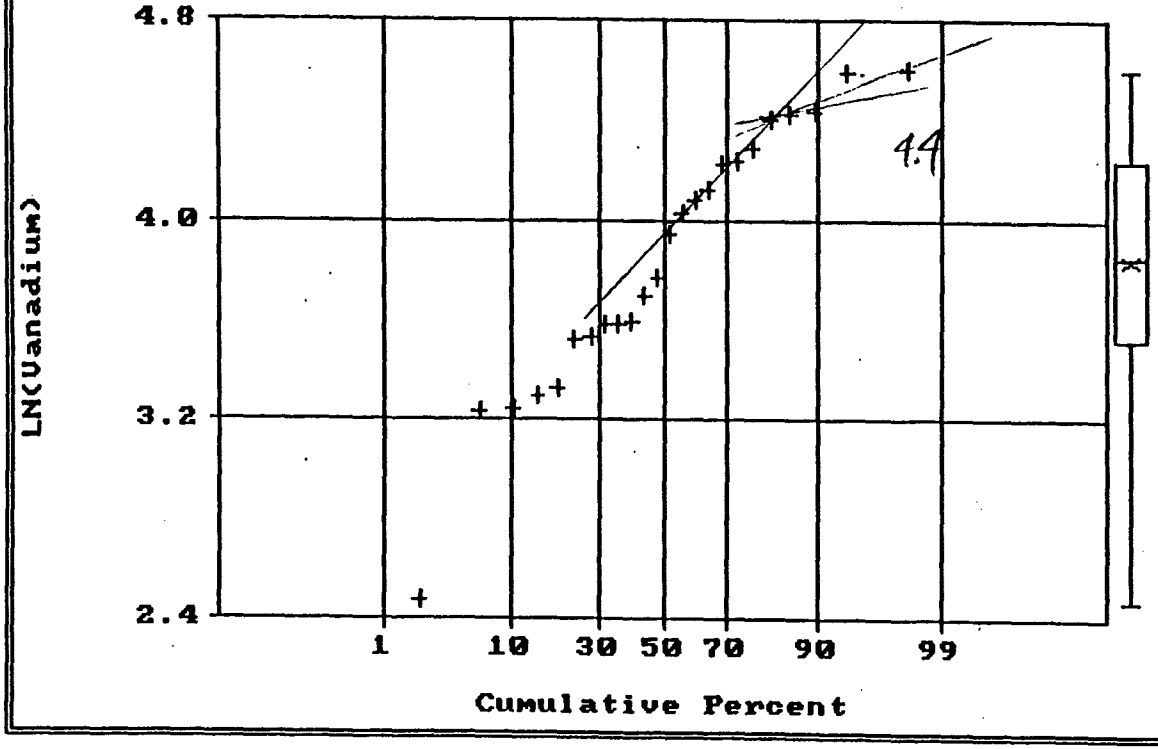


Statistics

N Total :	46
N Miss :	22
N Used :	24
Mean :	52.591
Variance:	622.432
Std. Dev:	24.949
% C.V. :	47.439
Skewness:	.380
Kurtosis:	2.033
Minimum :	11.800
25th % :	33.700
Median :	47.500
75th % :	69.000
Maximum :	99.400

A-321

Normal Probability Plot for LN(Vanadium)
Data file: ser-all.dat



Statistics

N Total :	46
N Miss :	22
N Used :	24
Mean :	3.841
Variance:	.279
Std. Dev:	.529
% C.V. :	13.763
Skewness:	-.530
Kurtosis:	2.960
Minimum :	2.468
25th % :	3.517
Median :	3.857
75th % :	4.234
Maximum :	4.599

$e^{4.4} \approx 81$

A-322

	A	B
1	DATA	ID
2	6.64	Ser-Zn
3	17.7	Ser-Zn
4	18	Ser-Zn
5	20.7523	Ser-Zn
6	33.8	Ser-Zn
7	40.8	Ser-Zn
8	42.5584	Ser-Zn
9	49.2769	Ser-Zn
10	50.641	Ser-Zn
11	51.7	Ser-Zn
12	52.4	Ser-Zn
13	53.5	Ser-Zn
14	53.7	Ser-Zn
15	53.7	Ser-Zn
16	59.1	Ser-Zn
17	60.487	Ser-Zn
18	67.2	Ser-Zn
19	75.4	Ser-Zn
20	75.9	Ser-Zn
21	95.1641	Ser-Zn
22	101	Ser-Zn
23	105	Ser-Zn
24	106.9196	Ser-Zn
25	110	Ser-Zn
26	123	Ser-Zn
27	160	Ser-Zn
28	180	Ser-Zn
29	301	Ser-Zn
30	590	Ser-Zn
31	923	Ser-Zn
32	1450	Ser-Zn

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	31	Mean	165.430
Censored	------	Lognormal mean	144.461
Detection limit or PQL	------	Std. devn.	301.086
Method detection limit	------	Median	60.487
TOTAL	31	Min.	6.64
ENTER DATA		Max.	1450

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.923

Normal distribution? r-squared is: 0.471

Recommendations:

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	6.64	Ser-Zn
3	17.7	Ser-Zn
4	18	Ser-Zn
5	20.7523	Ser-Zn
6	33.8	Ser-Zn
7	40.8	Ser-Zn
8	42.5584	Ser-Zn
9	49.2769	Ser-Zn
10	50.641	Ser-Zn
11	51.7	Ser-Zn
12	52.4	Ser-Zn
13	53.5	Ser-Zn
14	53.7	Ser-Zn
15	53.7	Ser-Zn
16	59.1	Ser-Zn
17	60.487	Ser-Zn
18	67.2	Ser-Zn
19	75.4	Ser-Zn
20	75.9	Ser-Zn
21	95.1641	Ser-Zn
22	101	Ser-Zn
23	105	Ser-Zn
24	106.9196	Ser-Zn
25	110	Ser-Zn
26	123	Ser-Zn
27	160	Ser-Zn
28	180	Ser-Zn
29	301	Ser-Zn
30	590	Ser-Zn
31	923	Ser-Zn
32	1450	Ser-Zn

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	31	Mean	165.430
Censored	------	Lognormal mean	144.461
Detection limit or PQL	------	Std. devn.	301.086
Method detection limit		Median	60.487
TOTAL	31	Min.	6.64
ENTER DATA		Max	1450

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.923

Normal distribution? r-squared is: 0.471

Recommendations:

Assume lognormal distribution.

W value is 0.9338. This exceeds the tabled value of 0.929

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

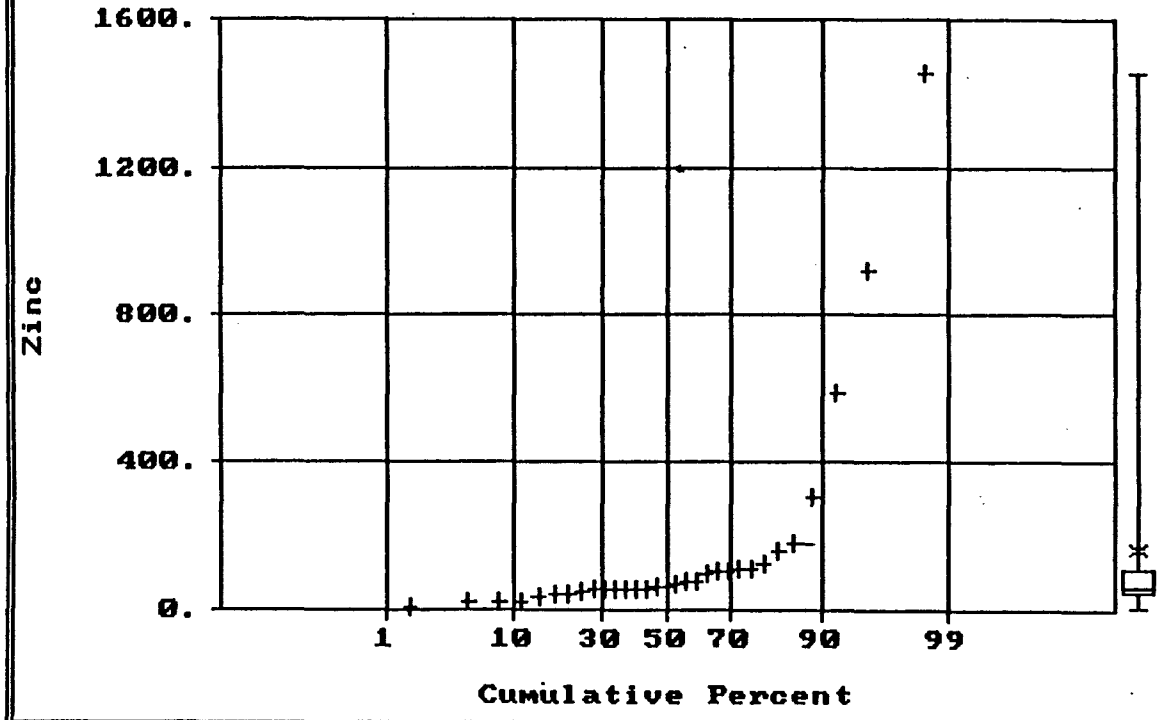
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Zinc
Data file: ser-all.dat

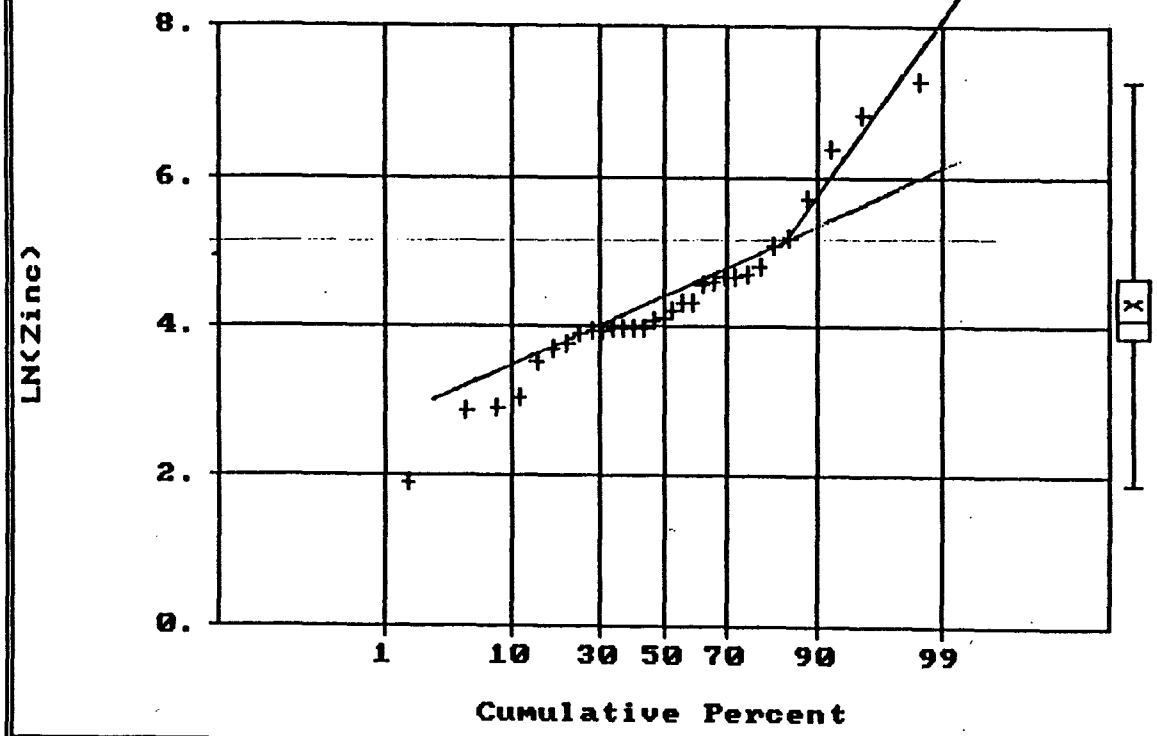


Statistics

N Total :	46
N Miss :	15
N Used :	31
Mean :	165.430
Variance:	90652.500
Std. Dev:	301.086
% C.V. :	182.001
Skewness:	3.225
Kurtosis:	12.950
Minimum :	6.640
25th % :	47.597
Median :	60.487
75th % :	107.690
Maximum :	1450.000

A-325

Normal Probability Plot for LN(Zinc)
Data file: ser-all.dat



Statistics

N Total :	46
N Miss :	15
N Used :	31
Mean :	4.350
Variance:	1.246
Std. Dev:	1.116
% C.V. :	25.656
Skewness:	.668
Kurtosis:	4.046
Minimum :	1.893
25th % :	3.861
Median :	4.102
75th % :	4.679
Maximum :	7.279

$e^{5.15} \approx 172.$

A-326

Fill

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	A	B
1	DATA	ID
2	0.8546	Fill-Al
3	1700	Fill-Al
4	2100	Fill-Al
5	2473.05	Fill-Al
6	2509.795	Fill-Al
7	3737.529	Fill-Al
8	3760	Fill-Al
9	3800	Fill-Al
10	3871.734	Fill-Al
11	4180	Fill-Al
12	4300	Fill-Al
13	4327.7311	Fill-Al
14	4700	Fill-Al
15	4796.636	Fill-Al
16	4890	Fill-Al
17	4908.7003	Fill-Al
18	4950	Fill-Al
19	5200	Fill-Al
20	5280	Fill-Al
21	5300	Fill-Al
22	5462.2742	Fill-Al
23	5500	Fill-Al
24	5537.1901	Fill-Al
25	5600	Fill-Al
26	5700	Fill-Al
27	5730	Fill-Al
28	5800	Fill-Al
29	5967.5676	Fill-Al
30	6100	Fill-Al
31	6100	Fill-Al
32	6100	Fill-Al
33	6177.8846	Fill-Al
34	6200	Fill-Al
35	6300	Fill-Al
36	6311.399	Fill-Al
37	6325.125	Fill-Al
38	6400	Fill-Al
39	6500	Fill-Al
40	6663.837	Fill-Al
41	6900	Fill-Al
42	6995.4165	Fill-Al
43	7000	Fill-Al
44	7025.074	Fill-Al
45	7031.4193	Fill-Al
46	7169.1974	Fill-Al
47	7300	Fill-Al
48	7443.53	Fill-Al
49	7460	Fill-Al
50	7500	Fill-Al
51	7500	Fill-Al
52	7500	Fill-Al
53	7547.8469	Fill-Al
54	7610.085	Fill-Al
55	7700	Fill-Al
56	7777.7778	Fill-Al
57	7800	Fill-Al
58	8000	Fill-Al
59	8200	Fill-Al
60	8200	Fill-Al
61	8329.646	Fill-Al
62	8453.947	Fill-Al
63	8482.1429	Fill-Al
64	8486.867	Fill-Al
65	8500	Fill-Al
66	8620	Fill-Al
67	8666.6667	Fill-Al

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	226	Mean	12514.604
Censored	------	Lognormal mean	14682.753
Detection limit or PQL	------	Std. devn.	7592.090
Method detection limit		Median	11000
TOTAL	226	Min.	0.8546
ENTER DATA		Max	55665.773

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.602

Normal distribution? r-squared is: 0.819

Recommendations

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	0.8546	Fill-Al
3	1700	Fill-Al
4	2100	Fill-Al
5	2473.05	Fill-Al
6	2509.795	Fill-Al
7	3737.529	Fill-Al
8	3760	Fill-Al
9	3800	Fill-Al
10	3871.734	Fill-Al
11	4180	Fill-Al
12	4300	Fill-Al
13	4327.7311	Fill-Al
14	4700	Fill-Al
15	4796.636	Fill-Al
16	4890	Fill-Al
17	4908.7003	Fill-Al
18	4950	Fill-Al
19	5200	Fill-Al
20	5280	Fill-Al
21	5300	Fill-Al
22	5462.2742	Fill-Al
23	5500	Fill-Al
24	5537.1901	Fill-Al
25	5600	Fill-Al
26	5700	Fill-Al
27	5730	Fill-Al
28	5800	Fill-Al
29	5967.5676	Fill-Al
30	6100	Fill-Al
31	6100	Fill-Al
32	6100	Fill-Al
33	6177.8846	Fill-Al
34	6200	Fill-Al
35	6300	Fill-Al
36	6311.399	Fill-Al
37	6325.125	Fill-Al
38	6400	Fill-Al
39	6500	Fill-Al
40	6663.837	Fill-Al
41	6900	Fill-Al
42	6995.4165	Fill-Al
43	7000	Fill-Al
44	7025.074	Fill-Al
45	7031.4193	Fill-Al
46	7169.1974	Fill-Al
47	7300	Fill-Al
48	7443.53	Fill-Al
49	7460	Fill-Al
50	7500	Fill-Al
51	7500	Fill-Al
52	7500	Fill-Al
53	7547.8469	Fill-Al
54	7610.085	Fill-Al
55	7700	Fill-Al
56	7777.7778	Fill-Al
57	7800	Fill-Al
58	8000	Fill-Al
59	8200	Fill-Al
60	8200	Fill-Al
61	8329.646	Fill-Al
62	8453.947	Fill-Al
63	8482.1429	Fill-Al
64	8486.867	Fill-Al
65	8500	Fill-Al
66	8620	Fill-Al
67	8666.6667	Fill-Al

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	226	Mean	12514.604
Censored	------	Lognormal mean	14682.753
Detection limit or PQL	------	Std. devn.	7592.090
Method detection limit		Median	11000
TOTAL	226	Min.	0.8546
ENTER DATA		Max	55665.773

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.602

Normal distribution? r-squared is: 0.819

Recommendations:

Reject lognormal distribution.

Y value is -39.6846. This lies outside the tabled values of 1.5215 and -2.3686

Reject normal distribution.

Y value is -18.7391. This lies outside the tabled values of 1.5215 and -2.3686

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

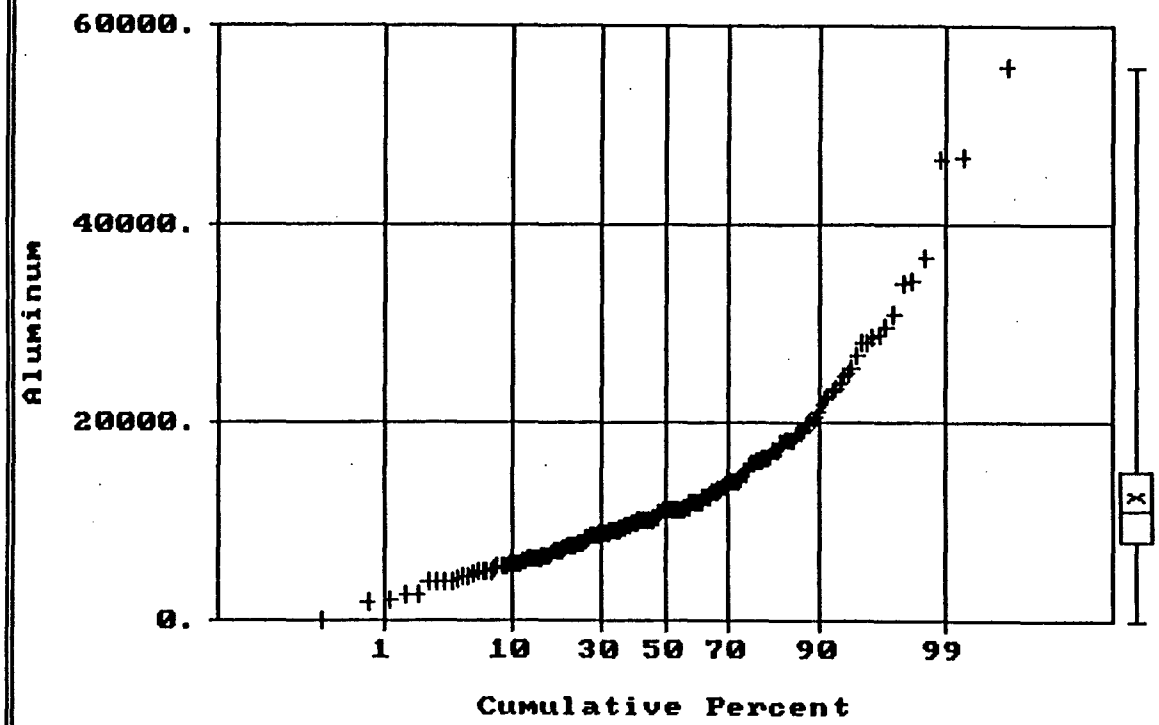
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Aluminum
Data file: fil-all.dat

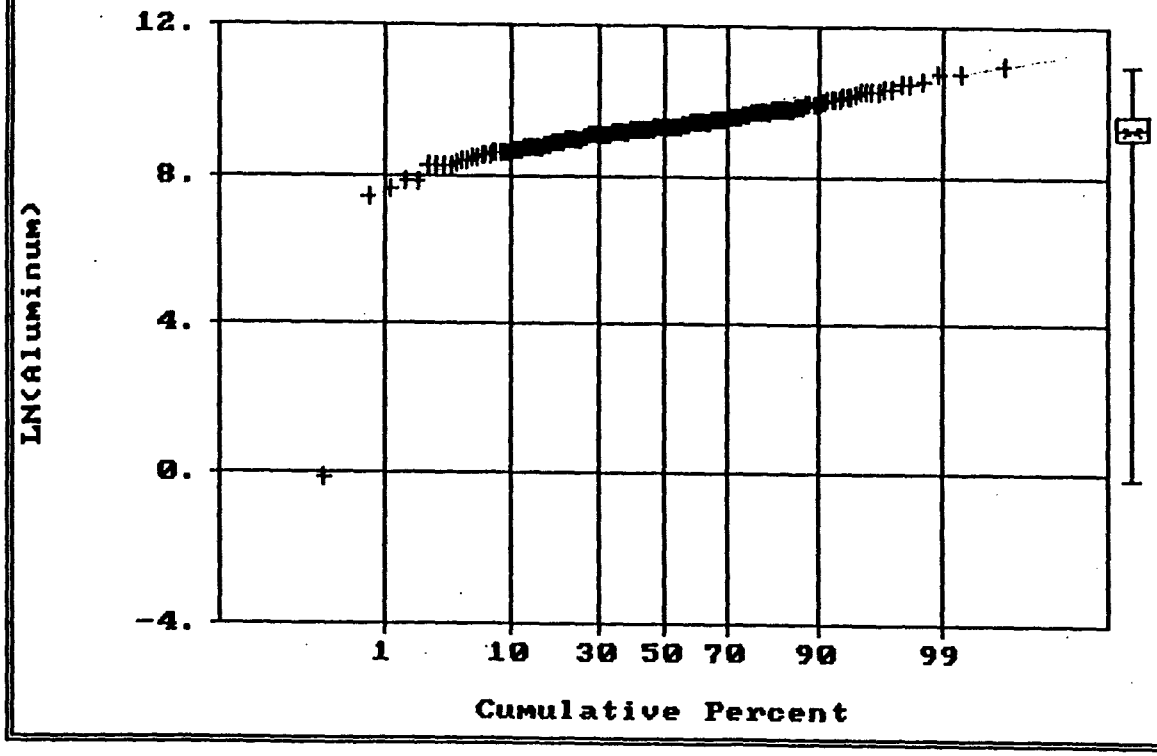


Statistics

N Total :	371
N Miss :	145
N Used :	226
Mean :	12514.600
Variance:	57639830.000
Std. Dev:	7592.090
% C.V. :	60.666
Skewness:	2.207
Kurtosis:	10.422
Minimum :	.855
25th % :	7900.000
Median :	11000.000
75th % :	15000.000
Maximum :	55665.770

A-331

Normal Probability Plot for LN(Aluminum)
Data file: fil-all.dat



Statistics

N Total :	371
N Miss :	145
N Used :	226
Mean :	9.251
Variance:	.686
Std. Dev:	.828
% C.V. :	8.954
Skewness:	-6.488
Kurtosis:	75.006
Minimum :	-.157
25th % :	8.975
Median :	9.306
75th % :	9.616
Maximum :	10.927

A-332

	A	B
1	DATA	ID
2	0.125	Fill-As
3	0.25	Fill-As
4	0.25	Fill-As
5	0.41	Fill-As
6	0.53	Fill-As
7	0.6	Fill-As
8	0.6	Fill-As
9	0.6	Fill-As
10	0.6	Fill-As
11	0.6	Fill-As
12	0.625	Fill-As
13	0.625	Fill-As
14	0.625	Fill-As
15	0.625	Fill-As
16	0.625	Fill-As
17	0.625	Fill-As
18	0.625	Fill-As
19	0.625	Fill-As
20	0.625	Fill-As
21	0.625	Fill-As
22	0.625	Fill-As
23	0.6359	Fill-As
24	0.637	Fill-As
25	0.8018	Fill-As
26	1.135	Fill-As
27	1.14	Fill-As
28	1.2	Fill-As
29	1.25	Fill-As
30	1.25	Fill-As
31	1.25	Fill-As
32	1.25	Fill-As
33	1.25	Fill-As
34	1.25	Fill-As
35	1.25	Fill-As
36	1.25	Fill-As
37	1.25	Fill-As
38	1.25	Fill-As
39	1.25	Fill-As
40	1.25	Fill-As
41	1.25	Fill-As
42	1.25	Fill-As
43	1.25	Fill-As
44	1.25	Fill-As
45	1.25	Fill-As
46	1.25	Fill-As
47	1.25	Fill-As
48	1.25	Fill-As
49	1.25	Fill-As
50	1.25	Fill-As
51	1.25	Fill-As
52	1.25	Fill-As
53	1.25	Fill-As
54	1.25	Fill-As
55	1.25	Fill-As
56	1.25	Fill-As
57	1.25	Fill-As
58	1.25	Fill-As
59	1.25	Fill-As
60	1.25	Fill-As
61	1.25	Fill-As
62	1.25	Fill-As
63	1.25	Fill-As
64	1.25	Fill-As
65	1.25	Fill-As
66	1.25	Fill-As
67	1.3	Fill-As

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	213	Mean	3.128
Censored	------	Lognormal mean	3.236
Detection limit or PQL	------	Std. devn.	2.525
Method detection limit		Median	2.86
TOTAL	213	Min.	0.125
ENTER DATA		Max	22

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.955

Normal distribution? r-squared is: 0.746

Recommendations:

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	0.125	Fill-As
3	0.25	Fill-As
4	0.25	Fill-As
5	0.41	Fill-As
6	0.53	Fill-As
7	0.6	Fill-As
8	0.6	Fill-As
9	0.6	Fill-As
10	0.6	Fill-As
11	0.6	Fill-As
12	0.625	Fill-As
13	0.625	Fill-As
14	0.625	Fill-As
15	0.625	Fill-As
16	0.625	Fill-As
17	0.625	Fill-As
18	0.625	Fill-As
19	0.625	Fill-As
20	0.625	Fill-As
21	0.625	Fill-As
22	0.625	Fill-As
23	0.6359	Fill-As
24	0.637	Fill-As
25	0.8018	Fill-As
26	1.135	Fill-As
27	1.14	Fill-As
28	1.2	Fill-As
29	1.25	Fill-As
30	1.25	Fill-As
31	1.25	Fill-As
32	1.25	Fill-As
33	1.25	Fill-As
34	1.25	Fill-As
35	1.25	Fill-As
36	1.25	Fill-As
37	1.25	Fill-As
38	1.25	Fill-As
39	1.25	Fill-As
40	1.25	Fill-As
41	1.25	Fill-As
42	1.25	Fill-As
43	1.25	Fill-As
44	1.25	Fill-As
45	1.25	Fill-As
46	1.25	Fill-As
47	1.25	Fill-As
48	1.25	Fill-As
49	1.25	Fill-As
50	1.25	Fill-As
51	1.25	Fill-As
52	1.25	Fill-As
53	1.25	Fill-As
54	1.25	Fill-As
55	1.25	Fill-As
56	1.25	Fill-As
57	1.25	Fill-As
58	1.25	Fill-As
59	1.25	Fill-As
60	1.25	Fill-As
61	1.25	Fill-As
62	1.25	Fill-As
63	1.25	Fill-As
64	1.25	Fill-As
65	1.25	Fill-As
66	1.25	Fill-As
67	1.3	Fill-As

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	213	Mean	3.128
Censored	------	Lognormal mean	3.236
Detection limit or PQL	------	Std. devn.	2.525
Method detection limit		Median	2.86
TOTAL	213	Min.	0.125
ENTER DATA		Max.	22

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.955

Normal distribution? r-squared is: 0.746

Recommendations:

Reject lognormal distribution.

Y value is -4.0078. This lies outside the tabled values of 1.5087 and -2.3798

Reject normal distribution.

Y value is -23.7919. This lies outside the tabled values of 1.5087 and -2.3798

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

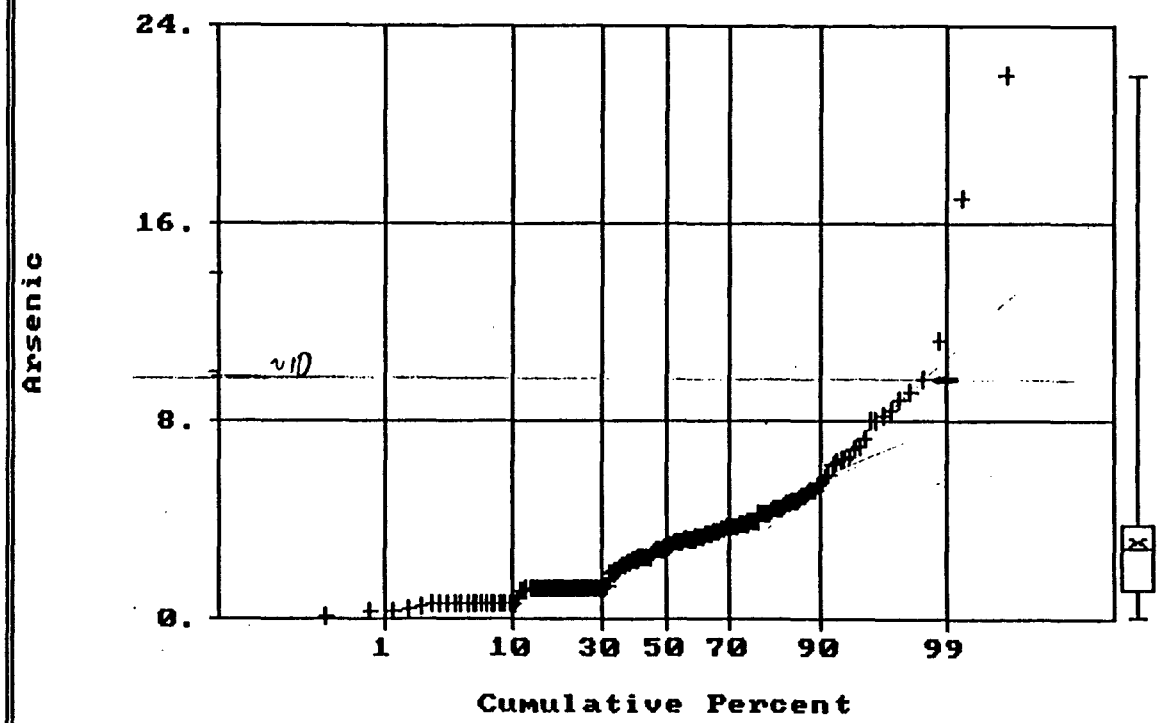
Normal

Neither

Sample size

A-334

Normal Probability Plot for Arsenic
Data file: fil-all.dat



Statistics

N Total :	371
N Miss :	158
N Used :	213
Mean :	3.128
Variance:	6.377
Std. Dev:	2.525
% C.V. :	80.735
Skewness:	3.190
Kurtosis:	20.720
Minimum :	.125
25th % :	1.250
Median :	2.860
75th % :	3.869
Maximum :	22.000

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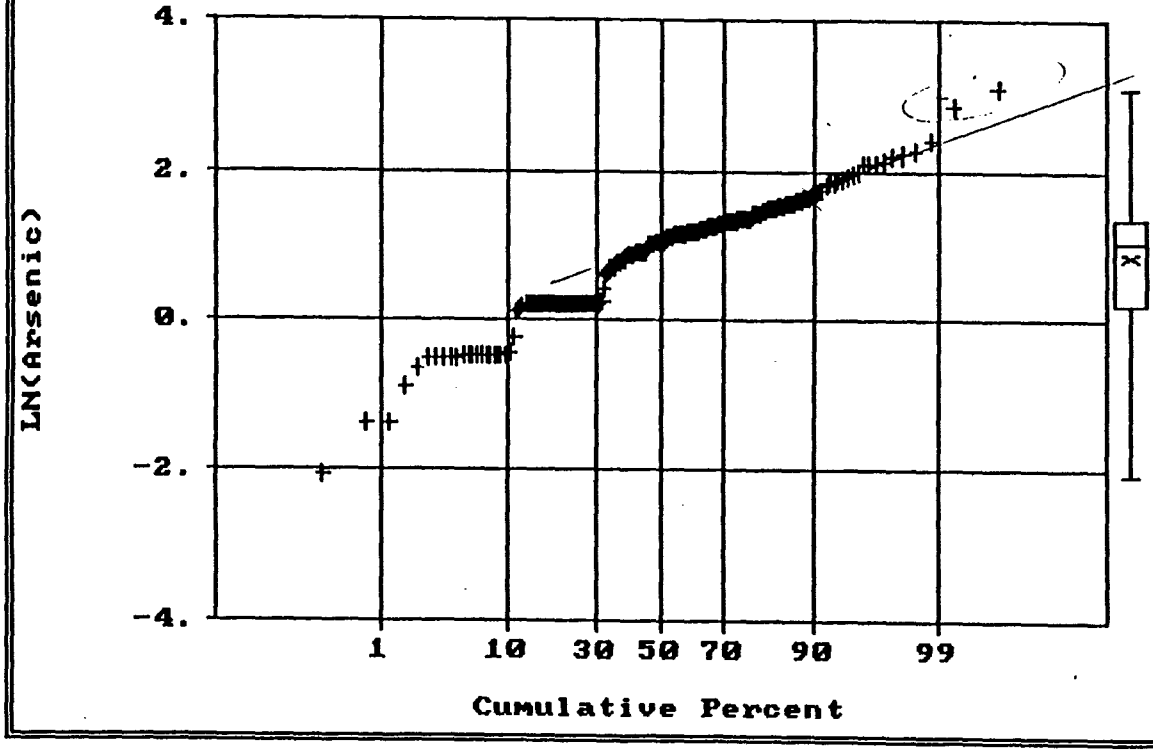
Normal Probability Plot for LN(Arsenic)
Data file: fil-all.dat



