APPENDIX E

Characterization of Background Conditions

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Characterization of Background Conditions

A. Introduction

This appendix describes the background characterization work performed by ENVIRON in April 2002. The basis for selecting the background sampling locations and the important elements of the sampling and analysis program are discussed. The data obtained from this effort are summarized in the tables provided in this appendix. Statistical analyses of the background data are presented, followed by comparisons of the background data and the soils data from the WRF expansion site. An Excel file of the background data base and electronic copies (PDF) of the analytical data sheets are included on the CD in Appendix D.

ENVIRON's initial plan for sampling and analysis to characterize background levels of constituents of potential concern in soils at the BMI Common Areas was submitted to the NDEP in late January 2002. This plan proposed collection of samples of surface soil from the 0-1 foot interval at six locations that were expected to represent background conditions. The initial plan was modified in March as a result of discussions with the NDEP.

As implemented in early April 2002, the background characterization effort involved collection of soil samples from two depth intervals at each of eight locations. All of the soil samples were analyzed for metals, radionuclides, perchlorate, dioxins/furans, total organic carbon (TOC), cation exchange capacity (CEC), and soil texture class. The surface samples were also analyzed for pesticides.

B. Selection of Background Sampling Locations

The background sampling effort was designed to obtain a data set that can be used to characterize the levels of the chemicals of interest that might be found in the BMI Common Areas in the absence of waste disposal activities or migration from the BMI complex. The design is based on the relevant USEPA guidance, as discussed below.

The USEPA issued an external review draft of a document entitled *Guidance for Characterizing Background Chemicals in Soil at Superfund Sites* (EPA 540-R-01-003) in June 2001. This draft document supplements the guidance provided in Volume I of *Risk Assessment Guidance for Superfund* (EPA 540/1-89/002), commonly known as RAGS, which was issued in December 1989. Together, these documents provide the USEPA's current guidance for characterizing background conditions. Both documents indicate that background samples should be collected at or near the hazardous waste site in areas that are not influenced by site contamination. RAGS states (section 4.4.2) that "the locations of background samples must be areas that could not have received contamination from the site, but that do have the same basic

characteristics as the medium of concern at the site. Identifying background location requires knowing which direction is upgradient/upwind/upstream."

To conform to the USEPA guidance, the ideal background sampling locations would be in undisturbed areas that are upgradient, upwind, and upstream of the BMI Common Areas and the industrial complex. In selecting proposed background sampling locations, ENVIRON considered land use, topography, soils, and local wind conditions.

The USGS topographic map for the Henderson quadrangle suggests that the BMI Common Areas are located primarily on alluvial fan deposits that originate in the River Mountains to the east of the urbanized portion of the City of Henderson. This USGS map is the basis for Figure E-1. The upper and lower ponds portion of the BMI Common Areas is identified on the figure as "Tailings Ponds." The BMI industrial complex (identified on the figure as the "Henderson Industrial Area") is located south and southwest of the Common Areas. The BMI industrial complex and the urbanized portion of the City of Henderson appear to be located primarily on alluvial fan deposits that originate in the McCullough Range to the south of the City.

The USGS map shows large areas of undeveloped land to the east and southeast of the BMI industrial complex and the BMI Common Areas. These undeveloped lands are generally upslope of the Common Areas on the same fan. The ephemeral stream channels on the USGS map suggest that the undeveloped lands to the east and southeast were upstream of the BMI Common Areas before the construction of cross-fan features such as Lake Mead Drive. ENVIRON has not obtained site-specific hydrogeologic information for the area east and southeast of the BMI Common Areas, but the undeveloped lands are thought to be generally upgradient of these areas. The wind rose for McCarran Airport in Las Vegas indicates that the dominant winds in the region are from the southwest quadrant. This suggests that areas to the northeast of the BMI industrial complex are generally downwind. Thus, undeveloped areas to the east and southeast of the BMI complex were identified as potential background sampling locations. Although the areas to the south and southwest of the BMI complex are also upgradient, upslope, and generally upwind, the USGS map (which was last photorevised in 1983) indicates that these areas are more developed than the areas east and southeast of the BMI complex.

Recent land use maps received from the City of Henderson confirmed that there are still large undeveloped areas to the east and southeast of the BMI complex. As shown on Figure E-1, the potential background areas nearest to the BMI complex are located in Township 22, Range 63, Sections 9, 16, and 21. The City's land use maps identify the United States government as the owner of large, undeveloped parcels of land in Sections 9 and 16. The most suitable parcels in Section 21 appear to be the privately-owned lands in the southwest quarter on each side of

Boulder Highway. Most of the City property in the northern portion of this section is surrounded by developed parcels and may have been disturbed.

ENVIRON examined additional data concerning local wind patterns to further confirm the suitability of areas to the east and southeast of the BMI complex for background sampling. The City obtained five years (1997-2001) of wind speed and direction data collected at the TIMET wind gauge from the Clark County Regional Flood Control District. The TIMET gauge is located just north of the BMI industrial complex, while the gauge at McCarran Airport is nearly 10 miles to the west-northwest. ENVIRON analyzed the TIMET wind data and compared the frequency of winds from various sectors to the wind rose developed for McCarran Airport. Unlike at McCarran, the most common wind direction at TIMET is from the southeast, and winds from most of the eastern sectors are more common at TIMET than at McCarran. This analysis confirms that areas to the east and southeast of the BMI complex are generally upwind.

The other source of information considered is the *Soil Survey of Las Vegas Valley Area, Nevada* published by the USDA Soil Conservation Service (SCS) in 1985. This reference identifies the soils in the former waste disposal ponds as slickens (code 600), and describes these as "accumulations of fine-textured material such as that separated in ore-mill operations." The soils in the BMI industrial complex are identified as urban land (code 615), which "consists of areas covered by asphalt, concrete, and buildings or other urban structures." Soil codes shown for the other portions of the Common Areas include the following:

- 117: Arizo very gravelly fine sandy loam, 2 to 8 percent slopes
- 182: Caliza-Pittman-Arizo complex, 0 to 8 percent slopes
- 184: Caliza very gravelly sandy loam, 2 to 8 percent slopes
- 326: McCarran very cobbly fine sandy loam, 2 to 8 percent slopes

Projection of these mapping units under the ponds suggests that native soils in the majority of the Common Areas are code 184, with a significant area of code 117 and smaller areas of codes 182 and 326. The WRF project site and the Tuscany Hills easements are in the code 184 area.

The detailed descriptions of the soil codes suggest that appropriate background samples can be collected in the undeveloped areas of Township 22, Range 63, Sections 9, 16 and 21. The soil survey map indicates that the soils in most of the undeveloped areas of Sections 9 and 16 are code 182, and code 117 is found in the extreme southwest corner of Section 21. Although code 184 is not mapped in the potential background sampling locations, the short description for code 182 says that the map unit is 60 percent Caliza extremely cobbly fine sandy loam, 2 to 8 percent slopes, on erosional fan remnants. The detailed description of the Caliza portion of the code 182 complex is nearly identical to the detailed description provided for code 184. Therefore,

background samples collected at selected locations in areas that are mapped as code 182 may be representative of areas mapped as code 184. ENVIRON discussed the field identification of Caliza soils and appropriate sampling locations with personnel at the local office of the Natural Resources Conservation Service (NRCS) before collecting the background soil samples (the NRCS is the current name of the federal agency formerly called the SCS.)

On the basis of this information, ENVIRON selected the eight sampling locations shown on Figure E-1. These locations are distributed as follows:

- One each in the northeast and southeast quarters of Section 9;
- One each in the northeast and southeast quarters and two in the southwest quarter of Section 16;
- Two in the southwest corner of Section 21 (the soils in this area are mapped as code 117).

C. Sampling and Analysis

All of the selected sampling locations except the two in Section 21 are located on public (USA) lands. ENVIRON obtained access to these lands under an authorization issued to the City of Henderson by the Bureau of Land Management (BLM). This authorization limited the depth of sampling to five feet and prohibited off-road vehicular travel. Access to the private land at the southwest corner of section 21 was obtained under an agreement between the City and the landowners.

All of the soil samples were collected by ENVIRON field personnel using a hand auger. Samples were collected from bare soil locations only; vegetation was not disturbed. The target sampling depths at each location were 0-1 foot and 4-5 feet below ground surface (bgs). The presence of caliche and cobbles in the subsurface prevented the field personnel from reaching the lower depth interval, so the deep samples were collected at depth intervals ranging from 2.5-3 feet bgs to 3.5-4 feet bgs. Boring and sampling notes for each location are provided on the boring logs in this appendix. The samples sent to the laboratories included one field duplicate soil sample and one equipment rinsate blank. Because none of the samples was analyzed for volatile organic chemicals, a trip blank was not needed.

All of the soil samples were analyzed for metals, radionuclides, perchlorate, and dioxins/furans. The methods and laboratory (Severn Trent Laboratories, Inc.) used for these analyses are the same as those used in the May 2001 site characterization work for the WRF expansion project. The surface (0-1 foot) background samples were also analyzed for organochlorine and organophosphorus pesticides. These analyses were conducted using the same methods used in May 2001, but by a different laboratory (SVL Analytical, Inc.). SVL was retained to perform the pesticide analyses on the background samples to ensure that the results

would include two specific organophosphorus pesticides identified by the NDEP (carbophenothion and phosmet). These two chemicals were not determined or reported in the pesticide analyses performed by Severn Trent Laboratories on the May 2001 samples. SVL also analyzed all of the background soil samples for total organic carbon (TOC), cation exchange capacity (CEC), and soil texture class. Table E-1 lists the analytes, methods, and laboratories used in the background characterization. The data obtained from these analyses are provided in electronic (Excel) form on the CD in Appendix D and summarized in the tables in this appendix.

D. Characteristics of the Background Soil Samples

The data obtained by analysis of the background soil samples for the physical and chemical indicator parameters are summarized in Table E-2. The soil textures reported in this table as "SCS Designation" were assigned by ENVIRON on the basis of the percentages of sand, silt, and clay reported by the laboratory. These designations were assigned to facilitate comparison to the soil textures reported for the samples collected at the WRF expansion site in Table D-2. Comparison of the data in Table E-2 to the corresponding data in Table D-2 suggests that although the grain size distributions are similar, there may be consistent differences between the soils in the two areas. Soils in both areas are classified primarily as loamy sand, with a few samples classified as sand or (for the WRF only) sandy loam. On average, however, the WRF samples have total organic carbon (TOC) levels that are three to four times higher than those in the background samples. The higher moisture contents in the WRF samples are likely related to the presence of more organic carbon.

Table E-3 summarizes the chemical data obtained from each background soil sample, including the field duplicate collected from the surface depth interval at location BG03. Antimony, hexavalent chromium, and the pesticides were not detected in any of the background samples. At least one of the dioxin and furan congeners was detected in 10 of the 17 samples, although some of the congeners (including 2,3,7,8-TCDD) were not detected in any of the samples. Perchlorate was also detected in 10 of the 17 samples. Of the 18 radionuclides, all but three (thorium 234, lead 210, and bismuth 212) were detected in all or almost all of the samples. Arsenic is the only chemical detected at a level greater than the Region 9 preliminary remediation goals (PRGs) for soils at industrial sites. The PRG benchmark of 2 mg/kg was exceeded in all 17 of the background soil samples, but the maximum detected arsenic concentration was only 4.3 mg/kg.

Table E-4 summarizes the statistical characteristics of the chemical data assigned to the 16 background soil sampling locations using one-half the detection limit to represent non-detects and averaging the values of the field duplicate samples collected at BG03. This table indicates that the background data for almost all of the chemicals are consistent with a normal distribution when the hypothesis test for normality is interpreted at the five percent level of significance. The

only four chemicals for which the null hypothesis was rejected are cobalt, thallium, vanadium, and perchlorate. Statistical analyses were conducted for all of the chemicals that were detected in at least one of the background soil samples, but three of these chemicals (bismuth 212, thorium 234, and lead 210) were detected in only a few background samples. The results of the analyses for these chemicals are determined by the detection limits, rather than by the actual concentrations. Therefore, the results presented for these chemicals in Table E-4 may not be representative of background conditions. Detailed descriptions of the distribution of data for each chemical are provided as JMP output pages in the Statistical Analyses section of this appendix. As in Appendix D, the analysis presented on the first page of JMP output for each chemical includes graphical depictions of the distribution of sample data (including a histogram, a quantile box plot, an outlier box plot, and a normal quantile plot). The quantiles, moments, and other characteristics of the sample data are provided, as are the results of a Shapiro-Wilk test for normality of the distribution represented by the sample values. In these pages, soil samples collected from the 0-1 foot depth interval are represented by "X" and deeper soil samples are represented by "+".

The possibility of trends or spatial patterns in the background data set was investigated using bubble plots similar to those provided in Appendix D for the WRF expansion site. (Bubble plots for the background data are provided in a later section of this appendix.) Examination of the background bubble plots indicates that with few exceptions, the detected chemicals are found at similar levels throughout the background area and at all sampled depths. The notable exceptions are for dioxins (none were detected in six of the eight samples collected at depth) and perchlorate, which was found at relatively high concentrations in the surface samples at two locations.

E. Comparison of the WRF Soil Data to Background

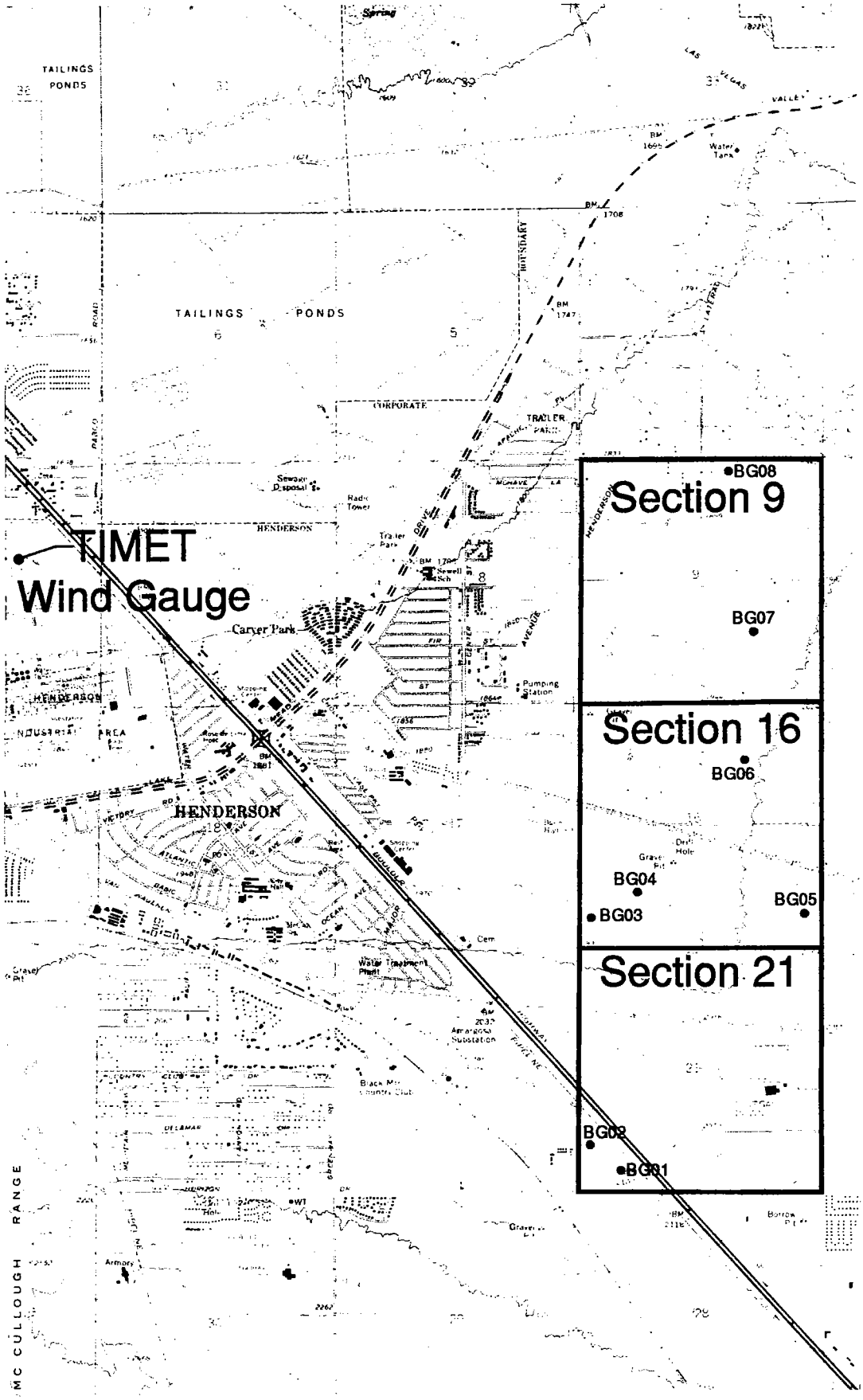
Table E-5 summarizes the comparison of data from the WRF soil samples to data from the background soil samples. Because this comparison is important to the risk assessment, it was performed separately for each of the two exposure areas (northern and southern). These comparisons include samples collected at all depths (up to 22 feet bgs) at the WRF expansion site, while the background samples collected at a maximum depth of four feet bgs. Therefore, the results of the comparisons may be due (at least in part) to trends in concentration with depth.

Each comparison is based on a nonparametric test of the null hypothesis that the mean concentration in soils at the WRF expansion site is less than or equal to the mean background concentration. The details of this analysis are provided as JMP output pages in the Statistical Analyses section of this appendix. These comparisons were performed for all of the chemicals that were commonly detected in both data sets. The background soil samples were not analyzed for VOCs or SVOCs, and antimony, hexavalent chromium, and pesticides were not detected in

the background samples. A few of the other chemicals (bismuth 212, thorium 234, and lead 210) were detected in five or fewer of the 16 background soil samples. Therefore, the comparison was not performed for these chemicals.

As shown in Table E-5, both of the exposure areas appear to be elevated with respect to background for dioxins, perchlorate, twelve of the metals, and two of the radionuclides (uranium 238 and uranium 234, which is a decay product of uranium 238). The northern exposure area also appears to be elevated for aluminum, chromium, and uranium 235; the southern exposure area also appears to be elevated for lead, mercury, bismuth 214, lead 214, and thorium 230. These results are based on interpretation of 78 statistical hypothesis tests (two each for 39 chemicals) at a five percent level of significance, so some false rejections of the null hypothesis are likely. While individual tests are not necessarily conclusive, the pattern and number of elevated levels indicate that soils in both exposure areas have been affected by wastes associated with the BMI industrial complex. The nature and disposal of these wastes is addressed in the conceptual model described in Chapter III of this report. A more detailed comparison to background for the chemicals of greatest significance in the risk assessment is provided in Appendix G.

APPENDIX E
FIGURE



BASEMAP SOURCE: USGS 7.5 MINUTE (TOPOGRAPHIC) MAP; HENDERSON, NEV. QUADRANGLE

ENVIRON

BACKGROUND SAMPLING LOCATION MAP
HENDERSON, NEVADA

Figure
E-1

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APPENDIX E
TABLES

TABLE E-1 Analytical Summary Table				
Parameter	**Surface**	**Subsurface**	**Laboratory**	**Method**
Metals				
Aluminum	X	X	STL	6010B
Iron	X	X	STL	6010B
Zinc	X	X	STL	6010B
Antimony	X	X	STL	6020
Arsenic	X	X	STL	6020
Barium	X	X	STL	6020
Beryllium	X	X	STL	6020
Cadmium	X	X	STL	6020
Chromium (total)	X	X	STL	6020
Cobalt	X	X	STL	6020
Copper	X	X	STL	6020
Lead	X	X	STL	6020
Magnesium	X	X	STL	6020
Manganese	X	X	STL	6020
Molybdenum	X	X	STL	6020
Nickel	X	X	STL	6020
Selenium	X	X	STL	6020
Silver	X	X	STL	6020
Thallium	X	X	STL	6020
Thorium	X	X	STL	6020
Titanium	X	X	STL	6020
Vanadium	X	X	STL	6020
Chromium (hexavalent)	X	X	STL	7196A
Mercury	X	X	STL	7471A
Dioxins/Furans				
1,2,3,4,6,7,8-HpCDD	X	X	STL	8290
1,2,3,4,6,7,8-HpCDF	X	X	STL	8290
1,2,3,4,7,8,9-HpCDF	X	X	STL	8290
1,2,3,4,7,8-HxCDD	X	X	STL	8290
1,2,3,4,7,8-HxCDF	X	X	STL	8290
1,2,3,6,7,8-HxCDD	X	X	STL	8290
1,2,3,6,7,8-HxCDF	X	X	STL	8290
1,2,3,7,8,9-HxCDD	X	X	STL	8290
1,2,3,7,8,9-HxCDF	X	X	STL	8290
1,2,3,7,8-PeCDD	X	X	STL	8290
1,2,3,7,8-PeCDF	X	X	STL	8290
2,3,4,6,7,8-HxCDF	X	X	STL	8290
2,3,4,7,8-PeCDF	X	X	STL	8290
2,3,7,8-TCDD	X	X	STL	8290
2,3,7,8-TCDF	X	X	STL	8290
OCDD	X	X	STL	8290
OCDF	X	X	STL	8290
Other				
Perchlorate	X	X	STL	314

TABLE E-1 Analytical Summary Table				
Parameter	**Surface**	**Subsurface**	**Laboratory**	**Method**
Pesticides				
4,4'-DDD	X		SVL	8081A
4,4'-DDE	X		SVL	8081A
4,4'-DDT	X		SVL	8081A
Aldrin	X		SVL	8081A
alpha-BHC	X		SVL	8081A
alpha-Chlordane	X		SVL	8081A
beta-BHC	X		SVL	8081A
Chlordane (technical)	X		SVL	8081A
delta-BHC	X		SVL	8081A
Dieldrin	X		SVL	8081A
Endosulfan I	X		SVL	8081A
Endosulfan II	X		SVL	8081A
Endosulfan sulfate	X		SVL	8081A
Endrin	X		SVL	8081A
Endrin aldehyde	X		SVL	8081A
Endrin ketone	X		SVL	8081A
gamma-BHC	X		SVL	8081A
gamma-Chlordane	X		SVL	8081A
Heptachlor	X		SVL	8081A
Heptachlor epoxide	X		SVL	8081A
Methoxychlor	X		SVL	8081A
Toxaphene	X		SVL	8081A
Azinphos-methyl	X		SVL	8141A
Bolstar	X		SVL	8141A
Carbophenothion	X		SVL	8141A
Chlorpyrifos	X		SVL	8141A
Coumaphos	X		SVL	8141A
Demeton-O	X		SVL	8141A
Demeton-S	X		SVL	8141A
Diazinon	X		SVL	8141A

TABLE E-1 Analytical Summary Table				
Parameter	**Surface**	**Subsurface**	**Laboratory**	**Method**
Dichlorvos	X		SVL	8141A
Disulfoton	X		SVL	8141A
Ethoprop	X		SVL	8141A
Fensulfothion	X		SVL	8141A
Fenthion	X		SVL	8141A
Merphos	X		SVL	8141A
Methyl parathion	X		SVL	8141A
Mevinphos	X		SVL	8141A
Naled	X		SVL	8141A
Phorate	X		SVL	8141A
Phosmet (Imidan)	X		SVL	8141A
Ronnel	X		SVL	8141A
Stirofos	X		SVL	8141A
Tokuthion	X		SVL	8141A
Trichloronate	X		SVL	8141A
Radionuclides				
Actinium 228	X	X	STL	300 MOD
Bismuth 212	X	X	STL	300 MOD
Bismuth 214	X	X	STL	300 MOD
Lead 210	X	X	STL	300 MOD
Lead 212	X	X	STL	300 MOD
Lead 214	X	X	STL	300 MOD
Potassium 40	X	X	STL	300 MOD
Radium 224	X	X	STL	300 MOD
Thallium 208	X	X	STL	300 MOD
Thorium 232	X	X	STL	NS-3004 MOD
Thorium 234	X	X	STL	300 MOD
Uranium 238	X	X	STL	300 MOD
Radium 226	X	X	STL	9315 MOD
Radium 228	X	X	STL	9320 MOD
Thorium 228	X	X	STL	NS-3004 MOD
Thorium 230	X	X	STL	NS-3004 MOD
Thorium 232	X	X	STL	NS-3004 MOD
Uranium 234	X	X	STL	NS-3050 MOD
Uranium 235	X	X	STL	NS-3050 MOD
Uranium 238	X	X	STL	NS-3050 MOD
Physical/Chemical Indicators				
Cation Exchange Capacity	X	X	SVL	9081
Soil Moisture	X	X	STL	160.3 MOD
Soil Texture	X	X	SVL	ASA #9
Total Organic Carbon	X	X	SVL	USDA H60 #24

TABLE E-2
Summary of Physical and Chemical Indicator Parameters Measured in Soil Samples

Boring	Moisture Content	CEC	TOC	Grain Size			SCS Designation
				Sand	Silt	Clay	
	%	MEQ/100g	%	%	%	%	
BG01-SS01	2.2	14.5	0.24	78.0	20.0	2.0	Loamy Sand
BG01-SS02	2.8	17.7	0.10	86.0	14.0	<1.0	Loamy Sand
BG02-SS01	1.3	12.9	0.13	90.0	10.0	<1.0	Loamy Sand
BG02-SS02	2.6	15	0.07	92.0	6.0	2.0	Sand
BG03-SS01	1.1	23.8	0.60	88.0	10.0	2.0	Loamy Sand
BG03-SS11	1.1	25.2	0.70	88.0	8.0	4.0	Loamy Sand
BG03-SS02	2.5	17.9	0.06	90.0	8.0	2.0	Sand
BG04-SS01	1.9	13.1	0.06	88.0	8.0	4.0	Loamy Sand
BG04-SS02	1.2	9.6	0.05	88.0	8.0	4.0	Loamy Sand
BG05-SS01	1.1	8.5	0.13	82.0	16.0	2.0	Loamy Sand
BG05-SS02	1.8	10.2	0.09	92.0	6.0	2.0	Sand
BG06-SS01	1.0	9.7	0.09	86.0	10.0	4.0	Loamy Sand
BG06-SS02	1.7	8.6	0.07	92.0	4.0	4.0	Sand
BG07-SS01	1.2	9.9	0.15	88.0	6.0	6.0	Loamy Sand
BG07-SS02	2.6	14.8	0.11	88.0	4.0	8.0	Loamy Sand
BG08-SS01	1.1	10.7	0.18	78.0	10.0	12.0	Loamy Sand
BG08-SS02	1.9	17.5	0.15	84.0	6.0	10.0	Loamy Sand

MEQ - milli-equivalents.
CEC - Cation Exchange Capacity
TOC - Total organic carbon.

TABLE E-3
Summary of Background Sampling Data for Chemicals Detected in Soila at the WRF Expansion Site

Chemical	Units	# of Samples	# of Detects	Maximum Detect	Maximum MDL for Nondetects	Region 9 Industrial Soil PRG	Detects Exceeding Industrial PRG	USEPA Generic SSL for Migration to Ground Water (DAF = 1)	# of Detects Exceeding USEPA Generic SSL for Migration to Ground Water SSL (DAF = 1)
METALS									
Aluminum	mg/kg	17	17	12700		1.0E+05	0	NA	
Antimony	mg/kg	17	0	0	0.04	4.1E+02		3.0E-01	
Arsenic	mg/kg	17	17	4.3		2.0E+00	17	1.0E+00	17
Barium	mg/kg	17	17	618		6.7E+04	0	8.2E+01	17
Beryllium	mg/kg	17	17	0.5		1.9E+03	0	3.0E+03	0
Cadmium	mg/kg	17	17	0.16		4.5E+02	0	4.0E+02	0
Chromium (hexavalent)	mg/kg	17	0	0	0.06	6.4E+01		2.0E+03	
Chromium (total)	mg/kg	17	17	12.4		4.5E+02	0	2.0E+03	0
Cobalt	mg/kg	17	17	7.8		1.9E+03	0	NA	
Copper	mg/kg	17	17	16.3		4.1E+04	0	NA	
Iron	mg/kg	17	17	15000		1.0E+05	0	NA	
Lead	mg/kg	17	17	23.5		7.5E+02	0	NA	
Magnesium	mg/kg	17	17	9090		NA		NA	
Manganese	mg/kg	17	17	770		1.9E+04	0	NA	
Mercury	mg/kg	17	17	0.027		3.1E+02	0	NA	
Molybdenum	mg/kg	17	17	0.44		5.1E+03	0	NA	
Nickel	mg/kg	17	17	15.4		2.0E+04	0	7.0E+00	17
Selenium	mg/kg	17	13	0.29	0.05	5.1E+03	0	3.0E-01	0
Silver	mg/kg	17	17	0.083		5.1E+03	0	2.0E+00	0
Thallium	mg/kg	17	17	0.4		6.7E+01	0	NA	
Thorium	mg/kg	17	17	7.7		NA		NA	
Titanium	mg/kg	17	17	473		NA		NA	
Vanadium	mg/kg	17	17	25.5		7.2E+03	0	3.0E+05	0
Zinc	mg/kg	17	17	52.4		1.0E+05	0	6.2E+02	0
DIOXINS/FURANS									
1,2,3,4,6,7,8-HpCDD	pg/g	17	4	15	0.26	NA		NA	
1,2,3,4,6,7,8-HpCDF	pg/g	17	10	13	0.26	NA		NA	
1,2,3,4,7,8,9-HpCDF	pg/g	17	6	5.1	0.27	NA		NA	
1,2,3,4,7,8-HxCDD	pg/g	17	0	0	0.52	NA		NA	
1,2,3,4,7,8-HxCDF	pg/g	17	5	7.1	0.30	NA		NA	
1,2,3,6,7,8-HxCDD	pg/g	17	0	0	0.36	NA		NA	
1,2,3,6,7,8-HxCDF	pg/g	17	5	4	0.26	NA		NA	
1,2,3,7,8,9-HxCDD	pg/g	17	0	0	0.35	NA		NA	
1,2,3,7,8,9-HxCDF	pg/g	17	0	0	0.35	NA		NA	
1,2,3,7,8-PeCDD	pg/g	17	0	0	0.26	NA		NA	
1,2,3,7,8-PeCDF	pg/g	17	4	5.4	0.26	NA		NA	
2,3,4,6,7,8-HxCDF	pg/g	17	0	0	0.36	NA		NA	
2,3,4,7,8-PeCDF	pg/g	17	0	0	0.31	NA		NA	

TABLE E-3
Summary of Background Sampling Data for Chemicals Detected in Soila at the WRF Expansion Site

Chemical	Units	# of Samples	# of Detects	Maximum Detect	Maximum MDL for Nondetects	Region 9 Industrial Soil PRG	Detects Exceeding Industrial PRG	USEPA Generic SSL for Migration to Ground Water (DAF = 1)	# of Detects Exceeding USEPA Generic SSL for Migration to Ground Water SSL (DAF = 1)
2,3,7,8-TCDD	pg/g	17	0	0	0.13	1.6E+01		NA	
2,3,7,8-TCDF	pg/g	17	9	2.4	0.07	NA		NA	
OCDD	pg/g	17	9	45	1.00	NA		NA	
OCDF	pg/g	17	10	28	0.51	NA		NA	
TEQ	pg/g	17	10	4.225		NA		NA	
PESTICIDES									
4,4'-DDD	ug/kg	9	0	0	3.08	1.0E+04		8.0E+02	
4,4'-DDE	ug/kg	9	0	0	3.08	7.0E+03		3.0E+03	
4,4'-DDT	ug/kg	9	0	0	3.08	7.0E+03		2.0E+03	
Aldrin	ug/kg	9	0	0	1.54	1.0E+02		2.0E+01	
alpha-BHC	ug/kg	9	0	0	1.54	3.6E+02		3.0E-02	
alpha-Chlordane	ug/kg	9	0	0	1.54	6.5E+03		5.0E+02	
Azinphos-methyl	ug/kg	9	0	0	57.67	NA		NA	
beta-BHC	ug/kg	9	0	0	1.54	1.3E+03		1.0E-01	
Bolstar	ug/kg	9	0	0	57.67	NA		NA	
Carbophenothion	ug/kg	9	0	0	57.67	NA		NA	
Chlordane (technical)	ug/kg	9	0	0	3.08	1.1E+04		5.0E+02	
Chlorpyrifos	ug/kg	9	0	0	57.67	1.8E+06		NA	
Coumaphos	ug/kg	9	0	0	57.67	NA		NA	
delta-BHC	ug/kg	9	0	0	1.54	NA		NA	
Demeton-O	ug/kg	9	0	0	57.67	2.5E+04		NA	
Demeton-S	ug/kg	9	0	0	57.67	2.5E+04		NA	
Diazinon	ug/kg	9	0	0	57.67	5.5E+05		NA	
Dichlorvos	ug/kg	9	0	0	57.67	5.9E+03		NA	
Dieldrin	ug/kg	9	0	0	3.08	1.1E+02		2.0E-01	
Disulfoton	ug/kg	9	0	0	57.67	2.5E+04		NA	
Endosulfan I	ug/kg	9	0	0	1.54	3.7E+06		9.0E+02	
Endosulfan II	ug/kg	9	0	0	3.08	3.7E+06		9.0E+02	
Endosulfan sulfate	ug/kg	9	0	0	3.08	3.7E+06		NA	
Endrin	ug/kg	9	0	0	3.08	1.8E+05		5.0E+01	
Endrin aldehyde	ug/kg	9	0	0	3.08	1.8E+05		NA	
Endrin ketone	ug/kg	9	0	0	3.08	1.8E+05		NA	
Ethoprop	ug/kg	9	0	0	57.67	NA		NA	
Fensulfothion	ug/kg	9	0	0	57.67	NA		NA	
Fenthion	ug/kg	9	0	0	57.67	NA		NA	

TABLE E-3
Summary of Background Sampling Data for Chemicals Detected in Soila at the WRF Expansion Site

Chemical	Units	# of Samples	# of Detects	Maximum Detect	Maximum MDL for Nondetects	Region 9 Industrial Soil PRG	Detects Exceeding Industrial PRG	USEPA Generic SSL for Migration to Ground Water (DAF = 1)	# of Detects Exceeding USEPA Generic SSL for Migration to Ground Water SSL (DAF = 1)
gamma-BHC	ug/kg	9	0	0	1.54	1.7E+04		5.0E-01	
gamma-Chlordane	ug/kg	9	0	0	1.54	6.5E+03		5.0E+02	
Heptachlor	ug/kg	9	0	0	1.54	3.8E+02		1.0E+03	
Heptachlor epoxide	ug/kg	9	0	0	1.54	1.9E+02		3.0E+01	
Merphos	ug/kg	9	0	0	57.67	1.8E+04		NA	
Methoxychlor	ug/kg	9	0	0	15.38	3.1E+06		8.0E+03	
Methyl parathion	ug/kg	9	0	0	57.67	1.5E+05		NA	
Mevinphos	ug/kg	9	0	0	57.67	NA		NA	
Naled	ug/kg	9	0	0	57.67	1.2E+06		NA	
Phorate	ug/kg	9	0	0	57.67	1.2E+05		NA	
Phosmet (Imidan)	ug/kg	9	0	0	57.67	1.8E+07		NA	
Ronnel	ug/kg	9	0	0	57.67	3.1E+07		NA	
Stirofos	ug/kg	9	0	0	57.67	NA		NA	
Tokuthion	ug/kg	9	0	0	57.67	NA		NA	
Toxaphene	ug/kg	9	0	0	192.23	1.6E+03		2.0E+03	
Trichloronate	ug/kg	9	0	0	57.67	NA		NA	
OTHER									
Perchlorate	ug/kg	17	10	412	19.00	1.0E+05	0	NA	
RADIONUCLIDES									
Actinium 228	pCi/g	17	17	2.05		NA		5.9E-02	17
Bismuth 212	pCi/g	17	4	1.72	1.30	NA		3.3E+00	0
Bismuth 214	pCi/g	17	17	1.22		NA		1.6E-02	17
Lead 210	pCi/g	17	1	1.9	2.70	NA		5.5E-04	1
Lead 212	pCi/g	17	17	1.57		NA		3.3E+00	0
Lead 214	pCi/g	17	17	1.23		NA		1.6E-02	17
Potassium 40	pCi/g	17	17	34.4		NA		NA	
Radium 224	pCi/g	17	16	6.7	2.00	NA		3.3E+00	7
Radium 226	pCi/g	17	17	2.15		NA		1.6E-02	17
Radium 228	pCi/g	17	17	1.88		NA		5.9E-02	17
Thallium 208	pCi/g	17	17	0.59		NA		3.3E+00	0
Thorium 228	pCi/g	17	17	2.19		NA		3.3E+00	0
Thorium 230	pCi/g	17	17	1.44		NA		3.0E-01	17
Thorium 232	pCi/g	17	17	1.93		NA		3.0E-01	17
Thorium 234	pCi/g	17	1	1.49	1.40	NA		1.2E-02	1
Uranium 234	pCi/g	17	17	1.11		NA		1.2E-02	17
Uranium 235	pCi/g	17	10	0.116	0.09	NA		1.2E-02	10
Uranium 238	pCi/g	17	17	1.07		NA		1.2E-02	17

Note:
None of the method detection limits reported for non-detects exceed either of the benchmarks against which the detected concentrations are evaluated.

TABLE E-4
Data from Background Soil Samples Collected in April 2002:
Summary Statistics for Chemicals Detected in Soils at the WRF Expansion Site and Background Soils
Values Assigned Using MDL/2 for Non-Detects

Chemical	Units	Number of Background Locations Sampled	Number of Locations with Detections	Minimum Assigned Value	Maximum Assigned Value	Mean Assigned Value	Standard Deviation	Coefficient of Variation (Percent)	Skewness	p-value* for test of normality
Metals										
aluminum	mg/kg	16	16	6820	12700	10036.250	1817.683	18	-0.44	0.4664
arsenic	mg/kg	16	16	2.1	4.3	3.038	0.583	19	0.38	0.8347
barium	mg/kg	16	16	198	561	335.688	105.791	32	0.38	0.4357
beryllium	mg/kg	16	16	0.25	0.5	0.375	0.076	20	-0.02	0.6280
cadmium	mg/kg	16	16	0.052	0.16	0.105	0.028	26	0.02	0.8966
chromium	mg/kg	16	16	4.3	12.4	7.694	2.083	27	0.51	0.9378
cobalt	mg/kg	16	16	3.9	7.8	5.684	1.442	25	0.02	**0.0442**
copper	mg/kg	16	16	7.8	16.3	10.613	2.281	21	0.82	0.0995
iron	mg/kg	16	16	7520	15000	11656.250	2562.543	22	-0.31	0.1146
lead	mg/kg	16	16	7	23.5	15.081	5.601	37	0.30	0.1551
magnesium	mg/kg	16	16	4630	9090	6890.625	1582.169	23	-0.19	0.1495
manganese	mg/kg	16	16	223	615	446.250	98.342	22	-0.44	0.8044
mercury	mg/kg	16	16	0.013	0.027	0.020	0.004	20	0.02	0.8445
molybdenum	mg/kg	16	16	0.17	0.44	0.293	0.081	28	0.54	0.2729
nickel	mg/kg	16	16	7.8	15.4	10.659	1.788	17	0.91	0.2269
selenium	mg/kg	16	12	0.02335	0.26	0.128	0.077	60	-0.06	0.1735
silver	mg/kg	16	16	0.019	0.083	0.049	0.019	39	0.43	0.2569
thallium	mg/kg	16	16	0.1	0.4	0.180	0.081	45	1.81	**0.0011**
thorium	mg/kg	16	16	4.6	7.7	5.891	0.925	16	0.58	0.3911
titanium	mg/kg	16	16	235	473	355.719	73.055	21	-0.09	0.4073
vanadium	mg/kg	16	16	14.6	25.5	20.525	4.351	21	-0.09	**0.0080**
zinc	mg/kg	16	16	23	52.4	39.609	10.412	26	-0.28	0.0694
Dioxins/Furans										
dioxins (TEQ)	pg/g	16	10	0.0002915	0.004225	0.002	0.001	62	1.05	0.1216

TABLE E-4
Data from Background Soil Samples Collected in April 2002:
Summary Statistics for Chemicals Detected in Soils at the WRF Expansion Site and Background Soils
Values Assigned Using MDL/2 for Non-Detects

Chemical	Units	Number of Background Locations Sampled	Number of Locations with Detections	Minimum Assigned Value	Maximum Assigned Value	Mean Assigned Value	Standard Deviation	Coefficient of Variation (Percent)	Skewness	p-value* for test of normality
Perchlorate										
perchlorate	ug/kg	16	9	9.35	402.5	60.044	101.250	169	3.01	**<.0001**
Radionuclides										
actinium 228	pCi/g	16	16	1.11	2.05	1.595	0.298	19	0.01	0.2902
bismuth 212	pCi/g	16	4	0.44	1.72	0.793	0.403	51	1.40	0.0002**
bismuth 214	pCi/g	16	16	0.57	1.22	0.873	0.183	21	0.21	0.9775
lead 210	pCi/g	16	1	0.85	1.9	1.155	0.241	21	2.01	0.0047**
lead 212	pCi/g	16	16	0.94	1.47	1.261	0.174	14	-0.54	0.1173
lead 214	pCi/g	16	16	0.62	1.23	0.845	0.149	18	0.87	0.3096
potassium 40	pCi/g	16	16	23.6	34.4	28.356	2.702	10	0.39	0.9673
radium 224	pCi/g	16	15	1	6.7	3.253	1.357	42	0.99	0.2230
radium 226	pCi/g	16	16	1.03	2.15	1.480	0.309	21	0.43	0.4454
radium 228	pCi/g	16	16	1.02	1.88	1.386	0.189	14	0.62	0.1354
thallium 208	pCi/g	16	16	0.33	0.59	0.483	0.083	17	-0.66	0.1704
thorium 228	pCi/g	16	16	1.07	2.14	1.579	0.284	18	0.19	0.9867
thorium 230	pCi/g	16	16	0.88	1.38	1.130	0.168	15	0.09	0.3032
thorium 232	pCi/g	16	16	1.1	1.93	1.518	0.239	16	-0.24	0.8303
thorium 234	pCi/g	16	1	0.55	1.49	0.665	0.225	34	3.72	<0.0001**
uranium 234	pCi/g	16	16	0.53	1.11	0.772	0.166	22	0.39	0.7614
uranium 235	pCi/g	16	9	0.019	0.116	0.061	0.032	52	0.36	0.2000
uranium 238	pCi/g	16	16	0.45	1.07	0.763	0.173	23	-0.43	0.4492

* In this context, the p-value is a statistical measure of the consistency of the data set with a normal distribution; the p-values less than 0.05 (five percent) are considered indicative of non-normal distributions

** These p-values are not meaningful because the chemical was detected in only a few background samples

TABLE E-5
Summary of Comparisons to Background for Chemicals Detected in Soils
Values Assigned Using One-Half MDL for Non-Detects

Chemical	Units	Number of Detections in 16 BG Locations	Number of Detections in 70 WRF Locations	Mean Assigned Value in BG	Mean Assigned Value in NEA	Mean Assigned Value in SEA	p-value* for comparison of NEA to BG	p-value* for comparison of SEA to BG	EA Means greater than BG Mean
Metals									
Aluminum	mg/kg	16	70	10036	11607	10697	0.0489	0.2746	NEA
Arsenic	mg/kg	16	70	3.04	6.10	6.57	0.0136	0.0003	NEA, SEA
Barium	mg/kg	16	70	336	242	248	0.0069	0.0021	
Beryllium	mg/kg	16	70	0.375	0.528	0.535	<.0001	<.0001	NEA, SEA
Cadmium	mg/kg	16	70	0.105	0.117	0.119	0.7026	0.9929	
Chromium	mg/kg	16	70	7.69	9.84	10.70	0.0451	0.0573	NEA
Cobalt	mg/kg	16	70	5.68	7.18	6.71	0.0043	0.0295	NEA, SEA
Copper	mg/kg	16	70	10.6	14.8	13.2	0.0003	0.0071	NEA, SEA
Iron	mg/kg	16	70	11656	18682	16431	<.0001	<.0001	NEA, SEA
Lead	mg/kg	16	70	15.1	13.6	19.9	0.0066	0.0007	SEA
Magnesium	mg/kg	16	70	6891	10723	12971	<.0001	<.0001	NEA, SEA
Manganese	mg/kg	16	70	446	416	435	0.4409	0.2826	
Mercury	mg/kg	16	44	0.0198	0.0186	0.0217	0.0965	0.0294	SEA
Molybdenum	mg/kg	16	70	0.293	0.835	1.170	0.0015	<.0001	NEA, SEA
Nickel	mg/kg	16	70	10.7	12.9	12.4	0.0002	0.0018	NEA, SEA
Selenium	mg/kg	12	70	0.128	0.287	0.378	<.0001	<.0001	NEA, SEA
Silver	mg/kg	16	70	0.049	0.132	0.129	<.0001	<.0001	NEA, SEA
Thallium	mg/kg	16	70	0.180	0.0823	0.107	<.0001	<.0001	
Thorium	mg/kg	16	70	5.89	6.49	6.60	0.1680	0.1002	
Titanium	mg/kg	16	70	356	519	515	<.0001	<.0001	NEA, SEA
Vanadium	mg/kg	16	70	20.5	27.1	28.6	<.0001	0.0001	NEA, SEA
Zinc	mg/kg	16	70	39.6	44.6	40.9	0.3675	0.7695	

TABLE E-5
Summary of Comparisons to Background for Chemicals Detected in Soils
Values Assigned Using One-Half MDL for Non-Detects

Chemical	Units	Number of Detections in 16 BG Locations	Number of Detections in 70 WRF Locations	Mean Assigned Value in BG	Mean Assigned Value in NEA	Mean Assigned Value in SEA	p-value* for comparison of NEA to BG	p-value* for comparison of SEA to BG	EA Means greater than BG Mean
Dioxins/Furans									
Dioxins (TEQ)	pg/g	10	29	1.72	2.27	3.36	0.0098	0.0090	NEA, SEA
Perchlorate									
Perchlorate	ug/kg	9	68	60	4720	4402	<.0001	<.0001	NEA, SEA
Radionuclides									
Actinium 228	pCi/g	16	66	1.60	1.35	1.27	0.0136	0.0042	
Bismuth 212	pCi/g	4	4	0.793	1.12	1.12	0.0022	0.0019	NC
Bismuth 214	pCi/g	16	70	0.873	0.886	1.274	0.8868	0.0050	SEA
Lead 210	pCi/g	1	4	1.15	1.12	1.53	0.9620	0.0291	NC
Lead 212	pCi/g	16	70	1.26	1.14	1.18	0.0367	0.0573	
Lead 214	pCi/g	16	70	0.845	0.826	1.220	0.3548	0.0095	SEA
Potassium 40	pCi/g	16	70	28.4	24.3	24.9	<.0001	0.0003	
Radium 224	pCi/g	15	57	3.25	3.01	3.23	0.4836	0.9080	
Radium 226	pCi/g	16	50	1.48	1.12	1.40	0.0369	0.6506	
Radium 228	pCi/g	16	70	1.39	1.45	1.24	0.4622	0.0209	
Thallium 208	pCi/g	16	69	0.483	0.434	0.423	0.0423	0.0067	
Thorium 228	pCi/g	16	70	1.58	1.42	1.29	0.0490	0.0021	
Thorium 230	pCi/g	16	70	1.13	1.12	1.48	0.6436	0.0252	SEA
Thorium 232	pCi/g	16	70	1.52	1.41	1.31	0.0874	0.0047	
Thorium 234	pCi/g	1	20	0.665	0.825	1.060	0.0425	0.0004	NC
Uranium 234	pCi/g	16	70	0.772	1.210	1.410	<.0001	<.0001	NEA, SEA
Uranium 235	pCi/g	9	34	0.0614	0.0881	0.0673	0.0300	0.7357	NEA
Uranium 238	pCi/g	16	70	0.763	0.971	1.245	0.0014	<.0001	NEA, SEA

BG - Background
NEA - Northern Exposure Area
SEA - Southern Exposure Area
NC - the statistic was not calculated because the chemical was detected in fewer than half of the background samples
*In this context, the p-value is a statistical measure of the significance of the difference in mean values. In this study, p-values less than 0.05 (five percent) are considered indicative of significant differences.

TABLE E-6.1
Summary of Background Soil Analytical Data
Metals and Perchlorate

Parameter	BG01-SS01	BG01-SS02	BG02-SS01	BG02-SS02	BG03-SS01
Aluminum	12700 J	12300 J	9950 J	9570 J	11500 J
Antimony	ND (0) U	ND (0) U	ND (0) U	ND (0) U	ND (0) U
Arsenic	3.3	2.6	88	2.4	2.7
Barium	253 N*	465 N*	92 *	198 N*	226 N*
Beryllium	0.49 JN	0.5 JN	61 N	0.4 JN	0.41 JN
Cadmium	0.16 J	0.095 J	110	0.1 J	0.13 J
Chromium (hexavalent)	ND (0.1) U	ND (0.1) U	ND (0.1) U	ND (0.1) U	ND (0.1) U
Chromium (total)	10.5 N	9.6 N	8.6 N	7 N	8 N
Cobalt	6.8 N	6.7 N	72 N	6.3 N	7.3 N
Copper	12.3 N	12.4 N	66 N	10.1 N	12.1 N
Iron	15000 J	14500 J	14500 J	12900 J	14400 J
Lead	15.4	9.8	89	8.6	16.7
Magnesium	8880	7950	80	6660	8780
Manganese	447 N*	348 N*	416 N*	408 N*	460 N*
Mercury	0.025 J	0.017 J	96	0.014 J	0.021 J
Molybdenum	0.42 J	0.21 J	93	0.44 J	0.35 J
Nickel	12.3 N	11.9 N	68 N	10.7 N	10.9 N
Selenium	0.19 J	0.1 J	84	0.26 J	0.17 J
Silver	0.083 J	0.077 J	119	0.043 J	0.044 J
Thallium	0.32 J	0.21 J	91	0.4 J	0.3 J
Thorium	7 J	7.3 J	6.8 J	5.8 J	5.3 J
Titanium	423 N	418 N	82	326 N	445 N
Vanadium	24.4	25.5	88	25.4	24.8
Zinc	52.4 J	47.7 J	99	45.3 J	49.9 J
Perchlorate	41.8 J	58.7	33.9 J	ND (19) U	393

TABLE E-6.1
Summary of Background Soil Analytical Data
Metals and Perchlorate

Parameter	BG03-SS02	BG03-SS11	BG04-SS01	BG04-SS02	BG05-SS01
Aluminum	11700 J	10300 J	10600 J	10900 J	7650 J
Antimony	ND (0) U	ND (0) U	ND (0) U	ND (0) U	ND (0) U
Arsenic	2.3	2.9	3.3	2.9	2.8
Barium	225 N*	618 N*	260 N*	211 N*	354 N*
Beryllium	0.45 JN	0.42 JN	0.38 JN	0.4 JN	0.28 JN
Cadmium	0.097 J	0.11 J	0.11 J	0.14 J	0.092 J
Chromium (hexavalent)	ND (0.1) U	ND (0.1) U	ND (0.1) U	ND (0.1) U	ND (0.1) U
Chromium (total)	5.4 N	4.4 N	7.8 N	5 N	8.3 N
Cobalt	7.3 N	7.8 N	6.4 N	7.8 N	4.2 JN
Copper	11.9 N	11.3 N	11.1 N	11.6 N	8.8 N
Iron	13800 J	12000 J	13600 J	13700 J	9300 J
Lead	9.3	11.3	20.1	9.4	15.7
Magnesium	8760	7960	7470	9090	5460
Manganese	521 N*	770 N*	504 N*	492 N*	388 N*
Mercury	0.015 J	0.021 J	0.019 J	0.019 J	0.019 J
Molybdenum	0.17 J	0.29 J	0.27 J	0.22 J	0.27 J
Nickel	10.4 N	10.2 N	10.3 N	11.5 N	10.1 N
Selenium	0.19 J	0.29 J	0.17 J	ND (0) U	ND (0) U
Silver	0.045 J	0.032 J	0.056 J	0.048 J	0.036 J
Thallium	0.16 J	0.21 J	0.16 J	0.12 J	0.16 J
Thorium	5.3 J	5.6 J	5.9 J	5.4 J	5 J
Titanium	446 N	336 N	392 N	398 N	294 N
Vanadium	25.4	20.8	23.8	24.7	15.7
Zinc	45.2 J	45.2 J	47.8 J	52.4 J	31.4 J
Perchlorate	37.6 J	412	39.7 J	ND (18.7) U	ND (18.7) U

TABLE E-6.1
Summary of Background Soil Analytical Data
Metals and Perchlorate

Parameter	BG05-SS02	BG06-SS01	BG06-SS02	BG07-SS01	BG07-SS02
Aluminum	6930 J	8930 J	6820 J	8960 J	9870 J
Antimony	ND (0) U	ND (0) U	ND (0) U	ND (0) U	ND (0) U
Arsenic	3.4	3.2	2.6	3.5	3.8
Barium	391 N*	426 N*	343 N*	393 N*	561 N*
Beryllium	0.29 JN	0.29 JN	0.25 JN	0.34 JN	0.37 JN
Cadmium	0.065 J	0.099 J	0.12 J	0.11 J	0.076 J
Chromium (hexavalent)	ND (0.1) U	ND (0.1) U	ND (0.1) U	ND (0.1) U	ND (0.1) U
Chromium (total)	7.2 N	12.4 N	6.6 N	7.2 N	8 N
Cobalt	4.1 JN	5.6 N	3.9 JN	4.1 JN	4.7 JN
Copper	8.4 N	16.3 N	7.8 N	8.1 N	8.9 N
Iron	9340 J	10600 J	7680 J	8960 J	10100 J
Lead	13	20.3	23.3	23.5	13.8
Magnesium	4630	7090	4690	4880	5990
Manganese	355 N*	545 N*	528 N*	431 N*	546 N*
Mercury	0.018 J	0.021 J	0.019 J	0.022 J	0.024 J
Molybdenum	0.26 J	0.42 J	0.22 J	0.35 J	0.28 J
Nickel	9.2 N	15.4 N	8.7 N	8.4 N	11.4 N
Selenium	0.18 J	0.13 J	0.11 J	0.11 J	ND (0) U
Silver	0.024 J	0.037 J	0.019 J	0.036 J	0.039 J
Thallium	0.15 J	0.13 J	0.15 J	0.13 J	0.13 J
Thorium	4.9 J	5 J	4.6 J	6.3 J	5.5 J
Titanium	253 N	285 N	235 N	302 N	301 N
Vanadium	14.6	17.7	15	15.8	17.5
Zinc	25.7 J	37.5 J	27.1 J	29.1 J	29.8 J
Perchlorate	ND (18.9) U	23.7 J	ND (18.8) U	183	ND (19) U

TABLE E-6.1
Summary of Background Soil Analytical Data
Metals and Perchlorate

Parameter	BG08-SS01	BG08-SS02
Aluminum	12000 J	10800 J
Antimony	ND (0) U	ND (0) U
Arsenic	4.3	3.3
Barium	347 N*	322 N*
Beryllium	0.43 JN	0.31 JN
Cadmium	0.14 J	0.052 J
Chromium (hexavalent)	ND (0.1) U	ND (0.1) U
Chromium (total)	9 N	4.3 N
Cobalt	4.6 JN	3.9 JN
Copper	9.9 N	8.1 N
Iron	11800 J	7520 J
Lead	23.5	7
Magnesium	7810	5030
Manganese	373 N*	223 N*
Mercury	0.024 J	0.013 J
Molybdenum	0.32 J	0.22 J
Nickel	10.8 N	7.8 N
Selenium	ND (0) U	0.1 J
Silver	0.072 J	0.076 J
Thallium	0.18 J	0.1 J
Thorium	6.3 J	7.7 J
Titanium	473 N	334 N
Vanadium	18.6	16.8
Zinc	40.6 J	23 J
Perchlorate	73.8	ND (18.9) U

TABLE E-6.2
Summary of Background Soil Analytical Data
Dioxins/Furans

Parameter	BG01-SS01	BG01-SS02	BG02-SS01	BG02-SS02	BG03-SS01
1,2,3,4,6,7,8-HpCDD	ND (0.3) U	ND (0.3) U	ND (0.2) U	ND (0.3) U	3.9 J
1,2,3,4,6,7,8-HpCDF	8.7	ND (0.3) U	74	3.3 J	3.5 J
1,2,3,4,7,8,9-HpCDF	4.1 J	ND (0.3) U	90	ND (0.3) U	ND (0.3) U
1,2,3,4,7,8-HxCDD	ND (0.5) U	ND (0.5) U	ND (0.5) U	ND (0.5) U	ND (0.5) U
1,2,3,4,7,8-HxCDF	5.5	ND (0.3) U	79	ND (0.3) U	ND (0.3) U
1,2,3,6,7,8-HxCDD	ND (0.4) U	ND (0.4) U	ND (0.4) U	ND (0.4) U	ND (0.4) U
1,2,3,6,7,8-HxCDF	3.7 J	ND (0.3) U	82	ND (0.3) U	ND (0.2) U
1,2,3,7,8,9-HxCDD	ND (0.3) U	ND (0.4) U	ND (0.3) U	ND (0.4) U	ND (0.3) U
1,2,3,7,8,9-HxCDF	ND (0.4) U	ND (0.4) U	ND (0.3) U	ND (0.4) U	ND (0.3) U
1,2,3,7,8-PeCDD	ND (0.3) U	ND (0.3) U	ND (0.2) U	ND (0.3) U	ND (0.2) U
1,2,3,7,8-PeCDF	3.7 J	ND (0.3) U	99	ND (0.3) U	ND (0.2) U
2,3,4,6,7,8-HxCDF	ND (0.4) U	ND (0.4) U	ND (0.4) U	ND (0.4) U	ND (0.4) U
2,3,4,7,8-PeCDF	ND (0.3) U	ND (0.3) U	ND (0.3) U	ND (0.3) U	ND (0.3) U
2,3,7,8-TCDD	ND (0.1) U	ND (0.1) U	ND (0.1) U	ND (0.1) U	ND (0.1) U
2,3,7,8-TCDF	1.7 CON	ND (0.1) U	93 CON	ND (0.1) U	0.95 CON J
OCDD	23	ND (1) U	72	ND (1) U	19
OCDF	17	ND (0.5) U	75	6.4 J	9.4 J
TEQ	2.7425	1.3413	507.471	1.4633	1.1274

TABLE E-6.2
Summary of Background Soil Analytical Data
Dioxins/Furans

Parameter	BG03-SS02	BG03-SS11	BG04-SS01	BG04-SS02	BG05-SS01
1,2,3,4,6,7,8-HpCDD	ND (0.3) U	4.6 J	4.6 J	ND (0.2) U	ND (0.2) U
1,2,3,4,6,7,8-HpCDF	ND (0.3) U	6.8	13	ND (0.2) U	4.6 J
1,2,3,4,7,8,9-HpCDF	ND (0.3) U	ND (0.3) U	5.1 JA	ND (0.3) U	2.7 J
1,2,3,4,7,8-HxCDD	ND (0.5) U	ND (0.5) U	ND (0.5) U	ND (0.5) U	ND (0.5) U
1,2,3,4,7,8-HxCDF	ND (0.3) U	ND (0.3) U	6.2	ND (0.3) U	ND (0.3) U
1,2,3,6,7,8-HxCDD	ND (0.4) U	ND (0.4) U	ND (0.4) U	ND (0.4) U	ND (0.4) U
1,2,3,6,7,8-HxCDF	ND (0.3) U	ND (0.2) U	4 J	ND (0.2) U	ND (0.2) U
1,2,3,7,8,9-HxCDD	ND (0.4) U	ND (0.3) U	ND (0.3) U	ND (0.3) U	ND (0.3) U
1,2,3,7,8,9-HxCDF	ND (0.4) U	ND (0.3) U	ND (0.3) U	ND (0.3) U	ND (0.3) U
1,2,3,7,8-PeCDD	ND (0.3) U	ND (0.2) U	ND (0.2) U	ND (0.2) U	ND (0.2) U
1,2,3,7,8-PeCDF	ND (0.3) U	ND (0.2) U	4.1 J	ND (0.2) U	ND (0.2) U
2,3,4,6,7,8-HxCDF	ND (0.4) U	ND (0.4) U	ND (0.4) U	ND (0.4) U	ND (0.4) U
2,3,4,7,8-PeCDF	ND (0.3) U	ND (0.3) U	ND (0.3) U	ND (0.3) U	ND (0.3) U
2,3,7,8-TCDD	ND (0.1) U	ND (0.1) U	ND (0.1) U	ND (0.1) U	ND (0.1) U
2,3,7,8-TCDF	ND (0.1) U	1.4 CON	1.8 CON	ND (0.1) U	1.2 CON
OCDD	ND (1) U	33	20	18	13
OCDF	ND (0.5) U	17	28	ND (0.5) U	15
TEQ	0.91105	2.0815	4.225	1.2926	1.6665

TABLE E-6.2
Summary of Background Soil Analytical Data
Dioxins/Furans

Parameter	BG05-SS02	BG06-SS01	BG06-SS02	BG07-SS01	BG07-SS02
1,2,3,4,6,7,8-HpCDD	ND (0.2) U	ND (0.2) U	ND (0.2) U	ND (0.2) U	ND (0.3) U
1,2,3,4,6,7,8-HpCDF	ND (0.2) U	8.1	ND (0.2) U	3.6 J	ND (0.3) U
1,2,3,4,7,8,9-HpCDF	ND (0.3) U	3.5 J	ND (0.3) U	ND (0.3) U	ND (0.3) U
1,2,3,4,7,8-HxCDD	ND (0.5) U	ND (0.5) U	ND (0.5) U	ND (0.5) U	ND (0.5) U
1,2,3,4,7,8-HxCDF	ND (0.3) U	4.2 J	ND (0.3) U	ND (0.3) U	ND (0.3) U
1,2,3,6,7,8-HxCDD	ND (0.4) U	ND (0.4) U	ND (0.4) U	ND (0.4) U	ND (0.4) U
1,2,3,6,7,8-HxCDF	ND (0.2) U	2.9 J	ND (0.2) U	ND (0.2) U	ND (0.3) U
1,2,3,7,8,9-HxCDD	ND (0.3) U	ND (0.3) U	ND (0.3) U	ND (0.3) U	ND (0.4) U
1,2,3,7,8,9-HxCDF	ND (0.3) U	ND (0.3) U	ND (0.3) U	ND (0.3) U	ND (0.4) U
1,2,3,7,8-PeCDD	ND (0.2) U	ND (0.2) U	ND (0.2) U	ND (0.2) U	ND (0.3) U
1,2,3,7,8-PeCDF	ND (0.2) U	ND (0.2) U	ND (0.2) U	ND (0.2) U	ND (0.3) U
2,3,4,6,7,8-HxCDF	ND (0.4) U	ND (0.4) U	ND (0.4) U	ND (0.4) U	ND (0.4) U
2,3,4,7,8-PeCDF	ND (0.3) U	ND (0.3) U	ND (0.3) U	ND (0.3) U	ND (0.3) U
2,3,7,8-TCDD	ND (0.1) U	ND (0.1) U	ND (0.1) U	ND (0.1) U	ND (0.1) U
2,3,7,8-TCDF	ND (0.1) U	1.2 CON	ND (0.1) U	0.91 CON J	ND (0.1) U
OCDD	ND (1) U	5.5 J	ND (1) U	ND (1) U	ND (1) U
OCDF	ND (0.5) U	25	ND (0.5) U	8.8 J	ND (0.5) U
TEQ	1.23645	2.0305	0.2915	1.4486	0.35245

TABLE E-6.2
Summary of Background Soil Analytical Data
Dioxins/Furans

Parameter	BG08-SS01	BG08-SS02
1,2,3,4,6,7,8-HpCDD	15	ND (0.2) U
1,2,3,4,6,7,8-HpCDF	9.1	ND (0.2) U
1,2,3,4,7,8,9-HpCDF	2.9 J	ND (0.3) U
1,2,3,4,7,8-HxCDD	ND (0.5) U	ND (0.5) U
1,2,3,4,7,8-HxCDF	5.1	ND (0.3) U
1,2,3,6,7,8-HxCDD	ND (0.4) U	ND (0.4) U
1,2,3,6,7,8-HxCDF	3.1 J	ND (0.2) U
1,2,3,7,8,9-HxCDD	ND (0.3) U	ND (0.3) U
1,2,3,7,8,9-HxCDF	ND (0.3) U	ND (0.3) U
1,2,3,7,8-PeCDD	ND (0.2) U	ND (0.2) U
1,2,3,7,8-PeCDF	2.9 J	ND (0.2) U
2,3,4,6,7,8-HxCDF	ND (0.4) U	ND (0.4) U
2,3,4,7,8-PeCDF	ND (0.3) U	ND (0.3) U
2,3,7,8-TCDD	ND (0.1) U	ND (0.1) U
2,3,7,8-TCDF	1.8 CON	ND (0.1) U
OCDD	45	ND (1) U
OCDF	17	ND (0.5) U
TEQ	2.38	1.00086

TABLE E-6.3
Summary of Background Soil Analytical Data
Pesticides

Parameter	BG01-SS01	BG01-SS02	BG02-SS01	BG02-SS02	BG03-SS01
4,4'-DDD	ND (2.7) U		ND (2.7) U		ND (2.7) U
4,4'-DDE	ND (2.7) U		ND (2.7) U		ND (2.7) U
4,4'-DDT	ND (2.7) U		ND (2.7) U		ND (2.7) U
Aldrin	ND (1.4) U		ND (1.4) U		ND (1.3) U
alpha-BHC	ND (1.4) U		ND (1.4) U		ND (1.3) U
alpha-Chlordane	ND (1.4) U		ND (1.4) U		ND (1.3) U
Azinphos-methyl	ND (50.8) U		ND (50.7) U		ND (50.5) U
beta-BHC	ND (1.4) U		ND (1.4) U		ND (1.3) U
Bolstar	ND (50.8) U		ND (50.7) U		ND (50.5) U
Carbophenothion	ND (50.8) U		ND (50.7) U		ND (50.5) U
Chlordane (technical)	ND (2.7) U		ND (2.7) U		ND (2.7) U
Chlorpyrifos	ND (50.8) U		ND (50.7) U		ND (50.5) U
Coumaphos	ND (50.8) U		ND (50.7) U		ND (50.5) U
delta-BHC	ND (1.4) U		ND (1.4) U		ND (1.3) U
Demeton-O	ND (50.8) U		ND (50.7) U		ND (50.5) U
Demeton-S	ND (50.8) U		ND (50.7) U		ND (50.5) U
Diazinon	ND (50.8) U		ND (50.7) U		ND (50.5) U
Dichlorvos	ND (50.8) U		ND (50.7) U		ND (50.5) U
Dieldrin	ND (2.7) U		ND (2.7) U		ND (2.7) U
Disulfoton	ND (50.8) U		ND (50.7) U		ND (50.5) U
Endosulfan I	ND (1.4) U		ND (1.4) U		ND (1.3) U
Endosulfan II	ND (2.7) U		ND (2.7) U		ND (2.7) U
Endosulfan sulfate	ND (2.7) U		ND (2.7) U		ND (2.7) U
Endrin	ND (2.7) U		ND (2.7) U		ND (2.7) U
Endrin aldehyde	ND (2.7) U		ND (2.7) U		ND (2.7) U
Endrin ketone	ND (2.7) U		ND (2.7) U		ND (2.7) U
Ethoprop	ND (50.8) U		ND (50.7) U		ND (50.5) U
Fensulfothion	ND (50.8) U		ND (50.7) U		ND (50.5) U
Fenthion	ND (50.8) U		ND (50.7) U		ND (50.5) U
gamma-BHC	ND (1.4) U		ND (1.4) U		ND (1.3) U
gamma-Chlordane	ND (1.4) U		ND (1.4) U		ND (1.3) U
Heptachlor	ND (1.4) U		ND (1.4) U		ND (1.3) U

TABLE E-6.3
Summary of Background Soil Analytical Data
Pesticides

Parameter	BG01-SS01	BG01-SS02	BG02-SS01	BG02-SS02	BG03-SS01
Heptachlor epoxide	ND (1.4) U		ND (1.4) U		ND (1.3) U
Merphos	ND (50.8) U		ND (50.7) U		ND (50.5) U
Methoxychlor	ND (13.5) U		ND (13.5) U		ND (13.5) U
Methyl parathion	ND (50.8) U		ND (50.7) U		ND (50.5) U
Mevinphos	ND (50.8) U		ND (50.7) U		ND (50.5) U
Naled	ND (50.8) U		ND (50.7) U		ND (50.5) U
Phorate	ND (50.8) U		ND (50.7) U		ND (50.5) U
Phosmet (Imidan)	ND (50.8) U		ND (50.7) U		ND (50.5) U
Ronnel	ND (50.8) U		ND (50.7) U		ND (50.5) U
Stirofos	ND (50.8) U		ND (50.7) U		ND (50.5) U
Tokuthion	ND (50.8) U		ND (50.7) U		ND (50.5) U
Toxaphene	ND (169.2) U		ND (169) U		ND (168.4) U
Trichloronate	ND (50.8) U		ND (50.7) U		ND (50.5) U

TABLE E-6.3
Summary of Background Soil Analytical Data
Pesticides

Parameter	BG03-SS02	BG03-SS11	BG04-SS01	BG04-SS02	BG05-SS01
4,4'-DDD		ND (2.7) U	ND (2.7) U		ND (2.7) U
4,4'-DDE		ND (2.7) U	ND (2.7) U		ND (2.7) U
4,4'-DDT		ND (2.7) U	ND (2.7) U		ND (2.7) U
Aldrin		ND (1.3) U	ND (1.3) U		ND (1.3) U
alpha-BHC		ND (1.3) U	ND (1.3) U		ND (1.3) U
alpha-Chlordane		ND (1.3) U	ND (1.3) U		ND (1.3) U
Azinphos-methyl		ND (50.6) U	ND (50.5) U		ND (50.6) U
beta-BHC		ND (1.3) U	ND (1.3) U		ND (1.3) U
Bolstar		ND (50.6) U	ND (50.5) U		ND (50.6) U
Carbophenothion		ND (50.6) U	ND (50.5) U		ND (50.6) U
Chlordane (technical)		ND (2.7) U	ND (2.7) U		ND (2.7) U
Chlorpyrifos		ND (50.6) U	ND (50.5) U		ND (50.6) U
Coumaphos		ND (50.6) U	ND (50.5) U		ND (50.6) U
delta-BHC		ND (1.3) U	ND (1.3) U		ND (1.3) U
Demeton-O		ND (50.6) U	ND (50.5) U		ND (50.6) U
Demeton-S		ND (50.6) U	ND (50.5) U		ND (50.6) U
Diazinon		ND (50.6) U	ND (50.5) U		ND (50.6) U
Dichlorvos		ND (50.6) U	ND (50.5) U		ND (50.6) U
Dieldrin		ND (2.7) U	ND (2.7) U		ND (2.7) U
Disulfoton		ND (50.6) U	ND (50.5) U		ND (50.6) U
Endosulfan I		ND (1.3) U	ND (1.3) U		ND (1.3) U
Endosulfan II		ND (2.7) U	ND (2.7) U		ND (2.7) U
Endosulfan sulfate		ND (2.7) U	ND (2.7) U		ND (2.7) U
Endrin		ND (2.7) U	ND (2.7) U		ND (2.7) U
Endrin aldehyde		ND (2.7) U	ND (2.7) U		ND (2.7) U
Endrin ketone		ND (2.7) U	ND (2.7) U		ND (2.7) U
Ethoprop		ND (50.6) U	ND (50.5) U		ND (50.6) U
Fensulfothion		ND (50.6) U	ND (50.5) U		ND (50.6) U
Fenthion		ND (50.6) U	ND (50.5) U		ND (50.6) U
gamma-BHC		ND (1.3) U	ND (1.3) U		ND (1.3) U
gamma-Chlordane		ND (1.3) U	ND (1.3) U		ND (1.3) U
Heptachlor		ND (1.3) U	ND (1.3) U		ND (1.3) U

TABLE E-6.3
Summary of Background Soil Analytical Data
Pesticides

Parameter	BG03-SS02	BG03-SS11	BG04-SS01	BG04-SS02	BG05-SS01
Heptachlor epoxide		ND (1.3) U	ND (1.3) U		ND (1.3) U
Merphos		ND (50.6) U	ND (50.5) U		ND (50.6) U
Methoxychlor		ND (13.5) U	ND (13.5) U		ND (13.5) U
Methyl parathion		ND (50.6) U	ND (50.5) U		ND (50.6) U
Mevinphos		ND (50.6) U	ND (50.5) U		ND (50.6) U
Naled		ND (50.6) U	ND (50.5) U		ND (50.6) U
Phorate		ND (50.6) U	ND (50.5) U		ND (50.6) U
Phosmet (Imidan)		ND (50.6) U	ND (50.5) U		ND (50.6) U
Ronnel		ND (50.6) U	ND (50.5) U		ND (50.6) U
Stirofos		ND (50.6) U	ND (50.5) U		ND (50.6) U
Tokuthion		ND (50.6) U	ND (50.5) U		ND (50.6) U
Toxaphene		ND (168.5) U	ND (168.4) U		ND (168.7) U
Trichloronate		ND (50.6) U	ND (50.5) U		ND (50.6) U

TABLE E-6.3
Summary of Background Soil Analytical Data
Pesticides

Parameter	BG05-SS02	BG06-SS01	BG06-SS02	BG07-SS01	BG07-SS02
4,4'-DDD		ND (3.1) U		ND (2.7) U	
4,4'-DDE		ND (3.1) U		ND (2.7) U	
4,4'-DDT		ND (3.1) U		ND (2.7) U	
Aldrin		ND (1.5) U		ND (1.3) U	
alpha-BHC		ND (1.5) U		ND (1.3) U	
alpha-Chlordane		ND (1.5) U		ND (1.3) U	
Azinphos-methyl		ND (57.7) U		ND (50.5) U	
beta-BHC		ND (1.5) U		ND (1.3) U	
Bolstar		ND (57.7) U		ND (50.5) U	
Carbophenothion		ND (57.7) U		ND (50.5) U	
Chlordane (technical)		ND (3.1) U		ND (2.7) U	
Chlorpyrifos		ND (57.7) U		ND (50.5) U	
Coumaphos		ND (57.7) U		ND (50.5) U	
delta-BHC		ND (1.5) U		ND (1.3) U	
Demeton-O		ND (57.7) U		ND (50.5) U	
Demeton-S		ND (57.7) U		ND (50.5) U	
Diazinon		ND (57.7) U		ND (50.5) U	
Dichlorvos		ND (57.7) U		ND (50.5) U	
Dieldrin		ND (3.1) U		ND (2.7) U	
Disulfoton		ND (57.7) U		ND (50.5) U	
Endosulfan I		ND (1.5) U		ND (1.3) U	
Endosulfan II		ND (3.1) U		ND (2.7) U	
Endosulfan sulfate		ND (3.1) U		ND (2.7) U	
Endrin		ND (3.1) U		ND (2.7) U	
Endrin aldehyde		ND (3.1) U		ND (2.7) U	
Endrin ketone		ND (3.1) U		ND (2.7) U	
Ethoprop		ND (57.7) U		ND (50.5) U	
Fensulfothion		ND (57.7) U		ND (50.5) U	
Fenthion		ND (57.7) U		ND (50.5) U	
gamma-BHC		ND (1.5) U		ND (1.3) U	
gamma-Chlordane		ND (1.5) U		ND (1.3) U	
Heptachlor		ND (1.5) U		ND (1.3) U	

TABLE E-6.3
Summary of Background Soil Analytical Data
Pesticides

Parameter	BG05-SS02	BG06-SS01	BG06-SS02	BG07-SS01	BG07-SS02
Heptachlor epoxide		ND (1.5) U		ND (1.3) U	
Merphos		ND (57.7) U		ND (50.5) U	
Methoxychlor		ND (15.4) U		ND (13.5) U	
Methyl parathion		ND (57.7) U		ND (50.5) U	
Mevinphos		ND (57.7) U		ND (50.5) U	
Naled		ND (57.7) U		ND (50.5) U	
Phorate		ND (57.7) U		ND (50.5) U	
Phosmet (Imidan)		ND (57.7) U		ND (50.5) U	
Ronnel		ND (57.7) U		ND (50.5) U	
Stirofos		ND (57.7) U		ND (50.5) U	
Tokuthion		ND (57.7) U		ND (50.5) U	
Toxaphene		ND (192.2) U		ND (168.2) U	
Trichloronate		ND (57.7) U		ND (50.5) U	

TABLE E-6.3
Summary of Background Soil Analytical Data
Pesticides

Parameter	BG08-SS01	BG08-SS02
4,4'-DDD	ND (2.7) U	
4,4'-DDE	ND (2.7) U	
4,4'-DDT	ND (2.7) U	
Aldrin	ND (1.3) U	
alpha-BHC	ND (1.3) U	
alpha-Chlordane	ND (1.3) U	
Azinphos-methyl	ND (50.5) U	
beta-BHC	ND (1.3) U	
Bolstar	ND (50.5) U	
Carbophenothion	ND (50.5) U	
Chlordane (technical)	ND (2.7) U	
Chlorpyrifos	ND (50.5) U	
Coumaphos	ND (50.5) U	
delta-BHC	ND (1.3) U	
Demeton-O	ND (50.5) U	
Demeton-S	ND (50.5) U	
Diazinon	ND (50.5) U	
Dichlorvos	ND (50.5) U	
Dieldrin	ND (2.7) U	
Disulfoton	ND (50.5) U	
Endosulfan I	ND (1.3) U	
Endosulfan II	ND (2.7) U	
Endosulfan sulfate	ND (2.7) U	
Endrin	ND (2.7) U	
Endrin aldehyde	ND (2.7) U	
Endrin ketone	ND (2.7) U	
Ethoprop	ND (50.5) U	
Fensulfothion	ND (50.5) U	
Fenthion	ND (50.5) U	
gamma-BHC	ND (1.3) U	
gamma-Chlordane	ND (1.3) U	
Heptachlor	ND (1.3) U	

TABLE E-6.3
Summary of Background Soil Analytical Data
Pesticides

Parameter	BG08-SS01	BG08-SS02
Heptachlor epoxide	ND (1.3) U	
Merphos	ND (50.5) U	
Methoxychlor	ND (13.5) U	
Methyl parathion	ND (50.5) U	
Mevinphos	ND (50.5) U	
Naled	ND (50.5) U	
Phorate	ND (50.5) U	
Phosmet (Imidan)	ND (50.5) U	
Ronnel	ND (50.5) U	
Stirofos	ND (50.5) U	
Tokuthion	ND (50.5) U	
Toxaphene	ND (168.4) U	
Trichloronate	ND (50.5) U	

TABLE E-6.4
Summary of Background Soil Analytical Data
Radionuclides

Parameter	BG01-SS01	BG01-SS02	BG02-SS01	BG02-SS02	BG03-SS01
Actinium 228	2.05	1.5	1.85	1.99	1.82
Bismuth 212	ND (1.2) U	ND (1.3) U	1.34	ND (1.3) U	ND (1.1) U
Bismuth 214	0.96	0.98	1.02	1.22	0.78
Lead 210	ND (2.1) U	ND (2.5) U	ND (2) U	ND (2.6) U	ND (2) U
Lead 212	1.43	1.27	1.47	1.38	1.25
Lead 214	1	0.94	0.94	0.87	0.8
Potassium 40	27.7	23.6	26.2	28	29.4
Radium 224	3.7	3.1	2.5	2.5	6
Radium 226	1.52	1.81	2.15	1.84	1.99
Radium 228	1.47	1.41	1.88	1.29	1.3
Thallium 208	0.52	0.46	0.58	0.58	0.43
Thorium 228	2.14	1.72	1.95	1.67	1.27
Thorium 230	1.08	1.38	0.88 J	1.06	1.2
Thorium 232	1.66	1.8	1.79	1.65	1.39
Thorium 234	ND (1.3) U	ND (1.3) U	1.49	ND (1.4) U	ND (1.2) U
Uranium 234	1.03	0.83 J	1.11	0.91 J	0.93 J
Uranium 235	ND (0.1) U	0.055 J	ND (0) U	0.116 J	0.102 J
Uranium 238	0.8 J	0.87 J	0.86 J	1.07	0.78 J

TABLE E-6.4
Summary of Background Soil Analytical Data
Radionuclides

Parameter	BG03-SS02	BG03-SS11	BG04-SS01	BG04-SS02	BG05-SS01
Actinium 228	1.78	1.84	1.36	1.57	1.36
Bismuth 212	ND (1.2) U	ND (1.2) U	1.45	1.72	ND (1.2) U
Bismuth 214	1.04	0.83	0.68	1.14	0.93
Lead 210	ND (2.7) U	ND (2.3) U	ND (2.1) U	ND (1.7) U	ND (2.4) U
Lead 212	1.44	1.57	1.3	1.44	1.09
Lead 214	0.91	0.84	0.79	1.23	0.85
Potassium 40	27.2	27.2	31.2	31.3	29.7
Radium 224	ND (2) U	3.9	6.7	4.4	3.1
Radium 226	1.15	1.52	1.39	1.52	1.13
Radium 228	1.41	1.59	1.55	1.39	1.49
Thallium 208	0.53	0.49	0.53	0.59	0.5
Thorium 228	1.78	2.19	1.44	1.9	1.52
Thorium 230	1.07	1.44	1.08	1.37	1.2
Thorium 232	1.6	1.89	1.4	1.93	1.24
Thorium 234	ND (1.3) U	ND (1.2) U	ND (1.3) U	ND (1.3) U	ND (1.2) U
Uranium 234	0.8 J	0.91 J	0.76 J	0.79 J	0.53 J
Uranium 235	ND (0.1) U	0.101 J	0.064 J	0.091 J	ND (0.1) U
Uranium 238	0.77 J	1.03	0.9 J	0.64 J	0.63 J

TABLE E-6.4
Summary of Background Soil Analytical Data
Radionuclides

Parameter	BG05-SS02	BG06-SS01	BG06-SS02	BG07-SS01	BG07-SS02
Actinium 228	1.22	1.86	1.9	1.37	1.29
Bismuth 212	ND (0.9) U	ND (1.1) U	ND (1.3) U	1.27	ND (1.1) U
Bismuth 214	0.57	0.9	0.78	0.64	0.83
Lead 210	1.9	ND (2.3) U	ND (2.4) U	ND (2) U	ND (2.1) U
Lead 212	1	1.26	1.23	1.36	1.05
Lead 214	0.71	0.86	0.85	0.79	0.66
Potassium 40	26.1	28.9	29.8	34.4	26.5
Radium 224	4.3	3.6	2.4	2.2	3.1
Radium 226	1.03	1.18	1.58	1.54	1.43
Radium 228	1.12	1.37	1.41	1.37	1.02
Thallium 208	0.33	0.49	0.54	0.48	0.34
Thorium 228	1.48	1.27	1.24	1.35	1.52
Thorium 230	1.16	1.35	0.9 J	0.92 J	1.11
Thorium 232	1.43	1.13	1.1	1.55	1.47
Thorium 234	ND (1.1) U	ND (1.2) U	ND (1.2) U	ND (1.2) U	ND (1.1) U
Uranium 234	0.67 J	0.65 J	0.71 J	0.58 J	0.53 J
Uranium 235	0.061 J	0.097 J	ND (0.1) U	ND (0) U	0.069 J
Uranium 238	0.78 J	0.92 J	0.59 J	0.45 J	0.45 J

TABLE E-6.4
Summary of Background Soil Analytical Data
Radionuclides

Parameter	BG08-SS01	BG08-SS02
Actinium 228	1.48	1.11
Bismuth 212	ND (1.1) U	ND (1) U
Bismuth 214	0.72	0.75
Lead 210	ND (2.3) U	ND (1.8) U
Lead 212	0.94	1.1
Lead 214	0.68	0.62
Potassium 40	24.9	29.9
Radium 224	2.3	2.2
Radium 226	1.14	1.52
Radium 228	1.25	1.3
Thallium 208	0.43	0.36
Thorium 228	1.49	1.07
Thorium 230	1.24	0.96 J
Thorium 232	1.58	1.31
Thorium 234	ND (1.1) U	ND (1.1) U
Uranium 234	0.72 J	0.81 J
Uranium 235	0.103 J	ND (0.1) U
Uranium 238	0.86 J	0.71 J

TABLE E-6.5
Summary of Background Field Quality Control Data

Parameter	040402-WB01
1,2,3,4,6,7,8-HpCDD	ND (1.9) U
1,2,3,4,6,7,8-HpCDF	ND (1) U
1,2,3,4,7,8,9-HpCDF	ND (1.2) U
1,2,3,4,7,8-HxCDD	ND (1.2) U
1,2,3,4,7,8-HxCDF	ND (1) U
1,2,3,6,7,8-HxCDD	ND (0.7) U
1,2,3,6,7,8-HxCDF	ND (1.1) U
1,2,3,7,8,9-HxCDD	ND (1.2) U
1,2,3,7,8,9-HxCDF	ND (1.1) U
1,2,3,7,8-PeCDD	ND (1.3) U
1,2,3,7,8-PeCDF	ND (1) U
2,3,4,6,7,8-HxCDF	ND (0.7) U
2,3,4,7,8-PeCDF	ND (0.7) U
2,3,7,8-TCDD	ND (0.8) U
2,3,7,8-TCDF	ND (0.9) U
OCDD	ND (9.8) U
OCDF	ND (1.5) U
TEQ	1.33055
Aluminum	ND (20.3) U
Antimony	ND (0.8) U
Arsenic	ND (0.3) U
Barium	ND (1) U
Beryllium	ND (0.2) U
Cadmium	ND (0.1) U
Chromium (hexavalent)	ND (3) U
Chromium (total)	98
Cobalt	ND (0.2) U
Copper	ND (1) U
Iron	ND (14.5) U
Lead	ND (0.8) U
Magnesium	110
Manganese	97

TABLE E-6.5
Summary of Background Field Quality Control Data

Parameter	040402-WB01
Mercury	ND (0) U
Molybdenum	99
Nickel	ND (4.1) U
Selenium	ND (0.9) U
Silver	ND (0.1) U
Thallium	105
Thorium	112
Titanium	99
Vanadium	ND (0.3) U
Zinc	95
Perchlorate	ND (1.9) U
4,4'-DDD	
4,4'-DDE	
4,4'-DDT	
Aldrin	
alpha-BHC	
alpha-Chlordane	
Azinphos-methyl	
beta-BHC	
Bolstar	
Carbophenothion	
Chlordane (technical)	
Chlorpyrifos	
Coumaphos	
delta-BHC	
Demeton-O	
Demeton-S	
Diazinon	
Dichlorvos	
Dieldrin	
Disulfoton	
Endosulfan I	

TABLE E-6.5
Summary of Background Field Quality Control Data

Parameter	040402-WB01
Endosulfan II	
Endosulfan sulfate	
Endrin	
Endrin aldehyde	
Endrin ketone	
Ethoprop	
Fensulfothion	
Fenthion	
gamma-BHC	
gamma-Chlordane	
Heptachlor	
Heptachlor epoxide	
Merphos	
Methoxychlor	
Methyl parathion	
Mevinphos	
Naled	
Phorate	
Phosmet (Imidan)	
Ronnel	
Stirofos	
Tokuthion	
Toxaphene	
Trichloronate	
Actinium 228	ND (58) U
Bismuth 212	ND (93) U
Bismuth 214	ND (36) U
Lead 210	ND (710) U
Lead 212	ND (17) U
Lead 214	ND (26) U
Potassium 40	ND (160) U
Radium 224	ND (170) U

TABLE E-6.5
Summary of Background Field Quality Control Data

Parameter	040402-WB01
Radium 226	ND (0.2) U
Radium 228	ND (0.8) U
Thallium 208	ND (14) U
Thorium 228	ND (0.2) U
Thorium 230	ND (0.4) U
Thorium 232	ND (0.2) U
Thorium 234	ND (190) U
Uranium 234	ND (0.3) U
Uranium 235	ND (0.2) U
Uranium 238	ND (0.2) U
1,2-Dichlorobenzene	ND (0.6) U
1,3-Dichlorobenzene	ND (0.5) U
1,4-Dichlorobenzene	ND (0.5) U
1,1,1-Trichloroethane	ND (0.2) U
1,1,2,2-Tetrachloroethane	ND (0.8) U
1,1,2-Trichloroethane	ND (0.3) U
1,1-Dichloroethane	ND (0.4) U
1,1-Dichloroethene	ND (0.4) U
1,2-Dichloroethane	ND (0.4) U
1,2-Dichloropropane	ND (0.5) U
2-Butanone	ND (1.8) U
2-Hexanone	ND (2.2) U
4-Methyl-2-pentanone	ND (0.6) U
Acetone	8.6 J B
Benzene	ND (0.4) U
Bromodichloromethane	ND (0.5) U
Bromoform	ND (0.6) U
Bromomethane	ND (1.5) U
Carbon disulfide	ND (0.5) U
Carbon tetrachloride	ND (0.3) U
Chlorobenzene	ND (0.4) U
Chloroethane	ND (0.7) U

TABLE E-6.5
Summary of Background Field Quality Control Data

Parameter	040402-WB01
Chloroform	ND (0.5) U
Chloromethane	ND (1.2) U
cis-1,2-Dichloroethene	ND (0.4) U
cis-1,3-Dichloropropene	ND (0.4) U
Dibromochloromethane	ND (0.4) U
Ethylbenzene	ND (0.6) U
Methylene chloride	2.6 J B
Styrene	ND (0.4) U
Tetrachloroethene	ND (0.7) U
Toluene	ND (0.4) U
trans-1,2-Dichloroethene	ND (3.9) U
trans-1,3-Dichloropropene	ND (0.6) U
Trichloroethene	ND (0.4) U
Trichlorofluoromethane	ND (0.4) U
Vinyl acetate	ND (0.5) U
Vinyl chloride	ND (0.5) U
Xylenes (total)	ND (1.5) U

APPENDIX E
BORING LOGS

BORING #:	BG01
DATE:	04/03/02
START TIME:	10:20
LOGGED BY:	Douglas H. Errett (ENVIRON)
DRILLING CO:	ENVIRON
DRILLER:	Douglas H. Errett (ENVIRON)
RIG:	- -
SAMPLING METHOD:	Stainless Steel Hand Auger
BORING DIA:	4 inches
BORING DEPTH	3.0 feet
ORGANIC VAPOR EQUIPMENT	- -

ENVIRON
BORING LOG

PROJECT: Henderson Background Sampling

CASE # 01-2131A

COMMENTS:

BG01 located in the southern portion of the southwestern parcel in Section 21.

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0 - 1.5	NA	18	NA	BG01-SS01	0 - 18": Medium grey to brown-grey fine silty sand and gravel.
1.5 – 3.0		18		BG01-SS02	18 - 36": Dry very fine sandy silt with gravel. Caliche or cobbles encountered at 3.0'.

COMMENTS: Collect soil sample BG01-SS01 from 0-1' and BG01-SS02 from 2.5-3.0' bgs for analysis of OC/OP pesticides, CEC, TOC, GSD/texture (SVL Labs; Kellogg, ID); dioxins/furans, perchlorate, metals (6010/6020), radionuclides, and moisture (STL Labs; Earth City, MO).

BORING #:	BG02
DATE:	04/03/02
START TIME:	11:00
LOGGED BY:	Douglas H. Errett (ENVIRON)
DRILLING CO:	ENVIRON
DRILLER:	Douglas H. Errett (ENVIRON)
RIG:	- -
SAMPLING METHOD:	Stainless Steel Hand Auger
BORING DIA:	4 inches
BORING DEPTH	3.0 feet
ORGANIC VAPOR EQUIPMENT	- -

ENVIRON
BORING LOG

PROJECT: Henderson Background Sampling

CASE # 01-2131A

COMMENTS:

BG02 located a few hundred yards north of BG01 in the southwestern parcel of Section 21..

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0 - 1.3	NA	15	NA	BG02-SS01	0 - 15": Dry greyish brown gravelly silty fine sand.
1.3 – 3.0		21		BG02-SS02	15 - 36": Dark grey to brownish grey dry gravelly fine sand. Caliche or cobbles encountered at 3.0'.

COMMENTS: Collect soil sample BG02-SS01 from 0-1' and BG02-SS02 from 2.5-3.0' bgs for analysis of OC/OP pesticides, CEC, TOC, GSD/texture (SVL Labs; Kellogg, ID); dioxins/furans, perchlorate, metals (6010/6020), radionuclides, and moisture (STL Labs; Earth City, MO). BG02-SS01 collected in triplicate volume for MS/MSD analysis.

BORING #:	BG03
DATE:	04/03/02
START TIME:	12:10
LOGGED BY:	Douglas H. Errett (ENVIRON)
DRILLING CO:	ENVIRON
DRILLER:	Douglas H. Errett (ENVIRON)
RIG:	- -
SAMPLING METHOD:	Stainless Steel Hand Auger
BORING DIA:	4 inches
BORING DEPTH	4.0 feet
ORGANIC VAPOR EQUIPMENT	- -

ENVIRON
BORING LOG

PROJECT: Henderson Background Sampling

CASE # 01-2131A

COMMENTS:

BG03 located in the southwestern quadrant of Section 16.

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0 - 1.6	NA	20	NA	BG03-SS01 BG03-SS11	0 - 20": Dry grey to brown-grey gravelly silty fine sand.
1.6 – 4.0		28		BG03-SS02	20 - 48": Dry grey to brown-grey gravelly fine sandy silt.

COMMENTS: Collect soil sample BG03-SS01/BG03-SS11 (duplicate) from 0-1' and BG01-SS02 from 3.5-4.0' bgs for analysis of OC/OP pesticides, CEC, TOC, GSD/texture (SVL Labs; Kellogg, ID); dioxins/furans, perchlorate, metals (6010/6020), radionuclides, and moisture (STL Labs; Earth City, MO).

BORING #:	BG04
DATE:	04/03/02
START TIME:	12:35
LOGGED BY:	Douglas H. Errett (ENVIRON)
DRILLING CO:	ENVIRON
DRILLER:	Douglas H. Errett (ENVIRON)
RIG:	- -
SAMPLING METHOD:	Stainless Steel Hand Auger
BORING DIA:	4 inches
BORING DEPTH	4.0 feet
ORGANIC VAPOR EQUIPMENT	- -

ENVIRON
BORING LOG

PROJECT: Henderson Background Sampling

CASE # 01-2131A

COMMENTS:

BG04 located in the southwestern quadrant of Section 16.

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0 - 1.5	NA	18	NA	BG04-SS01	0 - 18": Dry grey-brown gravelly fine sand.
1.5 – 4.0		30		BG04-SS02	18 - 48": Dry brown to grey-brown fine to medium sand with gravel. Caliche encountered at 4.0'.

COMMENTS: Collect soil sample BG04-SS01 from 0-1' and BG04-SS02 from 3.5-4.0' bgs for analysis of OC/OP pesticides, CEC, TOC, GSD/texture (SVL Labs; Kellogg, ID); dioxins/furans, perchlorate, metals (6010/6020), radionuclides, and moisture (STL Labs; Earth City, MO).

BORING #:	BG05
DATE:	04/03/02
START TIME:	13:00
LOGGED BY:	Douglas H. Errett (ENVIRON)
DRILLING CO:	ENVIRON
DRILLER:	Douglas H. Errett (ENVIRON)
RIG:	- -
SAMPLING METHOD:	Stainless Steel Hand Auger
BORING DIA:	4 inches
BORING DEPTH	3.5 feet
ORGANIC VAPOR EQUIPMENT	- -

ENVIRON
BORING LOG

PROJECT: Henderson Background Sampling

CASE # 01-2131A

COMMENTS:

BG05 located in the southeastern corner of Section 16.

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0 - 3.5	NA	42	NA	BG05-SS01 BG05-SS02	0 - 42": Dry greyish brown fine silty sand and gravel. Cobbles encountered at 3.5'.

COMMENTS: Collect soil sample BG05-SS01 from 0-1' and BG05-SS02 from 3.0-3.5' bgs for analysis of OC/OP pesticides, CEC, TOC, GSD/texture (SVL Labs; Kellogg, ID); dioxins/furans, perchlorate, metals (6010/6020), radionuclides, and moisture (STL Labs; Earth City, MO).

BORING #:	BG06
DATE:	04/03/02
START TIME:	13:55
LOGGED BY:	Douglas H. Errett (ENVIRON)
DRILLING CO:	ENVIRON
DRILLER:	Douglas H. Errett (ENVIRON)
RIG:	- -
SAMPLING METHOD:	Stainless Steel Hand Auger
BORING DIA:	4 inches
BORING DEPTH	3.5 feet
ORGANIC VAPOR EQUIPMENT	- -

ENVIRON
BORING LOG

PROJECT: Henderson Background Sampling

CASE # 01-2131A

COMMENTS:

BG06 located in the northeastern quadrant of Section 16.

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0 - 3.5	NA	42	NA	BG06-SS01 BG06-SS02	0 - 42": Dry brown to greyish-brown gravelly silty sand. Cobbles encountered at 3.5'.

COMMENTS: Collect soil sample BG06-SS01 from 0-1' and BG06-SS02 from 3.0-3.5' bgs for analysis of OC/OP pesticides, CEC, TOC, GSD/texture (SVL Labs; Kellogg, ID); dioxins/furans, perchlorate, metals (6010/6020), radionuclides, and moisture (STL Labs; Earth City, MO).

BORING #:	BG07
DATE:	04/03/02
START TIME:	14:25
LOGGED BY:	Douglas H. Errett (ENVIRON)
DRILLING CO:	ENVIRON
DRILLER:	Douglas H. Errett (ENVIRON)
RIG:	- -
SAMPLING METHOD:	Stainless Steel Hand Auger
BORING DIA:	4 inches
BORING DEPTH	3.5 feet
ORGANIC VAPOR EQUIPMENT	- -

ENVIRON
BORING LOG

PROJECT: Henderson Background Sampling

CASE # 01-2131A

COMMENTS:

BG07 located in the southeastern quadrant of Section 9.

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0 - 3.5	NA	42	NA	BG07-SS01 BG07-SS02	0 - 42": Medium grey to brown-grey dry gravelly fine to medium grained sand. Cobbles encountered at 3.5'.

COMMENTS: Collect soil sample BG07-SS01 from 0-1' and BG01-SS02 from 3.0-3.5' bgs for analysis of OC/OP pesticides, CEC, TOC, GSD/texture (SVL Labs; Kellogg, ID); dioxins/furans, perchlorate, metals (6010/6020), radionuclides, and moisture (STL Labs; Earth City, MO).

BORING #:	BG08
DATE:	04/03/02
START TIME:	15:00
LOGGED BY:	Douglas H. Errett (ENVIRON)
DRILLING CO:	ENVIRON
DRILLER:	Douglas H. Errett (ENVIRON)
RIG:	- -
SAMPLING METHOD:	Stainless Steel Hand Auger
BORING DIA:	4 inches
BORING DEPTH	3.5 feet
ORGANIC VAPOR EQUIPMENT	- -

ENVIRON
BORING LOG

PROJECT: Henderson Background Sampling

CASE # 01-2131A

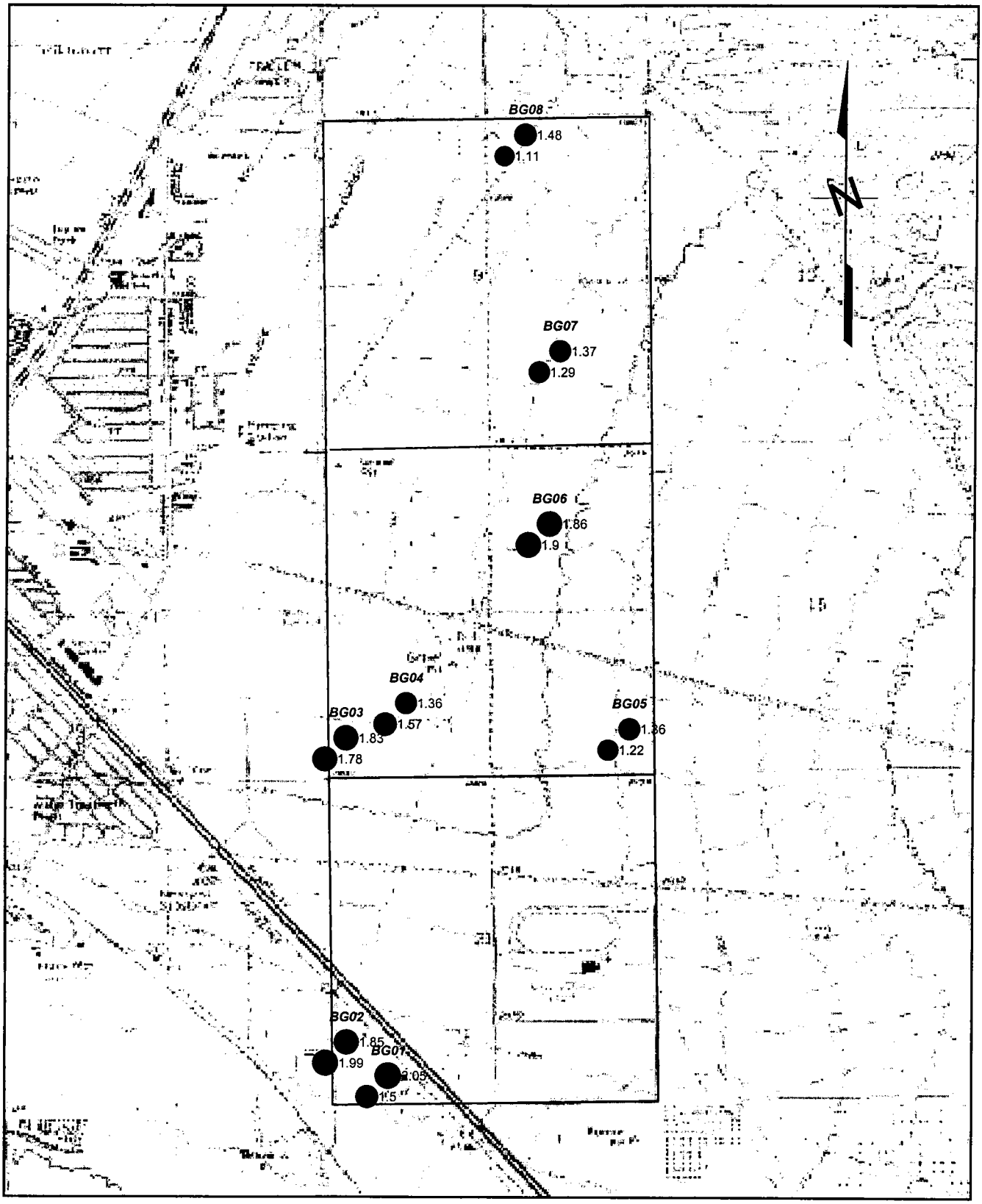
COMMENTS:

BG08 located in the northeastern quadrant of Section 9.

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0 – 3.5	NA	42	NA	BG08-SS01 BG08-SS02	0 - 42": Dry brownish-grey gravelly fine to medium grained sand. Cobbles/caliche encountered at 3.5'.

COMMENTS: Collect soil sample BG08-SS01 from 0-1' and BG08-SS02 from 3.0-3.5' bgs for analysis of OC/OP pesticides, CEC, TOC, GSD/texture (SVL Labs; Kellogg, ID); dioxins/furans, perchlorate, metals (6010/6020), radionuclides, and moisture (STL Labs; Earth City, MO).

APPENDIX E
BUBBLE PLOTS



ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Actinium 228

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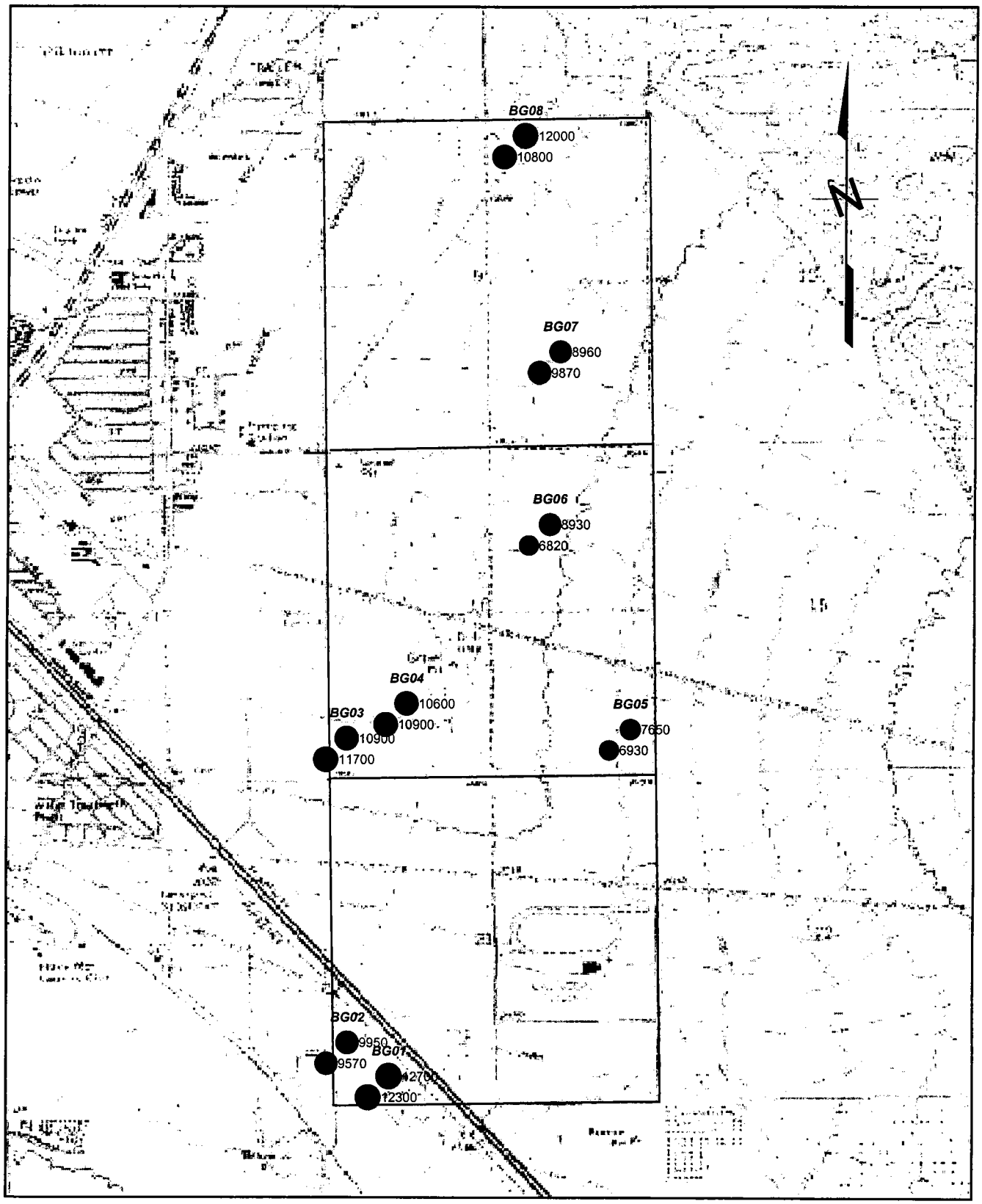

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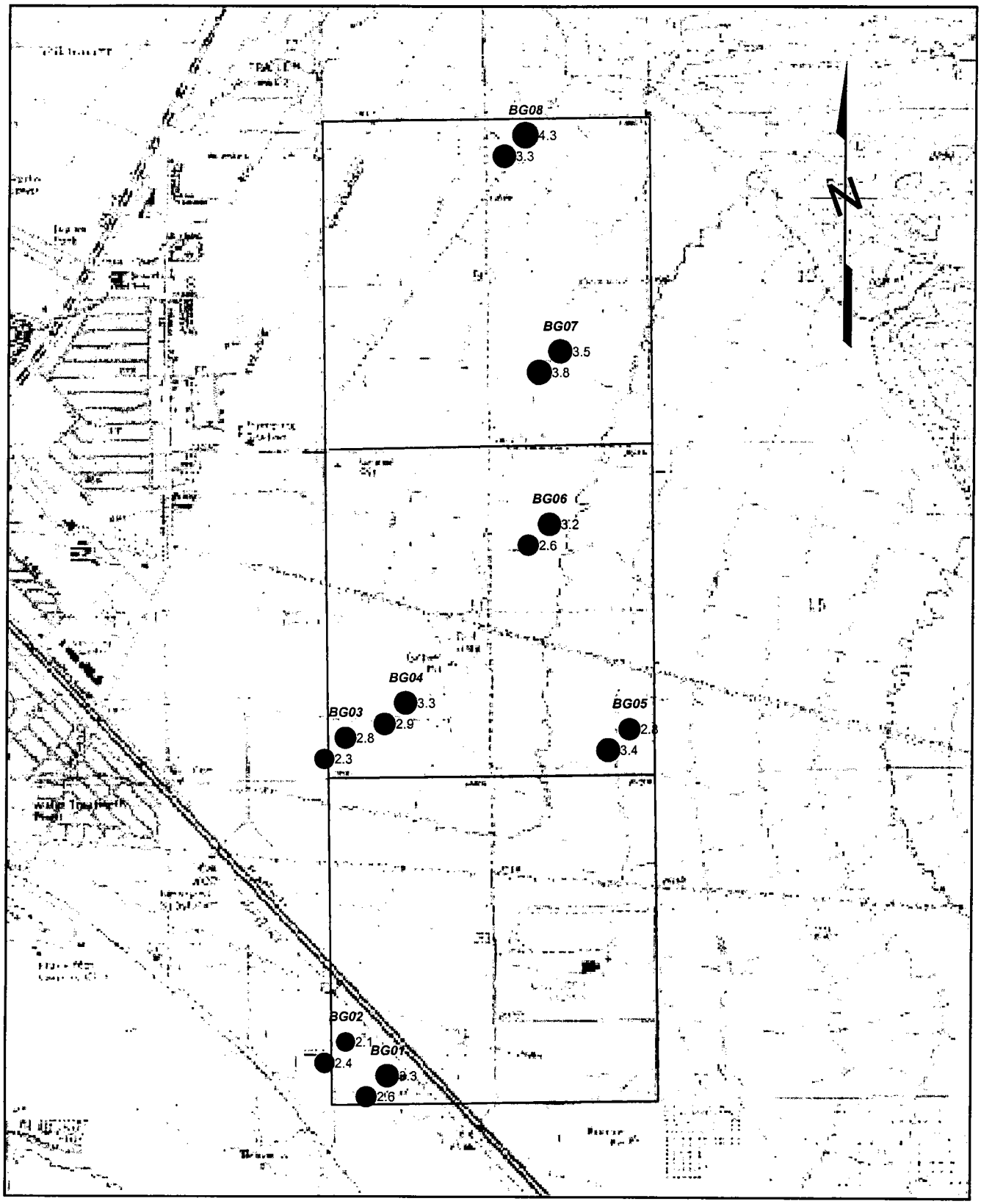
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Aluminum



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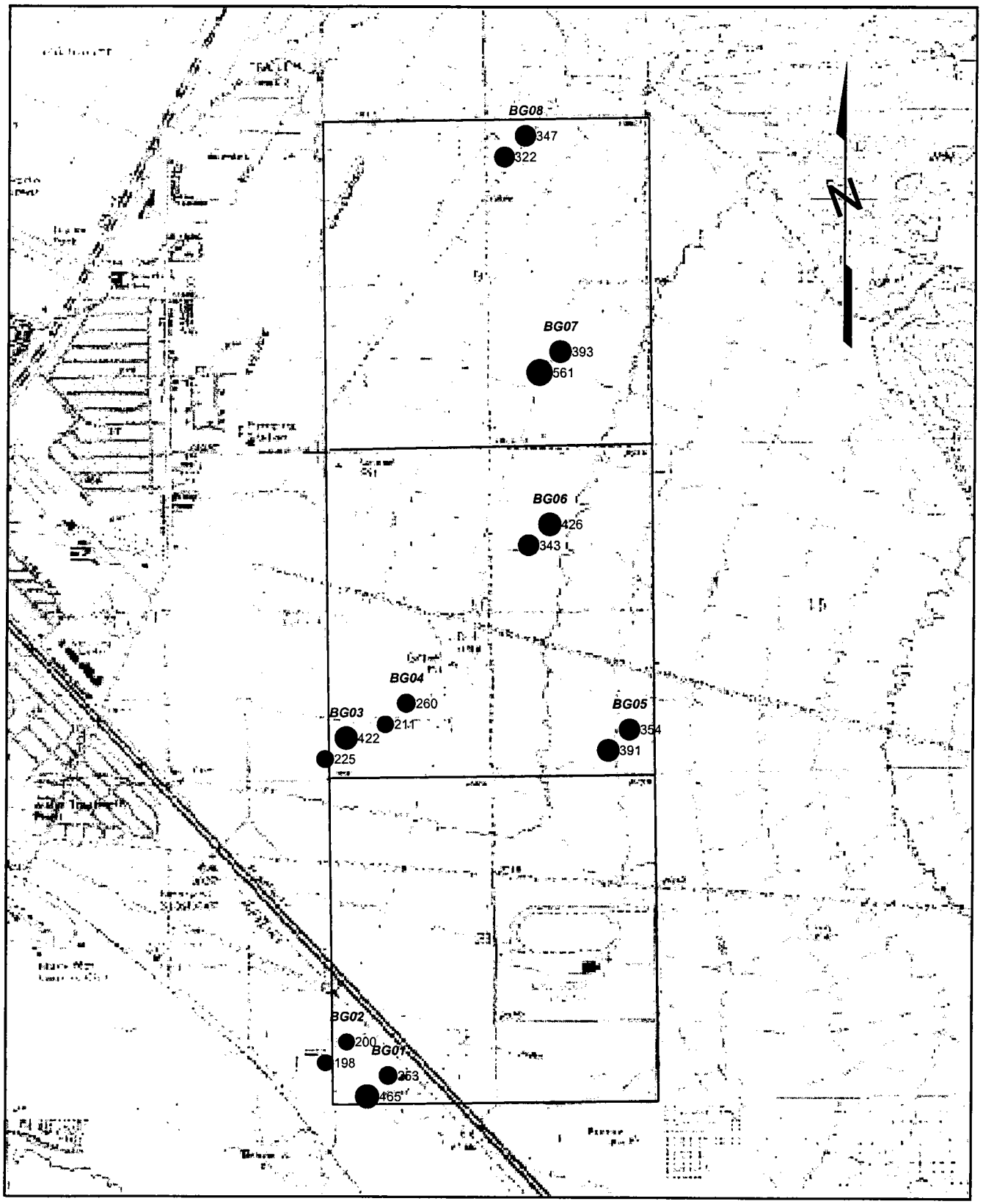
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Arsenic



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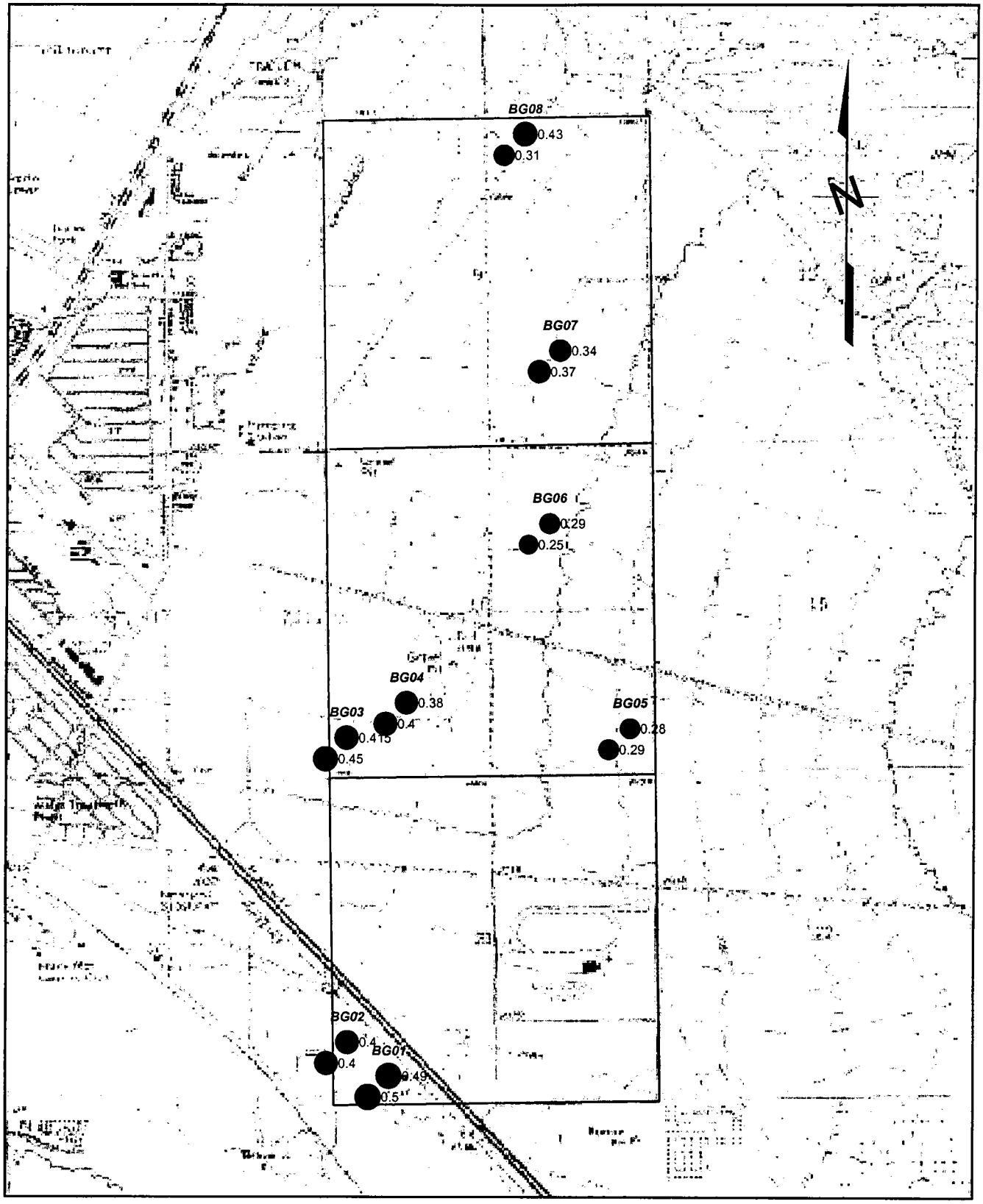
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Barium



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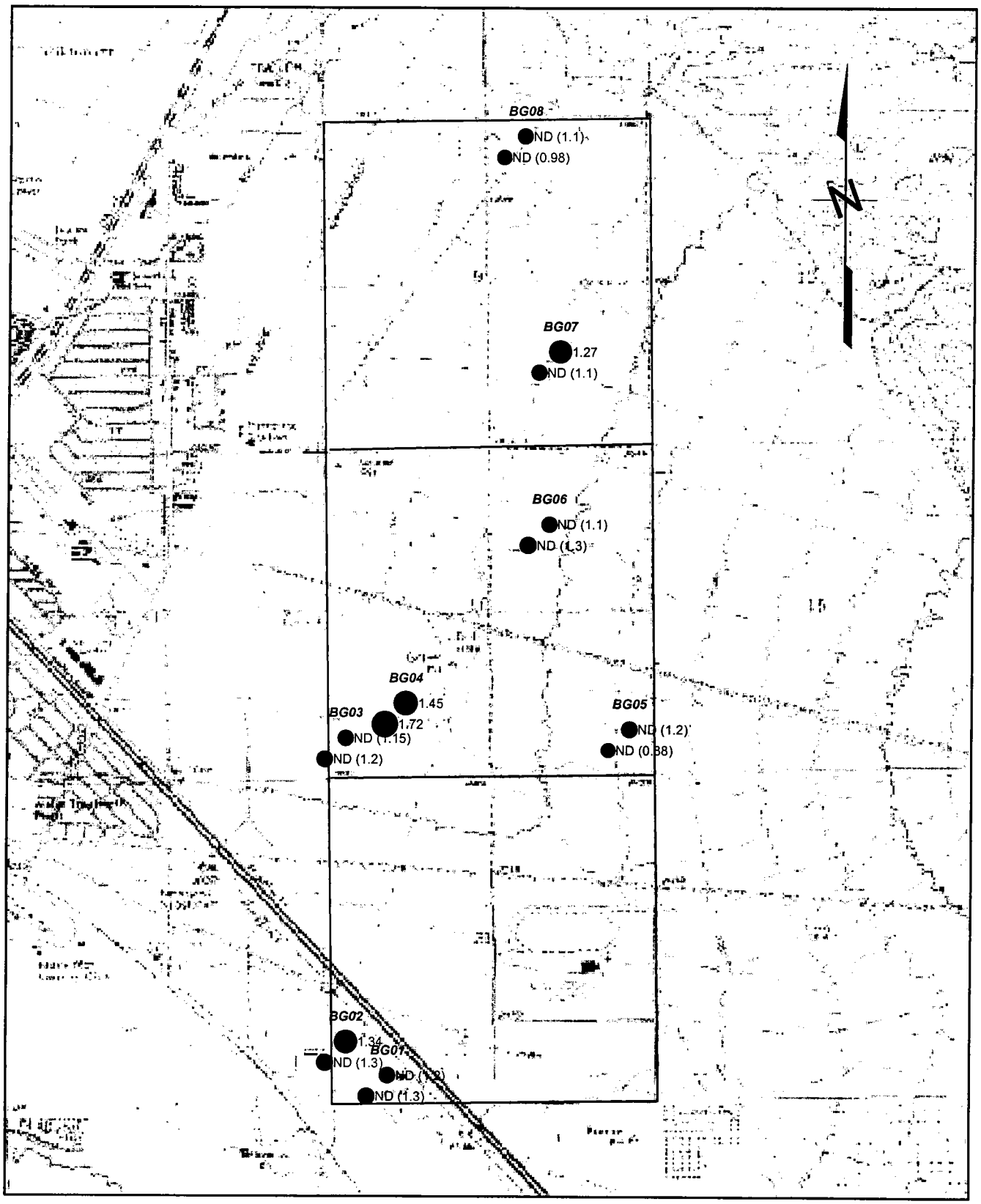
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Beryllium



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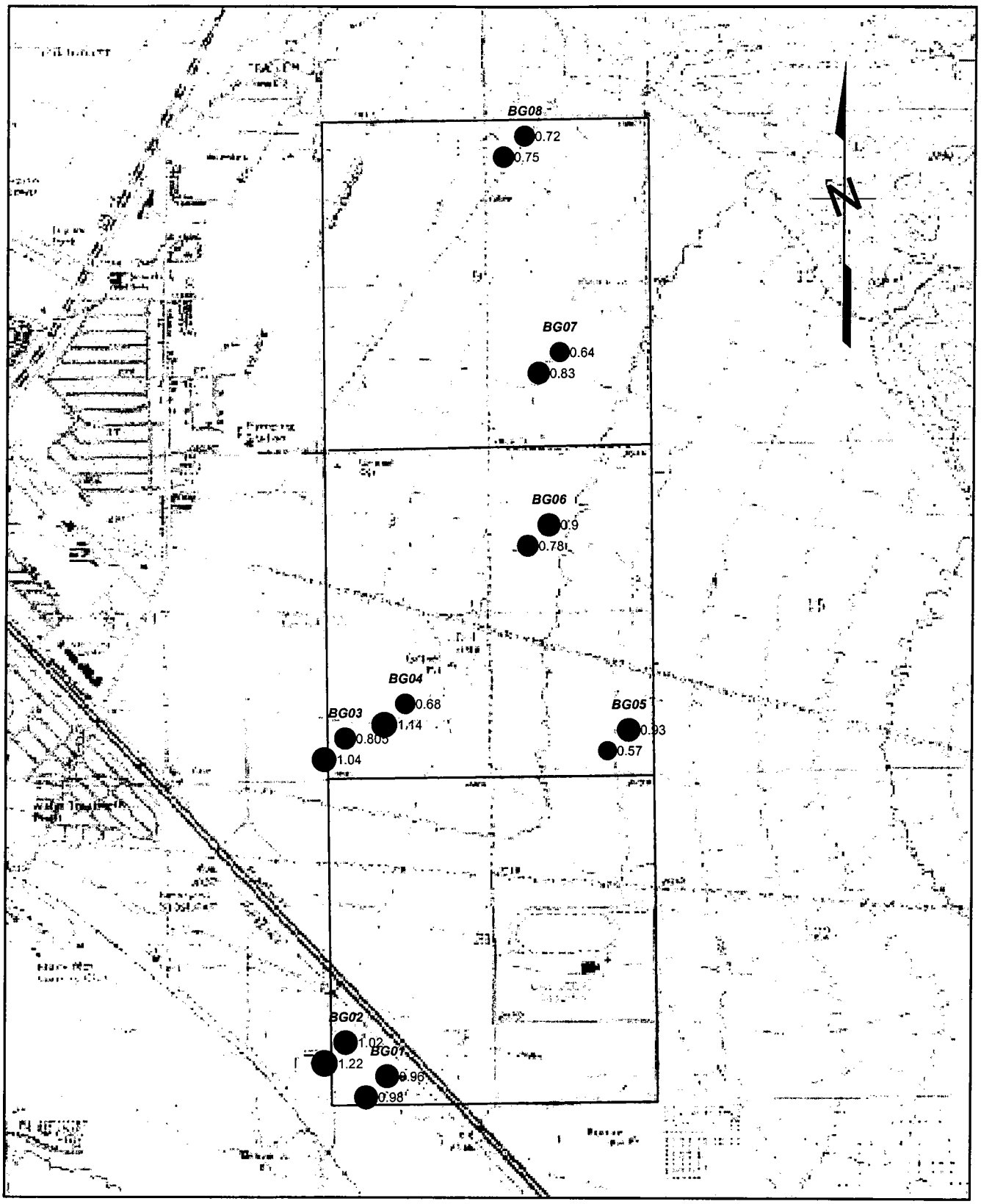
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Bismuth 212



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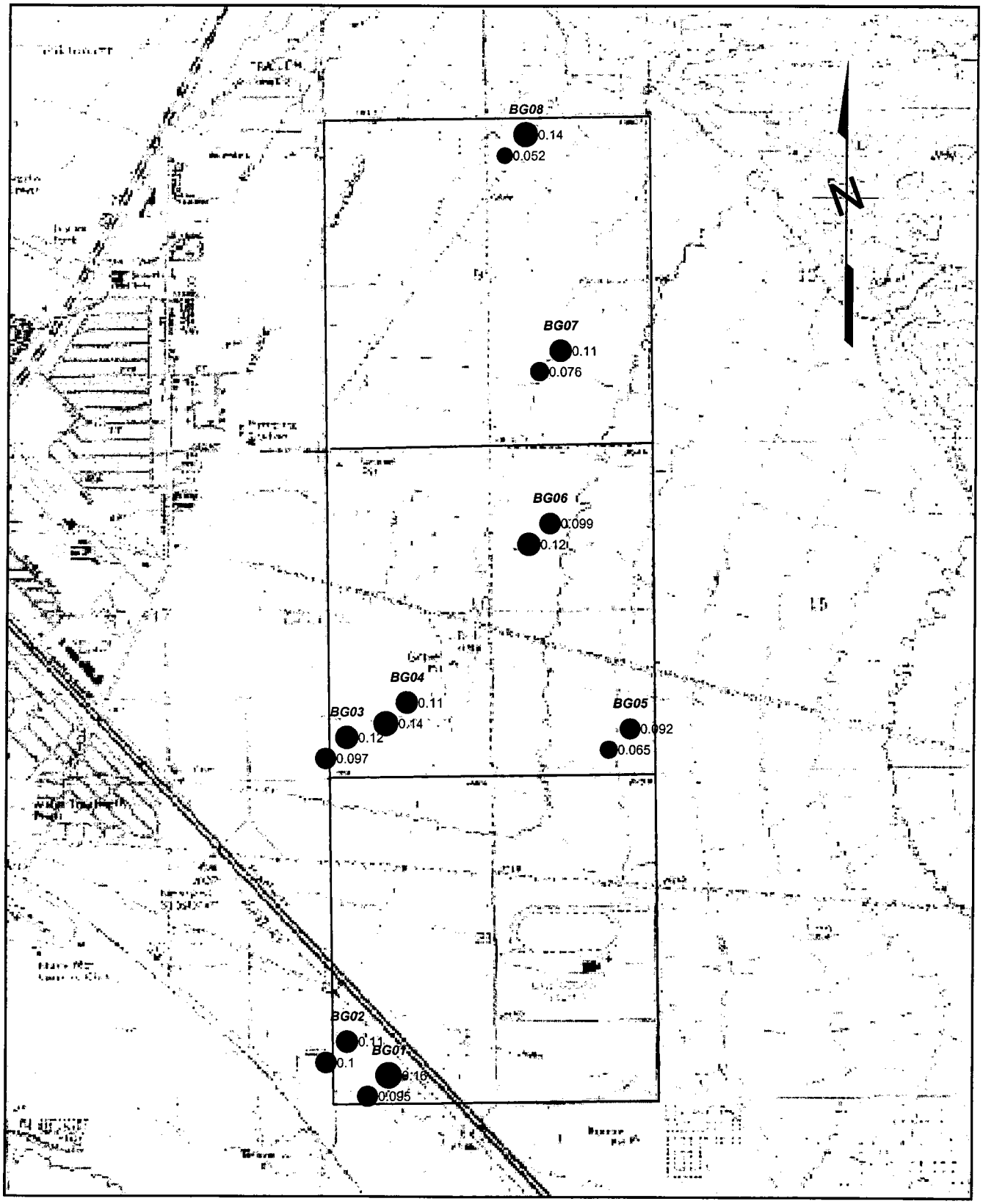
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Bismuth 214



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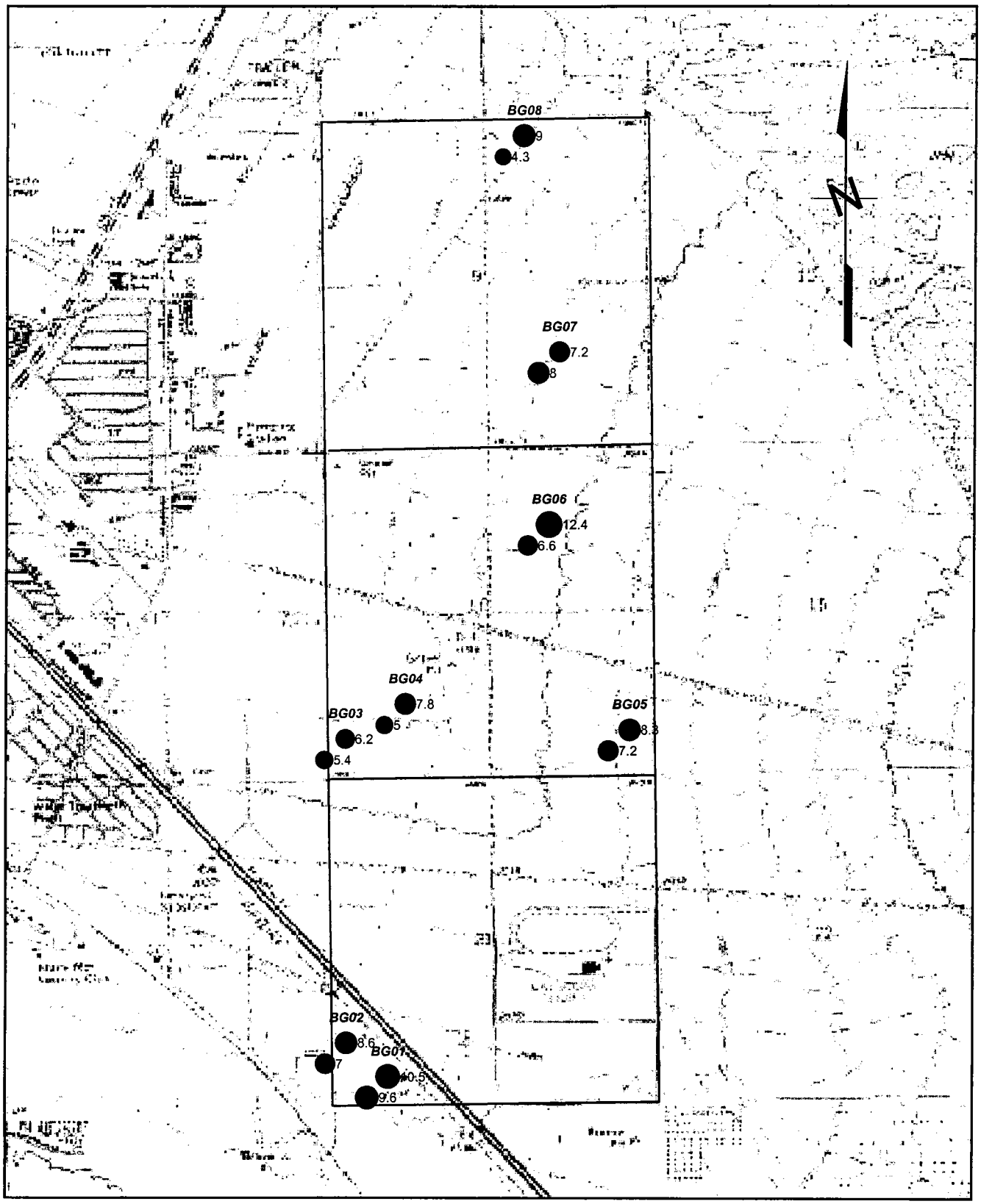
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Cadmium



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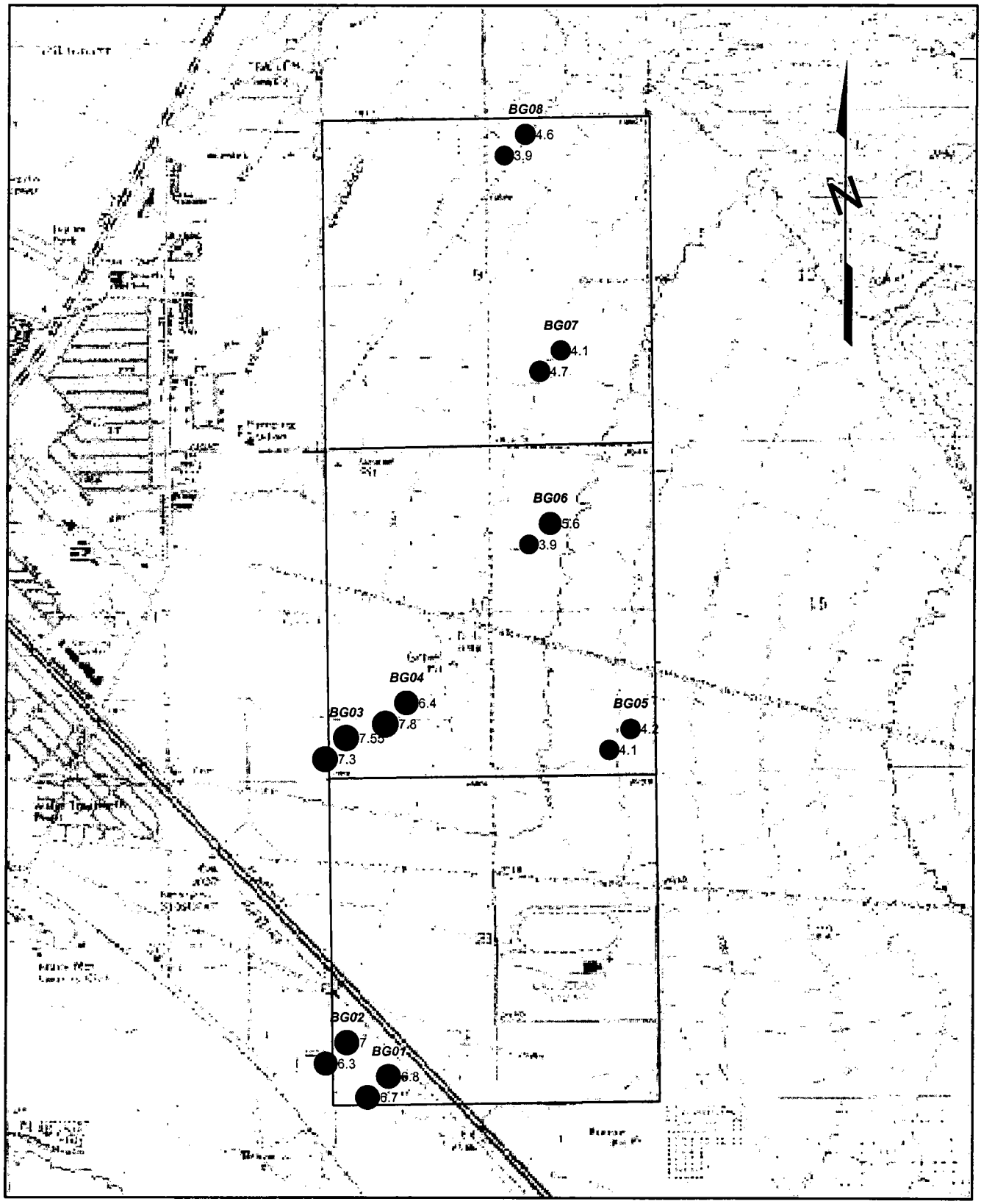
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Chromium
(total)



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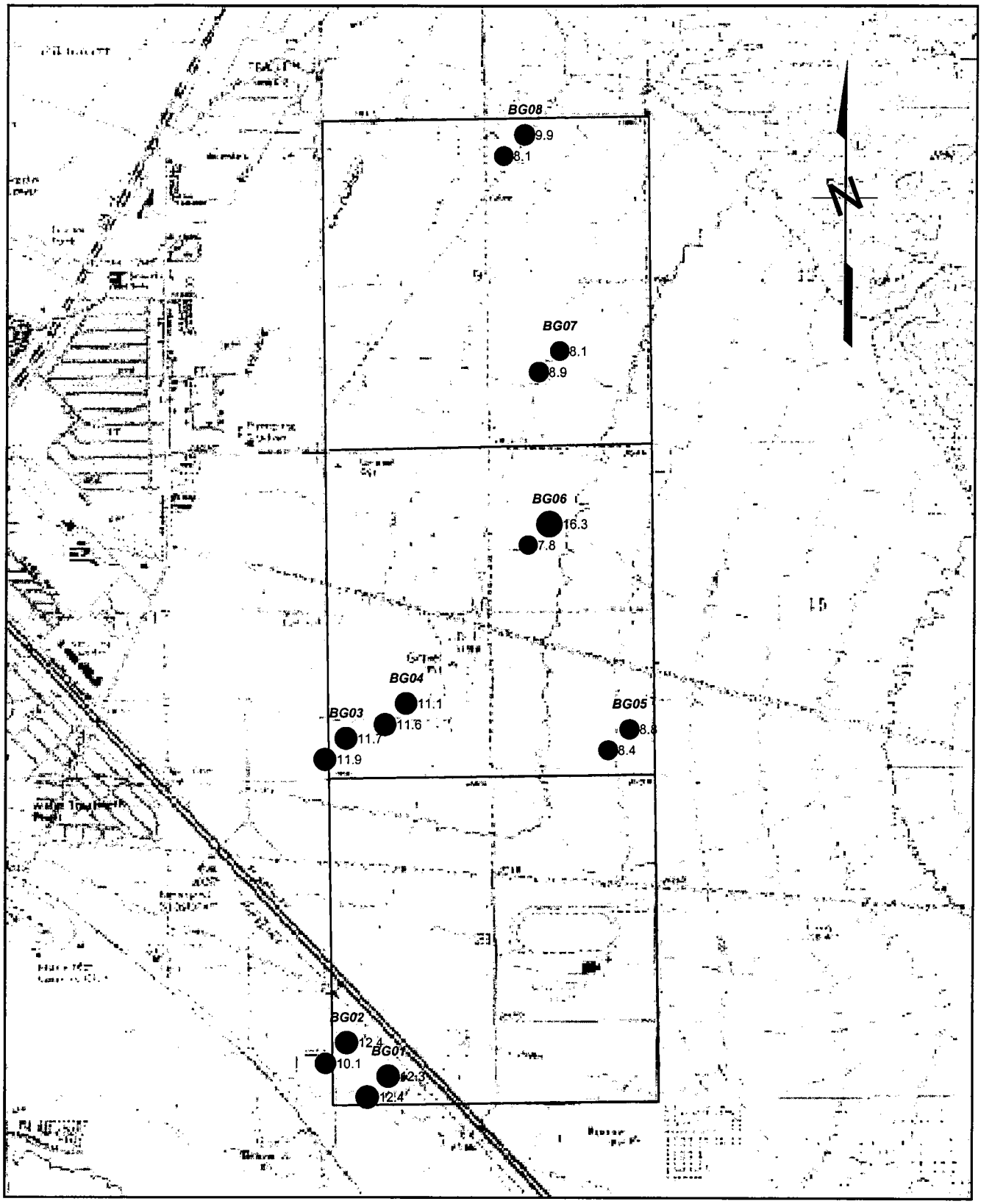
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Cobalt



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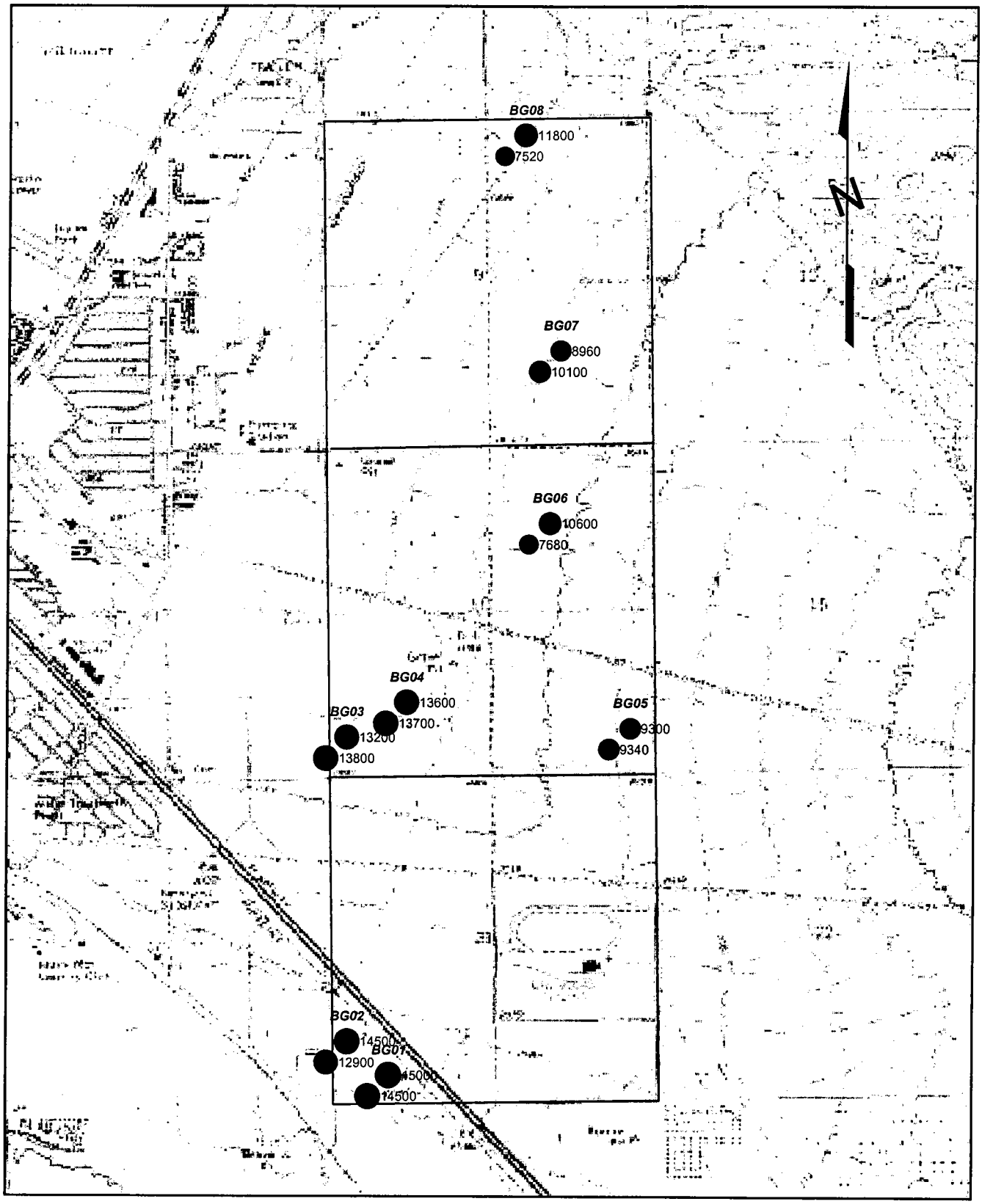
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Copper



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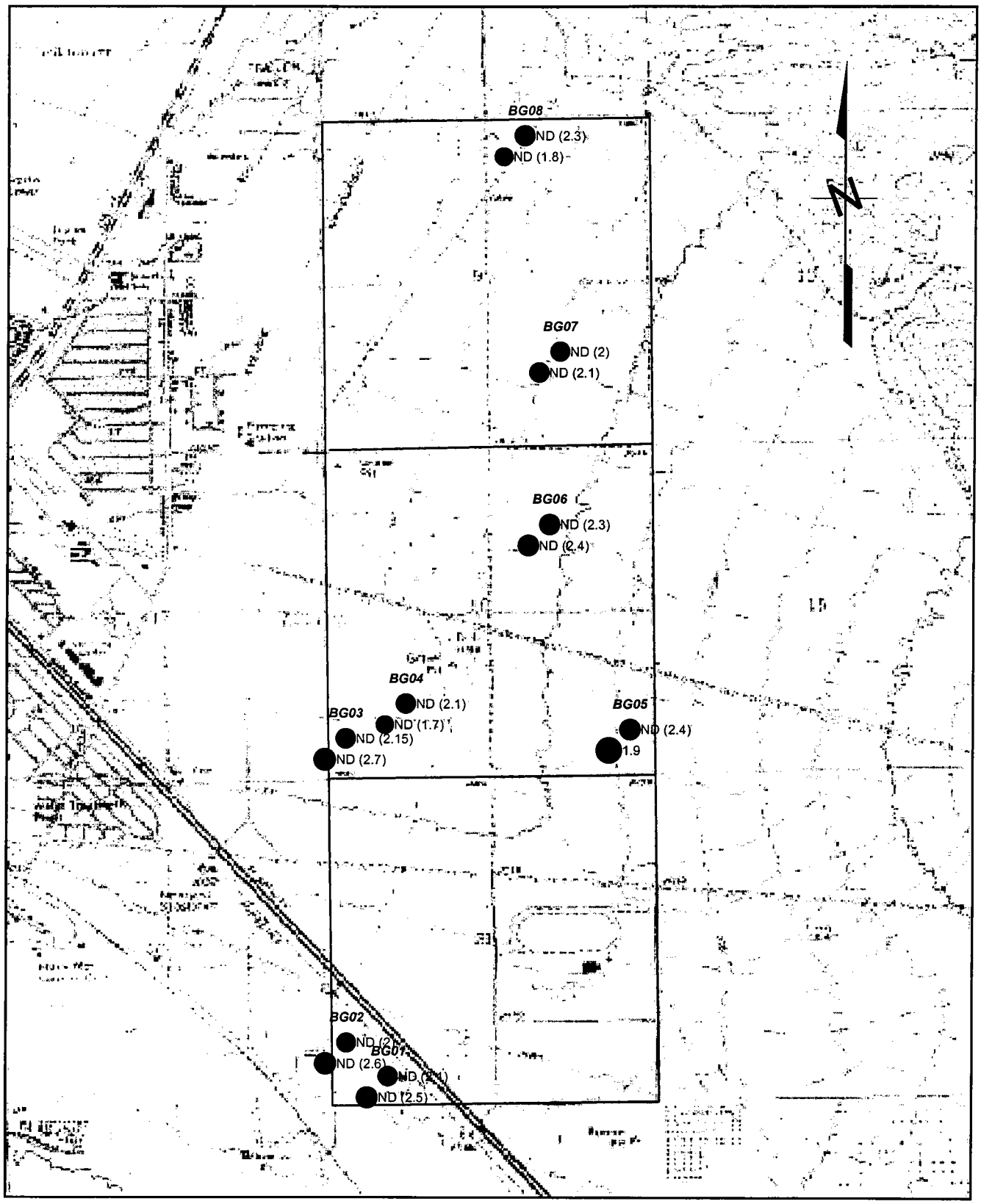
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Iron



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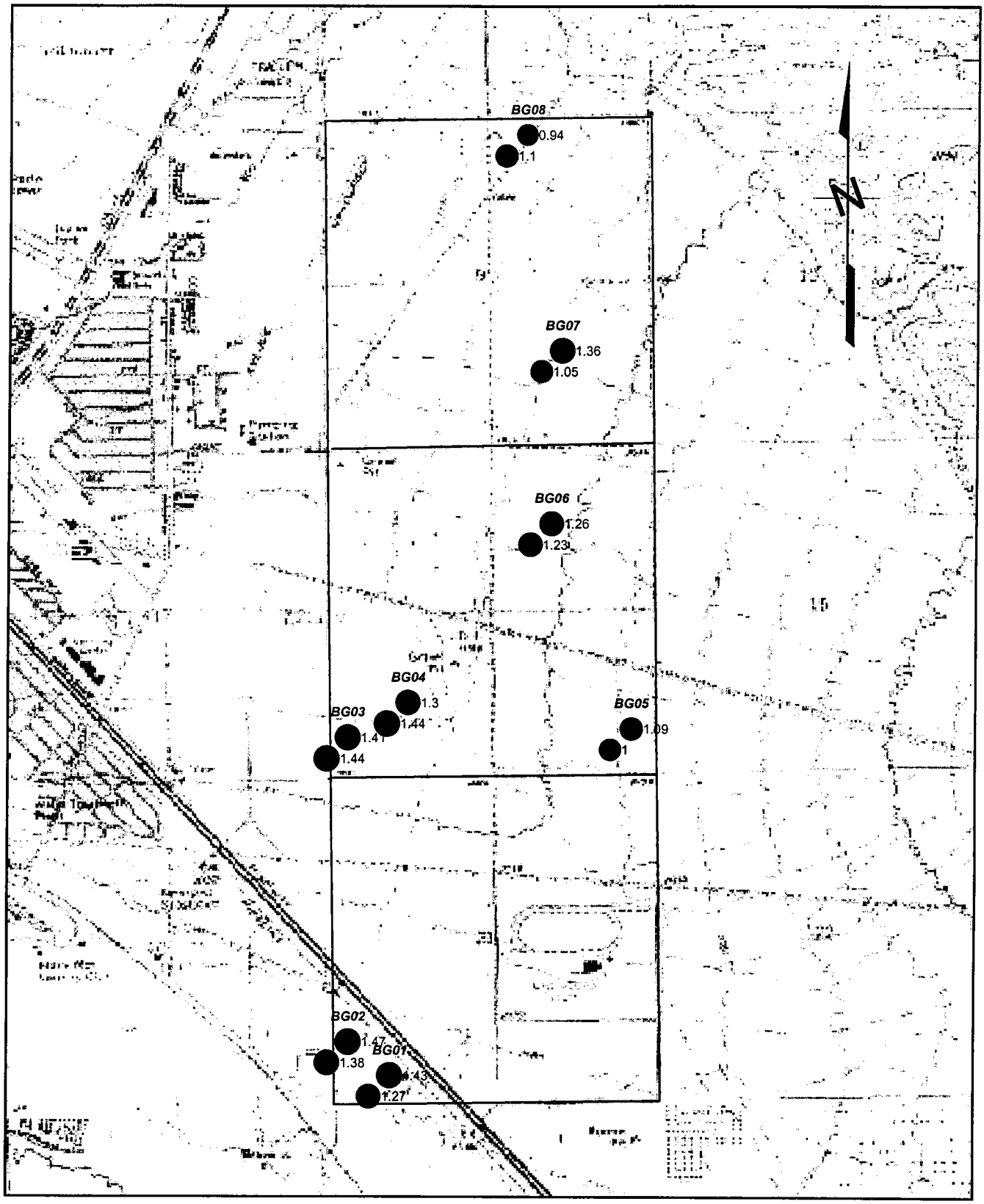
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Lead 210



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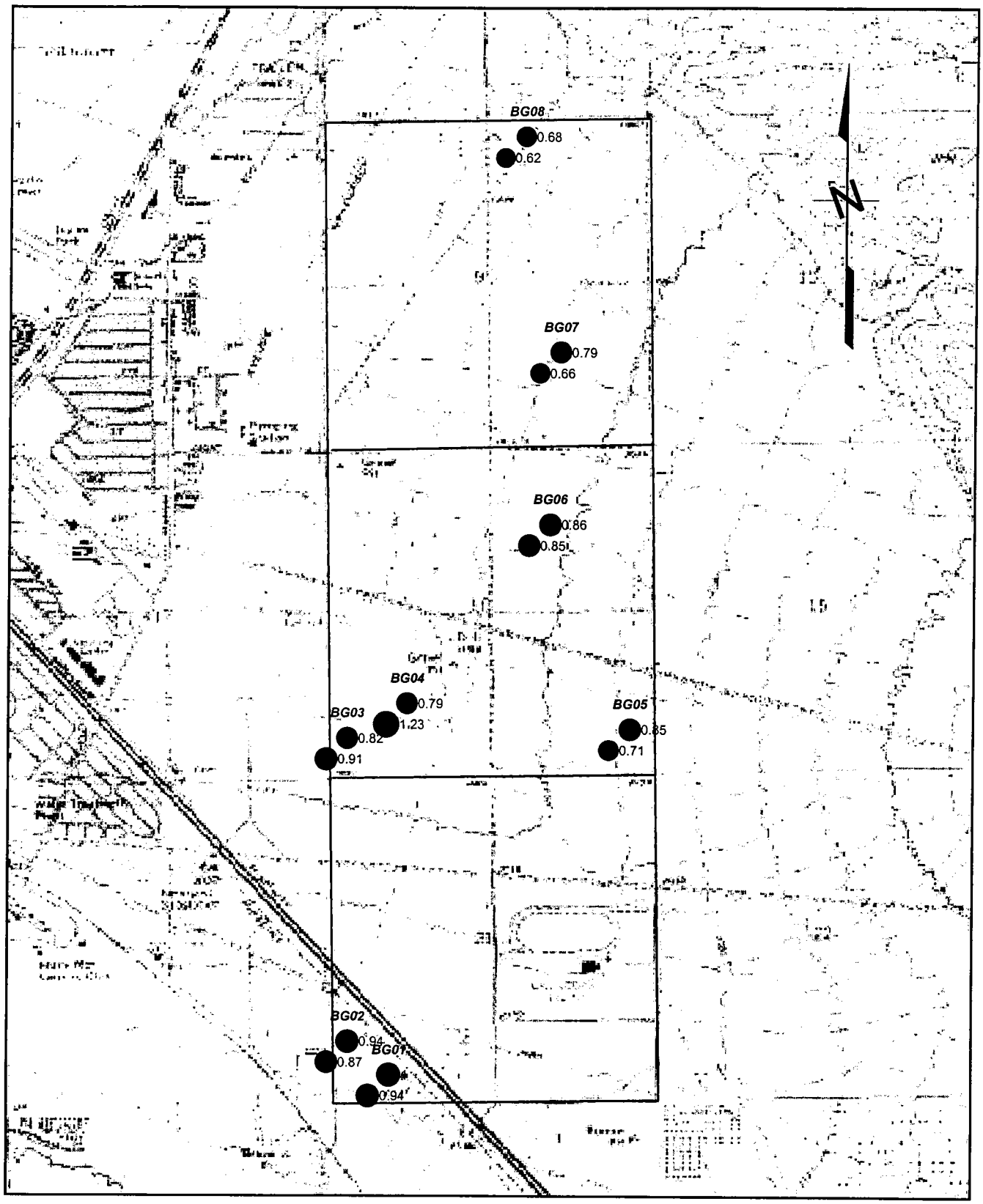
ENVIRON	Background Soil Sampling Results Henderson, Nevada	Chemical Lead 212



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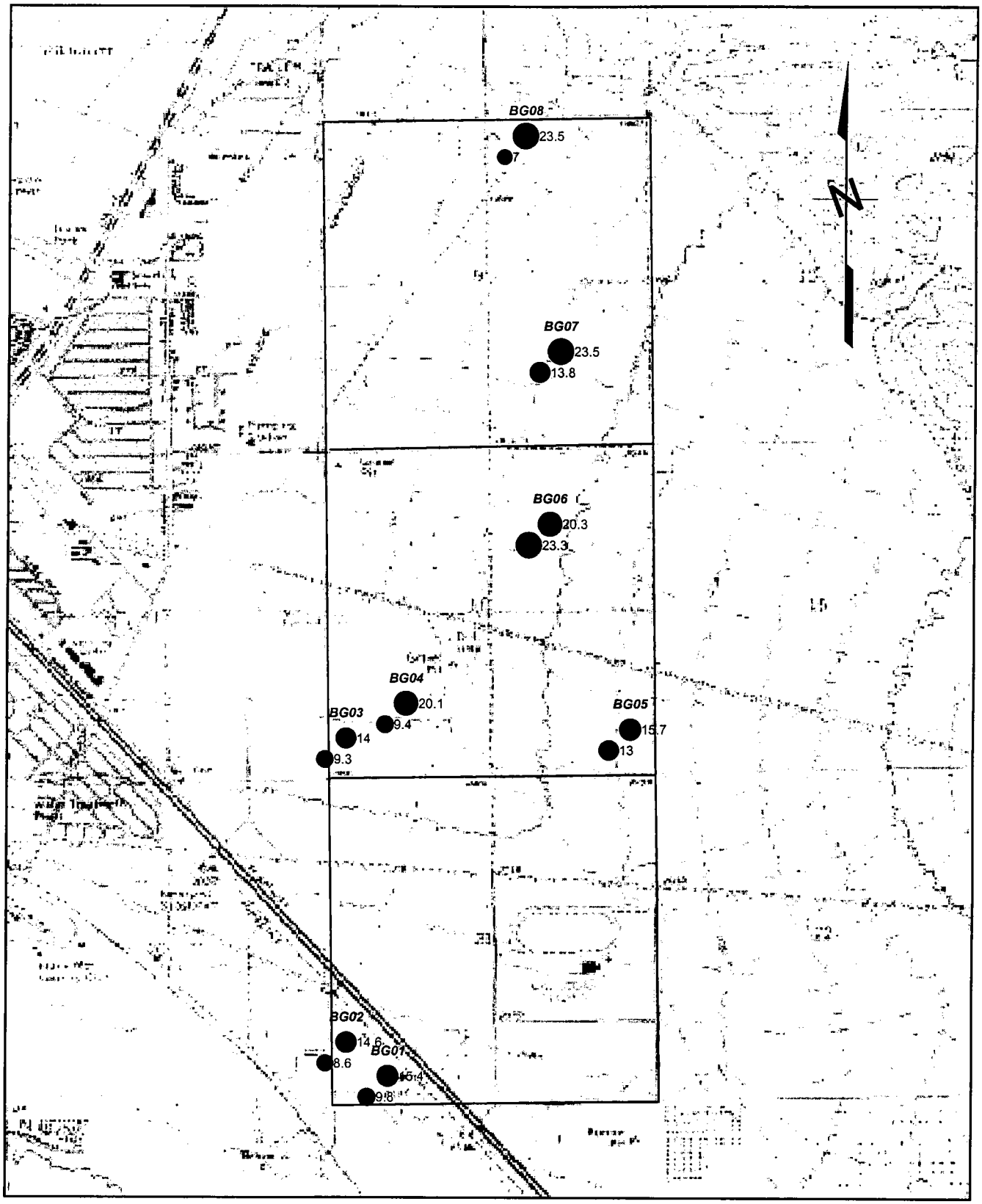
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Lead 214



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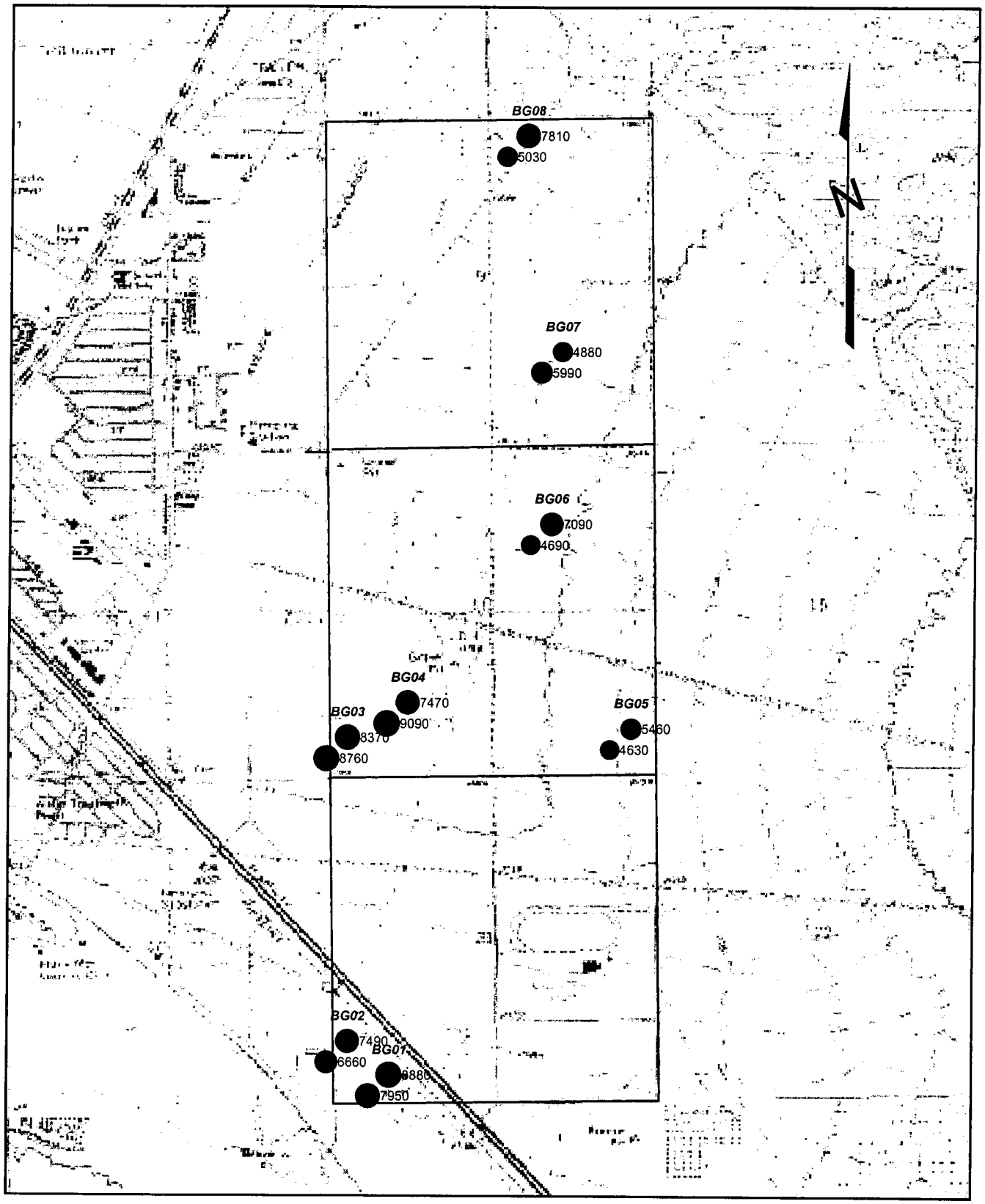
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Lead