Statistics

N Total :	371
N Miss :	158
N Used :	213
Mean :	.867
Variance:	.614
Std. Dev:	.784
% C.V. :	90.348
Skewness:	-.546
Kurtosis:	3.665
Minimum :	-2.079
25th % :	.223
Median :	1.051
75th % :	1.353
Maximum :	3.091

A-336

	A	B
1	DATA	ID
2	0.0022	Fill-Ba
3	7.91	Fill-Ba
4	11.7078	Fill-Ba
5	13.173	Fill-Ba
6	19.6	Fill-Ba
7	19.9	Fill-Ba
8	20.3	Fill-Ba
9	21.9715	Fill-Ba
10	24.6849	Fill-Ba
11	24.95	Fill-Ba
12	26	Fill-Ba
13	26.553	Fill-Ba
14	27.3114	Fill-Ba
15	27.3913	Fill-Ba
16	30	Fill-Ba
17	31.1	Fill-Ba
18	34.1	Fill-Ba
19	35	Fill-Ba
20	35.122	Fill-Ba
21	40.1	Fill-Ba
22	41.3	Fill-Ba
23	42	Fill-Ba
24	43.893	Fill-Ba
25	44.407	Fill-Ba
26	47	Fill-Ba
27	47.5	Fill-Ba
28	47.5	Fill-Ba
29	48.2	Fill-Ba
30	48.7603	Fill-Ba
31	48.8746	Fill-Ba
32	49.1	Fill-Ba
33	49.714	Fill-Ba
34	50	Fill-Ba
35	50.1	Fill-Ba
36	50.7	Fill-Ba
37	50.8	Fill-Ba
38	51.5	Fill-Ba
39	53	Fill-Ba
40	57.134	Fill-Ba
41	58.3	Fill-Ba
42	59.944	Fill-Ba
43	60.2	Fill-Ba
44	60.5	Fill-Ba
45	62.281	Fill-Ba
46	62.95	Fill-Ba
47	63.6	Fill-Ba
48	65	Fill-Ba
49	65.4	Fill-Ba
50	65.5	Fill-Ba
51	66.1	Fill-Ba
52	68.9	Fill-Ba
53	70	Fill-Ba
54	71.7208	Fill-Ba
55	72.306	Fill-Ba
56	72.5	Fill-Ba
57	73.029	Fill-Ba
58	74.9	Fill-Ba
59	75.192	Fill-Ba
60	75.2	Fill-Ba
61	77	Fill-Ba
62	77.398	Fill-Ba
63	77.759	Fill-Ba
64	78.8462	Fill-Ba
65	79.972	Fill-Ba
66	80.1	Fill-Ba
67	83	Fill-Ba

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	226	Mean	186.594
Censored	------	Lognormal mean	222.071
Detection limit or PQL	------	Std. devn.	258.712
Method detection limit	------	Median	111.69295
TOTAL	226	Min.	0.0022
ENTER DATA		Max.	2510

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.759

Normal distribution? r-squared is: 0.504

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	0.0022	Fill-Ba
3	7.91	Fill-Ba
4	11.7078	Fill-Ba
5	13.173	Fill-Ba
6	19.6	Fill-Ba
7	19.9	Fill-Ba
8	20.3	Fill-Ba
9	21.9715	Fill-Ba
10	24.6849	Fill-Ba
11	24.95	Fill-Ba
12	26	Fill-Ba
13	26.553	Fill-Ba
14	27.3114	Fill-Ba
15	27.3913	Fill-Ba
16	30	Fill-Ba
17	31.1	Fill-Ba
18	34.1	Fill-Ba
19	35	Fill-Ba
20	35.122	Fill-Ba
21	40.1	Fill-Ba
22	41.3	Fill-Ba
23	42	Fill-Ba
24	43.893	Fill-Ba
25	44.407	Fill-Ba
26	47	Fill-Ba
27	47.5	Fill-Ba
28	47.5	Fill-Ba
29	48.2	Fill-Ba
30	48.7603	Fill-Ba
31	48.8746	Fill-Ba
32	49.1	Fill-Ba
33	49.714	Fill-Ba
34	50	Fill-Ba
35	50.1	Fill-Ba
36	50.7	Fill-Ba
37	50.8	Fill-Ba
38	51.5	Fill-Ba
39	53	Fill-Ba
40	57.134	Fill-Ba
41	58.3	Fill-Ba
42	59.944	Fill-Ba
43	60.2	Fill-Ba
44	60.5	Fill-Ba
45	62.281	Fill-Ba
46	62.95	Fill-Ba
47	63.6	Fill-Ba
48	65	Fill-Ba
49	65.4	Fill-Ba
50	65.5	Fill-Ba
51	66.1	Fill-Ba
52	68.9	Fill-Ba
53	70	Fill-Ba
54	71.7208	Fill-Ba
55	72.306	Fill-Ba
56	72.5	Fill-Ba
57	73.029	Fill-Ba
58	74.9	Fill-Ba
59	75.192	Fill-Ba
60	75.2	Fill-Ba
61	77	Fill-Ba
62	77.398	Fill-Ba
63	77.759	Fill-Ba
64	78.8462	Fill-Ba
65	79.972	Fill-Ba
66	80.1	Fill-Ba
67	83	Fill-Ba

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	226	Mean	186.594
Censored	------	Lognormal mean	222.071
Detection limit or PQL	------	Std. devn.	258.712
Method detection limit	------	Median	111.69295
TOTAL	226	Min.	0.0022
ENTER DATA		Max.	2510

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.759

Normal distribution? r-squared is: 0.504

Recommendations:

Reject lognormal distribution.

Y value is -25.1341. This lies outside the tabled values of 1.5215 and -2.3686

Reject normal distribution.

Y value is -50.6605. This lies outside the tabled values of 1.5215 and -2.3686

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

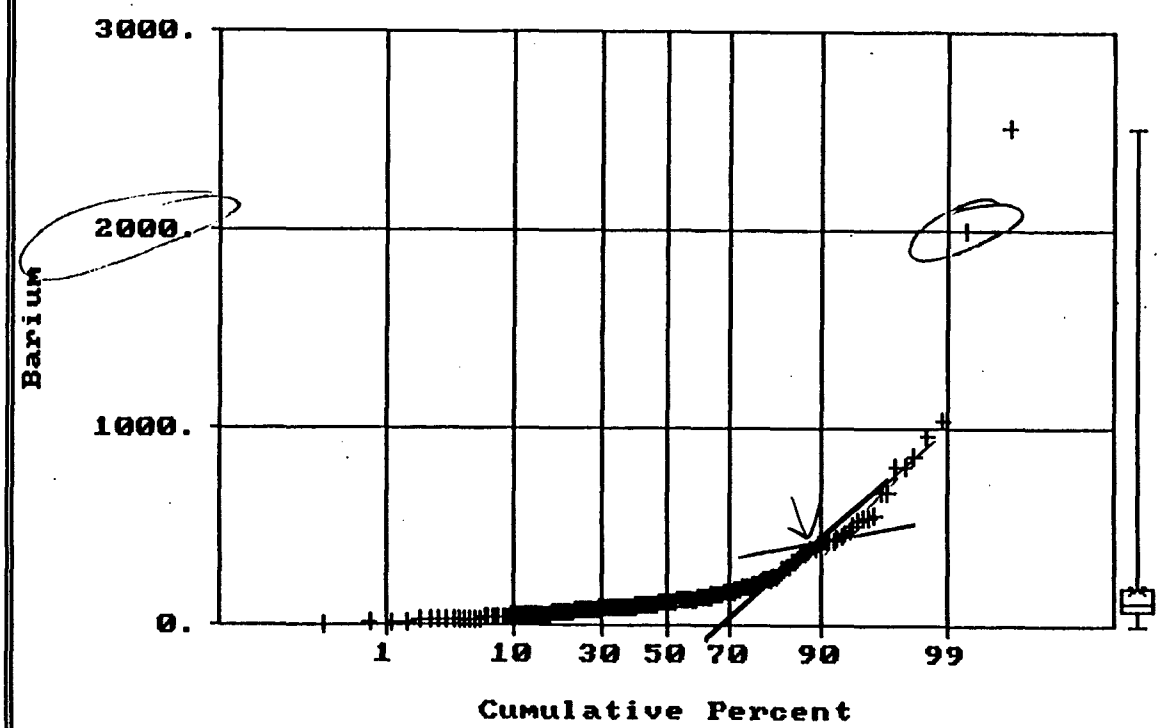
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Barium
Data file: fil-all.dat



Statistics

N Total :	371
N Miss :	145
N Used :	226
Mean :	186.594
Variance:	66931.810
Std. Dev:	258.712
% C.V. :	138.649
Skewness:	5.345
Kurtosis:	41.436
Minimum :	.002
25th % :	73.965
Median :	111.693
75th % :	189.249
Maximum :	2510.000

~~2000~~

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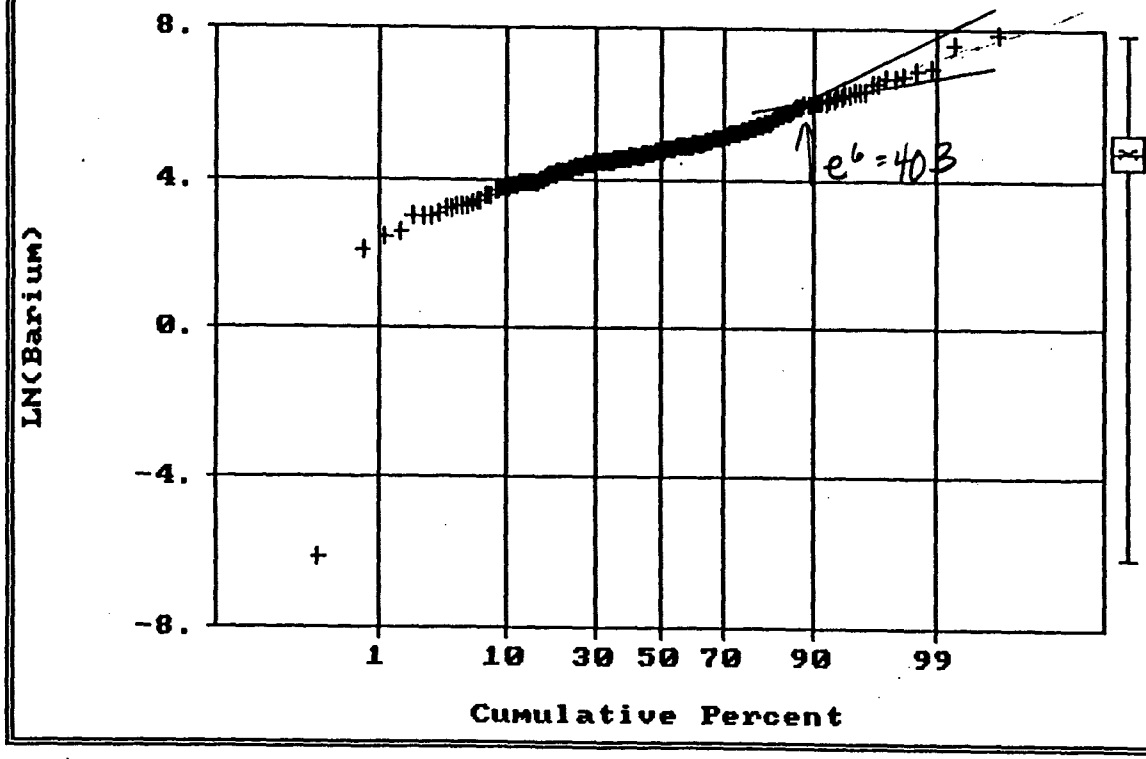
Normal Probability Plot for LN(Barium)
Data file: fil-all.dat



Statistics

N Total :	371
N Miss :	145
N Used :	226
Mean :	4.747
Variance:	1.312
Std. Dev:	1.145
% C.V. :	24.126
Skewness:	-3.619
Kurtosis:	37.580
Minimum :	-6.119
25th % :	4.304
Median :	4.716
75th % :	5.243
Maximum :	7.828

	A	B
1	DATA	ID
2	0.0189	Fill-Be
3	0.05	Fill-Be
4	0.134	Fill-Be
5	0.1461	Fill-Be
6	0.147	Fill-Be
7	0.1488	Fill-Be
8	0.1626	Fill-Be
9	0.1928	Fill-Be
10	0.1985	Fill-Be
11	0.2135	Fill-Be
12	0.2135	Fill-Be
13	0.2135	Fill-Be
14	0.2135	Fill-Be
15	0.2135	Fill-Be
16	0.2135	Fill-Be
17	0.2135	Fill-Be
18	0.2135	Fill-Be
19	0.2135	Fill-Be
20	0.2135	Fill-Be
21	0.2135	Fill-Be
22	0.2135	Fill-Be
23	0.2135	Fill-Be
24	0.2135	Fill-Be
25	0.2135	Fill-Be
26	0.2135	Fill-Be
27	0.2135	Fill-Be
28	0.2135	Fill-Be
29	0.2135	Fill-Be
30	0.2135	Fill-Be
31	0.2135	Fill-Be
32	0.2135	Fill-Be
33	0.2135	Fill-Be
34	0.2135	Fill-Be
35	0.2135	Fill-Be
36	0.2135	Fill-Be
37	0.2135	Fill-Be
38	0.2135	Fill-Be
39	0.2135	Fill-Be
40	0.2135	Fill-Be
41	0.2135	Fill-Be
42	0.2135	Fill-Be
43	0.2135	Fill-Be
44	0.2135	Fill-Be
45	0.2135	Fill-Be
46	0.2135	Fill-Be
47	0.2135	Fill-Be
48	0.2135	Fill-Be
49	0.2135	Fill-Be
50	0.2135	Fill-Be
51	0.2135	Fill-Be
52	0.2135	Fill-Be
53	0.2135	Fill-Be
54	0.2135	Fill-Be
55	0.2135	Fill-Be
56	0.2135	Fill-Be
57	0.2135	Fill-Be
58	0.2135	Fill-Be
59	0.2135	Fill-Be
60	0.2135	Fill-Be
61	0.2135	Fill-Be
62	0.2135	Fill-Be
63	0.2135	Fill-Be
64	0.2135	Fill-Be
65	0.2135	Fill-Be
66	0.2135	Fill-Be
67	0.2135	Fill-Be

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	227	Mean	0.500
Censored	------	Lognormal mean	0.502
Detection limit or PQL	------	Std. devn.	0.360
Method detection limit		Median	0.25
TOTAL	227	Min.	0.0189
ENTER DATA		Max	1.57

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.880

Normal distribution? r-squared is: 0.824

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

A-341

	A	B
1	DATA	ID
2	0.0189	Fill-Be
3	0.05	Fill-Be
4	0.134	Fill-Be
5	0.1461	Fill-Be
6	0.147	Fill-Be
7	0.1488	Fill-Be
8	0.1626	Fill-Be
9	0.1928	Fill-Be
10	0.1985	Fill-Be
11	0.2135	Fill-Be
12	0.2135	Fill-Be
13	0.2135	Fill-Be
14	0.2135	Fill-Be
15	0.2135	Fill-Be
16	0.2135	Fill-Be
17	0.2135	Fill-Be
18	0.2135	Fill-Be
19	0.2135	Fill-Be
20	0.2135	Fill-Be
21	0.2135	Fill-Be
22	0.2135	Fill-Be
23	0.2135	Fill-Be
24	0.2135	Fill-Be
25	0.2135	Fill-Be
26	0.2135	Fill-Be
27	0.2135	Fill-Be
28	0.2135	Fill-Be
29	0.2135	Fill-Be
30	0.2135	Fill-Be
31	0.2135	Fill-Be
32	0.2135	Fill-Be
33	0.2135	Fill-Be
34	0.2135	Fill-Be
35	0.2135	Fill-Be
36	0.2135	Fill-Be
37	0.2135	Fill-Be
38	0.2135	Fill-Be
39	0.2135	Fill-Be
40	0.2135	Fill-Be
41	0.2135	Fill-Be
42	0.2135	Fill-Be
43	0.2135	Fill-Be
44	0.2135	Fill-Be
45	0.2135	Fill-Be
46	0.2135	Fill-Be
47	0.2135	Fill-Be
48	0.2135	Fill-Be
49	0.2135	Fill-Be
50	0.2135	Fill-Be
51	0.2135	Fill-Be
52	0.2135	Fill-Be
53	0.2135	Fill-Be
54	0.2135	Fill-Be
55	0.2135	Fill-Be
56	0.2135	Fill-Be
57	0.2135	Fill-Be
58	0.2135	Fill-Be
59	0.2135	Fill-Be
60	0.2135	Fill-Be
61	0.2135	Fill-Be
62	0.2135	Fill-Be
63	0.2135	Fill-Be
64	0.2135	Fill-Be
65	0.2135	Fill-Be
66	0.2135	Fill-Be
67	0.2135	Fill-Be

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	227	Mean	0.500
Censored	------	Lognormal mean	0.502
Detection limit or PQL	------	Std. devn.	0.360
Method detection limit	------	Median	0.25
TOTAL	227	Min.	0.0189
ENTER DATA		Max.	1.57

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.880

Normal distribution? r-squared is: 0.824

Recommendations:

Reject lognormal distribution.

Y value is -5.1916. This lies outside the tabled values of 1.5225 and -2.3678

Reject normal distribution.

Y value is -10.0868. This lies outside the tabled values of 1.5225 and -2.3678

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

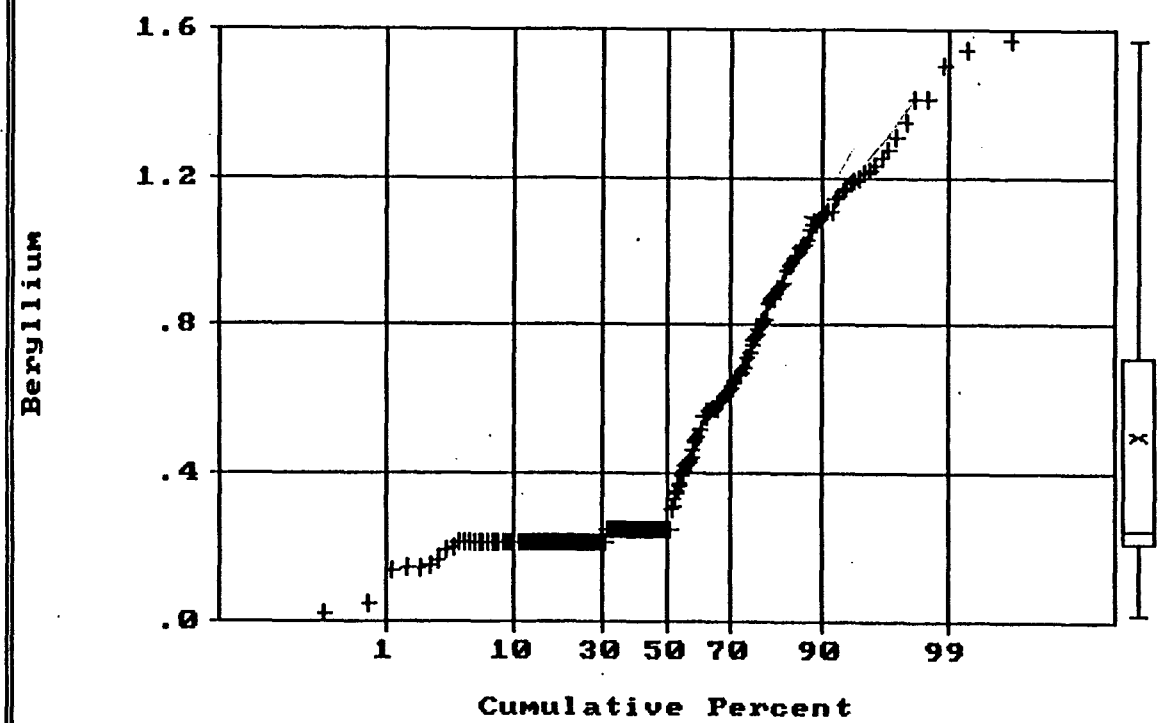
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Beryllium
Data file: fil-all.dat

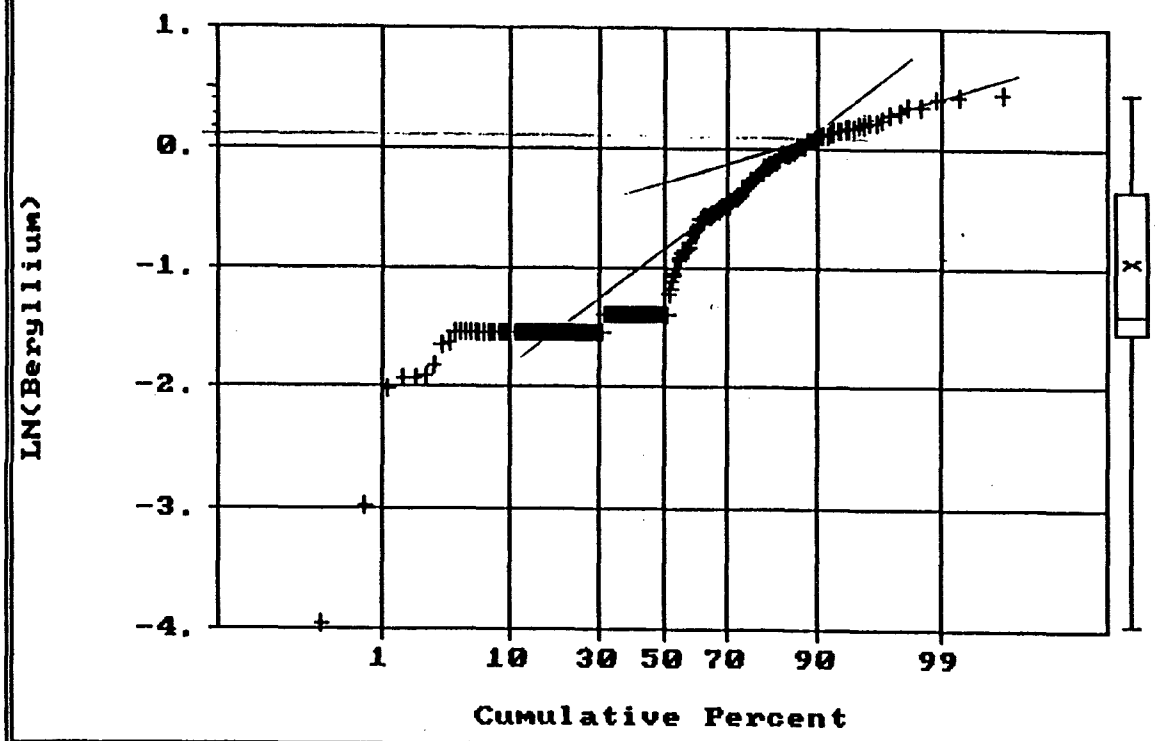


Statistics

N Total :	371
N Miss :	144
N Used :	227
Mean :	.500
Variance:	.130
Std. Dev:	.360
% C.V. :	72.072
Skewness:	1.051
Kurtosis:	2.988
Minimum :	.019
25th % :	.213
Median :	.250
75th % :	.713
Maximum :	1.570

A-343

Normal Probability Plot for LN(Beryllium)
Data file: fil-all.dat



Statistics

N Total :	371
N Miss :	144
N Used :	227
Mean :	-.938
Variance:	.498
Std. Dev:	.706
% C.V. :	75.250
Skewness:	.007
Kurtosis:	3.232
Minimum :	-3.969
25th % :	-1.544
Median :	-1.386
75th % :	-.338
Maximum :	.451

$e^{0.12} = 1.1$

A-344

	A	B
1	DATA	ID
2	0.05	Fill-Cd
3	0.25	Fill-Cd
4	0.25	Fill-Cd
5	0.25	Fill-Cd
6	0.25	Fill-Cd
7	0.25	Fill-Cd
8	0.25	Fill-Cd
9	0.25	Fill-Cd
10	0.25	Fill-Cd
11	0.25	Fill-Cd
12	0.25	Fill-Cd
13	0.25	Fill-Cd
14	0.25	Fill-Cd
15	0.25	Fill-Cd
16	0.25	Fill-Cd
17	0.25	Fill-Cd
18	0.25	Fill-Cd
19	0.25	Fill-Cd
20	0.25	Fill-Cd
21	0.25	Fill-Cd
22	0.25	Fill-Cd
23	0.25	Fill-Cd
24	0.25	Fill-Cd
25	0.25	Fill-Cd
26	0.25	Fill-Cd
27	0.25	Fill-Cd
28	0.25	Fill-Cd
29	0.25	Fill-Cd
30	0.25	Fill-Cd
31	0.25	Fill-Cd
32	0.25	Fill-Cd
33	0.25	Fill-Cd
34	0.2575	Fill-Cd
35	0.2575	Fill-Cd
36	0.2575	Fill-Cd
37	0.2575	Fill-Cd
38	0.2575	Fill-Cd
39	0.2575	Fill-Cd
40	0.2575	Fill-Cd
41	0.2575	Fill-Cd
42	0.2575	Fill-Cd
43	0.2575	Fill-Cd
44	0.2575	Fill-Cd
45	0.2575	Fill-Cd
46	0.2575	Fill-Cd
47	0.2575	Fill-Cd
48	0.2575	Fill-Cd
49	0.2575	Fill-Cd
50	0.2575	Fill-Cd
51	0.2575	Fill-Cd
52	0.2575	Fill-Cd
53	0.2575	Fill-Cd
54	0.2575	Fill-Cd
55	0.2575	Fill-Cd
56	0.2575	Fill-Cd
57	0.2575	Fill-Cd
58	0.2575	Fill-Cd
59	0.2575	Fill-Cd
60	0.2575	Fill-Cd
61	0.2575	Fill-Cd
62	0.2575	Fill-Cd
63	0.2575	Fill-Cd
64	0.2575	Fill-Cd
65	0.2575	Fill-Cd
66	0.2575	Fill-Cd
67	0.2575	Fill-Cd

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	227	Mean	1.717
Censored	------	Lognormal mean	1.010
Detection limit or PQL	------	Std. devn.	7.134
Method detection limit		Median	0.6
TOTAL	227	Min.	0.05
ENTER DATA		Max.	87.303

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.800

Normal distribution? r-squared is: 0.166

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

A-345

	A	B
1	DATA	ID
2	0.05	Fill-Cd
3	0.25	Fill-Cd
4	0.25	Fill-Cd
5	0.25	Fill-Cd
6	0.25	Fill-Cd
7	0.25	Fill-Cd
8	0.25	Fill-Cd
9	0.25	Fill-Cd
10	0.25	Fill-Cd
11	0.25	Fill-Cd
12	0.25	Fill-Cd
13	0.25	Fill-Cd
14	0.25	Fill-Cd
15	0.25	Fill-Cd
16	0.25	Fill-Cd
17	0.25	Fill-Cd
18	0.25	Fill-Cd
19	0.25	Fill-Cd
20	0.25	Fill-Cd
21	0.25	Fill-Cd
22	0.25	Fill-Cd
23	0.25	Fill-Cd
24	0.25	Fill-Cd
25	0.25	Fill-Cd
26	0.25	Fill-Cd
27	0.25	Fill-Cd
28	0.25	Fill-Cd
29	0.25	Fill-Cd
30	0.25	Fill-Cd
31	0.25	Fill-Cd
32	0.25	Fill-Cd
33	0.25	Fill-Cd
34	0.2575	Fill-Cd
35	0.2575	Fill-Cd
36	0.2575	Fill-Cd
37	0.2575	Fill-Cd
38	0.2575	Fill-Cd
39	0.2575	Fill-Cd
40	0.2575	Fill-Cd
41	0.2575	Fill-Cd
42	0.2575	Fill-Cd
43	0.2575	Fill-Cd
44	0.2575	Fill-Cd
45	0.2575	Fill-Cd
46	0.2575	Fill-Cd
47	0.2575	Fill-Cd
48	0.2575	Fill-Cd
49	0.2575	Fill-Cd
50	0.2575	Fill-Cd
51	0.2575	Fill-Cd
52	0.2575	Fill-Cd
53	0.2575	Fill-Cd
54	0.2575	Fill-Cd
55	0.2575	Fill-Cd
56	0.2575	Fill-Cd
57	0.2575	Fill-Cd
58	0.2575	Fill-Cd
59	0.2575	Fill-Cd
60	0.2575	Fill-Cd
61	0.2575	Fill-Cd
62	0.2575	Fill-Cd
63	0.2575	Fill-Cd
64	0.2575	Fill-Cd
65	0.2575	Fill-Cd
66	0.2575	Fill-Cd
67	0.2575	Fill-Cd

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	227	Mean	1.717
Censored	------	Lognormal mean	1.010
Detection limit or PQL	------	Std. devn.	7.134
Method detection limit		Median	0.6
TOTAL	227	Min.	0.05
ENTER DATA		Max	87.303

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.800

Normal distribution? r-squared is: 0.166

Recommendations:

Reject lognormal distribution.

Y value is -18.8946. This lies outside the tabled values of 1.5225 and -2.3678

Reject normal distribution.

Y value is -97.2536. This lies outside the tabled values of 1.5225 and -2.3678

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

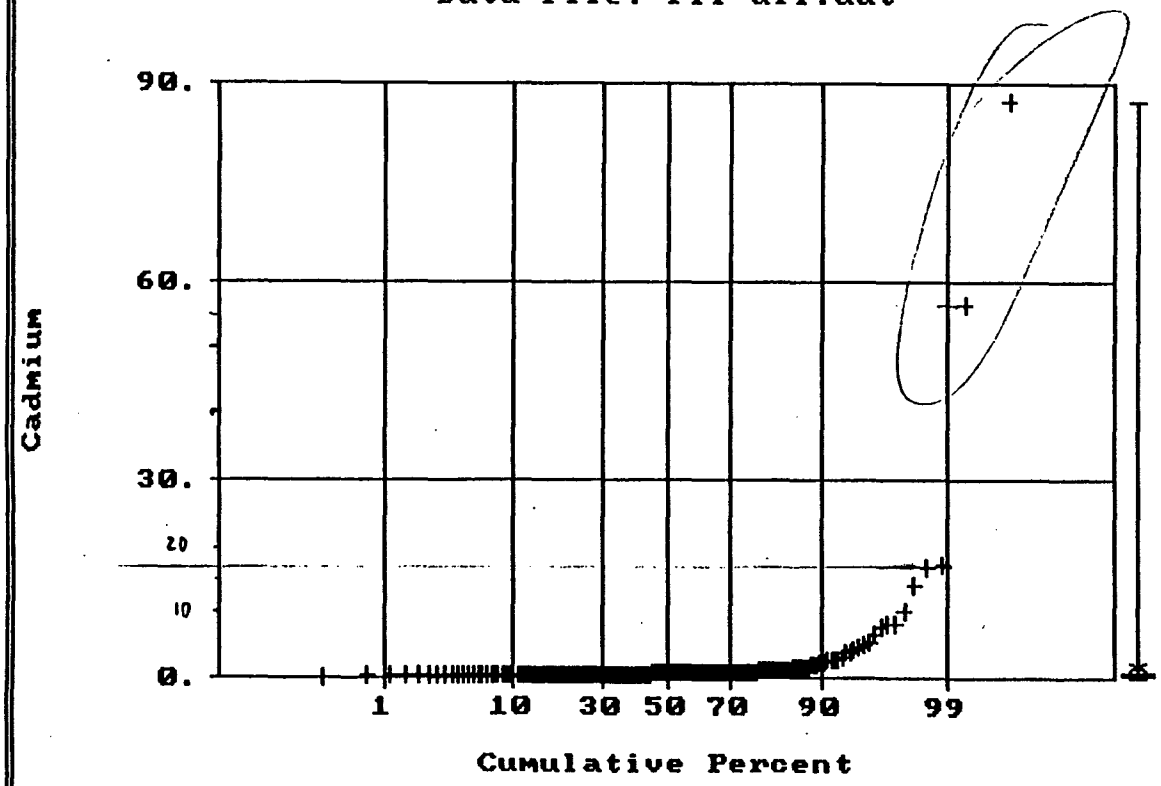
Normal

Neither

Sample size

A-346

Normal Probability Plot for Cadmium
Data file: fil-all.dat



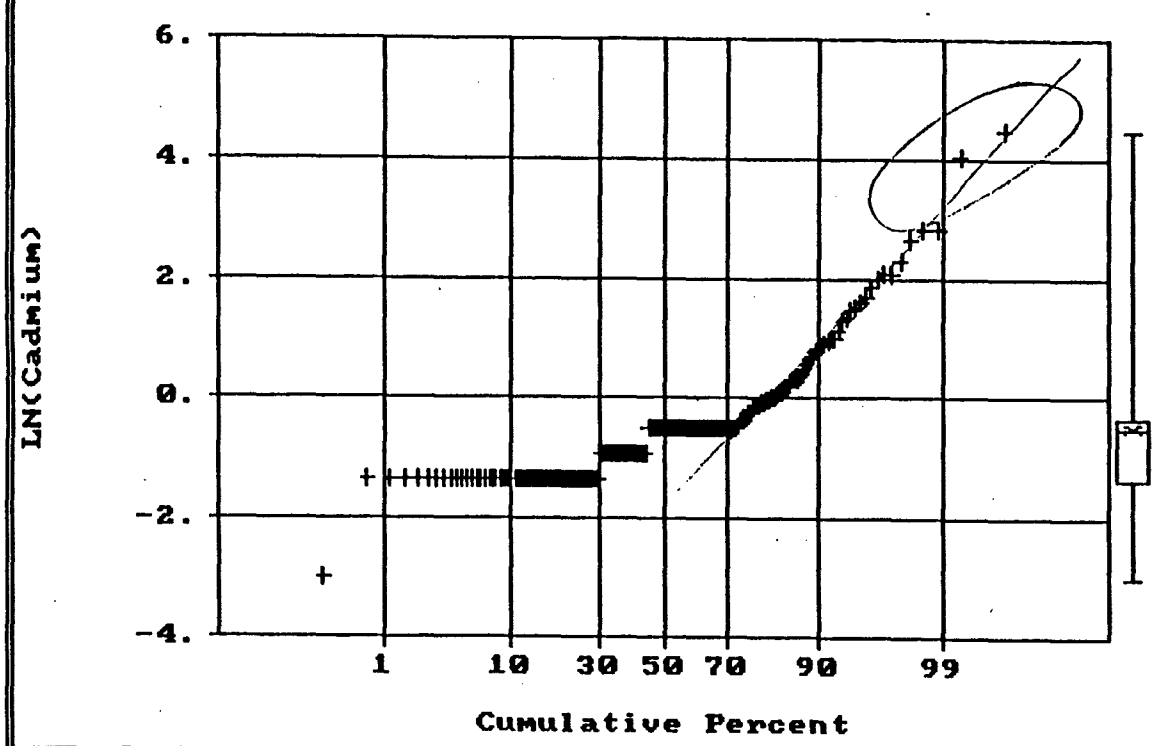
S t a t i s t i c s

N Total :	371
N Miss :	144
N Used :	227
Mean :	1.717
Variance:	50.899
Std. Dev:	7.134
% C.V. :	415.395
Skewness:	9.781
Kurtosis:	107.681
Minimum :	.050
25th % :	.257
Median :	.600
75th % :	.714
Maximum :	87.303

~55

A-347

Normal Probability Plot for LN(Cadmium)
Data file: fil-all.dat



Statistics

N Total :	371
N Miss :	144
N Used :	227
Mean :	-.495
Variance:	1.009
Std. Dev:	1.004
% C.V. :	203.008
Skewness:	1.869
Kurtosis:	7.923
Minimum :	-2.996
25th % :	-1.357
Median :	-.511
75th % :	-.337
Maximum :	4.469

A-348

	A	B
1	DATA	ID
2	0.125	Fill-CN
3	0.125	Fill-CN
4	0.125	Fill-CN
5	0.125	Fill-CN
6	0.125	Fill-CN
7	0.125	Fill-CN
8	0.125	Fill-CN
9	0.125	Fill-CN
10	0.125	Fill-CN
11	0.2	Fill-CN
12	0.2	Fill-CN
13	0.2818	Fill-CN
14	0.4145	Fill-CN
15	0.4145	Fill-CN
16	0.4145	Fill-CN
17	0.4145	Fill-CN
18	0.4145	Fill-CN
19	0.4145	Fill-CN
20	0.4145	Fill-CN
21	0.4145	Fill-CN
22	0.4145	Fill-CN
23	0.4145	Fill-CN
24	0.4145	Fill-CN
25	0.4145	Fill-CN
26	0.4145	Fill-CN
27	0.4145	Fill-CN
28	0.4145	Fill-CN
29	0.4145	Fill-CN
30	0.4145	Fill-CN
31	0.4145	Fill-CN
32	0.4145	Fill-CN
33	0.4145	Fill-CN
34	0.4432	Fill-CN
35	0.46	Fill-CN
36	0.4647	Fill-CN
37	0.4823	Fill-CN
38	0.5	Fill-CN
39	0.5	Fill-CN
40	0.509	Fill-CN
41	0.5656	Fill-CN
42	0.5988	Fill-CN
43	0.645	Fill-CN
44	0.776	Fill-CN

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	43	Mean	0.373
Censored	------	Lognormal mean	0.384
Detection limit or PQL	------	Std. devn.	0.159
Method detection limit		Median	0.4145
TOTAL	43	Min.	0.125
ENTER DATA		Max	0.776

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.766

Normal distribution? r-squared is: 0.851

Recommendations:

Reject lognormal distribution.

W value is 0.7523. This is less than the tabled value of 0.943

Reject normal distribution.

W value is 0.8458. This is less than the tabled value of 0.943

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

A-349

	A	B
1	DATA	ID
2	0.125	Fill-CN
3	0.125	Fill-CN
4	0.125	Fill-CN
5	0.125	Fill-CN
6	0.125	Fill-CN
7	0.125	Fill-CN
8	0.125	Fill-CN
9	0.125	Fill-CN
10	0.125	Fill-CN
11	0.2	Fill-CN
12	0.2	Fill-CN
13	0.2818	Fill-CN
14	0.4145	Fill-CN
15	0.4145	Fill-CN
16	0.4145	Fill-CN
17	0.4145	Fill-CN
18	0.4145	Fill-CN
19	0.4145	Fill-CN
20	0.4145	Fill-CN
21	0.4145	Fill-CN
22	0.4145	Fill-CN
23	0.4145	Fill-CN
24	0.4145	Fill-CN
25	0.4145	Fill-CN
26	0.4145	Fill-CN
27	0.4145	Fill-CN
28	0.4145	Fill-CN
29	0.4145	Fill-CN
30	0.4145	Fill-CN
31	0.4145	Fill-CN
32	0.4145	Fill-CN
33	0.4145	Fill-CN
34	0.4432	Fill-CN
35	0.46	Fill-CN
36	0.4647	Fill-CN
37	0.4823	Fill-CN
38	0.5	Fill-CN
39	0.5	Fill-CN
40	0.509	Fill-CN
41	0.5656	Fill-CN
42	0.5988	Fill-CN
43	0.645	Fill-CN
44	0.776	Fill-CN

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	43	Mean	0.373
Censored	------	Lognormal mean	0.384
Detection limit or PQL	------	Std. devn.	0.159
Method detection limit		Median	0.4145
TOTAL	43	Min.	0.125
ENTER DATA		Max.	0.776

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.766

Normal distribution? r-squared is: 0.851

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

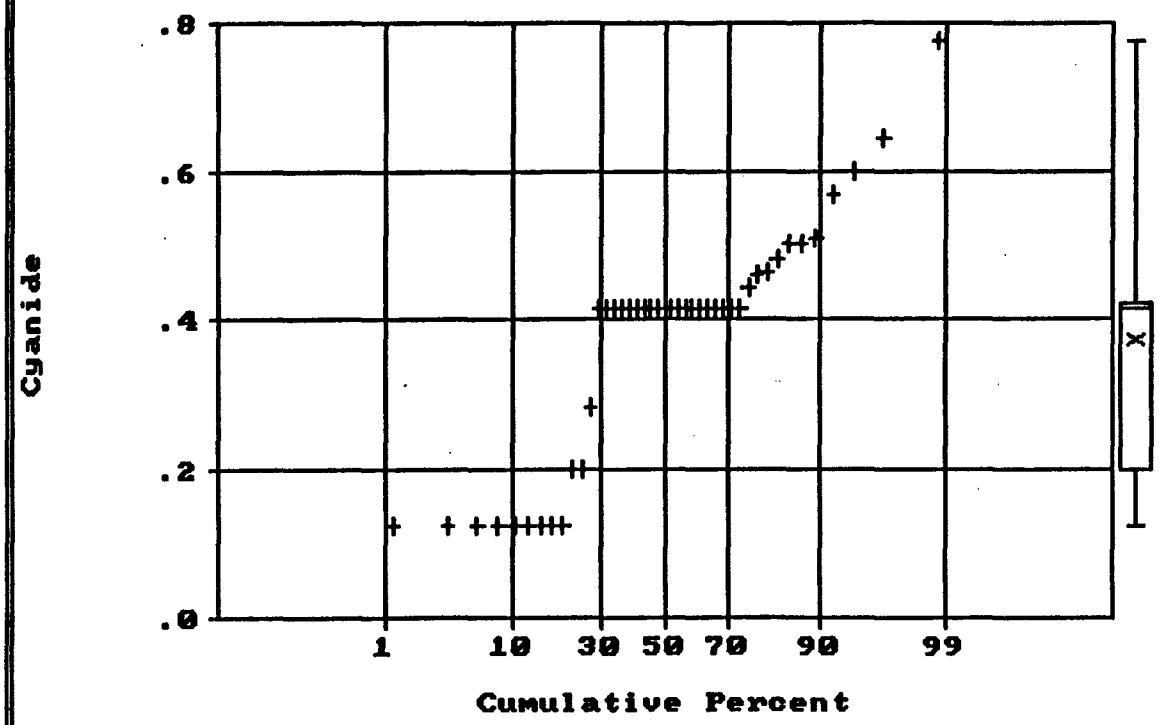
Normal

Neither

Sample size

A-350

Normal Probability Plot for Cyanide
Data file: fil-all.dat

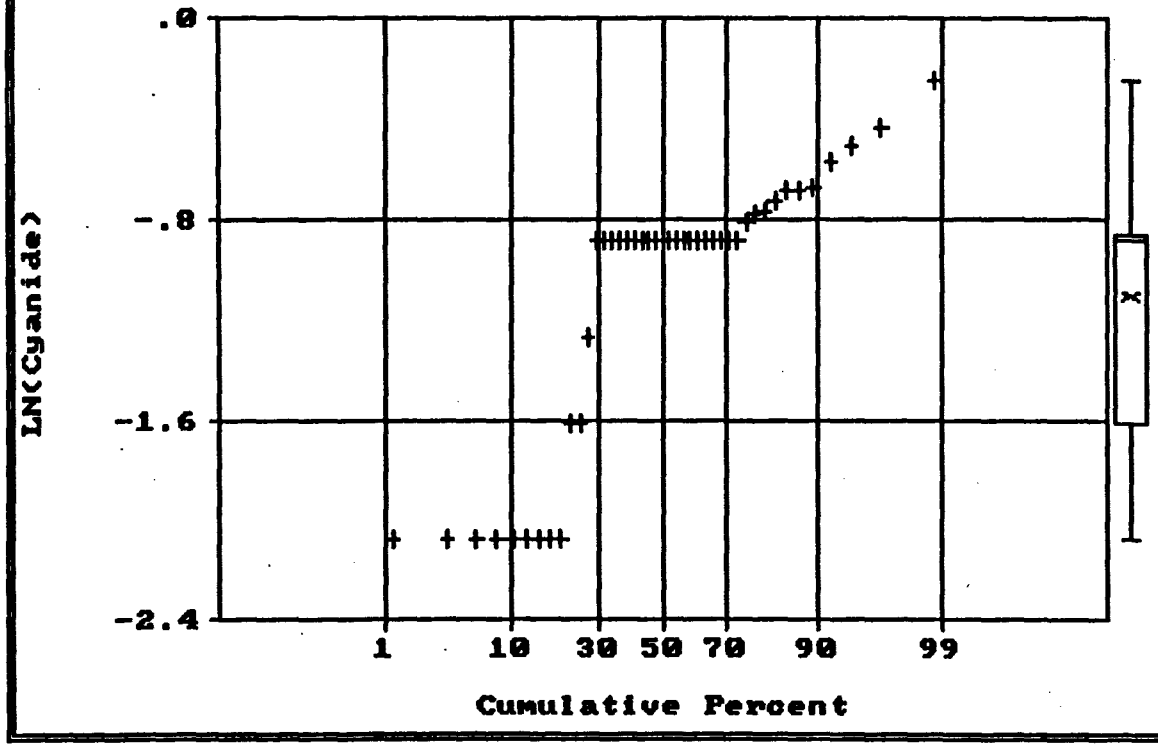


Statistics

N Total :	371
N Miss :	328
N Used :	43
Mean :	.373
Variance:	.025
Std. Dev:	.159
% C.V. :	42.670
Skewness:	-.198
Kurtosis:	2.770
Minimum :	.125
25th % :	.200
Median :	.414
75th % :	.422
Maximum :	.776

A-351

Normal Probability Plot for LN(Cyanide)
Data file: fil-all.dat



Statistics

N Total :	371
N Miss :	328
N Used :	43
Mean :	-1.110
Variance:	.306
Std. Dev:	.553
% C.V. :	49.853
Skewness:	-.926
Kurtosis:	2.398
Minimum :	-2.079
25th % :	-1.609
Median :	-.881
75th % :	-.864
Maximum :	-.254

A-352

	A	B
1	DATA	ID
2	0.0211	Fill-Co
3	0.644	Fill-Co
4	1.25	Fill-Co
5	1.25	Fill-Co
6	3.2	Fill-Co
7	3.24	Fill-Co
8	3.3	Fill-Co
9	3.4	Fill-Co
10	4.1	Fill-Co
11	5.0475	Fill-Co
12	5.3	Fill-Co
13	5.3151	Fill-Co
14	5.341	Fill-Co
15	5.48	Fill-Co
16	6	Fill-Co
17	6.07	Fill-Co
18	6.3	Fill-Co
19	6.445	Fill-Co
20	6.6	Fill-Co
21	6.65	Fill-Co
22	6.676	Fill-Co
23	6.83	Fill-Co
24	6.89	Fill-Co
25	7.09	Fill-Co
26	7.094	Fill-Co
27	7.16	Fill-Co
28	7.18	Fill-Co
29	7.355	Fill-Co
30	7.422	Fill-Co
31	7.4629	Fill-Co
32	7.475	Fill-Co
33	7.797	Fill-Co
34	7.962	Fill-Co
35	7.965	Fill-Co
36	8.0515	Fill-Co
37	8.25	Fill-Co
38	8.5938	Fill-Co
39	8.7	Fill-Co
40	8.8	Fill-Co
41	9.0683	Fill-Co
42	9.09	Fill-Co
43	9.1	Fill-Co
44	9.193	Fill-Co
45	9.2283	Fill-Co
46	9.24	Fill-Co
47	9.34	Fill-Co
48	9.4617	Fill-Co
49	9.473	Fill-Co
50	9.493	Fill-Co
51	9.6	Fill-Co
52	9.609	Fill-Co
53	9.708	Fill-Co
54	9.7205	Fill-Co
55	9.75	Fill-Co
56	9.881	Fill-Co
57	9.99	Fill-Co
58	10.131	Fill-Co
59	10.142	Fill-Co
60	10.235	Fill-Co
61	10.3	Fill-Co
62	10.3	Fill-Co
63	10.3892	Fill-Co
64	10.393	Fill-Co
65	10.789	Fill-Co
66	11	Fill-Co
67	11	Fill-Co

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	227	Mean	22.785
Censored	------	Lognormal mean	24.337
Detection limit or PQL	------	Std. devn.	24.934
Method detection limit		Median	15.2096
TOTAL	227	Min.	0.0211
ENTER DATA		Max	279

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.870

Normal distribution? r-squared is: 0.563

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

A-353

	A	B
1	DATA	ID
2	0.0211	Fill-Co
3	0.644	Fill-Co
4	1.25	Fill-Co
5	1.25	Fill-Co
6	3.2	Fill-Co
7	3.24	Fill-Co
8	3.3	Fill-Co
9	3.4	Fill-Co
10	4.1	Fill-Co
11	5.0475	Fill-Co
12	5.3	Fill-Co
13	5.3151	Fill-Co
14	5.341	Fill-Co
15	5.48	Fill-Co
16	6	Fill-Co
17	6.07	Fill-Co
18	6.3	Fill-Co
19	6.445	Fill-Co
20	6.6	Fill-Co
21	6.65	Fill-Co
22	6.676	Fill-Co
23	6.83	Fill-Co
24	6.89	Fill-Co
25	7.09	Fill-Co
26	7.094	Fill-Co
27	7.16	Fill-Co
28	7.18	Fill-Co
29	7.355	Fill-Co
30	7.422	Fill-Co
31	7.4629	Fill-Co
32	7.475	Fill-Co
33	7.797	Fill-Co
34	7.962	Fill-Co
35	7.965	Fill-Co
36	8.0515	Fill-Co
37	8.25	Fill-Co
38	8.5938	Fill-Co
39	8.7	Fill-Co
40	8.8	Fill-Co
41	9.0683	Fill-Co
42	9.09	Fill-Co
43	9.1	Fill-Co
44	9.193	Fill-Co
45	9.2283	Fill-Co
46	9.24	Fill-Co
47	9.34	Fill-Co
48	9.4617	Fill-Co
49	9.473	Fill-Co
50	9.493	Fill-Co
51	9.6	Fill-Co
52	9.609	Fill-Co
53	9.708	Fill-Co
54	9.7205	Fill-Co
55	9.75	Fill-Co
56	9.881	Fill-Co
57	9.99	Fill-Co
58	10.131	Fill-Co
59	10.142	Fill-Co
60	10.235	Fill-Co
61	10.3	Fill-Co
62	10.3	Fill-Co
63	10.3892	Fill-Co
64	10.393	Fill-Co
65	10.789	Fill-Co
66	11	Fill-Co
67	11	Fill-Co

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	227	Mean	22.785
Censored	------	Lognormal mean	24.337
Detection limit or PQL	------	Std. devn.	24.934
Method detection limit		Median	15.2096
TOTAL	227	Min.	0.0211
ENTER DATA		Max.	279

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.870

Normal distribution? r-squared is: 0.563

Recommendations:

Reject lognormal distribution.

Y value is -14.6254. This lies outside the tabled values of 1.5225 and -2.3678

Reject normal distribution.

Y value is -42.69. This lies outside the tabled values of 1.5225 and -2.3678

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

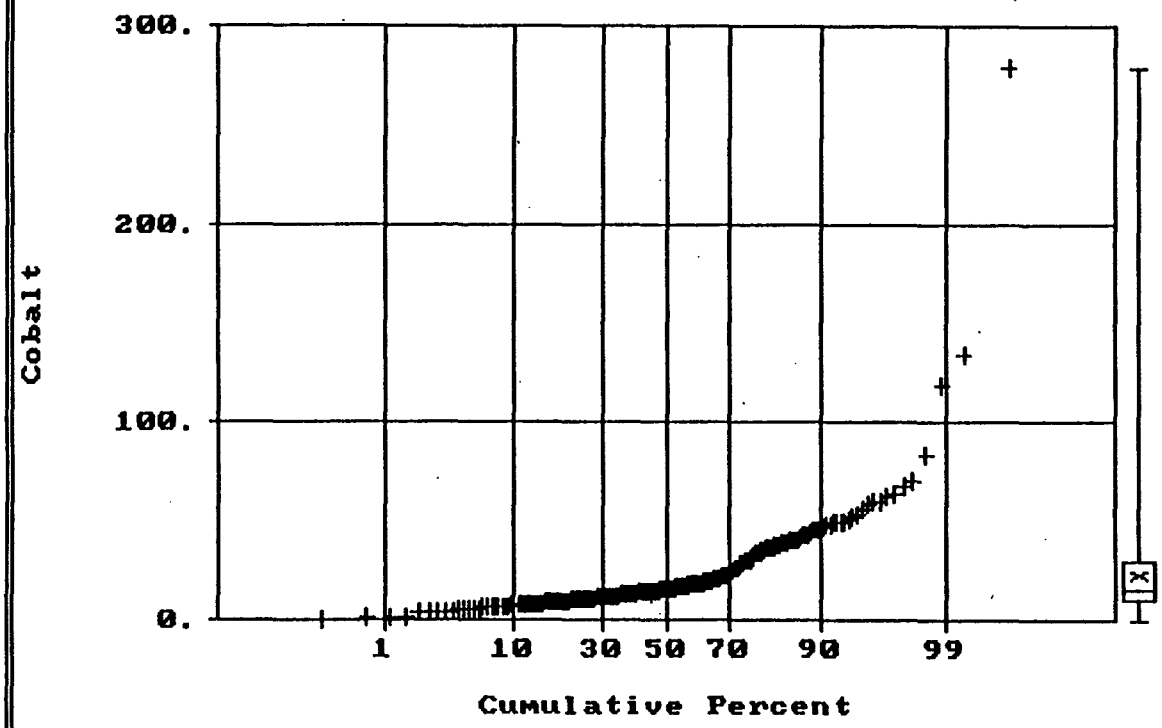
Normal

Neither

Sample size

A-354

Normal Probability Plot for Cobalt
Data file: fil-all.dat

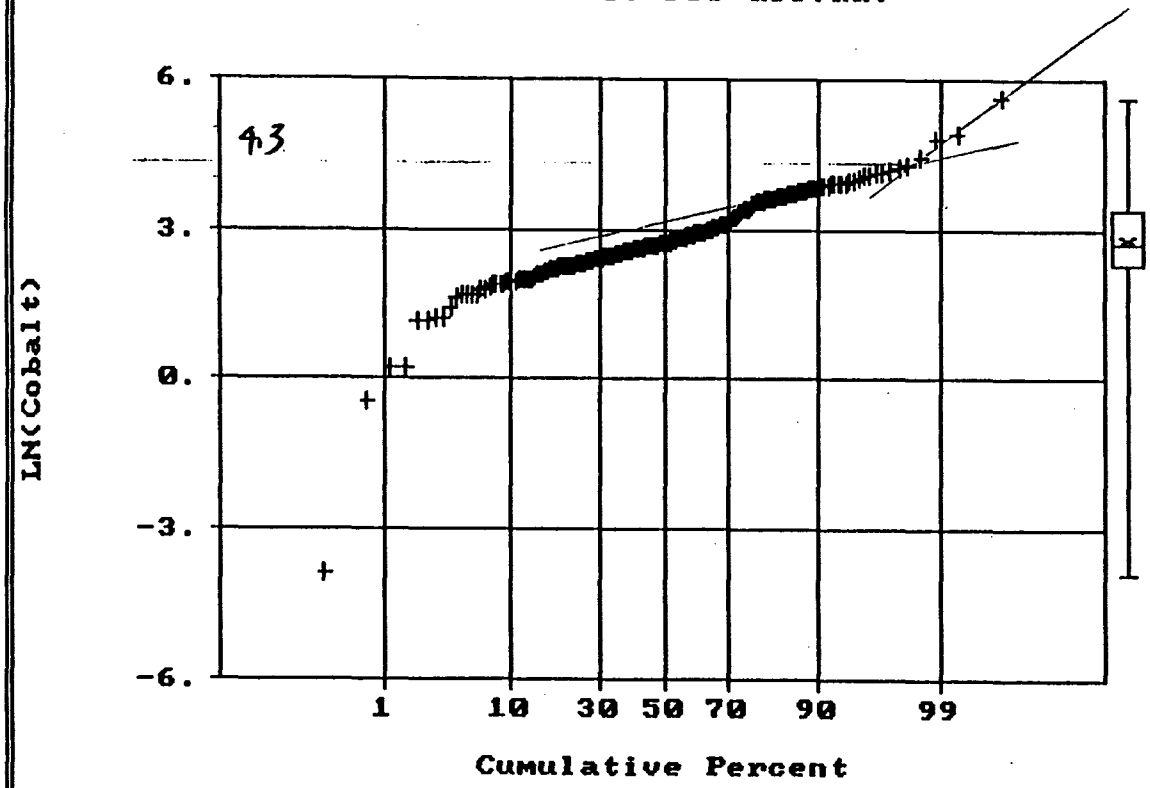


S t a t i s t i c s

N Total :	371
N Miss :	144
N Used :	227
Mean :	22.785
Variance:	621.729
Std. Dev:	24.934
% C.V. :	109.433
Skewness:	5.666
Kurtosis:	52.781
Minimum :	.021
25th % :	10.096
Median :	15.210
75th % :	29.675
Maximum :	279.000

A-355

Normal Probability Plot for LN(Cobalt)
Data file: fil-all.dat



Statistics

N Total :	371
N Miss :	144
N Used :	227
Mean :	2.779
Variance:	.827
Std. Dev:	.909
% C.V. :	32.726
Skewness:	-1.762
Kurtosis:	15.313
Minimum :	-3.858
25th % :	2.312
Median :	2.722
75th % :	3.390
Maximum :	5.631

$e^{4.3} = 73$

A-356

	A	B
1	DATA	ID
2	0.3374	Fill-Cr
3	1	Fill-Cr
4	9.8048	Fill-Cr
5	11.242	Fill-Cr
6	11.391	Fill-Cr
7	12.7368	Fill-Cr
8	13.2457	Fill-Cr
9	14.2703	Fill-Cr
10	20.1	Fill-Cr
11	23.2358	Fill-Cr
12	25	Fill-Cr
13	27	Fill-Cr
14	27.0784	Fill-Cr
15	28.0462	Fill-Cr
16	32.835	Fill-Cr
17	33.2	Fill-Cr
18	33.2625	Fill-Cr
19	35.6436	Fill-Cr
20	36.015	Fill-Cr
21	37.3096	Fill-Cr
22	37.6206	Fill-Cr
23	37.9	Fill-Cr
24	38.3	Fill-Cr
25	39.685	Fill-Cr
26	40.3	Fill-Cr
27	40.7	Fill-Cr
28	41.6	Fill-Cr
29	41.8	Fill-Cr
30	42.4	Fill-Cr
31	43	Fill-Cr
32	43.1416	Fill-Cr
33	43.4	Fill-Cr
34	43.8	Fill-Cr
35	44.6377	Fill-Cr
36	44.9	Fill-Cr
37	45	Fill-Cr
38	47.163	Fill-Cr
39	47.2	Fill-Cr
40	47.918	Fill-Cr
41	48	Fill-Cr
42	48.2	Fill-Cr
43	48.5	Fill-Cr
44	48.6	Fill-Cr
45	48.6333	Fill-Cr
46	49.0385	Fill-Cr
47	49.13	Fill-Cr
48	49.484	Fill-Cr
49	50	Fill-Cr
50	50.5	Fill-Cr
51	51	Fill-Cr
52	51.2	Fill-Cr
53	51.5	Fill-Cr
54	51.698	Fill-Cr
55	52.0335	Fill-Cr
56	52.5	Fill-Cr
57	53	Fill-Cr
58	53.4483	Fill-Cr
59	53.9	Fill-Cr
60	53.967	Fill-Cr
61	54.0023	Fill-Cr
62	56	Fill-Cr
63	56.6	Fill-Cr
64	56.9	Fill-Cr
65	58.097	Fill-Cr
66	59.1	Fill-Cr
67	59.481	Fill-Cr

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	227	Mean	150.305
Censored	------	Lognormal mean	148.541
Detection limit or PQL	------	Std. devn.	211.872
Method detection limit		Median	80.122
TOTAL	227	Min.	0.3374
ENTER DATA		Max	1590

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.896

Normal distribution? r-squared is: 0.542

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

A-357

	A	B
1	DATA	ID
2	0.3374	Fill-Cr
3	1	Fill-Cr
4	9.8048	Fill-Cr
5	11.242	Fill-Cr
6	11.391	Fill-Cr
7	12.7368	Fill-Cr
8	13.2457	Fill-Cr
9	14.2703	Fill-Cr
10	20.1	Fill-Cr
11	23.2358	Fill-Cr
12	25	Fill-Cr
13	27	Fill-Cr
14	27.0784	Fill-Cr
15	28.0462	Fill-Cr
16	32.835	Fill-Cr
17	33.2	Fill-Cr
18	33.2625	Fill-Cr
19	35.6436	Fill-Cr
20	36.015	Fill-Cr
21	37.3096	Fill-Cr
22	37.6206	Fill-Cr
23	37.9	Fill-Cr
24	38.3	Fill-Cr
25	39.685	Fill-Cr
26	40.3	Fill-Cr
27	40.7	Fill-Cr
28	41.6	Fill-Cr
29	41.8	Fill-Cr
30	42.4	Fill-Cr
31	43	Fill-Cr
32	43.1416	Fill-Cr
33	43.4	Fill-Cr
34	43.8	Fill-Cr
35	44.6377	Fill-Cr
36	44.9	Fill-Cr
37	45	Fill-Cr
38	47.163	Fill-Cr
39	47.2	Fill-Cr
40	47.918	Fill-Cr
41	48	Fill-Cr
42	48.2	Fill-Cr
43	48.5	Fill-Cr
44	48.6	Fill-Cr
45	48.6333	Fill-Cr
46	49.0385	Fill-Cr
47	49.13	Fill-Cr
48	49.484	Fill-Cr
49	50	Fill-Cr
50	50.5	Fill-Cr
51	51	Fill-Cr
52	51.2	Fill-Cr
53	51.5	Fill-Cr
54	51.698	Fill-Cr
55	52.0335	Fill-Cr
56	52.5	Fill-Cr
57	53	Fill-Cr
58	53.4483	Fill-Cr
59	53.9	Fill-Cr
60	53.967	Fill-Cr
61	54.0023	Fill-Cr
62	56	Fill-Cr
63	56.6	Fill-Cr
64	56.9	Fill-Cr
65	58.097	Fill-Cr
66	59.1	Fill-Cr
67	59.481	Fill-Cr

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	227	Mean	150.305
Censored	------	Lognormal mean	148.541
Detection limit or PQL	------	Std. devn.	211.872
Method detection limit	------	Median	80.122
TOTAL	227	Min.	0.3374
ENTER DATA		Max	1590

Distribution Decision

Probability plot method	W test	D'Agostino's test
Lognormal distribution? r-squared is: 0.896	Normal distribution? r-squared is: 0.542	

Recommendations:

Reject lognormal distribution.

Y value is -13.8737. This lies outside the tabled values of 1.5225 and -2.3678

Reject normal distribution.