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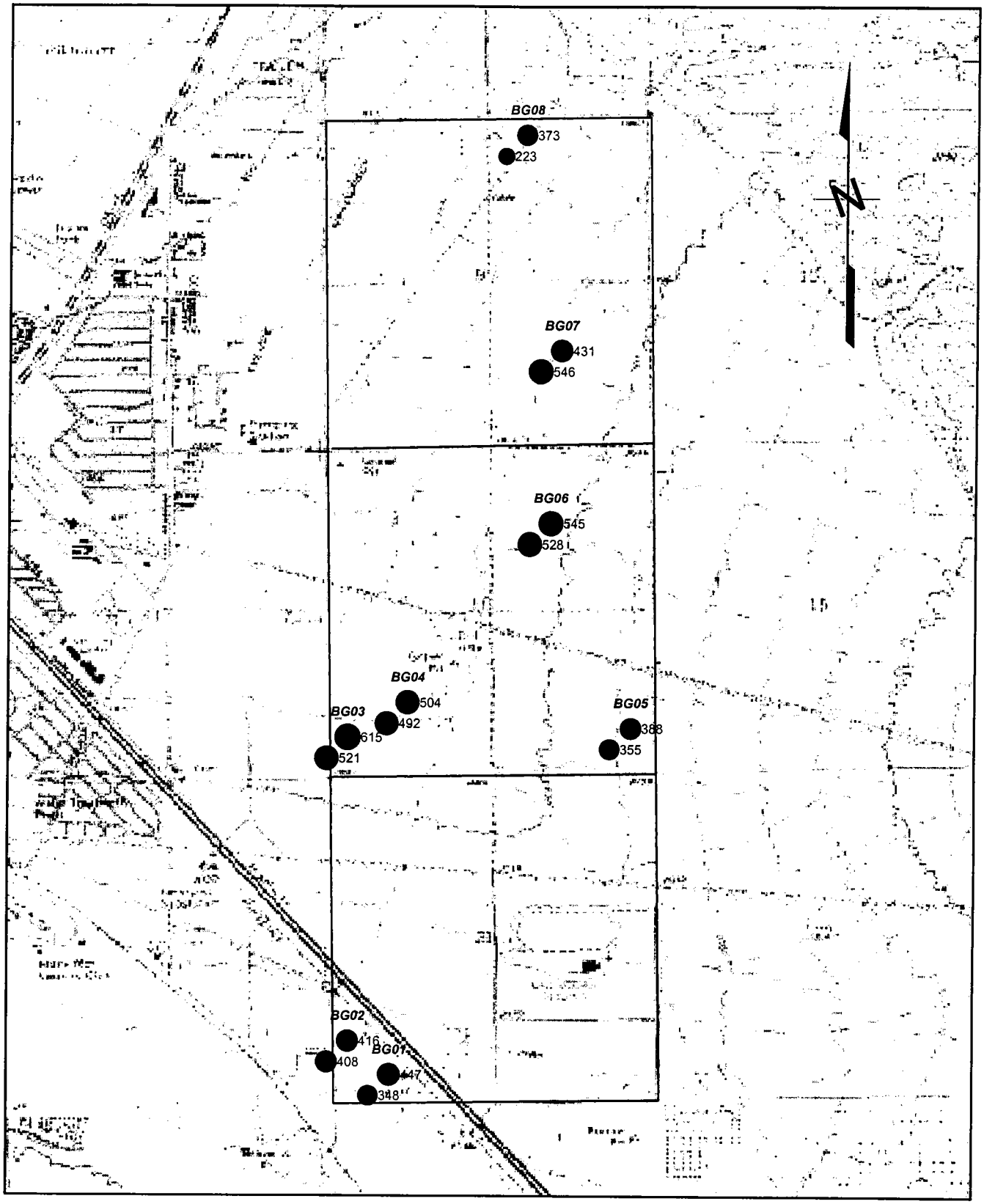
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Magnesium



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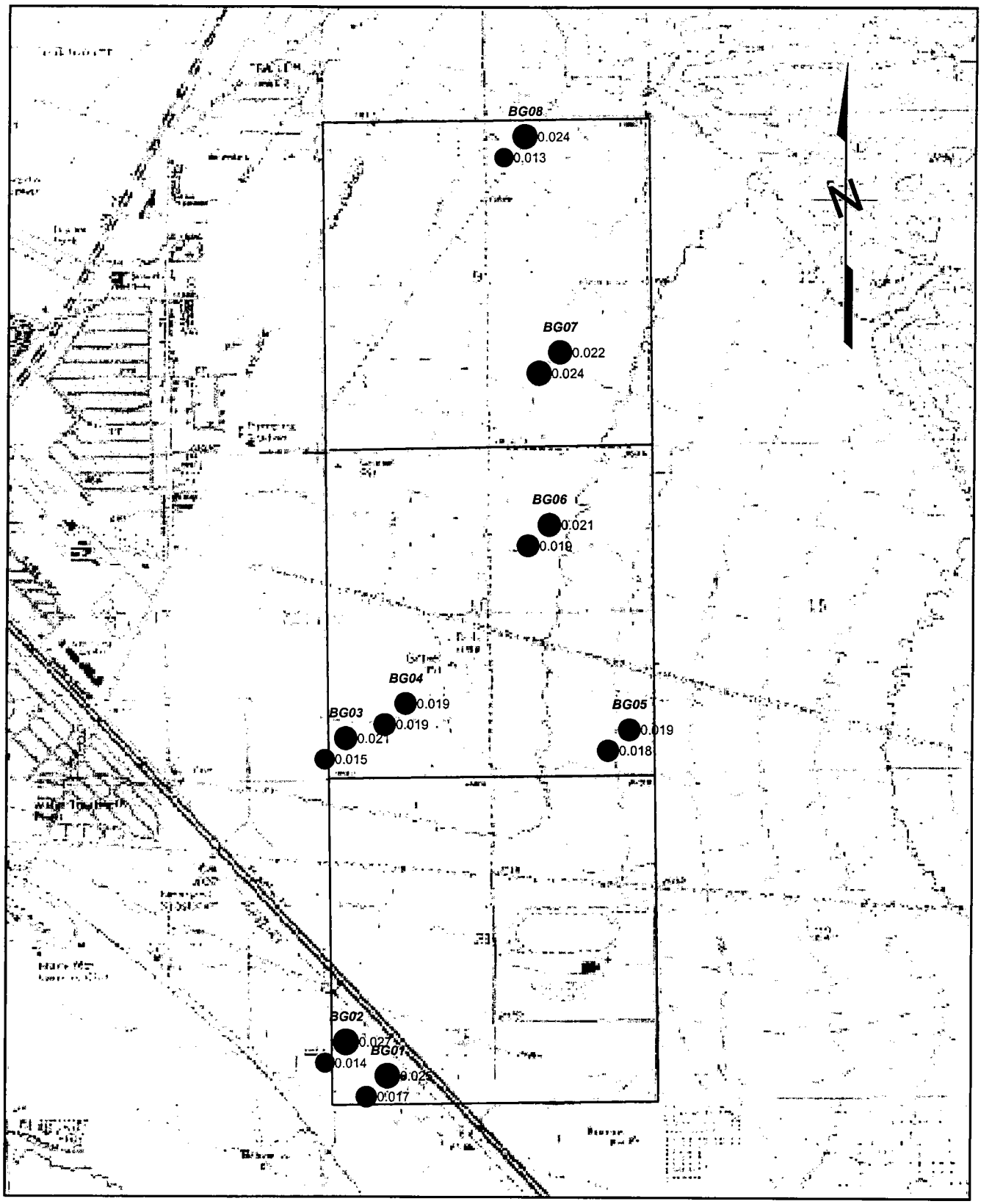
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Manganese



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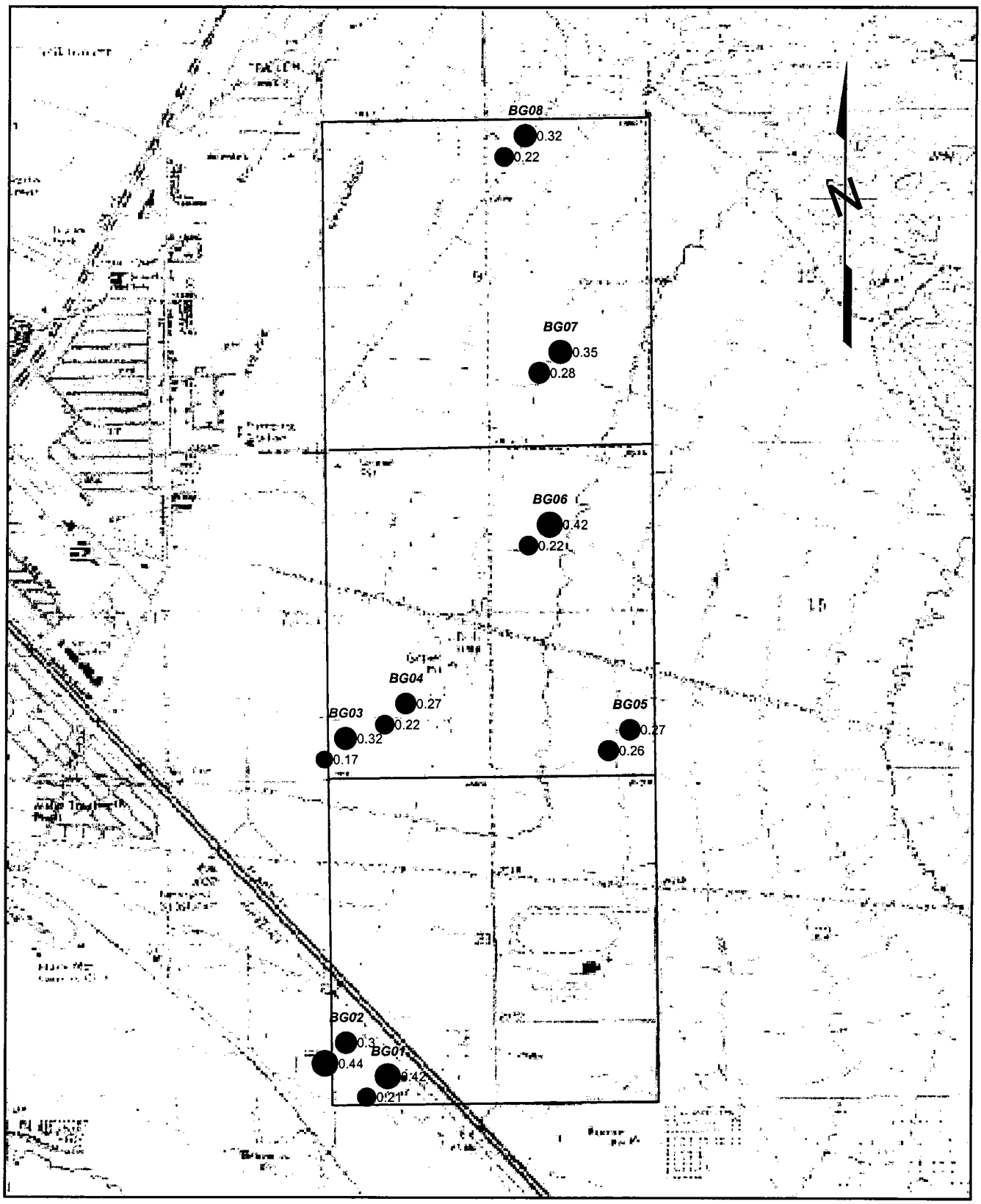
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Mercury



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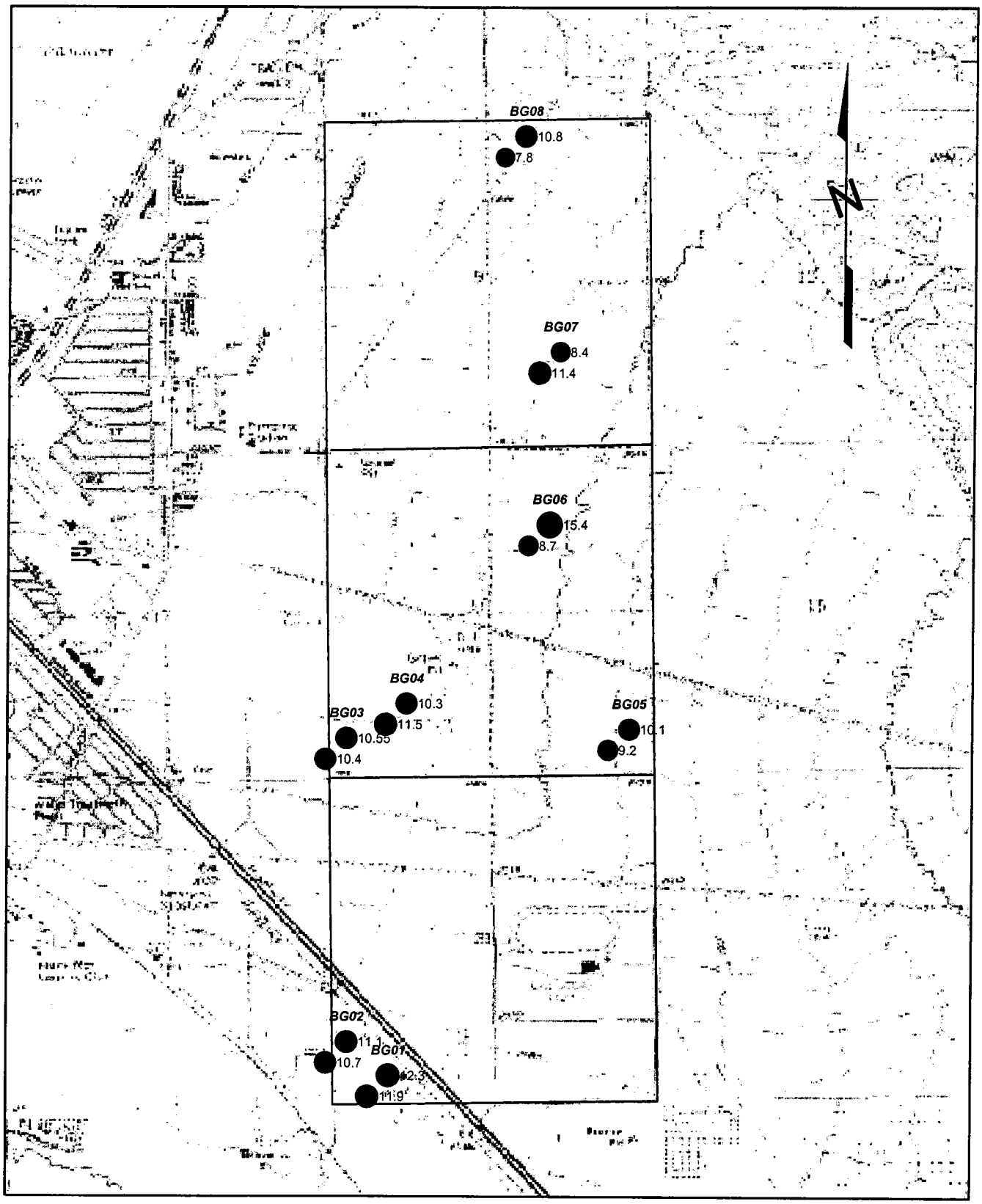
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Molybdenum



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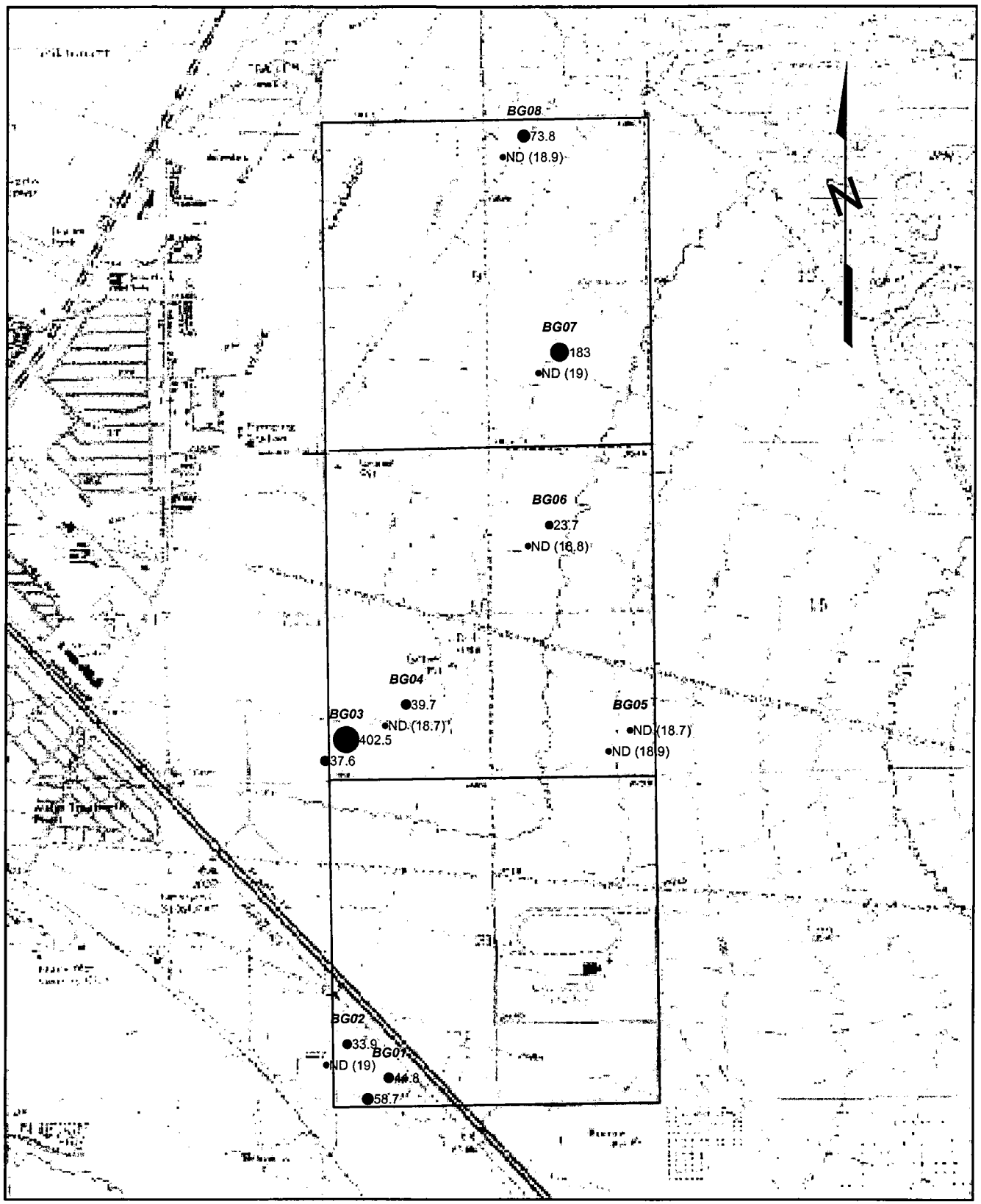
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Nickel



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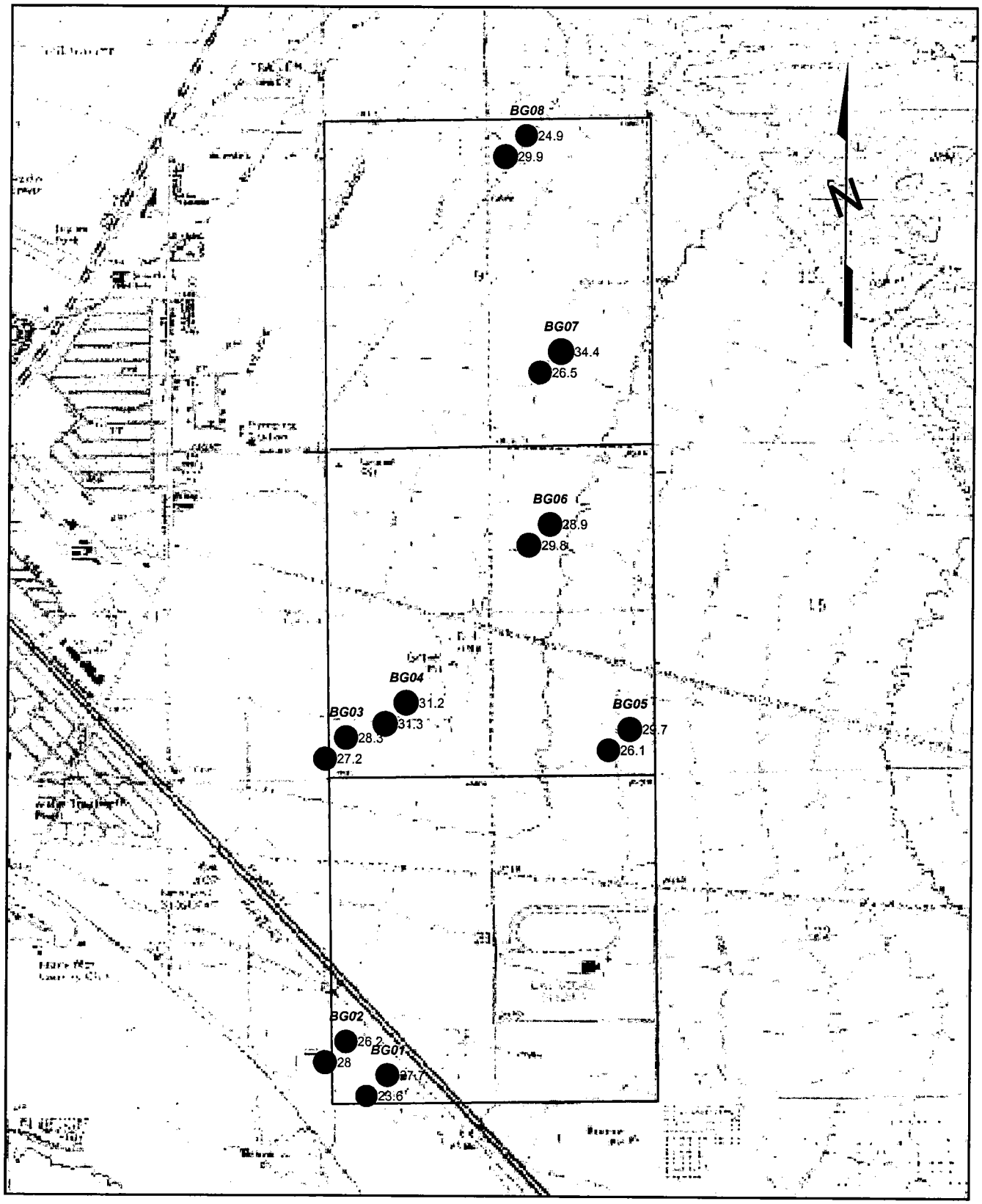
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Perchlorate



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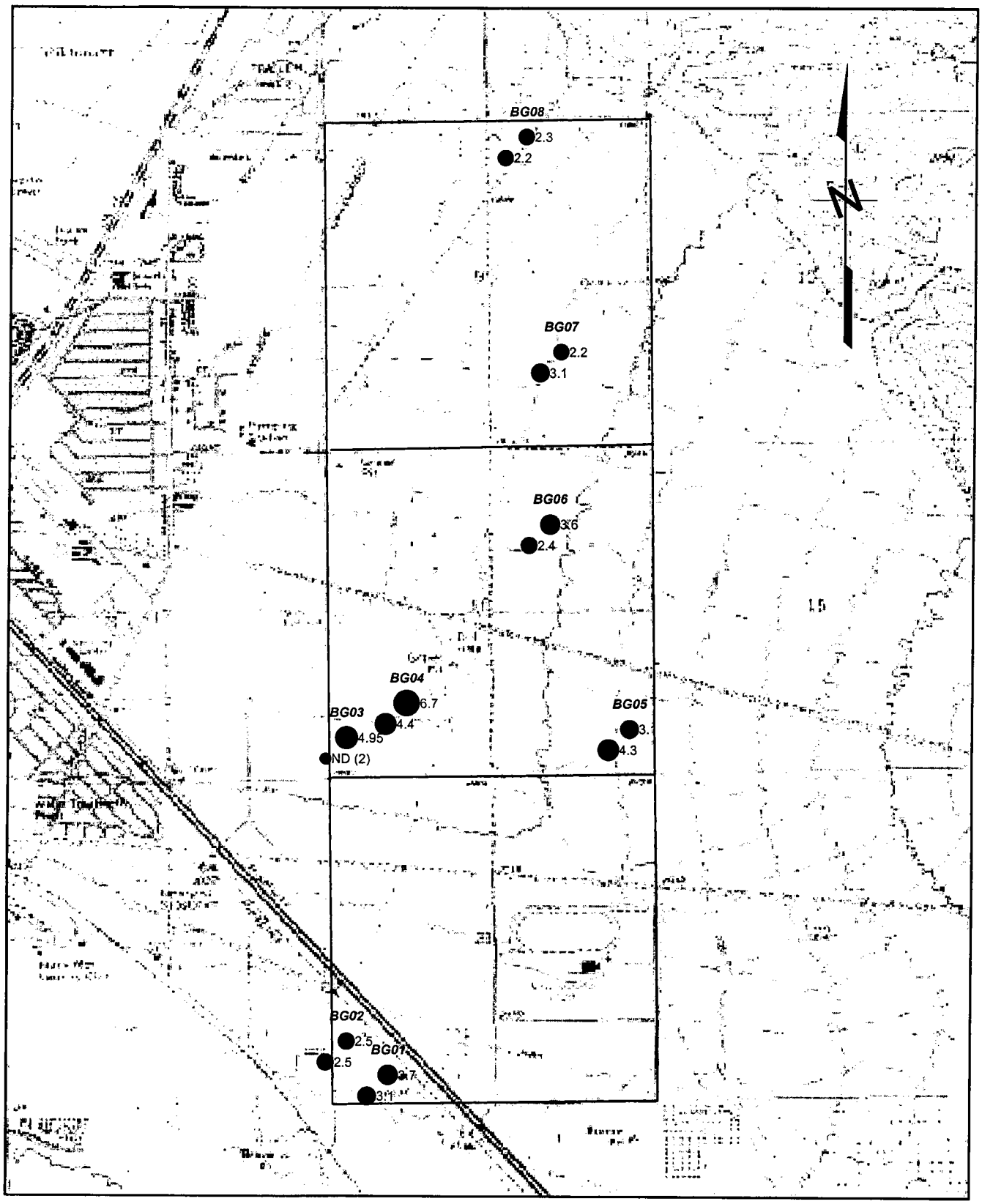
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Potassium 40



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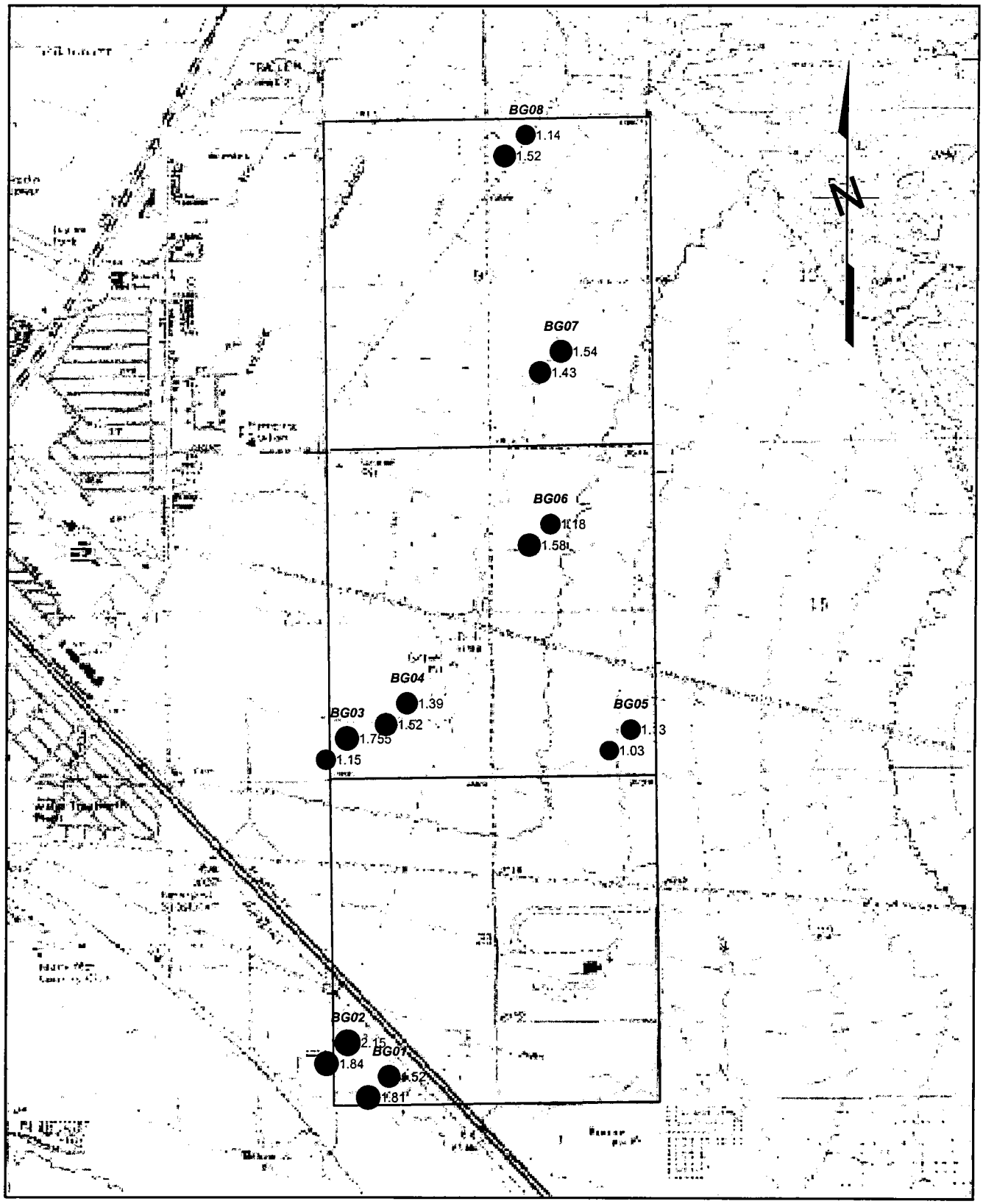
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Radium 224



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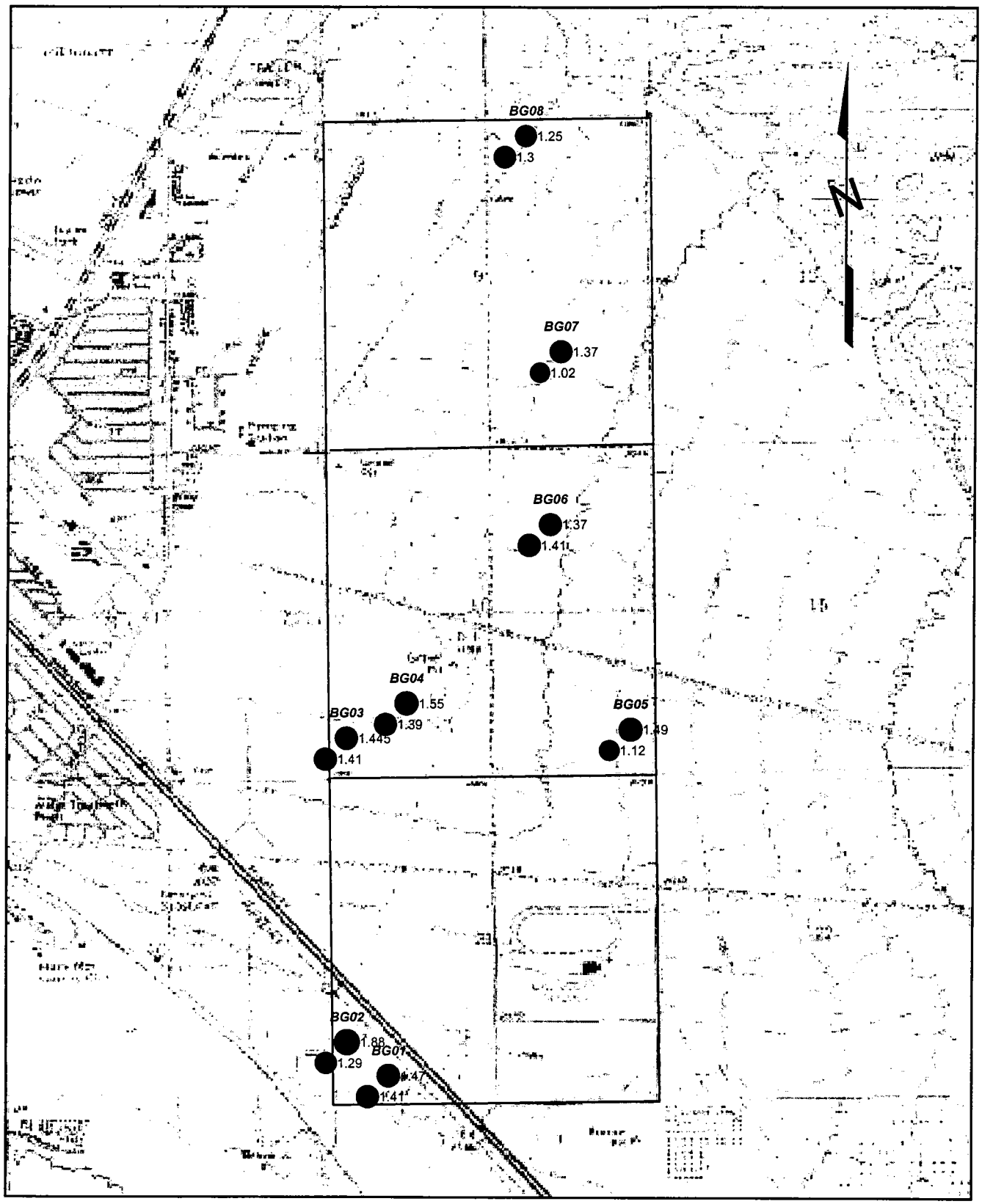
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Radium 226



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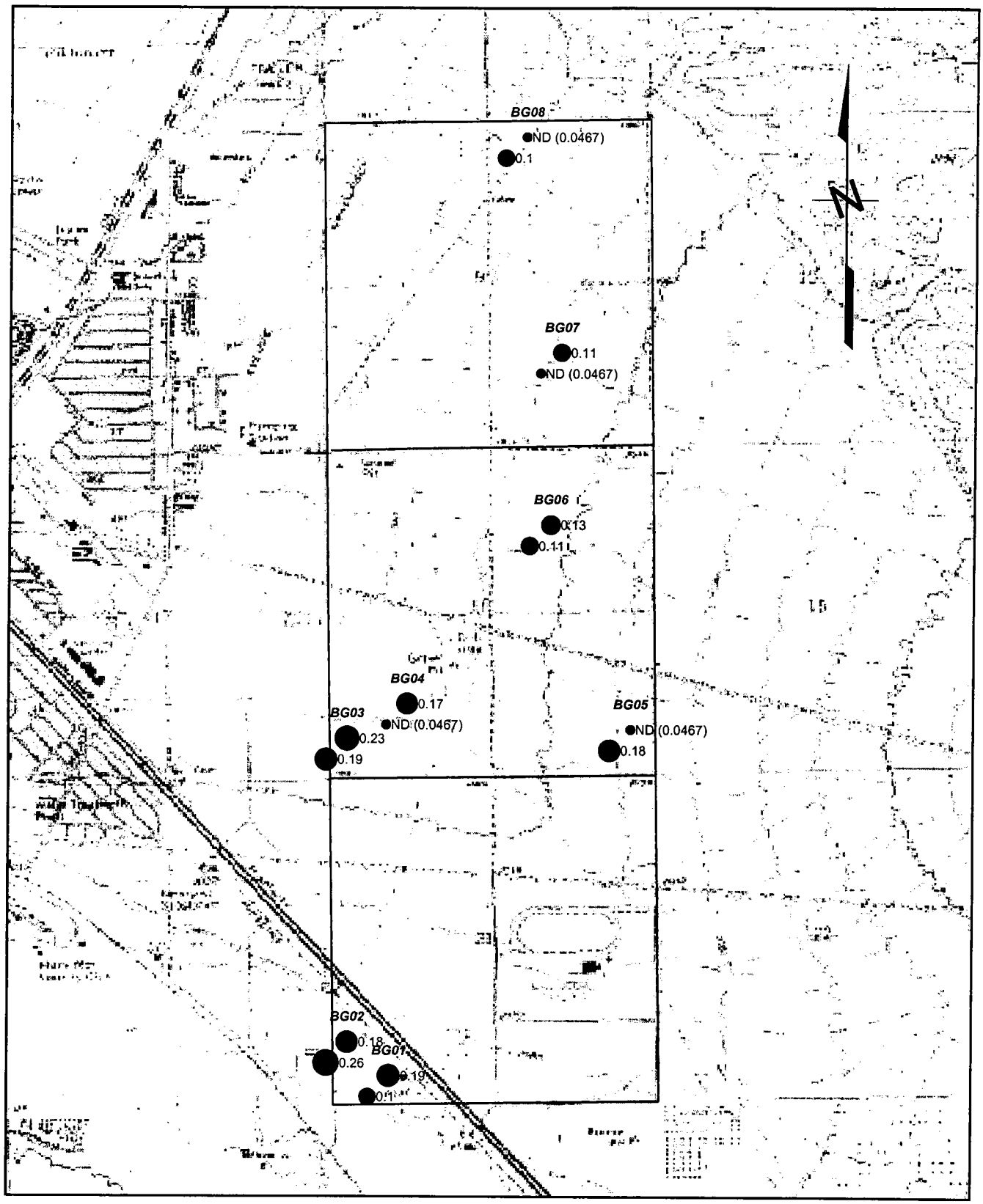
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Radium 228



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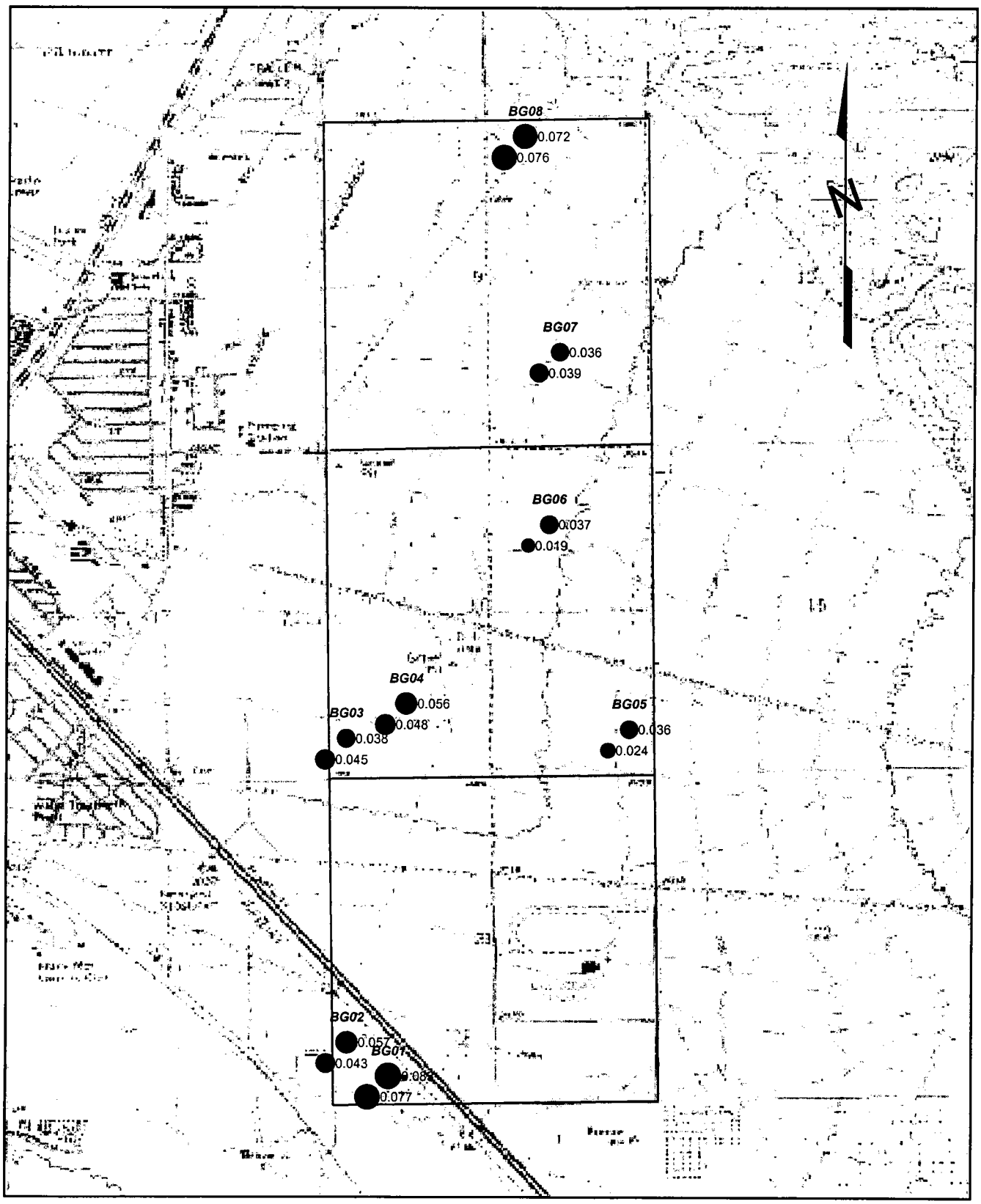
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Selenium



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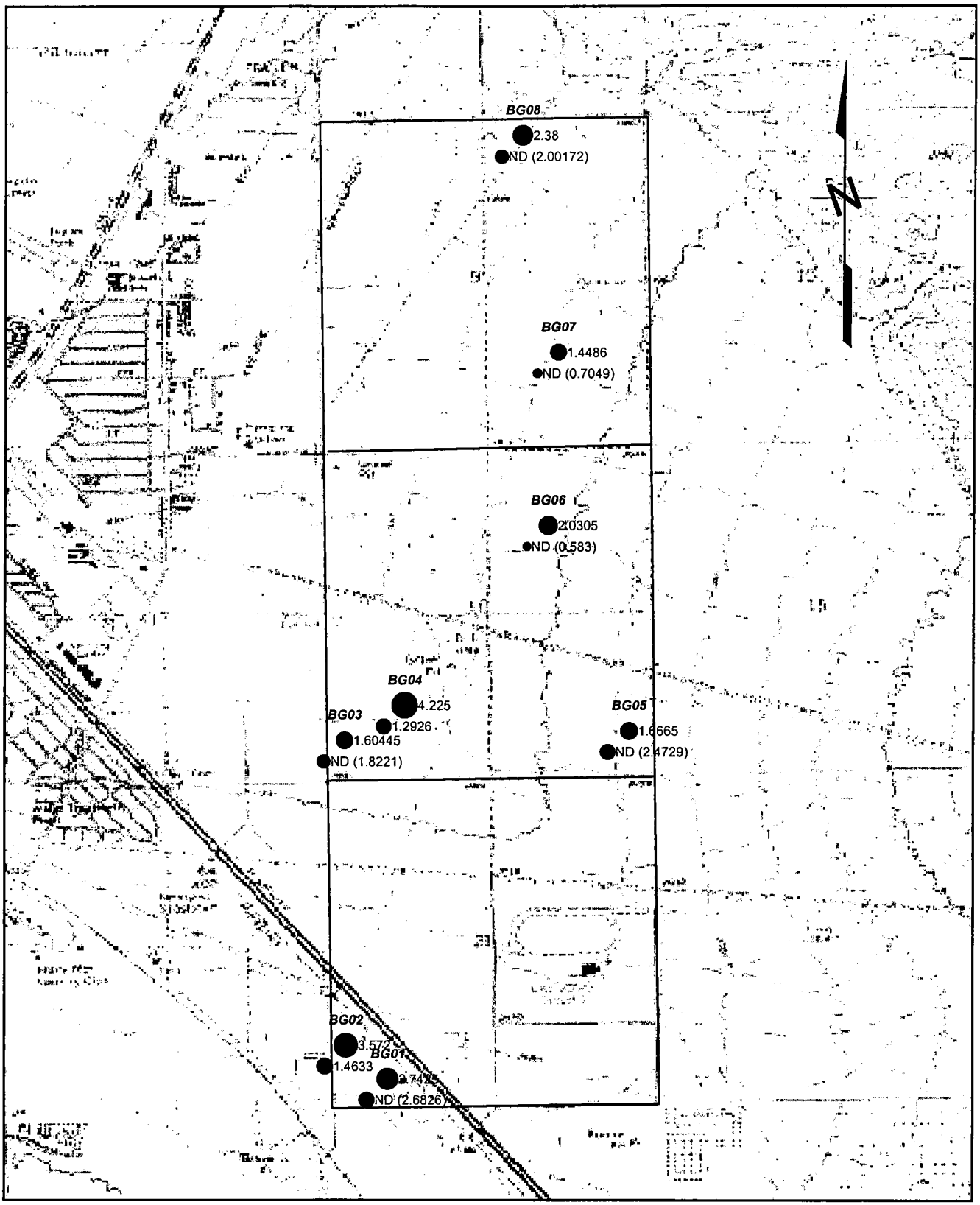
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Silver



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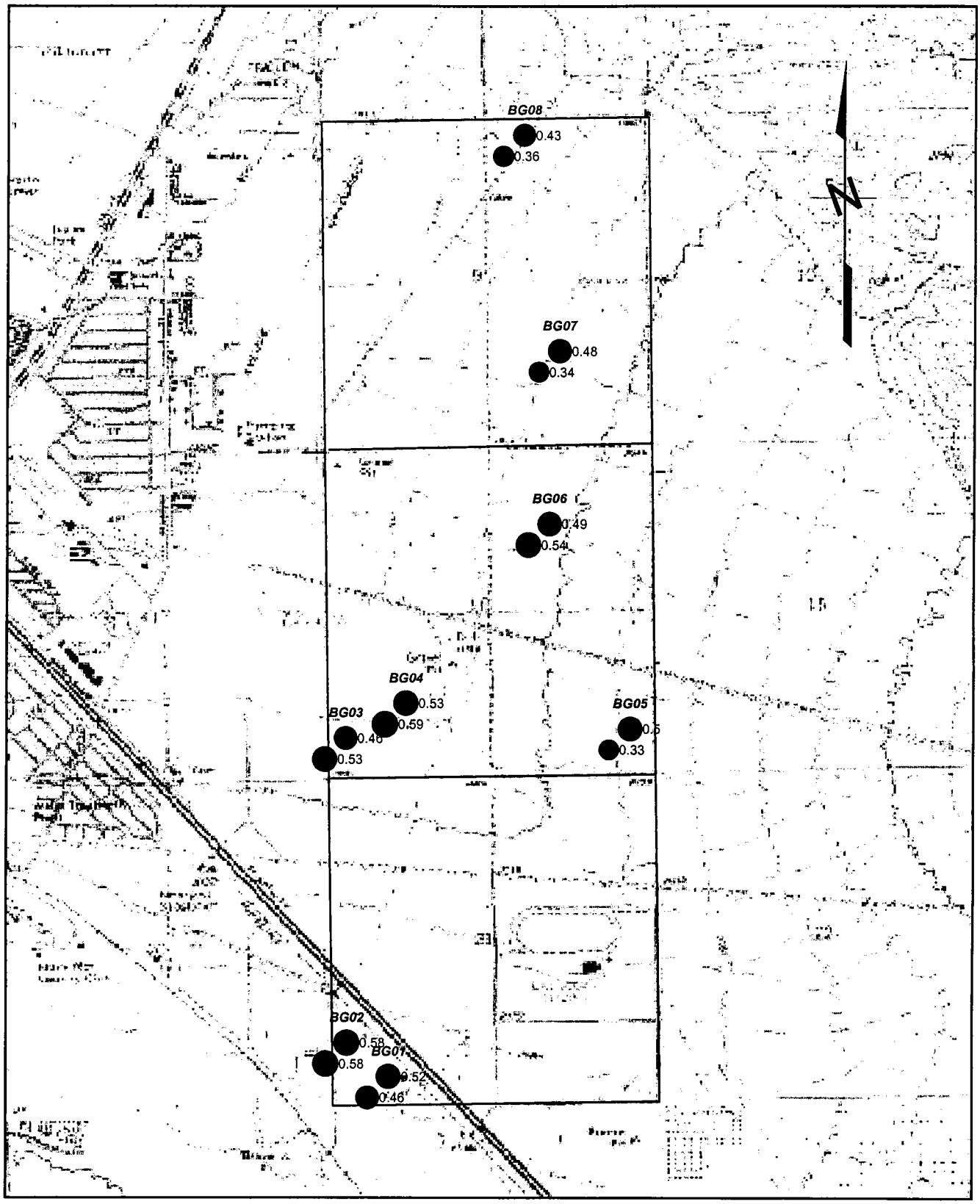
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
TEQ



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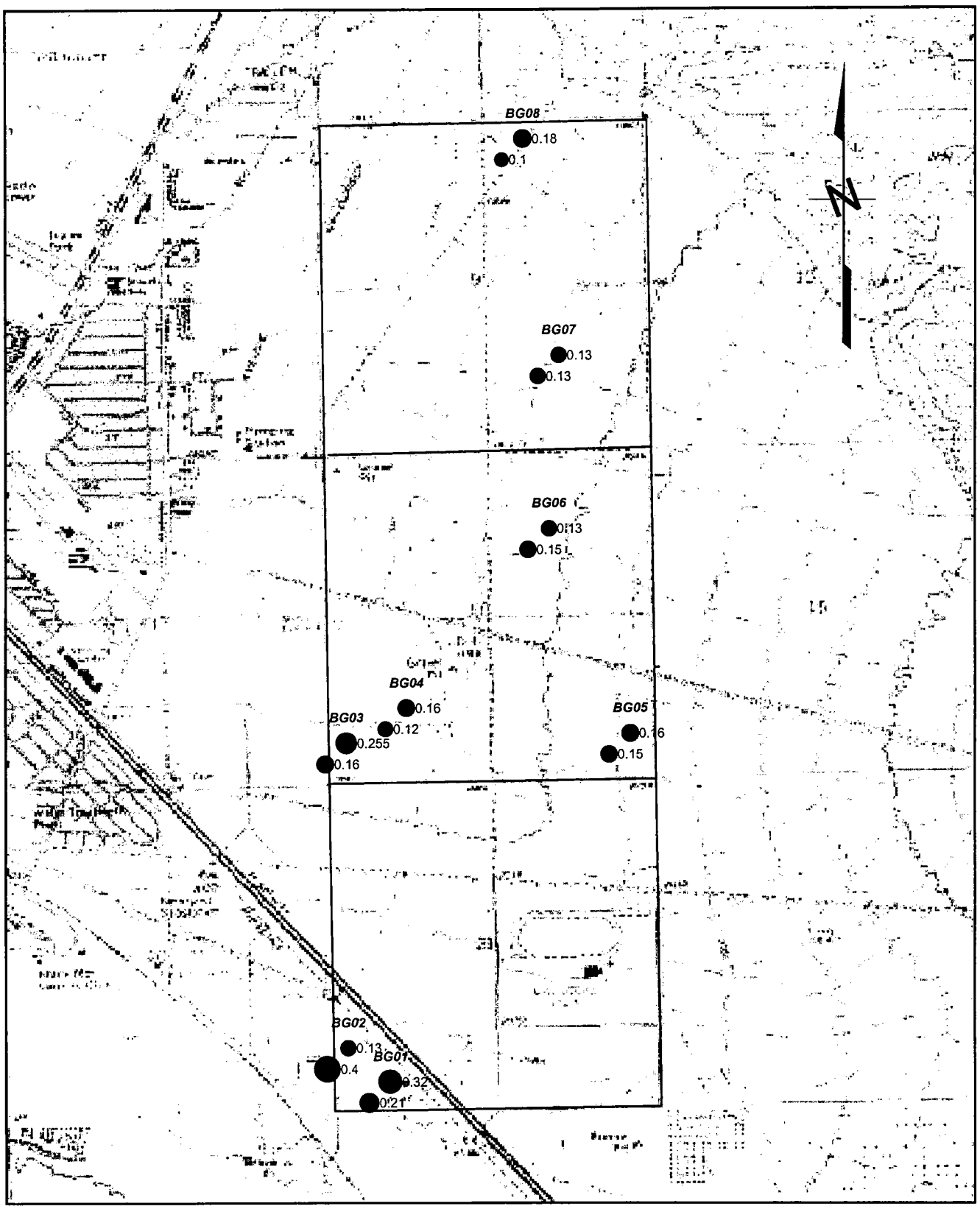
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Thallium 208



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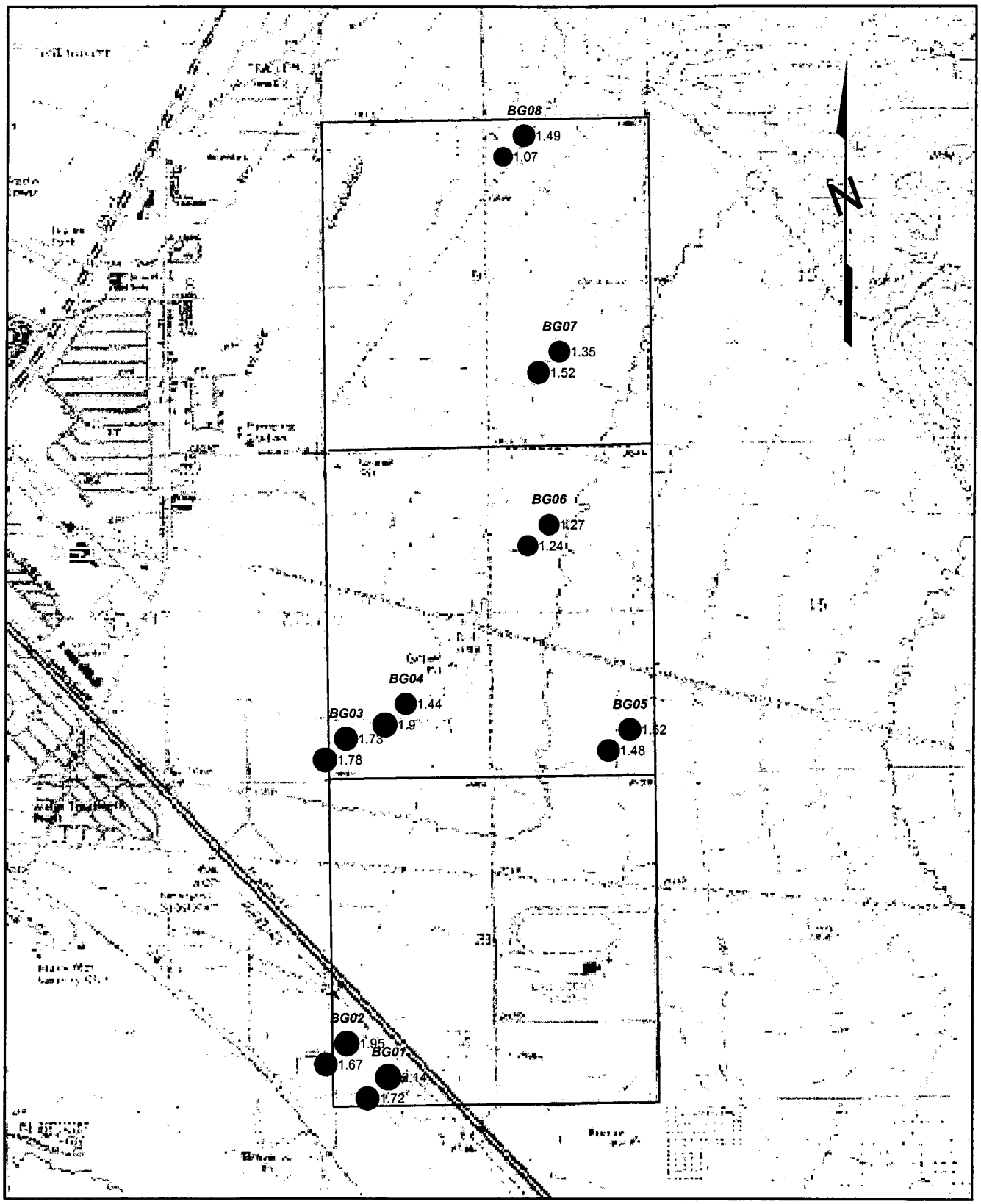
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Thallium



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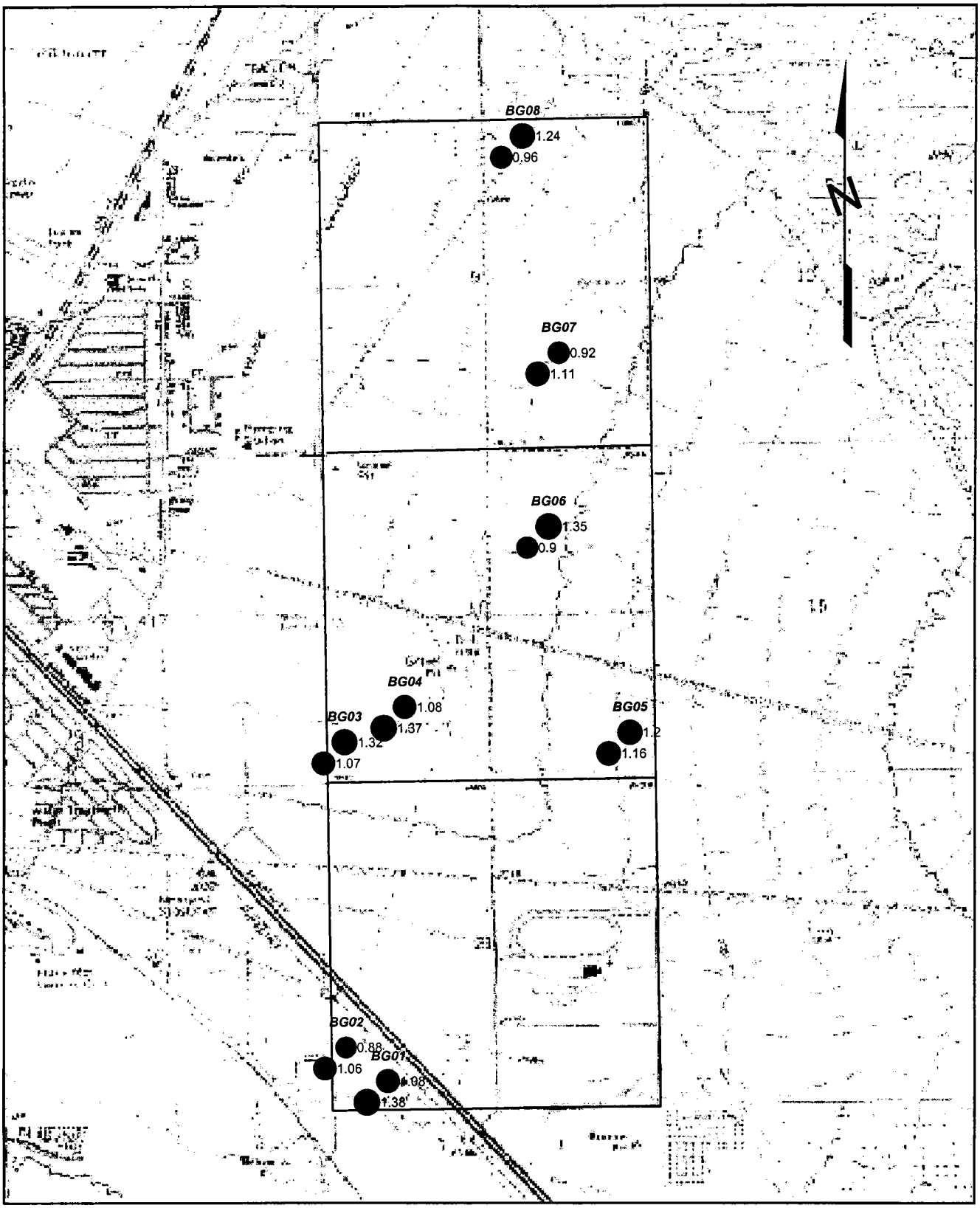
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Thorium 228



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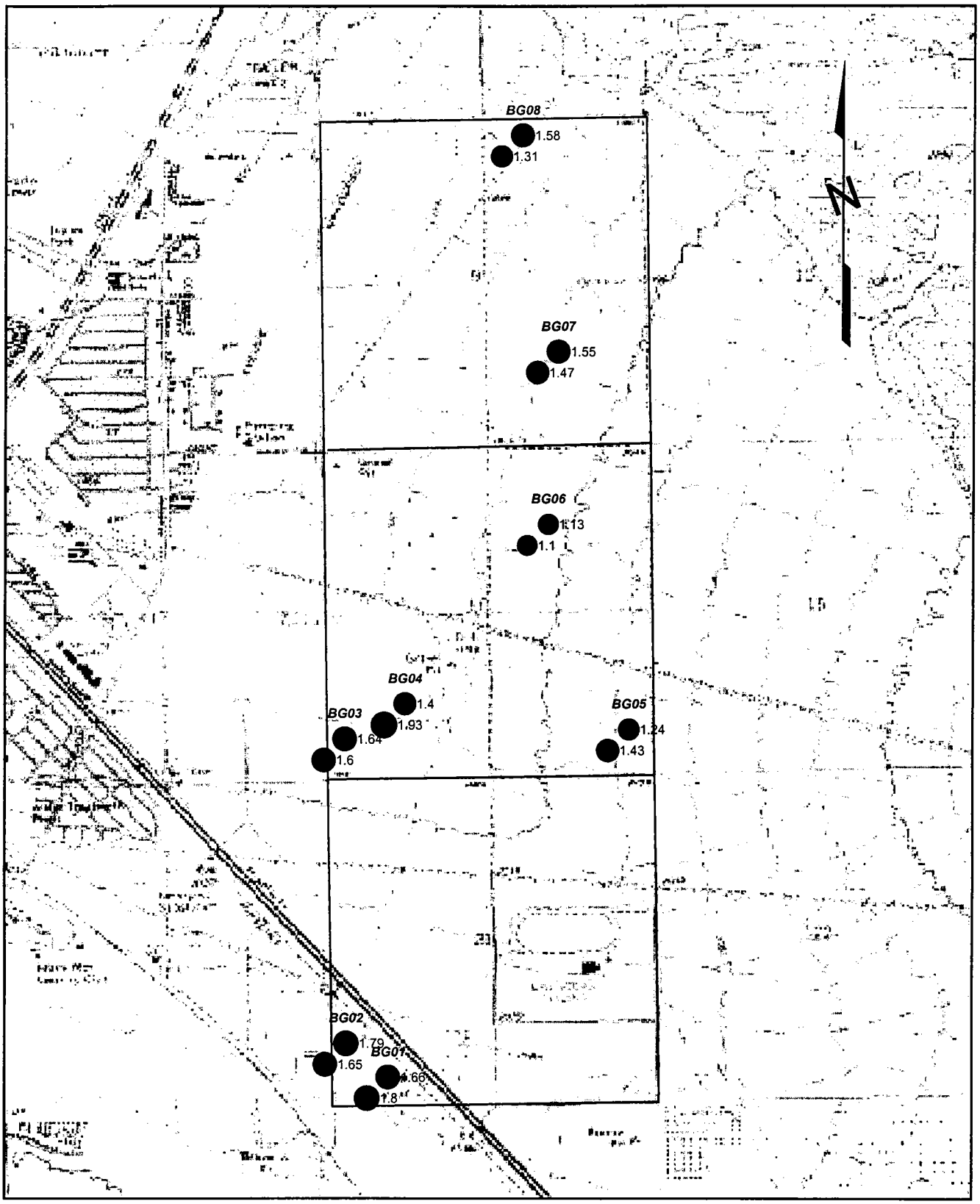
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Thorium 230



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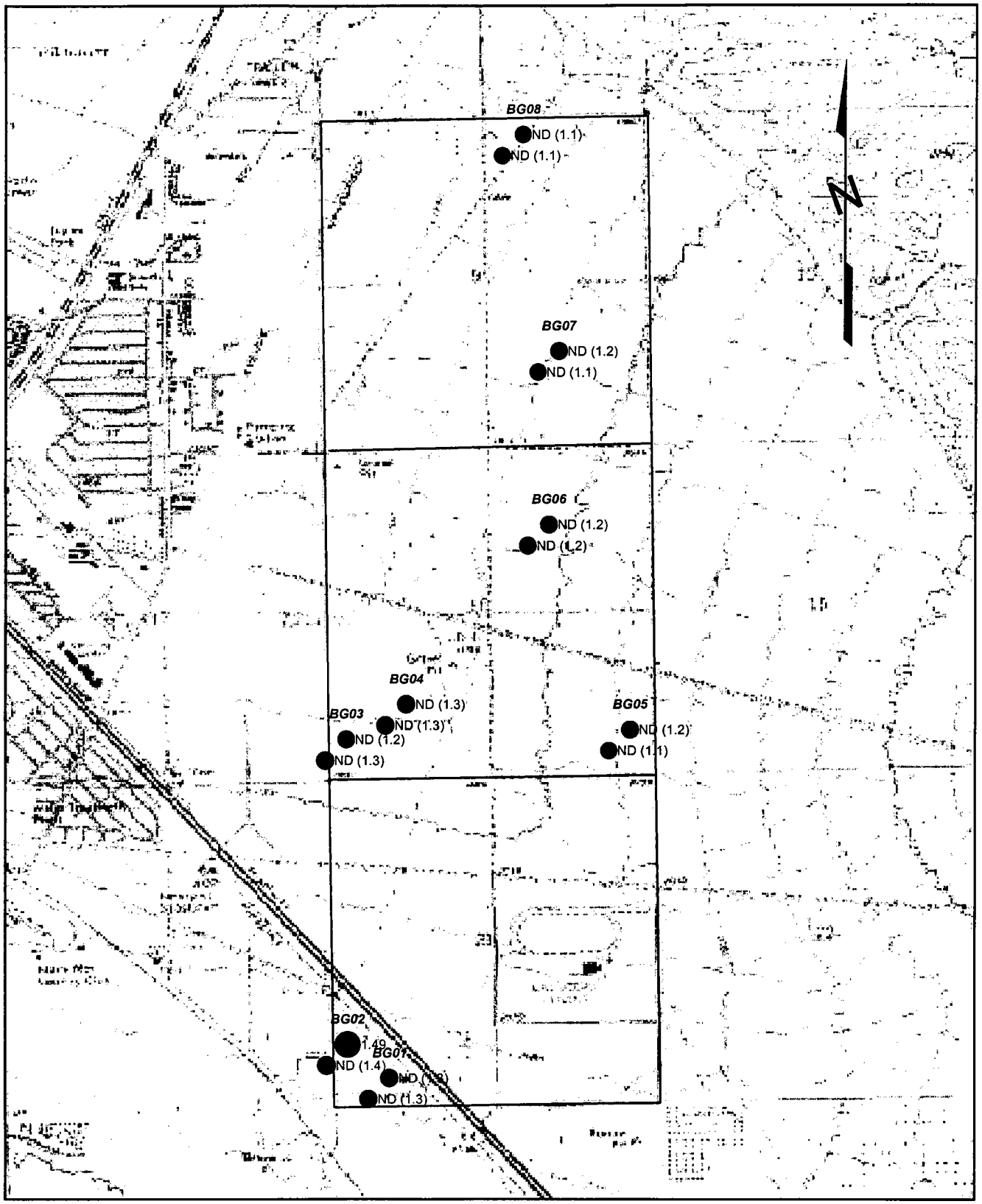
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Thorium 232



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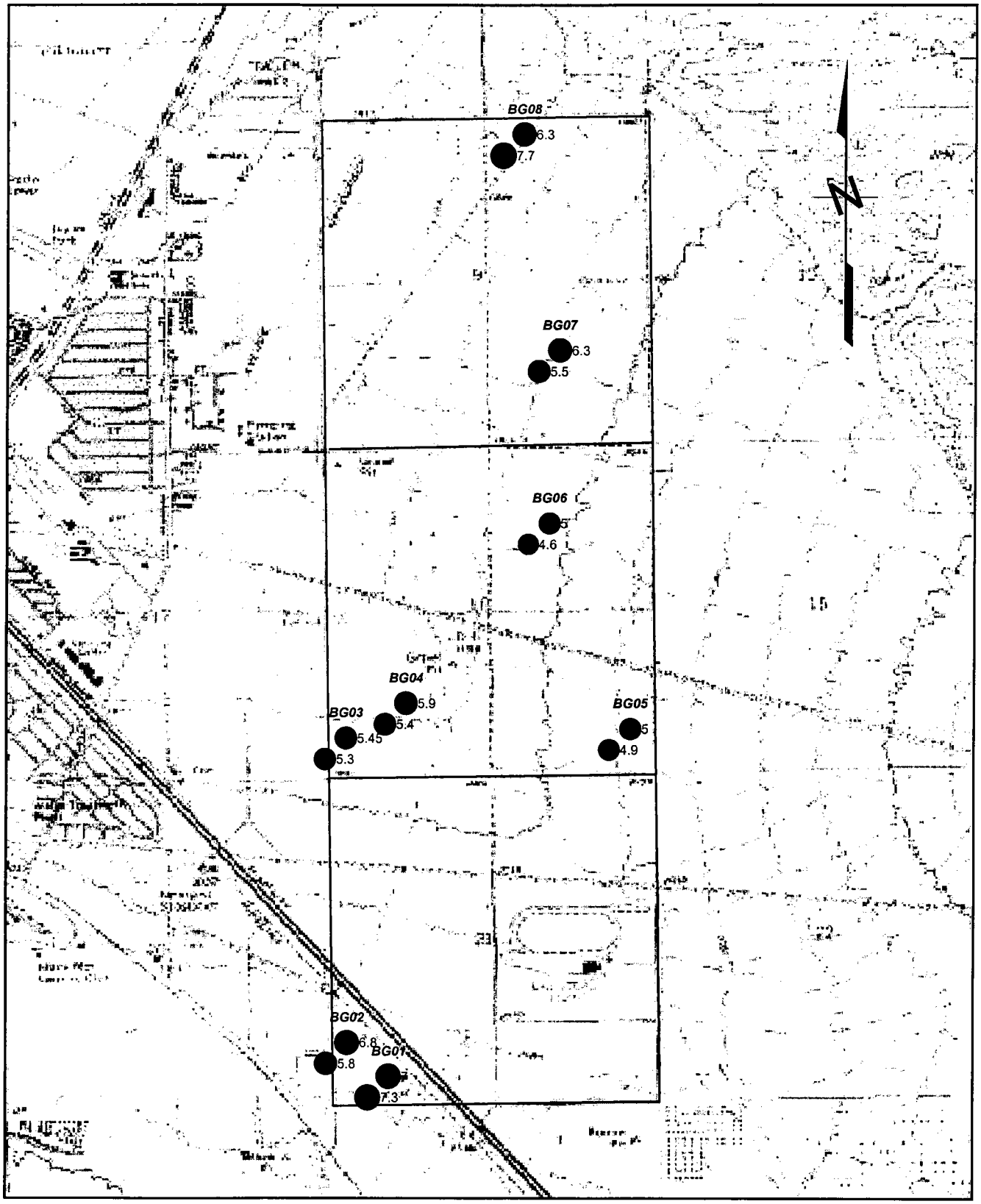
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Thorium 234



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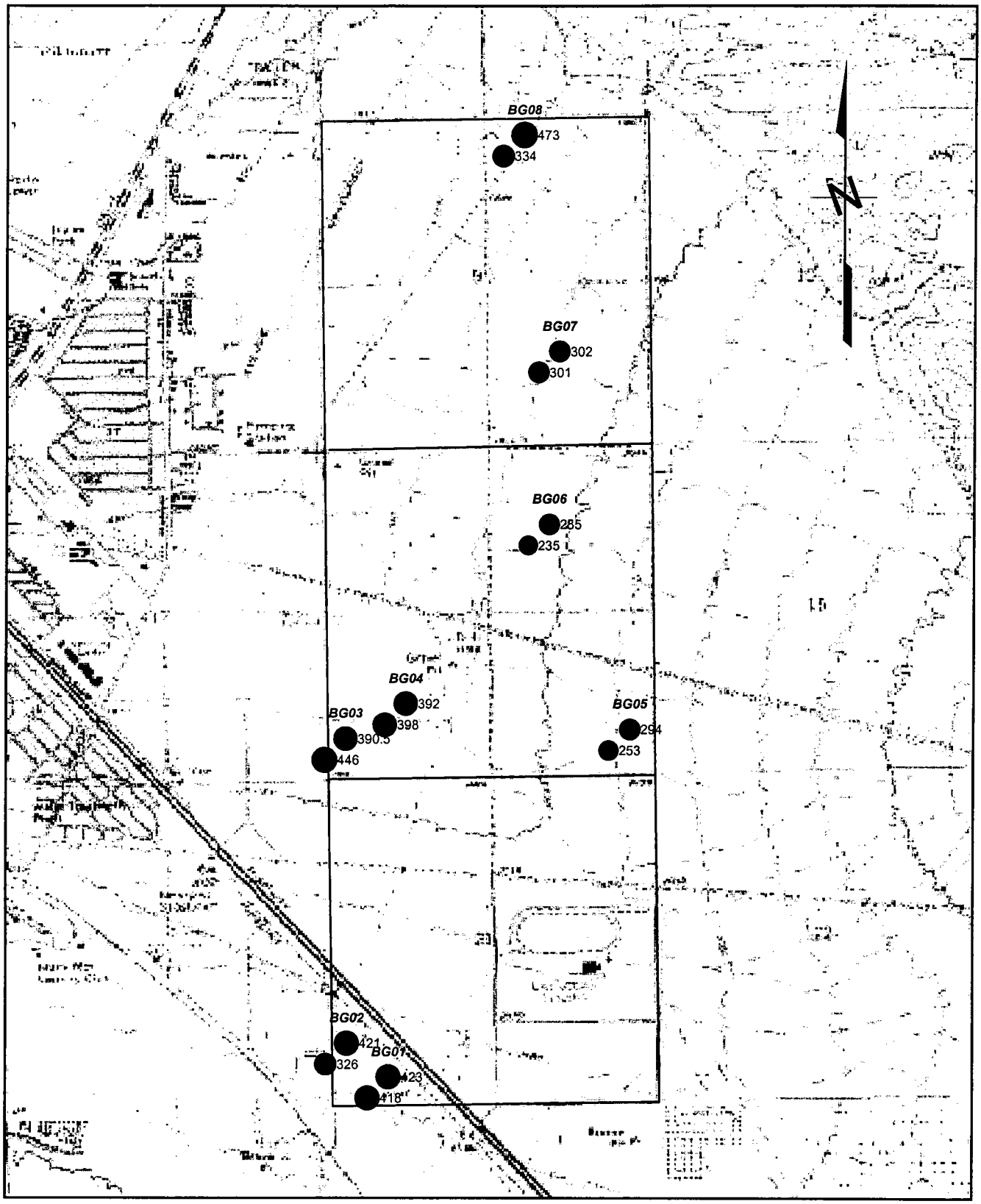
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Thorium



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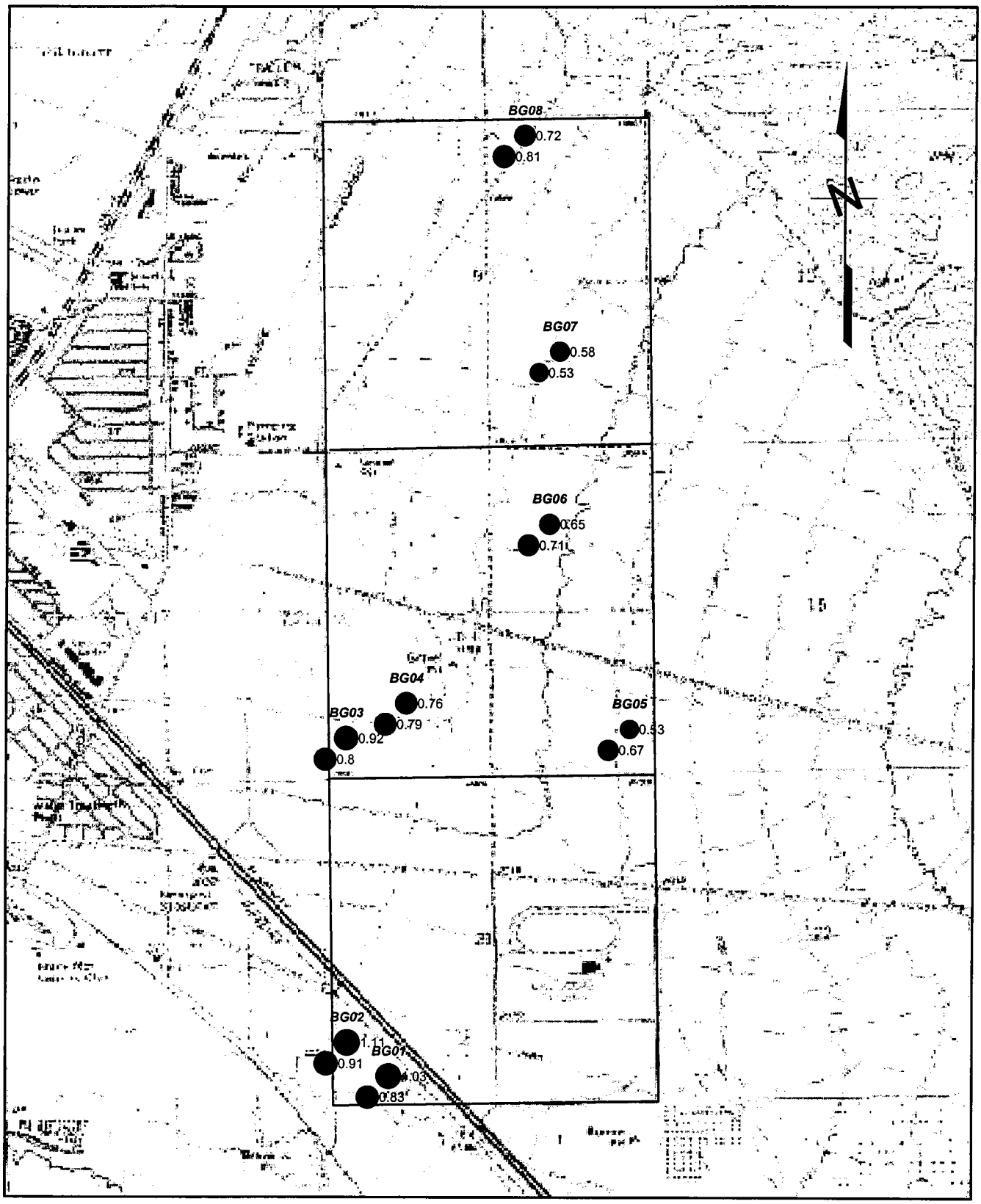
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Titanium



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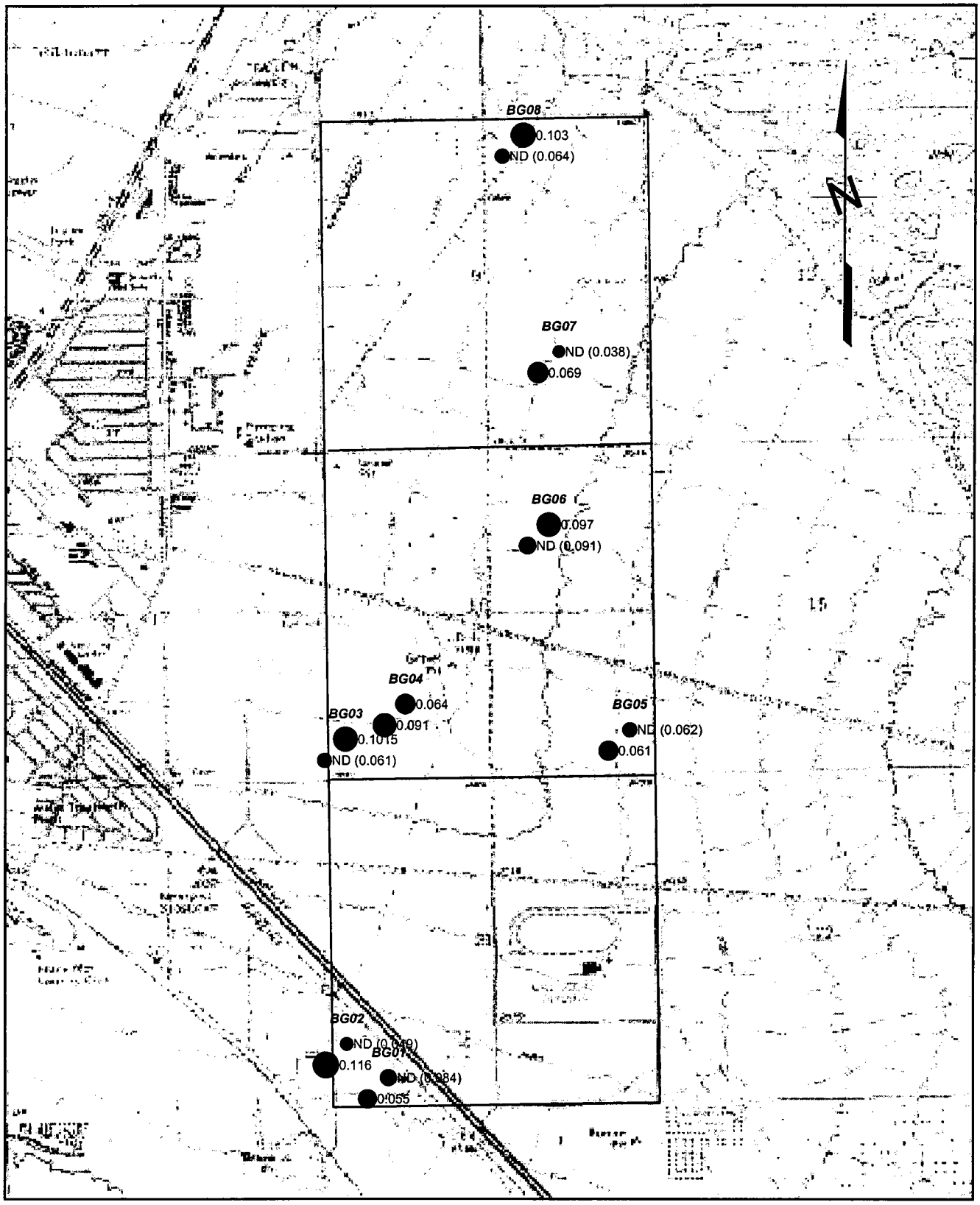
ENVIRON	Background Soil Sampling Results Henderson, Nevada	Chemical Uranium 234