Y value is -46.8902. This lies outside the tabled values of 1.5225 and -2.3678

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

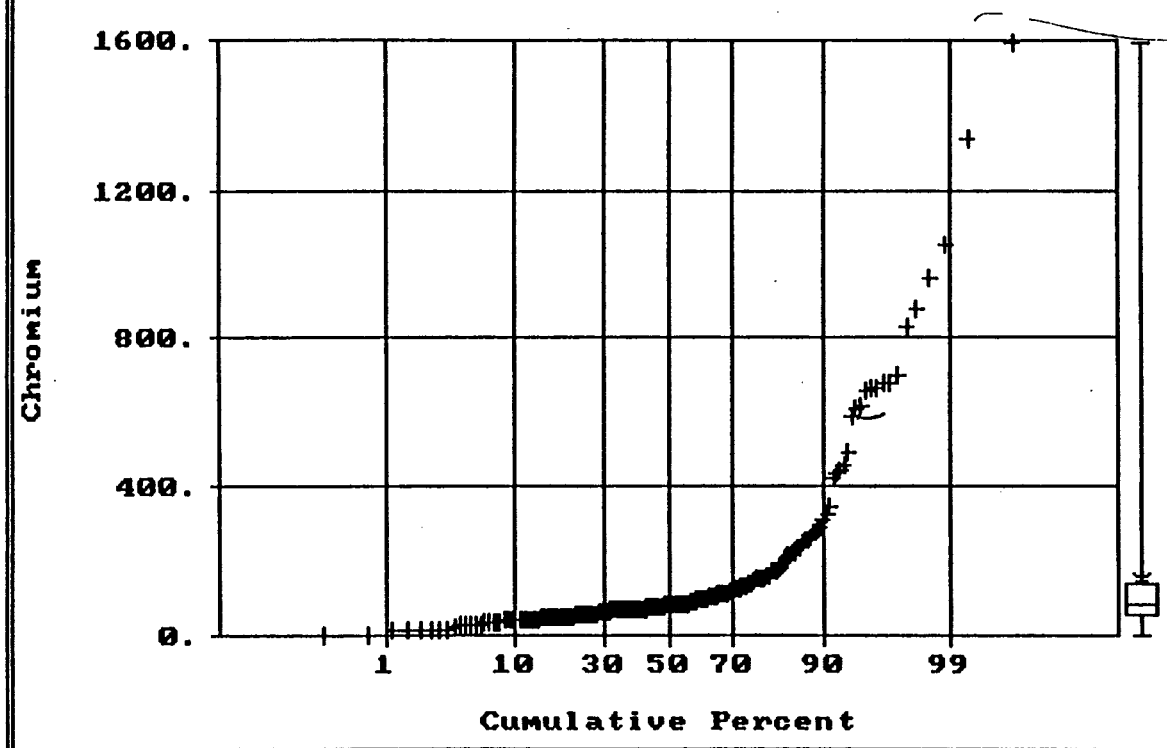
Lognormal

Normal

Neither

Sample size

Normal Probability Plot for Chromium
Data file: fil-all.dat

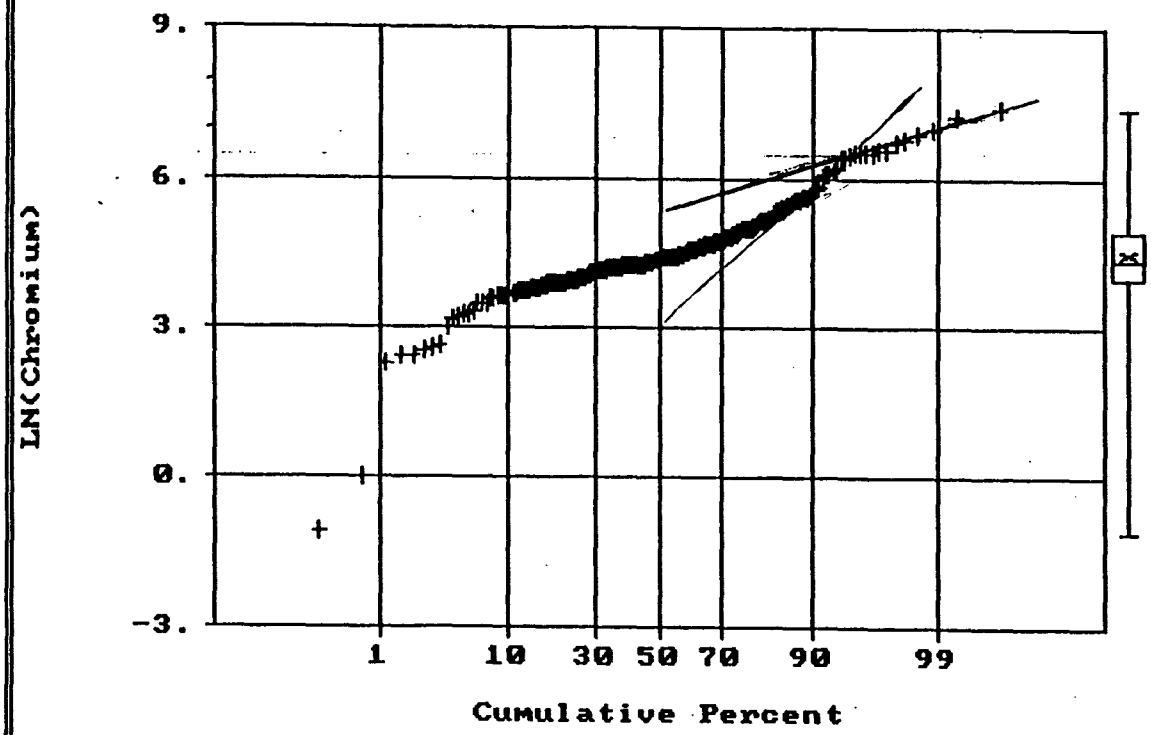


Statistics

N Total :	371
N Miss :	144
N Used :	227
Mean :	150.305
Variance:	44889.550
Std. Dev:	211.872
% C.V. :	140.961
Skewness:	3.627
Kurtosis:	18.700
Minimum :	.337
25th % :	53.336
Median :	80.122
75th % :	138.119
Maximum :	1590.000

A-359

Normal Probability Plot for LN(Chromium)
Data file: fil-all.dat



Statistics

N Total :	371
N Miss :	144
N Used :	227
Mean :	4.499
Variance:	1.004
Std. Dev:	1.002
% C.V. :	22.279
Skewness:	-.597
Kurtosis:	8.600
Minimum :	-1.086
25th % :	3.977
Median :	4.384
75th % :	4.928
Maximum :	7.371

$e^{6.4} = \sim 600$

A-36

	A	B
1	DATA	ID
2	0.0133	Fill-Cu
3	0.25	Fill-Cu
4	1.42	Fill-Cu
5	1.42	Fill-Cu
6	1.42	Fill-Cu
7	1.5	Fill-Cu
8	1.6	Fill-Cu
9	3.182	Fill-Cu
10	3.3	Fill-Cu
11	4.084	Fill-Cu
12	5.7245	Fill-Cu
13	6.05	Fill-Cu
14	6.21	Fill-Cu
15	6.817	Fill-Cu
16	7.2795	Fill-Cu
17	7.69	Fill-Cu
18	8.45	Fill-Cu
19	8.638	Fill-Cu
20	8.75	Fill-Cu
21	9.169	Fill-Cu
22	9.3	Fill-Cu
23	10.052	Fill-Cu
24	10.9	Fill-Cu
25	11.1	Fill-Cu
26	11.2395	Fill-Cu
27	11.279	Fill-Cu
28	11.5	Fill-Cu
29	11.678	Fill-Cu
30	11.9952	Fill-Cu
31	12	Fill-Cu
32	12.4	Fill-Cu
33	12.8	Fill-Cu
34	13	Fill-Cu
35	13.341	Fill-Cu
36	13.683	Fill-Cu
37	13.812	Fill-Cu
38	14	Fill-Cu
39	14.5	Fill-Cu
40	15.6	Fill-Cu
41	15.9	Fill-Cu
42	16	Fill-Cu
43	16	Fill-Cu
44	16.174	Fill-Cu
45	16.28	Fill-Cu
46	16.874	Fill-Cu
47	17.931	Fill-Cu
48	18.153	Fill-Cu
49	18.977	Fill-Cu
50	19	Fill-Cu
51	19	Fill-Cu
52	19.208	Fill-Cu
53	19.3	Fill-Cu
54	19.7	Fill-Cu
55	19.881	Fill-Cu
56	19.9	Fill-Cu
57	20.008	Fill-Cu
58	20.098	Fill-Cu
59	20.6	Fill-Cu
60	20.7	Fill-Cu
61	20.7525	Fill-Cu
62	21	Fill-Cu
63	21.2	Fill-Cu
64	21.4823	Fill-Cu
65	21.6	Fill-Cu
66	21.8	Fill-Cu
67	22	Fill-Cu

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	227	Mean	232.427
Censored	------	Lognormal mean	77.900
Detection limit or PQL	------	Std. devn.	2586.462
Method detection limit	------	Median	34.7
TOTAL	227	Min.	0.0133
ENTER DATA		Max.	39000

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.861

Normal distribution? r-squared is: 0.045

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

A-361

	A	B
1	DATA	ID
2	0.0133	Fill-Cu
3	0.25	Fill-Cu
4	1.42	Fill-Cu
5	1.42	Fill-Cu
6	1.42	Fill-Cu
7	1.5	Fill-Cu
8	1.6	Fill-Cu
9	3.182	Fill-Cu
10	3.3	Fill-Cu
11	4.084	Fill-Cu
12	5.7245	Fill-Cu
13	6.05	Fill-Cu
14	6.21	Fill-Cu
15	6.817	Fill-Cu
16	7.2795	Fill-Cu
17	7.69	Fill-Cu
18	8.45	Fill-Cu
19	8.638	Fill-Cu
20	8.75	Fill-Cu
21	9.169	Fill-Cu
22	9.3	Fill-Cu
23	10.052	Fill-Cu
24	10.9	Fill-Cu
25	11.1	Fill-Cu
26	11.2395	Fill-Cu
27	11.279	Fill-Cu
28	11.5	Fill-Cu
29	11.678	Fill-Cu
30	11.9952	Fill-Cu
31	12	Fill-Cu
32	12.4	Fill-Cu
33	12.8	Fill-Cu
34	13	Fill-Cu
35	13.341	Fill-Cu
36	13.683	Fill-Cu
37	13.812	Fill-Cu
38	14	Fill-Cu
39	14.5	Fill-Cu
40	15.6	Fill-Cu
41	15.9	Fill-Cu
42	16	Fill-Cu
43	16	Fill-Cu
44	16.174	Fill-Cu
45	16.28	Fill-Cu
46	16.874	Fill-Cu
47	17.931	Fill-Cu
48	18.153	Fill-Cu
49	18.977	Fill-Cu
50	19	Fill-Cu
51	19	Fill-Cu
52	19.208	Fill-Cu
53	19.3	Fill-Cu
54	19.7	Fill-Cu
55	19.881	Fill-Cu
56	19.9	Fill-Cu
57	20.008	Fill-Cu
58	20.098	Fill-Cu
59	20.6	Fill-Cu
60	20.7	Fill-Cu
61	20.7525	Fill-Cu
62	21	Fill-Cu
63	21.2	Fill-Cu
64	21.4823	Fill-Cu
65	21.6	Fill-Cu
66	21.8	Fill-Cu
67	22	Fill-Cu

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	227	Mean	232.427
Censored	------	Lognormal mean	77.900
Detection limit or PQL	------	Std. devn.	2586.462
Method detection limit	------	Median	34.7
TOTAL	227	Min.	0.0133
ENTER DATA		Max.	39000

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.861

Normal distribution? r-squared is: 0.045

Recommendations:

Reject lognormal distribution.

Y value is -18.9018. This lies outside the tabled values of 1.5225 and -2.3678

Reject normal distribution.

Y value is -121.8597. This lies outside the tabled values of 1.5225 and -2.3678

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

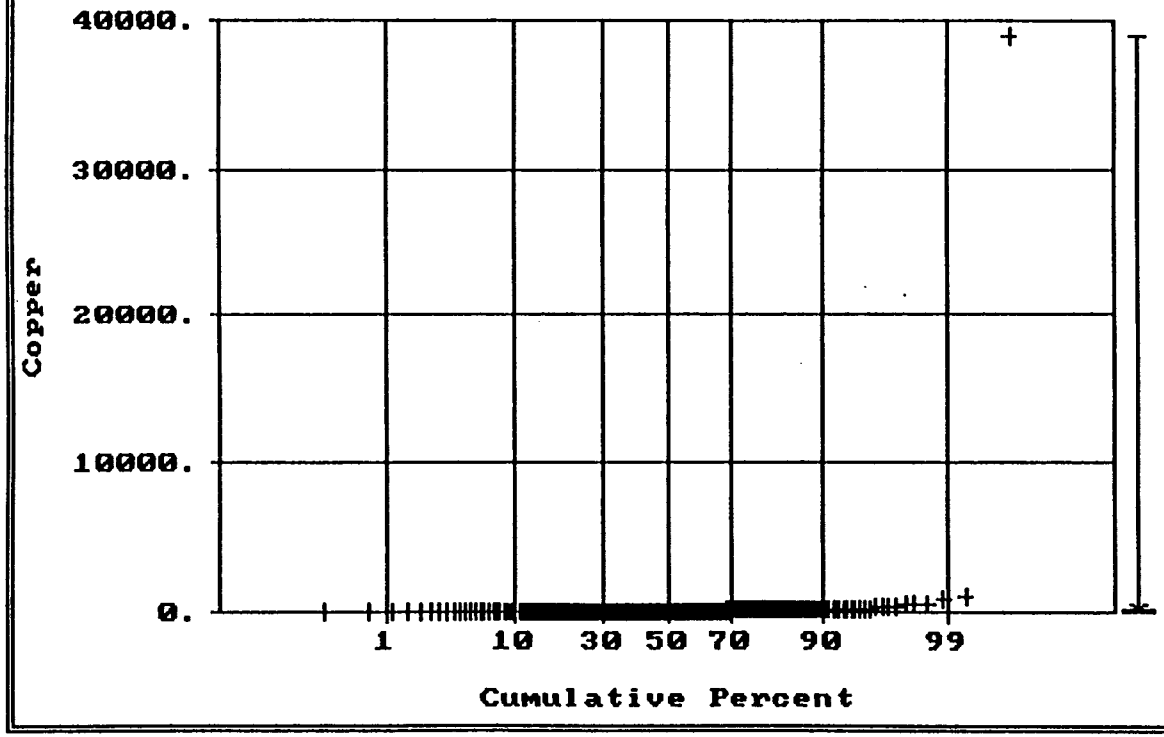
Normal

Neither

Sample size

A-362

Normal Probability Plot for Copper
Data file: fil-all.dat

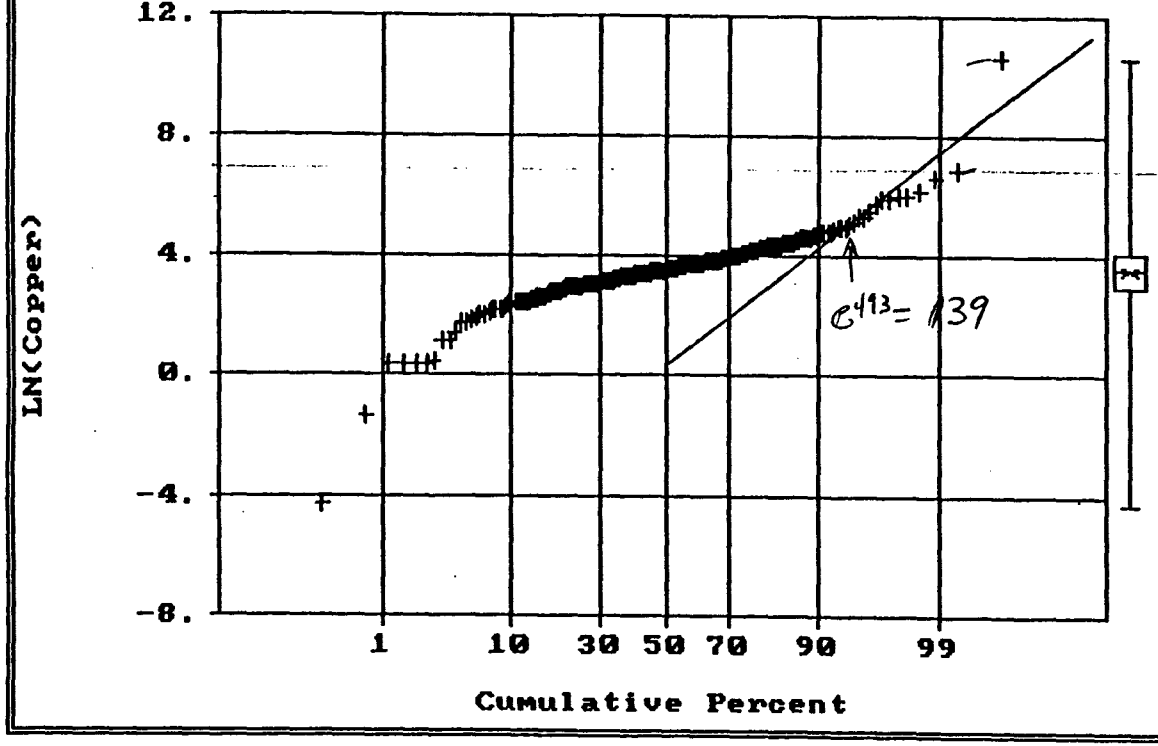


Statistics

N Total :	371
N Miss :	144
N Used :	227
Mean :	232.427
Variance:	6689784.000
Std. Dev:	2586.462
% C.V. :	1112.804
Skewness:	14.932
Kurtosis:	224.316
Minimum :	.013
25th % :	20.076
Median :	34.700
75th % :	62.377
Maximum :	39000.000

A-363

Normal Probability Plot for LN(Copper)
Data file: fil-all.dat



Statistics

N Total :	371
N Miss :	144
N Used :	227
Mean :	3.524
Variance:	1.663
Std. Dev:	1.290
% C.V. :	36.594
Skewness:	-.566
Kurtosis:	12.890
Minimum :	-4.320
25th % :	2.999
Median :	3.547
75th % :	4.133
Maximum :	10.571

~~$e^{7.2} \approx 1100$~~

A-364

	A	B
1	DATA	ID
2	0.475	Fill-Fe
3	3996.436	Fill-Fe
4	4000	Fill-Fe
5	4004.4248	Fill-Fe
6	5800	Fill-Fe
7	6000	Fill-Fe
8	6030.478	Fill-Fe
9	8254.1568	Fill-Fe
10	9275.708	Fill-Fe
11	9351.7535	Fill-Fe
12	9500	Fill-Fe
13	9789.604	Fill-Fe
14	9842.437	Fill-Fe
15	10000	Fill-Fe
16	11000	Fill-Fe
17	110000	Fill-Fe
18	11006.118	Fill-Fe
19	11897.1061	Fill-Fe
20	12000	Fill-Fe
21	12000	Fill-Fe
22	12000	Fill-Fe
23	12500	Fill-Fe
24	125343.242	Fill-Fe
25	12860.5769	Fill-Fe
26	13000	Fill-Fe
27	13000	Fill-Fe
28	13000	Fill-Fe
29	13000	Fill-Fe
30	13500	Fill-Fe
31	14000	Fill-Fe
32	14000	Fill-Fe
33	14000	Fill-Fe
34	140000	Fill-Fe
35	14114.8325	Fill-Fe
36	15000	Fill-Fe
37	15000	Fill-Fe
38	15000	Fill-Fe
39	15300	Fill-Fe
40	15688.7755	Fill-Fe
41	15709.6425	Fill-Fe
42	16000	Fill-Fe
43	16000	Fill-Fe
44	16000	Fill-Fe
45	16100	Fill-Fe
46	16436.7816	Fill-Fe
47	16735.5372	Fill-Fe
48	17000	Fill-Fe
49	17000	Fill-Fe
50	17023.6753	Fill-Fe
51	17371.176	Fill-Fe
52	17450	Fill-Fe
53	17604.7904	Fill-Fe
54	17655.367	Fill-Fe
55	17894.697	Fill-Fe
56	18000	Fill-Fe
57	18000	Fill-Fe
58	18000	Fill-Fe
59	18112.7983	Fill-Fe
60	18170.8785	Fill-Fe
61	18260.8696	Fill-Fe
62	18552.0362	Fill-Fe
63	18977.2727	Fill-Fe
64	19000	Fill-Fe
65	19012.3457	Fill-Fe
66	19125	Fill-Fe
67	19167.5794	Fill-Fe

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	227	Mean	28074.015
Censored	------	Lognormal mean	34919.875
Detection limit or PQL	------	Std. devn.	17140.307
Method detection limit		Median	25000
TOTAL	227	Min.	0.475
ENTER DATA		Max	140000

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.521

Normal distribution? r-squared is: 0.760

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

A-365

	A	B
1	DATA	ID
2	0.475	Fill-Fe
3	3996.436	Fill-Fe
4	4000	Fill-Fe
5	4004.4248	Fill-Fe
6	5800	Fill-Fe
7	6000	Fill-Fe
8	6030.478	Fill-Fe
9	8254.1568	Fill-Fe
10	9275.708	Fill-Fe
11	9351.7535	Fill-Fe
12	9500	Fill-Fe
13	9789.604	Fill-Fe
14	9842.437	Fill-Fe
15	10000	Fill-Fe
16	11000	Fill-Fe
17	110000	Fill-Fe
18	11006.118	Fill-Fe
19	11897.1061	Fill-Fe
20	12000	Fill-Fe
21	12000	Fill-Fe
22	12000	Fill-Fe
23	12500	Fill-Fe
24	125343.242	Fill-Fe
25	12860.5769	Fill-Fe
26	13000	Fill-Fe
27	13000	Fill-Fe
28	13000	Fill-Fe
29	13000	Fill-Fe
30	13500	Fill-Fe
31	14000	Fill-Fe
32	14000	Fill-Fe
33	14000	Fill-Fe
34	140000	Fill-Fe
35	14114.8325	Fill-Fe
36	15000	Fill-Fe
37	15000	Fill-Fe
38	15000	Fill-Fe
39	15300	Fill-Fe
40	15688.7755	Fill-Fe
41	15709.6425	Fill-Fe
42	16000	Fill-Fe
43	16000	Fill-Fe
44	16000	Fill-Fe
45	16100	Fill-Fe
46	16436.7816	Fill-Fe
47	16735.5372	Fill-Fe
48	17000	Fill-Fe
49	17000	Fill-Fe
50	17023.6753	Fill-Fe
51	17371.176	Fill-Fe
52	17450	Fill-Fe
53	17604.7904	Fill-Fe
54	17655.367	Fill-Fe
55	17894.697	Fill-Fe
56	18000	Fill-Fe
57	18000	Fill-Fe
58	18000	Fill-Fe
59	18112.7983	Fill-Fe
60	18170.8785	Fill-Fe
61	18260.8696	Fill-Fe
62	18552.0362	Fill-Fe
63	18977.2727	Fill-Fe
64	19000	Fill-Fe
65	19012.3457	Fill-Fe
66	19125	Fill-Fe
67	19167.5794	Fill-Fe

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	227	Mean	28074.015
Censored	------	Lognormal mean	34919.875
Detection limit or PQL	------	Std. devn.	17140.307
Method detection limit		Median	25000
TOTAL	227	Min.	0.475
ENTER DATA		Max	140000

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.521

Normal distribution? r-squared is: 0.760

Recommendations:

Reject lognormal distribution.

Y value is -48.6239. This lies outside the tabled values of 1.5225 and -2.3678

Reject normal distribution.

Y value is -25.2658. This lies outside the tabled values of 1.5225 and -2.3678

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

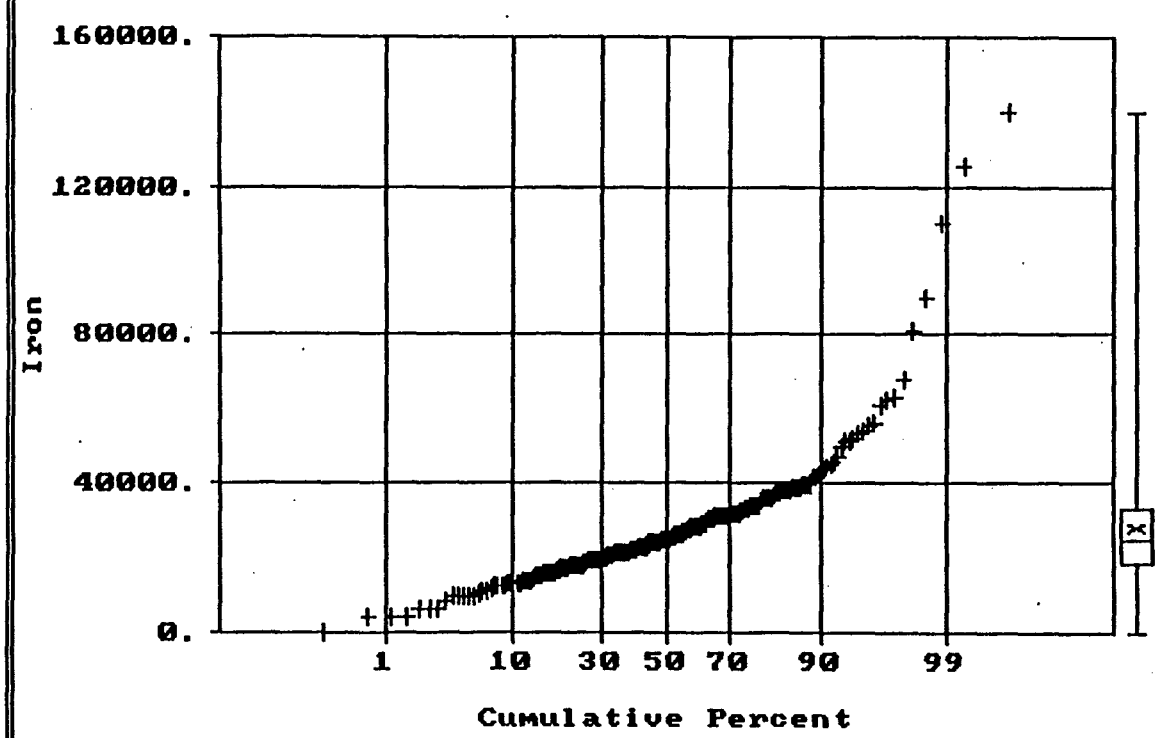
Normal

Neither

Sample size

A-366

Normal Probability Plot for Iron
Data file: fil-all.dat

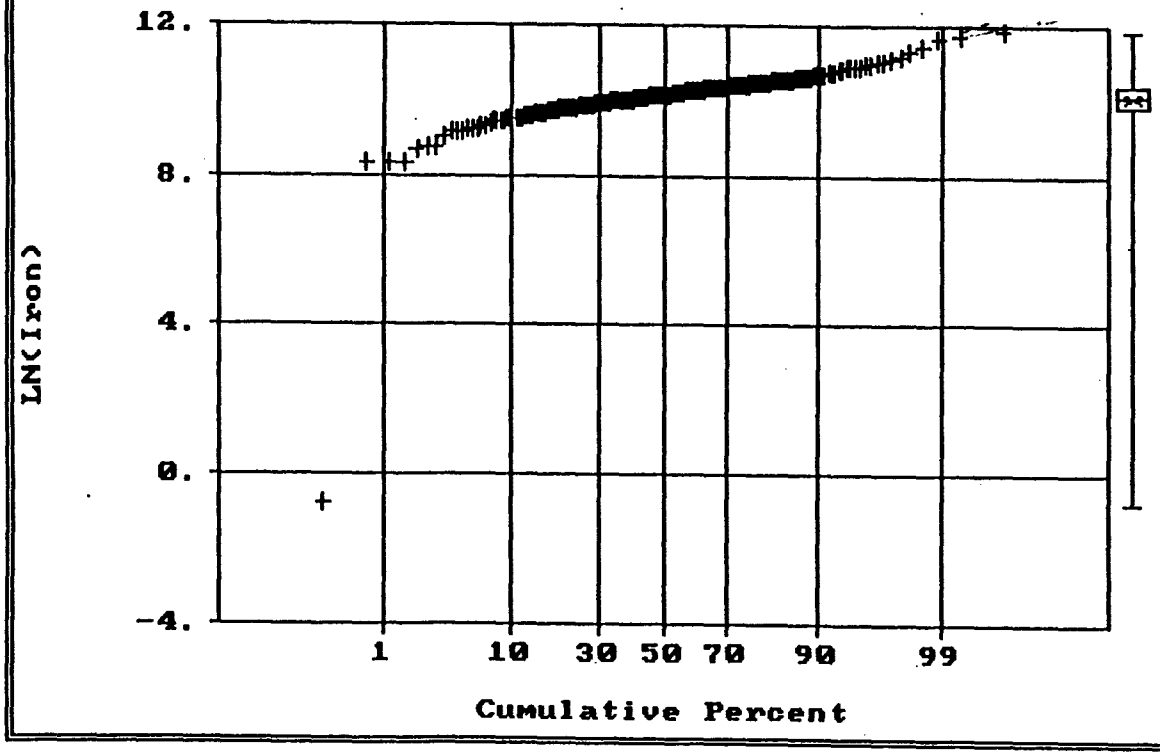


Statistics

N Total :	371
N Miss :	144
N Used :	227
Mean :	28074.020
Variance:	293790100.000
Std. Dev:	17140.310
% C.V. :	61.054
Skewness:	2.957
Kurtosis:	16.942
Minimum :	.475
25th % :	18238.370
Median :	25000.000
75th % :	33000.000
Maximum :	140000.000

A-367

Normal Probability Plot for LN(Iron)
Data file: fil-all.dat



Statistics

N Total :	371
N Miss :	144
N Used :	227
Mean :	10.059
Variance:	.803
Std. Dev:	.896
% C.V. :	8.908
Skewness:	-7.785
Kurtosis:	94.524
Minimum :	-.744
25th % :	9.811
Median :	10.127
75th % :	10.404
Maximum :	11.849

A-368

	A	B
1	DATA	ID
2	0.005	Fill-Hg
3	0.005	Fill-Hg
4	0.0135	Fill-Hg
5	0.0135	Fill-Hg
6	0.0135	Fill-Hg
7	0.0135	Fill-Hg
8	0.0135	Fill-Hg
9	0.0135	Fill-Hg
10	0.0135	Fill-Hg
11	0.0135	Fill-Hg
12	0.0135	Fill-Hg
13	0.0135	Fill-Hg
14	0.0135	Fill-Hg
15	0.016	Fill-Hg
16	0.02	Fill-Hg
17	0.025	Fill-Hg
18	0.025	Fill-Hg
19	0.025	Fill-Hg
20	0.025	Fill-Hg
21	0.025	Fill-Hg
22	0.025	Fill-Hg
23	0.025	Fill-Hg
24	0.025	Fill-Hg
25	0.025	Fill-Hg
26	0.025	Fill-Hg
27	0.025	Fill-Hg
28	0.025	Fill-Hg
29	0.025	Fill-Hg
30	0.025	Fill-Hg
31	0.025	Fill-Hg
32	0.025	Fill-Hg
33	0.025	Fill-Hg
34	0.025	Fill-Hg
35	0.025	Fill-Hg
36	0.025	Fill-Hg
37	0.025	Fill-Hg
38	0.025	Fill-Hg
39	0.025	Fill-Hg
40	0.025	Fill-Hg
41	0.025	Fill-Hg
42	0.025	Fill-Hg
43	0.027	Fill-Hg
44	0.027	Fill-Hg
45	0.029	Fill-Hg
46	0.0295	Fill-Hg
47	0.0295	Fill-Hg
48	0.0295	Fill-Hg
49	0.0295	Fill-Hg
50	0.0295	Fill-Hg
51	0.0295	Fill-Hg
52	0.0295	Fill-Hg
53	0.0295	Fill-Hg
54	0.0295	Fill-Hg
55	0.0295	Fill-Hg
56	0.0295	Fill-Hg
57	0.0295	Fill-Hg
58	0.0295	Fill-Hg
59	0.03	Fill-Hg
60	0.03	Fill-Hg
61	0.031	Fill-Hg
62	0.032	Fill-Hg
63	0.034	Fill-Hg
64	0.034	Fill-Hg
65	0.034	Fill-Hg
66	0.036	Fill-Hg
67	0.036	Fill-Hg

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	226	Mean	0.233
Censored	------	Lognormal mean	0.175
Detection limit or PQL	------	Std. devn.	0.660
Method detection limit		Median	0.0745
TOTAL	226	Min.	0.005
ENTER DATA		Max.	6.819

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.955

Normal distribution? r-squared is: 0.295

Recommendations:

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

A-369

	A	B
1	DATA	ID
2	0.005	Fill-Hg
3	0.005	Fill-Hg
4	0.0135	Fill-Hg
5	0.0135	Fill-Hg
6	0.0135	Fill-Hg
7	0.0135	Fill-Hg
8	0.0135	Fill-Hg
9	0.0135	Fill-Hg
10	0.0135	Fill-Hg
11	0.0135	Fill-Hg
12	0.0135	Fill-Hg
13	0.0135	Fill-Hg
14	0.0135	Fill-Hg
15	0.016	Fill-Hg
16	0.02	Fill-Hg
17	0.025	Fill-Hg
18	0.025	Fill-Hg
19	0.025	Fill-Hg
20	0.025	Fill-Hg
21	0.025	Fill-Hg
22	0.025	Fill-Hg
23	0.025	Fill-Hg
24	0.025	Fill-Hg
25	0.025	Fill-Hg
26	0.025	Fill-Hg
27	0.025	Fill-Hg
28	0.025	Fill-Hg
29	0.025	Fill-Hg
30	0.025	Fill-Hg
31	0.025	Fill-Hg
32	0.025	Fill-Hg
33	0.025	Fill-Hg
34	0.025	Fill-Hg
35	0.025	Fill-Hg
36	0.025	Fill-Hg
37	0.025	Fill-Hg
38	0.025	Fill-Hg
39	0.025	Fill-Hg
40	0.025	Fill-Hg
41	0.025	Fill-Hg
42	0.025	Fill-Hg
43	0.027	Fill-Hg
44	0.027	Fill-Hg
45	0.029	Fill-Hg
46	0.0295	Fill-Hg
47	0.0295	Fill-Hg
48	0.0295	Fill-Hg
49	0.0295	Fill-Hg
50	0.0295	Fill-Hg
51	0.0295	Fill-Hg
52	0.0295	Fill-Hg
53	0.0295	Fill-Hg
54	0.0295	Fill-Hg
55	0.0295	Fill-Hg
56	0.0295	Fill-Hg
57	0.0295	Fill-Hg
58	0.0295	Fill-Hg
59	0.03	Fill-Hg
60	0.03	Fill-Hg
61	0.031	Fill-Hg
62	0.032	Fill-Hg
63	0.034	Fill-Hg
64	0.034	Fill-Hg
65	0.034	Fill-Hg
66	0.036	Fill-Hg
67	0.036	Fill-Hg

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	226	Mean	0.233
Censored	------	Lognormal mean	0.175
Detection limit or PQL	------	Std. devn.	0.660
Method detection limit		Median	0.0745
TOTAL	226	Min.	0.005
ENTER DATA		Max	6.819

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.955

Normal distribution? r-squared is: 0.295

Recommendations:

Reject lognormal distribution.

Y value is -4.357. This lies outside the tabled values of 1.5215 and -2.3686

Reject normal distribution.