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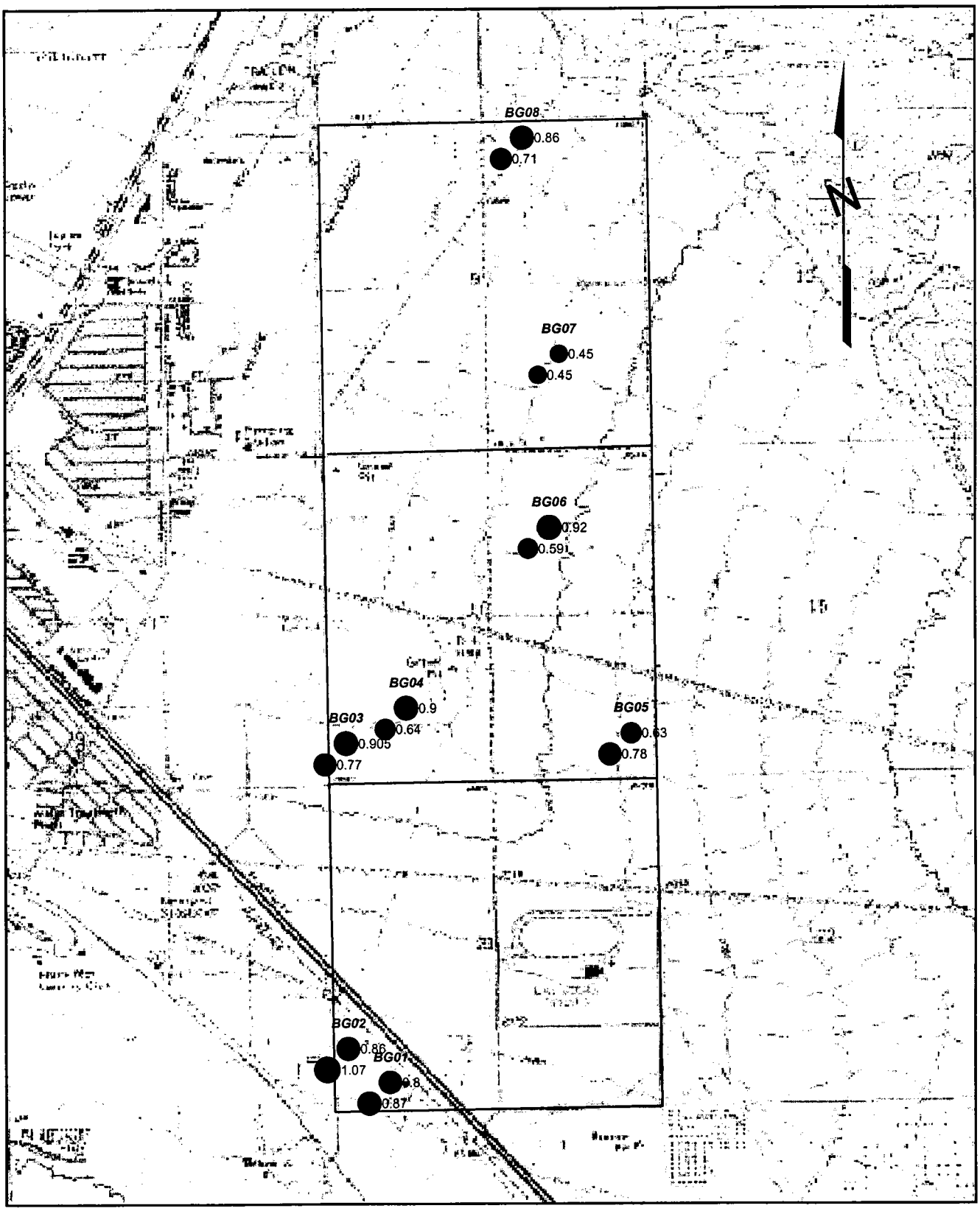
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Uranium 235



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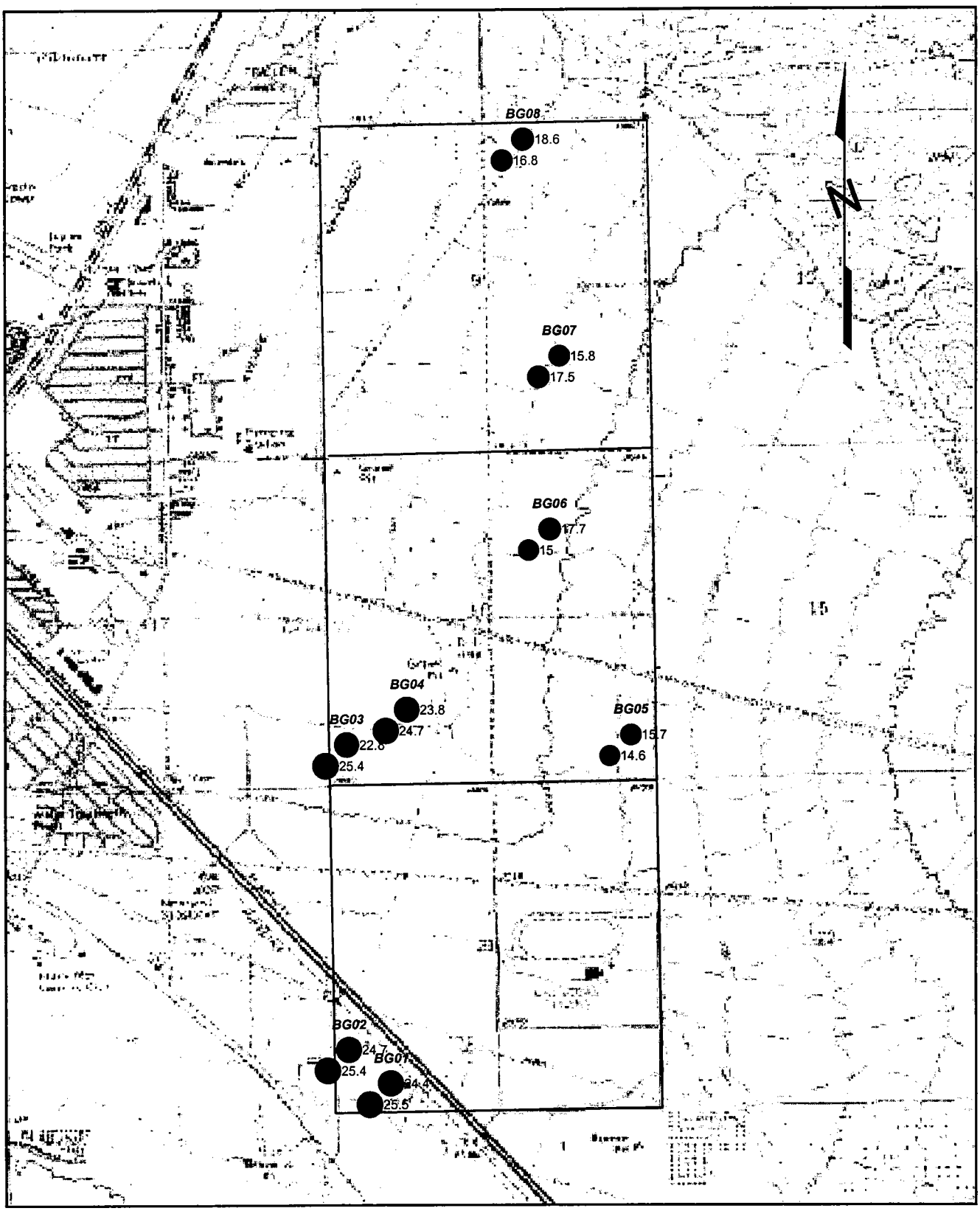
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Uranium 238



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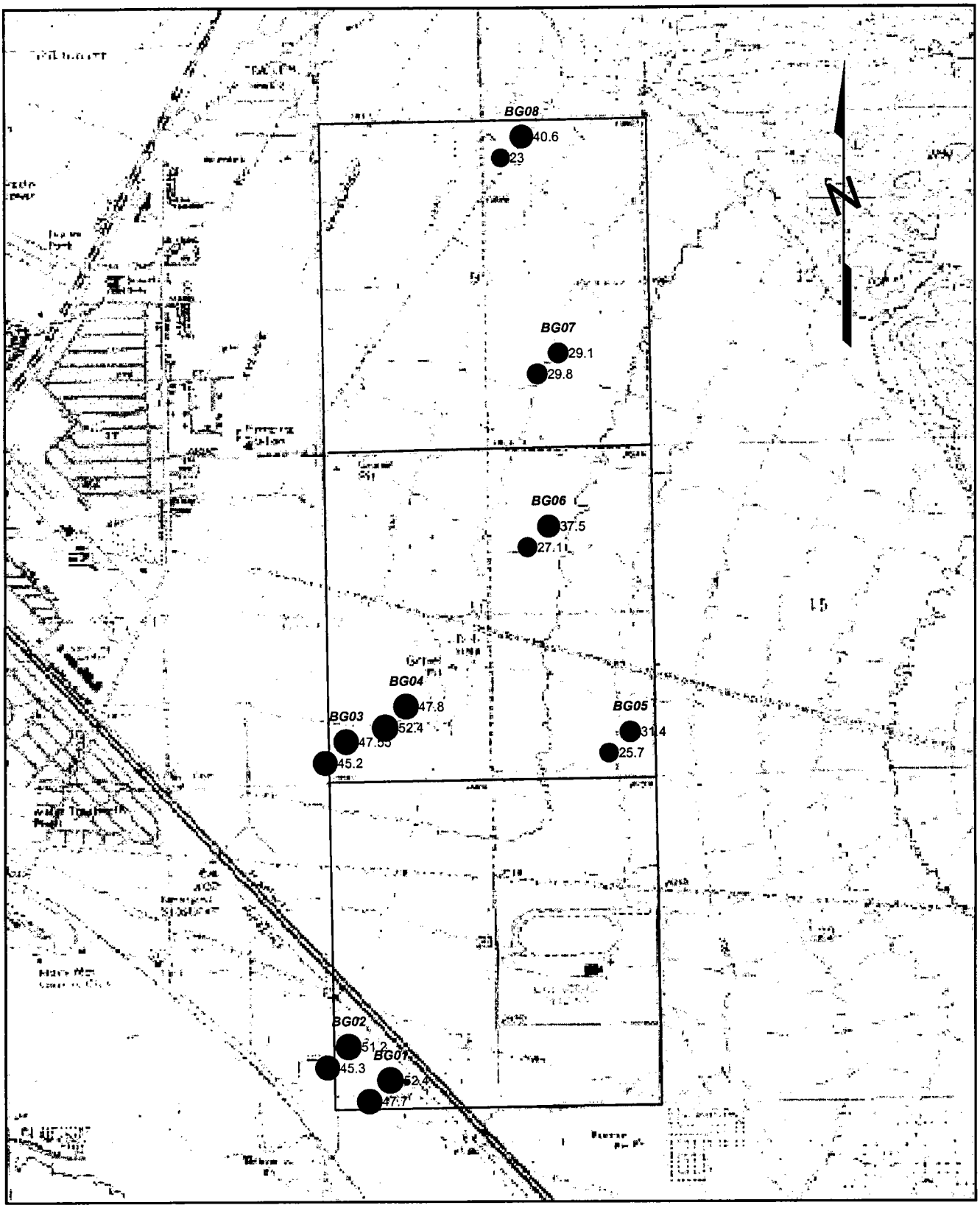
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Vanadium



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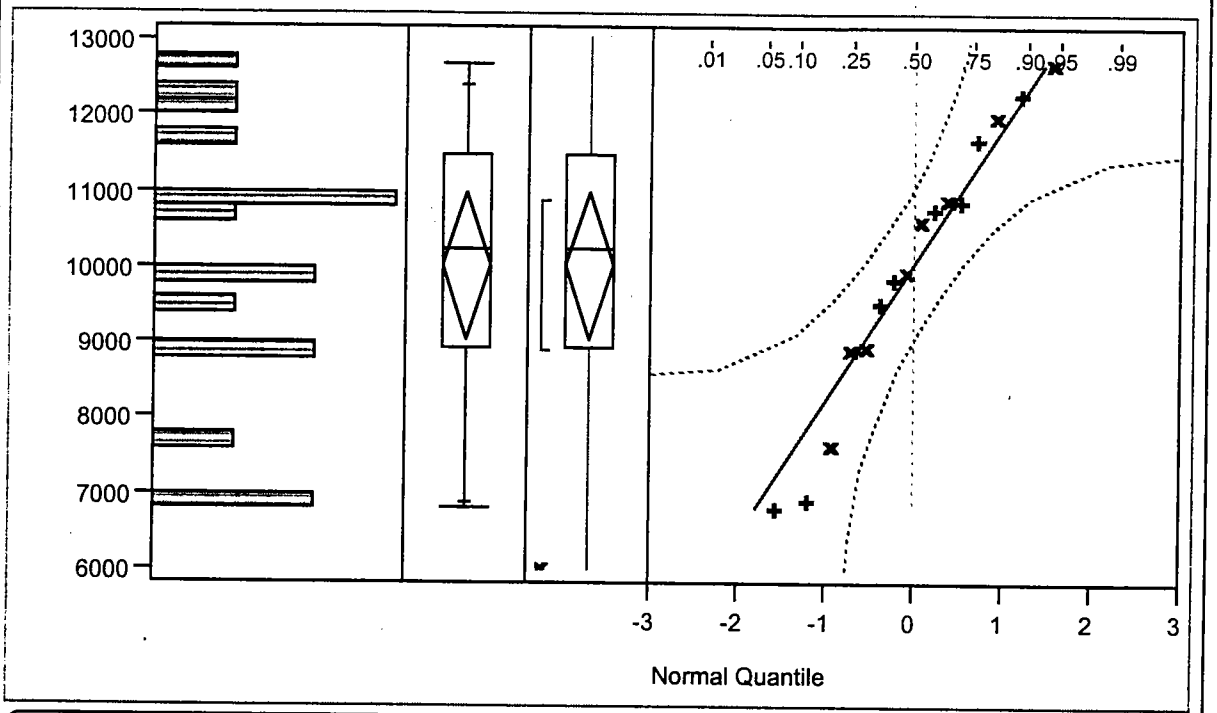
ENVIRON

Background Soil Sampling Results
Henderson, Nevada

Chemical
Zinc

APPENDIX E
STATISTICAL ANALYSES

Al



Quantiles

maximum	100.0%	12700
	99.5%	12700
	97.5%	12700
	90.0%	12420
quartile	75.0%	11500
median	50.0%	10275
quartile	25.0%	8938
	10.0%	6897
	2.5%	6820
	0.5%	6820
minimum	0.0%	6820

Moments

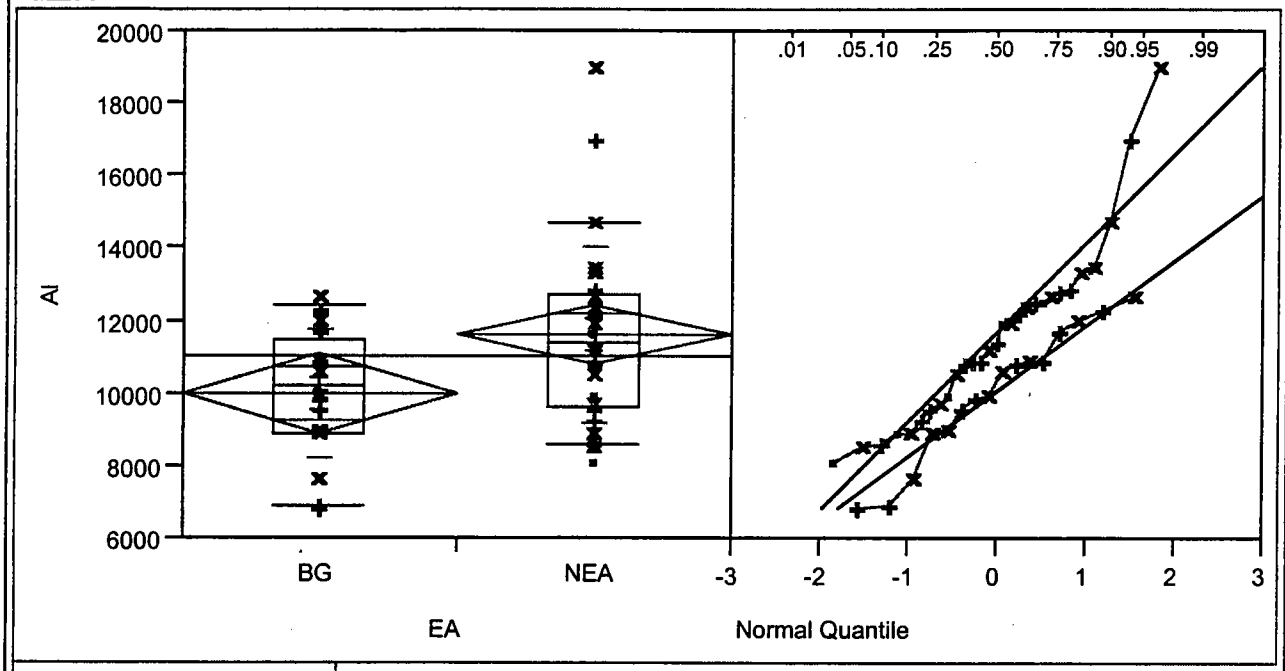
Mean	10036.25
Std Dev	1817.68
Std Error Mean	454.42
Upper 95% Mean	11004.82
Lower 95% Mean	9067.68
N	16.00
Sum Weights	16.00
Sum	160580.00
Variance	3303971.7
Skewness	-0.44
Kurtosis	-0.64
CV	18.11

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.949247	0.4664

AI By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	6820	6897	8937.5	10275	11500	12420	12700
NEA	8120	8650	9655	11400	12750	14700	19000

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	10036.3	1817.68	454.42
NEA	29	11607.2	2467.35	458.17

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	285	17.8125	-1.957
NEA	29	750	25.8621	1.957

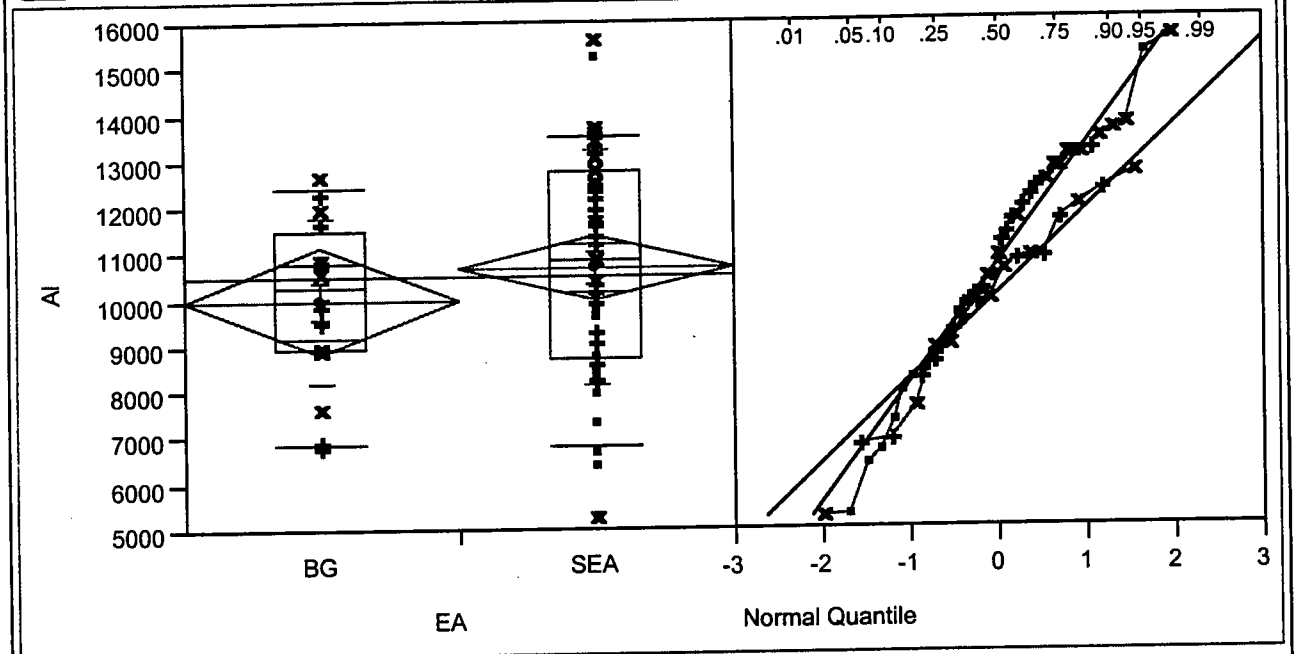
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
285	-1.95720	0.0503

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
3.8772	1	0.0489

Al By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	6820	6897	8937.5	10275	11500	12420	12700
SEA	5260	6836	8715	10900	12800	13560	15600

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	10036.3	1817.68	454.42
SEA	41	10697.3	2563.73	400.39

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	402.5	25.1563	-1.084
SEA	41	1250.5	30.5000	1.084

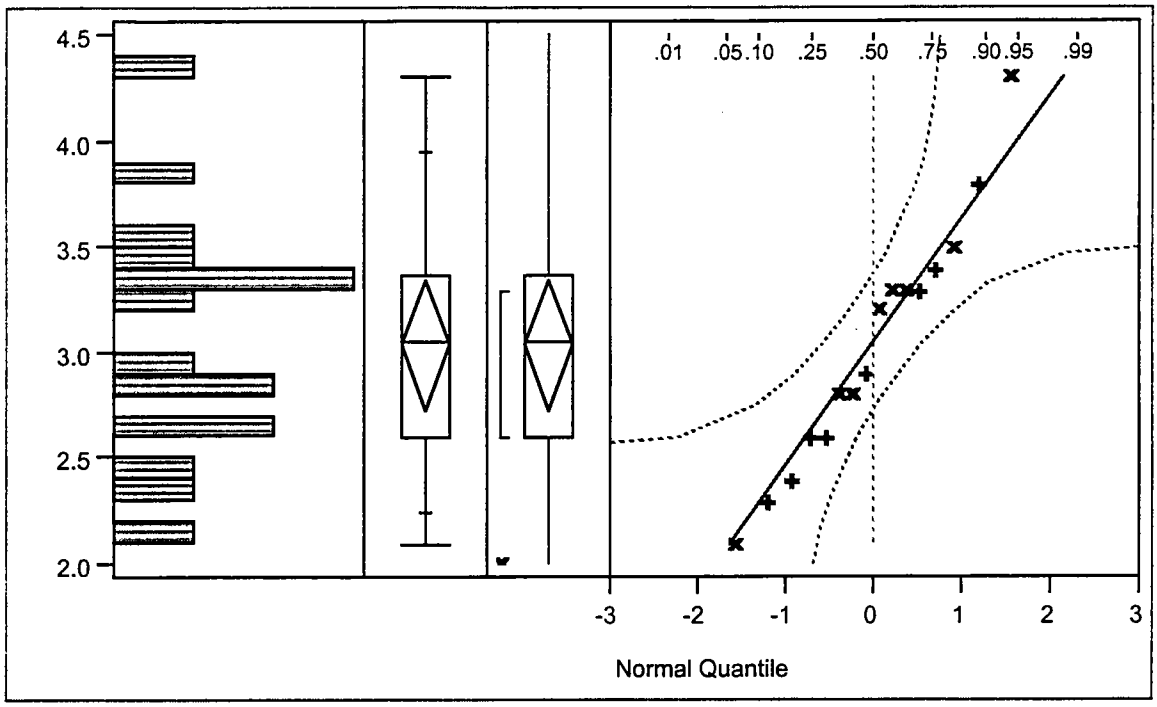
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
402.5	-1.08358	0.2786

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
1.1935	1	0.2746

As



Quantiles

maximum	100.0%	4.3000
	99.5%	4.3000
	97.5%	4.3000
	90.0%	3.9500
quartile	75.0%	3.3750
median	50.0%	3.0500
quartile	25.0%	2.6000
	10.0%	2.2400
	2.5%	2.1000
	0.5%	2.1000
minimum	0.0%	2.1000

Moments

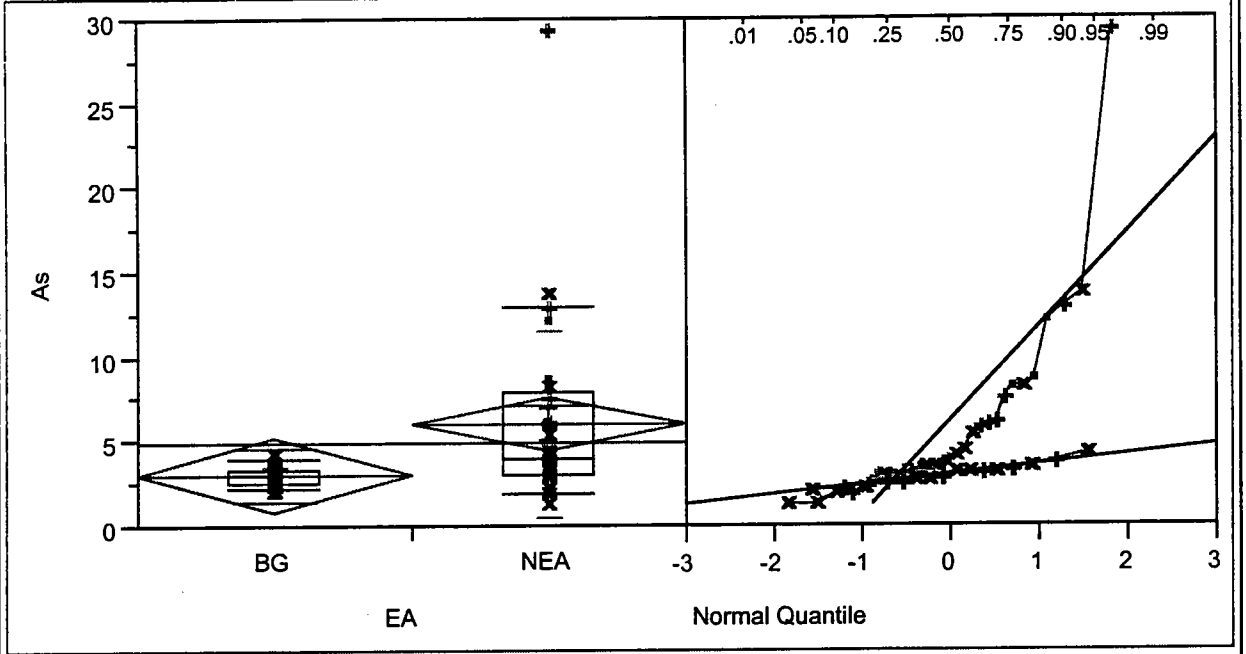
Mean	3.03750
Std Dev	0.58295
Std Error Mean	0.14574
Upper 95% Mean	3.34813
Lower 95% Mean	2.72687
N	16.00000
Sum Weights	16.00000
Sum	48.60000
Variance	0.33983
Skewness	0.37678
Kurtosis	-0.02493
CV	19.19184

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.971722	0.8347

As By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	2.1	2.24	2.6	3.05	3.375	3.95	4.3
NEA	1.3	2	3.1	4.1	7.95	13	29.5

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	3.03750	0.58295	0.1457
NEA	29	6.09655	5.62231	1.0440

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	264	16.5000	-2.456
NEA	29	771	26.5862	2.456

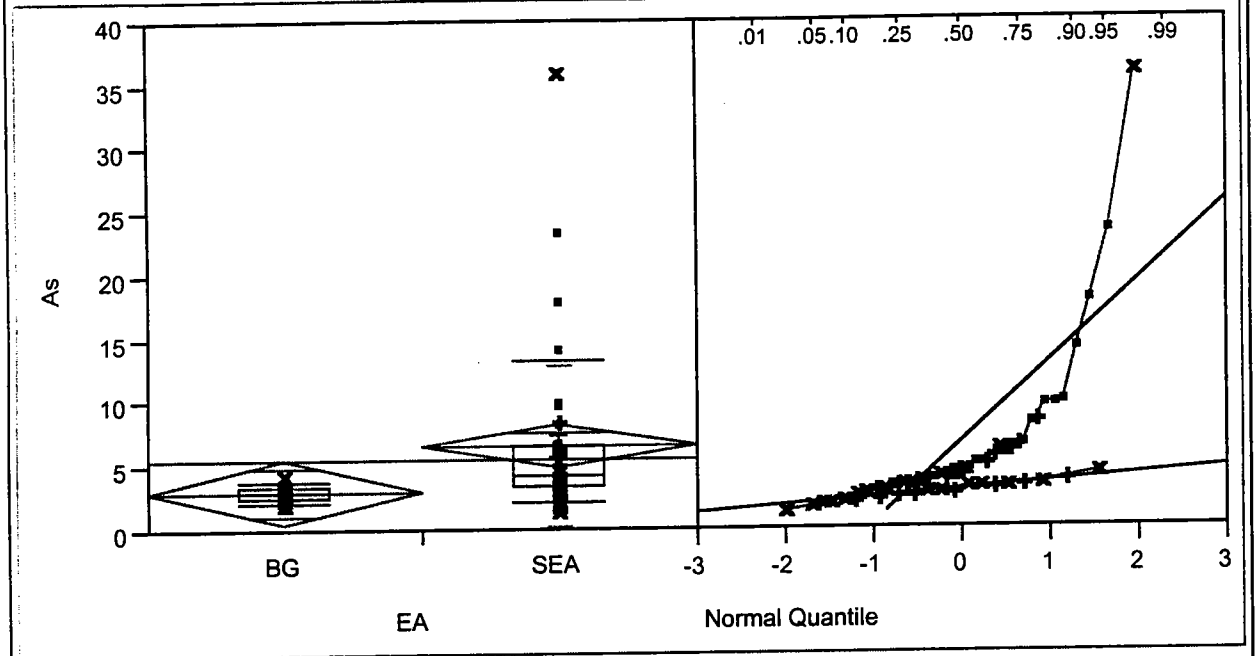
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
264	-2.45588	0.0141

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
6.0898	1	0.0136

As By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	2.1	2.24	2.6	3.05	3.375	3.95	4.3
SEA	1.3	2.3	3.4	4.4	6.7	13.46	35.9

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	3.03750	0.58295	0.14574
SEA	41	6.57317	6.39475	0.99869

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	261	16.3125	-3.598
SEA	41	1392	33.9512	3.598

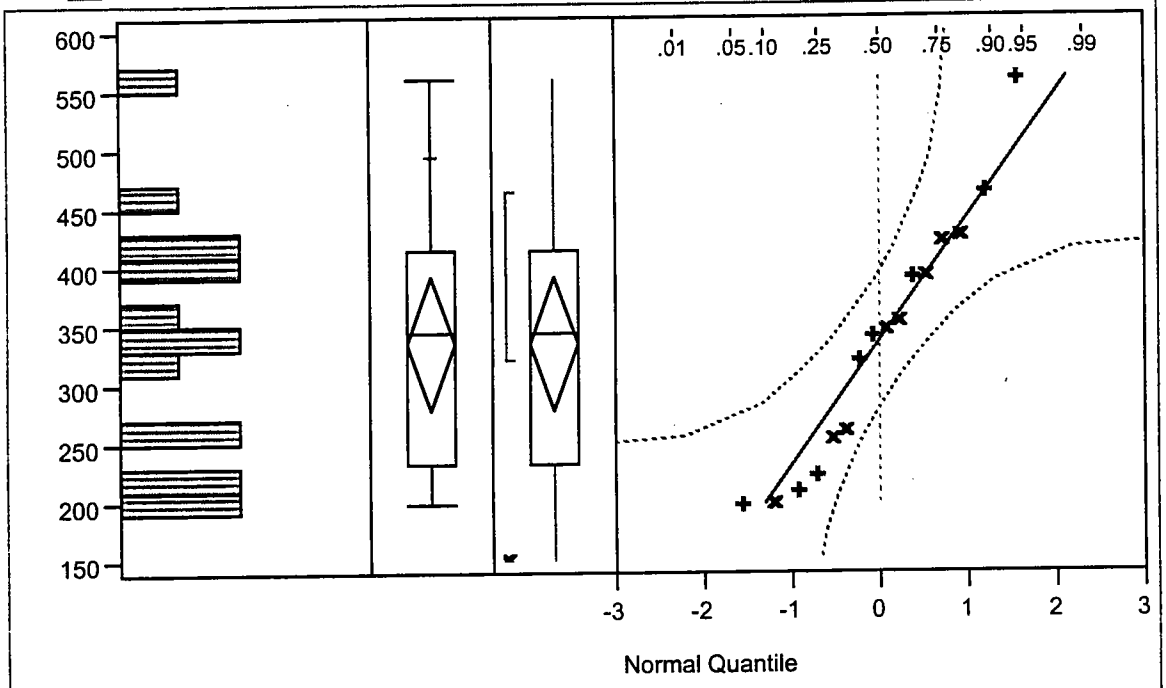
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
261	-3.59806	0.0003

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
13.0100	1	0.0003

Ba



Quantiles

maximum	100.0%	561.00
	99.5%	561.00
	97.5%	561.00
	90.0%	493.80
quartile	75.0%	414.75
median	50.0%	345.00
quartile	25.0%	232.00
	10.0%	199.40
	2.5%	198.00
	0.5%	198.00
minimum	0.0%	198.00

Moments

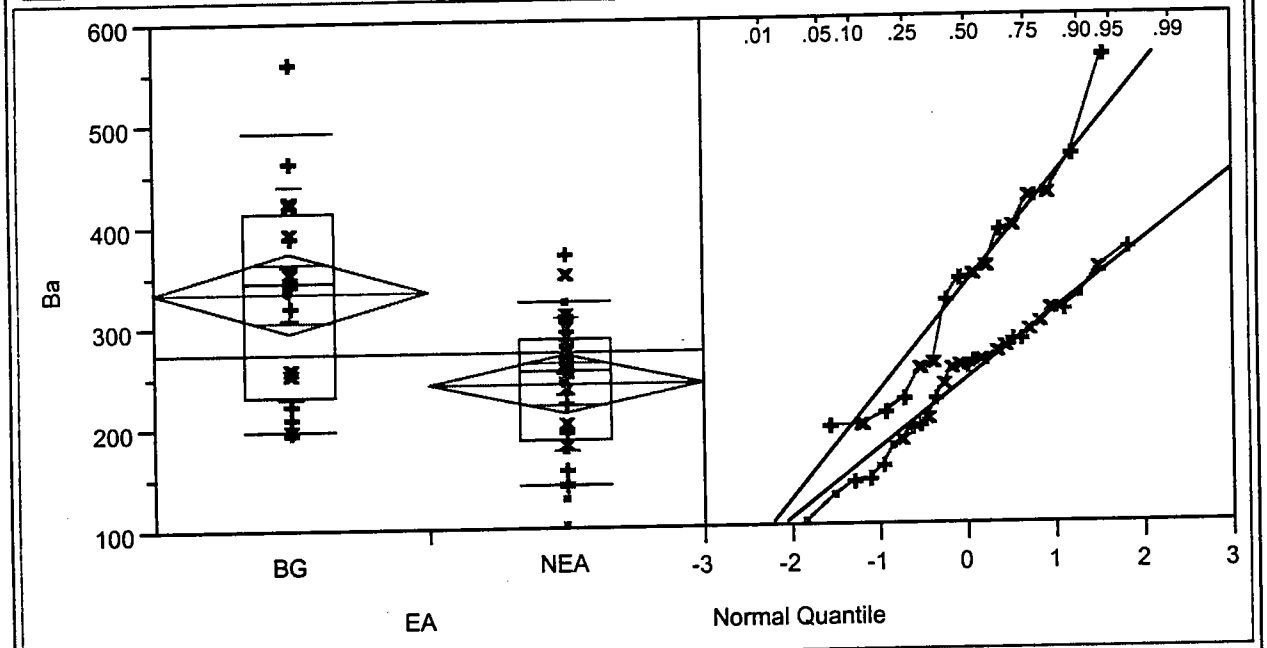
Mean	335.6875
Std Dev	105.7908
Std Error Mean	26.4477
Upper 95% Mean	392.0592
Lower 95% Mean	279.3158
N	16.0000
Sum Weights	16.0000
Sum	5371.0000
Variance	11191.696
Skewness	0.3823
Kurtosis	-0.3927
CV	31.5147

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.947095	0.4357

Ba By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	198	199.4	232	345	414.75	493.8	561
NEA	103	143	188.5	256	288	324	372

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	335.688	105.791	26.448
NEA	29	242.448	67.975	12.623

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	482	30.1250	2.692
NEA	29	553	19.0690	-2.692

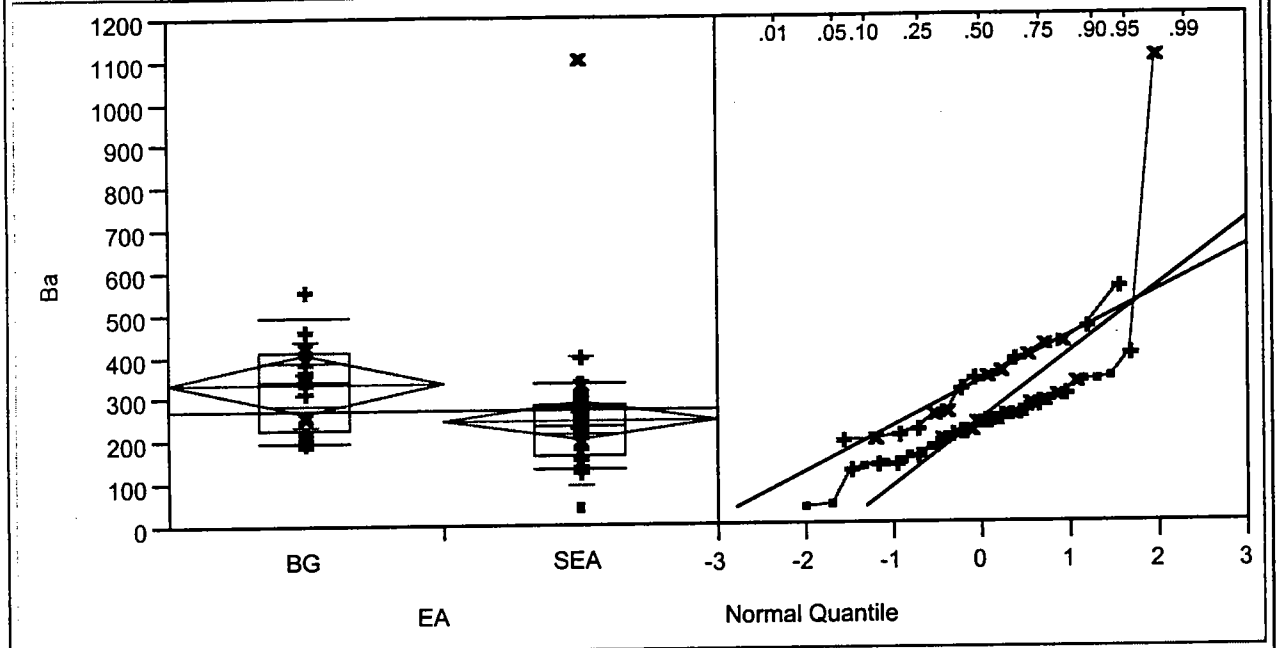
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
482	2.69157	0.0071

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
7.3085	1	0.0069

Ba By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	198	199.4	232	345	414.75	493.8	561
SEA	43.8	137.6	164.5	236	286.5	339.8	1100

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	335.688	105.791	26.448
SEA	41	247.561	157.200	24.550

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	637.5	39.8438	3.073
SEA	41	1015.5	24.7683	-3.073

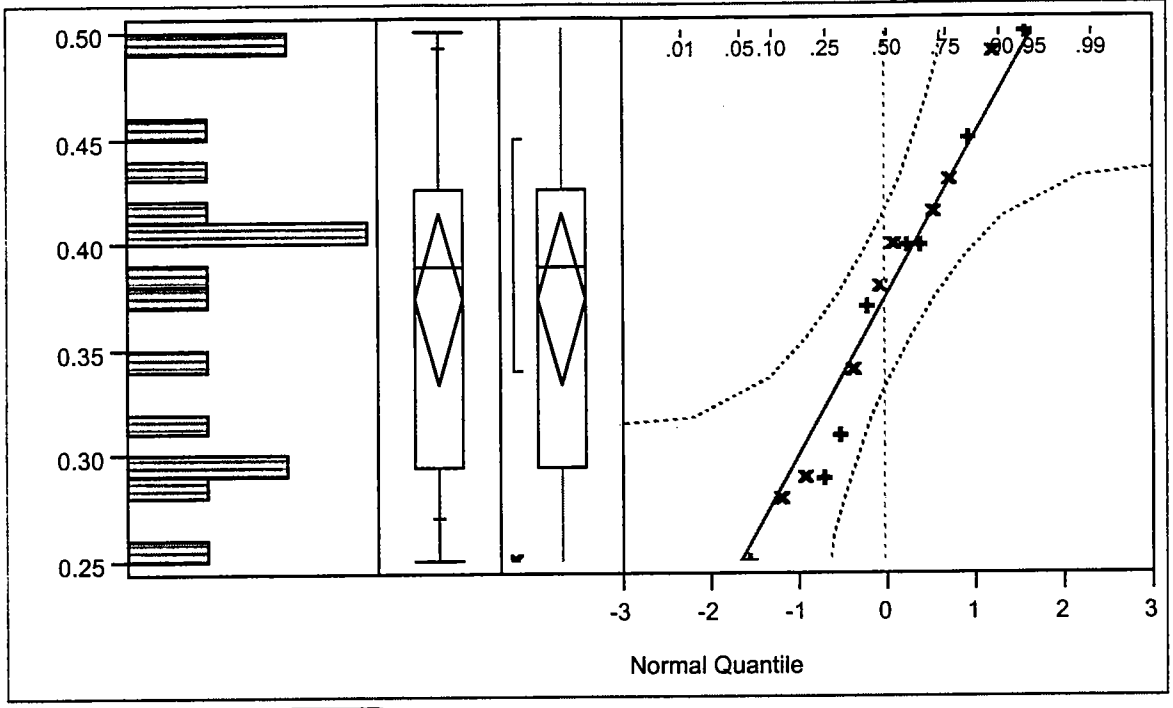
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
637.5	3.07250	0.0021

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
9.4949	1	0.0021

Be



Quantiles

maximum	100.0%	0.50000
	99.5%	0.50000
	97.5%	0.50000
	90.0%	0.49300
quartile	75.0%	0.42625
median	50.0%	0.39000
quartile	25.0%	0.29500
	10.0%	0.27100
	2.5%	0.25000
	0.5%	0.25000
minimum	0.0%	0.25000

Moments

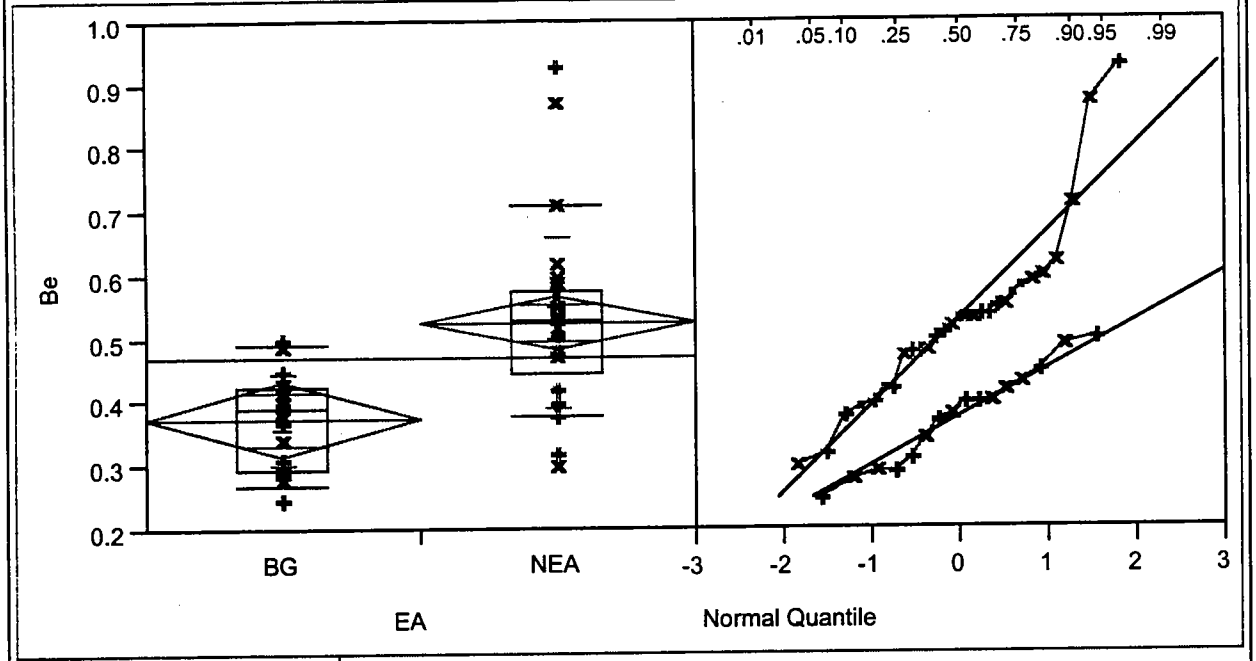
Mean	0.37469
Std Dev	0.07553
Std Error Mean	0.01888
Upper 95% Mean	0.41493
Lower 95% Mean	0.33444
N	16.00000
Sum Weights	16.00000
Sum	5.99500
Variance	0.00570
Skewness	-0.01819
Kurtosis	-0.91462
CV	20.15833

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.959390	0.6280

Be By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.25	0.271	0.295	0.39	0.42625	0.493	0.5
NEA	0.3	0.38	0.445	0.53	0.575	0.71	0.93

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.374688	0.075531	0.01888
NEA	29	0.527931	0.136575	0.02536

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	198.5	12.4063	-4.010
NEA	29	836.5	28.8448	4.010

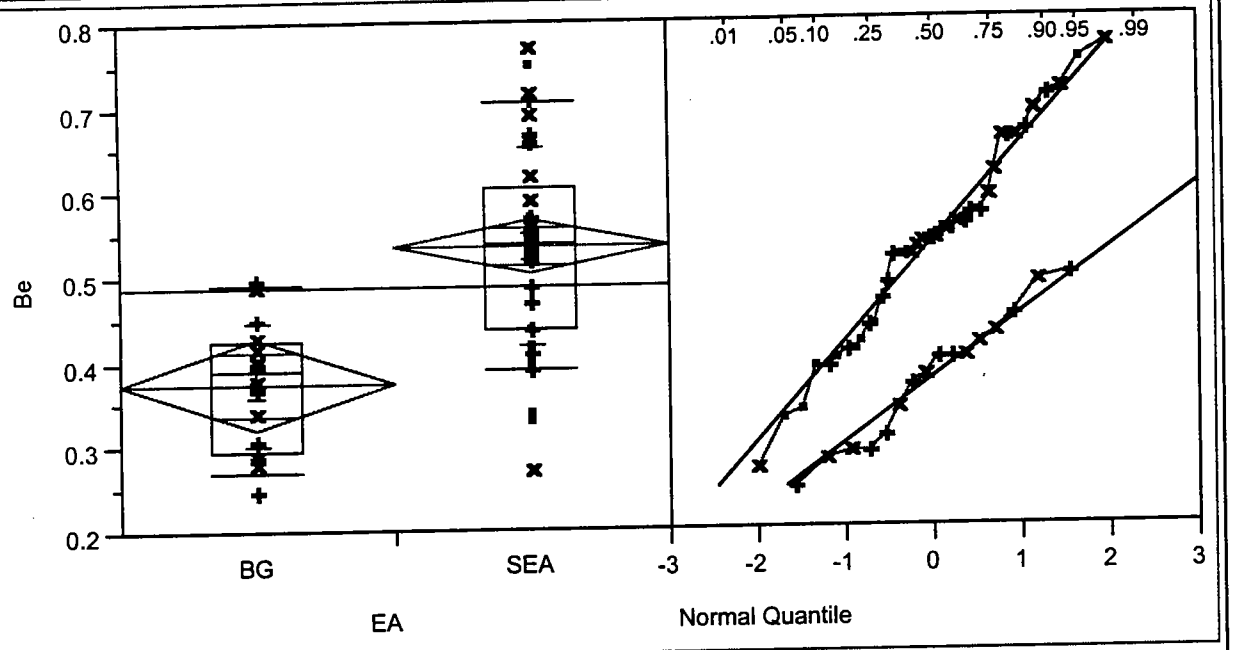
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
198.5	-4.01036	<.0001

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
16.1783	1	<.0001

Be By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.25	0.271	0.295	0.39	0.42625	0.493	0.5
SEA	0.27	0.39	0.44	0.54	0.605	0.706	0.77

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.374688	0.075531	0.01888
SEA	41	0.535122	0.117236	0.01831

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	218.5	13.6563	-4.354
SEA	41	1434.5	34.9878	4.354

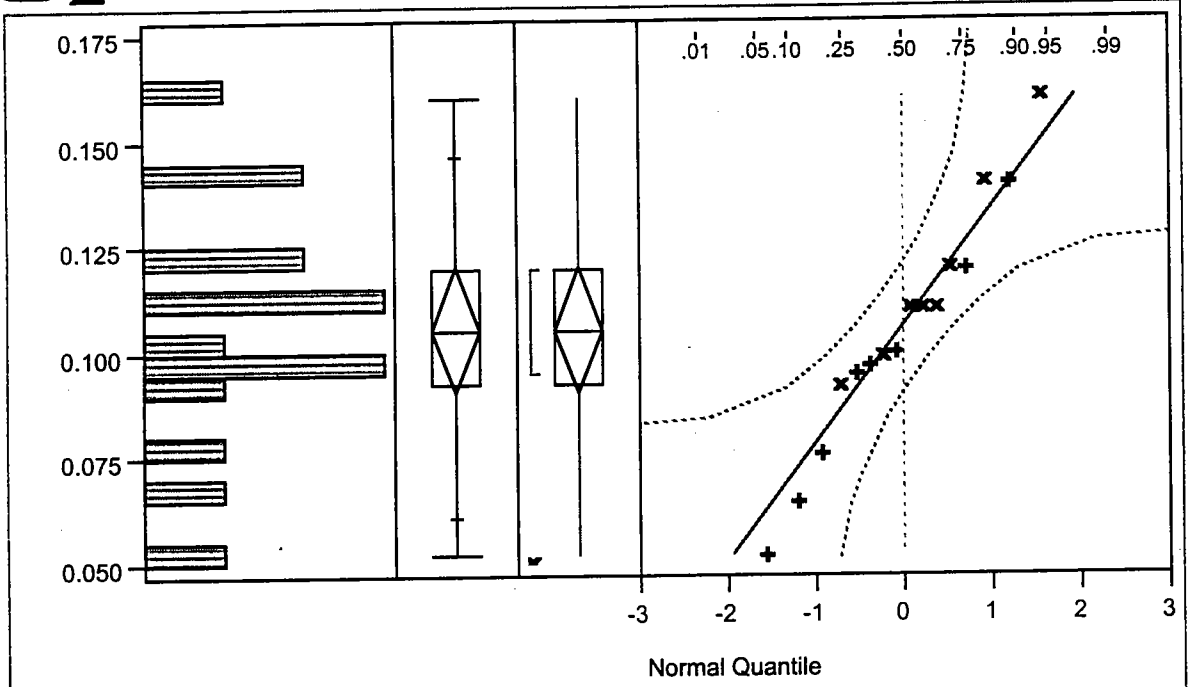
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
218.5	-4.35405	<.0001

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
19.0352	1	<.0001

Cd



Quantiles

maximum	100.0%	0.16000
	99.5%	0.16000
	97.5%	0.16000
	90.0%	0.14600
quartile	75.0%	0.12000
median	50.0%	0.10500
quartile	25.0%	0.09275
	10.0%	0.06110
	2.5%	0.05200
	0.5%	0.05200
minimum	0.0%	0.05200

Moments

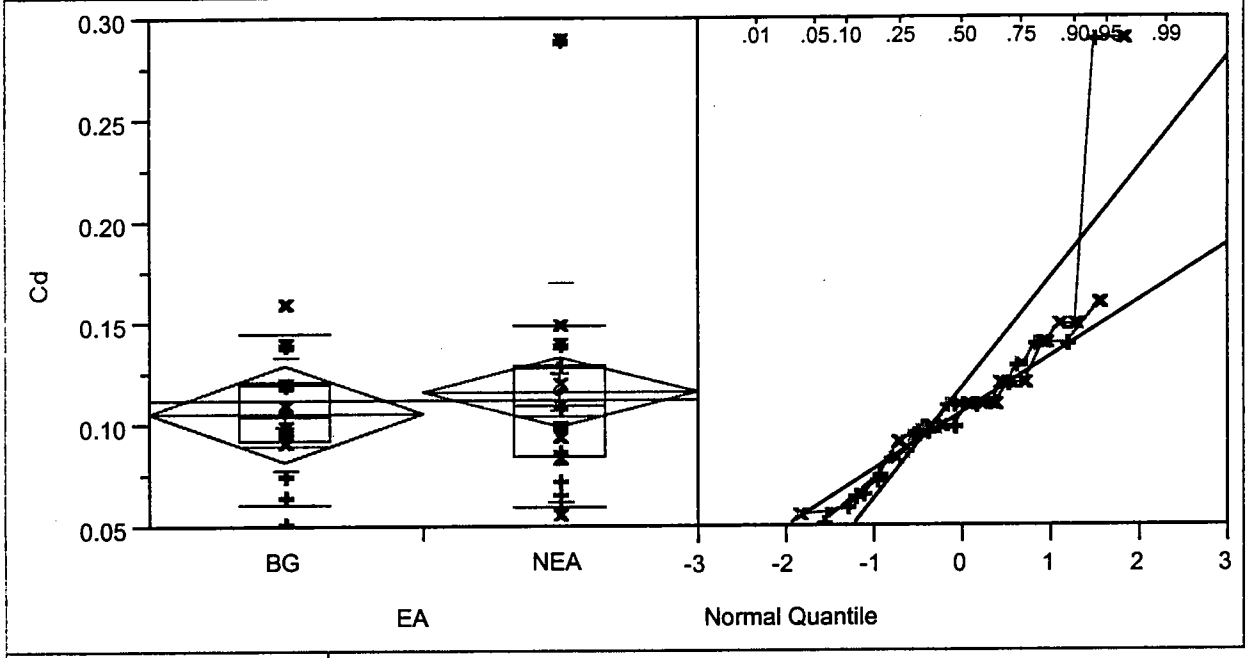
Mean	0.10538
Std Dev	0.02786
Std Error Mean	0.00696
Upper 95% Mean	0.12022
Lower 95% Mean	0.09053
N	16.00000
Sum Weights	16.00000
Sum	1.68600
Variance	0.00078
Skewness	0.01704
Kurtosis	0.16838
CV	26.43784

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.976063	0.8966

Cd By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.052	0.0611	0.09275	0.105	0.12	0.146	0.16
NEA	0.056	0.06	0.0855	0.11	0.13	0.15	0.29

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.105375	0.027859	0.00696
NEA	29	0.116862	0.054593	0.01014

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	352	22.0000	-0.370
NEA	29	683	23.5517	0.370

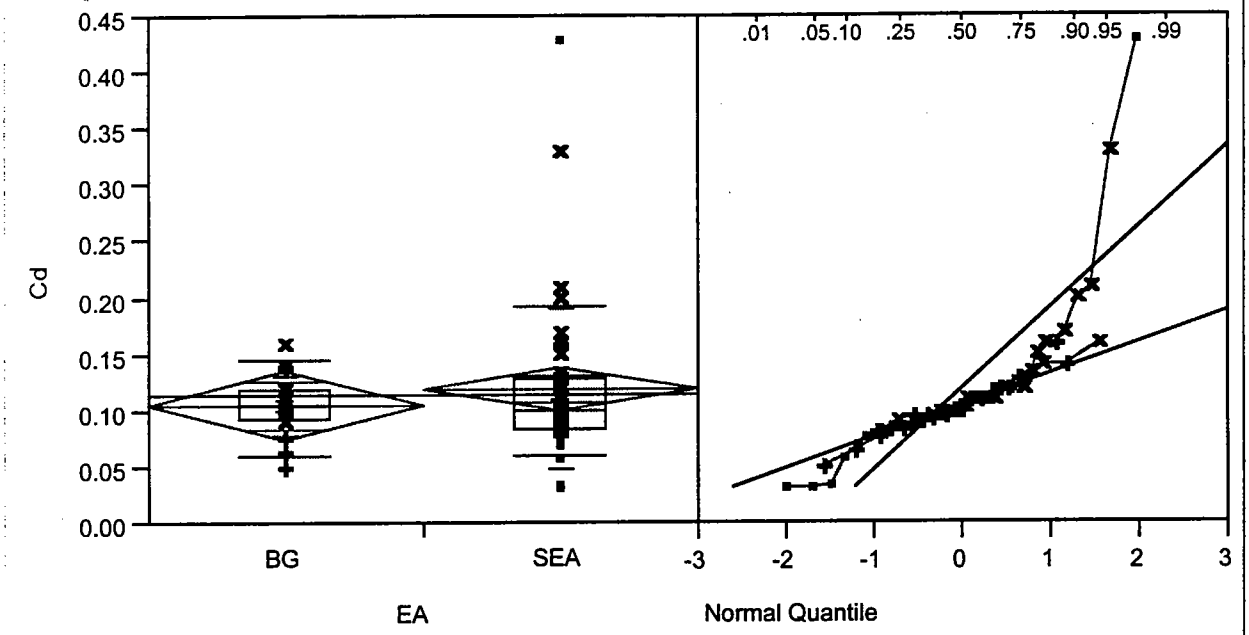
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
352	-0.36988	0.7115

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
0.1458	1	0.7026

Cd By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.052	0.0611	0.09275	0.105	0.12	0.146	0.16
SEA	0.033	0.061	0.0845	0.1	0.13	0.194	0.43

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.105375	0.027859	0.00696
SEA	41	0.119366	0.071840	0.01122

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	464.5	29.0313	0.000
SEA	41	1188.5	28.9878	0.000

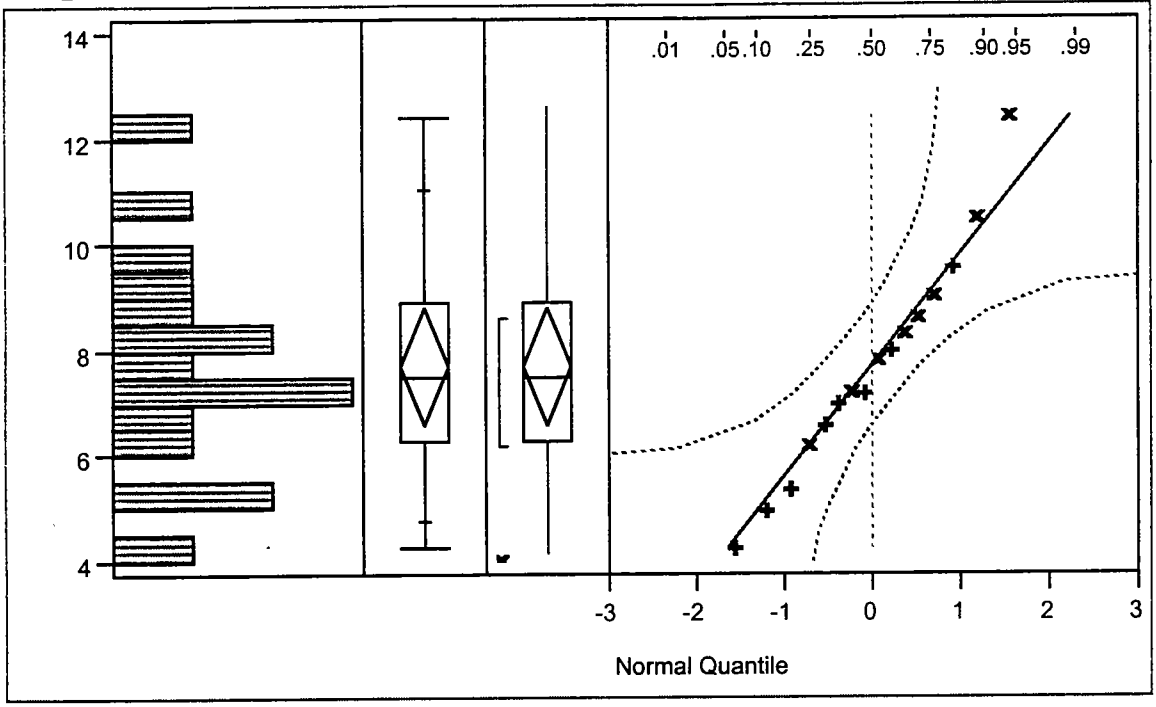
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
464.5	0.00000	1.0000

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
0.0001	1	0.9929

Cr



Quantiles

maximum	100.0%	12.400
	99.5%	12.400
	97.5%	12.400
	90.0%	11.070
quartile	75.0%	8.900
median	50.0%	7.500
quartile	25.0%	6.300
	10.0%	4.790
	2.5%	4.300
	0.5%	4.300
minimum	0.0%	4.300

Moments

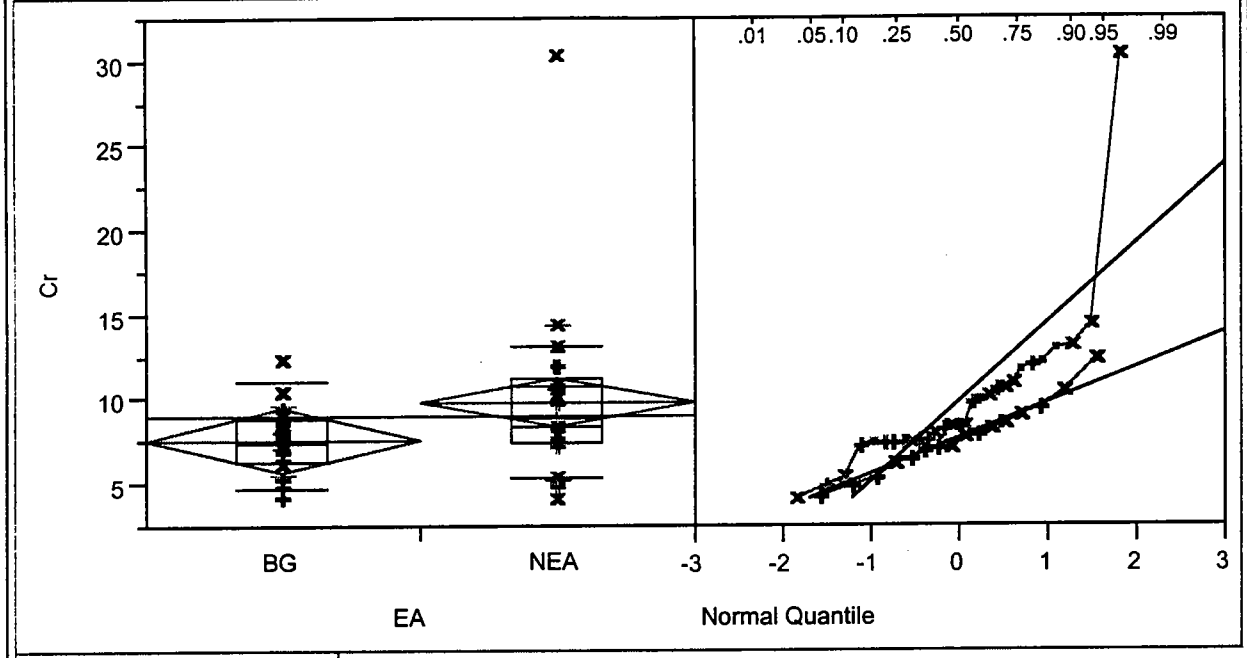
Mean	7.69375
Std Dev	2.08310
Std Error Mean	0.52077
Upper 95% Mean	8.80375
Lower 95% Mean	6.58375
N	16.00000
Sum Weights	16.00000
Sum	123.10000
Variance	4.33929
Skewness	0.51055
Kurtosis	0.46752
CV	27.07518

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.979609	0.9378

Cr By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	4.3	4.79	6.3	7.5	8.9	11.07	12.4
NEA	4.2	5.5	7.5	8.5	11.3	13.2	30.3

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	7.69375	2.08310	0.52077
NEA	29	9.84483	4.66396	0.86608

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	283.5	17.7188	-1.992
NEA	29	751.5	25.9138	1.992

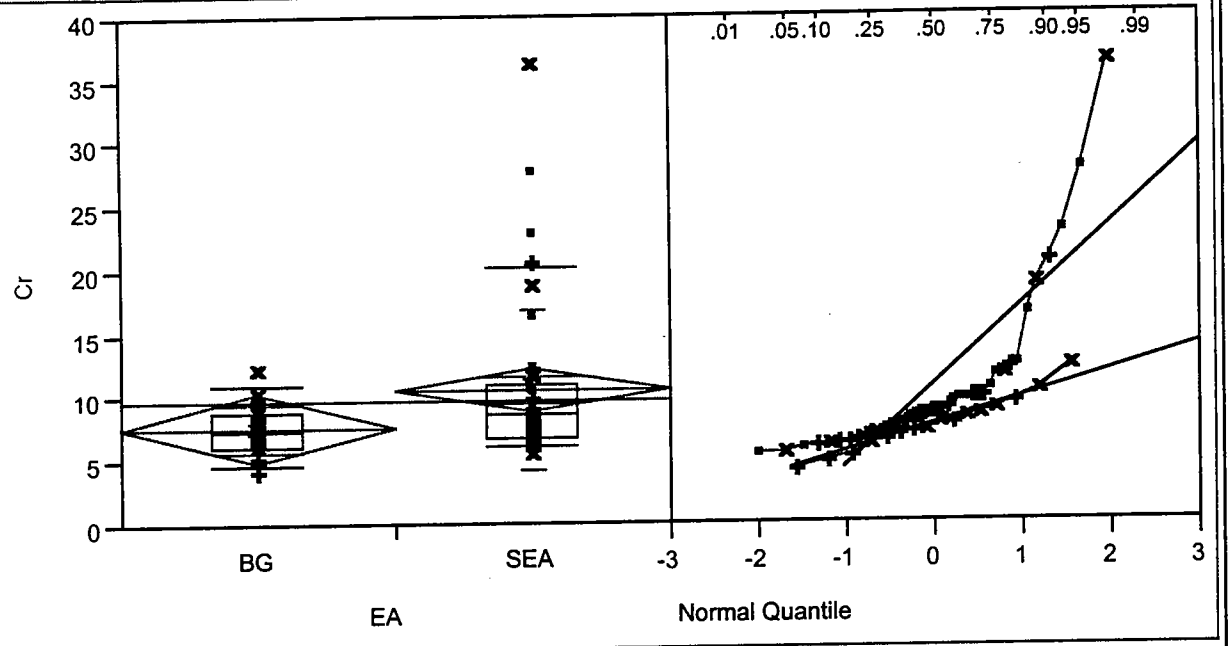
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
283.5	-1.99233	0.0463

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
4.0168	1	0.0451

Cr By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	4.3	4.79	6.3	7.5	8.9	11.07	12.4
SEA	5.5	6.3	6.9	8.7	11.15	20.42	36.3

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	7.6937	2.08310	0.52077
SEA	41	10.6976	6.35503	0.99249

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	357	22.3125	-1.892
SEA	41	1296	31.6098	1.892

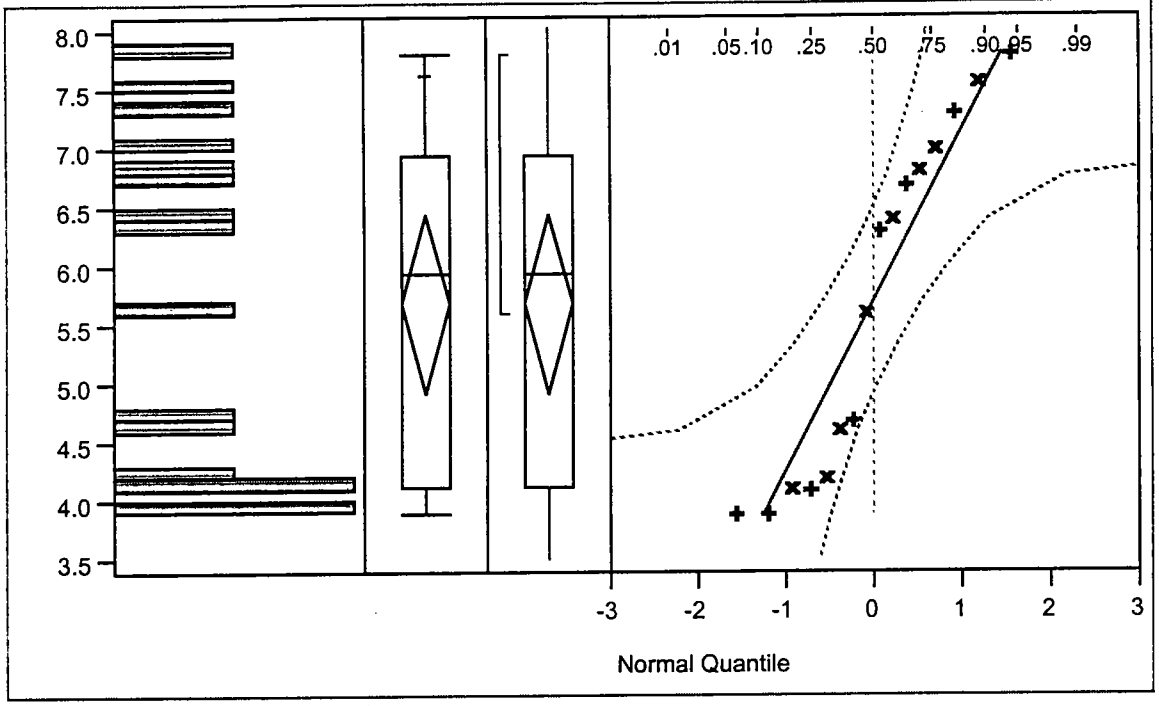
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
357	-1.89185	0.0585

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
3.6128	1	0.0573

Co



Quantiles

maximum	100.0%	7.8000
	99.5%	7.8000
	97.5%	7.8000
	90.0%	7.6250
quartile	75.0%	6.9500
median	50.0%	5.9500
quartile	25.0%	4.1250
	10.0%	3.9000
	2.5%	3.9000
	0.5%	3.9000
minimum	0.0%	3.9000

Moments

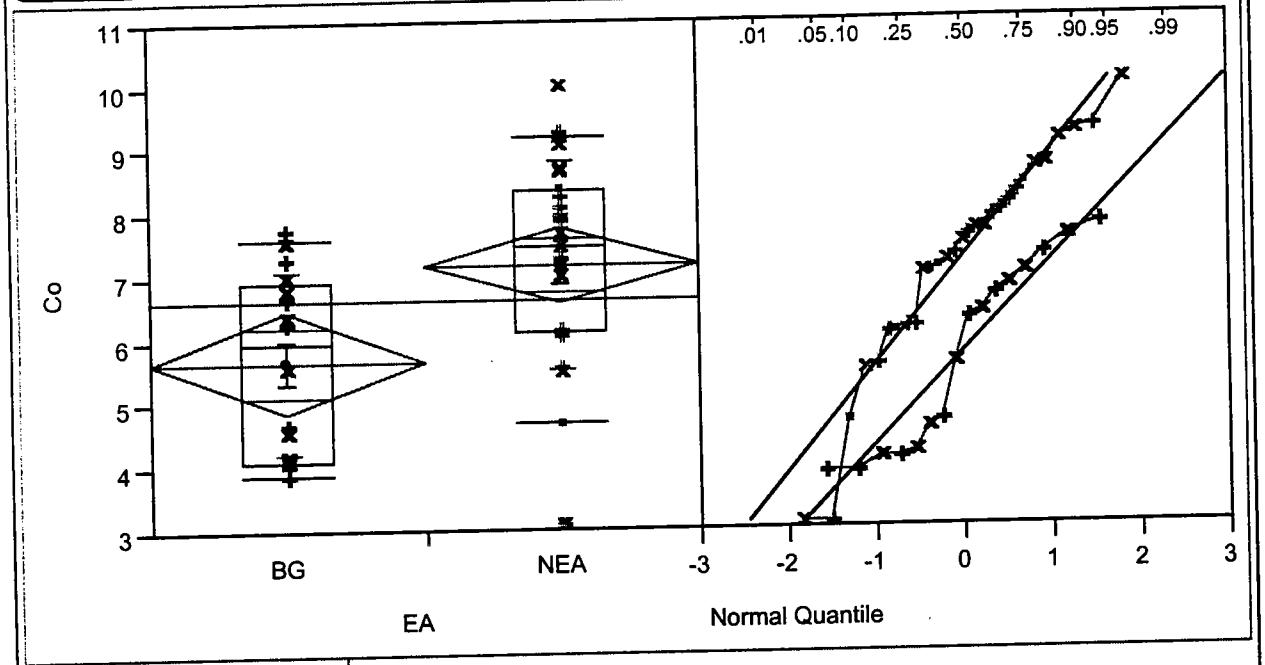
Mean	5.68438
Std Dev	1.44242
Std Error Mean	0.36060
Upper 95% Mean	6.45298
Lower 95% Mean	4.91577
N	16.00000
Sum Weights	16.00000
Sum	90.95000
Variance	2.08057
Skewness	0.01715
Kurtosis	-1.75168
CV	25.37516

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.883464	0.0442

Co By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	3.9	3.9	4.125	5.95	6.95	7.625	7.8
NEA	3.1	4.7	6.15	7.5	8.35	9.2	10

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	5.68438	1.44242	0.36060
NEA	29	7.18448	1.68380	0.31267

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	247.5	15.4688	-2.847
NEA	29	787.5	27.1552	2.847

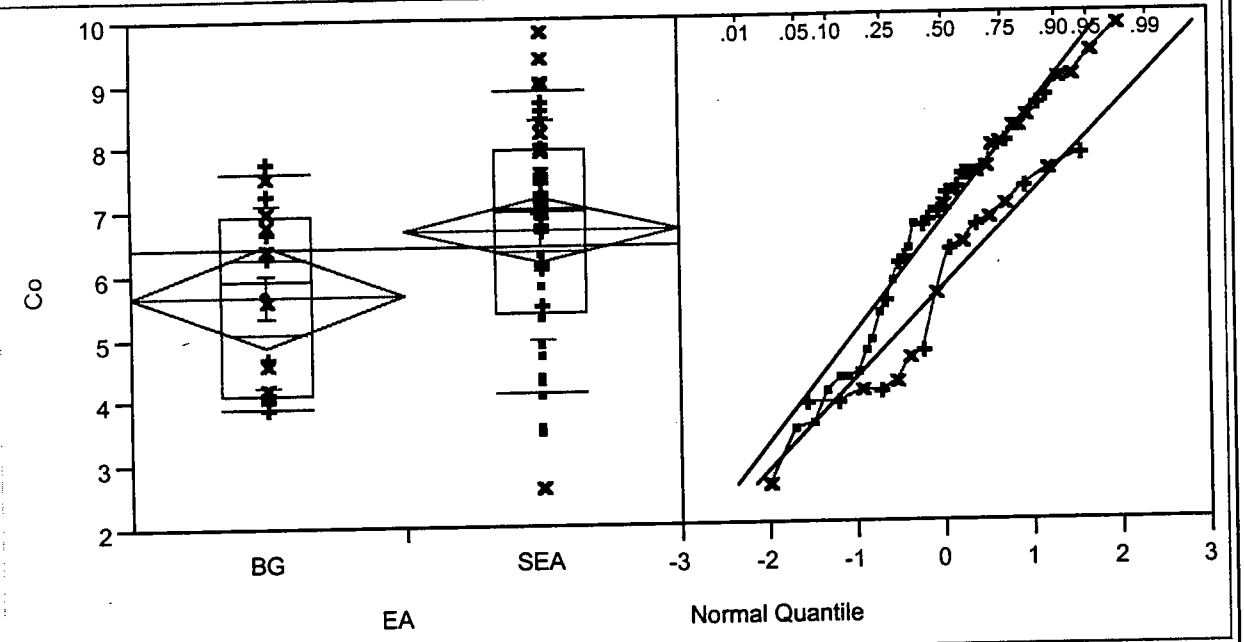
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
247.5	-2.84656	0.0044

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
8.1706	1	0.0043

Co By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	3.9	3.9	4.125	5.95	6.95	7.625	7.8
SEA	2.6	4.14	5.4	7	7.975	8.9	9.8

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	5.68438	1.44242	0.36060
SEA	41	6.70976	1.76048	0.27494

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	341.5	21.3438	-2.167
SEA	41	1311.5	31.9878	2.167

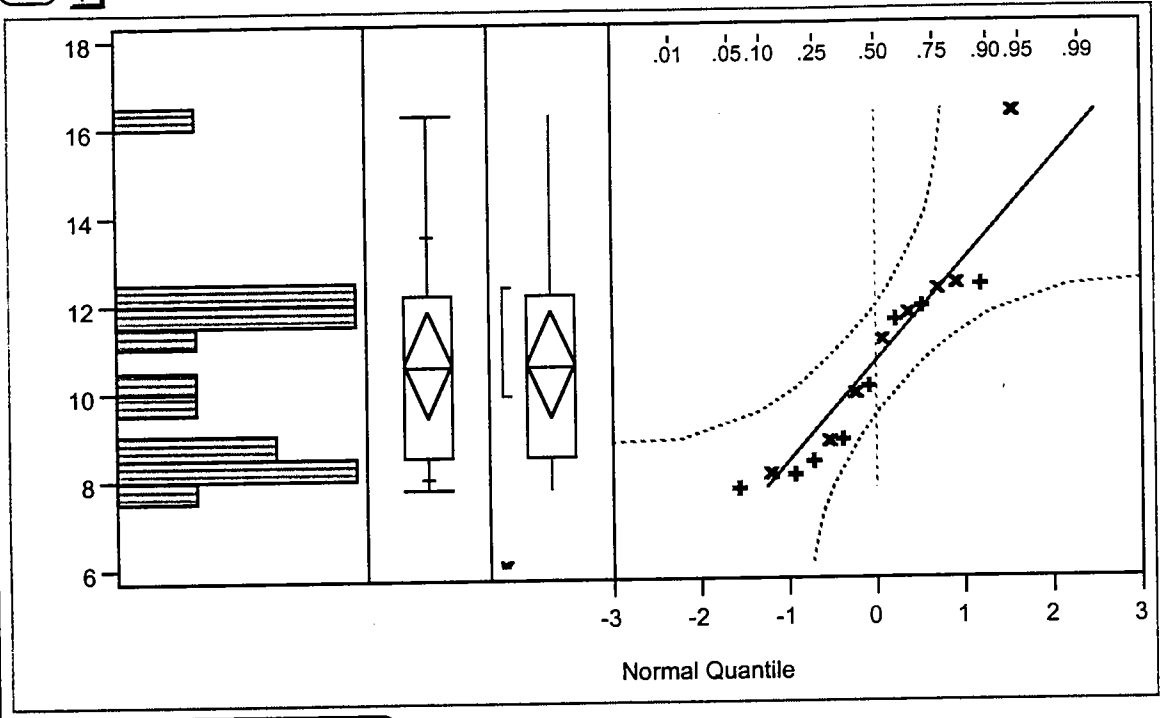
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
341.5	-2.16744	0.0302

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
4.7364	1	0.0295

Cu



Quantiles

maximum	100.0%	16.300
	99.5%	16.300
	97.5%	16.300
	90.0%	13.570
quartile	75.0%	12.200
median	50.0%	10.600
quartile	25.0%	8.500
	10.0%	8.010
	2.5%	7.800
	0.5%	7.800
minimum	0.0%	7.800

Moments

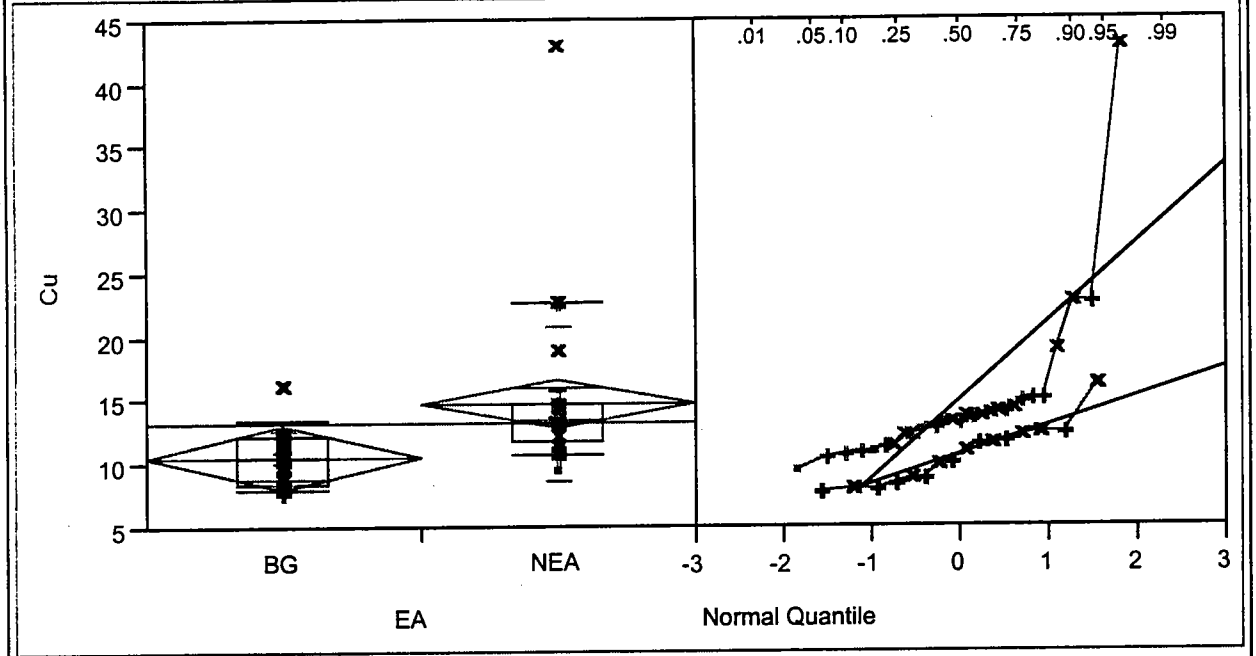
Mean	10.61250
Std Dev	2.28119
Std Error Mean	0.57030
Upper 95% Mean	11.82806
Lower 95% Mean	9.39694
N	16.00000
Sum Weights	16.00000
Sum	169.80000
Variance	5.20383
Skewness	0.82431
Kurtosis	0.94916
CV	21.49532

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.905379	0.0995

Cu By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	7.8	8.01	8.5	10.6	12.2	13.57	16.3
NEA	9.6	10.7	11.85	13.4	14.7	22.7	43.1

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	10.6125	2.28119	0.5703
NEA	29	14.8224	6.25371	1.1613

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	216	13.5000	-3.593
NEA	29	819	28.2414	3.593

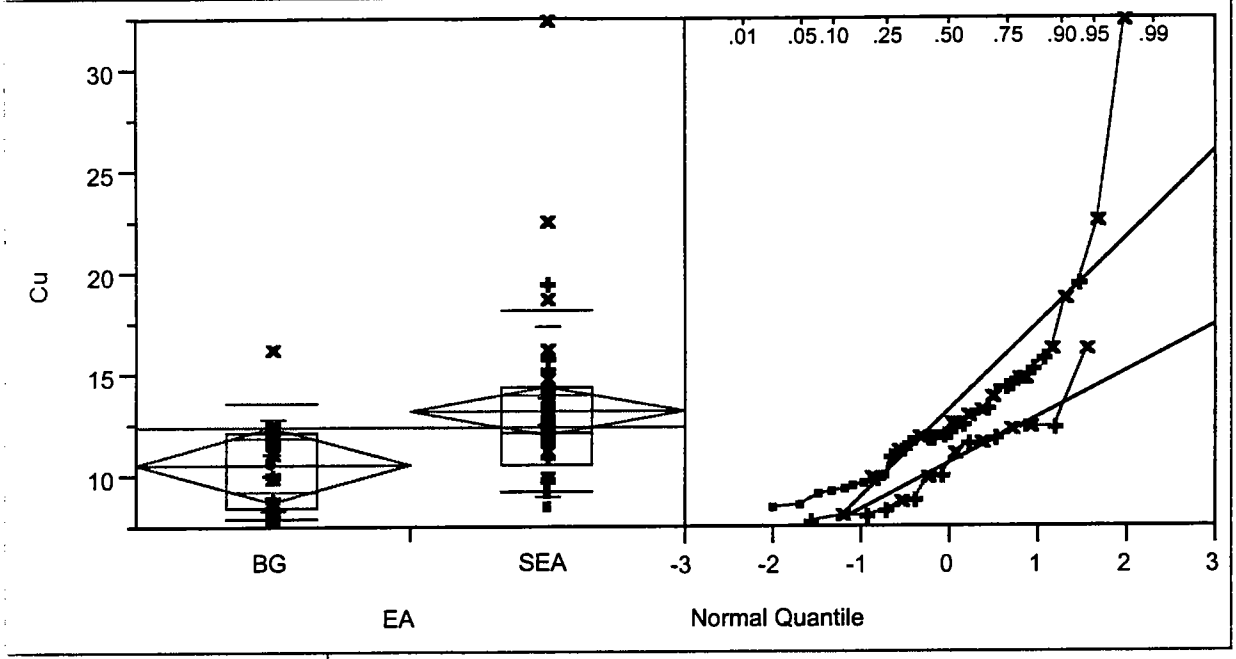
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
216	-3.59295	0.0003

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
12.9946	1	0.0003

Cu By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	7.8	8.01	8.5	10.6	12.2	13.57	16.3
SEA	8.5	9.32	10.55	12.2	14.45	18.2	32.4

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	10.6125	2.28119	0.57030
SEA	41	13.1902	4.27440	0.66755

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	312.5	19.5313	-2.683
SEA	41	1340.5	32.6951	2.683

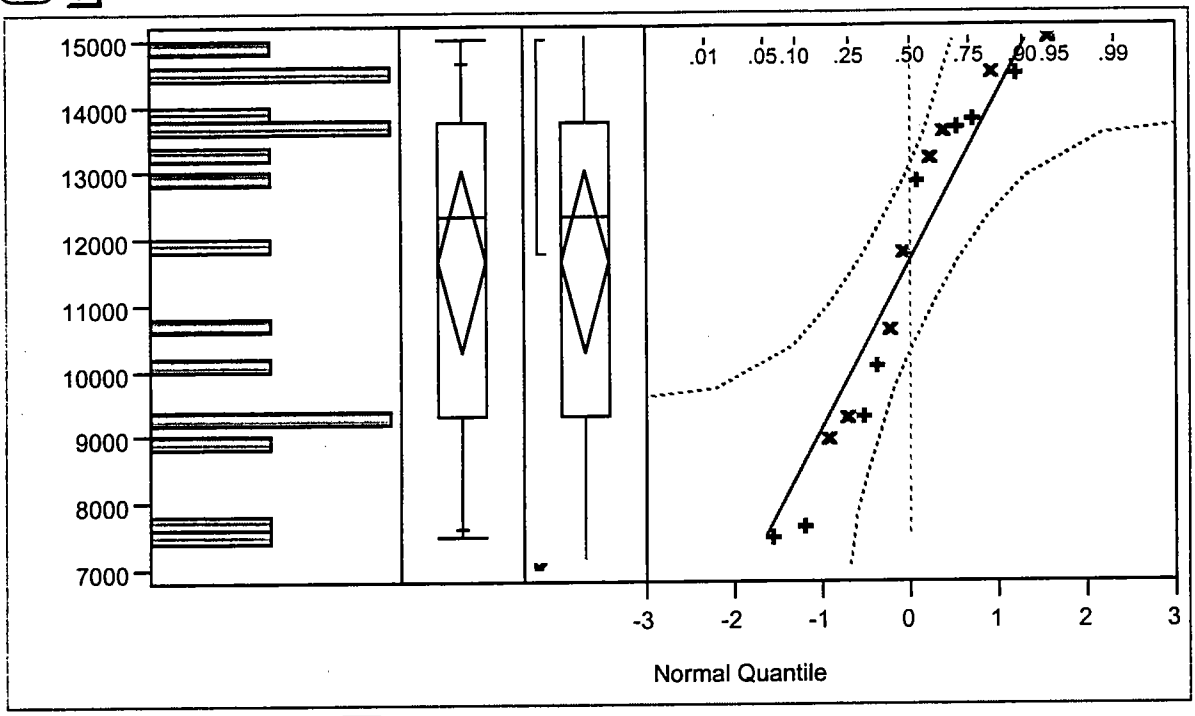
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
312.5	-2.68260	0.0073

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
7.2441	1	0.0071

Fe



Quantiles

maximum	100.0%	15000
	99.5%	15000
	97.5%	15000
	90.0%	14650
quartile	75.0%	13775
median	50.0%	12350
quartile	25.0%	9310
	10.0%	7632
	2.5%	7520
	0.5%	7520
minimum	0.0%	7520

Moments

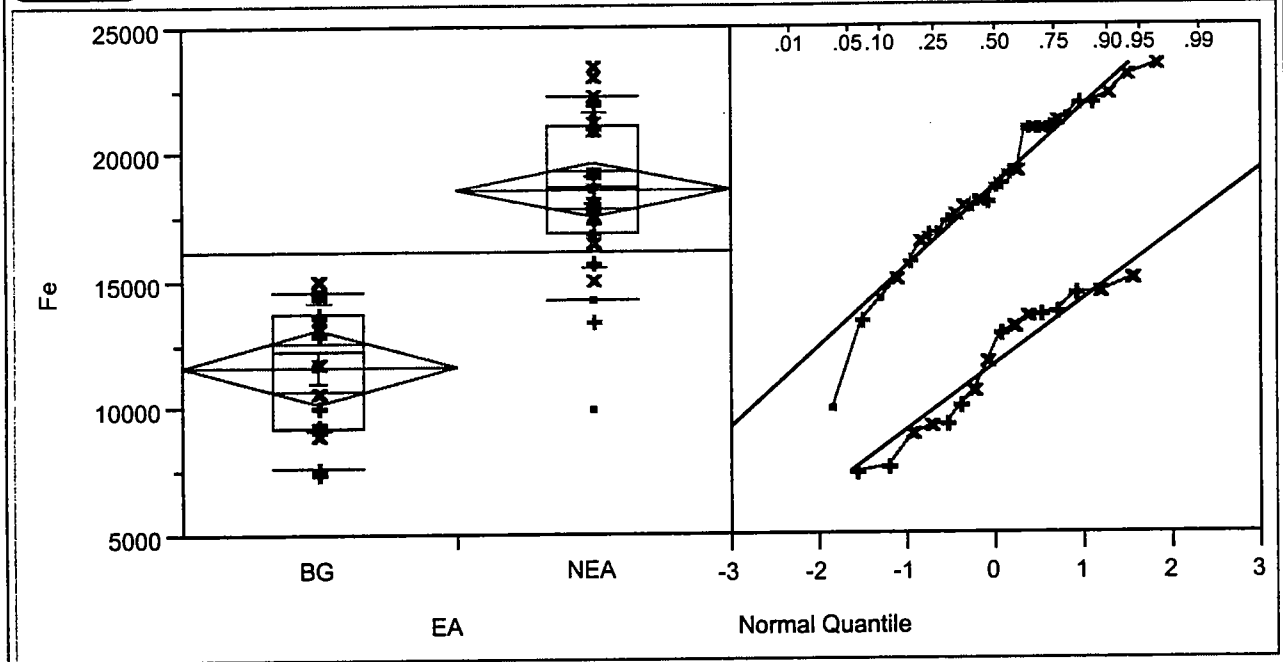
Mean	11656.25
Std Dev	2562.54
Std Error Mean	640.64
Upper 95% Mean	13021.73
Lower 95% Mean	10290.77
N	16.00
Sum Weights	16.00
Sum	186500.00
Variance	6566625
Skewness	-0.31
Kurtosis	-1.45
CV	21.98

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.909207	0.1146

Fe By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	7520	7632	9310	12350	13775	14650	15000
NEA	9990	14300	16900	18700	21200	22300	23500

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	11656.3	2562.54	640.64
NEA	29	18682.4	3128.76	581.00

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	156.5	9.7813	-5.004
NEA	29	878.5	30.2931	5.004

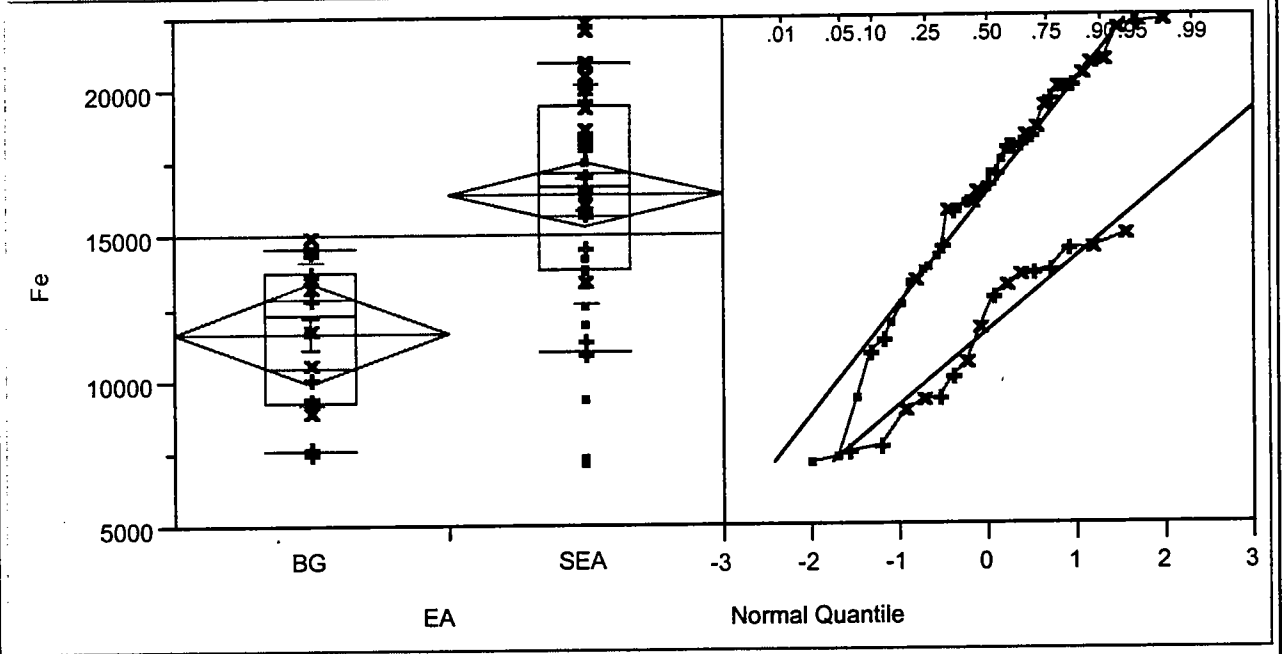
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
156.5	-5.00404	<.0001

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
25.1593	1	<.0001

Fe By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	7520	7632	9310	12350	13775	14650	15000
SEA	7180	11000	13850	16700	19550	20980	22400

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	11656.3	2562.54	640.64
SEA	41	16431.3	3846.14	600.67

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	235.5	14.7188	-4.050
SEA	41	1417.5	34.5732	4.050

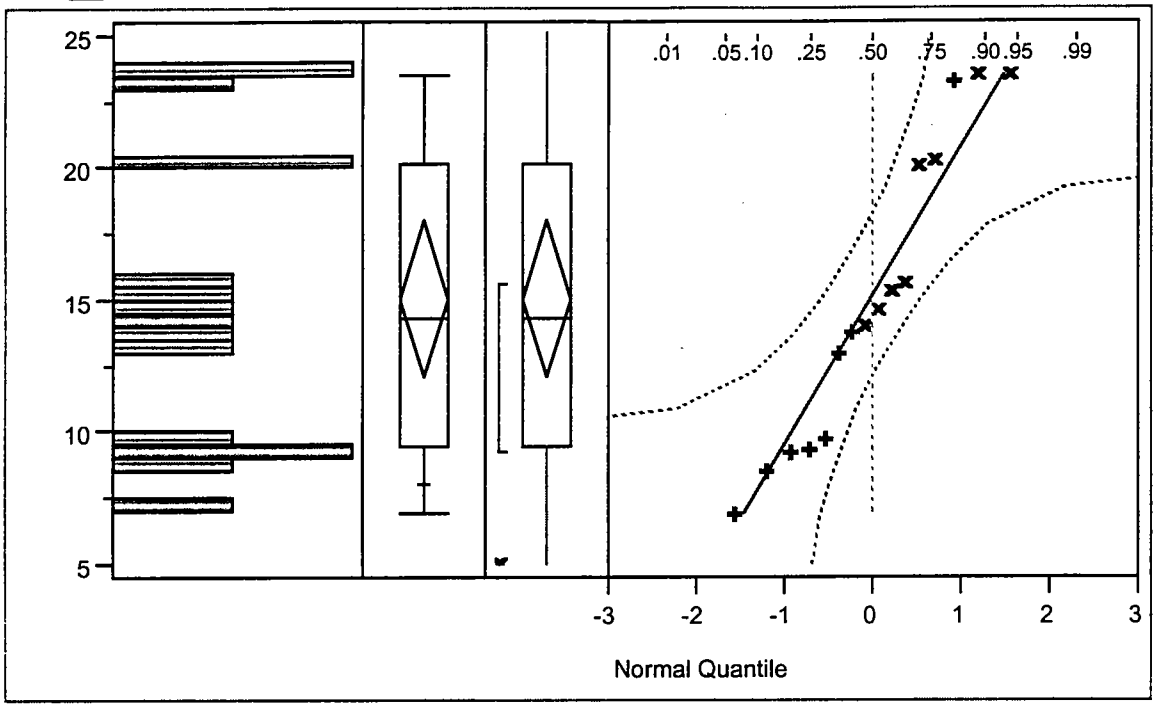
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
235.5	-4.04963	<.0001

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
16.4715	1	<.0001

Pb



Quantiles

maximum	100.0%	23.500
	99.5%	23.500
	97.5%	23.500
	90.0%	23.500
quartile	75.0%	20.250
median	50.0%	14.300
quartile	25.0%	9.500
	10.0%	8.120
	2.5%	7.000
	0.5%	7.000
minimum	0.0%	7.000

Moments

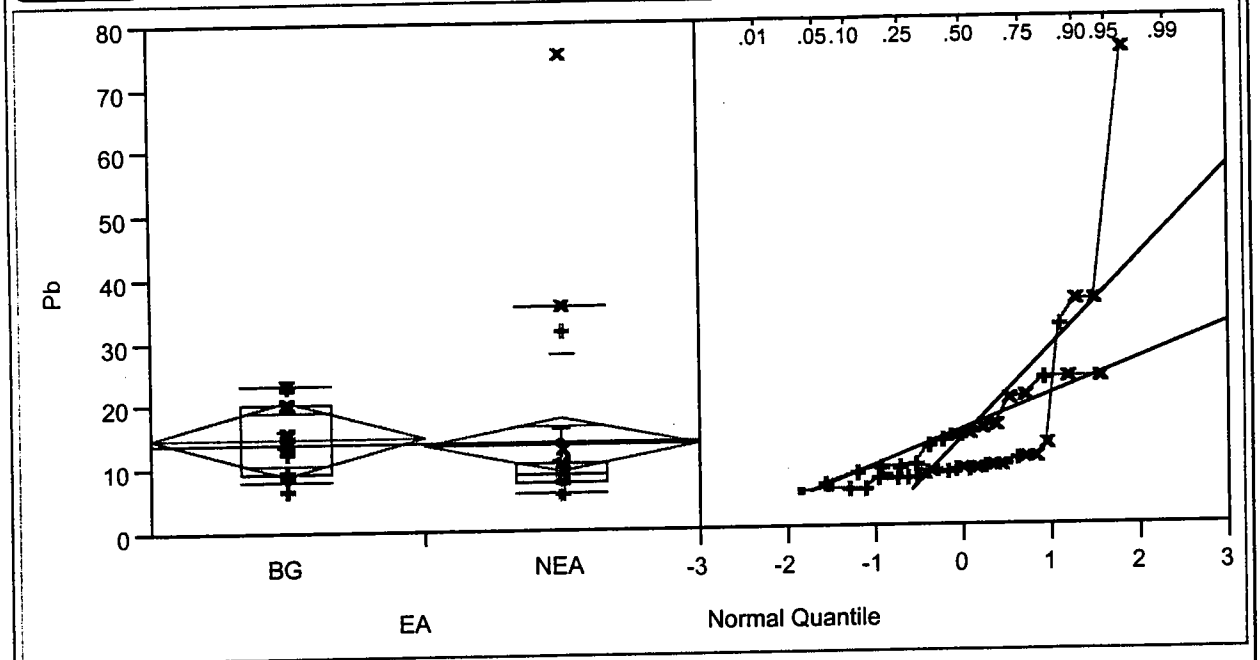
Mean	15.08125
Std Dev	5.60050
Std Error Mean	1.40013
Upper 95% Mean	18.06554
Lower 95% Mean	12.09696
N	16.00000
Sum Weights	16.00000
Sum	241.30000
Variance	31.36562
Skewness	0.29534
Kurtosis	-1.17948
CV	37.13553

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.917436	0.1551

Pb By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	7	8.12	9.5	14.3	20.25	23.5	23.5
NEA	5.5	6.1	7.9	8.9	10.7	35.6	75

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	15.0813	5.6005	1.4001
NEA	29	13.6190	14.3326	2.6615

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	482.5	30.1563	2.704
NEA	29	552.5	19.0517	-2.704

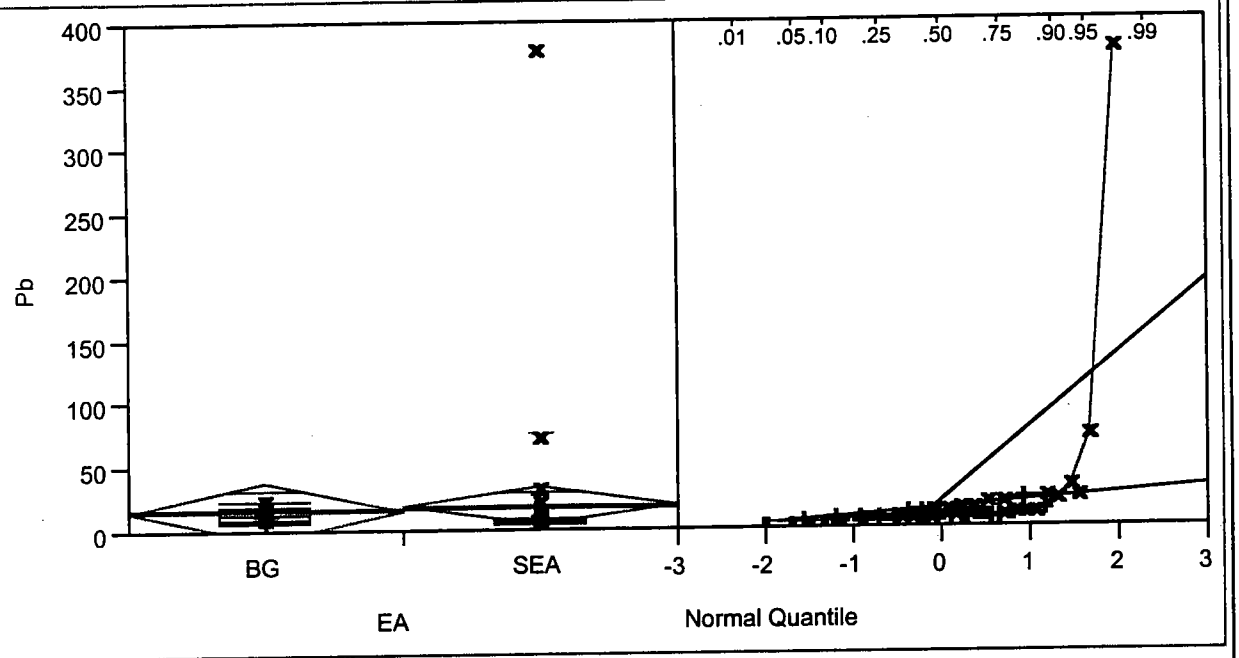
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
482.5	2.70396	0.0069

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
7.3757	1	0.0066

Pb By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	7	8.12	9.5	14.3	20.25	23.5	23.5
SEA	4.8	6.12	6.8	8.4	10.2	20.16	379

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	15.0813	5.6005	1.4001
SEA	41	19.9378	58.4976	9.1358

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	654	40.8750	3.366
SEA	41	999	24.3659	-3.366

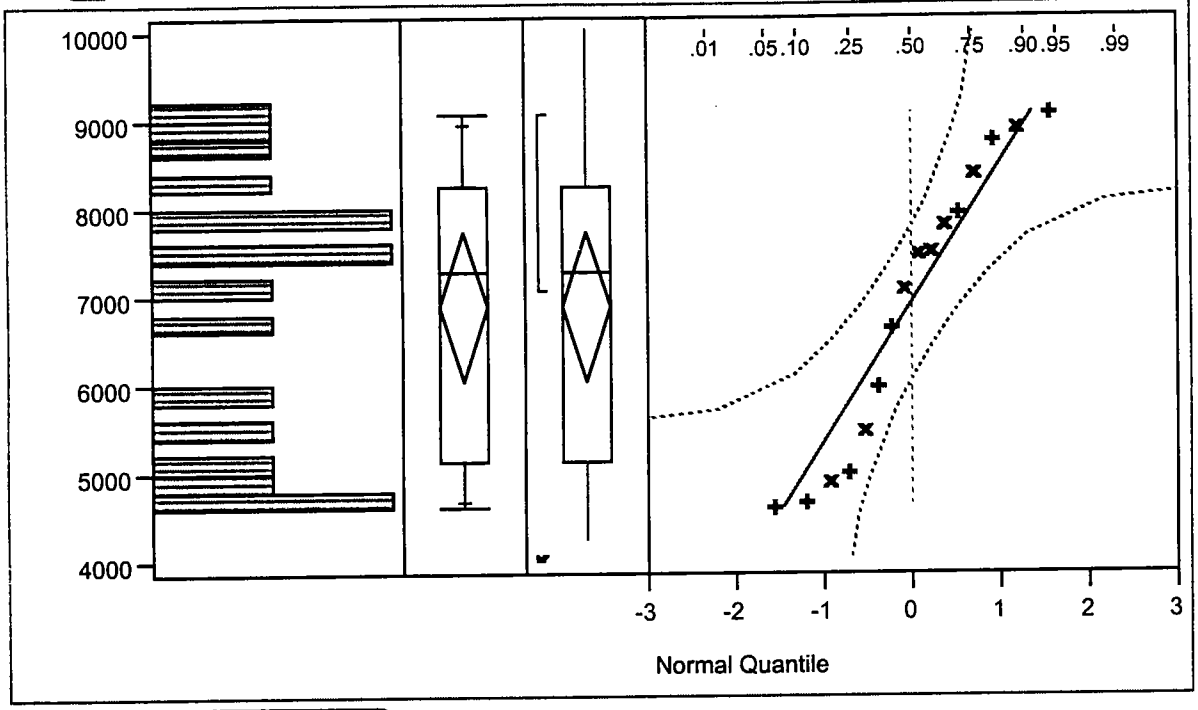
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
654	3.36598	0.0008

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
11.3897	1	0.0007

Mg



Quantiles

maximum	100.0%	9090.0
	99.5%	9090.0
	97.5%	9090.0
	90.0%	8943.0
quartile	75.0%	8265.0
median	50.0%	7280.0
quartile	25.0%	5137.5
	10.0%	4672.0
	2.5%	4630.0
	0.5%	4630.0
minimum	0.0%	4630.0

Moments

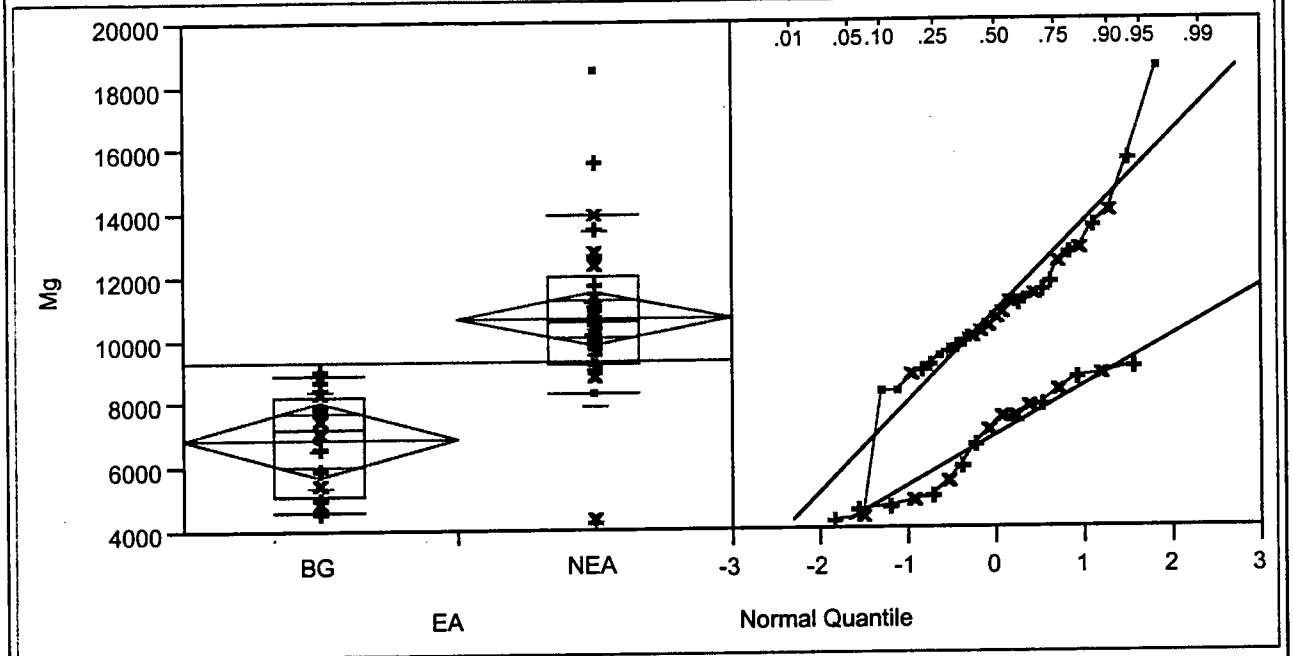
Mean	6890.625
Std Dev	1582.169
Std Error Mean	395.542
Upper 95% Mean	7733.700
Lower 95% Mean	6047.550
N	16.000
Sum Weights	16.000
Sum	110250
Variance	2503259.6
Skewness	-0.188
Kurtosis	-1.466
CV	22.961

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.916443	0.1495

Mg By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	4630	4672	5137.5	7280	8265	8943	9090
NEA	4270	8360	9295	10600	12075	14000	18500

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	6890.6	1582.17	395.54
NEA	29	10723.1	2833.88	526.24

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	178.5	11.1563	-4.482
NEA	29	856.5	29.5345	4.482

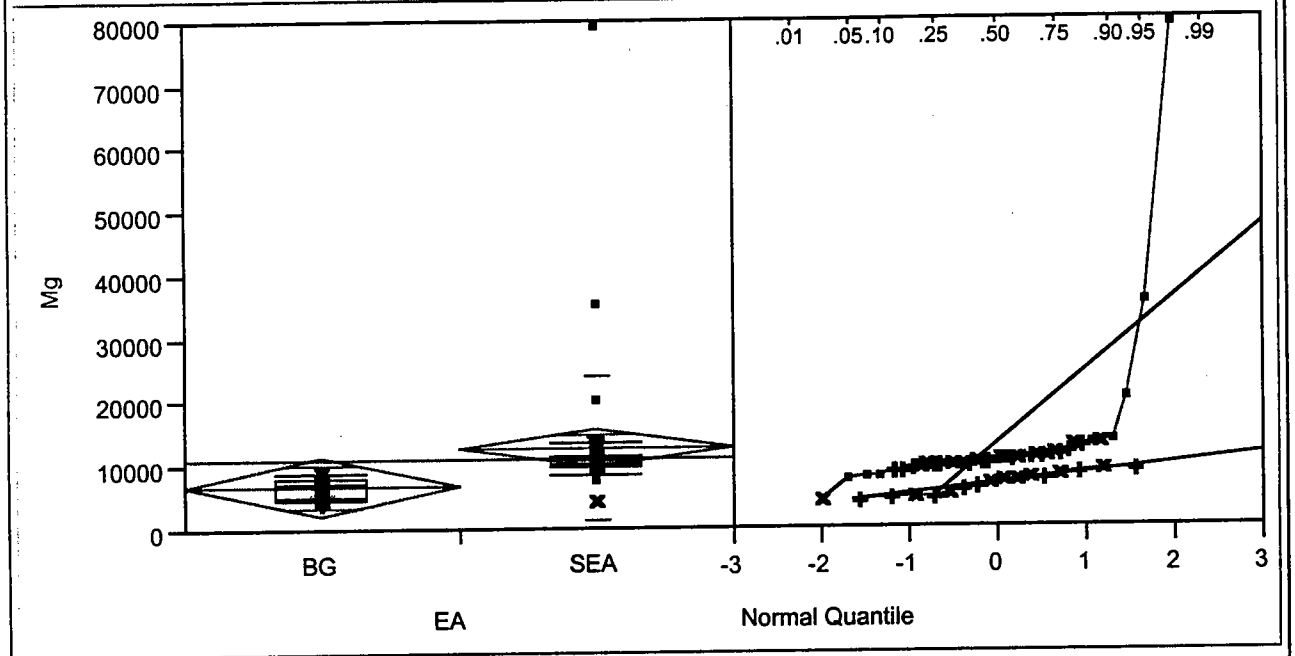
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
178.5	-4.48170	<.0001

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
20.1921	1	<.0001

Mg By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	4630	4672	5137.5	7280	8265	8943	9090
SEA	4310	8454	9885	10500	11400	13560	79500

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	6890.6	1582.2	395.5
SEA	41	12970.7	11568.7	1806.7

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	167	10.4375	-5.267
SEA	41	1486	36.2439	5.267

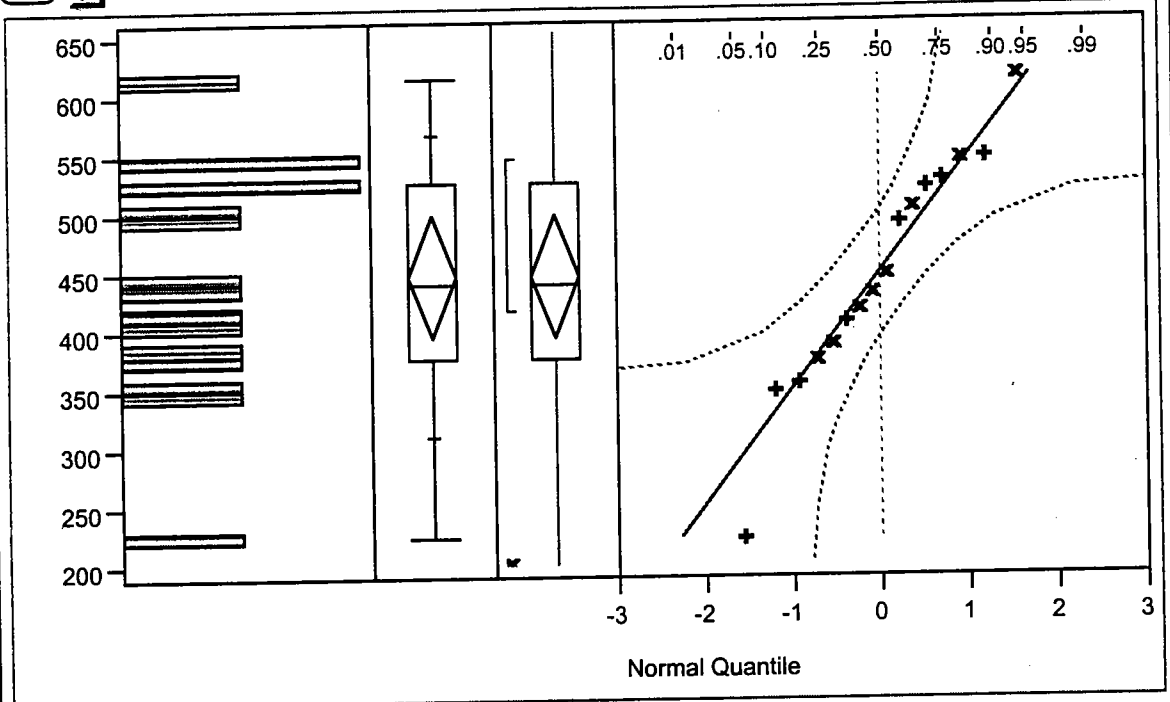
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
167	-5.26690	<.0001

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
27.8339	1	<.0001

Mn



Quantiles

maximum	100.0%	615.00
	99.5%	615.00
	97.5%	615.00
	90.0%	566.70
quartile	75.0%	526.25
median	50.0%	439.00
quartile	25.0%	376.75
	10.0%	310.50
	2.5%	223.00
	0.5%	223.00
minimum	0.0%	223.00

Moments

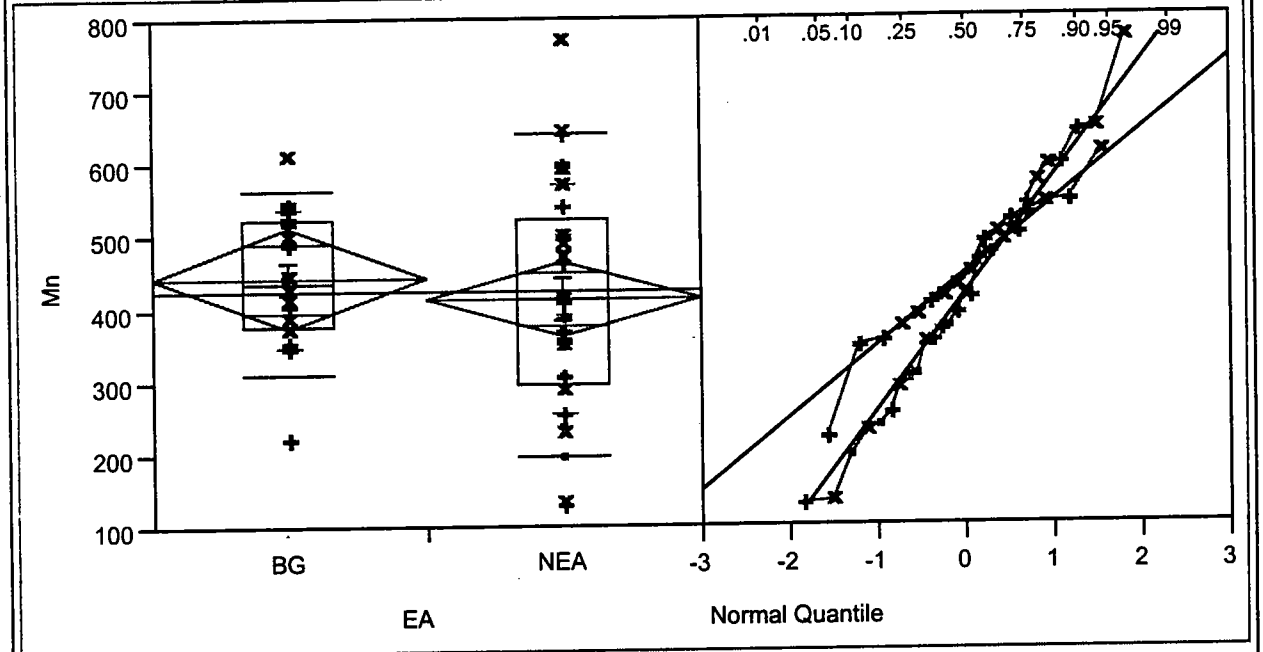
Mean	446.2500
Std Dev	98.3419
Std Error Mean	24.5855
Upper 95% Mean	498.6525
Lower 95% Mean	393.8475
N	16.0000
Sum Weights	16.0000
Sum	7140.0000
Variance	9671.1333
Skewness	-0.4406
Kurtosis	0.3246
CV	22.0374

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.969798	0.8044

Mn By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	223	310.5	376.75	439	526.25	566.7	615
NEA	132	199	299	415	525	642	774

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	446.250	98.342	24.585
NEA	29	416.310	160.309	29.769

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	400.5	25.0313	0.759
NEA	29	634.5	21.8793	-0.759

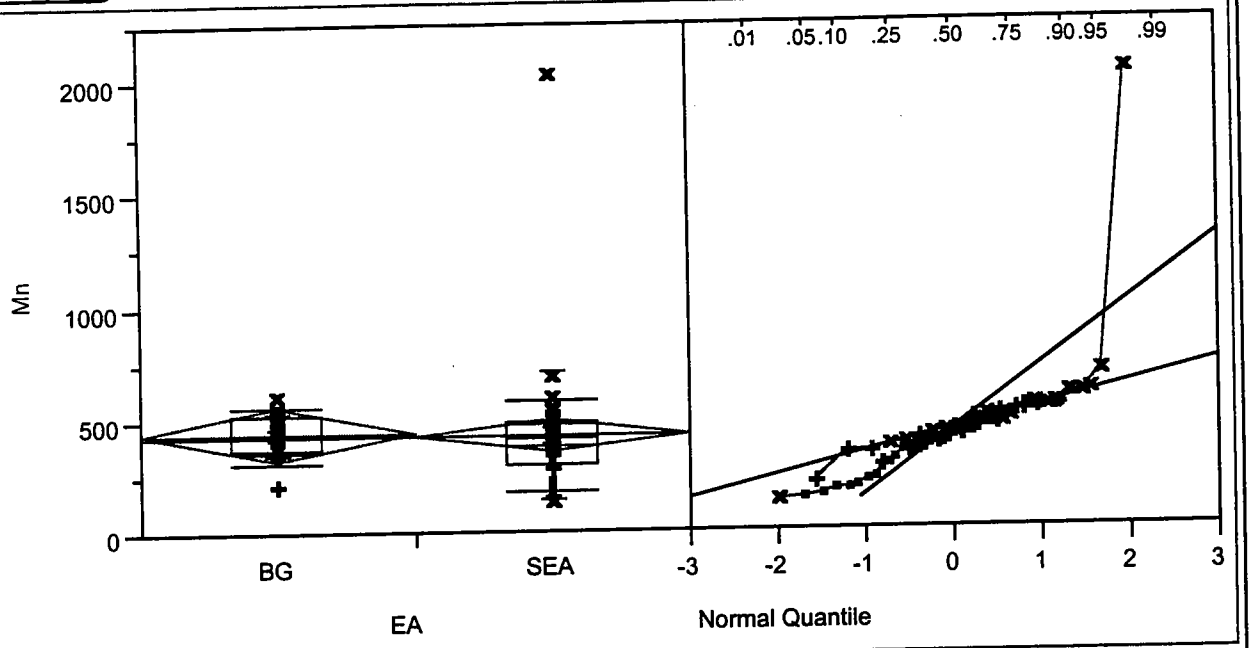
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
400.5	0.75883	0.4480

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
0.5940	1	0.4409

Mn By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	223	310.5	376.75	439	526.25	566.7	615
SEA	136	180.8	302.5	420	497	591.8	2030

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	446.250	98.342	24.585
SEA	41	434.720	288.927	45.123

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	524.5	32.7813	1.066
SEA	41	1128.5	27.5244	-1.066

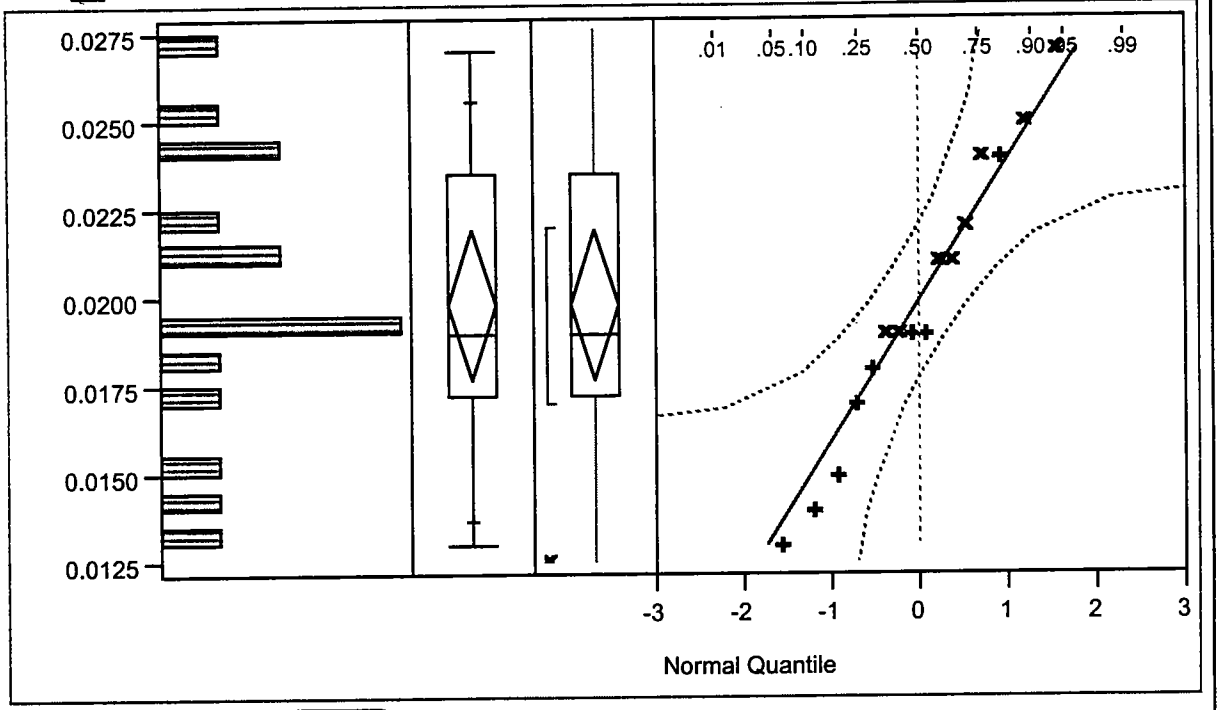
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
524.5	1.06562	0.2866

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
1.1546	1	0.2826

Hg



Quantiles

maximum	100.0%	0.02700
	99.5%	0.02700
	97.5%	0.02700
	90.0%	0.02560
quartile	75.0%	0.02350
median	50.0%	0.01900
quartile	25.0%	0.01725
	10.0%	0.01370
	2.5%	0.01300
	0.5%	0.01300
minimum	0.0%	0.01300

Moments

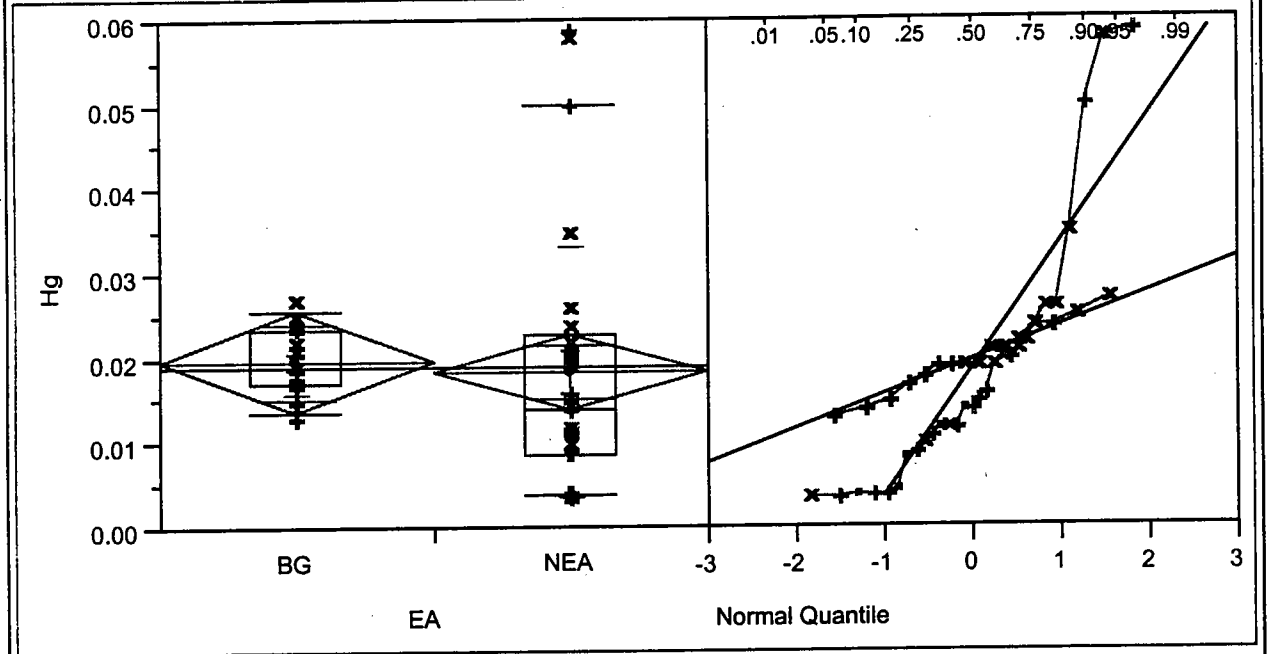
Mean	0.01981
Std Dev	0.00399
Std Error Mean	0.00100
Upper 95% Mean	0.02194
Lower 95% Mean	0.01769
N	16.00000
Sum Weights	16.00000
Sum	0.31700
Variance	0.00002
Skewness	0.02071
Kurtosis	-0.57732
CV	20.12345

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.972362	0.8445

Hg By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.013	0.0137	0.01725	0.019	0.0235	0.0256	0.027
NEA	0.00365	0.0039	0.0087	0.014	0.023	0.05	0.059

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.019813	0.003987	0.00100
NEA	29	0.018519	0.015130	0.00281

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	438	27.3750	1.650
NEA	29	597	20.5862	-1.650

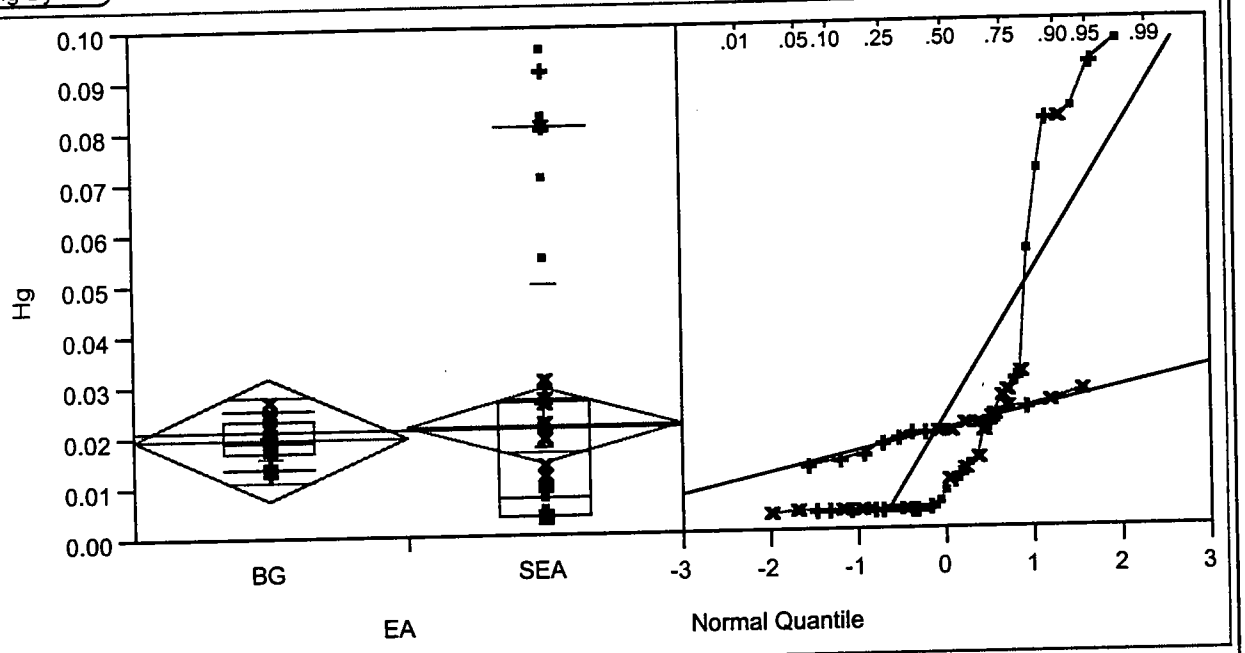
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
438	1.65016	0.0989

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
2.7623	1	0.0965

Hg By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.013	0.0137	0.01725	0.019	0.0235	0.0256	0.027
SEA	0.0036	0.0037	0.003775	0.0077	0.0265	0.081	0.096

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.019813	0.003987	0.00100
SEA	41	0.021745	0.028348	0.00443

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	586.5	36.6563	2.169
SEA	41	1066.5	26.0122	-2.169

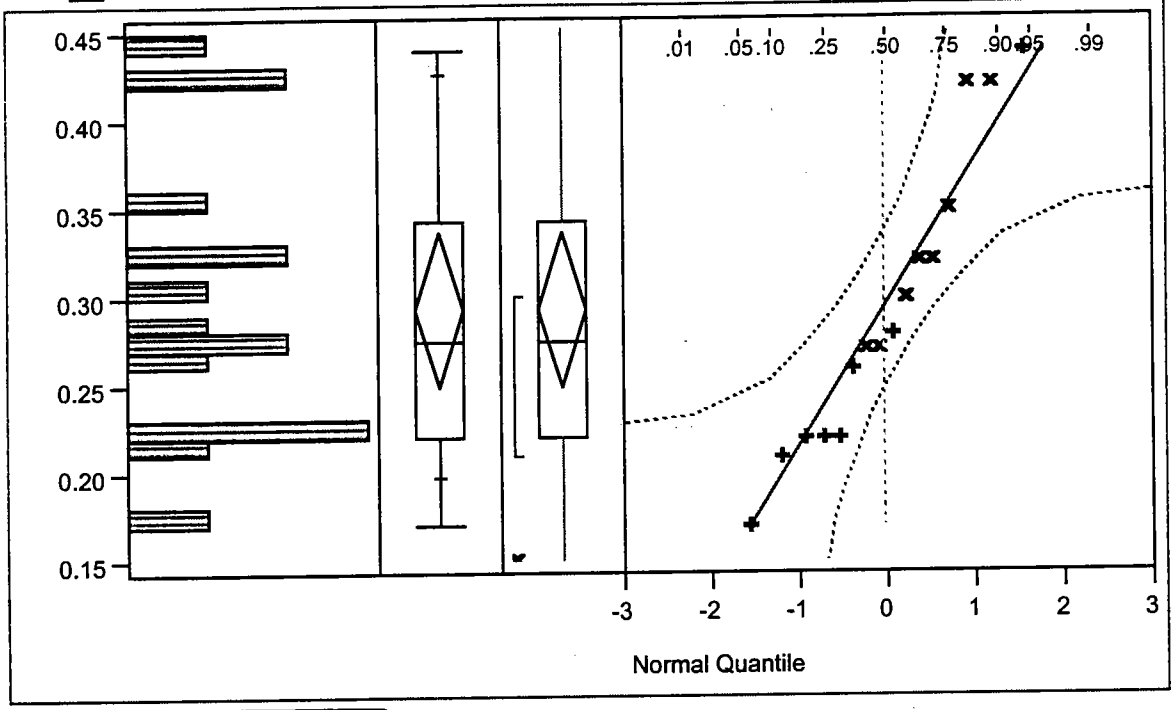
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
586.5	2.16934	0.0301

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
4.7447	1	0.0294

Mo



Quantiles

maximum	100.0%	0.44000
	99.5%	0.44000
	97.5%	0.44000
	90.0%	0.42600
quartile	75.0%	0.34250
median	50.0%	0.27500
quartile	25.0%	0.22000
	10.0%	0.19800
	2.5%	0.17000
	0.5%	0.17000
minimum	0.0%	0.17000

Moments

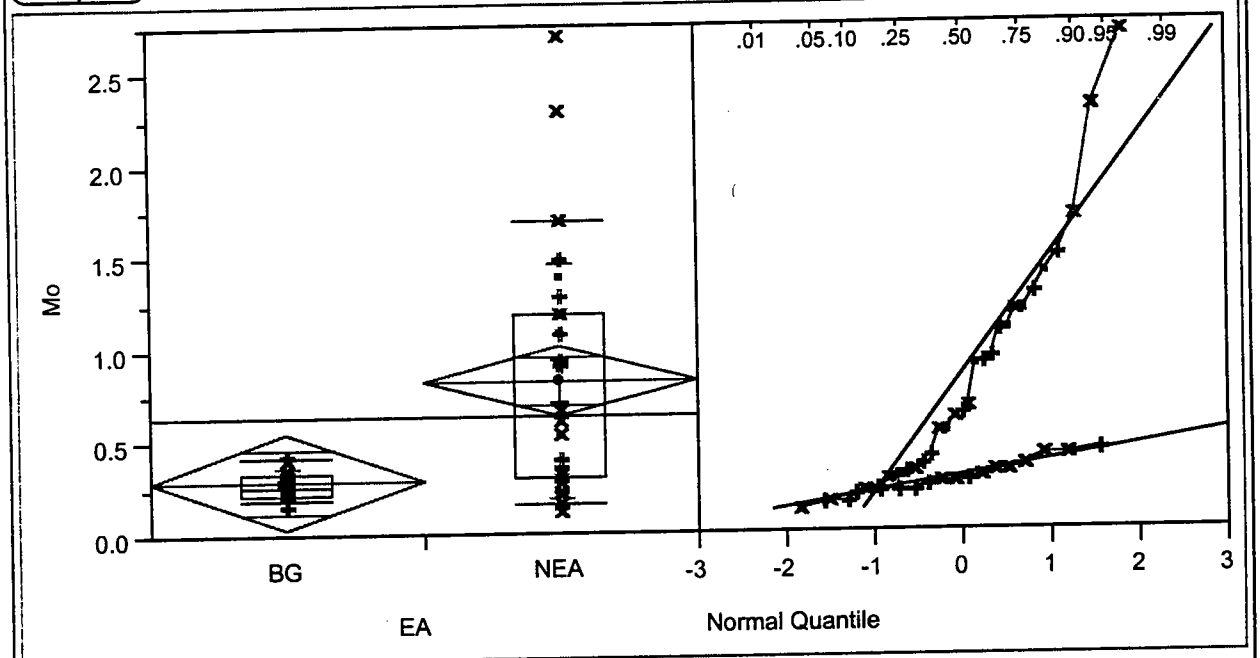
Mean	0.29312
Std Dev	0.08122
Std Error Mean	0.02030
Upper 95% Mean	0.33640
Lower 95% Mean	0.24985
N	16.00000
Sum Weights	16.00000
Sum	4.69000
Variance	0.00660
Skewness	0.54027
Kurtosis	-0.59395
CV	27.70739

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.933193	0.2729

Mo By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.17	0.198	0.22	0.275	0.3425	0.426	0.44
NEA	0.12	0.16	0.31	0.64	1.2	1.7	2.7

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.293125	0.081217	0.02030
NEA	29	0.834828	0.646665	0.12008

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	234.5	14.6563	-3.155
NEA	29	800.5	27.6034	3.155

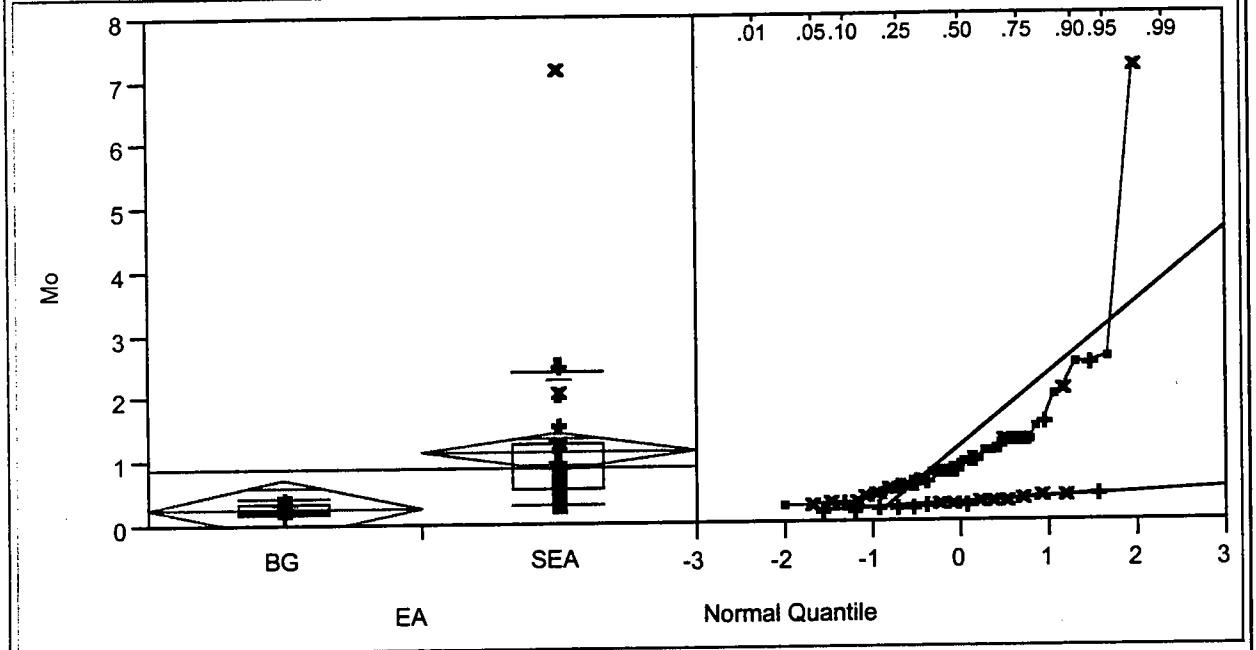
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
234.5	-3.15504	0.0016

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
10.0293	1	0.0015

Mo By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.17	0.198	0.22	0.275	0.3425	0.426	0.44
SEA	0.26	0.314	0.56	0.89	1.3	2.42	7.2

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.29312	0.08122	0.02030
SEA	41	1.16561	1.14474	0.17878

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	173	10.8125	-5.162
SEA	41	1480	36.0976	5.162

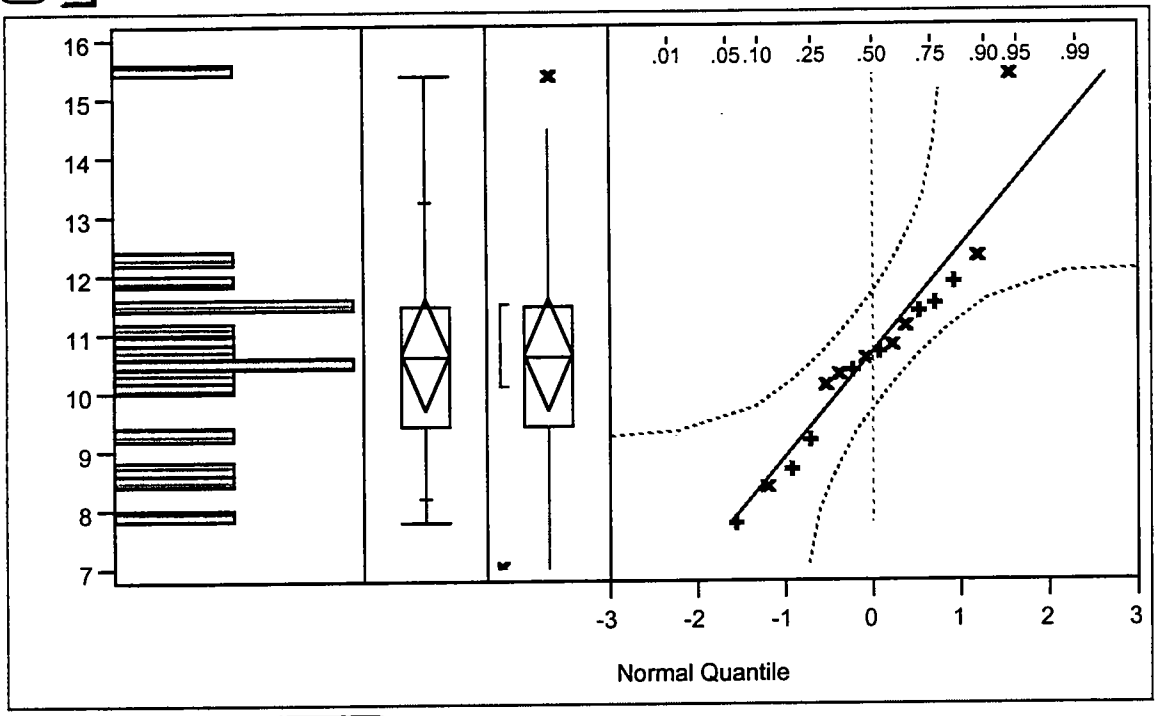
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
173	-5.16208	<.0001

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
26.7388	1	<.0001

Ni



Quantiles

maximum	100.0%	15.400
	99.5%	15.400
	97.5%	15.400
	90.0%	13.230
quartile	75.0%	11.475
median	50.0%	10.625
quartile	25.0%	9.425
	10.0%	8.220
	2.5%	7.800
	0.5%	7.800
minimum	0.0%	7.800

Moments

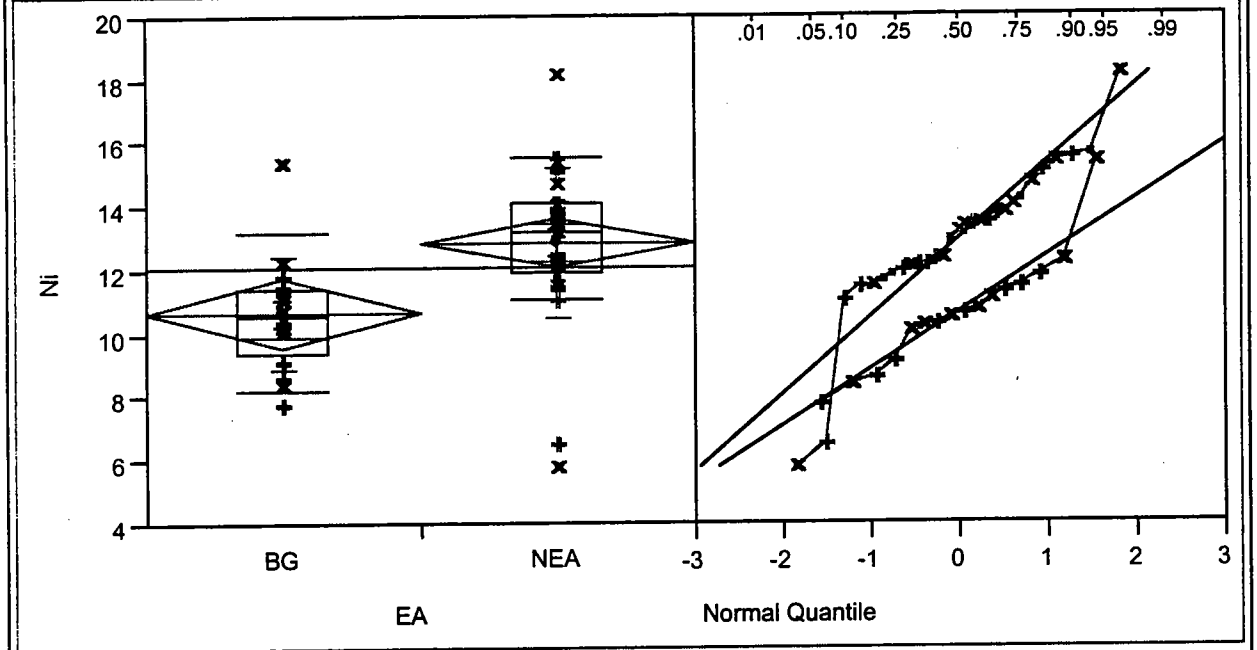
Mean	10.65938
Std Dev	1.78785
Std Error Mean	0.44696
Upper 95% Mean	11.61205
Lower 95% Mean	9.70670
N	16.00000
Sum Weights	16.00000
Sum	170.55000
Variance	3.19641
Skewness	0.90887
Kurtosis	2.41347
CV	16.77256

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.927964	0.2269

Ni By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	7.8	8.22	9.425	10.625	11.475	13.23	15.4
NEA	5.8	11.1	11.95	13.2	14.15	15.6	18.2

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	10.6594	1.78785	0.44696
NEA	29	12.9069	2.44174	0.45342

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	208.5	13.0313	-3.771
NEA	29	826.5	28.5000	3.771

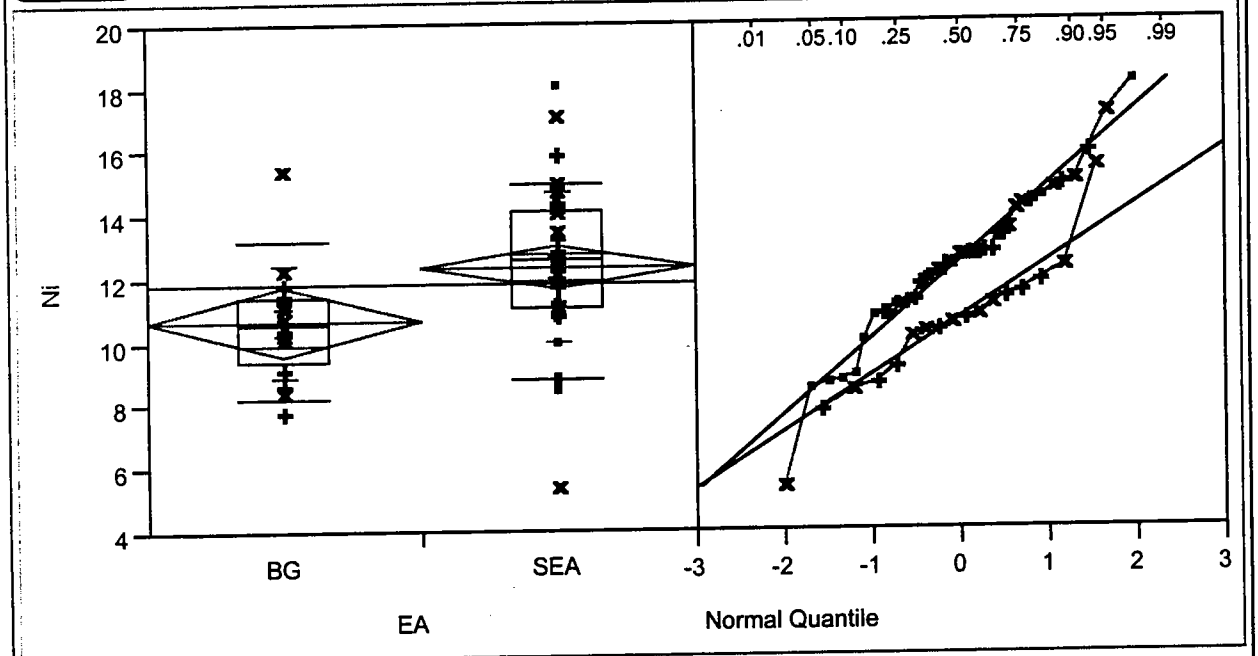
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
208.5	-3.77144	0.0002

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
14.3134	1	0.0002

Ni By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	7.8	8.22	9.425	10.625	11.475	13.23	15.4
SEA	5.4	8.82	11.1	12.6	14.125	14.98	18.1

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	10.6594	1.78785	0.44696
SEA	41	12.4085	2.39358	0.37381

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	288	18.0000	-3.118
SEA	41	1365	33.2927	3.118

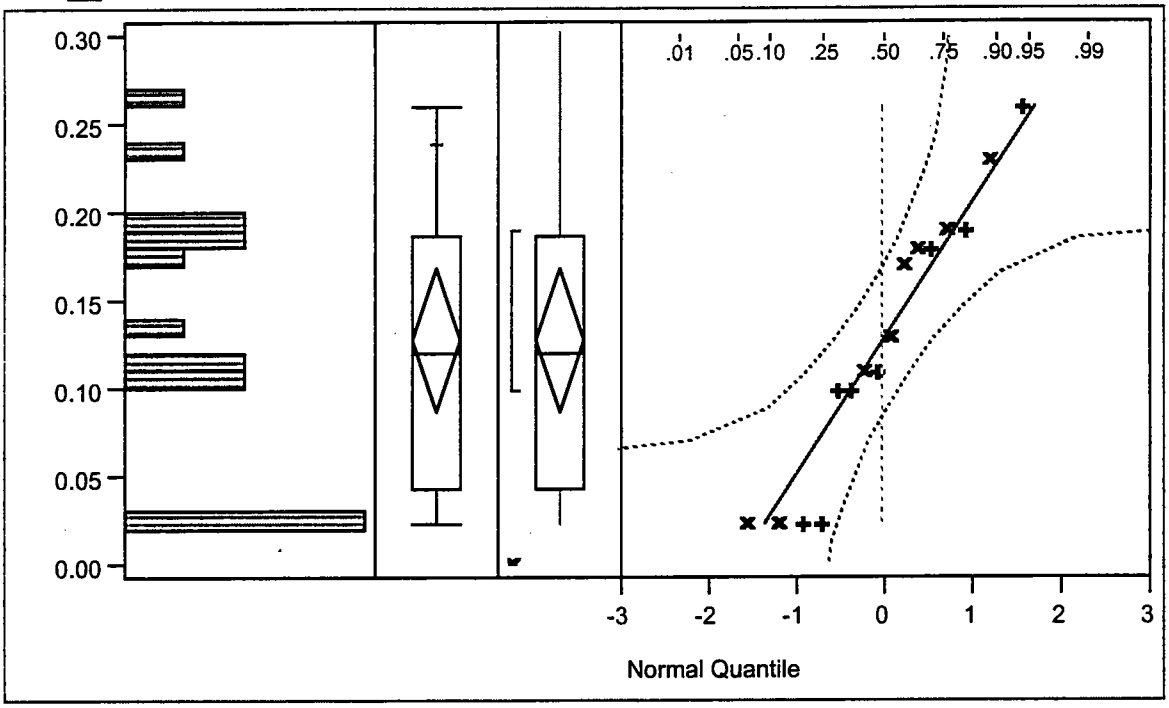
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
288	-3.11761	0.0018

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
9.7749	1	0.0018

Se



Quantiles

maximum	100.0%	0.26000
	99.5%	0.26000
	97.5%	0.26000
	90.0%	0.23900
quartile	75.0%	0.18750
median	50.0%	0.12000
quartile	25.0%	0.04251
	10.0%	0.02335
	2.5%	0.02335
	0.5%	0.02335
minimum	0.0%	0.02335

Moments

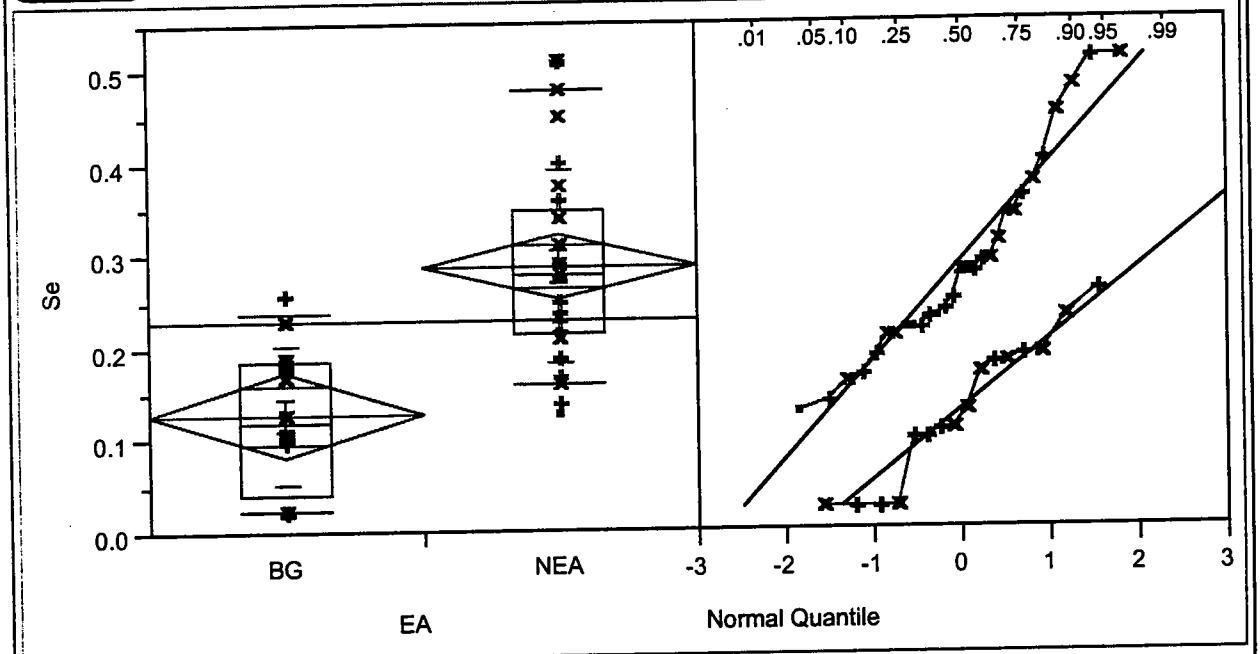
Mean	0.12771
Std Dev	0.07690
Std Error Mean	0.01923
Upper 95% Mean	0.16869
Lower 95% Mean	0.08673
N	16.00000
Sum Weights	16.00000
Sum	2.04340
Variance	0.00591
Skewness	-0.06202
Kurtosis	-1.03166
CV	60.21643

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.920518	0.1735

Se By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.02335	0.02335	0.042513	0.12	0.1875	0.239	0.26
NEA	0.13	0.16	0.215	0.28	0.35	0.48	0.51

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.127713	0.076904	0.01923
NEA	29	0.286724	0.106287	0.01974

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	182	11.3750	-4.403
NEA	29	853	29.4138	4.403

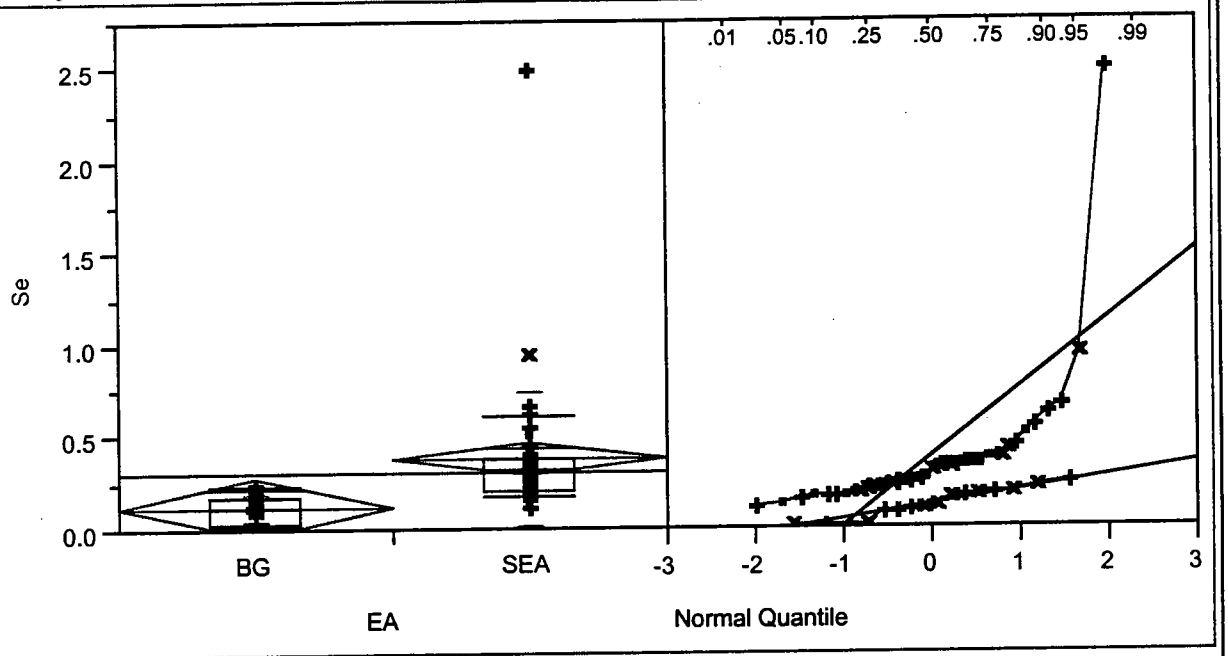
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
182	-4.40350	<.0001

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
19.4955	1	<.0001

Se By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.02335	0.02335	0.042513	0.12	0.1875	0.239	0.26
SEA	0.13	0.18	0.215	0.315	0.385	0.616	2.5