Y value is -77.7265. This lies outside the tabled values of 1.5215 and -2.3686

Upper Confidence Limit (UCL)

G | H

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

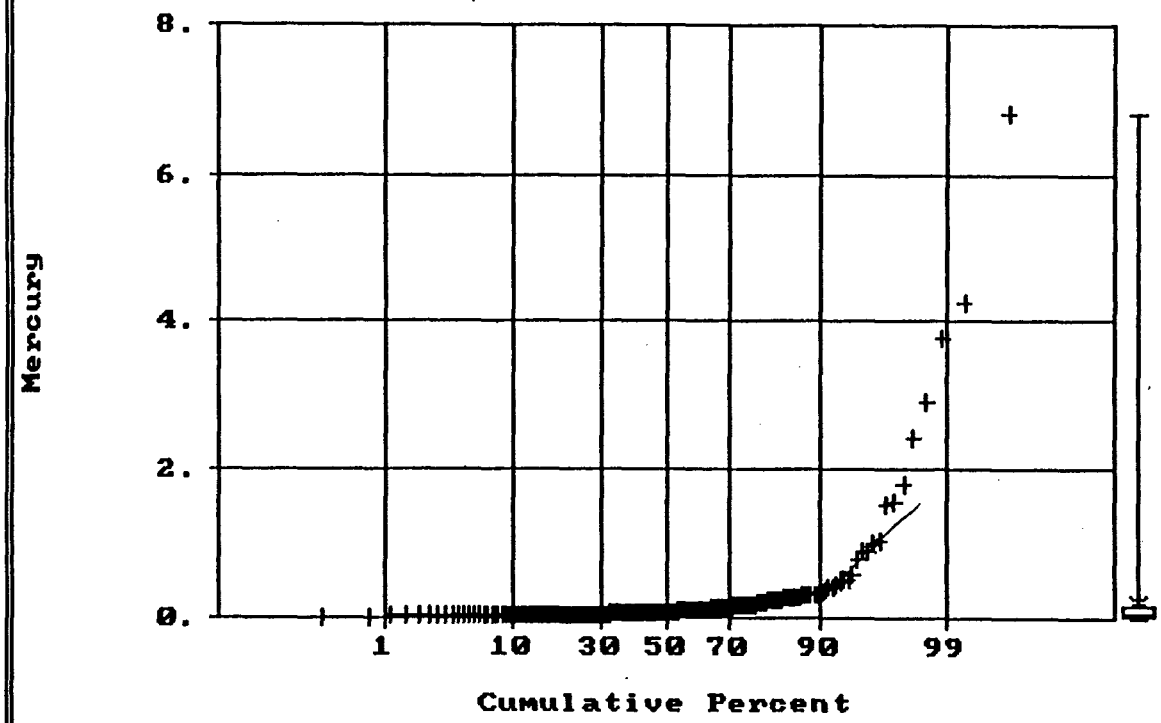
Normal

Neither

Sample size

A-370

Normal Probability Plot for Mercury
Data file: fil-all.dat

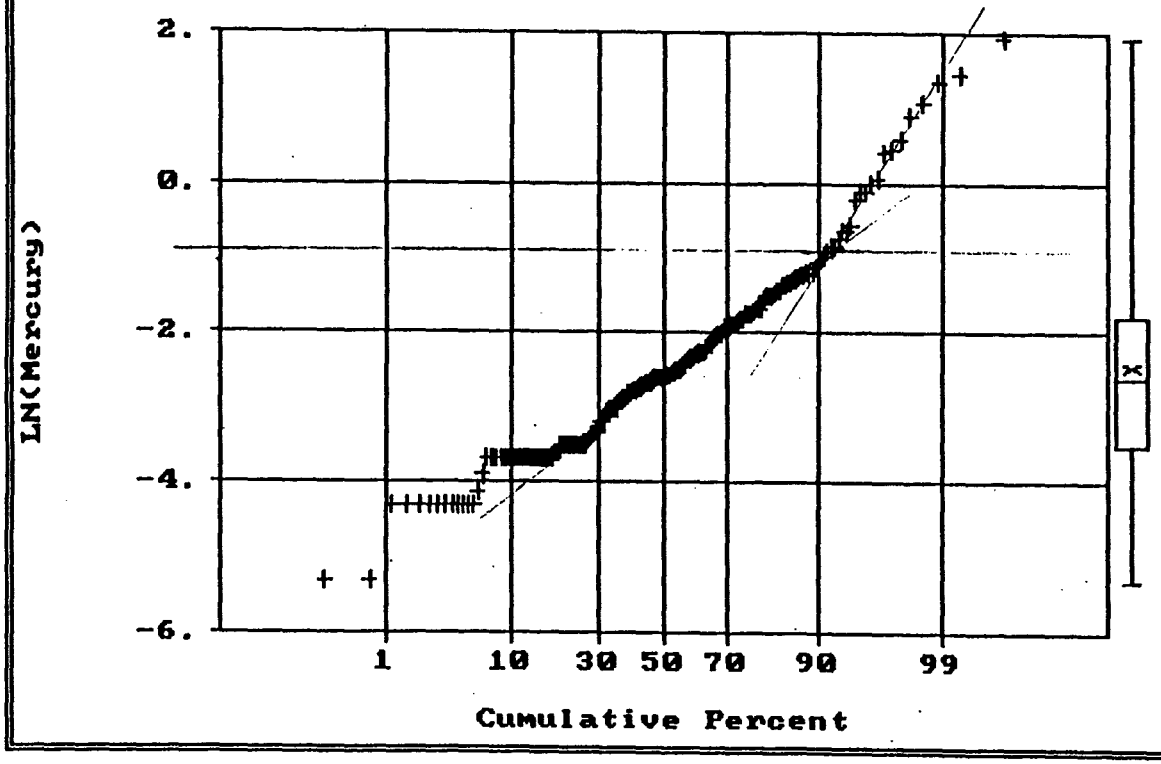


S t a t i s t i c s

N Total :	371
N Miss :	145
N Used :	226
Mean :	.233
Variance:	.436
Std. Dev:	.660
% C.V. :	283.103
Skewness:	6.722
Kurtosis:	56.166
Minimum :	.005
25th % :	.030
Median :	.075
75th % :	.167
Maximum :	6.819

A-371

Normal Probability Plot for LN(Mercury)
Data file: fil-all.dat



Statistics

N Total :	371
N Miss :	145
N Used :	226
Mean :	-2.470
Variance:	1.460
Std. Dev:	1.208
% C.V. :	48.908
Skewness:	.795
Kurtosis:	4.117
Minimum :	-5.298
25th % :	-3.523
Median :	-2.597
75th % :	-1.790
Maximum :	1.920

$e^{-0.9} = 0.4$

A-372

	A	B
1	DATA	ID
2	0.0078	Fill-Mn
3	34.37	Fill-Mn
4	39	Fill-Mn
5	65.058	Fill-Mn
6	81	Fill-Mn
7	113.1829	Fill-Mn
8	137	Fill-Mn
9	151	Fill-Mn
10	152.066	Fill-Mn
11	155	Fill-Mn
12	158	Fill-Mn
13	158.6134	Fill-Mn
14	164	Fill-Mn
15	170	Fill-Mn
16	176.4081	Fill-Mn
17	180	Fill-Mn
18	182.462	Fill-Mn
19	193	Fill-Mn
20	194.3069	Fill-Mn
21	196.1415	Fill-Mn
22	200.321	Fill-Mn
23	202	Fill-Mn
24	205	Fill-Mn
25	213	Fill-Mn
26	216	Fill-Mn
27	218.448	Fill-Mn
28	233	Fill-Mn
29	234.375	Fill-Mn
30	237	Fill-Mn
31	238	Fill-Mn
32	240	Fill-Mn
33	248.464	Fill-Mn
34	253.789	Fill-Mn
35	254	Fill-Mn
36	255	Fill-Mn
37	256	Fill-Mn
38	260	Fill-Mn
39	261.231	Fill-Mn
40	262.1885	Fill-Mn
41	263.322	Fill-Mn
42	273	Fill-Mn
43	273.7603	Fill-Mn
44	275.798	Fill-Mn
45	280	Fill-Mn
46	280.108	Fill-Mn
47	282.635	Fill-Mn
48	287	Fill-Mn
49	290	Fill-Mn
50	292	Fill-Mn
51	298	Fill-Mn
52	298.494	Fill-Mn
53	300	Fill-Mn
54	301.401	Fill-Mn
55	306	Fill-Mn
56	306	Fill-Mn
57	309.835	Fill-Mn
58	310.4693	Fill-Mn
59	325.8235	Fill-Mn
60	326	Fill-Mn
61	330.144	Fill-Mn
62	331.6327	Fill-Mn
63	332	Fill-Mn
64	334.022	Fill-Mn
65	334.907	Fill-Mn
66	339.7129	Fill-Mn
67	340	Fill-Mn

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	227	Mean	589.646
Censored	------	Lognormal mean	728.451
Detection limit or PQL	------	Std. devn.	529.254
Method detection limit		Median	450
TOTAL	227	Min.	0.0078
ENTER DATA		Max.	4648.6486

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.635

Normal distribution? r-squared is: 0.653

Recommendations.

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	0.0078	Fill-Mn
3	34.37	Fill-Mn
4	39	Fill-Mn
5	65.058	Fill-Mn
6	81	Fill-Mn
7	113.1829	Fill-Mn
8	137	Fill-Mn
9	151	Fill-Mn
10	152.066	Fill-Mn
11	155	Fill-Mn
12	158	Fill-Mn
13	158.6134	Fill-Mn
14	164	Fill-Mn
15	170	Fill-Mn
16	176.4081	Fill-Mn
17	180	Fill-Mn
18	182.462	Fill-Mn
19	193	Fill-Mn
20	194.3069	Fill-Mn
21	196.1415	Fill-Mn
22	200.321	Fill-Mn
23	202	Fill-Mn
24	205	Fill-Mn
25	213	Fill-Mn
26	216	Fill-Mn
27	218.448	Fill-Mn
28	233	Fill-Mn
29	234.375	Fill-Mn
30	237	Fill-Mn
31	238	Fill-Mn
32	240	Fill-Mn
33	248.464	Fill-Mn
34	253.789	Fill-Mn
35	254	Fill-Mn
36	255	Fill-Mn
37	256	Fill-Mn
38	260	Fill-Mn
39	261.231	Fill-Mn
40	262.1885	Fill-Mn
41	263.322	Fill-Mn
42	273	Fill-Mn
43	273.7603	Fill-Mn
44	275.798	Fill-Mn
45	280	Fill-Mn
46	280.108	Fill-Mn
47	282.635	Fill-Mn
48	287	Fill-Mn
49	290	Fill-Mn
50	292	Fill-Mn
51	298	Fill-Mn
52	298.494	Fill-Mn
53	300	Fill-Mn
54	301.401	Fill-Mn
55	306	Fill-Mn
56	306	Fill-Mn
57	309.835	Fill-Mn
58	310.4693	Fill-Mn
59	325.8235	Fill-Mn
60	326	Fill-Mn
61	330.144	Fill-Mn
62	331.6327	Fill-Mn
63	332	Fill-Mn
64	334.022	Fill-Mn
65	334.907	Fill-Mn
66	339.7129	Fill-Mn
67	340	Fill-Mn

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	227	Mean	589.646
Censored	------	Lognormal mean	728.451
Detection limit or PQL	------	Std. devn.	529.254
Method detection limit		Median	450
TOTAL	227	Min.	0.0078
ENTER DATA		Max.	4848.6486

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.635

Normal distribution? r-squared is: 0.653

Recommendations:

Reject lognormal distribution.

Y value is -37.2163. This lies outside the tabled values of 1.5225 and -2.3678

Reject normal distribution.

Y value is -35.0434. This lies outside the tabled values of 1.5225 and -2.3678

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

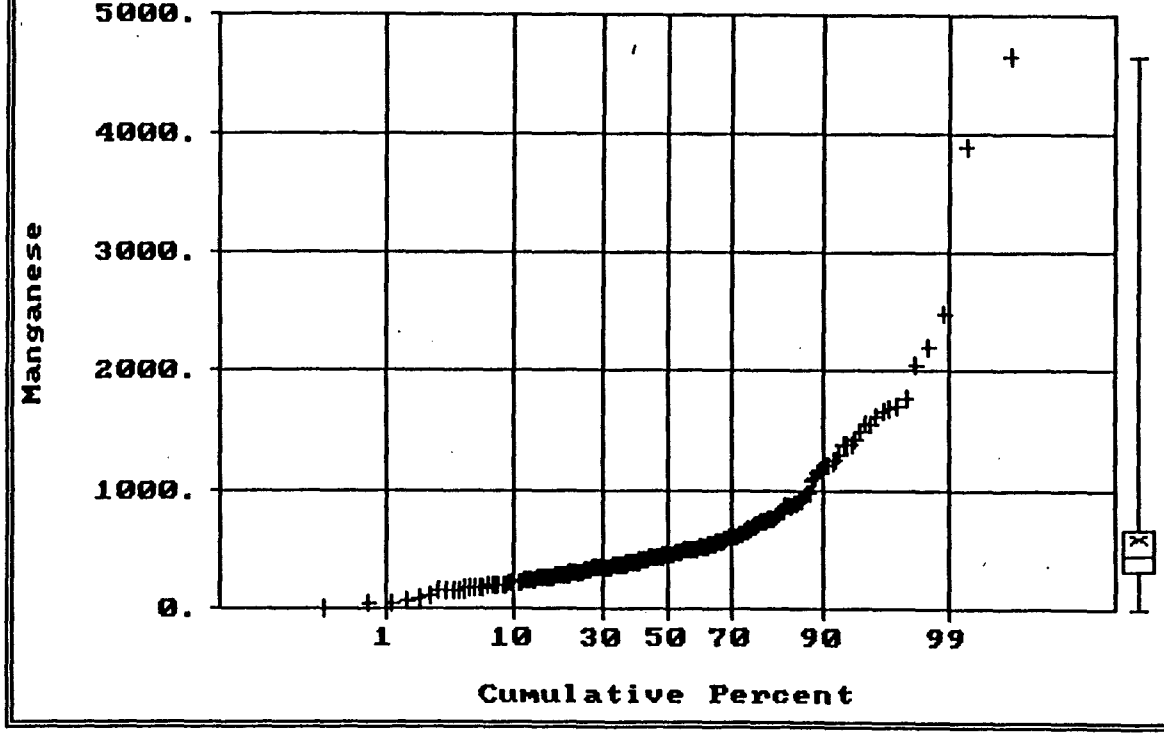
Normal

Neither

Sample size

A-374

Normal Probability Plot for Manganese
Data file: fil-all.dat

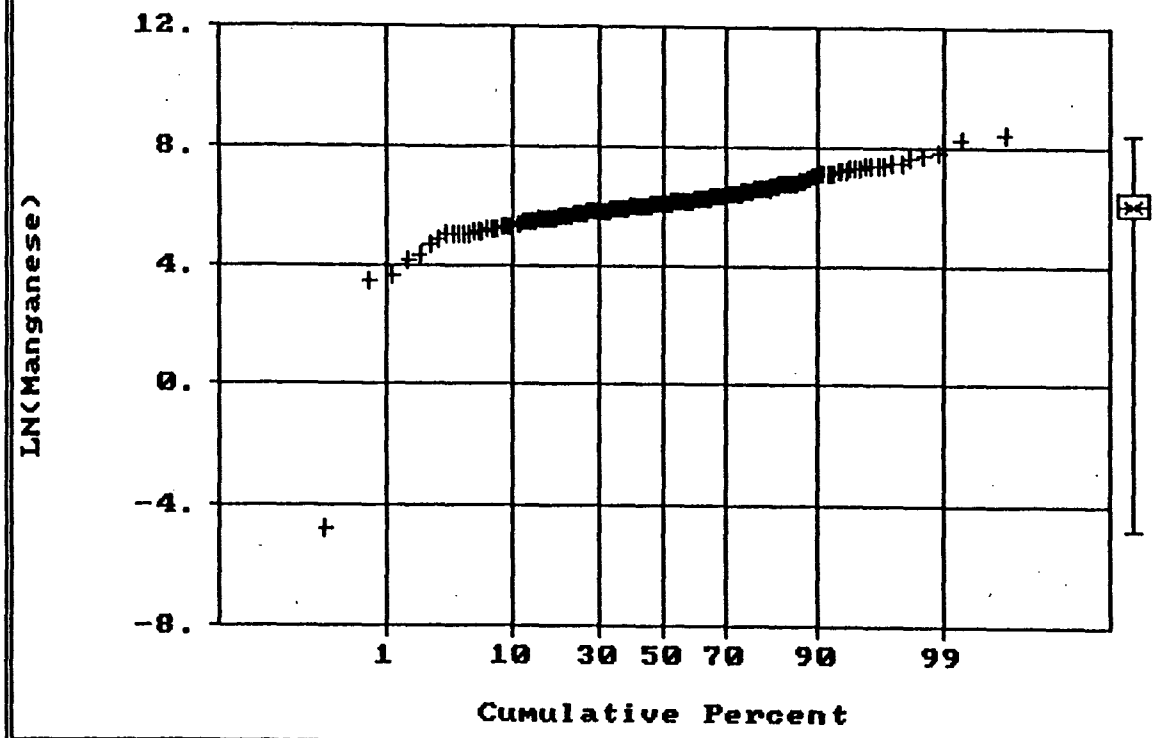


Statistics

N Total :	371
N Miss :	144
N Used :	227
Mean :	589.646
Variance:	280109.400
Std. Dev:	529.254
% C.V. :	89.758
Skewness:	3.807
Kurtosis:	24.358
Minimum :	.008
25th % :	310.311
Median :	450.000
75th % :	658.250
Maximum :	4648.648

A-375

Normal Probability Plot for LN(Manganese)
Data file: fil-all.dat



Statistics

N Total :	371
N Miss :	144
N Used :	227
Mean :	6.090
Variance:	1.003
Std. Dev:	1.001
% C.V. :	16.442
Skewness:	-5.735
Kurtosis:	64.473
Minimum :	-4.854
25th % :	5.738
Median :	6.109
75th % :	6.490
Maximum :	8.444

NONE

A-376

	A	B
1	DATA	ID
2	2.5	Fill-Ni
3	4.184	Fill-Ni
4	8.451	Fill-Ni
5	9.205	Fill-Ni
6	12.9067	Fill-Ni
7	13.3625	Fill-Ni
8	14	Fill-Ni
9	15.6513	Fill-Ni
10	17.1891	Fill-Ni
11	17.4054	Fill-Ni
12	18	Fill-Ni
13	19	Fill-Ni
14	21.1	Fill-Ni
15	21.3777	Fill-Ni
16	21.6	Fill-Ni
17	22.786	Fill-Ni
18	23	Fill-Ni
19	24.5	Fill-Ni
20	24.5	Fill-Ni
21	25.252	Fill-Ni
22	26.957	Fill-Ni
23	27.2	Fill-Ni
24	27.309	Fill-Ni
25	27.313	Fill-Ni
26	28.2	Fill-Ni
27	28.991	Fill-Ni
28	29.3305	Fill-Ni
29	29.907	Fill-Ni
30	30	Fill-Ni
31	30.643	Fill-Ni
32	31.322	Fill-Ni
33	31.928	Fill-Ni
34	31.993	Fill-Ni
35	32.109	Fill-Ni
36	32.2	Fill-Ni
37	32.466	Fill-Ni
38	32.5301	Fill-Ni
39	32.614	Fill-Ni
40	32.9	Fill-Ni
41	33.506	Fill-Ni
42	34.5	Fill-Ni
43	35.376	Fill-Ni
44	35.6	Fill-Ni
45	35.964	Fill-Ni
46	36.1	Fill-Ni
47	36.9	Fill-Ni
48	37.084	Fill-Ni
49	37.8132	Fill-Ni
50	38.4058	Fill-Ni
51	39.2	Fill-Ni
52	39.5	Fill-Ni
53	40	Fill-Ni
54	40.039	Fill-Ni
55	40.1914	Fill-Ni
56	40.3001	Fill-Ni
57	40.5048	Fill-Ni
58	40.9	Fill-Ni
59	41.0349	Fill-Ni
60	41.2627	Fill-Ni
61	42.2	Fill-Ni
62	43.052	Fill-Ni
63	43.5	Fill-Ni
64	43.598	Fill-Ni
65	43.6	Fill-Ni
66	43.7	Fill-Ni
67	44	Fill-Ni

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	227	Mean	162.477
Censored	------	Lognormal mean	133.054
Detection limit or PQL	------	Std. devn.	368.928
Method detection limit		Median	63.8323
TOTAL	227	Min.	2.5
ENTER DATA		Max.	4300

Paste values
Sort data
Create report
Clear all
Histogram
5 10 20

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.935

Normal distribution? r-squared is: 0.345

Recommendations:

Use lognormal distribution.

Clear messages

Upper Confidence Limit (UCL)

Calculate UCL
Lognormal
Normal
Neither
Sample size

	A	B
1	DATA	ID
2	2.5	Fill-Ni
3	4.184	Fill-Ni
4	8.451	Fill-Ni
5	9.205	Fill-Ni
6	12.9067	Fill-Ni
7	13.3625	Fill-Ni
8	14	Fill-Ni
9	15.6513	Fill-Ni
10	17.1891	Fill-Ni
11	17.4054	Fill-Ni
12	18	Fill-Ni
13	19	Fill-Ni
14	21.1	Fill-Ni
15	21.3777	Fill-Ni
16	21.6	Fill-Ni
17	22.786	Fill-Ni
18	23	Fill-Ni
19	24.5	Fill-Ni
20	24.5	Fill-Ni
21	25.252	Fill-Ni
22	26.957	Fill-Ni
23	27.2	Fill-Ni
24	27.309	Fill-Ni
25	27.313	Fill-Ni
26	28.2	Fill-Ni
27	28.991	Fill-Ni
28	29.3305	Fill-Ni
29	29.907	Fill-Ni
30	30	Fill-Ni
31	30.643	Fill-Ni
32	31.322	Fill-Ni
33	31.928	Fill-Ni
34	31.993	Fill-Ni
35	32.109	Fill-Ni
36	32.2	Fill-Ni
37	32.466	Fill-Ni
38	32.5301	Fill-Ni
39	32.614	Fill-Ni
40	32.9	Fill-Ni
41	33.506	Fill-Ni
42	34.5	Fill-Ni
43	35.376	Fill-Ni
44	35.6	Fill-Ni
45	35.964	Fill-Ni
46	36.1	Fill-Ni
47	36.9	Fill-Ni
48	37.084	Fill-Ni
49	37.8132	Fill-Ni
50	38.4058	Fill-Ni
51	39.2	Fill-Ni
52	39.5	Fill-Ni
53	40	Fill-Ni
54	40.039	Fill-Ni
55	40.1914	Fill-Ni
56	40.3001	Fill-Ni
57	40.5048	Fill-Ni
58	40.9	Fill-Ni
59	41.0349	Fill-Ni
60	41.2627	Fill-Ni
61	42.2	Fill-Ni
62	43.052	Fill-Ni
63	43.5	Fill-Ni
64	43.598	Fill-Ni
65	43.6	Fill-Ni
66	43.7	Fill-Ni
67	44	Fill-Ni

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	227	Mean	162.477
Censored	------	Lognormal mean	133.054
Detection limit or PQL	------	Std. devn.	368.928
Method detection limit		Median	63.8323
TOTAL	227	Min.	2.5
ENTER DATA		Max	4300

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.935

Normal distribution? r-squared is: 0.345

Recommendations:

Reject lognormal distribution.

Y value is -8.6775. This lies outside the tabled values of 1.5225 and -2.3678

Reject normal distribution.

Y value is -70.2873. This lies outside the tabled values of 1.5225 and -2.3678

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

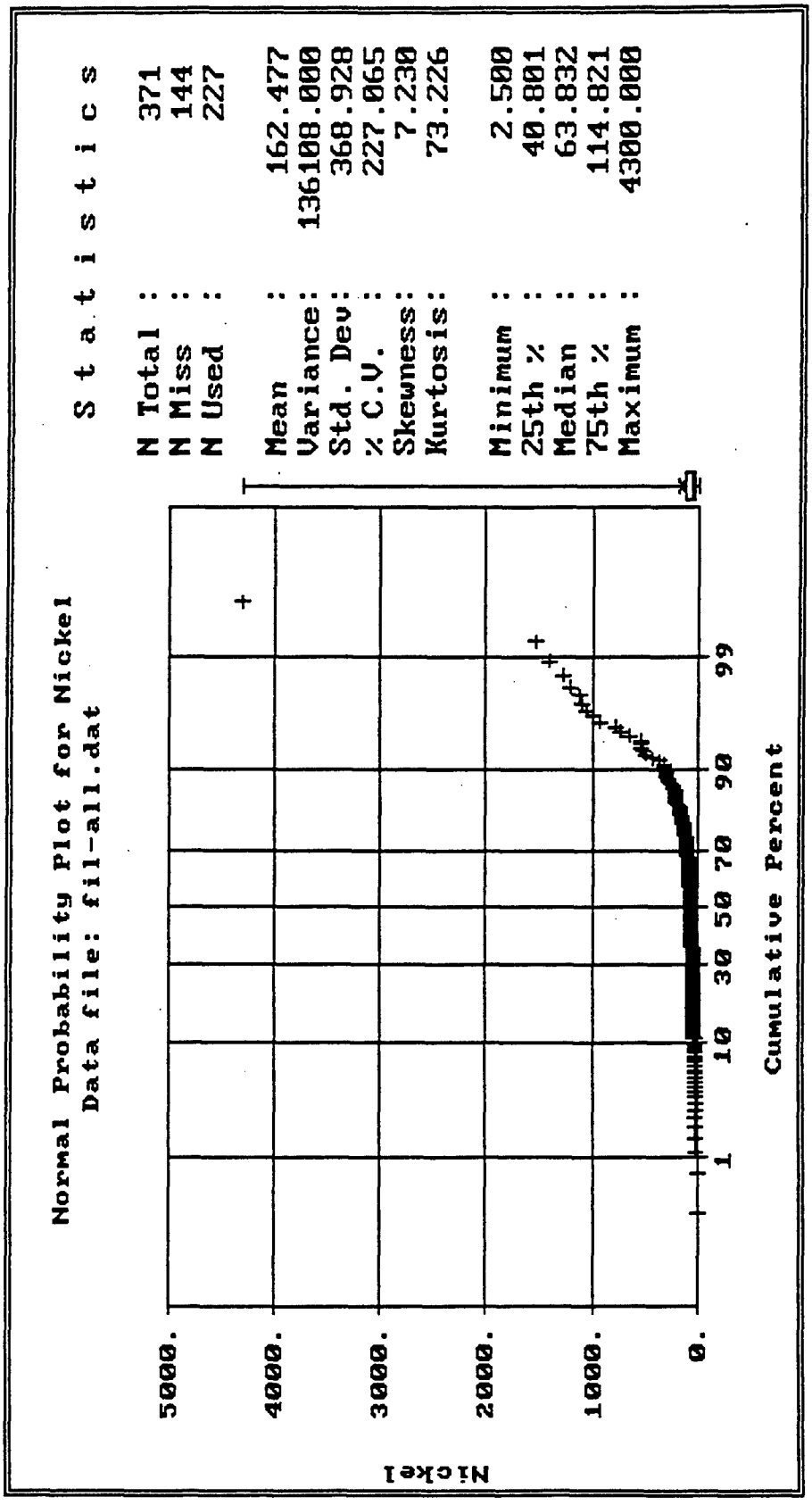
Normal

Neither

Sample size

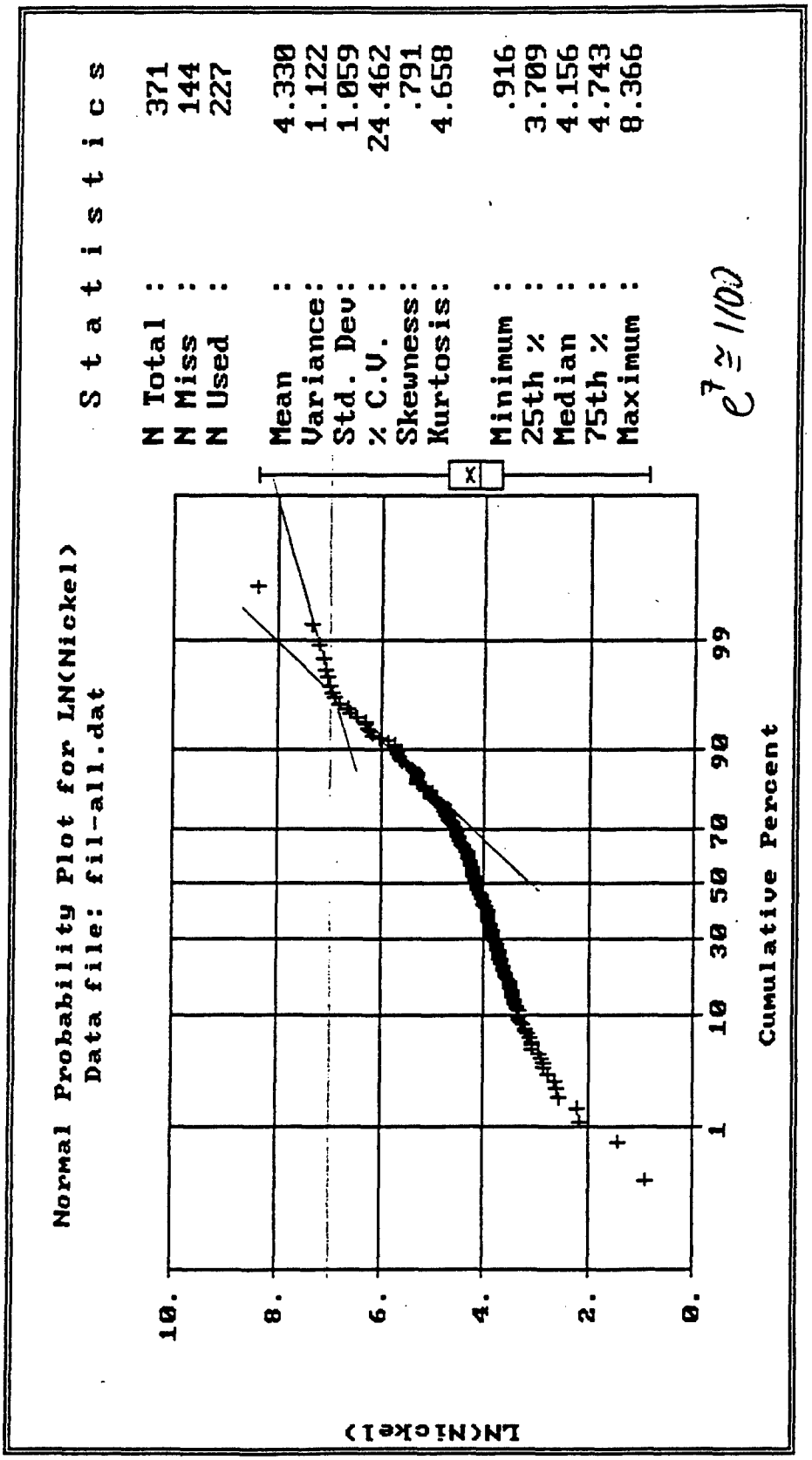
A-378

DAMES & MOORE
303 EAST 17TH AVENUE, SUITE 550, DENVER, COLORADO 80203
(303) 831-8868 FAX: (303) 831-8708



A-379

DAMES & MOORE
303 EAST 17TH AVENUE, SUITE 550, DENVER, COLORADO 80203
(303) 831-8868 FAX (303) 831-8708



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A-380

	A	B
1	DATA	ID
2	1.09	Fill-Pb
3	1.82	Fill-Pb
4	1.91	Fill-Pb
5	2.24	Fill-Pb
6	2.33	Fill-Pb
7	2.46	Fill-Pb
8	3.02	Fill-Pb
9	3.05	Fill-Pb
10	3.4559	Fill-Pb
11	3.72	Fill-Pb
12	3.72	Fill-Pb
13	3.72	Fill-Pb
14	3.72	Fill-Pb
15	3.72	Fill-Pb
16	3.72	Fill-Pb
17	3.85	Fill-Pb
18	4.5	Fill-Pb
19	4.51	Fill-Pb
20	4.6	Fill-Pb
21	4.64	Fill-Pb
22	4.7052	Fill-Pb
23	4.71	Fill-Pb
24	4.94	Fill-Pb
25	5.74	Fill-Pb
26	5.82	Fill-Pb
27	6.6	Fill-Pb
28	6.6	Fill-Pb
29	6.6488	Fill-Pb
30	7.104	Fill-Pb
31	7.6128	Fill-Pb
32	8.2	Fill-Pb
33	8.3133	Fill-Pb
34	8.7	Fill-Pb
35	9.304	Fill-Pb
36	9.41	Fill-Pb
37	10.4146	Fill-Pb
38	10.937	Fill-Pb
39	11.2	Fill-Pb
40	11.3	Fill-Pb
41	11.9	Fill-Pb
42	12	Fill-Pb
43	12	Fill-Pb
44	12.301	Fill-Pb
45	12.5	Fill-Pb
46	12.5	Fill-Pb
47	12.5	Fill-Pb
48	12.5	Fill-Pb
49	12.5	Fill-Pb
50	12.5	Fill-Pb
51	12.5	Fill-Pb
52	12.5	Fill-Pb
53	12.5	Fill-Pb
54	12.5	Fill-Pb
55	12.5	Fill-Pb
56	12.5	Fill-Pb
57	12.5	Fill-Pb
58	12.5	Fill-Pb
59	12.5	Fill-Pb
60	12.5	Fill-Pb
61	12.5	Fill-Pb
62	12.5	Fill-Pb
63	12.5	Fill-Pb
64	12.5	Fill-Pb
65	12.5	Fill-Pb
66	12.5	Fill-Pb
67	12.5	Fill-Pb

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	371	Mean	372.806
Censored	------	Lognormal mean	410.255
Detection limit or PQL	------	Std. devn.	1008.236
Method detection limit		Median	79.5
TOTAL	371	Min.	1.09
ENTER DATA		Max	12065.431

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.982

Normal distribution? r-squared is: 0.350

Recommendations:

Reject lognormal distribution.

Y value is 2.1562. This lies outside the tabled values of 1.6197 and -2.2822

Reject normal distribution.