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.127713	0.076904	0.01923
SEA	41	0.378171	0.375752	0.05868

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	194	12.1250	-4.792
SEA	41	1459	35.5854	4.792

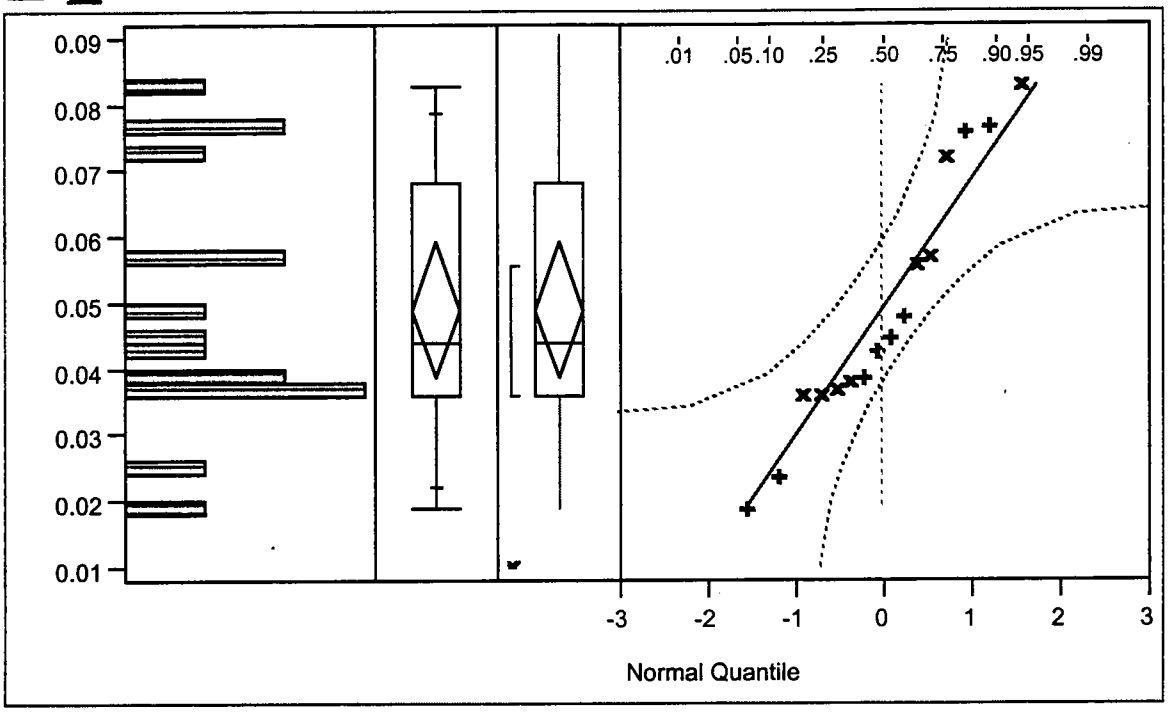
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
194	-4.79171	<.0001

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
23.0458	1	<.0001

Ag



Quantiles

maximum	100.0%	0.08300
	99.5%	0.08300
	97.5%	0.08300
	90.0%	0.07880
quartile	75.0%	0.06825
median	50.0%	0.04400
quartile	25.0%	0.03625
	10.0%	0.02250
	2.5%	0.01900
	0.5%	0.01900
minimum	0.0%	0.01900

Moments

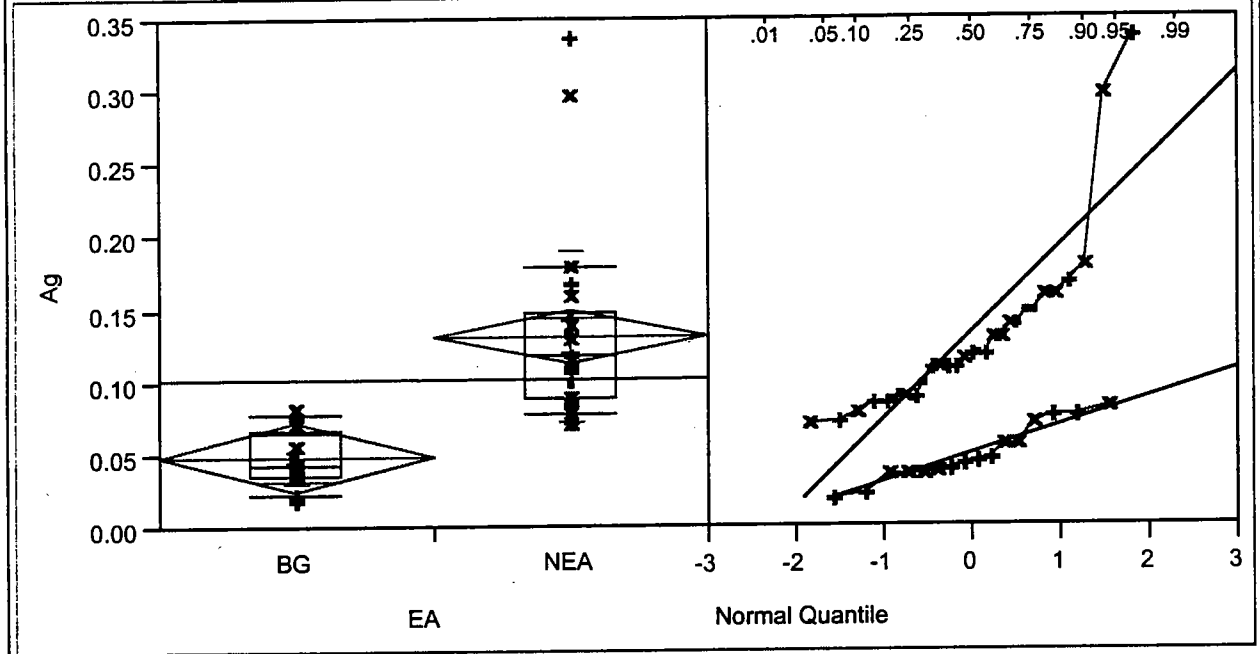
Mean	0.04913
Std Dev	0.01931
Std Error Mean	0.00483
Upper 95% Mean	0.05941
Lower 95% Mean	0.03884
N	16.00000
Sum Weights	16.00000
Sum	0.78600
Variance	0.00037
Skewness	0.42877
Kurtosis	-0.80320
CV	39.30300

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.931475	0.2569

Ag By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.019	0.0225	0.03625	0.044	0.06825	0.0788	0.083
NEA	0.072	0.079	0.09	0.12	0.15	0.18	0.34

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.049125	0.019308	0.00483
NEA	29	0.132138	0.059936	0.01113

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	143.5	8.9688	-5.315
NEA	29	891.5	30.7414	5.315

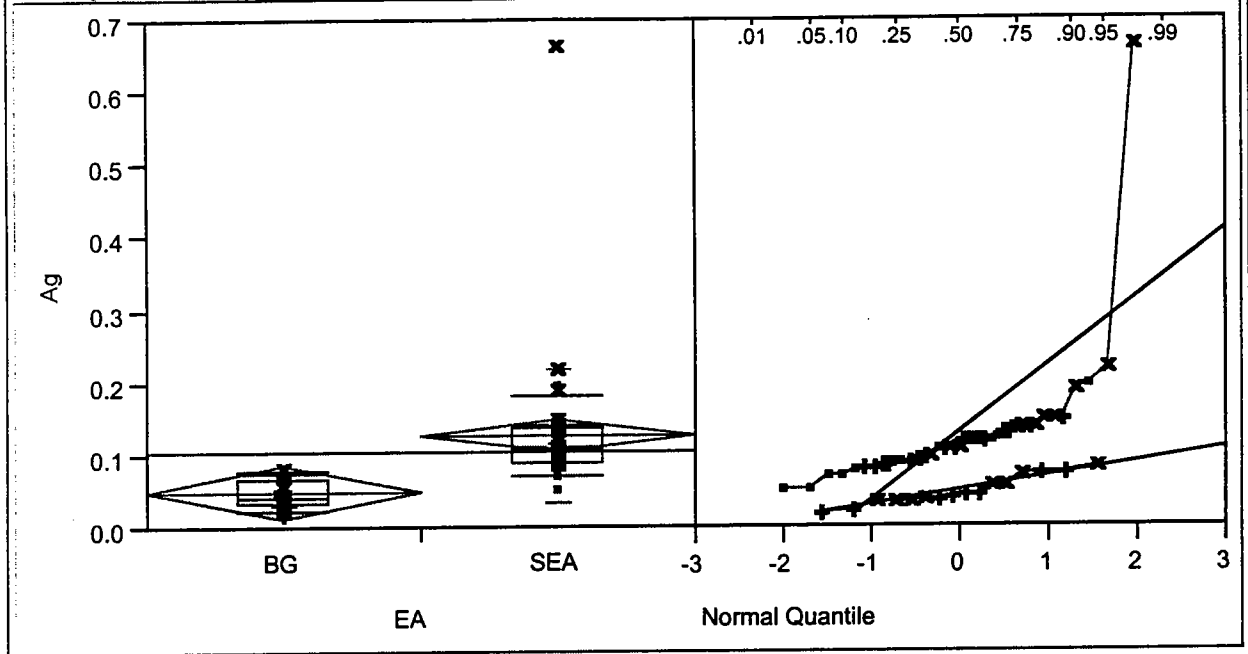
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
143.5	-5.31515	<.0001

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
28.3771	1	<.0001

Ag By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.019	0.0225	0.03625	0.044	0.06825	0.0788	0.083
SEA	0.053	0.0732	0.091	0.11	0.1375	0.182	0.67

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.049125	0.019308	0.00483
SEA	41	0.128634	0.093544	0.01461

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	157	9.8125	-5.450
SEA	41	1496	36.4878	5.450

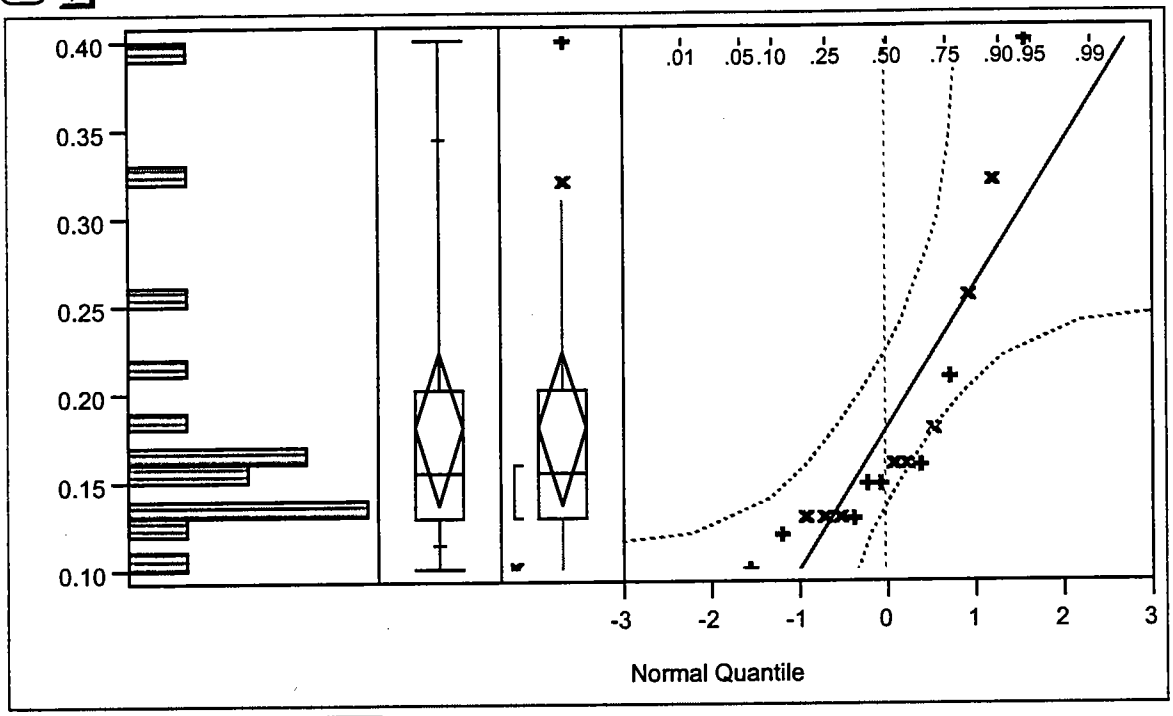
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
157	-5.44984	<.0001

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
29.7977	1	<.0001

TI



Quantiles

maximum	100.0%	0.40000
	99.5%	0.40000
	97.5%	0.40000
	90.0%	0.34400
quartile	75.0%	0.20250
median	50.0%	0.15500
quartile	25.0%	0.13000
	10.0%	0.11400
	2.5%	0.10000
	0.5%	0.10000
minimum	0.0%	0.10000

Moments

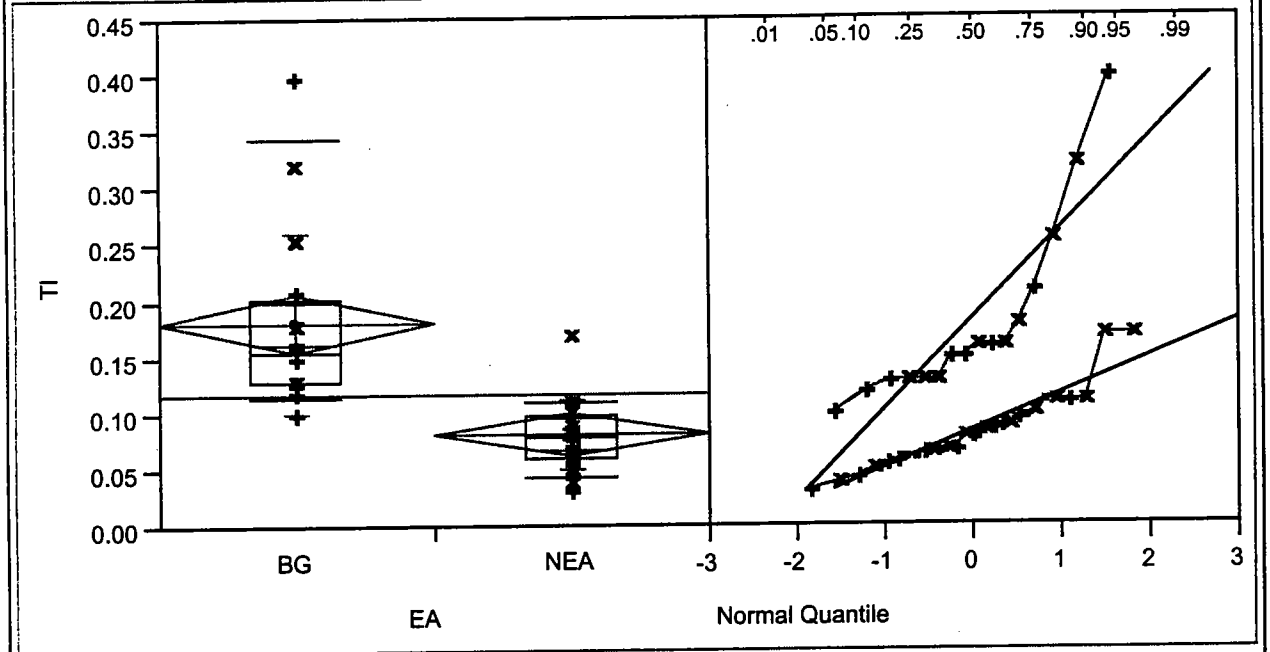
Mean	0.18031
Std Dev	0.08063
Std Error Mean	0.02016
Upper 95% Mean	0.22328
Lower 95% Mean	0.13735
N	16.00000
Sum Weights	16.00000
Sum	2.88500
Variance	0.00650
Skewness	1.80848
Kurtosis	2.94891
CV	44.71807

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.777622	0.0011

TI By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.1	0.114	0.13	0.155	0.2025	0.344	0.4
NEA	0.031	0.043	0.06	0.08	0.098	0.11	0.17

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.180313	0.080632	0.02016
NEA	29	0.082259	0.032699	0.00607

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	573.5	35.8438	4.865
NEA	29	461.5	15.9138	-4.865

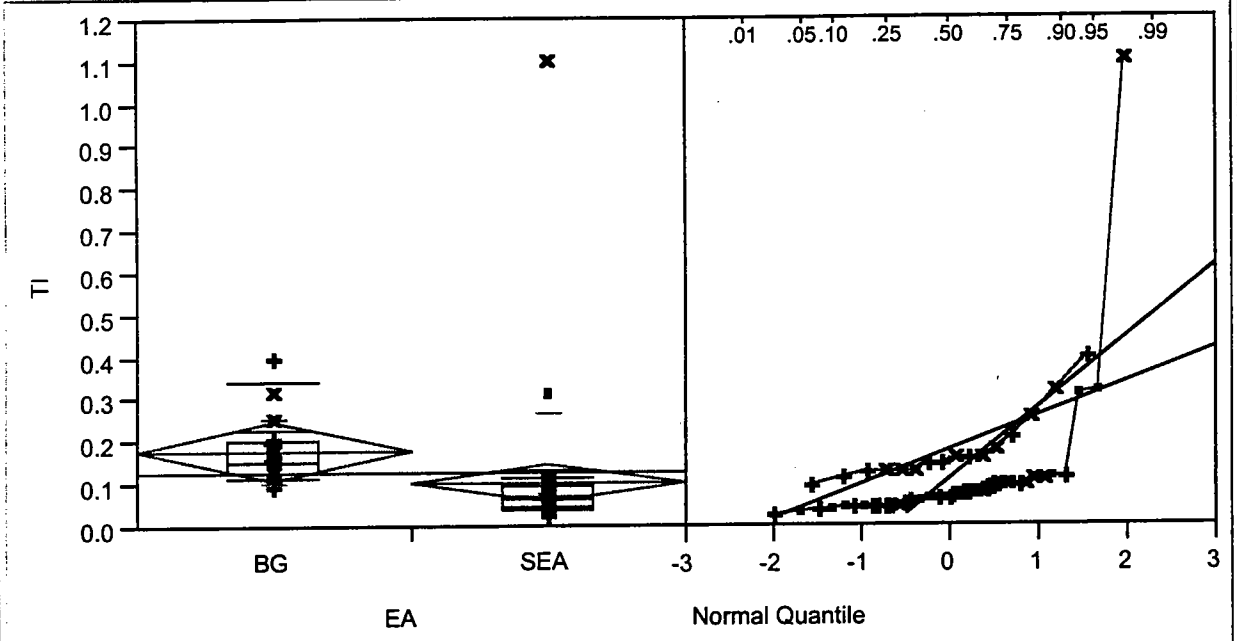
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
573.5	4.86528	<.0001

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
23.7865	1	<.0001

TI By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.1	0.114	0.13	0.155	0.2025	0.344	0.4
SEA	0.03	0.0434	0.049	0.069	0.0955	0.12	1.1

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.180313	0.080632	0.02016
SEA	41	0.107378	0.169249	0.02643

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	742	46.3750	4.931
SEA	41	911	22.2195	-4.931

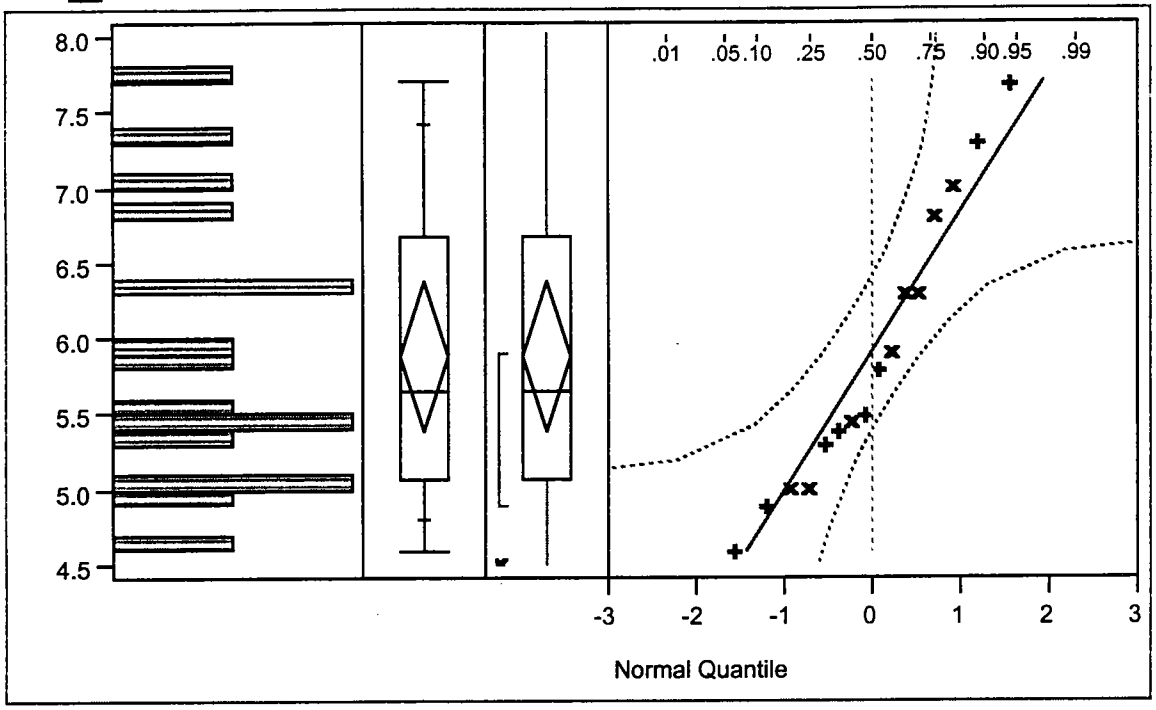
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
742	4.93051	<.0001

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
24.3976	1	<.0001

Th



Quantiles

maximum	100.0%	7.7000
	99.5%	7.7000
	97.5%	7.7000
	90.0%	7.4200
quartile	75.0%	6.6750
median	50.0%	5.6500
quartile	25.0%	5.0750
	10.0%	4.8100
	2.5%	4.6000
	0.5%	4.6000
minimum	0.0%	4.6000

Moments

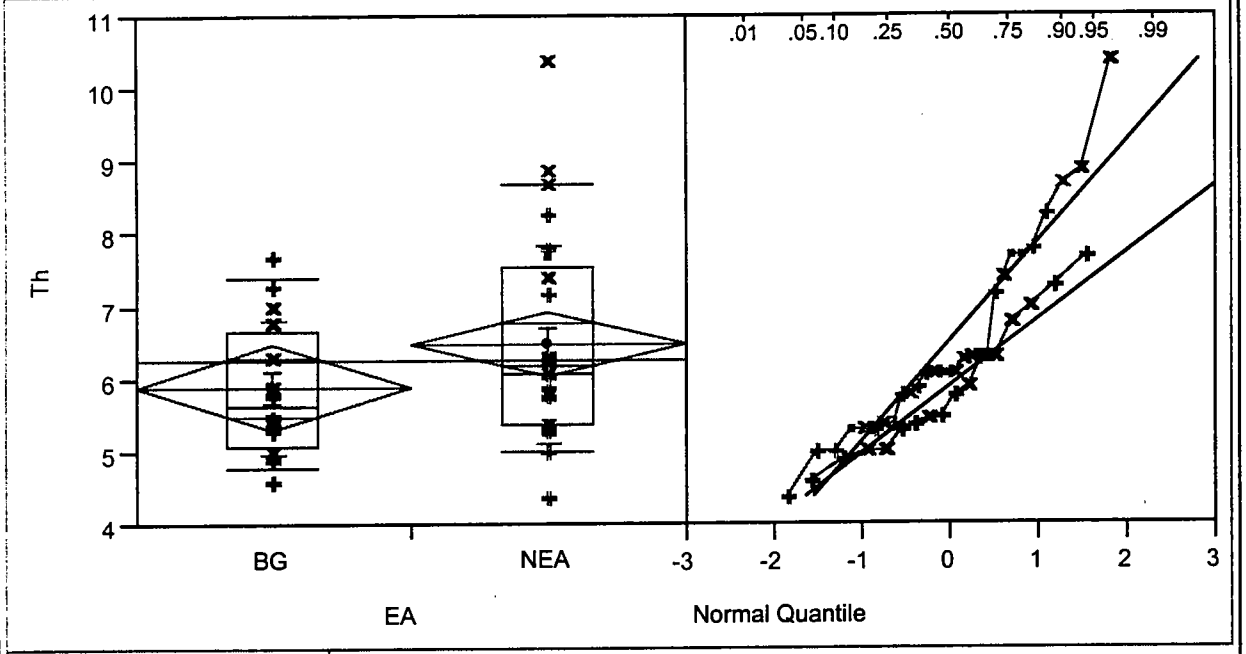
Mean	5.89063
Std Dev	0.92488
Std Error Mean	0.23122
Upper 95% Mean	6.38346
Lower 95% Mean	5.39779
N	16.00000
Sum Weights	16.00000
Sum	94.25000
Variance	0.85541
Skewness	0.57520
Kurtosis	-0.69210
CV	15.70091

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.943765	0.3911

Th By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	4.6	4.81	5.075	5.65	6.675	7.42	7.7
NEA	4.4	5	5.4	6.1	7.55	8.7	10.4

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	5.89063	0.92488	0.23122
NEA	29	6.49483	1.37441	0.25522

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	310	19.3750	-1.367
NEA	29	725	25.0000	1.367

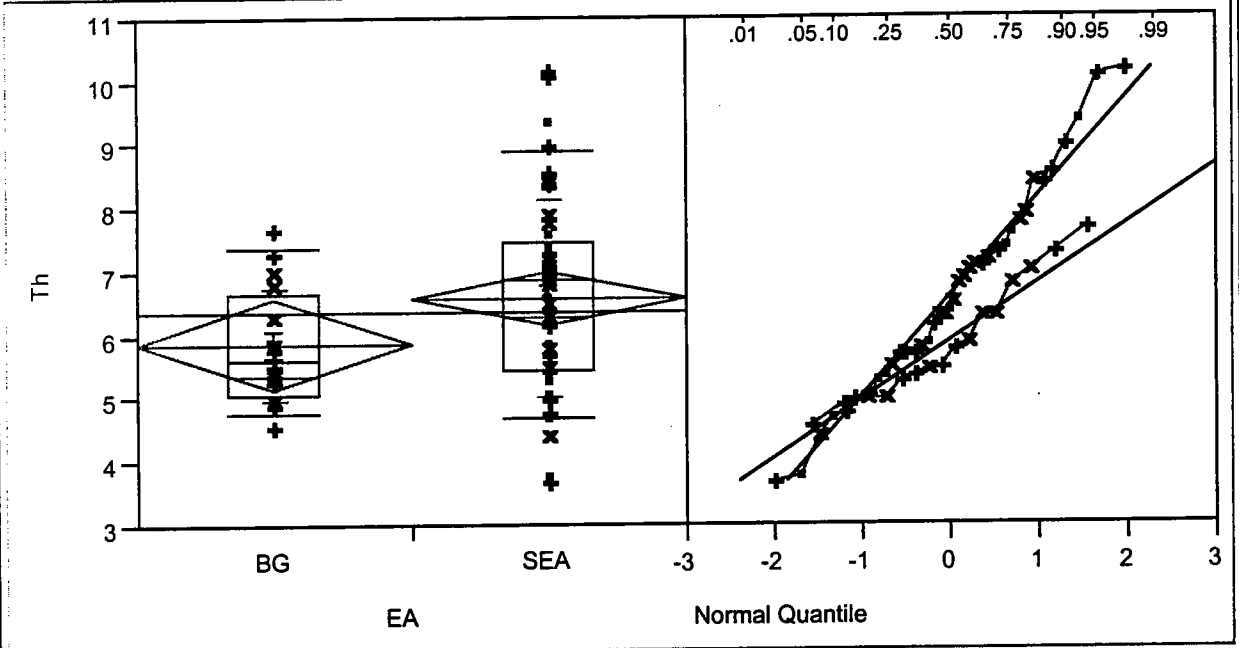
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
310	-1.36668	0.1717

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
1.9004	1	0.1680

Th By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	4.6	4.81	5.075	5.65	6.675	7.42	7.7
SEA	3.7	4.72	5.45	6.4	7.5	8.92	10.2

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	5.89063	0.92488	0.23122
SEA	41	6.59634	1.58463	0.24748

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	371.5	23.2188	-1.635
SEA	41	1281.5	31.2561	1.635

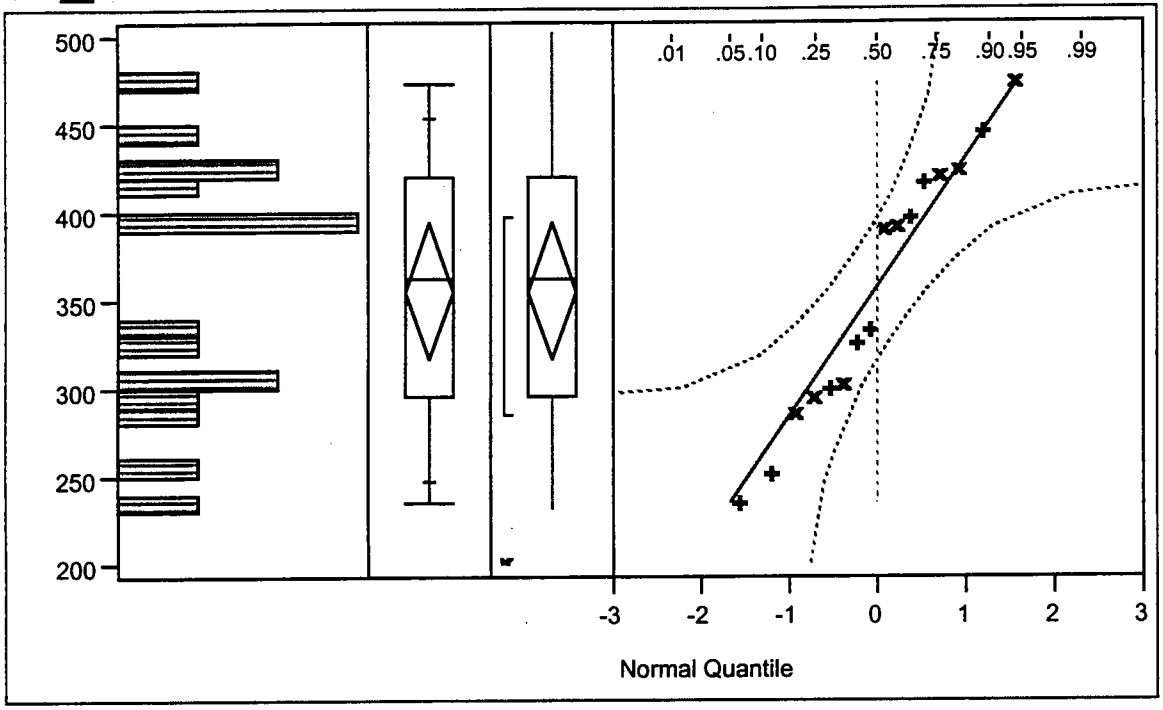
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
371.5	-1.63483	0.1021

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
2.7018	1	0.1002

Ti



Quantiles

maximum	100.0%	473.00
	99.5%	473.00
	97.5%	473.00
	90.0%	454.10
quartile	75.0%	420.25
median	50.0%	362.25
quartile	25.0%	295.75
	10.0%	247.60
	2.5%	235.00
	0.5%	235.00
minimum	0.0%	235.00

Moments

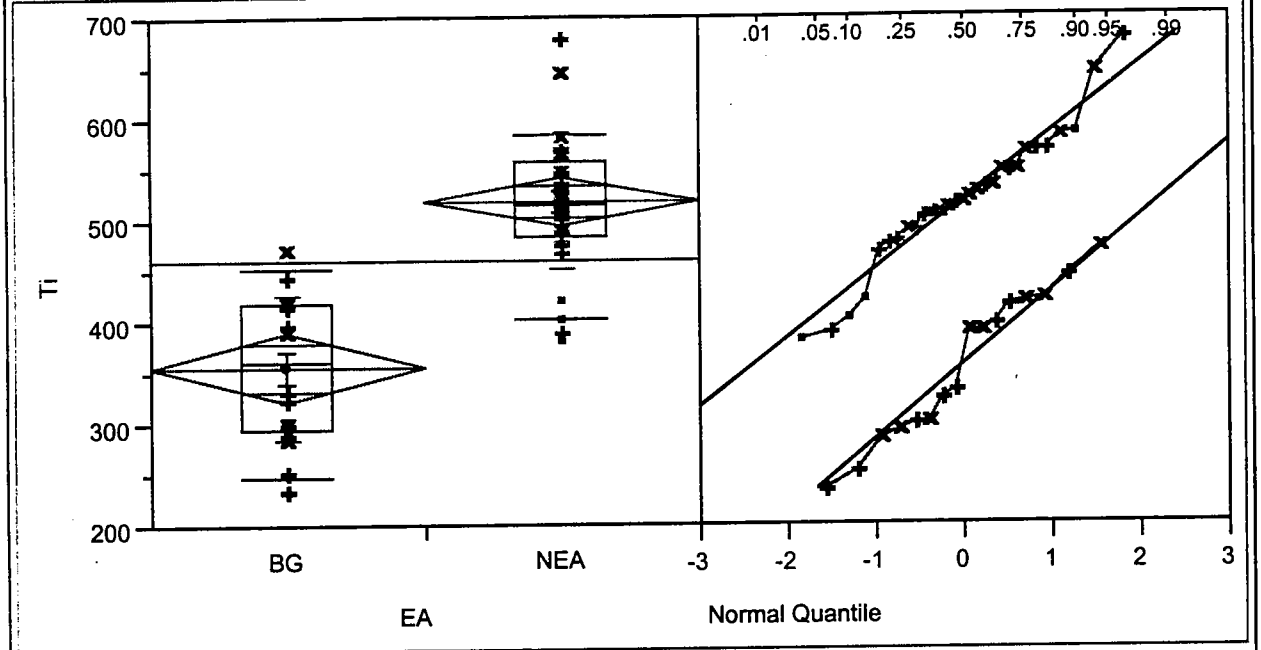
Mean	355.7188
Std Dev	73.0552
Std Error Mean	18.2638
Upper 95% Mean	394.6470
Lower 95% Mean	316.7905
N	16.0000
Sum Weights	16.0000
Sum	5691.5000
Variance	5337.0656
Skewness	-0.0876
Kurtosis	-1.2700
CV	20.5374

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.945006	0.4073

Ti By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	235	247.6	295.75	362.25	420.25	454.1	473
NEA	383	404	486.5	518	558	585	681

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	355.719	73.0552	18.264
NEA	29	518.603	67.1538	12.470

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	159.5	9.9688	-4.933
NEA	29	875.5	30.1897	4.933

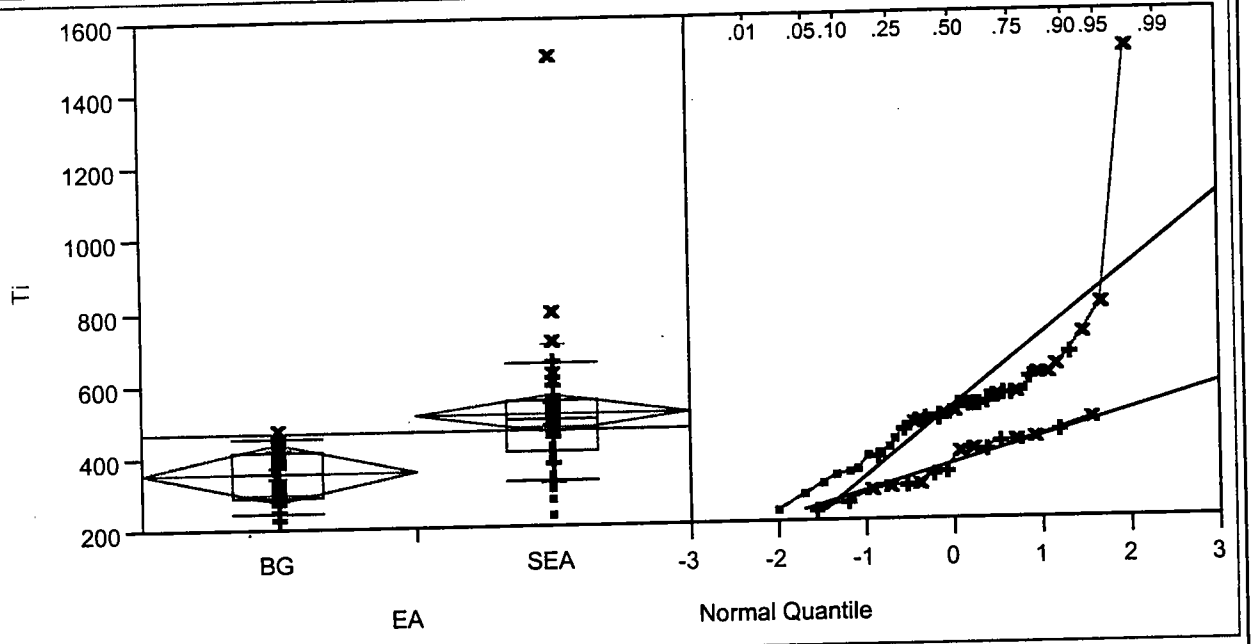
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
159.5	-4.93257	<.0001

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
24.4474	1	<.0001

Ti By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	235	247.6	295.75	362.25	420.25	454.1	473
SEA	233	331.8	413.5	498.5	548	654.6	1500

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	355.719	73.055	18.264
SEA	41	514.646	194.492	30.375

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

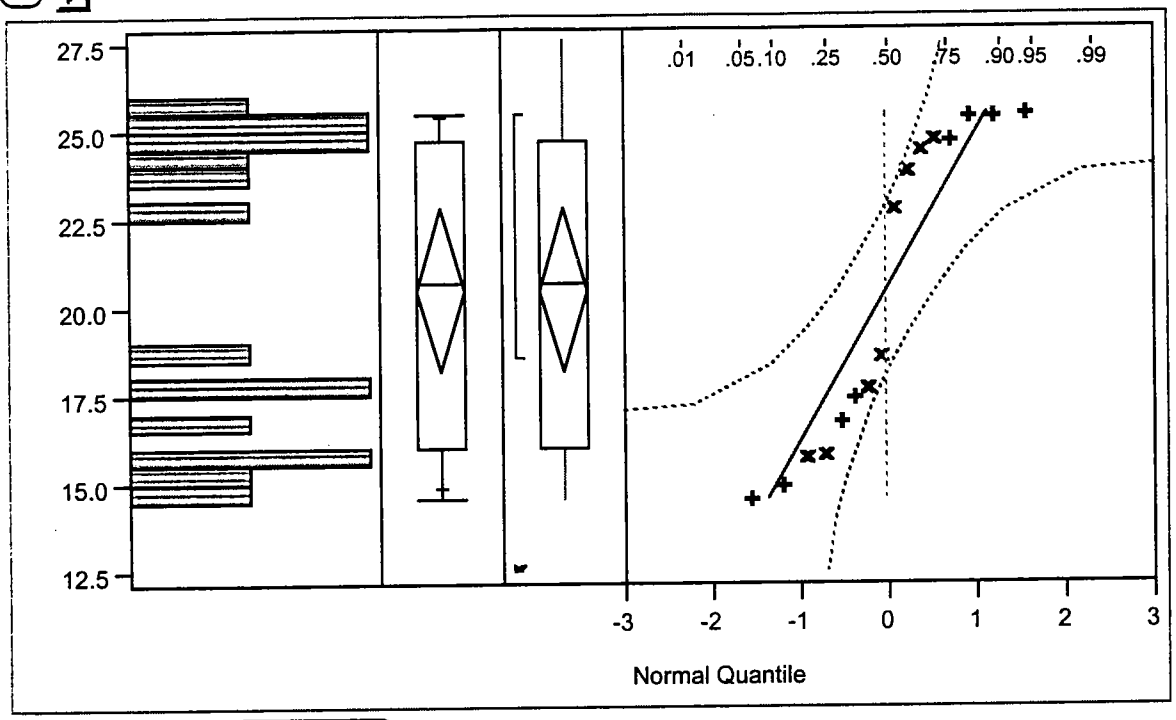
Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	235	14.6875	-4.058
SEA	41	1418	34.5854	4.058

2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
235	-4.05819	<.0001

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
16.5410	1	<.0001



Quantiles

maximum	100.0%	25.500
	99.5%	25.500
	97.5%	25.500
	90.0%	25.430
quartile	75.0%	24.700
median	50.0%	20.700
quartile	25.0%	16.050
	10.0%	14.880
	2.5%	14.600
	0.5%	14.600
minimum	0.0%	14.600

Moments

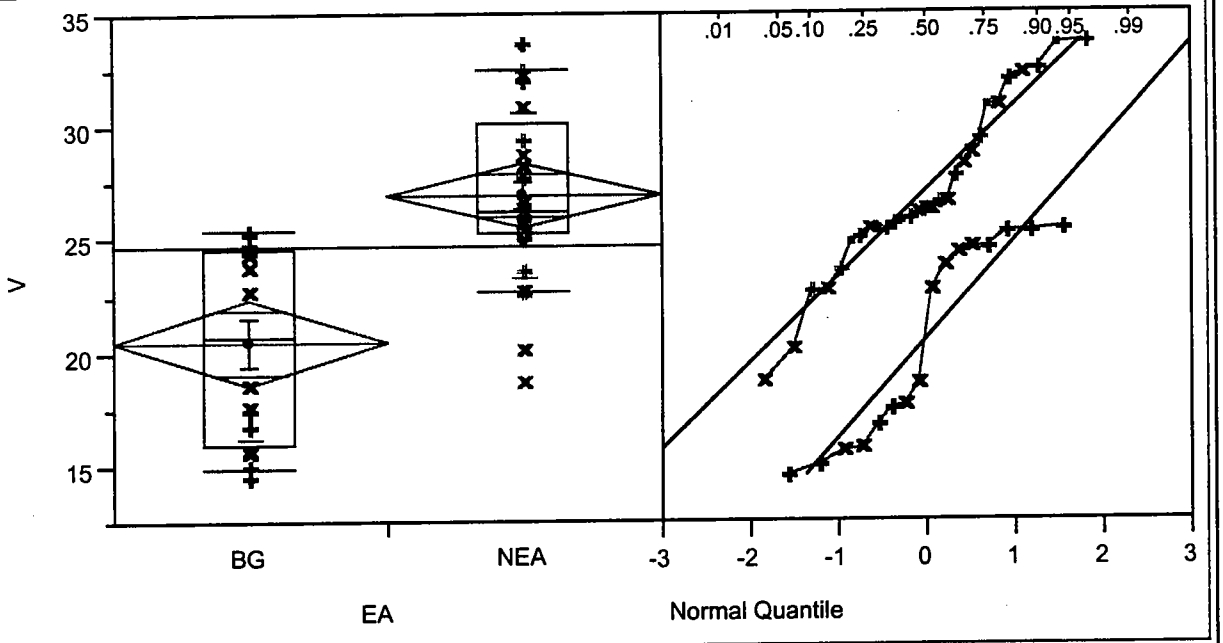
Mean	20.52500
Std Dev	4.35132
Std Error Mean	1.08783
Upper 95% Mean	22.84365
Lower 95% Mean	18.20635
N	16.00000
Sum Weights	16.00000
Sum	328.40000
Variance	18.93400
Skewness	-0.09066
Kurtosis	-1.96470
CV	21.20011

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.836103	0.0080

V By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	14.6	14.88	16.05	20.7	24.7	25.43	25.5
NEA	18.7	22.7	25.3	26.3	30.2	32.6	33.7

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	20.5250	4.35132	1.0878
NEA	29	27.0517	3.78235	0.7024

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	182	11.3750	-4.401
NEA	29	853	29.4138	4.401

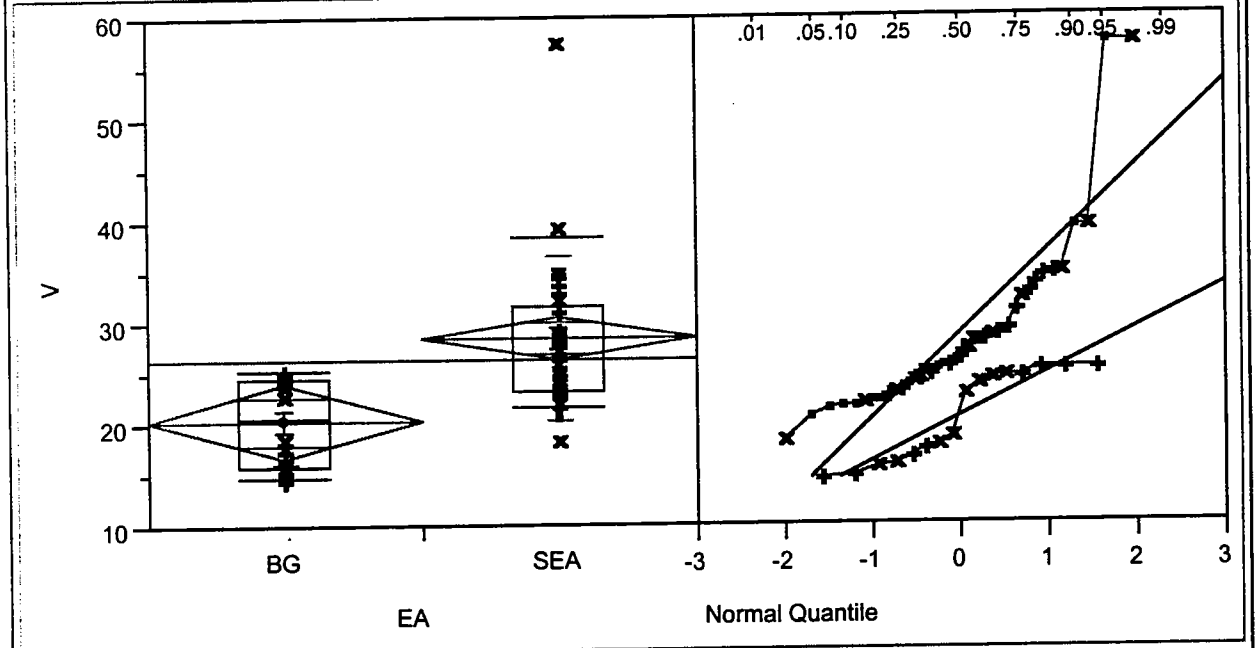
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
182	-4.40059	<.0001

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
19.4698	1	<.0001

V By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	14.6	14.88	16.05	20.7	24.7	25.43	25.5
SEA	18.4	21.72	23.2	26.5	31.75	38.5	57.5

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	20.5250	4.35132	1.0878
SEA	41	28.6293	8.27763	1.2927

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	250	15.6250	-3.792
SEA	41	1403	34.2195	3.792

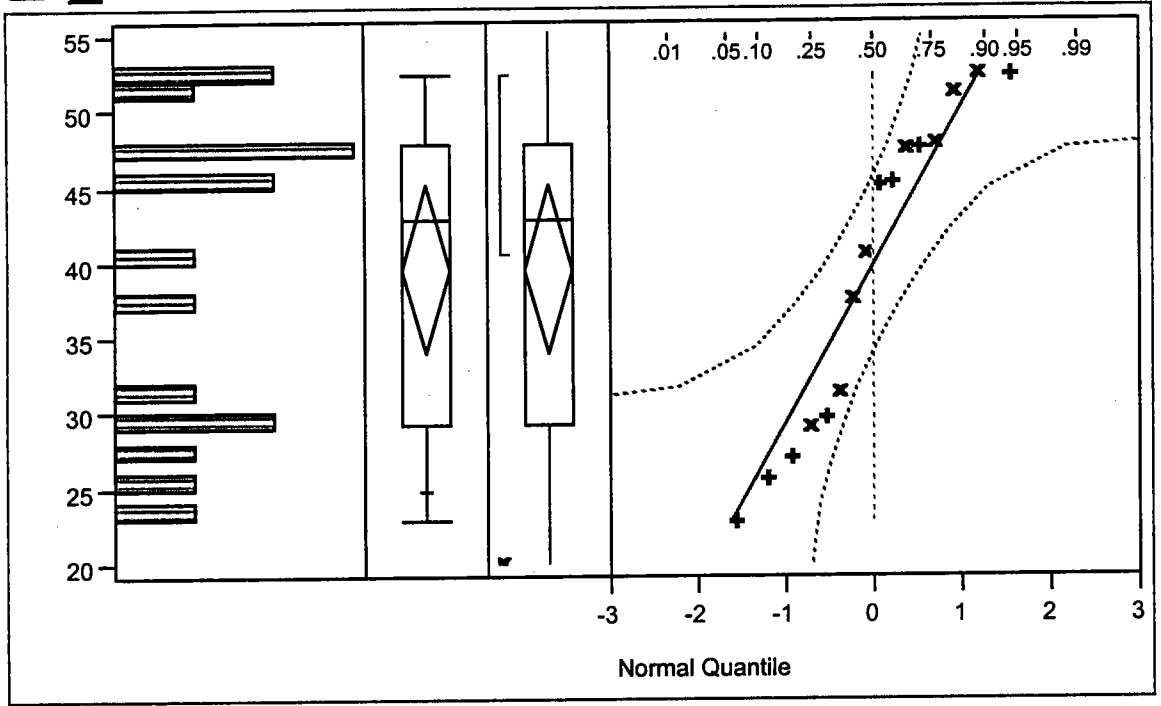
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
250	-3.79191	0.0001

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
14.4460	1	0.0001

Zn



Quantiles

maximum	100.0%	52.400
	99.5%	52.400
	97.5%	52.400
	90.0%	52.400
quartile	75.0%	47.775
median	50.0%	42.900
quartile	25.0%	29.275
	10.0%	24.890
	2.5%	23.000
	0.5%	23.000
minimum	0.0%	23.000

Moments

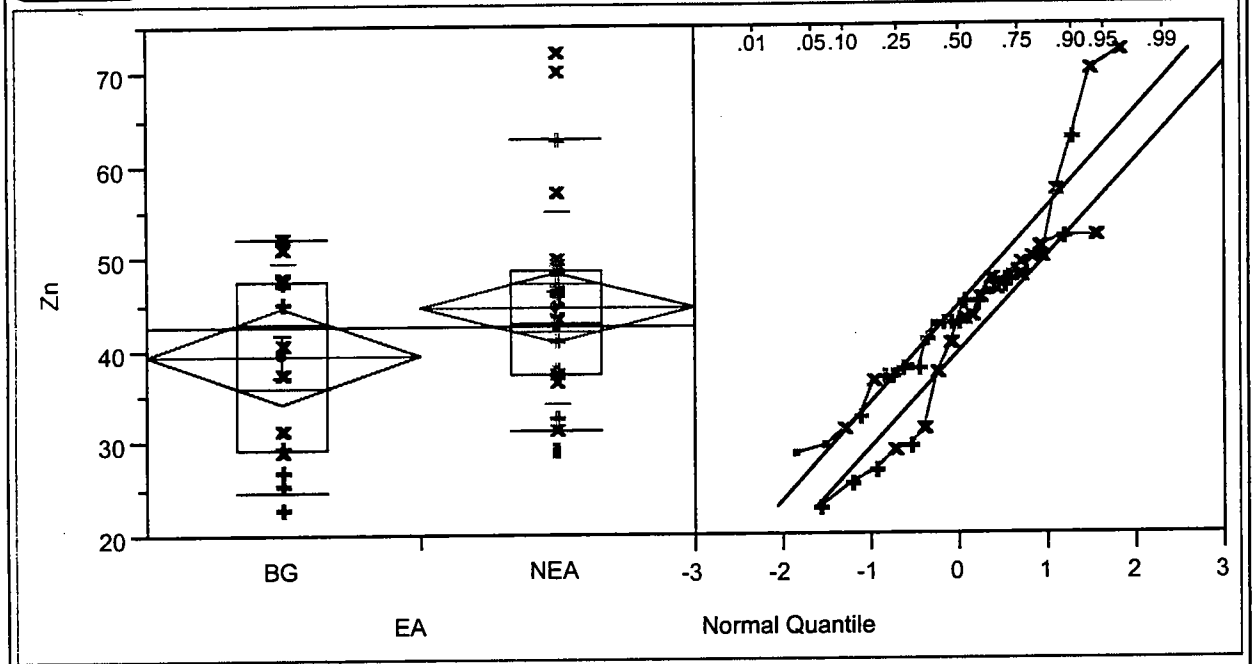
Mean	39.60938
Std Dev	10.41186
Std Error Mean	2.60296
Upper 95% Mean	45.15744
Lower 95% Mean	34.06131
N	16.00000
Sum Weights	16.00000
Sum	633.75000
Variance	108.40674
Skewness	-0.28458
Kurtosis	-1.58583
CV	26.28634

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.895644	0.0694

Zn By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	23	24.89	29.275	42.9	47.775	52.4	52.4
NEA	28.7	31.5	37.55	43.1	48.95	63	72.2

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	39.6094	10.4119	2.6030
NEA	29	44.6224	10.5810	1.9648

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	330	20.6250	-0.889
NEA	29	705	24.3103	0.889

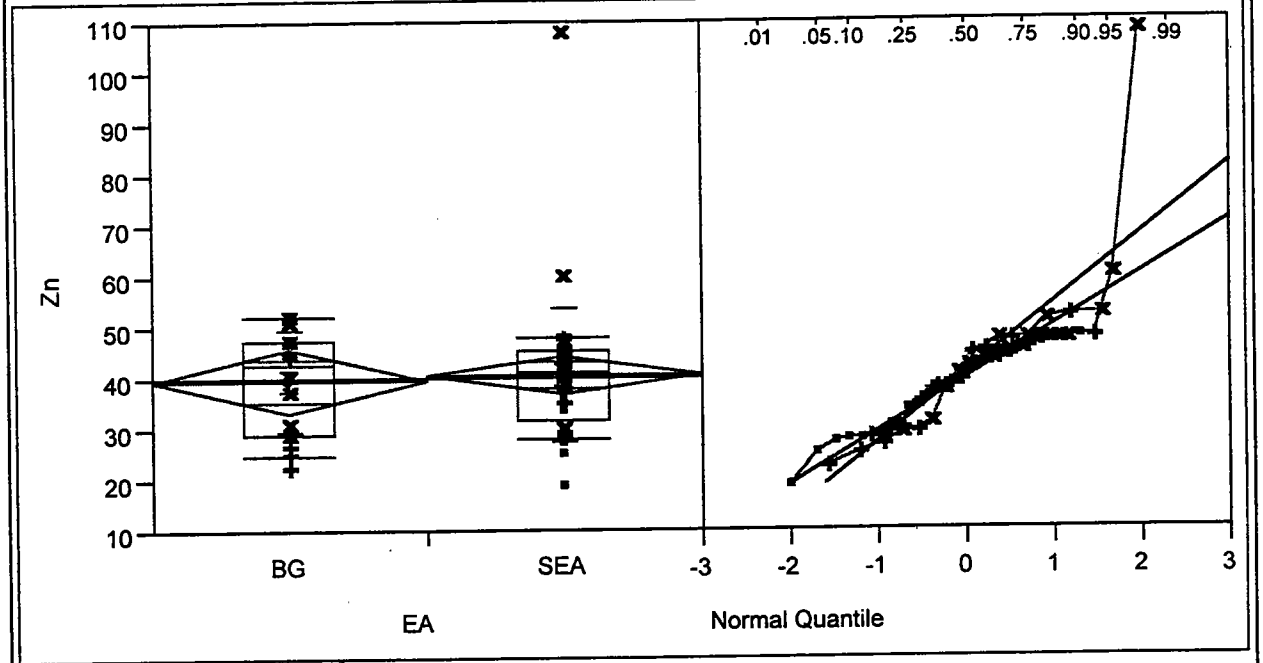
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
330	-0.88929	0.3738

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
0.8121	1	0.3675

Zn By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	23	24.89	29.275	42.9	47.775	52.4	52.4
SEA	19.1	28.13	32	41.3	45.625	48.2	108

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	39.6094	10.4119	2.6030
SEA	41	40.8988	13.5793	2.1207

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	480.5	30.0313	0.284
SEA	41	1172.5	28.5976	-0.284

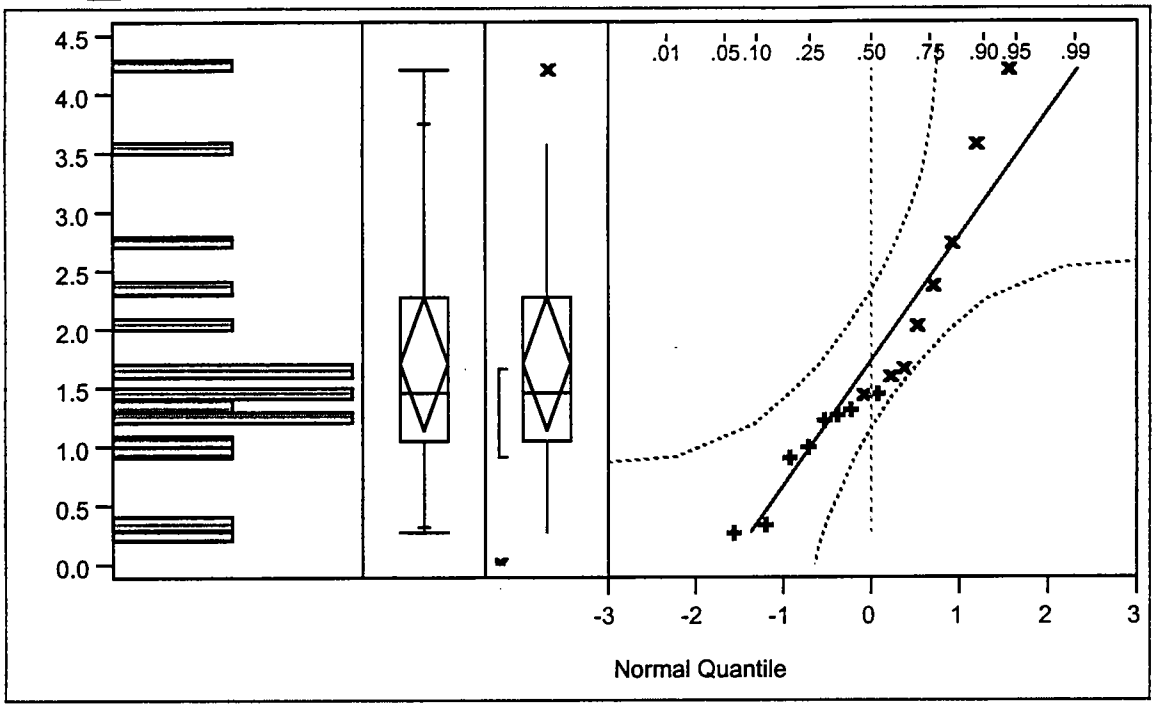
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
480.5	0.28418	0.7763

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
0.0859	1	0.7695

TEQ



Quantiles

maximum	100.0%	4.2250
	99.5%	4.2250
	97.5%	4.2250
	90.0%	3.7679
quartile	75.0%	2.2926
median	50.0%	1.4560
quartile	25.0%	1.0598
	10.0%	0.3342
	2.5%	0.2915
	0.5%	0.2915
minimum	0.0%	0.2915

Moments

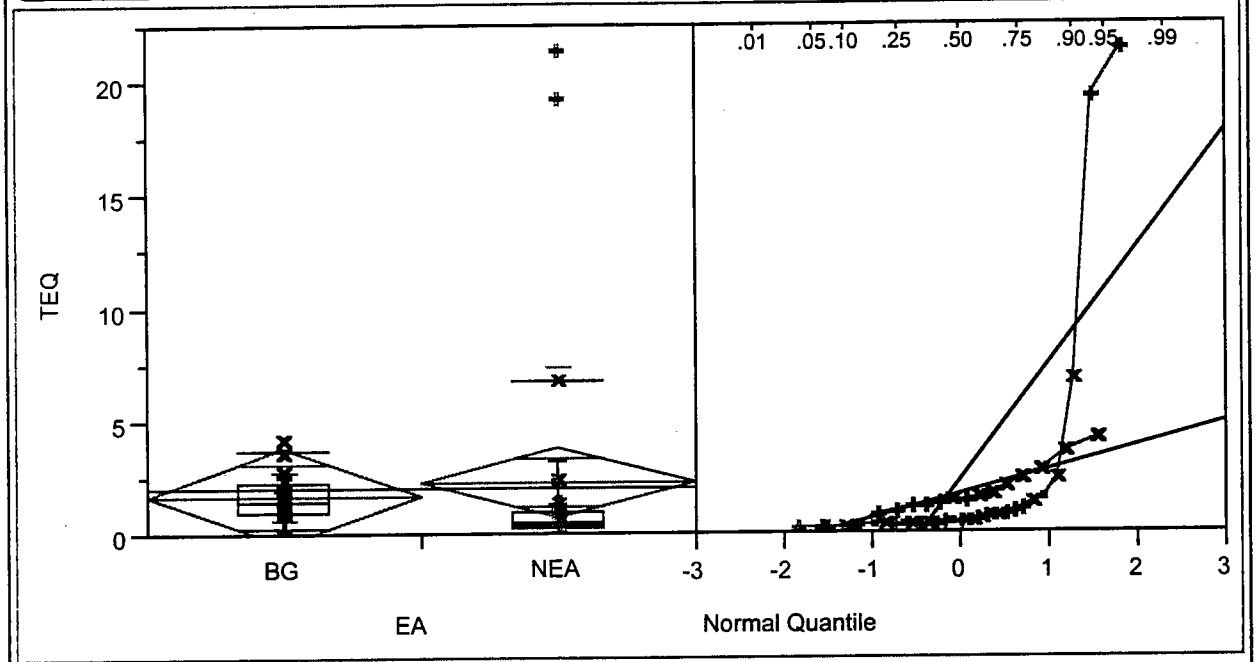
Mean	1.72244
Std Dev	1.06710
Std Error Mean	0.26677
Upper 95% Mean	2.29105
Lower 95% Mean	1.15383
N	16.00000
Sum Weights	16.00000
Sum	27.55906
Variance	1.13869
Skewness	1.04555
Kurtosis	0.95891
CV	61.95250

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.910815	0.1216

TEQ By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.2915	0.334165	1.059757	1.45595	2.292625	3.7679	4.225
NEA	0.33614	0.349695	0.41145	0.5083	1.051675	6.811	21.535

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	1.72244	1.06710	0.26677
NEA	29	2.26551	5.19450	0.96459

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	477	29.8125	2.573
NEA	29	558	19.2414	-2.573

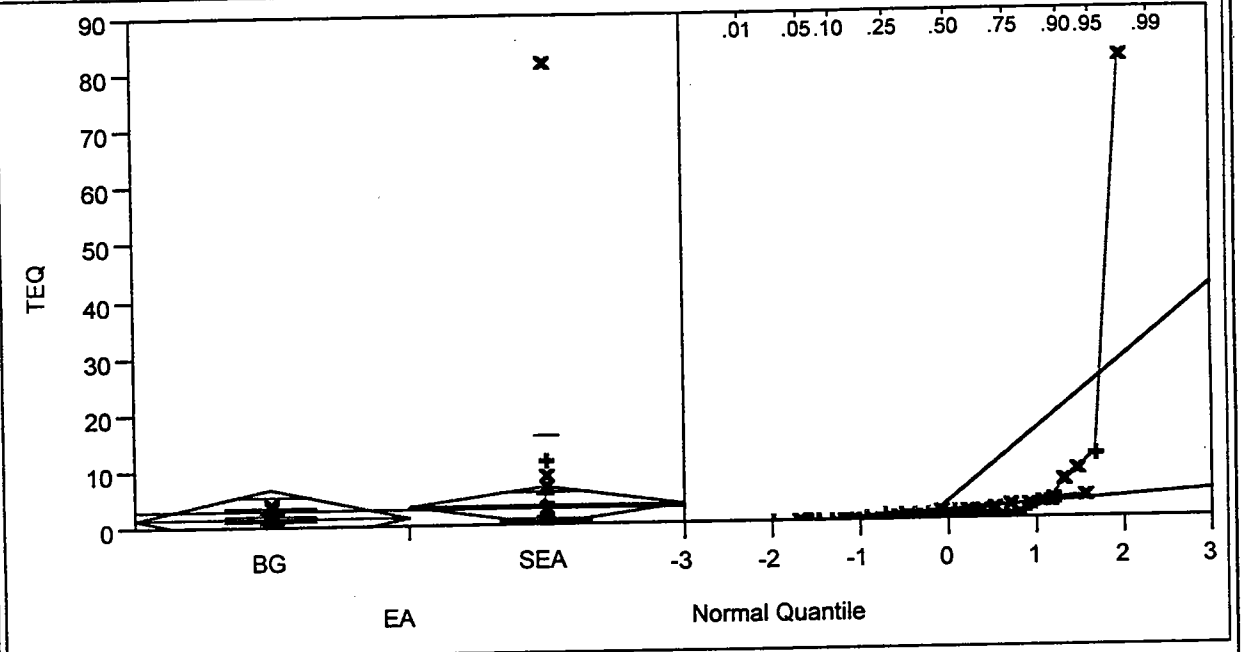
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
477	2.57266	0.0101

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
6.6797	1	0.0098

TEQ By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.2915	0.334165	1.059757	1.45595	2.292625	3.7679	4.225
SEA	0.337375	0.363572	0.47415	0.56315	0.8516	5.9997	81.7

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	1.72244	1.0671	0.2668
SEA	41	3.36317	12.7586	1.9926

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	611	38.1875	2.602
SEA	41	1042	25.4146	-2.602

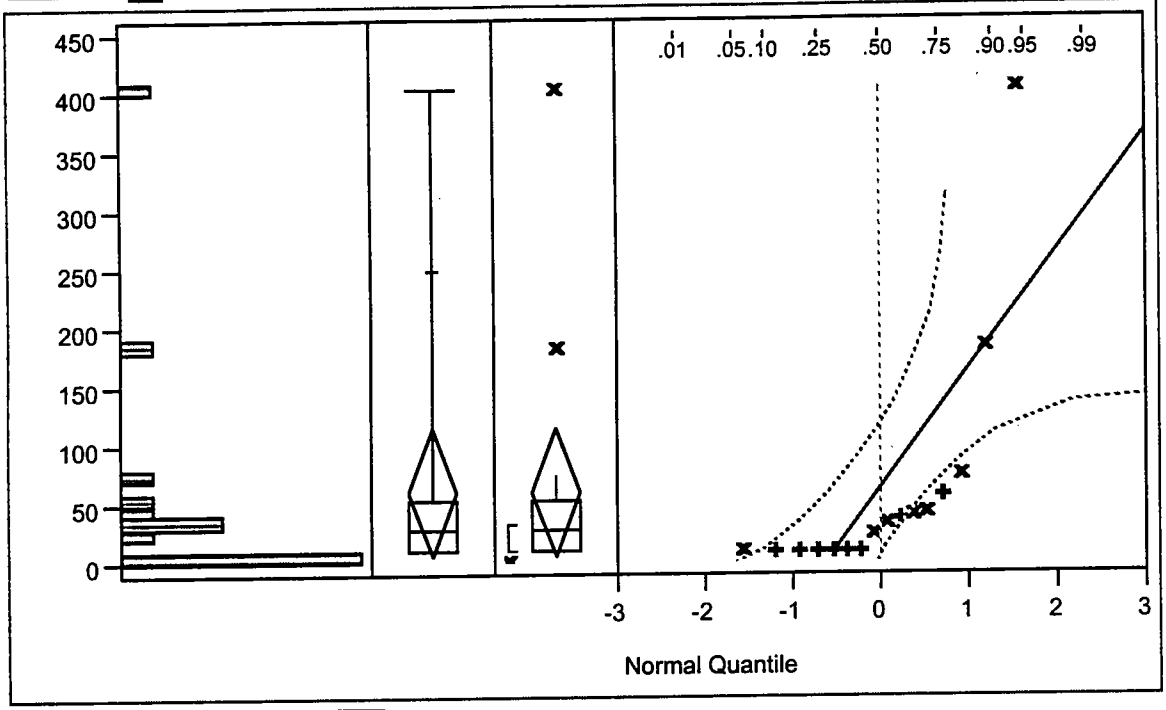
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
611	2.60173	0.0093

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
6.8153	1	0.0090

Perchlor



Quantiles

maximum	100.0%	402.50
	99.5%	402.50
	97.5%	402.50
	90.0%	248.85
quartile	75.0%	54.48
median	50.0%	28.80
quartile	25.0%	9.45
	10.0%	9.35
	2.5%	9.35
	0.5%	9.35
minimum	0.0%	9.35

Moments

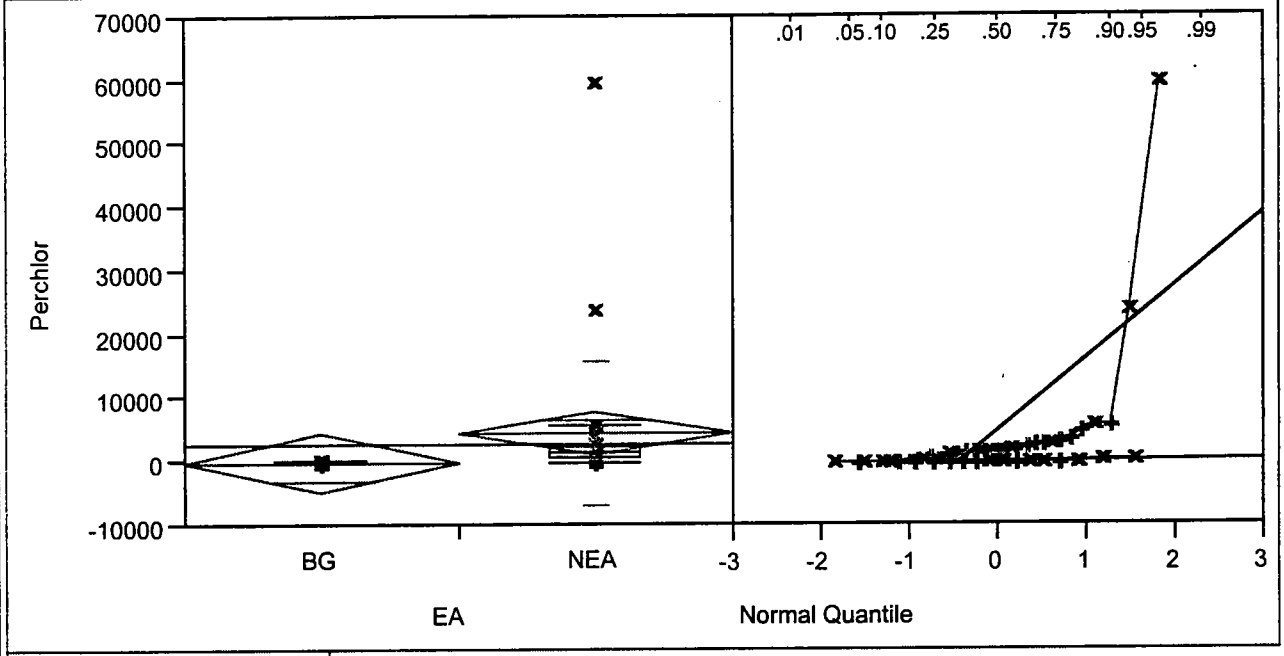
Mean	60.0438
Std Dev	101.2501
Std Error Mean	25.3125
Upper 95% Mean	113.9959
Lower 95% Mean	6.0916
N	16.0000
Sum Weights	16.0000
Sum	960.7000
Variance	10251.577
Skewness	3.0113
Kurtosis	9.5931
CV	168.6272

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.550025	<.0001

Perchlor By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	9.35	9.35	9.45	28.8	54.475	248.85	402.5
NEA	10.4	45.8	768	1770	3007.5	5870	59900

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	60.04	101.3	25.3
NEA	29	4720.14	11490.1	2133.7

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	162	10.1250	-4.873
NEA	29	873	30.1034	4.873

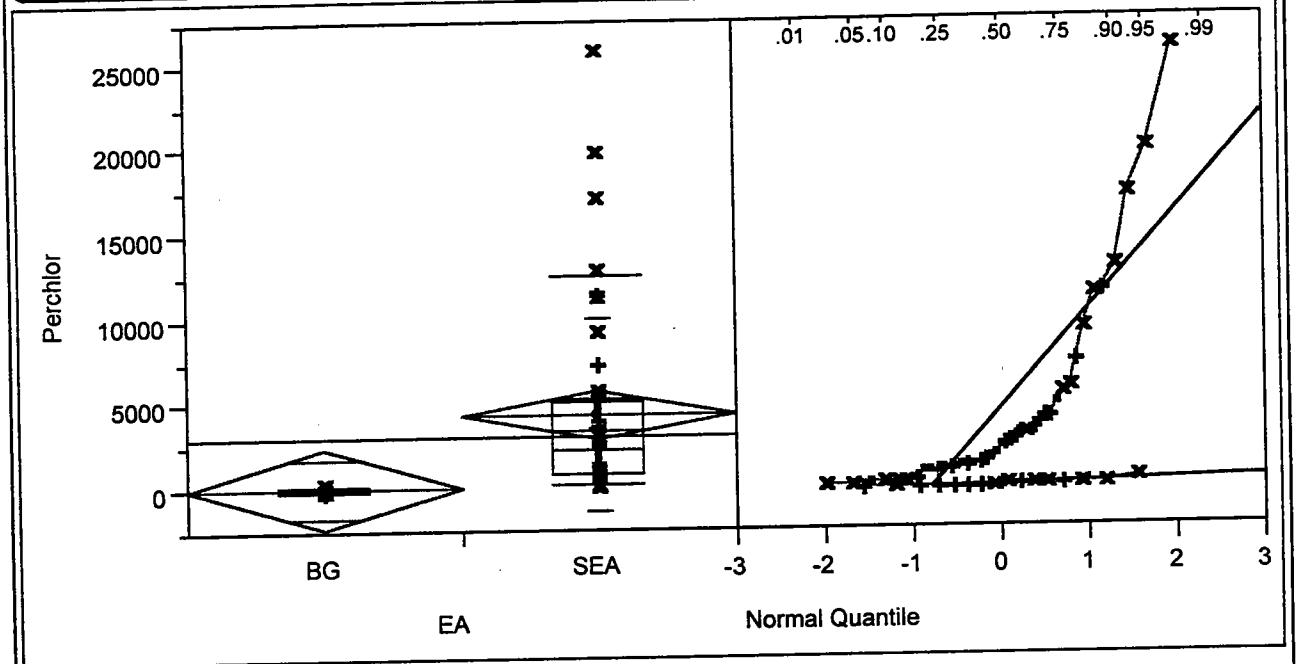
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
162	-4.87312	<.0001

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
23.8630	1	<.0001

Perchlor By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	9.35	9.35	9.45	28.8	54.475	248.85	402.5
SEA	34.5	276.8	970	2360	5220	12572	25800

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	60.04	101.25	25.31
SEA	41	4402.46	5781.64	902.94

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	150	9.3750	-5.568
SEA	41	1503	36.6585	5.568

2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
150	-5.56789	<.0001

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
31.1003	1	<.0001

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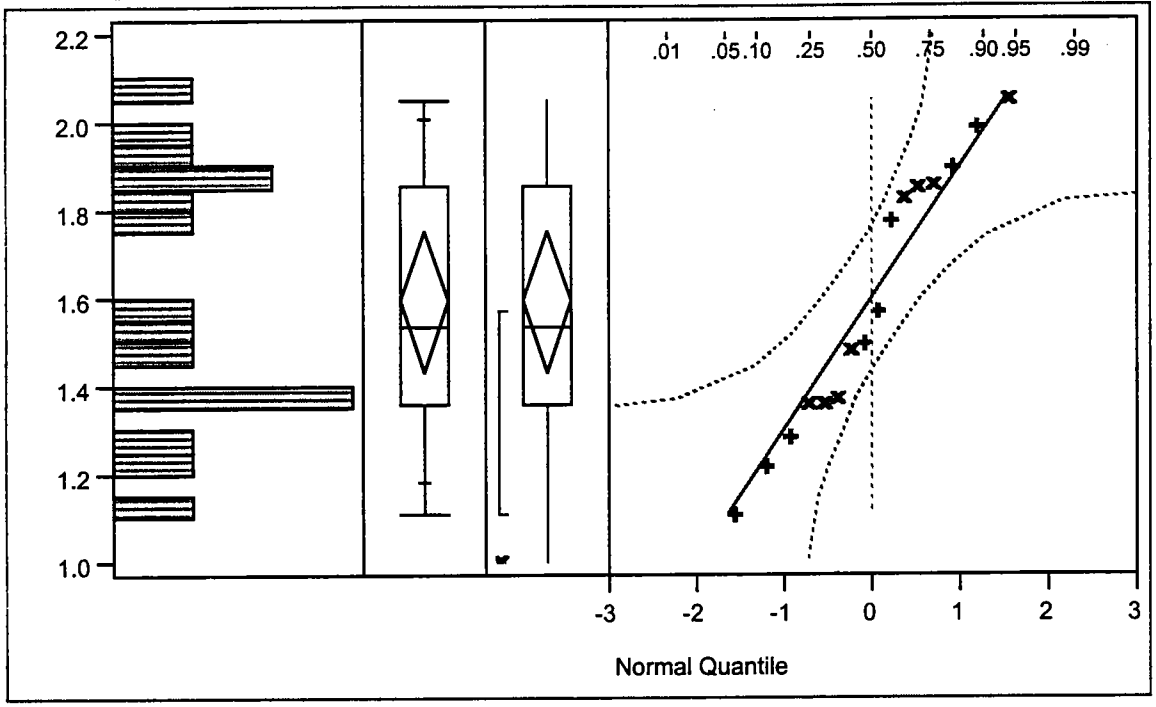


Quantiles

maximum	100.0%	2.0500
	99.5%	2.0500
	97.5%	2.0500
	90.0%	2.0080
quartile	75.0%	1.8575
median	50.0%	1.5350
quartile	25.0%	1.3600
	10.0%	1.1870
	2.5%	1.1100
	0.5%	1.1100
minimum	0.0%	1.1100

Moments

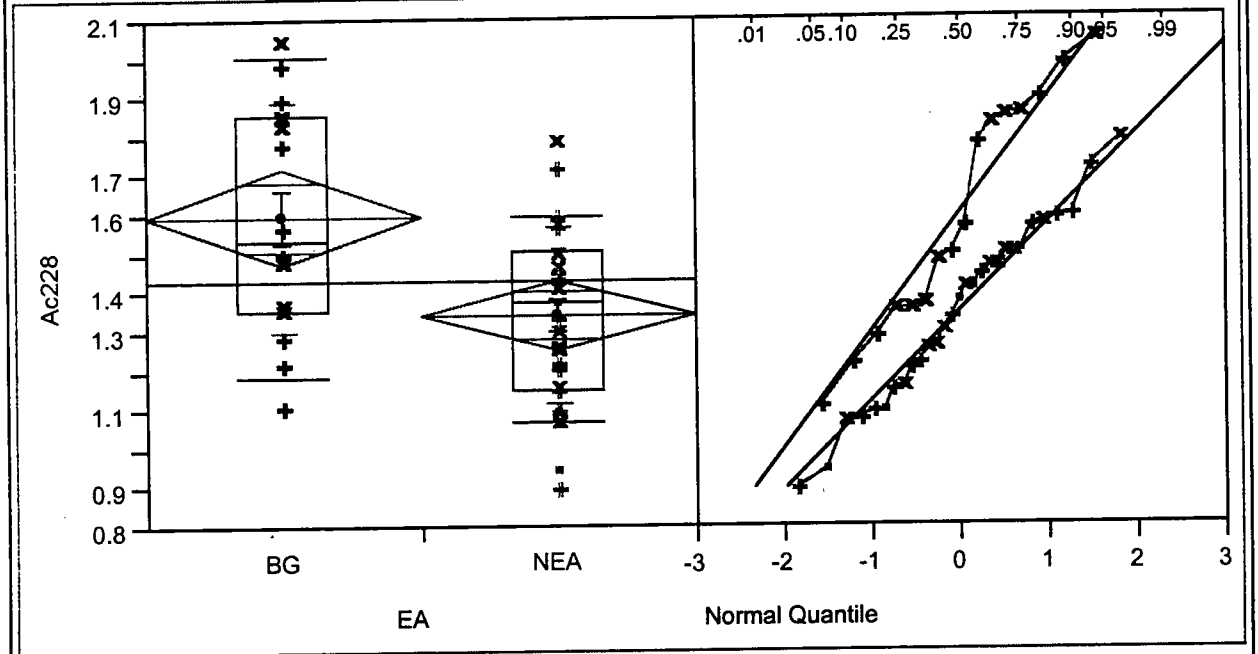
Mean	1.59500
Std Dev	0.29817
Std Error Mean	0.07454
Upper 95% Mean	1.75388
Lower 95% Mean	1.43612
N	16.00000
Sum Weights	16.00000
Sum	25.52000
Variance	0.08891
Skewness	0.01083
Kurtosis	-1.41576
CV	18.69418

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.934956	0.2902

Ac228 By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	1.11	1.187	1.36	1.535	1.8575	2.008	2.05
NEA	0.9	1.07	1.155	1.38	1.505	1.6	1.79

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	1.59500	0.298172	0.07454
NEA	29	1.34638	0.226790	0.04211

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	472	29.5000	2.455
NEA	29	563	19.4138	-2.455

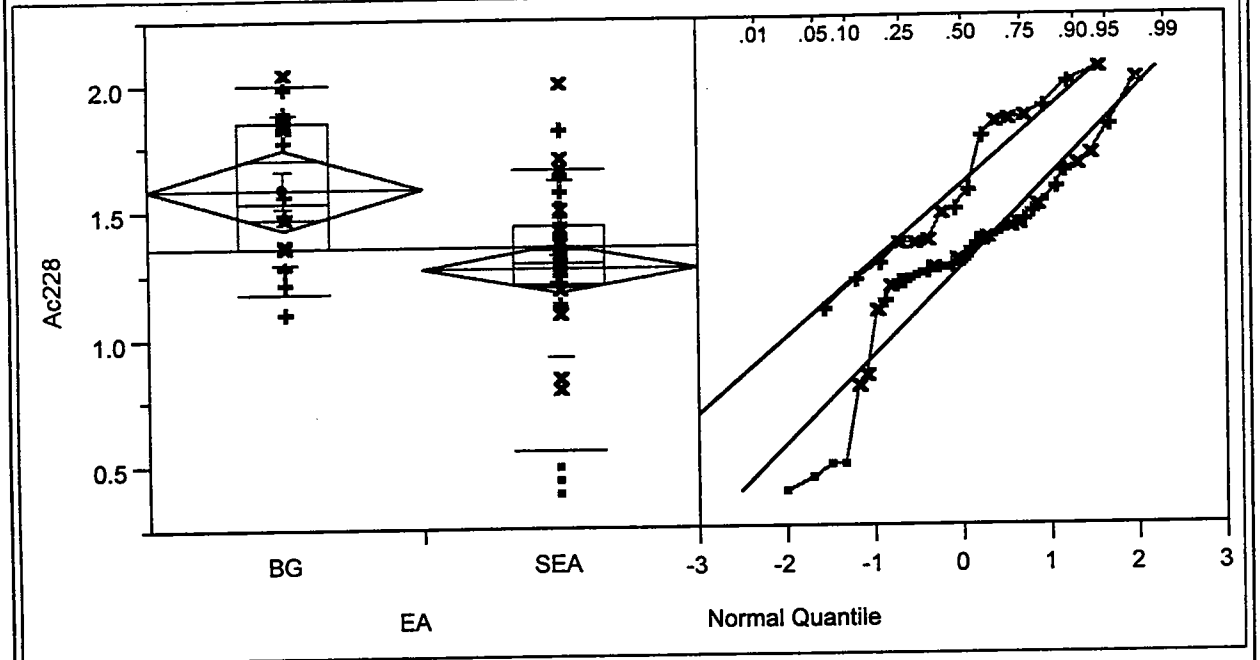
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
472	2.45491	0.0141

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
6.0850	1	0.0136

Ac228 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	1.11	1.187	1.36	1.535	1.8575	2.008	2.05
SEA	0.395	0.56	1.21	1.3	1.445	1.664	2

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	1.59500	0.298172	0.07454
SEA	41	1.27287	0.349122	0.05452

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	625	39.0625	2.851
SEA	41	1028	25.0732	-2.851

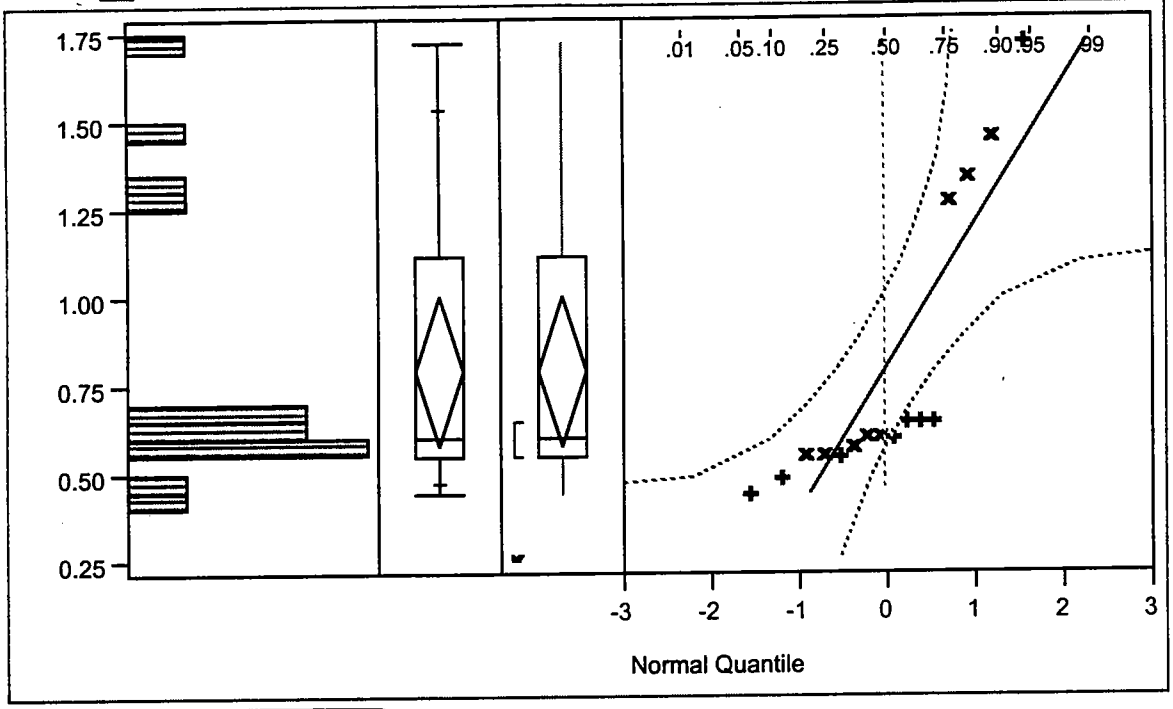
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
625	2.85096	0.0044

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
8.1787	1	0.0042

Bi212



Quantiles

maximum	100.0%	1.7200
	99.5%	1.7200
	97.5%	1.7200
	90.0%	1.5310
quartile	75.0%	1.1150
median	50.0%	0.6000
quartile	25.0%	0.5500
	10.0%	0.4750
	2.5%	0.4400
	0.5%	0.4400
minimum	0.0%	0.4400

Moments

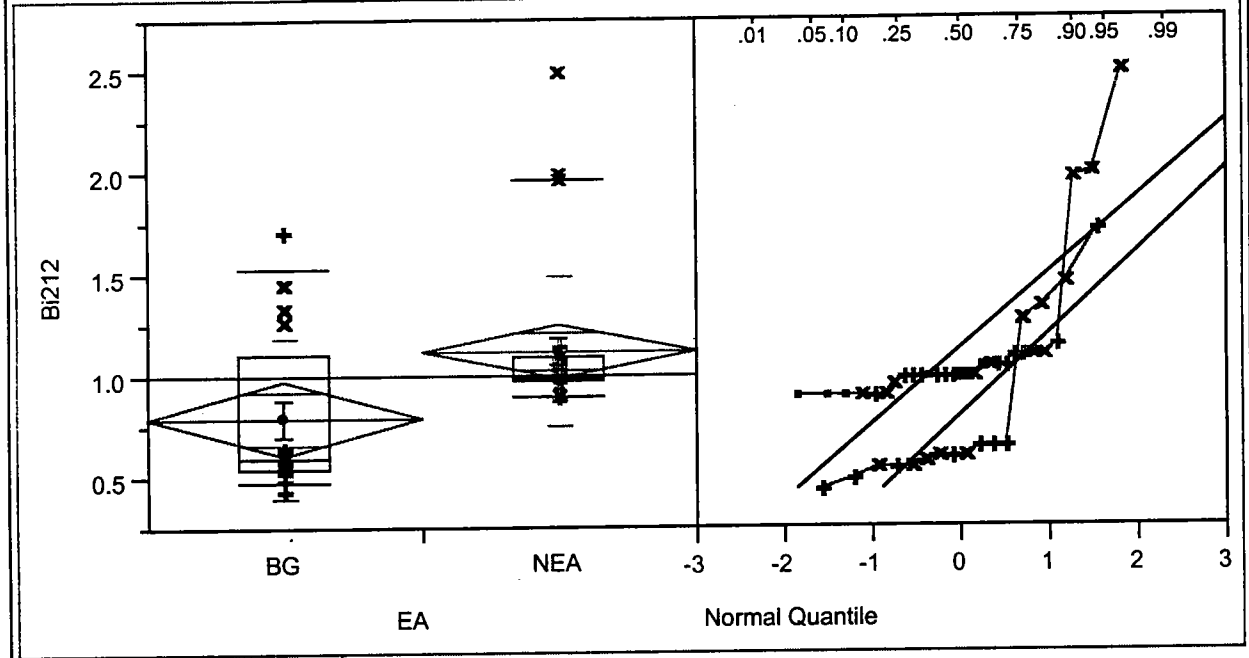
Mean	0.79281
Std Dev	0.40265
Std Error Mean	0.10066
Upper 95% Mean	1.00737
Lower 95% Mean	0.57826
N	16.00000
Sum Weights	16.00000
Sum	12.68500
Variance	0.16213
Skewness	1.39846
Kurtosis	0.49509
CV	50.78747

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.723830	0.0002

Bi212 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.44	0.475	0.55	0.6	1.115	1.531	1.72
NEA	0.9	0.9	0.975	1	1.1	1.97	2.5

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.79281	0.402649	0.10066
NEA	29	1.12310	0.372560	0.06918

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	240	15.0000	-3.047
NEA	29	795	27.4138	3.047

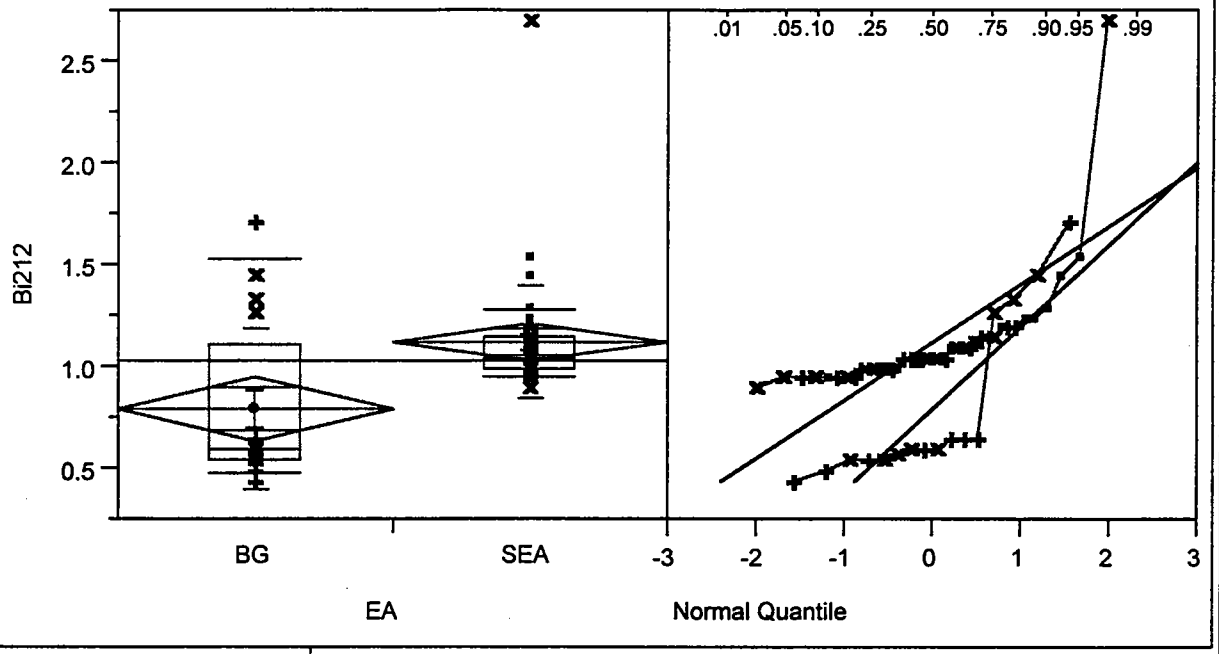
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
240	-3.04654	0.0023

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
9.3544	1	0.0022

Bi212 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.44	0.475	0.55	0.6	1.115	1.531	1.72
SEA	0.9	0.95	1	1.05	1.15	1.29	2.7

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.79281	0.402649	0.10066
SEA	41	1.12378	0.286135	0.04469

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	289.5	18.0938	-3.103
SEA	41	1363.5	33.2561	3.103

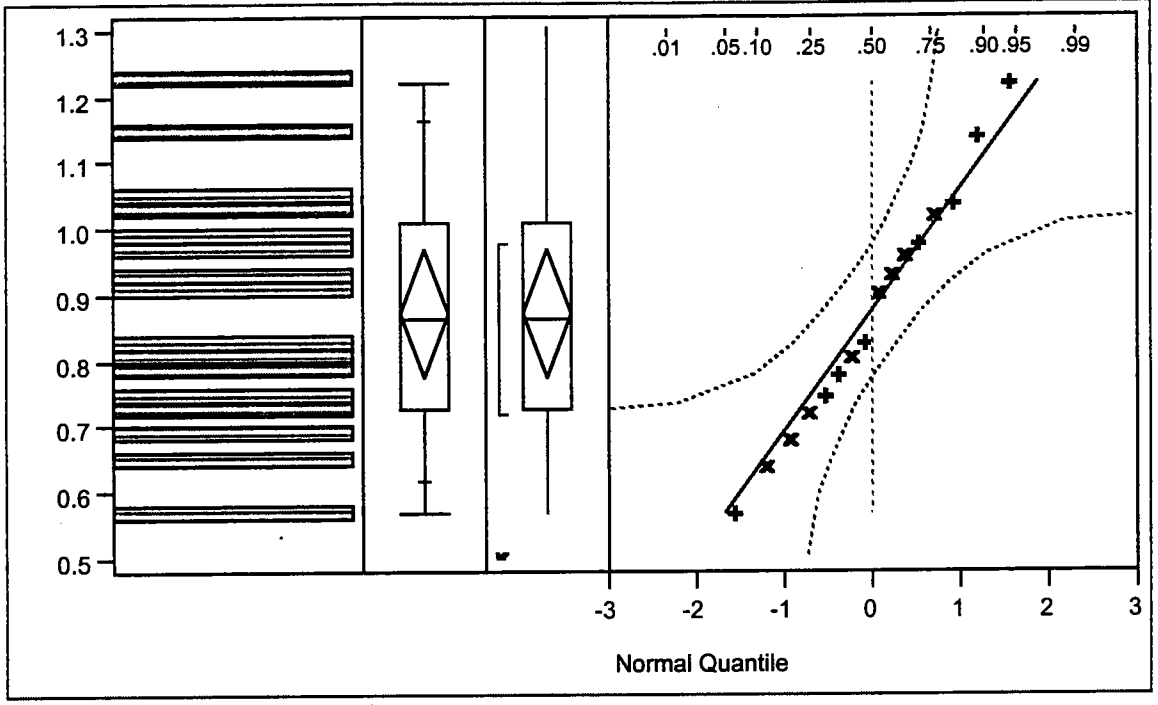
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
289.5	-3.10341	0.0019

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
9.6866	1	0.0019

Bi214



Quantiles

maximum	100.0%	1.2200
	99.5%	1.2200
	97.5%	1.2200
	90.0%	1.1640
quartile	75.0%	1.0100
median	50.0%	0.8650
quartile	25.0%	0.7275
	10.0%	0.6190
	2.5%	0.5700
	0.5%	0.5700
minimum	0.0%	0.5700

Moments

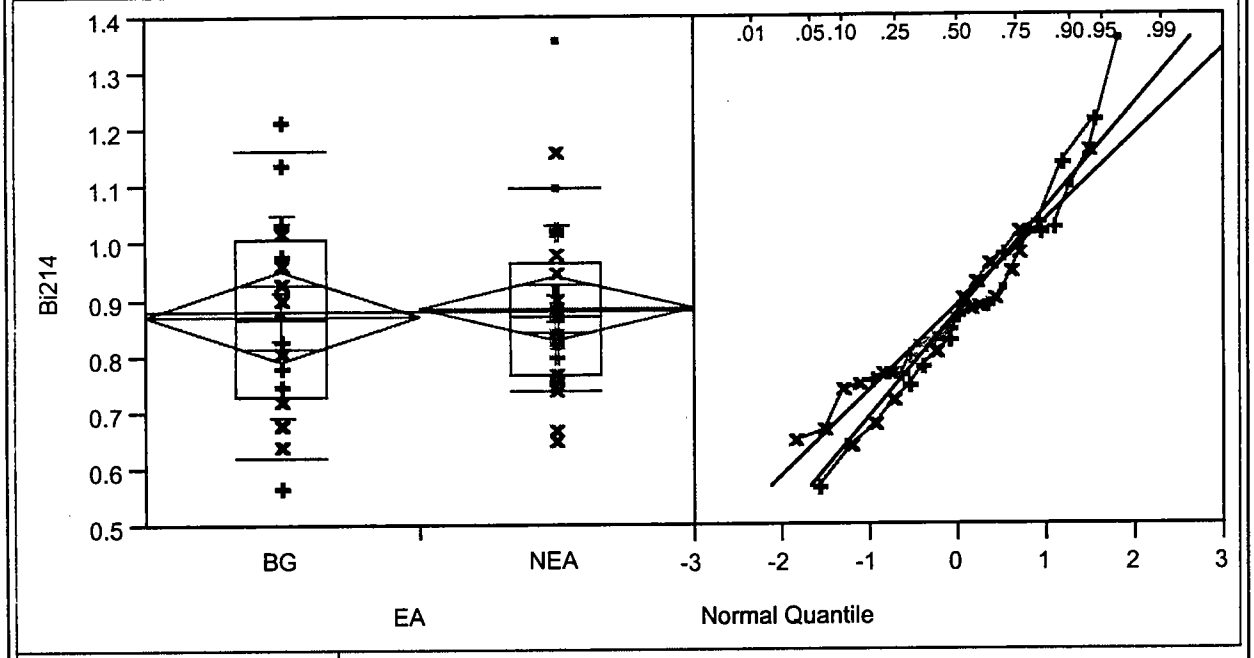
Mean	0.87281
Std Dev	0.18279
Std Error Mean	0.04570
Upper 95% Mean	0.97022
Lower 95% Mean	0.77541
N	16.00000
Sum Weights	16.00000
Sum	13.96500
Variance	0.03341
Skewness	0.20861
Kurtosis	-0.61412
CV	20.94297

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.984594	0.9775

Bi214 By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.57	0.619	0.7275	0.865	1.01	1.164	1.22
NEA	0.65	0.74	0.77	0.87	0.965	1.1	1.36

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.872812	0.182793	0.04570
NEA	29	0.885690	0.150936	0.02803

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	362	22.6250	-0.130
NEA	29	673	23.2069	0.130

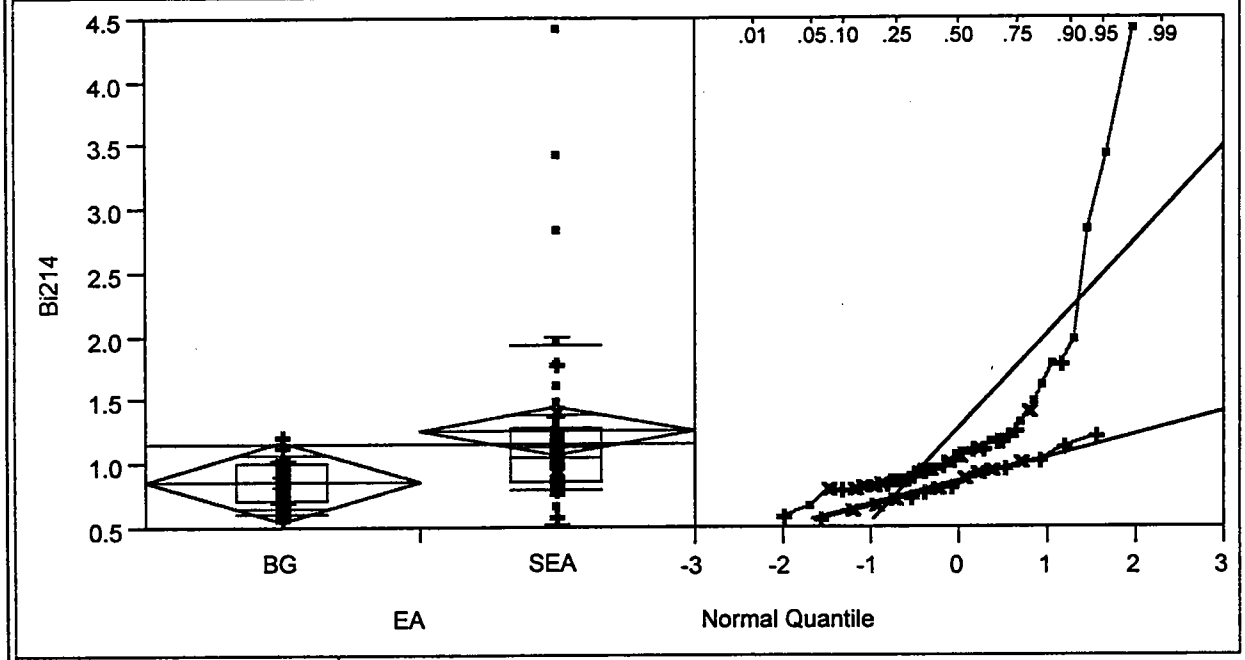
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
362	-0.13047	0.8962

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
0.0203	1	0.8868

Bi214 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.57	0.619	0.7275	0.865	1.01	1.164	1.22
SEA	0.6	0.81	0.865	1.055	1.295	1.944	4.43

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.87281	0.182793	0.04570
SEA	41	1.27415	0.742241	0.11592

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	306	19.1250	-2.798
SEA	41	1347	32.8537	2.798

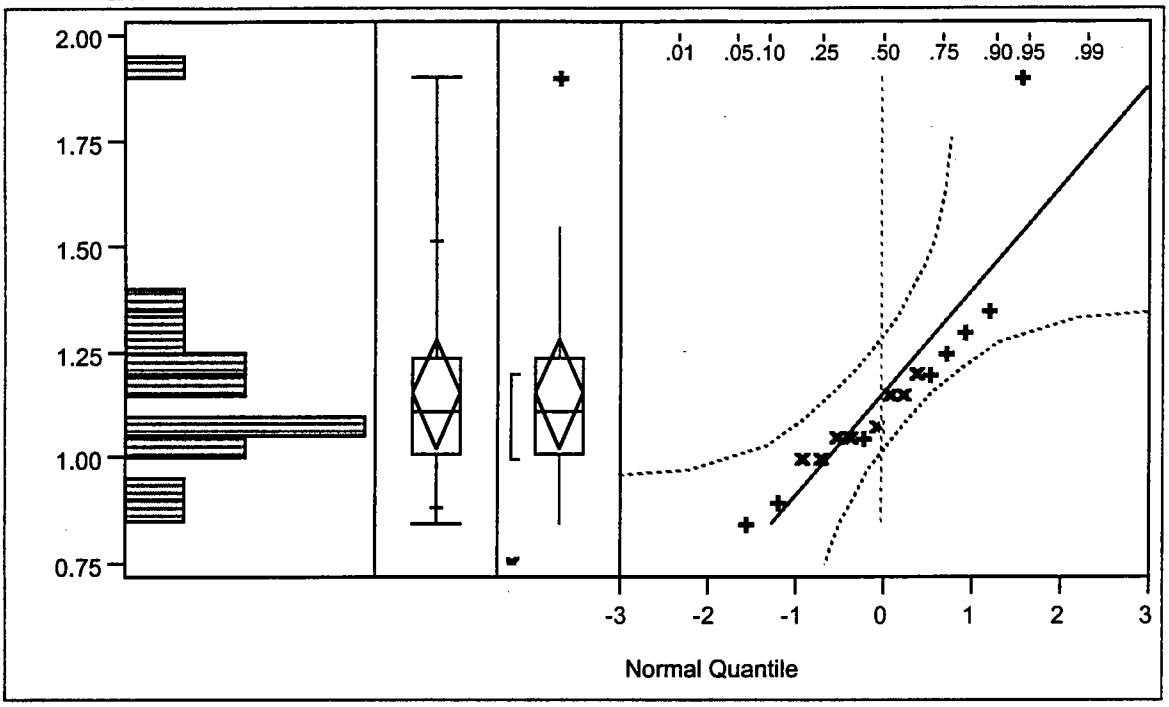
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
306	-2.79772	0.0051

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
7.8770	1	0.0050

Pb210



Quantiles

maximum	100.0%	1.9000
	99.5%	1.9000
	97.5%	1.9000
	90.0%	1.5150
quartile	75.0%	1.2375
median	50.0%	1.1125
quartile	25.0%	1.0125
	10.0%	0.8850
	2.5%	0.8500
	0.5%	0.8500
minimum	0.0%	0.8500

Moments

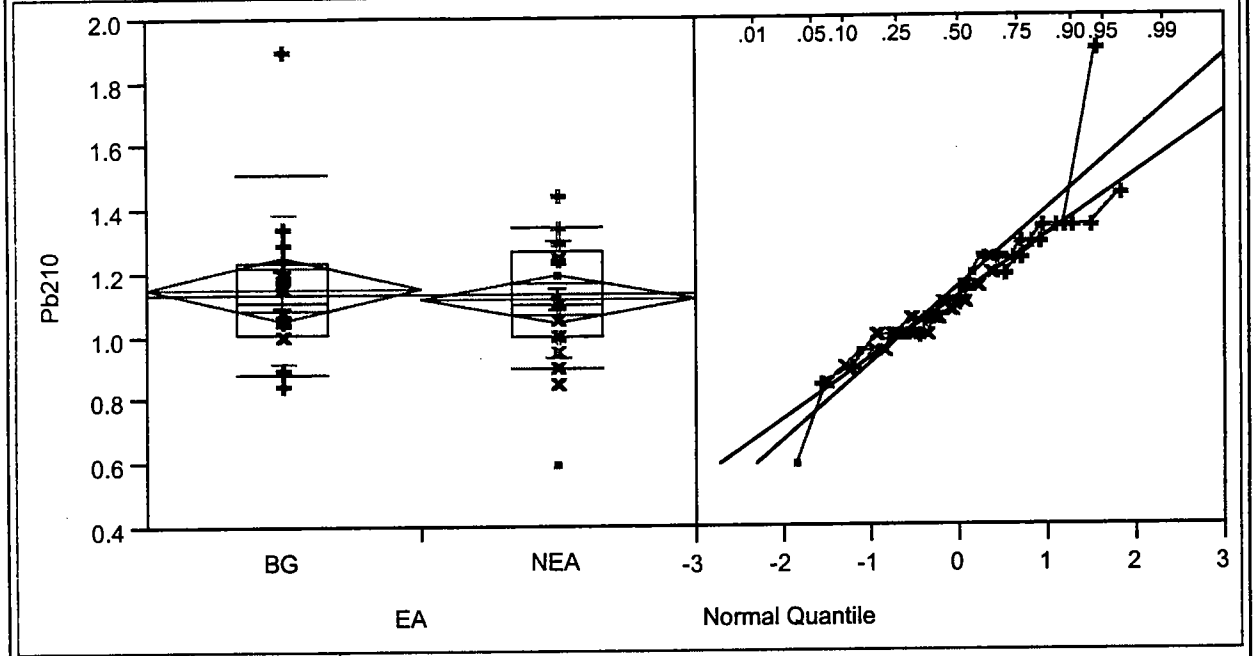
Mean	1.15469
Std Dev	0.24122
Std Error Mean	0.06030
Upper 95% Mean	1.28322
Lower 95% Mean	1.02615
N	16.00000
Sum Weights	16.00000
Sum	18.47500
Variance	0.05818
Skewness	2.00547
Kurtosis	5.85390
CV	20.89011

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.821057	0.0047

Pb210 By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.85	0.885	1.0125	1.1125	1.2375	1.515	1.9
NEA	0.6	0.9	1	1.1	1.275	1.35	1.45

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	1.15469	0.241215	0.06030
NEA	29	1.12241	0.192069	0.03567

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	366	22.8750	-0.036
NEA	29	669	23.0690	0.036

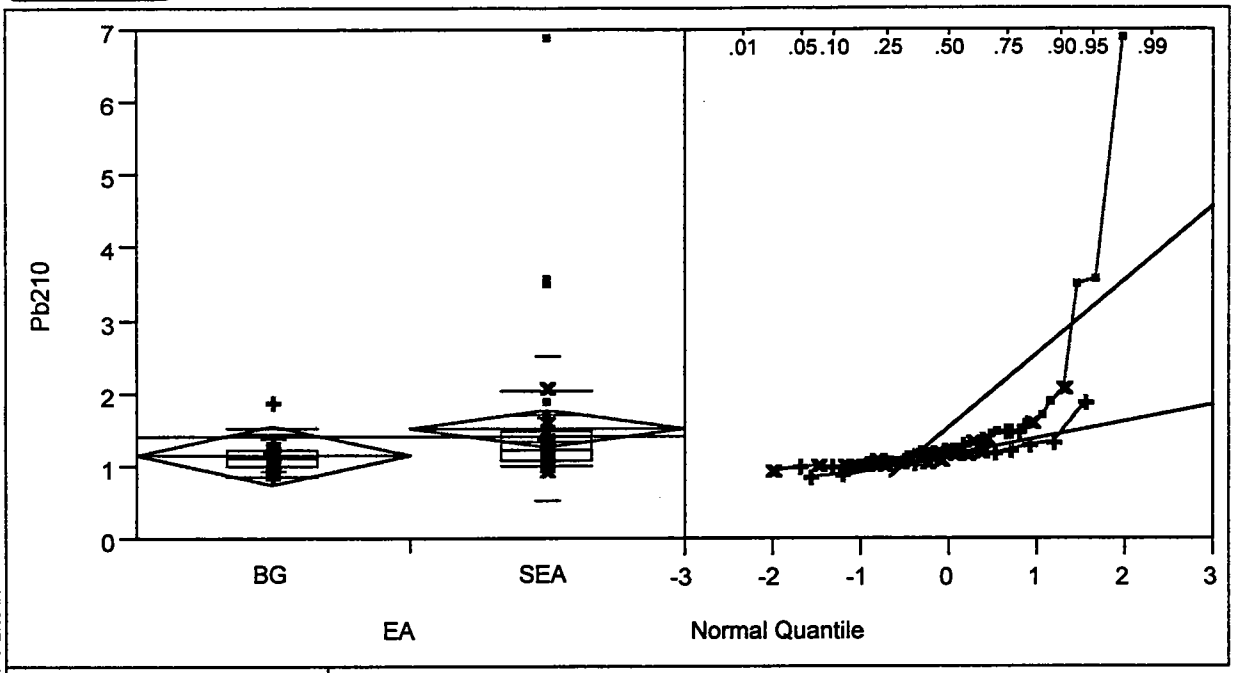
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
366	-0.03574	0.9715

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
0.0023	1	0.9620

Pb210 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.85	0.885	1.0125	1.1125	1.2375	1.515	1.9
SEA	0.95	1	1.1	1.25	1.5	2.06	6.9

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	1.15469	0.24122	0.06030
SEA	41	1.52805	1.02299	0.15976

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	341.5	21.3438	-2.173
SEA	41	1311.5	31.9878	2.173

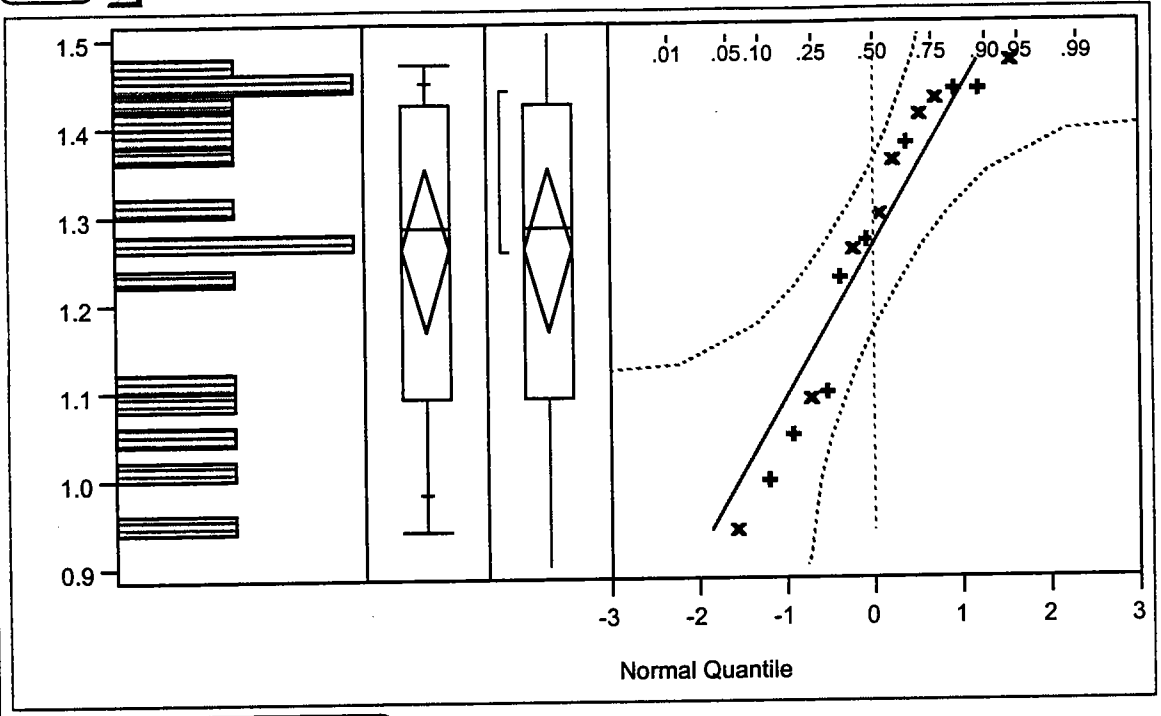
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
341.5	-2.17298	0.0298

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
4.7606	1	0.0291

Pb212



Quantiles

maximum	100.0%	1.4700
	99.5%	1.4700
	97.5%	1.4700
	90.0%	1.4490
quartile	75.0%	1.4250
median	50.0%	1.2850
quartile	25.0%	1.0925
	10.0%	0.9820
	2.5%	0.9400
	0.5%	0.9400
minimum	0.0%	0.9400

Moments

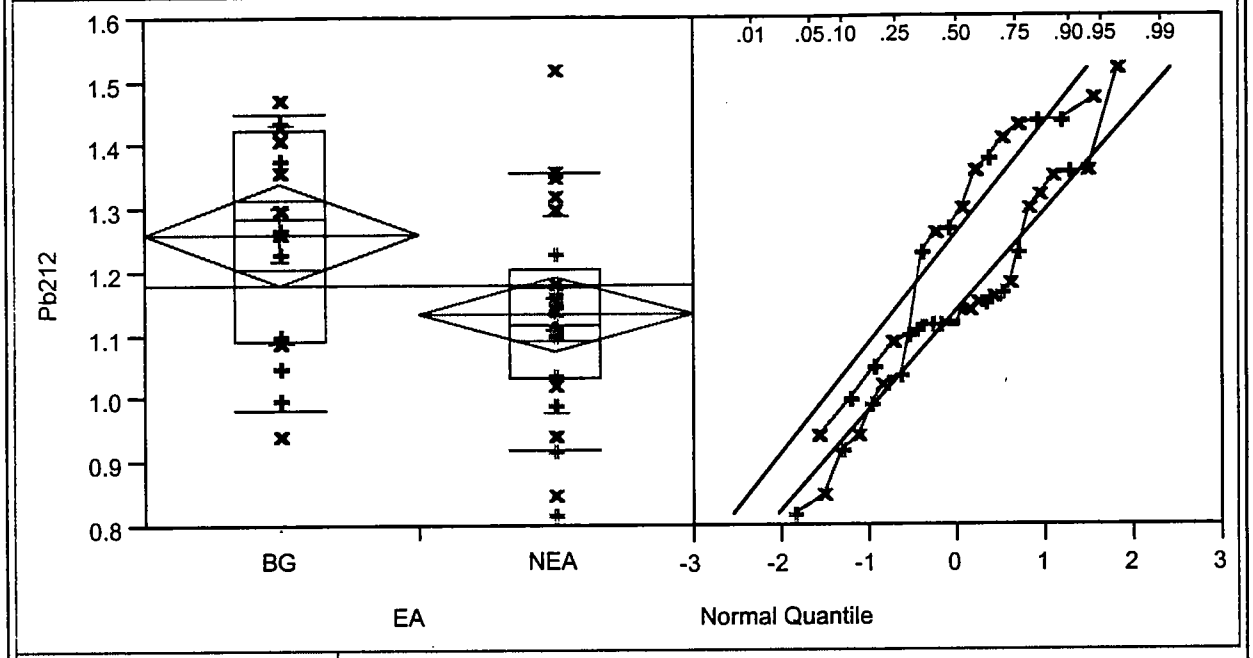
Mean	1.26062
Std Dev	0.17434
Std Error Mean	0.04358
Upper 95% Mean	1.35352
Lower 95% Mean	1.16773
N	16.00000
Sum Weights	16.00000
Sum	20.17000
Variance	0.03039
Skewness	-0.53908
Kurtosis	-1.08993
CV	13.82930

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.909832	0.1173

Pb212 By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.94	0.982	1.0925	1.285	1.425	1.449	1.47
NEA	0.82	0.92	1.035	1.12	1.205	1.36	1.52

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	1.26062	0.174336	0.04358
NEA	29	1.13621	0.157263	0.02920

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	456	28.5000	2.077
NEA	29	579	19.9655	-2.077

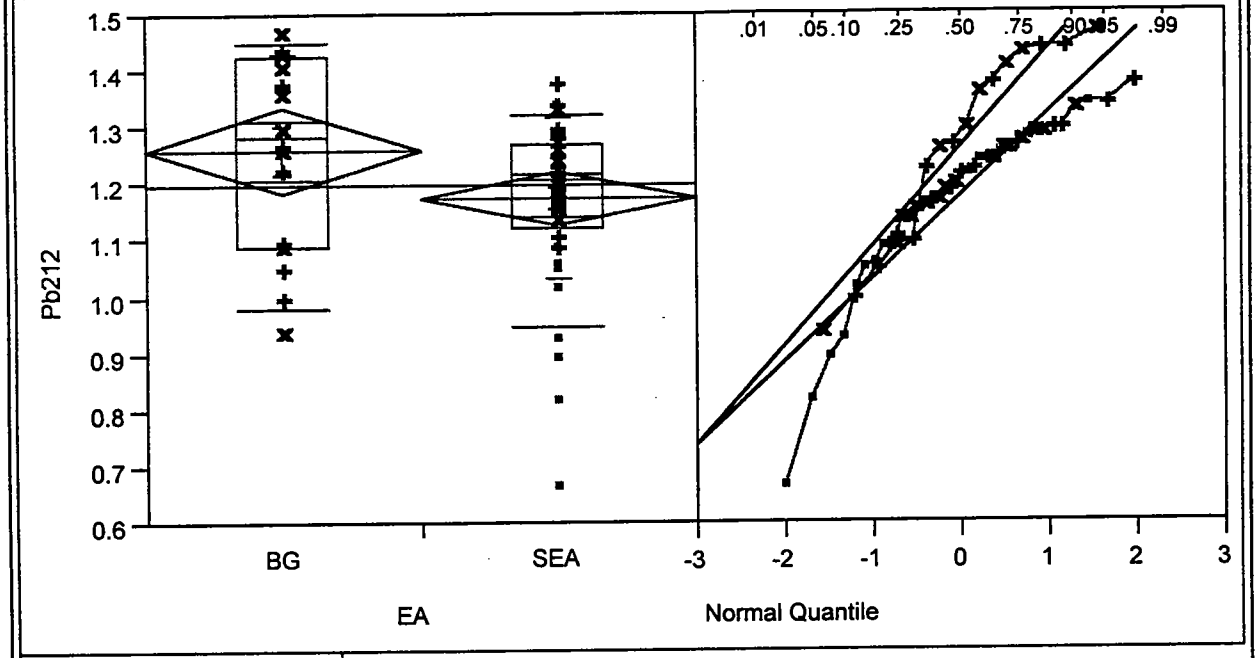
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
456	2.07685	0.0378

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
4.3627	1	0.0367

Pb212 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.94	0.982	1.0925	1.285	1.425	1.449	1.47
SEA	0.67	0.948	1.125	1.22	1.2725	1.324	1.38

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	1.26062	0.174336	0.04358
SEA	41	1.17549	0.145580	0.02274

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	571	35.6875	1.892
SEA	41	1082	26.3902	-1.892

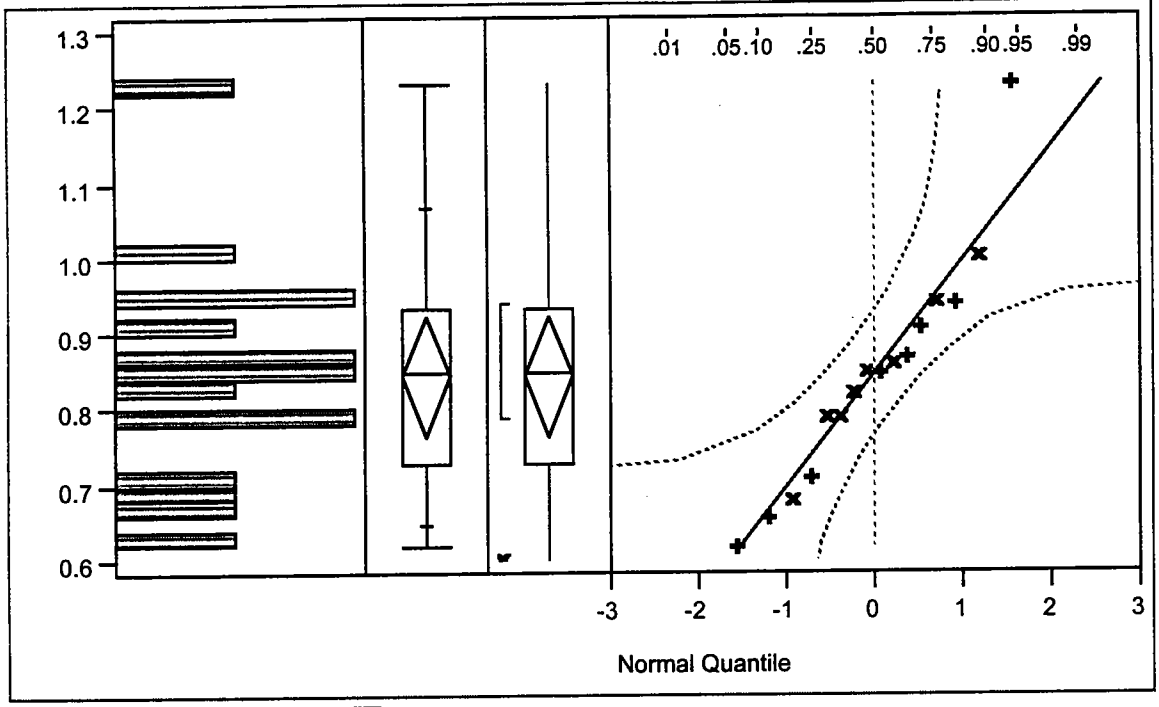
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
571	1.89240	0.0584

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
3.6149	1	0.0573

Pb214



Quantiles

maximum	100.0%	1.2300
	99.5%	1.2300
	97.5%	1.2300
	90.0%	1.0690
quartile	75.0%	0.9325
median	50.0%	0.8500
quartile	25.0%	0.7300
	10.0%	0.6480
	2.5%	0.6200
	0.5%	0.6200
minimum	0.0%	0.6200

Moments

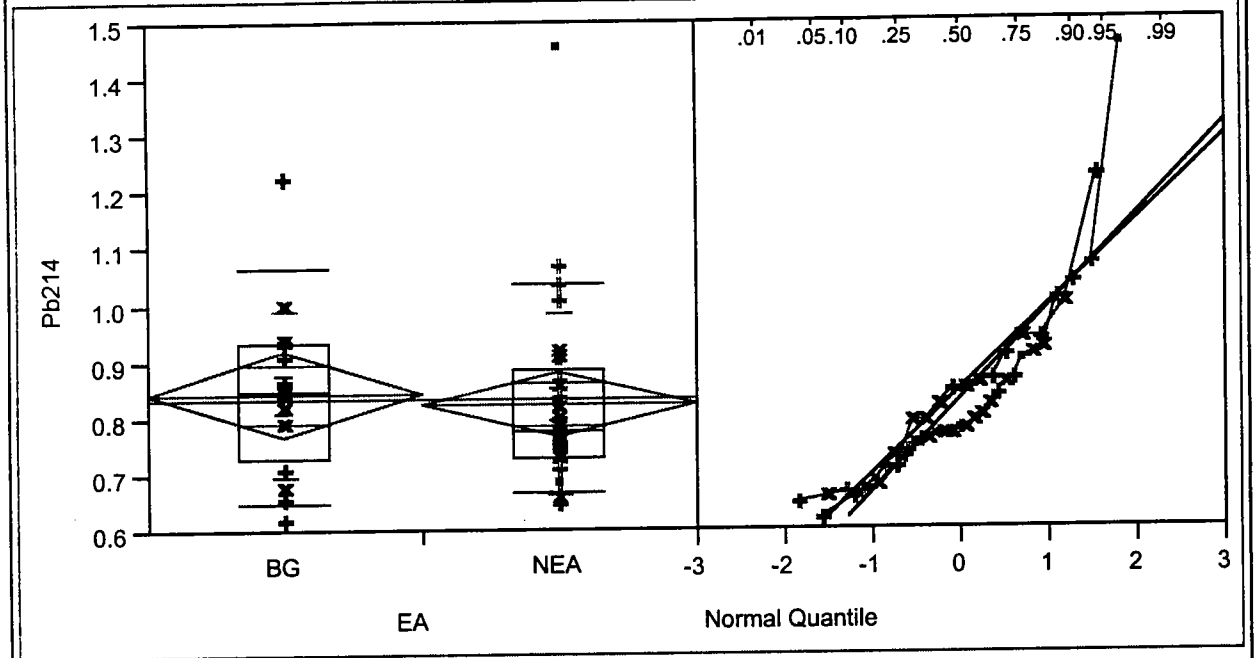
Mean	0.84500
Std Dev	0.14886
Std Error Mean	0.03722
Upper 95% Mean	0.92432
Lower 95% Mean	0.76568
N	16.00000
Sum Weights	16.00000
Sum	13.52000
Variance	0.02216
Skewness	0.87249
Kurtosis	1.88199
CV	17.61685

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.936825	0.3096

Pb214 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.62	0.648	0.73	0.85	0.9325	1.069	1.23
NEA	0.65	0.67	0.73	0.78	0.885	1.04	1.46

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.845000	0.148862	0.03722
NEA	29	0.825517	0.164047	0.03046

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	407	25.4375	0.913
NEA	29	628	21.6552	-0.913

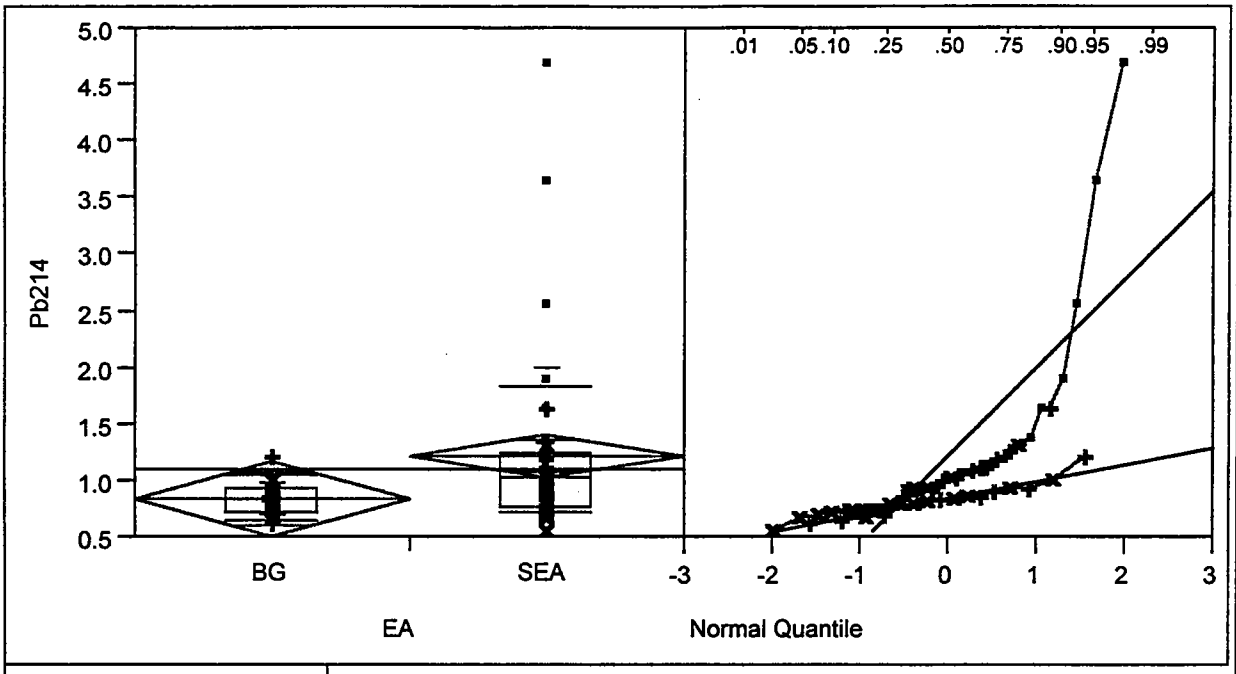
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
407	0.91348	0.3610

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
0.8563	1	0.3548

Pb214 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.62	0.648	0.73	0.85	0.9325	1.069	1.23
SEA	0.56	0.724	0.78	1.03	1.235	1.848	4.7

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.84500	0.148862	0.03722
SEA	41	1.21622	0.782565	0.12222

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	318	19.8750	-2.585
SEA	41	1335	32.5610	2.585

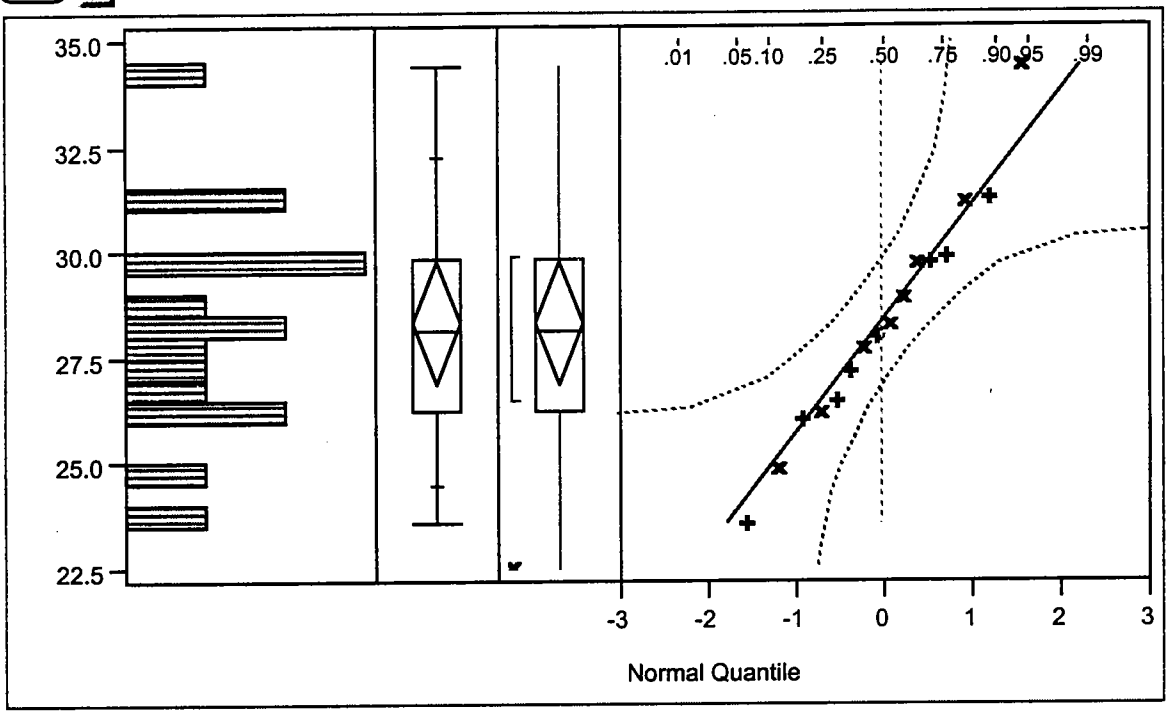
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
318	-2.58493	0.0097

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
6.7279	1	0.0095

K40



Quantiles

maximum	100.0%	34.400
	99.5%	34.400
	97.5%	34.400
	90.0%	32.230
quartile	75.0%	29.875
median	50.0%	28.150
quartile	25.0%	26.275
	10.0%	24.510
	2.5%	23.600
	0.5%	23.600
minimum	0.0%	23.600

Moments

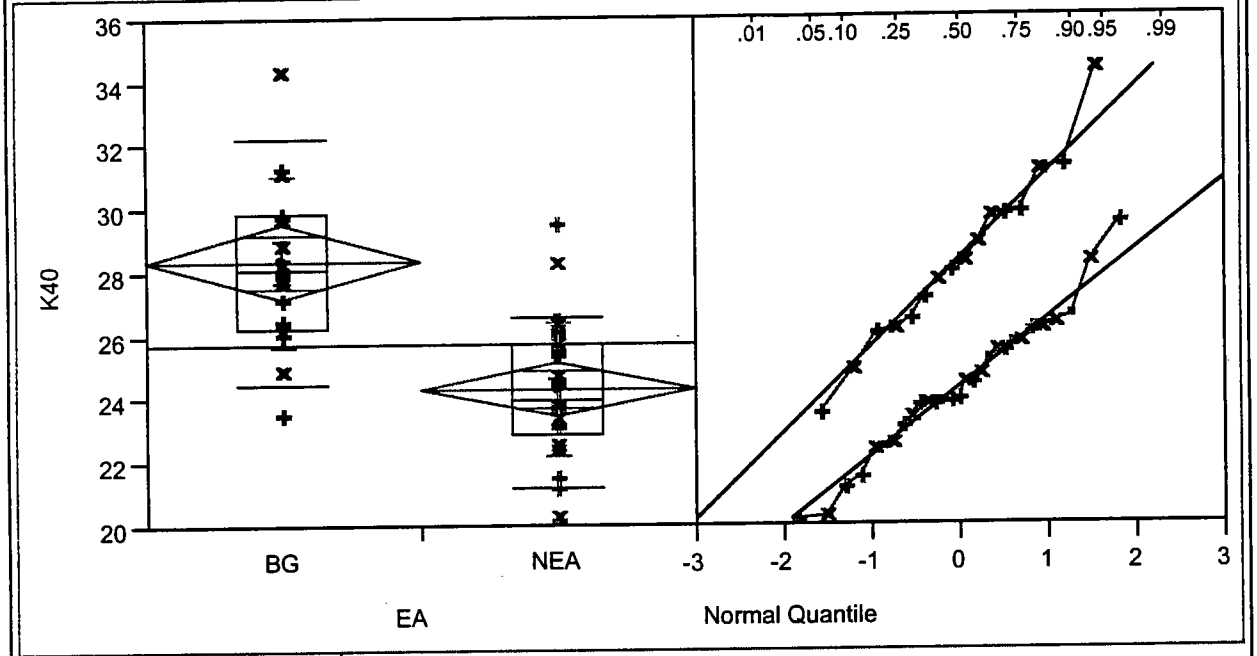
Mean	28.35625
Std Dev	2.70184
Std Error Mean	0.67546
Upper 95% Mean	29.79596
Lower 95% Mean	26.91654
N	16.00000
Sum Weights	16.00000
Sum	453.70000
Variance	7.29996
Skewness	0.38583
Kurtosis	0.41182
CV	9.52821

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.983009	0.9673

K40 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	23.6	24.51	26.275	28.15	29.875	32.23	34.4
NEA	20.2	21.2	22.875	24	25.8	26.6	29.6

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	28.3562	2.70184	0.67546
NEA	29	24.3293	2.17533	0.40395

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	546.5	34.1563	4.222
NEA	29	488.5	16.8448	-4.222

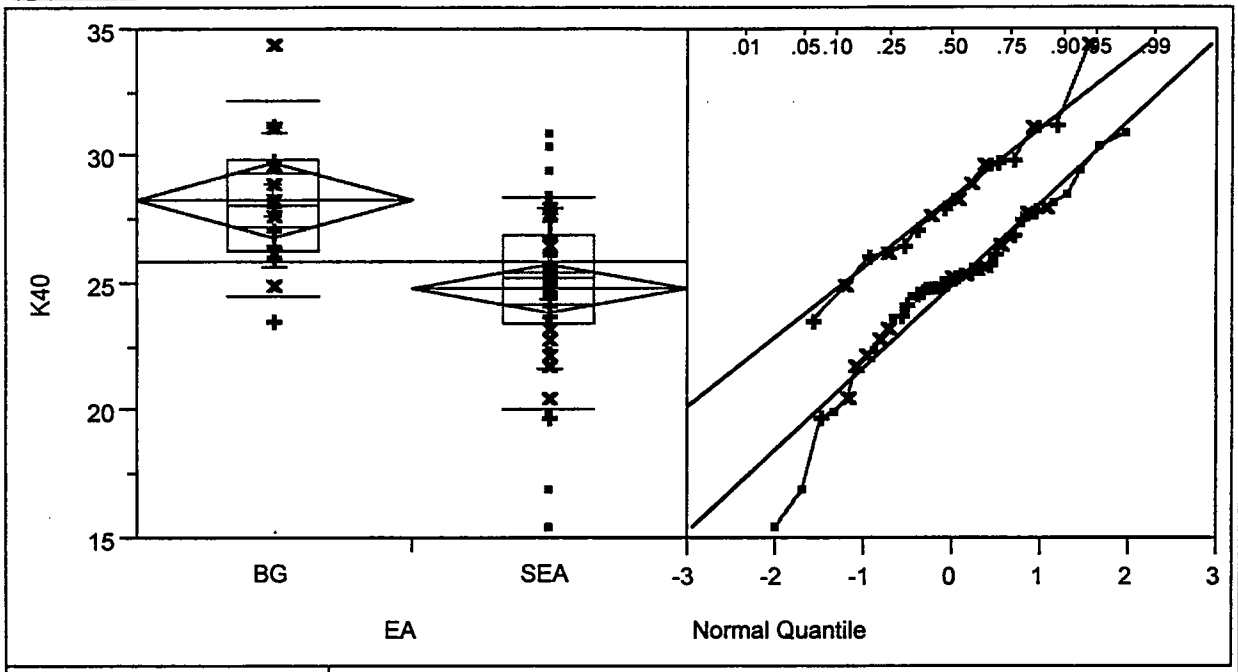
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
546.5	4.22239	<.0001

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
17.9289	1	<.0001

K40 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	23.6	24.51	26.275	28.15	29.875	32.23	34.4
SEA	15.5	20.14	23.5	25.3	26.9	28.44	31

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	28.3562	2.70184	0.67546
SEA	41	24.8768	3.22269	0.50330

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	665.5	41.5938	3.570
SEA	41	987.5	24.0854	-3.570

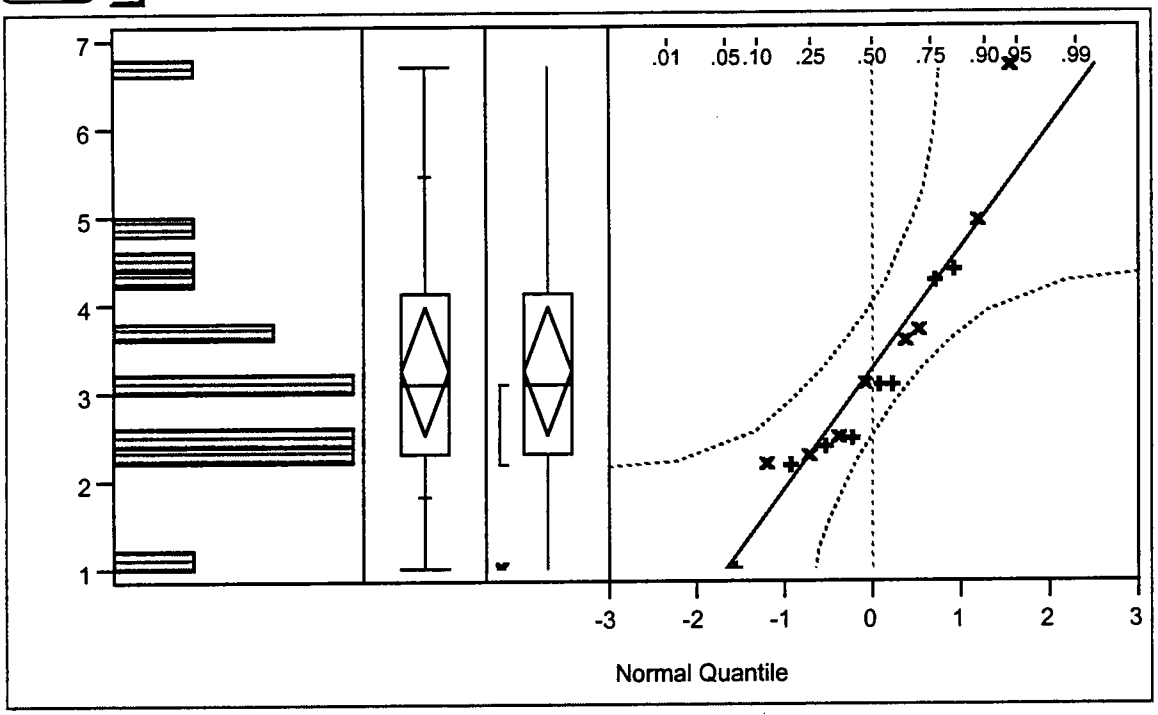
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
665.5	3.56996	0.0004

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
12.8081	1	0.0003

Ra224



Quantiles

maximum	100.0%	6.7000
	99.5%	6.7000
	97.5%	6.7000
	90.0%	5.4750
quartile	75.0%	4.1500
median	50.0%	3.1000
quartile	25.0%	2.3250
	10.0%	1.8400
	2.5%	1.0000
	0.5%	1.0000
minimum	0.0%	1.0000

Moments

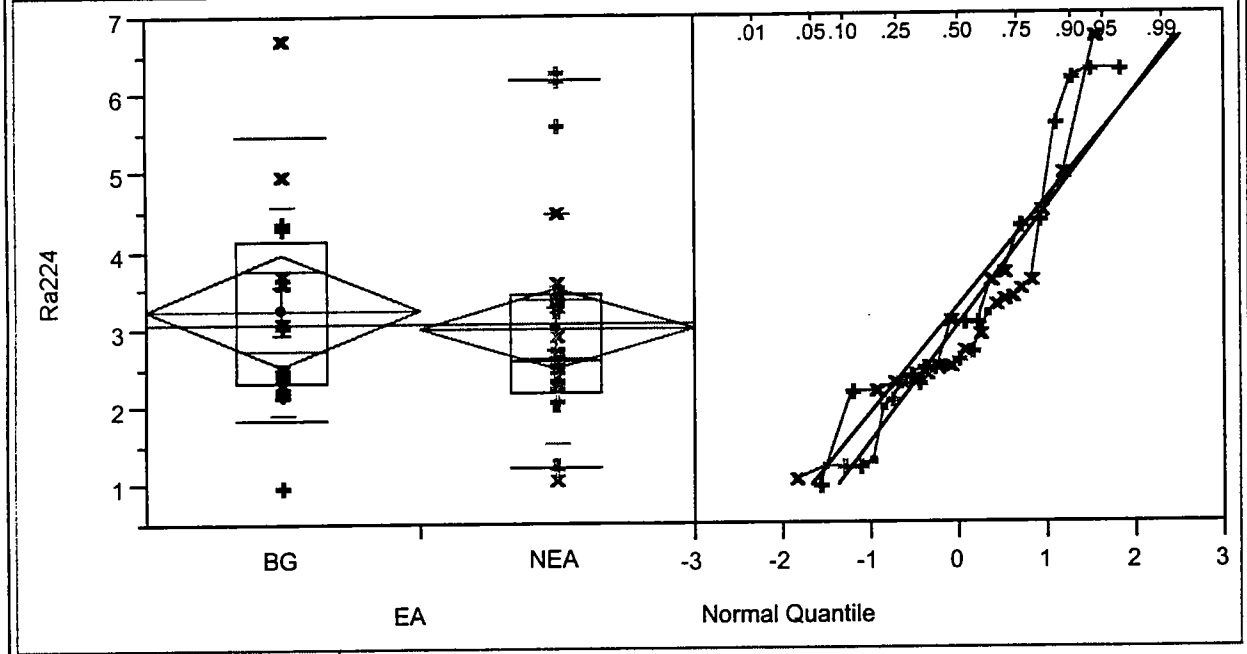
Mean	3.25313
Std Dev	1.35714
Std Error Mean	0.33928
Upper 95% Mean	3.97629
Lower 95% Mean	2.52996
N	16.00000
Sum Weights	16.00000
Sum	52.05000
Variance	1.84182
Skewness	0.99060
Kurtosis	1.65616
CV	41.71797

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.927485	0.2230

Ra224 By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	1	1.84	2.325	3.1	4.15	5.475	6.7
NEA	1.05	1.25	2.2	2.6	3.45	6.2	6.3

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	3.25313	1.35714	0.33928
NEA	29	3.00517	1.49609	0.27782

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	397.5	24.8438	0.689
NEA	29	637.5	21.9828	-0.689

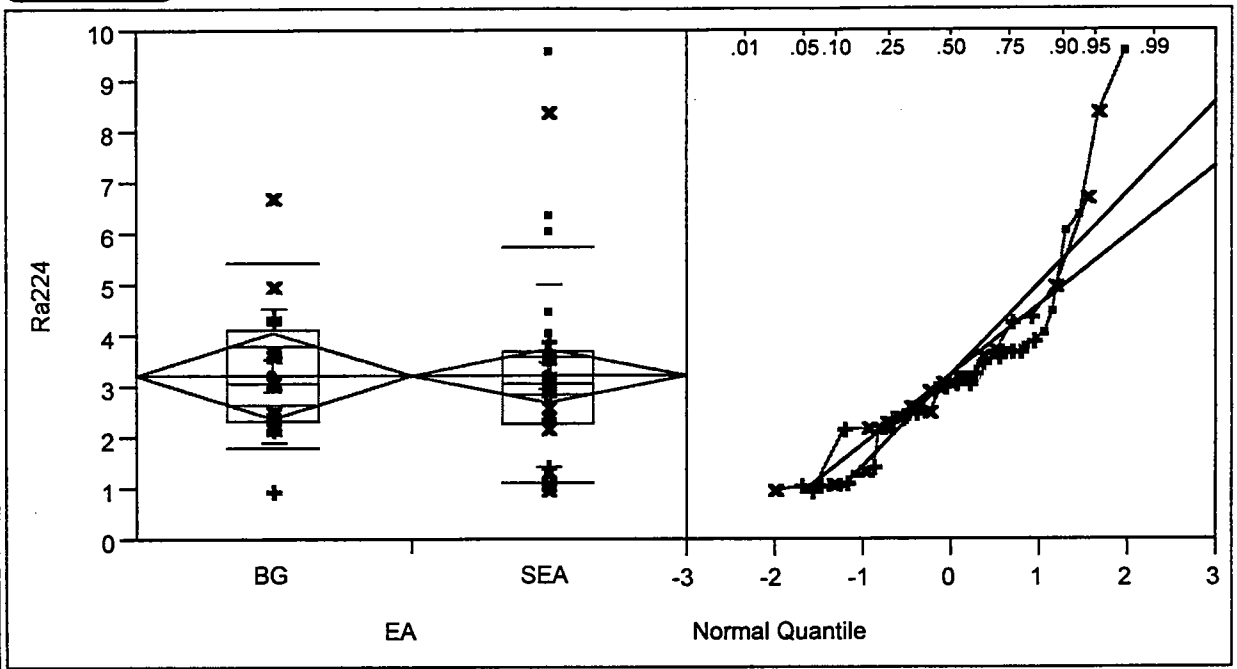
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
397.5	0.68860	0.4911

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
0.4907	1	0.4836

Ra224 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	1	1.84	2.325	3.1	4.15	5.475	6.7
SEA	1	1.11	2.3	3.1	3.7	5.78	9.6

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	3.25313	1.35714	0.33928
SEA	41	3.22805	1.79259	0.27996

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	470.5	29.4063	0.107
SEA	41	1182.5	28.8415	-0.107

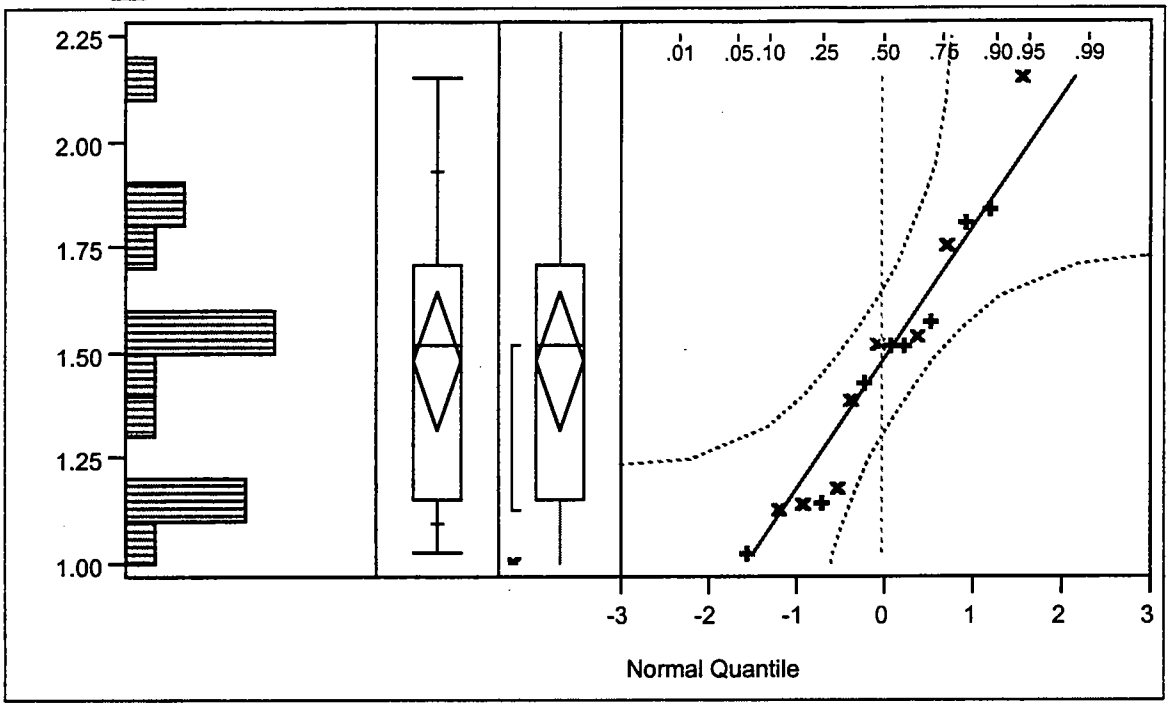
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
470.5	0.10669	0.9150

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
0.0134	1	0.9080

Ra226



Quantiles

maximum	100.0%	2.1500
	99.5%	2.1500
	97.5%	2.1500
	90.0%	1.9330
quartile	75.0%	1.7112
median	50.0%	1.5200
quartile	25.0%	1.1575
	10.0%	1.1000
	2.5%	1.0300
	0.5%	1.0300
minimum	0.0%	1.0300

Moments

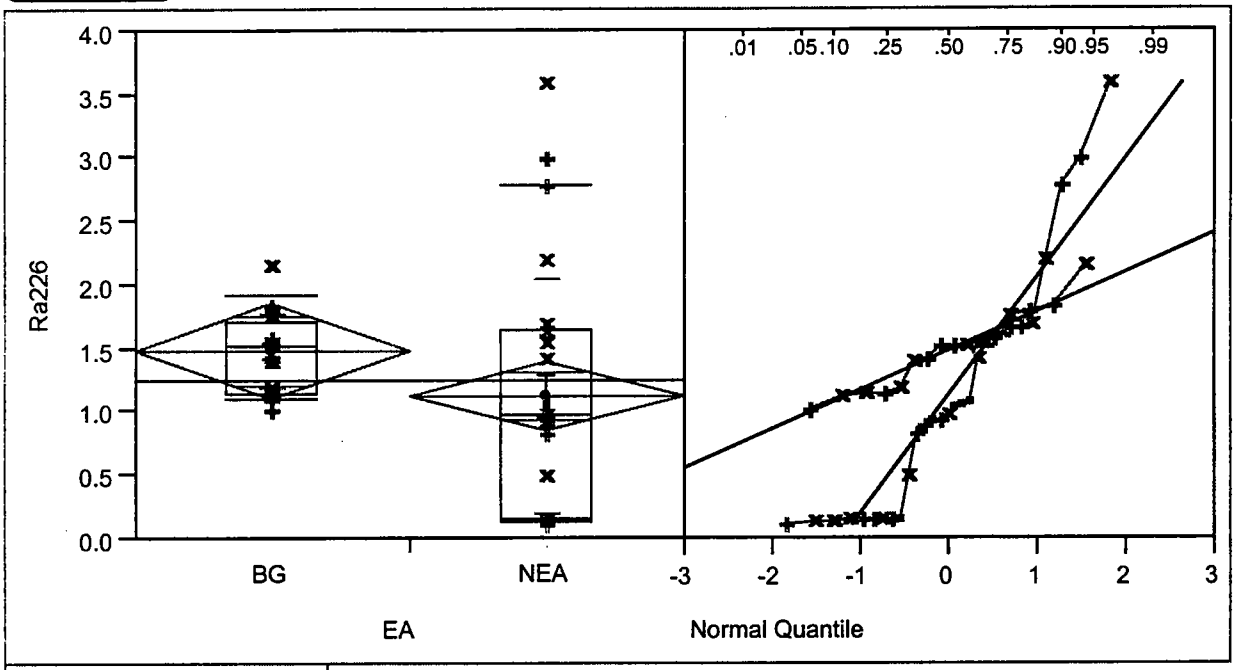
Mean	1.48031
Std Dev	0.30893
Std Error Mean	0.07723
Upper 95% Mean	1.64493
Lower 95% Mean	1.31570
N	16.00000
Sum Weights	16.00000
Sum	23.68500
Variance	0.09543
Skewness	0.43190
Kurtosis	-0.15127
CV	20.86893

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.947786	0.4454

Ra226 By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	1.03	1.1	1.1575	1.52	1.71125	1.933	2.15
NEA	0.125	0.145	0.1625	0.97	1.655	2.8	3.6

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	1.48031	0.308925	0.07723
NEA	29	1.11983	0.934404	0.17351

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	456	28.5000	2.075
NEA	29	579	19.9655	-2.075

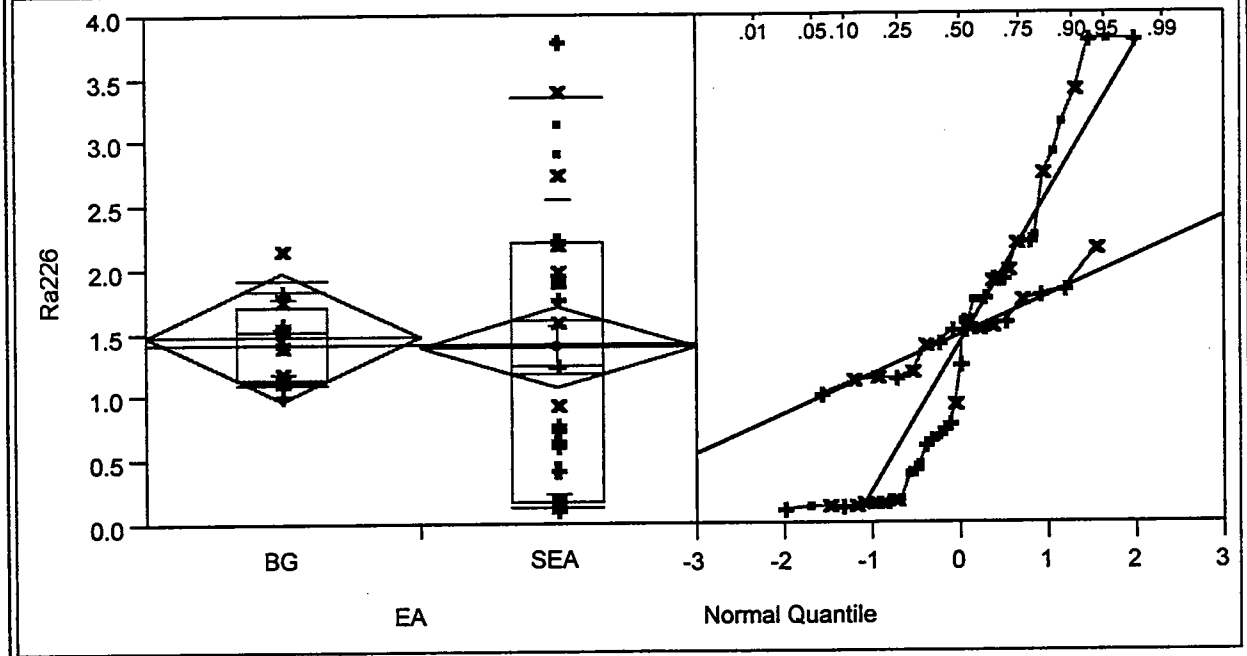
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
456	2.07541	0.0379

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
4.3567	1	0.0369

Ra226 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	1.03	1.1	1.1575	1.52	1.71125	1.933	2.15
SEA	0.115	0.14	0.19	1.26	2.22	3.349	3.81

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	1.48031	0.30893	0.07723
SEA	41	1.40079	1.17783	0.18395

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	489.5	30.5938	0.444
SEA	41	1163.5	28.3780	-0.444

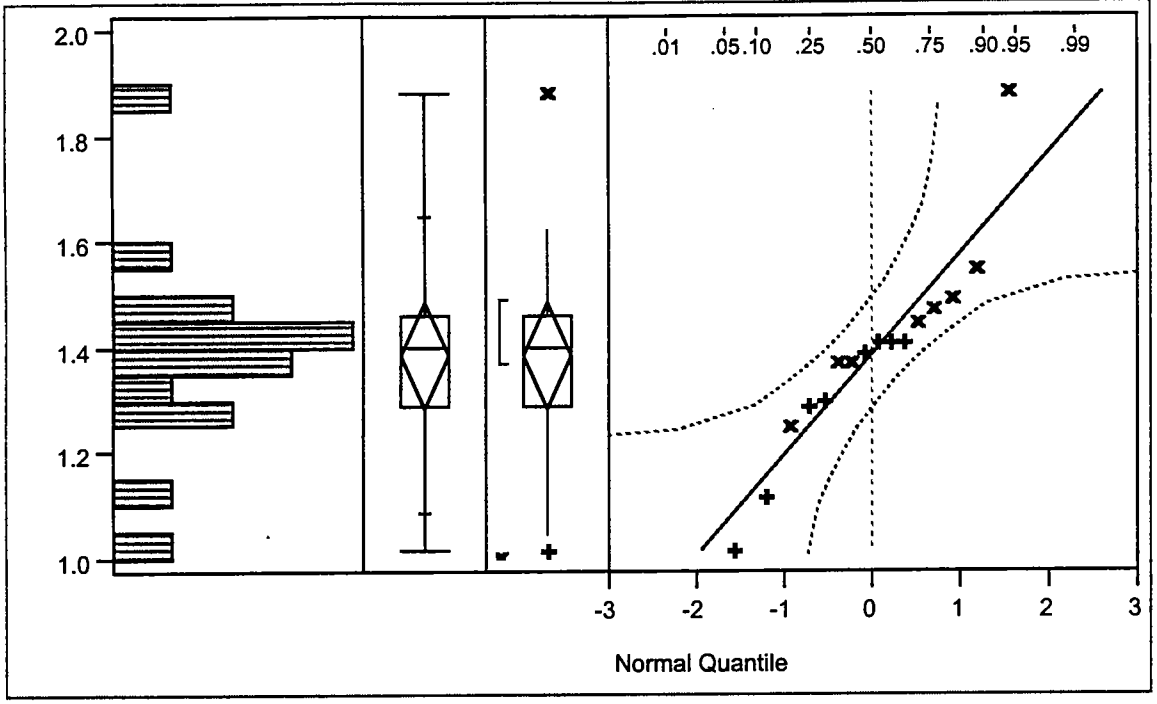
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
489.5	0.44406	0.6570

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
0.2052	1	0.6506

Ra228



Quantiles

maximum	100.0%	1.8800
	99.5%	1.8800
	97.5%	1.8800
	90.0%	1.6490
quartile	75.0%	1.4638
median	50.0%	1.4000
quartile	25.0%	1.2925
	10.0%	1.0900
	2.5%	1.0200
	0.5%	1.0200
minimum	0.0%	1.0200