Y value is -89.2251. This lies outside the tabled values of 1.6197 and -2.2822

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

A-381

	A	B
1	DATA	ID
2	1.09	Fill-Pb
3	1.82	Fill-Pb
4	1.91	Fill-Pb
5	2.24	Fill-Pb
6	2.33	Fill-Pb
7	2.46	Fill-Pb
8	3.02	Fill-Pb
9	3.05	Fill-Pb
10	3.4559	Fill-Pb
11	3.72	Fill-Pb
12	3.72	Fill-Pb
13	3.72	Fill-Pb
14	3.72	Fill-Pb
15	3.72	Fill-Pb
16	3.72	Fill-Pb
17	3.85	Fill-Pb
18	4.5	Fill-Pb
19	4.51	Fill-Pb
20	4.6	Fill-Pb
21	4.64	Fill-Pb
22	4.7052	Fill-Pb
23	4.71	Fill-Pb
24	4.94	Fill-Pb
25	5.74	Fill-Pb
26	5.82	Fill-Pb
27	6.6	Fill-Pb
28	6.6	Fill-Pb
29	6.6488	Fill-Pb
30	7.104	Fill-Pb
31	7.6128	Fill-Pb
32	8.2	Fill-Pb
33	8.3133	Fill-Pb
34	8.7	Fill-Pb
35	9.304	Fill-Pb
36	9.41	Fill-Pb
37	10.4146	Fill-Pb
38	10.937	Fill-Pb
39	11.2	Fill-Pb
40	11.3	Fill-Pb
41	11.9	Fill-Pb
42	12	Fill-Pb
43	12	Fill-Pb
44	12.301	Fill-Pb
45	12.5	Fill-Pb
46	12.5	Fill-Pb
47	12.5	Fill-Pb
48	12.5	Fill-Pb
49	12.5	Fill-Pb
50	12.5	Fill-Pb
51	12.5	Fill-Pb
52	12.5	Fill-Pb
53	12.5	Fill-Pb
54	12.5	Fill-Pb
55	12.5	Fill-Pb
56	12.5	Fill-Pb
57	12.5	Fill-Pb
58	12.5	Fill-Pb
59	12.5	Fill-Pb
60	12.5	Fill-Pb
61	12.5	Fill-Pb
62	12.5	Fill-Pb
63	12.5	Fill-Pb
64	12.5	Fill-Pb
65	12.5	Fill-Pb
66	12.5	Fill-Pb
67	12.5	Fill-Pb

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	371	Mean	372.806
Censored	------	Lognormal mean	410.255
Detection limit or PQL	------	Std. devn.	1008.236
Method detection limit		Median	79.5
TOTAL	371	Min.	1.09
ENTER DATA		Max.	12065.431

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.982

Normal distribution? r-squared is: 0.350

Recommendations:

Use lognormal distribution.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

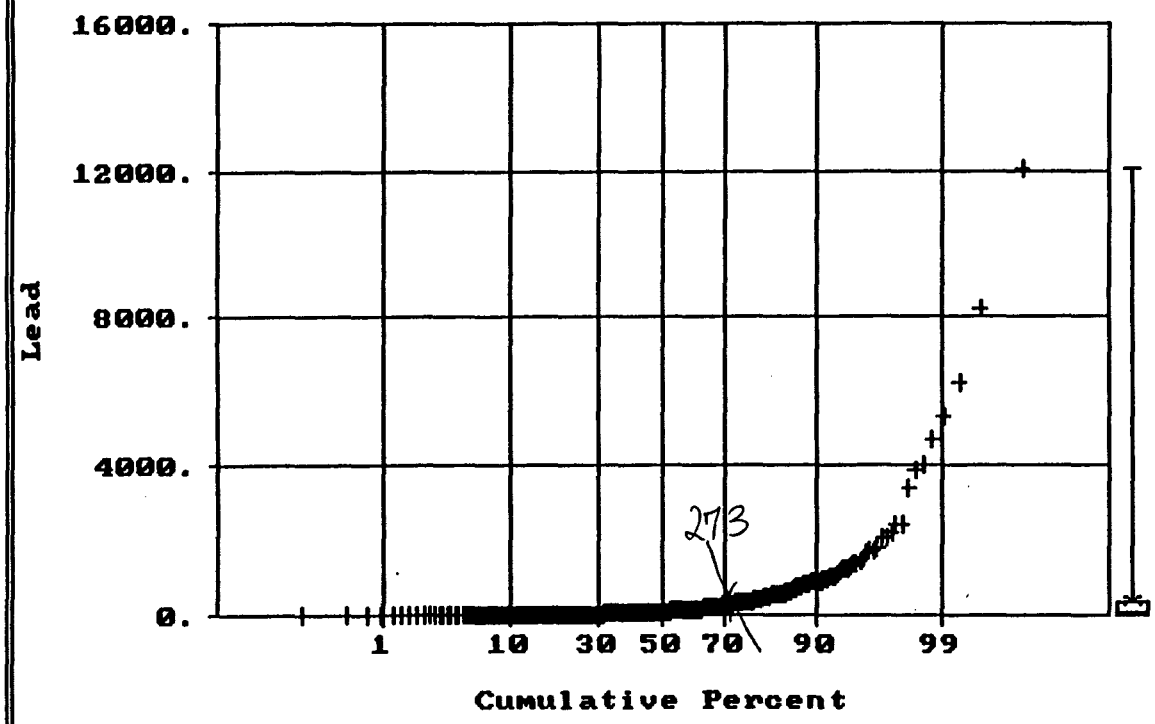
Normal

Neither

Sample size

A-382

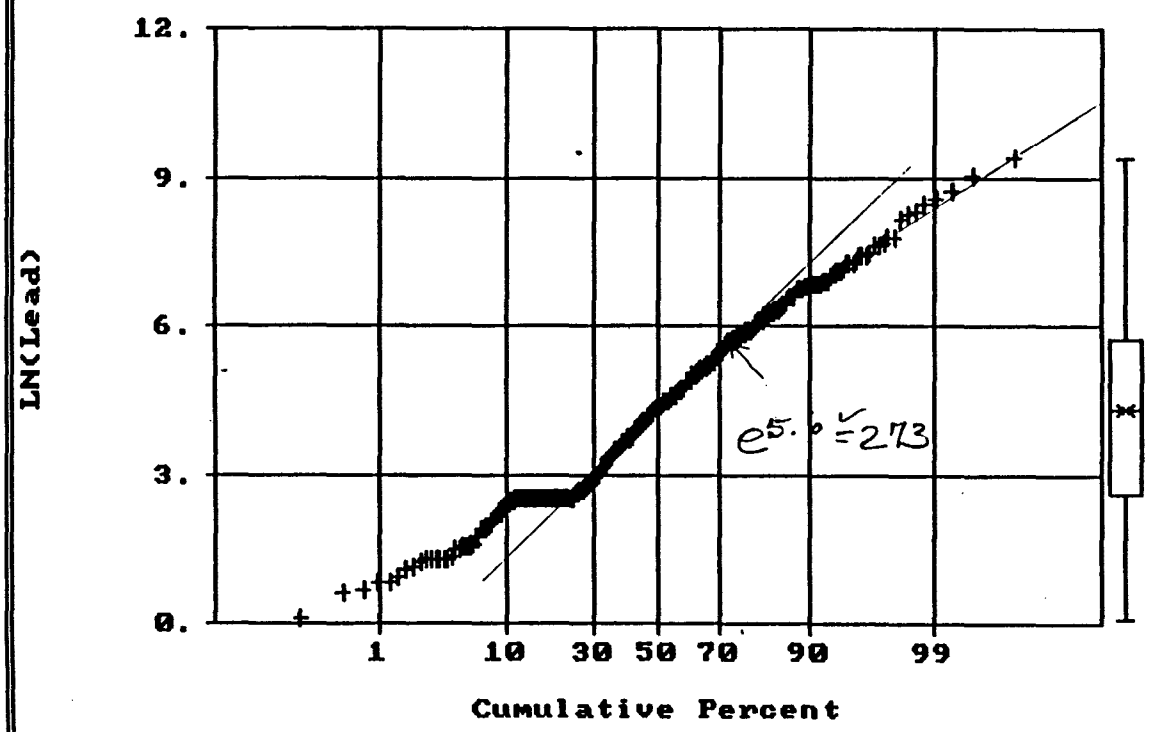
Normal Probability Plot for Lead
Data file: fil-all.dat



Statistics

N Total :	371
N Miss :	0
N Used :	371
Mean :	372.806
Variance:	1016541.000
Std. Dev:	1008.236
% C.V. :	270.446
Skewness:	6.970
Kurtosis:	65.650
Minimum :	1.090
25th % :	14.000
Median :	79.500
75th % :	323.471
Maximum :	12065.430

Normal Probability Plot for LN(Lead)
Data file: fil-all.dat



Statistics

N Total :	371
N Miss :	0
N Used :	371
Mean :	4.357
Variance:	3.320
Std. Dev:	1.822
% C.V. :	41.820
Skewness:	.173
Kurtosis:	2.309
Minimum :	.086
25th % :	2.639
Median :	4.376
75th % :	5.779
Maximum :	9.398

	A	B
1	DATA	ID
2	0.05	Fill-Sb
3	0.05	Fill-Sb
4	0.05	Fill-Sb
5	0.1	Fill-Sb
6	0.1294	Fill-Sb
7	0.154	Fill-Sb
8	0.2	Fill-Sb
9	0.2	Fill-Sb
10	0.2	Fill-Sb
11	0.2	Fill-Sb
12	0.2	Fill-Sb
13	0.2141	Fill-Sb
14	0.25	Fill-Sb
15	0.25	Fill-Sb
16	0.25	Fill-Sb
17	0.25	Fill-Sb
18	0.25	Fill-Sb
19	0.25	Fill-Sb
20	0.25	Fill-Sb
21	0.25	Fill-Sb
22	0.25	Fill-Sb
23	0.25	Fill-Sb
24	0.25	Fill-Sb
25	2.5	Fill-Sb
26	2.5	Fill-Sb
27	2.5	Fill-Sb
28	2.5	Fill-Sb
29	2.5	Fill-Sb
30	2.5	Fill-Sb
31	2.5	Fill-Sb
32	2.5	Fill-Sb
33	2.5	Fill-Sb
34	2.5	Fill-Sb
35	2.5	Fill-Sb
36	2.5	Fill-Sb
37	2.5	Fill-Sb
38	2.5	Fill-Sb
39	2.5	Fill-Sb
40	2.5	Fill-Sb
41	2.5	Fill-Sb
42	2.5	Fill-Sb
43	2.5	Fill-Sb
44	2.5	Fill-Sb
45	2.5	Fill-Sb
46	2.5	Fill-Sb
47	2.5	Fill-Sb
48	2.5	Fill-Sb
49	5.3	Fill-Sb
50	5.6	Fill-Sb
51	6.2	Fill-Sb
52	9.8	Fill-Sb
53	9.8	Fill-Sb
54	9.8	Fill-Sb
55	9.8	Fill-Sb
56	9.8	Fill-Sb
57	9.8	Fill-Sb
58	9.8	Fill-Sb
59	9.8	Fill-Sb
60	9.8	Fill-Sb
61	9.8	Fill-Sb
62	9.8	Fill-Sb
63	9.8	Fill-Sb
64	9.8	Fill-Sb
65	9.8	Fill-Sb
66	9.8	Fill-Sb
67	9.8	Fill-Sb

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	216	Mean	14.971
Censored	------	Lognormal mean	23.607
Detection limit or PQL	------	Std. devn.	20.952
Method detection limit	------	Median	9.8
TOTAL	216	Min.	0.05
ENTER DATA		Max.	164.205

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.777

Normal distribution? r-squared is: 0.458

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

A-385

	A	B
1	DATA	ID
2	0.05	Fill-Sb
3	0.05	Fill-Sb
4	0.05	Fill-Sb
5	0.1	Fill-Sb
6	0.1294	Fill-Sb
7	0.154	Fill-Sb
8	0.2	Fill-Sb
9	0.2	Fill-Sb
10	0.2	Fill-Sb
11	0.2	Fill-Sb
12	0.2	Fill-Sb
13	0.2141	Fill-Sb
14	0.25	Fill-Sb
15	0.25	Fill-Sb
16	0.25	Fill-Sb
17	0.25	Fill-Sb
18	0.25	Fill-Sb
19	0.25	Fill-Sb
20	0.25	Fill-Sb
21	0.25	Fill-Sb
22	0.25	Fill-Sb
23	0.25	Fill-Sb
24	0.25	Fill-Sb
25	2.5	Fill-Sb
26	2.5	Fill-Sb
27	2.5	Fill-Sb
28	2.5	Fill-Sb
29	2.5	Fill-Sb
30	2.5	Fill-Sb
31	2.5	Fill-Sb
32	2.5	Fill-Sb
33	2.5	Fill-Sb
34	2.5	Fill-Sb
35	2.5	Fill-Sb
36	2.5	Fill-Sb
37	2.5	Fill-Sb
38	2.5	Fill-Sb
39	2.5	Fill-Sb
40	2.5	Fill-Sb
41	2.5	Fill-Sb
42	2.5	Fill-Sb
43	2.5	Fill-Sb
44	2.5	Fill-Sb
45	2.5	Fill-Sb
46	2.5	Fill-Sb
47	2.5	Fill-Sb
48	2.5	Fill-Sb
49	5.3	Fill-Sb
50	5.6	Fill-Sb
51	6.2	Fill-Sb
52	9.8	Fill-Sb
53	9.8	Fill-Sb
54	9.8	Fill-Sb
55	9.8	Fill-Sb
56	9.8	Fill-Sb
57	9.8	Fill-Sb
58	9.8	Fill-Sb
59	9.8	Fill-Sb
60	9.8	Fill-Sb
61	9.8	Fill-Sb
62	9.8	Fill-Sb
63	9.8	Fill-Sb
64	9.8	Fill-Sb
65	9.8	Fill-Sb
66	9.8	Fill-Sb
67	9.8	Fill-Sb

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	216	Mean	14.971
Censored	------	Lognormal mean	23.607
Detection limit or PQL	------	Std. devn.	20.952
Method detection limit		Median	9.8
TOTAL	216	Min.	0.05
ENTER DATA		Max.	164.205

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.777

Normal distribution? r-squared is: 0.458

Recommendations:

Reject lognormal distribution.

Y value is -21.1167. This lies outside the tabled values of 1.5117 and -2.3772

Reject normal distribution.

Y value is -54.5437. This lies outside the tabled values of 1.5117 and -2.3772

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

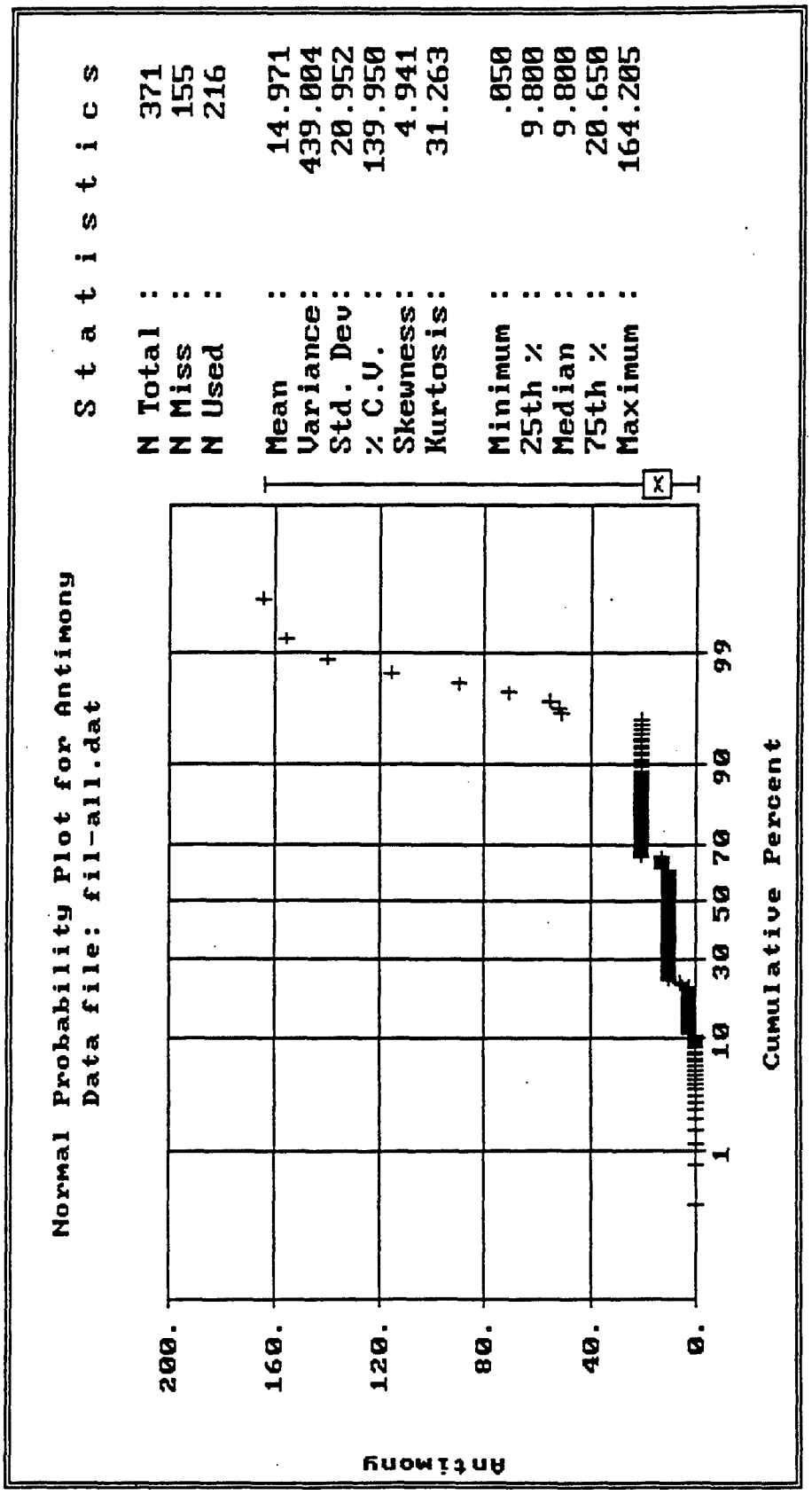
Normal

Neither

Sample size

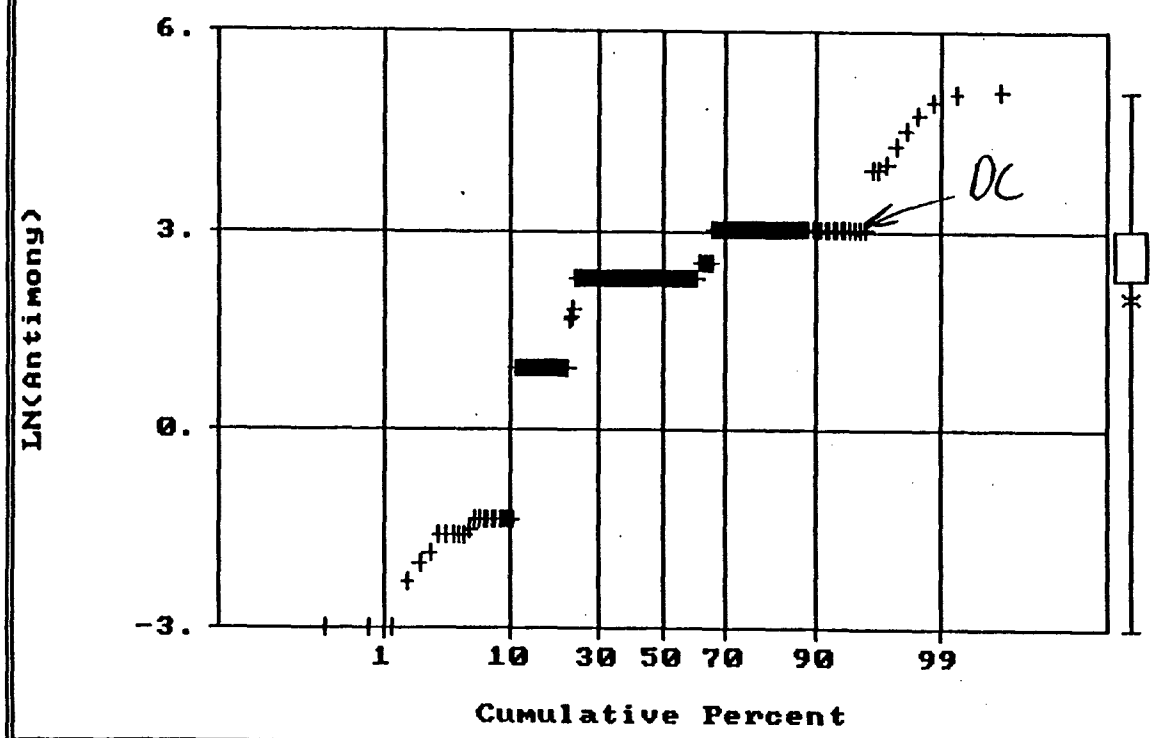
A-386

DAMES & MOORE
303 EAST 17TH AVENUE, SUITE 550, DENVER, COLORADO 80203
(303) 831-8868 FAX (303) 831-8708



A-387

Normal Probability Plot for LN(Antimony)
Data file: fil-all.dat



Statistics

N Total :	371
N Miss :	155
N Used :	216
Mean :	2.018
Variance:	2.287
Std. Dev:	1.512
% C.V. :	74.943
Skewness:	-1.502
Kurtosis:	5.147
Minimum :	-2.996
25th % :	2.282
Median :	2.282
75th % :	3.028
Maximum :	5.101

A-38

	A	B
1	DATA	ID
2	0.125	Fill-Se
3	0.125	Fill-Se
4	0.125	Fill-Se
5	0.125	Fill-Se
6	0.125	Fill-Se
7	0.125	Fill-Se
8	0.125	Fill-Se
9	0.125	Fill-Se
10	0.125	Fill-Se
11	0.125	Fill-Se
12	0.125	Fill-Se
13	0.125	Fill-Se
14	0.125	Fill-Se
15	0.125	Fill-Se
16	0.125	Fill-Se
17	0.125	Fill-Se
18	0.125	Fill-Se
19	0.125	Fill-Se
20	0.125	Fill-Se
21	0.125	Fill-Se
22	0.125	Fill-Se
23	0.125	Fill-Se
24	0.125	Fill-Se
25	0.125	Fill-Se
26	0.125	Fill-Se
27	0.125	Fill-Se
28	0.125	Fill-Se
29	0.125	Fill-Se
30	0.125	Fill-Se
31	0.125	Fill-Se
32	0.125	Fill-Se
33	0.125	Fill-Se
34	0.125	Fill-Se
35	0.125	Fill-Se
36	0.125	Fill-Se
37	0.125	Fill-Se
38	0.125	Fill-Se
39	0.125	Fill-Se
40	0.125	Fill-Se
41	0.125	Fill-Se
42	0.125	Fill-Se
43	0.125	Fill-Se
44	0.125	Fill-Se
45	0.125	Fill-Se
46	0.125	Fill-Se
47	0.125	Fill-Se
48	0.125	Fill-Se
49	0.125	Fill-Se
50	0.125	Fill-Se
51	0.125	Fill-Se
52	0.125	Fill-Se
53	0.125	Fill-Se
54	0.125	Fill-Se
55	0.208	Fill-Se
56	0.208	Fill-Se
57	0.208	Fill-Se
58	0.208	Fill-Se
59	0.208	Fill-Se
60	0.208	Fill-Se
61	0.208	Fill-Se
62	0.208	Fill-Se
63	0.208	Fill-Se
64	0.208	Fill-Se
65	0.208	Fill-Se
66	0.208	Fill-Se
67	0.208	Fill-Se

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	216	Mean	0.378
Censored	------	Lognormal mean	0.332
Detection limit or PQL	------	Std. devn.	0.617
Method detection limit		Median	0.2245
TOTAL	216	Min.	0.125
ENTER DATA		Max.	5.3701

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.798

Normal distribution? r-squared is: 0.350

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

A-389

	A	B
1	DATA	ID
2	0.125	Fill-Se
3	0.125	Fill-Se
4	0.125	Fill-Se
5	0.125	Fill-Se
6	0.125	Fill-Se
7	0.125	Fill-Se
8	0.125	Fill-Se
9	0.125	Fill-Se
10	0.125	Fill-Se
11	0.125	Fill-Se
12	0.125	Fill-Se
13	0.125	Fill-Se
14	0.125	Fill-Se
15	0.125	Fill-Se
16	0.125	Fill-Se
17	0.125	Fill-Se
18	0.125	Fill-Se
19	0.125	Fill-Se
20	0.125	Fill-Se
21	0.125	Fill-Se
22	0.125	Fill-Se
23	0.125	Fill-Se
24	0.125	Fill-Se
25	0.125	Fill-Se
26	0.125	Fill-Se
27	0.125	Fill-Se
28	0.125	Fill-Se
29	0.125	Fill-Se
30	0.125	Fill-Se
31	0.125	Fill-Se
32	0.125	Fill-Se
33	0.125	Fill-Se
34	0.125	Fill-Se
35	0.125	Fill-Se
36	0.125	Fill-Se
37	0.125	Fill-Se
38	0.125	Fill-Se
39	0.125	Fill-Se
40	0.125	Fill-Se
41	0.125	Fill-Se
42	0.125	Fill-Se
43	0.125	Fill-Se
44	0.125	Fill-Se
45	0.125	Fill-Se
46	0.125	Fill-Se
47	0.125	Fill-Se
48	0.125	Fill-Se
49	0.125	Fill-Se
50	0.125	Fill-Se
51	0.125	Fill-Se
52	0.125	Fill-Se
53	0.125	Fill-Se
54	0.125	Fill-Se
55	0.208	Fill-Se
56	0.208	Fill-Se
57	0.208	Fill-Se
58	0.208	Fill-Se
59	0.208	Fill-Se
60	0.208	Fill-Se
61	0.208	Fill-Se
62	0.208	Fill-Se
63	0.208	Fill-Se
64	0.208	Fill-Se
65	0.208	Fill-Se
66	0.208	Fill-Se
67	0.208	Fill-Se

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	216	Mean	0.378
Censored	------	Lognormal mean	0.332
Detection limit or PQL	------	Std. devn.	0.617
Method detection limit		Median	0.2245
TOTAL	216	Min.	0.125
ENTER DATA		Max.	5.3701

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.798

Normal distribution? r-squared is: 0.350

Recommendations:

Reject lognormal distribution.

Y value is -17.2189. This lies outside the tabled values of 1.5117 and -2.3772

Reject normal distribution.

Y value is -67.7123. This lies outside the tabled values of 1.5117 and -2.3772

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear message

Calculate UCL

Lognormal

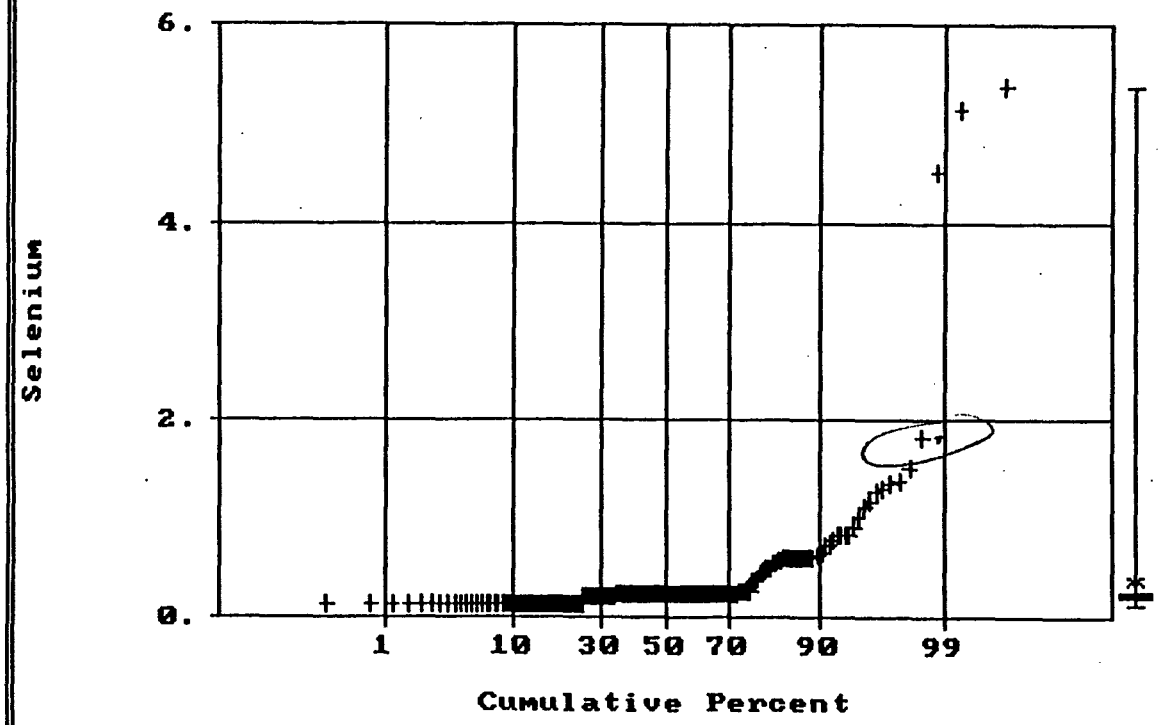
Normal

Neither

Sample size

A-390

Normal Probability Plot for Selenium
Data file: fil-all.dat

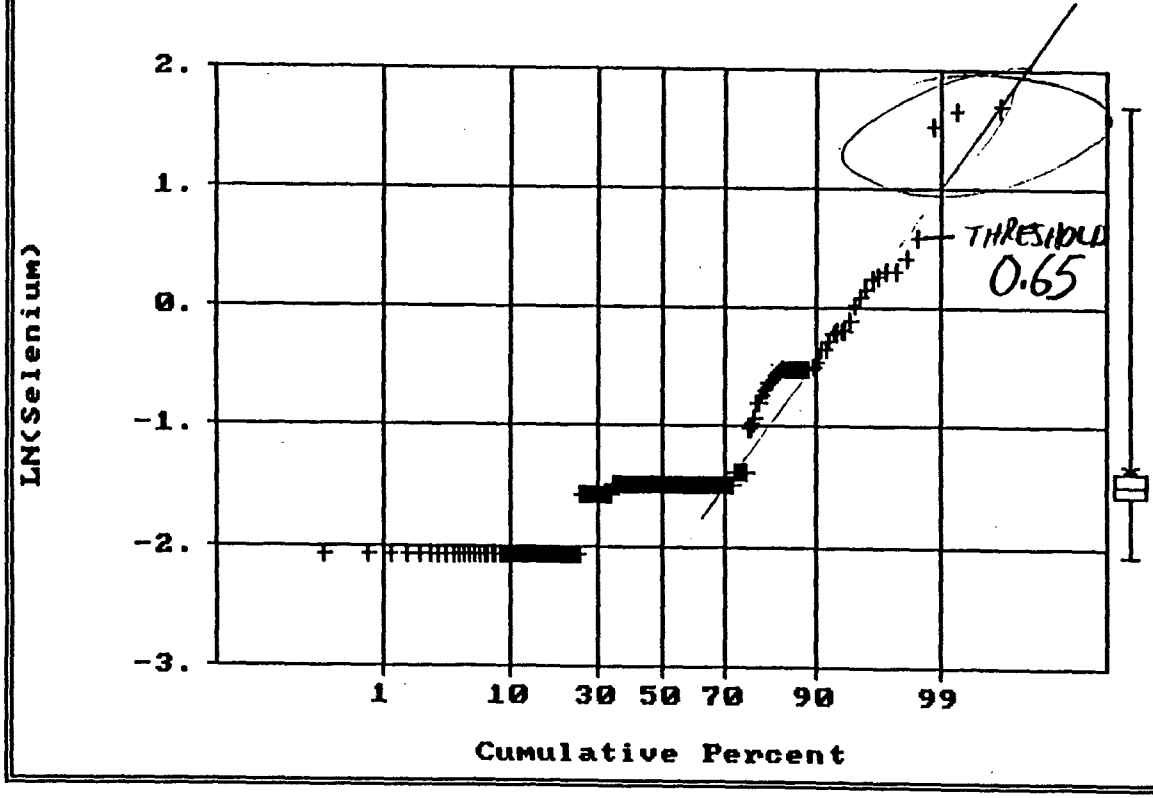


Statistics

N Total :	371
N Miss :	155
N Used :	216
Mean :	.378
Variance:	.380
Std. Dev:	.617
% C.V. :	163.138
Skewness:	6.210
Kurtosis:	46.649
Minimum :	.125
25th % :	.208
Median :	.225
75th % :	.250
Maximum :	5.370

A-391

Normal Probability Plot for LN(Selenium)
Data file: fil-all.dat



Statistics

N Total :	371
N Miss :	155
N Used :	216
Mean :	-1.354
Variance:	.502
Std. Dev:	.708
% C.V. :	52.337
Skewness:	1.595
Kurtosis:	6.235
Minimum :	-2.079
25th % :	-1.570
Median :	-1.494
75th % :	-1.386
Maximum :	1.681

$e^{.65} \approx 1.9$

A-392

	A	B
1	DATA	ID
2	0.005	Fill-Ag
3	0.005	Fill-Ag
4	0.005	Fill-Ag
5	0.005	Fill-Ag
6	0.005	Fill-Ag
7	0.2	Fill-Ag
8	0.2	Fill-Ag
9	0.2	Fill-Ag
10	0.2	Fill-Ag
11	0.2	Fill-Ag
12	0.2	Fill-Ag
13	0.2	Fill-Ag
14	0.2	Fill-Ag
15	0.2	Fill-Ag
16	0.2	Fill-Ag
17	0.2	Fill-Ag
18	0.25	Fill-Ag
19	0.25	Fill-Ag
20	0.25	Fill-Ag
21	0.25	Fill-Ag
22	0.25	Fill-Ag
23	0.25	Fill-Ag
24	0.25	Fill-Ag
25	0.25	Fill-Ag
26	0.25	Fill-Ag
27	0.25	Fill-Ag
28	0.25	Fill-Ag
29	0.25	Fill-Ag
30	0.25	Fill-Ag
31	0.25	Fill-Ag
32	0.25	Fill-Ag
33	0.25	Fill-Ag
34	0.25	Fill-Ag
35	0.25	Fill-Ag
36	0.25	Fill-Ag
37	0.25	Fill-Ag
38	0.25	Fill-Ag
39	0.25	Fill-Ag
40	0.25	Fill-Ag
41	0.25	Fill-Ag
42	0.25	Fill-Ag
43	0.25	Fill-Ag
44	0.25	Fill-Ag
45	0.25	Fill-Ag
46	0.25	Fill-Ag
47	0.25	Fill-Ag
48	0.25	Fill-Ag
49	0.25	Fill-Ag
50	0.25	Fill-Ag
51	0.25	Fill-Ag
52	0.25	Fill-Ag
53	0.25	Fill-Ag
54	0.25	Fill-Ag
55	0.25	Fill-Ag
56	0.25	Fill-Ag
57	0.25	Fill-Ag
58	0.25	Fill-Ag
59	0.25	Fill-Ag
60	0.25	Fill-Ag
61	0.25	Fill-Ag
62	0.25	Fill-Ag
63	0.25	Fill-Ag
64	0.2605	Fill-Ag
65	0.2605	Fill-Ag
66	0.2605	Fill-Ag
67	0.2605	Fill-Ag

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	227	Mean	15.275
Censored	------	Lognormal mean	1.015
Detection limit or PQL	------	Std. devn.	214.135
Method detection limit	------	Median	0.4015
TOTAL	227	Min.	0.005
ENTER DATA		Max	3227.0408

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.692

Normal distribution? r-squared is: 0.037

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

A-393

	A	B
1	DATA	ID
2	0.005	Fill-Ag
3	0.005	Fill-Ag
4	0.005	Fill-Ag
5	0.005	Fill-Ag
6	0.005	Fill-Ag
7	0.2	Fill-Ag
8	0.2	Fill-Ag
9	0.2	Fill-Ag
10	0.2	Fill-Ag
11	0.2	Fill-Ag
12	0.2	Fill-Ag
13	0.2	Fill-Ag
14	0.2	Fill-Ag
15	0.2	Fill-Ag
16	0.2	Fill-Ag
17	0.2	Fill-Ag
18	0.25	Fill-Ag
19	0.25	Fill-Ag
20	0.25	Fill-Ag
21	0.25	Fill-Ag
22	0.25	Fill-Ag
23	0.25	Fill-Ag
24	0.25	Fill-Ag
25	0.25	Fill-Ag
26	0.25	Fill-Ag
27	0.25	Fill-Ag
28	0.25	Fill-Ag
29	0.25	Fill-Ag
30	0.25	Fill-Ag
31	0.25	Fill-Ag
32	0.25	Fill-Ag
33	0.25	Fill-Ag
34	0.25	Fill-Ag
35	0.25	Fill-Ag
36	0.25	Fill-Ag
37	0.25	Fill-Ag
38	0.25	Fill-Ag
39	0.25	Fill-Ag
40	0.25	Fill-Ag
41	0.25	Fill-Ag
42	0.25	Fill-Ag
43	0.25	Fill-Ag
44	0.25	Fill-Ag
45	0.25	Fill-Ag
46	0.25	Fill-Ag
47	0.25	Fill-Ag
48	0.25	Fill-Ag
49	0.25	Fill-Ag
50	0.25	Fill-Ag
51	0.25	Fill-Ag
52	0.25	Fill-Ag
53	0.25	Fill-Ag
54	0.25	Fill-Ag
55	0.25	Fill-Ag
56	0.25	Fill-Ag
57	0.25	Fill-Ag
58	0.25	Fill-Ag
59	0.25	Fill-Ag
60	0.25	Fill-Ag
61	0.25	Fill-Ag
62	0.25	Fill-Ag
63	0.25	Fill-Ag
64	0.2605	Fill-Ag
65	0.2605	Fill-Ag
66	0.2605	Fill-Ag
67	0.2605	Fill-Ag

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	227	Mean	15.275
Censored	------	Lognormal mean	1.015
Detection limit or PQL	------	Std. devn.	214.135
Method detection limit		Median	0.4015
TOTAL	227	Min.	0.005
ENTER DATA		Max.	3227.0408

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.692

Normal distribution? r-squared is: 0.037

Recommendations:

Reject lognormal distribution.