Moments

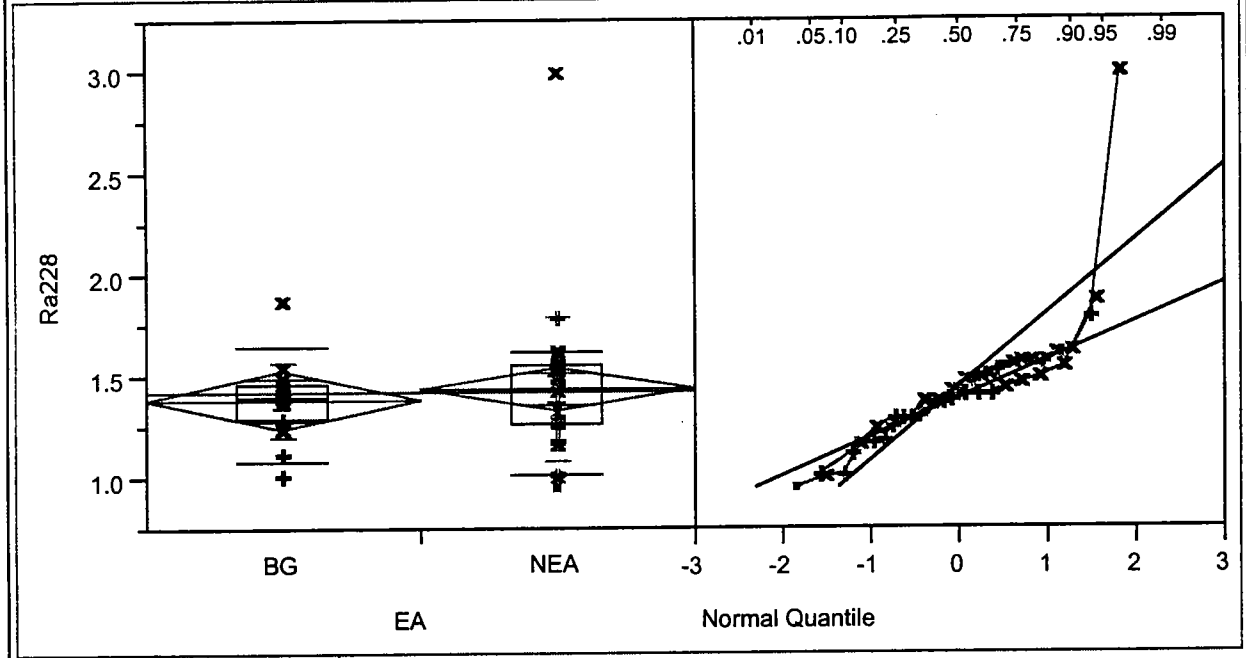
Mean	1.38594
Std Dev	0.18874
Std Error Mean	0.04719
Upper 95% Mean	1.48651
Lower 95% Mean	1.28536
N	16.00000
Sum Weights	16.00000
Sum	22.17500
Variance	0.03562
Skewness	0.62477
Kurtosis	2.87836
CV	13.61846

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.913731	0.1354

Ra228 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	1.02	1.09	1.2925	1.4	1.46375	1.649	1.88
NEA	0.955257	1.01695	1.275398	1.440562	1.563427	1.623884	2.997711

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	1.38594	0.188743	0.04719
NEA	29	1.44665	0.360745	0.06699

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	337	21.0625	-0.723
NEA	29	698	24.0690	0.723

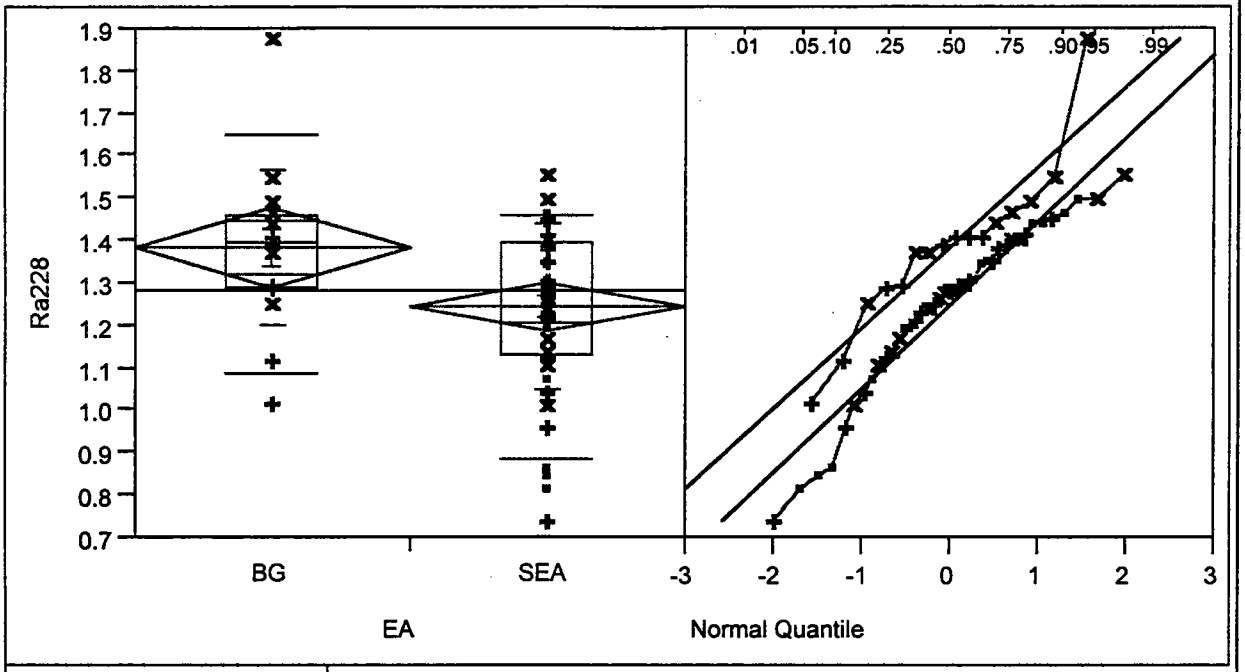
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
337	-0.72331	0.4695

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
0.5405	1	0.4622

Ra228 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	1.02	1.09	1.2925	1.4	1.46375	1.649	1.88
SEA	0.739666	0.886037	1.132799	1.283921	1.399738	1.462096	1.553408

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	1.38594	0.188743	0.04719
SEA	41	1.24370	0.197962	0.03092

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	594	37.1250	2.300
SEA	41	1059	25.8293	-2.300

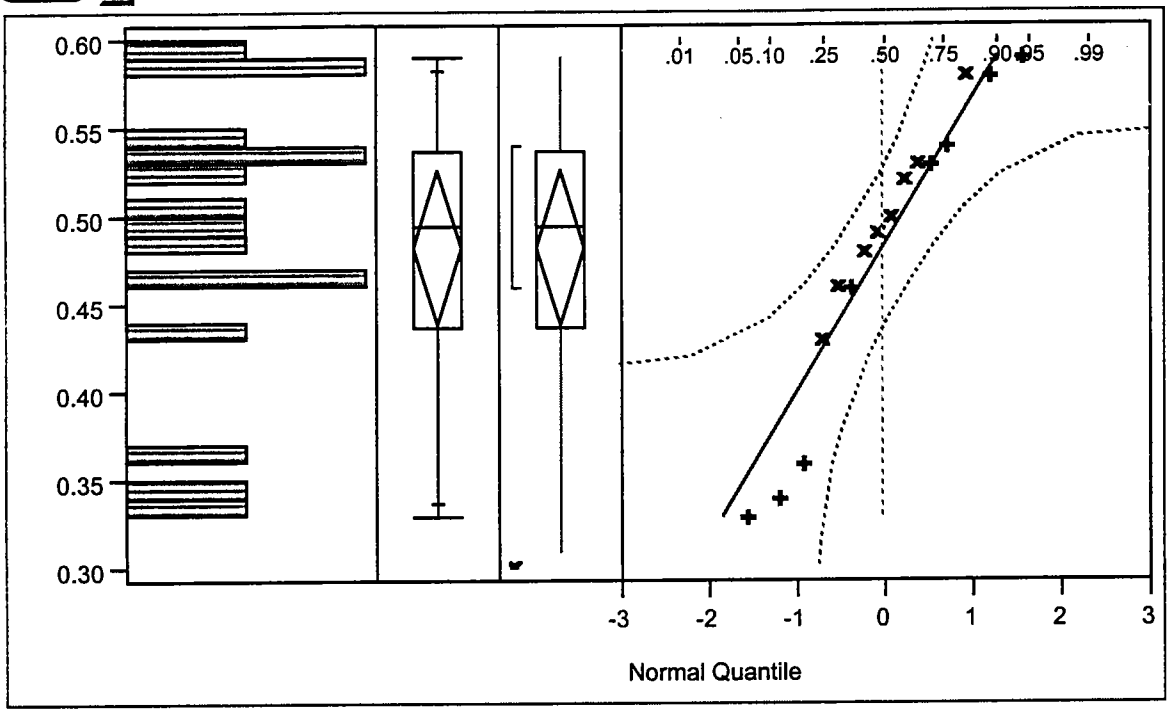
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
594	2.30001	0.0214

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
5.3310	1	0.0209

TI208



Quantiles

maximum	100.0%	0.59000
	99.5%	0.59000
	97.5%	0.59000
	90.0%	0.58300
quartile	75.0%	0.53750
median	50.0%	0.49500
quartile	25.0%	0.43750
	10.0%	0.33700
	2.5%	0.33000
	0.5%	0.33000
minimum	0.0%	0.33000

Moments

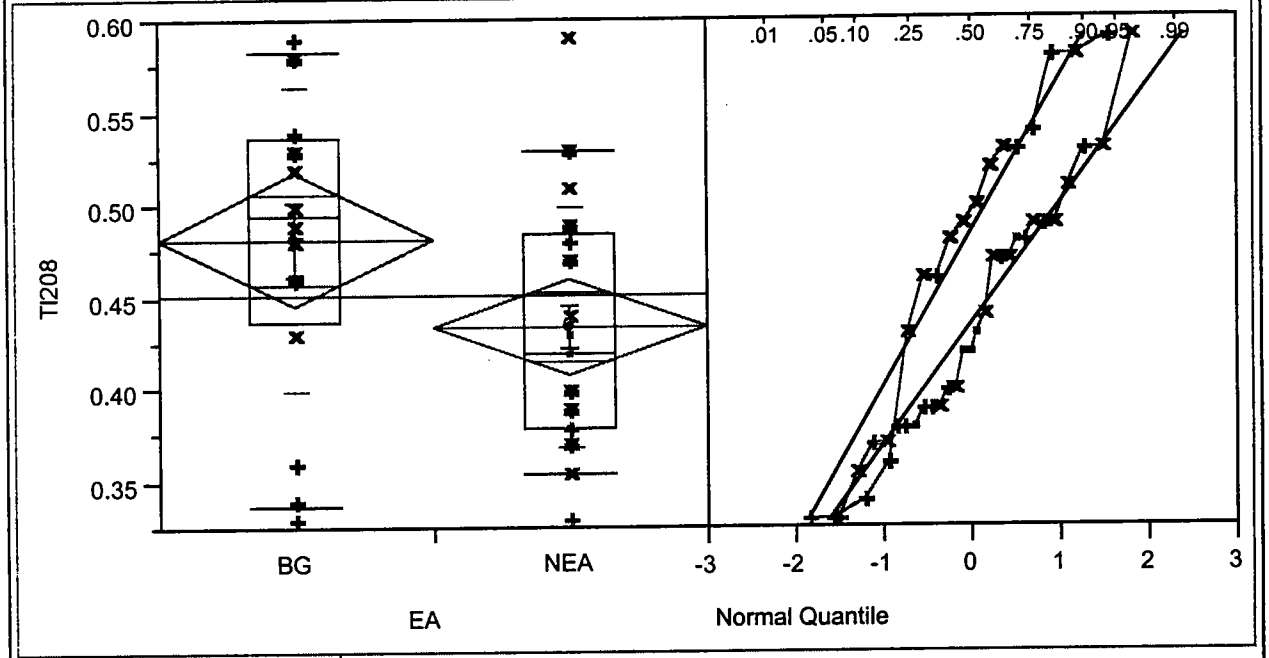
Mean	0.48250
Std Dev	0.08266
Std Error Mean	0.02067
Upper 95% Mean	0.52655
Lower 95% Mean	0.43845
N	16.00000
Sum Weights	16.00000
Sum	7.72000
Variance	0.00683
Skewness	-0.65916
Kurtosis	-0.45705
CV	17.13243

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.920031	0.1704

TI208 By EA



Analysis ▶ Display ▶

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.33	0.337	0.4375	0.495	0.5375	0.583	0.59
NEA	0.33	0.355	0.38	0.42	0.485	0.53	0.59

Means and Std Deviations ▶

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.482500	0.082664	0.02067
NEA	29	0.433621	0.065314	0.01213

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	453.5	28.3438	2.019
NEA	29	581.5	20.0517	-2.019

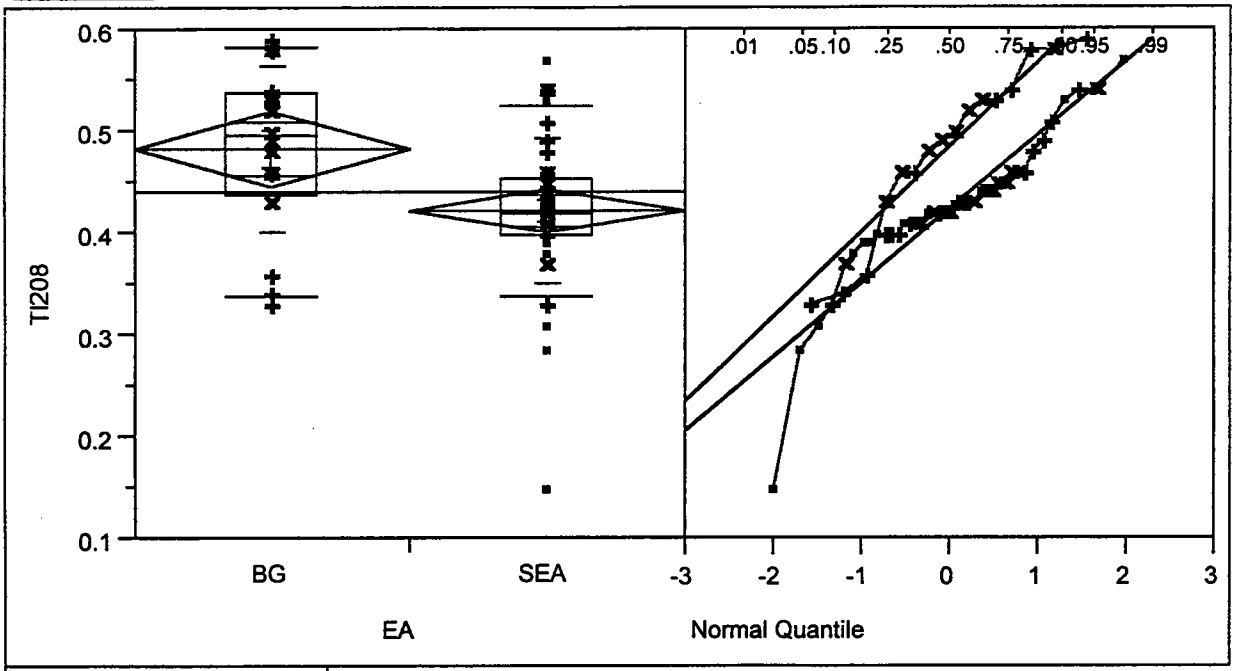
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
453.5	2.01858	0.0435

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
4.1227	1	0.0423

Tl208 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.33	0.337	0.4375	0.495	0.5375	0.583	0.59
SEA	0.15	0.338	0.4	0.42	0.455	0.526	0.57

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.482500	0.082664	0.02067
SEA	41	0.423049	0.071945	0.01124

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	616.5	38.5313	2.704
SEA	41	1036.5	25.2805	-2.704

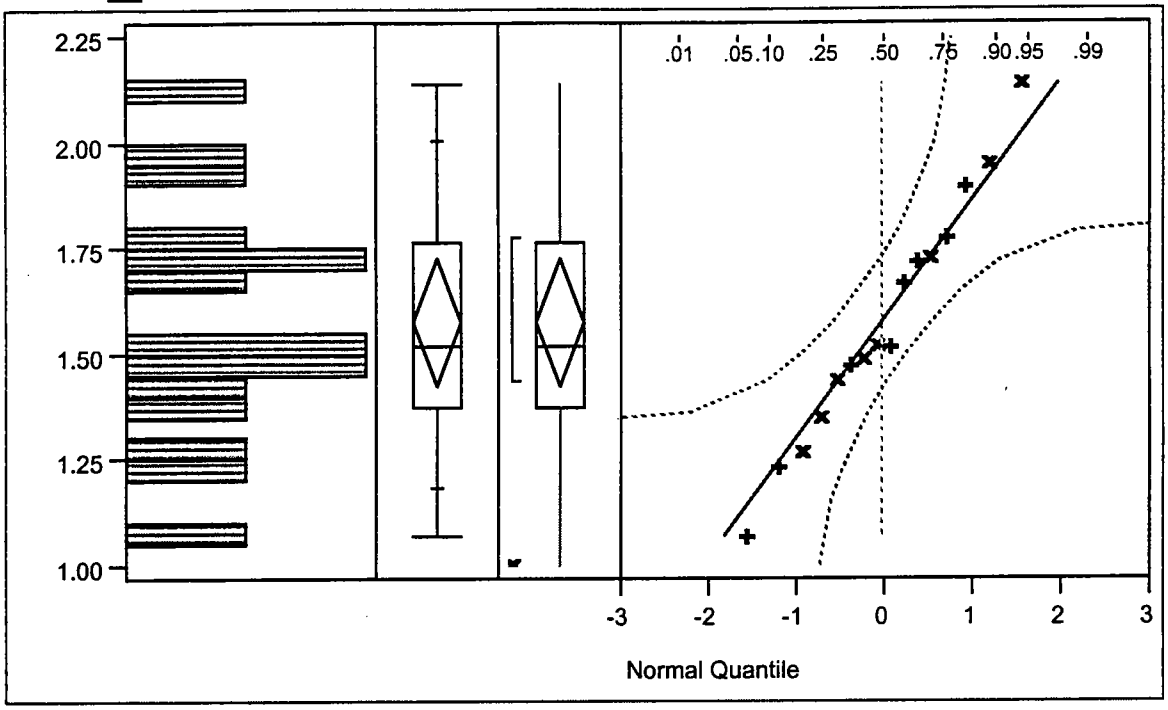
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
616.5	2.70436	0.0068

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
7.3618	1	0.0067

Th228



Quantiles

maximum	100.0%	2.1400
	99.5%	2.1400
	97.5%	2.1400
	90.0%	2.0070
quartile	75.0%	1.7675
median	50.0%	1.5200
quartile	25.0%	1.3725
	10.0%	1.1890
	2.5%	1.0700
	0.5%	1.0700
minimum	0.0%	1.0700

Moments

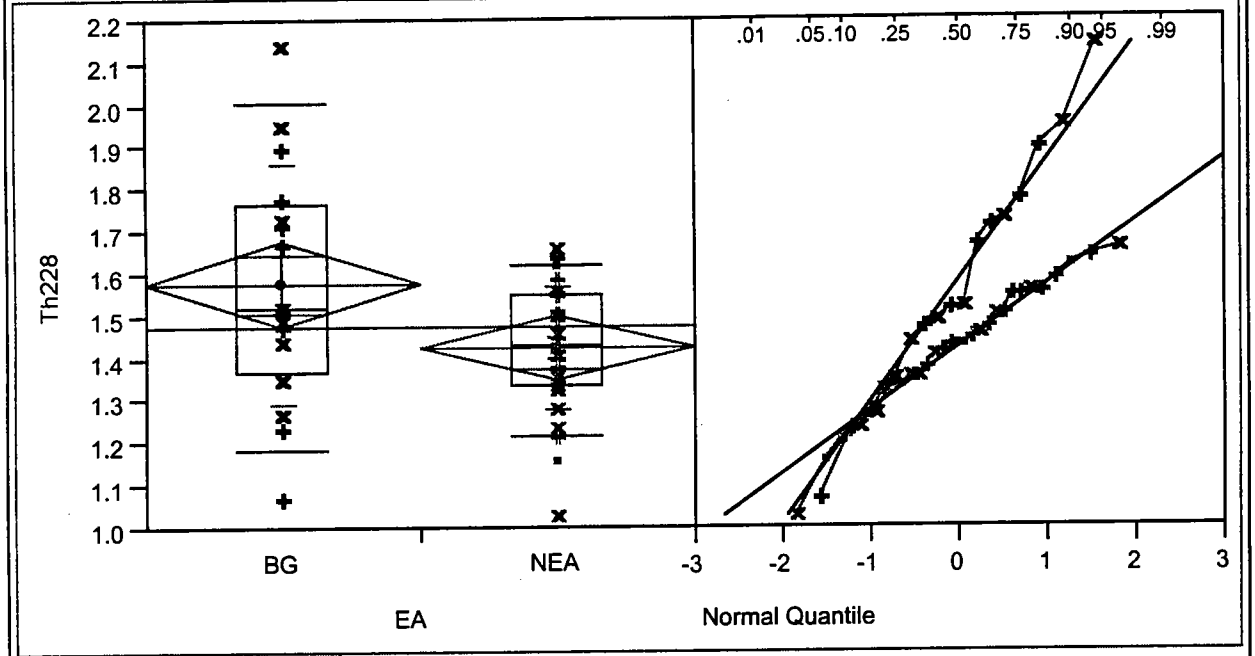
Mean	1.57938
Std Dev	0.28433
Std Error Mean	0.07108
Upper 95% Mean	1.73089
Lower 95% Mean	1.42786
N	16.00000
Sum Weights	16.00000
Sum	25.27000
Variance	0.08085
Skewness	0.19005
Kurtosis	-0.29586
CV	18.00299

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.986478	0.9867

Th228 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	1.07	1.189	1.3725	1.52	1.7675	2.007	2.14
NEA	1.03	1.22	1.34	1.43	1.55	1.62	1.66

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	1.57938	0.284335	0.07108
NEA	29	1.42362	0.147702	0.02743

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	451	28.1875	1.957
NEA	29	584	20.1379	-1.957

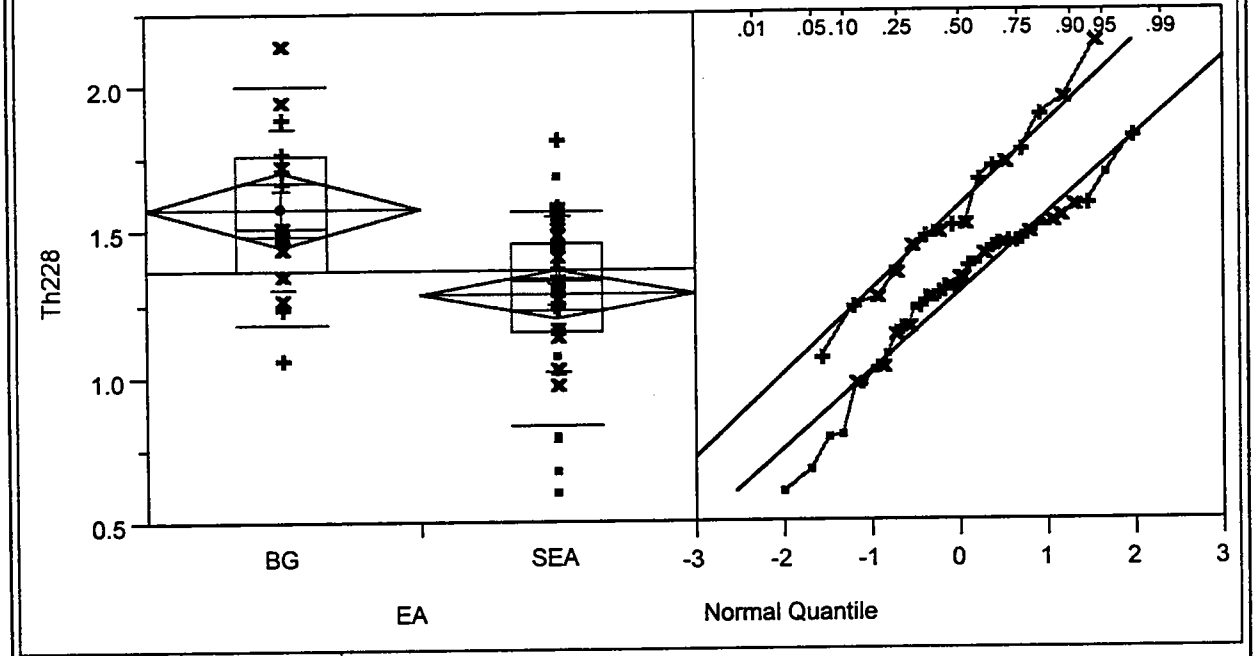
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
451	1.95688	0.0504

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
3.8759	1	0.0490

Th228 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	1.07	1.189	1.3725	1.52	1.7675	2.007	2.14
SEA	0.61	0.834	1.155	1.33	1.465	1.574	1.82

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	1.57938	0.284335	0.07108
SEA	41	1.28963	0.267419	0.04176

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	637	39.8125	3.064
SEA	41	1016	24.7805	-3.064

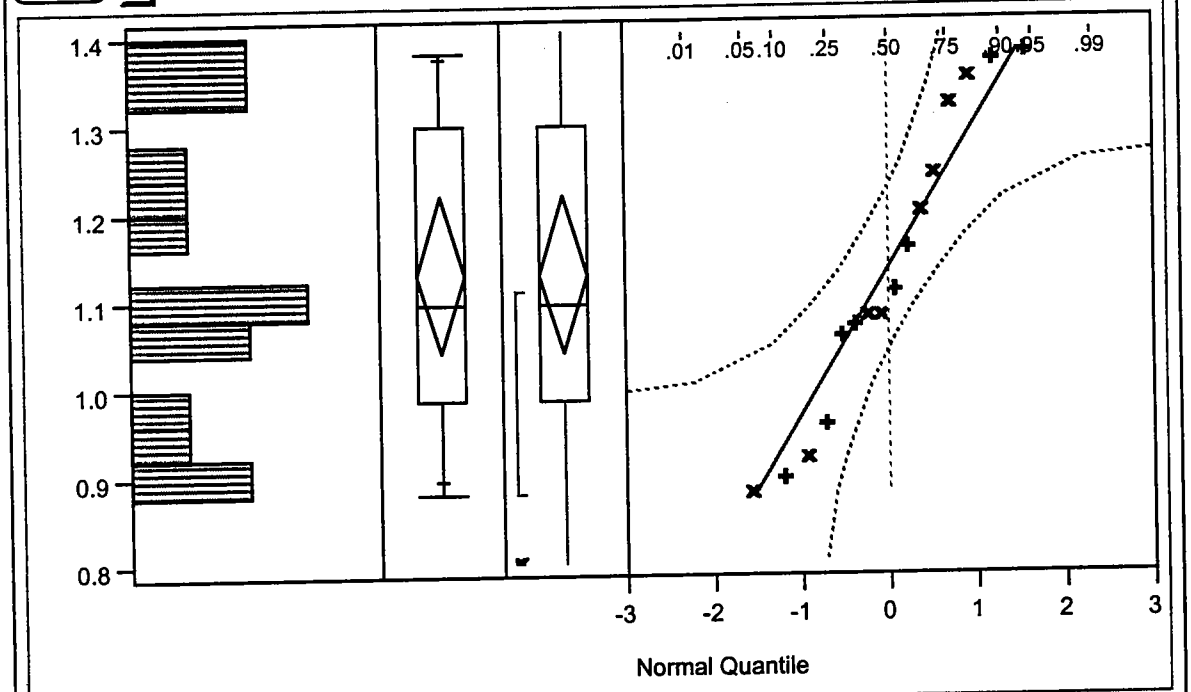
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
637	3.06422	0.0022

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
9.4439	1	0.0021

Th230



Quantiles

maximum	100.0%	1.3800
	99.5%	1.3800
	97.5%	1.3800
	90.0%	1.3730
quartile	75.0%	1.3000
median	50.0%	1.0950
quartile	25.0%	0.9850
	10.0%	0.8940
	2.5%	0.8800
	0.5%	0.8800
minimum	0.0%	0.8800

Moments

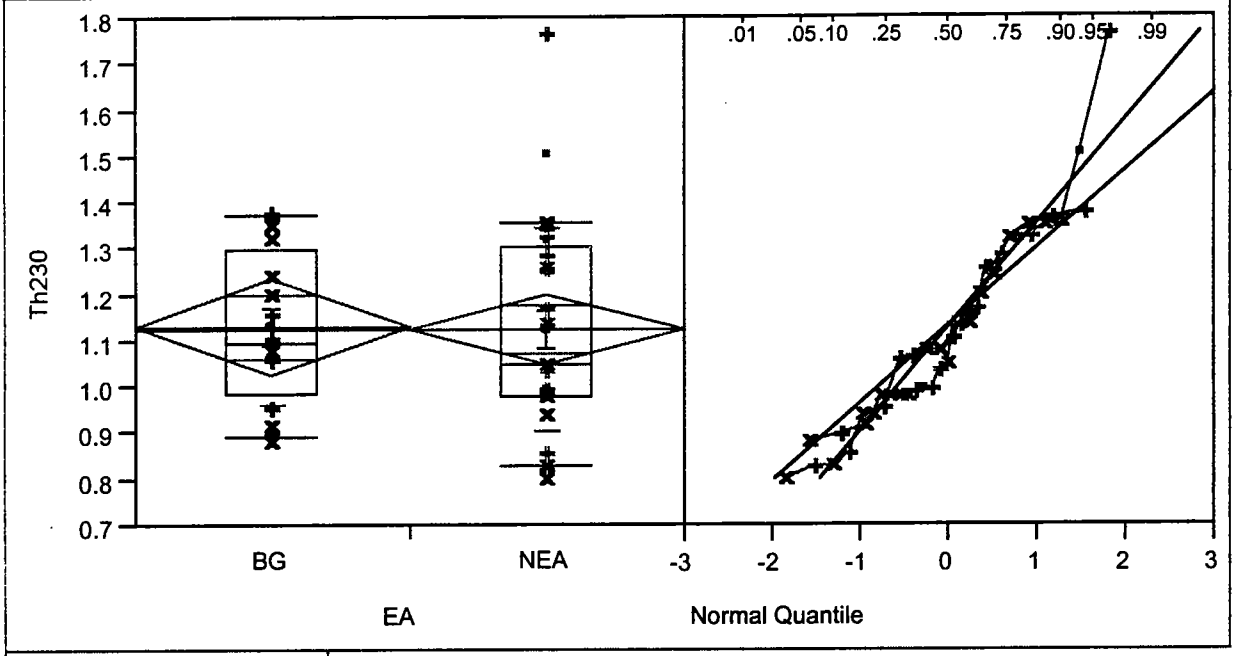
Mean	1.13000
Std Dev	0.16829
Std Error Mean	0.04207
Upper 95% Mean	1.21967
Lower 95% Mean	1.04033
N	16.00000
Sum Weights	16.00000
Sum	18.08000
Variance	0.02832
Skewness	0.09391
Kurtosis	-1.15276
CV	14.89252

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.936225	0.3032

Th230 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.88	0.894	0.985	1.095	1.3	1.373	1.38
NEA	0.8	0.83	0.98	1.05	1.305	1.36	1.77

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	1.13000	0.168285	0.04207
NEA	29	1.12276	0.225133	0.04181

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	387.5	24.2188	0.451
NEA	29	647.5	22.3276	-0.451

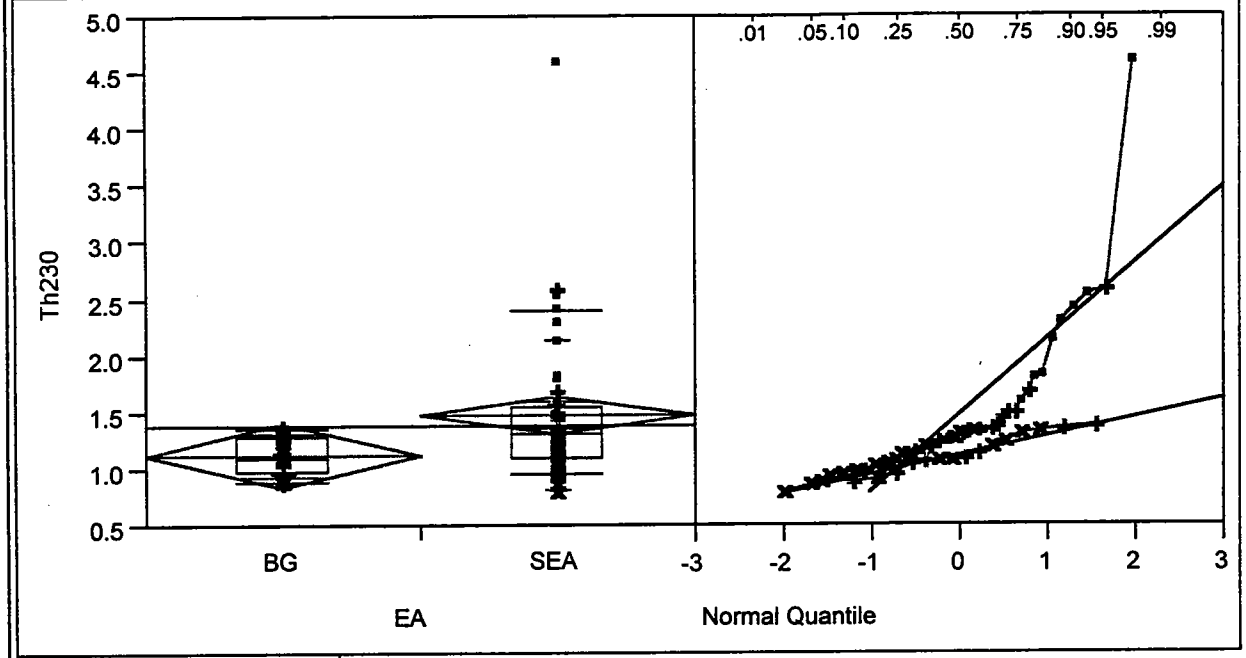
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
387.5	0.45087	0.6521

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
0.2141	1	0.6436

Th230 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.88	0.894	0.985	1.095	1.3	1.373	1.38
SEA	0.8	0.972	1.1075	1.31	1.56	2.398	4.6

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	1.13000	0.168285	0.04207
SEA	41	1.47561	0.671267	0.10483

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	338	21.1250	-2.229
SEA	41	1315	32.0732	2.229

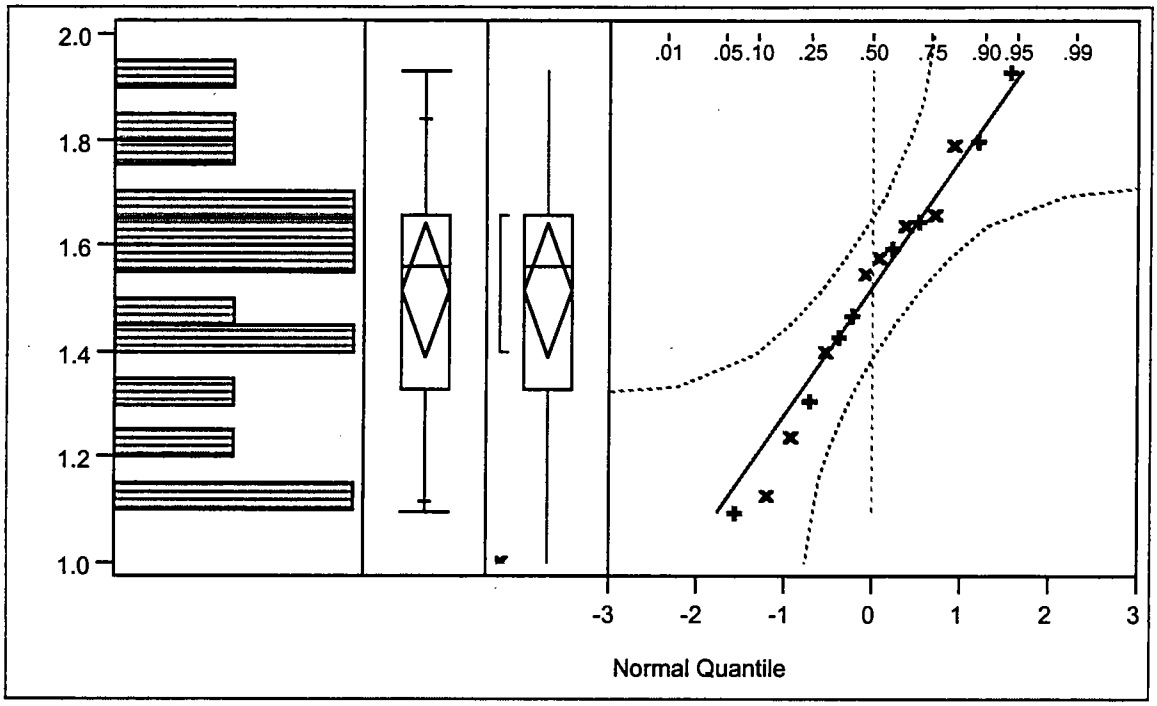
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
338	-2.22911	0.0258

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
5.0086	1	0.0252

Th232



Quantiles

maximum	100.0%	1.9300
	99.5%	1.9300
	97.5%	1.9300
	90.0%	1.8390
quartile	75.0%	1.6575
median	50.0%	1.5650
quartile	25.0%	1.3325
	10.0%	1.1210
	2.5%	1.1000
	0.5%	1.1000
minimum	0.0%	1.1000

Moments

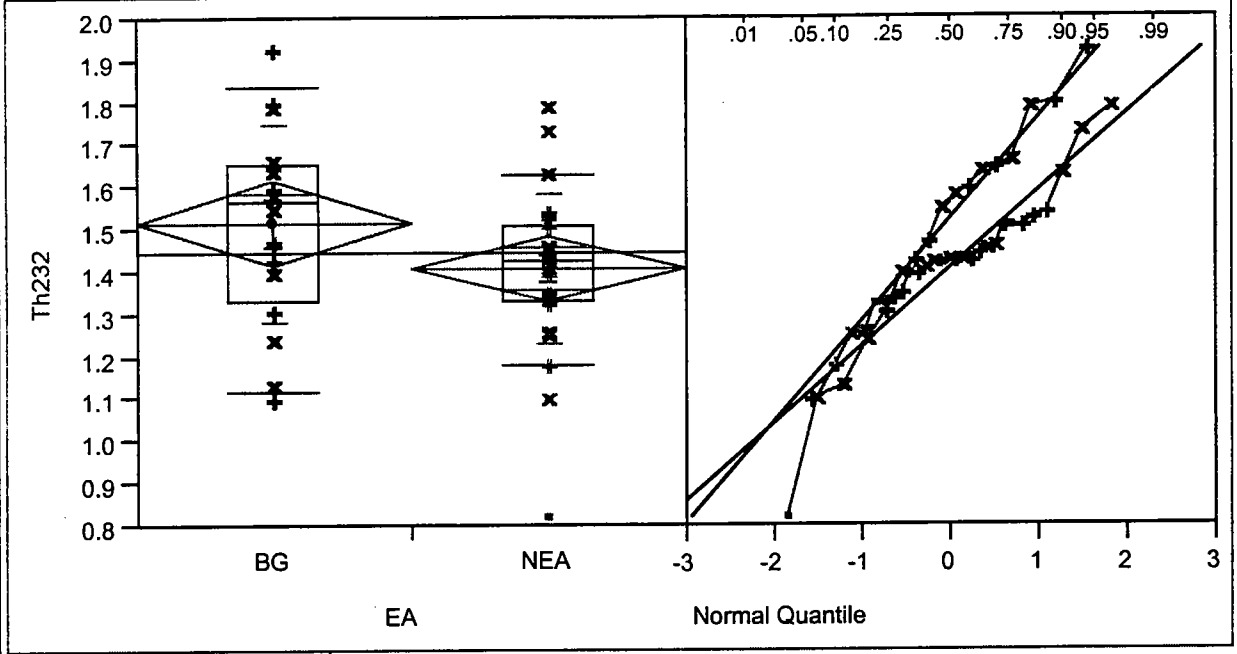
Mean	1.51750
Std Dev	0.23904
Std Error Mean	0.05976
Upper 95% Mean	1.64487
Lower 95% Mean	1.39013
N	16.00000
Sum Weights	16.00000
Sum	24.28000
Variance	0.05714
Skewness	-0.23871
Kurtosis	-0.57138
CV	15.75221

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.971436	0.8303

Th232 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	1.1	1.121	1.3325	1.565	1.6575	1.839	1.93
NEA	0.82	1.18	1.335	1.43	1.51	1.63	1.79

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	1.51750	0.239040	0.05976
NEA	29	1.40845	0.182351	0.03386

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	440	27.5000	1.697
NEA	29	595	20.5172	-1.697

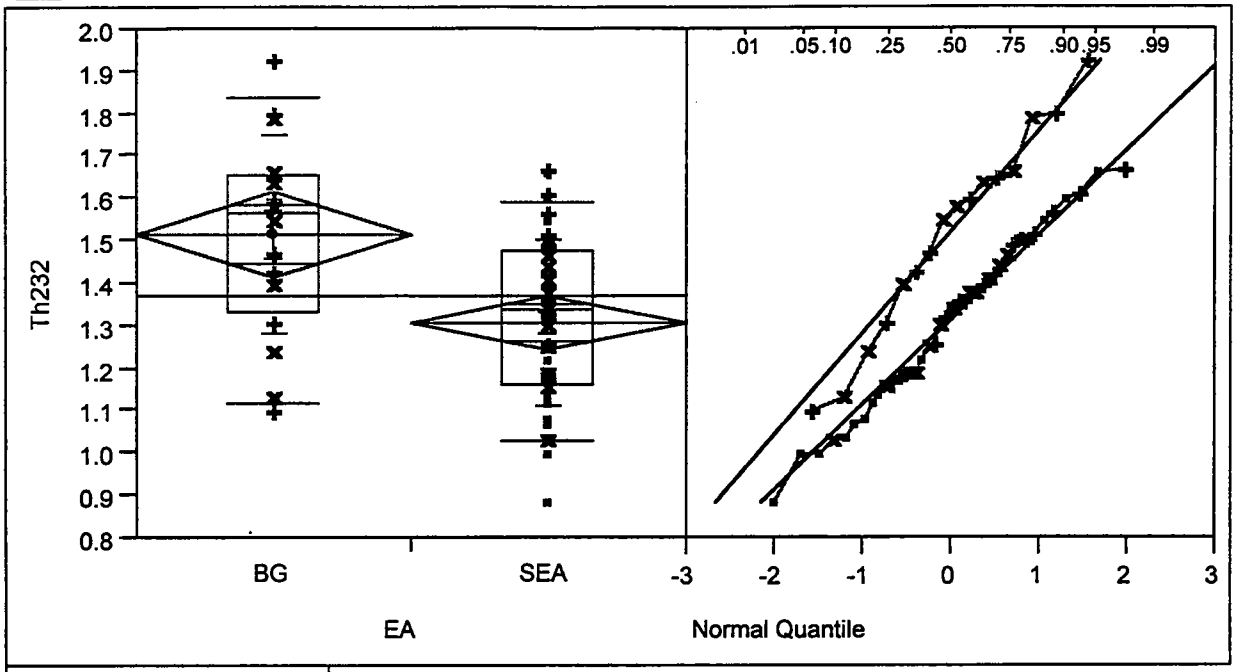
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
440	1.69714	0.0897

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
2.9207	1	0.0874

Th232 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	1.1	1.121	1.3325	1.565	1.6575	1.839	1.93
SEA	0.885	1.032	1.165	1.34	1.4775	1.594	1.67

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	1.51750	0.239040	0.05976
SEA	41	1.31134	0.200368	0.03129

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	623	38.9375	2.815
SEA	41	1030	25.1220	-2.815

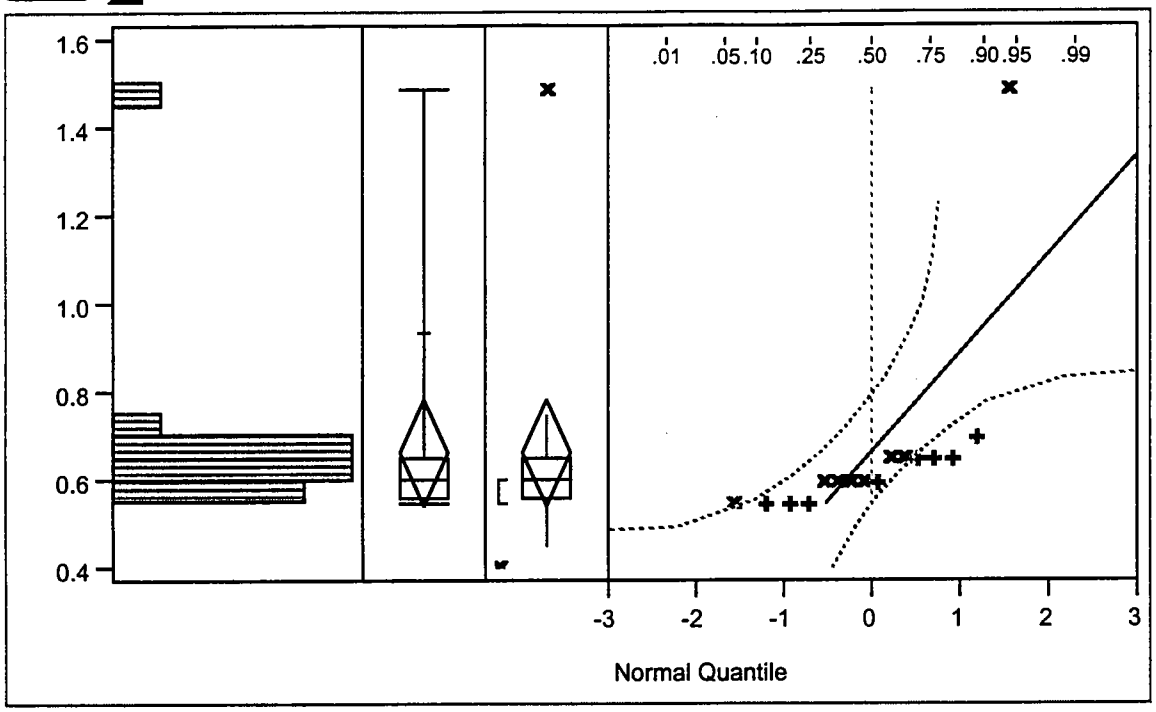
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
623	2.81539	0.0049

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
7.9765	1	0.0047

Th234



Quantiles

maximum	100.0%	1.4900
	99.5%	1.4900
	97.5%	1.4900
	90.0%	0.9370
quartile	75.0%	0.6500
median	50.0%	0.6000
quartile	25.0%	0.5625
	10.0%	0.5500
	2.5%	0.5500
	0.5%	0.5500
minimum	0.0%	0.5500

Moments

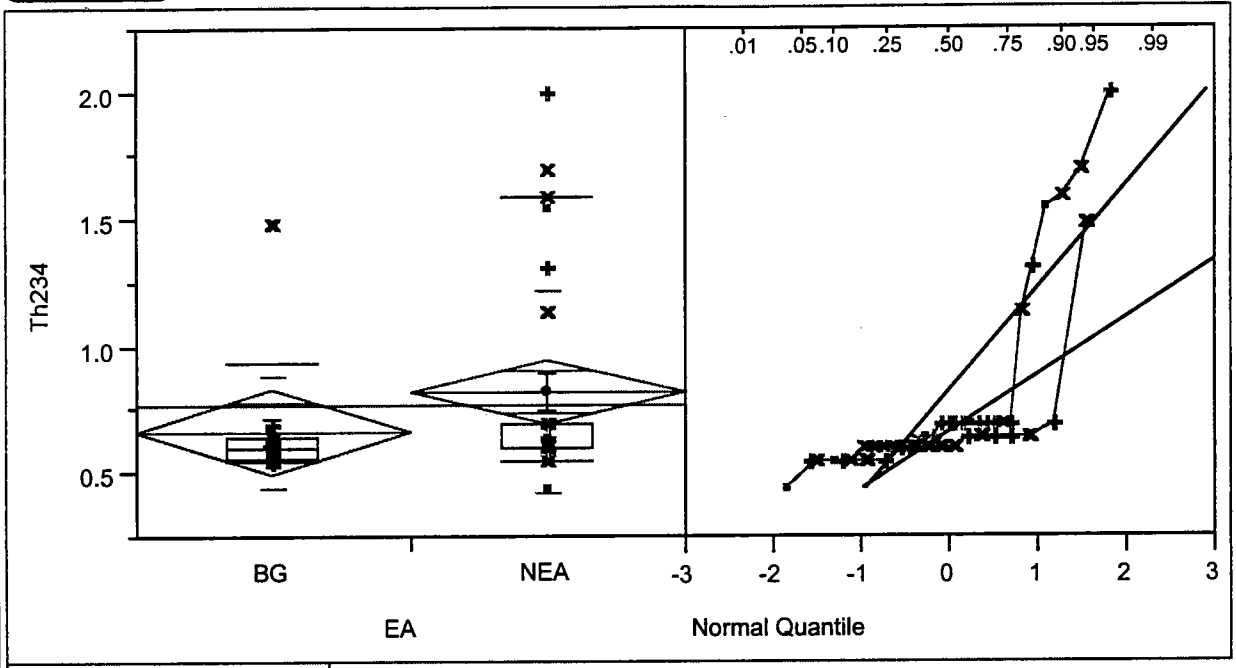
Mean	0.66500
Std Dev	0.22465
Std Error Mean	0.05616
Upper 95% Mean	0.78471
Lower 95% Mean	0.54529
N	16.00000
Sum Weights	16.00000
Sum	10.64000
Variance	0.05047
Skewness	3.72366
Kurtosis	14.44442
CV	33.78163

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.449371	<.0001

Th234 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.55	0.55	0.5625	0.6	0.65	0.937	1.49
NEA	0.45	0.55	0.6	0.7	0.7	1.59	2

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.665000	0.224648	0.05616
NEA	29	0.825000	0.402230	0.07469

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	284	17.7500	-2.017
NEA	29	751	25.8966	2.017

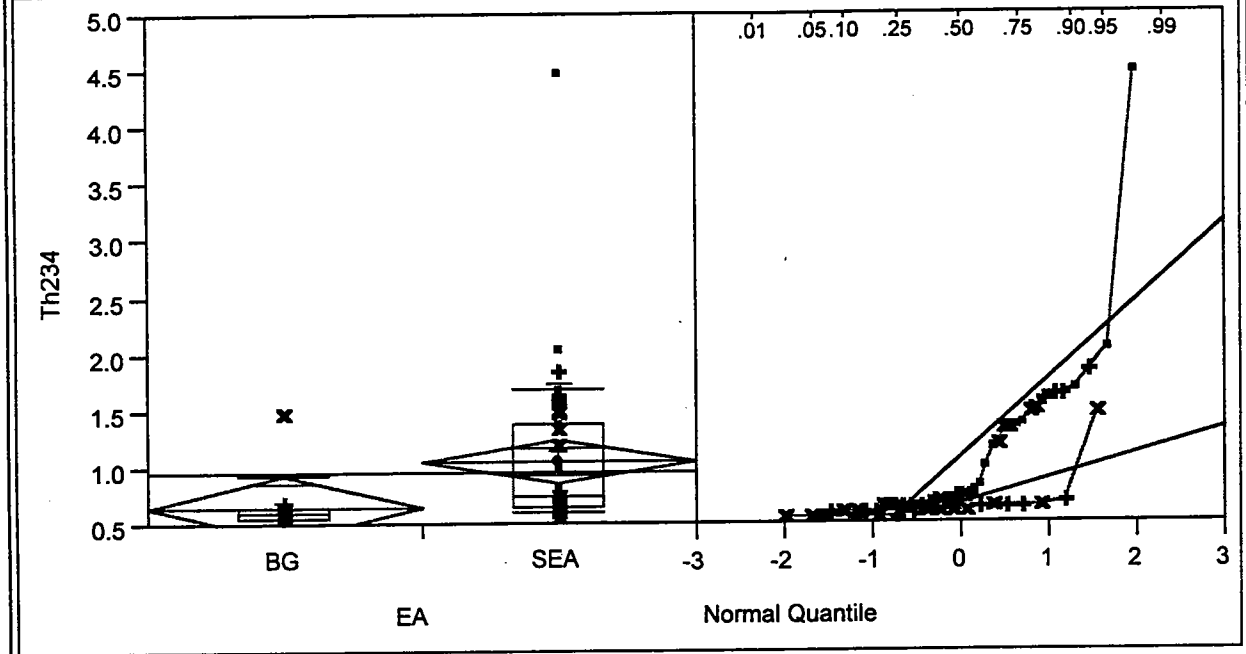
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
284	-2.01689	0.0437

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
4.1167	1	0.0425

Th234 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.55	0.55	0.5625	0.6	0.65	0.937	1.49
SEA	0.55	0.6	0.65	0.75	1.38	1.69	4.5

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.66500	0.224648	0.05616
SEA	41	1.06280	0.699641	0.10927

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	267.5	16.7188	-3.515
SEA	41	1385.5	33.7927	3.515

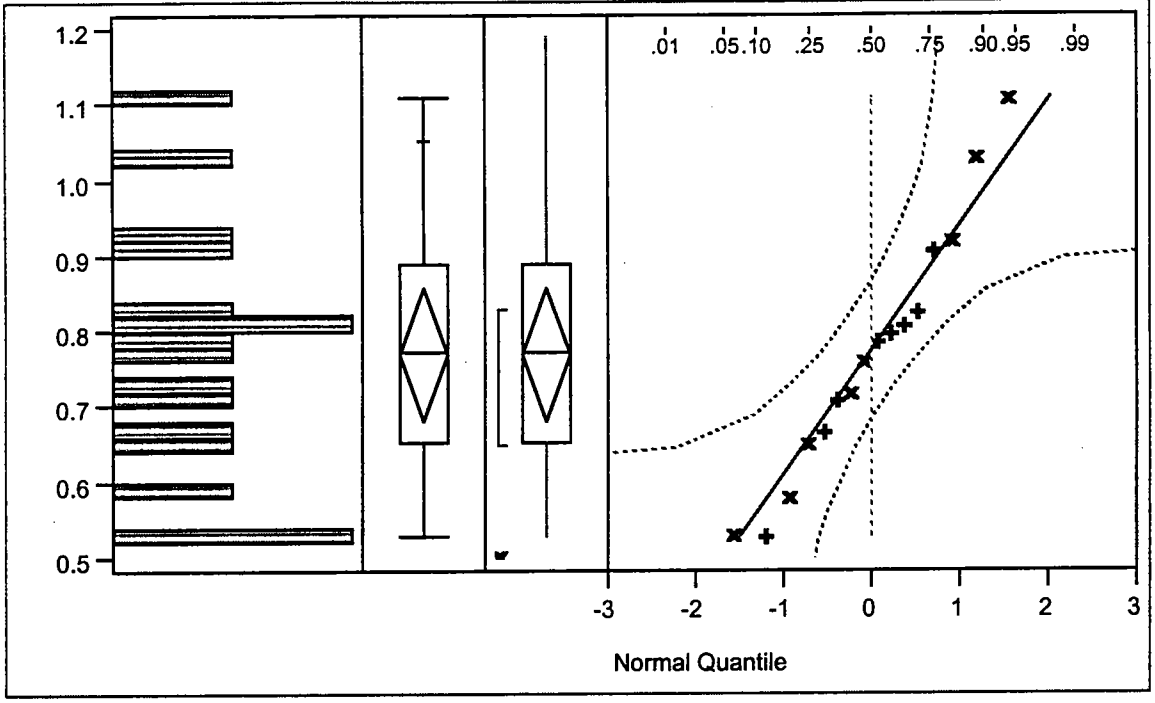
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
267.5	-3.51481	0.0004

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
12.4170	1	0.0004

U234



Quantiles

maximum	100.0%	1.1100
	99.5%	1.1100
	97.5%	1.1100
	90.0%	1.0540
quartile	75.0%	0.8900
median	50.0%	0.7750
quartile	25.0%	0.6550
	10.0%	0.5300
	2.5%	0.5300
	0.5%	0.5300
minimum	0.0%	0.5300

Moments

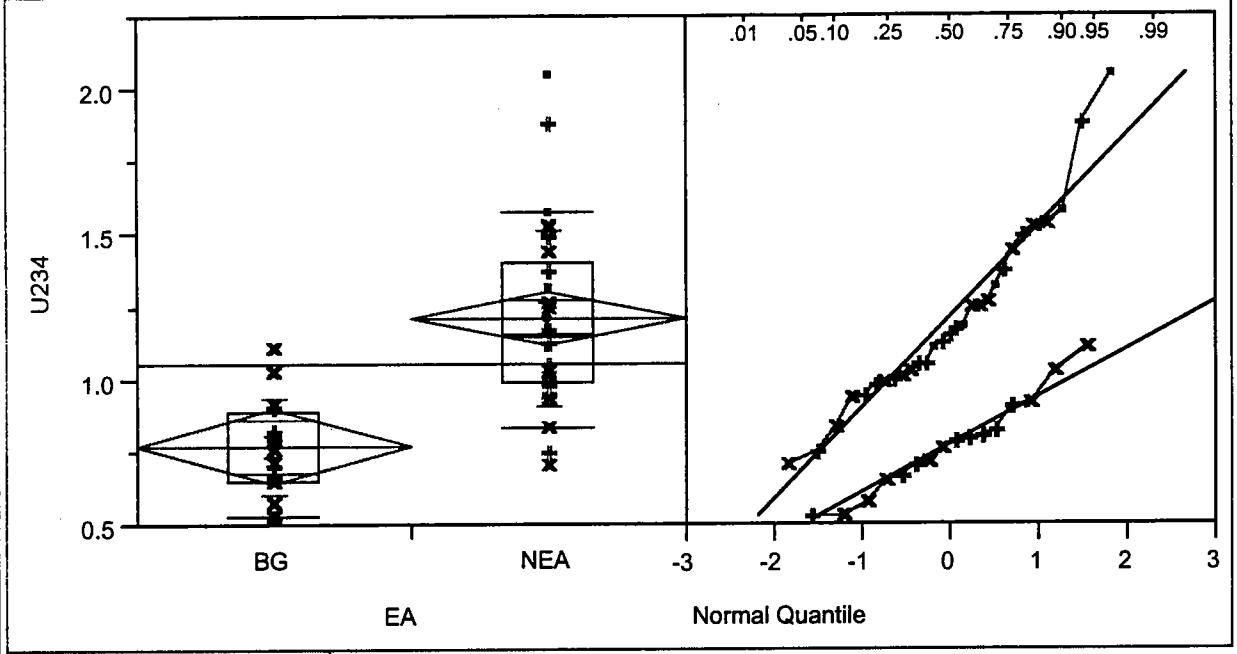
Mean	0.77188
Std Dev	0.16606
Std Error Mean	0.04152
Upper 95% Mean	0.86036
Lower 95% Mean	0.68339
N	16.00000
Sum Weights	16.00000
Sum	12.35000
Variance	0.02758
Skewness	0.38950
Kurtosis	-0.18161
CV	21.51397

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.967197	0.7614

U234 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.53	0.53	0.655	0.775	0.89	1.054	1.11
NEA	0.71	0.84	0.995	1.16	1.41	1.58	2.05

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.77188	0.166061	0.04152
NEA	29	1.21017	0.311874	0.05791

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	175.5	10.9688	-4.553
NEA	29	859.5	29.6379	4.553

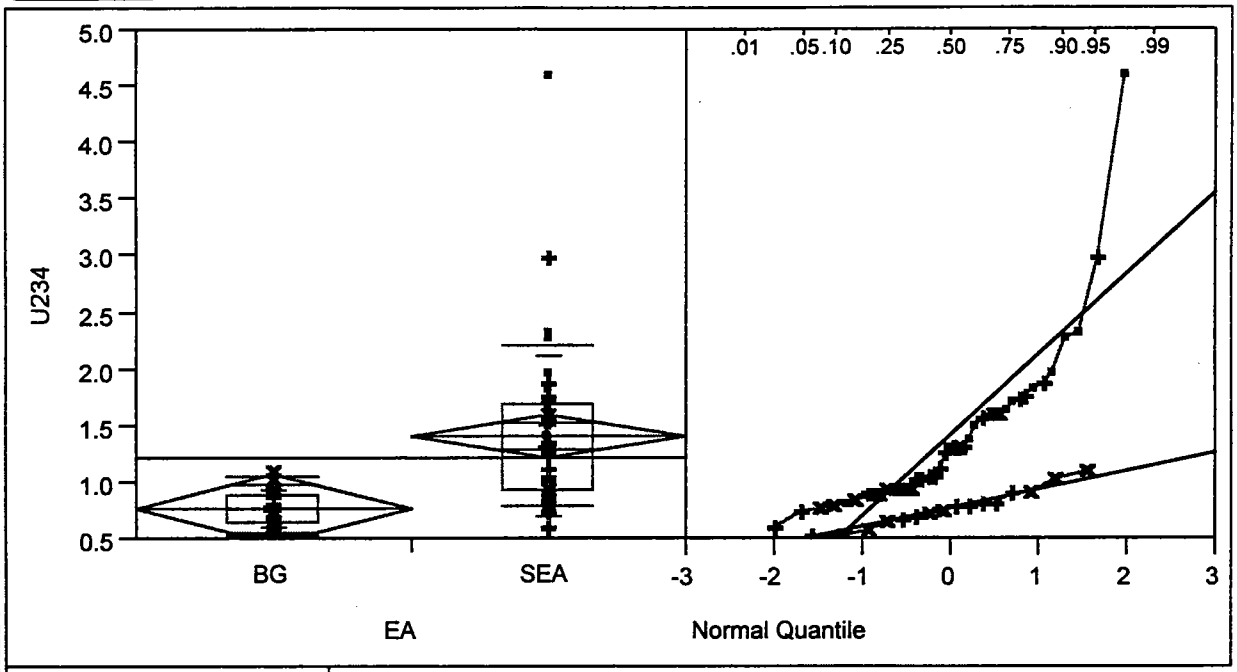
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
175.5	-4.55329	<.0001

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
20.8406	1	<.0001

U234 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.53	0.53	0.655	0.775	0.89	1.054	1.11
SEA	0.6	0.798	0.93	1.3	1.685	2.222	4.6

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.77188	0.166061	0.04152
SEA	41	1.40963	0.721600	0.11270

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	209	13.0625	-4.521
SEA	41	1444	35.2195	4.521

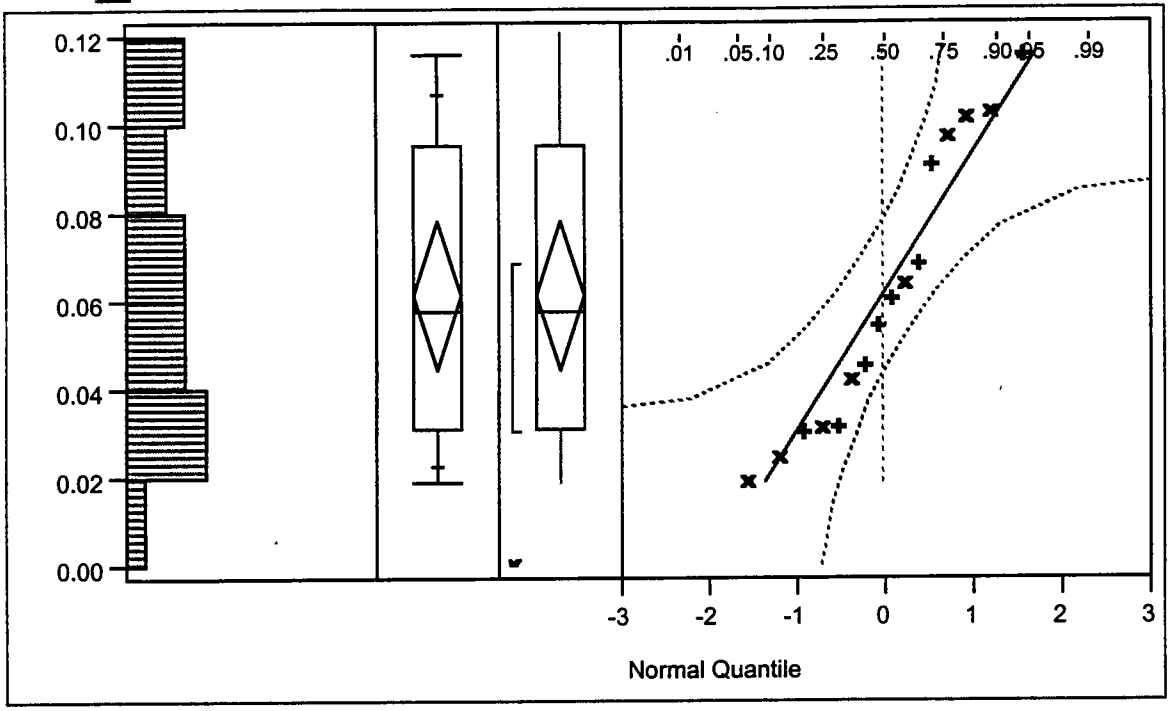
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
209	-4.52068	<.0001

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
20.5169	1	<.0001

U235



Quantiles

maximum	100.0%	0.11600
	99.5%	0.11600
	97.5%	0.11600
	90.0%	0.10690
quartile	75.0%	0.09550
median	50.0%	0.05800
quartile	25.0%	0.03125
	10.0%	0.02285
	2.5%	0.01900
	0.5%	0.01900
minimum	0.0%	0.01900

Moments

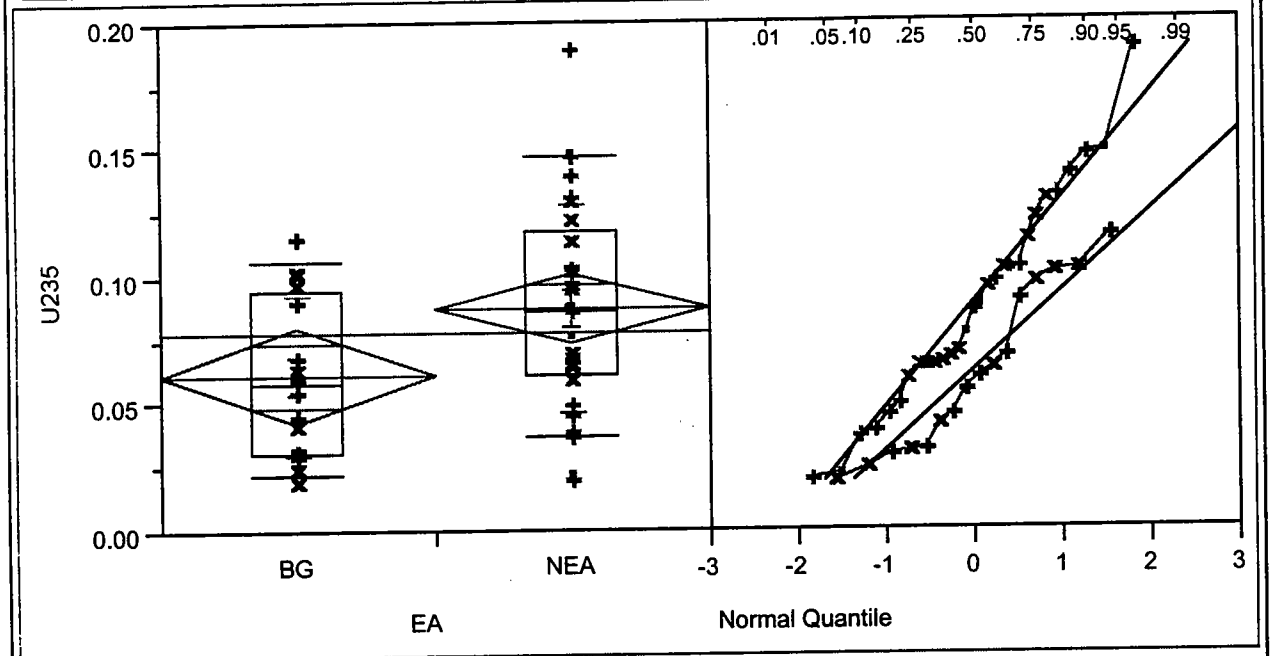
Mean	0.06137
Std Dev	0.03173
Std Error Mean	0.00793
Upper 95% Mean	0.07828
Lower 95% Mean	0.04447
N	16.00000
Sum Weights	16.00000
Sum	0.98200
Variance	0.00101
Skewness	0.35976
Kurtosis	-1.28390
CV	51.69662

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.924454	0.2000

U235 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.019	0.02285	0.03125	0.058	0.0955	0.1069	0.116
NEA	0.021	0.0375	0.062	0.087	0.1185	0.148	0.19

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.061375	0.031729	0.00793
NEA	29	0.088138	0.041296	0.00767

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	276.5	17.2813	-2.158
NEA	29	758.5	26.1552	2.158

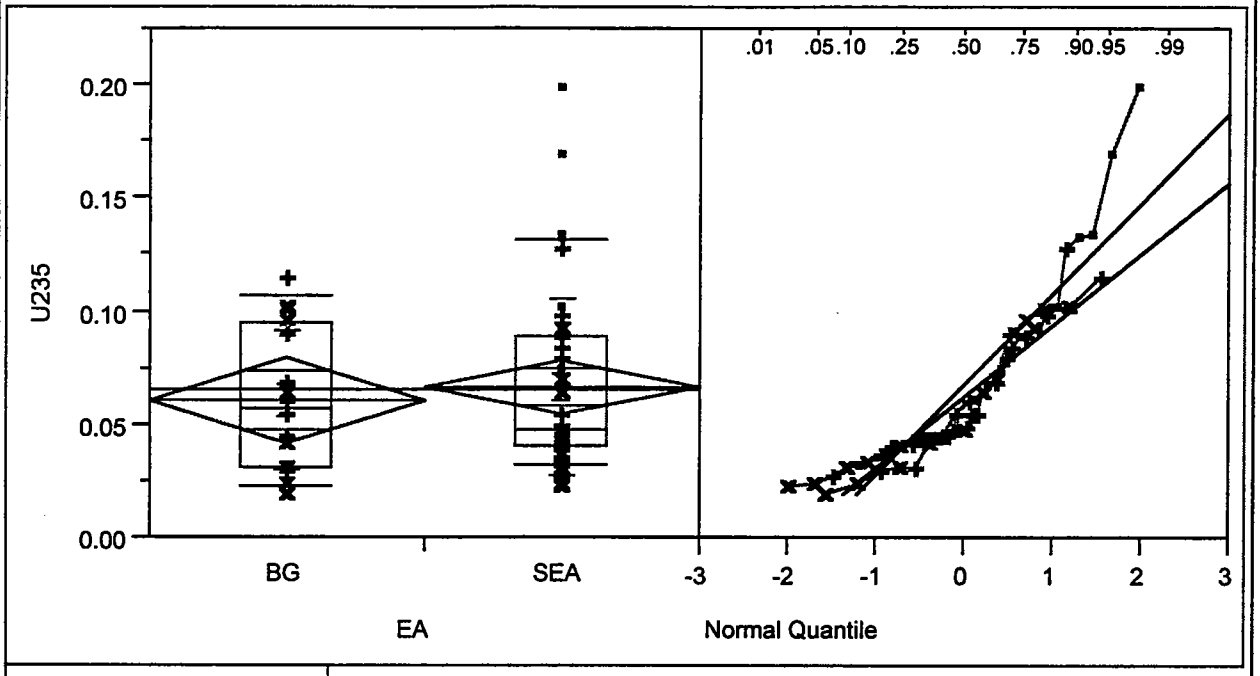
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
276.5	-2.15836	0.0309

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
4.7098	1	0.0300

U235 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.019	0.02285	0.03125	0.058	0.0955	0.1069	0.116
SEA	0.0235	0.0321	0.04125	0.0485	0.089	0.132	0.2

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.061375	0.031729	0.00793
SEA	41	0.067274	0.040044	0.00625

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	445	27.8125	-0.329
SEA	41	1208	29.4634	0.329

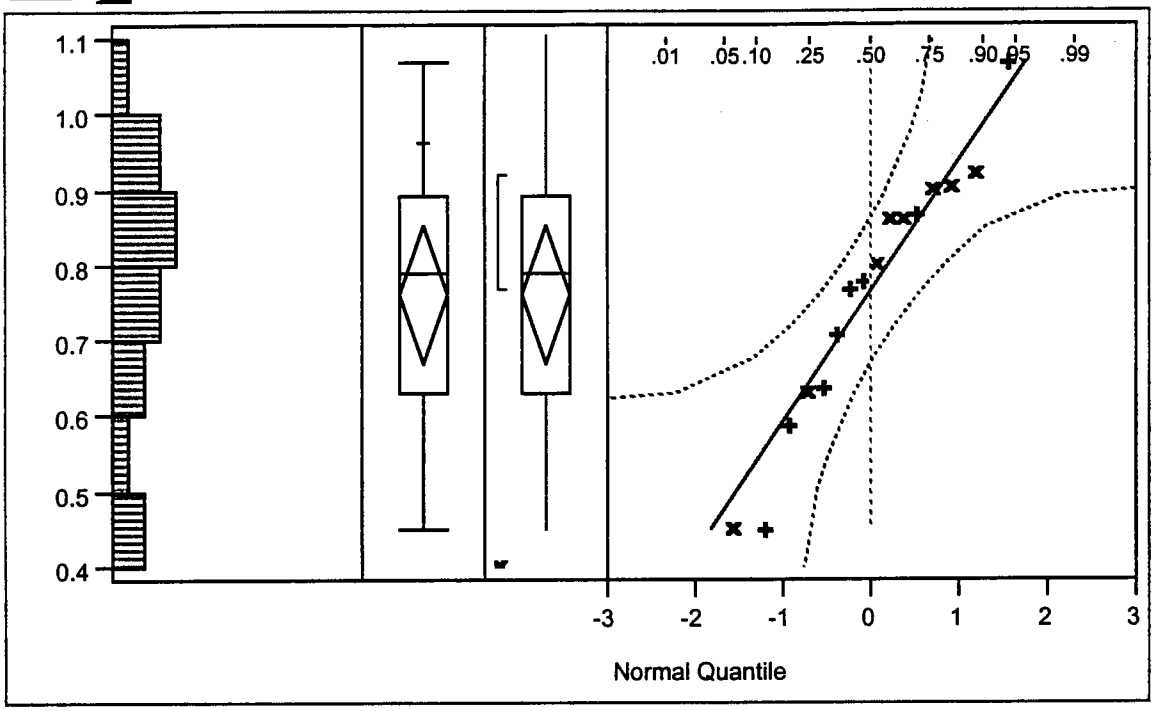
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
445	-0.32864	0.7424

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
0.1139	1	0.7357

U238



Quantiles

maximum	100.0%	1.0700
	99.5%	1.0700
	97.5%	1.0700
	90.0%	0.9650
quartile	75.0%	0.8925
median	50.0%	0.7900
quartile	25.0%	0.6325
	10.0%	0.4500
	2.5%	0.4500
	0.5%	0.4500
minimum	0.0%	0.4500

Moments

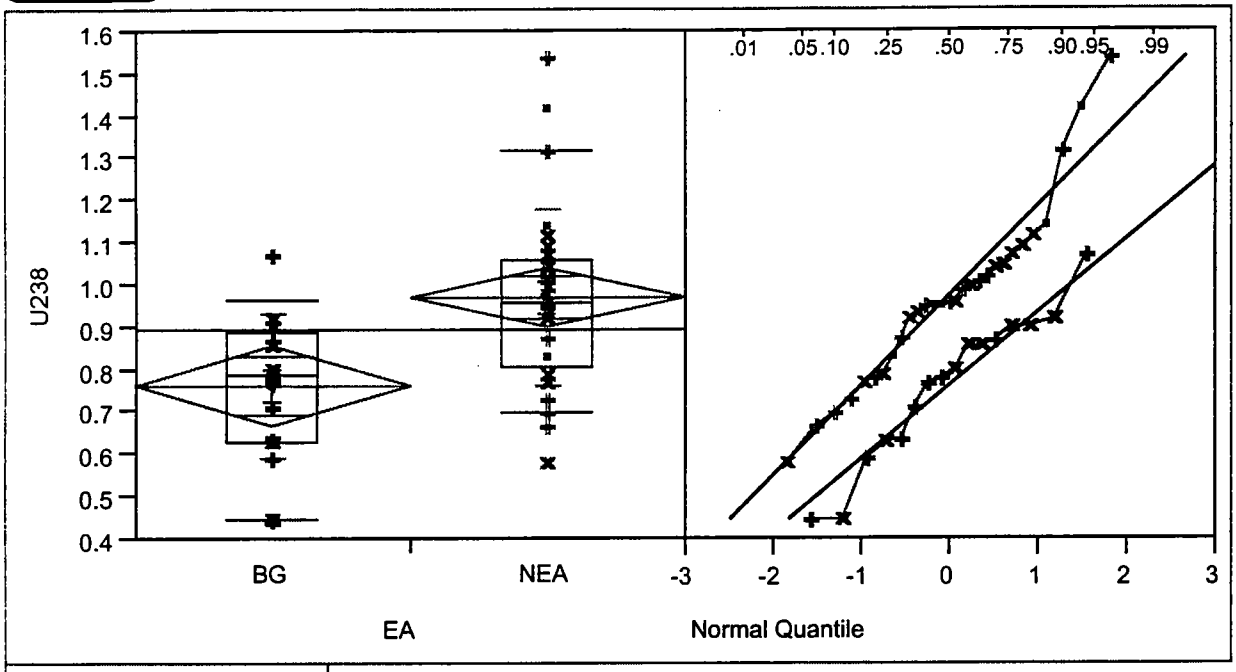
Mean	0.76281
Std Dev	0.17345
Std Error Mean	0.04336
Upper 95% Mean	0.85524
Lower 95% Mean	0.67039
N	16.00000
Sum Weights	16.00000
Sum	12.20500
Variance	0.03009
Skewness	-0.42732
Kurtosis	-0.27702
CV	22.73885

Test for Normality

Shapiro-Wilk W Test

W	Prob<W
0.948055	0.4492

U238 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.45	0.45	0.6325	0.79	0.8925	0.965	1.07
NEA	0.58	0.7	0.81	0.96	1.06	1.32	1.54

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.762812	0.173455	0.04336
NEA	29	0.971207	0.211819	0.03933

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	233	14.5625	-3.190
NEA	29	802	27.6552	3.190

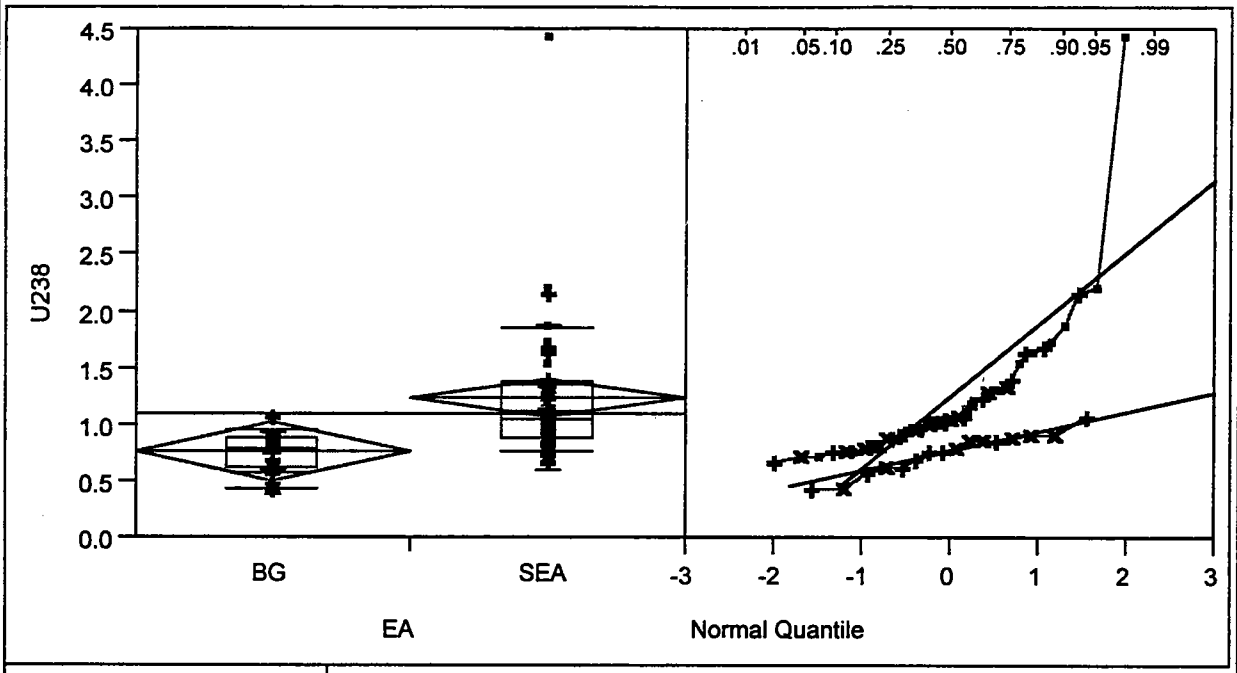
2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
233	-3.19031	0.0014

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
10.2539	1	0.0014

U238 By EA



Analysis Display

Quantiles

Level	minimum	10.0%	25.0%	median	75.0%	90.0%	maximum
BG	0.45	0.45	0.6325	0.79	0.8925	0.965	1.07
SEA	0.68	0.772	0.89	1.05	1.375	1.85	4.45

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean
BG	16	0.76281	0.173455	0.04336
SEA	41	1.24512	0.641764	0.10023

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Score Mean	(Mean-Mean0)/Std0
BG	16	234	14.6250	-4.077
SEA	41	1419	34.6098	4.077

2-Sample Test, Normal Approximation

S	Z	Prob>|Z|
234	-4.07674	<.0001

1-way Test, Chi-Square Approximation

ChiSquare	DF	Prob>ChiSq
16.6923	1	<.0001