Y value is -35.1047. This lies outside the tabled values of 1.5225 and -2.3678

Reject normal distribution.

Y value is -124.2586. This lies outside the tabled values of 1.5225 and -2.3678

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

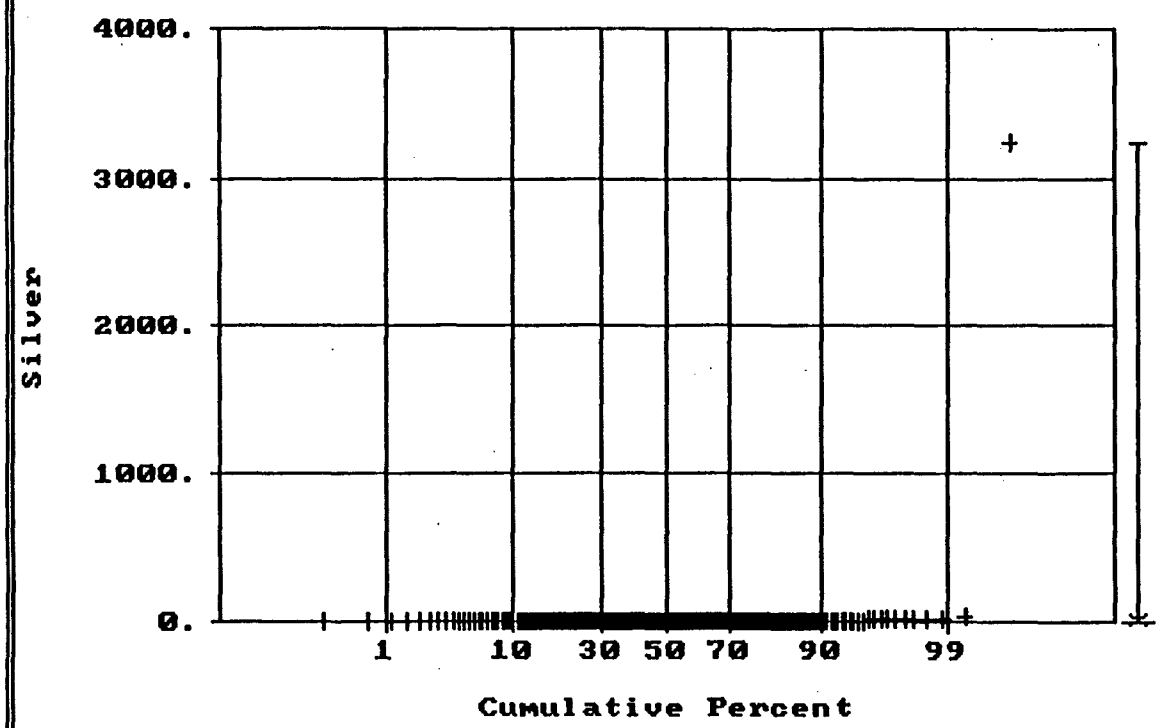
Normal

Neither

Sample size

A-394

Normal Probability Plot for Silver
Data file: fil-all.dat

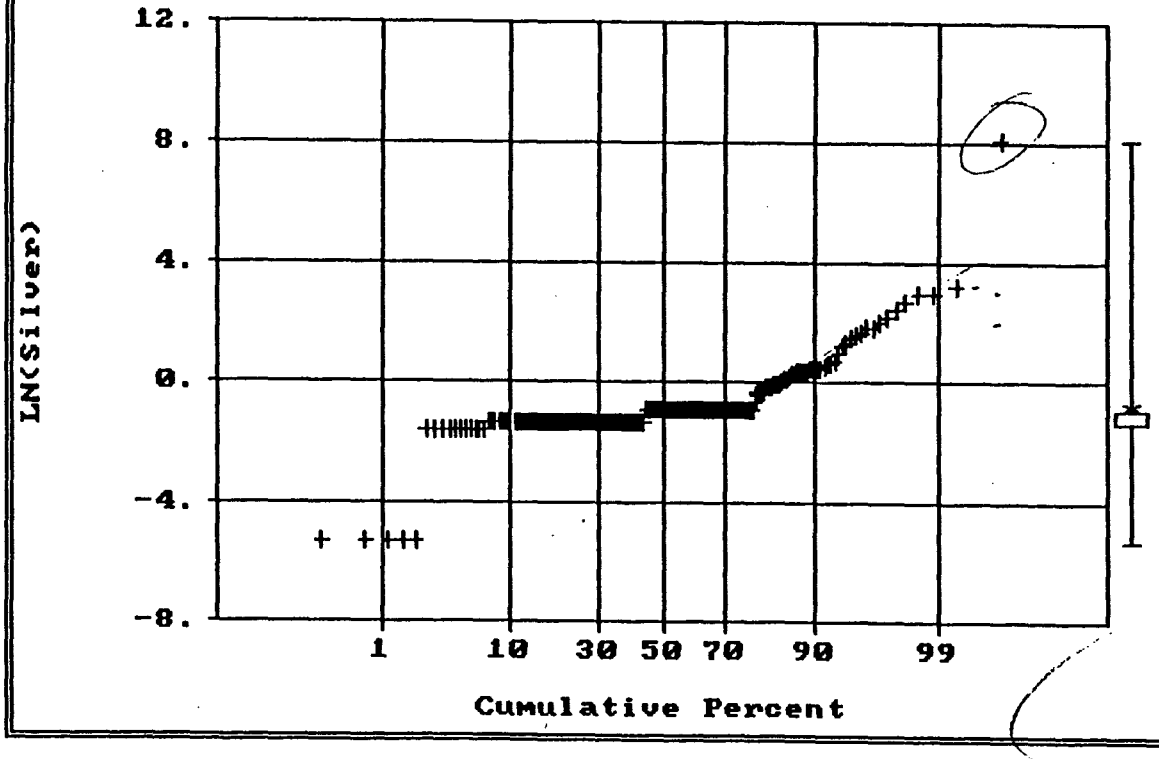


Statistics

N Total :	371
N Miss :	144
N Used :	227
Mean :	15.275
Variance:	45853.870
Std. Dev:	214.135
% C.V. :	1401.912
Skewness:	14.963
Kurtosis:	224.922
Minimum :	.005
25th % :	.250
Median :	.401
75th % :	.401
Maximum :	3227.041

A-395

Normal Probability Plot for LN(Silver)
Data file: fil-all.dat



Statistics

N Total :	371
N Miss :	144
N Used :	227
Mean :	-.819
Variance:	1.667
Std. Dev:	1.291
% C.V. :	157.739
Skewness:	1.409
Kurtosis:	15.484
Minimum :	-5.298
25th % :	-1.386
Median :	-.913
75th % :	-.913
Maximum :	8.079

$e^{3.2} = \sim 25$

A-396

	A	B
1	DATA	ID
2	0.081	Fill-Tl
3	0.081	Fill-Tl
4	0.081	Fill-Tl
5	0.081	Fill-Tl
6	0.081	Fill-Tl
7	0.081	Fill-Tl
8	0.081	Fill-Tl
9	0.081	Fill-Tl
10	0.081	Fill-Tl
11	0.081	Fill-Tl
12	0.081	Fill-Tl
13	0.081	Fill-Tl
14	0.081	Fill-Tl
15	0.081	Fill-Tl
16	0.081	Fill-Tl
17	0.081	Fill-Tl
18	0.081	Fill-Tl
19	0.081	Fill-Tl
20	0.081	Fill-Tl
21	0.081	Fill-Tl
22	0.081	Fill-Tl
23	0.081	Fill-Tl
24	0.081	Fill-Tl
25	0.081	Fill-Tl
26	0.081	Fill-Tl
27	0.081	Fill-Tl
28	0.081	Fill-Tl
29	0.081	Fill-Tl
30	0.081	Fill-Tl
31	0.081	Fill-Tl
32	0.081	Fill-Tl
33	0.081	Fill-Tl
34	0.081	Fill-Tl
35	0.081	Fill-Tl
36	0.081	Fill-Tl
37	0.1	Fill-Tl
38	0.1	Fill-Tl
39	0.1	Fill-Tl
40	0.1	Fill-Tl
41	0.1	Fill-Tl
42	0.25	Fill-Tl
43	0.25	Fill-Tl
44	2.5	Fill-Tl
45	2.5	Fill-Tl
46	2.5	Fill-Tl
47	2.5	Fill-Tl
48	2.5	Fill-Tl
49	2.5	Fill-Tl
50	2.5	Fill-Tl
51	2.5	Fill-Tl
52	2.5	Fill-Tl
53	2.5	Fill-Tl
54	2.5	Fill-Tl
55	2.5	Fill-Tl
56	2.5	Fill-Tl
57	2.5	Fill-Tl
58	2.5	Fill-Tl
59	2.5	Fill-Tl
60	2.5	Fill-Tl
61	2.5	Fill-Tl
62	2.5	Fill-Tl
63	2.5	Fill-Tl
64	2.5	Fill-Tl
65	2.5	Fill-Tl
66	2.5	Fill-Tl
67	2.5	Fill-Tl

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	156	Mean	10.535
Censored	------	Lognormal mean	39.821
Detection limit or PQL	------	Std. devn.	10.775
Method detection limit		Median	17.15
TOTAL	156	Min.	0.081
ENTER DATA		Max	100

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.715

Normal distribution? r-squared is: 0.560

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

	A	B
1	DATA	ID
2	0.081	Fill-Tl
3	0.081	Fill-Tl
4	0.081	Fill-Tl
5	0.081	Fill-Tl
6	0.081	Fill-Tl
7	0.081	Fill-Tl
8	0.081	Fill-Tl
9	0.081	Fill-Tl
10	0.081	Fill-Tl
11	0.081	Fill-Tl
12	0.081	Fill-Tl
13	0.081	Fill-Tl
14	0.081	Fill-Tl
15	0.081	Fill-Tl
16	0.081	Fill-Tl
17	0.081	Fill-Tl
18	0.081	Fill-Tl
19	0.081	Fill-Tl
20	0.081	Fill-Tl
21	0.081	Fill-Tl
22	0.081	Fill-Tl
23	0.081	Fill-Tl
24	0.081	Fill-Tl
25	0.081	Fill-Tl
26	0.081	Fill-Tl
27	0.081	Fill-Tl
28	0.081	Fill-Tl
29	0.081	Fill-Tl
30	0.081	Fill-Tl
31	0.081	Fill-Tl
32	0.081	Fill-Tl
33	0.081	Fill-Tl
34	0.081	Fill-Tl
35	0.081	Fill-Tl
36	0.081	Fill-Tl
37	0.1	Fill-Tl
38	0.1	Fill-Tl
39	0.1	Fill-Tl
40	0.1	Fill-Tl
41	0.1	Fill-Tl
42	0.25	Fill-Tl
43	0.25	Fill-Tl
44	2.5	Fill-Tl
45	2.5	Fill-Tl
46	2.5	Fill-Tl
47	2.5	Fill-Tl
48	2.5	Fill-Tl
49	2.5	Fill-Tl
50	2.5	Fill-Tl
51	2.5	Fill-Tl
52	2.5	Fill-Tl
53	2.5	Fill-Tl
54	2.5	Fill-Tl
55	2.5	Fill-Tl
56	2.5	Fill-Tl
57	2.5	Fill-Tl
58	2.5	Fill-Tl
59	2.5	Fill-Tl
60	2.5	Fill-Tl
61	2.5	Fill-Tl
62	2.5	Fill-Tl
63	2.5	Fill-Tl
64	2.5	Fill-Tl
65	2.5	Fill-Tl
66	2.5	Fill-Tl
67	2.5	Fill-Tl

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	156	Mean	10.535
Censored	------	Lognormal mean	39.821
Detection limit or PQL	------	Std. devn.	10.775
Method detection limit		Median	17.15
TOTAL	156	Min.	0.081
ENTER DATA		Max	100

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.715

Normal distribution? r-squared is: 0.560

Recommendations:

Reject lognormal distribution.

Y value is -11.7448. This lies outside the tabled values of 1.4318 and -2.4447

Reject normal distribution.

Y value is -27.9638. This lies outside the tabled values of 1.4318 and -2.4447

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

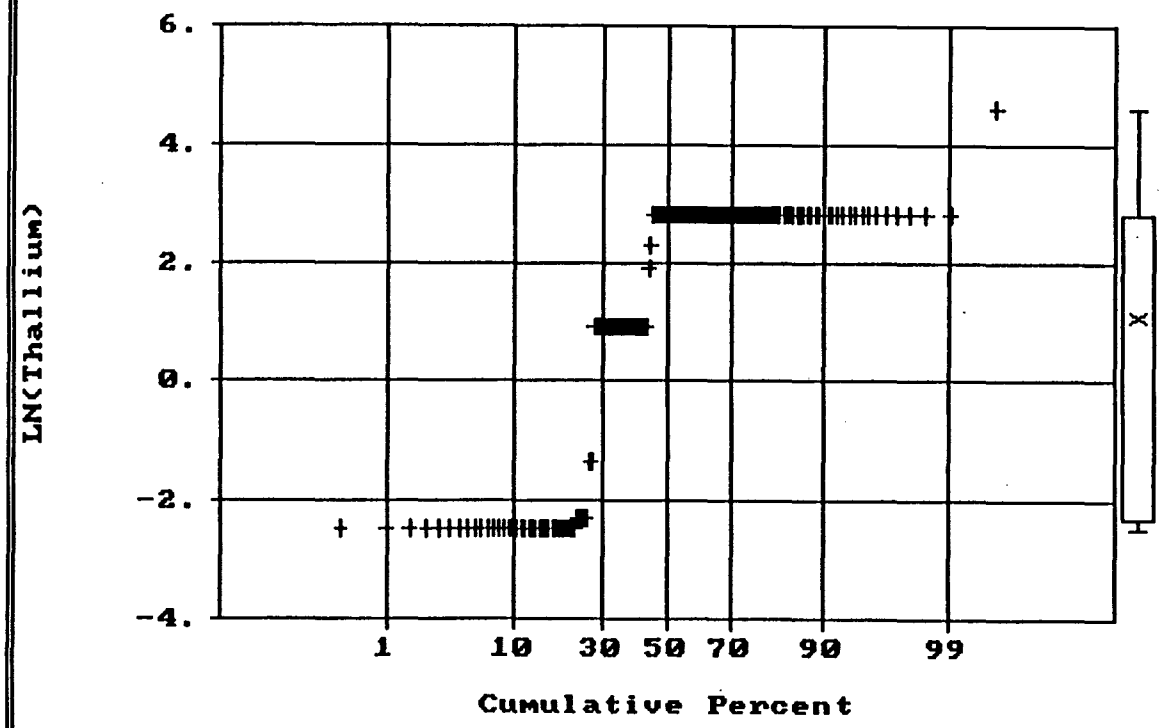
Normal

Neither

Sample size

A-39

Normal Probability Plot for LN(Thallium)
Data file: fil-all.dat



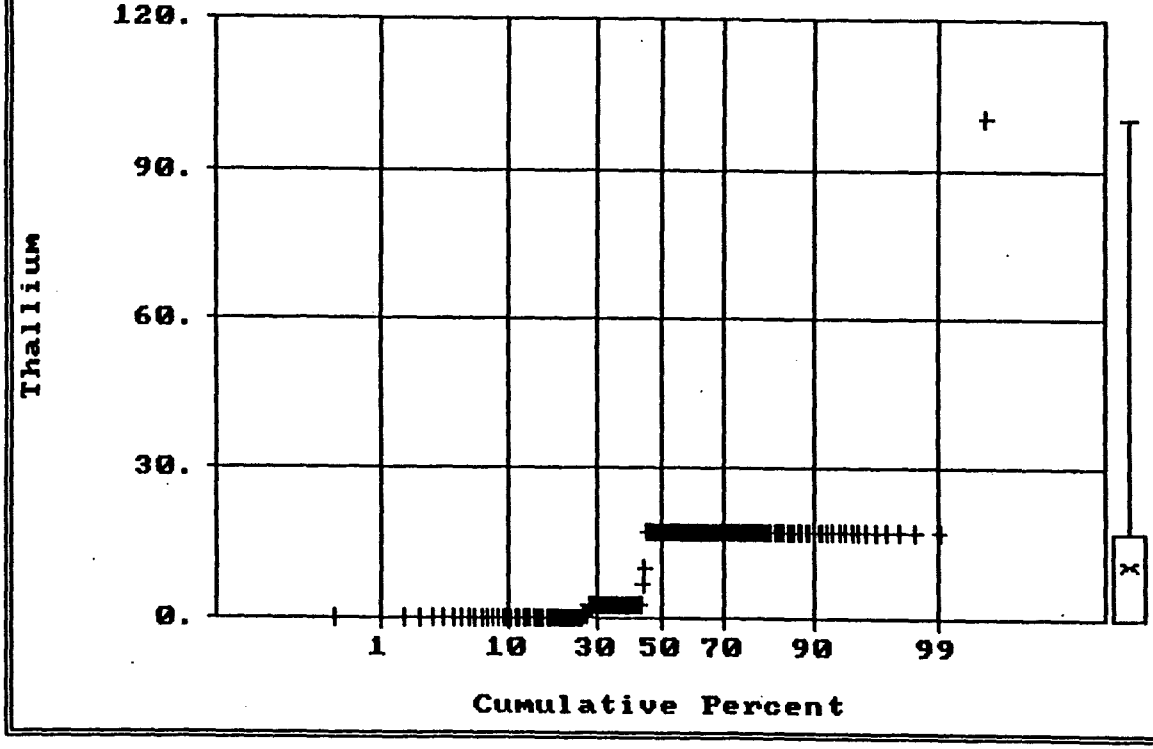
Statistics

N Total :	371
N Miss :	215
N Used :	156
Mean :	1.102
Variance:	5.164
Std. Dev:	2.272
% C.V. :	206.140
Skewness:	-.767
Kurtosis:	1.866
Minimum :	-2.513
25th % :	-2.303
Median :	2.842
75th % :	2.842
Maximum :	4.605

ALL DETECTS

A-399

Normal Probability Plot for Thallium
Data file: fil-all.dat



Statistics

N Total :	371
N Miss :	215
N Used :	156
Mean :	10.535
Variance:	116.108
Std. Dev:	10.775
% C.V. :	102.286
Skewness:	3.514
Kurtosis:	31.229
Minimum :	.081
25th % :	.100
Median :	17.150
75th % :	17.150
Maximum :	100.000

DL = ? 34 (17? x2)

A-400

	A	B
1	DATA	ID
2	0.0344	Fill-V
3	3.1	Fill-V
4	4.7	Fill-V
5	4.958	Fill-V
6	5.96	Fill-V
7	8.874	Fill-V
8	15	Fill-V
9	15	Fill-V
10	16.2708	Fill-V
11	16.5414	Fill-V
12	19	Fill-V
13	19.8725	Fill-V
14	20.3	Fill-V
15	20.3	Fill-V
16	21.7768	Fill-V
17	21.8004	Fill-V
18	22.4	Fill-V
19	23	Fill-V
20	23.4504	Fill-V
21	23.5	Fill-V
22	24.637	Fill-V
23	25.9901	Fill-V
24	26.1275	Fill-V
25	26.6936	Fill-V
26	27.0526	Fill-V
27	27.45	Fill-V
28	27.5	Fill-V
29	27.8204	Fill-V
30	27.9743	Fill-V
31	28	Fill-V
32	28.1	Fill-V
33	28.128	Fill-V
34	28.2563	Fill-V
35	28.5	Fill-V
36	29.1	Fill-V
37	29.808	Fill-V
38	30	Fill-V
39	31	Fill-V
40	31	Fill-V
41	31.2432	Fill-V
42	32	Fill-V
43	32	Fill-V
44	32.5	Fill-V
45	32.5482	Fill-V
46	33	Fill-V
47	33	Fill-V
48	34	Fill-V
49	34.398	Fill-V
50	34.41	Fill-V
51	35.295	Fill-V
52	35.516	Fill-V
53	35.58	Fill-V
54	35.9	Fill-V
55	35.9694	Fill-V
56	36.402	Fill-V
57	36.4183	Fill-V
58	36.6	Fill-V
59	36.8	Fill-V
60	36.8116	Fill-V
61	38	Fill-V
62	38	Fill-V
63	38.383	Fill-V
64	38.4	Fill-V
65	38.6364	Fill-V
66	38.9381	Fill-V
67	38.949	Fill-V

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	227	Mean	56.240
Censored	------	Lognormal mean	62.589
Detection limit or PQL	------	Std. devn.	33.881
Method detection limit		Median	51.44
TOTAL	227	Min.	0.0344
ENTER DATA		Max	300.021

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.710

Normal distribution? r-squared is: 0.794

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

A-401

	A	B
1	DATA	ID
2	0.0344	Fill-V
3	3.1	Fill-V
4	4.7	Fill-V
5	4.958	Fill-V
6	5.96	Fill-V
7	8.874	Fill-V
8	15	Fill-V
9	15	Fill-V
10	16.2708	Fill-V
11	16.5414	Fill-V
12	19	Fill-V
13	19.8725	Fill-V
14	20.3	Fill-V
15	20.3	Fill-V
16	21.7768	Fill-V
17	21.8004	Fill-V
18	22.4	Fill-V
19	23	Fill-V
20	23.4504	Fill-V
21	23.5	Fill-V
22	24.637	Fill-V
23	25.9901	Fill-V
24	26.1275	Fill-V
25	26.6936	Fill-V
26	27.0526	Fill-V
27	27.45	Fill-V
28	27.5	Fill-V
29	27.8204	Fill-V
30	27.9743	Fill-V
31	28	Fill-V
32	28.1	Fill-V
33	28.128	Fill-V
34	28.2563	Fill-V
35	28.5	Fill-V
36	29.1	Fill-V
37	29.808	Fill-V
38	30	Fill-V
39	31	Fill-V
40	31	Fill-V
41	31.2432	Fill-V
42	32	Fill-V
43	32	Fill-V
44	32.5	Fill-V
45	32.5482	Fill-V
46	33	Fill-V
47	33	Fill-V
48	34	Fill-V
49	34.398	Fill-V
50	34.41	Fill-V
51	35.295	Fill-V
52	35.516	Fill-V
53	35.58	Fill-V
54	35.9	Fill-V
55	35.9694	Fill-V
56	36.402	Fill-V
57	36.4183	Fill-V
58	36.6	Fill-V
59	36.8	Fill-V
60	36.8116	Fill-V
61	38	Fill-V
62	38	Fill-V
63	38.383	Fill-V
64	38.4	Fill-V
65	38.6364	Fill-V
66	38.9381	Fill-V
67	38.949	Fill-V

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	227	Mean	56.240
Censored	------	Lognormal mean	62.589
Detection limit or PQL	------	Std. devn.	33.881
Method detection limit		Median	51.44
TOTAL	227	Min.	0.0344
ENTER DATA		Max.	300.021

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.710

Normal distribution? r-squared is: 0.794

Recommendations:

Reject lognormal distribution.

Y value is -31.0567. This lies outside the tabled values of 1.5225 and -2.3678

Reject normal distribution.

Y value is -22.0425. This lies outside the tabled values of 1.5225 and -2.3678

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

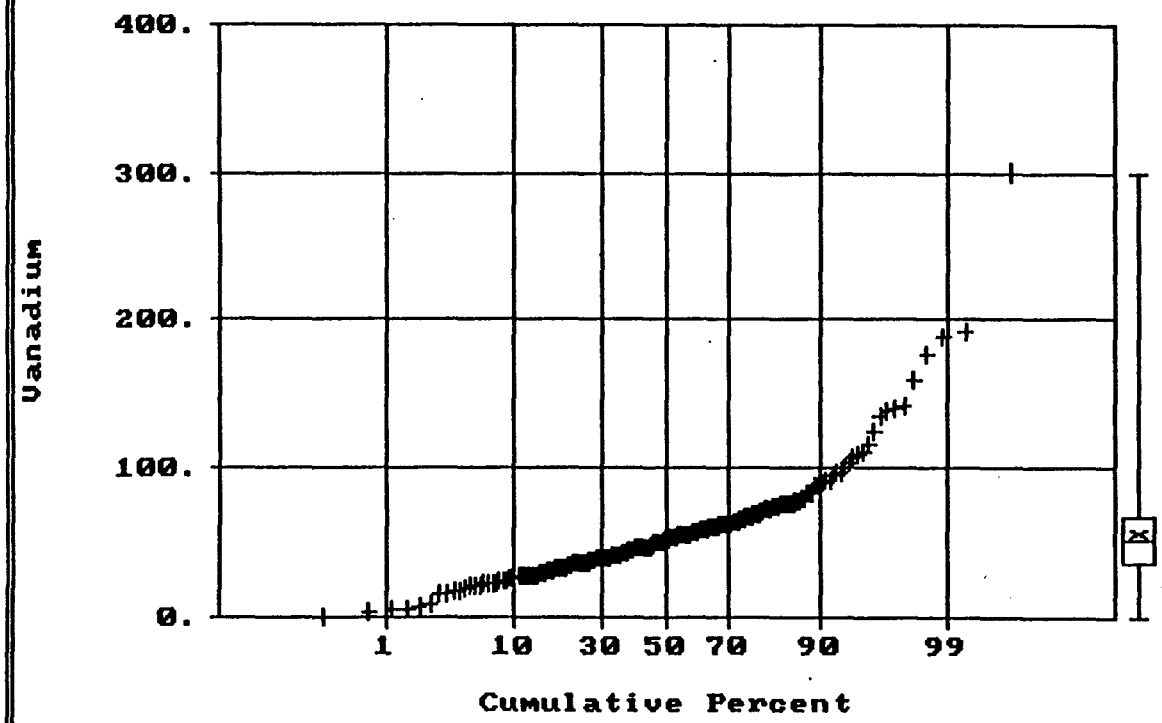
Normal

Neither

Sample size

A-402

Normal Probability Plot for Vanadium
Data file: fil-all.dat

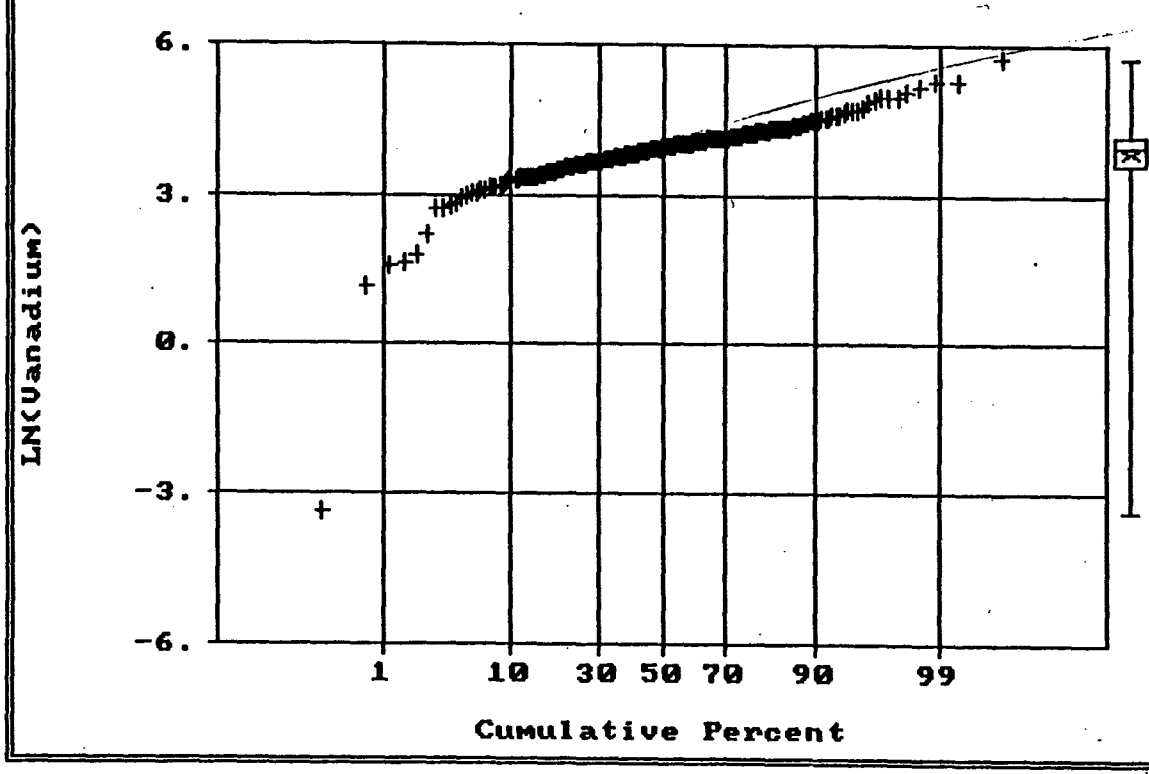


Statistics

N Total :	371
N Miss :	144
N Used :	227
Mean :	56.240
Variance:	1147.922
Std. Dev:	33.881
% C.V. :	60.244
Skewness:	2.713
Kurtosis:	16.341
Minimum :	.034
25th % :	36.555
Median :	51.440
75th % :	66.332
Maximum :	300.021

A-403

Normal Probability Plot for LN(Vanadium)
Data file: fil-all.dat



Statistics

N Total :	371
N Miss :	144
N Used :	227
Mean :	3.850
Variance:	.574
Std. Dev:	.758
% C.V. :	19.677
Skewness:	-4.235
Kurtosis:	39.137
Minimum :	-3.370
25th % :	3.599
Median :	3.940
75th % :	4.195
Maximum :	5.704

NONE

A-404

	A	B
1	DATA	ID
2	0.141	Fill-Zn
3	0.5816	Fill-Zn
4	14.198	Fill-Zn
5	17.8571	Fill-Zn
6	18.171	Fill-Zn
7	22.4	Fill-Zn
8	22.6	Fill-Zn
9	23	Fill-Zn
10	23.9869	Fill-Zn
11	25.5	Fill-Zn
12	27.7	Fill-Zn
13	28.1	Fill-Zn
14	28.1615	Fill-Zn
15	29.8	Fill-Zn
16	30.769	Fill-Zn
17	32.061	Fill-Zn
18	32.538	Fill-Zn
19	33.5	Fill-Zn
20	34	Fill-Zn
21	35.5	Fill-Zn
22	35.9	Fill-Zn
23	36	Fill-Zn
24	36.625	Fill-Zn
25	36.7347	Fill-Zn
26	37.051	Fill-Zn
27	37.088	Fill-Zn
28	37.1	Fill-Zn
29	37.389	Fill-Zn
30	38.208	Fill-Zn
31	38.2204	Fill-Zn
32	38.5	Fill-Zn
33	39.7	Fill-Zn
34	39.8	Fill-Zn
35	41.0526	Fill-Zn
36	42.8	Fill-Zn
37	42.8	Fill-Zn
38	42.9	Fill-Zn
39	44.328	Fill-Zn
40	45.552	Fill-Zn
41	45.8	Fill-Zn
42	46.5	Fill-Zn
43	46.76	Fill-Zn
44	46.973	Fill-Zn
45	47	Fill-Zn
46	47.6	Fill-Zn
47	47.6764	Fill-Zn
48	48.637	Fill-Zn
49	49	Fill-Zn
50	49.2	Fill-Zn
51	50.0564	Fill-Zn
52	50.7822	Fill-Zn
53	51.0625	Fill-Zn
54	51.2432	Fill-Zn
55	52	Fill-Zn
56	52.2	Fill-Zn
57	52.5	Fill-Zn
58	53.6	Fill-Zn
59	56.4	Fill-Zn
60	56.8	Fill-Zn
61	57.7	Fill-Zn
62	57.74	Fill-Zn
63	57.784	Fill-Zn
64	58.342	Fill-Zn
65	59.82	Fill-Zn
66	60.124	Fill-Zn
67	61.5	Fill-Zn

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	240	Mean	482.890
Censored	------	Lognormal mean	304.353
Detection limit or PQL	------	Std. devn.	2083.195
Method detection limit		Median	92.65
TOTAL	240	Min.	0.141
ENTER DATA		Max	24000

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.899

Normal distribution? r-squared is: 0.179

Recommendations:

Reject BOTH lognormal and normal distributions. See Statistics Guidance.

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

Normal

Neither

Sample size

A-405

	A	B
1	DATA	ID
2	0.141	Fill-Zn
3	0.5816	Fill-Zn
4	14.198	Fill-Zn
5	17.8571	Fill-Zn
6	18.171	Fill-Zn
7	22.4	Fill-Zn
8	22.6	Fill-Zn
9	23	Fill-Zn
10	23.9869	Fill-Zn
11	25.5	Fill-Zn
12	27.7	Fill-Zn
13	28.1	Fill-Zn
14	28.1615	Fill-Zn
15	29.8	Fill-Zn
16	30.769	Fill-Zn
17	32.061	Fill-Zn
18	32.538	Fill-Zn
19	33.5	Fill-Zn
20	34	Fill-Zn
21	35.5	Fill-Zn
22	35.9	Fill-Zn
23	36	Fill-Zn
24	36.625	Fill-Zn
25	36.7347	Fill-Zn
26	37.051	Fill-Zn
27	37.088	Fill-Zn
28	37.1	Fill-Zn
29	37.389	Fill-Zn
30	38.208	Fill-Zn
31	38.2204	Fill-Zn
32	38.5	Fill-Zn
33	39.7	Fill-Zn
34	39.8	Fill-Zn
35	41.0526	Fill-Zn
36	42.8	Fill-Zn
37	42.8	Fill-Zn
38	42.9	Fill-Zn
39	44.328	Fill-Zn
40	45.552	Fill-Zn
41	45.8	Fill-Zn
42	46.5	Fill-Zn
43	46.76	Fill-Zn
44	46.973	Fill-Zn
45	47	Fill-Zn
46	47.6	Fill-Zn
47	47.6764	Fill-Zn
48	48.637	Fill-Zn
49	49	Fill-Zn
50	49.2	Fill-Zn
51	50.0564	Fill-Zn
52	50.7822	Fill-Zn
53	51.0625	Fill-Zn
54	51.2432	Fill-Zn
55	52	Fill-Zn
56	52.2	Fill-Zn
57	52.5	Fill-Zn
58	53.6	Fill-Zn
59	56.4	Fill-Zn
60	56.8	Fill-Zn
61	57.7	Fill-Zn
62	57.74	Fill-Zn
63	57.784	Fill-Zn
64	58.342	Fill-Zn
65	59.82	Fill-Zn
66	60.124	Fill-Zn
67	61.5	Fill-Zn

MTCAStat Site Module V2.0

Number of samples		Uncensored values	
Uncensored	240	Mean	482.890
Censored	------	Lognormal mean	304.353
Detection limit or PQL	------	Std. devn.	2083.195
Method detection limit	------	Median	92.65
TOTAL	240	Min.	0.141
ENTER DATA		Max	24000

Distribution Decision

Probability plot method | W test | D'Agostino's test

Lognormal distribution? r-squared is: 0.899

Normal distribution? r-squared is: 0.179

Recommendations:

Reject lognormal distribution.

Y value is -12.6457. This lies outside the tabled values of 1.5352 and -2.3566

Reject normal distribution.

Y value is -98.0211. This lies outside the tabled values of 1.5352 and -2.3566

Upper Confidence Limit (UCL)

Paste values

Sort data

Create report

Clear all

Histogram

5 10 20

Clear messages

Calculate UCL

Lognormal

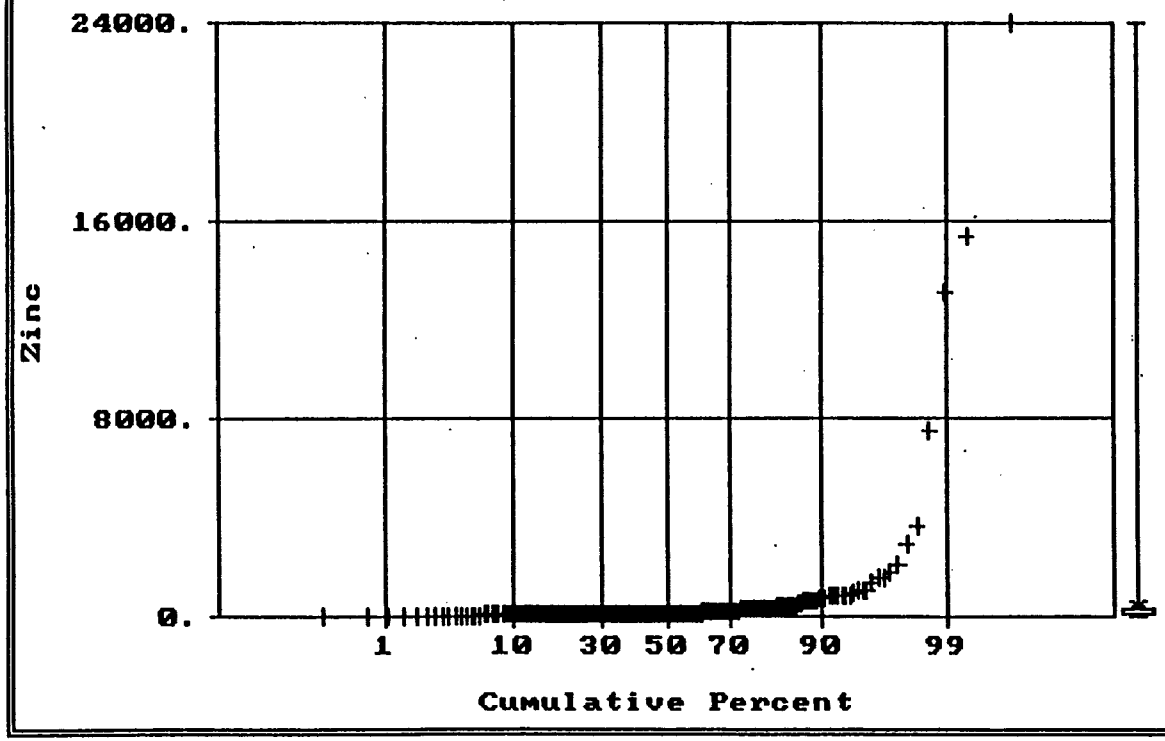
Normal

Neither

Sample size

A-406

Normal Probability Plot for Zinc
Data file: fil-all.dat

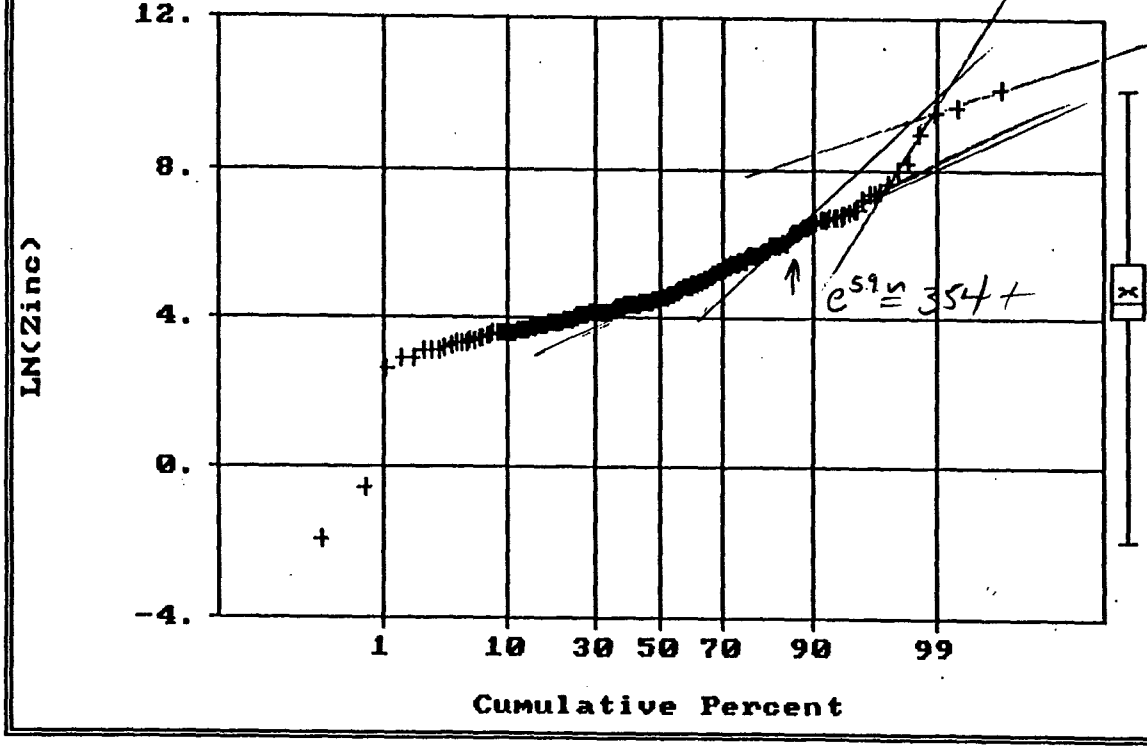


Statistics

N Total :	371
N Miss :	131
N Used :	240
Mean :	482.890
Variance:	4339704.000
Std. Dev:	2083.196
% C.V. :	431.401
Skewness:	8.679
Kurtosis:	85.478
Minimum :	.141
25th % :	57.700
Median :	92.650
75th % :	247.126
Maximum :	24000.000

A-407

Normal Probability Plot for LN(Zinc)
Data file: fil-all.dat



Statistics

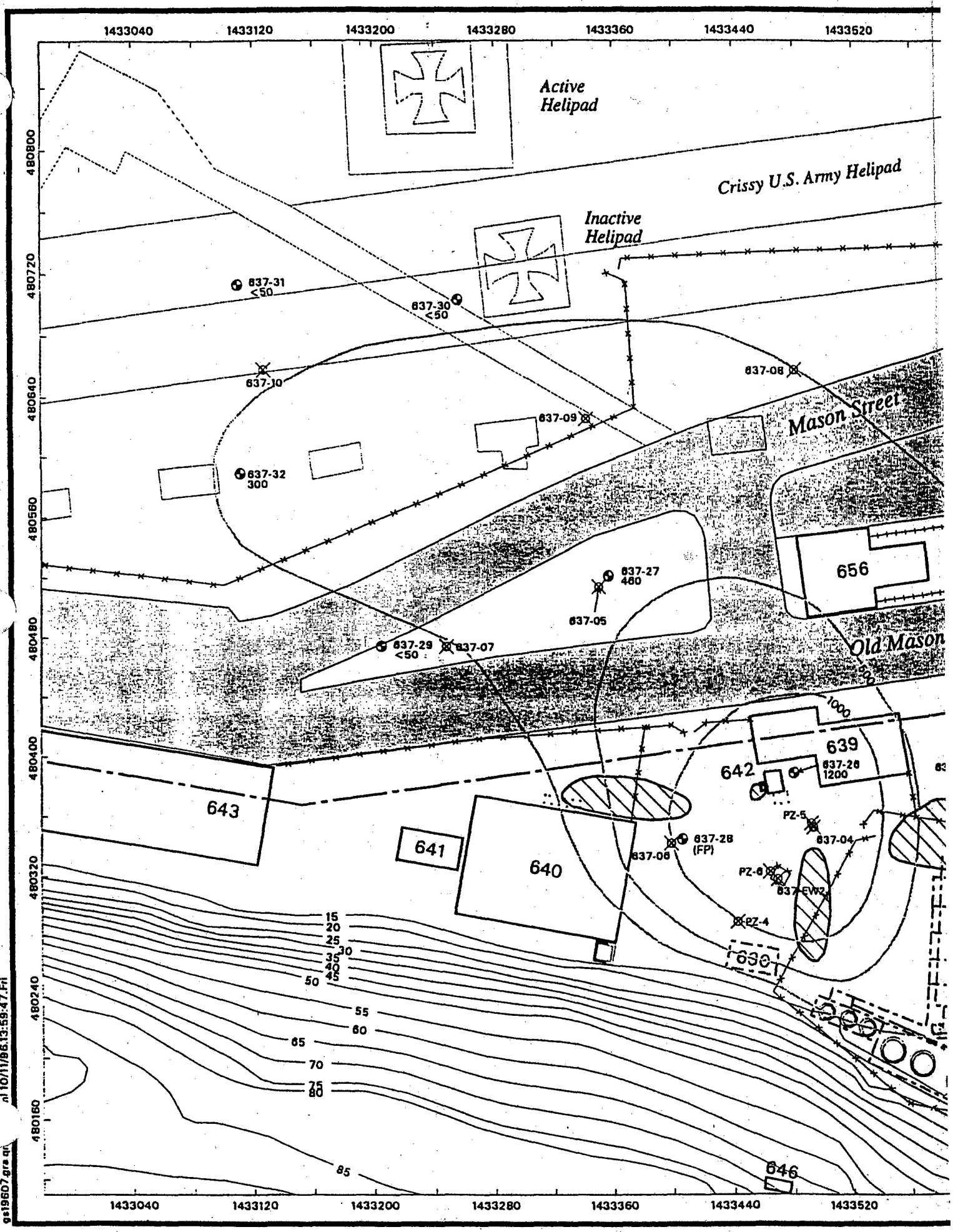
N Total :	371
N Miss :	131
N Used :	240
Mean :	4.825
Variance:	1.787
Std. Dev:	1.337
% C.V. :	27.703
Skewness:	.242
Kurtosis:	7.753
Minimum :	-1.959
25th % :	4.055
Median :	4.529
75th % :	5.510
Maximum :	10.086

$\cancel{e^{75} = 1800}$

A-408

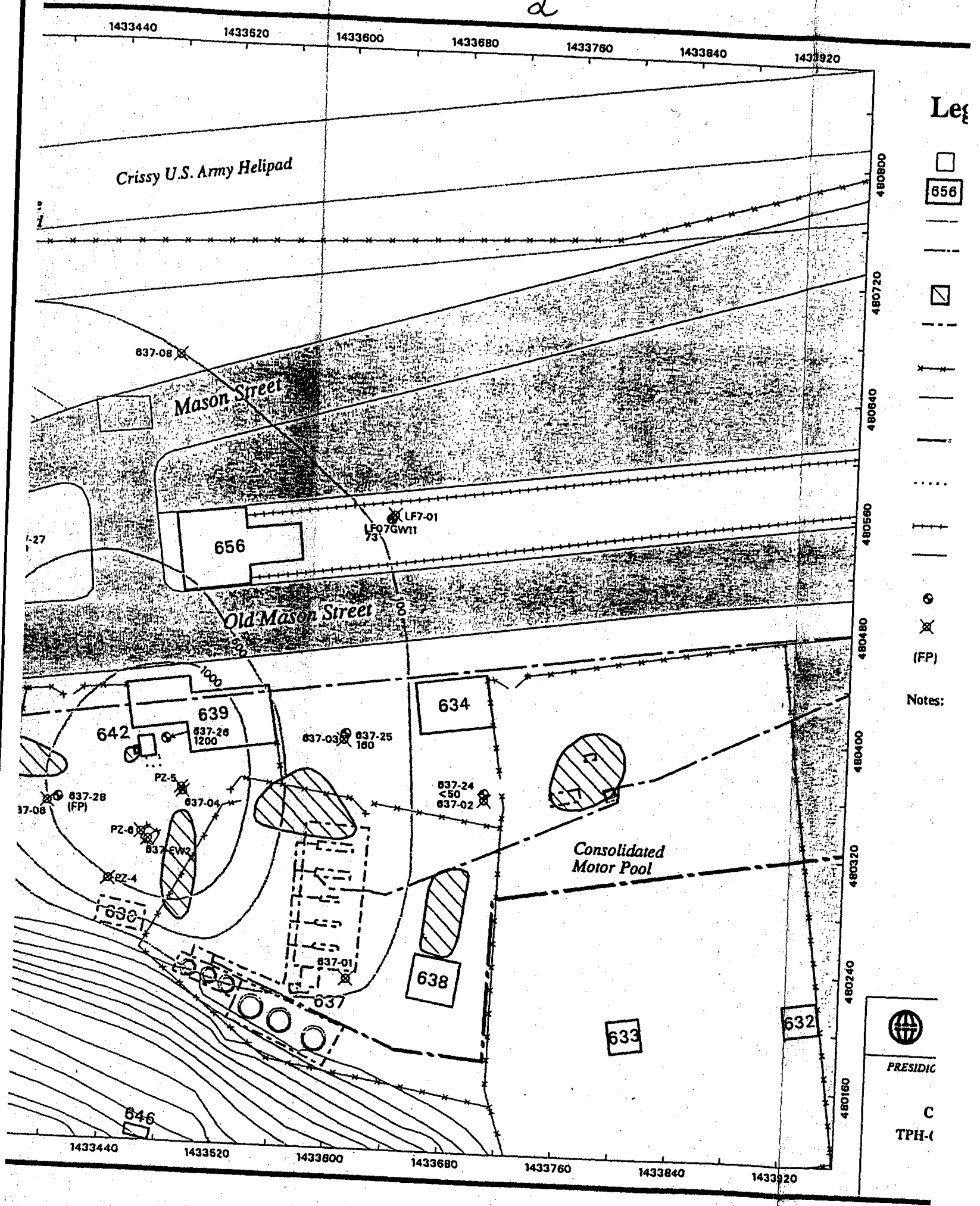
Appendix C
Crissy Field Study Area

C.1 Building 633 Soil Borings C-2
C.2 Building 637 ..... C-13
Soil Borings C-14
JMM Soil Borings C-20
Well Information C-27
JMM Well Information C-51
C.3 Building 638 Soil Borings C-95
C.4 Building 640 Soil Borings C-97
C.5 Building 642 Soil Borings C-102
C.6 Building 643 Soil Borings C-107
C.7 Landfill 7 ..... C-116
Sediment Samples C-117
Test Pits C-123
Soil Borings C-129
Discrete Groundwater Sample Sheets C-196
Well Information C-214
C.8 Crissy Field Lift Station C-303
Soil Borings C-304
Discrete Groundwater Sample Sheets C-309
C.9 Building 637 Area TPH Concentration Figures for Groundwater C-312



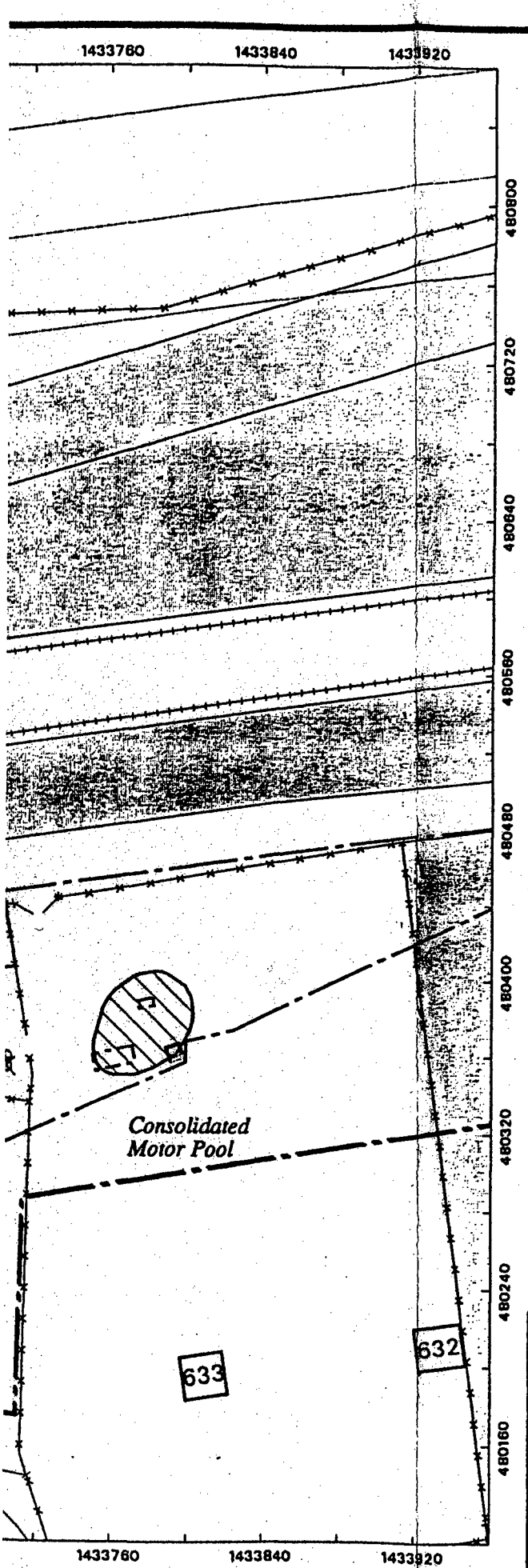
gs19607.gra.qr nl 10/11/96.13:59:47.Fri

2



1433440
1433520
1433600
1433680
1433760
1433840
1433920
480800
480720
480640
480560
480480
480400
480320
480240
480160
Crissy U.S. Army Helipad
Mason Street
Old Mason Street
Consolidated Motor Pool
637-08
LF7-01
LF07GW11
73
656
639
642
637-26
1200
637-03
637-25
160
634
PZ-5
637-04
637-28
(FP)
PZ-6
637-EW2
PZ-4
637-24
<50
637-02
637-01
637
638
633
632
646
100
500
1000
Leg
656
(FP)
Notes:
PRESIDIC
C
TPH-(

3



Legend:

- Roadway
- 656 — Building and Number
- Air Field Features
- Abandoned Gasoline Lines (approximate)
- Other Potential Source Areas
- Removed Structure (except tanks)
- Fence
- Topographic Contour (Contour Interval: 5 ft.)
- Removed Aboveground Storage Tank
- Removed Underground Storage Tank
- Rail Line
- Chemical Isoconcentration Contour (µg/l) (Dashed where Uncertain)
- Zone A1 Monitoring Well
- Abandoned Monitoring Well
- (FP) — Well not sampled due to presence of free product

Notes: Horizontal Datum: NAD 27, CA State Plane Coordinates, Zone 3, feet

Vertical Datum: Presidio Lower Low Water (LLW)

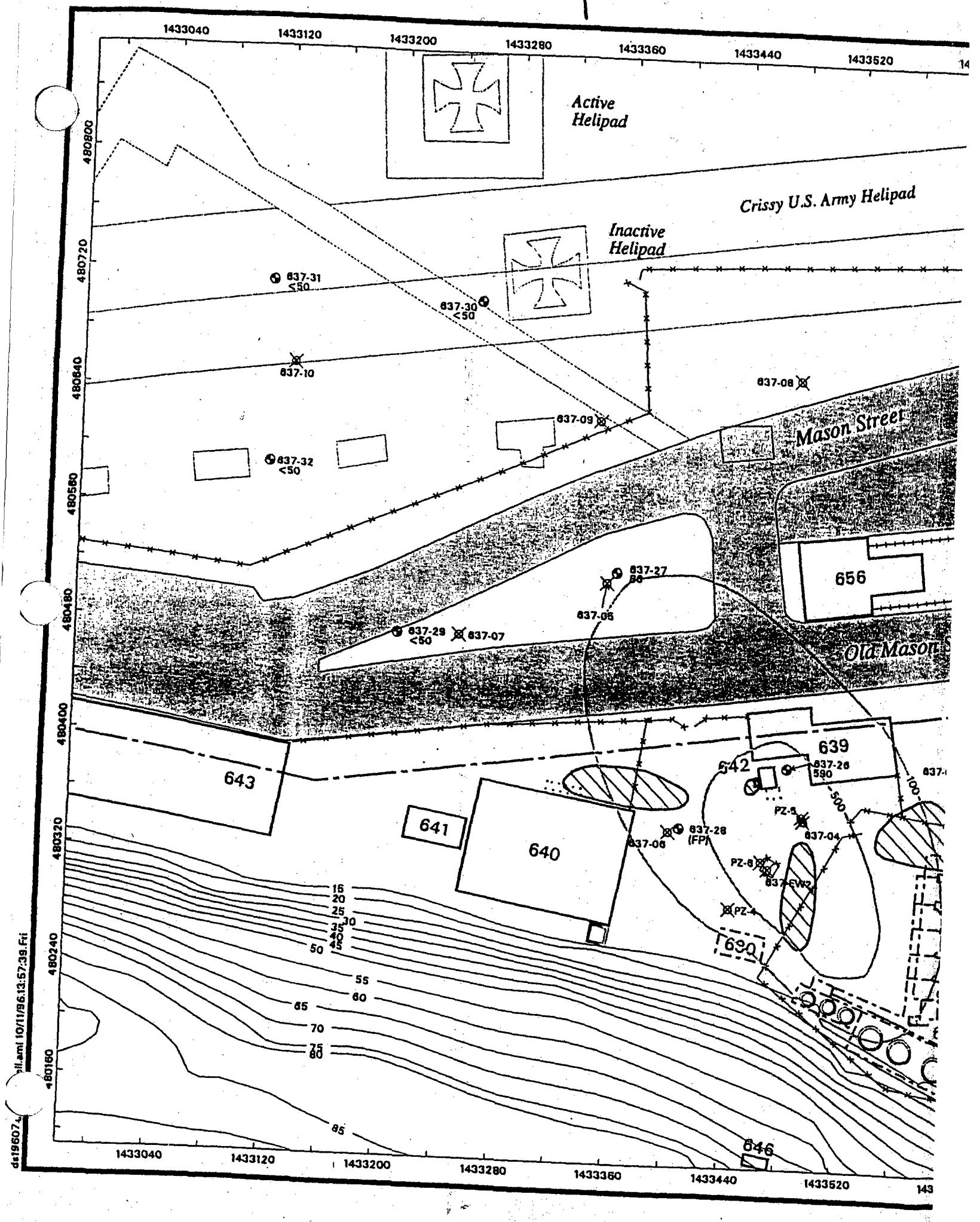
0 40 80
feet

MONTGOMERY WATSON

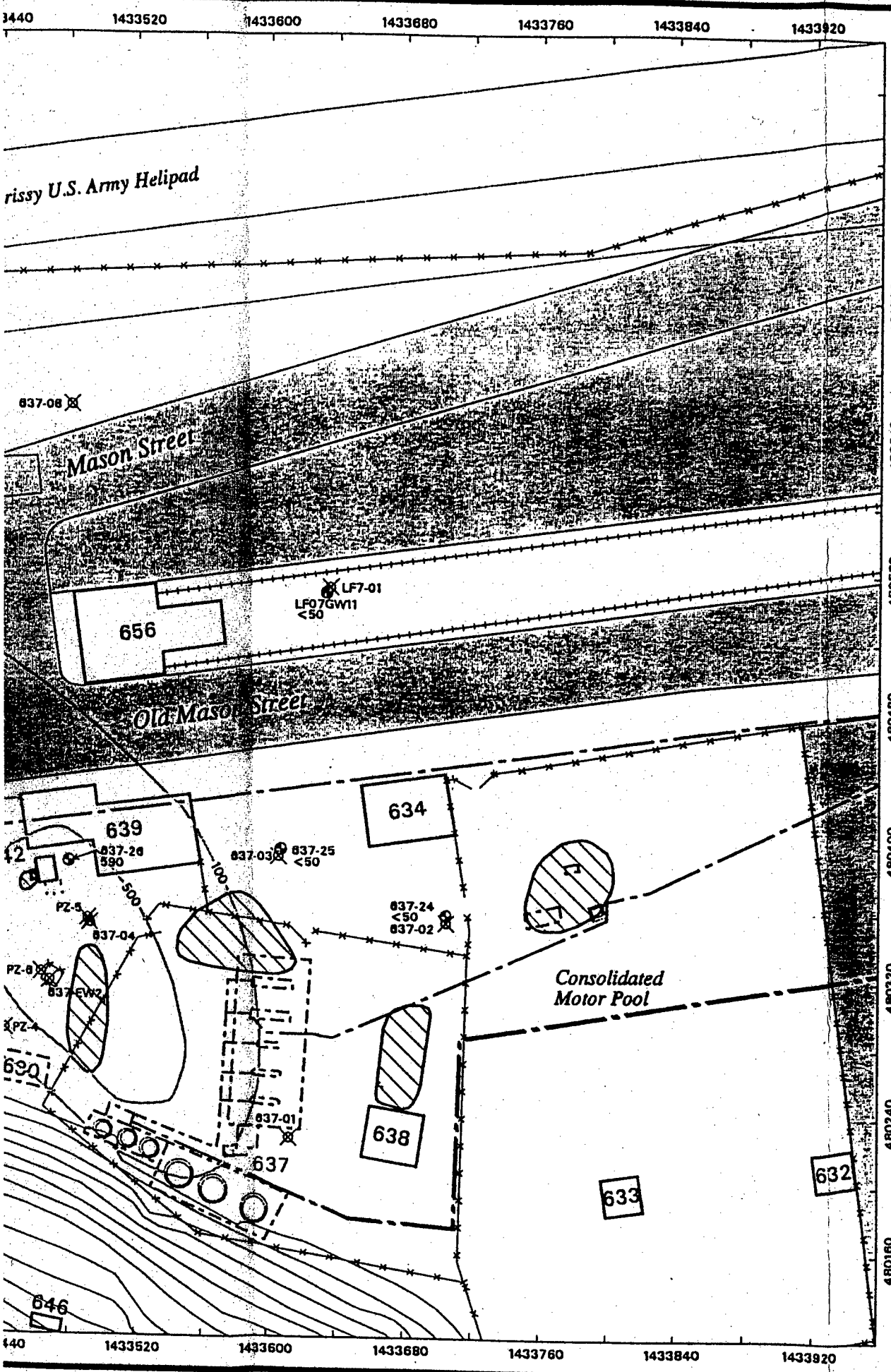
PRESIDIO OF SAN FRANCISCO *CALIFORNIA*

BUILDING 637 AREA
CHEMICAL CONCENTRATION MAP
TPH-GASOLINE RANGE IN ZONE A1 WELLS
JULY 1996 QUARTER
FIGURE 4-1

C-312


1433040
1433120
1433200
1433280
1433360
1433440
1433520
480800
480720
480640
480560
480480
480400
480320
480240
480160
Active Helipad
Crissy U.S. Army Helipad
Inactive Helipad
637-31 <50
637-30 <50
637-10
637-08
637-09
637-32 <50
Mason Street
637-27 86
637-05
637-29 <50
637-07
Old Mason
656
643
641
640
639
642
637-26 590
637-28 (FP)
637-06
PZ-5
637-04
PZ-6
637-EW2
PZ-4
690
646
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
100
500

2



Legend:

- Roadway
- 656 Building
- Air Field
- Abandon (approxi
- Other Po
- Removed (except ta
- Fence
- Topograp (Contour
- Removed Storage T
- Removed Storage T
- Rail Line
- Chemical (Dashed v
- Zone A1 I
- Abandon
- (FP) Well not s presence
- Notes: Horizonta Plane Coo
- Vertical D Low Wate

0

MONTGOM

PRESIDIO OF SAN FRANCIS

BUILDI

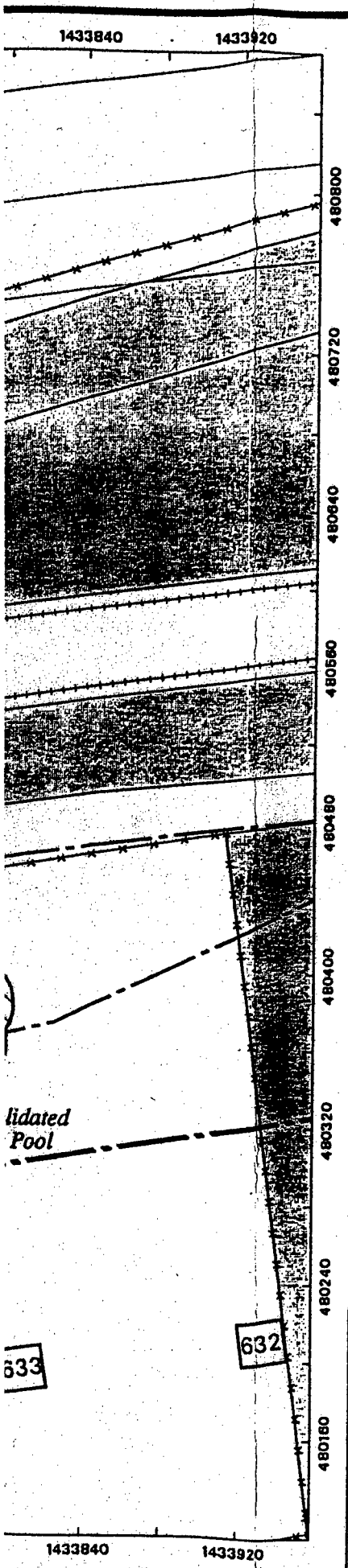
CHEMICAL CO

TPH-DIESEL RAN

JULY 1

FI

3



Legend:

- Roadway
- 656 — Building and Number
- Air Field Features
- Abandoned Gasoline Lines (approximate)
- Other Potential Source Areas
- Removed Structure (except tanks)
- Fence
- Topographic Contour (Contour Interval: 5 ft.)
- Removed Aboveground Storage Tank
- Removed Underground Storage Tank
- Rail Line
- Chemical Isoconcentration Contour (µg/l) (Dashed where Uncertain)
- Zone A1 Monitoring Well
- Abandoned Monitoring Well
- (FP) — Well not sampled due to presence of free product

Notes: Horizontal Datum: NAD 27, CA State Plane Coordinates, Zone 3, feet

Vertical Datum: Presidio Lower Low Water (LLW)

0 40 80
feet

MONTGOMERY WATSON

PRESIDIO OF SAN FRANCISCO *CALIFORNIA*

BUILDING 637 AREA

CHEMICAL CONCENTRATION MAP

TPH-DIESEL RANGE IN ZONE A1 WELLS

JULY 1996 QUARTER

FIGURE 4-2

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